High Speed Two Phase 2a: West Midlands to Crewe Working Draft Equality Impact Assessment Report

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

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





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Contents

Foreword		iii
Purpose of the working draft Equality Impact Assessment Report		
1	Introduction	1
1.1	Background	1
1.2	HS ₂ Phase 2a route description	4
1.3	Equality Act (2010) and the Public Sector Equality Duty	5
1.4	Protected characteristics and protected groups	6
1.5	Aims of the Equality Impact Assessment	7
1.6	Further steps to fulfil the Public Sector Equality Duty	8
1.7	Relationship to Environmental Impact Assessment Report	8
1.8	Design development	9
2	Scope and methodology	10
2.1	Introduction	10
2.2	Scope of the Equality Impact Assessment	10
2.3	Assessment methodology	12
3	Stakeholder engagement and public consultation	13
3.1	Introduction	13
3.2	Objectives	13
3.3	Stakeholder engagement methodology	13
3.4	Consultation on the working draft EQIA report and other consultations	14
4	Baseline	15
4.1	Introduction	15
4.2	Data collection	15
4.3	Information/data gaps	15
4.4	Route overview	16
4.5	Community area 1 (Fradley to Colton)	17
4.6	Community area 2 (Colwich to Yarlet)	21
4.7	Community area 3 (Stone and Swynnerton)	25
4.8	Community area 4 (Whitmore Heath to Madeley)	28
4.9	Community area 5 (South Cheshire)	31

Route-wide assessment	35
Introduction	35
3 , ,	35
, ,	40
Potential effects during construction and operation	40
Community area 1 (Fradley to Colton) assessment	49
Community area 2 (Colwich to Yarlet) assessment	51
Community area 3 (Stone and Swynnerton) assessment	57
Community area 4 (Whitmore Heath to Madeley) assessment	58
Community area 5 (South Cheshire) assessment	59
Glossary of terms	62
List of abbreviations	65
of figures	
Figure 1: The HS2 Core Network	
Figure 2: Community areas	
J	Introduction General measures to mitigate equality effects Further measures to address potential equality effects Potential effects during construction and operation Community area 1 (Fradley to Colton) assessment Community area 2 (Colwich to Yarlet) assessment Community area 3 (Stone and Swynnerton) assessment Community area 4 (Whitmore Heath to Madeley) assessment Community area 5 (South Cheshire) assessment Glossary of terms List of abbreviations of figures ore 1: The HS2 Core Network

Foreword

Purpose of the working draft Equality Impact Assessment Report

The purpose of this working draft Equality Impact Assessment (EQIA) Report is to provide the public and other stakeholders with an opportunity to review and comment on the current draft equality information for Phase 2a of the proposed High Speed Two (HS2) rail network, between the West Midlands and Crewe (the Proposed Scheme). Comments received will be considered during the on-going process of assessment and design of the Proposed Scheme, and will be reflected in the formal EQIA Report, which is expected to be published when the hybrid Bill is deposited.

Scope and methodology

The scope of assessment and the methodology to be followed for the working draft EQIA is set out in the EQIA Scope and Methodology Report (SMR) for Phase 2a¹ which is being published alongside this working draft EQIA Report. A draft EQIA SMR² was issued for consultation from 8 March 2016 to 13 May 2016, and amended in response to consultation feedback.

Work in progress

The consultation on this working draft EQIA Report is taking place at an early stage in the development of the proposals for Phase 2a. This is to assist the early engagement with those potentially affected by the Proposed Scheme, to help inform the scheme design and assessment.

The approach adopted for this working draft EQIA Report is to present baseline information gathered to date, and report the potential equality effects of the Proposed Scheme and any proposed mitigation, based on the information available at the time. Professional judgement has been used where appropriate, for example, where there is no clear evidence available in respect of a particular area or issue.

The purpose of this consultation

HS2 Ltd recognises the importance of ensuring early widespread engagement on the Proposed Scheme, which can bring to light potential equality issues and inform decision making in respect of the Proposed Scheme. Comments received will be considered in the development of the Proposed Scheme through:

- the ongoing design;
- the collection of relevant baseline information and data;
- the identification of potential disproportionate and differential equality effects arising from construction and operation of the Proposed Scheme;

¹ Arup/ERM (2016) HS2 Phase 2a: West Midlands to Crewe EQIA Scope and Methodology Report – September 2016. Available online at: https://www.gov.uk/

² Arup/ERM (2016) HS2 Phase Two: West Midlands to Crewe EQIA Scope and Methodology Report – draft for consultation, March 2016. Available online at: https://www.gov.uk/

- the identification of opportunities to secure potential beneficial equality effects of the Proposed Scheme; and
- the development of measures to mitigate potential adverse equality effects.

This consultation may identify equality or other issues that result in changes being made to the design of the Proposed Scheme or mitigation. Proposed Scheme refinements may also be made as a result of ongoing design development work. Any equality effects of these changes will be reflected in the formal EQIA Report.

1 Introduction

1.1 Background

Overview of High Speed Two

- 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, East Midlands and South Yorkshire will be served by high speed trains running at speeds of up to 36okph (225mph).
- In January 2012, the Government announced its intention to develop a Y-shaped high speed rail network. The network will be brought forward in phases, with powers sought initially for a high speed line between London and the West Midlands, called Phase One. The 2012 decision also confirmed the Government's preferred route for Phase One, following the public consultation undertaken during 2011. In November 2013, HS2 Ltd deposited a hybrid Bill with Parliament to seek powers for the construction and operation of Phase One. The Bill is currently proceeding through Parliament, with the aim of achieving Royal Assent by the end of 2016 and construction beginning in 2017.
- 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 consulted on for seven months until January 2014.
- 1.1.4 Sir David Higgins, in his 2014 reports (HS2 Plus³ and Rebalancing Britain⁴) recommended accelerating the delivery of the West Midlands to Crewe section of the Phase Two route, in order to deliver some of the benefits that HS2 will bring to the region sooner. In the November 2015 Command Paper, the Government, having considered a number of options for accelerating the planning and development of this section of the route, announced its intention to bring forward the route to Crewe and set out the preferred line of route for what is known as Phase 2a.
- Phase 2a (the Proposed Scheme), the subject of this working draft EQIA Report, comprises the first section of the western leg of Phase Two, from the West Midlands to Crewe (approximately 60km (37 miles) in length). It would connect with Phase One near Fradley, to the north-east of Lichfield, and connect to the West Coast Main Line (WCML) south of Crewe, to provide onward services beyond the HS2 network, to the north-west of England and to Scotland. The proposed HS2 route highlighting the route to Crewe is shown in Figure 1: The HS2 Core Network.
- 1.1.6 The powers for Phase 2a will be sought through a separate hybrid Bill, with the aim of achieving Royal Assent by the end of 2019. Construction would commence in 2020,

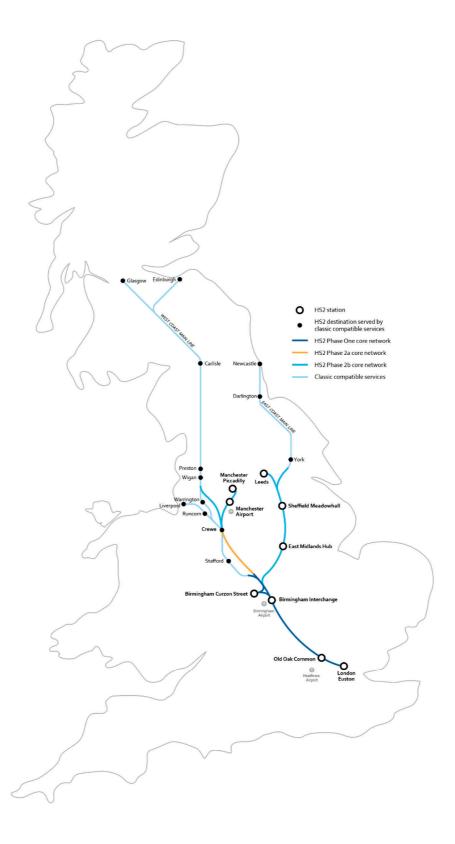
³ HS₂ Ltd (2014), HS₂ Plus A report by David Higgins. Available online at:

https://www.gov.uk/government/uploads/system/uploads/attachment data/file/374695/HS2 Plus A report by David Higgins.pdf

⁴ HS₂ Ltd (2014), Rebalancing Britain – From HS₂ towards a national transport strategy. Available online at:

- ahead of the rest of Phase Two, and the section is anticipated to be operational in 2027, six years earlier than originally planned.
- An announcement on the Phase Two route from Crewe to Manchester and from the West Midlands to Leeds, referred to as Phase 2b, is expected in Autumn 2016. Construction of Phase 2b would commence in approximately 2023, with operation planned to start around 2033.

Figure 1: The HS2 Core Network5



⁵ On 7 July 2016, Sir David Higgins' report Sheffield and South Yorkshire Report 2016 was published and indicated that a different route through South and West Yorkshire should be considered, which would remove the previously proposed Meadowhall station. This is currently being considered by the Secretary of State.

1.2 HS2 Phase 2a route description

- 1.2.1 The Phase 2a route comprises a high speed railway line from the Phase One route near Fradley, to Crewe. It would run north-east of Stafford and south-west of Stone, crossing a mainly rural area with small settlements in Staffordshire and Cheshire East.
- Phase 2a would connect with the Manchester spur that forms part of Phase One near Fradley, to the north-east of Lichfield. It would continue northwards over a distance of approximately 3km, on a series of embankments and viaducts. Maintenance loop sidings would be located to the north of Pipe Ridware.
- The route would pass between the villages of Stockwell Heath and Colton on embankment, before crossing Moreton Brook on viaduct. It would continue into a cutting with a retaining wall past Moreton House, a Grade II listed building used as a residential home for Rugeley School (Mayfield Children's Home), emerging onto embankment.
- The route would enter a cutting through Ingestre Park Golf Club then pass through the southern part of Staffordshire County Showground. It would pass through Hopton in a false cutting behind a landscaped retaining wall. It would then pass Marston on embankment and continue via a series of embankments and cuttings, following the M6 corridor and crossing Norton Bridge to Stone Railway on a viaduct. The route would cross the M6 near Stone and Yarnfield. A construction railhead would be located adjacent to the M6 to the west of Stone, utilising land both north and south of the Norton Bridge to Stone Railway.
- The route would pass to the north of Swynnerton on an embankment. It would continue into the Meece valley on an embankment and then pass through the higher ground west of Whitmore.
- The route would cross the A53 Newcastle Road to the south-east of Whitmore Heath, in a cut and cover tunnel of approximately 250m in length. This would be followed by twin bored tunnels of approximately 750m in length under the settlement of Whitmore Heath. The route would emerge and pass through Whitmore Wood ancient woodland in a cutting with a retaining wall. The route would enter the River Lea valley on an embankment. It would continue on a viaduct over the River Lea, WCML and the out of use Silverdale line of the Stoke to Market Drayton Railway.
- 1.2.7 Extending northwards towards Crewe, the route would continue in a cutting before entering a bored tunnel, approximately 67om in length, to the west of Madeley. The route would continue in a shallow cutting before continuing onto embankment and crossing Checkley Brook and the River Lea floodplain on a viaduct.
- 1.2.8 The route of the Proposed Scheme would then run on embankment before transitioning into a shallow cutting, passing under an overbridge and towards Den Lane.
- Continuing northwards, the route of the Proposed Scheme would pass under a viaduct, which would carry two spurs over the route to connect with the WCML to the east of the Proposed Scheme. For the Proposed Scheme to integrate with the existing WCML, modifications would be required to a section of the existing WCML including a new section of WCML and modifications to the southern and northern parts.

- 1.2.10 The route of the Proposed Scheme would continue in a retained cut for approximately 1.5km and travel north towards Crewe. The Proposed Scheme would end to the south of Crewe in a retained cutting, which would connect into a tunnel portal and a tunnel (part of the proposed Phase 2b scheme).
- Access tracks to connect the route of the Proposed Scheme with an infrastructure maintenance depot would run along the western side of the route of the Proposed Scheme. It is currently anticipated that an Infrastructure Maintenance Depot (IMD) would be located at the northern end of the area, on an area of approximately 37 hectares and extending for three kilometres to the west of the Proposed Scheme. The IMD would provide a central store and help maintain high speed trains on the Phase 2a route, as well as the full western leg of Phase Two (to Manchester) once the full Y network is operational. The IMD would be supported by maintenance loop facilities at Pipe Ridware, in the Fradley to Colton area (Community Area (CA) 1).
- As part of the development of the design, further work is being undertaken to consider the location and operating requirements of the permanent maintenance facilities. An alternative potential location in the Stone and Swynnerton area (CA₃) has been identified within the site of the proposed temporary railhead near Stone. Further studies will be carried out to consider the location and the facilities to be included in the Proposed Scheme (refer also to Section 1.8 on design development).

1.3 Equality Act (2010) and the Public Sector Equality Duty

- 1.3.1 Under the Equality Act 2010, 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.
- 1.3.2 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;
 - 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.
- 1.3.3 In addition, Section 20 of the Equality Act 2010 requires decision-makers to make reasonable adjustments in certain circumstances. For example, 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 aids⁶. The Act makes it lawful to treat a disabled person more favourably than a non-disabled person⁷. In addition the Equality Act 2010 requires service providers to anticipate the needs of disabled people by considering who might use a service and making appropriate reasonable adjustments before a request is received. The EQIA enables HS2 to identify where adjustments might be required, such as noise insulation or maintaining accessible routes, in order to meet its anticipatory duty.

1.3.4 Relevant guidance on fulfilling the PSED includes:

- Equality and Human Rights Commission (EHRC), Equality Act 2010: Technical Guidance on the Public Sector Equality Duty England⁸;
- EHRC, Meeting the Equality Duty in Policy and Decision-Making England (and non-devolved public authorities in Scotland and Wales)⁹; and
- Government Equalities Office, Equality Act 2010: Public Sector Equality Duty What Do I Need To Know? A Quick Start Guide for Public Sector Organisations¹⁰.

1.4 Protected characteristics and protected groups

- 1.4.1 The list below outlines each protected characteristic relevant to the PSED and provides a supporting definition:
 - age: this refers to persons defined by either a particular age or a range of ages¹¹;
 - 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 activities¹²;
 - 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
 couples¹³;
 - 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-

⁶ Equality and Human Rights Commission (2013) Equality Act 2010 Technical Guidance on the Public Sector Equality Duty England, p.91

⁷ Equality and Human Rights Commission (2013) Equality Act 2010 Technical Guidance on the Public Sector Equality Duty England, p. 44

 $^{{}^{8}\} https://www.equalityhumanrights.com/en/publication-download/technical-guidance-public-sector-equality-duty-england-public-sector-equality-england-public-equality-england-public-equality-england-public-$

 $^{{}^9\,\}underline{\text{https://www.equality}}\underline{\text{humanrights.com/en/publication-download/meeting-equality-duty-policy-and-decision-making-england-and-non-devolved}$

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/85041/equality-duty.pdf

¹¹ Equality and Human Rights Commission (2013) Equality Act 2010 Technical Guidance on the Public Sector Equality Duty England, p.91

¹² Equality and Human Rights Commission (2013) Equality Act 2010 Technical Guidance on the Public Sector Equality Duty England, p.90

¹³ Equality and Human Rights Commission (2013) Equality Act 2010 Technical Guidance on the Public Sector Equality Duty England, p.91

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 origins¹⁴;
- 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.

1.5 Aims of the Equality Impact Assessment

- 1.5.1 The formal EQIA Report will contribute towards both enabling and documenting HS2 Ltd's active fulfilment of its PSED obligations during the design stage of the Proposed Scheme. It 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 serves to inform design, mitigation and other relevant project-related decisions.
- 1.5.2 The objectives underpinning this EQIA are to:
 - identify the presence of protected characteristic groups along the route, 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 to avoid, minimise and/or mitigate potential negative equality effects for 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.

¹⁴ Equality Act (2010) HM Government

1.6 Further steps to fulfil the Public Sector Equality Duty

- 1.6.1 The PSED is an ongoing process 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 diversity profile of affected communities to support informed decision-making at this stage of the Proposed Scheme's development. As the Proposed Scheme progresses, further equality issues may be identified and will require consideration in decision-making by HS2 Ltd and may affect other functions of relevant public bodies, including the Secretary of State for Transport.
- 1.6.2 HS2 Ltd will ensure that potential effects identified in this working draft EQIA Report are kept under review, and where appropriate, the baseline evidence is updated, further stakeholder engagement is undertaken and further appraisal of potential effects is conducted and used to inform relevant future decisions.
- 1.6.3 HS2 Ltd has appointed an equality lead responsible for overseeing monitoring and reporting on equality effects during the construction of the Proposed Scheme. The equality lead will continue to bring equality issues to the attention of the project, and is responsible for reporting on the effectiveness of measures taken to mitigate potential or actual negative effects as well as of positive actions to promote equality.

1.7 Relationship to Environmental Impact Assessment Report

- 1.7.1 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 in this instance that 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 ongoing basis.
- This EQIA Report considers the equality effects of the Proposed Scheme based on the current level of design. It draws on information provided in the working draft EIA Report, 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 for protected characteristic groups (see Section 2.3).
- 1.7.3 Reflecting the evolution of good practice and learning from Phase One, the working draft EQIA Report and the working draft EIA Report have shared data gathering across assessments, particularly with regard to the community baseline data used in the working draft EQIA Report and in the working draft EIA Report health assessment. The working draft EQIA Report has also drawn on baseline evidence and assessment from other EIA topics, where relevant. The EQIA assesses whether any of the effects identified in the health assessment of the EIA will have disproportionate or differential effects on groups with protected characteristics.
- 1.7.4 The approach to this working draft EQIA Report also reflects the emphasis on integrated stakeholder engagement for Phase 2a. This approach is outlined in Section 3.

1.8 Design development

- 1.8.1 Design development continues for the Phase 2a route as further engineering and environmental baseline is collated, including from field surveys, and as part of ongoing stakeholder engagement. The main areas of development being considered include:
 - · refinement of vertical and horizontal route alignment;
 - refinement of tunnel options including lengths, design and construction methods and alternative engineering options;
 - refinement of the connections to the West Coast Main Line and conventional railway;
 - alternative location for a permanent maintenance facility;
 - review of the proposed lengths and heights of viaducts and other river crossing structures and associated replacement flood storage areas, following the completion of flood modelling;
 - temporary and permanent utility diversions;
 - refinement of the realignment of roads and public rights of way crossing the Proposed Scheme;
 - refinement of drainage features required for rail and highways;
 - additional environmental features required to mitigate likely significant adverse environmental effects;
 - accommodation works and crossings of the route for private means of access;
 - grid connections from the sub-stations at Rugeley and Crewe and associated infrastructure;
 - refinement of construction compound locations and haul roads; and
 - refinement of auto-transformer station and auto-transformer feeder station locations.
- 1.8.2 Changes to the design of the scheme will be described in the formal EIA Report and any additional identified differential or disproportionate equality effects will be reported in the formal EQIA Report.

2 Scope and methodology

2.1 Introduction

- 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 alongside this document¹⁵. The draft EQIA SMR was issued for consultation from 8 March 2016 to 13 May 2016, and amended in response to consultation feedback¹⁶.
- This working draft EQIA Report takes into account HS2 Ltd's Equality, Diversity and Inclusion Policy¹⁷, which outlines HS2 Ltd's approach to embedding inclusion in its workforce and in the planning, design, construction and operation of the Proposed Scheme.

2.2 Scope of the Equality Impact Assessment

- The scope of the EQIA reflects 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 share it; and foster good relations between people who share a relevant protected characteristic and those who do not share it.
- The report considers potential equality effects for 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

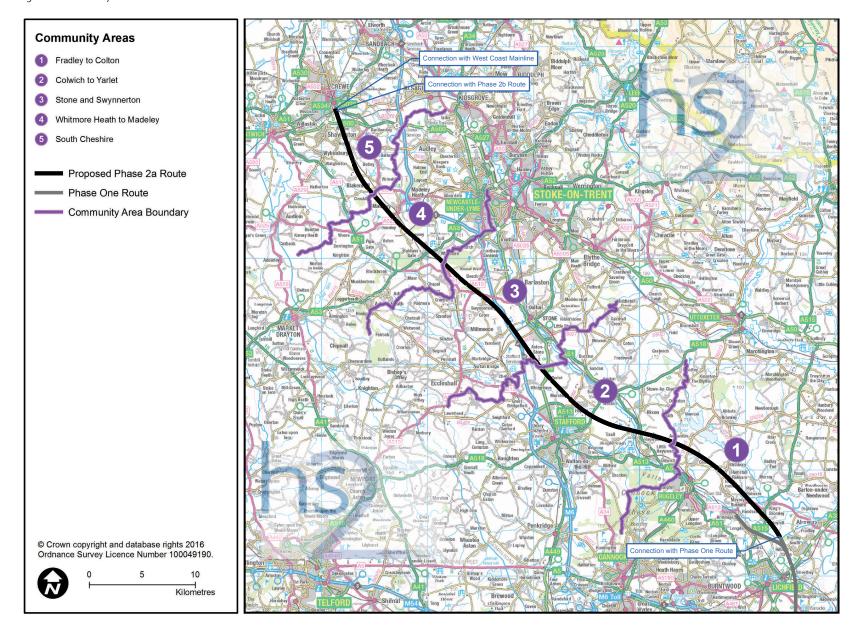
- 2.2.3 The spatial scope of this working draft EQIA Report is guided by the assessments within the working draft EIA Report and professional experience and judgement. An overarching spatial approach based around the following five community areas (shown in Figure 2: Community areas) is used across the working draft EIA Report and working draft EQIA Report, 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.

¹⁵ Arup/ERM (2016) HS2 Phase 2a: West Midlands to Crewe EQIA Scope and Methodology Report, September 2016. Available online at: https://www.gov.uk/

¹⁶ Arup/ERM (2016) HS2 Phase Two: West Midlands to Crewe EQIA Scope and Methodology Report – draft for consultation, March 2016. Available online at: https://www.gov.uk/

¹⁷ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/437449/G5_-Equality Diversity and Inclusion Policy v1.2.pdf

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

There is a limited range of guidance available, none of which is statutory guidance.
The methodology for this EQIA also 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. Section 4 includes relevant baseline evidence at the local, regional and national levels, and the appendix to this report provides a summary of published evidence undertaken in order to understand the needs of protected characteristic groups. 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 statutory bodies, such as local authorities, and communities to comment on and inform the scope and methodology of the assessment, the enhancement of beneficial effects, and the mitigation of disproportionate or differential adverse effects. The approach to stakeholder engagement to inform the EQIA is described in full in Section 3, and in the 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 on the grounds of their protected characteristics (the EQIA considers effects on groups of people rather than on individuals). Further information, including definitions of disproportionate and differential effects, is provided in the SMR.

3 Stakeholder engagement and public consultation

3.1 Introduction

- 3.1.1 Stakeholder engagement is ongoing, and further information will be provided in the formal EQIA Report. The stakeholder engagement programme has been 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 local needs and considerations 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, the meetings held to date, and the objectives of the ongoing engagement.

3.2 Objectives

- 3.2.1 The EQIA stakeholder engagement does 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 and begin to consider potential mitigation. The primary mechanism for this interaction is through face to face meetings and workshops.
- 3.2.2 The key objectives of the EQIA stakeholder engagement process at this stage are to:
 - identify protected characteristic groups within a local authority (LA) 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 Four different stakeholder groups have been identified to be engaged with for the EQIA on the basis of their proximity to the route and their relevance to the assessment:
 - LA equality and diversity officers (titles may differ between LAs) along the route;

- relevant public bodies and statutory organisations such as the EHRC;
- parish councils along the route; 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 LAs:
 - Staffordshire County Council;
 - Stafford Borough Council;
 - Lichfield District Council;
 - Newcastle-under-Lyme Borough Council; and
 - Cheshire East Council.
- 3.3.3 These meetings were intended as preliminary meetings to introduce the Proposed Scheme and the approach to the EQIA. It is intended that engagement with these local authorities will continue.
- 3.3.4 Engagement with stakeholders will identify potentially sensitive receptors along the route of the Proposed Scheme. It is intended, as far as possible, to hold face-to-face meetings with representatives of these receptors 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 been held with: Yarlet School; Rugeley School; and Conservation, Horticulture and Agriculture for the Disabled Society (CHADS). It is also intended to hold meetings with other potentially sensitive receptors along the route.

3.4 Consultation on the working draft EQIA report and other consultations

- 3.4.1 This working draft EQIA report is being formally consulted on between September and November 2016. Parallel consultations on refinements to the design and the working draft EIA Report are also being undertaken during this period. As part of the process of consultation, stakeholders are invited to comment on the Proposed Scheme and the working draft EIA and EQIA reports. Details on the consultations are available online at www.gov.uk/hs2.
- 3.4.2 Responses to the working draft EQIA Report consultation will be analysed and considered in the preparation of the formal EQIA Report.

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 ward¹⁸ level within each of the five CAs, within approximately 1km either side of the centre line of the route. National and district/borough level data has been included for comparison purposes.
- Baseline information that relates to the nine protected characteristic groups has been collected where available. These include: 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.
- Data sources for the baseline information include the 2011 Office for National Statistics Census ('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.
- Data from an Equality Analysis was also used to identify potential effects for protected characteristic groups¹⁹, and 'clusters' of protected characteristic groups along the Phase Two route. This data informed the baseline collection process for this working draft EQIA Report. 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 2011²⁰, also identified key aspects of the Proposed Scheme relevant for the assessment of equality effects. This screening report helped inform the scope of the EQIA.
- 4.2.6 Data collection is an ongoing process with additional relevant information from consultation and engagement to be included as the Proposed Scheme develops.

4.3 Information/data gaps

4.3.1 The Census does not collect data on sexual orientation, and there is very little data available at local level. Nationally, it is estimated that around 5-7% of people of the

¹⁸ 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 here: https://www.ons.gov.uk/methodology/geography/ukgeographies/censusgeography

¹⁹ 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.

²⁰ DfT, 2011, High Speed Rail: Investing in Britain's Future - Equality Impact Screening. London, Her Majesty's Stationary Office (HMSO).

population describe themselves as lesbian, gay or bisexual²¹. In the absence of reliable local data, estimates have not been provided for community areas. In addition the Census does not collect data on gender reassignment and there is no official estimate of the transgender population²².

4.4 Route overview

- The route of the Proposed Scheme would extend approximately 60km north from near Fradley to Crewe. The initial section of the route (from near Fradley to the A513) is predominantly rural in character and has low levels of deprivation. This area also has the highest proportion of white residents and the highest employment figures along the route. After crossing the A513, the route would pass the villages of Kings Bromley, Handsacre, Pipe Ridware and Blithbury before passing between the settlements of Stockwell Heath and Colton. Further north, the route would pass the towns of Rugeley and Stafford, within which some areas fall into the 30% most deprived nationally. However, the surrounding rural settlements of Great Haywood, Little Haywood, Hopton, Marston and Yarlet all have overall deprivation figures that position them in the 30% least deprived compared with the rest of England. These areas also have the lowest population density figures along the route with less than two persons per hectare as well as significantly higher proportions of men compared with women.
- 4.4.2 The route would continue north, passing close to the town of Stone, where overall deprivation is marginally higher than the surrounding rural areas, but still relatively low compared with national levels. The route would then pass Swynnerton, which has overall deprivation in the 20% least deprived nationally. Within these areas there are high proportions of people identifying as Christian and white ethnicity. The proposed route would then run through twin tunnels beneath the village of Whitmore Heath before continuing through the rural landscape and passing within 500m of the village of Madeley. Deprivation is slightly higher in Madeley than in the surrounding area, especially in terms of health and employment. There are particularly low proportions of people aged 0-15 in this area. Registered marriages are also at their lowest along the route in this area, with less than 50% of the adult population being married.
- At the northern end of the Proposed Scheme, the route would extend from Wrinehill to Crewe. This area is predominantly rural in character from Wrinehill to the crossing of the A500, at which point the surrounding land is designated for residential and commercial development. Compared with the rest of the route, ethnicity and religion are both more varied in the urban area of Crewe where the population density figure rises above 10 persons per hectare in some areas. Overall deprivation is low around Wrinehill and Wybunbury, while some areas around Crewe are in the 10% most deprived nationally. Private rented and socially rented housing proportions also increase significantly around Crewe.

²¹ ONS (2006) Sexual Orientation and the 2011 Census – background information.

²² EHRC (2009) Trans research review. Available online at: https://www.equalityhumanrights.com/en/trans-inequalities-reviewed [accessed August 2016]

4.5 Community area 1 (Fradley to Colton)

Introduction

4.5.1 This community area is within the county of Staffordshire and is administered by Lichfield District Council. It includes the wards of Alrewas and Fradley, Armitage with Handsacre, Colton and the Ridwares, and Kings Bromley.

Community profile

Population

4.5.2 Population density figures for Colton and Mavesyn Ridware and Kings Bromley are both below 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 approximately five people per hectare.

Age

4.5.3 All four 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, while less than 10% of each ward's resident population is aged 16-24 years.

Race

The wards in this area have larger proportions of white residents compared to the district and national average, with around 98% of residents in each ward being from this ethnic group. In Alrewas and Fradley, 1.3% of residents are from mixed/ multiple ethnic groups²³.

Disability

4.5.5 Approximately one-fifth of all households in each of the four wards have one or more person with a long term health problem or disability, which is consistent with local and national figures.

Sex

4.5.6 A higher proportion of females compared with males were recorded in each of the four wards, following the national trend of approximately 51% females and 49% males.

Marital and civil partnership

4.5.7 In the Lichfield District 54.8% of people are married. There are also 105 registered same-sex civil partnerships in the district, constituting 0.1% of the population.

²³ Census 2011 categories of ethnicity- Mixed/Multiple ethnic group includes White and Black Caribbean, White and Black African, White and Asian, any other Mixed/Multiple ethnic background

Pregnancy and maternity

4.5.8 The birth rate in the Lichfield District in 2014 was 9.6 per 1,000 population, equating to 982 live births.

Religion or belief

The wards in this area have higher proportions of Christians than the national average, with around 70% of the population identifying with this religion. In Alrewas and Fradley, 24.9% of people identify as having no religion, which is higher than the other wards.

Housing

4.5.10 Approximately 80% of people in each of the four wards in this area own their own home, while 8-10% rent privately. The proportion of people renting from the council is low, with approximately 1-2% of tenures falling into this category.

Employment and economy

- In each of the four wards in this area, approximately 60-65% of the resident population is economically active, with the highest rates amongst males and people aged 25-49. The same trend can be seen in the proportion of the labour force that is employed, with approximately 70% of males being employed compared to 55% of females across this area.
- All four wards have lower proportions of job seeker's allowance (JSA) claimants than the national average, indicating low levels of unemployment. Armitage and Handsacre, however, has higher proportions of JSA claimants in the 16-24 and 25-49 age groups compared to Lichfield.
- The proportion of children living in low income families in this area varies, with Alrewas and Fradley having only 7.0% of children in this category while Armitage with Handsacre has 14.0%. However, all wards have figures that are lower than the national average (20.1%).

Education, skills and training

- Alrewas and Fradley and Kings Bromley have high proportions of people with Level 4 qualifications²⁴ and above (compared with the other wards in this area), with over 30% of their respective resident workforce falling into this category. The proportion of people with no qualifications is lower at around 20% in these two wards while the proportion exceeds 25% for both Armitage with Handsacre and Colton and Mavesyn Ridware.
- 4.5.15 The proportion of the resident workforce in this area with Level 1-3 qualifications, apprenticeships and other qualifications is consistent with the national and local figures.

²⁴ https://www.nidirect.gov.uk/articles/qualifications-what-different-levels-mean

Staffordshire Locality Profile

- 4.5.16 Staffordshire County Council produces a Locality Profile for each district and borough within the county. 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 resources²⁵.
- 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.
- 4.5.18 The Lichfield Locality Profile was published in April 2016. Alrewas and Fradley, Colton and the Ridwares, and Kings Bromley are all identified as areas of low need. Armitage and Handscare is classed as medium need, as the levels of long-term adult social care users and premature mortality are higher than the England average.

Community resources and facilities

Schools and educational facilities

- 4.5.19 The following schools and educational facilities have been identified in community area 1:
 - Rugeley School, located on Blithbury Road near Rugeley, providing education for young people aged 5-19 who have been diagnosed with autism and moderate to severe learning difficulties. Rugeley School is linked with Mayfield Children's Home, located at Moreton House in community area 2 Colwich to Yarlet;
 - St Stephen's Primary School, a co-educational community primary school in Fradley providing education for children aged 4-11;
 - Toll House Nursery, a co-educational nursery in Mavesyn Ridware providing education and care for children aged 2-4 years old;
 - All Saint's Church of England (CofE) Primary School, a co-educational CofE primary school in Alrewas providing education for children aged 3-11 years old;
 - Richard Crosse CofE Primary School, a co-educational CofE primary school in Kings Bromley providing education for children aged 3-11 years old;
 - Henry Chadwick Community Primary School, a co-educational community primary school in Rugeley providing education for children aged 4-11 years old; and

²⁵ Staffordshire County Council, Insight, Planning and Performance (2016) Lichfield: Locality Profile. Available online at: http://www.staffordshireobservatory.org.uk/publications/thestaffordshirestory/LocalityProfiles.aspx#.V5lo6k32bhA [accessed July 2016]

• St Mary's CofE Primary School, a co-educational CofE primary school in Colton, providing education for children aged 4-11 years old.

Places of worship

- 4.5.20 The following places of worship have been identified in the area:
 - The Parish Church of All Saints (CofE), Alrewas;
 - All Saints (CofE), Kings Bromley; and
 - St Mary the Virgin (CofE), Colton.

Healthcare facilities

4.5.21 No healthcare facilities have been identified in the area.

Residential facilities

Kings Bromley Nursing Home is the only residential facility identified in the area. It is located on Manor Park in Kings Bromley, and provides accommodation and care (for up to 47 residents) for adults aged 55 and over, including those with dementia and physical disabilities.

Recreation and public open space

- 4.5.23 The following areas of recreation and public open space have been identified within the area:
 - Delta Force Paintball, located close to the Phase One route south of Kings Bromley Wharf, approximately 1km from the Proposed Scheme;
 - Manor Park fishing lakes at Kings Bromley: fishing lakes managed by Burton Mutual Angling Association, located approximately 140m from the Proposed Scheme at its closest point;
 - Manor Park Sailing Club: sailing club using the above lakes, approximately 140m from the Proposed Scheme at its closest point. The clubhouse is located approximately 350m from the Proposed Scheme;
 - Hurst Wood and Rugeley to Colton Circular Walk. Hurst Wood is an area of woodland located to the east of Colton and Stockwell Heath that can be accessed as part of the Rugeley to Colton Circular Walk;
 - Tomlinson's Spinney Woodland is approximately 3.5ha of publicly accessible
 woodland area located west of Shaw Lane and south of the A513 Rugeley Road
 South. Kings Bromley footpath 1 is located along the northern boundary of
 Tomlinson's Spinney, and provides access to the wood from the A513 Rugeley
 Road. The woodland area is located south of Kings Bromley; and
 - Trentside Meadows is a nature reserve owned and managed by CHADS, a
 charity based in Handsacre, which aims to enable access to the countryside for
 disabled people. It is an approximately 27.6ha site, located between the River
 Trent and the A513 Rugeley Road, west of Kings Bromley.

4.6 Community area 2 (Colwich to Yarlet)

Introduction

4.6.1 This community area is located within Staffordshire and is administered by Stafford Borough Council. It includes the wards of Haywood and Hixon, Milwich, Seighford, Church Eaton, and Milford.

Community profile

Population

All five wards in this area have population density figures below that of the local and national average, with no ward exceeding two persons per hectare. The total population figures in the wards range from approximately 2,000 in Milwich to 6,500 in Haywood and Hixon.

Age

Within this area, the age band with the largest proportion of people in each ward is the 45-64 group, with approximately 30% of residents. In Milford, 20.4% of residents are aged 16-24 compared with approximately 8% of residents in the other wards in this area. In Seighford, 24.1% of residents are aged 65-84, while the other wards have proportions of approximately 15-20% for this age band.

Race

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, both figures are significantly higher than in the other wards in this area.

Disability

4.6.5 The proportion of households in each ward in this area that have one or more person with a long term health problem or disability is approximately 25%, excluding Milford, which has just 21.3% of households in this group.

Sex

4.6.6 The proportion of males and females in each ward in this area does not uniformly follow the national and local pattern of higher numbers of females. In Milwich, 55.3% of the resident population are male and Seighford and Church Eaton have a 50% male resident population.

Marital and civil partnership

4.6.7 In Stafford Borough (in which this area lies), 51.9% of residents aged 16 years and above are married. There are also 166 registered same-sex civil partnerships in the borough, constituting to 0.2% of the resident population.

Pregnancy and maternity

4.6.8 The birth rate in Stafford Borough in 2014 was 9.1 per 1,000 population, equating to 1,201 live births.

Religion or belief

The wards in this area have 70% of their population stating Christianity as their religion, apart from Milford, at 65.4%. The proportion of people stating no religion is highest in Milford (23.6%) and Milwich (14.5%). Approximately 7% of the population in each ward chose not to state their religion.

Housing

4.6.10 Approximately 80% of the housing stock in each ward in this area is owner occupied, excluding Milwich, where 75.0% of houses are in this category. Private rented properties in Milwich account for 14.8% of houses, while it is approximately 8% for the other wards in this area. The proportion of rented and social rented properties in the wards in this area is consistently low.

Employment and economy

- 4.6.11 Economic activity exceeds 60% in all of the wards in this area. The proportion of economically active males is consistently higher than females, while approximately 90% of people aged 25-49 in each ward are economically active. The same trend can be seen in employment rates, with approximately 70% of males and 90% of those aged 25-49 being employed. Seighford and Milford have the lowest employment rates in this area at 60%.
- The proportion of people in this area who claim JSA is low, with no claimants aged 16-24. There are only 0.3% and 0.4% of residents aged 25-49 in Haywood and Hixon and Milford that are claimants.
- 4.6.13 Each of the five wards in this area records a significantly lower than average proportion of children in low income families. Rates are lowest in Milwich, at 2.4%, and Seighford, at 2.5%, compared with 12.0% overall in Stafford Borough and 20.1% nationally.

Education, skills and training

- 4.6.14 All five wards in this area have 30% and above of their resident workforce having Level 4 qualifications and above. This is highest in Milford, where 36.0% of the resident workforce falls into this category. Milford also has the lowest proportion of people with no qualifications at 13.2%, while in Milwich, 21.5% of the resident workforce are in this group.
- 4.6.15 The proportion of the resident workforce in this area with Level 1-3 qualifications, apprenticeships and other qualifications is consistent with local and national averages.

Staffordshire Locality Profile

4.6.16 Stafford Locality Profile was published in April 2016. All five wards in this community area are classed as areas of low need, as the levels of all 12 indicators outlined in Section 4.5²⁶ are higher than the England average.

Community resources and facilities

Schools and educational facilities

- 4.6.17 The following schools have been identified within the area:
 - Colwich Primary School, a CofE co-educational primary school providing education for children aged 4-11;
 - St John's Roman Catholic Primary School, a co-educational primary school in Great Haywood providing education for children aged 4-11, and a nursery for younger children;
 - St Peter's School, a CofE co-educational primary school in Hixon providing education for children aged 4-11; and
 - Yarlet School, an independent co-educational preparatory school and nursery providing education for children aged 2-13.
- 4.6.18 The following facilities have been identified that provide educational access, including for people with protected characteristics:
 - Ingestre Hall Residential Arts Centre is a facility owned and managed by Sandwell Metropolitan Borough Council. It offers residential arts courses and day visits for schools, youth, adult and community groups; and
 - Upper Moreton Farm: a working farm near Little Haywood, which provides educational visits for local schools, and rural therapy and care farming for people with mental health problems, multiple learning difficulties, emotional difficulties, and people who have experienced abuse or neglect.

Places of worship

- 4.6.19 The following places of worship have been identified in the area:
 - Mount Zion Congregational Chapel, Great Haywood;
 - Parish Church of St John the Baptist (Roman Catholic), Great Haywood;
 - Parish Church of St Mary the Virgin (CofE), Ingestre;
 - Parish Church of St Stephen (CofE), Great Haywood;
 - St Leonard's Church (CofE), Marston;
 - St Peter's Church (CofE), Hixon; and

²⁶ Staffordshire County Council, Insight, Planning and Performance Team (2016) Stafford: Locality Profile. Available online at: http://www.staffordshireobservatory.org.uk/publications/thestaffordshirestory/LocalityProfiles.aspx#.V5lo6k32bhA [accessed July 2016]

- St Peter's Church (CofE), Hopton.
- 4.6.20 In addition, St Mary's Abbey in Colwich is an enclosed community of Roman Catholic women who are members of the English Benedictine Congregation.

Healthcare facilities

- 4.6.21 The following healthcare facilities have been identified in the area:
 - Great Haywood Dental Practice;
 - Hazeldene House Surgery, Great Haywood; and
 - Stafford General Hospital.

Residential facilities

- 4.6.22 The following residential homes have been identified in the area:
 - Little Ingestre House Care Home: residential home providing accommodation (for up to 15 residents) for adults aged between 18 and 65 who require nursing or personal care, including those with learning disabilities and/or physical disabilities;
 - Mayfield Children's Home is a specialist residential home for students at Rugeley School located in the Fradley to Colton area (CA1). The home is located within Morton House, a Grade II listed building. The home has facilities for up to 23 children aged between 5 and 19, with 40-50 staff. Children stay on site up to 52 weeks a year, with some children on 40 week packages. All of the children are severely autistic, with many having special behavioural, learning or communication needs in addition. The site includes a small outdoor playground, football pitch, trampoline, gardening areas and a sensory garden. The children at the home often take walks in the local area and regular trips to local towns, particularly to Rugeley, Stafford and Cannock, and to the Wolesley Centre and Shugborough Hall.
 - Meadowfields Care Home, Pasturefields: residential home providing accommodation (for up to 65) adults who require nursing or personal care, including those with dementia and/or physical disabilities.

Recreation and public open space

- 4.6.23 The following recreation facilities have been identified in the area:
 - Staffordshire County Showground: multi-purpose venue, comprising
 exhibition halls, conference suites, a 600-seat grandstand and caravan and
 camping facilities for use on show days. The site covers approximately 24ha of
 land. It hosts a number of community events each year, such as a motor show,
 an animal show, a toy fair and the Staffordshire County Show. A bridge club
 and a Young Farmers group meet within the Showground on a weekly basis;
 - Ingestre Park Golf Club: private members golf club, with an 18-hole golf course and a range of practice facilities. It currently has 650 members. The Club has a GolfMark accreditation, which means that it is recognised as a safe, rewarding

and fulfilling place for participants of all ages, which encourages its members to stay active throughout their lives²⁷. In addition to the course there is a club house that includes a bar, restaurant and a pro shop. The club house facilities are used for a variety of social and recreational events and can cater for up to 200 people;

- Ingestre Stables: equestrian centre offering riding lessons, and British Horse Society accredited training and examinations. It is used regularly by the Stafford Riding for the Disabled Association; and
- Great Haywood Sports and Social Club: village club with bar and function room, providing entertainment events and a meeting place for sports clubs and other local organisations within the local community, including a local history society and local branch of the Royal National Lifeboat Institution.

Other community resources and facilities

- 4.6.24 There are a number of additional community resources that do not fit into the categories above, but that will need to be considered for the assessment. These include:
 - Girlguiding Staffordshire, St Peter's School, Hixon: county headquarters located at a site at St Peter's School in Hixon. The building is used by Girlguiding Staffordshire for various Girlguiding events and training activities, and can also be hired for meetings, conferences and other external events;
 - 7th Stafford (Trent Valley) Scout Group, Hixon: the group, based on Bath Lane, has an active Beaver Scout section, open to boys and girls aged between 6 and 8; and a Cub Scout section, open to boys and girls aged between 8 and 10½;
 - there are four private, authorised Gypsy and Traveller sites located on Within Lane in Hopton. These include Ashlea Mobile Home Park, Ashlea Caravan Site, Rear Widdens and Front Widdens, which together have a total of 56 pitches²⁸; and
 - Ivy Cottage Mobile Home Park is a privately owned park home site located on Within Lane in Hopton. Residence of the site is restricted to those aged 50 and over.²⁹

4.7 Community area 3 (Stone and Swynnerton) Introduction

4.7.1 Like community area 2, this community area is located within Staffordshire County and is administered by Stafford Borough Council. This area includes the wards of

²⁷ England Golf, GolfMark: http://www.golfmark.org/ [accessed May 2016]

²⁸ Arc4 (2012) Gypsy and Traveller Accommodation Needs Assessment for Stafford Borough. Available online at: http://www.staffordbc.gov.uk/live/Documents/Forward%20Planning/Examination%20Library%202013/D4--GYPSY-AND-TRAVELER-ACCOMMODATION-NEEDS-ASSESSMENT-FOR-SBC-2012.pdf [accessed May 2016]

²⁹ Thompson Park Homes, Park Rules for Ivy Cottage Mobile Home Park: http://www.thompsonparkhomes.co.uk/page4.html [accessed May 2016]

Milwich (also included in community area2), Walton, Eccleshall, Swynnerton, and Barlaston and Oulton.

Community profile

Population

4.7.2 Each ward in this area has a population of approximately 5,000 persons, excluding Milwich, which has a resident population of just 1,954 persons. Population density figures for the wards in this area are generally between 0.5 and 1.5, however, Walton, close to the urban centre of Stone, has 16.5 persons per hectare.

Age

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

Race

In each of the five wards in this area, 97-98% of the resident population is white. 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

4.7.5 In Walton and Barlaston and Oulton, nearly 30% of households have one or more person with a long term health problem or disability. In the other wards in this area, the proportion is lower at approximately 25%.

Sex

4.7.6 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.

Marital and civil partnership

4.7.7 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

4.7.8 The birth rate in Stafford Borough in 2014 was 9.1 per 1,000 population, equating to 1,201 live births.

Religion or belief

4.7.9 Approximately 75% of the population in each ward in this area are Christian, which is significantly higher than the national average of 59.4%. In Milwich, 14.5% were recorded as having no religion, while in Walton this was 19.6%.

Housing

In Swynnerton, 82.7% of the housing stock is owner occupied, the highest proportion in this area, with the other wards having approximately 70-80% of houses categorised in this group. There are lower than average proportions of social rented housing - approximately 3%, excluding Barlaston and Oulton where 7.7% of houses are rented from the council.

Employment and economy

- 4.7.11 Approximately 60-65% of the labour force in the wards in this area are economically active, excluding Barlaston and Oulton where only 57.5% fall into this category. Males are consistently more economically active than females, 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, while the other wards have proportions as high as 50% for this group.
- In Walton, 1% of people aged 16-24 are JSA claimants, while the proportion in Swynnerton is 1.4%. All other age groups in the wards across this area have less than 1% of the working age population claiming this benefit.

Education, skills and training

- In Walton, 26.6% of the resident workforce have Level 4 qualifications and above. This is lower than the rest of this area, where wards typically have over 30% in this group. Swynnerton has 17.1% of its resident workforce with no qualifications while the other wards all have over 20%.
- 4.7.14 The proportions of the resident workforce in this area with Level 1-3 qualifications, apprenticeships and other qualifications are consistent with the national and local figures.

Staffordshire Locality Profile

The Stafford Locality Profile identifies Milwich and Swynnerton as areas of low need. However Walton, Eccleshall, and Barlaston and Oulton are all classed as areas of medium need, as the levels of at least one of the 12 indicators outlined in Section 4.5³⁰ are higher than the England average. All three of these wards have levels of lone pensioners higher than the England average. Walton also has levels of long-term adult social care users higher than the England average³¹.

Community resources and facilities

Schools

- 4.7.16 The following schools have been identified in the area:
 - Manor Hill First School, a co-educational community primary school in Stone providing education for children aged 4-9;

³⁰ Staffordshire County Council, Insight, Planning and Performance Team (2016) Stafford: Locality Profile. Available online at: http://www.staffordshireobservatory.org.uk/publications/thestaffordshireostory/LocalityProfiles.aspx#.V5lo6k32bhA [accessed July 2016]

³¹ Staffordshireobservatory.org.uk/publications/thestaffordshireotory/LocalityProfiles.aspx#.V5lo6k32bhA [accessed July 2016]

- Pirehill First School, a co-educational community primary school in Stone providing education for children aged 5-9;
- Springfields First School, a co-educational community primary school in Yarnfield providing education for children aged 3-9; and
- Walton Priory Middle School, a co-educational community middle school in Stone providing education for children aged 9-13.

Places of worship

- 4.7.17 The following places of worship have been identified in the area:
 - St Mary's Church (CofE), Swynnerton; and
 - Our Lady of the Assumption Church (Roman Catholic), Swynnerton.

Healthcare facilities

4.7.18 Trentside Clinic in Stone is the only healthcare facility identified in the area.

Recreation and open space

The Yarnfield Park Sports Centre is the only recreational facility identified in the area. It has a gym and leisure facility located within the grounds of Yarnfield Park Training and Conference Centre. The sports centre is run by Nuffield Health and is open to members of the public, as well as to delegates and residents of the training and conference centre.

4.8 Community area 4 (Whitmore Heath to Madeley)

Introduction

4.8.1 This community area is within the Newcastle-under-Lyme Borough and includes the wards of Loggerheads and Whitmore, Madeley and Halmerend.

Community profile

Population

4.8.2 The population density figures for this area are relatively low, with all wards two persons per hectare or below. Loggerheads and Whitmore has the highest total population at 6,948, while the other two wards have approximately 4,000 people.

Age

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

Race

4.8.4 The wards in this area have particularly high proportions of people in the white ethnic group, with Halmerend having 98.5% of the resident population in this group compared to the national average of 85.4%. Loggerheads and Whitmore have a

relatively high proportion of Asian or Asian British people, with 1.4% of the resident population identifying as such, compared with other wards in this area. However, this is still significantly lower than the national average of 7.8%. Other ethnic groups across this area represent less than 1% of the population in each ward.

Disability

4.8.5 The ward of Halmerend has a higher proportion of households (26.9%) that have one or more person with a long-term health problem or disability, compared with the borough and national averages.

Sex

4.8.6 The wards in this area are consistent with the borough and national averages, having a higher proportion of women compared to men in the resident population. However, Loggerheads and Whitmore has a more equal number of males and females in the resident population.

Marital and civil partnership

4.8.7 In the Newcastle-under-Lyme Borough, 2011 census data from the ONS shows that 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

4.8.8 The birth rate in Newcastle-under-Lyme in 2014 was 10.2 per 1,000 population, equating to 1,291 live births.

Religion or belief

4.8.9 The three wards in this area have high proportions of people with Christian belief, the highest being 75.7% of people in Loggerheads and Whitmore. Only 16.2% of residents in this ward stated no religion, while the proportion for this group in the other wards was consistent with the borough and England average of 25%.

Housing

4.8.10 The proportions of owner-occupied dwellings in the wards in this area are significantly higher compared to the national average; 84.4% of residents in Loggerheads and Whitmore own their own home, compared to the national average of 63.3%. The proportion of residents that rent privately in the Newcastle-under-Lyme Borough is approximately 6% lower than the national average, which is reflected in all three wards.

Employment and economy

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 compared with females by approximately 10-12%. In Halmerend, only 38.9% of people aged 50 and over are economically active, which is lower than the other wards as well as the national average (40.1%). Total employment levels for the three wards are consistent with the national average, while above-average employment levels were recorded across this area for those aged 25-49.

- 4.8.12 All three of the wards have lower proportions of JSA claimants compared with the national average. However, the proportion of claimants aged 50-64 in Madeley is 1.1%, higher than the borough average of 0.9%.
- 4.8.13 The wards across this area have lower than average proportions of children living in low income families compared with the borough and national figures. Loggerheads and Whitmore have only 7.3% compared with the national average of 20.1%.

Education, skills and training

All three of the wards in this area have higher proportions of residents with Level 4 and above qualifications, compared with the borough and national average. The proportions of residents with Level 2 and Level 3 qualifications are consistent with the national trend. 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.

Newcastle-under-Lyme Locality Profile

4.8.15 Newcastle-under-Lyme Locality Profile was published in 2016. Loggerheads and Whitmore is classed as an area of low need. Madeley and Halmerend are identified as areas of medium need. Both wards have levels of lone pensioners³² higher than the England average.

Community resources and facilities

Schools and educational facilities

- 4.8.16 The following schools have been identified within the area:
 - Madeley High School, is a co-educational secondary school with academy status located in Madeley, providing education for children aged 11-16;
 - Baldwin's Gate CofE Primary School, is a co-educational primary school located in Baldwin's Gate, providing education for children aged 3-11; and
 - Sir John Offley Cofe Primary School, is a co-educational primary school located in Madeley, providing education to children aged 4-11, and a nursery for younger children.

Places of worship

- 4.8.17 The following places of worship have been identified in the area:
 - Baldwin's Gate Methodist Church, Baldwin's Gate;
 - St Mary and All Saints Anglican Church (Grade II listed), Whitmore; and
 - All Saints (CofE) Church (Grade II listed), Madeley.

³² Staffordshire County Council, Insight, Planning and Performance Team (2016) Newcastle-under-Lyme: Locality Profile. Available online at: http://www.staffordshireobservatory.org.uk/publications/thestaffordshirestory/LocalityProfiles.aspx#.V5lo6k32bhA [accessed July 2016]

Healthcare facilities

4.8.18 Madeley Medical Practice/Moss Lane Surgery in Madeley is the only healthcare facility identified in the area.

Residential facilities

4.8.19 Madeley Manor Care Home Ltd, located in Madeley is the only residential home identified in the area. The home provides accommodation for up to 38 adults aged 55 and over who require nursing or personal care, including those with learning disabilities and/or physical disabilities.

Recreation and public open space

- 4.8.20 The following recreation facilities have been identified in the area:
 - The Madeley Centre: community centre with a main hall and stage, as well as
 three function rooms for hire. Also contains a 'Rural Hub' where desks are
 rented out to the public and an Internet café. Car boot sales and a 'New2U'
 Charity shop also operate using the centre. Local groups that use the centre
 include Keikobasku Karate, Madeley Scout Group, Madeley Parish Council,
 University of the Third Age, Yoga, and Zumba Fitness;
 - Onneley Golf Club: private members golf club, with an 18-hole golf course and a range of practice facilities. The Club runs a junior academy and offers coaching courses and facilities. Juniors and female players are actively encouraged to join the open membership; and
 - 1st Madeley Scout Group, the Madeley Centre, Madeley: The group has an active Beaver Scout section, open to boys and girls aged between 6 and 8; a Cub Scout section, open to boys and girls aged between 8 and 10½; and a Scout section, open to boys and girls aged between 10½ and 14.

4.9 Community area 5 (South Cheshire)

Introduction

4.9.1 This community area is administered by Cheshire East Council and includes the wards of Wybunbury, Haslington, Shavington, Crewe South, and Crewe East.

Community profile

Population

4.9.2 Wards in the north of this area have higher population density figures compared with those in the south. Crewe East has the highest total population at 15,339 persons, while Shavington has the lowest at just 3,822 persons.

Age

4.9.3 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. The highest proportions of the resident population for Crewe South and Crewe East are those aged 25-44, at approximately 25-30% of their population, whilst the other three wards in the south have over 30% of their population aged 45-64.

Race

The wards in this area have proportions of white residents that exceed 96%, whereas Crewe South has a slightly lower proportion at 91.5%. Other significant ethnic groups include 4.3% of residents in Crewe South being from an Asian or Asian British ethnic background while a further 2.3% are from mixed/multiple ethnic group.

Disability

4.9.5 The numbers of households that have one or more people with a long-term health problem or disability are fairly consistent across the five wards and with the Cheshire East and national averages. Crewe East has highest proportion of those with a long-term problem or disability.

Sex

4.9.6 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 approximately 51% of the population in these areas.

Marital and civil partnership

4.9.7 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

4.9.8 The birth rate in Cheshire East in 2014 was 10.0 per 1,000 population, equating to 3,770 live births.

Religion or belief

4.9.9 The wards in this area have a high proportion of Christians, with roughly 70% of the population in 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 having no religion, which is higher than the other wards.

Housing

4.9.10 The proportion of resident owned houses in Wybunbury, Haslington and Shavington is above 80%, which is significantly higher than the national average and as much as 30% higher than that of Crewe South. In Crewe South, however, 28.8% of people are in private rented tenancies. Residents that have rented from council and other social rented tenures are also higher in Crewe South and Crewe East compared with the other wards.

Employment and economy

In each of the five wards in this area, approximately 60-65% of the resident population is economically active with the highest rates amongst males. Approximately 90% of people aged 25-49 are economically active, while only 36.8% of people in Shavington aged 50 and over are economically active. The same trend can be seen in the

- proportion of the labour force that is employed, with approximately 65-70% of males being employed compared to as few as 50.9% of females in Crewe East.
- The proportion of people in this area who claim JSA is low, with less than 1% of the population of any age claiming this benefit in Wybunbury, Haslington and Shavington. The proportion of working age claimants is higher in Crewe South and Crewe East, however, at approximately 1-2% for all age bands.
- 4.9.13 Data for the proportion of children living in low income families in this area is currently unavailable.

Education, skills and training

- 4.9.14 Wybunbury and Haslington 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 Cheshire East and national trends.
- 4.9.15 Crewe East has a significantly higher proportion of apprenticeships compared with the national average, while both Crewe South and Crewe East have considerably lower proportions of the resident workforce with other qualifications compared with Cheshire East and England.

Locality Profile

4.9.16 Cheshire East does not produce a Locality Profile.

Community resources and facilities

Schools and educational facilities

- 4.9.17 The following schools have been identified within the area:
 - Ruskin Community High School, a co-educational comprehensive secondary school located in Crewe providing education for children aged 11-16;
 - Westminster Street County Nursery, a co-educational nursery located in Crewe providing education for children aged 3-4;
 - Weston Village Primary School, a co-educational community primary school in Crewe providing education for children aged 4-11;
 - South Cheshire College, a co-educational further education college located in Crewe providing education for young people aged 16-18; and
 - Manchester Metropolitan University Cheshire Campus, a co-educational higher education university located in Crewe providing education for those aged 18 and above.

Places of worship

- 4.9.18 The following places of worship have been identified in the area:
 - Methodist Church, Chorlton;
 - Hough Methodist Church, Hough;

- Gresty Road Evangelical Church, Crewe; and
- The Chapel CofE Church, Weston.

Healthcare facilities

- 4.9.19 The following healthcare facilities have been identified in the area:
 - Chorlton Clinic, Chorlton;
 - Gresty Brook Medical Centre, South Crewe;
 - Rope Green Medical Centre, Shavington/Crewe; and
 - BUPA Centre, Crewe.

Residential facilities

- 4.9.20 The following residential homes have been identified in the area:
 - Doddlespool Care Home, Crewe: residential home providing accommodation (for up to 27 residents), for elderly people who require help with personal care and who may have dementia care needs; and
 - The Lady Verdin Trust, Crewe: residential services are offered to adults with learning disabilities as well as educational, living, and employment support.

Recreation and public open space

- 4.9.21 The following recreation facilities have been identified in the area:
 - Wrinehill Alpacas: a small farm located in Wrinehill where Huacaya alpacas are bred and sold. Visitors are able to see the herd, with a small number available for sale each year;
 - Wychwood Park Golf Club: an 18 hole private members golf course located in Wychwood, near Chorlton. The club also has a golf shop and onsite bar and hotel with 108 rooms for guests to stay at. The club is often hired out for meetings, training, conferences and other events; and
 - Crewe Alexandra Football Club: a League Two professional football team based at Gresty Road (The Alexandra Stadium). The stadium accommodates roughly 10,000 people. The club has an active Ladies team and provides junior coaching facilities at the Alexandra Soccer Centre in Shavington.

Other community resources and facilities

4.9.22 No Gypsy or Traveller sites have been identified in the area, however, plans for a Gypsy and Traveller site to be established in Middlewich, Crewe have been proposed.

5 Route-wide assessment

5.1 Introduction

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

5.2 General measures to mitigate equality effects

HS2 Ltd will put in place a range of general measures, which will serve to reduce potential negative equality effects and to enhance potential positive effects of the Proposed Scheme during construction and operation, as summarised below. Many of these are set out in the draft Code of Construction Practice (CoCP) (see the appendix to Volume 1 of the working draft EIA Report), which sets out measures to provide effective planning, management and control of environmental issues and issues affecting people during construction. The draft CoCP also makes provision for the preparation of local environmental management plans (LEMPs), which will set out how the Proposed Scheme will adapt and deliver the required environmental and community protection measures within each local authority area, through the implementation of specific measures required to control dust and other emissions from construction activities in the area. The draft CoCP has been prepared and is being consulted upon with the local authorities along the route.

General

- 5.2.2 HS2 Ltd has produced an Equality, Diversity and Inclusion Policy³³, which includes commitments to promote equal opportunity and diversity outcomes.
- 5.2.3 The nominated undertaker and its contractors will produce and implement a stakeholder 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. The appointed community relations personnel will be aware of equality and diversity issues relevant to the local community. The stakeholder engagement framework will include a mechanism for community relations personnel to report on newly arising issues concerning equality, as part of the on-going monitoring and implementation of measures relating to equality. The nominated undertaker will take reasonable 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.
- The nominated undertaker and its contractors will maintain a construction operations website and telephone helpline staffed 24 hours a day, 7 days a week, to handle

³³ https://www.gov.uk/government/publications/hs2-equality-diversity-and-inclusion-policy

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. The helpline will be widely promoted and displayed on site signboards and hoardings. It will also be possible to contact the HS2 helpline service via the HS2 website email function. Information for the public will also be provided using other methods such as social media, email alerts, local radio and newspapers as appropriate. The service will also be available in different languages, on a case by case basis, as agreed by the nominated undertaker.

The nominated undertaker and its contractors 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 framework.

Housing

- Individuals whose properties have to be acquired for construction of the Proposed Scheme will be eligible for compensation pursuant to the provisions of the National Compensation 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 can demonstrate that their homes are physically affected by its operation.
- In addition, the Government has developed a discretionary package of property measures, going above and beyond the National Compensation Code, which addresses the most serious effects of HS2 and which supports the local housing markets around the proposed line of the route. 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. Eligibility for these schemes depends on the location of the affected property.
- Further measures will be provided in rural areas where the line runs on the surface in recognition that the short-term effects on communities can reasonably be expected to be much more marked in these areas. This 'rural support zone' (RSZ) will cover the area outside safeguarding up to 120m from the centre line of the railway. The RSZ for Phase 2a will run from the connection with Phase One near Fradley to the A500 south of Crewe. The schemes available in the RSZ are a cash offer scheme, voluntary purchase, and a homeowner payment scheme.
- It was also announced in May 2016 that a number of changes would be implemented, with immediate effect, to the discretionary property assistance schemes which apply to Phase One and Phase 2a. These include additional guidance on health and mobility, whereby HS2 Ltd will give wider consideration to an applicant's health and mobility, and the suitability of their current property. In addition, HS2 Ltd will permit the use of local valuers in the valuation process for certain property compensation and assistance schemes³⁴.

³⁴ See https://www.gov.uk/government/speeches/hs2-phase-2a-west-midlands-to-crewe-property-consultation.

- 5.2.10 Further information about the property compensation schemes in place for Phase 2a can be found online at: https://www.gov.uk/government/speeches/hs2-phase-2a-west-midlands-to-crewe-property-consultation.
- Households affected by noise during construction may also qualify for noise insulation or temporary re-housing in accordance with the noise insulation and temporary rehousing policy set out in the draft CoCP. The policy expressly identifies that the nominated undertaker will consider at its discretion applications supported by evidence for noise insulation or temporary rehousing from occupiers who may have special circumstances, such as those with a medical condition which will be seriously aggravated by construction noise, and provide noise insulation or temporary housing where it is demonstrated that this is necessary.

Community infrastructure and public open spaces

- 5.2.12 HS2 Ltd will support the dissemination of information on public open space closures via the use of community liaison officers and measures contained within the draft CoCP.
- The nominated undertaker will maintain, where reasonably practicable, public rights of way (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.
- On completion of construction works in a particular location, the nominated undertaker will reinstate public open spaces used for construction. In cases where replacement facilities are to be provided, this will be done as soon as is practicable in the circumstances of the particular case. This may involve working with third parties, including relevant local authorities and local groups, to facilitate delivery.
- The draft CoCP includes additional provisions relating to construction activity near schools including, where practicable, the avoidance of Heavy Goods Vehicles (HGVs) operating adjacent to schools during drop off and pick up periods.

Employment and businesses

- HS2 Ltd has a number of strategic aims, which include skills, employment and education (SEE). These aims are driven down 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 protected characteristic groups who experience existing employment-related disadvantage.
- The SEE requirements and the procurement strategy will identify appropriate positive actions, as allowed 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 promoting equal opportunity for women, disabled people, young people, black, Asian and minority ethnic (BAME) groups and minority faith groups to share in new employment and training opportunities, as well as new

business opportunities, building on existing initiatives within the construction industry and lessons learned from comparable major schemes, including London 2012 and Crossrail. Children in low income households where adults benefit from new employment will also potentially benefit, as a result of increased household income.

HS2 Ltd has committed to providing a minimum of 2,000 apprenticeships over the lifetime of the project (both 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

- 5.2.19 Footways of adequate width to facilitate pedestrian flows and safe access around the site boundary will be provided, including signage where appropriate.
- 5.2.20 Lighting to site boundaries will be provided and illumination will be sufficient to provide a safe route for the public to use.
- 5.2.21 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.
- 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.
- 5.2.23 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

- In the design and construction of the Proposed Scheme, HS2 Ltd will comply with all relevant accessibility requirements set out in the Department for Transport's Design Standards, and the Design Manual for Roads and Bridges³⁵.
- 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;

³⁵ Available online at: http://www.standardsforhighways.co.uk/dmrb/ [accessed July 2016]

- workplace travel plans to reduce employee movements to/from construction sites and compounds; and
- various management procedures intended to reduce the impact of construction traffic; agreed routes for construction vehicles (HGVs), keeping to the main road network (e.g. motorways and strategic trunk roads and other 'A' roads).
- Traffic management mitigation to be used during construction and utility works may include temporary lane closures, junction signal retiming, temporary traffic signals, tidal flow workings, 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.
- 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 persons with restricted mobility will be identified, taking into account existing hazards and obstructions such as pavement kerbs and street lighting standards.
- The contractor will have full regard to the safety of other road users including pedestrians and cyclists. Specific measures will be included in the LEMPs 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.
- 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. 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.
- For the construction of the proposed railhead near Stone (located in community area 3) 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

- 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. 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 possible to reduce internal sound levels from construction activities and also when the Proposed Scheme comes into operation.
- The development of the Proposed Scheme has sought to keep the route alignment as low as reasonably practicable and away from main communities. These avoidance measures have 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. HS2 trains will be quieter than the relevant current European Union (EU) specifications, as assumed for the HS2 Phase One noise assessment³⁶. 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.

5.3 Further measures to address potential equality effects

- It is expected that the Secretary of State will establish a set of environmental controls known as Environmental Minimum Requirements, which will include the draft CoCP; policies setting out the approach to specific aspects of the Proposed Scheme, such as land acquisition and disposal, noise mitigation and discretionary compensation arrangements; and undertakings and assurances given to petitioners and to Parliament during the passage of the hybrid Bill.
- 5.3.2 As the design develops, further equality effects may be identified and the control measures outlined above will be relevant to addressing potential equality effects.
- 5.3.3 HS2 Ltd is committed to taking into account equalities issues when developing the fare structure for travel on the completed HS2 railway.

5.4 Potential effects during construction and operation

This section reports on potential differential and disproportionate effects that may arise along the route of the Proposed Scheme, during construction and operation.

³⁶ Measures would be put in place which would reduce noise emissions by approximately 3dB at 360kph compared to a current European high speed train operating on the new track

Loss of housing

- 5.4.2 There would be some loss of market housing in various locations along the route of the Proposed Scheme. Residents would be eligible for compensation in accordance with the National Compensation Code.
- The EQIA considers the potential for effects on community cohesion and existing housing-related disadvantage. There may be the potential for loss of housing to result in community cohesion effects, particularly in rural communities where any net loss could have the potential to affect existing social ties. In areas where a substantial proportion of housing would be lost or where there is a relatively high level of housing deprivation, there is the potential for a differential effect for older people, disabled people, or children and young people, who may be more likely to experience or be at higher risk of housing-related disadvantage^{37 38 39}. Where resident in affected properties, these groups may also be more sensitive to emotional distress and anxieties associated with relocation and the loss of existing social ties, particularly if they are unable to find suitable alternative accommodation nearby.
- Individual residential properties and small groups of residential properties would be lost in some rural locations along the route. The EQIA does not assess the impact of the Proposed Scheme on individual properties. Where five or more properties within a particular settlement are likely to be lost, potential equality effects are considered under the relevant community area assessment within this report. Areas that could be affected are Hopton (located in community area 2), Madeley (located in community area 4), and Basford West (located in community area 5).

Isolation in rural areas

- Many small settlements in rural areas have little community infrastructure, and residents are, therefore, reliant on transport to nearby settlements to meet their day-to-day needs, such as education and access to healthcare and services. Isolation effects can arise as a result of construction activities, increased traffic flows on local roads, the closure or diversion of local roads, or the presence of infrastructure and visual barriers in the landscape. There is the potential for this to affect community cohesion, and to result in adverse differential effects for women, children, older and disabled residents, who may have particular needs in terms of accessing services. Older and disabled residents may also be more likely to experience isolation as a barrier to accessing services and social activities⁴⁰.
- 5.4.6 Individual residential properties and small groups of residential properties would be affected by isolation in some rural locations along the route. The EQIA does not assess the impact of the Proposed Scheme on individual properties. Where five or more

³⁷ Homeless Link (2016) Young and Homeless 2015. Available online at http://www.homeless.org.uk/sites/default/files/site-attachments/201512%20-%20Young%20and%20Homeless%20-%20Full%20Report.pdf [accessed April 2016]

³⁸ Department for Work and Pensions (2015) Households below average income, 2013/2014: supporting data tables. Available online at: https://www.gov.uk/government/statistics/households-below-average-income-19941995-to-20132014 [accessed April 2016]

³⁹Department for Communities and Local Government (DCLG) (2015) English housing survey, households, 2013-2014. Available online at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/461439/EHS_Households_2013-14.pdf [accessed April 2016]

⁴⁰ Action with Communities in Rural England (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 [accessed April 2016]

⁴⁰ 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 [accessed April 2016]

properties within a particular settlement are likely to be affected by isolation, potential equality effects are considered under the relevant community area assessment within this report. Areas that are likely to be affected are Stockwell Heath (located in community area 1), Hopton (located in community area 2), Marston (located in community area 2), Great Haywood (located in community area 2), Madeley (located in community area 4), Den Lane in Wrinehill (located in community area 5), and Newcastle Road in Chorlton (also located in community area 5).

Effects on existing employment

- The working draft EIA Report states that an estimated 10 jobs could be lost 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 National Compensation Code. HS2 Ltd recognises the importance of displaced businesses being able to relocate to alternative premises and will therefore provide additional support to facilitate this.
- There are a number of employment areas along the route of the Proposed Scheme where the scale of employment change and/or the capacity of businesses to find alternative premises or adapt to changes brought about by the Proposed Scheme has the potential to give rise to effects. Affected employment areas are Great Haywood Marina and Ingestre Park Golf Club (both located in community area 2). Land required for the construction of the Proposed Scheme has the potential to impair the operation of these facilities.
- The profile of business owners and employees is not known. However, there may be the potential for any residual effects on these employment areas to result in adverse equality effects, where affected businesses 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. Residual socioeconomic effects will be reported in the formal EIA Report. Any identified differential or disproportionate equality effects will be reported in the formal EQIA Report.

Construction employment

- The Proposed Scheme would provide significant opportunities for employment, particularly in engineering and construction. It is estimated that the construction phase would generate the equivalent of approximately 2,690 full time construction jobs. 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, quantity surveying to business administration.
- The construction works would 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 a further 1,010 full-time jobs could be generated.
- 5.4.12 Certain protected characteristic groups 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 and families with disabled members⁴¹. Education, skills and employment gaps affect a number of BAME groups⁴². Pro-active measures in the construction sector have proven effective in addressing skills gaps and under-representation of protected characteristic groups, including women and disabled people.

- HS2 Ltd's Approach to Training and Employment Phase One Information Paper (G4) (June 2015)⁴³ 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 or the nominated undertaker 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. Information Papers based on those published for Phase One will be published by HS2 Ltd for Phase 2a. It is anticipated that the commitments contained will not be less than those made for Phase One.
- During the procurement of any relevant contract, HS2 Ltd or the nominated undertaker will require a range of skills, education and employment (SEE) outputs based on the contract value. Tenderers' responses will be evaluated against SEE criteria, including their record of SEE interventions as well as the number and proposed method of meeting the required SEE outputs. These outputs will, for example, 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 by a variety of means as part of their recruitment, training, communicating, publicising and performance management process.
- There is, therefore, the potential for the employment opportunities created during the construction phase to result in a positive equality effect for certain protected 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, underrepresentation in certain employment sectors and below average rates of pay. These include groups that are particularly affected by income poverty and deprivation, such as women, children, BAME groups, religious minority groups and families with disabled members. Certain BAME groups are also more likely to be affected by gaps in education, skills and employment⁴⁴.

⁴¹ Equality and Human Rights Commission (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 [accessed April 2016]

⁴²Joseph Rowntree Foundation (2015) Ethnic minority disadvantage in the labour market. Available online at: https://www.jrf.org.uk/report/ethnic-minority-disadvantage-labour-market [accessed April 2016]

⁴³ HS2 Ltd (2015) High Speed Two Information Paper G4: Approach to Training and Employment. Available online at: <a href="https://www.gov.uk/government/uploads/system/up

Approaches to Training and Employment v1.4.pdf [accessed June 2016]

⁴⁴ 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 [accessed June 2016]

Operational employment

- The Proposed Scheme would create an estimated 300 direct operational jobs at the HS2 IMD at Crewe. There would also be indirect employment opportunities associated with the HS2 IMD, resulting from expenditure on supplies and services necessary for the operation of the Proposed Scheme. Indirect jobs would also result from expenditure by those directly employed at the depot and by workers employed by suppliers contracted to the Proposed Scheme. It is estimated that 115 jobs would be created route-wide through indirect effects as a result of the operational phase. In total 415 direct and indirect permanent jobs are estimated to be created during the operational phase.
- 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 for 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 and families with disabled members.

Noise effects for residents

- The working draft EIA Report indicates that people living in some properties close to the line of the Proposed Scheme may potentially experience noise effects due to a change in the acoustic environment, both during construction and once the Proposed Scheme is operational. Within the demographic potentially affected, there may be people who are more or less sensitive to noise. The composition of groups affected in these areas is unknown and it is therefore not possible to assess whether there may be the potential for disproportionate or differential effects.
- 5.4.19 Further work is being undertaken to confirm residual construction noise and vibration effects, including any temporary effects from construction traffic. Further information will be reported in the formal EIA Report, and any identified differential or disproportionate equality effects will be reported in the formal EQIA Report.

Noise effects at schools and educational facilities

- The outdoor learning environment at a limited number of schools and educational facilities close to construction worksites may be subject to construction noise effects for varying durations. Potentially affected schools and educational facilities include Yarlet School located in community area 2.
- 5.4.21 Children, in particular younger children, are generally considered to be more sensitive than adults to the potential adverse effects of noise on their concentration and ability to learn, with implications for educational attainment⁴⁵ ⁴⁶. This has the potential to differentially and disproportionately affect children engaging in outdoor learning at affected schools. These effects also have the potential to temporarily affect the concentration of pupils and their ability to learn, which could result in a

⁴⁵ M. Haines, S. Stansfeld, S. Brentnall, J. Head, B. Berry, M. Jiggins, S. Hygge (2001) The West London Schools Study: the effects of chronic aircraft noise exposure on child health, Psychological Medicine, 2001, 31:8. Available online at: http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=91583 [accessed April 2016]

⁴⁶Shield, B. and Dockrell, J. (2007) The effects of environmental and classroom noise on the academic attainments of primary school children, available online at: http://eprints.ioe.ac.uk/926/1/Shield2008The Effects133.pdf [accessed April 2016]

- disproportionate and differential effect for children engaging in indoor learning within a classroom environment at these schools.
- HS2 Ltd will continue to seek reasonably practicable measures to further reduce or avoid effects on journey time, ease of reaching school, and as a result of construction noise. In doing so, HS2 Ltd will continue to engage with stakeholders to fully understand the affected receptors, their use and the benefit of mitigation measures. The outcome of these activities will be reflected in the Environmental Minimum Requirements. HS2 Ltd will ensure that measures within the draft CoCP and LEMPs designed to ensure the safety of pedestrians are taken into account.
- Further work is being undertaken to confirm residual construction noise and vibration effects, including any temporary effects from construction traffic. Further information will be reported in the formal EIA Report, and any additional identified differential or disproportionate equality effects will be reported in the formal EQIA Report.
- There may also be the potential for the outdoor learning environment at a limited number of schools and educational facilities to be affected by noise once the Proposed Scheme is operational. Further information will be reported in the formal EIA Report, and any additional identified differential or disproportionate equality effects will be reported in the formal EQIA Report.

Noise effects at places of worship

- Construction noise may affect a number of places of worship along the route of the Proposed Scheme, the facilities being predominantly churches. This, therefore, has the potential to have a disproportionate effect on Christians using these churches for worship, quiet prayer or contemplation, or for social and cultural uses. Places of worship that may be subject to construction noise are St Leonards Church, Marston and St Peters Church, Hopton, both located in community area 2.
- In addition to the measures included in the draft CoCP, HS2 Ltd will continue to seek reasonably practicable measures to reduce or avoid noise effects for users of these facilities. In doing so, HS2 Ltd will continue to engage with stakeholders to understand fully the places of worship, their use, and the benefit of mitigation measures.
- 5.4.27 Further work is being undertaken to confirm residual construction noise and vibration effects, including any temporary effects from construction traffic. Further information will be reported in the formal EIA Report, and any additional identified differential or disproportionate equality effects will be reported in the formal EQIA Report.
- There may also be the potential for places of worship along the route to be affected by noise once the Proposed Scheme is operational. Further information will be reported in the formal EIA Report, and any additional identified differential or disproportionate equality effects will be reported in the formal EQIA Report.

Loss and severance of access to public open spaces

There are effects on public open spaces at various points along the route of the Proposed Scheme. Facilities that would be occupied or partially required by the Proposed Scheme for construction related activities include:

- Hurst Wood (located in community area 1);
- Tomlinson's Spinney woodland area (located in community area 1);
- Trentside Meadows (located in community area 1); and
- Mill Lane allotments (located in community area 5).
- Children and young people, for whom public open space and play space are important for play, health, fitness and social interaction may be differentially and disproportionately affected by the temporary and permanent loss or severance of the public open spaces as above, though 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 the loss of these spaces, where this reduces their access to local outdoor recreation areas.

Diversion, realignment and closure of roads and PRoW

- There would be temporary and permanent diversion or realignment of roads at various points along the route of the Proposed Scheme, and a limited number of permanent closures. Roads that could be affected are set out in the relevant community area assessments. In some cases, the diversion, realignment or closure of roads would increase journey distance and time for traffic and for non-motorised users, and may result in adverse differential equality effects for people with protected characteristics. For example, 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, leading to a potential increase in isolation⁴⁷.
- There would be temporary and permanent diversion or realignment of PRoW at various points along the length of the Proposed Scheme, and a limited number of permanent closures. PRoW that would be affected are set out in the relevant community area assessments. In some cases, the diversion, realignment or closure of PRoW would increase journey distance and time for non-motorised users and may result in adverse differential equality effects for people with protected characteristics. For example, exercise and access to the outdoors is particularly important for children, while older and disabled people may experience greater difficulties than other users when making use of longer and potentially more complex alternative routes⁴⁸. In other cases there could be a reduction in journey distance, with the potential for beneficial equality effects for these groups.

Construction traffic

5.4.33 Construction traffic using local roads to access compounds and worksites may increase traffic flows, resulting in increased congestion and delays on some roads and increased traffic severance effects for non-motorised users, such as difficulties in crossing roads. Where severance affects a receptor, such as a school or place of worship, this would have the potential to differentially affect users of that facility. There may also be the potential for differential effects for children, older people and

⁴⁷ACRE (2014) Older people: policy position paper and Scope (2012) Over-looked communities, over-due change.

⁴⁸Play England (2006) Planning for play: guidance on the planning and implementation of a local play strategy. Available online at: http://www.playengland.org.uk/media/120480/planning_for_play.pdf [accessed April 2016]

disabled people, who may be more likely to experience severance and increased journey times as barriers to accessing services and engaging in social activities⁴⁹. Roads that would be affected are set out in the relevant community area assessment.

The CoCP and LEMPs will contain a number of measures designed to ensure safety of pedestrians and cyclists, and avoid causing concern or anxiety about safety, particularly in the vicinity of schools and other facilities used by protected groups. The LEMPs will take account of the potential site specific issues raised in this report.

Air quality and health effects

- 5.4.35 Some people with protected characteristics may be particularly susceptible to health effects arising from air pollution. This includes older people and children, as well as those with existing respiratory or cardiovascular health conditions. There is a well-established association between health and socio-economic status, and so children, older people and those with existing conditions may be at particular risk where they live in income-deprived households⁵⁰. There may also be the potential for perceived health impacts arising from anxiety around increased traffic emissions, particularly for people with existing respiratory conditions.
- 5.4.36 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. Furthermore, it is important to note that air quality impacts are identified with respect to air quality legislation, and that a significant air quality impact does not necessarily denote a significant direct impact on human health.
- The methods 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 it is not expected that any direct health and wellbeing effects will arise as a result of air quality effects during construction. A summary of the potential residual significant effects on local air quality will be reported in the formal EIA Report. Where any residual health effects are identified as a result, any potential equality effects will be reported in the formal EQIA Report.

Crime, safety and personal security

Members of protected characteristic groups can have greater-than-average levels of concern about crimes and anti-social behaviour⁵¹. It is possible that they may have concerns that change to the street-scape, such as around construction sites, may create opportunities for increased incidences of crime and anti-social behaviour (including hate crimes and hate incidents, which are of particular relevance to protected groups). General measures set out in the draft CoCP will contribute to addressing concerns about personal security and minimising risks of crime and anti-social behaviour associated with the construction activities. These measures will reduce risks that members of protected characteristic groups would experience

⁴⁹ACRE (2014) Older people: policy position paper and Scope (2012) Over-looked communities, over-due change

⁵⁰ EHRC (2010) How Fair is Britain?

⁵¹Transport for London (TfL) (2014) Understanding the travel needs of London's diverse communities: a summary of existing research. Available online at: http://content.tfl.gov.uk/understanding-the-travel-needs-of-london-diverse-communities.pdf [accessed April 2016]

differential effects in terms of heightened concerns or actual vulnerability to greater risks of crime or anti-social behaviour associated with the presence of construction activities.

6 Community area 1 (Fradley to Colton) assessment

- 6.1.1 The following impacts have been identified in the Fradley to Colton area, which could give rise to potential equality effects:
 - isolation at Stockwell Heath;
 - loss of open space at Trentside Meadows and Tomlinson's Spinney;
 - loss of open space and reduced access to Hurst Wood;
 - temporary diversion or realignment of 12 PRoW and permanent diversion or realignment of 10 PRoW;
 - closure of Common Lane and Shaw Lane;
 - permanent diversion or realignment of A515 Lichfield Road, Pipe Lane, Hadley Gate, the B5014 Uttoxeter Road, Blithbury Road, Stonyford Lane, Newlands Lane (North), Newlands Lane (South), Moor Lane and the B5013 Uttoxeter Road; and
 - increased traffic flows during construction on A₃8 Lichfield Road, A₅1 Stafford Road, A₅15 Lichfield Road, A₅13 Rugeley Road, A₅192 Eastern Avenue, Wood End Lane, B₅014 Uttoxeter Road, and B₅013 Uttoxeter Road.
- Potential differential and disproportionate equality effects which could arise as a result of these impacts are discussed in Section 5.4. Where further information is available regarding particular receptors, a more detailed discussion of potential equality effects is provided below. Further analysis along with stakeholder engagement will verify these equality effects for the formal EQIA Report. Any mitigation will be based on the equality effects identified in the formal EQIA Report.

Stockwell Heath

- 6.1.3 Stockwell Heath is a small rural hamlet comprising 12 residential properties, located to the north of the village of Colton. Stockwell Heath is closely linked with Colton, with the majority of local services located in Colton. Facilities in Colton include a church, primary school, and two public houses. The two villages are currently linked by Moor Lane and Newlands Lane.
- 6.1.4 The Stockwell Heath embankment would be located between Colton and Stockwell Heath, crossing Moor Lane and Newlands Lane. Moor Lane would be diverted and Newlands Lane would be permanently realigned. The two roads would be combined into one road passing under the route of the Proposed Scheme at the Newlands Lane (North) underbridge. This would ensure that access between the villages is retained; however, access would be reduced to a single route.
- 6.1.5 The physical disruption to access as a result of construction activities and the presence of the route acting as a visual barrier between the settlements is likely to permanently isolate the residential properties in Stockwell Heath. This has the potential to result in an adverse effect on community cohesion in the community of Colton and Stockwell

Heath. There is the potential for isolation to result in adverse differential effects for women, children, older and disabled residents of Stockwell Heath, who may have particular needs in terms of accessing services. Older and disabled residents may also be more likely to experience isolation as a barrier to accessing services and social activities.

6.1.6 Isolation could also adversely affect community cohesion in the wider community of Stockwell Heath and Colton, as the reduction in access between the two settlements has the potential to affect existing social and community ties. This could give rise to differential adverse equality effects for people with protected characteristics, including older people, disabled people and children, who may be more sensitive to emotional distress associated with any loss of existing ties.

Trentside Meadows

- 6.1.7 Trentside Meadows is a Local Wildlife Site owned and managed 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. 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 users of Trentside Meadows includes school groups (including Rugeley School); groups of older people from local residential homes; people with conditions including arthritis, MS, 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 (weddings etc.), and are used by local groups for yoga and meditation
- 6.1.8 Part of Trentside Meadows (approximately 7.5ha) is located within land required for the construction of the River Trent viaduct. An additional area (approximately 4.0ha) would also be isolated from the rest of the nature reserve throughout construction. Overall, approximately 40% of Trentside Meadows (including the area lost and the area isolated) would be temporarily inaccessible to the public during the construction period. Some of this land may also be inaccessible once the Proposed Scheme is operational. This will be reported in the formal EIA report, and any equality effects in the formal EQIA Report.
- 6.1.9 Users of the site are understood to include disabled people and those with mobility issues, who may be less able to access nearby alternative facilities. The temporary loss of approximately half of the open space for the construction period, therefore, has the potential to give rise to adverse disproportionate and differential equality effects for disabled people during construction. Further consideration will be given to try to reduce the temporary land take from Trentside Meadows.
- 6.1.10 Operational effects of the Proposed Scheme on Trentside Meadows will be reported in the formal EIA Report. Any identified differential or disproportionate equality effects will be reported in the formal EQIA Report.

7 Community area 2 (Colwich to Yarlet) assessment

- 7.1.1 The following impacts have been identified in the Colwich to Yarlet area, which could give rise to potential equality effects:
 - isolation at Marston and Great Haywood;
 - permanent closure of Hopton Lane, loss of housing and isolation at Hopton;
 - isolation and noise impacts at Staffordshire County Showground;
 - · loss of land and facilities at Ingestre Park Golf Club;
 - noise and visual impacts at Mayfield Children's Home and Upper Moreton
 Farm
 - impacts on existing employment at Great Haywood Marina and Ingestre Park Golf Club;
 - construction noise at Yarlet School, St Leonard's Church, Marston, and St Peter's Church, Hopton;
 - temporary diversion or realignment of 14 ProW and permanent diversion or realignment of 13 PRoW; and
 - permanent closure of Colwich Footpath 55;
 - permanent diversion or realignment of A51 Lichfield Road, Tolldish Lane, the A518 Weston Road, the B5066 Sandon Road, Hopton Lane and Marston Lane; and
 - increased traffic flows during construction on M6, A34 Stone Road, A51
 Lichfield Road, A518 Weston Road, A513 Beaconside, and B5066 Sandon Road.
- Potential differential and disproportionate equality effects which could arise as a result of these impacts are discussed in Section 5.4. Where further information is available regarding particular receptors, a more detailed discussion of potential equality effects is provided below. Further analysis along with stakeholder engagement will verify these equality effects for the formal EQIA Report. Any mitigation will be based on the equality effects identified in the formal EQIA Report.

Marston

- 7.1.3 Marston Lane extends north from the small rural village of Marston. There are a number of residential properties and farms located on this road that connects Marston to Yarlet. Marston has few services but provides an alternative route to the A34 into Stafford town from Yarlet.
- 7.1.4 The area required for the Marston South embankment, Marston Lane diversion, Marston Bridleway 8 accommodation underbridge and the Marston Lane satellite compound would be in proximity to five residential properties on Marston Lane. The

Marston South embankment would form a physical barrier between these five properties and the rest of Marston and Yarlet. Access to the properties would be maintained via Marston Lane, however, this route would be used as a construction traffic route, possibly leading to delays.

7.1.5 The possible reduction in accessibility and the presence of construction activities is likely to result in temporary isolation for this group of residential properties on Marston Lane. There could be the potential for an adverse differential effect for any older and disabled residents, who may be more likely to experience the isolation of the properties as a barrier to accessing the services and social activities in Yarlet and Marston.

Great Haywood

- 7.1.6 Great Haywood is a village which provides shops and services, including the local health centre for the surrounding area. There are a number of residential properties and farms located on the roads extending north and south of the village such as the A51 Lichfield Road, Tolldish Lane, Mill Lane and Hoo Mill Lane.
- 7.1.7 The area required for the construction of the Trent South embankment, the works to the A51 Lichfield Road, and the construction of the Great Haywood viaduct would be adjacent to 11 residential properties to the north and south of Great Haywood. Associated works including the Tolldish Lane diversion and the Hoo Mill Lane diversion; construction of the A51 Lichfield Road underbridge, Mill Lane autotransformer station, A51 main compound and Mill Lane satellite compound and the diversion of a high pressure gas main will also be located in proximity to these residences.
- 7.1.8 The possible reduction in accessibility and the presence of construction activities is likely to result in temporary isolation for this group of properties to the south and north of Great Haywood. There could be the potential for an adverse differential effect for any older and disabled residents, who may be more likely to experience the isolation of the properties as a barrier to accessing the services and social activities in Great Haywood.

Hopton

- 7.1.9 Hopton is a village located to the north-east of Stafford, in the ward of Milwich. Facilities in the village include a church and village hall. The south-western extent of the village adjoins Ministry of Defence (MoD) Stafford, on Spode Avenue.
- 7.1.10 The construction of the Hopton cutting, landscape mitigation earthworks and the diversion of Hopton Lane would require the demolition of seven residential properties within the village. Hopton is located in an area of relatively high deprivation in terms of access to housing, and so any net loss in housing stock could have the potential to result in an adverse equality effect for groups who experience barriers to housing, including younger people, female-headed households, and some BAME groups.
- 7.1.11 The loss of housing stock also has the potential to give rise to adverse community cohesion effects, including the loss of existing social and community ties. This could result in differential adverse equality effects for people with protected characteristics,

- including older people, disabled people, and children, who may be more sensitive to emotional distress associated with the loss of existing ties.
- 7.1.12 The Hopton North cutting would separate the majority of residential properties and community facilities in the north from approximately 10 properties on Mount Edge and approximately 38 properties within the MoD Stafford barracks off Spode Avenue in the south. The route would be in cutting, resulting in limited views of the Proposed Scheme, but would nevertheless form a visual barrier between the two parts of the village.
- 7.1.13 The route of the Proposed Scheme would also sever Hopton Lane and the B5066 Sandon Road, which would be diverted. This would increase the distance which would need to be travelled from residences south of the Proposed Scheme to access community facilities in the north by approximately 1.2km, resulting in a permanent perception of isolation for residents.
- 7.1.14 Severance and isolation have the potential to result in adverse equality effects for residents of the village with protected characteristics. For example, older people and disabled people may be more likely to experience increased travel distances as a barrier restricting their access to services and social activities. Furthermore, the severance of the village has the potential to contribute to the adverse community cohesion effects resulting from the loss of housing.

Staffordshire County Showground

- 7.1.15 Staffordshire County Showground is a multi-purpose venue, comprising exhibition halls, conference suites, a 600-seat grandstand and caravan and camping facilities for use on show days. It is open to the public on show days, and is also used for conferences, banqueting and other events. A bridge club and a Young Farmers group meet within the Showground on a weekly basis.
- 7.1.16 The Showground is accessed only from the A518 Weston Road, which would be realigned as part of the Proposed Scheme. During construction, access to the Showground via the A518 is likely to be disrupted; however, works would be managed to ensure access to the site is maintained. There may be the potential for this to affect the use of the Showground by people with protected characteristics, including older people and disabled people who may be more likely to experience disruption as a barrier.
- 7.1.17 The route of the Proposed Scheme would pass through the southern part of the Showground. The initial noise assessment identifies a potential residual noise impact on the Showground. This initial assessment is in the absence of detailed baseline sound levels, and specific information regarding the characteristics of the facilities at the Showground, including their construction, layout, day-to-day requirements and uses. Further assessment work is being undertaken to confirm residual operational sound and vibration effects, especially those at non-residential receptors and quiet areas (as necessary, on a receptor-by-receptor basis). This will be reported in the formal EIA Report.
- 7.1.18 There may be the potential for any residual noise effects to result in adverse differential equality effects for users of the showground with protected characteristics who may be more likely to be sensitive to the impact of noise, including children, older

people, and disabled people. The profile of users of the Showground is not known, and it is not understood whether the isolation of these facilities resulting from disruption to access to the site would be likely to affect the use of the Showground by people with protected characteristics. Where possible, information will be collected through stakeholder engagement and desk-based research in order to understand the potential for equality effects. Any identified differential or disproportionate equality effects will be reported in the formal EQIA Report.

Ingestre Park Golf Club

- 7.1.19 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, and can cater for up to 200 people.
- 7.1.20 The Trent North embankment, the Brancote south cutting and associated landscaping would require a total of approximately 20.8ha (approximately 40%) of Ingestre Park Golf Club to be either lost, or cut off from the clubhouse by the route during construction. This area would cover seven holes of the course. 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. This loss of land would mean that the club would not be able to function in its current arrangement.
- 7.1.21 In the absence of mitigation, there is the potential for this to result in an adverse equality effect for members of the golf club with protected characteristics. For example, the loss of long standing social links could be particularly important for older people who use the club and clubhouse facility. The profile of club members is not known. Where possible, information will be collected through stakeholder engagement and desk-based research in order to develop a profile of the golf club users and understand the potential for equality effects. Any identified differential or disproportionate equality effects will be reported in the formal EQIA Report.

Mayfield Children's Home

- 7.1.22 Mayfield Children's Home, located at Moreton House on Bishton Lane, is part of Rugeley School, a specialist residential school for young people aged five to 19 with autism and moderate to severe learning difficulties. Mayfield Children's Home provides open-ended and longer-term residential accommodation and wraparound care for up to 23 pupils of the school.
- 7.1.23 During construction, it is anticipated that there is the potential for residents at Moreton House to experience close range views of large scale excavation works associated with the railway cutting. This has the potential to result in a high magnitude of visual change. Whilst some of the construction works would be screened by the proposed cutting and the local topography, a large extent of the works would be in proximity to this facility. In particular, it is anticipated that there would be open views of the works from the upper storeys at Moreton House.
- 7.1.24 Once the Proposed Scheme is operational, it is anticipated that there would be the potential for residents at Moreton House to experience close range views of the proposed cutting, in both summer and winter of year 1 of operation. Replacement planting would mitigate adverse effects to some extent, however, this has the

potential to result in a high magnitude of visual change. Although the cutting would become more integrated within the view by the summer of year 15, due to its proximity, the Proposed Scheme would still be very apparent.

- 7.1.25 Consideration will be given during the detailed design stage to where planting can be established early in the construction programme. This may include consideration of early planting in ecological mitigation sites, which would have the additional benefit of providing some visual screening. However, not all landscape and visual effects can be practicably mitigated due to the visibility of construction activity and the sensitivity of surrounding receptors. While replacement planting would mitigate the impact on Moreton House to an extent, it is anticipated that there would be a residual visual effect arising from the operation of the Proposed Scheme. Residual effects arising during construction will be reported in the formal EIA Report.
- 7.1.26 The initial noise assessment identifies a potential residual airborne noise impact on Mayfield Children's Home at Moreton House. This initial assessment is in the absence of detailed baseline sound levels, and specific information regarding receptors, including their construction, layout, day-to-day requirements and uses. Further assessment work is being undertaken to confirm residual operational sound and vibration effects, especially those at non-residential receptors and quiet areas (as necessary, on a receptor-by-receptor basis). This will be reported in the formal EIA Report.
- 7.1.27 Children, in particular younger children, are generally considered to be more sensitive than adults to the potential adverse effects of noise. There is, therefore, the potential for any residual noise effect at Mayfield Children's Home to give rise to an adverse differential equality effect for children residing at the home. People on the autistic spectrum can be particularly sensitive to changes in the sensory environment. Therefore, any residual noise or visual effects resulting from changes in the landscape as a result of large scale excavation works may have the potential to give rise to an adverse differential effect for children with autism residing at Mayfield Children's Home.
- 7.1.28 Engagement with Rugeley School is ongoing to understand any concerns in relation to noise and visual impacts, and develop measures to reduce the potential for equality effects on Mayfield Children's Home. Any disproportionate or differential equality effects identified as a result of residual noise or visual effects will be reported in the formal EQIA Report.

Upper Moreton Farm

- 7.1.29 Upper Moreton Farm is a working farm near Little Haywood, which provides educational visits for local schools, and rural therapy and care farming for people with mental health problems, multiple learning difficulties, emotional difficulties, and people who have experienced abuse or neglect⁵².
- 7.1.30 During construction, it is anticipated that there would be elevated views from Upper Moreton Farm of potential construction works associated with the Moreton Brook

⁵² Care farming at Upper Moreton Farm: http://www.uppermoretonfarm.co.uk/what-we-offer/care-farming/ [accessed August 2016]

- viaduct and associated embankments (also covered in community area 1). This has the potential to result in a high magnitude of visual change.
- 7.1.31 Once the Proposed Scheme is operational, it is anticipated that there would be elevated views from Upper Moreton Farm of the Moreton Brook viaduct, associated embankments, noise barriers and overhead line equipment, in both summer and winter of year 1 of operation. However, replacement planting would mitigate adverse effects to the extent that no residual effects are anticipated.
- Consideration will be given during the detailed design stage to where planting can be established early in the construction programme. This may include consideration of early planting in ecological mitigation sites, which would have the additional benefit of providing some visual screening. However, not all landscape and visual effects can be practicably mitigated due to the visibility of construction activity and the sensitivity of surrounding receptors. Any residual effects arising during construction will be reported in the formal EIA Report.
- 7.1.33 The profile of users of Upper Moreton Farm is not known. However, people on the autistic spectrum can be particularly sensitive to changes in the sensory environment, and so there may be the potential for any residual visual effect at Upper Moreton Farm to give rise to an adverse differential equality effect for people with autism using this facility. Where possible, information will be collected through stakeholder engagement and desk-based research in order to develop a profile of users and understand the potential for equality effects. Any identified differential or disproportionate equality effects arising from residual visual effects will be reported in the formal EQIA Report.

8 Community area 3 (Stone and Swynnerton) assessment

- 8.1.1 The following impacts have been identified in the Stone and Swynnerton area, which could give rise to potential equality effects:
 - temporary closure of Yarnfield Lane for three years due to the construction of the Stone railhead;
 - temporary diversion or realignment of nine PRoW and permanent diversion or realignment of nine PRoW;
 - permanent closure of a section of Swynnerton Bridleway 54; and
 - increased traffic flows during construction on M6, A51 Stone Road, A34
 Stafford Road/The Fillybrooks, A519 Newcastle Road, B5026 Eccleshall Road, Yarnfield Lane, Meece Road, Tittensor Road, and Bent Lane.
- 8.1.2 Potential differential and disproportionate equality effects which could arise as a result of these impacts are discussed in Section 5.4. Where further information is available regarding particular receptors, a more detailed discussion of potential equality effects is provided below. Further analysis along with stakeholder engagement will verify these equality effects for the formal EQIA Report. Any mitigation will be based on the equality effects identified in the formal EQIA Report.

9 Community area 4 (Whitmore Heath to Madeley) assessment

- 9.1.1 The following impacts have been identified in the Whitmore Heath to Madeley area, which could give rise to potential equality effects:
 - loss of housing and isolation at Bar Hill, Madeley;
 - temporary diversion of the A53 Newcastle Road during construction;
 - temporary diversion or realignment of six PRoW and permanent diversion or realignment of three PRoW, including permanent realignment of the Newcastle Way promoted route;
 - permanent closure of Madeley Bridleway 5;
 - permanent closure of a section of Snape Hill Road;
 - · permanent realignment of Bent Lane; and
 - increased traffic flows during construction on M6, A51 London Road, A53 Newcastle Road/Whitmore Road, A5182 Trentham Road, A525 Bar Hill/Newcastle Road, Manor Road.
- 9.1.2 Potential differential and disproportionate equality effects which could arise as a result of these impacts are discussed in Section 5.4. Where further information is available regarding particular receptors, a more detailed discussion of potential equality effects is provided below. Further analysis along with stakeholder engagement will verify these equality effects for the formal EQIA Report. Any mitigation will be based on the equality effects identified in the formal EQIA Report.

Bar Hill, Madeley

- 9.1.3 The village of Madeley and the adjoining village of Little Madeley are situated to the east of the WCML and the west of the M6. Facilities in the villages include a church, primary and secondary schools, and various shops, pubs and community resources.
- 9.1.4 Construction of the Proposed Scheme would require the realignment of the A525 Bar Hill close to a group of six residential properties located to the west of Madeley. These properties would be surrounded by construction works which may result in severance and isolation effects. There is the potential for severance and isolation to result in adverse equality effects for residents with protected characteristics. For example, older people and disabled people may be more likely to experience increased travel distances as a barrier restricting their access to services and social activities.

10 Community area 5 (South Cheshire) assessment

- 10.1.1 The following impacts have been identified in the South Cheshire area, which could give rise to potential equality effects:
 - isolation at Den Lane, Wrinehill, and Newcastle Road, Chorlton;
 - loss of open space at Mill Lane Allotments;
 - loss of an estimated 40 residential properties at Basford West site on Jack Mills Way, Crewe⁵³;
 - temporary diversion or realignment of 19 PRoW and permanent diversion or realignment of 18 PRoW;
 - permanent closure of Blakenhall Footpath 15, Blakenhall Footpath 17, Chorlton Footpath 3 and Shavington cum Gresty Footpath 2;
 - permanent closure of part of B5071 Jack Mills Way;
 - permanent realignment or diversion of Checkley Lane, Den Lane, Chorlton Lane, Newcastle Road, Casey Lane, Weston Lane, the A500 Shavington Bypass, the B5071 Gresty Road and Crotia Mill Lane;
 - potential for increased congestion and delays at and in the vicinity of Crewe Station; and
 - increased traffic flows during construction on M6, A51 London Road; A500 Newcastle Road/Shavington Bypass; A531 Newcastle Road; B5071 Wybunbury Lane/Bridge Street; Newcastle Road; Weston Lane; Chorlton Lane; Wrinehill Road/Den Lane; B5071 Jack Mills Way and Crewe Road.
- Potential differential and disproportionate equality effects which could arise as a result of these impacts are discussed in Section 5.4. Where further information is available regarding particular receptors, a more detailed discussion of potential equality effects is provided below. Further analysis along with stakeholder engagement will verify these equality effects for the formal EQIA Report. Any mitigation will be based on the equality effects identified in the formal EQIA Report.

Den Lane, Wrinehill

Den Lane extends north from the small rural village of Wrinehill. There are a number of residential properties and farms located on this road, which connects Wrinehill to Crewe. Wrinehill has three public houses as well as garage and shop services and lies to the east of the current WCML alignment.

⁵³ 4o residential properties are estimated to be either completed or under construction (as of Summer 2016) at the Basford West Development site. The effects on the completed Basford Way development site will be reported in the formal EIA Report. Any identified equality effects will be reported in the formal EQIA Report. An alternative location for a permanent maintenance facility is also being considered within the Stone and Swynnerton community area (CA₃). If selected, the Basford West development area would no longer be required and these demolitions would be avoided.

- The area required for the Den Lane realignment, WCML realignment and Den Lane East Viaduct would be adjacent to six residential properties on Den Lane. The properties would be surrounded to the east and west by construction activities associated with the Proposed Scheme. Access to the properties would be maintained via Den Lane, however this route would be used as a construction traffic route, possibly leading to delays.
- The possible reduction in access to the properties and the presence of construction activities is likely to result in temporary isolation for this group of properties on Den Lane. There could be the potential for an adverse differential effect for any older and disabled residents, who may be more likely to experience the isolation of the properties as a barrier to accessing the services and social activities in Wrinehill.

Newcastle Road, Chorlton

- 10.1.6 Newcastle Road connects the villages of Hough and Chorlton through Chorlton Lane. There are a number of residential properties situated along this road and it provides the main route over the current alignment of the WCML.
- The area required for the construction and operation of the route over Newcastle Road is adjacent to 10 residential properties on Newcastle Road. The properties would be surrounded to the north, east and south by elements of the Proposed Scheme including the South Crewe Auto-transformer Feeder Station, the diverted Chorlton Lane, the IMD reception tracks, landscape earthworks and the diverted Newcastle Road. Access to the properties would be maintained via the existing Newcastle Road, however, this would be permanently closed to the east of the properties and tied in with the realigned Newcastle Road to the west of the properties.
- The resulting isolation effect of reduced access to the properties and being surrounded by elements of the Proposed Scheme is likely to result in permanent isolation for this group of residential properties on Newcastle Road. There could be the potential for an adverse differential effect for any older and disabled residents, who may be more likely to experience the isolation of the properties as a barrier to accessing the services and social activities in Chorlton.

Mill Lane Allotments

- The Mill Lane Allotment site is located off Mill Lane close to the A500 to the south of Crewe. The land is owned by Cheshire East council and is rented by local people who manage plots.
- 10.1.10 Part of Mill Lane Allotments (approximately 0.2ha) is located within land required for the construction of A500 Shavington Bypass realignment and Mill Lane realignment. Approximately 25% of the site would be inaccessible to the public during the construction period while approximately 13% of the site would be permanently inaccessible to the public due to the presence of the realigned road in cutting and hedgerow planting.
- The temporary loss of approximately 25% of the open space and the permanent loss of 13% of the open space at Mill Lane Allotments could reduce opportunities to participate in outdoor activities within the local community. This could have the potential to result in adverse community cohesion effects among those who use these

facilities. There may also be the potential for adverse equality effects for groups such as older people who may be more likely to use the allotments. The profile of users is not known. Where possible, information will be collected through stakeholder engagement and desk-based research in order to understand the potential for equality effects. Any identified differential or disproportionate equality effects will be reported in the formal EQIA Report.

11 Glossary of terms

Term	Definition
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.
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 impact assessment report.
Compensation Code	See 'National Compensation Code'.
Department for Transport	Government department responsible for transport issues in the UK (where powers have not been devolved).
Directive	A legal act of the EU. Legal obligations imposed on European member states by the European Commission following approval by the European Parliament and European Council.
East Coast Main Line	The existing rail route connecting London King's Cross, Peterborough, Doncaster, Wakefield, Leeds, York, Darlington, Newcastle, Edinburgh and Aberdeen.
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.
full-time equivalent (employment)	Combines full- and part-time employment to provide a standard measure of employment by working week. Someone who works 2.5 days a week, for instance, would be counted as 0.5 full-time equivalent.
haul roads	Temporary roads provided within a contractor's site area to allow for the movement of construction material, construction machinery and/or construction labour around the site.
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

Term	Definition
	case for new high speed rail services linking London, northern England and Scotland.
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 working draft EQIA 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.
mitigation	The measures put forward to prevent, reduce and where possible, offset any adverse effects on the environment, individuals and communities
National 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 real, physical events from a scheme once it is in operation, for example vibration or noise, are entitled to compensation.
nominated undertaker	The body or bodies appointed to implement the powers of the hybrid Bill to construct and maintain the Proposed Scheme.
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 WCML south of Crewe.
Phase 2b	The section of the Phase Two route from Crewe to Manchester and from the West Midlands to Leeds, completing what is known as the 'Y network'.
Proposed Scheme	Proposed high speed rail line between the West Midlands and Crewe (i.e. Phase 2a of HS2).
Protected Characteristics Groups	Groups identified in the Equality Act 2010 as sharing a particular characteristic against which is it illegal to discriminate.

Term	Definition
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).
receptor	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
residual impacts	Those impacts of the development that cannot be mitigated following implementation of mitigation proposals.
safeguarded area	Safeguarding is an established part of the planning system, designed to protect land which has been earmarked for major infrastructure projects from conflicting developments which might otherwise occur.
transfer node	A location where bulk deliveries or excavated materials leave or enter the construction worksites from public roads.
tunnel portal	Tunnel entrances and exits.
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	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

ECML East Coast Main Line

EHRC Equality and Human Rights Commission

EIA Environmental Impact Assessment

EQIA Equality Impact Assessment

EU European Union

HGVs Heavy Goods Vehicles

IMD Infrastructure Maintenance Depot

JSA Job seekers allowance

LA Local Authority

LEMP Local Environmental Management Plan

PRoW Public rights of way

PSED Public Sector Equality Duty

SEE Skills, employment and education

WCML West Coast Main Line

High Speed Two Phase 2a: West Midlands to Crewe Working Draft Equality Impact Assessment Report Appendix: Literature Review

Contents

1	Introduction		1
	1.1	Purpose of this appendix	1
	1.2	Structure of this appendix	1
2	Housing		
	2.1	Young people	2
	2.2	Older people	2
	2.3	Disabled people	2
	2.4	Black, Asian and minority ethnic groups	3
	2.5	Women	3
	2.6	Lesbian, gay, bisexual and trans people	3
3	Comm	unity infrastructure and open spaces	4
	3.1	Introduction	4
	3.2	Children and young people	4
	3.3	Older people	5
	3.4	Disabled people	5
	3.5	BAME groups	6
4	Emplo	yment and business	7
	4.1	Introduction	7
	4.2	Young people	7
	4.3	Older people	7
	4.4	Disabled people	7
	4.5	BAME groups	8
	4.6	Women, pregnant women and mothers of new-born babies	8
5	Traffic	, transport and accessibility	10
	5.1	Introduction	10
	5.2	Children and young people	10
	5.3	Older people	10
	5.4	Disabled people	10
	5.5	Women and mothers of new-born babies	12
6	Noise,	air quality, and other environmental effects	13

	6.1	Introduction	13
	6.2	Children, young people and disabled people	13
	6.3	BAME groups	13
7	Crime,	safety and personal security	14
	7.1	Children	14
	7.2	Disabled people	14
	7.3	BAME groups, and religious groups	14
	7.4	Women	14
	7.5	LGBT people	15

1 Introduction

1.1 Purpose of this appendix

1.1.1 This appendix provides a summary of key research evidence drawn from recent national and regional evidence reviews, research findings and policy documents, to inform understanding of the sensitivity of protected characteristic groups to potential effects of the Proposed Scheme, and their specific needs in relation to potential effects.

1.2 Structure of this appendix

- 1.2.1 This appendix is divided into the following sections:
 - Section 2 Housing;
 - Section 3 Community infrastructure and open spaces;
 - Section 4 Employment and business;
 - Section 5 Traffic, transport and physical accessibility;
 - Section 6 Noise, air quality, and other environmental effects; and
 - Section 7 Crime, safety and personal security.

2 Housing

2.1 Young people

Young people face significant affordability barriers to home-ownership. Young people are more likely than other groups to be living in poverty¹, and there is a significant risk of homelessness. In 2015, nearly half of people living in homeless accommodation services were aged between 16 and 24, and 20% of all people presenting as homeless were aged under 25².

2.2 Older people

- Social housing is of particular importance to older people. In 2014/2015, 29.0% of social rented households 1.1 million households were headed by someone aged 65 or over³. A higher proportion of those aged 75 and over are social tenants than those aged 65 and over, reflecting both changing tenure patterns over the last 30 years and the number of older owner-occupiers who find their homes are no longer suitable for their needs and become eligible for specialist social housing⁴.
- Older people living in social housing or private rented accommodation are more than twice as likely to be living in poverty as those in owner-occupied housing. After housing costs, 44.0% of older social or private rental tenants are in low income groups, compared with 18.0% of owner occupiers⁵. For owner-occupiers, housing can be a financial asset with the potential to be converted into cash, which can then be used to boost income in retirement, thereby reducing the likelihood of poverty⁶.

2.3 Disabled people

2.3.1 Many disabled people live in unsuitable accommodation that does not meet their needs and prevents them from living independently⁷. This is particularly the case for older disabled people. In 2013, a quarter of a million households in the social rented sector included someone who used a wheelchair, but only 27% of homes occupied by wheelchair users met all four criteria for wheelchair accessibility (level access, flush thresholds, a ground floor WC, and sufficient passage space)⁸.

¹T, McInnes, A. Tinson, C. Hughes, T. B. Born and H. Aldridge (2015) Monitoring poverty and social exclusion 2015. Joseph Rowntree Foundation. Available online at: https://www.jrf.org.uk/mpse-2015 [accessed April 2016]

² Homeless Link (2016) Young and Homeless 2015. Available online at http://www.homeless.org.uk/sites/default/files/site-attachments/201512%20-%20Young%20and%20Homeless%20-%20Full%20Report.pdf [accessed April 2016]

³ Department for Communities and Local Government (2016) English housing survey: headline report, 2014-2015. Available online at: <a href="https://www.gov.uk/government/uploads/system/

⁴ New Policy Institute (2012) Market assessment of housing options for older people. A report for Shelter and the Joseph Rowntree Foundation. Available online at: http://npi.org.uk/files/5213/7485/1289/Market_Assessment_of_Housing_Options_for_Older_People.pdf [accessed April 2016]

⁵ Department for Work and Pensions (2015) Households below average income, 2013/2014: supporting data tables. Available online at: https://www.gov.uk/government/statistics/households-below-average-income-19941995-to-20132014 [accessed April 2016]

⁶ Birmingham University (2009) Briefing 1: How would housing wealth perform as a pension? European Union DEMHOW (Demographic Chance and Housing Wealth) Project. Available online at: http://www.birmingham.ac.uk/Documents/college-social-sciences/social-policy/DEMHOW/C2.pdf [accessed April 2016]

⁷ Equality and Human Rights Commission (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 [accessed April 2016]

Bepartment for Communities and Local Government (DCLG) (2015) English housing survey, households, 2013-2014. Available online at: https://www.gov.uk/government/uploads/system/uploads/system/uploads/attachment data/file/461439/EHS Households 2013-14. Pdf [accessed April 2016]

2.4 Black, Asian and minority ethnic groups

- Black, Asian and minority ethnic (BAME) groups experience a range of barriers in accessing housing suitable for their needs. Overcrowding is a particular issue, with BAME households significantly more likely to be overcrowded than White British households. Thirty-five percent (35%) of Black African households have fewer rooms than they require, compared with just 5% of White British households⁹. In rural areas, there can be particular challenges associated with a lack of appropriate accommodation, compounded by little access to support and advice, language and communication difficulties, and a lack of cultural sensitivity in service delivery¹⁰.
- 2.4.2 English Gypsies and Irish Travellers are recognised racial groups and have distinct housing needs. While many Gypsies and Travellers live in bricks and mortar housing, others express a cultural aversion, preferring to live in trailers on traveller sites. However, there is a shortage of good quality sites. Sites can be found in very poor locations, such as adjacent to motorways, railways and sewage works, and some have poor access to services. Shortage of authorised sites is a factor in illegal encampments or unauthorised sites¹¹.

2.5 Women

2.5.1 Households headed by women are more likely to be overcrowded or substandard than those headed by men. Overcrowding is most pronounced among households with children, especially female headed households with children. Female-headed households can be particularly reliant on social-rented housing, due to difficulty affording private rental or home ownership as a result of differences in employment rates and relatively low pay¹².

2.6 Lesbian, gay, bisexual and trans people

- There is little evidence available regarding the specific housing needs of lesbian, gay, bisexual and trans (LGBT) people. However, research by Stonewall in Wales suggests that these groups can experience risks of housing crisis and homelessness arising from abuse and harassment, particularly where homophobia or rejection by family members leads young people to leave the family home¹³.
- 2.6.2 More recent research by the Albert Kennedy Trust found that young people who identify as LGBT are significantly over-represented among homeless populations, and are more likely to be at risk of targeted violence, discrimination, and exploitation¹⁴.

⁹ Race Equality Foundation (2013) Understanding ethnic inequalities in housing: analysis of the 2011 census. Available online at: http://www.better-housing.org.uk/sites/default/files/briefings/downloads/Housing%20Briefing%2023.pdf [accessed April 2016]

¹⁰ Race Equality Foundation (2006) Rural minority ethnic experiences: housing and health. Available online at: http://www.hlg.org.uk/images/stories/hlg_files/better_housing_briefing-7.pdf [accessed April 2016]

¹¹ EHRC (2009) Inequalities experienced by Gypsy and Traveller communities. Available online at: http://www.equalityhumanrights.com/sites/default/files/12inequalities_experienced_by_gypsy_and_traveller_communities_a_review.pdf [accessed April 2016]

¹² EHRC (2010) How fair is Britain?

¹³ Stonewall Cymru (2006) The Housing Needs of Lesbian, Gay and Bisexual (LGB) People in Wales

¹⁴ Albert Kennedy Trust (2015) LGBT youth homelessness: a UK national scoping of cause, prevalence, response and outcome. Available online at: http://www.akt.org.uk/webtop/modules/ repository/documents/AlbertKennedy ResearchReport FINALInteractive.pdf [accessed April 2016]

3 Community infrastructure and open spaces

3.1 Introduction

3.1.1 Community infrastructure and open spaces enable people to sustain social networks, to socialise and to participate in their community, with benefits for well-being and community cohesion¹⁵.

3.2 Children and young people

- Children and young people need access to play and recreational facilities that are safe, easily accessible, and close to home¹⁶. While children in rural areas benefit from greater access to the natural environment, their access to facilities for play and recreation can be restricted by dispersed population patterns and a lack of suitable transport. Linear village layouts, heavy traffic, lack of pavements and safe road crossing points can act as barriers preventing children in rural areas from accessing play, while intensive farming practices and a lack of public provision of play facilities can restrict opportunities¹⁷.
- 3.2.2 Evidence shows health and social benefits for children who walk to school¹⁸. Across England, 46% of primary school children and 38% of secondary school children walk to school. In rural areas, however, children travel further to school, and the proportion who walk to school is consequently much lower. This is particularly the case for rural secondary school children, who travel an average of 6.7 miles to school. The main reason cited by parents for children in this age group not walking to school is that the school is too far away; for children in the primary school age group, it is traffic danger¹⁹.
- 3.2.3 It is estimated that around 15% of school pupils have a special educational need (SEN)²⁰, 6.0% are disabled²¹, and 1.1% are on the autistic spectrum²². There is a significant gap in attainment between disabled and non-disabled children, with disabled young people more likely to leave school early than their non-disabled peers, and disabled adults three times as likely as non-disabled adults to have no formal qualifications²³. While many disabled children, autistic children, and children with SEN

¹⁵ New Economics Foundation (2012) Well-being evidence for policy: A review

¹⁶ 'Accessible' is used here to refer to locations that can be reached relatively easily. Access for disabled children and young people specifically is referred to below, and is described in terms of 'inclusive accessibility'.

¹⁷ Play England (2006) Planning for play: guidance on the planning and implementation of a local play strategy. Available online at: http://www.playengland.org.uk/media/120480/planning_for_play.pdf [accessed April 2016]

¹⁸ Ramblers' Association (RA) (2010) Walking facts and figures 1: the benefits of walking. Available online at: http://www.ramblers.org.uk/advice/facts-and-stats-about-walking.aspx [accessed April 2016]

¹⁹ Department for Transport (DfT) (2014) National travel survey 2014: travel to school. Available online at:

 $[\]underline{\text{https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/476635/travel-to-school.pdf} \ [\textbf{accessed April 2016}] \ \underline{\text{https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/476635/travel-to-school.pdf} \ \underline{\text{https://www.gov.uk/government/uploads/system/uploads/system/uploads/attachment_data/file/476635/travel-to-school.pdf} \ \underline{\text{https://www.gov.uk/government/uploads/system/u$

²⁰ Department for Education (DfE) (2015) Special Eductional Needs in England: January 2015. Available online at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/447917/SFR25-2015_Text.pdf [accessed April 2016]

²¹ Department for Work and Pensions and Office for Disability Studies (2014) Disability facts and figures. Available online at: https://www.gov.uk/government/publications/disability-facts-and-figures/disability-facts-and-figures#fn:3 [accessed April 2016]

²² The National Autistic Society (2016) Autism facts and history. Available online at: http://www.autism.org.uk/about/what-is/myths-facts-stats.aspx [accessed April 2016]. Assumption based on 1.1% of total population on autistic spectrum.

²³ Papworth Trust (2015) Disability in the United Kingdom 2014: facts and figures. Available online at:

http://www.papworthtrust.org.uk/sites/default/files/UK%20Disability%2ofacts%20and%20figures%20report%202014.pdf [accessed April 2016]

attend mainstream schools, some have more specialist learning needs. Currently, 17% of disabled children and 45.7% of children with SEN attend specialist schools²⁴.

3.3 Older people

- 3.3.1 Access to services, such as local shops, post offices and healthcare centres can be difficult for older people, particularly in rural areas. Older households who do not have access to their own car are particularly vulnerable to social isolation in rural areas, where services, such as GP surgeries, are too far away to reach on foot, and public transport can be limited²⁵.
- In terms of recreation, participation in sports declines significantly with age, from 16% in the 35-54 age group to 7.6% in over 55s. Walking is more likely to be maintained, with 22.3% of those in the 55-65 age category still taking at least one 30 minute walk every four weeks²⁶.
- 3.3.3 Access to places of worship is important for many older people, particularly in rural areas where churches and other places of worship can provide important community resources. In 2014, the average age of Church of England congregations in rural areas was 53, and 21% of regular attendees at Sunday services were aged 75 and over²⁷.

3.4 Disabled people

- 3.4.1 Disabled people have specific access needs, and are more likely to rely on public transport to access services, facilities, family and friends²⁸. Social isolation can be particularly significant for some groups of disabled people, including disabled women and BAME disabled people²⁹.
- Play is critically important in supporting the wellbeing and development of children with disabilities. However, disabled children experience barriers to play associated with a lack of inclusive accessibility and a lack of support in mainstream play settings, as well as a shortage of specialist provision. The majority (92%) of parents of disabled children feel that their child does not have the same opportunities to play as their non-disabled peers³⁰.
- 3.4.3 Disabled adults can also experience barriers to recreation, including in their use of public rights of ways (PROW) and open spaces. Well designed and managed routes, along with the provision of facilities such as disabled parking and accessible toilets,

²⁴ English Federation of Disability Sport (2016) Facts and statistics. Available online at: http://www.efds.co.uk/resources/facts and statistics [accessed April 2016]

²⁵ Action with Communities in Rural England (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 [accessed April 2016]

²⁶ RA (2010) Walking facts and figures: participation in walking.

²⁷ Church of England (2014) Everyone counts 2014: diversity audit key findings. Available online at: https://www.churchofengland.org/media/2261061/everyonecounts_keyfindings.pdf [accessed April 2016]

²⁸ Department for Transport (2012) Transport for everyone: an action plan to improve accessibility for all. Available online at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/49089/accessibility-action-plan.pdf [accessed April 2016]

²⁹ 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 [accessed]

³⁰ Sense (2016) Making the case for play: findings of the Sense Public Inquiry into access to play opportunities for disabled children with multiple needs. Available online at: https://www.sense.org.uk/sites/default/files/the-case-for-play-report.pdf [accessed April 2016]

can support inclusive use of footpaths and open spaces for exercise and recreation, with benefits for health and well-being³¹.

3.4.4 Around 28,000 disabled people in the UK regularly participate in horse riding through the Riding for the Disabled Association³². Research has found that this can have some significant health benefits for disabled people, both in terms of physical health and mental health and wellbeing³³.

3.5 BAME groups

Access to places of worship is also an important consideration for some BAME groups. At 48%, regular churchgoing is more than three times higher among adults of Black ethnic origin than among White adults (15%)³⁴, and BAME worshippers account for 7% of Church of England congregations³⁵. Places of worship are also important to other religious groups, providing an important function in terms of support networks and community cohesion³⁶.

³¹ The Countryside Agency (2005) By all reasonable means: Inclusive access to the outdoors for disabled people. Available online at: http://www.sensorytrust.org.uk/resources/by_all_reasonable_means.pdf [Accessed April 2016]

³² Riding for the Disabled Association (2015) Impact report 2015. Available online at: http://www.rda.org.uk/assets/RDA_Impact-Report_2015.pdf [accessed April 2016]

³³ The British Horse Society (2011) The health benefits of horse riding in the UK. Available online at: http://www.bhs.org.uk/enjoy-riding/health-benefits [accessed April 2016]

³⁴ Tearfund (2007) Churchgoing in the UK: a research report from Tearfund on church attendance in the UK. Available online at: http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/03_04_07_tearfundchurch.pdf [Accessed April 2016]

³⁵ Church of England (2014) Everyone counts 2014

³⁶ Scope (2012) Over-looked communities, over-due change

4 Employment and business

4.1 Introduction

4.1.1 Certain protected characteristic groups experience low socio-economic status and poor standards of living due to differences in economic activity, employment rates, type of work and remuneration. Income poverty particularly affects groups such as women with children, ethnic minority groups, and families with disabled members. Ethnic minorities, disabled people, and religious minority groups are overrepresented in the most deprived neighbourhoods in England³⁷.

4.2 Young people

- As of December 2015, 11.8% of 16-24 year olds were not in employment, education or training (NEET), of whom 42.0% were unemployed³⁸. The rates of youth unemployment recorded in the West Midlands and North West of England are amongst the highest in the UK³⁹, and young people from certain BAME communities are particularly likely to be affected⁴⁰. Young people in rural communities also experience particular barriers to accessing employment and training, including access to transport, careers advice, employment and training support, and youth services⁴¹.
- The construction industry faces a skills shortage, and efforts are being made by charities such as the Prince's Trust and the Construction Youth Trust, as well as government and industry, to encourage young people into work, training and apprenticeships in the industry.

4.3 Older people

4.3.1 With regards to age, the over 50s have among the lowest employment rate for any age group. In 2015, 69.9% of those aged 50-63 were in employment, compared with 82.6% of those aged 25-49⁴². People aged over fifty, once unemployed, find it harder to gain new jobs, and experience the longest period of unemployment. The ONS Annual Population Survey for 2015 shows that 21.5% of men and 33.5% of women in the 50-64 age group were economically inactive, compared with 16.4% and 27.6% for the total working age population respectively⁴³.

4.4 Disabled people

4.4.1 Employment rates are lower among disabled adults than among non-disabled adults. In 2012, 46.3% of working age disabled adults were employed, compared with 76.4%

³⁷ EHRC (2010) How fair is Britain?

³⁸ Office for National Statistics (ONS) (2016) Young people not in education, employment or training (NEET): February 2016. Available online at: http://www.ons.gov.uk/employmentandlabourmarket/peoplenotinwork/unemployment/bulletins/youngpeoplenotineducationemploymentortrainingneet/february2016 [accessed April 2016]

³⁹ ONS (2012) Characteristics of young unemployed people. Available online at:

 $[\]underline{\text{http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/dcp171776_256894.pdf} \ [accessed April 2016] \\ \underline{\text{http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/dcp171776_256894.pdf} \ [accessed April 2016] \\ \underline{\text{http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/20160105160709/http://www.ons.gov.uk/20160105160709/http://www.ons.gov.uk/20160105160709/http://www.ons.gov.uk/20160105160709/http://www.ons.gov.uk/20160105160709/http://www.ons.gov.uk/20160105160709/http://www.ons.gov.uk/20160105160709/http://www.ons.gov.uk/20160105160709/http://www.ons.gov.uk/20160105160709/http://www.ons.gov.uk/20160105160709/http://www.ons.gov.uk/20160105160709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http://www.ons.gov.uk/2016010709/http$

⁴⁰ Trade Union Congress (TUC) (2012) Youth unemployment and ethnicity.

⁴¹ Commission for Rural Communities (2012) Barriers to education, employment and training for young people in rural areas. Available online at: http://dera.ioe.ac.uk/15199/1/Barriers-to-education-employment-and-training-for-young-people-in-rural-areas.pdf [accessed April 2016]

⁴² ONS (2016) Annual population survey 2015

⁴³ ONS (2016) Annual population survey 2015

- of working age non-disabled adults⁴⁴. Disabled people in employment are more likely than their non-disabled counterparts to work part-time, although it is unclear if this is down to personal choice or other, potentially discriminatory, reasons⁴⁵.
- Disabled people are also more likely to be in low-paid work, with 16% of disabled people in Britain earning less than 60% of the median hourly wage compared with 13% of non-disabled people⁴⁶.
- The disparity in employment rates between disabled and non-disabled adults indicates that disabled people continue to face barriers to employment. Although many of these are attitudinal, a practical lack of access to appropriate transport can also make it harder to find work.

4.5 BAME groups

- National evidence suggests that school pupils from Black and Pakistani ethnic backgrounds experience gaps in attainment relative to pupils from Asian, Indian and White ethnic backgrounds⁴⁷. This is reflected in persistent ethnic segregation in the labour market: unskilled jobs are most likely to be taken by African (23%) and Bangladeshi men (21%)⁴⁸.
- 4.5.2 Employment gaps between some ethnic groups are narrowing over time, but evidence shows persistent ethnic minority disadvantage in the labour market relative to the White British population⁴⁹. In the 2011 Census, unemployment rates were highest among people from Mixed White-Caribbean (19%), African (16%), Bangladeshi (15%), Caribbean (15%) and Mixed White-African (15%) ethnic backgrounds⁵⁰. There are particularly high rates of persistent unemployment among women from certain ethnic groups, most notably the Bangladeshi and Pakistani populations⁵¹.

4.6 Women, pregnant women and mothers of new-born babies

- 4.6.1 Occupational segregation is a key factor in explaining pay differences, particularly in the private and voluntary sectors where at age 40 men are earning, on average, 27% more than women. This is thought to be partly explained by the higher proportion of women in part-time employment compared with men. Women are also less likely than men to be self-employed⁵².
- 4.6.2 In the past, inflexible working practices have been a barrier to female employment in the construction industry. However, there is an increasing focus on the role of women

⁴⁴ DWP and Office for Disability Issues (2016) Disability facts and figures. Available online at: https://www.gov.uk/government/publications/disability-facts-and-figures/disability-facts-and-figures [accessed April 2016]

⁴⁵ EHRC (2010) Disability, skills and employment: a review of recent statistics and literature on policy and initiatives. Available online at: https://www.equalityhumanrights.com/sites/default/files/disability_skills_and_employment.pdf [accessed May 2016]

⁴⁶ EHRC (2010) How fair is Britain?

⁴⁷ Department for Business, Innovation and Skills (2013) Youth unemployment: review of training for young people with low qualifications. Available online at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/70226/bis-13-608-youth-unemployment-review-of-training-for-young-people-with-low-qualifications.pdf [accessed April 2016]

⁴⁸ EHRC (2010) How fair is Britain?

⁴⁹ 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 [accessed April 2016]

⁵⁰ JRF (2015) Ethnic minority disadvantage in the labour market

⁵¹ JRF (2015) Ethnic minority disadvantage in the labour market

⁵² EHRC (2010) How fair is Britain?

in construction⁵³, and the Equality and Human Rights Commission (EHRC) has published guidance aimed at increasing diversity within the sector⁵⁴. Women now make up between 10 and 12% of the construction workforce, and with the industry facing a severe skills gap and initiatives being taken forward to encourage women into construction, this is likely to increase in future⁵⁵.

⁵³ Construction Youth Trust (2016) Women in construction. Available online at: http://www.constructionyouth.org.uk/women-construction [accessed April 2016]

 $^{^{54}}$ EHRC (2012) Eqaulity and diversity: good practice for the construction sector.

 $[\]underline{\text{http://www.equalityhumanrights.com/sites/default/files/ed_report_construction_sector.pdf} \ [accessed April 2016]$

⁵⁵ L. Worrall, K. Harris, R. Stewart, A. Thomas, P. McDermott (2010) Barriers to Women in the UK Construction Industry, Engineering, Construction and Architectural Management, 17:3. Available online at: https://core.ac.uk/download/files/130/1660903.pdf [accessed April 2014]

5 Traffic, transport and accessibility

5.1 Introduction

The availability of transport is of particular importance to certain protected characteristic groups, especially where access to a car is limited. A persistent barrier to employment for various disabled groups, for example, is the lack of appropriate transport. In addition, some groups can be particularly sensitive to the effects of road traffic, which disproportionately affects socially excluded areas⁵⁶.

5.2 Children and young people

- Many young people rely on public transport in order to access education and employment. The proportion of young adults (aged 17-20) with a full driving licence has decreased since the 1990s, and people in this age group now make more trips by bus than other age groups, and twice as many as the average person. For women aged 17-20, nearly one in five trips are by bus^{57.}
- 5.2.2 Busy roads can divide and damage local communities and restrict walking, particularly for children and young people. The number of children that have been killed or seriously injured in traffic accidents has generally been decreasing over time, although an increase of 5% was recorded in 2014. However, the total number of children seriously injured in reported road traffic accidents was 2,029, the second lowest ever recorded⁵⁸.

5.3 Older people

The over-6os make more trips by bus than those in middle age groups, reflecting the availability of concessionary bus travel and differing levels of car ownership and driving licences. Bus use is particularly high amongst older women, and the highest proportion of trips made by over-6os of both genders is for the purpose of shopping⁵⁹. Other important reasons for travelling among both men and women in this age group include visiting friends, entertainment and sport and personal business. This reflects the importance of public transport in enabling older people to access essential services – including healthcare – as well as to socialise and participate in their local communities⁶⁰.

5.4 Disabled people

5.4.1 Disabled people have specific access needs. The National Travel Survey (NTS) defines someone with mobility difficulties as someone who has difficulties travelling on foot, by bus, or both. In 2014, the NTS reported that 9% of adults have a mobility difficulty.

⁵⁶ Social Exclusion Unit (2003) Making the connections: final report on transport and social exclusion. Avilable online at: http://www.ilo.org/wcmsp5/groups/public/@ed_emp/@emp_policy/@invest/documents/publication/wcms_asist_8210.pdf [accessed May 2016] ⁵⁷ DfT (2014) National travel survey 2014. Available online at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/457752/nts2014-01.pdf [accessed April 2014]

⁵⁸ DfT (2015) Reported road casualties in Great Britain, 2014. Available online at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/438040/reported-road-casualties-in-great-britain-main-results-2014-release.pdf [accessed April 2016]

⁵⁹ DfT (2014) National travel survey 2014

⁶⁰ Age UK (2012) Missed opportunities: the impact on older people of cuts to rural bus services. Available online at: http://www.ageuk.org.uk/Documents/EN-GB/For-professionals/Policy/transport/bus_services_in_rural_areas_may2013.pdf?dtrk=true [accessed April 2016]

This increases with age to 32% of those aged 70 and over, and is more marked among women than men⁶¹.

- Disabled people are less likely to travel compared to non-disabled people, but make more frequent trips by bus and taxi. In 2014, it was found that 29% of disabled people identified difficulty with transport as the main barrier to employment⁶². Inclusive design can support equal access to public transport for disabled people, and there is evidence of recent improvements in this regard. The majority (95%) of buses in England now have low floor designs, and over half the national fleet of rail vehicles comply with modern access standards for persons with reduced mobility⁶³.
- In terms of rail travel specifically, there is a range of potential problems encountered by disabled people in their use of railway stations. These include, but are not limited to, the following issues identified in the DfT code of practice for accessible train and station design:
 - cluttered or multi-level station layouts, which can cause difficulties for people with limited mobility;
 - difficulty in hearing announcements, which can affect deaf people and those who are hard of hearing;
 - difficulty in reading essential travel information, which can affect blind people and those with limited vision and other impairments, such as colour blindness;
 - difficulty in negotiating physical features, which can affect blind people and those with limited vision;
 - busy stations, which can cause confusion for people with learning disabilities;
 - difficulty in understanding timetabling and ticketing information, which can affect people with learning disabilities;
 - difficulty in communicating with station staff, which can affect deaf people, people with speech difficulties, and people with a first language other than English;
 - limited or inappropriately located Blue Badge parking and set-down points;
 and
 - difficulty in standing for long periods, which can have particular effects for people with arthritis⁶⁴.

⁶¹ DfT (2014) National travel survey 2014

⁶² Papworth Trust (2014) Disability in the United Kingdom 2014

⁶³ DfT (2015) Accessibility and equality action plan: progress update 2014. Available online at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/399252/accessibility-and-equality-action-plan-2014.pdf [accessed

⁶⁴ DfT (2011) Accessible train and station design for disabled people: a code of practice. Available online at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/3191/accessible-train-station-design-cop.pdf [accessed April 2016]

Along with inclusive design, the availability of information in appropriate formats, improved communication within stations, and the presence of well-trained staff can support improved access to rail travel for disabled people⁶⁵.

5.5 Women and mothers of new-born babies

Women's trips are more likely to relate to caring and family responsibilities, such as shopping and escorting children to school, while men are more likely to travel for business and leisure. As a result, women tend to make shorter, more frequent journeys than men, and are also more likely to travel with children and/or buggies or heavy shopping⁶⁶. Many women with children rely on buses and other public transport, and poor physical access can be a significant barrier. This is particularly the case for single parents, who are amongst those least likely to own a car⁶⁷.

⁶⁵ DfT (2011) Accessible train and station design for disabled people

⁶⁶ DfT (2014) National travel survey 2014

⁶⁷ RAC Foundation for Motoring (2011) Low income motoring in Great Britain. Available online at: http://www.racfoundation.org/assets/rac_foundation/content/downloadables/low_income_motoring-bayliss-280909.pdf [accessed April 2016]

6 Noise, air quality, and other environmental effects

6.1 Introduction

6.1.1 A poor quality local environment can have a detrimental effect on quality of life.

Certain protected characteristic groups may be particularly sensitive to environmental impacts associated with noise and air quality, and therefore, are at greater risk of harmful effects.

6.2 Children, young people and disabled people

- 6.2.1 Exposure to noise can be a particular problem around schools, leading to cognitive impairment for children during lessons and negative effects on educational attainment^{68,69}. Autistic children can be particularly sensitive to their environment, and in some cases can be extremely distressed by loud noise^{70,71}. Children with hearing difficulties also benefit from a quiet learning environment, and background noise can reduce the effectiveness of hearing aids⁷².
- 6.2.2 Children may also be more sensitive to health effects arising from poor air quality, along with older people and people with certain illnesses such as chronic lung or heart conditions^{73,74}.

6.3 BAME groups

- 6.3.1 There is a link between socio-economic status and poorer neighbourhood quality, with those living in poor housing more likely to report concerns with the level of pollution and grime in their neighbourhood⁷⁵. BAME and religious minority groups are highly represented in the most deprived neighbourhoods in England.
- Gypsy and Traveller communities may also be at increased risk of harmful effects from air quality and noise impacts, due to the poor environment on some sites and the proximity of some sites to busy roads and industrial areas⁷⁶.

⁶⁸ M. Haines, S. Stansfeld, S. Brentnall, J. Head, B. Berry, M. Jiggins, S. Hygge (2001) The West London Schools Study: the effects of chronic aircraft noise exposure on child health, Psychological Medicine, 2001, 31:8. Available online at: http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=91583 [accessed April 2016]

⁶⁹ Shield, B. and Dockrell, J. (2007) The effects of environmental and classroom noise on the academic attainments of primary school children, available online at: http://eprints.ioe.ac.uk/926/1/Shield2008The_Effects133.pdf [accessed April 2016]

⁷⁰ Autism Education Trust (2008) Educational provision for children and young people on the autism spectrum living in England: a review of current practice, issues and challenges. Available online at: http://www.autismeducationtrust.org.uk/resources/research.aspx [accessed April 2016]

⁷¹ The National Autistic Society (2006) Make school make sense. Autism and education: the realities for families today. http://www.autism.org.uk/get-involved/campaign/successes/reports/make-school-make-sense.aspx [accessed April 2016]

⁷² The National Deaf Children's Society (2003) Deaf-friendly Teaching: Practical guidance for teachers working with deaf children. Available online at: http://www.ndcs.org.uk/professional_support/our_resources/deaf_friendly_schools_packs/teacher_training_pks.html [accessed April 2016]

73 Defra (2013) Short-term effects of air pollution on health. Available online at: https://uk-air.defra.gov.uk/air-pollution/effects?view=short-term [accessed April 2016]

⁷⁴ WHO (2006) What are the effects of air pollution on children's health and development? Available online at: http://www.euro.who.int/en/data-and-evidence-informed-policy-making/publications/hen-summaries-of-network-members-reports/what-are-the-effects-of-air-pollution-on-childrens-health-and-development [accessed April 2016]

 $^{^{75}}$ EHRC (2010) How fair is Britain?

⁷⁶ The Traveller Movement (2016) Impact of insecure accommodation and the living environment on Gypsies' and Travellers' health. Available online at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/490846/NIHB - Gypsy and Traveller health accs.pdf [accessed April 2016]

7 Crime, safety and personal security

7.1 Children

7.1.1 Children could be affected disproportionately by heavy traffic around construction sites. Of the 53 child deaths nationally resulting from traffic incidents in 2014, 29 were pedestrians and six were cyclists⁷⁷. As well as children with hearing difficulties, those from ethnic minorities or from low income families are most likely to be involved in road accidents while walking or playing.

7.2 Disabled people

- A hate crime is defined as any criminal offence perceived by the victim or any other person to be motivated by hostility or prejudice based on the victim's disability, race, religion or belief, sexual orientation, or transgender identity⁷⁸. Although higher proportions of older people have disabilities, evidence suggests that within each age group, disabled people are more likely to be victims of crime. Hate crimes are more likely to affect some groups of disabled people than others, particularly those with learning difficulties, visual impairments, or mental health difficulties⁷⁹.
- Heavy goods vehicles often have 'blind spots' which make it difficult for drivers to see pedestrians and other road-users, and are associated with a disproportionate number of accidents involving construction vehicles⁸⁰. Construction traffic poses a particular risk to some groups of disabled people, including deaf people, people who are hard of hearing, and people with mental disabilities. Children with hearing difficulties are 10 times more likely to be involved in road accidents while walking or playing than other children⁸¹.

7.3 BAME groups, and religious groups

Racially motivated crimes are by far the most common form of hate crime, with over 80% of hate crimes falling into this category. In 2014, the number of racially motivated hate crimes recorded in Staffordshire decreased by 6% from 965 incidents to 909. However, there was an increase in the number of hate crimes associated with religion and belief, from 5 to 12⁸².

7.4 Women

7.4.1 Women perceive themselves to be at higher risk of crime than men, particularly when travelling at night or in isolated areas, and are more likely to experience worry as a barrier to their use of public transport⁸³. Disruption to existing public transport

⁷⁷ DfT (2015) Reported road casualties in Great Britain, 2014

⁷⁸ CIVITAS Institute for the Study of Civil Society (2012) Crime factsheets - hate crime. Available online at: http://www.civitas.org.uk/content/files/factsheet-hatecrime.pdf [accessed April 2016]

⁷⁹ CIVITAS (2012) Crime fact sheets - hate crime.

⁸º Transport Research Laboratory (2013) Construction logistics and cyclist safety. Available online at: http://content.tfl.gov.uk/construction-logistics-and-cyclist-safety-summary-report.pdf [accessed April 2016]

logistics-and-cyclist-safety-summary-report.pdf [accessed April 2016]

AA Foundation for Road Safety Research (2003) The facts about road accidents and children. Available online at:
https://www.theaa.com/public_affairs/reports/facts_about_road_accidents_and_children.pdf [accessed April 2016]

⁸² Staffordshire Police (2014) Equality and diversity monitoring report, 2013-2014. Available online at:

https://www.staffordshire.police.uk/media/doc_rep/annual_reports/pdf/Equality_and_Diversity_Monia.pdf [accessed April 2016]

⁸3 Transport for London (TfL) (2014) Understanding the travel needs of London's diverse communities: a summary of existing research. Available online at: http://content.tfl.gov.uk/understanding-the-travel-needs-of-london-diverse-communities.pdf [accessed April 2016]

networks, including increases in waiting time at bus stops and stations, may exacerbate these safety concerns and discourage women from travelling.

7.5 LGBT people

7.5.1 The incidence of hate crime against the LGBT community is high. The most common form of crime motivated or aggravated by sexual orientation or gender are offences against the person and public order offences. According to The Gay British Crime Survey 2013, one in six lesbian, gay and bisexual people has experienced a homophobic hate crime in the last three years while one in five victims has been threatened with violence⁸⁴.

⁸⁴ Stonewall (2013) Homophobic hate crime: the gay British crime survey 2013. Available online at: https://www.stonewall.org.uk/sites/default/files/Homophobic_Hate_Crime___2013_.pdf [accessed April 2016]