

High Speed Rail (Crewe – Manchester)

Supplementary Environmental Statement 2 and Additional Provision 2 Environmental Statement

Volume 2: Community Area Map Book

MA08: Manchester Piccadilly Station

High Speed Rail (Crewe – Manchester)

Supplementary Environmental Statement 2 and Additional Provision 2 Environmental Statement

Volume 2: Community Area Map Book

MA08: Manchester Piccadilly Station



Department
for Transport

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

High Speed Two (HS2) Limited
Two Snowhill
Snow Hill Queensway
Birmingham B4 6GA

Telephone: 08081 434 434

General email enquiries: HS2enquiries@hs2.org.uk

Website: www.hs2.org.uk

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

ARUP+ ERM | FOSTER + PARTNERS | JACOBS
RAMBOLL | TYPESA | COSTAIN

MWJV

Mott MacDonald | WSP

High Speed Two (HS2) Limited has actively considered the needs of blind and partially sighted people in accessing this document. The text will be made available in full on the HS2 website. The text may be freely downloaded and translated by individuals or organisations for conversion into other accessible formats. If you have other needs in this regard, please contact High Speed Two (HS2) Limited.

© High Speed Two (HS2) Limited, 2023, except where otherwise stated.

Copyright in the typographical arrangement rests with High Speed Two (HS2) Limited.

This information is licensed under the Open Government Licence v3.0. To view this licence, visit www.nationalarchives.gov.uk/doc/open-government-licence/version/3 **OGL** or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or e-mail: psi@nationalarchives.gsi.gov.uk. Where we have identified any third-party copyright information you will need to obtain permission from the copyright holders concerned.



Printed in Great Britain on paper containing 100% recycled fibre.

Contents

Mapping explanatory notes

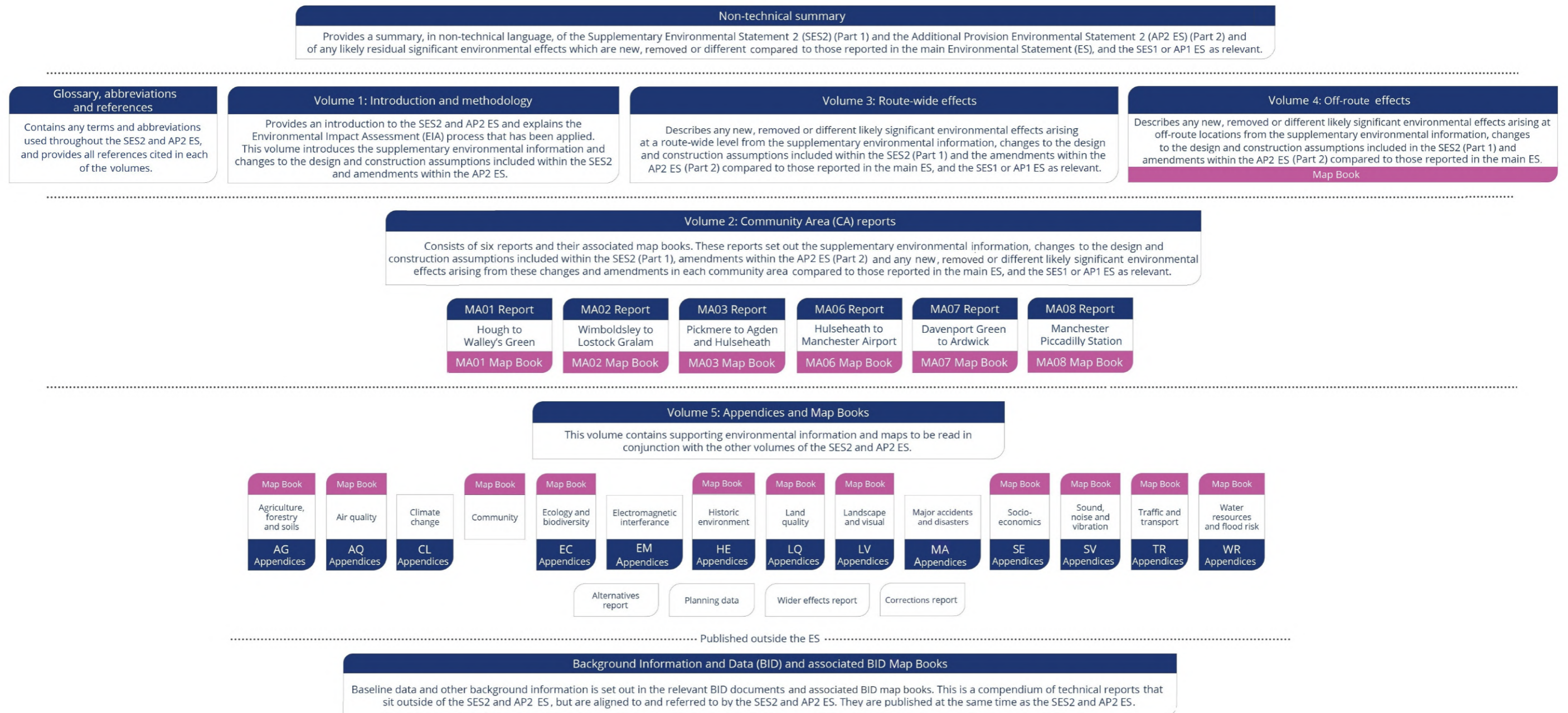
Data dictionary and definitions

Map series name	CT-05 - Construction Phase	CT-06 - Proposed Scheme	CT-10 - Environmental Baseline	LV-01 - Photomontages	LV-03 - Construction Phase Significantly Affected Viewpoints	LV-04 - Operational Phase Significantly Affected Viewpoints	SV-05 - Operational Airborne Noise and Vibration Impacts and Likely Significant Effects
Map series description	These plans show the land potentially required during construction, the construction features, access requirements and infrastructure associated with construction of the Proposed Scheme. The plans also show the construction phase arrangements for public access using Public Rights of Way. The base mapping shown on the plans is reflective of 2022 Ordnance Survey (OS) data.	These maps show permanent features, infrastructure, restored land, and areas for landscaping, screening and ecological mitigation associated with the Proposed Scheme. The base mapping shown on the plans is reflective of 2022 Ordnance Survey (OS) data.	The Environmental Baseline maps display a range of environmental data layers.	Photomontages illustrating the AP2 revised scheme at significantly affected viewpoints during construction and/or operation.	Maps showing the viewpoint locations from which the AP2 revised scheme has been assessed to give rise to new or different significant effects during the construction phase. The base mapping shown on the plans is reflective of 2022 Ordnance Survey (OS) data.	Maps showing the viewpoint locations from which the AP2 revised scheme has been assessed to give rise to new or different significant effects during the operational phase. The base mapping shown on the plans is reflective of 2022 Ordnance Survey (OS) data.	SV-05 presents the direct operational noise impacts and likely significant effects of the Proposed Scheme. The SV-05 figure series necessarily contains a large amount of information relating to the operational noise and vibration assessment. It is designed to communicate visually the assessment process from the prediction of impacts to the determination of likely residual significant effects. The corresponding text is included in Vol2. A more detailed explanation of each legend item included is on the figures and can be found in the data dictionary.
Community Area name							
MA01 Hough to Walley's Green	✓	✓	✓		✓		✓
MA02 Wimboldsley to Lostock Gralam	✓	✓	✓		✓		✓
MA03 Pickmere to Agden and Hulseheath	✓	✓	✓		✓	✓	✓
MA06 Hulseheath to Manchester Airport	✓	✓	✓	✓	✓	✓	✓
MA07 Davenport Green to Ardwick	✓	✓	✓	✓	✓	✓	
MA08 Manchester Piccadilly Station	✓	✓	✓		✓	✓	✓

Mapping explanatory notes

Structure of the Supplementary Environmental Statement 2 and the Additional Provision 2 Environmental Statement

This map book is part of the suite of documents that make up the Supplementary Environmental Statement 2 (SES2) and the Additional Provision 2 Environmental Statement (AP2 ES) for the High Speed Rail (Crewe – Manchester) scheme. The SES2 and the AP2 ES are separate documents; however, they are bound together and presented in a number of volumes shown in Figure 1.



Copyright statements

Copyright statements are presented in the data dictionary and definitions section at the front of the map book, due to limited space to include this on the individual maps themselves.

Ordnance Survey data

All maps produced as part of the SES2 and AP2 ES contain Ordnance Survey (OS) data. HS2 Ltd use the most up to date mapping available, where possible, supplied by the OS and as such, we cannot be held responsible for any inaccuracies within this data. As part of our licence conditions, all digital maps carry a watermark.

Chainage

Most of the maps presented as part of the SES2 and AP2 ES have a chainage value shown next to the alignment. Chainage is presented on the maps in black font, in the form of XXX+YYY, e.g. 192+000 or 239+500.

Chainage (known as reference chainage) is referenced from Euston Station, which is 0+000, and the value presented is in metres, e.g. 192+000 refers to the point, 192,000m, or 192km, from Euston Station. Chainage values increase in intervals dependent on the map scale. For maps at 1:50,000 scale chainage is shown at 5km intervals. For maps at 1:25,000 scale chainage is shown at 2km intervals. For maps at 1:20,000, 1:10,000, 1:5,000 and 1:2,500 scales, chainage is shown at 1km intervals.

Chainage has been included on the maps as a useful tool for comparing different map sets showing the different environmental themes or engineering plans, due to map sets having different scales, and therefore, showing differing amounts of alignment on the map.

Map sheet layout

Each map in Volume 2 is presented twice, with the main ES map (In Parliament - Session 2021 - 2022) on the left-hand page and the SES2 and the AP2 ES map on the right. For the CT-05 and CT-06 map series, the SES2 and the AP2 ES is shown with different coloured hatching, annotated with labels, which highlights the areas of change. The coloured text box provides a brief description of the design change and amendment, and gives the SES2 and the AP2 ES reference number. In some instances where the effect covers a large area, a box without hatching but with a label, is shown. Only maps which have been amended as a result of the SES2 and the AP2 ES are included within the map books. Other design changes which are within the existing limits of the Bill and do not result in new or different likely significant effects are also shown on the maps, but are not indicated by hatching.

Each Volume 5 map is annotated to describe the change to a receptor or significant effect, and to give the SES2 and the AP2 ES reference number. For more detailed information about the SES2 and the AP2 ES annotation, refer to the map series legend. Only maps which have been amended as a result of the SES2 and the AP2 ES are included within the map book. Changes to receptors or significant effects relating to SES1 or AP1 ES are also provided for reference. Where this is the case they are shown in a faded box.

Where a significant effect has been changed due to a correction to mapping produced in the main ES or previous SES/AP, the significant effect reference is suffixed with a double asterisk (**). The map now shows the correct effect.

Map orientation

The majority of the maps presented in these map books are presented with the railway alignment running horizontally across the page. The direction of travel to London would be following the alignment to the left hand side of the page, and Manchester to the right.

The exception to this, are map series LV-00, LV-02, LV-07 and LV-08, which present the alignment running from bottom to top of the page. This is to allow more of the modelled outputs to be shown at the appropriate map scale. In this instance, the direction of travel to London would be to the bottom of the page, and Manchester to the top.

Further details on the approach to mapping is set out in Section 6 of Volume 1 of the SES2 and AP2 ES.

Map books

In total, there are 19 map books included in the SES2 and AP2 ES Volume 2, Volume 4 and Volume 5. A list of the map book titles and map series is provided below for reference.

Map book title (map series)	Map book title (map series)
Volume 2: Map Book – MA01: Hough to Walley’s Green (CT-05, CT-06, CT-10, LV-03, SV-05)	Volume 5: Map Book – Planning Data / Committed Developments (CT-13)
Volume 2: Map Book – MA02: Wimboldsley to Lostock Gralam (CT-05, CT-06, CT-10, LV-03, SV-05)	Volume 5: Map Book – Ecology and biodiversity (EC-01)
Volume 2: Map Book – MA03: Pickmere to Agden and Hulseheath (CT-05, CT-06, CT-10, LV-03, LV-04, SV-05)	Volume 5: Map Book – Historic environment (HE-01, HE-02)
Volume 2: Map Book – MA06: Hulseheath to Manchester Airport (CT-05, CT-06, CT-10, LV-01, LV-03, LV-04, SV-05)	Volume 5: Map Book – Land quality (LQ-01)
Volume 2: Map Book – MA07: Davenport Green to Ardwick (CT-05, CT-06, CT-10, LV-01, LV-03, LV-04)	Volume 5: Map Book – Landscape and visual (LV-00, LV-02, LV-07, LV-08, LV-17)
Volume 2: Map Book – MA08: Manchester Piccadilly Station (CT-05, CT-06, CT-10, LV-03, LV-04, SV-05)	Volume 5: Map Book – Socio-economics (SE-01)
Volume 4: Off-route effects map book	Volume 5: Map Book – Sound, noise and vibration (SV-02, SV-03, SV-08, SV-09)
Volume 5: Map Book – Agriculture, forestry and soils (AG-01, AG-04)	Volume 5: Map Book – Traffic and transport (TR-01, TR-03, TR-04, TR-08)
Volume 5: Map Book – Air quality (AQ-01)	Volume 5: Map Book – Water resources and flood risk (WR-01, WR-03, WR-05, WR-06)
Volume 5: Map Book – Community (CM-01)	

**High Speed Rail
(Crewe – Manchester)**

**Supplementary Environmental Statement 2 and
Additional Provision 2 Environmental Statement**

Data dictionary and definitions

Data dictionary and definitions

Legend features	Definition	Source	Copyright
5m contours	A contour line showing points of equal elevation (height) above a reference level, such as mean sea level and therefore gives indication of the topography, showing valleys and hills, and the steepness of slopes. Spaced at intervals of 5m.	High Speed Two (HS2) Ltd	
Additional land required at current AP	Areas of land required at the current AP, additional to that defined by the boundary of the maximum possible extent of construction works required to build HS2 based on the design at Hybrid Bill stage. This only covers surface works and includes all tunnel portals, vent shafts and headhouses, but does not apply to wholly tunnelled sections or to air rights unless for air rights it is otherwise stated in the relevant Volume 2 report. It also encompasses associated highway, access, drainage and utility works.	High Speed Two (HS2) Ltd	
Additional land required at previous AP	Areas of land required at the previous AP, additional to that defined by the boundary of the maximum possible extent of construction works required to build HS2 based on the design at Hybrid Bill stage. This only covers surface works and includes all tunnel portals, vent shafts and headhouses, but does not apply to wholly tunnelled sections or to air rights unless for air rights it is otherwise stated in the relevant Volume 2 report. It also encompasses associated highway, access, drainage and utility works.	High Speed Two (HS2) Ltd	
Ancient Woodland Inventory Sites (AWIS)	Ancient Woodland is land that has had continuous woodland cover since at least 1600AD. Natural England maintain an inventory of ancient woodlands.	Natural England	© Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right 2022.
Balancing pond	Part of a drainage system that is used to temporarily store, and thereby attenuate, the flow of surface water runoff.	High Speed Two (HS2) Ltd	
Borrow pit	Areas excavated to provide material for construction purposes.	High Speed Two (HS2) Ltd	
Committed developments - SV only	This informs the assessment of the future baseline. A development consent or allocation that has full or outline planning permission, or is allocated in an adopted development plan.	High Speed Two (HS2) Ltd	
Community area boundary	The Environmental Statement has been split into sections called Community Areas.	High Speed Two (HS2) Ltd	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2019.

Legend features	Definition	Source	Copyright
Conservation area	Areas considered worthy of preservation or enhancement because of their special architectural or historic interest. Conservation areas have been captured and digitised from desktop based studies using publicly available local authority information. Accuracy of the data is dependent upon that of the individual data source and areas are provided as indicative site boundaries only.	Carlisle City Council Cheshire East Council Cheshire Historic Environment Record Cheshire West and Chester Council Cumbria County Council Lancashire County Council Manchester City Council Salford City Council Stockport Metropolitan Borough Council Trafford Council Warrington Borough Council	© Carlisle City Council. © Cheshire East Council. © Cheshire Historic Environment Record. © Cheshire West and Chester Council. © Cumbria County Council. © Lancashire County Council. © Manchester City Council. © Salford City Council. © Stockport Metropolitan Borough Council. © Trafford Council. © Warrington Borough Council.
Construction compounds	A strategic construction hub for core project management (engineering, planning and construction delivery), commercial and administrative staff associated with the construction of the Proposed Scheme. These compounds will include an area for equipment and materials storage, as well as providing main welfare facilities for construction staff, with some compounds also providing overnight sleeping accommodation for construction staff.	High Speed Two (HS2) Ltd	
Construction traffic route	Public highways which may be used for HGV construction traffic.	High Speed Two (HS2) Ltd	
County boundary	County boundaries from Ordnance Survey boundary mapping.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2021.
Culvert	A tunnel (pipe or box-shaped) carrying a stream or open drain under a road or railway.	High Speed Two (HS2) Ltd	
Depot, station, headhouse or portal building	Extends to cover operational footprint of each depot and station and the footprint of each tunnel vent shaft and headhouse at surface level. Excludes any ancillary buildings associated with these structures.	High Speed Two (HS2) Ltd	
District/Borough boundary	Ordnance Survey local authority boundary mapping.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2021.
Ecological mitigation pond (indicative only)	A pond for ecological mitigation. Locations shown are indicative.	High Speed Two (HS2) Ltd	
Engineering earthworks	Engineering (structural) earthworks which include railway embankments, cuttings and crossings (roads etc.)	High Speed Two (HS2) Ltd	
Engineering earthworks: Cutting	Cuttings created in the construction of the railway and associated works such as highways.	High Speed Two (HS2) Ltd	

Legend features	Definition	Source	Copyright
Engineering earthworks: Embankment	Embankments created in the construction of the railway and associated works such as highways.	High Speed Two (HS2) Ltd	
Envisaged features further reducing noise effects: Other environmental e.g. landscaping Engineering e.g. cuttings	Other environmental features e.g. landscaping: These lines represent environmental mitigation features provided for reasons other than noise mitigation which also reduce sound levels from the Proposed Scheme to the surrounding environment. These features are not placed specifically to reduce or remove a likely significant noise effect. Examples include landscaping and visual mitigation earthworks (non-engineering earthworks). Engineering e.g. cuttings: These lines represent engineering features which reduce sound levels from the Proposed Scheme to the surrounding environment but are not placed specifically to reduce or remove a likely significant noise effect. Examples include cuttings and safety barriers on viaducts which are not close to sensitive receptors.	High Speed Two (HS2) Ltd	
Envisaged mitigation to avoid / reduce significant noise effects: Landscaping and/or fence barriers Engineering e.g. cuttings	Landscaping and/or fence barriers: These lines represent the envisaged mitigation provided specifically to reduce sound levels from the Proposed Scheme at sensitive receptors in order to reduce or remove likely operational significant noise effects. Examples include noise fence barriers or earth bunds (non-engineering earthworks) acting as noise barriers. These features are labelled with the height of the top of the barrier/bund above rail level. Engineering e.g. cuttings: These lines represent engineering features of the route which reduce sound levels from the Proposed Scheme at potentially significant sensitive receptors. These features, therefore, serve a material purpose in reducing or avoiding likely significant noise effects. Examples include engineering cuttings near to sensitive receptors. These features are labelled with the height of the top of the feature above rail level.	High Speed Two (HS2) Ltd	
Existing buildings	Extent of buildings derived from Ordnance Survey MasterMap data.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2022.
Existing contours	Lines depicting land heights to show topography.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2022.
Existing inland water	See Water body.	See Water body	See Water body
Existing public right 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).	See Public Rights of Way	

Legend features	Definition	Source	Copyright
Existing watercourse	See Watercourse.	See Watercourse.	See Watercourse.
Existing woodland	See Woodland.	See Woodland.	
Existing woodland and tree belts	A dataset showing large areas of trees that are likely to have an impact on whether the scheme is visible during construction and vegetation. It was used in the ZTV as part of the base models.	High Speed Two (HS2) Ltd	
Grassed areas	A grassed area.	High Speed Two (HS2) Ltd	
Grassland habitat creation	An area of grassland habitat creation.	High Speed Two (HS2) Ltd	
Hedgerow	Hedgerow.	High Speed Two (HS2) Ltd	
HS2 access	Access to HS2 infrastructure such as electricity substations, balancing ponds and maintenance access points to the railway.	High Speed Two (HS2) Ltd	
Land no longer required at current AP/SES	Areas of land no longer required at the current AP/SES as compared to that defined by the boundary of the maximum possible extent of construction works required to build HS2 based on the design at Hybrid Bill stage. This only covers surface works and includes all tunnel portals, vent shafts and headhouses, but does not apply to wholly tunnelled sections or to air rights. It also encompasses associated highway, access, drainage and utility works.	High Speed Two (HS2) Ltd	
Land no longer required at previous AP/SES	Areas of land no longer required at a previous AP/SES as compared to that defined by the boundary of the maximum possible extent of construction works required to build HS2 based on the design at Hybrid Bill stage. This only covers surface works and includes all tunnel portals, vent shafts and headhouses, but does not apply to wholly tunnelled sections or to air rights. It also encompasses associated highway, access, drainage and utility works.	High Speed Two (HS2) Ltd	
Land potentially required during construction	Boundary defining the maximum possible extent of construction works required to build HS2 as far as the current level of design allows. This only covers surface works and includes all tunnel portals, vent shafts and headhouses, but does not apply to wholly tunnelled sections or to air rights. It also encompasses associated highway, access, drainage and utility works.	High Speed Two (HS2) Ltd	
Land potentially required for mitigation planting	Land potentially required for mitigation planting.	High Speed Two (HS2) Ltd	
Landscape earthworks	Landscape earthworks to provide permanent landscape, visual or acoustic mitigation.	High Speed Two (HS2) Ltd	
Landscape mitigation planting (scrub / woodland)	An area of landscape mitigation planting (scrub / woodland).	High Speed Two (HS2) Ltd	

Legend features	Definition	Source	Copyright
Listed buildings: Grade I Grade II* Grade II	Buildings and structures in England of special architectural or historic interest. The Listed Building data consists of approximately 375,000 standing structures. The information was obtained in digital form from Historic England. The data is subject to continuous review and regularly updated as new structures are designated and positional accuracy improves.	Historic England	© Historic England 2022. Contains Ordnance Survey data © Crown copyright and database right 2022 The Historic England GIS Data contained in this material was obtained on 4 July 2022. The most publicly available up to date Historic England GIS Data can be obtained from HistoricEngland.org.uk .
Local Nature Reserve (LNR)	A Local Nature Reserve (LNR) is a statutory designation made under Section 21 of the National Parks and Access to the Countryside Act 1949 by principal local authorities. Data supplied has the status of Declared. The boundaries are interpreted from material gathered from the local authorities and does not currently cover all LNRs. This national dataset is indicative not definitive. Definitive information can only be provided by individual local authorities and you should refer directly to their information for all purposes that require the most up to date and complete dataset.	Natural England	© Natural England copyright. Contains Ordnance Survey data. © Crown copyright and database right 2022.
Local placement	Local placement: Land already required for construction of the scheme to be used for the permanent placement of surplus excavated materials, which will subsequently be restored for agricultural use.	High Speed Two (HS2) Ltd	
Local Wildlife Sites (LWS)	Local Wildlife Sites (LWS) are identified and selected for their local nature conservation value. They protect threatened species and habitats acting as buffers, stepping stones and corridors between nationally-designated wildlife sites. They are local non-statutory nature conservation sites. They were formerly referred to as County Wildlife Sites.	Cheshire Biological Group Cheshire East Council Cheshire West and Chester Council Cheshire Wildlife Trust	© Cheshire Biological Group. © Cheshire East Council. © Cheshire West and Chester Council. © Cheshire Wildlife Trust. © Warrington Borough Council.
LpAFmax exceeds 60dB façade	Assessment locations where the predicted value of LpAFmax is 60 dB or greater having applied a façade correction of +2.5 dB to the predicted free field value.	High Speed Two (HS2) Ltd	
Main construction compound	A strategic construction hub for core project management, commercial and administrative staff associated with the construction of the Proposed Scheme. These compounds will include an area for equipment and materials storage, as well as providing main welfare facilities for construction staff.	High Speed Two (HS2) Ltd	
Major utility works	Utilities which may be diverted, or have their height or depth altered, where their current alignment, either above or below ground.	High Speed Two (HS2) Ltd	
Major utility works - removed	Utilities to be removed to enable construction of the Proposed Scheme.	High Speed Two (HS2) Ltd	
National Nature Reserve (NNR)	Designated and non-designated nature reserves managed by local authorities, The Wildlife Trusts and private landowners.	Natural England	© Natural England copyright. Contains Ordnance Survey data. © Crown copyright and database right 2022.

Legend features	Definition	Source	Copyright
New ditches	New ditches.	High Speed Two (HS2) Ltd	
New, diverted or realigned public right of way	New, realigned or diverted public rights of way (PRoW).	High Speed Two (HS2) Ltd	
Noise fence barrier	A barrier to reduce unwanted sound.	High Speed Two (HS2) Ltd	
Noise Important Areas defined in national noise action plans (Defra 2014)/(Defra 2019)	The Environmental Noise (England) Regulations 2006 (SI 2006/2238) required Defra, as the Competent Authority, to implement the Environmental Noise Directive in England, which requires amongst other things, the adoption of Action Plans, based upon the noise exposure assessment results. The noise action plan(s) "apply in particular to the most important areas as established by the strategic noise maps". These identified areas are referred to as noise important areas.	High Speed Two (HS2) Ltd	
Non engineering earthworks: Cutting	Cuttings created in the construction of landscape features and mitigation measures.	High Speed Two (HS2) Ltd	
Non engineering earthworks: Embankment	Embankments created in the construction of landscape features and mitigation measures.	High Speed Two (HS2) Ltd	
Operational airborne noise impacts at residential buildings	The buildings shown on SV-02 and SV-05 are colour-coded according to the magnitude of the predicted noise impacts of the Proposed Scheme. Noise impacts are calculated by comparing the sound levels predicted if the Proposed Scheme did not go ahead with those if it did (details of this process can be found in Volume 5: Appendix SV-001-00000). Panel B on SV02/SV-05 contains a key showing the colours used with the corresponding impact categories. The impacts presented are the greatest (i.e. worst-case) of the impacts predicted for daytime and night-time.	High Speed Two (HS2) Ltd	
Potential additional noise insulation (triggered by maximum sound levels at night)	This represents dwellings which would potentially be provided with noise insulation due maximum sound levels from the Proposed Scheme (further information regarding assessment criteria can be found in Volume 5 Appendix SV-001-00000).	High Speed Two (HS2) Ltd	
Potential additional noise insulation (triggered by WHO Night Noise Guidelines Interim Target)	This represents dwellings which would potentially be provided with noise insulation due to noise from the Proposed Scheme exceeding the World Health Organization (WHO) night noise guidelines interim target (further information regarding assessment criteria can be found in Volume 5 Appendix SV-001-00000).	High Speed Two (HS2) Ltd	
Potential noise insulation (triggered by Noise Insulation Regulations 1996)	This represents dwellings which would potentially qualify for noise insulation under the Noise Insulation (Railways and Other Guided Transport Systems) Regulations 1996 (further information regarding assessment criteria can be found in Volume 5 Appendix SV-001-00000).	High Speed Two (HS2) Ltd	
Proposed tree planting	A dataset showing proposed planting that may have an impact on whether the scheme is visible during construction and operation. It was used in the operation year 15 ZTV.	High Speed Two (HS2) Ltd	
Public realm	Outdoor areas, other than highways, accessible to the public in towns and cities.	High Speed Two (HS2) Ltd	

Legend features	Definition	Source	Copyright
Public right of way closure	Public rights of way that will be closed due to construction of the scheme.	High Speed Two (HS2) Ltd	
Public Rights of Way (PRoW)	Public rights of way are highways which can be used for the following purposes: - Footpaths - pedestrians only - Bridleways - pedestrians, cyclists and equestrians - Restricted byways - as bridleways plus non-motorised vehicles - Byways open to all traffic. Definitive Map data supplied by surveying authorities.	Cheshire East council Cheshire West council Cumbria County council Manchester City council Preston City council Salford City council Trafford Metropolitan Borough council Warrington Borough council	© Cheshire East council. © Cheshire West council. © Cumbria County council. © Manchester City council. © Preston City council. © Salford City council. © Trafford Metropolitan Borough council. © Warrington Borough council.
Pumping station	Site for pumping water.	High Speed Two (HS2) Ltd	
Rail alignment	Longitudinal geometry of the tracks consisting of a series of straights and curves.	High Speed Two (HS2) Ltd	
Rail alignment formation	The space required to accommodate the railway infrastructure which typically includes the tracks, overhead line equipment, drainage, lineside access paths and cable routes for electrification and communication systems.	High Speed Two (HS2) Ltd	
Railway systems compounds	Represents railway systems compounds which facilitate installation, testing and commissioning of the railway systems, including track, overhead line equipment, communications and signalling equipment, and traction power supply.	High Speed Two (HS2) Ltd	
Railway systems site	Site of power supply, train control and/or telecommunications for the operational railway.	High Speed Two (HS2) Ltd	
Ramsar Site - Wetland of International Importance	A Ramsar Site is the land listed as a Wetland of International Importance under the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (the Ramsar Convention) 1971. Data supplied has the status of "Listed".	Natural England	© Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right 2022.
Registered park/garden	Parks and Gardens of special historic interest. Supplied by Historic England. Of the 1,590 Registered Parks and Gardens, over 91% were captured against the 1:10,000 Ordnance Survey Raster product. 135 records are potentially subject to movement under Positional Accuracy Improvement (PAI) improvements.	Historic England	© Historic England 2022. Contains Ordnance Survey data © Crown copyright and database right 2022 The Historic England GIS Data contained in this material was obtained on 4 July 2022. The most publicly available up to date Historic England GIS Data can be obtained from HistoricEngland.org.uk .
Replacement community facility	Area of land for the provision of a replacement community facility, such as a playground, community centre or activity centre, whilst construction works are in progress.	High Speed Two (HS2) Ltd	
Replacement floodplain storage area	An area of low-lying land designed to temporarily fill with flood water to replace an area of existing floodplain lost due to development.	High Speed Two (HS2) Ltd	

Legend features	Definition	Source	Copyright
Returned to suitable development use	An area to be levelled and protected by hoarding, which will be available for return to suitable development use following construction of the Proposed Scheme.	High Speed Two (HS2) Ltd	
Route in bored tunnel Route in green tunnel	Represents the proposed route of HS2, split into route in bored tunnel and route in green tunnel sections.	High Speed Two (HS2) Ltd	
Route in tunnel	Represents the proposed route of HS2, split into route on surface and tunnelled sections.	High Speed Two (HS2) Ltd	
Route on surface	Represents the proposed route of HS2, split into route on surface and tunnelled sections.	High Speed Two (HS2) Ltd	
Satellite construction compound	A compound that is smaller in size than the main compounds. Satellite compounds provide office accommodation for limited numbers of staff involved in the construction of the Proposed Scheme. Welfare facilities for staff are also provided.	High Speed Two (HS2) Ltd	
Scheduled monument	Nationally significant heritage assets protected by the Ancient Monuments and Archaeological Areas Act 1979. The Scheduled Monument layer consists of approximately 22,380 monuments tied into the Ordnance Survey. The majority of these are fixed; however, a small number of records may be updated as digital positional accuracy improves. The data is subject to continuous review and regularly updated as new monuments are designated.	Historic England	© Historic England 2022. Contains Ordnance Survey data © Crown copyright and database right 2022. The Historic England GIS Data contained in this material was obtained on 4 July 2022. The most publicly available up to date Historic England GIS Data can be obtained from HistoricEngland.org.uk .
Significantly affected photomontage location	This dataset shows the locations of photomontages from which the schemes visual impact has been assessed as significant during either construction or operation.	High Speed Two (HS2) Ltd	
Significantly affected viewpoint	This dataset shows the locations of the visual receptors from which the schemes visual impact has been assessed and shows whether or not the impact is significant or non-significant during construction and operation.	High Speed Two (HS2) Ltd	
Significantly affected viewpoint or photomontage number	This dataset shows the locations of the visual receptors from which the schemes visual impact has been assessed and shows whether or not the impact is significant or non-significant during construction and operation.	High Speed Two (HS2) Ltd	
Site of Special Scientific Interest (SSSI)	A Site of Special Scientific Interest (SSSI) is the land notified as an SSSI under the Wildlife and Countryside Act (1981), as amended.	Natural England	© Natural England copyright. Contains Ordnance Survey data. © Crown copyright and database right 2022.
Sound contours	The sound levels from the Proposed Scheme (expressed as LpAeq,T and representing sound from the new railway only) are presented as contours lines, which represent equal sound levels. Further details regarding contour values are provided on the SV-02, SV-05, SV-08 and SV-09 map series.	High Speed Two (HS2) Ltd	

Legend features	Definition	Source	Copyright
Special Area of Conservation (SAC)	A Special Area of Conservation (SAC) is the land designated under Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.	Natural England	© Natural England copyright. Contains Ordnance Survey data. © Crown copyright and database right 2022.
Special Protection Area (SPA)	Special Protection Areas (SPAs) are strictly protected sites classified in accordance with Article 4 of the EC Birds Directive, which came into force in April 1979. They are classified for rare and vulnerable birds (as listed on Annex I of the Directive), and for regularly occurring migratory species.	Natural England	© Natural England copyright. Contains Ordnance Survey data. © Crown copyright and database right 2022.
Storage / prefabrication / laydown areas	An area used for prefabrication and/or the temporary storage of construction equipment and supplies.	High Speed Two (HS2) Ltd	
System railheads	A site at locations along the route with connections to the National Rail network. They will be used as the delivery location for bulk rail-borne materials, such as ballast, rails and sleepers.	High Speed Two (HS2) Ltd	
Temporary highway diversion / realignment	Indicative temporary highway diversion layouts during the construction phase.	High Speed Two (HS2) Ltd	
Temporary material stockpile	An area where materials excavated during construction of the Proposed Scheme will be stored temporarily before being reused, and managing movement of excavated materials during construction.	High Speed Two (HS2) Ltd	
Temporary public right of way closure	Indicative temporary closures to public rights of way as a result of construction of the scheme.	High Speed Two (HS2) Ltd	
Temporary public right of way diversion / realignment	Indicative temporary diversions to public rights of way as a result of construction of the scheme. These will vary depending on construction phase and local conditions.	High Speed Two (HS2) Ltd	
Temporary replacement community facility	An area where materials excavated during construction of the Proposed Scheme will be stored temporarily before being reused, and managing movement of excavated materials during construction.	High Speed Two (HS2) Ltd	
Temporary workers accommodation	Temporary overnight accommodation for workers during the construction period.	High Speed Two (HS2) Ltd	
Tunnel portal	The footprint of a tunnel portal.	High Speed Two (HS2) Ltd	
Tunnels external extent	The external excavated extent of each tunnel bore.	High Speed Two (HS2) Ltd	
Water body	Any mass of water having definite hydrological, physical, chemical and biological characteristics.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2022.
Watercourse	Any channel through which water flows, can be natural or manmade. They are split into two categories (main rivers or ordinary watercourses) in England and Wales for regulation purposes.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2022.

Legend features	Definition	Source	Copyright
Watercourse diversion	A route of a watercourse, where either the start or the finish point changes due to modification, which results in changes to the flow regime within a discrete section of channel.	High Speed Two (HS2) Ltd	
Wetland habitat creation	An area of wetland habitat creation.	High Speed Two (HS2) Ltd	
Woodland	Woodland areas derived from Ordnance Survey MasterMap data.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2022.
Woodland habitat creation	An area of woodland habitat creation.	High Speed Two (HS2) Ltd	

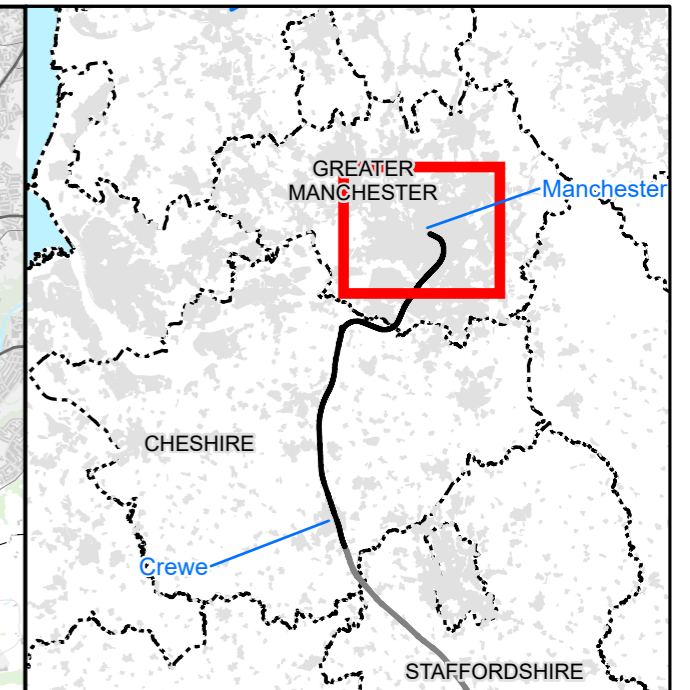
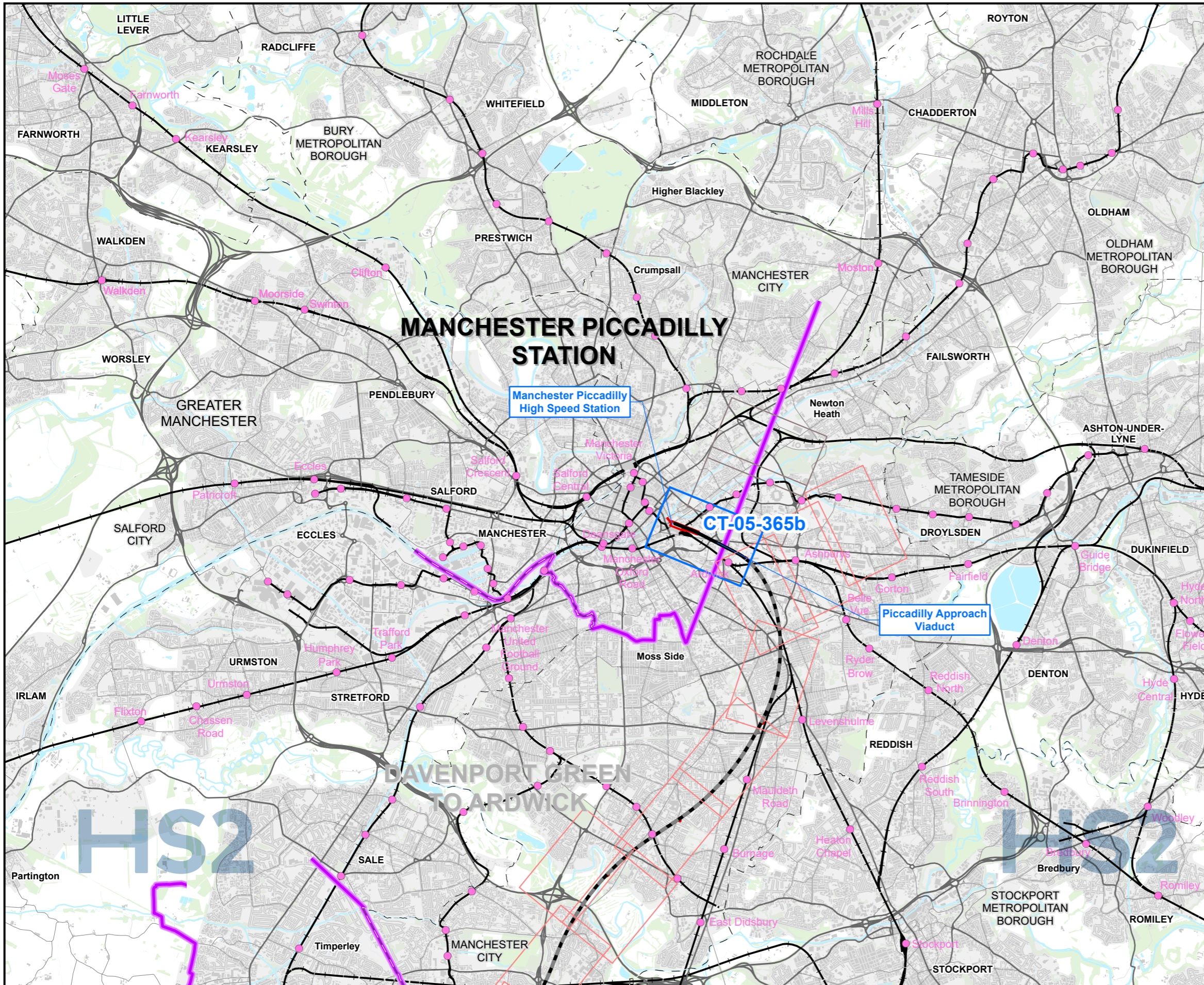
This page is left intentionally blank

High Speed Rail (Crewe – Manchester)

Supplementary Environmental Statement 2 and Additional Provision 2 Environmental Statement

CT-05 – Construction Phase

CT-06 – Proposed Scheme



Map Series Information:

These plans show the land potentially required during construction, the construction features, access requirements and infrastructure associated with construction of the Proposed Scheme.

The plans also show the construction phase arrangements for public access using Public Rights of Way. The base mapping shown on the plans is reflective of 2022 Ordnance Survey (OS) data.

Main Map Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Community area boundary
- Existing railway station
- County boundary
- District/Borough boundary
- Map sheets included in this community area
- Map sheets included in this community area with no amendment
- Map sheets not included in this community area

Map Number CT-05-INDEX-MA08

Map Name
**Index Map of:
 Construction Phase
 SES2 and AP2 ES**

Community Area MA08:
 Manchester Piccadilly Station

HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.

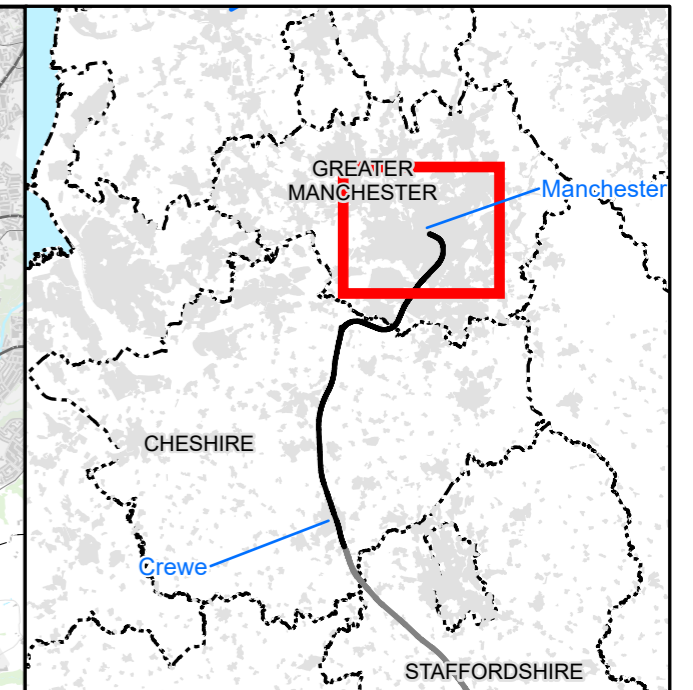
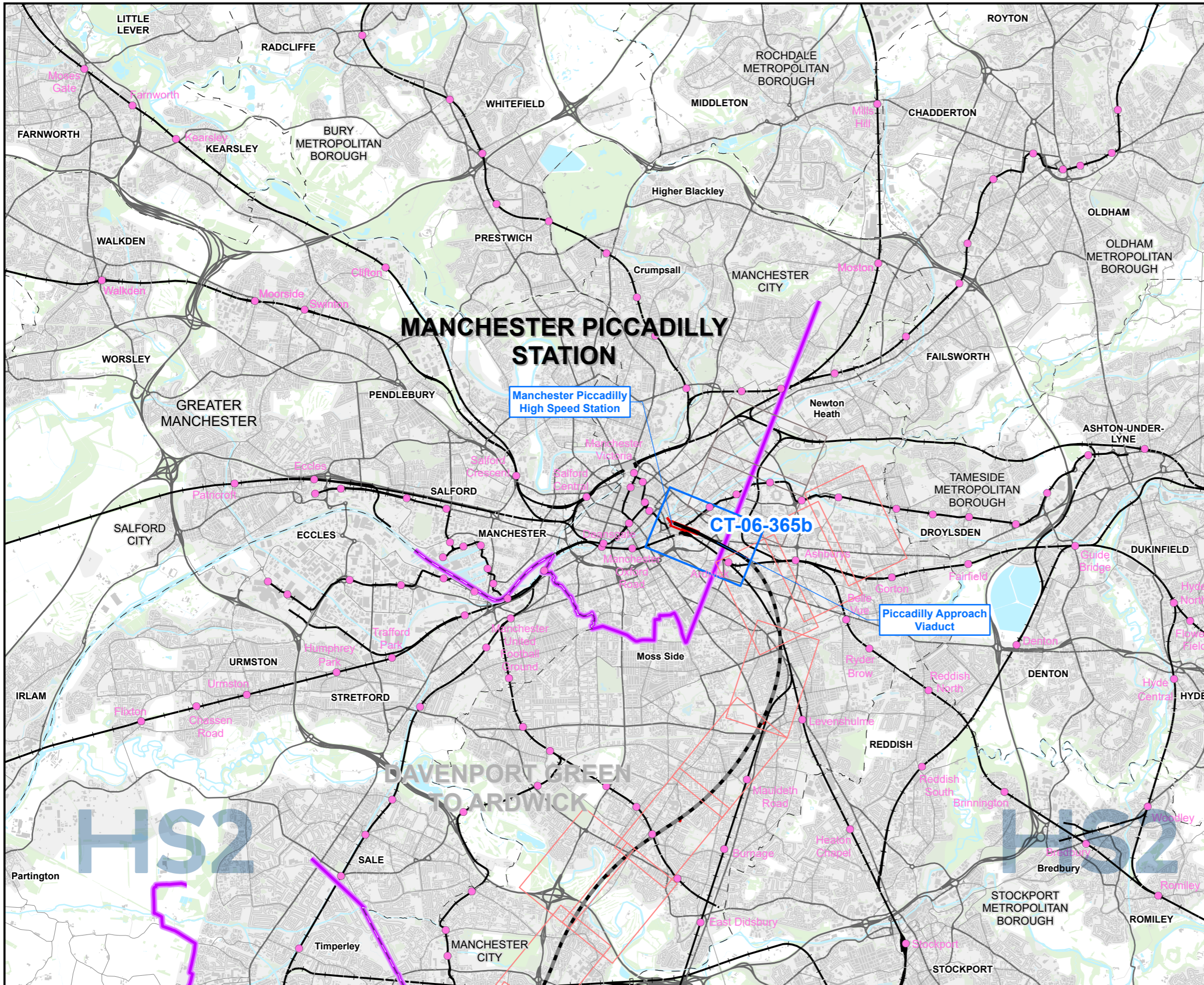
Registered in England. Registration number 06791686.
 Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6GA.

© Crown copyright and database rights 2022
 OS 100049190

Scale at A3: 1:75,000

Doc Number: 2PT27-MWJ-EV-DSC-M000-500008-P03

Date: 04/04/23



Map Series Information:

These maps show permanent features, infrastructure, restored land, and areas for landscaping, screening and ecological mitigation associated with the Proposed Scheme.

The base mapping shown on the plans is reflective of 2022 Ordnance Survey (OS) data.

Main Map Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Community area boundary
- Existing railway station
- County boundary
- District/Borough boundary
- Map sheets included in this community area
- Map sheets included in this community area with no amendment
- Map sheets not included in this community area

Map Number	CT-06-INDEX-MA08
Map Name	Index Map of: Proposed Scheme SES2 and AP2 ES
	Community Area MA08: Manchester Piccadilly Station

HS2

Registered in England. Registration number 06791686.
Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6GA.

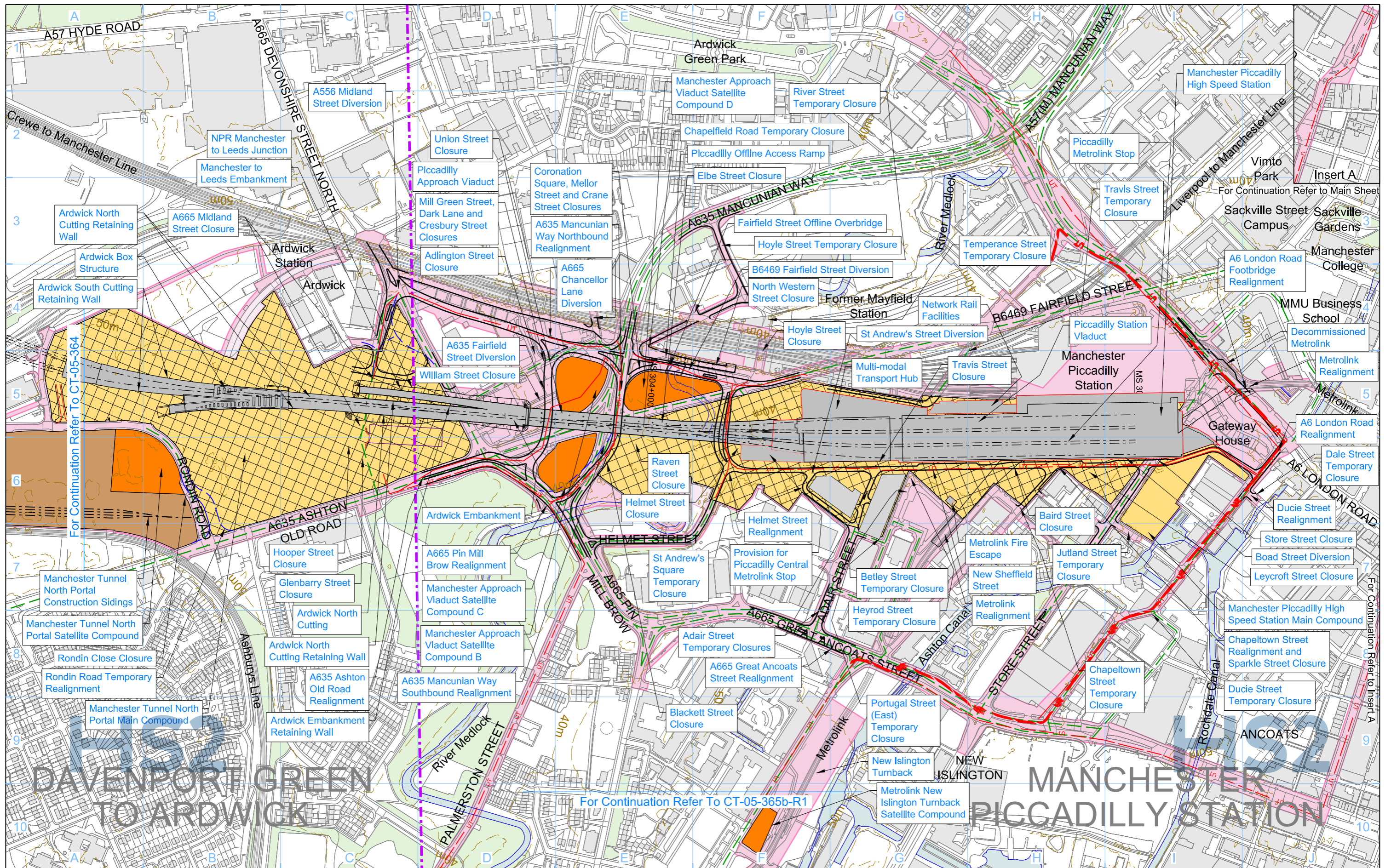
Scale at A3: 1:75,000

© Crown copyright and database rights 2022
OS 100049190

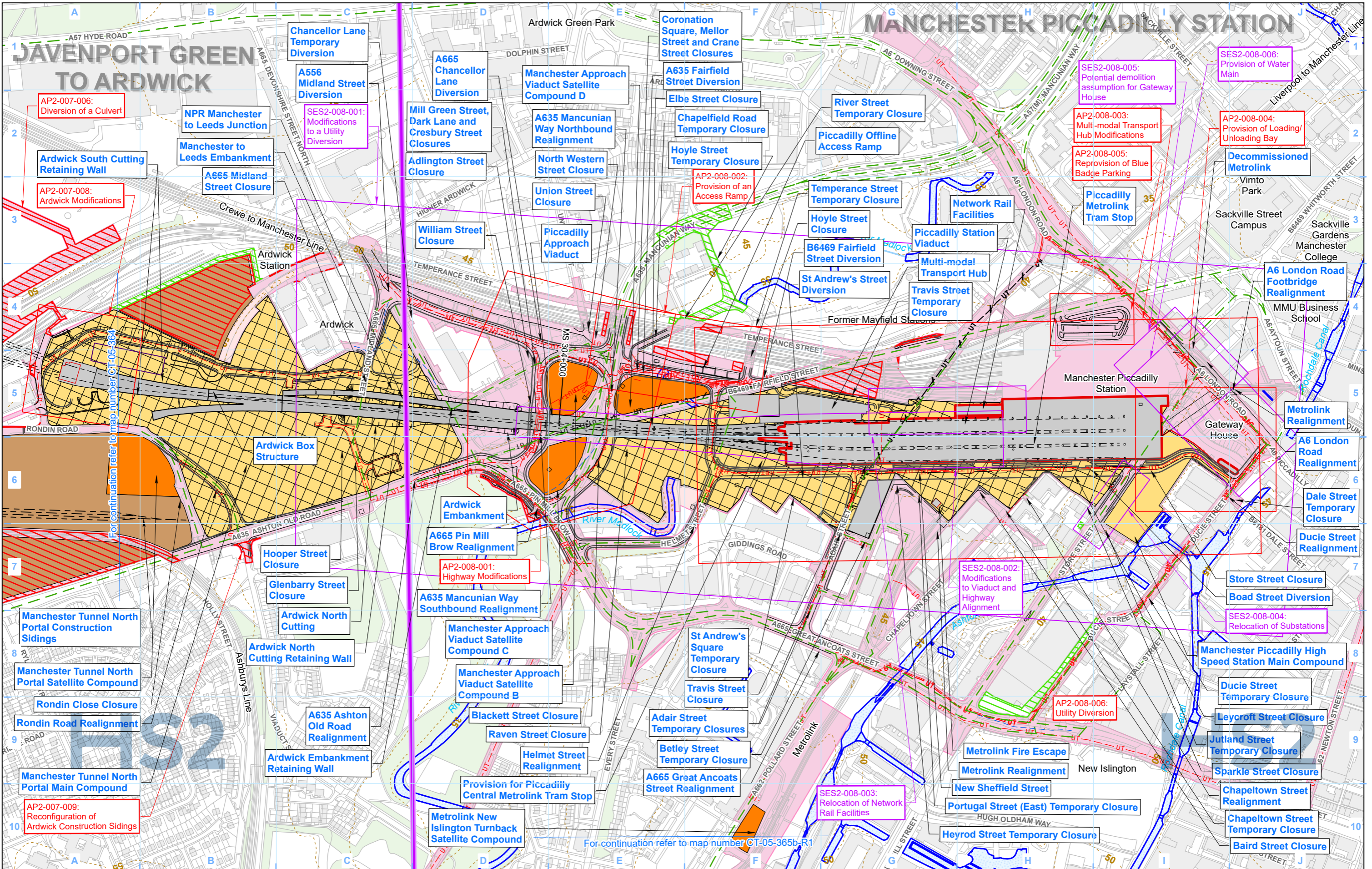
Doc Number: 2PT27-MWJ-EV-DSC-M000-600008-P03

Date: 04/04/23

Note: Not all data layers in the legend are represented on every map.



Legend <ul style="list-style-type: none"> Depot, station, headhouse or portal building Tunnel portal Main construction compounds Satellite construction compounds Railway systems compounds System railheads Temporary material stockpile Borrow pit Railway systems site Storage / prefabrication / laydown areas Land potentially required during construction Land potentially required for mitigation planting Temporary replacement community facility Rail alignment formation Temporary workers accommodation 		<ul style="list-style-type: none"> Community area boundary Construction traffic route Existing public right of way Public right of way closure Temporary public right of way closure Temporary public right of way diversion / realignment New, diverted or realigned public right of way Landscape earthworks Engineering earthworks Temporary highway diversion / realignment Major utility works Major utility works - Removed County boundary Borough / District boundary Tunnels external extent Existing woodland Existing buildings Existing inland water Existing contours Existing watercourse HS2 access Rail alignment Chainage (e.g. 10+000) 		<p>Map Number: CT-05-365b</p> <p>Map Name: Construction Phase</p> <p>Community Area: MA08 Manchester Piccadilly Station</p>		<p>HS2</p> <p>Registered in England Registration No. 06791886 Registered office: 2 Snow Hill, Queensway, Birmingham, B4 6GA</p> <p>Scale at A3: 1:5,000</p> <p>0 50 100 150 200 250 Metres</p> <p>Doc Number: 2DE01-MWJ-EV-DPL-M003-520365 P11 Date: 10/08/21</p>	
---	--	--	--	--	--	--	--



Legend

Depot, station, headhouse or portal building	Railway systems site	Temporary workers accommodation	New, diverted or realigned public right of way	County boundary	Rail alignment
Tunnel portal	Storage / prefabrication / laydown areas	Community area boundary	Landscape earthworks	Borough / District boundary	Additional land required at current AP
Main construction compound	Land potentially required during construction	Construction traffic route	Engineering earthworks	Tunnels external extent	Land no longer required at current AP/SES
Satellite construction compound	Land potentially required for mitigation planting	Existing public right of way	Temporary highway diversion / realignment	Existing buildings	Additional land required at a previous AP
Railway systems compounds	Temporary replacement community facility	Public right of way closure	Major utility works	Existing woodland	Land no longer required at a previous AP/SES
System railheads	Temporary public right of way diversion / realignment	Temporary public right of way closure	Major utility works - Removed	Existing inland water	
Temporary material stockpile		Temporary public right of way diversion / realignment		Existing watercourse	
Borrow pit				Existing contours	

Additional land required at current AP	Rail alignment
Land no longer required at current AP/SES	Additional land required at a previous AP
Additional land required at a previous AP	Land no longer required at a previous AP/SES

Map Number: CT-05-365b
 Map Name: Construction Phase SES2 and AP2 ES
 Community Area MA08: Manchester Piccadilly Station

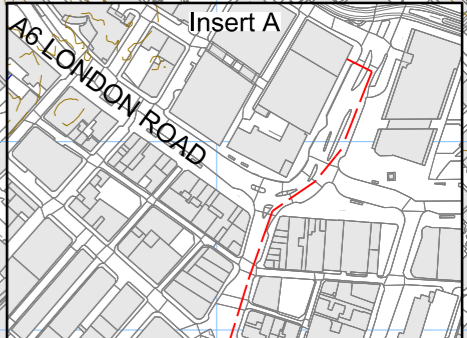
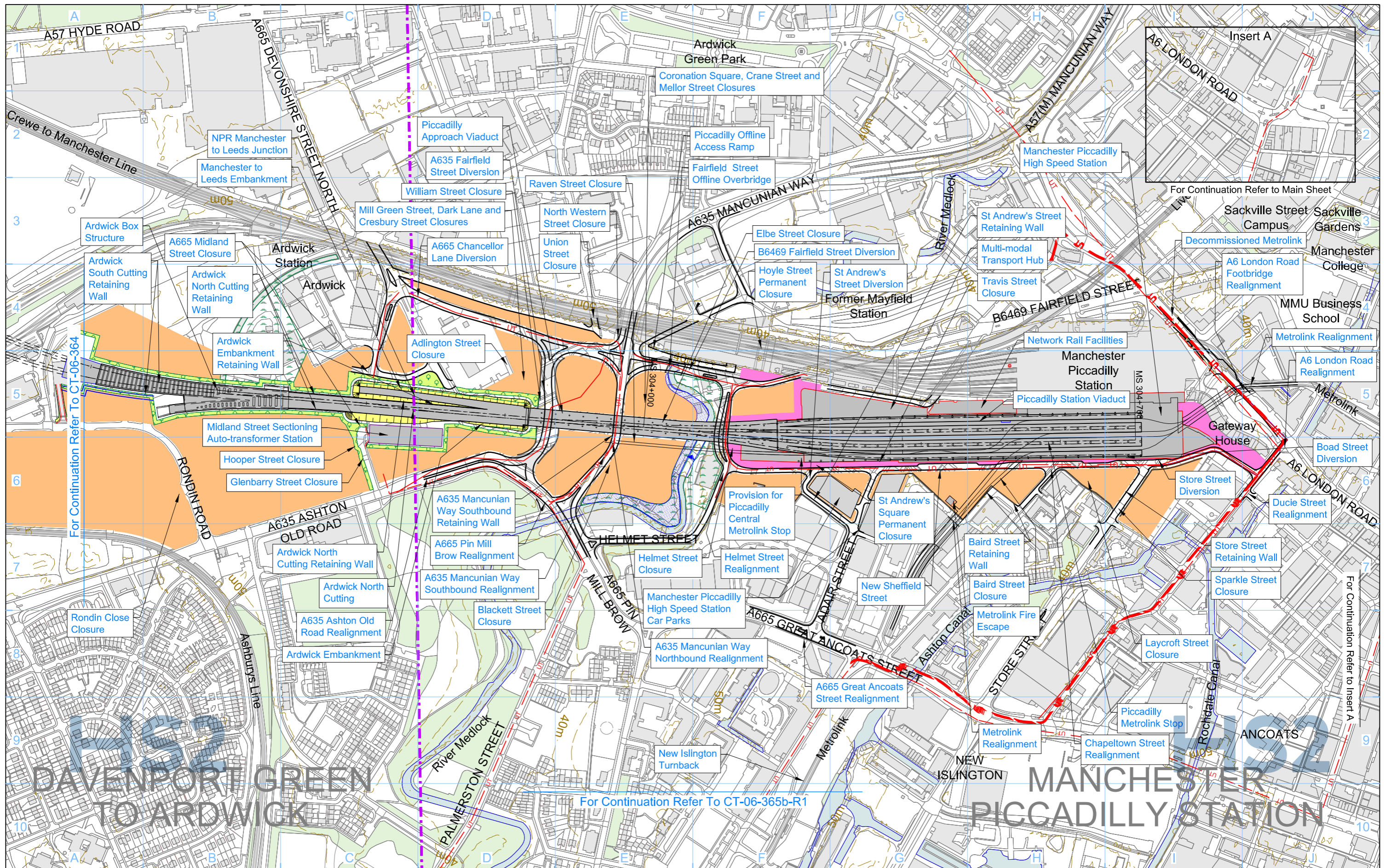
HS2

Registered in England. Registration number 06791686.
 Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6GA.

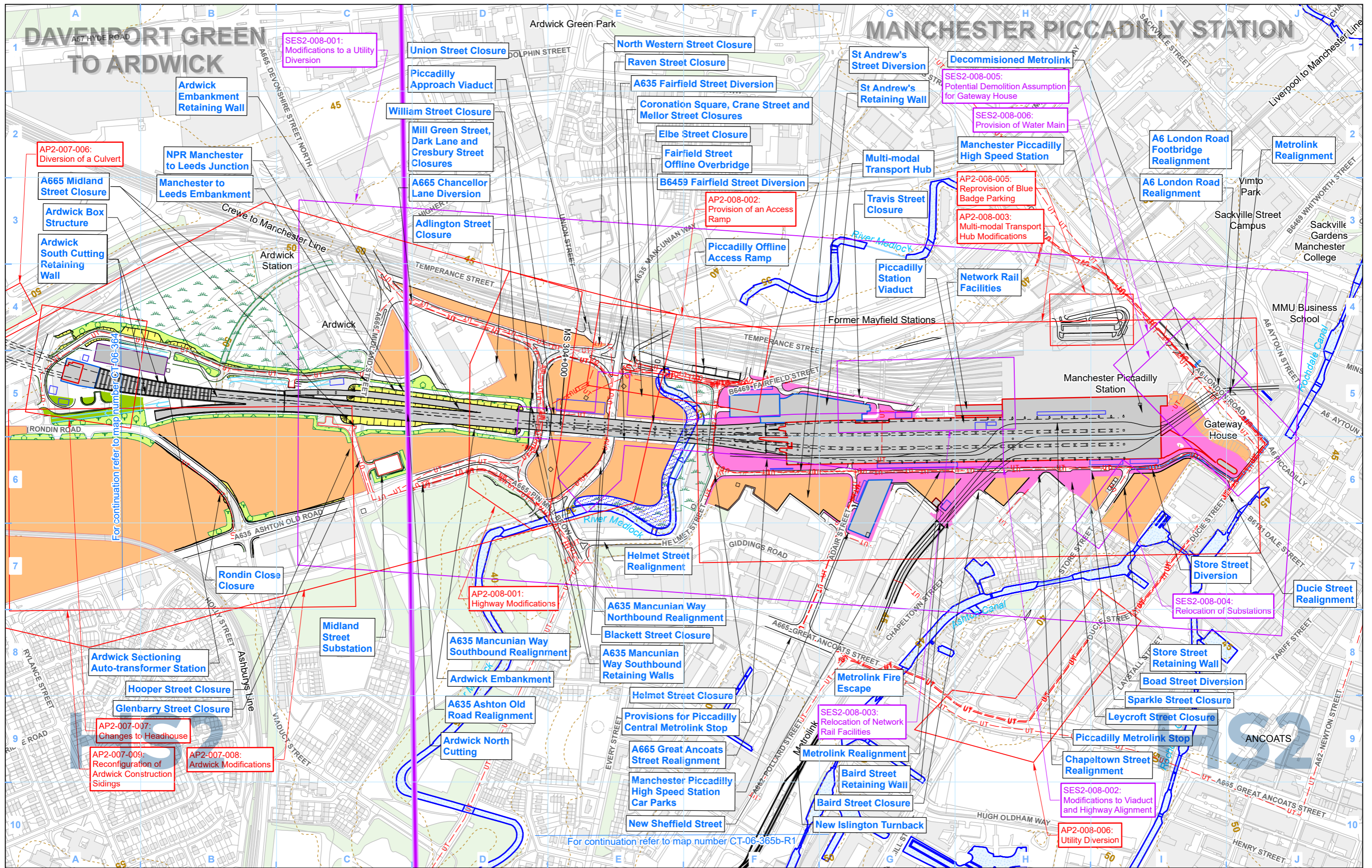
Scale at A3: 1:5,000

© Crown copyright and database rights 2022
 OS 100049190

Doc Number: 2PT27-MWJ-EV-DPL-M003-520365-P03
 Date: 11/04/23



Legend 									
Map Number CT-06-365b		Map Name Proposed Scheme				<small>Registered in England Registration No. 06791886 Registered office: 2 Snow Hill, Queensway, Birmingham, B4 6GA</small>		<small>Scale at A3: 1:5,000</small> 	
Community Area MA08 Manchester Piccadilly Station		<small>© Crown copyright and database rights 2020. Ordnance Survey Licence Number 100049190.</small>		<small>Doc Number: 2DE01-MWJ-EV-DPL-M003-620365</small>		<small>P11</small>		<small>Date: 10/08/21</small>	



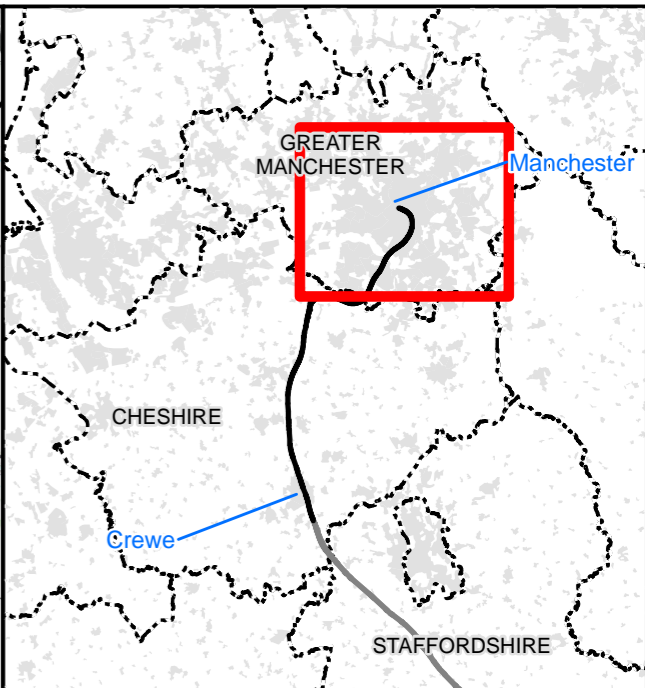
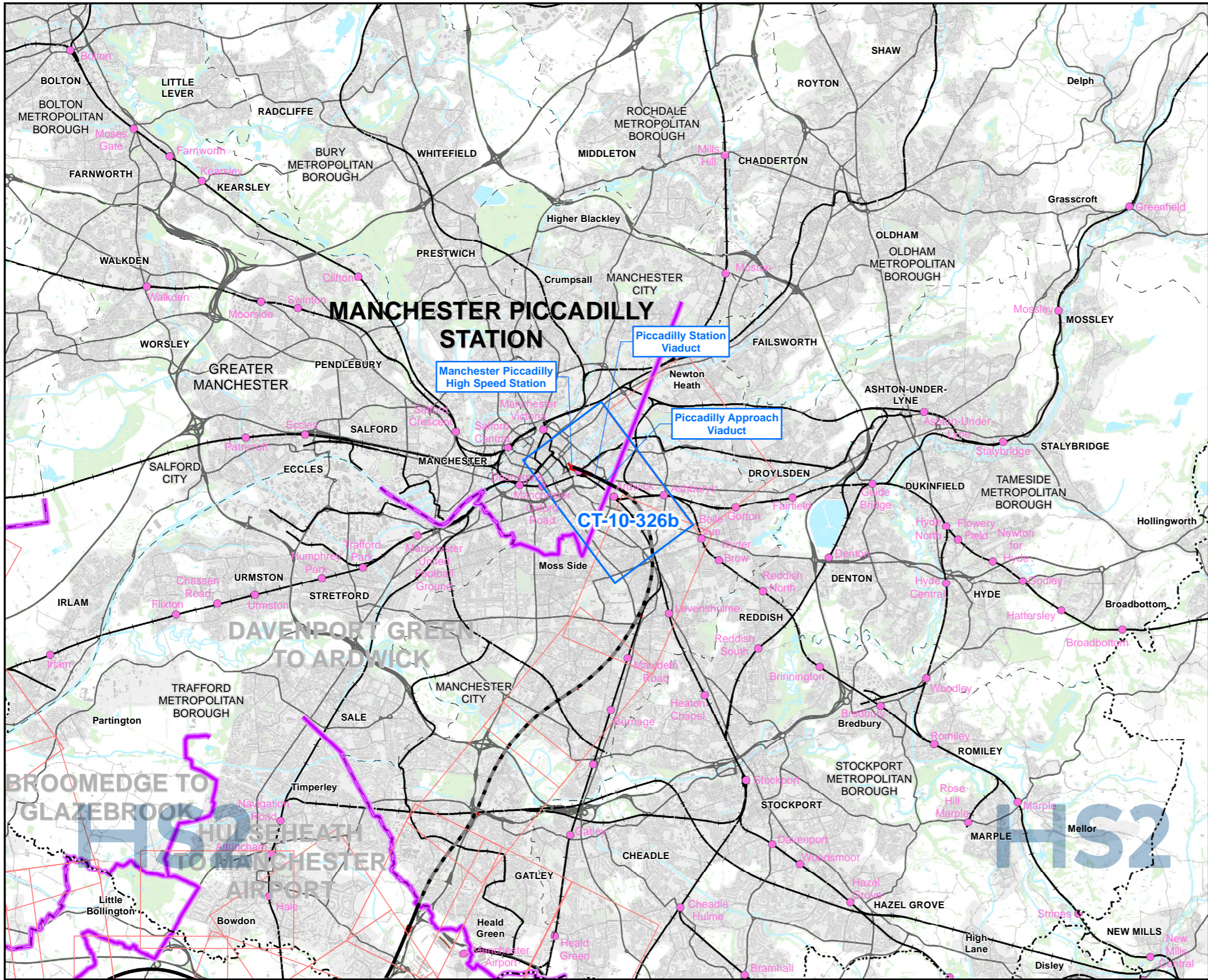
Legend <ul style="list-style-type: none"> Depot, station, headhouse or portal building Tunnel portal Railway systems site Ecological mitigation pond (Indicative only) Balancing pond Replacement floodplain storage area Pumping station Woodland habitat creation Wetland habitat creation Grassland habitat creation Landscape mitigation planting (scrub / woodland) Hedgerow Grassed areas Public realm Replacement community facility Returned to suitable development use Local placement 		<ul style="list-style-type: none"> County boundary Borough / District boundary Community area boundary New ditches Existing contours Existing watercourse Watercourse diversion Engineering earthworks Landscape earthworks Rail alignment formation Tunnels external extent Major utility works Existing public right of way New, diverted or realigned public right of way Public right of way closure Existing buildings Existing woodland Existing inland water HS2 access Noise fence barrier Rail alignment Culvert 	
Map Number CT-06-365b Map Name Proposed Scheme SES2 and AP2 ES Community Area MA08: Manchester Piccadilly Station		HS2 <small>Registered in England. Registration number 06791686. Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6GA.</small> <small>© Crown copyright and database rights 2022 OS 100049190</small> Scale at A3: 1:5,000 <small>0 50 100 150 200 Metres</small> Doc Number: 2PT27-MWJ-EV-DPL-M003-620365-P03 Date: 11/04/23	

This page is left intentionally blank

**High Speed Rail
(Crewe – Manchester)**

**Supplementary Environmental Statement 2 and
Additional Provision 2 Environmental Statement**

CT-10 – Environmental Baseline



Map Series Information:

The Environmental Baseline maps display a range of environmental data layers.

Main Map Legend

Route in tunnel	Map sheets included in this community area
Route on surface	Map sheets included in this community area with no amendment
Depot, station, headhouse or portal building	Map sheets not included in this community area
Community area boundary	
Existing railway station	
County boundary	
District/Borough boundary	

Map Number	CT-10-INDEX-MA08
Map Name	Index Map of: Environmental Baseline SES2 and AP2 ES
	Community Area MA08: Manchester Piccadilly Station

HS2

HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.

Registered in England. Registration number 06791686.
Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6GA.

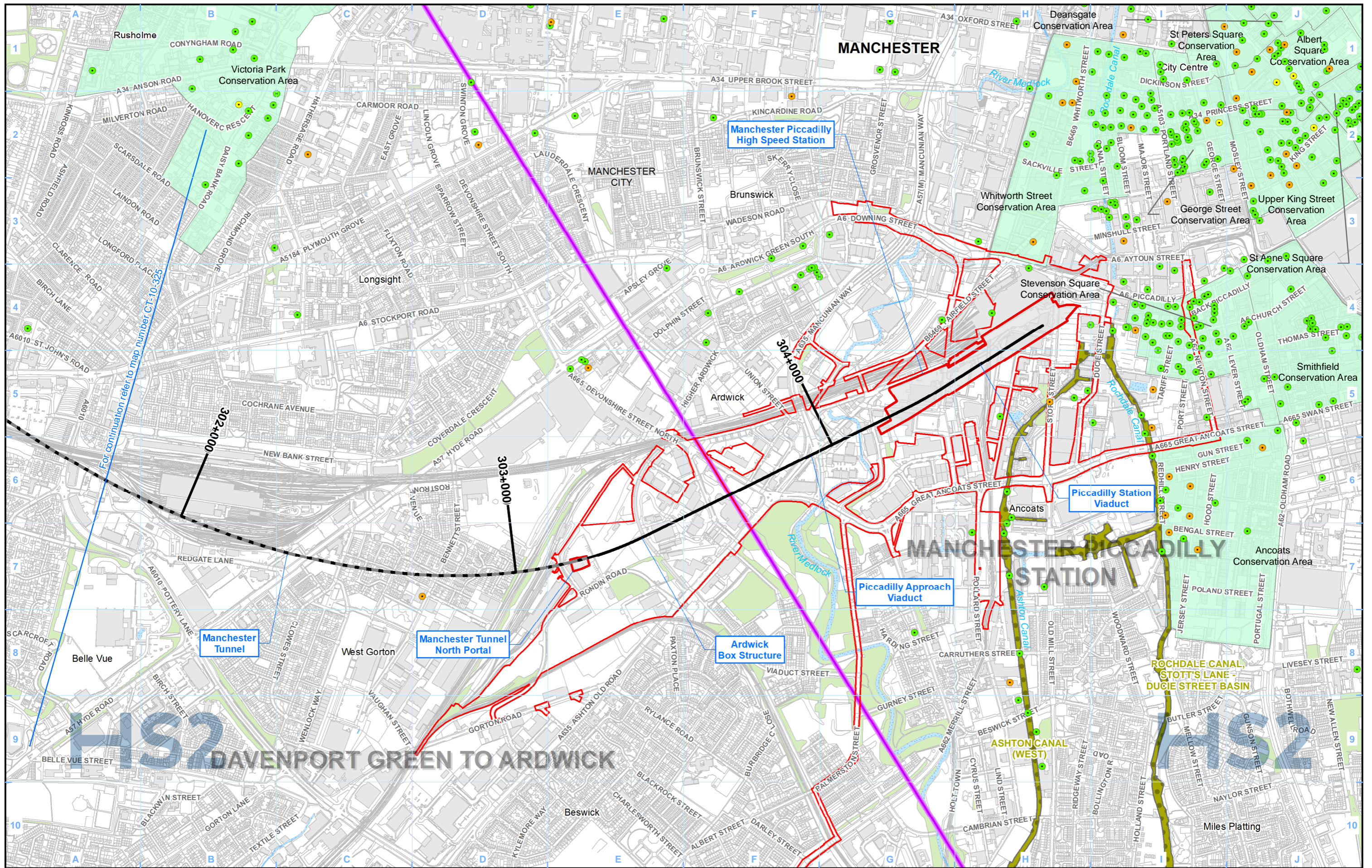
Scale at A3: 1:100,000

© Crown copyright and database rights 2022
OS 100049190

Doc Number: 2PT27-MWJ-EV-MAP-M000-000200-P01

Date: 03/04/23

This page is left intentionally blank



Legend

Route in tunnel	Watercourse	Conservation Area	Special Protection Area (SPA)	Ramsar Site
Route on surface	Water body	Scheduled monument	Special Area of Conservation (SAC)	
Depot, station, headhouse or portal building	Woodland	Listed building grade I	Site of Special Scientific Interest (SSSI)	
Land potentially required during construction		Listed building grade II*	National Nature Reserve (NNR)	
Community area boundary		Listed building grade II	Local Nature Reserve (LNR)	
County boundary		Registered park/garden	Local Wildlife Sites (LWS)	
District/Borough boundary		Ancient Woodland Inventory Sites (AWIS)		

Map Number	CT-10-326b
Map Name	Environmental Baseline
Community Area MA08: Manchester Piccadilly Station	

Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway,
Birmingham B4 6GA.

© Crown copyright and database rights 2020
OS 100049190

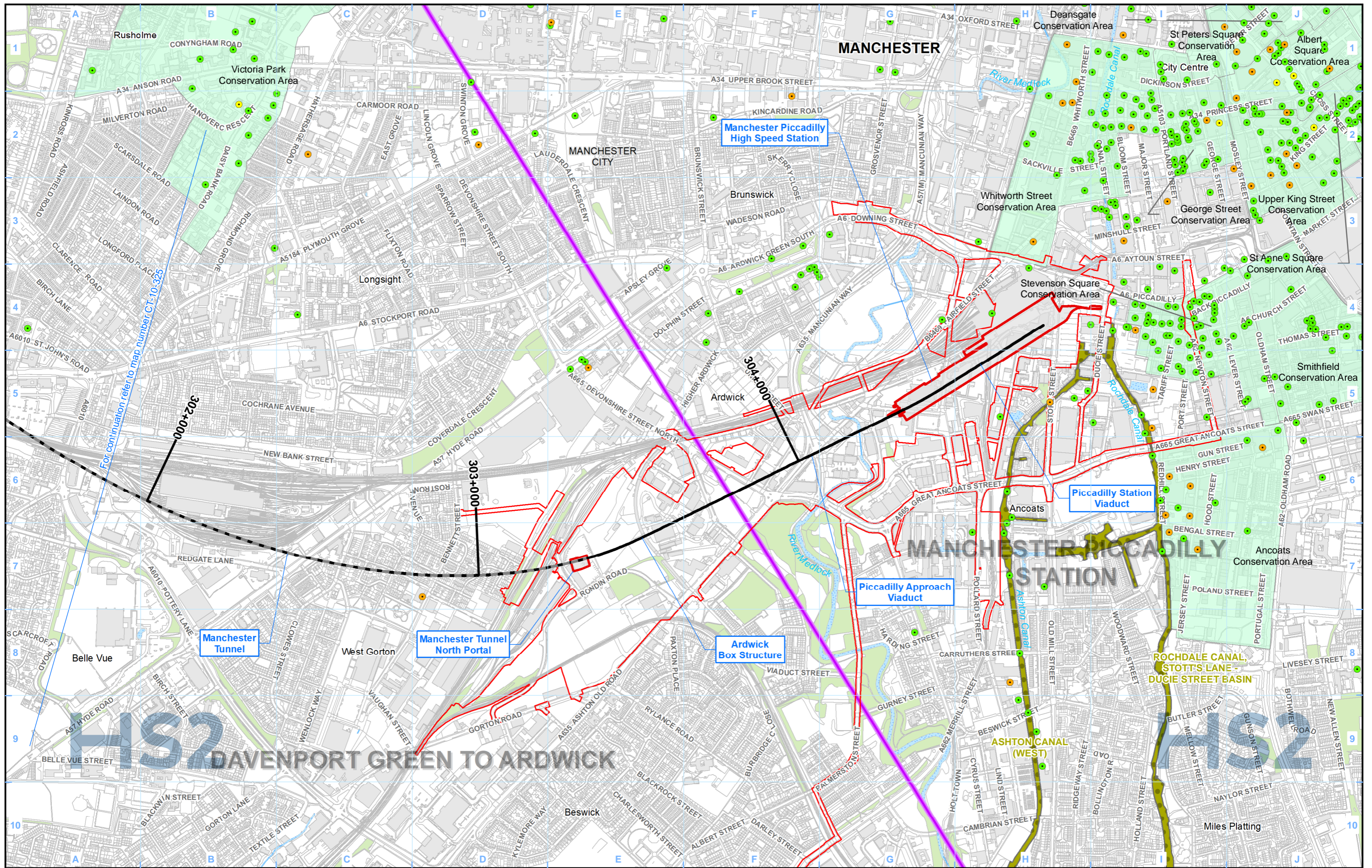
Doc Number: 2DE01-MWJ-EV-MAP-M000-000232-P07

Scale at A3: 1:10,000

Metres

Date: 27/08/21

HS2 Ltd accept no responsibility for any circumstances which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.



Legend	
	Route in tunnel
	Route on surface
	Depot, station, headhouse or portal building
	Land potentially required during construction
	Community area boundary
	County boundary
	District/Borough boundary
	Watercourse
	Water body
	Woodland
	Conservation Area
	Scheduled monument
	Listed building grade I
	Listed building grade II*
	Listed building grade II
	Registered park/garden
	Special Protection Area (SPA)
	Special Area of Conservation (SAC)
	Site of Special Scientific Interest (SSSI)
	National Nature Reserve (NNR)
	Local Nature Reserve (LNR)
	Local Wildlife Sites (LWS)
	Ancient Woodland Inventory Sites (AWIS)
	Ramsar Site

Map Number	CT-10-326b
Map Name	Environmental Baseline SES2 and AP2 ES
Community Area MA08: Manchester Piccadilly Station	

HS2 Ltd accepted no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.

Registered in England. Registration number 06791686.
Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6GA.

© Crown copyright and database rights 2022
OS 100049190

Scale at A3: 1:10,000

Doc Number: 2PT27-MWJ-EV-MAP-M000-000232-P01 Date: 28/03/23

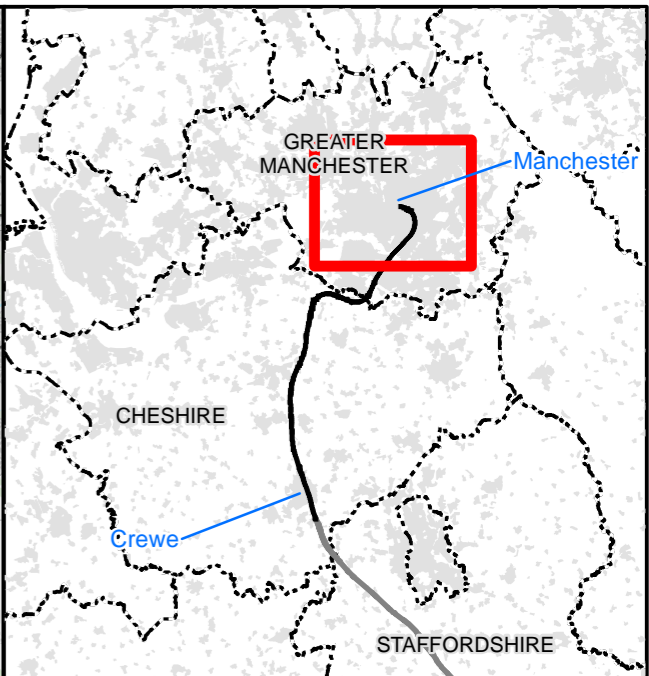
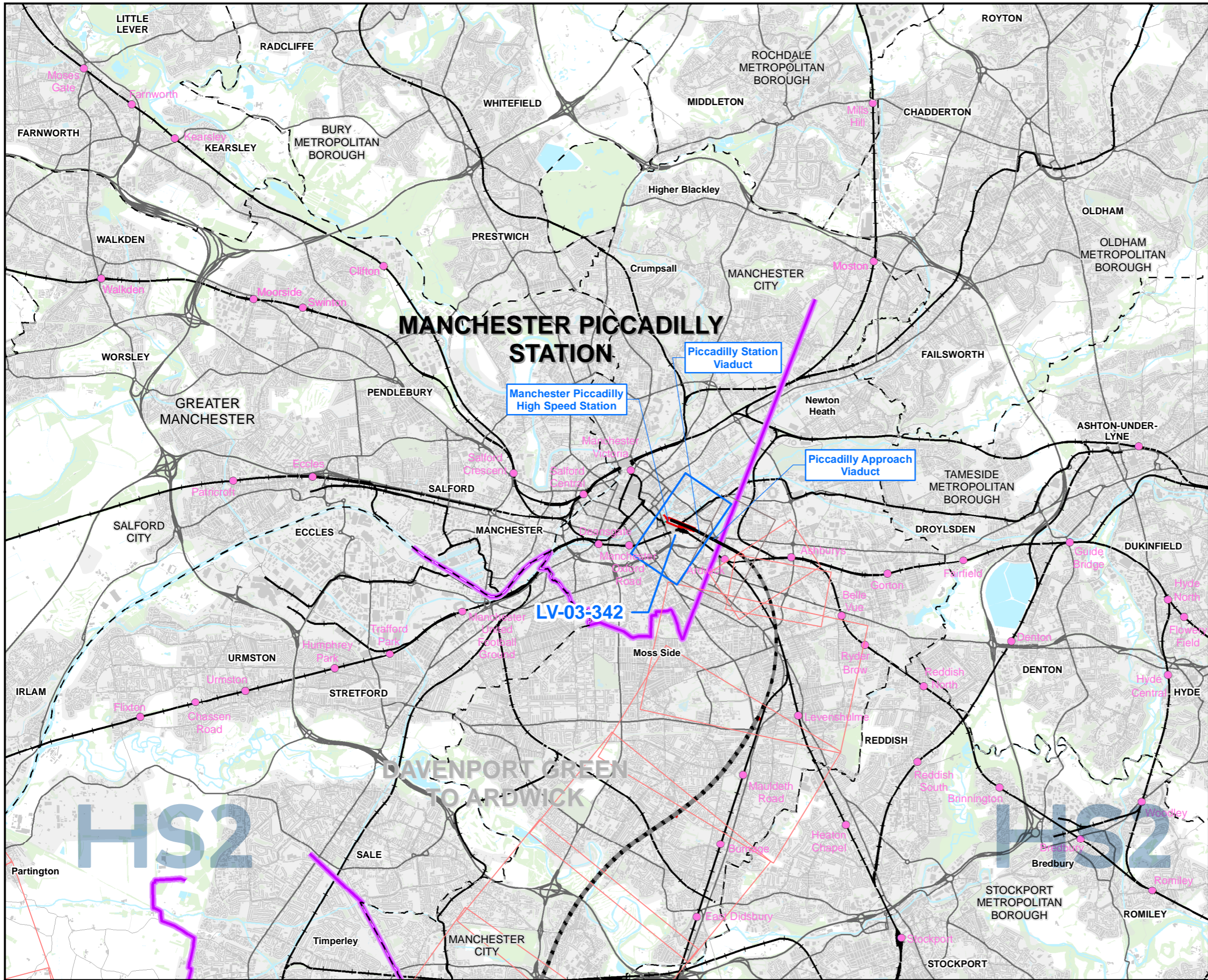
This page is left intentionally blank

High Speed Rail (Crewe – Manchester)

Supplementary Environmental Statement 2 and Additional Provision 2 Environmental Statement

LV-03 – Construction Phase Significantly Affected Viewpoints

LV-04 – Operational Phase Significantly Affected Viewpoints



Map Series Information:

Maps showing the viewpoint locations from which the AP2 revised scheme has been assessed to give rise to new or different significant effects during the construction phase.

The base mapping shown on the plans is reflective of 2022 Ordnance Survey (OS) data.

Main Map Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Community area boundary
- Existing railway station
- County boundary
- District/Borough boundary
- Map sheets included in this community area
- Map sheets included in this community area with no amendment
- Map sheets not included in this community area

Map Number	LV-03-INDEX-MA08
Map Name	Index Map of: Construction Phase Significantly Affected Viewpoints SES2 and AP2 ES
	Community Area MA08: Manchester Piccadilly Station

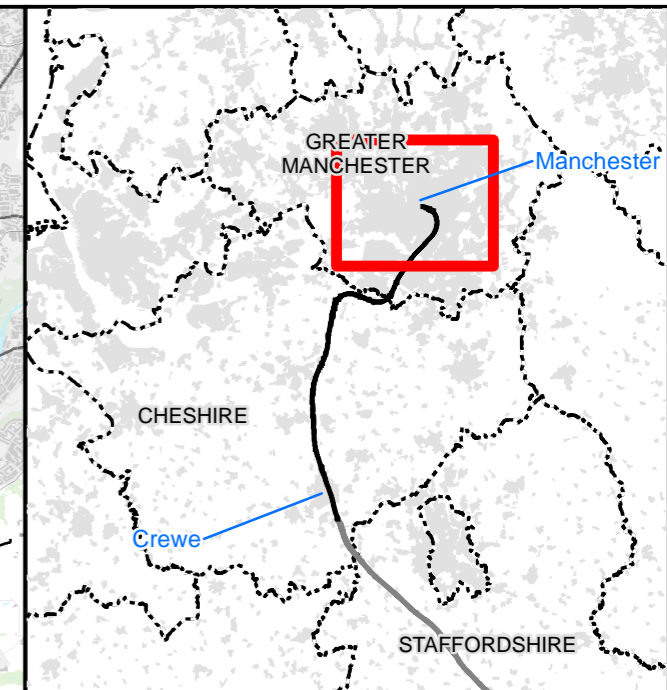
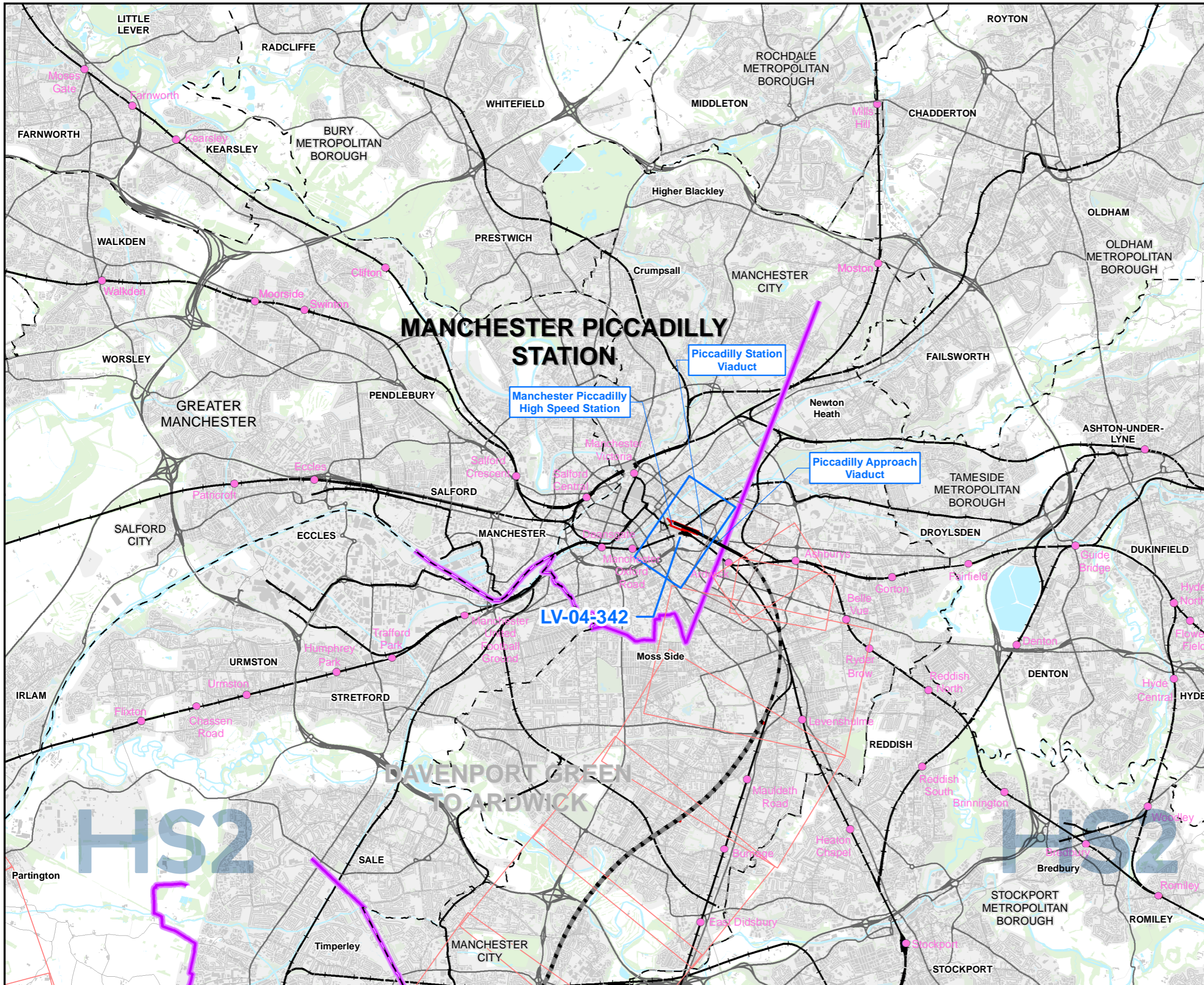
HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.

Registered in England. Registration number 06791686.
Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6GA.

© Crown copyright and database rights 2022
OS 100049190

Scale at A3: 1:75,000

Doc Number: 2PT27-MWJ-EV-MAP-M000-000079-P01 Date: 12/04/23



Map Series Information:

Maps showing the viewpoint locations from which the AP2 revised scheme has been assessed to give rise to new or different significant effects during the operational phase.

The base mapping shown on the plans is reflective of 2022 Ordnance Survey (OS) data.

Main Map Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Community area boundary
- Existing railway station
- County boundary
- District/Borough boundary
- Map sheets included in this community area
- Map sheets included in this community area with no amendment
- Map sheets not included in this community area

Map Number	LV-04-INDEX-MA08
Map Name	Index Map of: Operational Phase Significantly Affected Viewpoints SES2 and AP2 ES
	Community Area MA08: Manchester Piccadilly Station

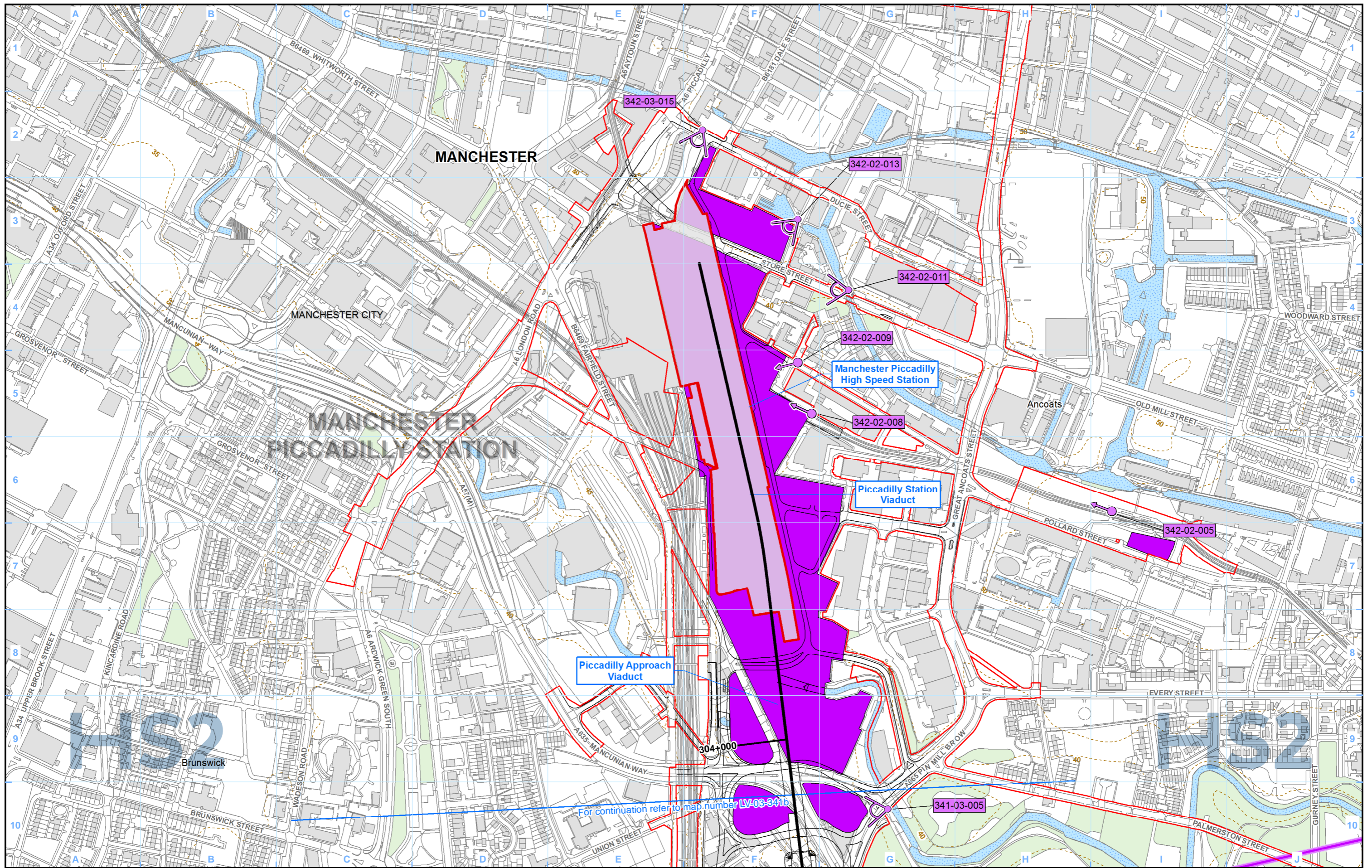
HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.

Registered in England. Registration number 06791686.
Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6GA.

© Crown copyright and database rights 2022
OS 100049190

Scale at A3: 1:75,000

Doc Number: 2PT27-MWJ-EV-MAP-M000-000133-P01 Date: 12/04/23



- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Land potentially required during construction
 - Community area boundary
 - County boundary
 - District/Borough boundary
 - Public Rights of Way (PRoW)
 - 5m contours
 - Water body
 - Existing woodland and tree belts
 - Construction compounds
 - Significantly affected viewpoint
 - Significantly affected photomontage
 - 001-01-001 Significantly affected viewpoint or photomontage number

- Engineering earthworks:**
- Embankment
 - Cutting
- Non engineering earthworks:**
- Embankment
 - Cutting

Map Number LV-03-342

Map Name Construction Phase Significantly Affected Viewpoints

Community Area MA08: Manchester Piccadilly Station

Scale at A3: 1:5,000

Doc Number: 2DE01-MWJ-EV-MAP-M000-000337-P07

Date: 02/09/21

HS2

Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway, Birmingham B4 6QA.

© Crown copyright and database rights 2020
OS 100049190

HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.

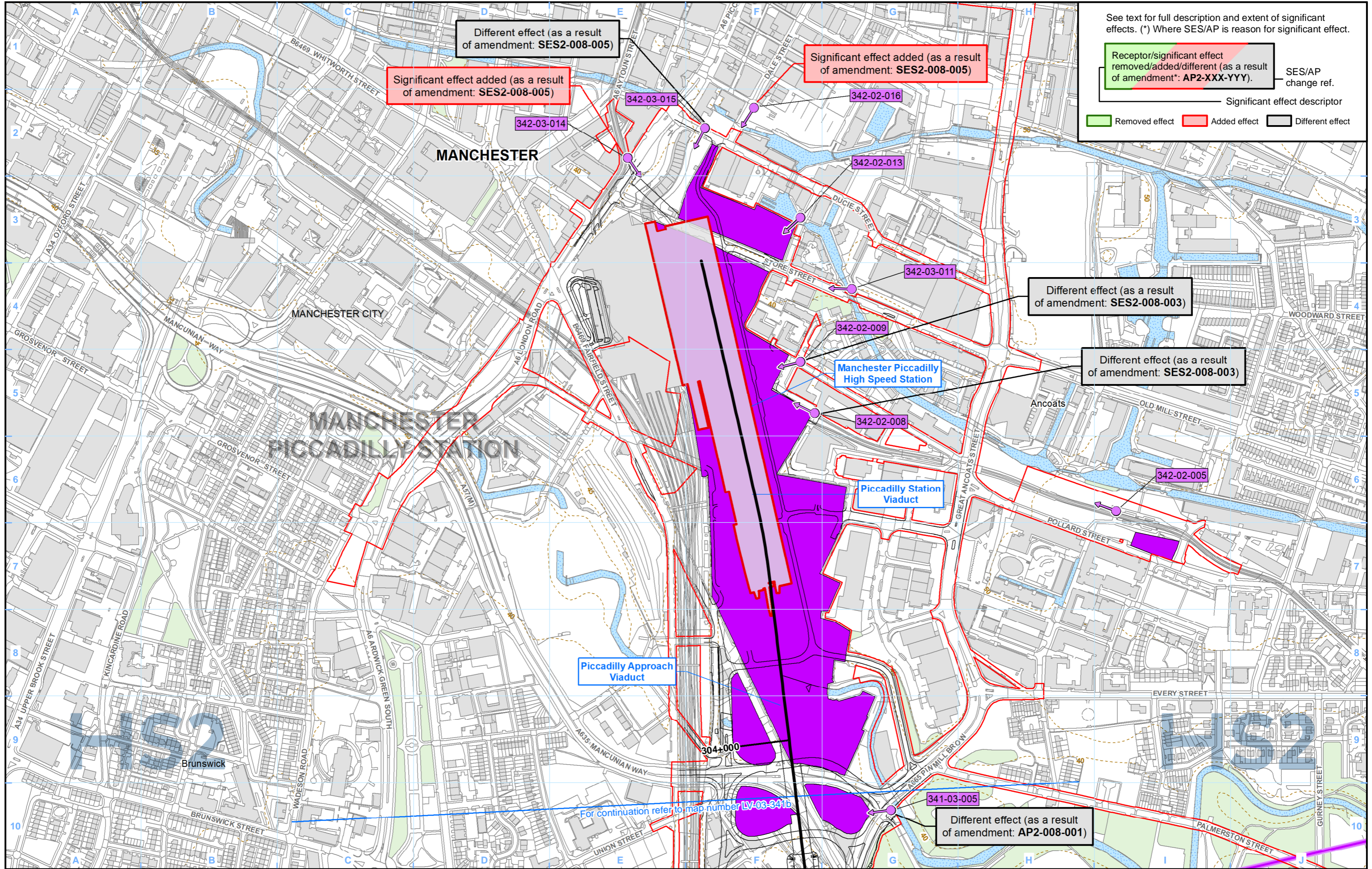
Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway, Birmingham B4 6QA.

© Crown copyright and database rights 2020
OS 100049190

Scale at A3: 1:5,000

Doc Number: 2DE01-MWJ-EV-MAP-M000-000337-P07

Date: 02/09/21



See text for full description and extent of significant effects. (*) Where SES/AP is reason for significant effect.

Receptor/significant effect removed/added/different (as a result of amendment*: AP2-XXX-YYY). SES/AP change ref.

Significant effect descriptor

Removed effect Added effect Different effect

- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Land potentially required during construction
 - Community area boundary
 - County boundary
 - District/Borough boundary
 - Public Rights of Way (PRoW)
 - 5m contours
 - Water body
 - Existing woodland and tree belts
 - Construction compounds
 - Significantly affected viewpoint
 - Significantly affected photomontage
 - Significantly affected viewpoint or photomontage number
 - Engineering earthworks: Embankment
 - Engineering earthworks: Cutting
 - Non engineering earthworks: Embankment
 - Non engineering earthworks: Cutting

For continuation refer to map number LV-03-341b

304+000

341-03-005

Different effect (as a result of amendment: AP2-008-001)

Map Number LV-03-342

Map Name Construction Phase Significantly Affected Viewpoints SES2 and AP2 ES

Community Area MA08: Manchester Piccadilly Station

HS2

Registered in England. Registration number 06791686. Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6GA.

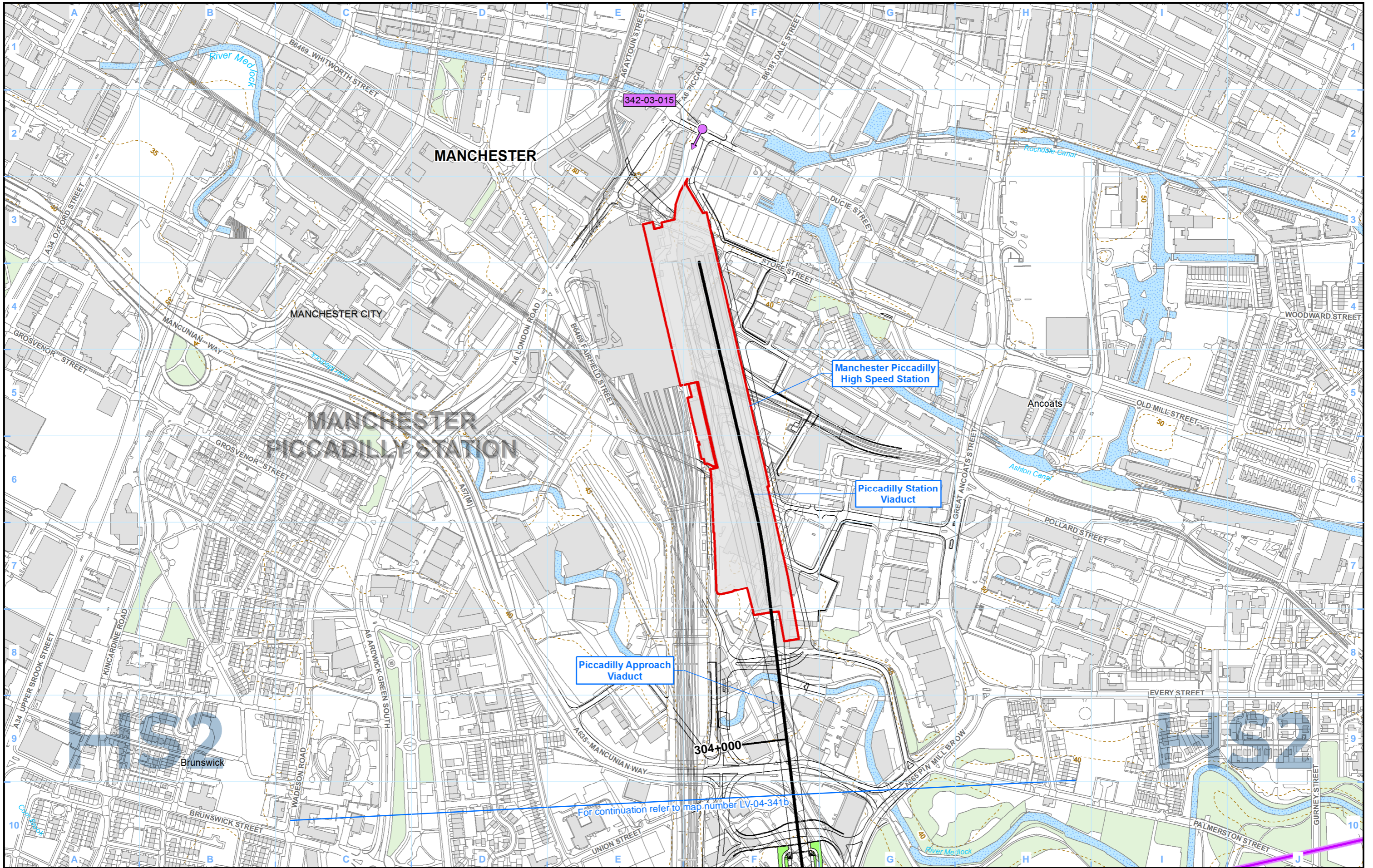
© Crown copyright and database rights 2022 OS 100049190

Doc Number: 2PT27-MWJ-EV-MAP-M000-000337-P01

Scale at A3: 1:5,000

Metres

Date: 12/04/23



- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Community area boundary
 - County boundary
 - District/Borough boundary

- Public Rights of Way (PRoW)
- 5m contours
- Water body
- Existing woodland and tree belts
- Proposed tree planting

- Significantly affected viewpoint
- Significantly affected photomontage
- Significantly affected viewpoint or photomontage number

- Engineering earthworks:**
- Embankment
 - Cutting
- Non engineering earthworks:**
- Embankment
 - Cutting

Map Number LV-04-342

Map Name
Operational Phase Significantly Affected Viewpoints

Community Area MA08:
Manchester Piccadilly Station

HS2 HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.

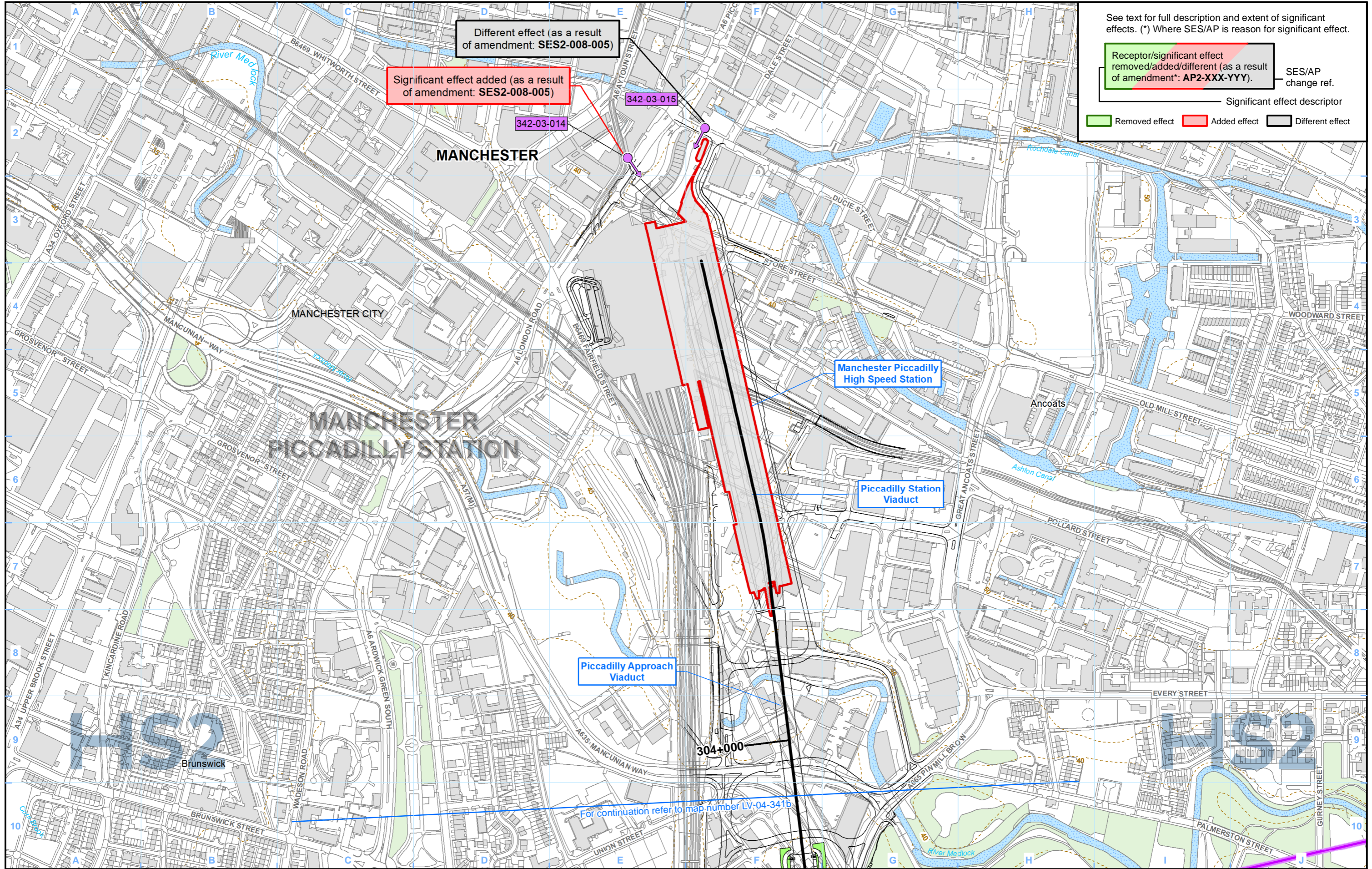
Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway, Birmingham B4 6GA.

Scale at A3: 1:5,000

© Crown copyright and database rights 2020
OS 100049190

Doc Number: 2DE01-MWJ-EV-MAP-M000-000342-P07

Date: 02/09/21



See text for full description and extent of significant effects. (*) Where SES/AP is reason for significant effect.

Receptor/significant effect removed/added/different (as a result of amendment*: AP2-XXX-YYY).	SES/AP change ref.	
—	Significant effect descriptor	
Removed effect	Added effect	Different effect

Legend

Engineering earthworks:

	Embankment
	Cutting

Non engineering earthworks:

	Embankment
	Cutting

Map Number: LV-04-342

Map Name: Operational Phase Significantly Affected Viewpoints SES2 and AP2 ES

Community Area MA08: Manchester Piccadilly Station

HS2

Registered in England. Registration number 06791686.
Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6GA.

Scale at A3: 1:5,000

© Crown copyright and database rights 2022
OS 100049190

Doc Number: 2PT27-MWJ-EV-MAP-M000-000342-P01

Date: 12/04/23

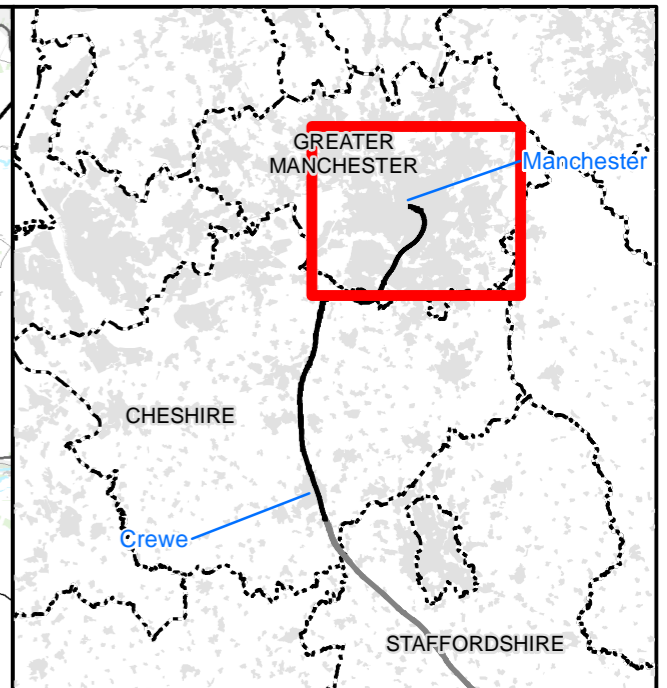
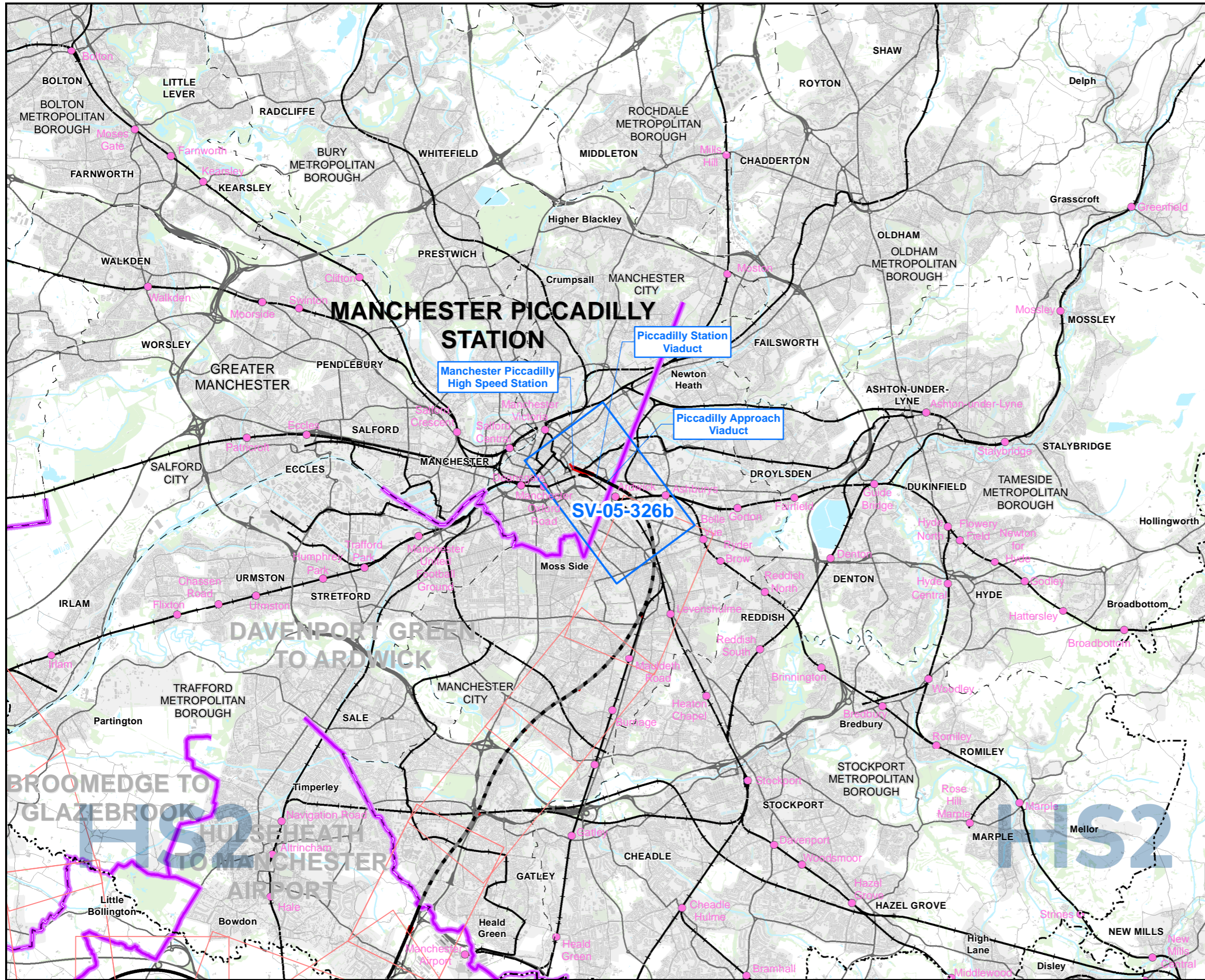
HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.

This page is left intentionally blank

High Speed Rail (Crewe – Manchester)

Supplementary Environmental Statement 2 and Additional Provision 2 Environmental Statement

SV-05 – Operational Noise and Vibration Impacts and
Likely Significant Effects



Map Series Information:

SV-05 presents the direct operational noise impacts and likely significant effects of the Proposed Scheme.

The SV-05 figure series necessarily contains a large amount of information relating to the operational noise and vibration assessment. It is designed to communicate visually the assessment process from the prediction of impacts to the determination of likely residual significant effects. The corresponding text is included in Vol2.

Key items on the figure series include:

- the Proposed Scheme (the proposed railway alignments and surrounding associated earthworks/roads);
- blue and green lines representing the wayside airborne noise mitigation measures included in the Proposed Scheme;
- the study areas, which indicate the areas within which direct operational sound and vibration impacts of the Proposed Scheme have been quantitatively assessed;
- the calculated scheme direct impacts, displayed as colour-coded buildings, and symbols representing buildings that would potentially qualify for noise insulation;
- sound contours representing sound produced by the new railway (displayed in a simpler manner than on SV-08 and SV-09 in order not to obscure other features on the figure series); and
- labels indicating where the likely residual direct noise and/or vibration significant effects have been identified.

The design of the Proposed Scheme will be informed through stakeholder engagement and further engineering and environmental studies.

A more detailed explanation of each legend item included on the figures and on the separate legend page can be found in the data dictionary.

Note: Not all data layers in the legend are represented on every map.

Main Map Legend

	Route in tunnel		Map sheets included in this community area
	Route on surface		Map sheets included in this community area with no amendment
	Depot, station, headhouse or portal building		Map sheets not included in this community area
	Community area boundary		
	Existing railway station		
	County boundary		
	District/Borough boundary		

Map Number	SV-05-INDEX-MA08
Map Name	Index Map of: Operational Airborne Noise and Vibration Impacts and Likely Significant Effects SES2 and AP2 ES Community Area MA08: Manchester Piccadilly Station

HS2

HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.

Registered in England. Registration number 06791686.
Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6GA.

Scale at A3: 1:100,000

© Crown copyright and database rights 2022
OS 100049190

Doc Number: 2PT27-MWJ-EV-MAP-M000-002137-P01

Date: 30/03/23

HS2 (rail only) noise level $L_{p,Aeq,T}$		Potential noise effect ^{1, 2}	
Night-time $L_{p,Aeq,T}$ (T=23:00 to 07:00)	Daytime $L_{p,Aeq,T}$ (T=07:00 to 23:00)	Residential	Non-residential & quiet areas
> 55 dB	> 65 dB	Likely significant effect on dwellings indicated by ○, * or X avoided by noise insulation	Effect dependent on receptor and baseline. For further details see Volume 5, Appendix SV-003-00000. Likely significant effect indicated by MA0X-O-N# ²
40 to 55 dB	50 to 65 dB	Effect dependent on noise level change and significance criteria. Likely significant effects on groups of dwellings and any shared community open areas indicated by MA0X-O-C# ²	
< 40 dB	< 50 dB	Generally no adverse effect expected ¹	

Operational airborne noise impacts at residential buildings¹

- Major adverse
- Moderate adverse
- Minor adverse
- Negligible
- Beneficial

- Potential additional noise insulation (triggered by maximum noise levels at night)¹
- * Potential additional noise insulation (triggered by WHO Night Noise Guidelines Interim Target)¹
- X Potential noise insulation (triggered by Noise Insulation Regulations 1996)¹
- L_{pAFmax} exceeds 60dB façade
○ HS2 train only L_{pAFmax} +2.5dB façade correction

Ground-borne noise or vibration impact at residential buildings

See text for full description and extent of likely significant effect. (*Where SES/AP is reason for likely significant effect.)

Likely significant effect removed/added/different (as a result of amendment*: AP2-XXX-YYY). SES2/AP2 change ref.

Significant effect descriptor

Removed effect
 Added effect
 Different effect

HS2

HS2

¹ For further information see Volume 5 Appendix SV-001-00000 of the Main ES

² For further details of the SES2/AP2 ES assessment see Volume 5 Appendix SV-003-00000

Map Number SV-05 - Legend

Map Name
Operational Airborne Noise and Vibration Impacts and Likely Significant Effects SES2 and AP2 ES

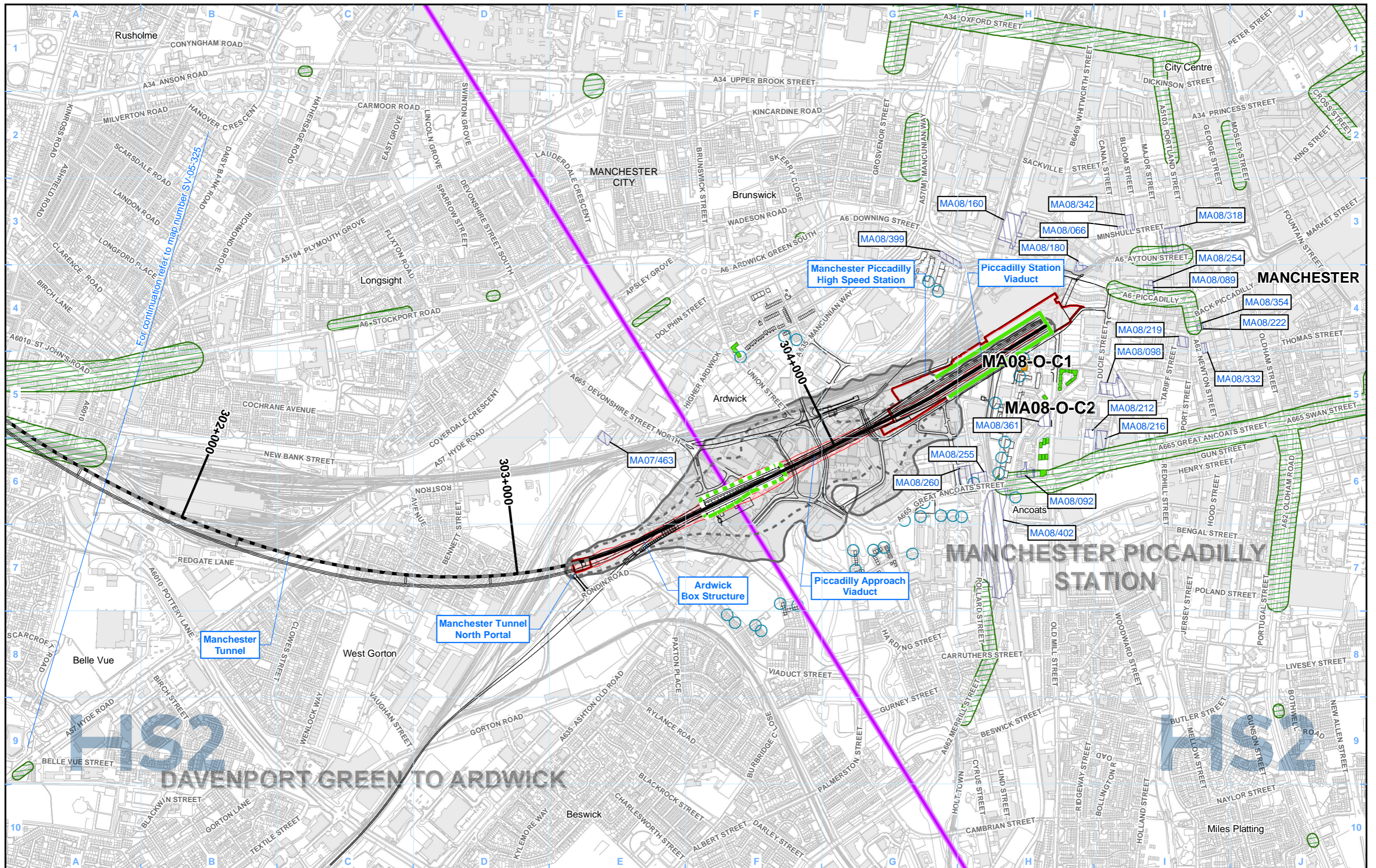
HS2

Registered in England. Registration number 06791686.
Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6GA.
© Crown copyright and database rights 2023
OS 100049190

HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.

Doc Number: -

Date:



Legend - General features

- Route in bored tunnel
- Route in green tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Community area boundary
- County boundary
- District/Borough boundary

- Engineering earthworks:**
- Embankment
 - Cutting
- Non engineering earthworks:**
- Embankment
 - Cutting

Legend - Noise related features

- Envisaged mitigation to avoid / reduce significant noise effects:**
- Landscaping and/or fence barriers (labelled with total noise barrier height above rail)
 - Engineering e.g. cuttings (green tunnels separately marked)
- Envisaged features further reducing noise effects:**
- Other environmental e.g. landscaping
 - Engineering e.g. cuttings

- Noise Important Areas defined in national noise action plans (Defra 2014)
 - Committed developments - SV Only
- For SNV effects symbology please refer to SV-05 - Legend page

Map Number: SV-05-326b

Map Name: Operational Airborne Noise and Vibration Impacts and Likely Significant Effects

Community Area MA08: Manchester Piccadilly Station

HS2

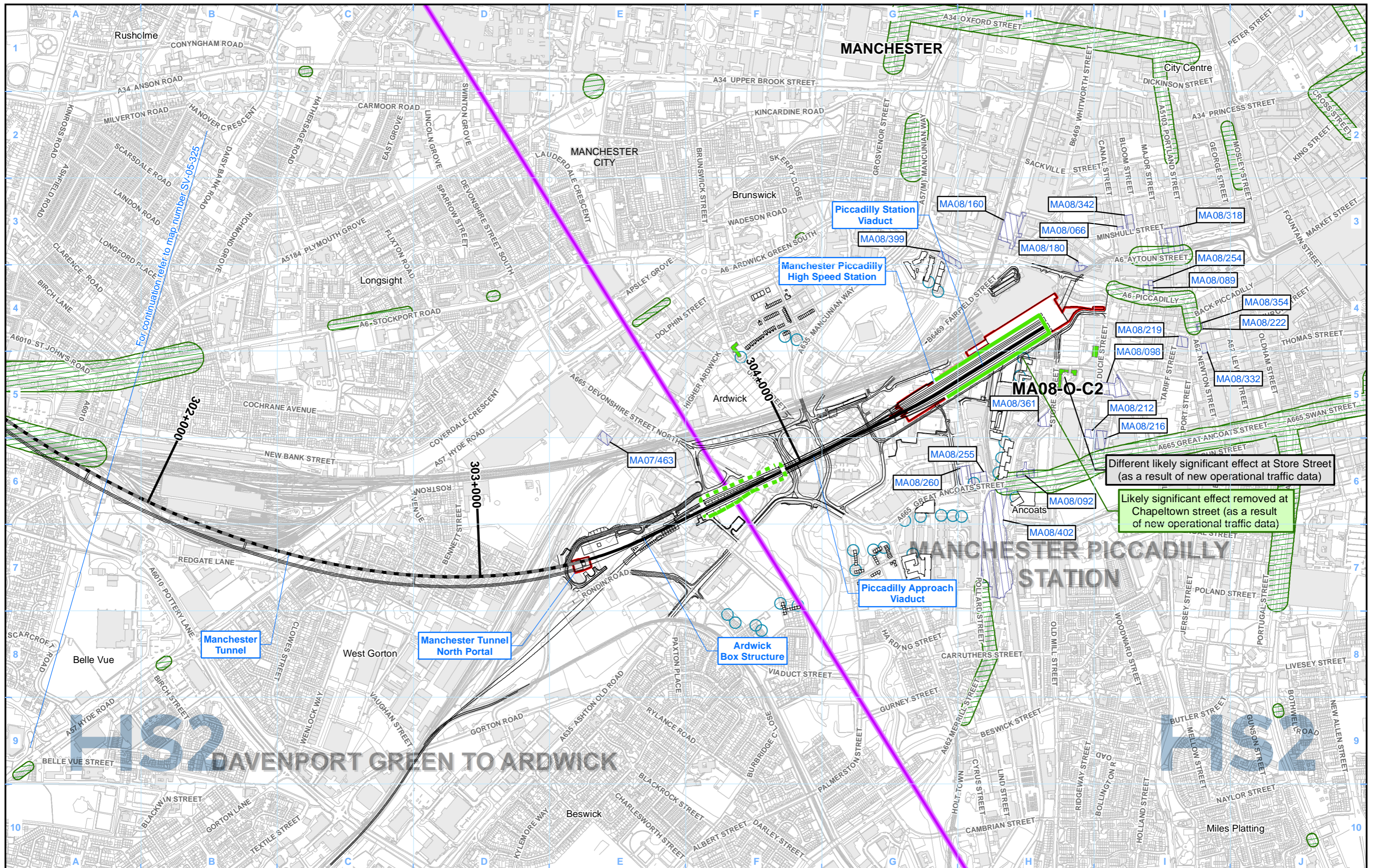
Registered in England. Registration number 06791686. Registered office: 2 Snowhill, Queensway, Birmingham B4 6QA.

© Crown copyright and database rights 2020 OS 100049190

Doc Number: 2DE01-MWJ-EV-MAP-M000-002126-P03

Date: 10/08/21

Scale at A3: 1:10,000



For continuation refer to map number SV-05-325

Different likely significant effect at Store Street (as a result of new operational traffic data)

Likely significant effect removed at Chapeltown street (as a result of new operational traffic data)

- Legend - General features**
- Route in bored tunnel
 - Route in green tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Community area boundary
 - County boundary
 - District/Borough boundary

- Engineering earthworks:**
- Non engineering earthworks:
 - Embankment
 - Cutting
 - Engineering earthworks:
 - Embankment
 - Cutting

- Legend - Noise related features**
- Envisaged mitigation to avoid / reduce significant noise effects:
 - Landscaping and/or fence barriers (labelled with total noise barrier height above rail)
 - Engineering e.g. cuttings (green tunnels separately marked)
 - Envisaged features further reducing noise effects:
 - Other environmental e.g. landscaping
 - Engineering e.g. cuttings

- Noise Important Areas defined in national noise action plans (Defra 2014)
 - Committed developments - SV Only
- For SNV effects symbology please refer to SV-05 - Legend page

Map Number SV-05-326b

Map Name Operational Airborne Noise and Vibration Impacts and Likely Significant Effects SES2 and AP2 ES

Community Area MA08: Manchester Piccadilly Station

HS2

Registered in England. Registration number 06791686. Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6GA.

Scale at A3: 1:10,000

Doc Number: 2PT27-MWJ-EV-MAP-M000-002126-P01

Date: 31/03/23

This page is left intentionally blank