

High Speed Rail (Crewe – Manchester) Environmental Statement

Volume 2: Community Area Map Book

MA04: Broomedge to Glazebrook

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Department
for Transport

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

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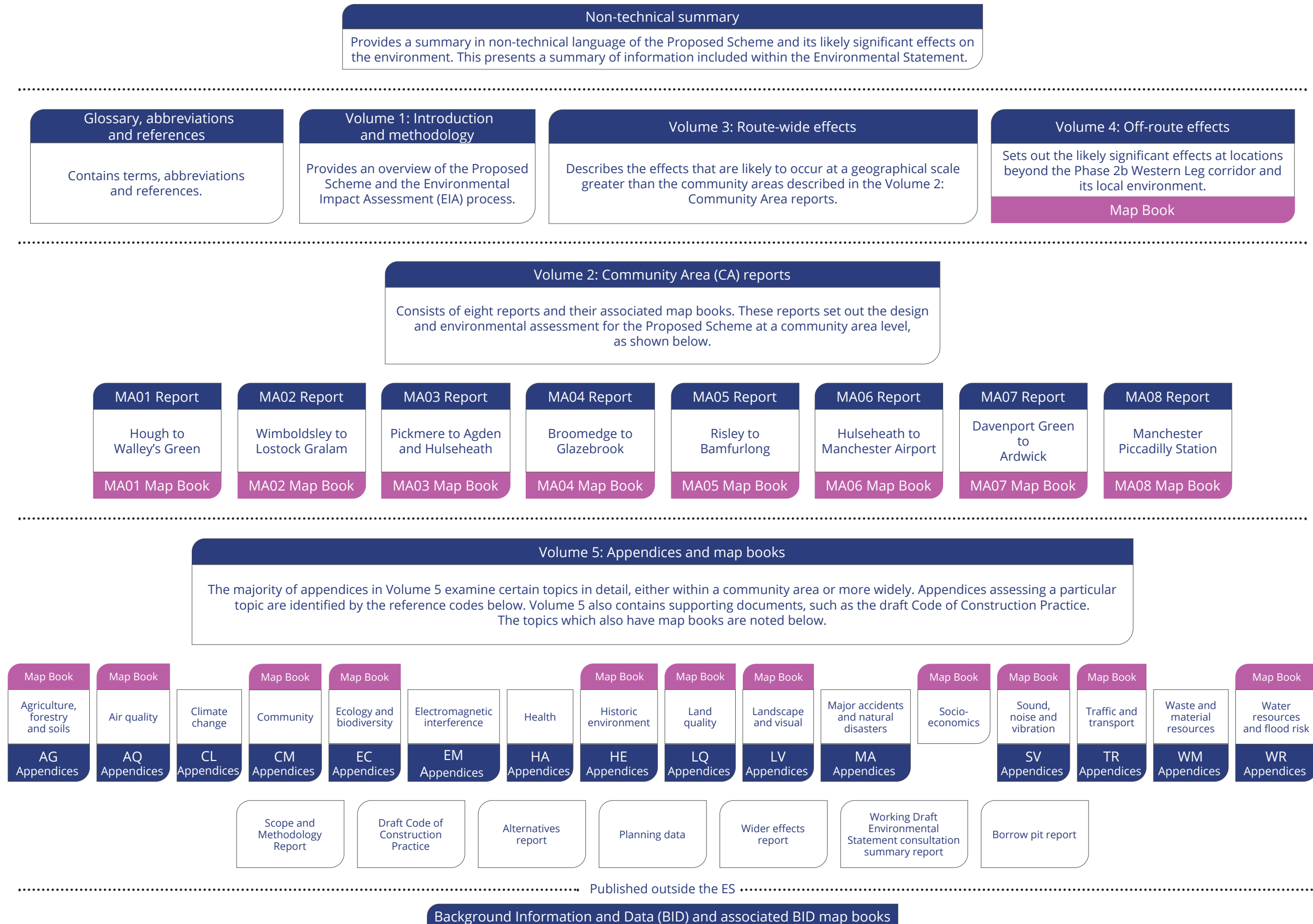
Data dictionary and definitions

Map series name	Map series description
CT-05 - Construction Phase	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 2020 Ordnance Survey (OS) data.
CT-06 - Proposed Scheme	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 2020 Ordnance Survey (OS) data.
CT-10 – Environmental Baseline	The Environmental Baseline maps display a range of environmental data layers.
LV-03 - Construction Phase Significantly Affected Viewpoints	Maps showing the viewpoint locations from which the Proposed Scheme has been assessed to give rise to significant effects during the construction phase.
LV-04 - Operational Phase Significantly Affected Viewpoints	Maps showing the viewpoint locations from which the Proposed Scheme has been assessed to give rise to significant effects during the operational phase.
SV-05 - Operational Airborne Noise and Vibration Impacts and Likely Significant Effects	SV-05 presents the direct operational noise impacts and likely significant effects of the 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.

Mapping explanatory notes

Structure of the HS2 Phase 2b Environmental Statement

This map book is part of the suite of documents that make up the Environmental Statement (ES) that accompanies the deposit of the High Speed Rail (Crewe – Manchester) hybrid Bill. The structure of the ES is shown in the diagram below:



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 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 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 dependant 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 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.

Map books

In total, there are 29 map books, which make up the ES, found in Volume 2, Volume 4 and Volume 5. A list of the titles is provided below for reference.

Name	Name
Volume 2: Map book – MA01: Hough to Walley's Green	Volume 5: Map book – Agriculture (AG-01, AG02, AG-04)
Volume 2: Map book – MA02: Wimboldsley to Lostock Gralam	Volume 5: Map book – Air quality (AQ-01)
Volume 2: Map book – MA03: Pickmere to Agden and Hulseheath	Volume 5: Map book – Community (CM-01)
Volume 2: Map book – MA04: Broomedge to Glazebrook	Volume 5: Map book – Ecology and biodiversity (EC-01)
Volume 2: Map book – MA05: Risley to Bamfurlong	Volume 5: Map book – Historic Environment (HE-01, HE-02, HE-03)
Volume 2: Map book – MA06: Hulseheath to Manchester Airport	Volume 5: Map book – Land quality (LQ-01)
Volume 2: Map book – MA07: Davenport to Green Ardwick	Volume 5: Map book – MA01: Hough to Walley's Green Landscape and visual (LV-00, LV-02, LV-07, LV-08, LV-17)
Volume 2: Map book – MA08: Manchester Piccadilly Station	Volume 5: Map book – MA02: Wimboldsley to Lostock Gralam Landscape and visual (LV-00, LV-02, LV-07, LV-08, LV-17)
Volume 4: Map book – Off-route effects	Volume 5: Map book – MA03: Pickmere to Agden and Hulseheath Landscape and visual (LV-00, LV-02, LV-07, LV-08, LV-17)

Name	Name
Volume 5: Map book – MA04: Broomedge to Glazebrook Landscape and visual (LV-00, LV-02, LV-07, LV-08, LV-17)	Volume 5: Map book – MA05: Risley to Bamfurlong Landscape and visual (LV-00, LV-02, LV-07, LV-08, LV-17)
Volume 5: Map book – MA06: Hulseheath to Manchester Airport Landscape and visual (LV-00, LV-02, LV-07, LV-08, LV-17)	Volume 5: Map book – MA07: Davenport to Green Ardwick Landscape and visual (LV-00, LV-02, LV-07, LV-08, LV-17)
Volume 5: Map book – MA08: Manchester Piccadilly Station Landscape and visual (LV-00, LV-02, LV-07, LV-08, LV-17)	Volume 5: Map book – OR003 Annandale Depot Landscape and visual (LV-00, LV-02, LV-07, LV-08, LV-17)
Volume 5: Map book – Planning Data/Committed Development (CT-13)	Volume 5: Map book – Socio-economics (SE-01)
Volume 5: Map book – Sound, noise and vibration (SV-02, SV-03, SV-08, SV-09)	Volume 5: Map book – Traffic and transport (TR-01, TR-03, TR-04, TR-08)
Volume 5: Map book – Water resources and flood risk (WR-01, WR-02, WR-03, WR-05, WR-06)	

High Speed Rail (Crewe – Manchester) 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	
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	
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	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2019.
Community area boundary	The Environmental Statement has been split into 8 sections called Community Areas.	High Speed Two (HS2) Ltd	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2020.
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 Wigan 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. © Wigan Council.

Legend features	Definition	Source	Copyright
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.	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/Unitary authority boundary	Ordnance Survey local authority boundary mapping.	High Speed Two (HS2) Ltd	
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 slopes 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	
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 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	

Legend features	Definition	Source	Copyright
Envisaged mitigation to avoid / reduce significant noise effects	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 2020.
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 2020.
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	
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	
Ground-borne noise or vibration impact	Buildings at which an operational ground-borne sound or vibration impact is predicted from the Proposed Scheme.	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	

Legend features	Definition	Source	Copyright
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	
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 2020. Contains Ordnance Survey data © Crown copyright and database right 2020 The Historic England GIS Data contained in this material was obtained on 15 June 2020. The most publicly available up to date Historic England GIS Data can be obtained from HistoricEngland.org.uk .
Local Nature Conservation Sites (LNCS)	Local Nature Conservation Sites (LNCS) 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.	South West Scotland Environmental Centre	© South West Scotland Environmental Centre (2019).
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 2019.
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	

Legend features	Definition	Source	Copyright
Local Wildlife Sites (LWS)	A non-statutory site of nature conservation value that has been designated 'locally'. These sites are referred to differently between counties. Common terms including site of importance for nature conservation, county wildlife site, site of biological importance, site of local importance and sites of metropolitan importance. In some cases Local Wildlife data is not shown as this is still being verified.	Cheshire Biological Group Cheshire East Council Cheshire West and Chester Council Cheshire Wildlife Trust Merseyside BioBank Warrington Borough Council	© Cheshire Biological Group. © Cheshire East Council. © Cheshire West and Chester Council. © Cheshire Wildlife Trust. © Merseyside BioBank. © 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	Main Construction Compounds in which main contractors offices and welfare facilities will be located.	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 2017.
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)	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	

Legend features	Definition	Source	Copyright
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	
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: <ul style="list-style-type: none"> - 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 Wigan Metropolitan 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. © Wigan Metropolitan Borough council.
Pumping station	Site for pumping water.	High Speed Two (HS2) Ltd	

Legend features	Definition	Source	Copyright
Rail alignment Chainage	The chainage is the distance measured along the railway line from its beginning point measured in 100m integers.	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 sites that are of international importance, as designated under Article 2(1) of the Convention on Wetlands of International Importance especially as Waterfowl Habitat. Ramsar (Iran), 2 February 1971. UN Treaty Series No. 14583.	Natural England	© Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right 2020.
Registered park and 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 2020. Contains Ordnance Survey data © Crown copyright and database right 2020 The Historic England GIS Data contained in this material was obtained on 15 June 2020. 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	
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	

Legend features	Definition	Source	Copyright
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 2020. Contains Ordnance Survey data © Crown copyright and database right 2020 The Historic England GIS Data contained in this material was obtained on 15 June 2020. The most publicly available up to date Historic England GIS Data can be obtained from HistoricEngland.org.uk .
Scottish designations: Listed buildings Category A/B/C	Buildings and structures in Scotland of special architectural or historic interest. Listing is the recognition through the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 that a building or structure is of 'special' interest. Digital data set obtained from Historic Environment Scotland.	Historic Environment Scotland	© Historic Environment Scotland (2019).
Significantly affected photomontage	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 as significant during either construction or 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 as significant during either construction or 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 2019.
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 2021.

Legend features	Definition	Source	Copyright
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 2020.
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	Area of land for the provision of a temporary replacement community facility, such as a playground, community centre or activity centre, whilst construction works are in progress.	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 2019.
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 2019.
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	

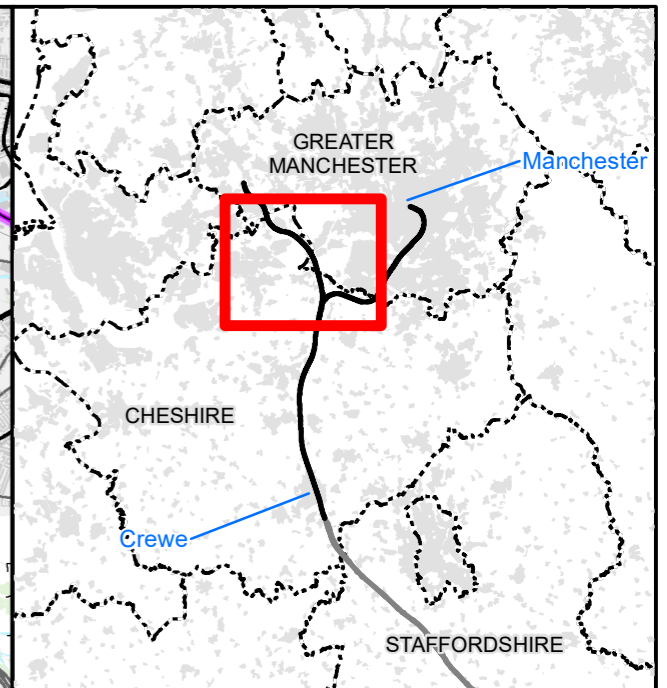
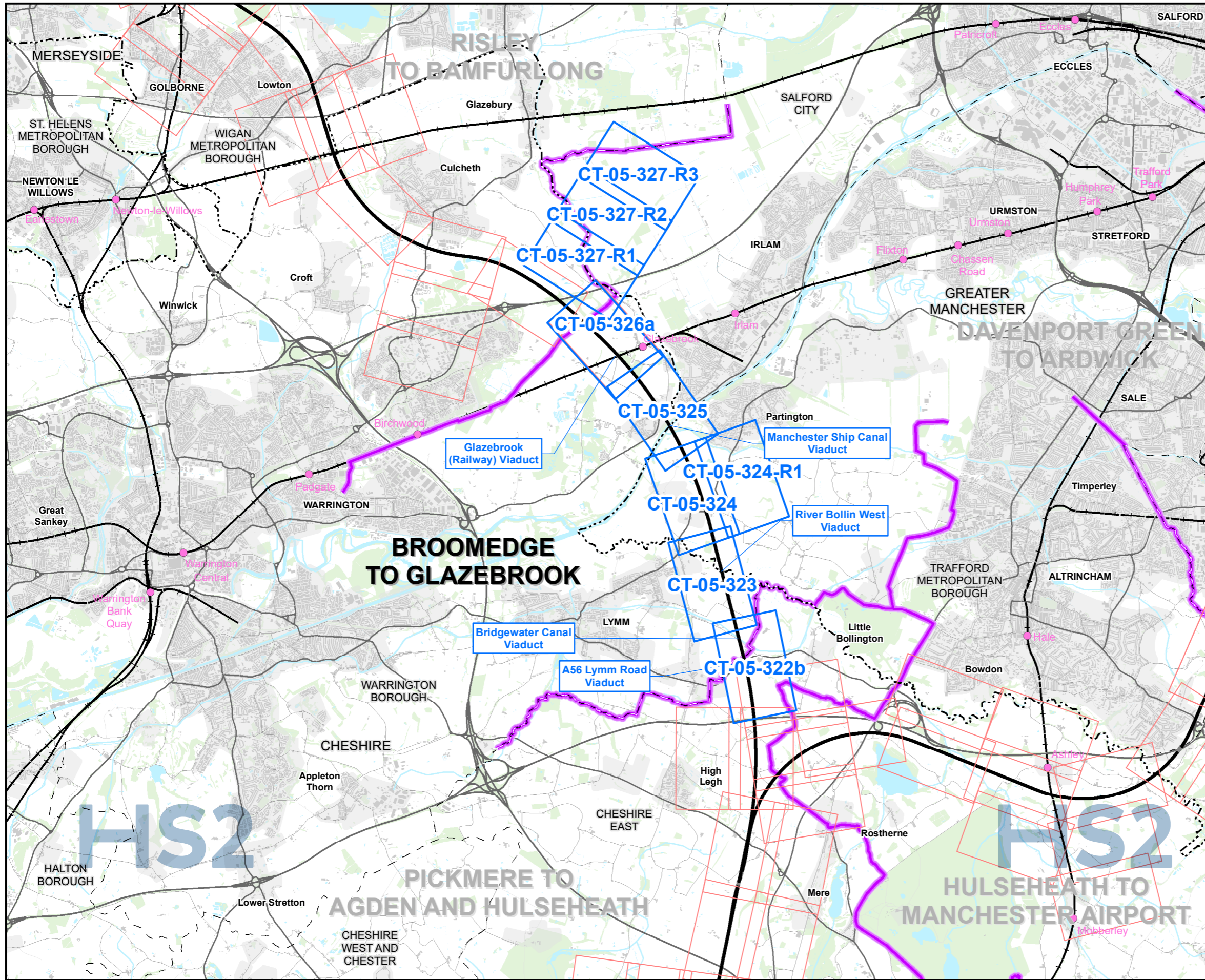
Legend features	Definition	Source	Copyright
Woodland	Woodland areas derived from Ordnance Survey MasterMap data.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2019.
Woodland habitat creation	An area of woodland habitat creation.	High Speed Two (HS2) Ltd	

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High Speed Rail (Crewe – Manchester) 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 2020 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 not included in this community area

Map Number	CT-05-INDEX-MA04
Map Name	Index Map of: Construction Phase
	Community Area MA04: Broomedge to Glazebrook

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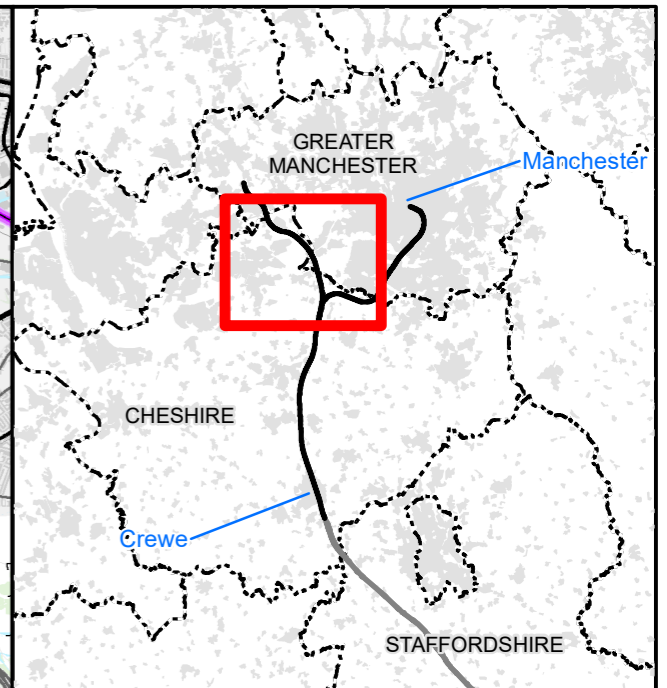
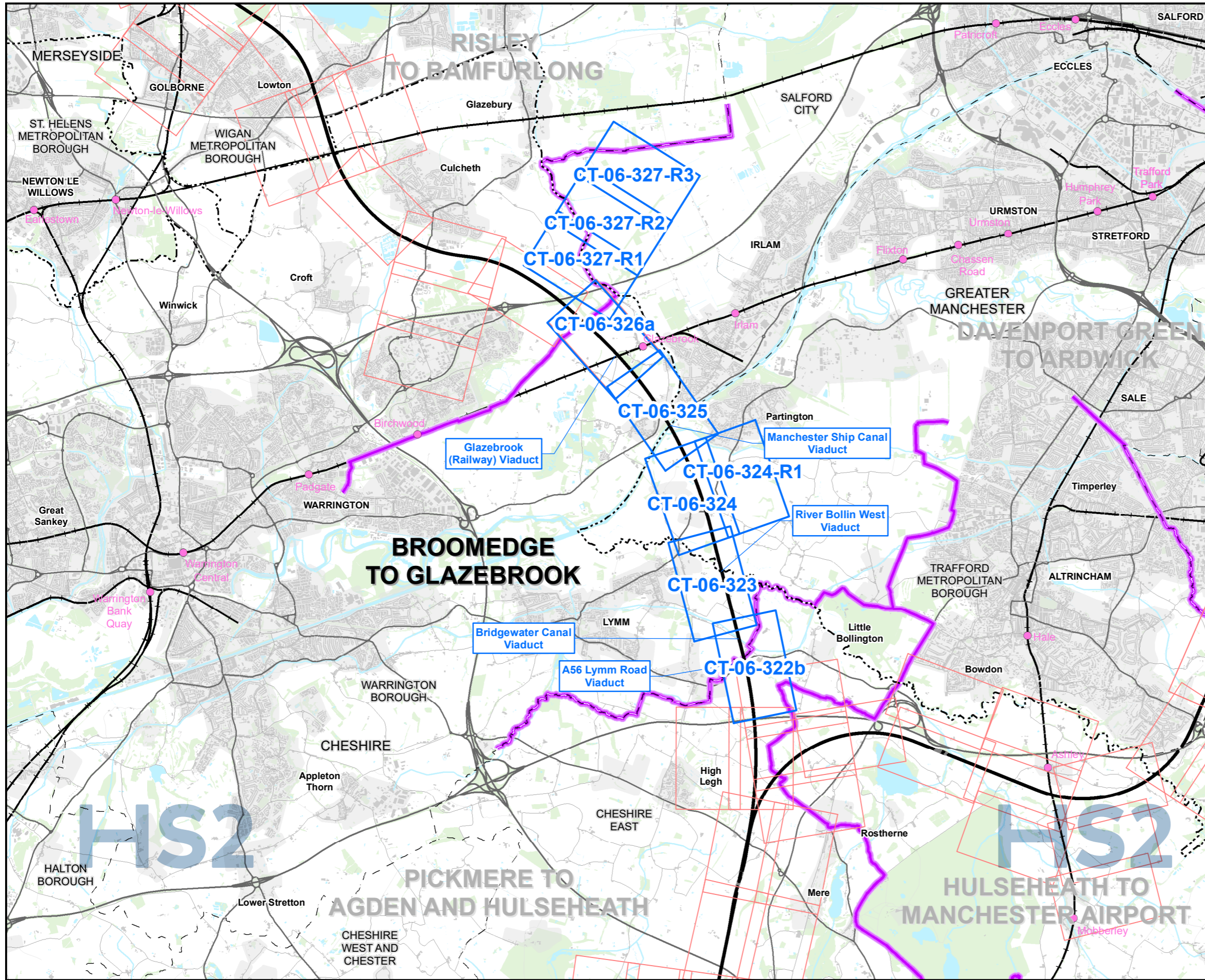
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Scale at A3: 1:75,000

Doc Number: 2DE01-MWJ-EV-MAP-M000-000004-P07

Date: 20/10/21



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 2020 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 not included in this community area

Map Number	CT-06-INDEX-MA04
Map Name	Index Map of: Proposed Scheme
	Community Area MA04: Broomedge to Glazebrook

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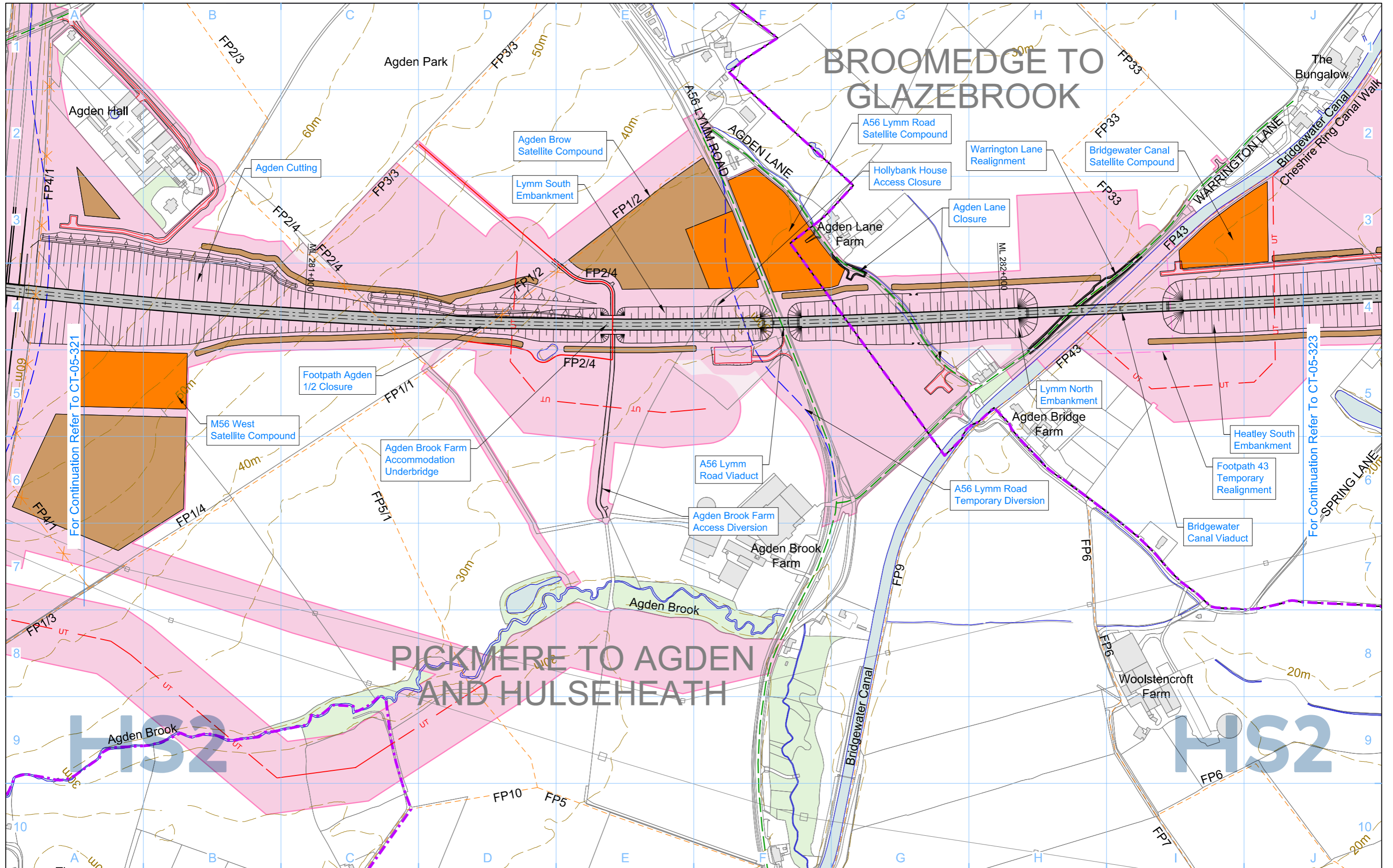
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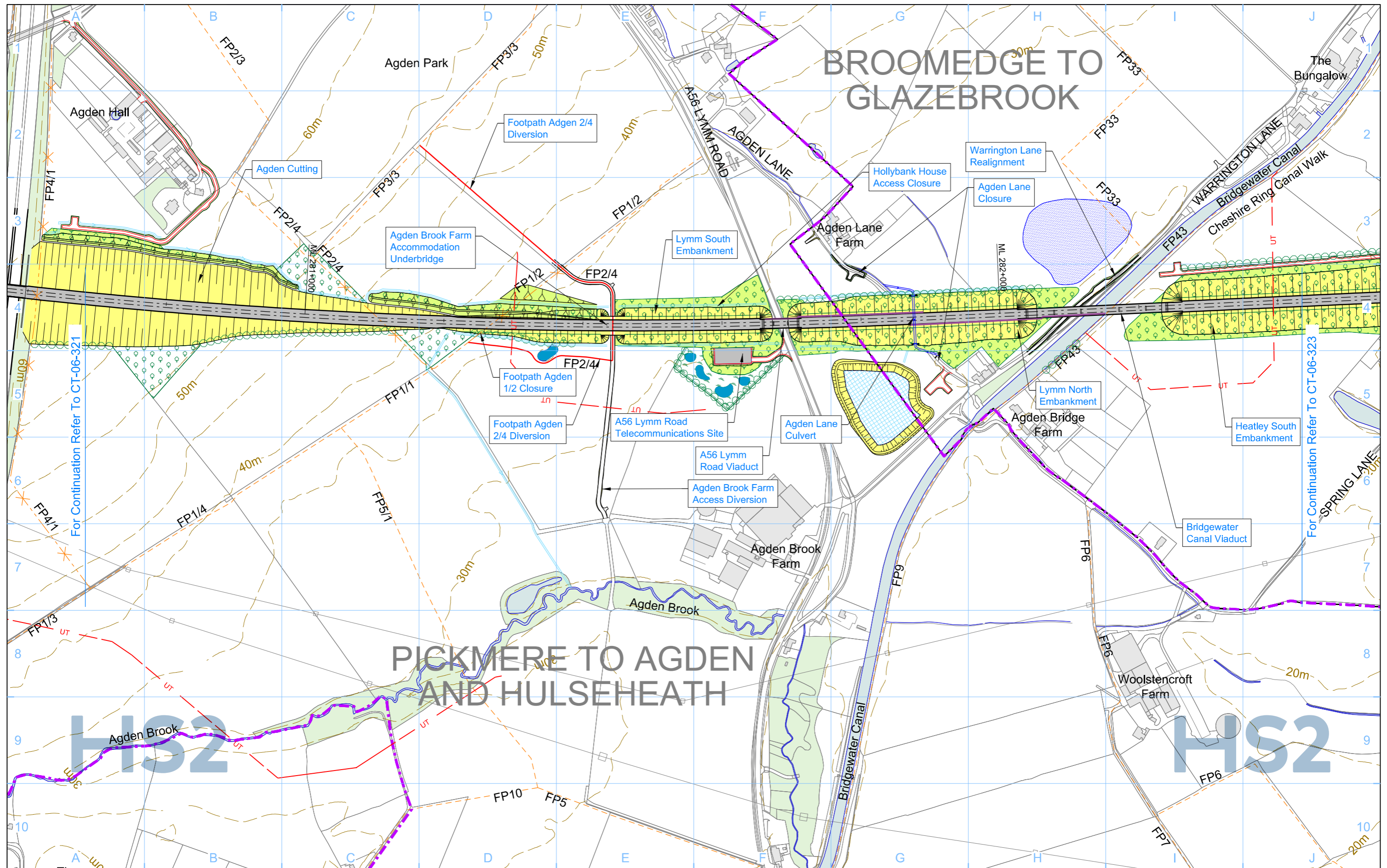
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BROOMEDGE TO GLAZEBROOK

PICKMERE TO AGDEN AND HULSEHEATH

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 		<ul style="list-style-type: none"> Existing woodland Existing buildings Existing inland water Existing contours Existing watercourse HS2 access Rail alignment Chainage (e.g. 10+000) 		Map Number CT-05-322b Map Name Construction Phase Community Area MA04 Broomedge to Glazebrook	<p>Registered in England Registration No. 06791686 Registered office: 2 Snow Hill, Queensway, Birmingham, B4 6GA</p> <p>Scale at A3: 1:5,000</p> <p>© Crown copyright and database rights 2020. Ordnance Survey Licence Number 100049190.</p> <p>Doc Number: 2DE01-MWJ-EV-DPL-M002-520322 P09 Date: 10/08/21</p>
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BROOMEDGE TO GLAZEBROOK

PICKMERE TO AGDEN AND HULSEHEATH

Legend

Depot, station, headhouse or portal building	Pumping station	Local placement
Tunnel portal	Woodland habitat creation	Returned to suitable development use
Railway Systems Site	Wetland habitat creation	Hedgerow
Ecological mitigation pond (Indicative only)	Grassland habitat creation	County boundary
Replacement floodplain storage area	Landscape mitigation planting (scrub / woodland)	Borough / District boundary
	Grassed areas	Community area boundary
	Public realm	Watercourse diversion
	Replacement Community Facility	Existing watercourse
		New ditches

Engineering earthworks	Existing woodland
Landscape earthworks	Existing buildings
Rail alignment formation	Existing inland water
Tunnels external extent	Existing contours
Major utility works	HS2 access
Existing public right of way	Noise fence barrier
New, diverted or realigned public right of way	Rail alignment
Public right of way closure	Chainage (e.g. 10+000)

Map Number	CT-06-322b
Map Name	Proposed Scheme
Community Area	MA04 Broomedge to Glazebrook

HS2

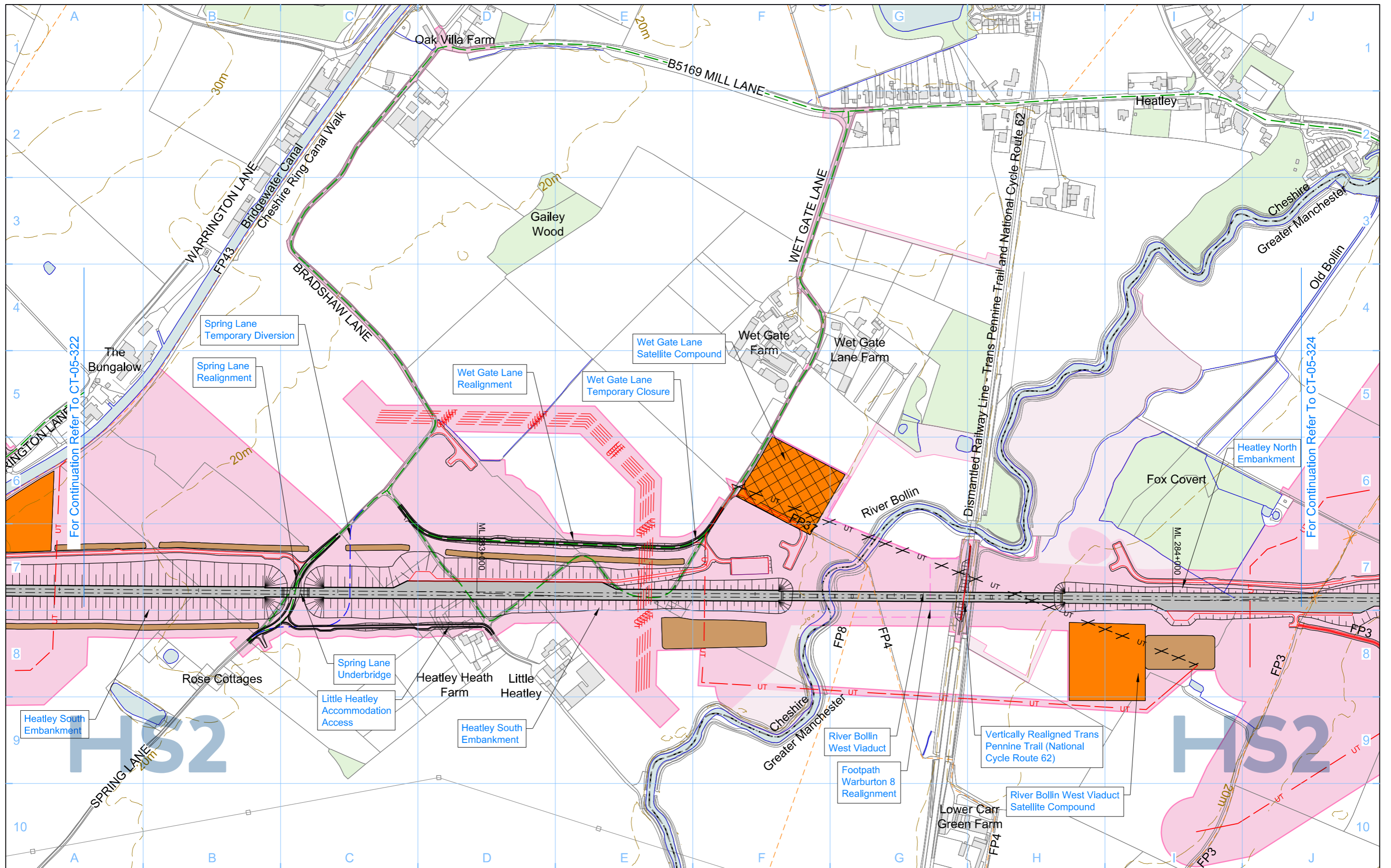
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 Birmingham, B4 6GA

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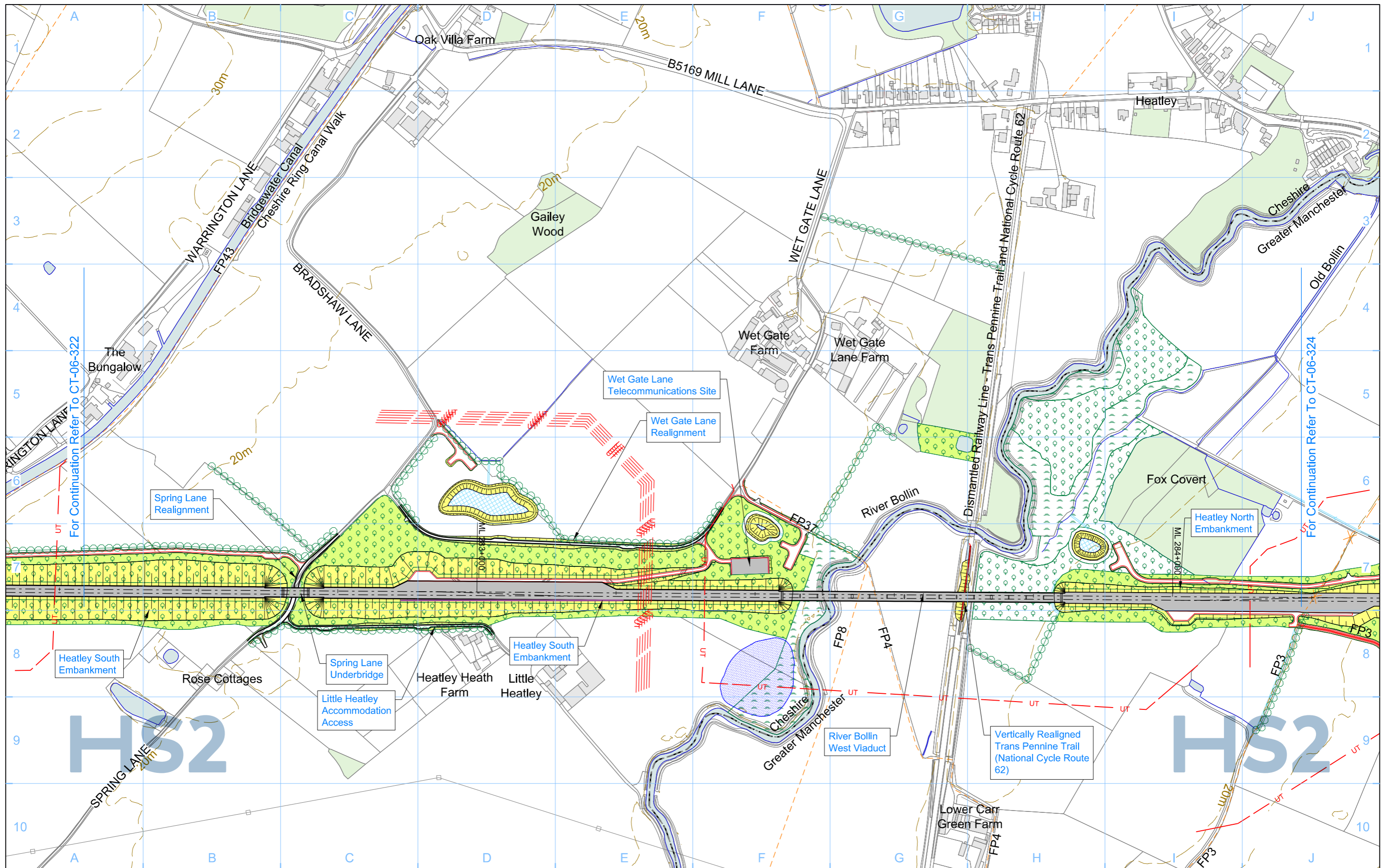
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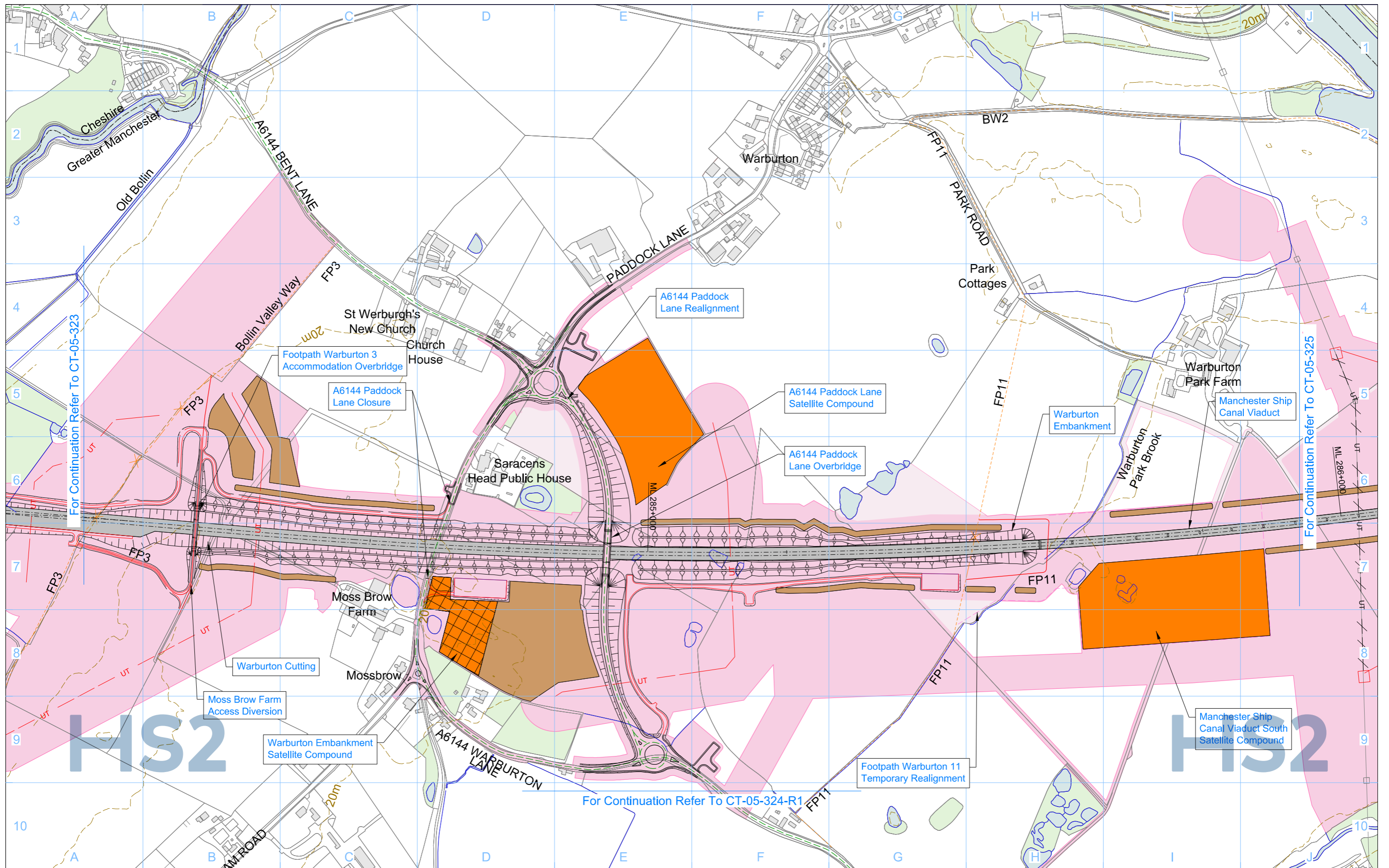
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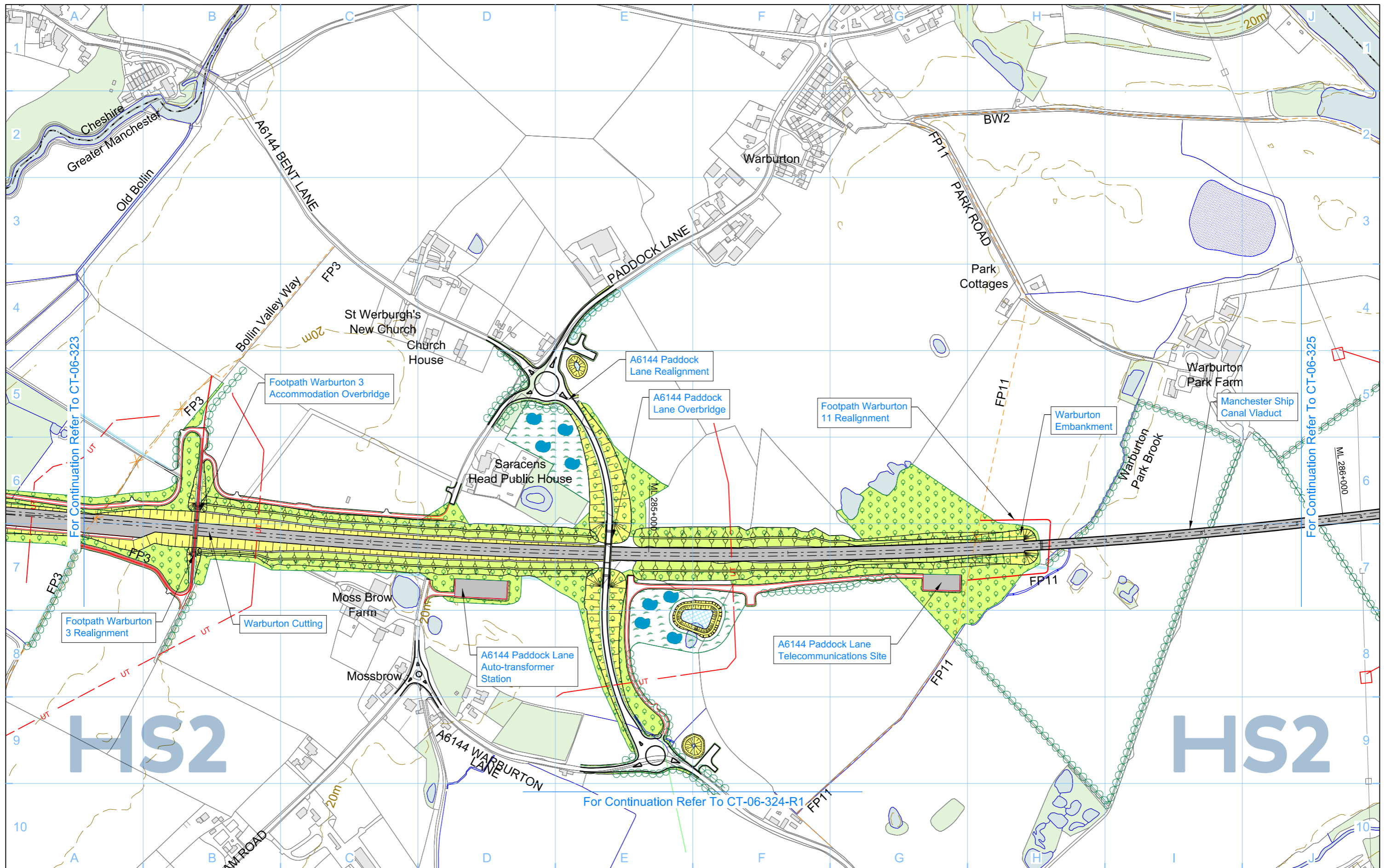
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Map Number CT-06-323		Map Name Proposed Scheme		Community Area MA04 Broomedge to Glazebrook				Registered in England Registration No. 06791686 Registered office: 2 Snow Hill, Queensway, Birmingham, B4 6GA	
Scale at A3: 1:5,000 		© Crown copyright and database rights 2020. Ordnance Survey Licence Number 100049190.		Doc Number: 2DE01-MWJ-EV-DPL-M002-600323		P09		Date: 10/08/21	



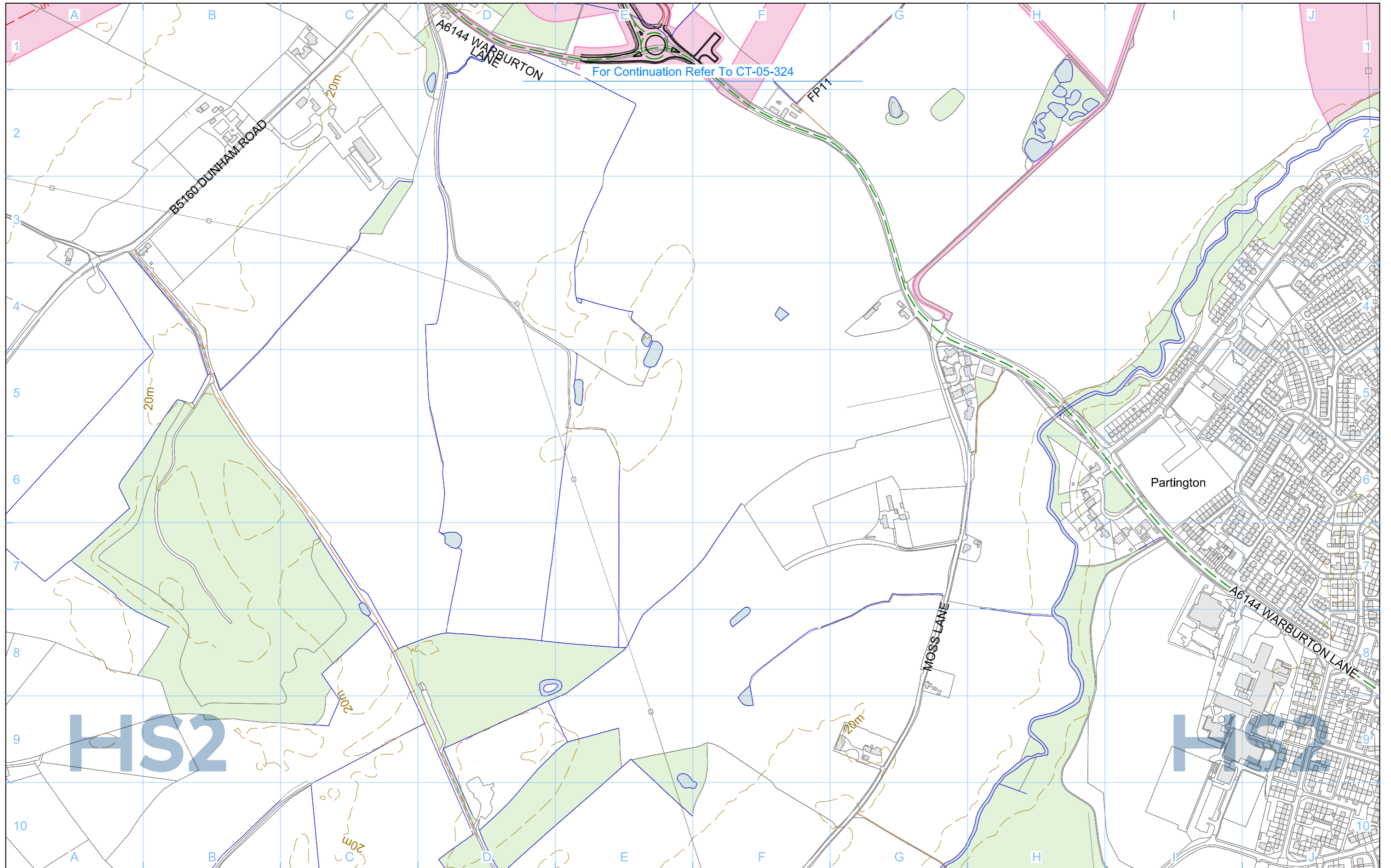
Legend	
	Depot, station, headhouse or portal building
	Main construction compounds
	Satellite construction compounds
	Railway systems compounds
	System railheads
	Temporary material stockpile
	Borrow pit
	Railway systems site
	Storage / prefabrication / laydown areas
	Land potentially required during construction
	Land potentially required for mitigation planting
	Temporary replacement community facility
	Rail alignment formation
	Temporary workers accommodation
	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)

Map Number CT-05-324	<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>Metres</p>
Map Name Construction Phase		
Community Area MA04 Broomedge to Glazebrook	<p>© Crown copyright and database rights 2020. Ordnance Survey Licence Number 100049190.</p> <p>Doc Number: 2DE01-MWJ-EV-DPL-M002-500324 P08 Date: 25/06/21</p>	



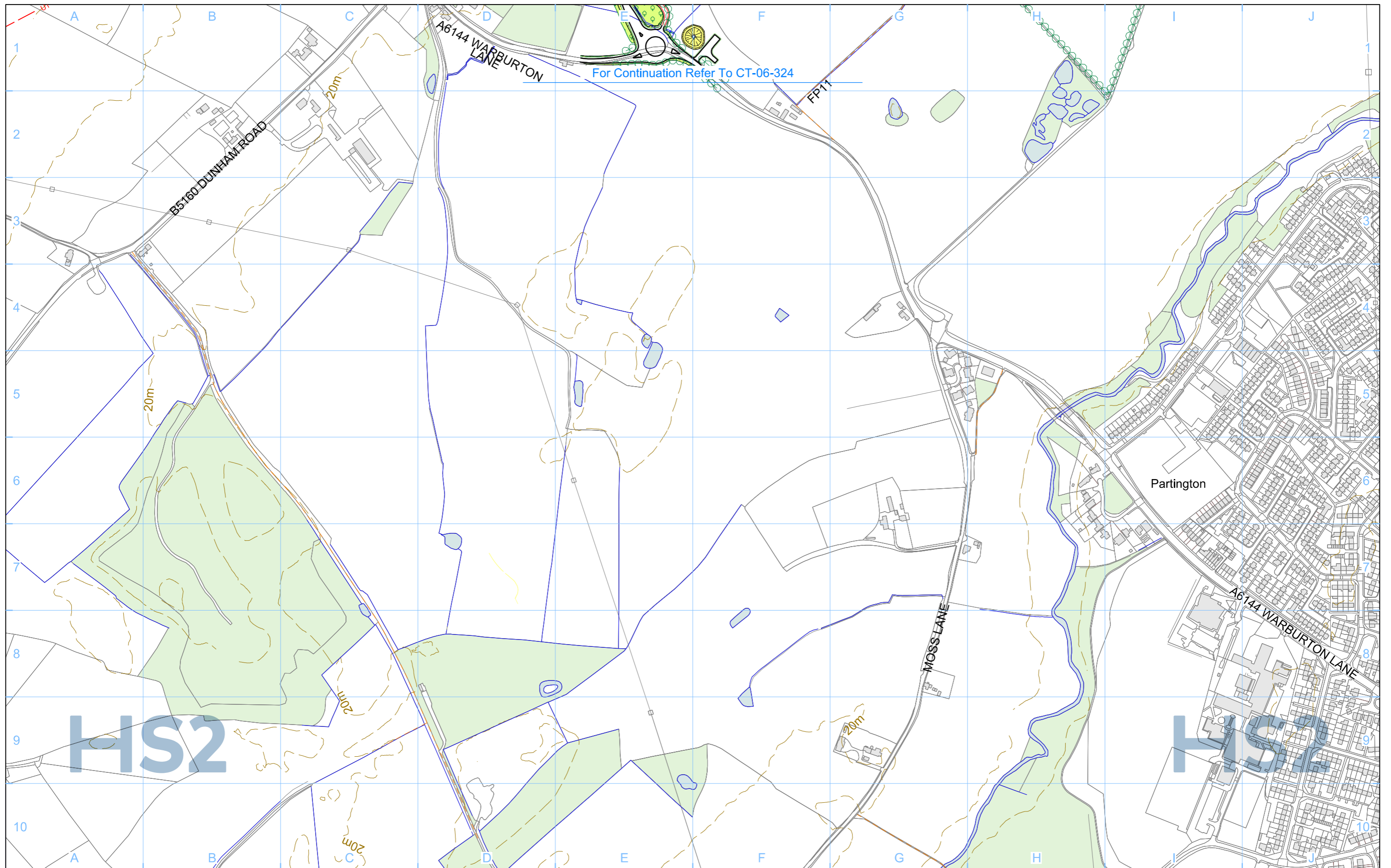
Legend <ul style="list-style-type: none"> Depot, station, headhouse or portal building Tunnel portal Railway Systems Site Ecological mitigation pond (Indicative only) Balancing pond Replacement floodplain storage area 		<ul style="list-style-type: none"> Pumping station Woodland habitat creation Wetland habitat creation Grassland habitat creation Landscape mitigation planting (scrub / woodland) Grassed areas Public realm Replacement Community Facility 		<ul style="list-style-type: none"> Local placement Returned to suitable development use Hedgerow County boundary Borough / District boundary Community area boundary Watercourse diversion Existing watercourse New ditches 		<ul style="list-style-type: none"> 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 		<ul style="list-style-type: none"> Existing woodland Existing buildings Existing inland water Existing contours HS2 access Noise fence barrier Rail alignment Chainage (e.g. 10+000) 		Map Number CT-06-324	<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>© Crown copyright and database rights 2020. Ordnance Survey Licence Number 100049190.</p> <p>Doc Number: 2DE01-MWJ-EV-DPL-M002-600324 P08 Date: 26/06/21</p>
Map Name Proposed Scheme		Community Area MA04 Broomedge to Glazebrook		Map Number CT-06-324		Map Name Proposed Scheme		Community Area MA04 Broomedge to Glazebrook			



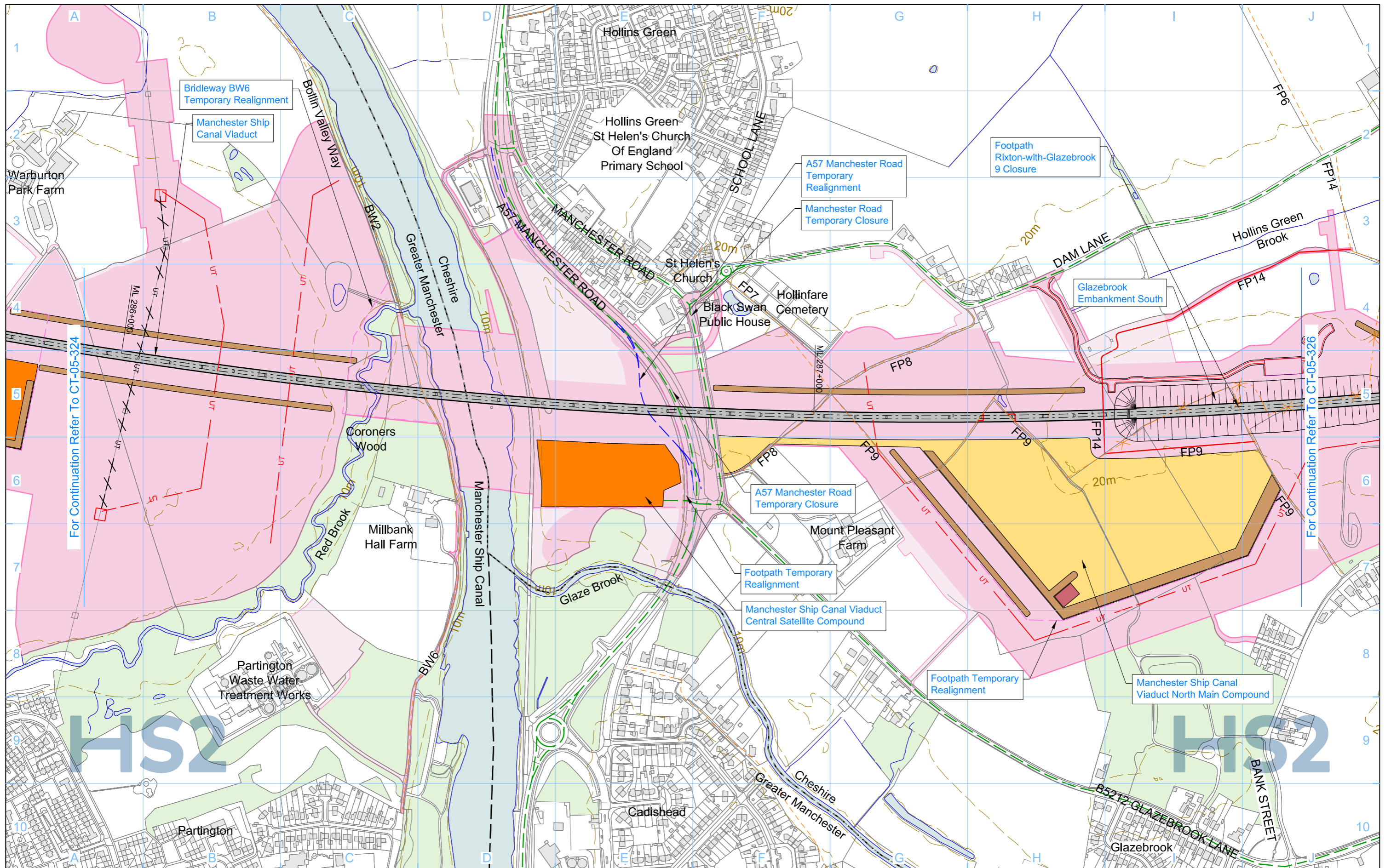
Legend	
	Depot, station, headhouse or portal building
	Tunnel portal
	Main construction compounds
	Satellite construction compounds
	Railway systems compounds
	System railheads
	Temporary material stockpile
	Borrow pit
	Railway systems site
	Storage / prefabrication / laydown areas
	Land potentially required during construction
	Land potentially required for mitigation planting
	Temporary replacement community facility
	Rail alignment formation
	Temporary workers accommodation
	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)

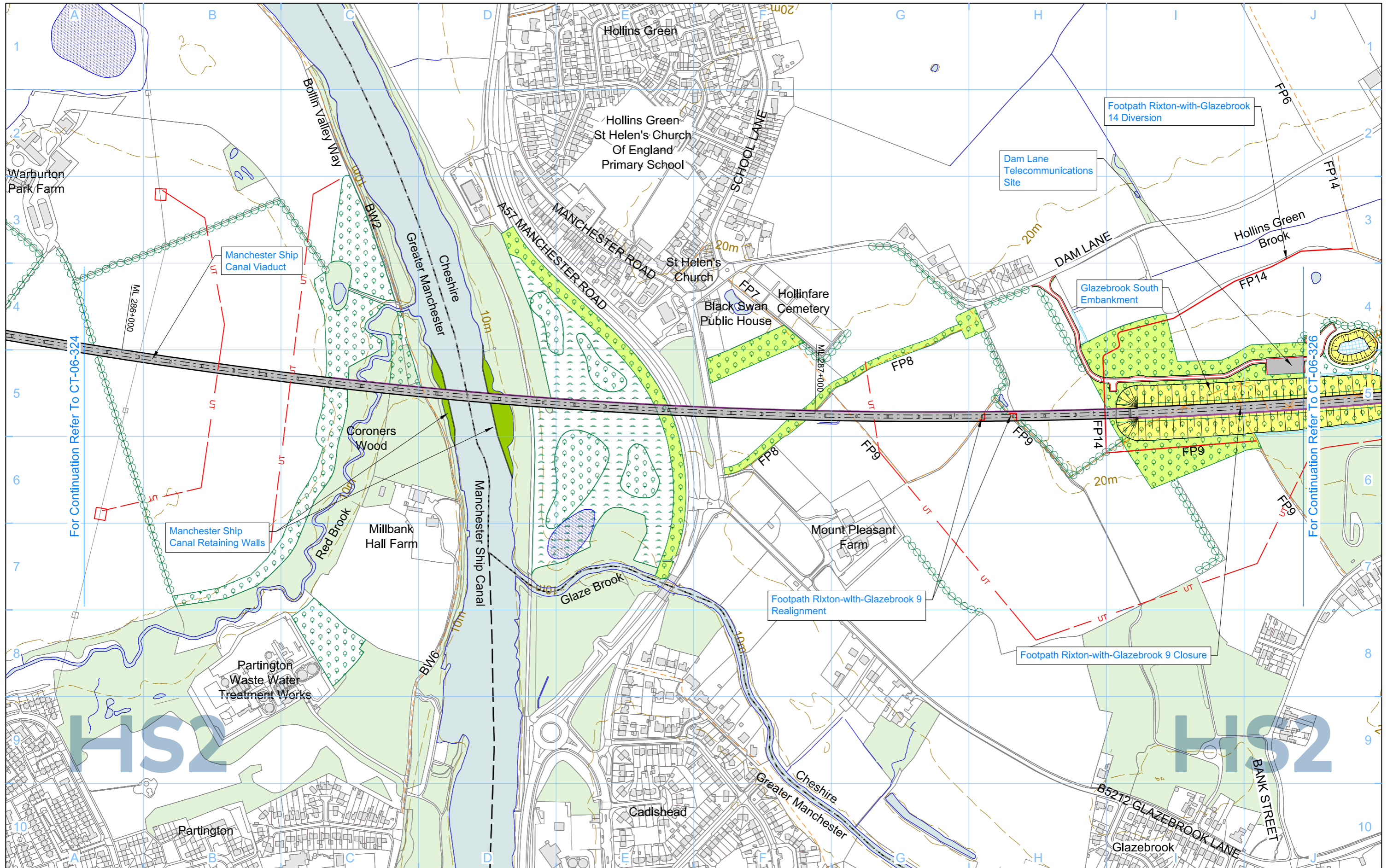
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Map Name Construction Phase		
Community Area MA04 Broomedge to Glazebrook	<p>© Crown copyright and database rights 2020. Ordnance Survey Licence Number 100049190.</p> <p>Doc Number: 2DE01-MWJ-EV-DPL-M002-505324 P04 Date: 25/06/21</p>	



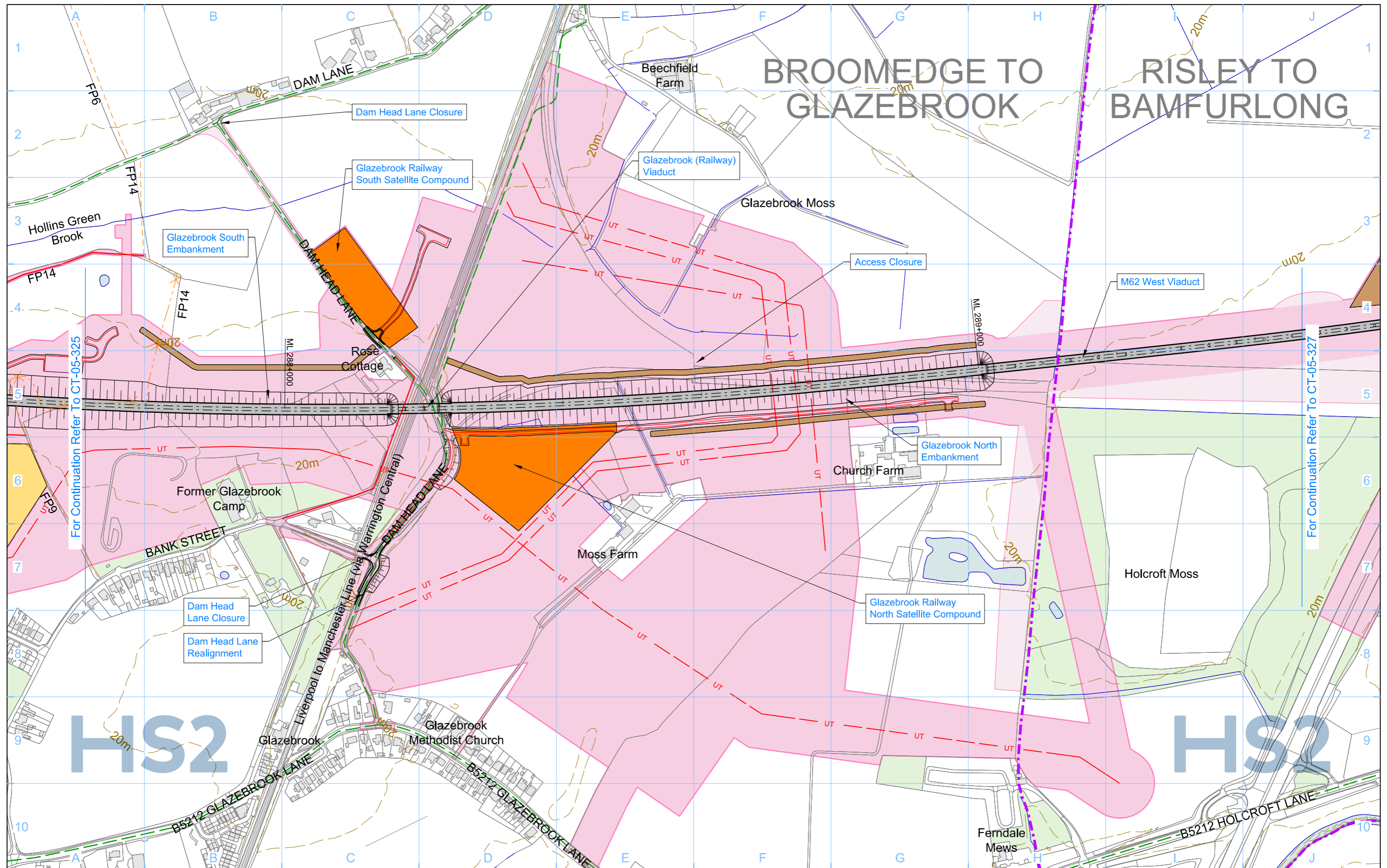
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Depot, station, headhouse or portal building Tunnel portal Railway Systems Site Ecological mitigation pond (Indicative only) Balancing pond Replacement floodplain storage area		Pumping station Woodland habitat creation Wetland habitat creation Grassland habitat creation Landscape mitigation planting (scrub / woodland) Grassed areas Public realm Replacement Community Facility		Local placement Returned to suitable development use Hedgerow County boundary Borough / District boundary Community area boundary Watercourse diversion Existing watercourse New ditches		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 woodland Existing buildings Existing inland water Existing contours HS2 access Noise fence barrier Rail alignment Chainage (e.g. 10+000)		Map Name Proposed Scheme	
MA04 Broomedge to Glazebrook								Community Area MA04 Broomedge to Glazebrook			



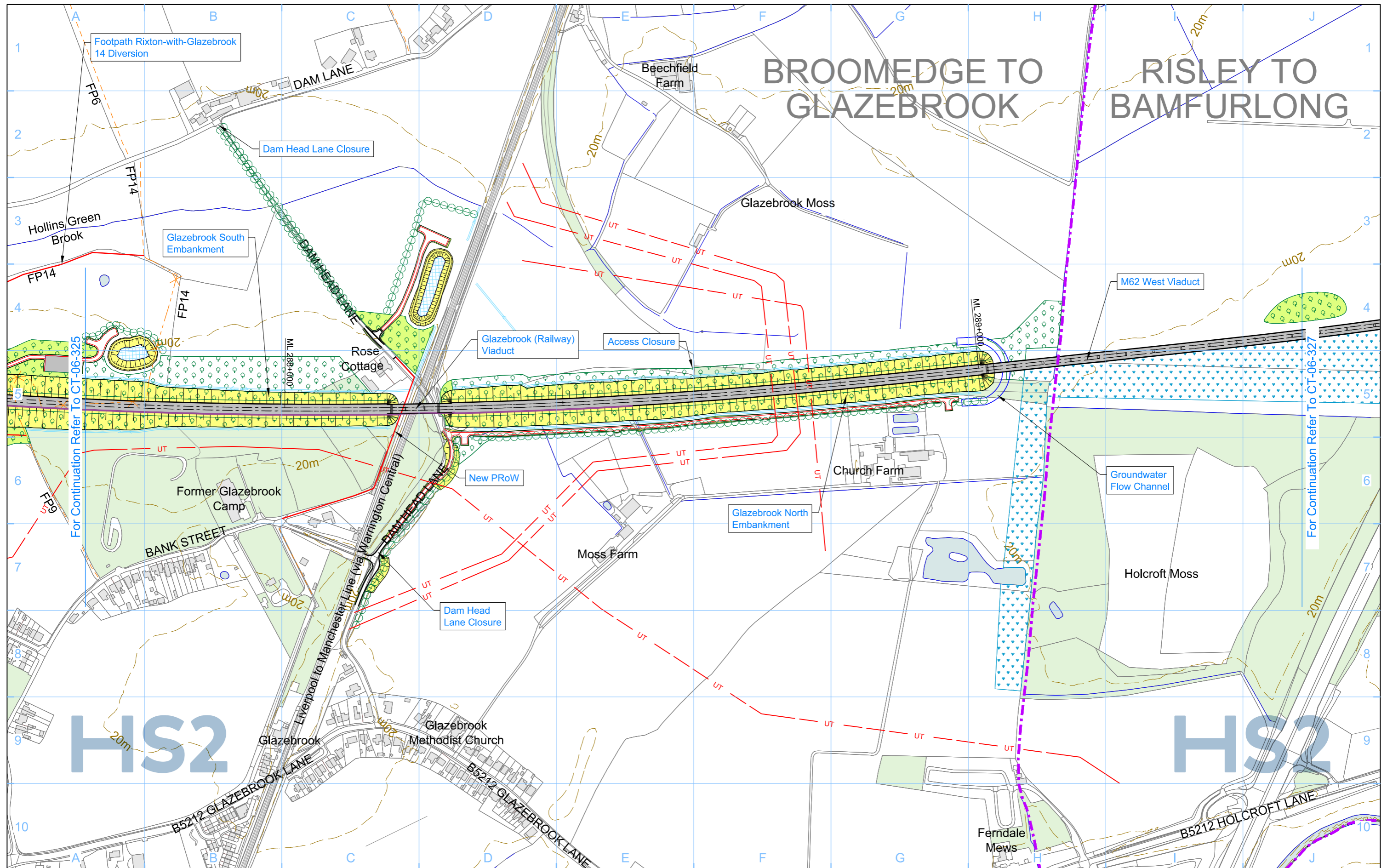
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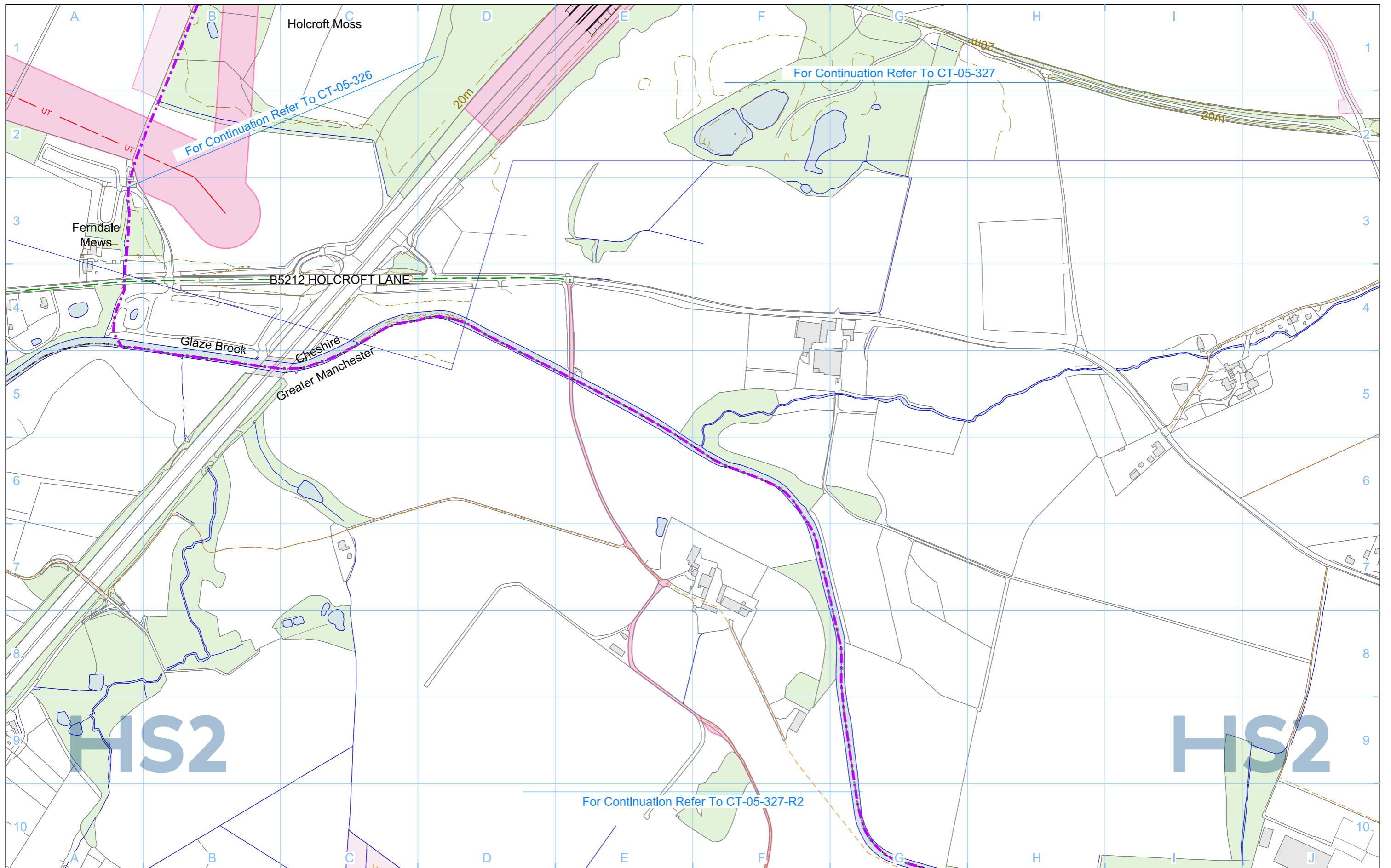
Legend Depot, station, headhouse or portal building Tunnel portal Railway Systems Site Ecological mitigation pond (Indicative only) Balancing pond Replacement floodplain storage area		Pumping station Woodland habitat creation Wetland habitat creation Grassland habitat creation Landscape mitigation planting (scrub / woodland) Grassed areas Public realm Replacement Community Facility		Local placement Returned to suitable development use Hedgerow County boundary Borough / District boundary Community area boundary Watercourse diversion Existing watercourse New ditches		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 woodland Existing buildings Existing inland water Existing contours HS2 access Noise fence barrier Rail alignment Chainage (e.g. 10+000)		Map Number CT-06-325 Map Name Proposed Scheme Community Area MA04 Broomedge to Glazebrook	Registered in England Registration No. 06791886 Registered office: 2 Snow Hill, Queensway, Birmingham, B4 6GA Scale at A3: 1:5,000 0 50 100 150 200 250 Metres © Crown copyright and database rights 2020. Ordnance Survey Licence Number 100049190. Doc Number: 2DE01-MWJ-EV-DPL-M002-600325 P08 Date: 25/06/21
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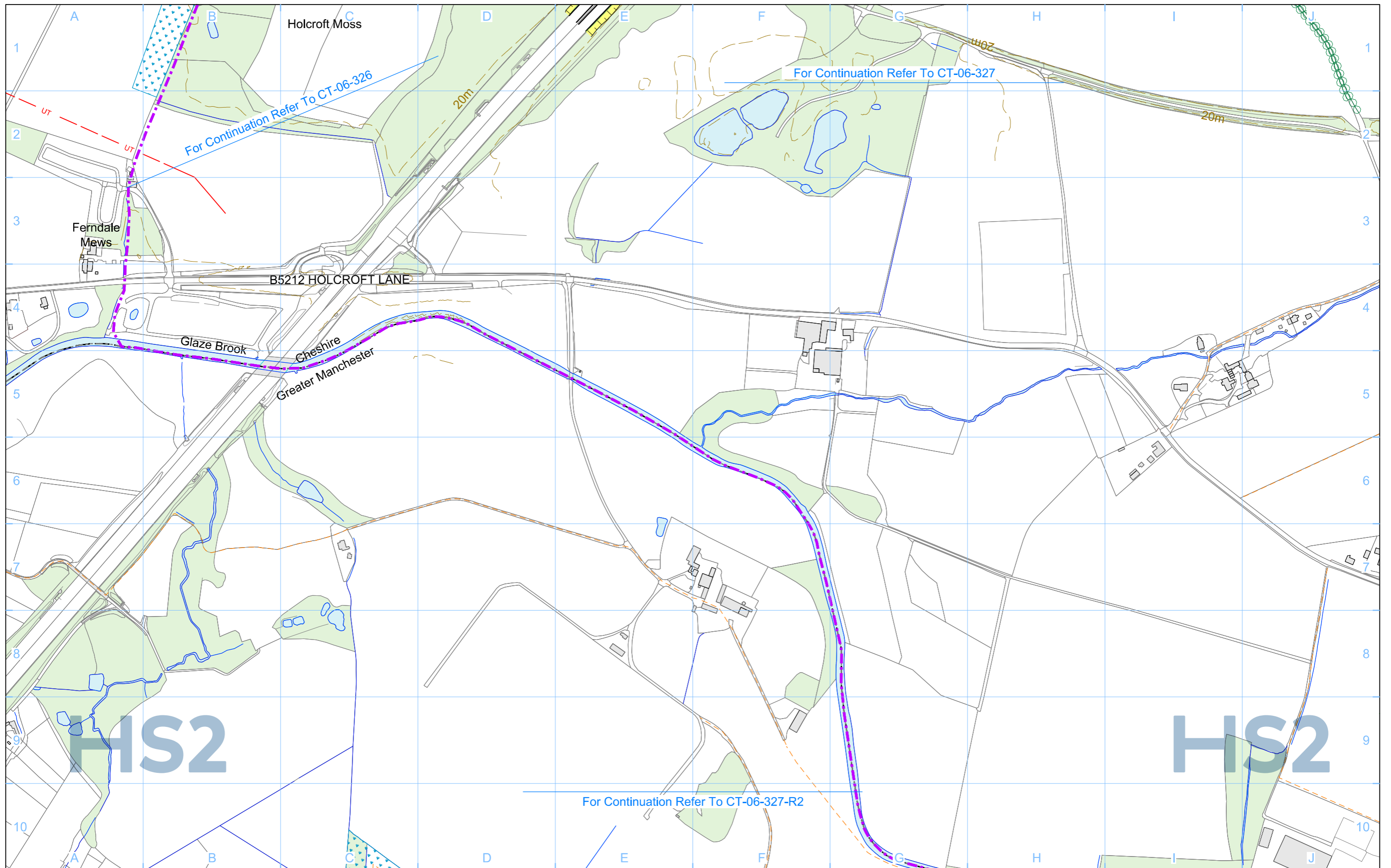
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Legend <ul style="list-style-type: none"> Depot, station, headhouse or portal building Tunnel portal Railway Systems Site Ecological mitigation pond (Indicative only) Balancing pond Replacement floodplain storage area 		<ul style="list-style-type: none"> Pumping station Woodland habitat creation Wetland habitat creation Grassland habitat creation Landscape mitigation planting (scrub / woodland) Grassed areas Public realm Replacement Community Facility 		<ul style="list-style-type: none"> Local placement Returned to suitable development use Hedgerow County boundary Borough / District boundary Community area boundary Watercourse diversion Existing watercourse New ditches 		<ul style="list-style-type: none"> 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 		<ul style="list-style-type: none"> Existing woodland Existing buildings Existing inland water Existing contours HS2 access Noise fence barrier Rail alignment Chainage (e.g. 10+000) 		<p>Map Number CT-06-326a</p> <p>Map Name Proposed Scheme</p> <p>Community Area MA04 Broomedge to Glazebrook</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>© Crown copyright and database rights 2020. Ordnance Survey Licence Number 100049190.</p> <p>Doc Number: 2DE01-MWJ-EV-DPL-M002-610326 P08 Date: 25/06/21</p>	
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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 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) 		Map Number CT-05-327-R1 Map Name Construction Phase Community Area MA04 Broomedge to Glazebrook	<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>© Crown copyright and database rights 2020. Ordnance Survey Licence Number 100049190.</p> <p>Doc Number: 2DE01-MWJ-EV-DPL-M002-505327 P01 Date: 26/06/21</p>
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Legend

	Depot, station, headhouse or portal building		Pumping station		Local placement
	Tunnel portal		Woodland habitat creation		Returned to suitable development use
	Railway Systems Site		Wetland habitat creation		Hedgerow
	Ecological mitigation pond (Indicative only)		Grassland habitat creation		County boundary
	Balancing pond		Landscape mitigation planting (scrub / woodland)		Borough / District boundary
	Replacement floodplain storage area		Grassed areas		Community area boundary
			Public realm		Watercourse diversion
			Replacement Community Facility		Existing watercourse
					New ditches

	Engineering earthworks		Existing woodland
	Landscape earthworks		Existing buildings
	Rail alignment formation		Existing inland water
	Tunnels external extent		Existing contours
	Major utility works		HS2 access
	Major utility works		Noise fence barrier
	Major utility works		Rail alignment
	Major utility works		Chainage (e.g. 10+000)
	Major utility works		Existing public right of way
	Major utility works		New, diverted or realigned public right of way
	Major utility works		Public right of way closure

Map Number	CT-06-327-R1
Map Name	Proposed Scheme
Community Area	MA04 Broomedge to Glazebrook

HS2

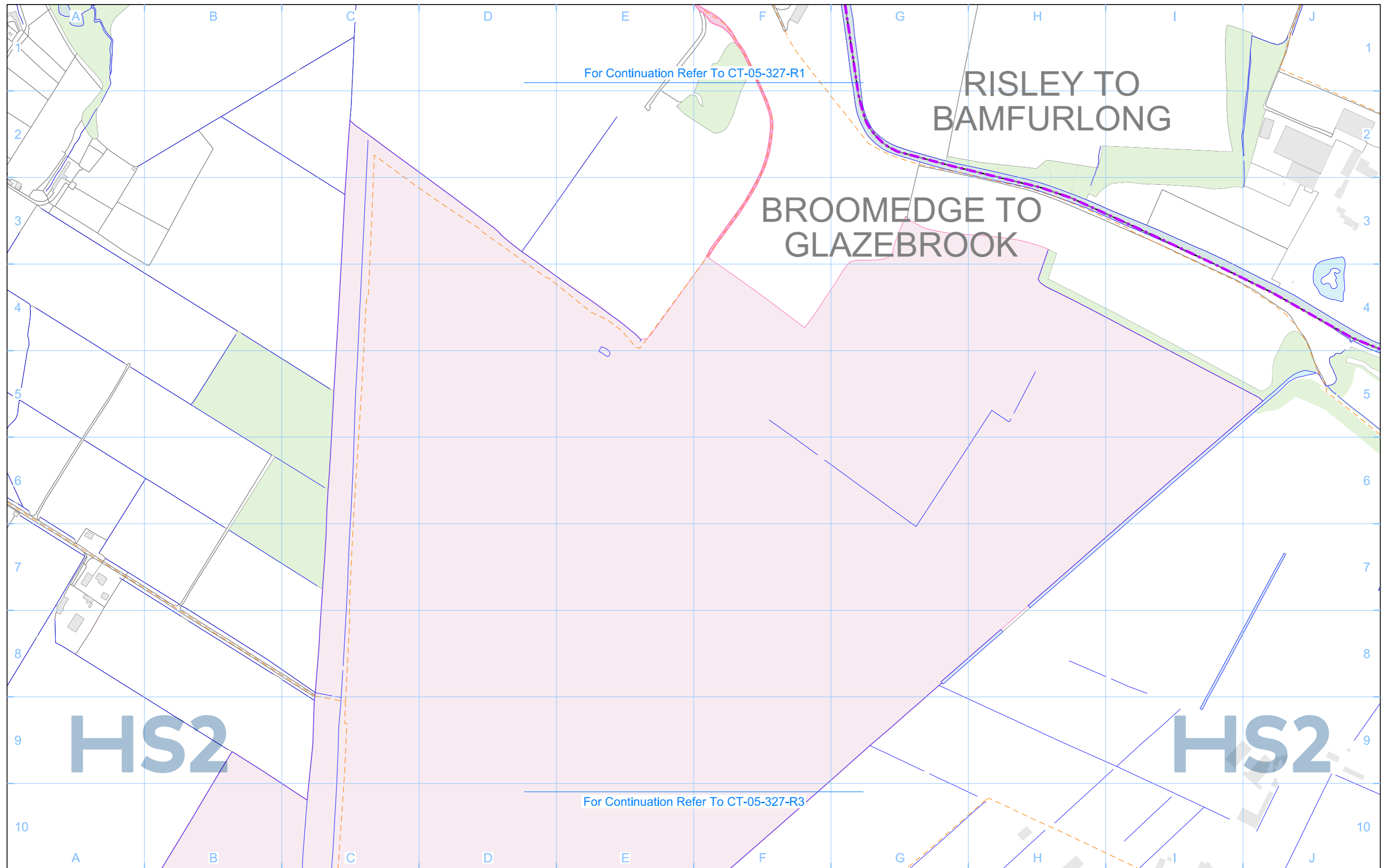
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 Registered office:
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Scale at A3: 1:5,000

0 50 100 150 200 250
 Metres

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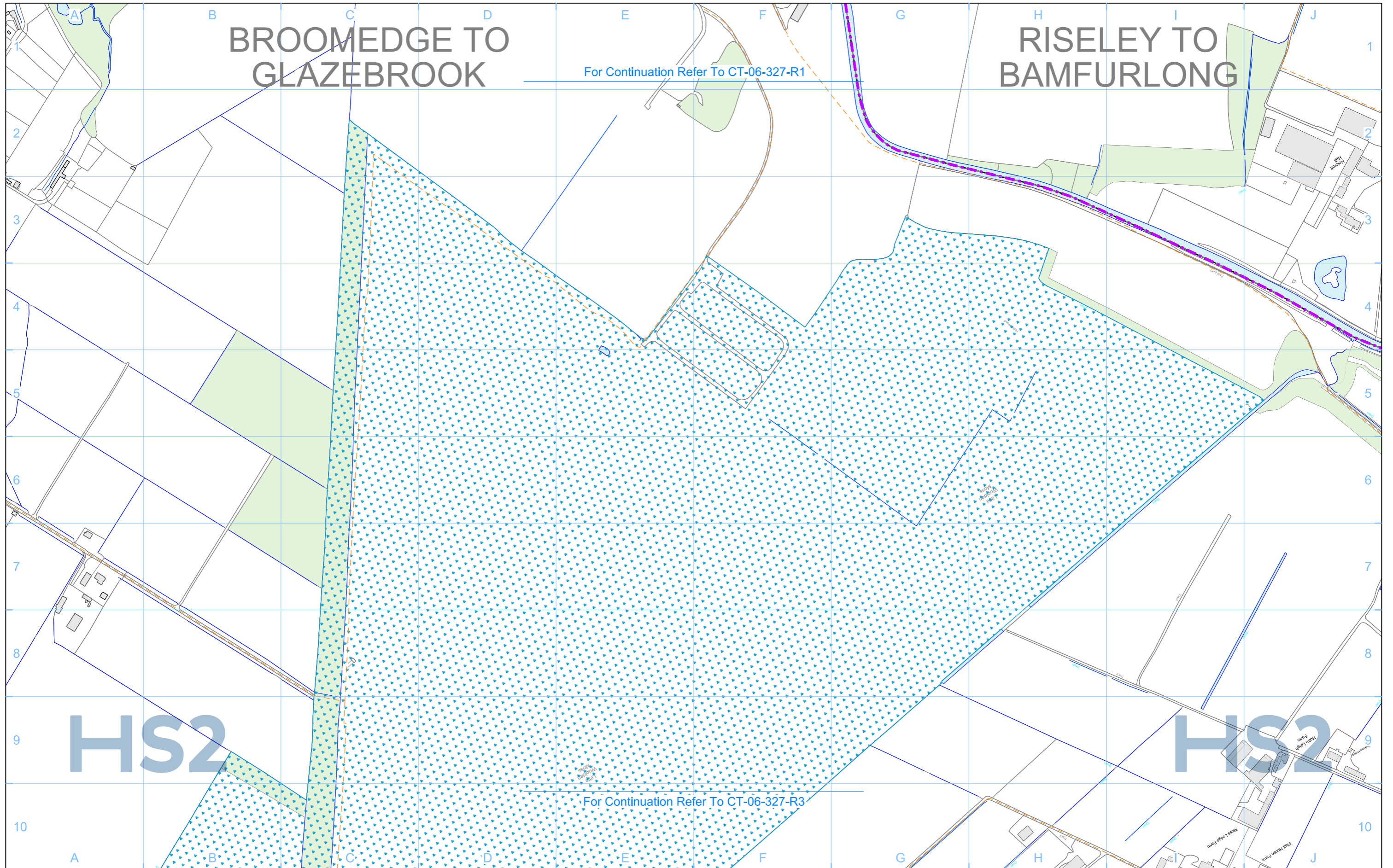
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Map Name Construction Phase		Community Area MA04 Broomedge to Glazebrook	

BROOMEDGE TO GLAZEBROOK

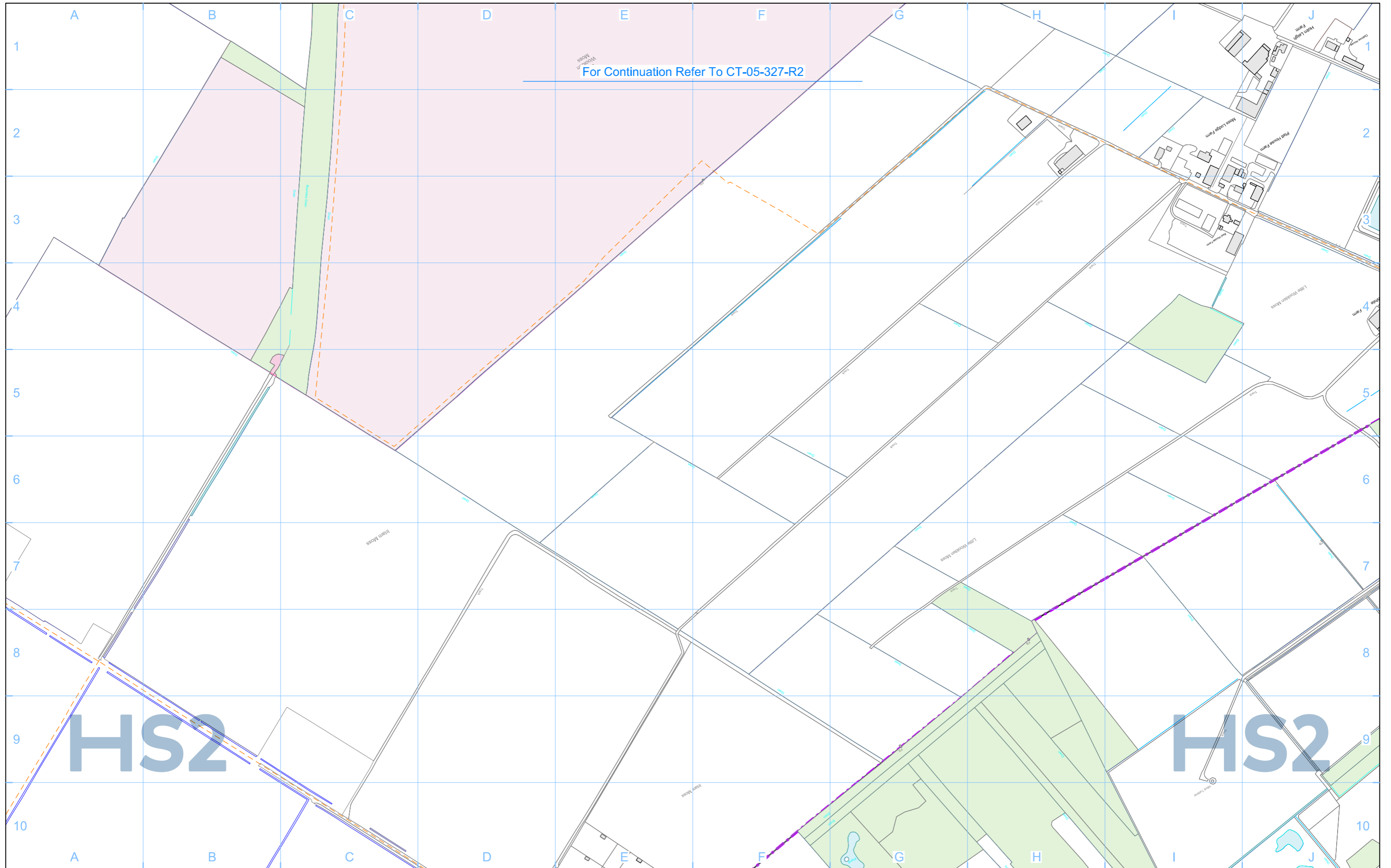
RISELEY TO BAMFURLONG

For Continuation Refer To CT-06-327-R1

For Continuation Refer To CT-06-327-R3



Legend 		Map Number CT-06-327-R2 Map Name Proposed Scheme Community Area MA04 Broomedge to Glazebrook		 Registered in England Registration No. 06791886 Registered office: 2 Snow Hill, Queensway, Birmingham, B4 6GA Scale at A3: 1:5,000 © Crown copyright and database rights 2020. Ordnance Survey Licence Number 100049190. Doc Number: 2DE01-MWJ-EV-DPL-M002-606327 P01 Date: 27/06/21	
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For Continuation Refer To CT-05-327-R2

Legend

- | | | | | |
|--|---|---|---|---------------------------------------|
| Depot, station, headhouse or portal building | Borrow pit | Community area boundary | Landscape earthworks | Existing woodland |
| Tunnel portal | Railway systems site | Construction traffic route | Engineering earthworks | Existing buildings |
| Main construction compounds | Storage / prefabrication / laydown areas | Existing public right of way | Temporary highway diversion / realignment | Existing inland water |
| Satellite construction compounds | Land potentially required during construction | Public right of way closure | Major utility works | Existing watercourse |
| Railway systems compounds | Land potentially required for mitigation planting | Temporary public right of way closure | Major utility works - Removed | Existing contours |
| System railheads | Temporary replacement community facility | Temporary public right of way diversion / realignment | County boundary | HS2 access |
| Temporary material stockpile | Rail alignment formation | New, diverted or realigned public right of way | Borough / District boundary | Rail alignment Chainage (e.g. 10+000) |
| | Temporary workers accommodation | | Tunnels external extent | |

Map Number	CT-05-327-R3
Map Name	Construction Phase
Community Area	MA04 Broomedge to Glazebrook

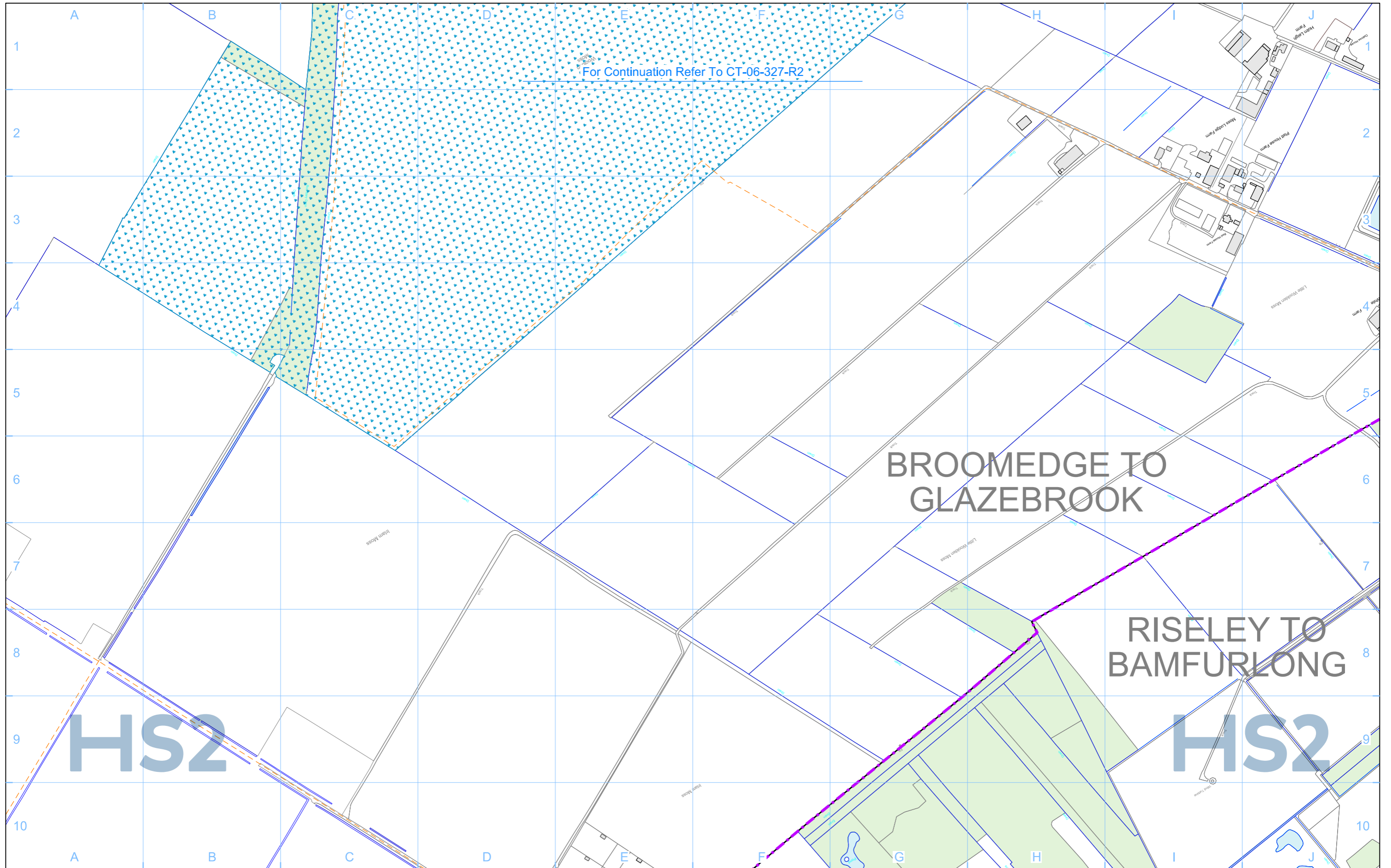
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Metres

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	Depot, station, headhouse or portal building		Pumping station		Local placement		Returned to suitable development use		Woodland habitat creation		Wetland habitat creation		Grassland habitat creation		Landscape mitigation planting (scrub / woodland)		Grassed areas		Public realm		Replacement Community Facility		
	Tunnel portal		Railway Systems Site		Ecological mitigation pond (Indicative only)		Balancing pond		Replacement floodplain storage area		Hedgerow		County boundary		Borough / District boundary		Community area boundary		Watercourse diversion		Existing watercourse		New ditches

	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 woodland		Existing buildings		Existing inland water		Existing contours		HS2 access		Noise fence barrier		Rail alignment		Chainage (e.g. 10+000)
--	-------------------	--	--------------------	--	-----------------------	--	-------------------	--	------------	--	---------------------	--	----------------	--	------------------------

Map Number	CT-06-327-R3
Map Name	Proposed Scheme
Community Area	MA04 Broomedge to Glazebrook

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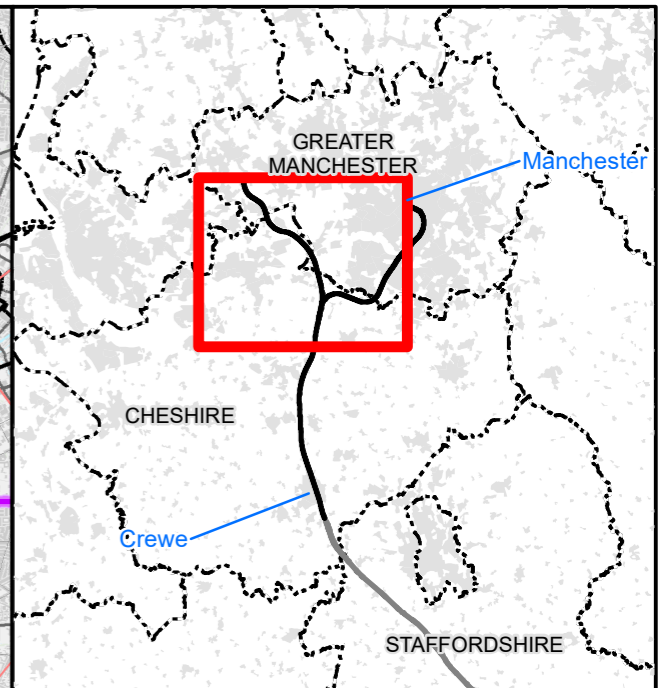
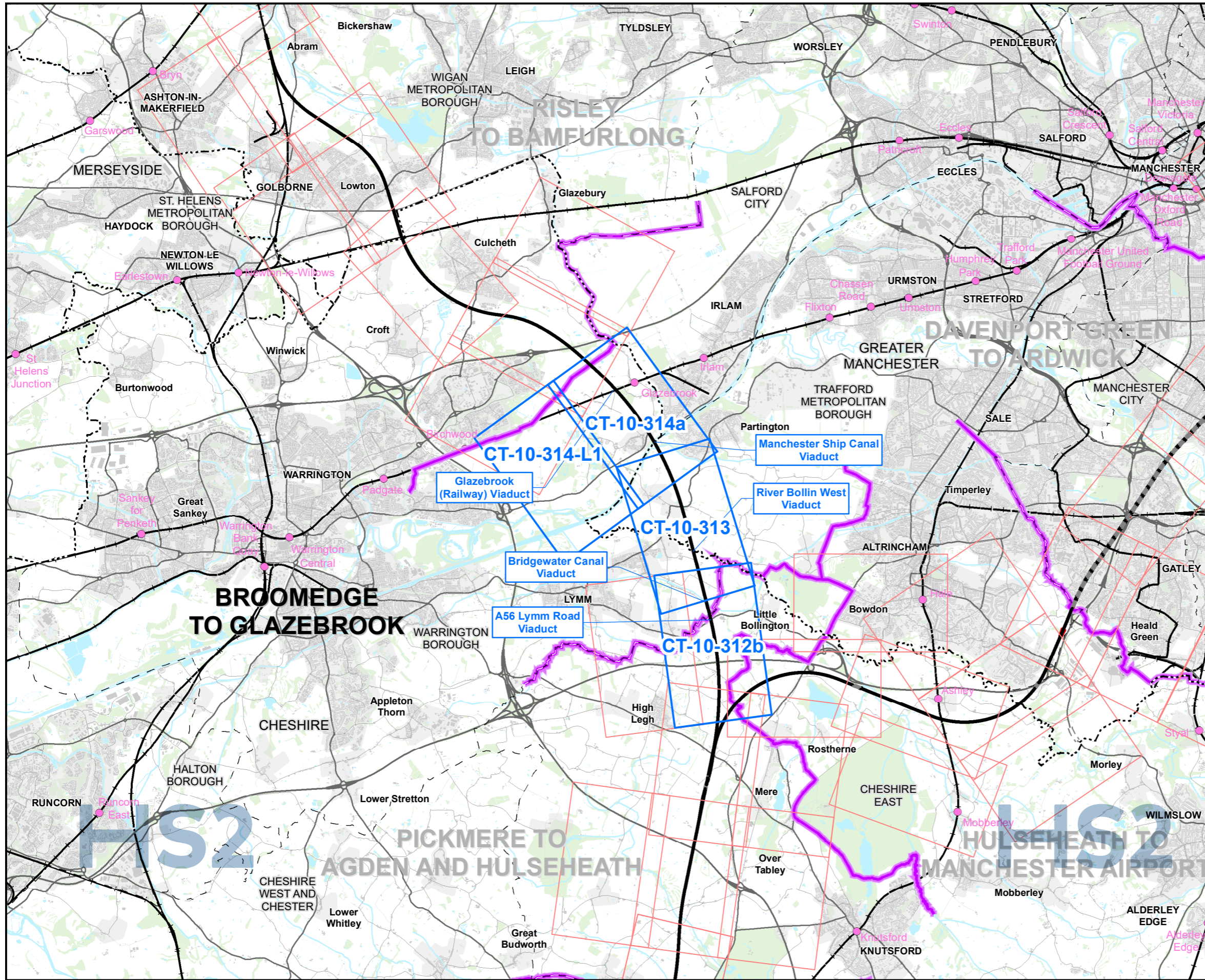
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**High Speed Rail
(Crewe – Manchester)
Environmental Statement**

CT-10 – Environmental Baseline



Map Series Information:
 The Environmental Baseline maps display a range of environmental data layers.

Main Map Legend

- Route in tunnel
- 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 not included in this community area

Map Number	CT-10-INDEX-MA04
Map Name	Index Map of: Environmental Baseline
	Community Area MA04: Broomedge to Glazebrook

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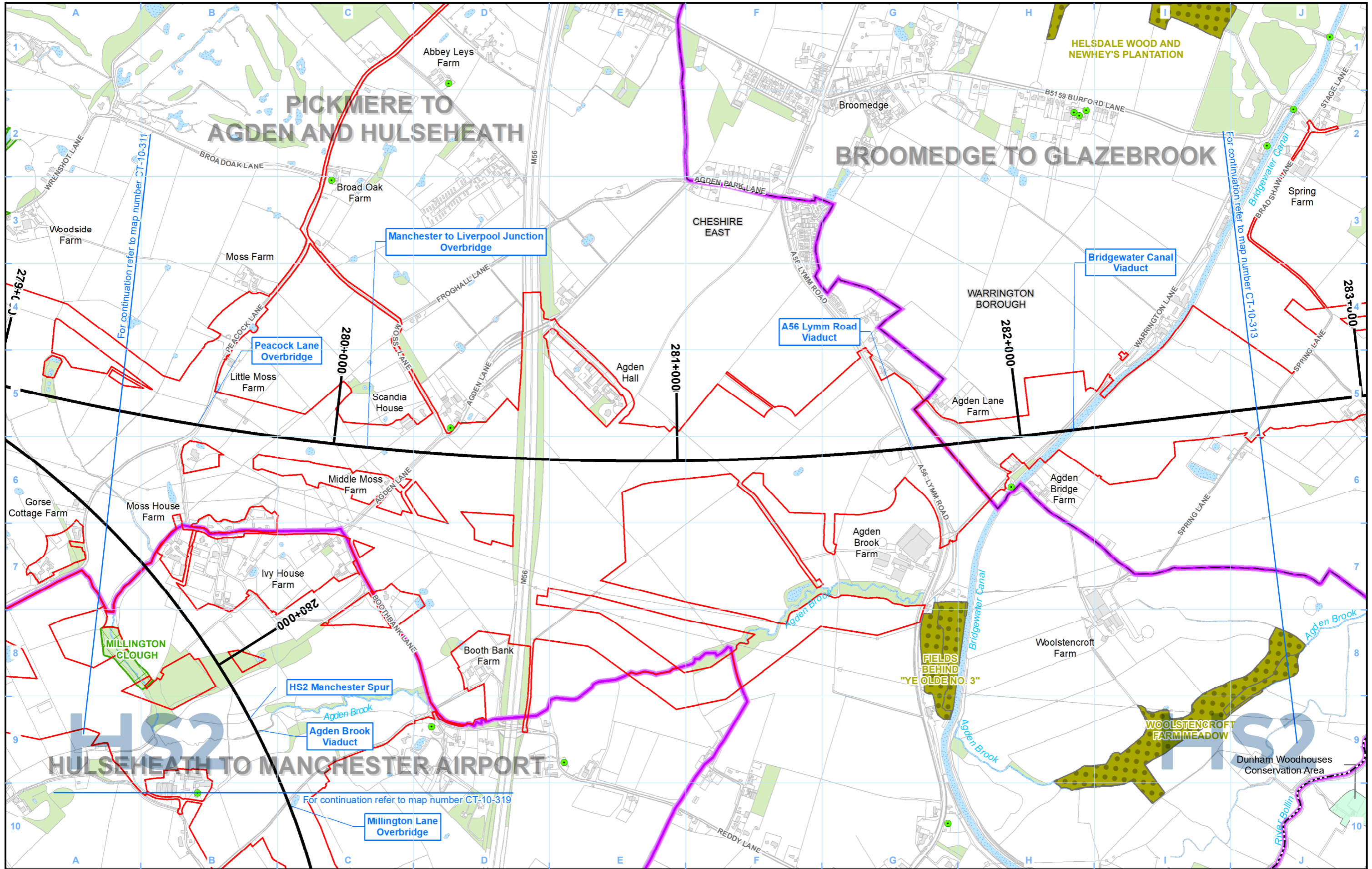
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Doc Number: 2DE01-MWJ-EV-MAP-M000-000196-P07

Scale at A3: 1:100,000

Metres

Date: 27/08/21



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-10-312b
Map Name	Environmental Baseline
Community Area MA04: Broomedge to Glazebrook	

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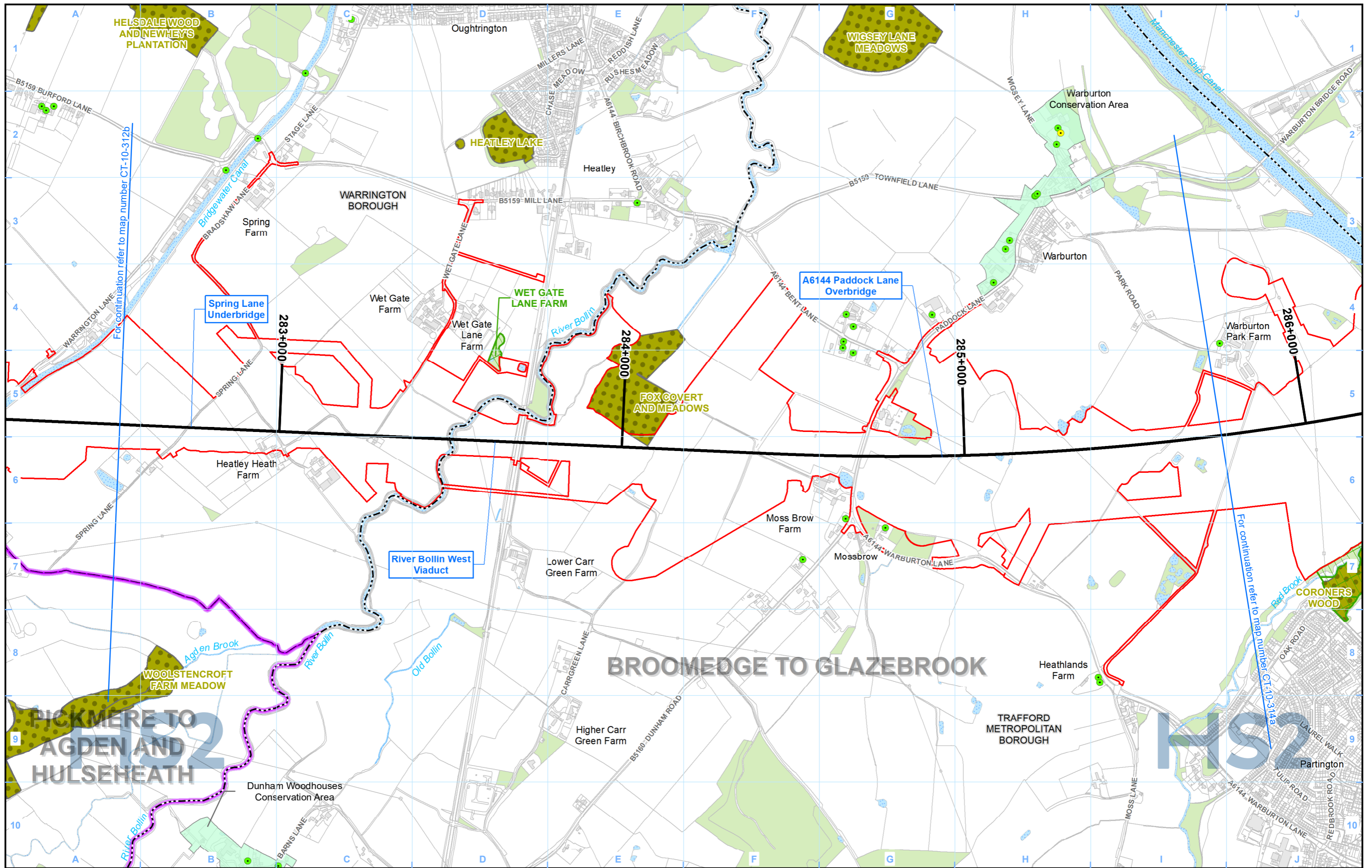
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Date: 27/08/21



Legend

Map Number	CT-10-313
Map Name	Environmental Baseline
Community Area MA04: Broomedge to Glazebrook	

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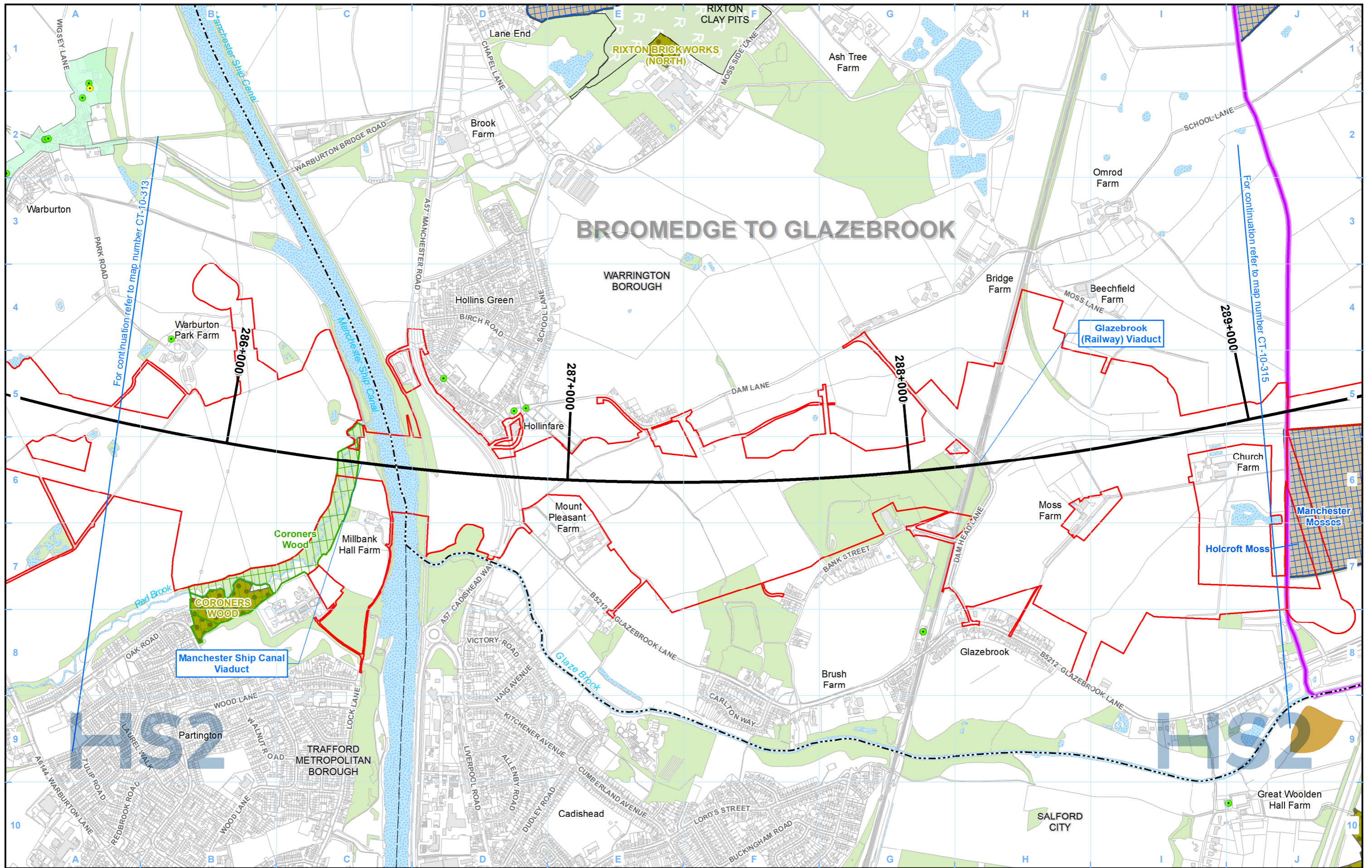
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Date: 27/08/21

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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-10-314a
Map Name	Environmental Baseline
Community Area MA04: Broomedge to Glazebrook	

HS2

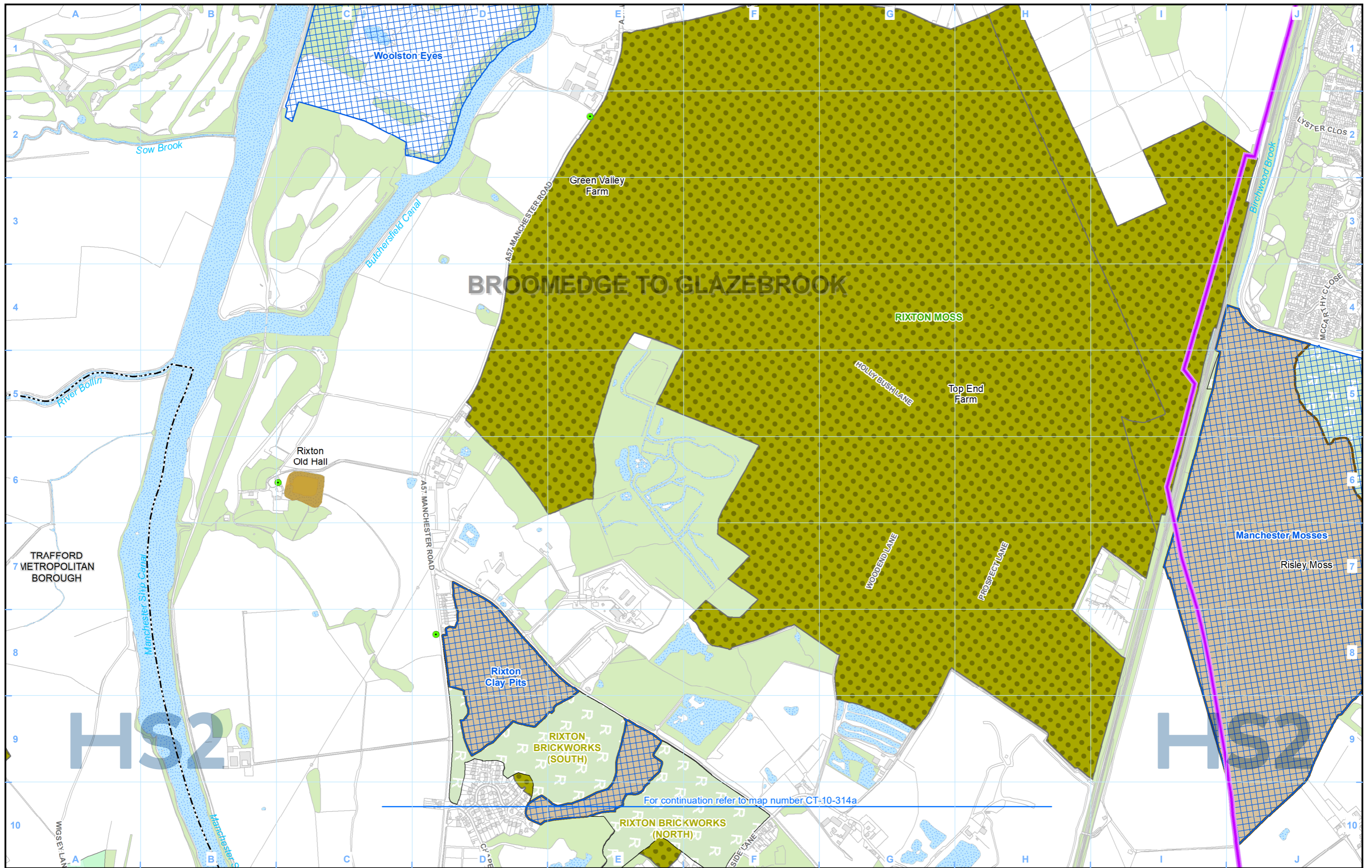
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Date: 27/08/21



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-10-314-L1

Map Name: Environmental Baseline

Community Area MA04:
Broomedge to Glazebrook

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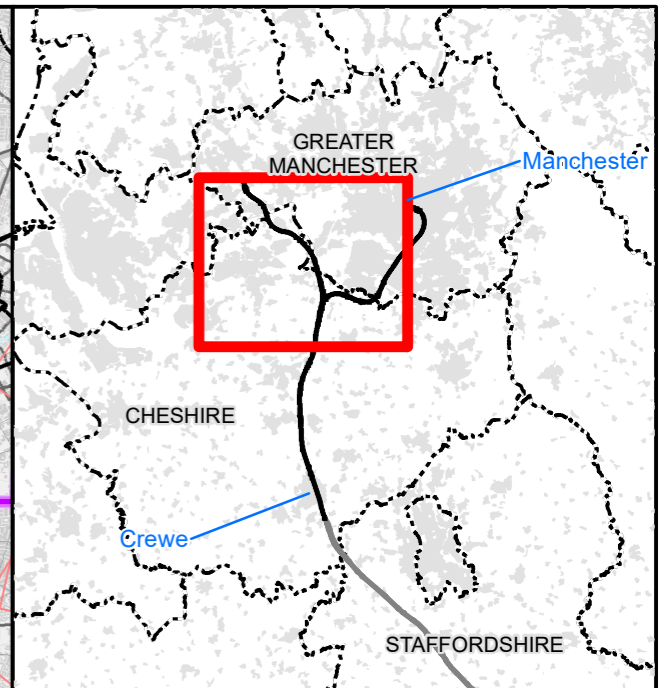
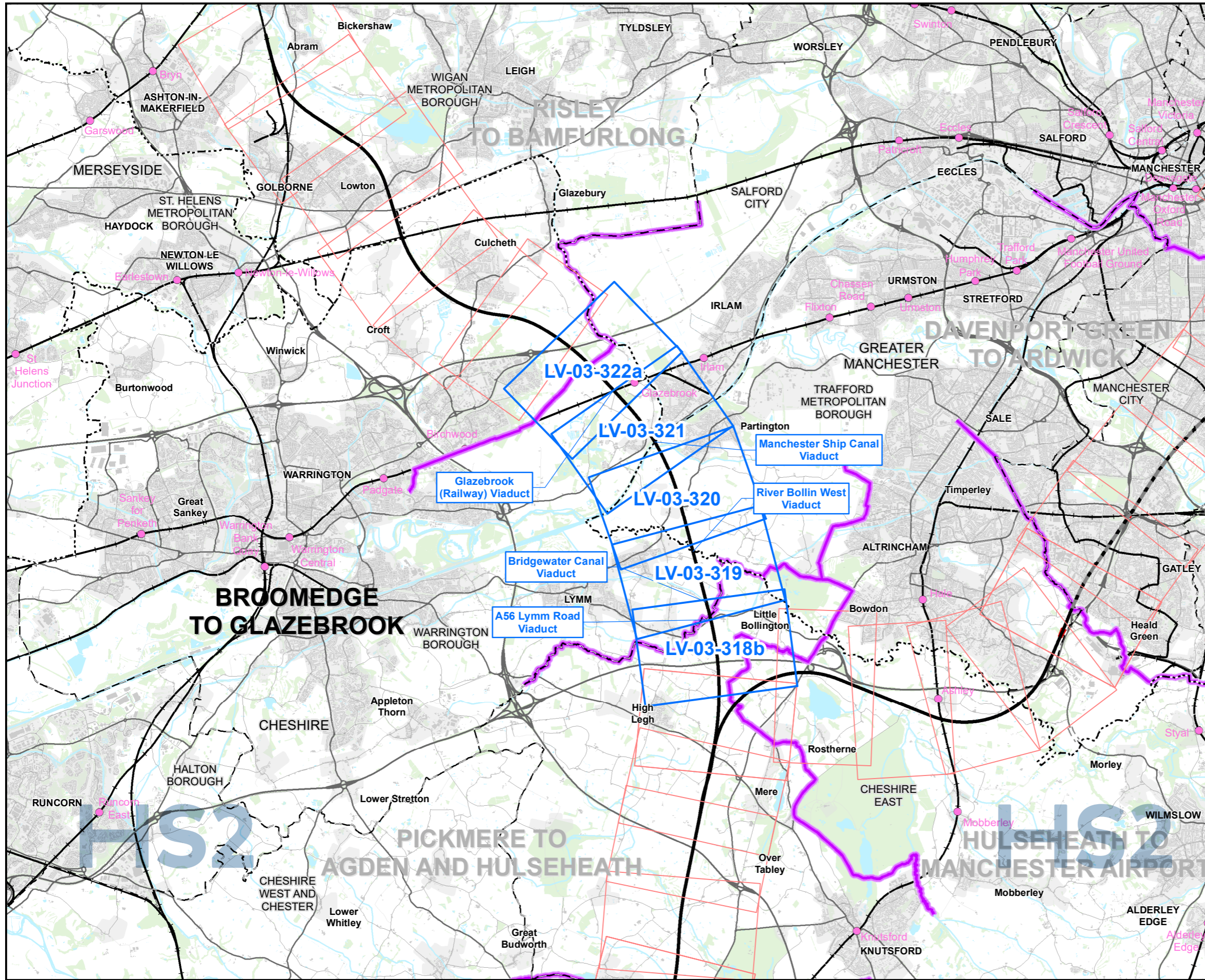
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Date: 27/08/21

High Speed Rail (Crewe – Manchester) 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 Proposed Scheme has been assessed to give rise to significant effects during the construction phase.

- 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 not included in this community area

Map Number	LV-03-INDEX-MA04
Map Name	Index Map of: Construction Phase Significantly Affected Viewpoints
	Community Area MA04: Broomedge to Glazebrook

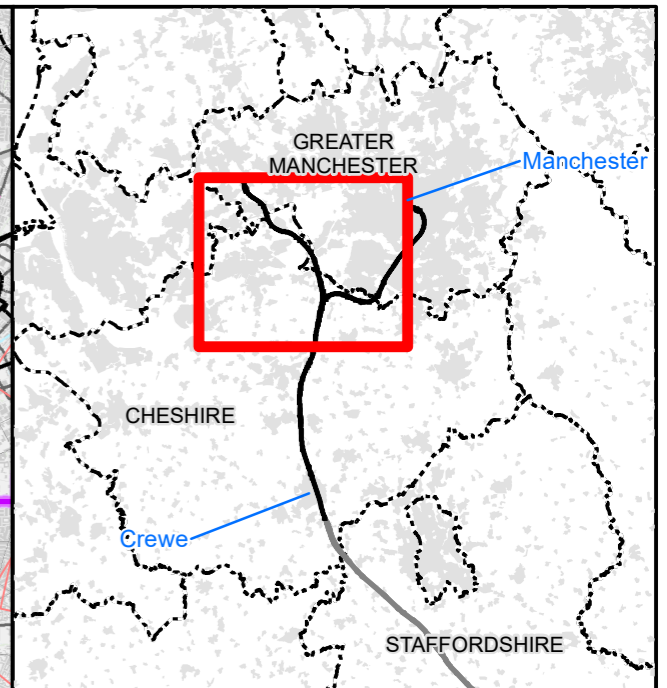
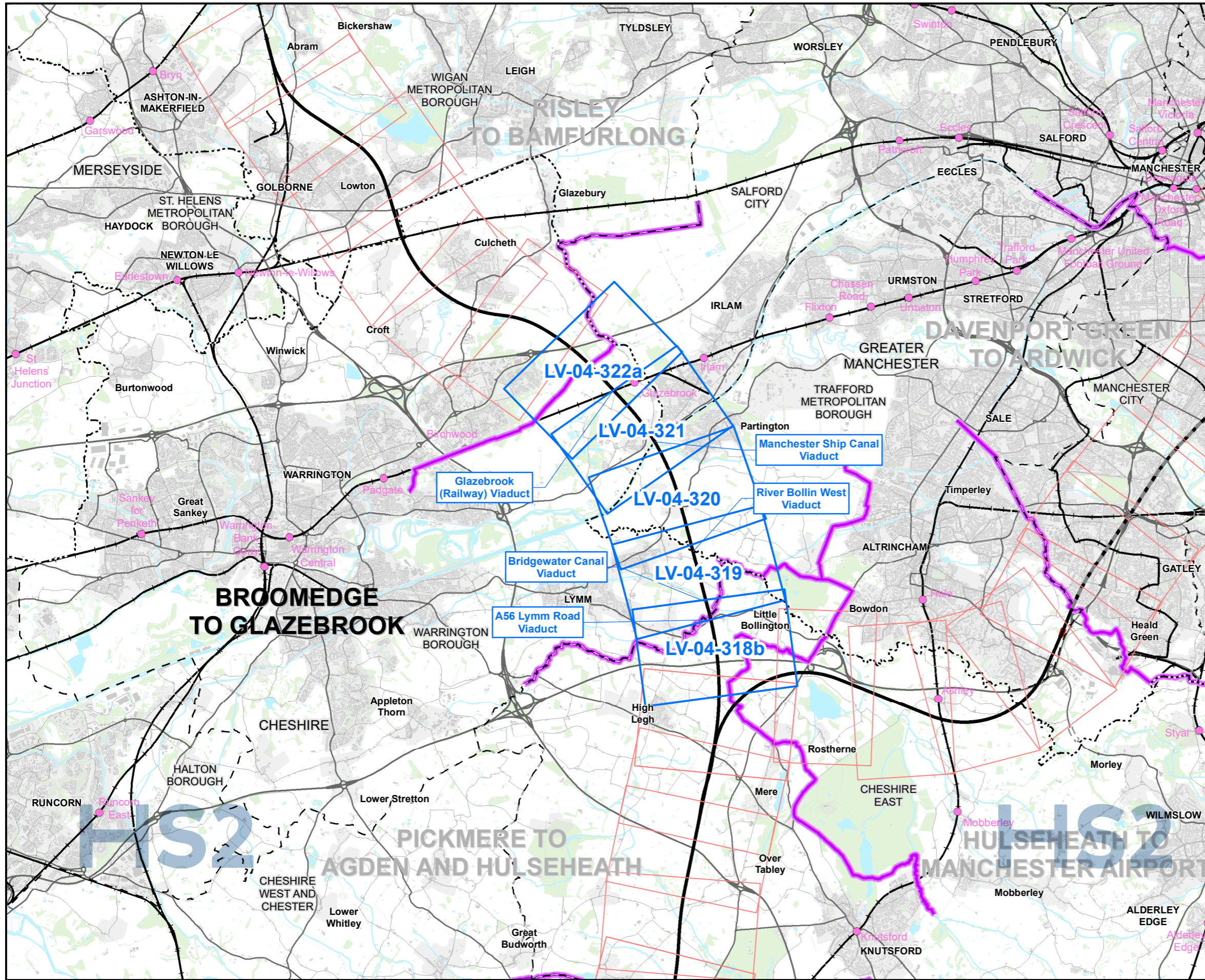
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Map Series Information:

Maps showing the viewpoint locations from which the Proposed Scheme has been assessed to give rise to significant effects during the operational phase.

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 not included in this community area

Map Number	LV-04-INDEX-MA04
Map Name	Index Map of: Operational Phase Significantly Affected Viewpoints
	Community Area MA04: Broomedge to Glazebrook

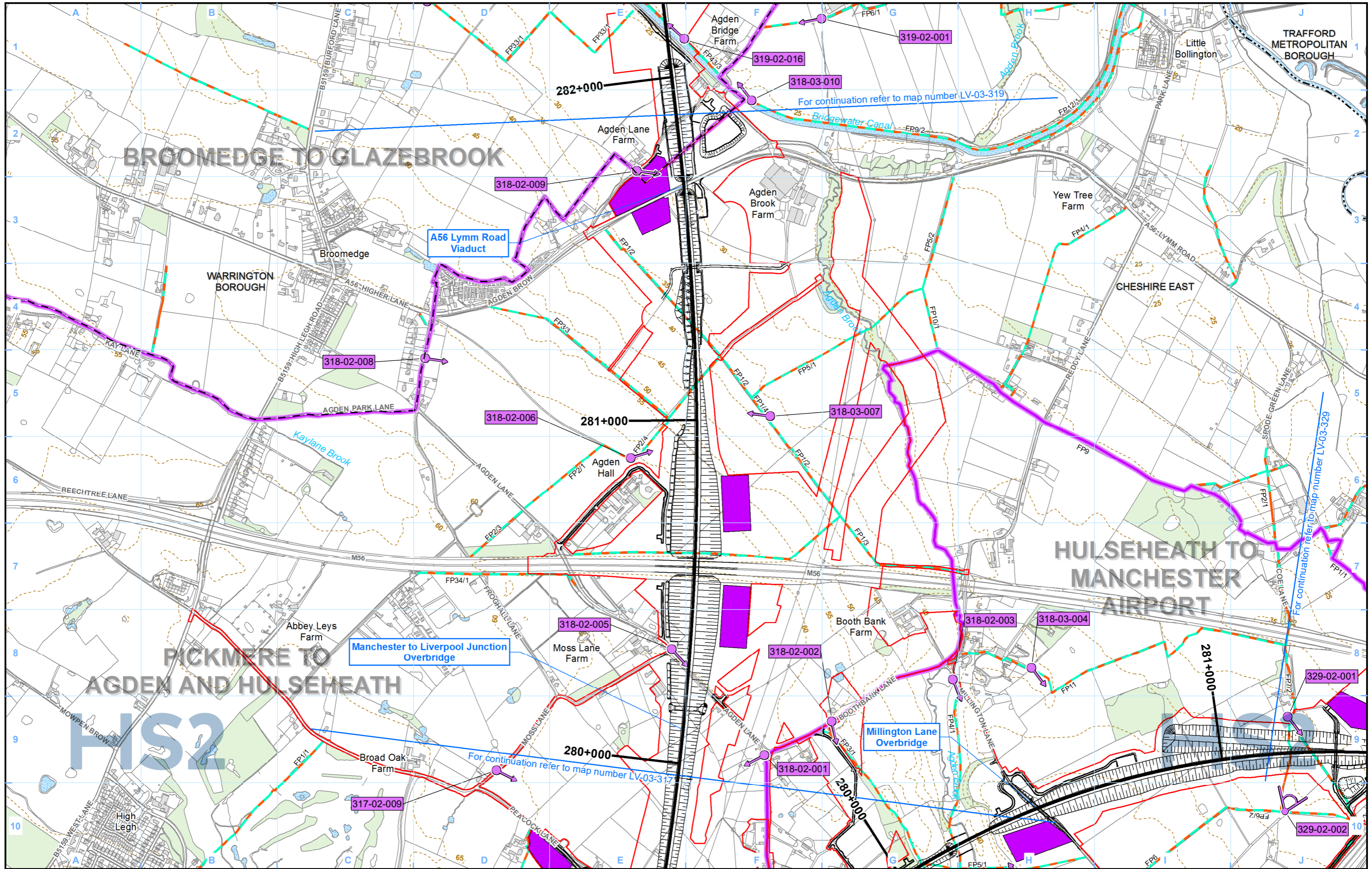
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- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Land potentially required during construction
 - Community area boundary
 - County boundary
 - District/Borough boundary
 - Public Rights of Way (PRoW)
 - 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
 - Cutting
- Non engineering earthworks:**
- Embankment
 - Cutting

Map Number: LV-03-318b

Map Name: Construction Phase Significantly Affected Viewpoints

Community Area MA04: Broomedge to Glazebrook

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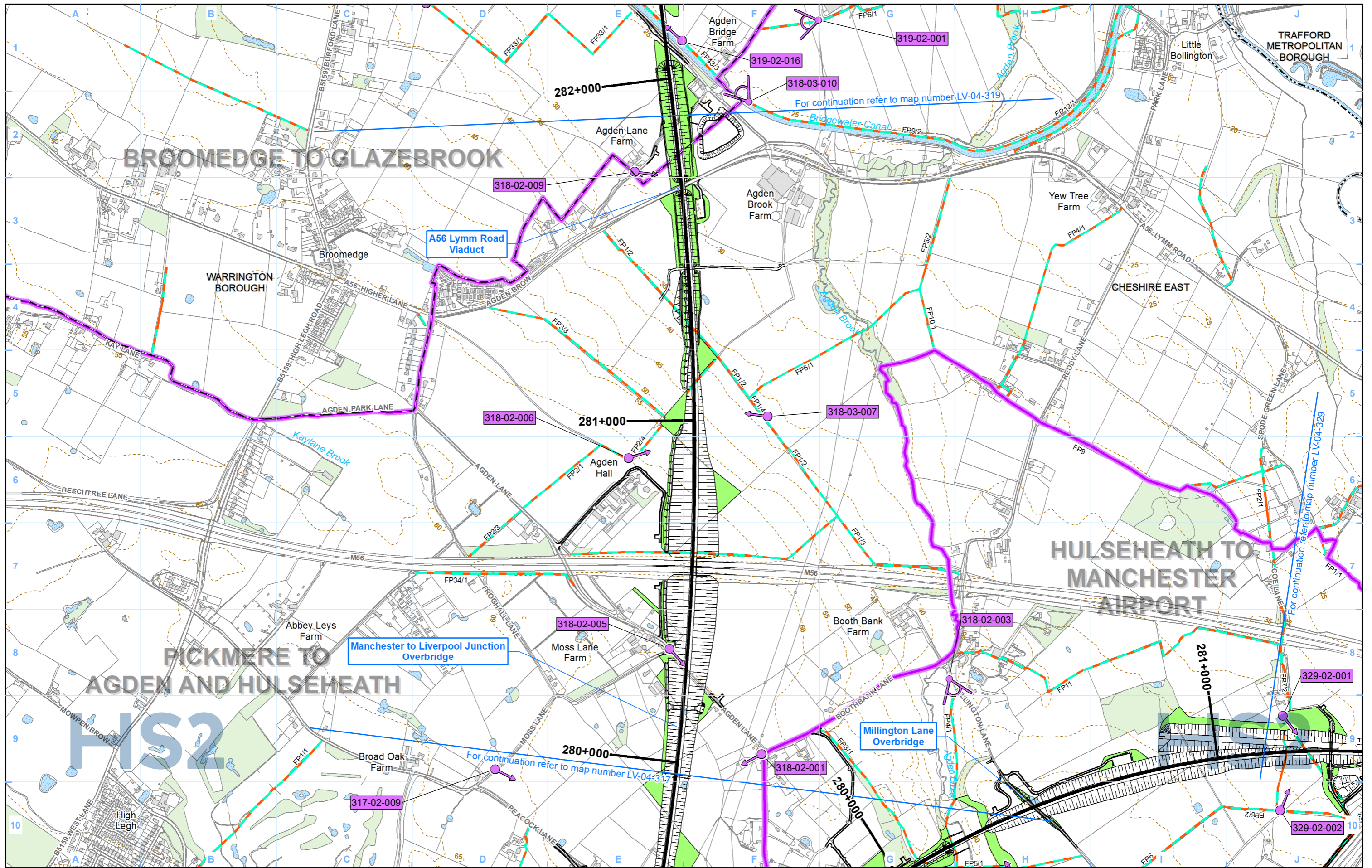
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- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Community area boundary
 - County boundary
 - District/Borough boundary

- 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-04-318b

Map Name Operational Phase Significantly Affected Viewpoints

Community Area MA04: Broomedge to Glazebrook

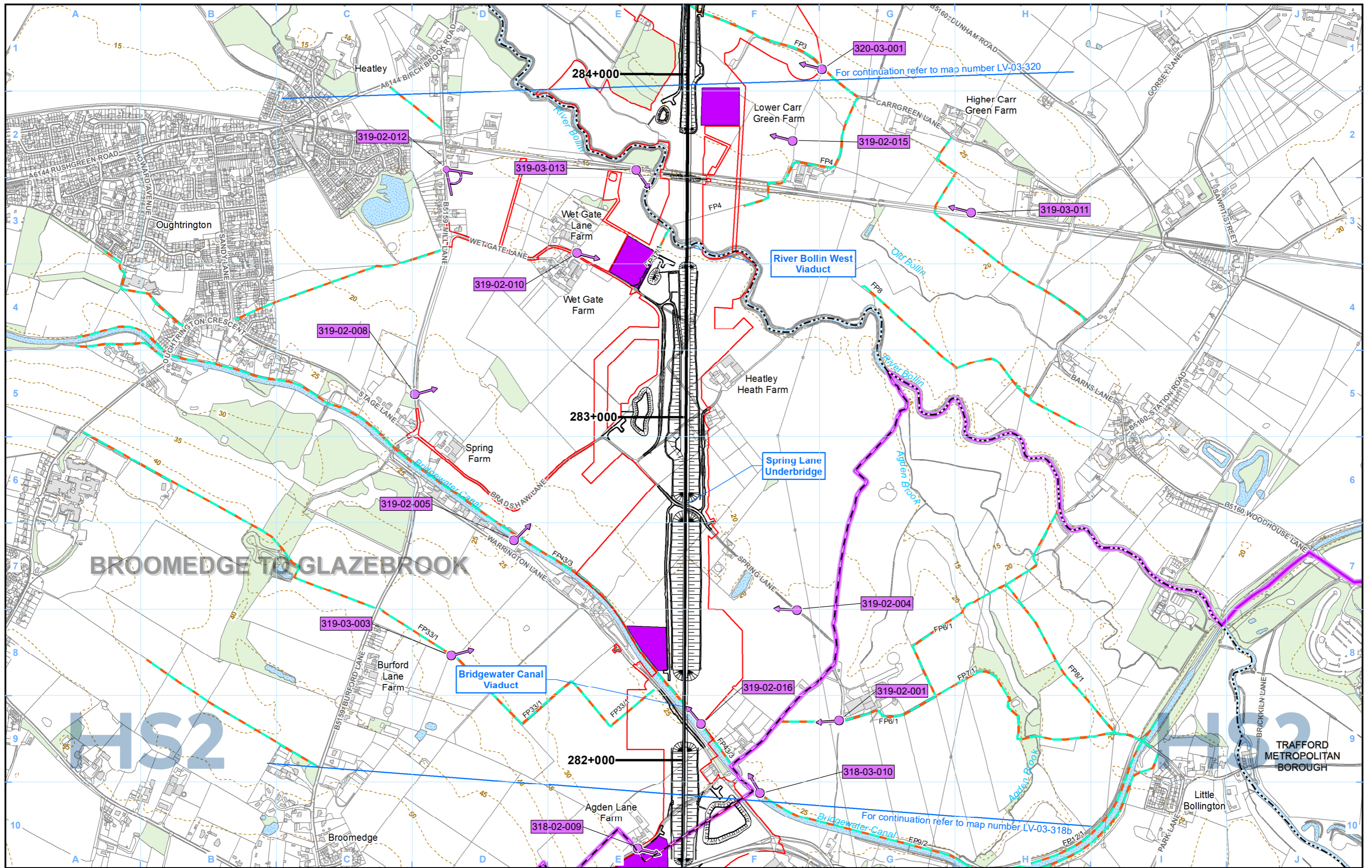
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BROOMEDGE TO GLAZEBROOK

- 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
 - Cutting
- Non engineering earthworks:
 - Embankment
 - Cutting

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

Map Number: LV-03-319

Map Name: Construction Phase Significantly Affected Viewpoints

Community Area MA04: Broomedge to Glazebrook

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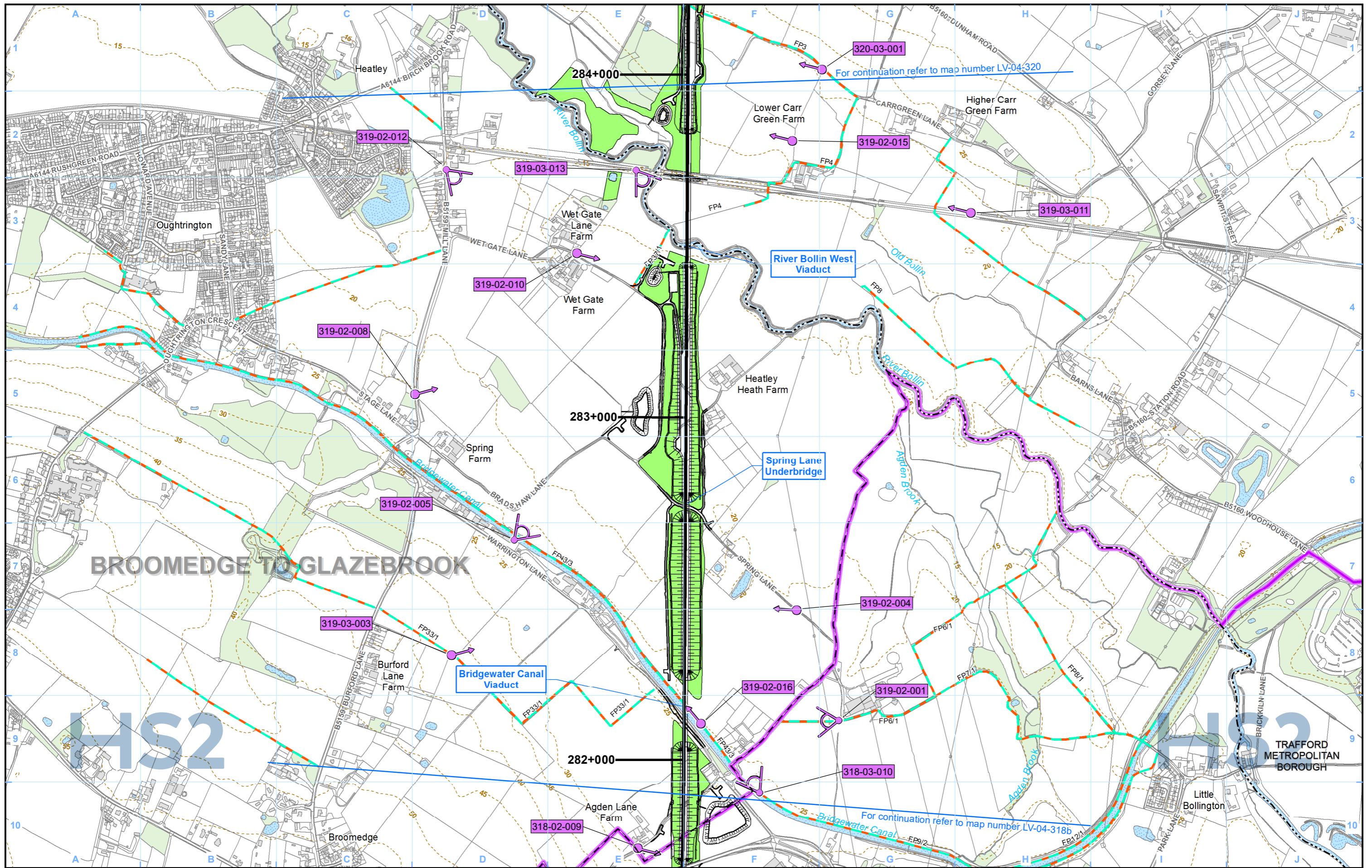
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BROOMEDGE TO GLAZEBROOK

- 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:**
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 - Cutting

Map Number: LV-04-319

Map Name: Operational Phase Significantly Affected Viewpoints

Community Area MA04: Broomedge to Glazebrook

HS2

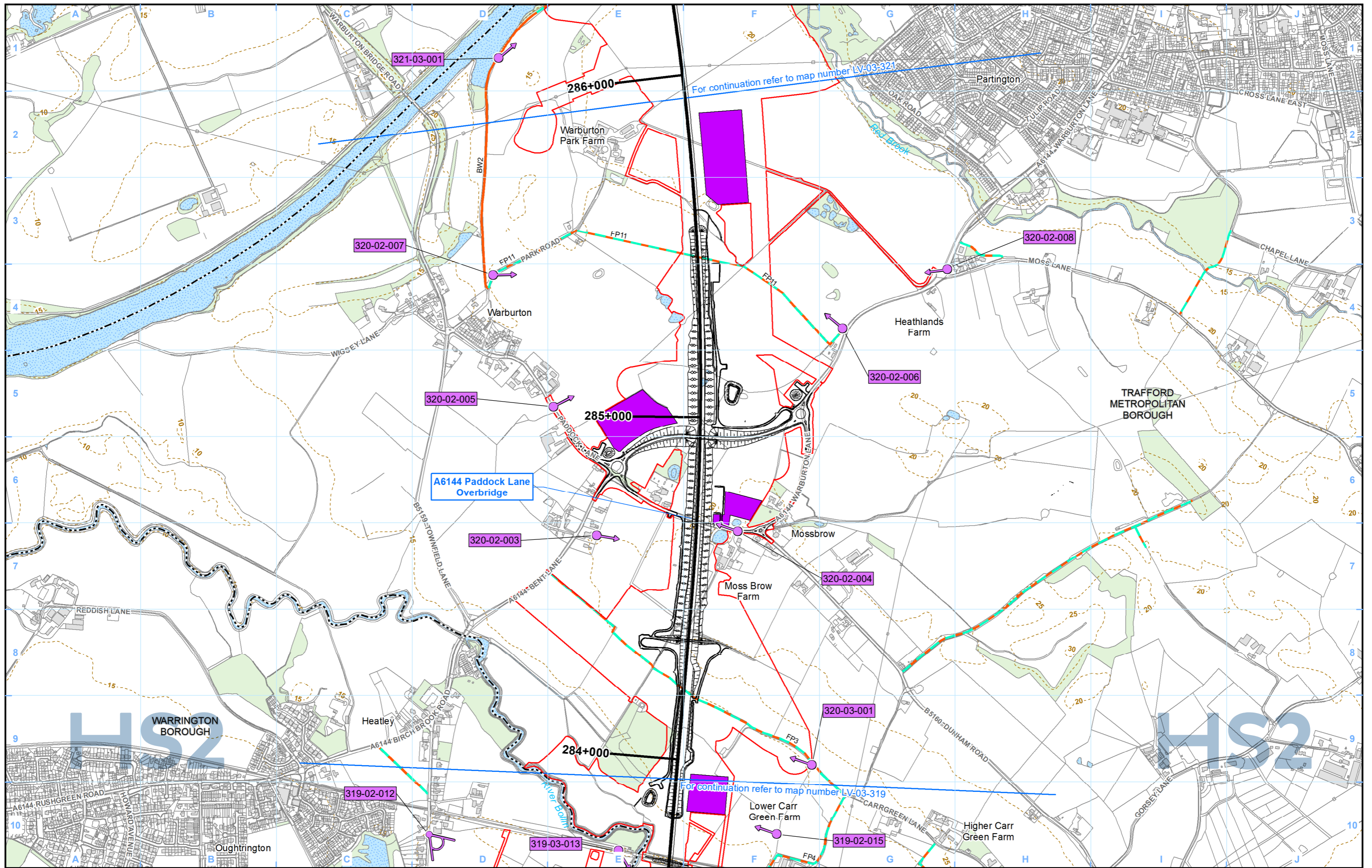
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Date: 03/08/21



- 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-03-321

For continuation refer to map number LV-03-319

Map Number LV-03-320

Map Name Construction Phase Significantly Affected Viewpoints

Community Area MA04: Broomedge to Glazebrook

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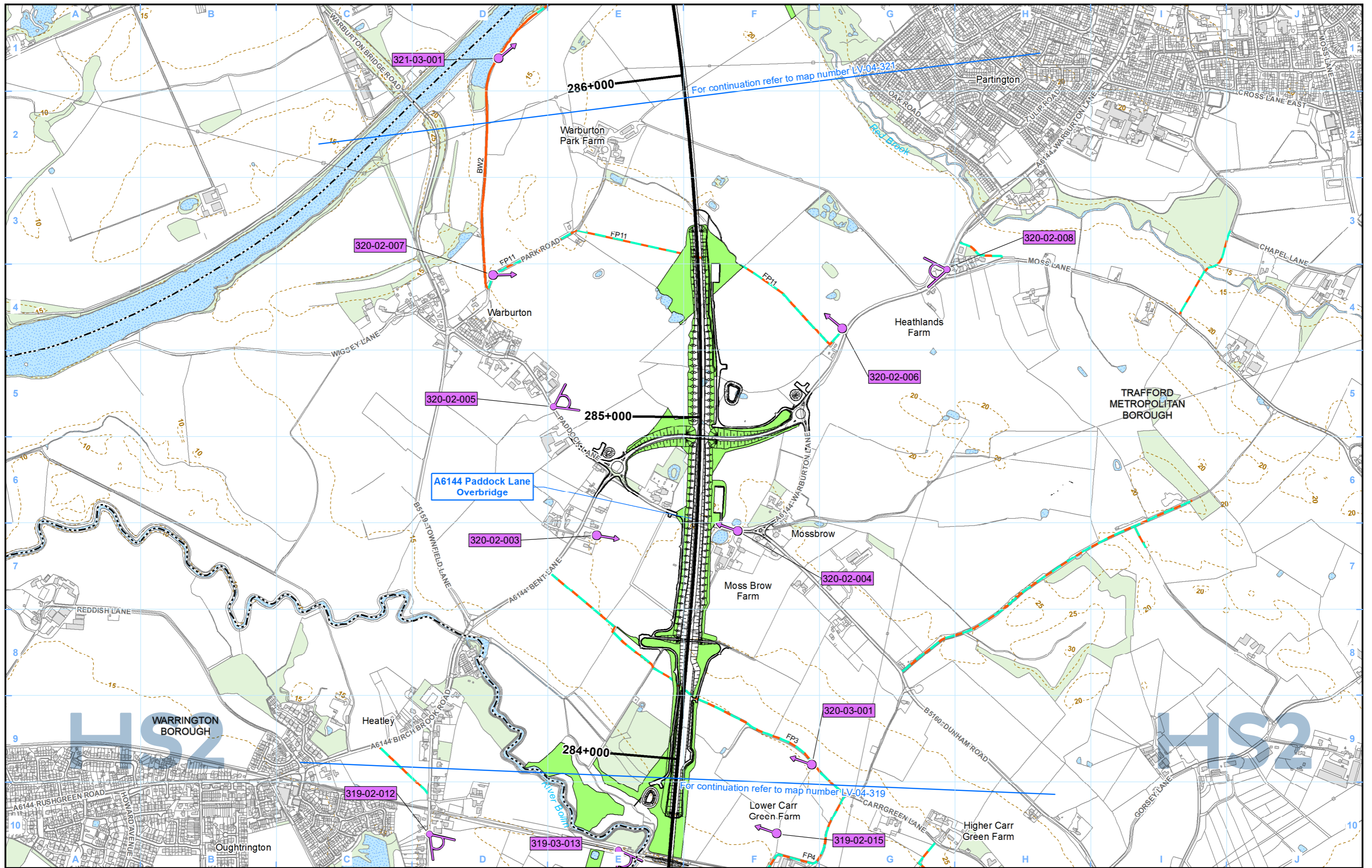
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Scale at A3: 1:10,000

Metres

Date: 03/08/21



Legend

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Engineering earthworks:

	Embankment
	Cutting

Non engineering earthworks:

	Embankment
	Cutting

Map Number	LV-04-320
Map Name	Operational Phase Significantly Affected Viewpoints
Community Area MA04: Broomedged to Glazebrook	

HS2

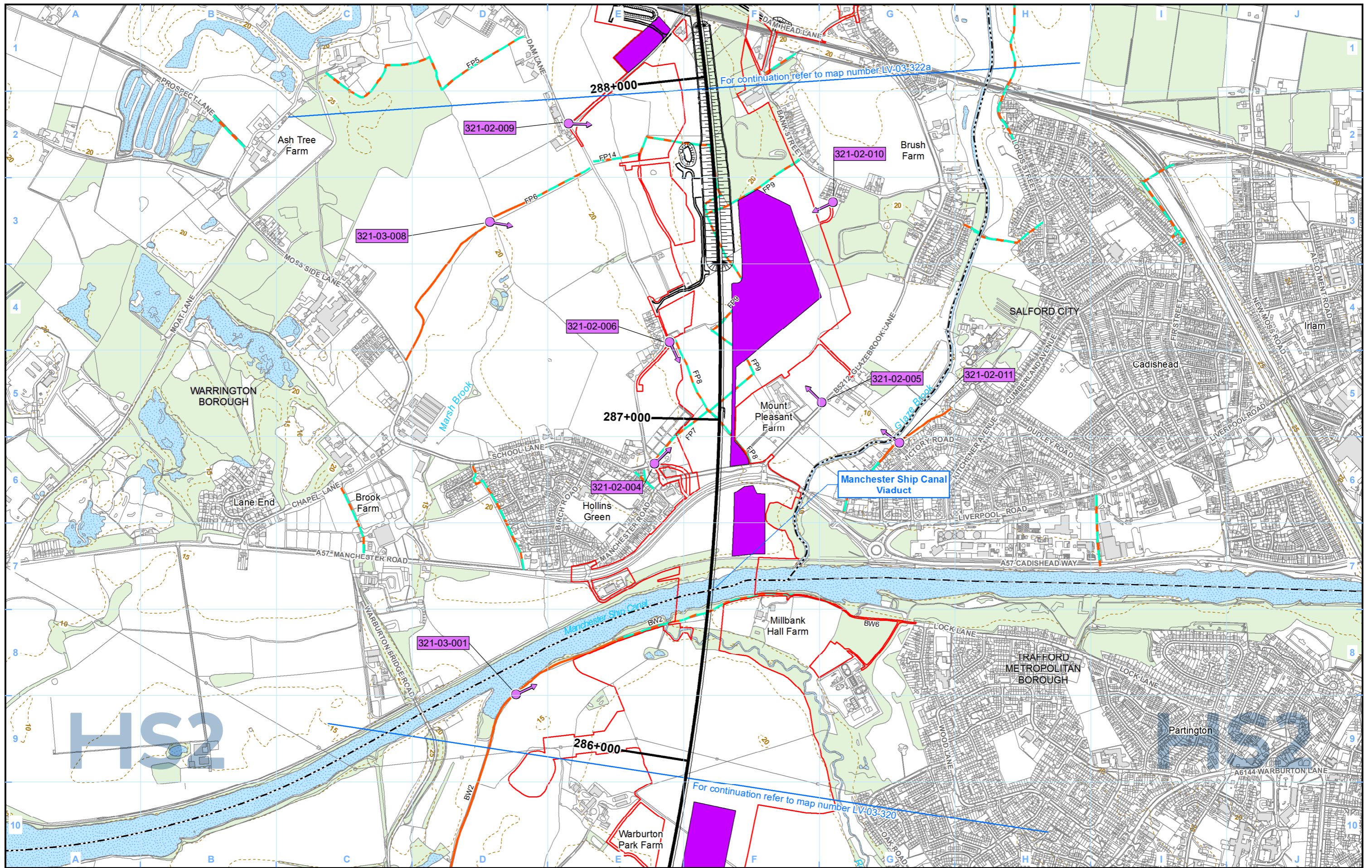
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Date: 03/08/21



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

Map Number: LV-03-321

Map Name: Construction Phase Significantly Affected Viewpoints

Community Area MA04: Broomedged to Glazebrook

Map Number: LV-03-321

Map Name: Construction Phase Significantly Affected Viewpoints

Community Area MA04: Broomedged to Glazebrook

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Date: 03/08/21

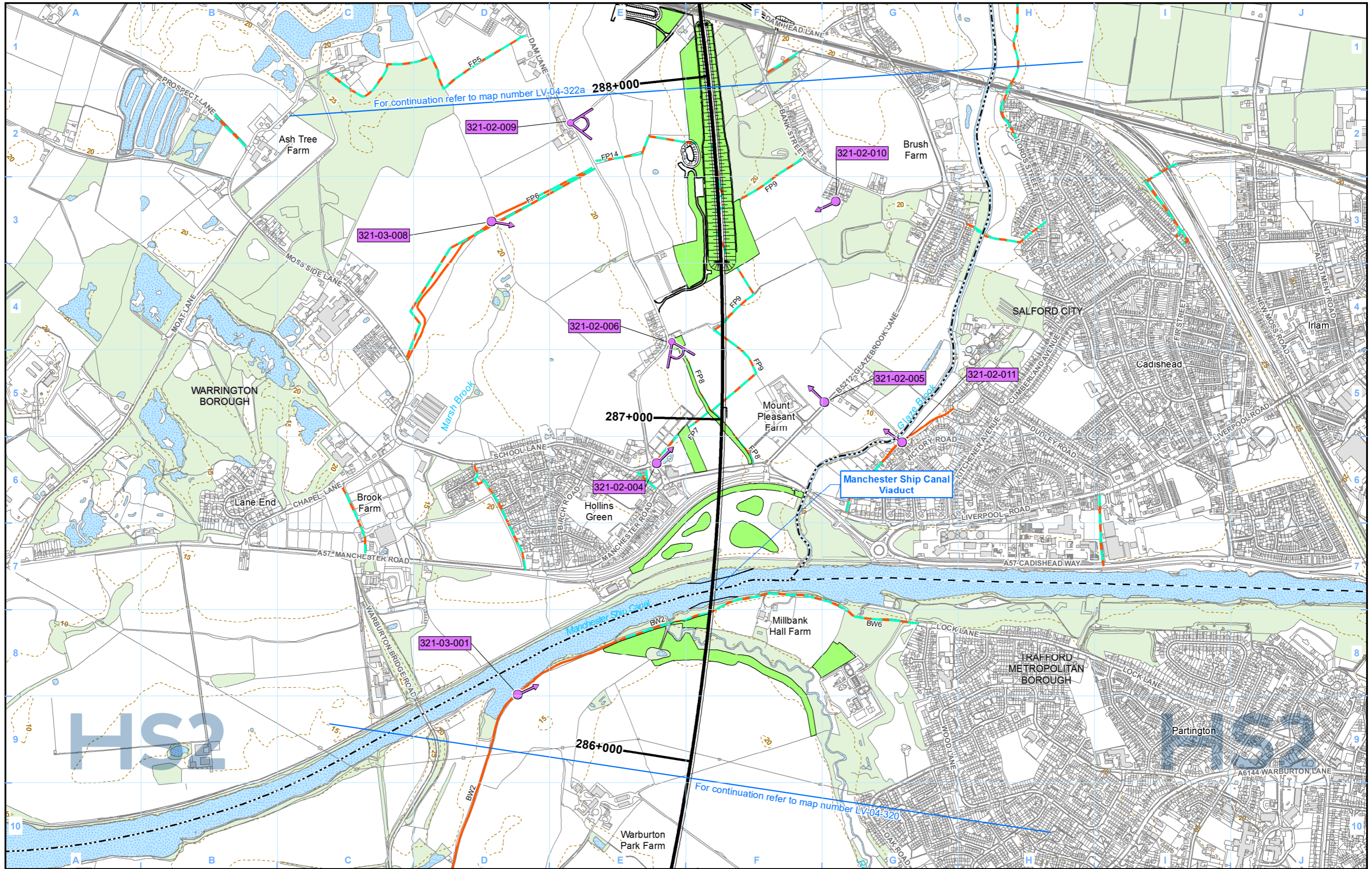
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Scale at A3: 1:10,000

0 100 200 300 400 Metres



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-04-321

Map Name: Operational Phase Significantly Affected Viewpoints

Community Area MA04: Broomedged to Glazebrook

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Date: 03/08/21

Map Number: LV-04-321

Map Name: Operational Phase Significantly Affected Viewpoints

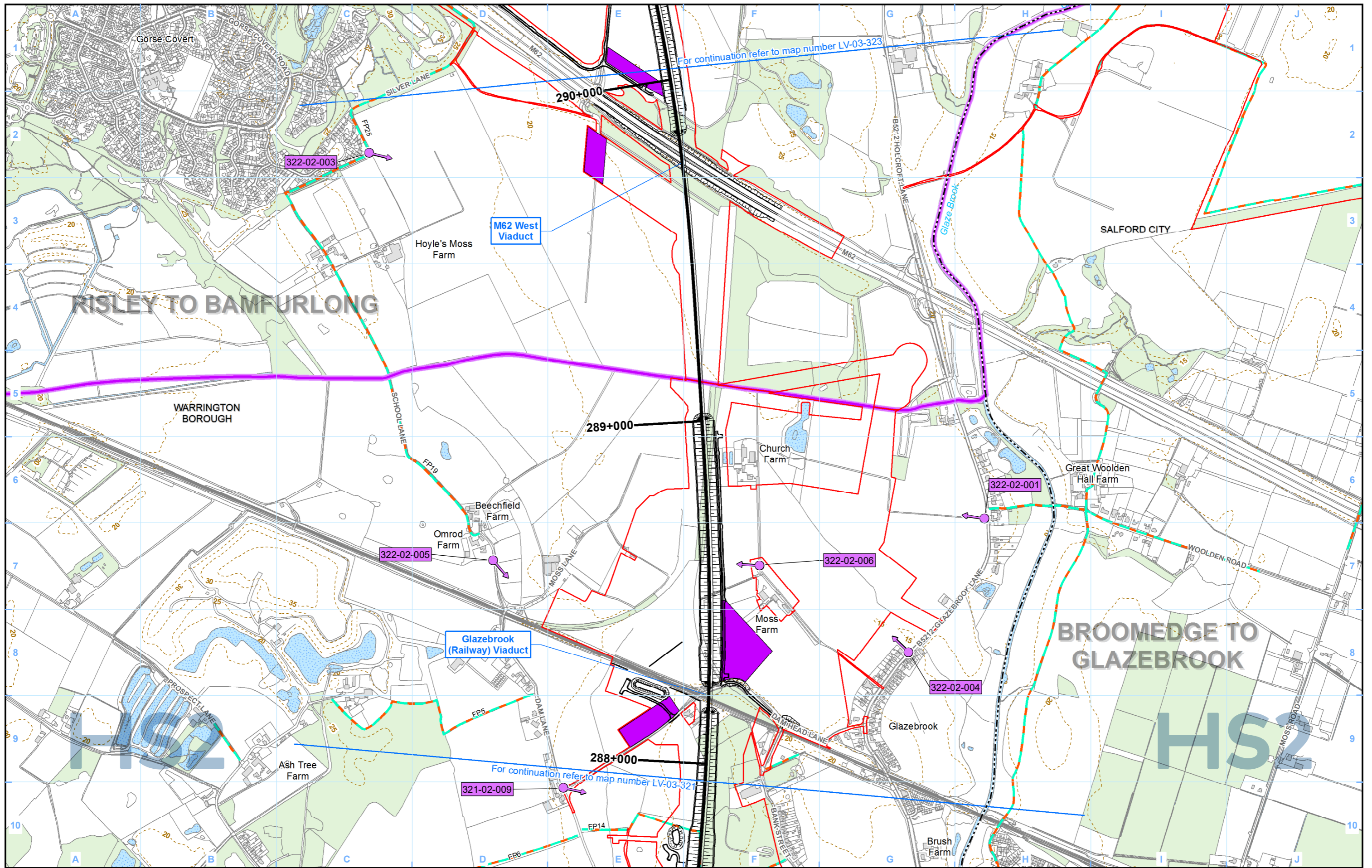
Community Area MA04: Broomedged to Glazebrook

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Date: 03/08/21



Legend

	Engineering earthworks:
	Embankment
	Non engineering earthworks:
	Embankment
	Cutting

Map Number	LV-03-322a
Map Name	Construction Phase Significantly Affected Viewpoints
	Community Area MA04: Broomedge to Glazebrook

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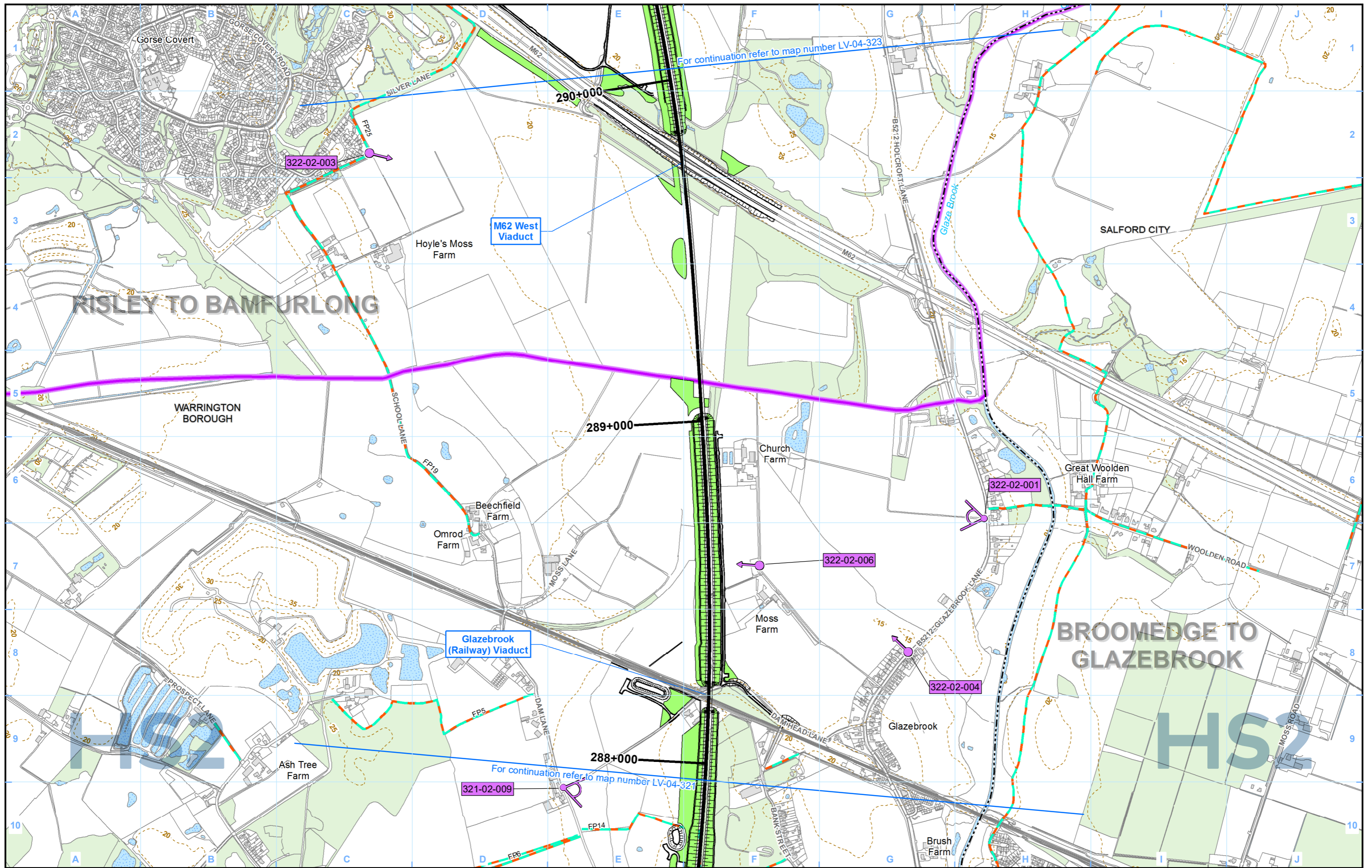
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Doc Number: 2DE01-MWJ-EV-MAP-M000-000104-P07

Date: 03/08/21

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Map Number	LV-03-322a
Map Name	Construction Phase Significantly Affected Viewpoints
	Community Area MA04: Broomedge to Glazebrook



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
	Engineering earthworks: Cutting
	Non engineering earthworks: Embankment
	Non engineering earthworks: Cutting

Map Number	LV-04-322a
Map Name	Operational Phase Significantly Affected Viewpoints
	Community Area MA04: Broomedge to Glazebrook

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Doc Number: 2DE01-MWJ-EV-MAP-M000-000158-P07

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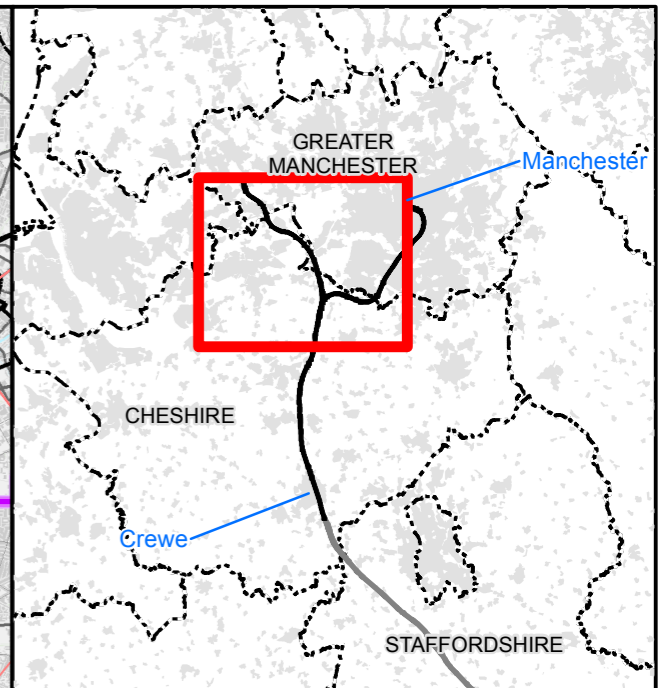
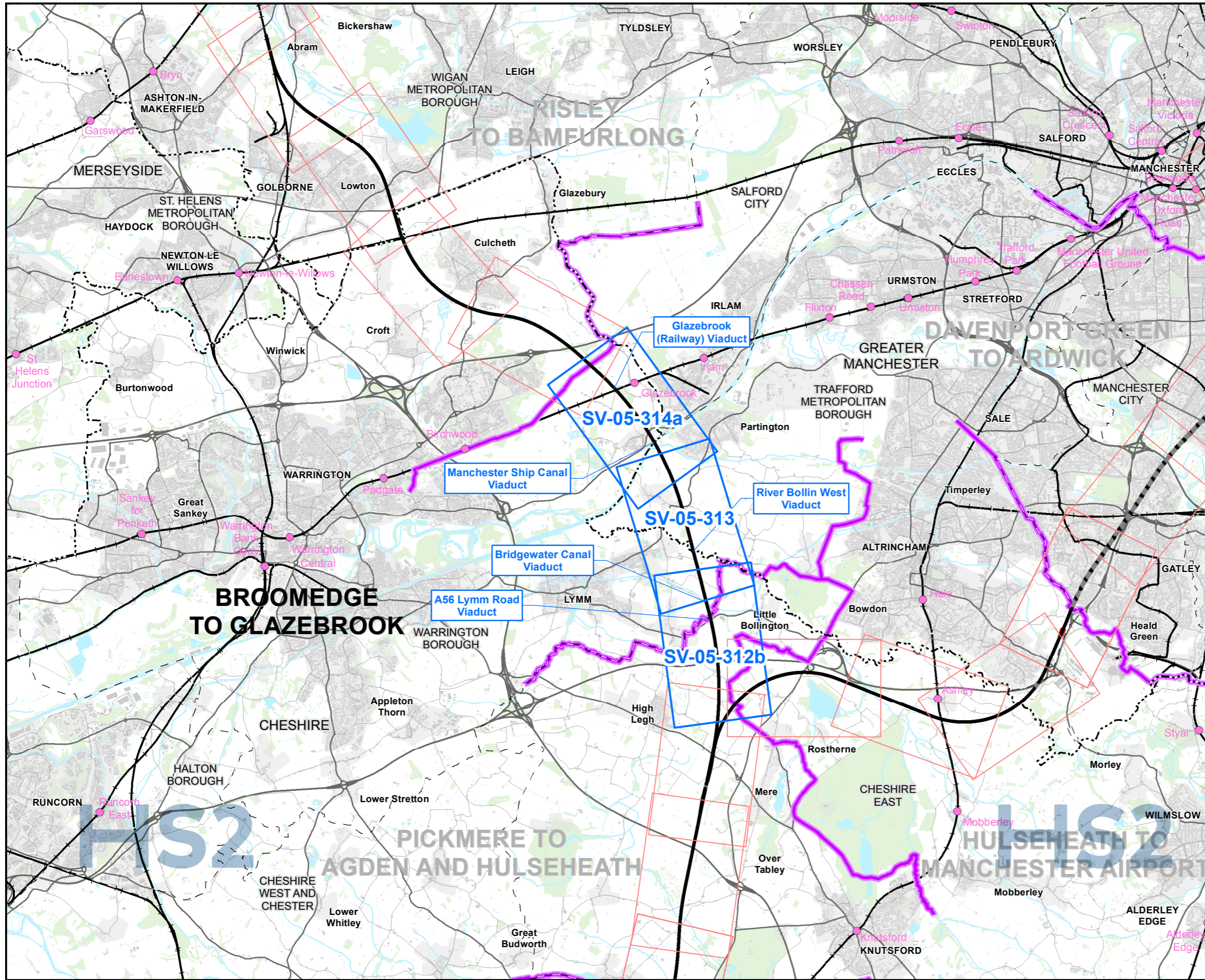
Metres

Date: 03/08/21

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**High Speed Rail
(Crewe – Manchester)
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 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 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 not included in this community area
Depot, station, headhouse or portal building	Existing railway station
Community area boundary	County boundary
Existing railway station	District/Borough boundary

Map Number	SV-05-INDEX-MA04
Map Name	Index Map of: Operational Airborne Noise and Vibration Impacts and Likely Significant Effects
	Community Area MA04: Broomedge to Glazebrook

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Doc Number: 2DE01-MWJ-EV-MAP-M000-002133-P03 Date: 10/08/21

HS2 (rail only) noise level $L_{pAeq,T}$		Potential noise effect ^{1, 2}	
Night-time $L_{pAeq,T}$ (T=23:00 to 07:00)	Daytime $L_{pAeq,T}$ (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-003-0MA0X. 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
-  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

¹ For further information see Volume 5 Appendix SV-001-00000

² For details see relevant Volume 5 Appendix SV-003-0MA0X

SV-05 - Legend

Operational Airborne Noise and Vibration Impacts and Likely Significant Effects

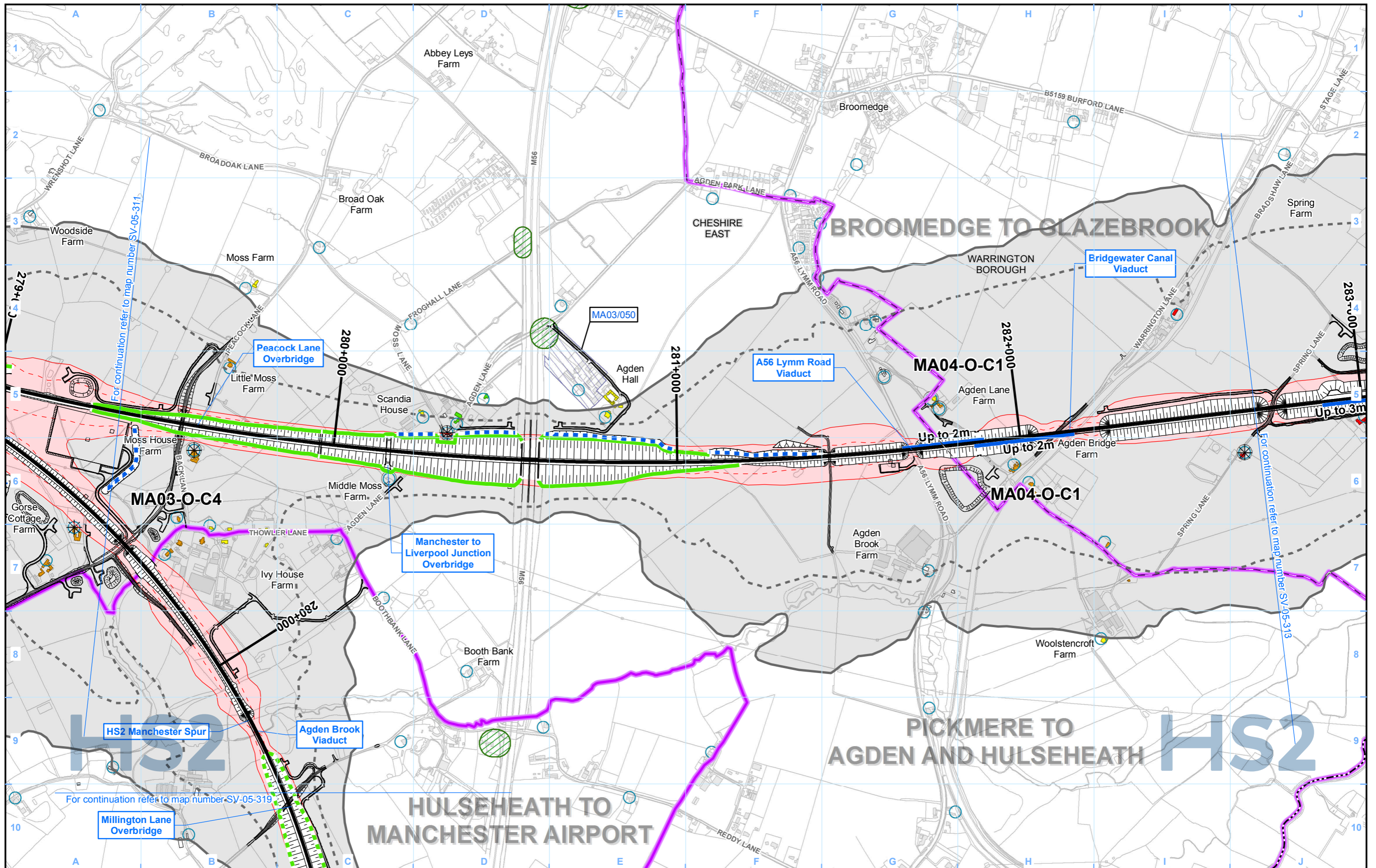


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Doc Number: -

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

Legend - Noise related features

- Noise Important Areas defined in national noise action plans (Defra 2014)
- Landscaping and/or fence barriers (labelled with total noise barrier height above rail)
- Engineering e.g. cuttings (green tunnels separately marked)
- Other environmental e.g. landscaping
- Engineering e.g. cuttings

- 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

Map Number: SV-05-312b

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

Community Area MA04: Broomedge to Glazebrook

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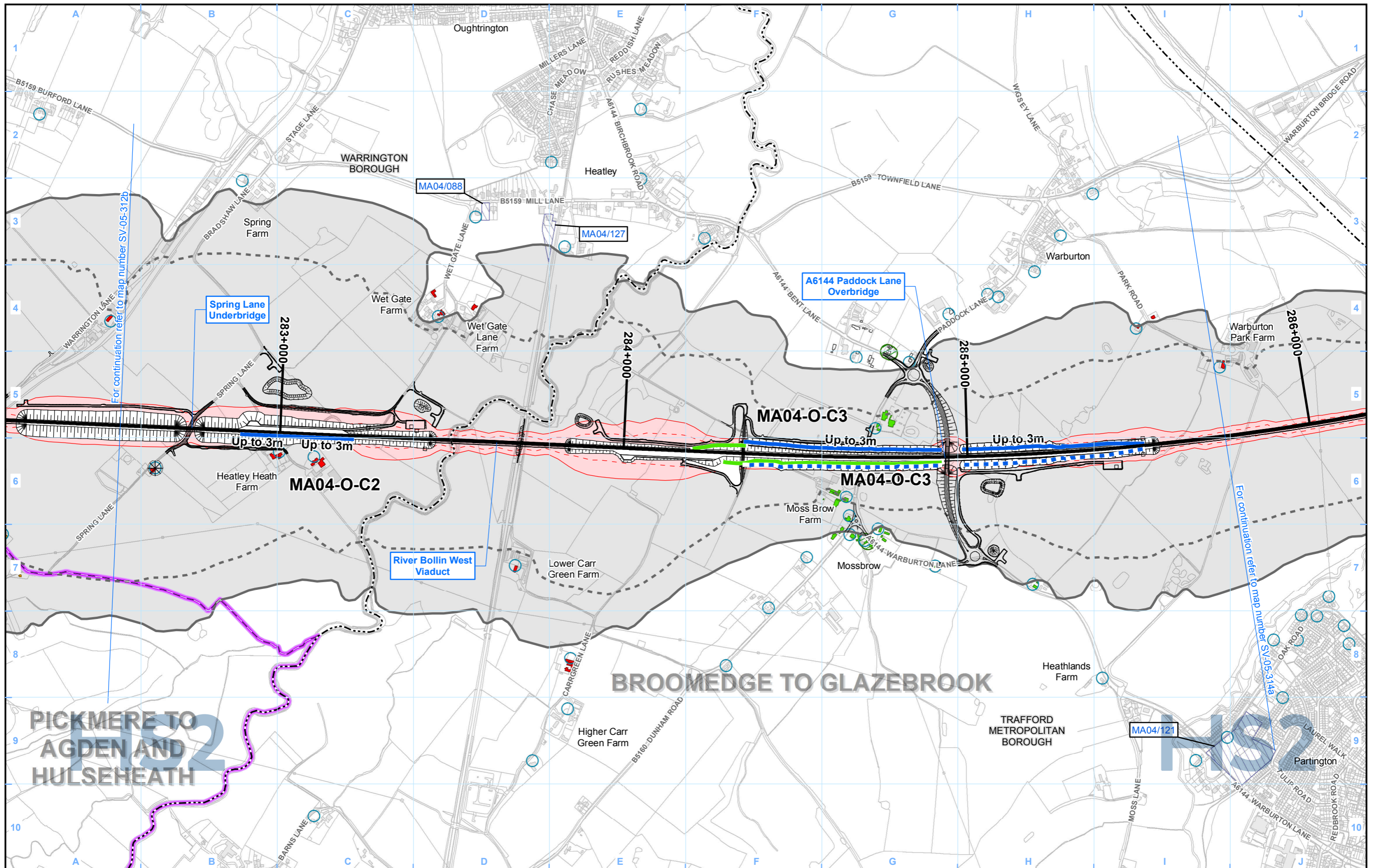
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Doc Number: 2DE01-MWJ-EV-MAP-M000-002108-P03

Date: 10/08/21

Scale at A3: 1:10,000

0 100 200 300 400 Metres



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
- 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-05-313**

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

Community Area MA04: Broomedge to Glazebrook

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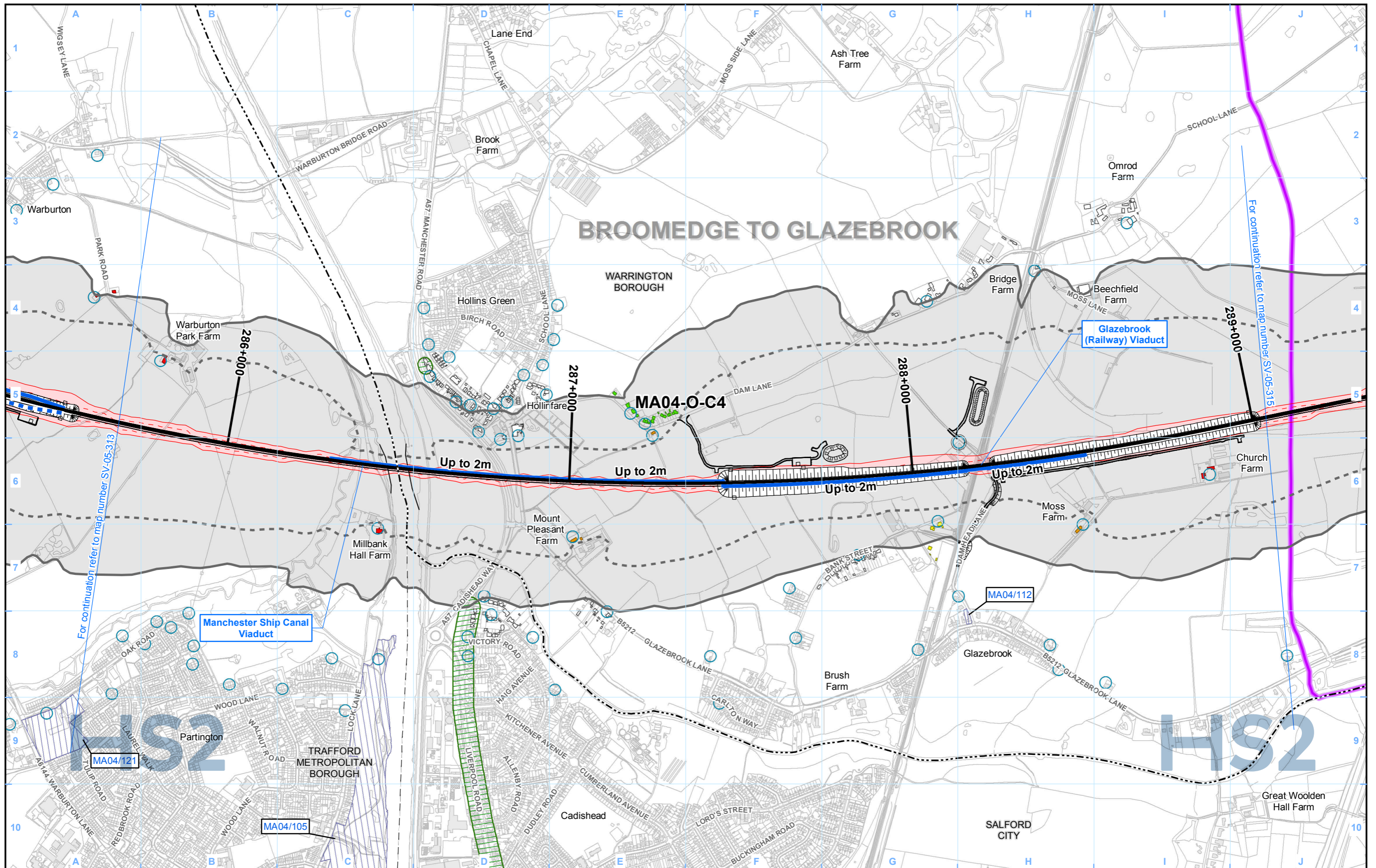
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Doc Number: 2DE01-MWJ-EV-MAP-M000-002109-P03

Date: 10/08/21

Scale at A3: 1:10,000

0 100 200 300 400 Metres



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

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-05-314a

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

Community Area MA04: Broomedge to Glazebrook

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0 100 200 300 400 Metres