

Supplementary Environmental Statement 2 and Additional Provision 2 Environmental Statement

Volume 5: Map Book

Landscape and visual (LV-00, LV-02, LV-07, LV-08, LV-17)



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

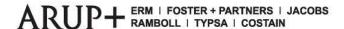
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A report prepared for High Speed Two (HS2) Limited:





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Map series name	LV-00 – Route Wide Landscape Character Areas and National Character Areas	LV-02 – Landscape Character Areas	LV-07 – Construction Phase Zone of Theoretical Visibility (ZTV) and Viewpoints	LV-08 – Operational Phase Zone of Theoretical Visibility (ZTV) and Viewpoints	LV-17 – Route-wide Landscape Context
Map series description	Map showing the Landscape Character Areas (LCAs) in context with the National Character Areas (NCAs).	Maps showing the landscape character areas that have been considered for assessment and illustrating new or different significant effects during construction and operation.	Maps showing the construction phase zone of theoretical visibility (ZTV) and the viewpoint locations from which the visual assessment of the AP2 revised scheme has been undertaken. (All significant and nonsignificant viewpoint and photomontage locations are shown).	Maps showing the operational phase year one and year fifteen zone of theoretical visibility (ZTV) and the viewpoint locations from which the visual assessment of the AP2 revised scheme has been undertaken. (All significant and nonsignificant viewpoint and photomontage locations are shown).	Maps showing the AP2 revised scheme and planting in context with the wider landscape.
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			✓-	✓	✓-
ORW1 Preston Station (PSTN)					
ORW2 Carlisle Station (CSTN)					
ORW3 Annandale Depot (ADEP)					

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 the figure below.

Non-technical summary

Provides a summary, in non-technical language, of the Supplementary Environmental Statement 2 (SES2) (Part 1) and the Additional Provision Environmental Statement 2 (AP2 ES) (Part 2) and of any likely residual significant environmental effects which are new, removed or different compared to those reported in the main Environmental Statement (ES), and the SES1 or AP1 ES as relevant.

Glossary, abbreviations

Contains any terms and abbreviations used throughout the SES2 and AP2 ES, and provides all references cited in each of the volumes.

Volume 1: Introduction and methodology

Provides an introduction to the SES2 and AP2 ES and explains the Environmental Impact Assessment (EIA) process that has been applied. This volume introduces the supplementary environmental information and changes to the design and construction assumptions included within the SES2 and amendments within the AP2 ES.

Volume 3: Route-wide effects

Describes any new, removed or different likely significant environmental effects arising at a route-wide level from the supplementary environmental information, changes to the design and construction assumptions included within the SES2 (Part 1) and the amendments within the AP2 ES (Part 2) compared to those reported in the main ES, and the SES1 or AP1 ES as relevant.

Volume 4: Off-route effects

Describes any new, removed or different likely significant environmental effects arising at off-route locations from the supplementary environmental information, changes to the design and construction assumptions included in the SES2 (Part 1) and amendments within the AP2 ES (Part 2) compared to those reported in the main ES.

Map Book

Volume 2: Community Area (CA) reports

Consists of six reports and their associated map books. These reports set out the supplementary environmental information, changes to the design and construction assumptions included within the SES2 (Part 1), amendments within the AP2 ES (Part 2) and any new, removed or different likely significant environmental effects arising from these changes and amendments in each community area compared to those reported in the main ES, and the SES1 or AP1 ES as relevant.

MA01 Report

Hough to
Walley's Green

MA01 Map Book

MA02 Report Wimboldsley to Lostock Gralam MA03 Report Pickmere to Agden and Hulseheath MA06 Report Hulseheath to Manchester Airport MA07 Report

Davenport Green
to Ardwick

MA07 Map Book

Manchester Piccadilly Station

MA08 Report

MA08 Map Book

Volume 5: Appendices and Map Books

This volume contains supporting environmental information and maps to be read in conjunction with the other volumes of the SES2 and AP2 ES.

Map Book

Agriculture, forestry and soils

AG

Appendices

Appendices

Appendices

Air quality

AQ
Appendices

Map Book
Community

Ecology and biodiversity

EC EM Appendices

Map Book

Electromagnet interferance

EM Appendices

magnetic Historic environm

M HE Appendic

Planning data

Land quality

LQ
Appendices

Landscape and visual Wajor a and d

Socioeconomics

SE
Appendices

Sound, noise and vibration Traffic a transpo Water resources and flood risk

10(19)

Background Information and Data (BID) and associated BID Map Books

Baseline data and other background information is set out in the relevant BID documents and associated BID map books. This is a compendium of technical reports that sit outside of the SES2 and AP2 ES, but are aligned to and referred to by the SES2 and AP2 ES. They are published at the same time as the SES2 and AP2 ES.

· Published outside the ES

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 1:25,000 scale chainage is shown 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)		



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	
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	
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.
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	
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.
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	Ponds whose primary function is to provide ecological mitigation. This could be a standalone pond or part of a wider wetland habitat creation plan.	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	

Legend features	Definition	Source	Copyright
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	High Speed Two (HS2) Ltd	
	the ZTV as part of the base models.	S- S	
	Boundary defining the maximum possible extent of construction works required		
Land potentially required during construction	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	High Speed Two (HS2) Ltd	
	apply to wholly tunnelled sections or to air rights. It also encompasses		
	associated highway, access, drainage and utility works.		
	This dataset represents the landscape character areas that have been assessed		
Landscape Character Area (LCA)	route wide as defined by the Landscape Architects. Landscape character areas	High Spood Two (HS2) Ltd	
Landscape Character Area (LCA)	(LCAs) are single unique areas which are the discrete geographical areas of a	High Speed Two (HS2) Ltd	
	particular landscape type.		
Large urban area	Urban areas derived from Ordnance Survey Meridian data.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2016.
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	
Other planting and hedgerows	Soft landscape design that can include any seeded areas for the purpose of creating grassland except for the engineering earthworks. Ecological mitigation area to provide new wetland habitat creation, enhancements to existing areas and areas for ecological management. This level does not include screening planting for visual mitigation purposes.	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 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.
Route in tunnel	Represents the proposed route of HS2, split into route on surface and tunnelled sections.		

Legend features	Definition	Source	Copyright
Route on surface	Represents the proposed route of HS2, split into route on surface and tunnelled sections.	High Speed Two (HS2) Ltd	
Significantly affected photomontage location Non 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 or photomontage number Non 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	
Significantly affected viewpoint Non 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	
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	
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.
ZTV construction	This is a computer generated model showing areas of land within which the activities undertaken during the construction of the scheme may be theoretically visible. ZTV has been used as a tool for identifying likely areas for survey and assessment based on initial scheme design.	High Speed Two (HS2) Ltd	
ZTV operation year 1	This is a computer generated model showing areas of land within which the scheme may be theoretically visible on day 1 of operation.	High Speed Two (HS2) Ltd	
ZTV operation year 15	This is a computer generated model showing areas of land within which the scheme may be theoretically visible after 15 years of operation by incorporating an assumed height of 7.5 metres for any mitigation planting.	High Speed Two (HS2) Ltd	



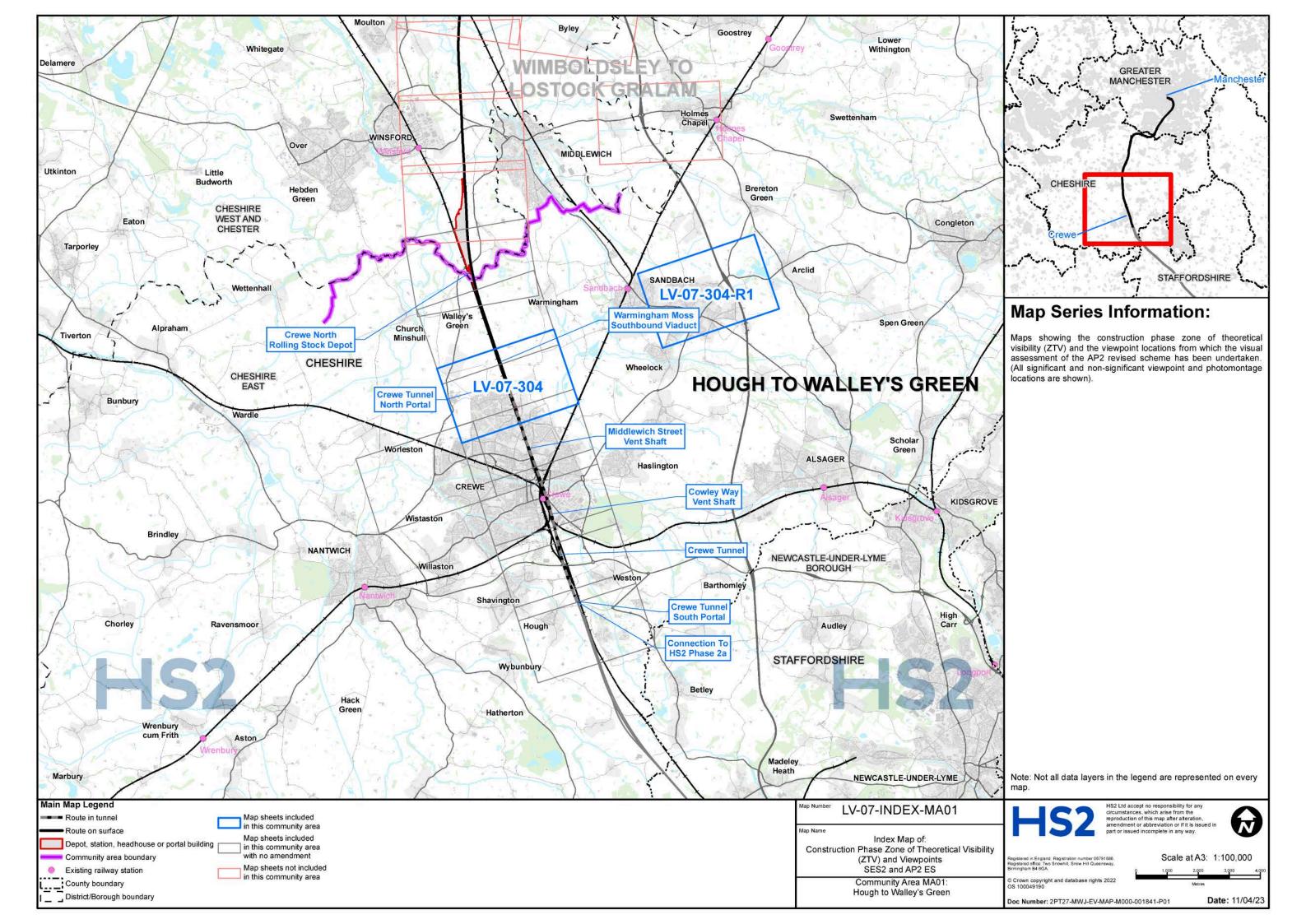
Supplementary Environmental Statement 2 and Additional Provision 2 Environmental Statement

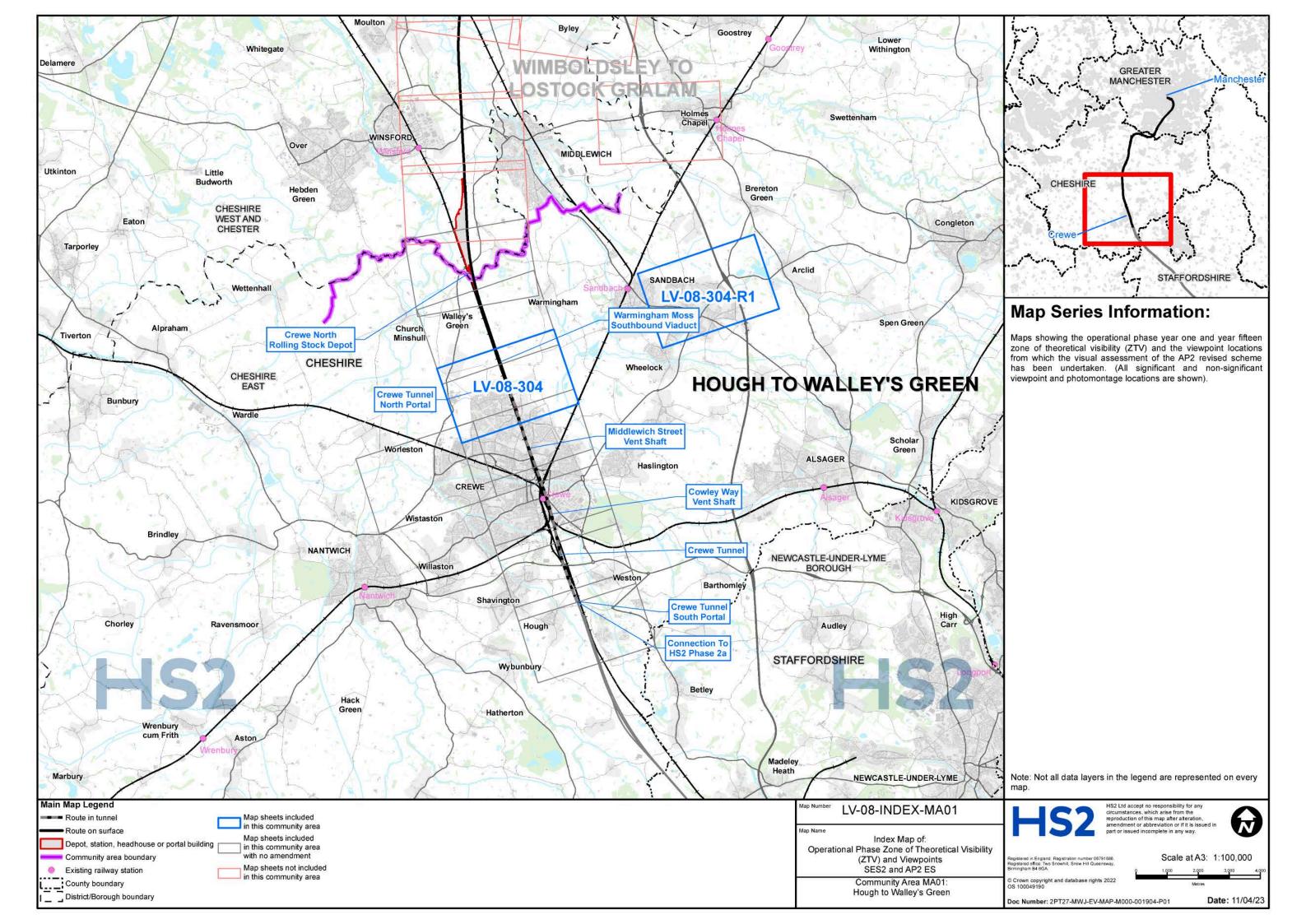
MA01: Hough to Walley's Green

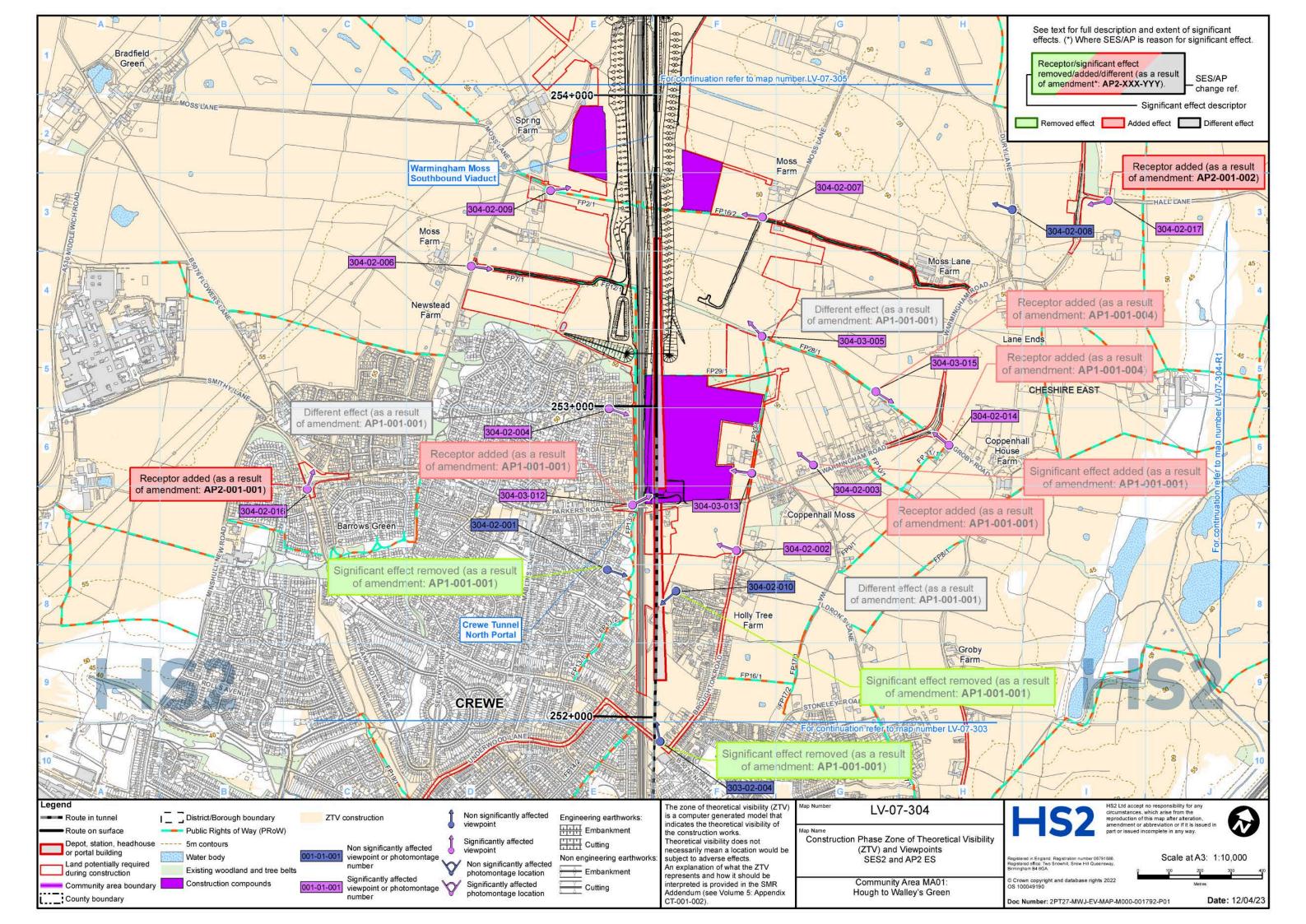
LV-07 - Construction Phase Zone of Theoretical Visibility (ZTV) and Viewpoints

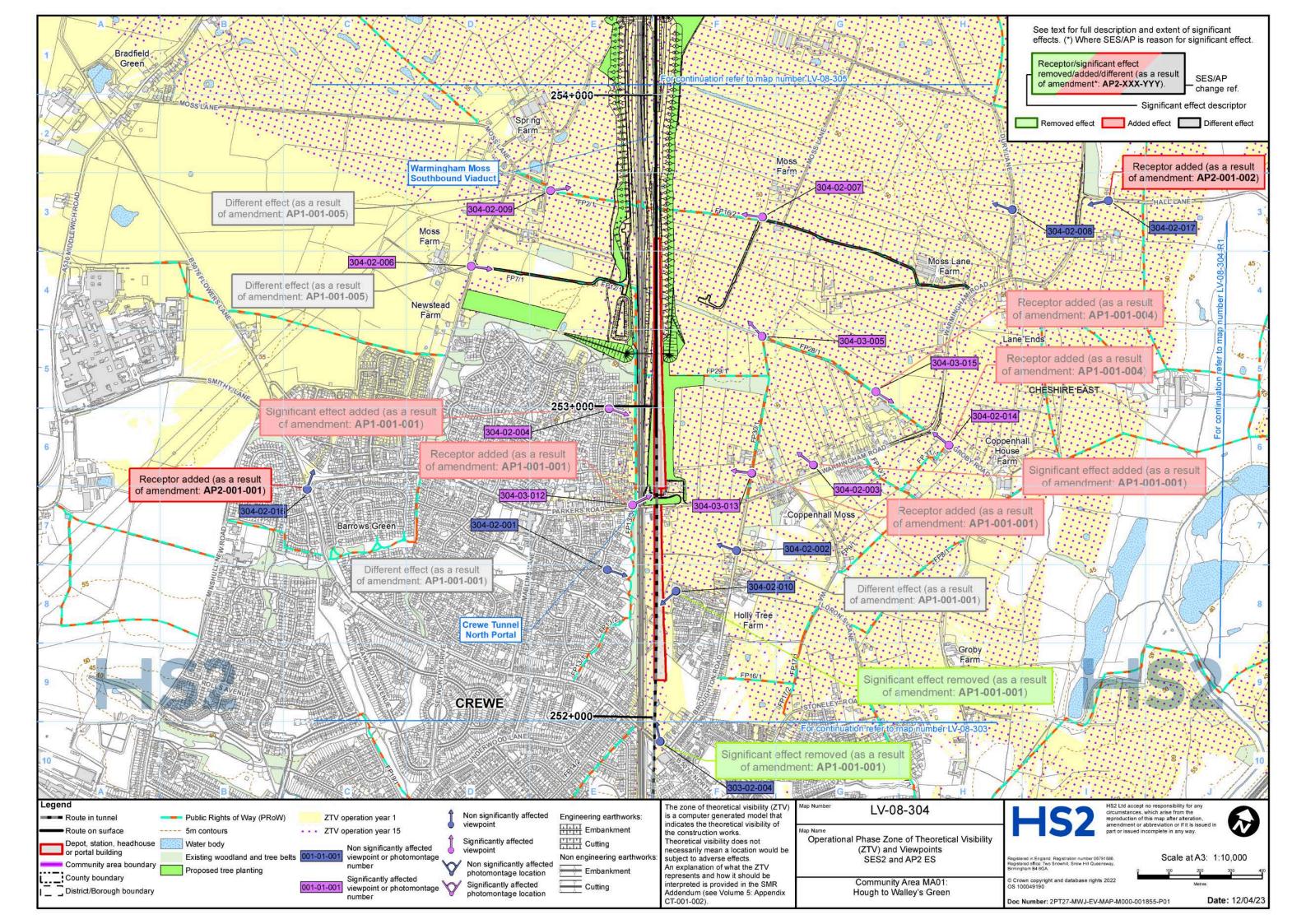
LV-08 - Operational Phase Zone of Theoretical Visibility (ZTV) and Viewpoints

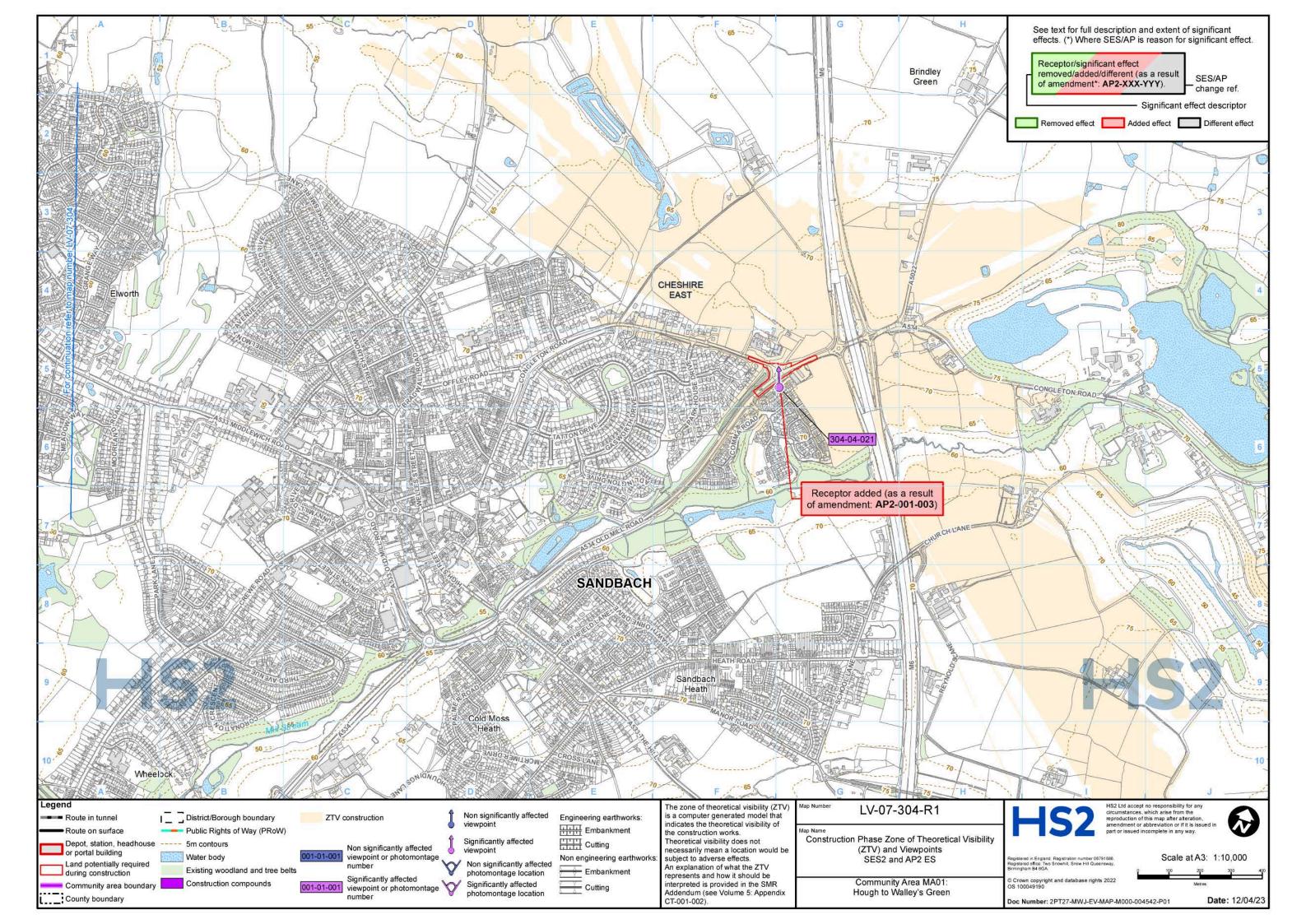
LV-17 - Route-wide Landscape Context

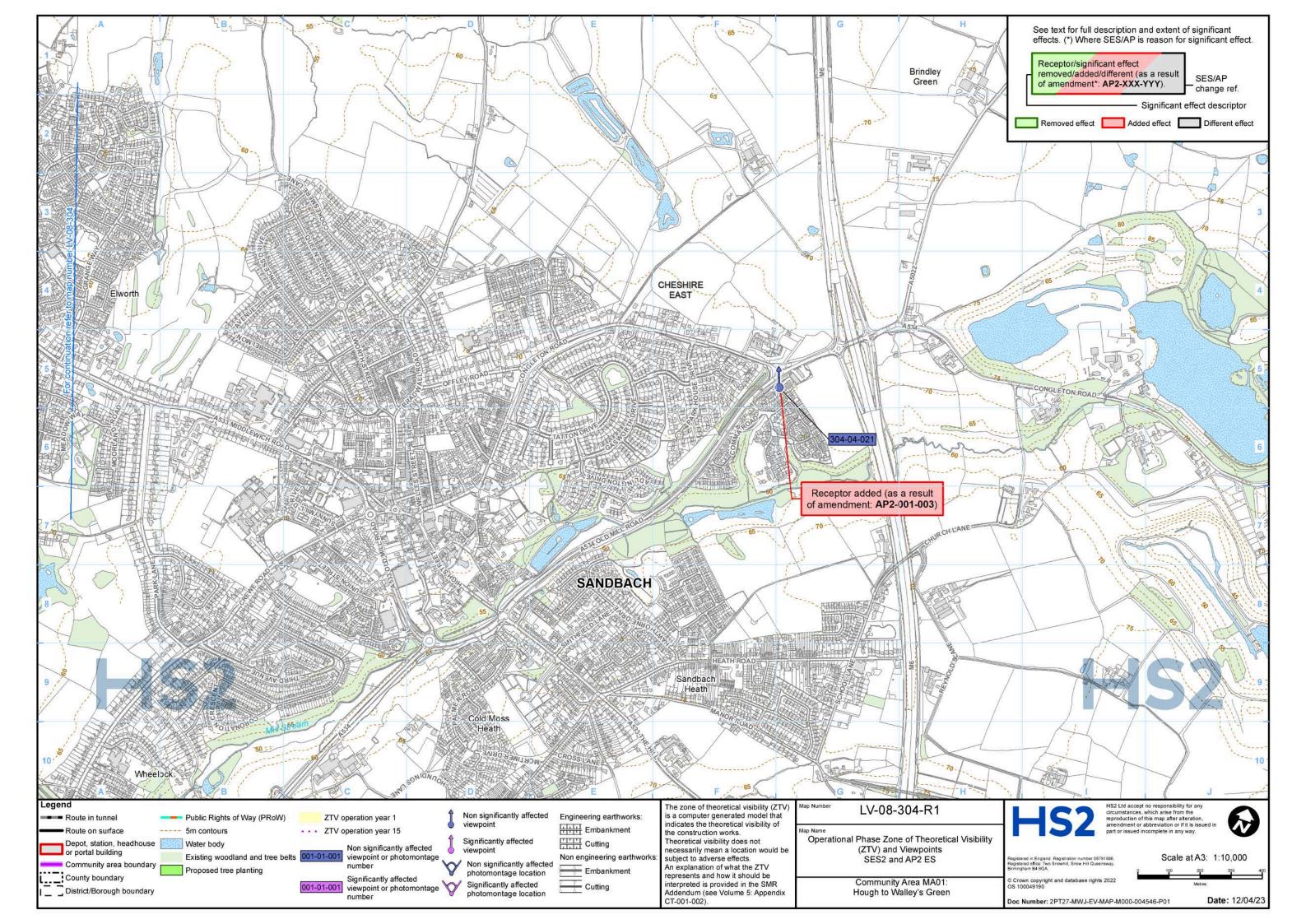


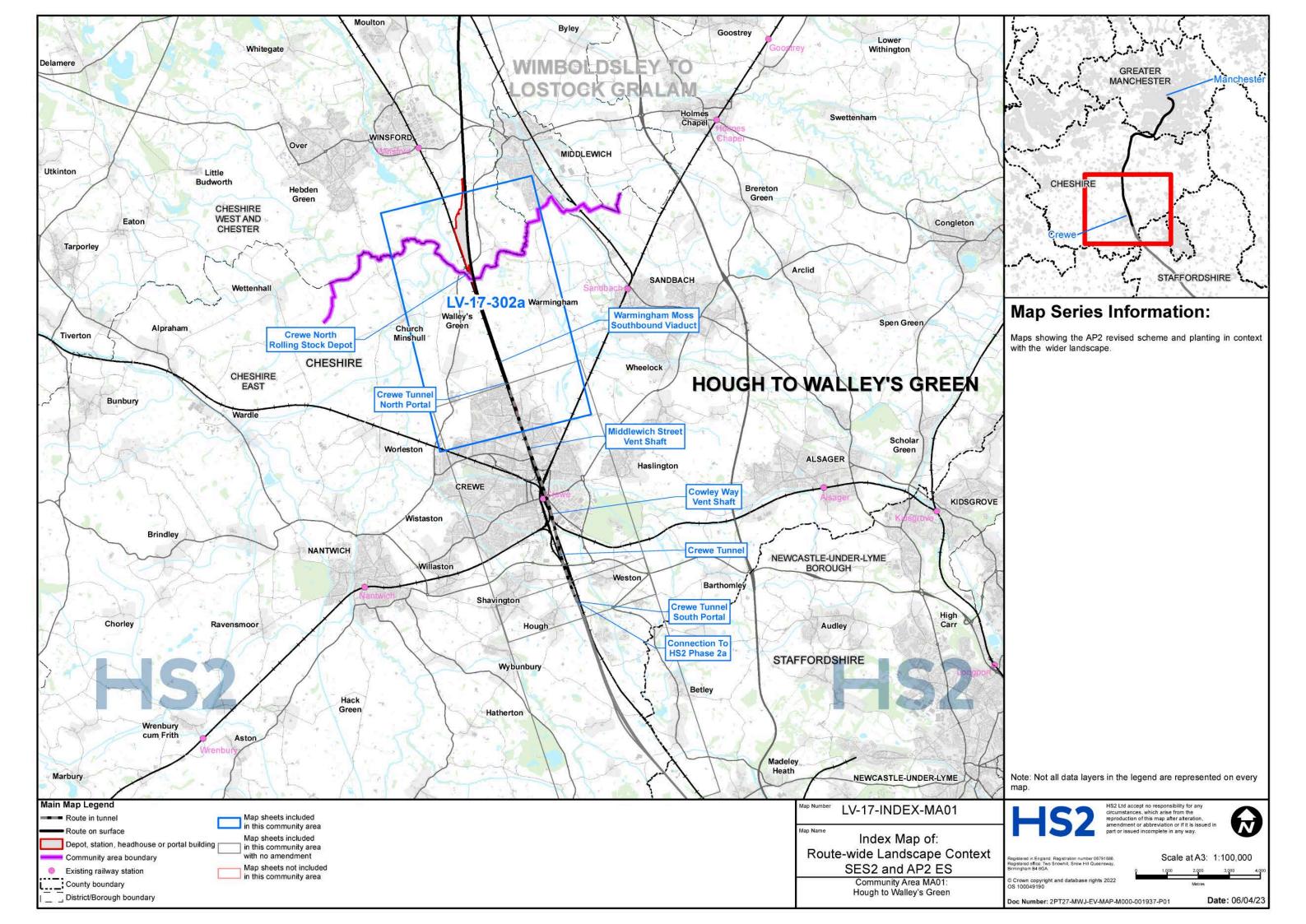


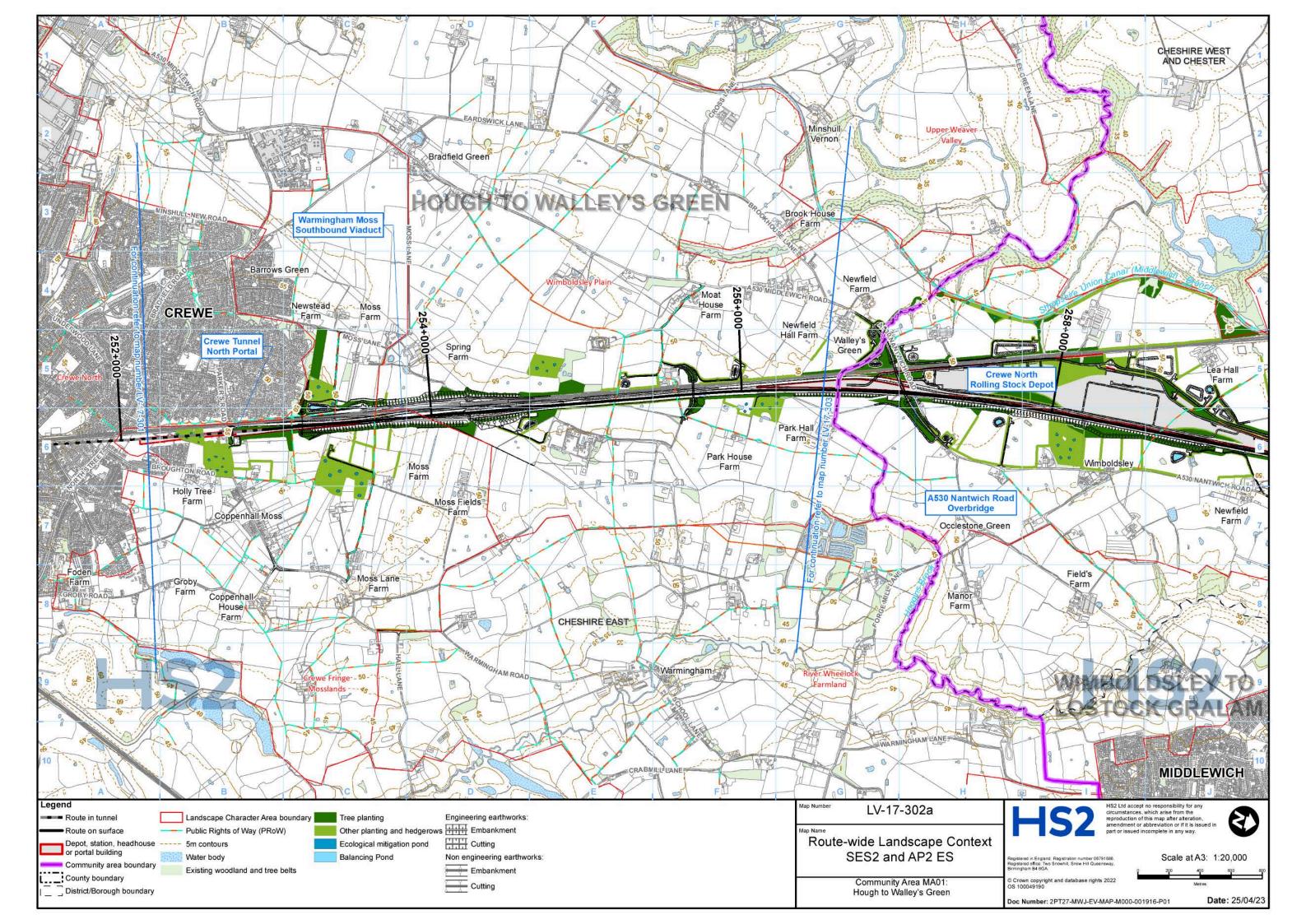












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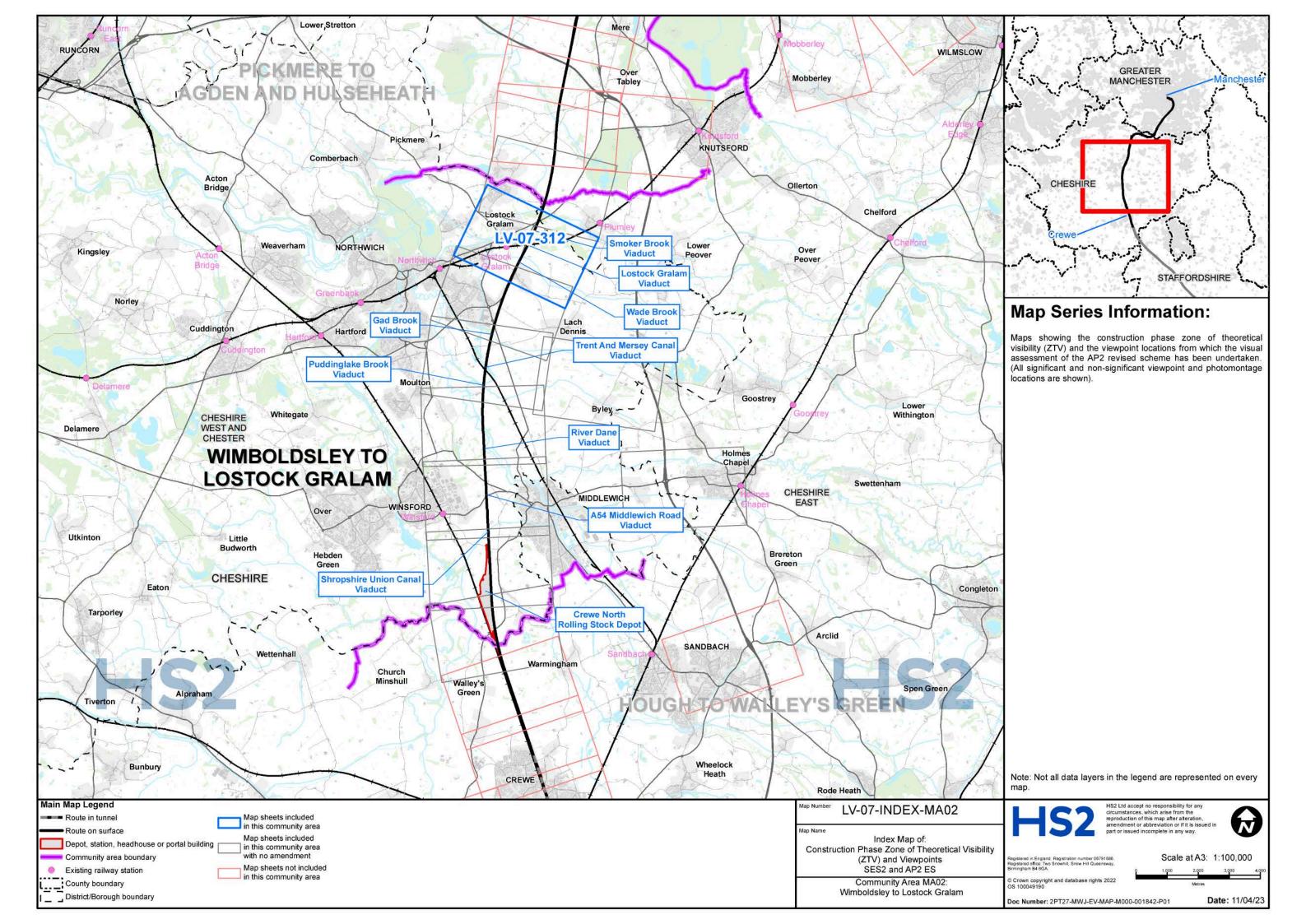
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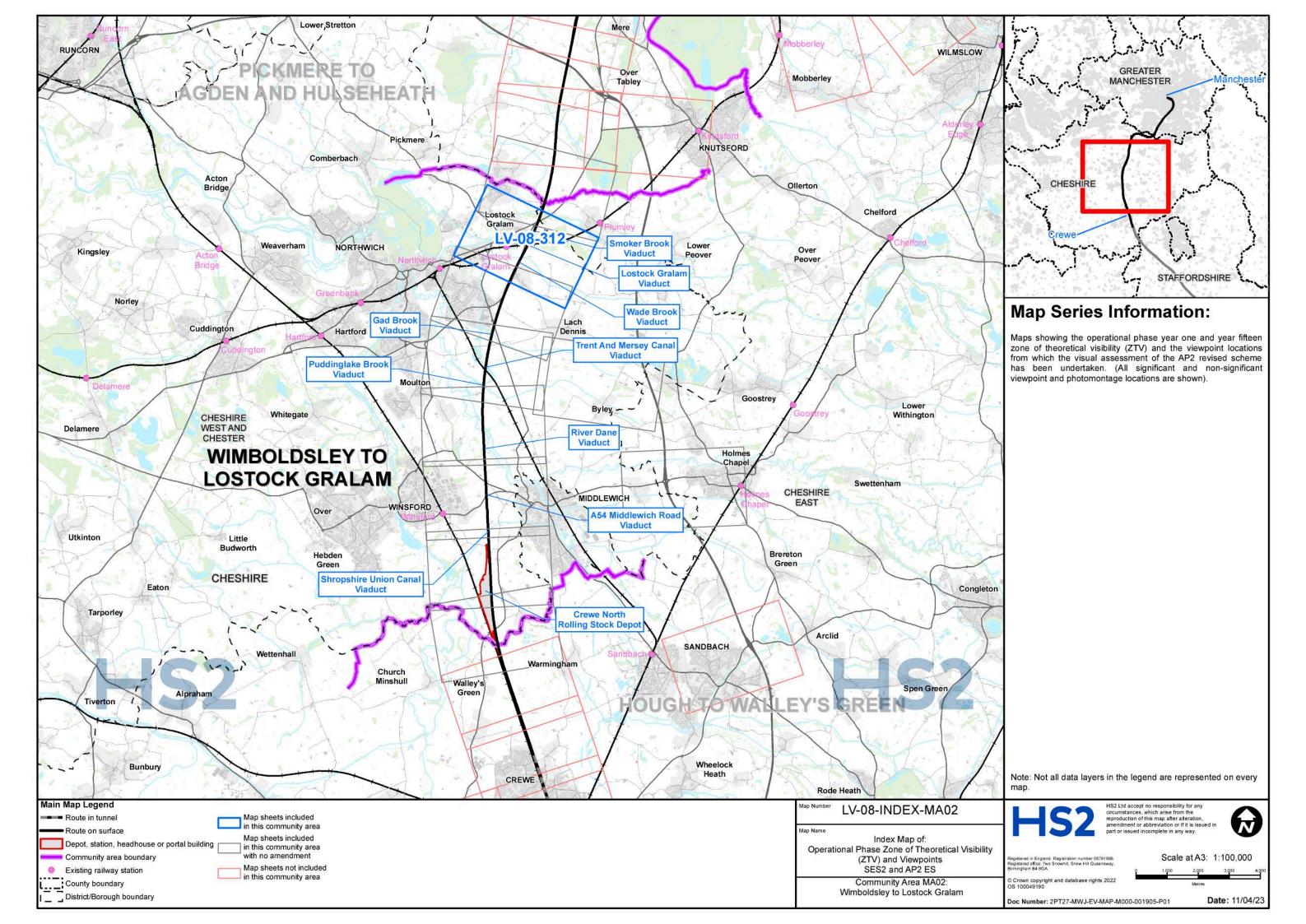
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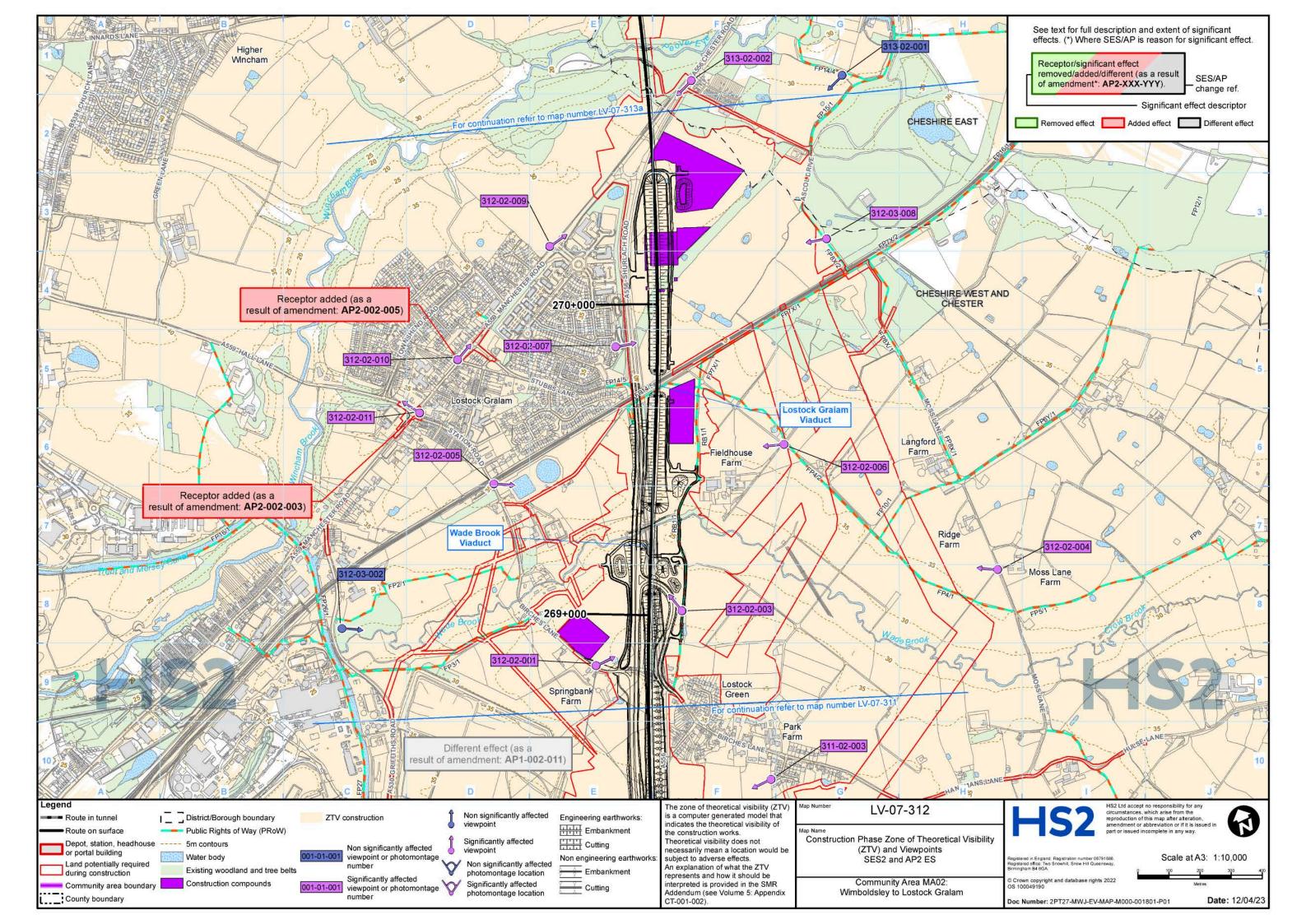
LV-07 – Construction Phase Zone of Theoretical Visibility (ZTV) and Viewpoints

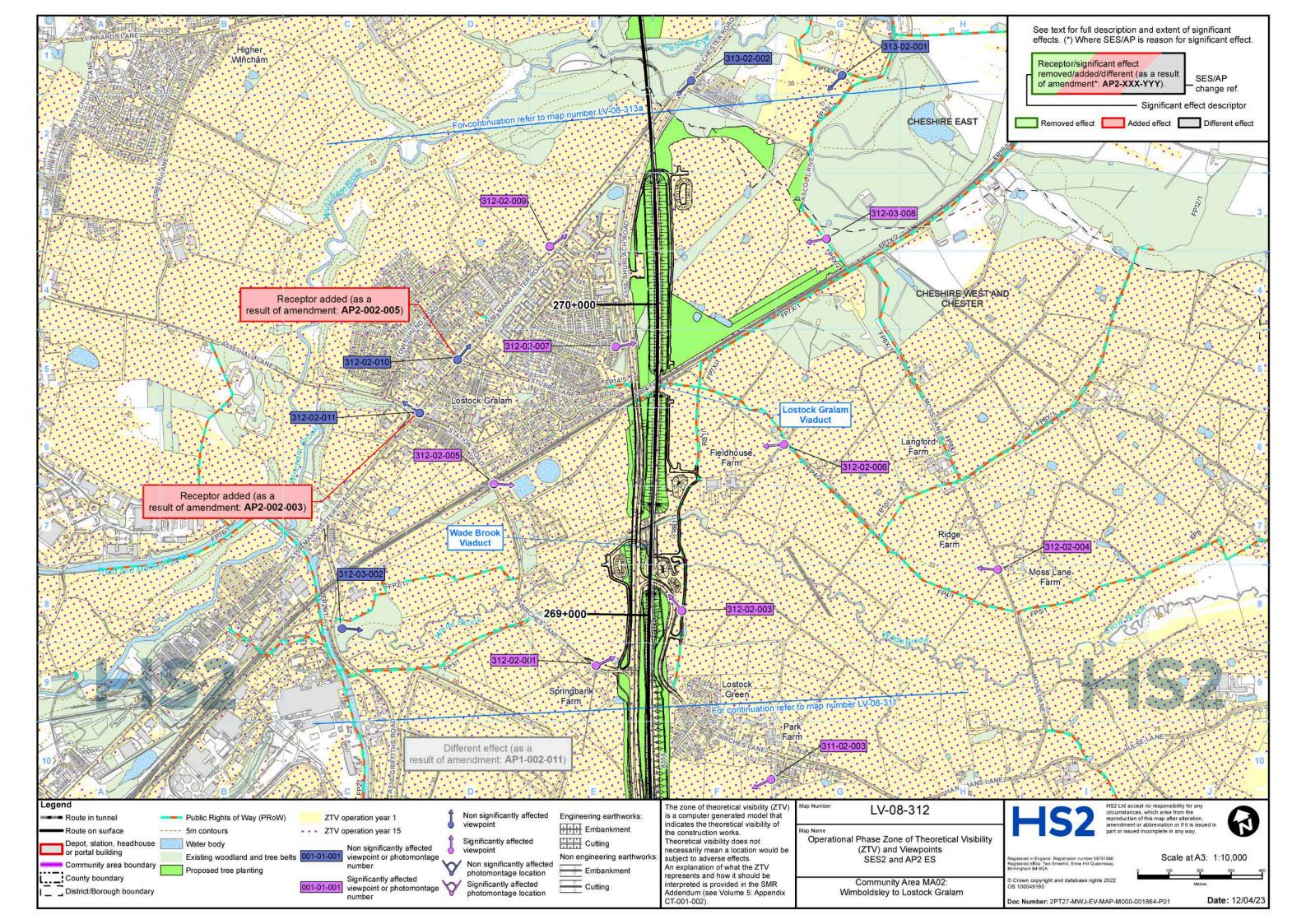
LV-08 – Operational Phase Zone of Theoretical Visibility (ZTV) and Viewpoints

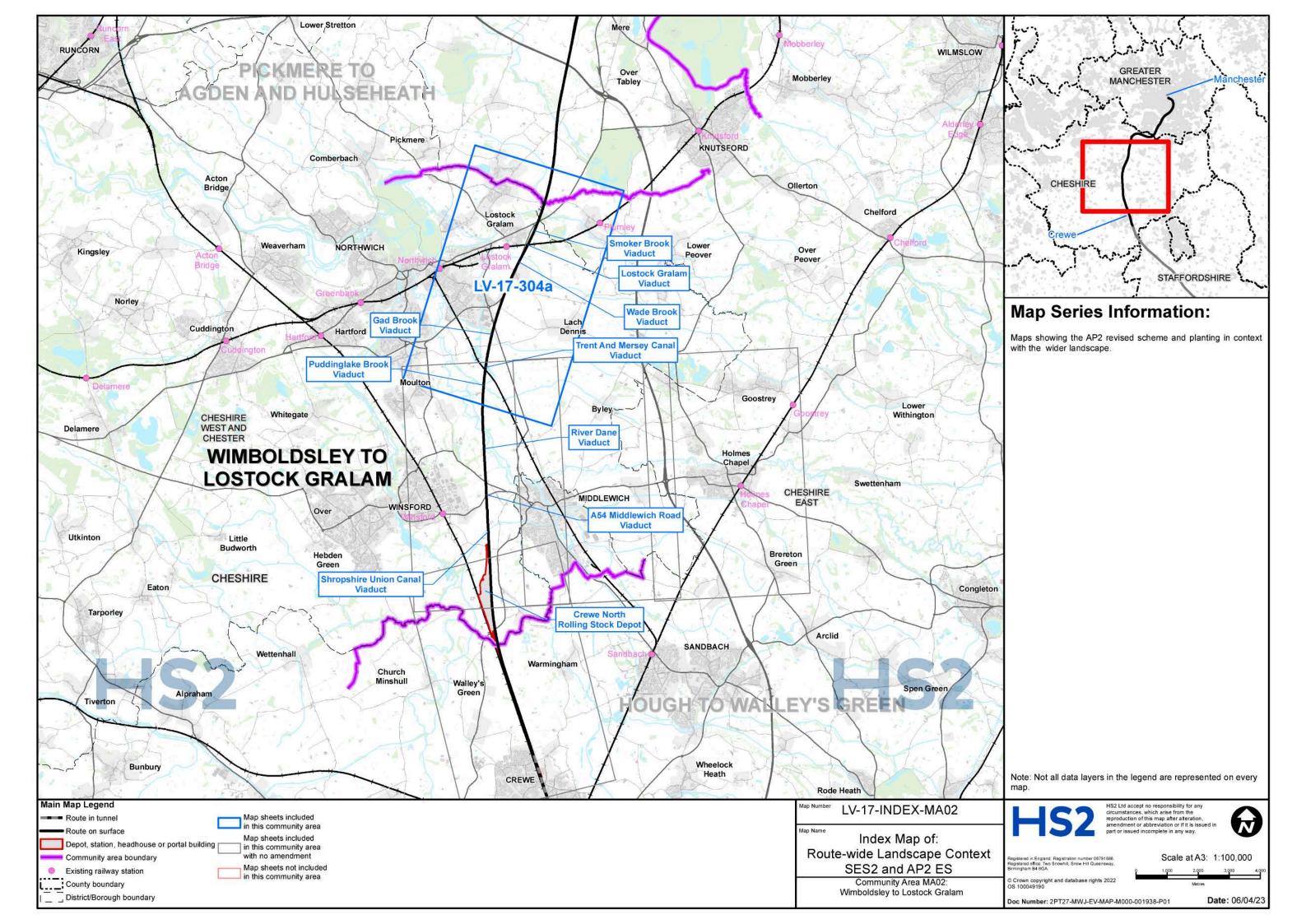
LV-17 – Route-wide Landscape Context

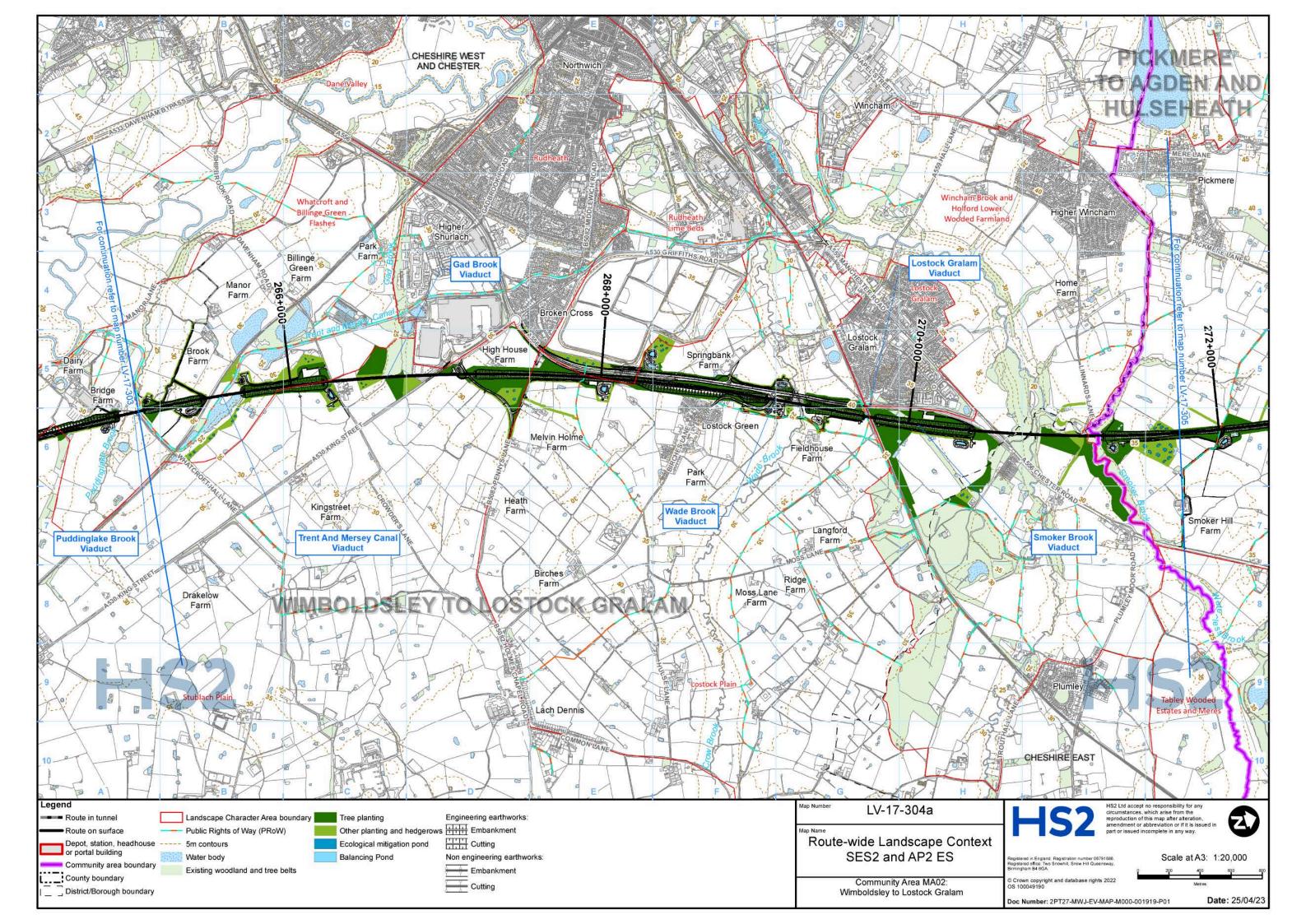












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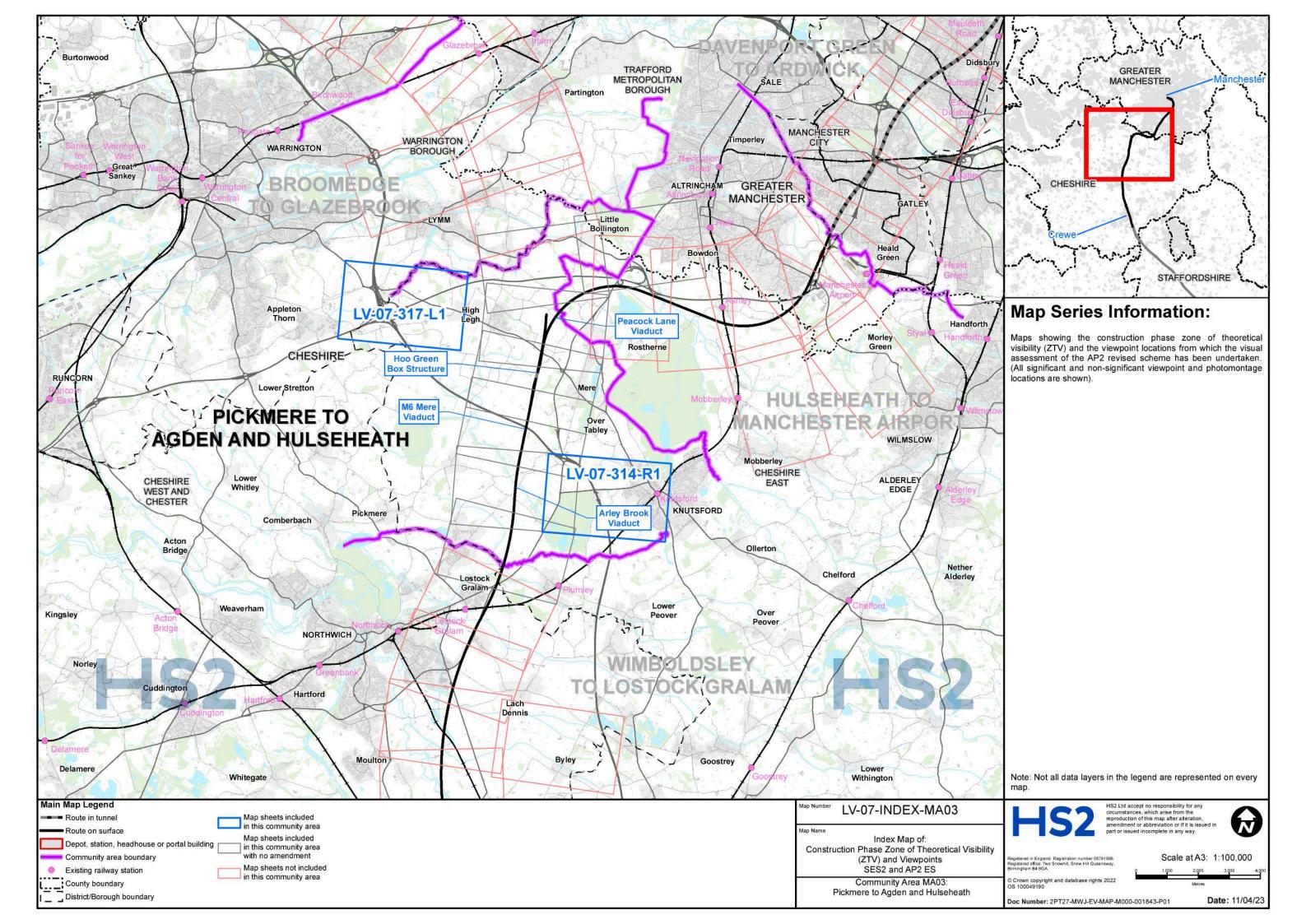
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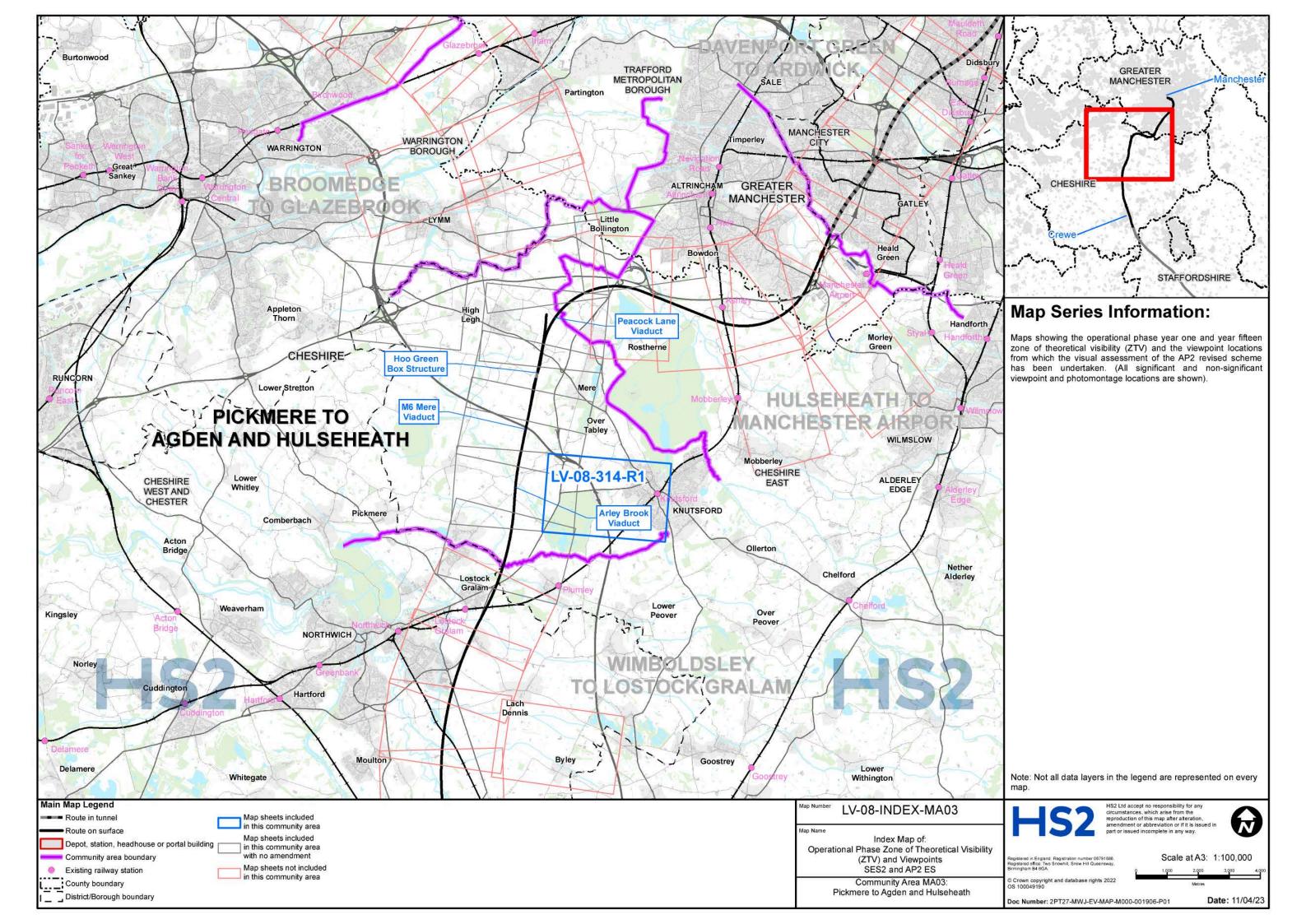
MA03: Pickmere to Agden and Hulseheath

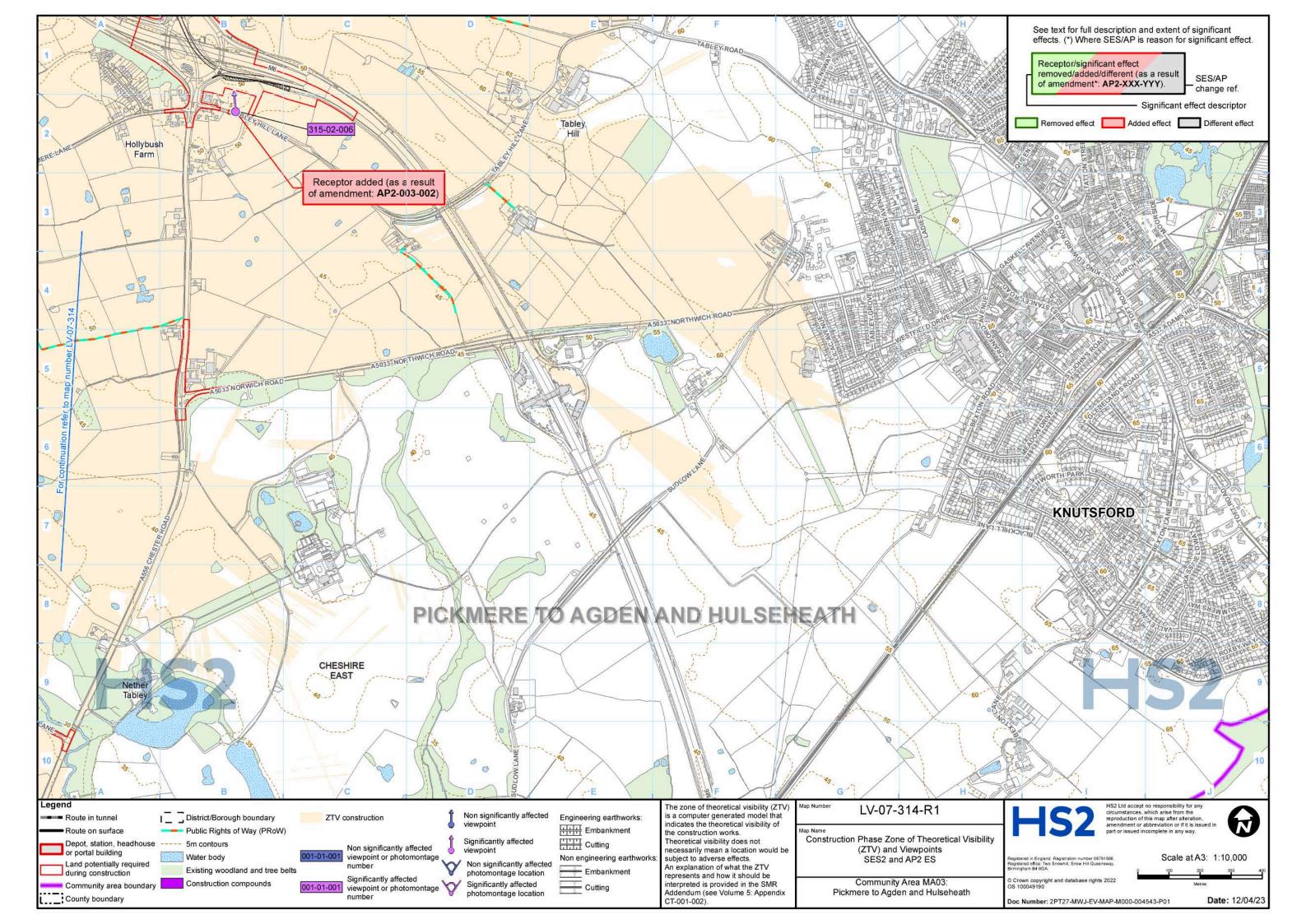
LV-07 – Construction Phase Zone of Theoretical Visibility (ZTV) and Viewpoints

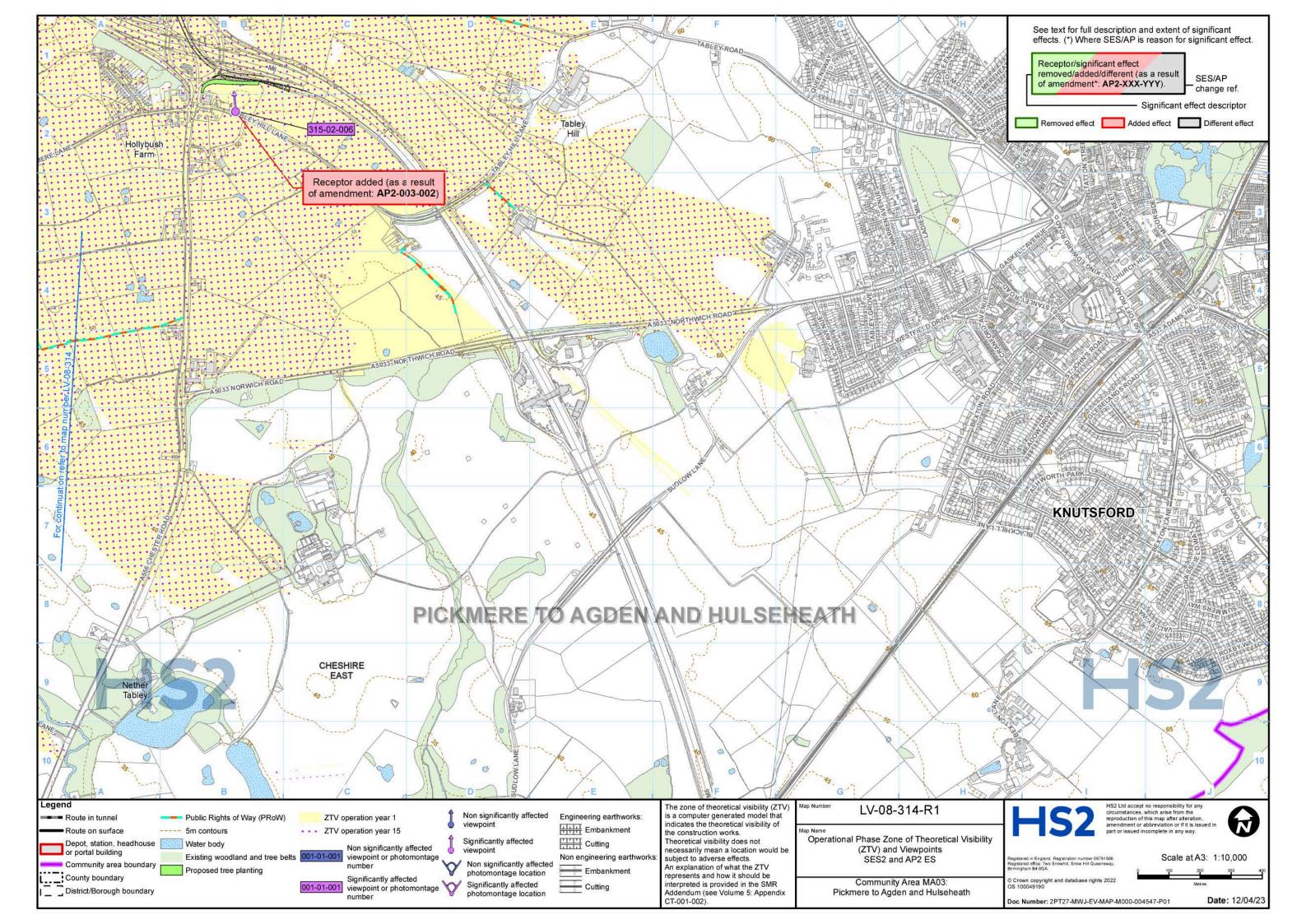
LV-08 – Operational Phase Zone of Theoretical Visibility (ZTV) and Viewpoints

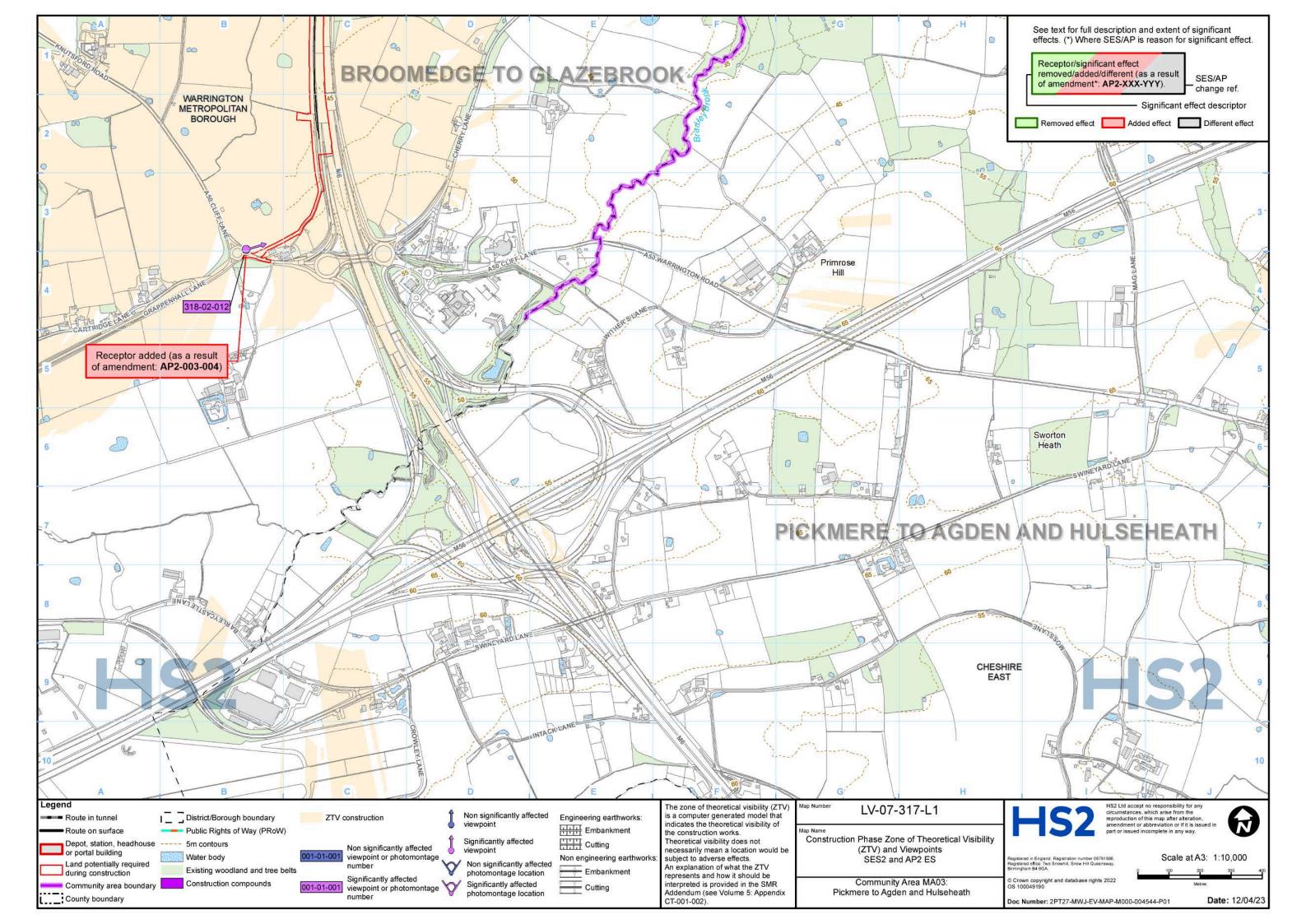
LV-17 – Route-wide Landscape Context



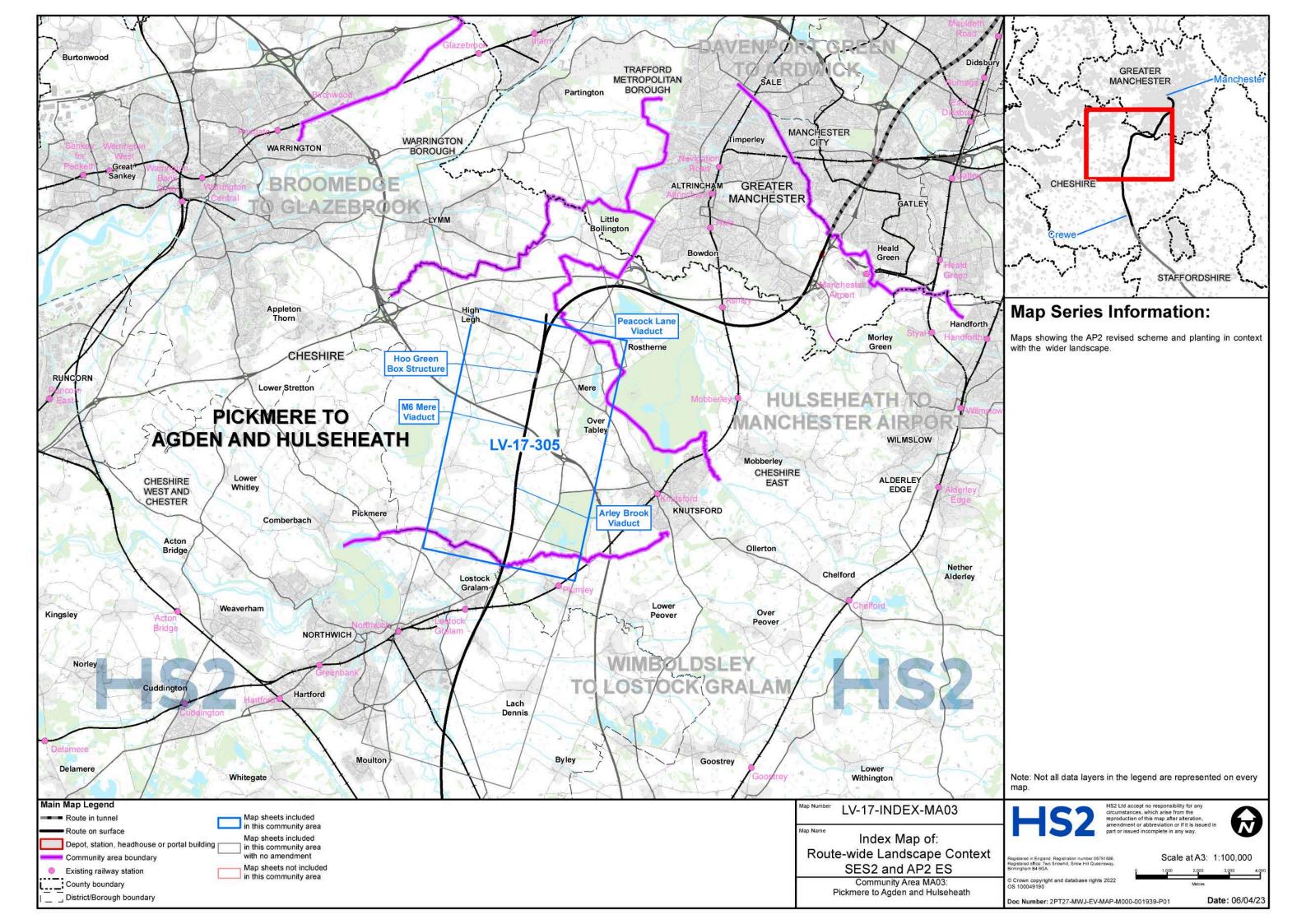


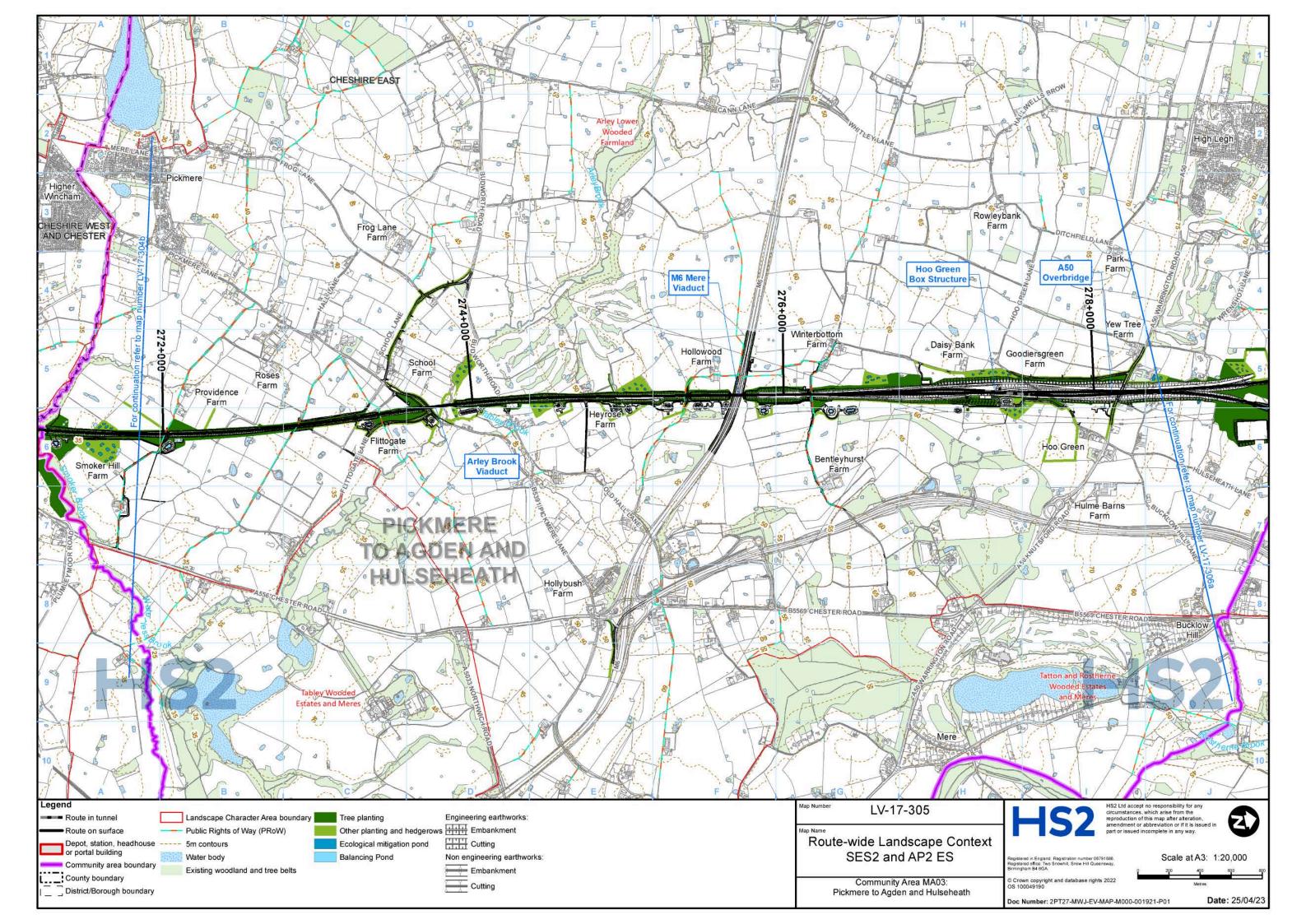






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High Speed Rail (Crewe – Manchester)

Supplementary Environmental Statement 2 and Additional Provision 2 Environmental Statement

MA06: Hulseheath to Manchester Airport

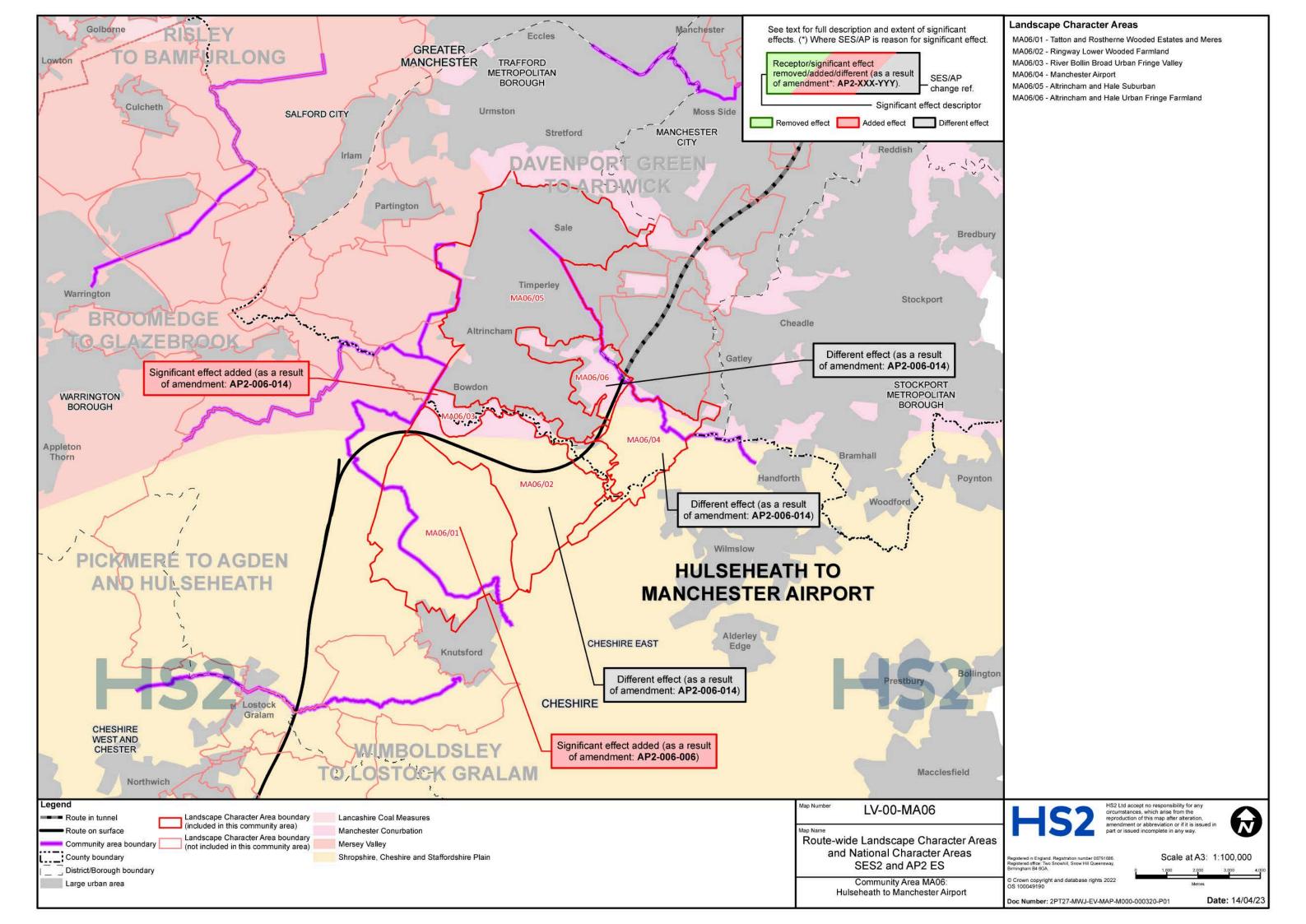
LV-00 – Route-wide Landscape Character Areas and National Character Areas

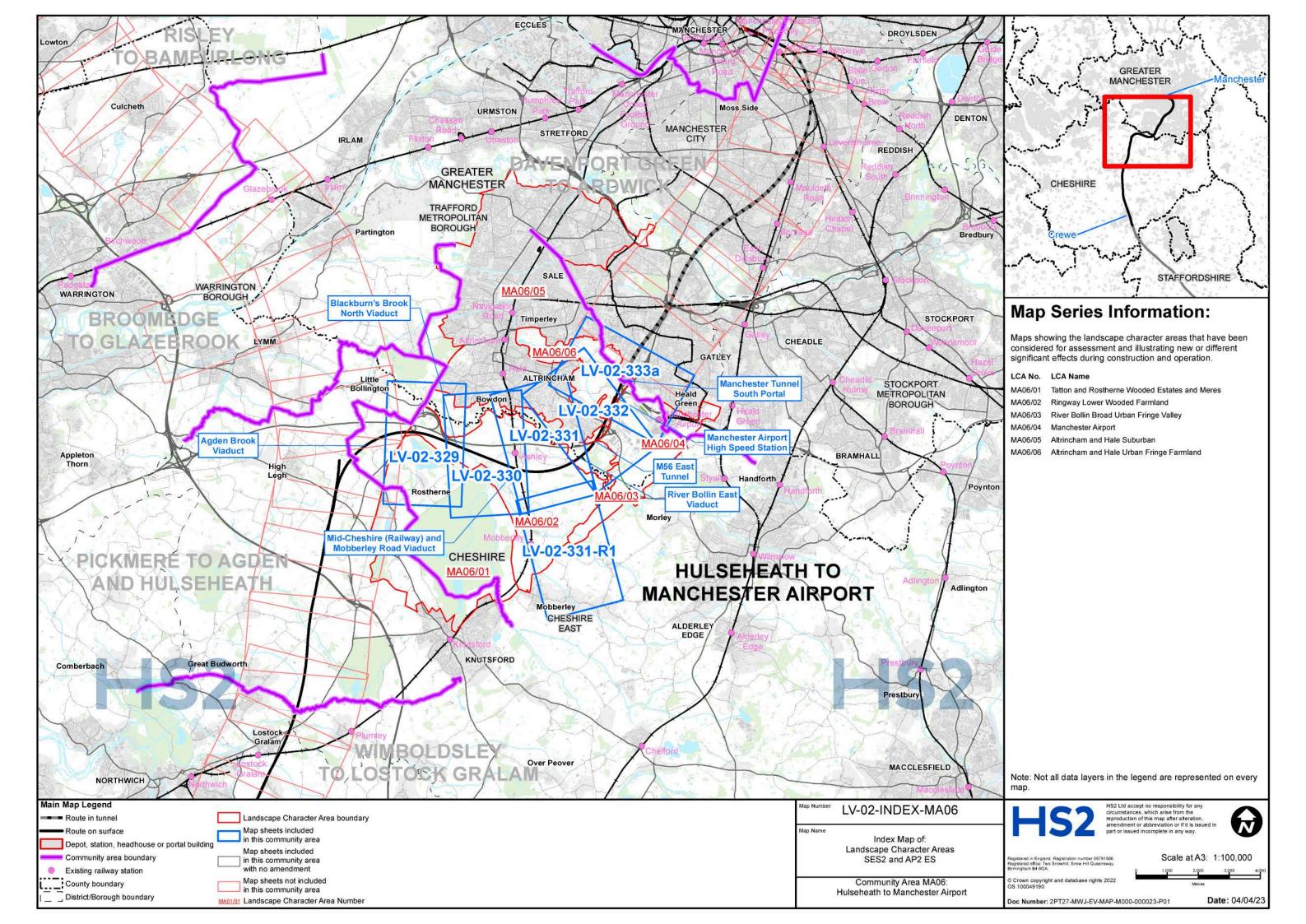
LV-02 – Landscape Character Areas

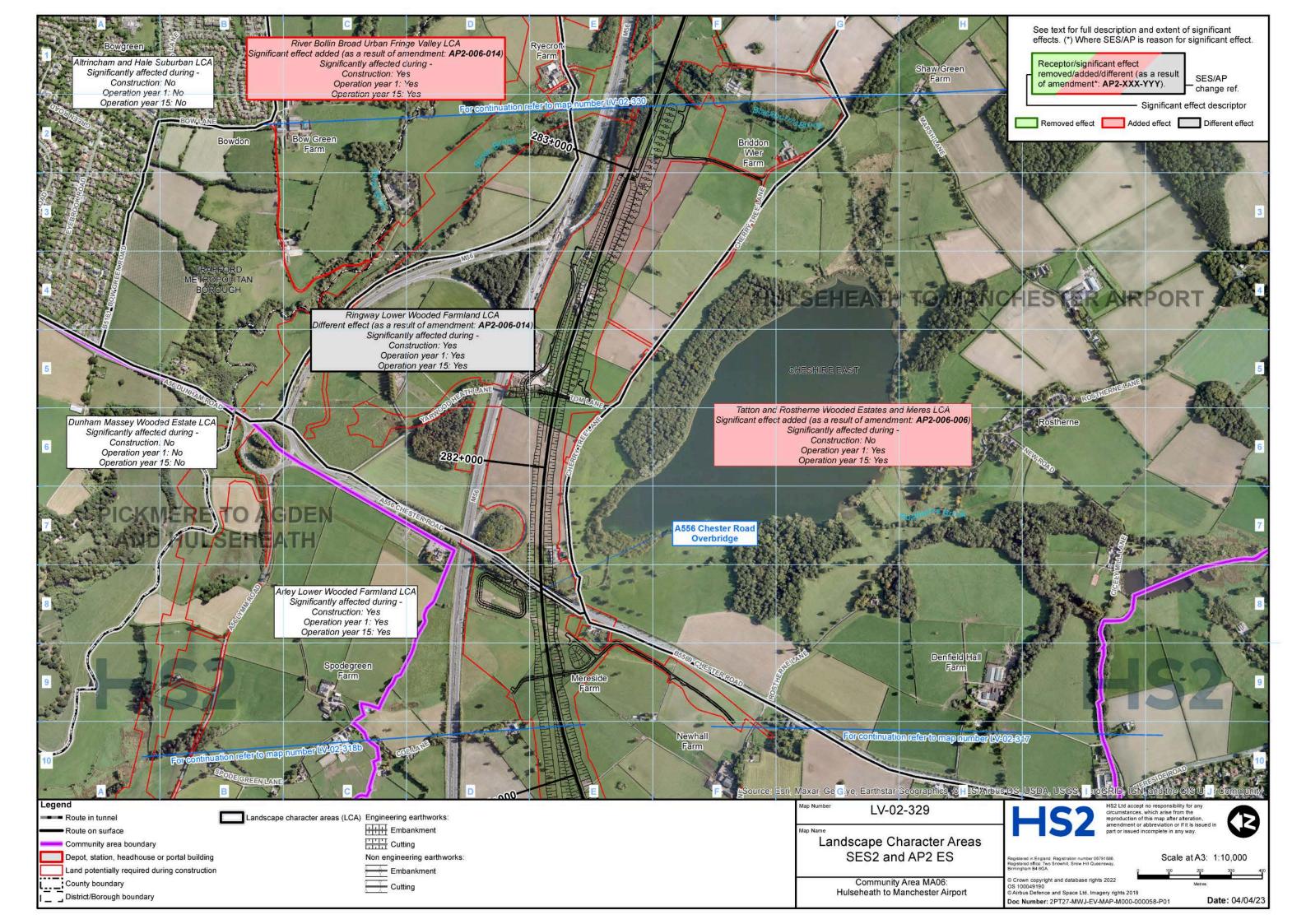
LV-07 – Construction Phase Zone of Theoretical Visibility (ZTV) and Viewpoints

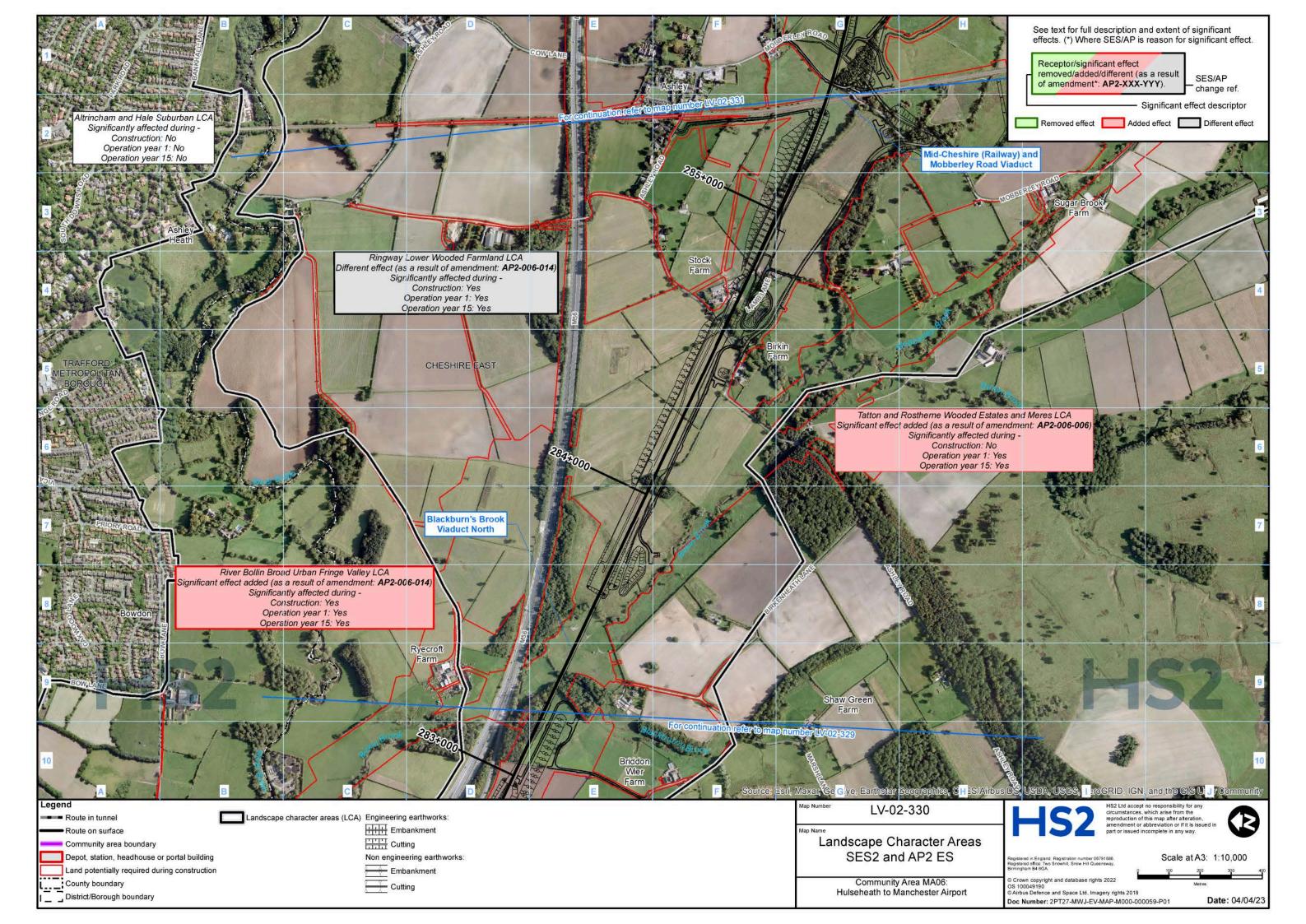
LV-08 – Operational Phase Zone of Theoretical Visibility (ZTV) and Viewpoints

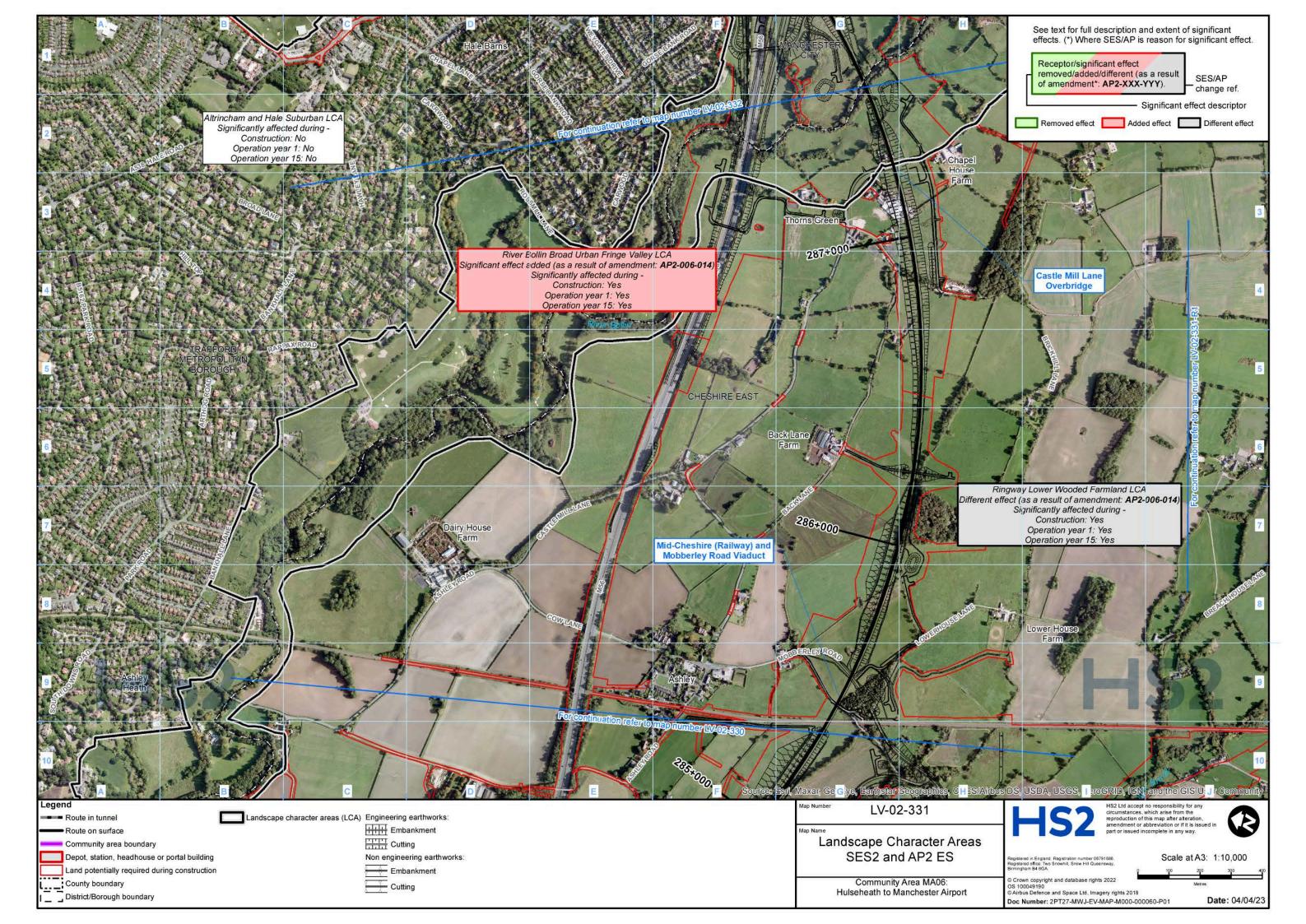
LV-17 – Route-wide Landscape Context

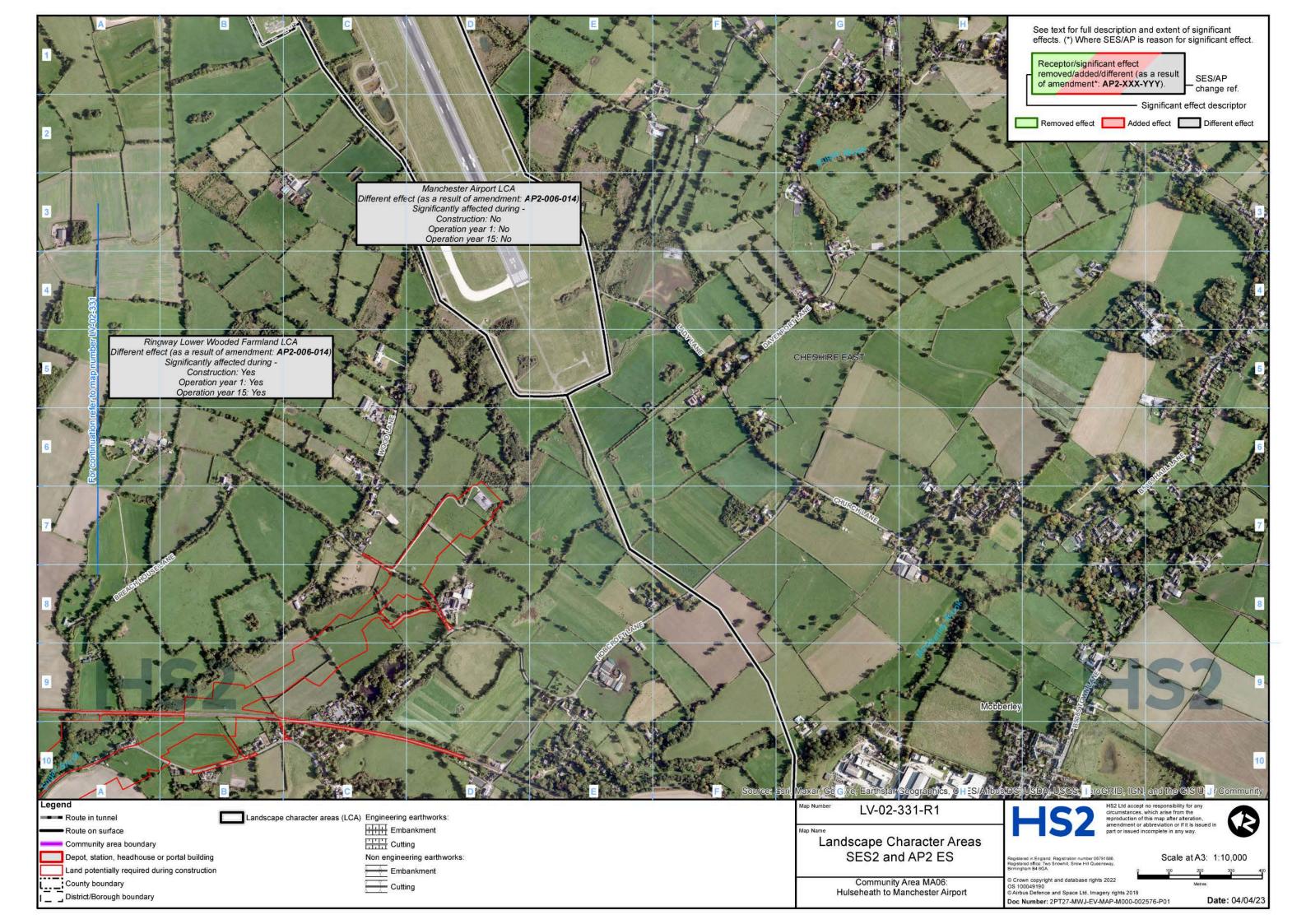


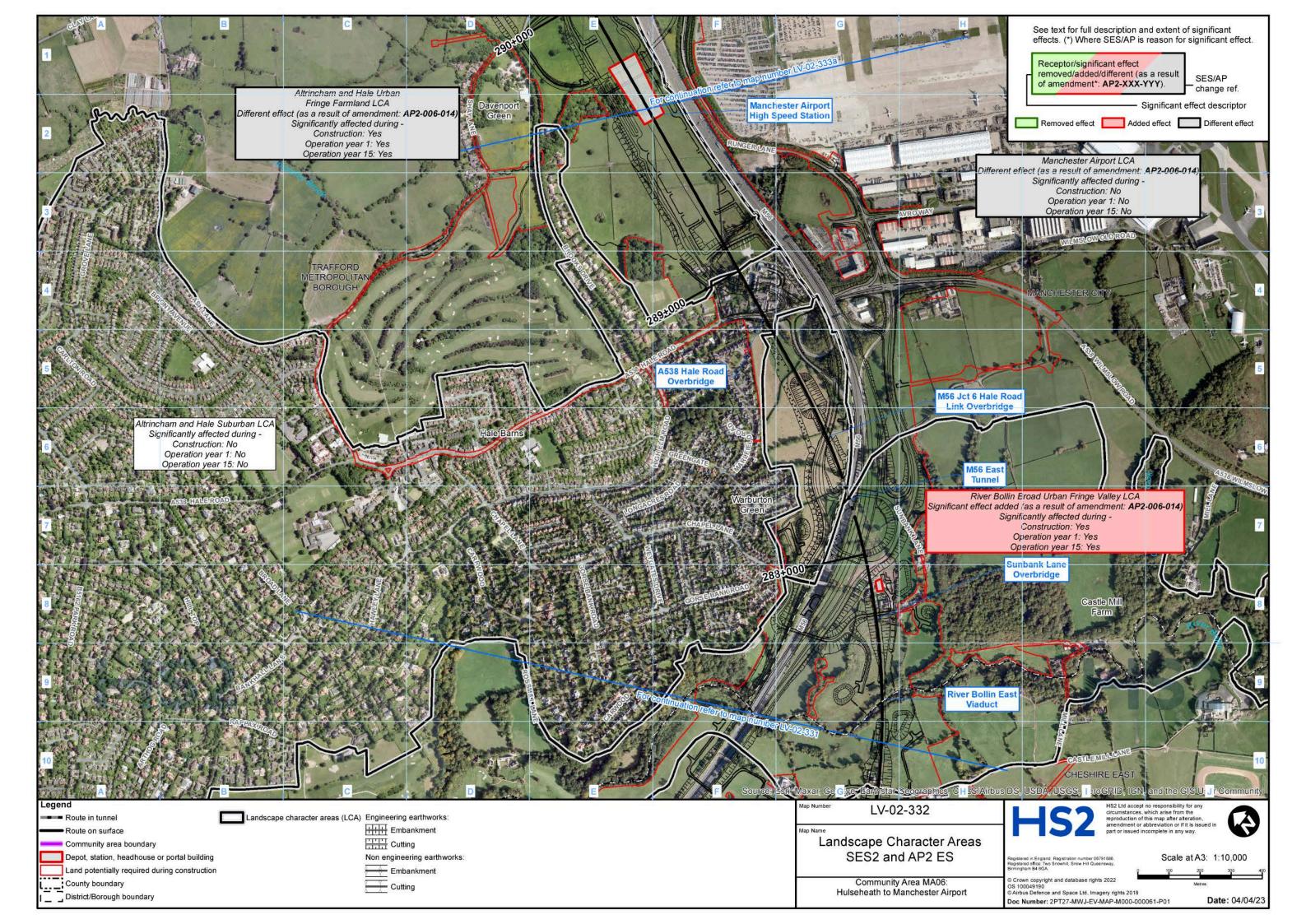


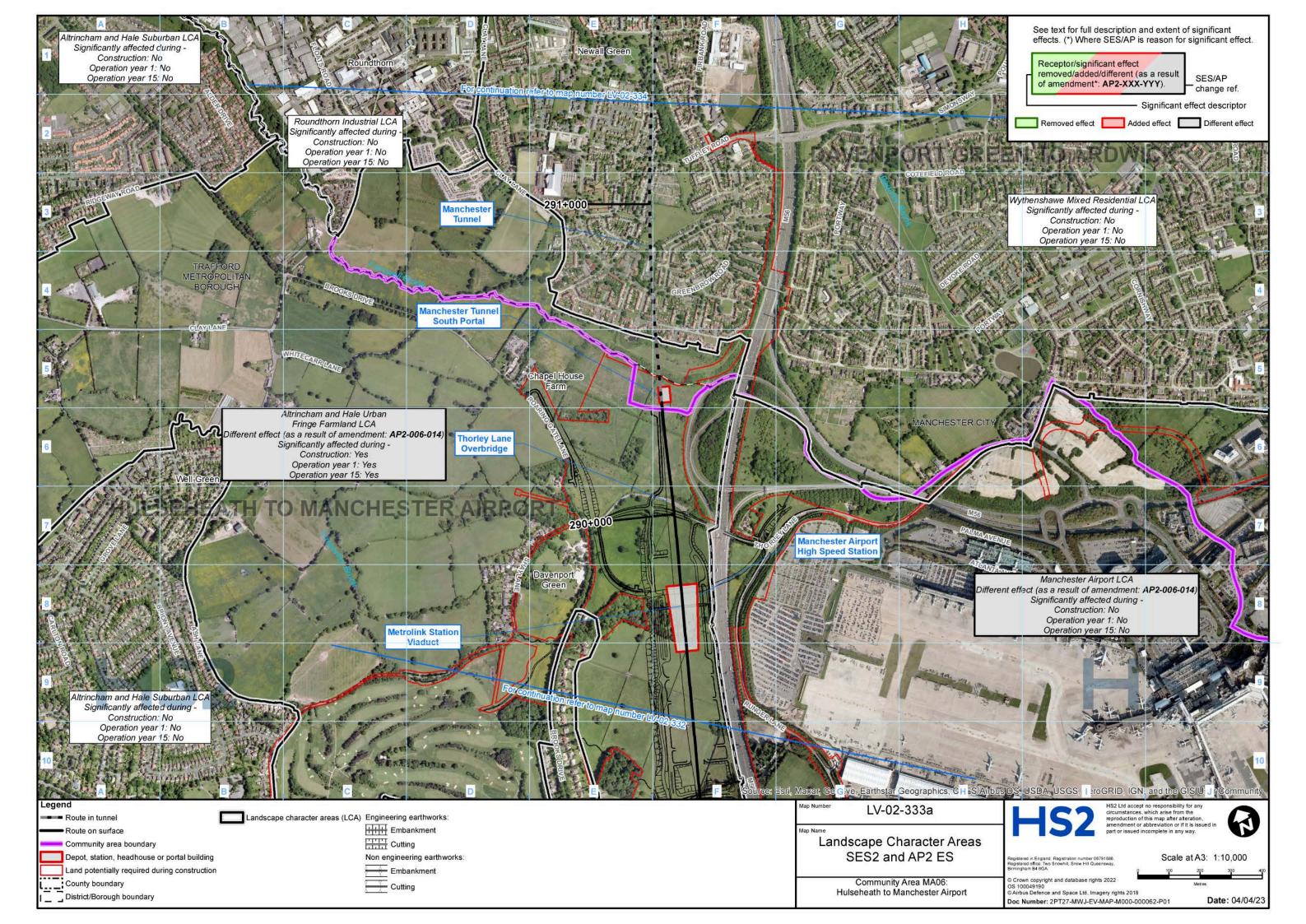


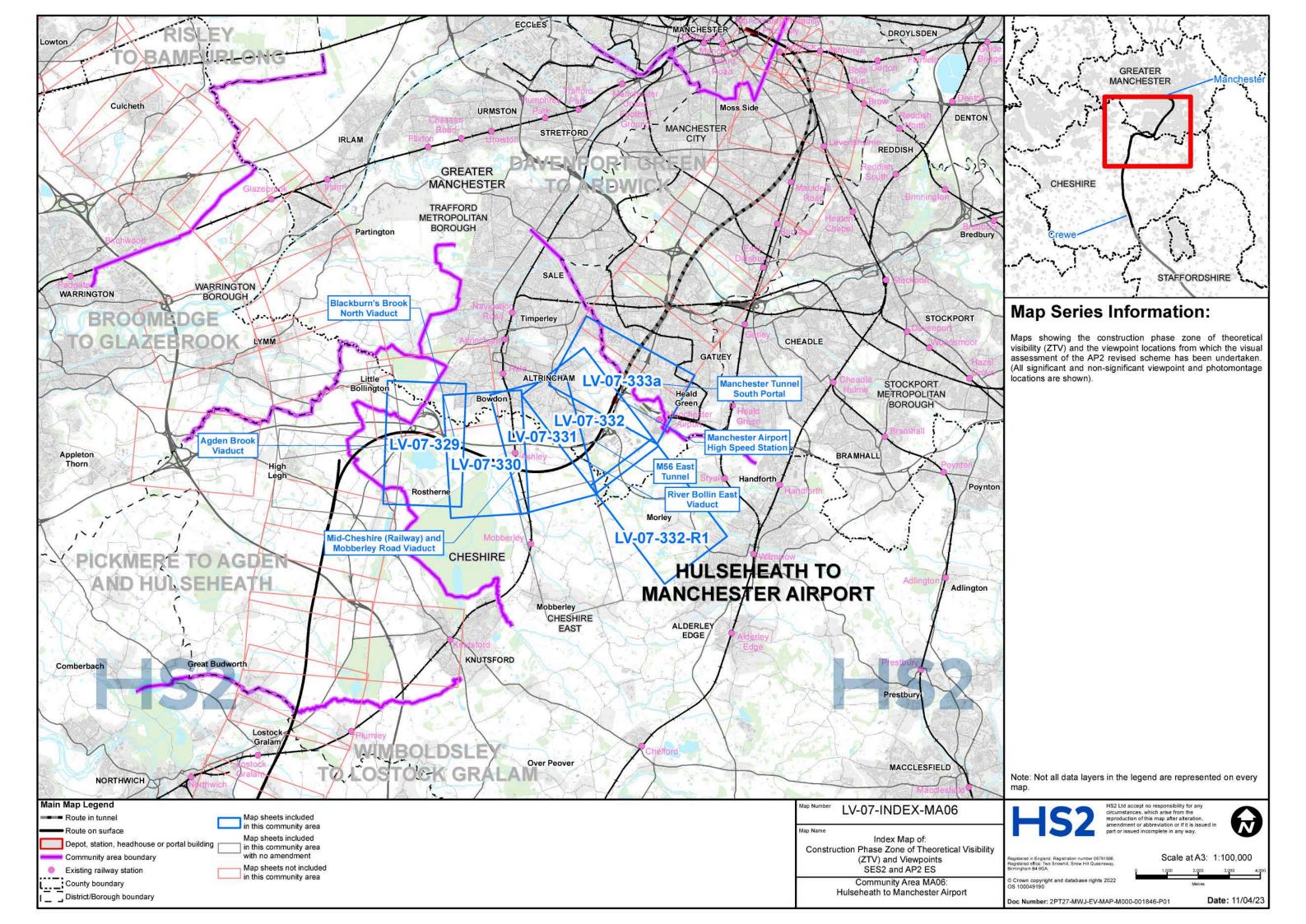


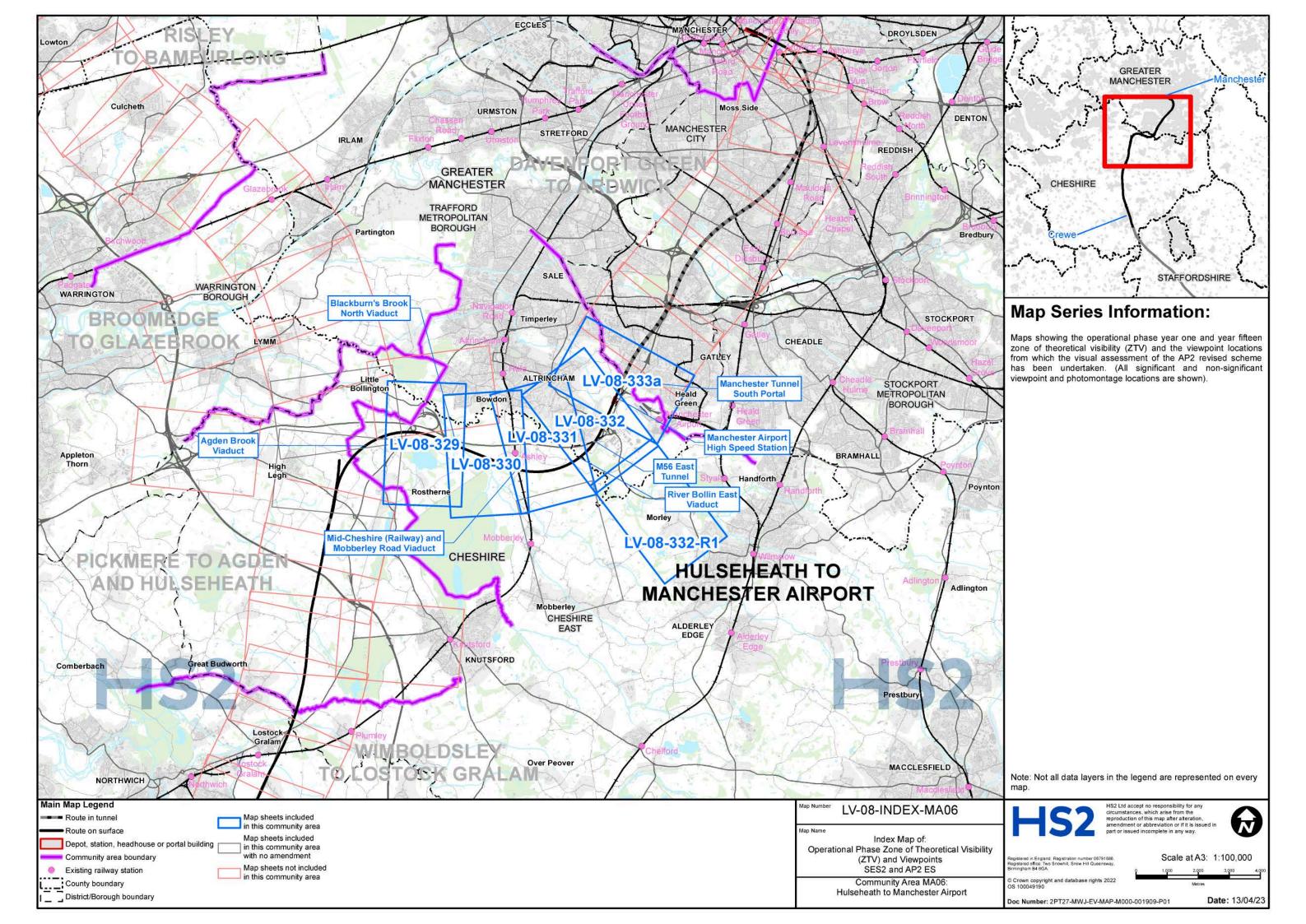


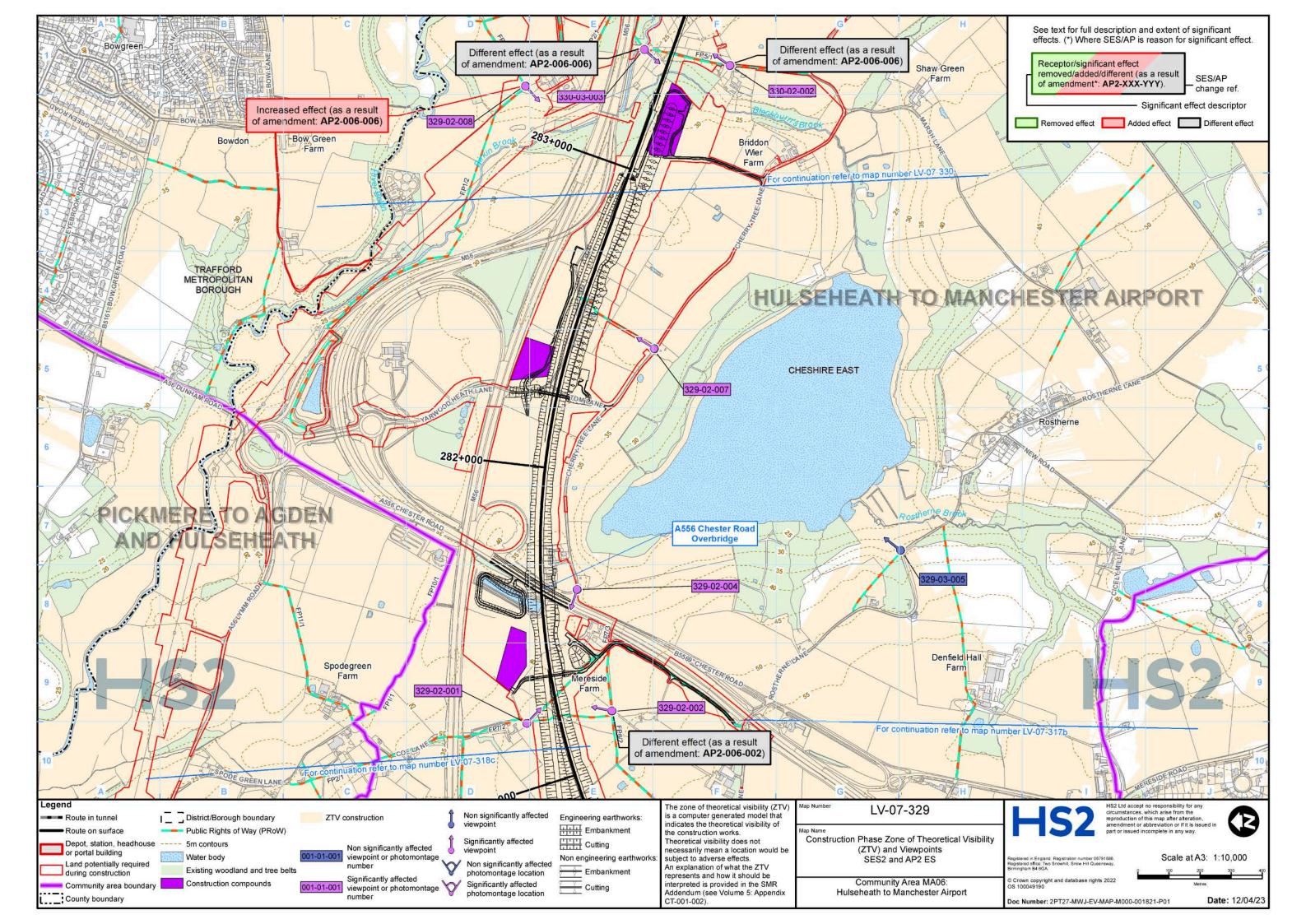


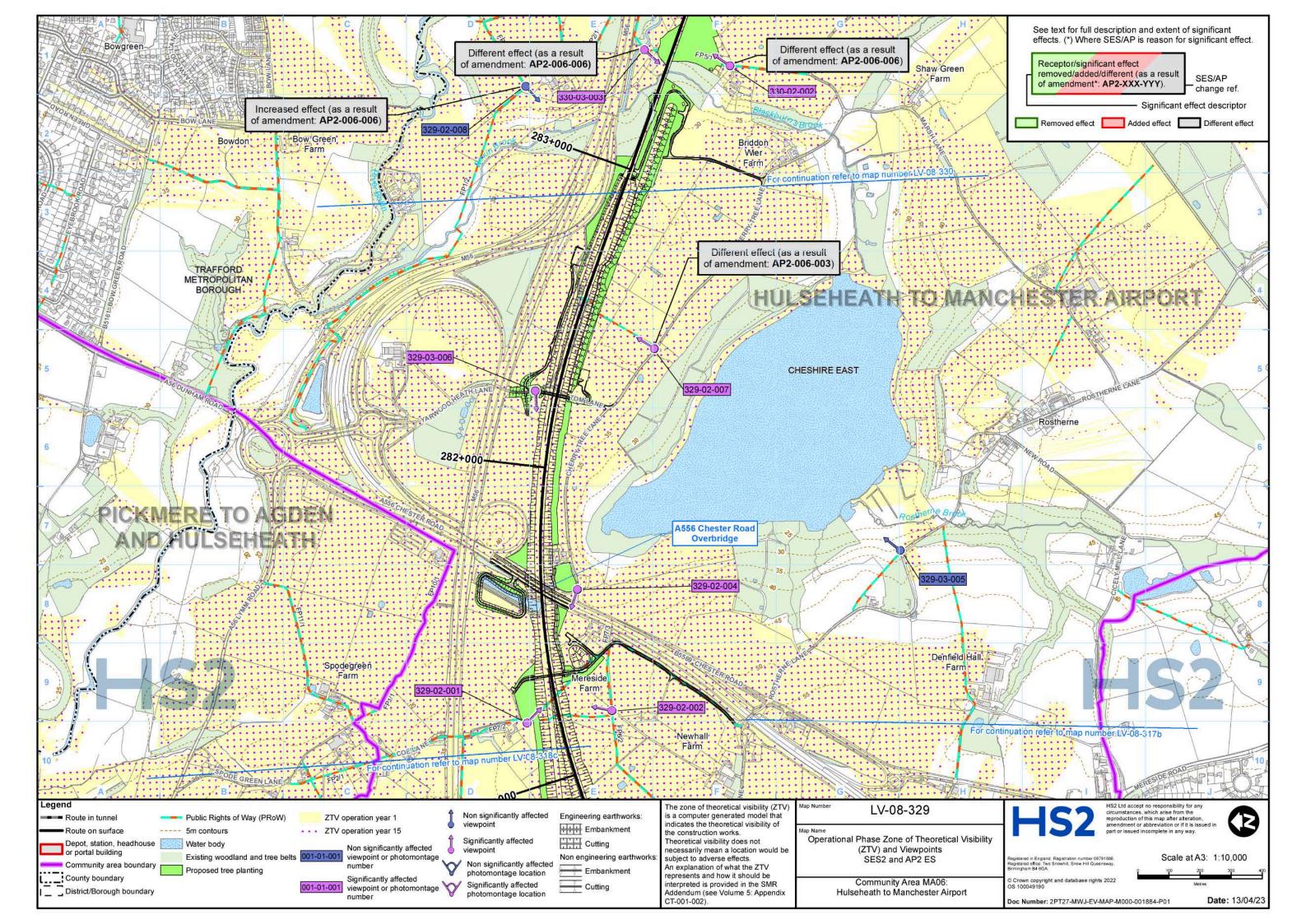


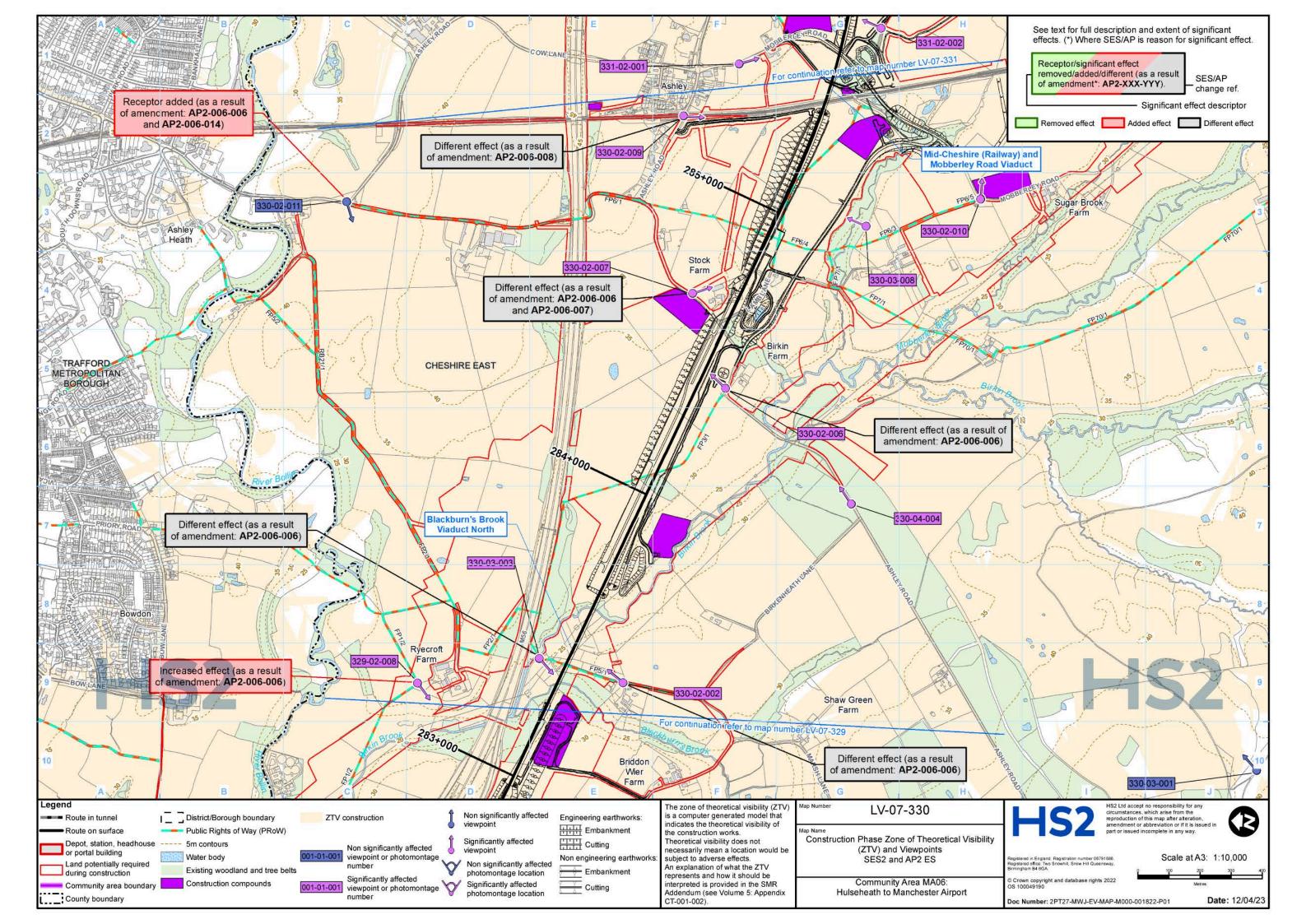


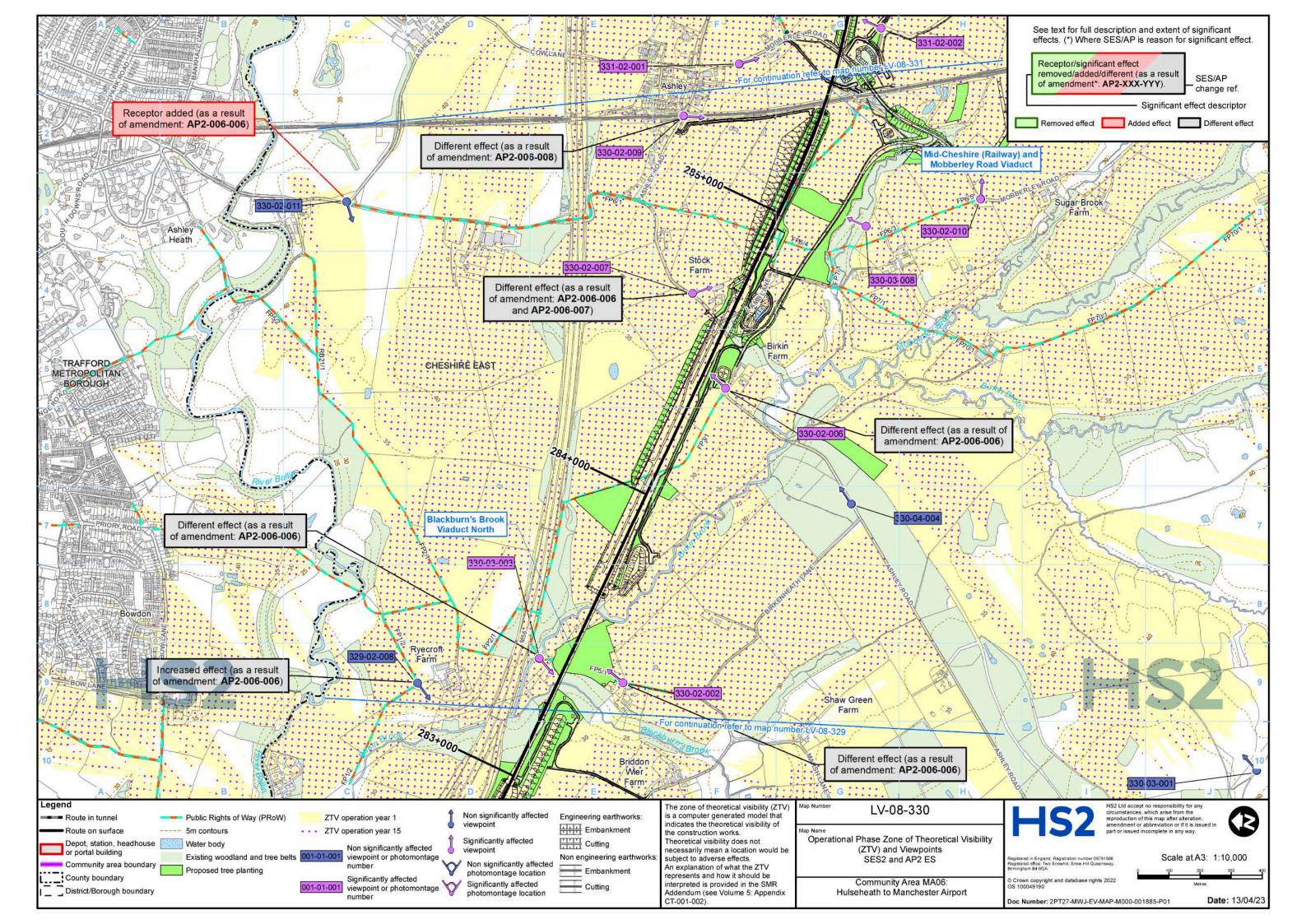


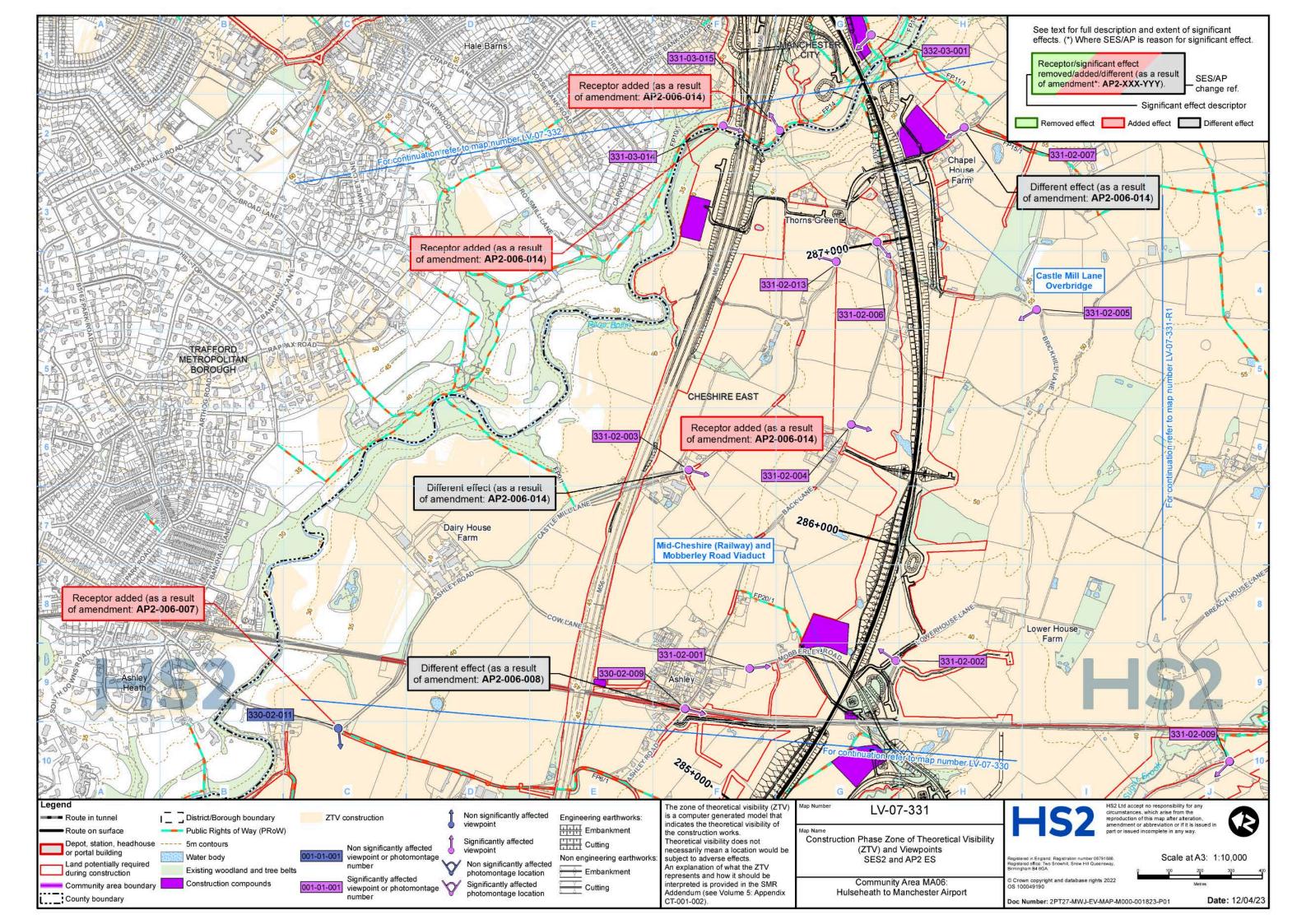


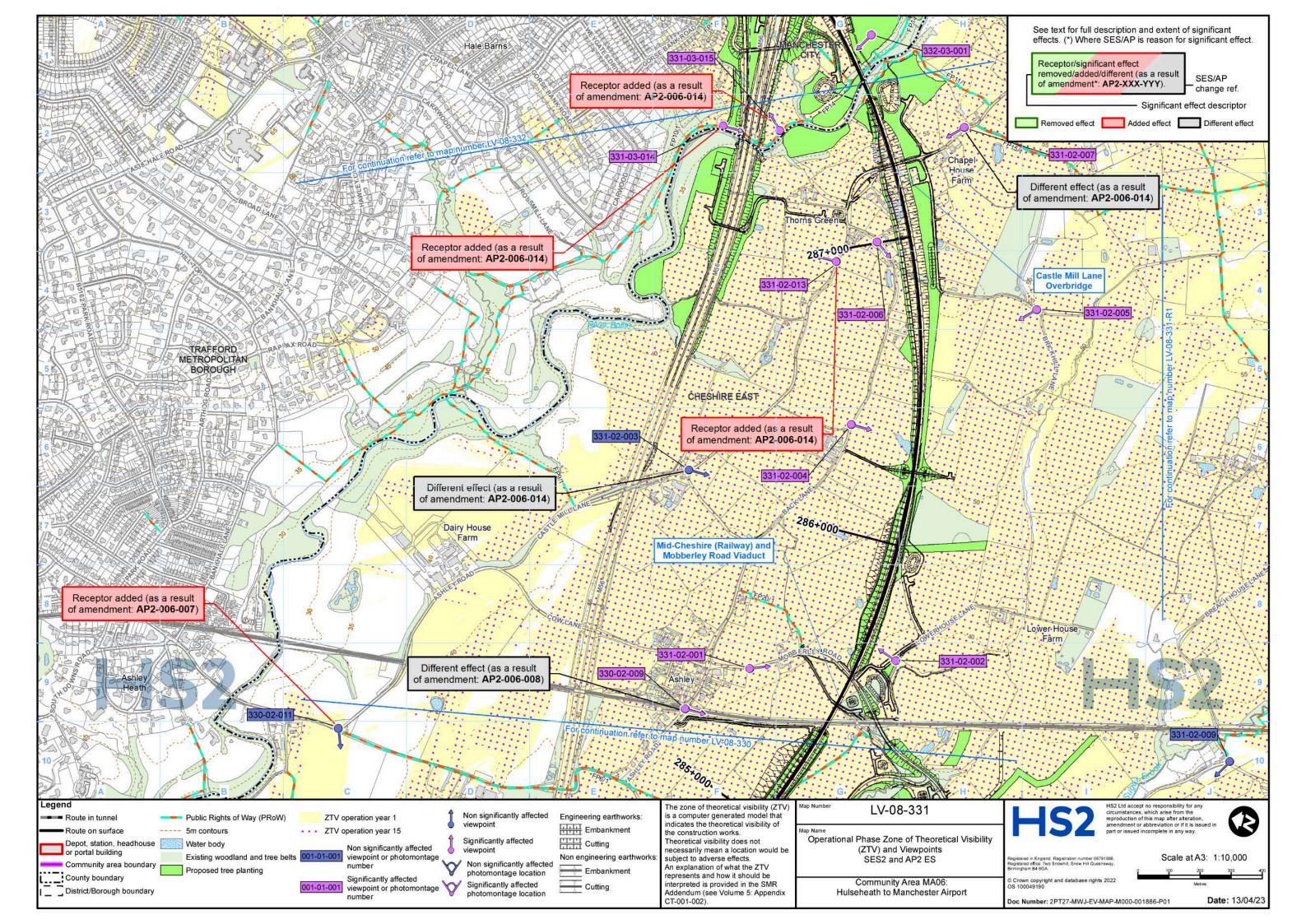


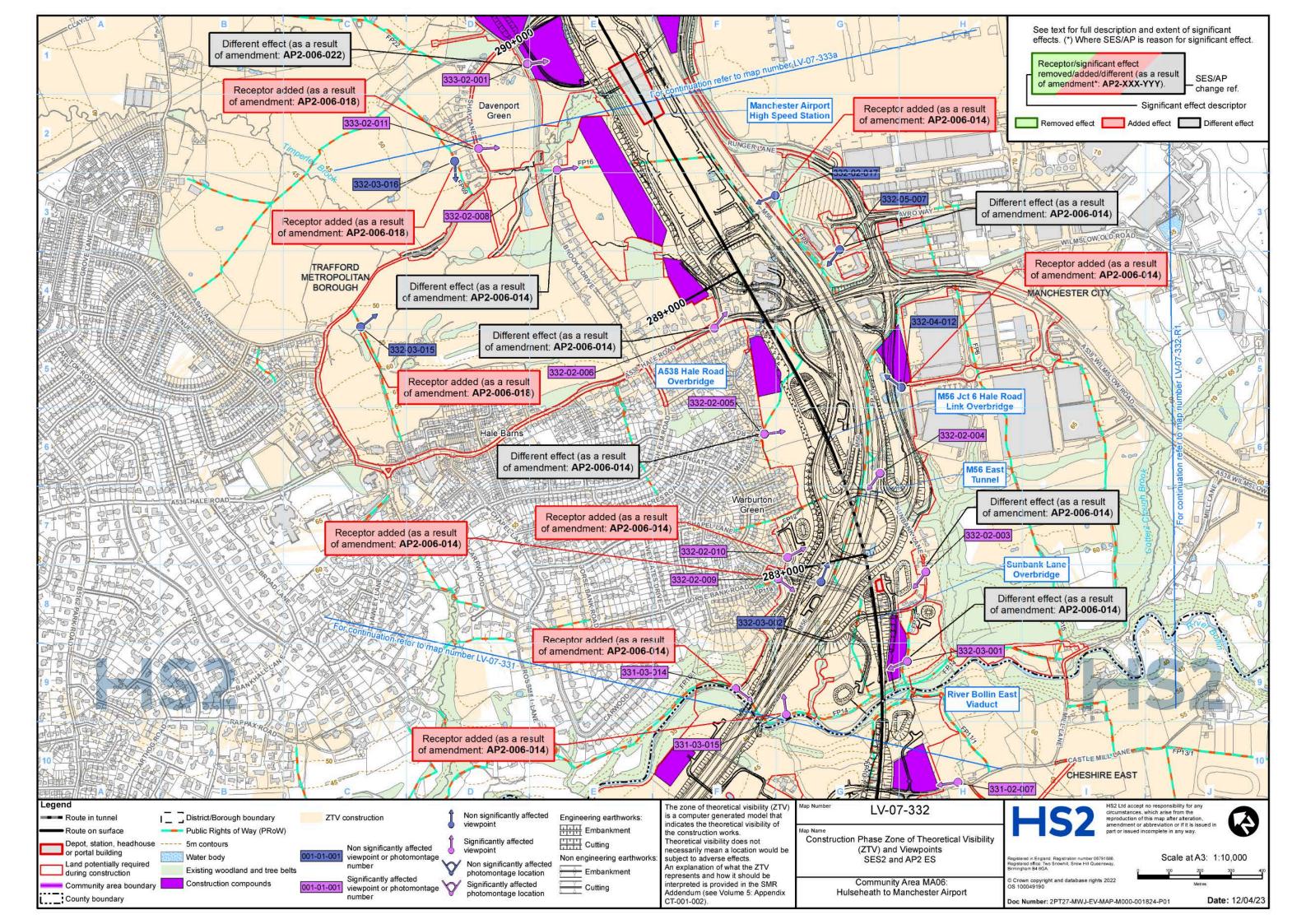


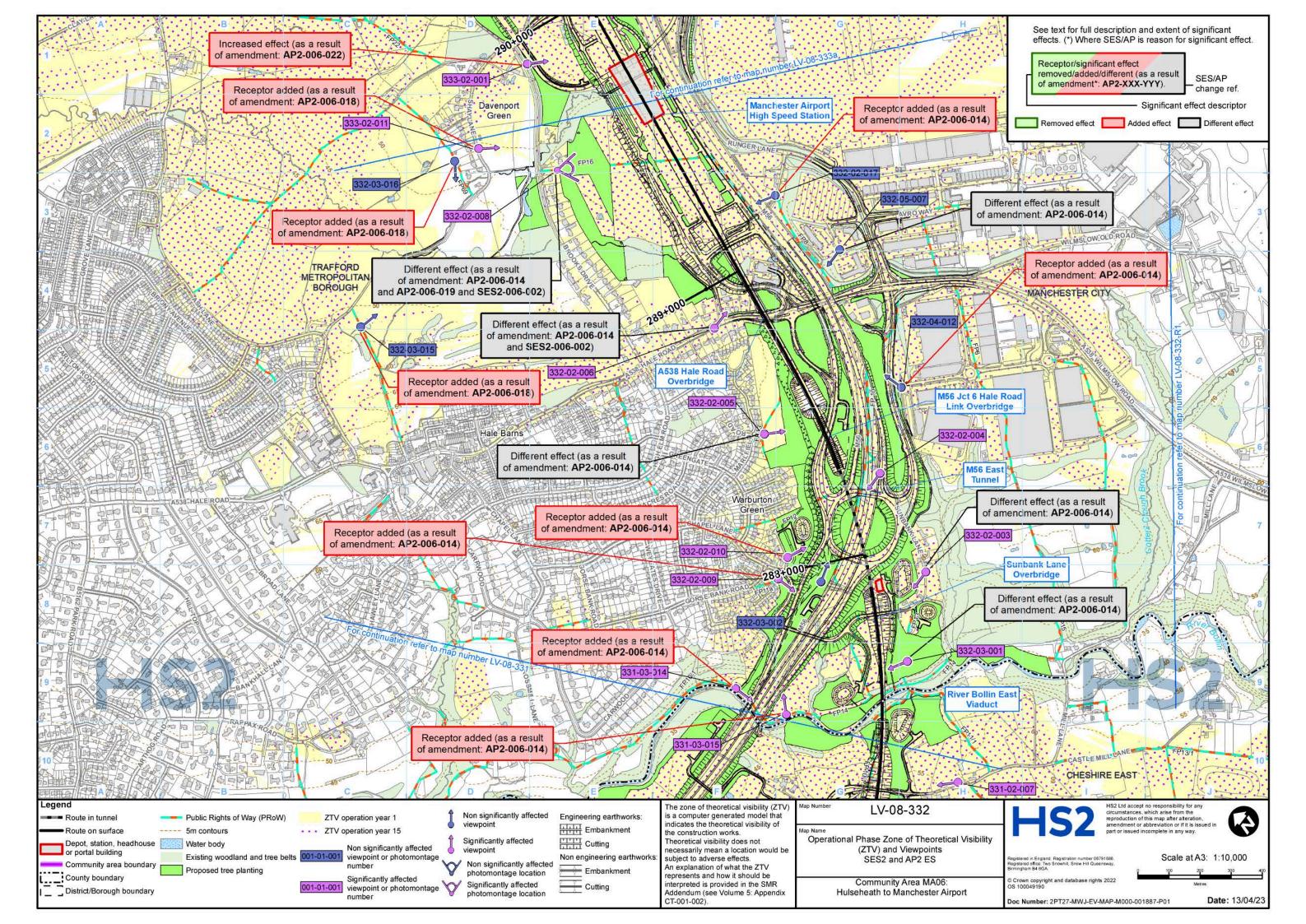


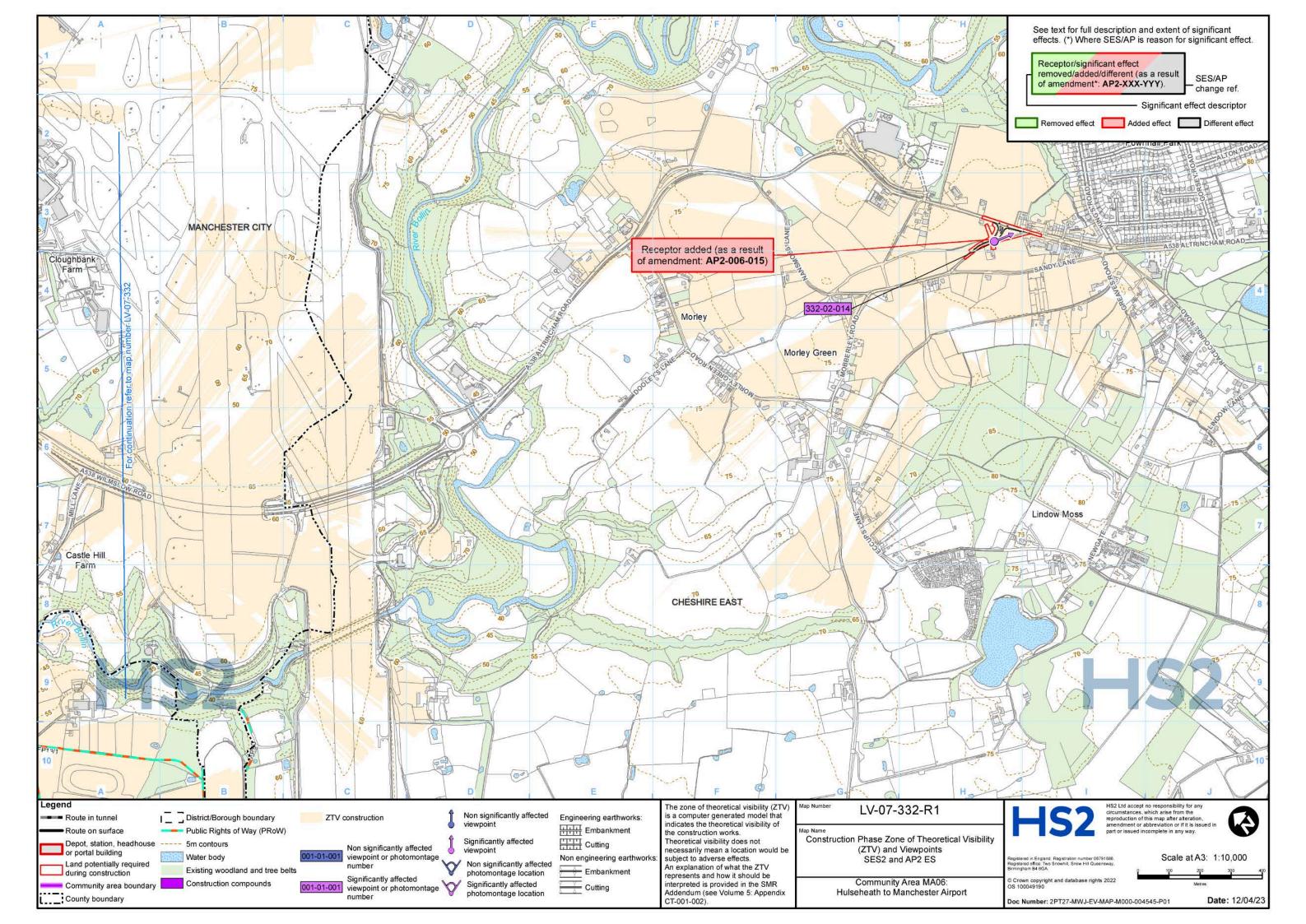


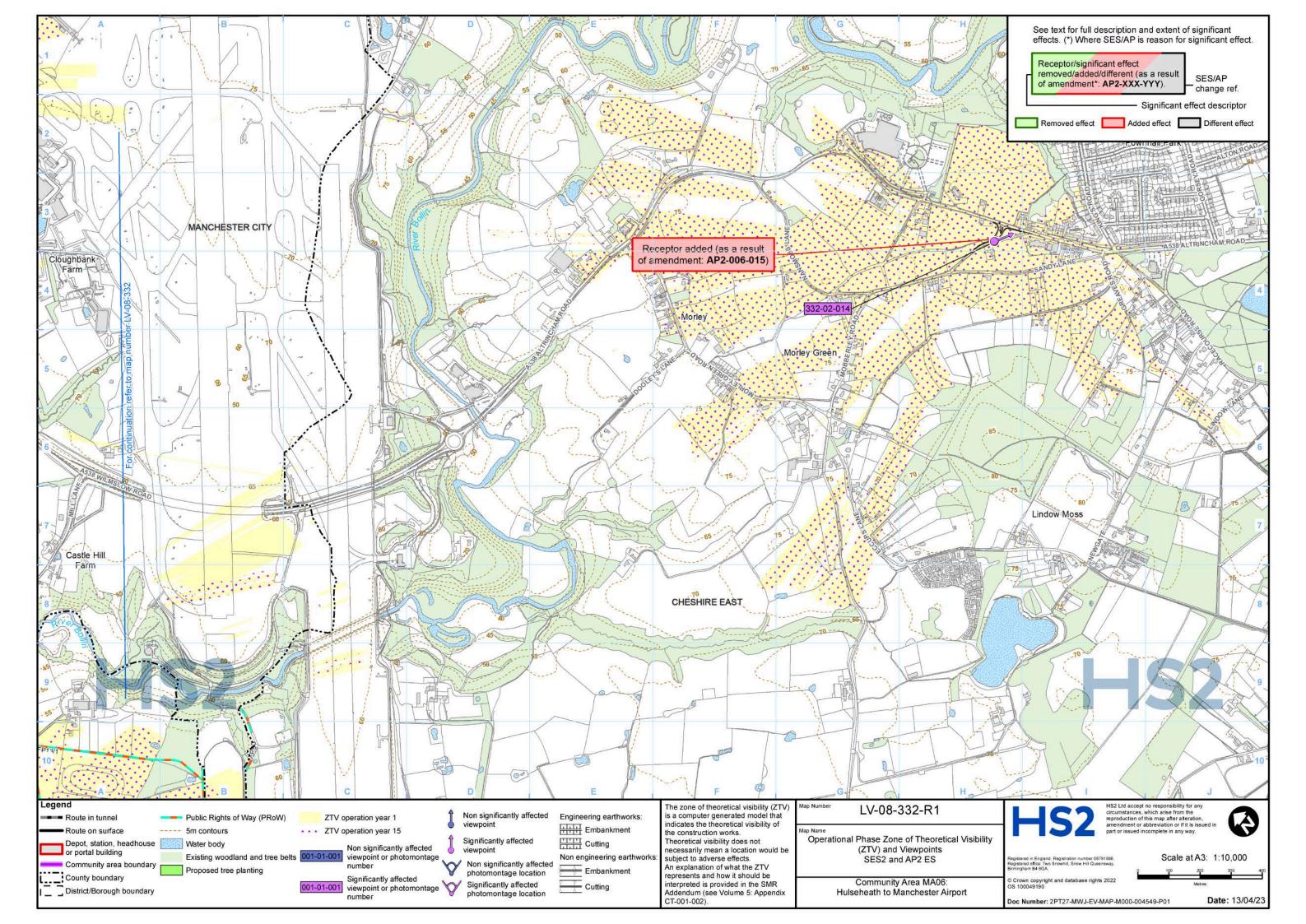


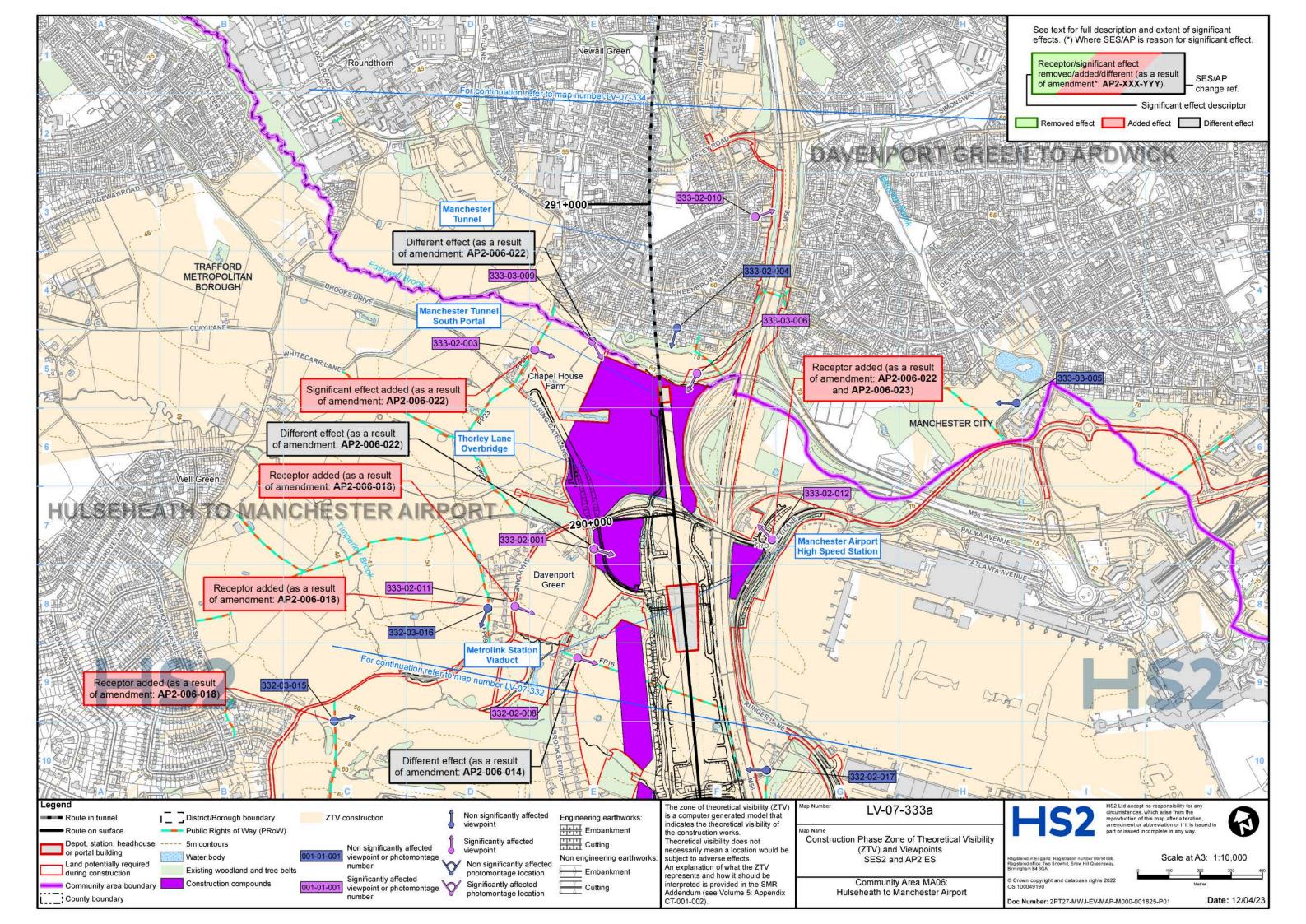


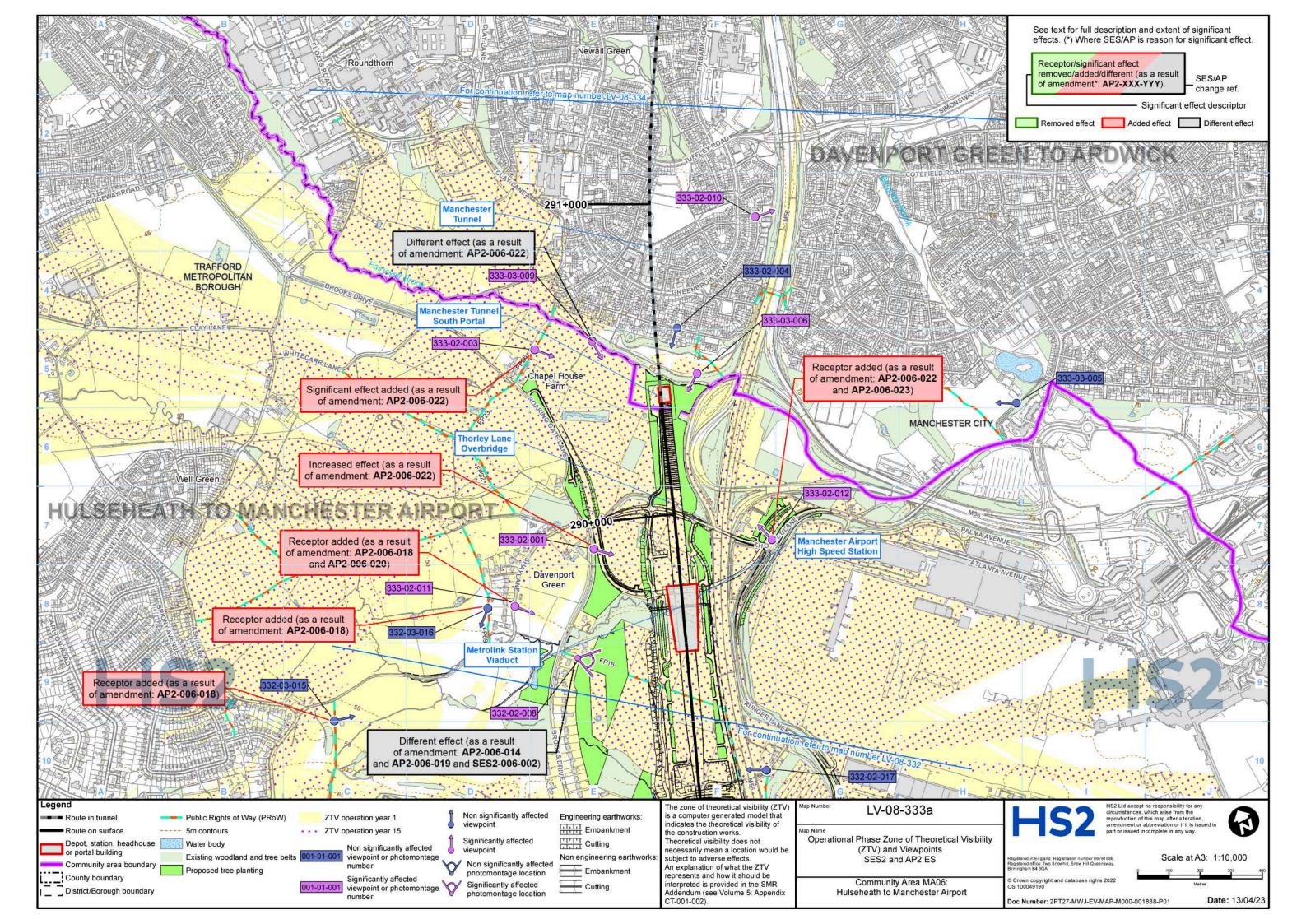


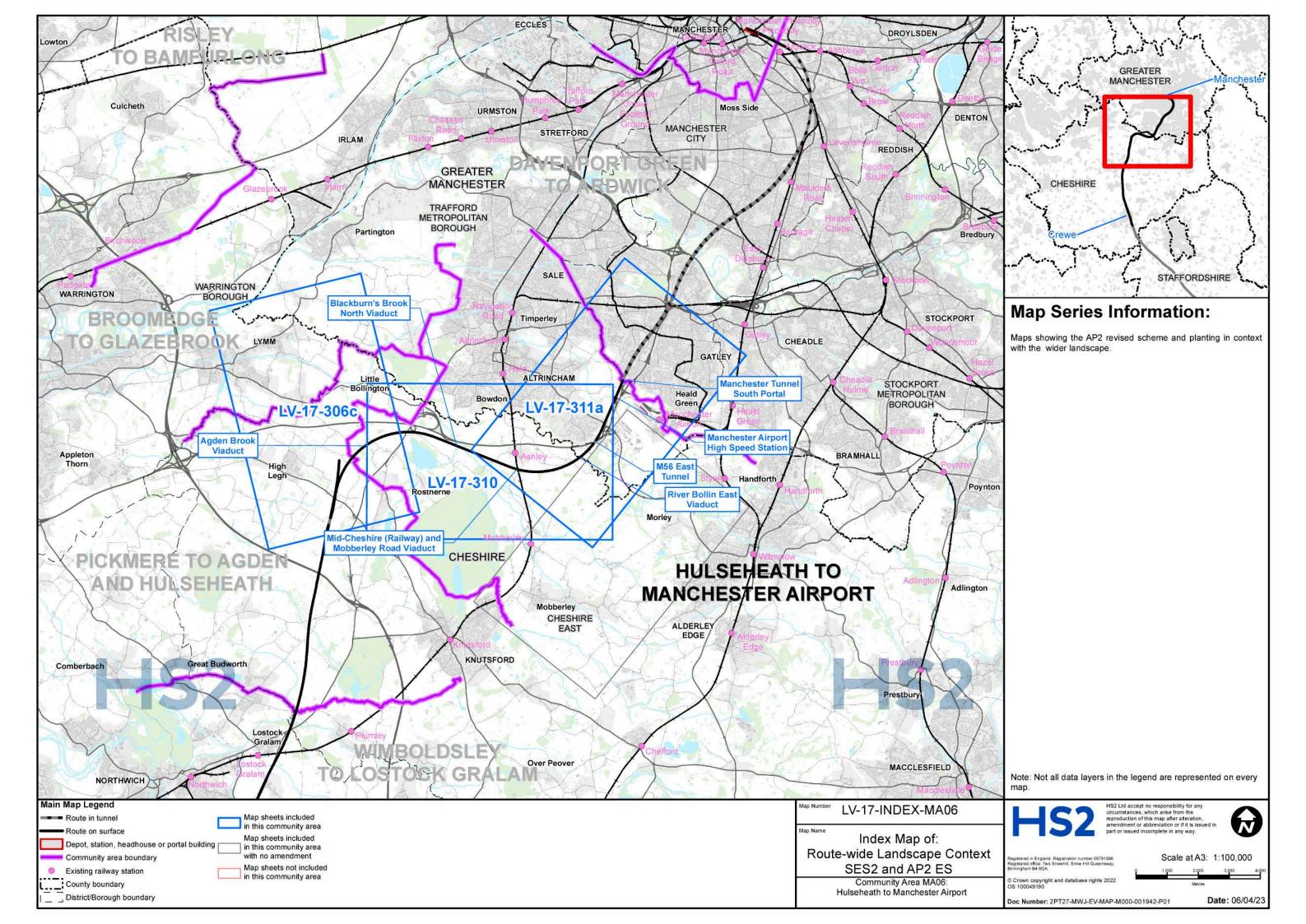


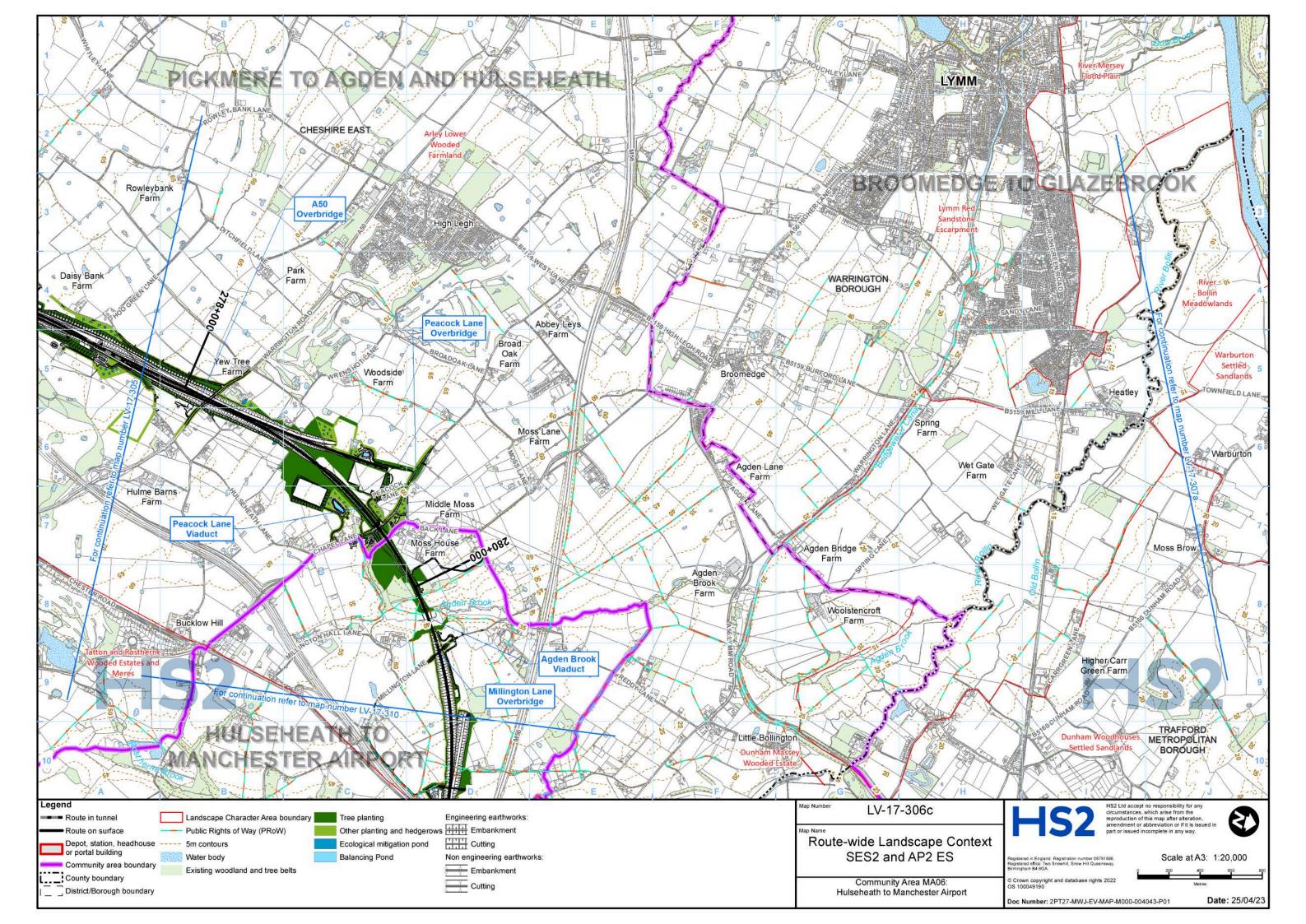


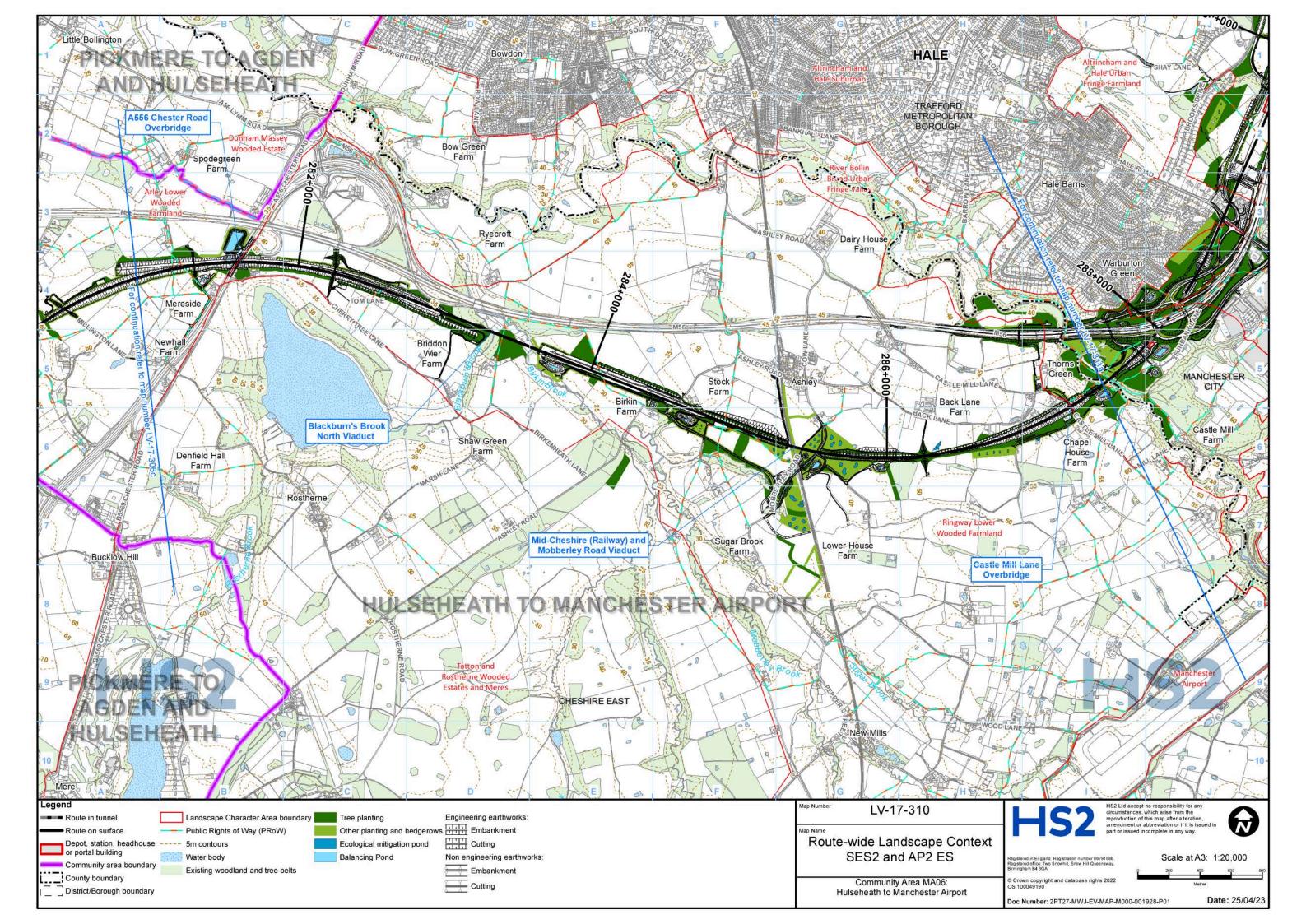


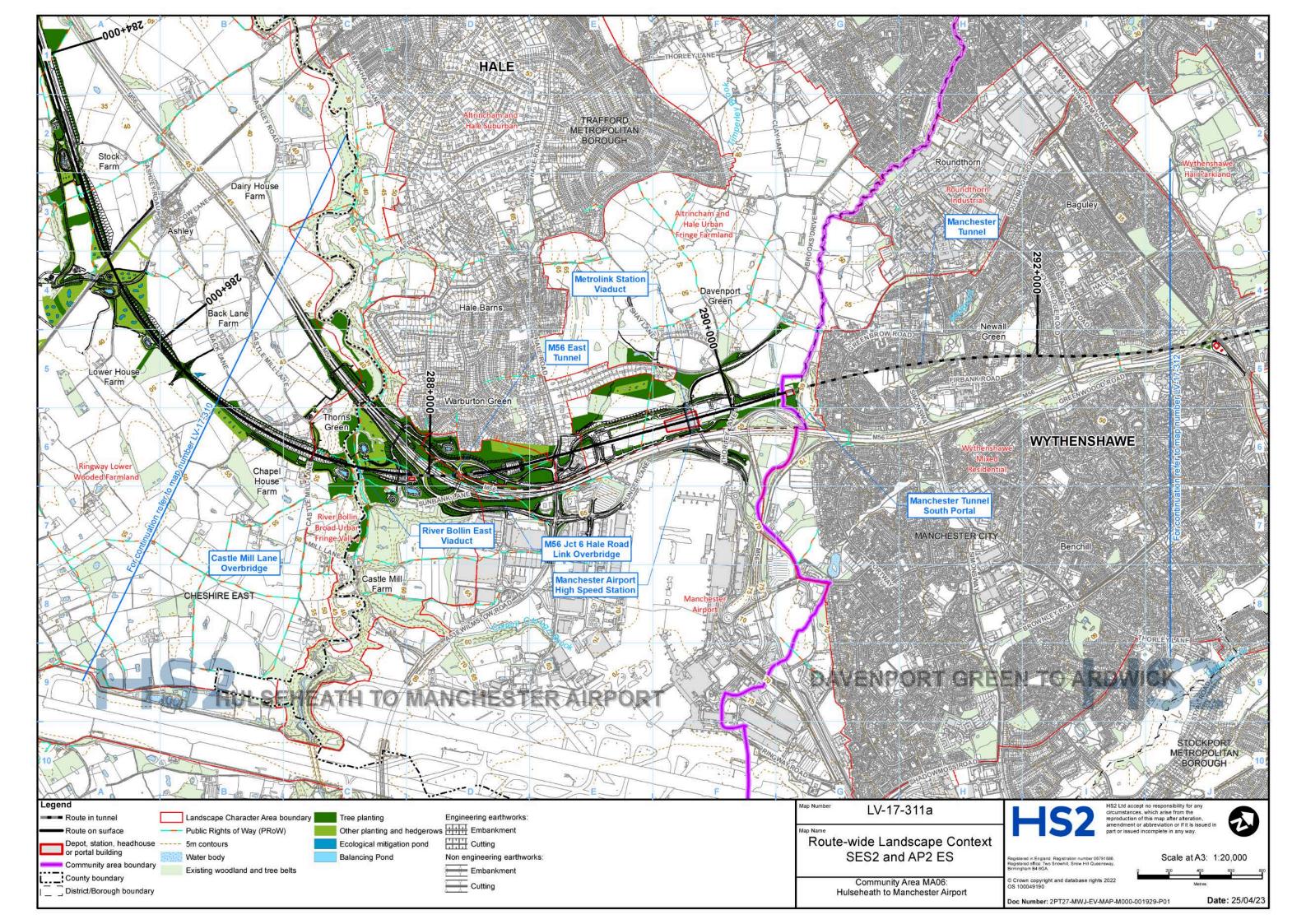














High Speed Rail (Crewe – Manchester)

Supplementary Environmental Statement 2 and Additional Provision 2 Environmental Statement

MA07: Davenport Green to Ardwick

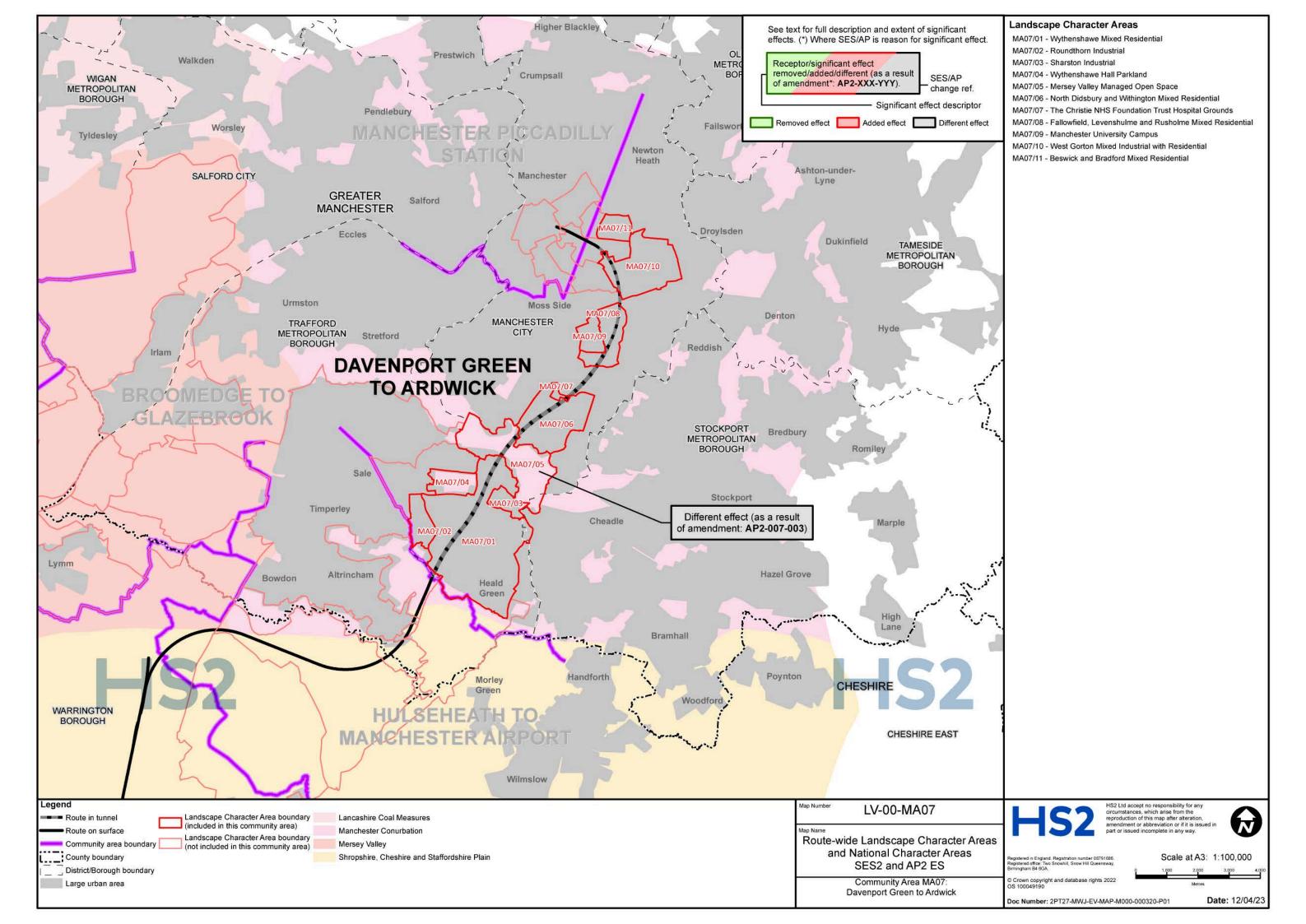
LV-00 – Route-wide Landscape Character Areas and National Character Areas

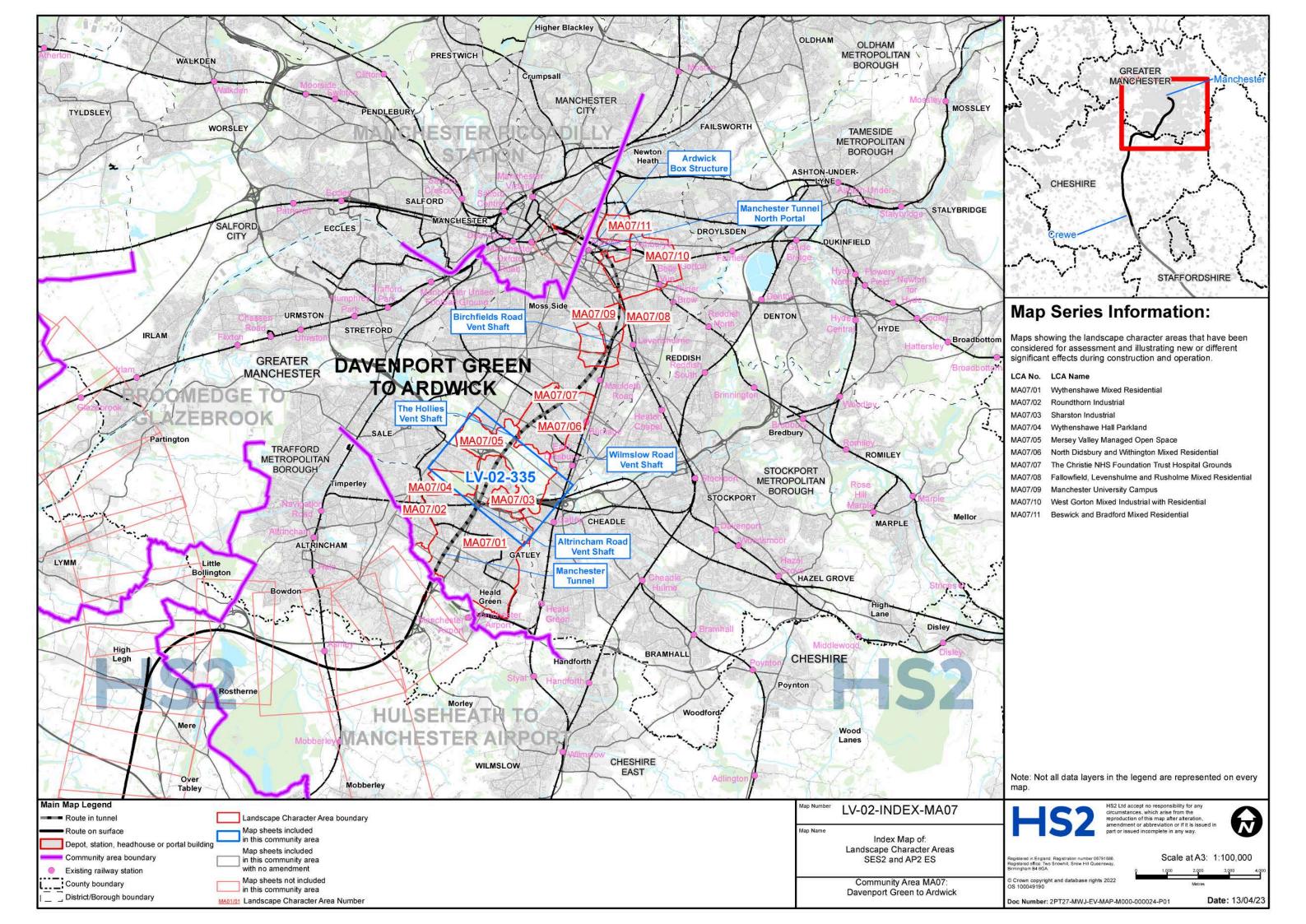
LV-02 – Landscape Character Areas

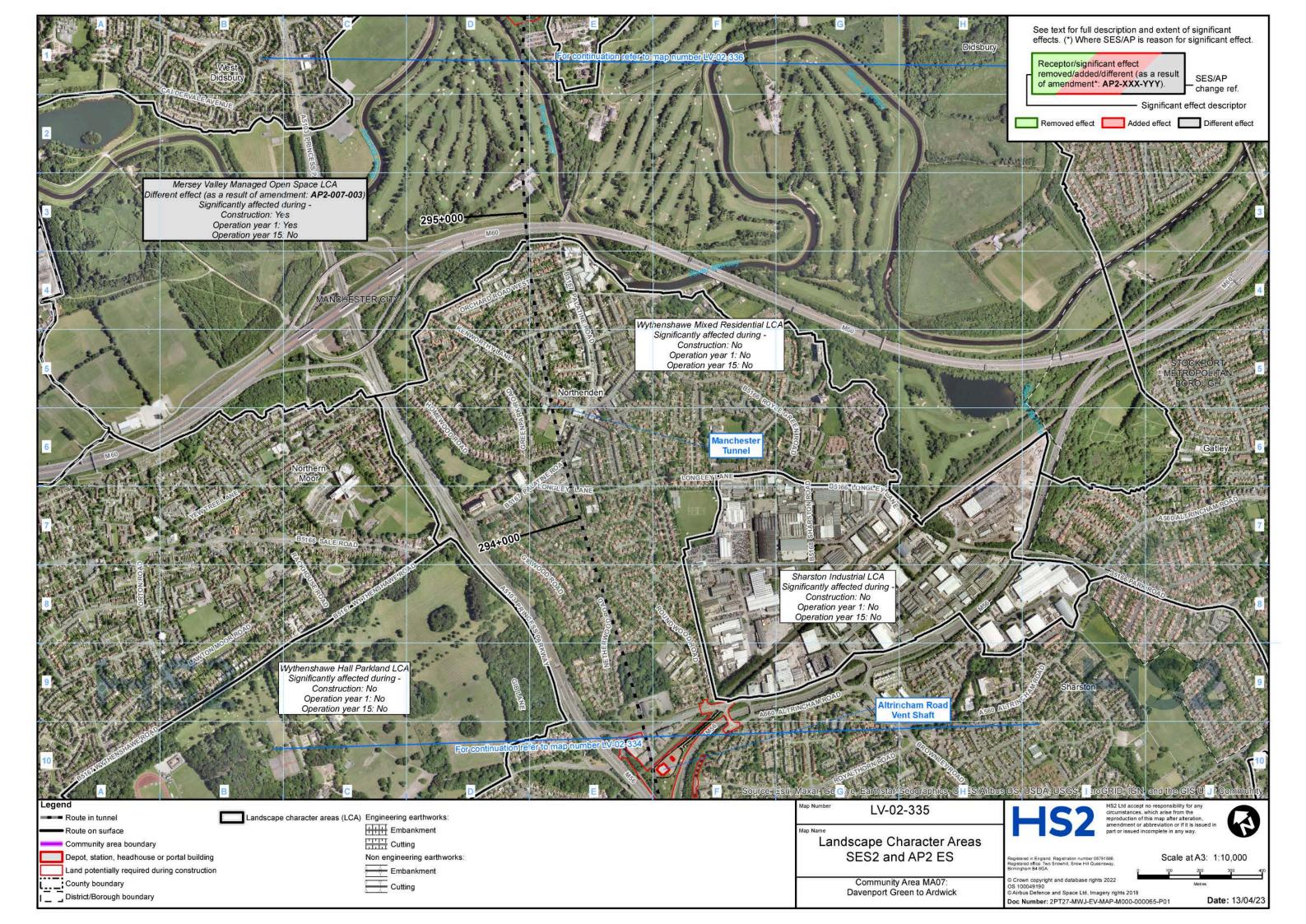
LV-07 – Construction Phase Zone of Theoretical Visibility (ZTV) and Viewpoints

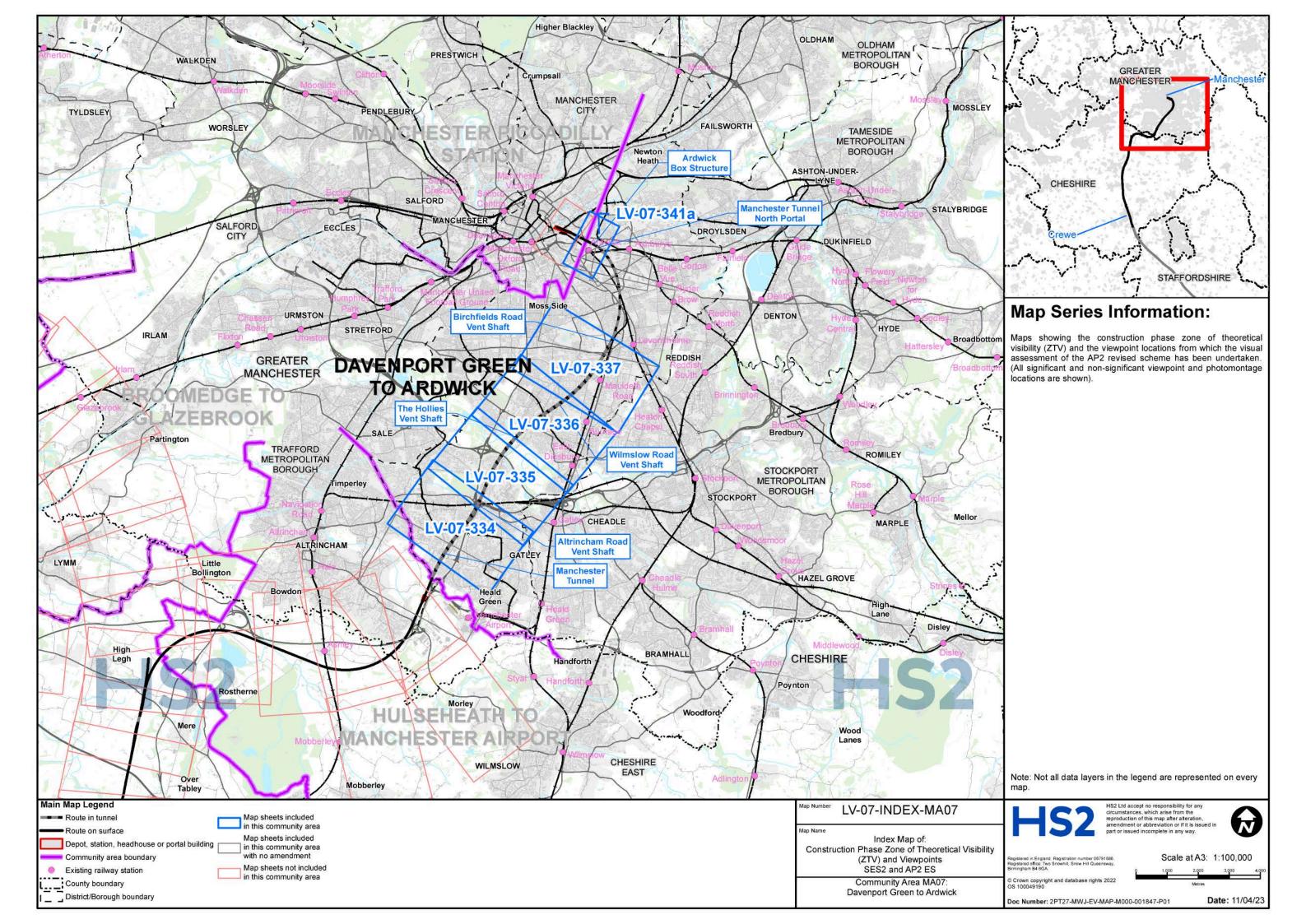
LV-08 – Operational Phase Zone of Theoretical Visibility (ZTV) and Viewpoints

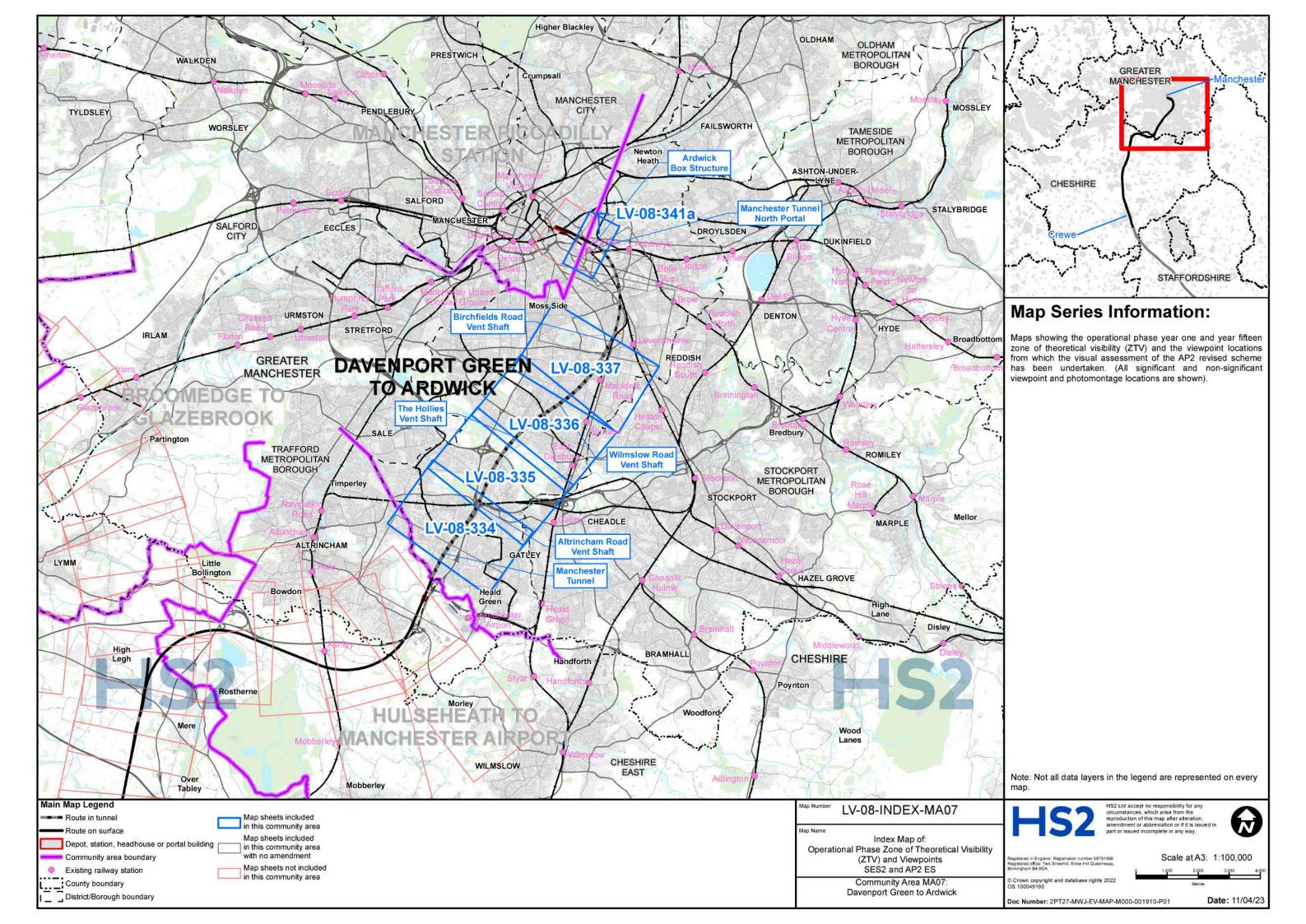
LV-17 – Route-wide Landscape Context

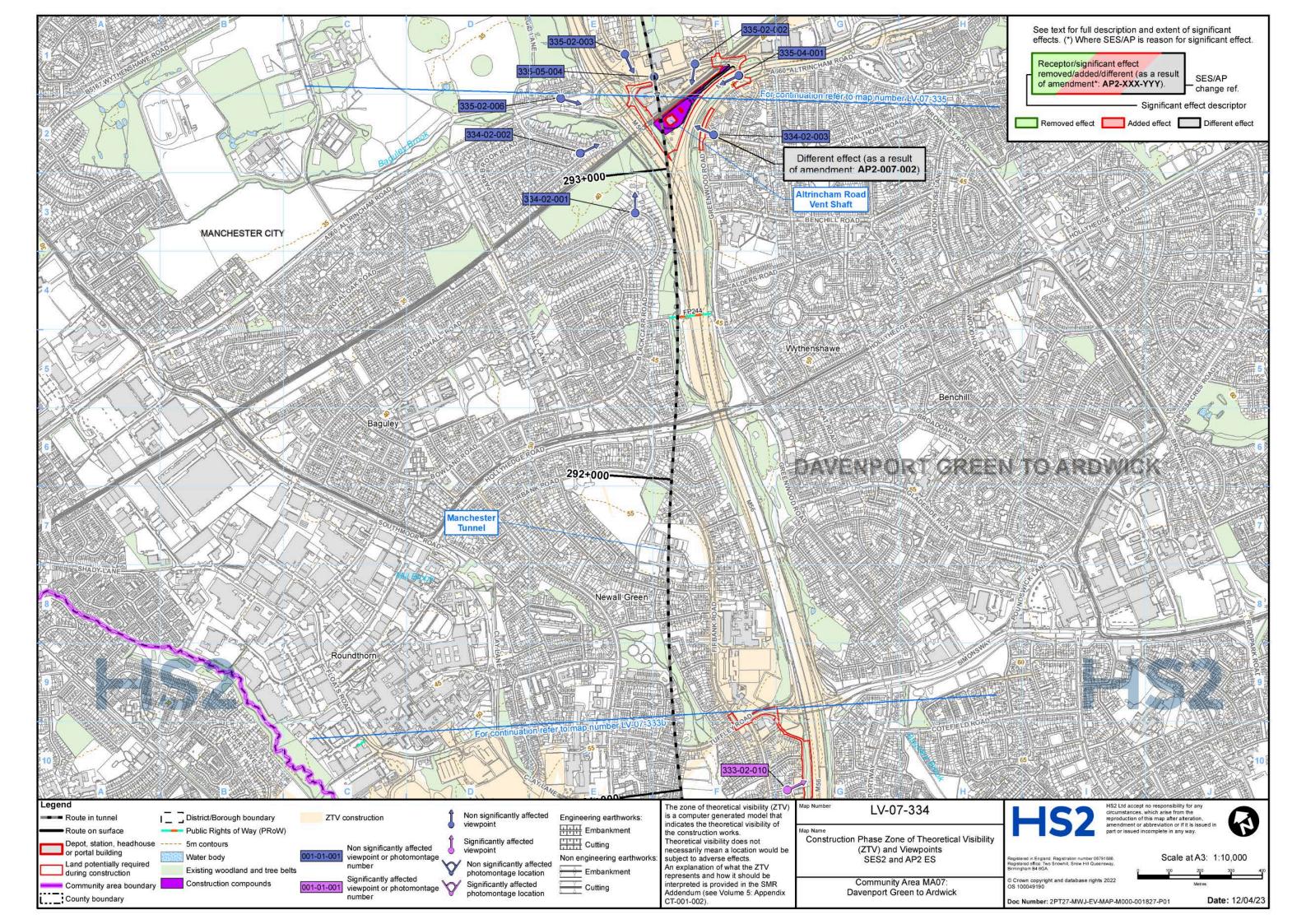


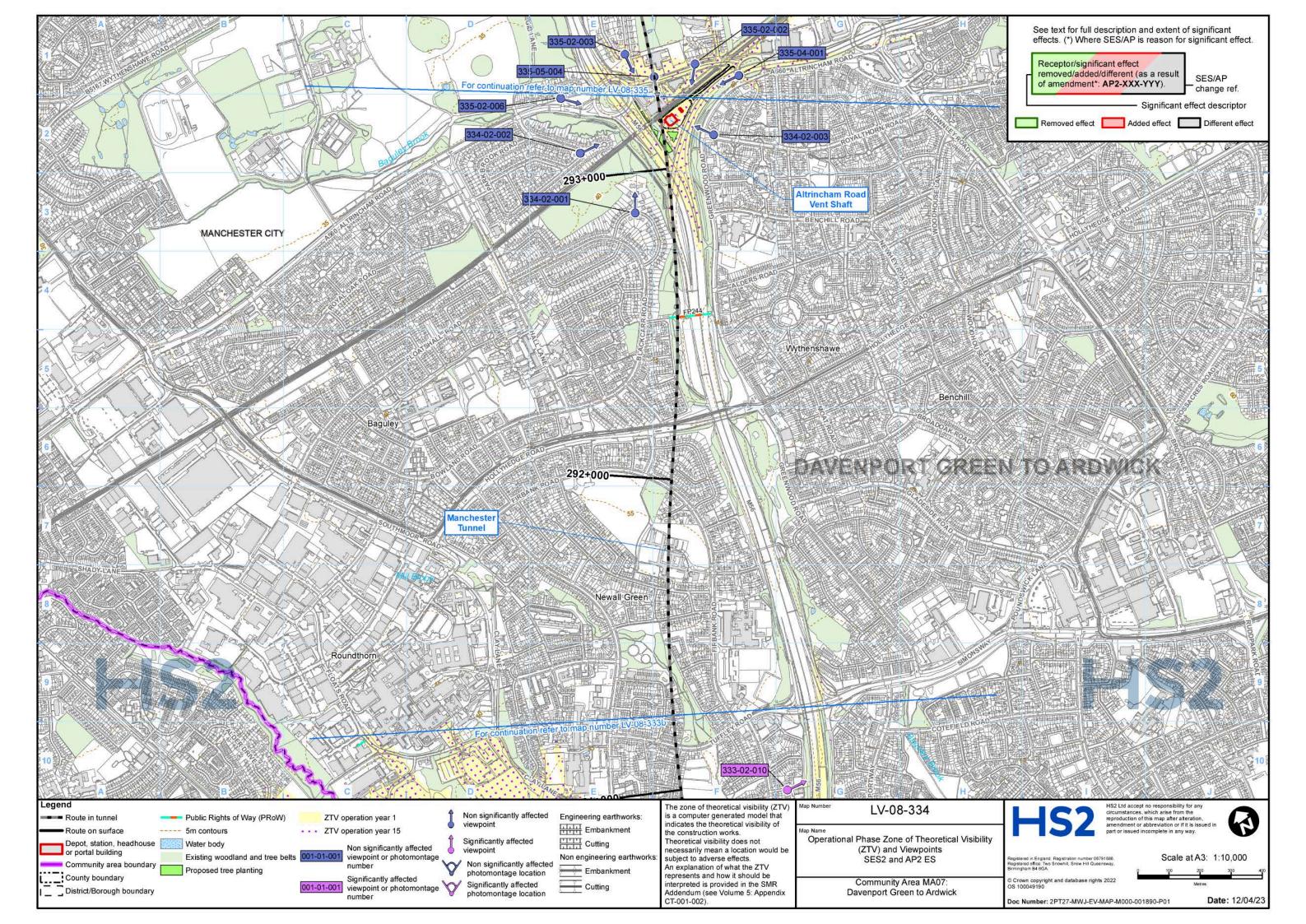


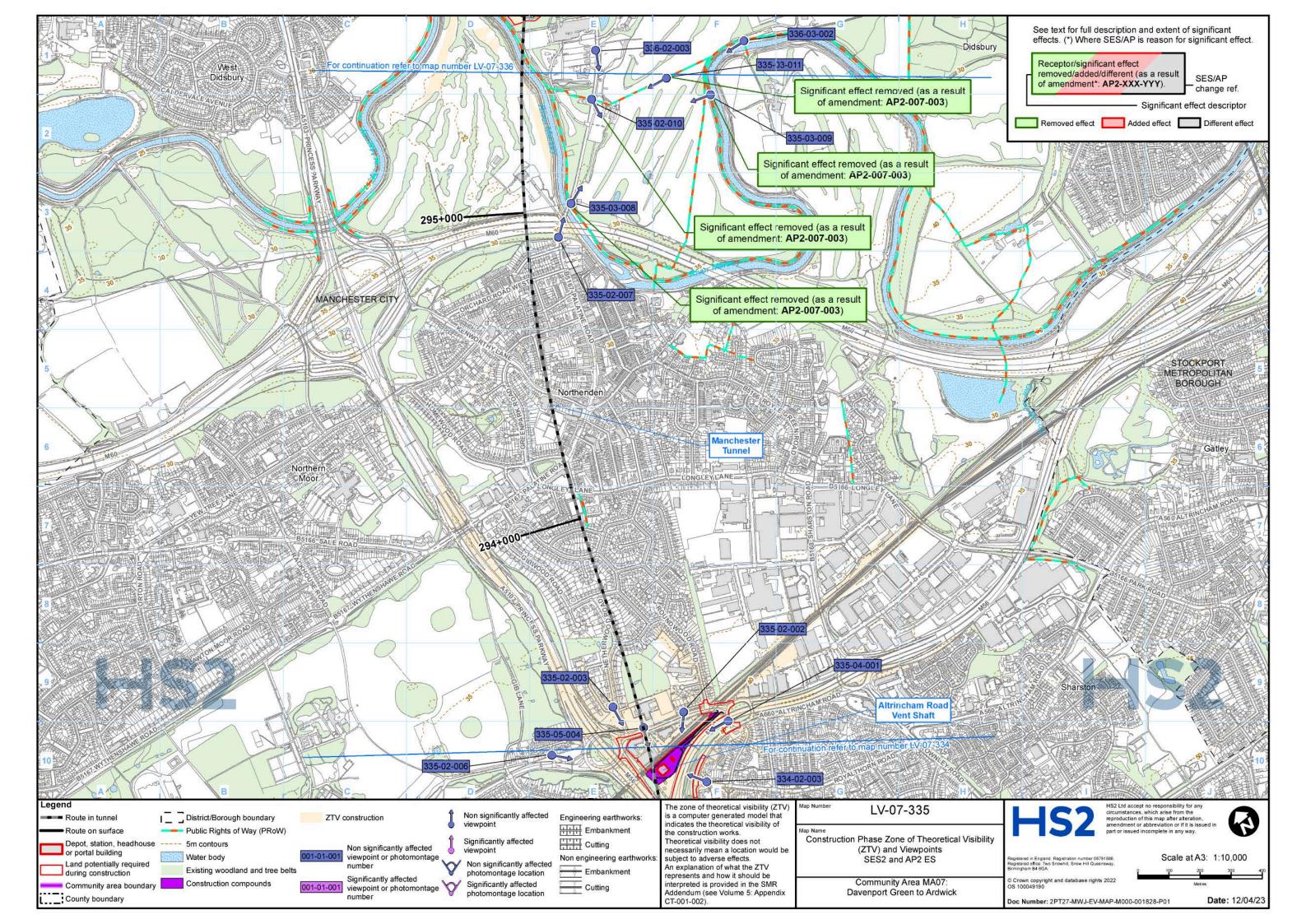


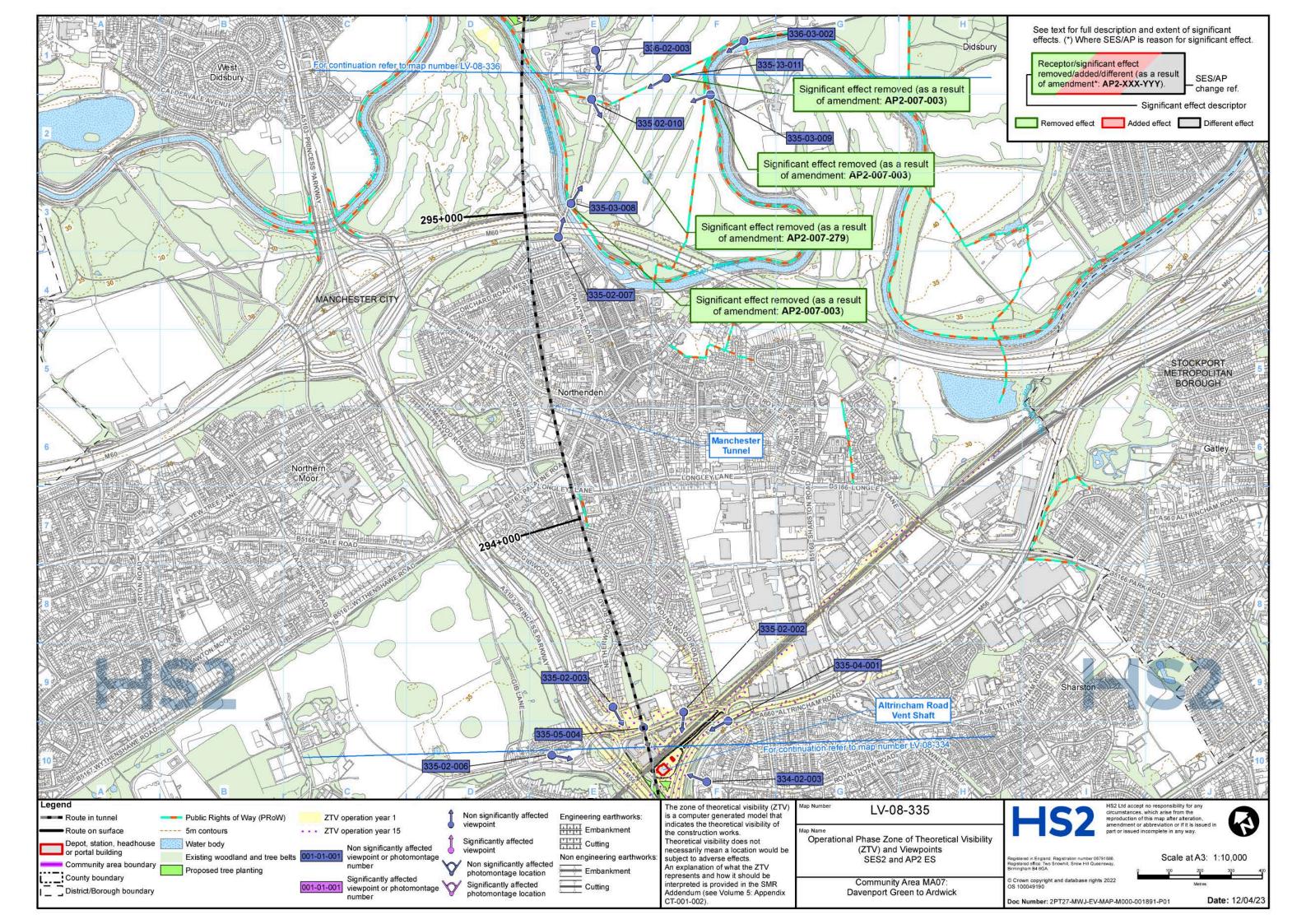


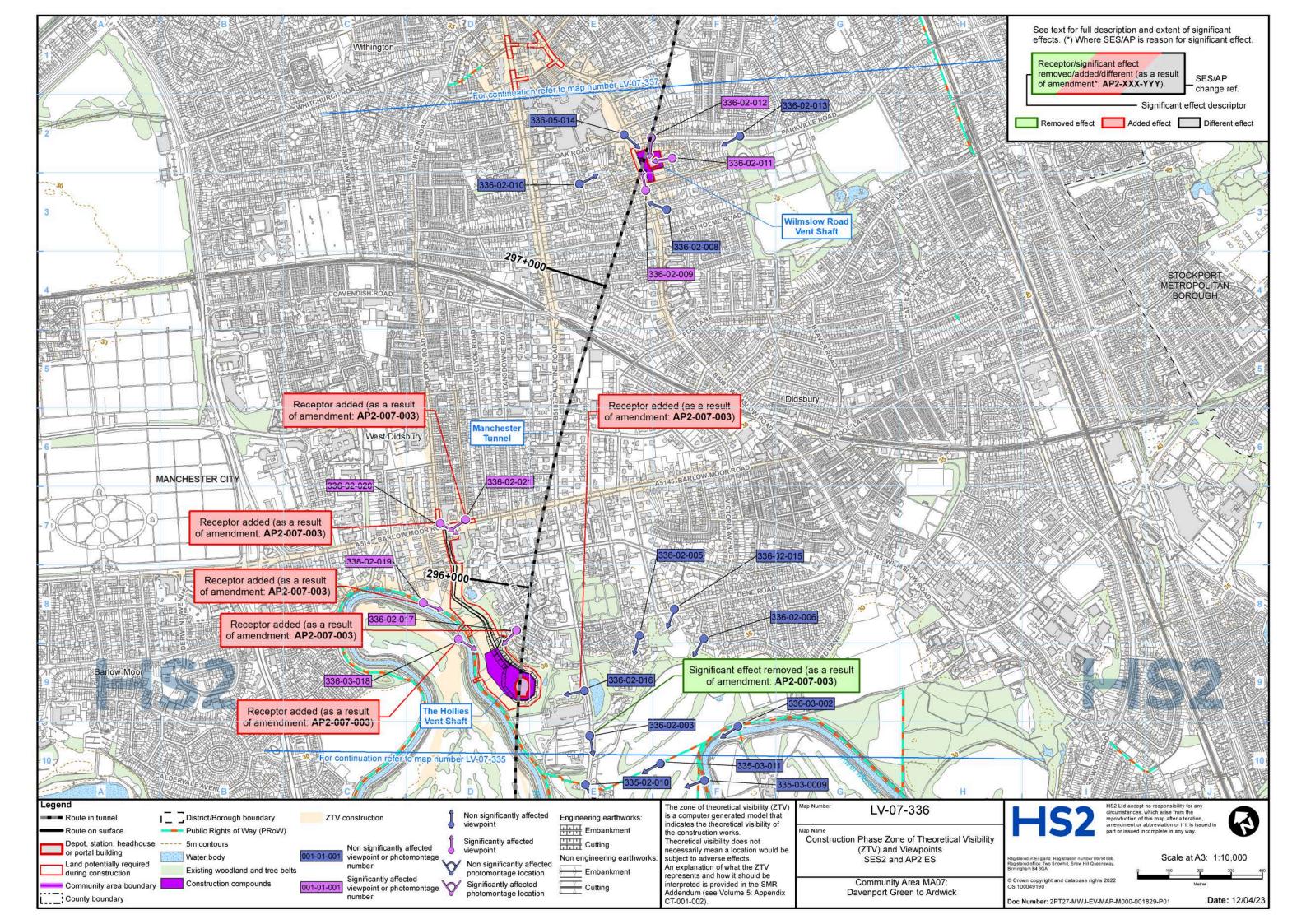


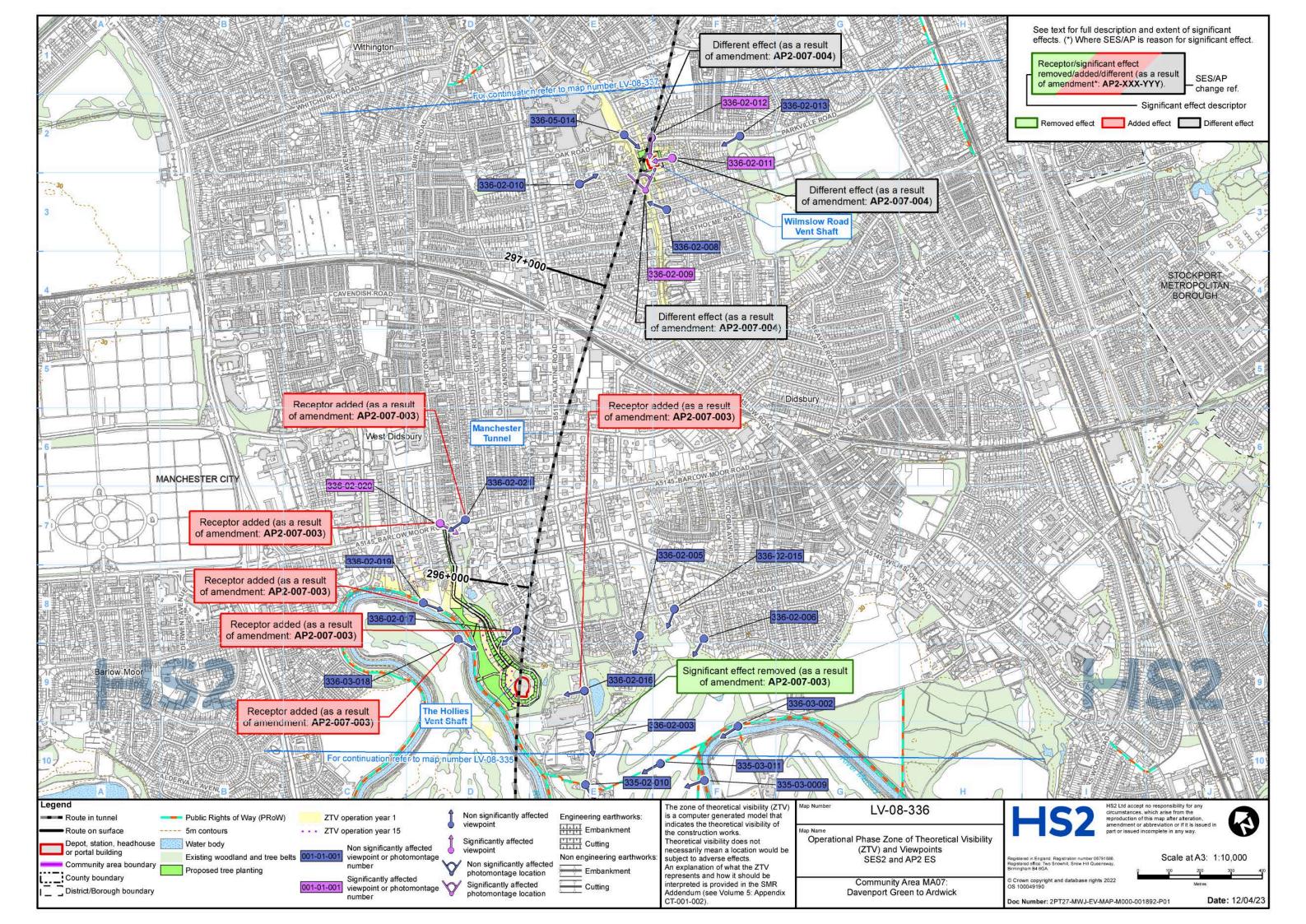


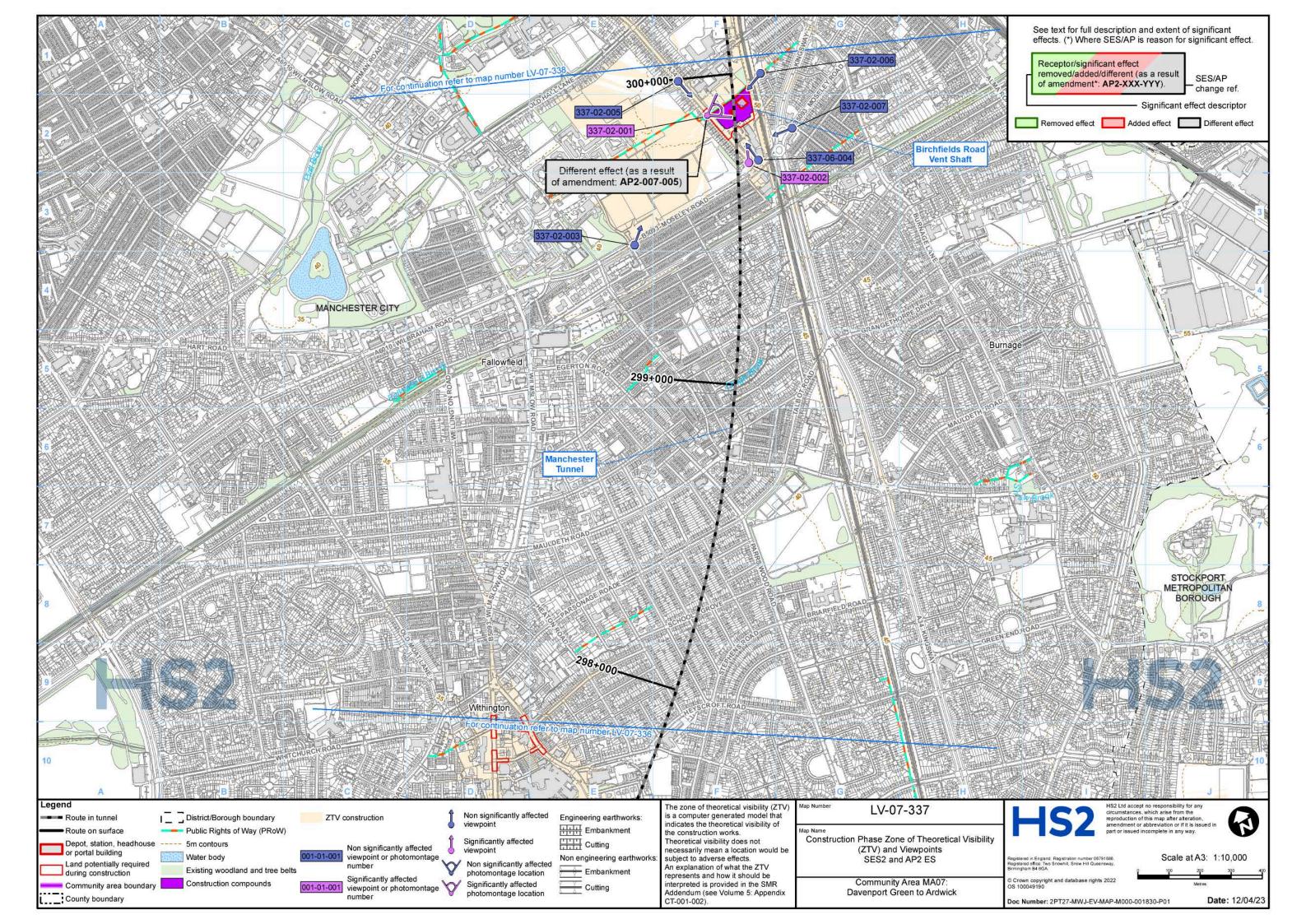


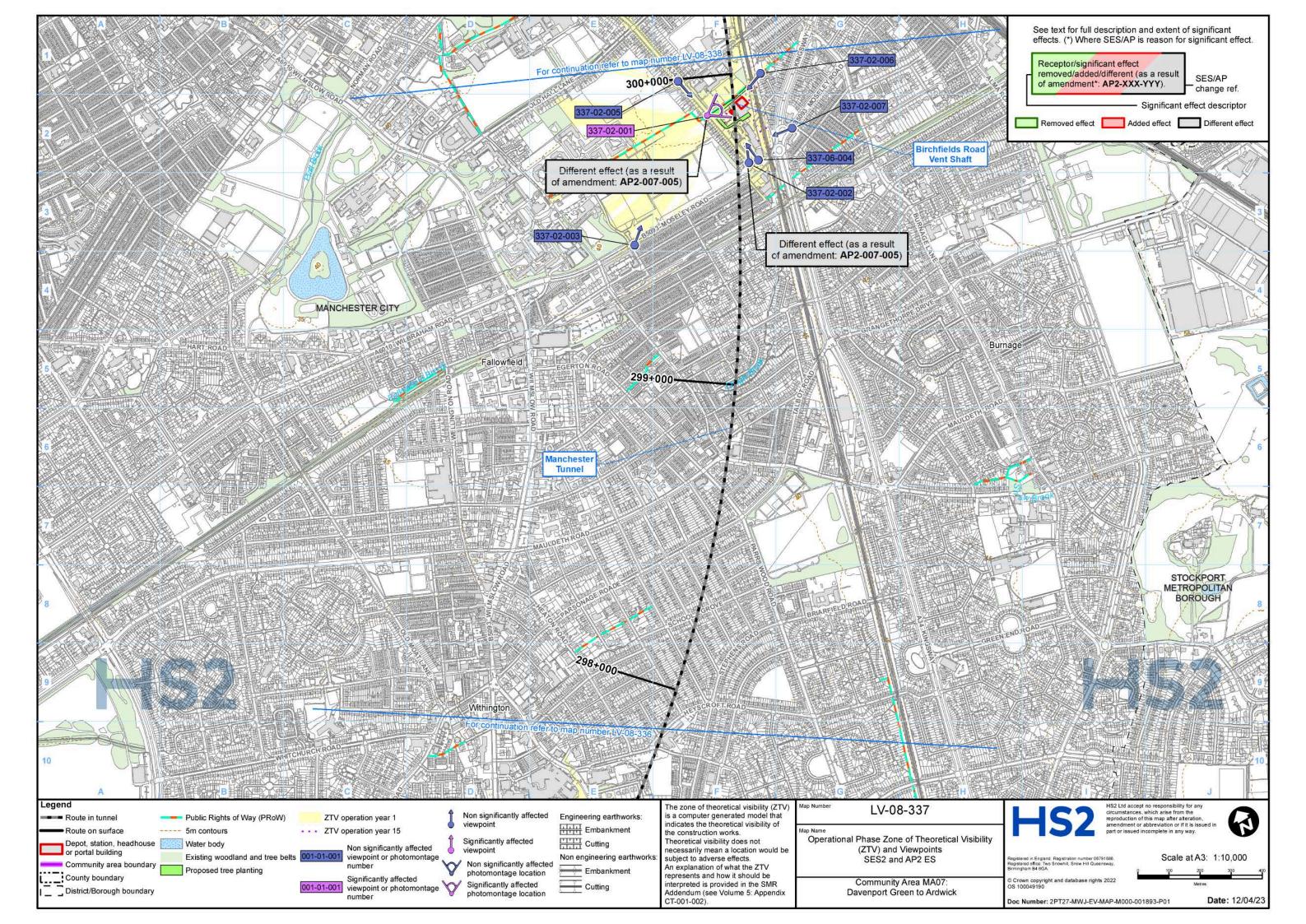


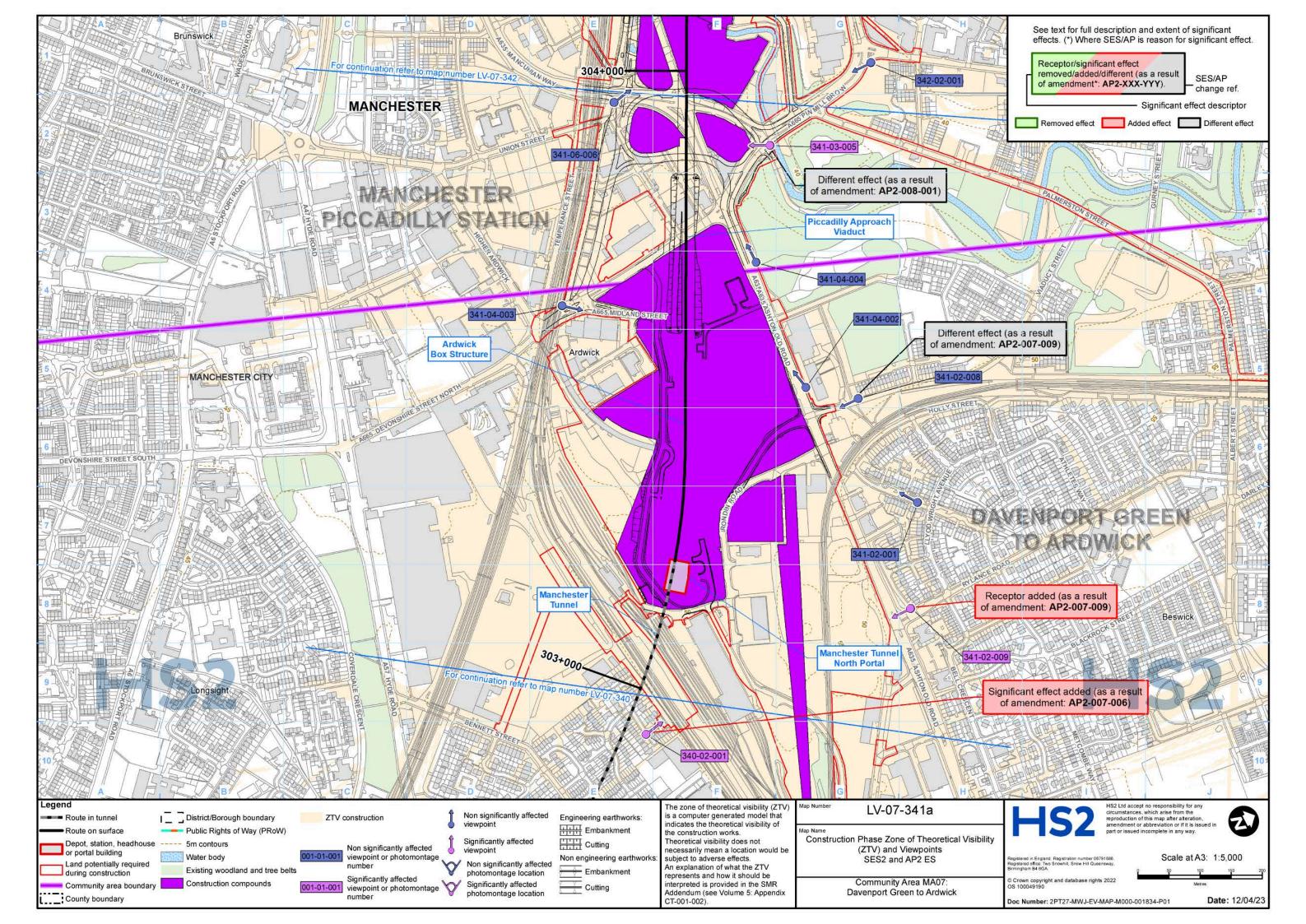


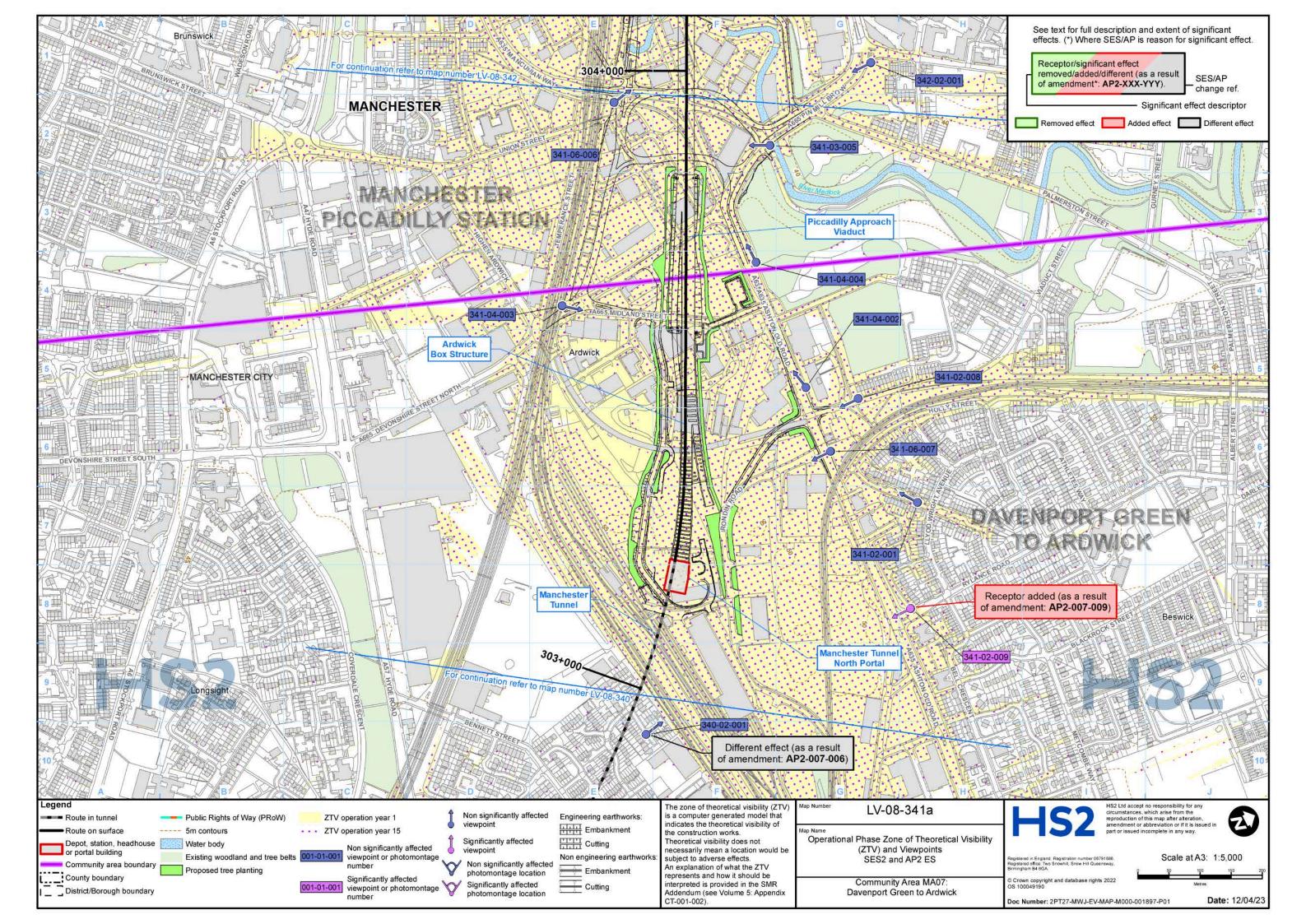


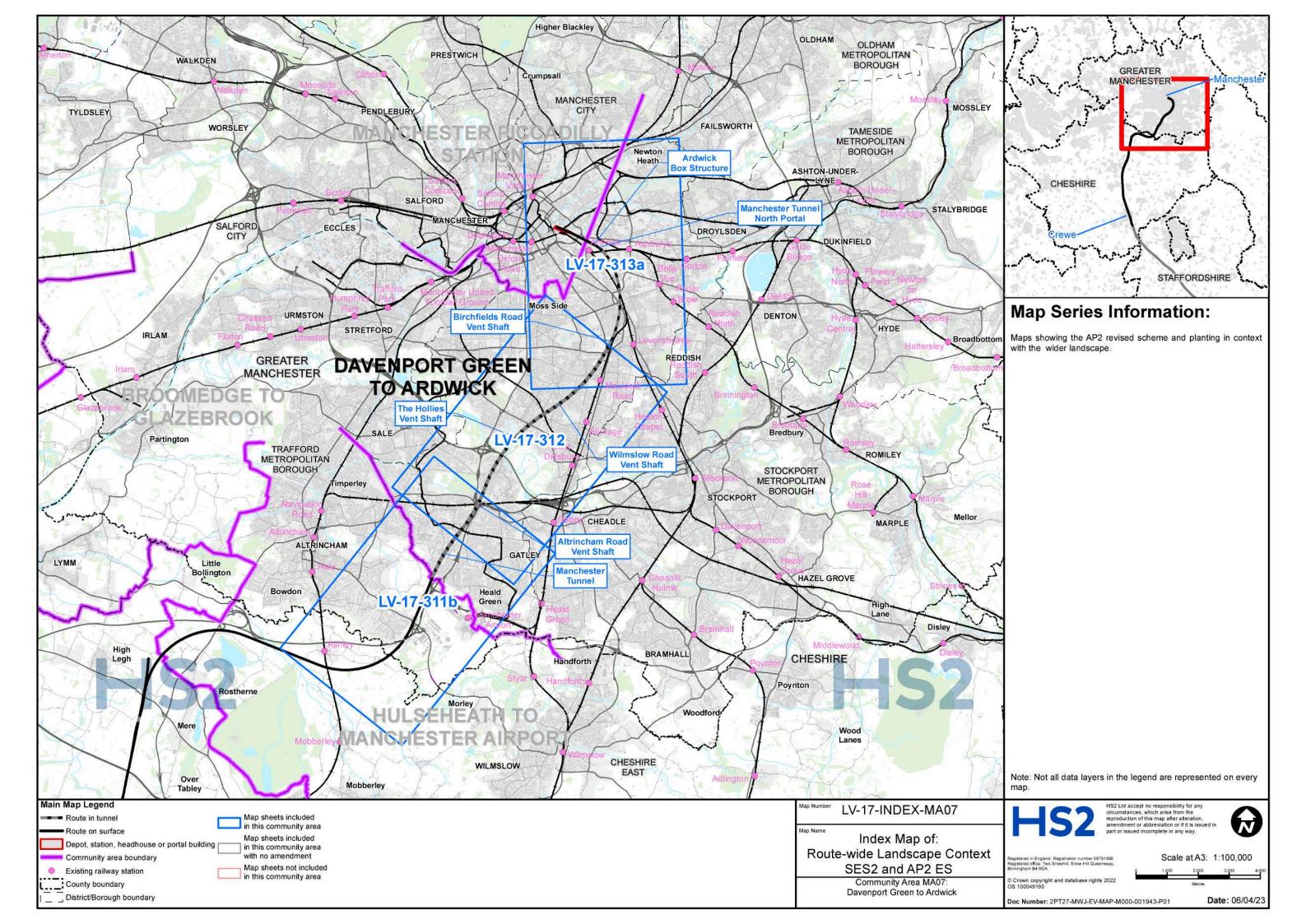


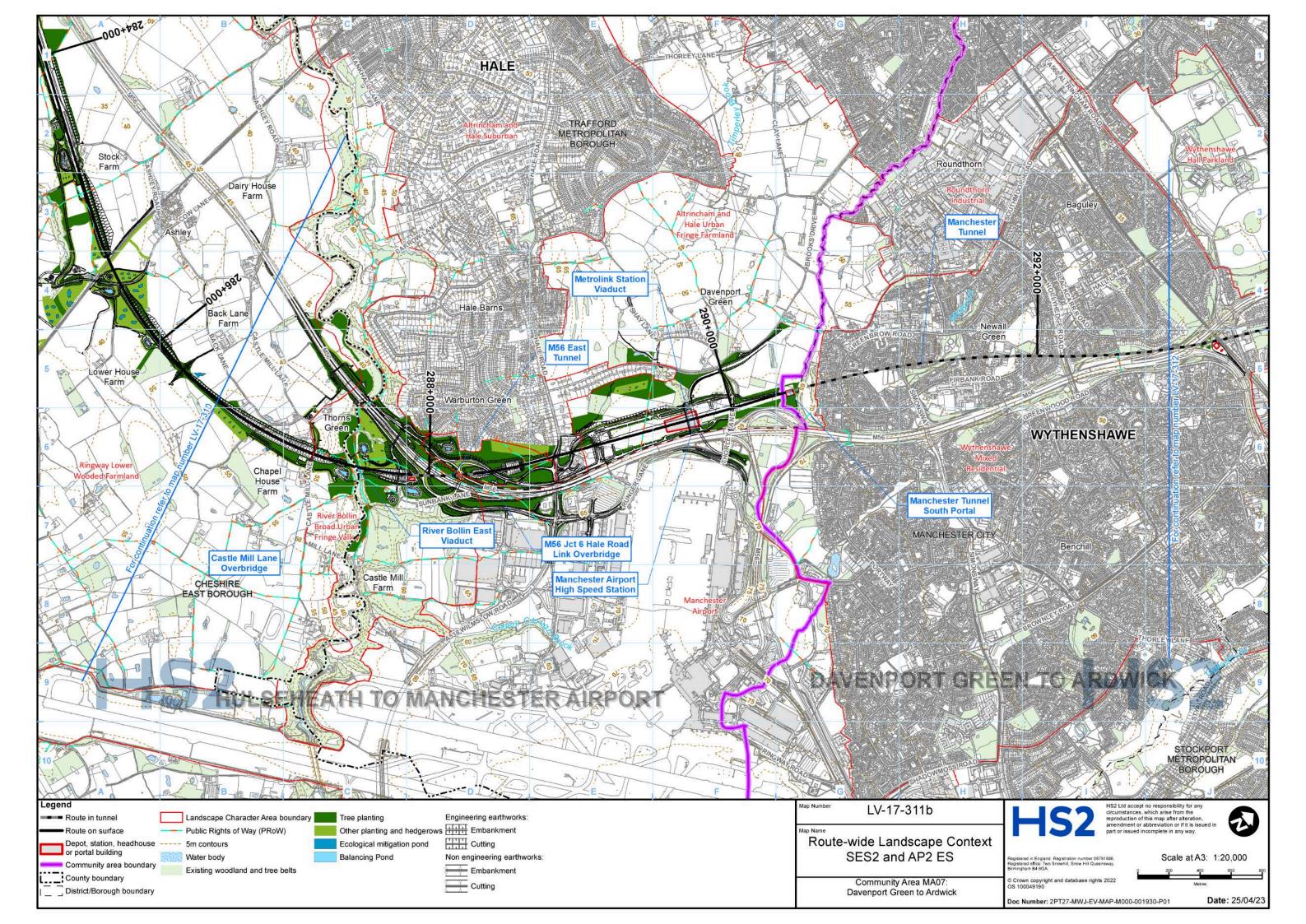


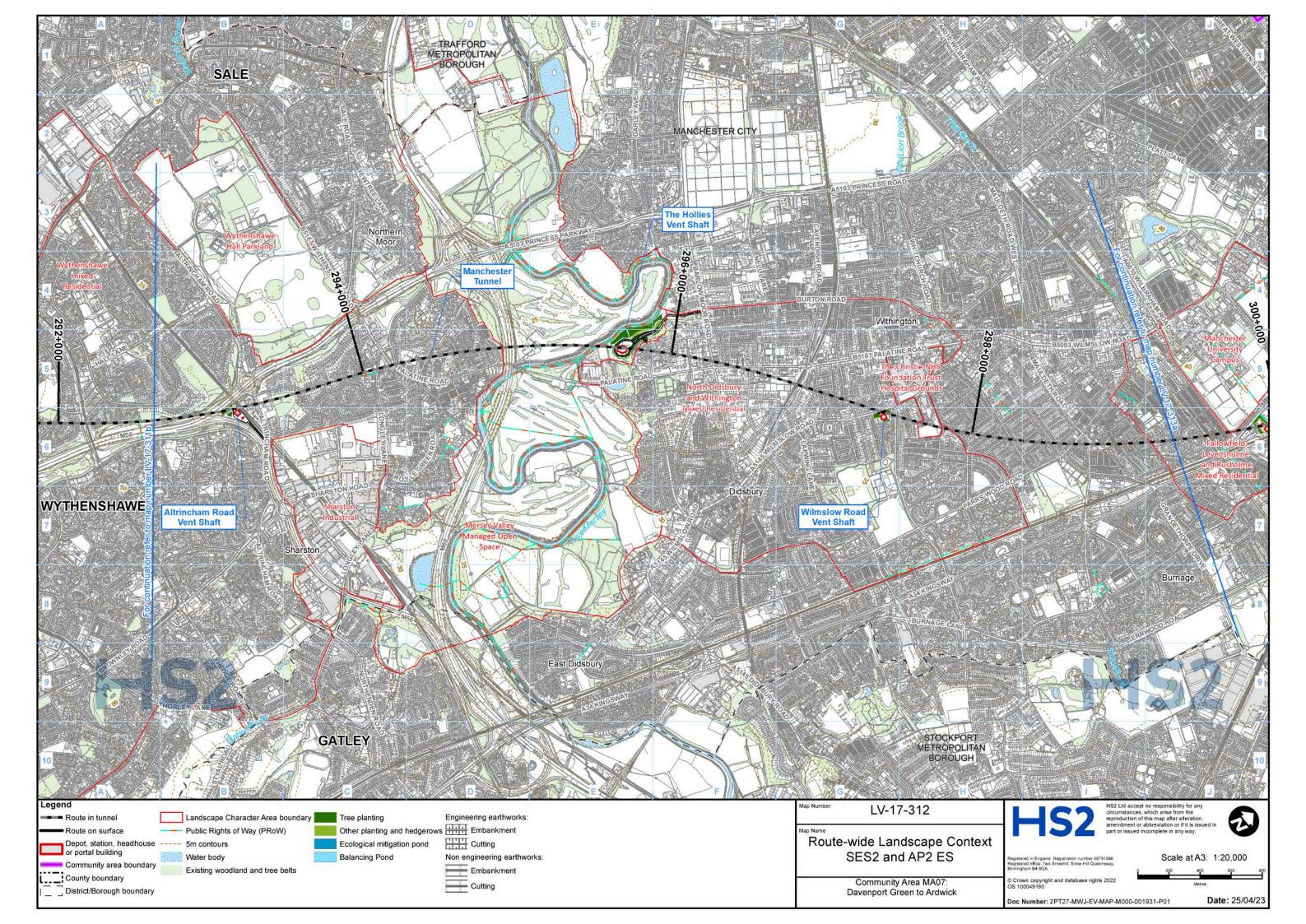


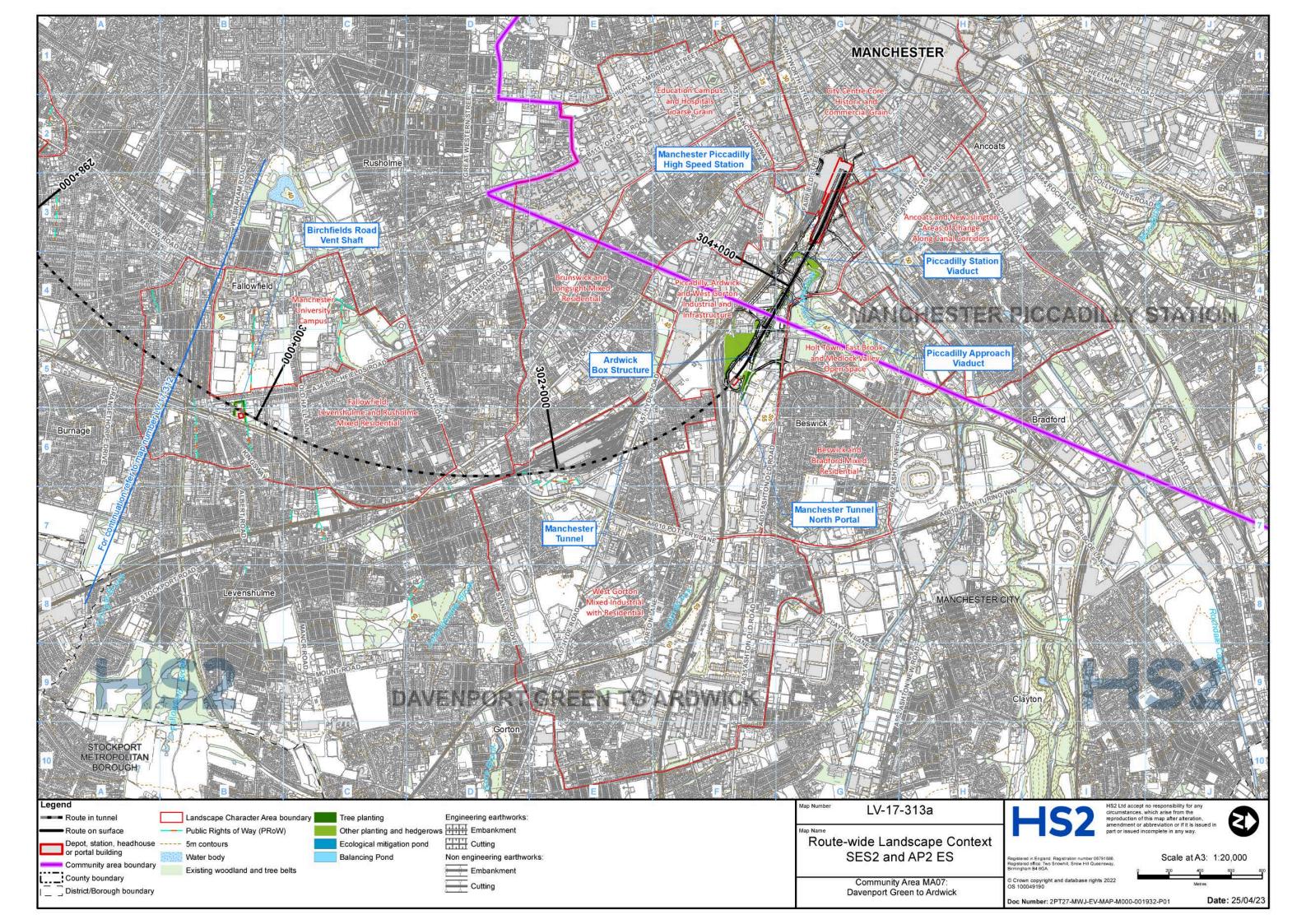












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High Speed Rail (Crewe - Manchester)

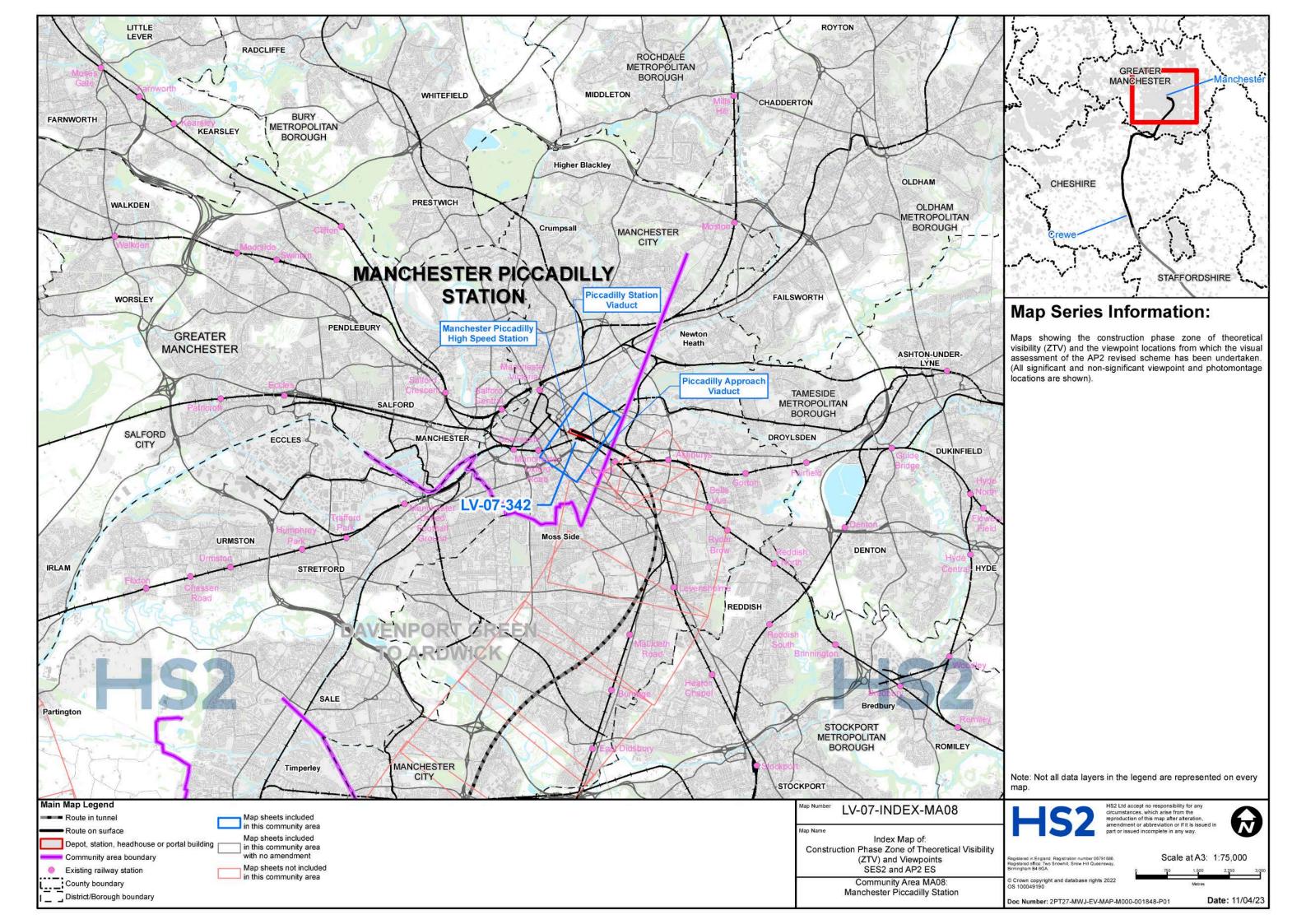
Supplementary Environmental Statement 2 and Additional Provision 2 Environmental Statement

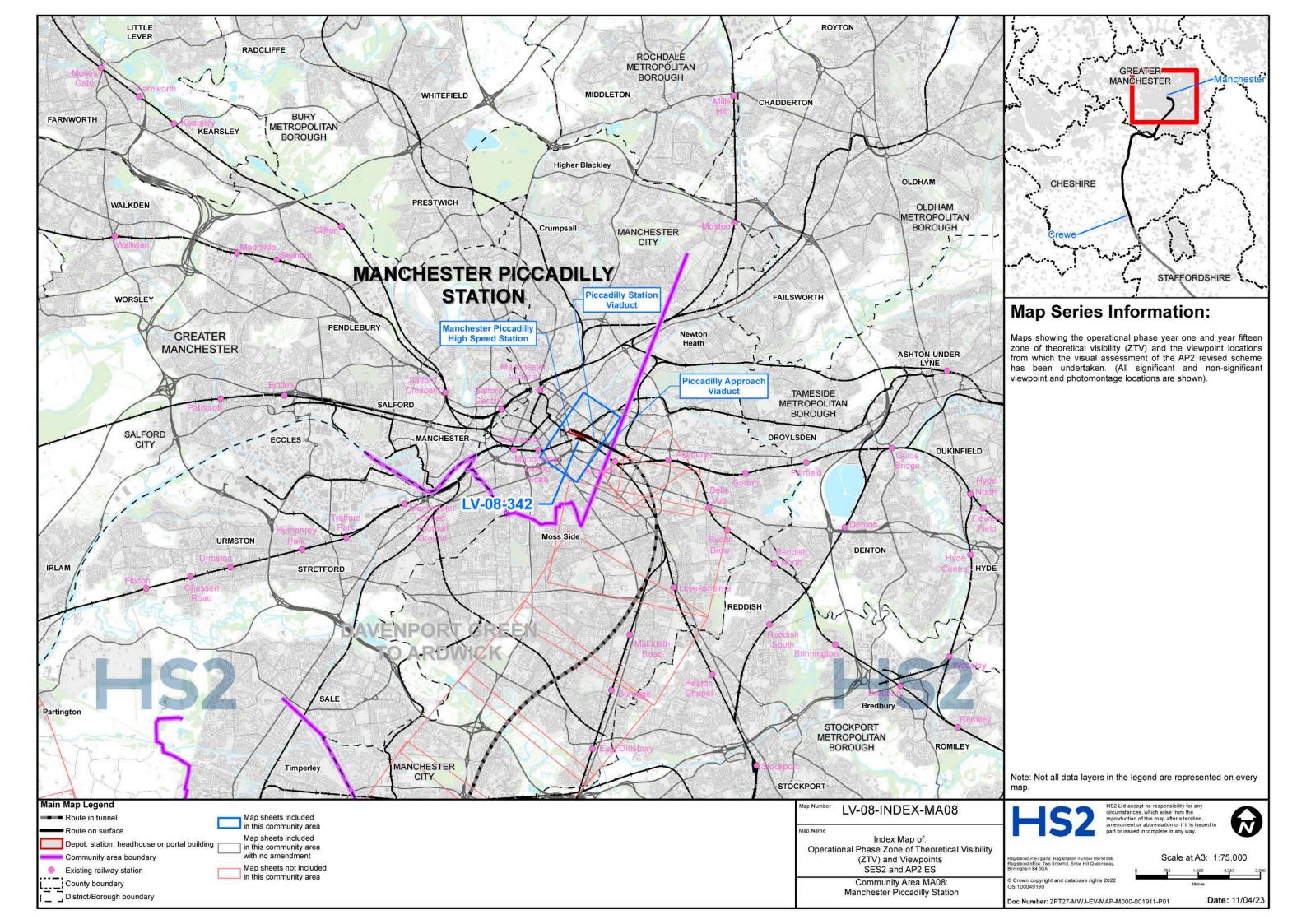
MA08: Manchester Piccadilly Station

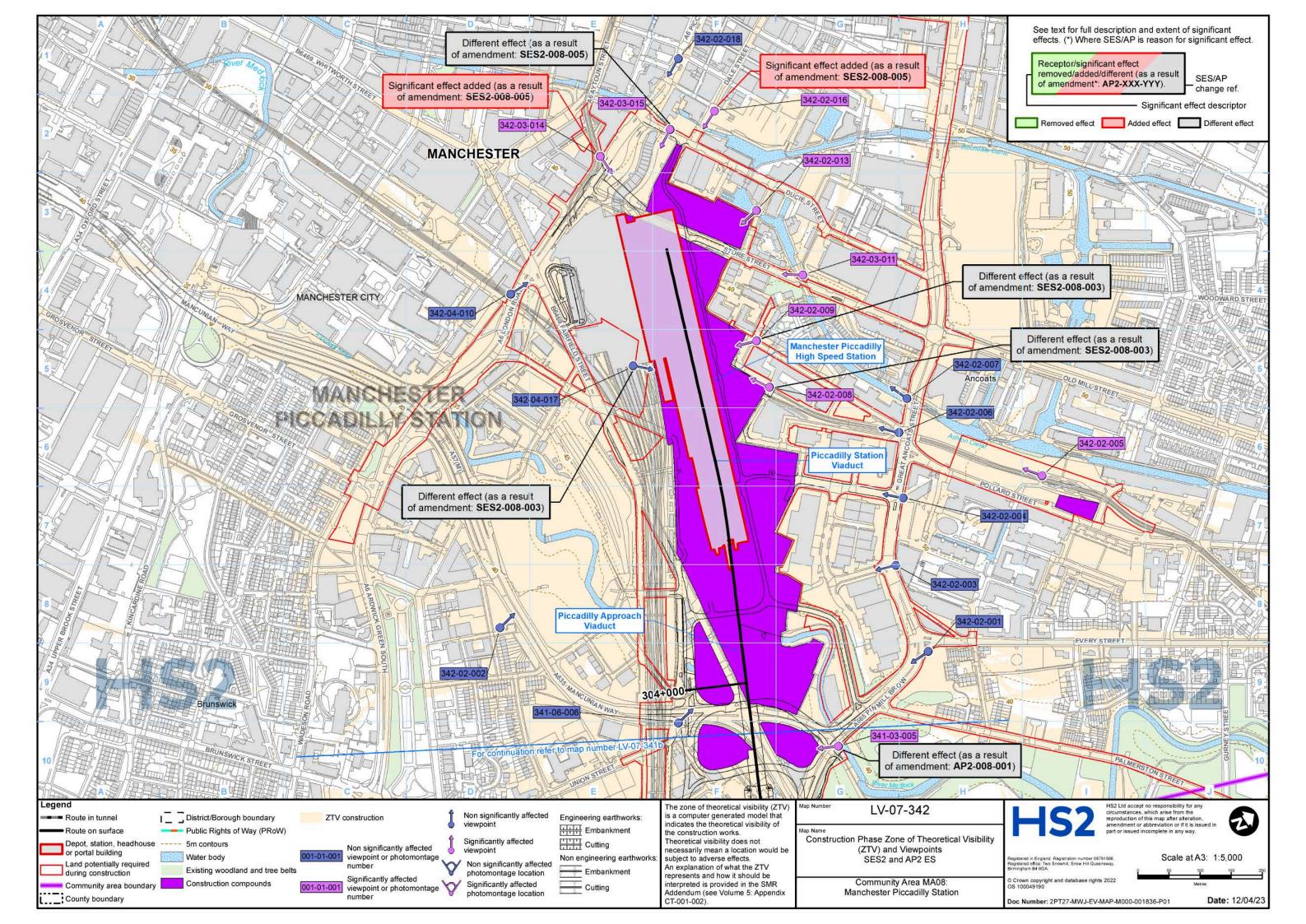
LV-07 – Construction Phase Zone of Theoretical Visibility (ZTV) and Viewpoints

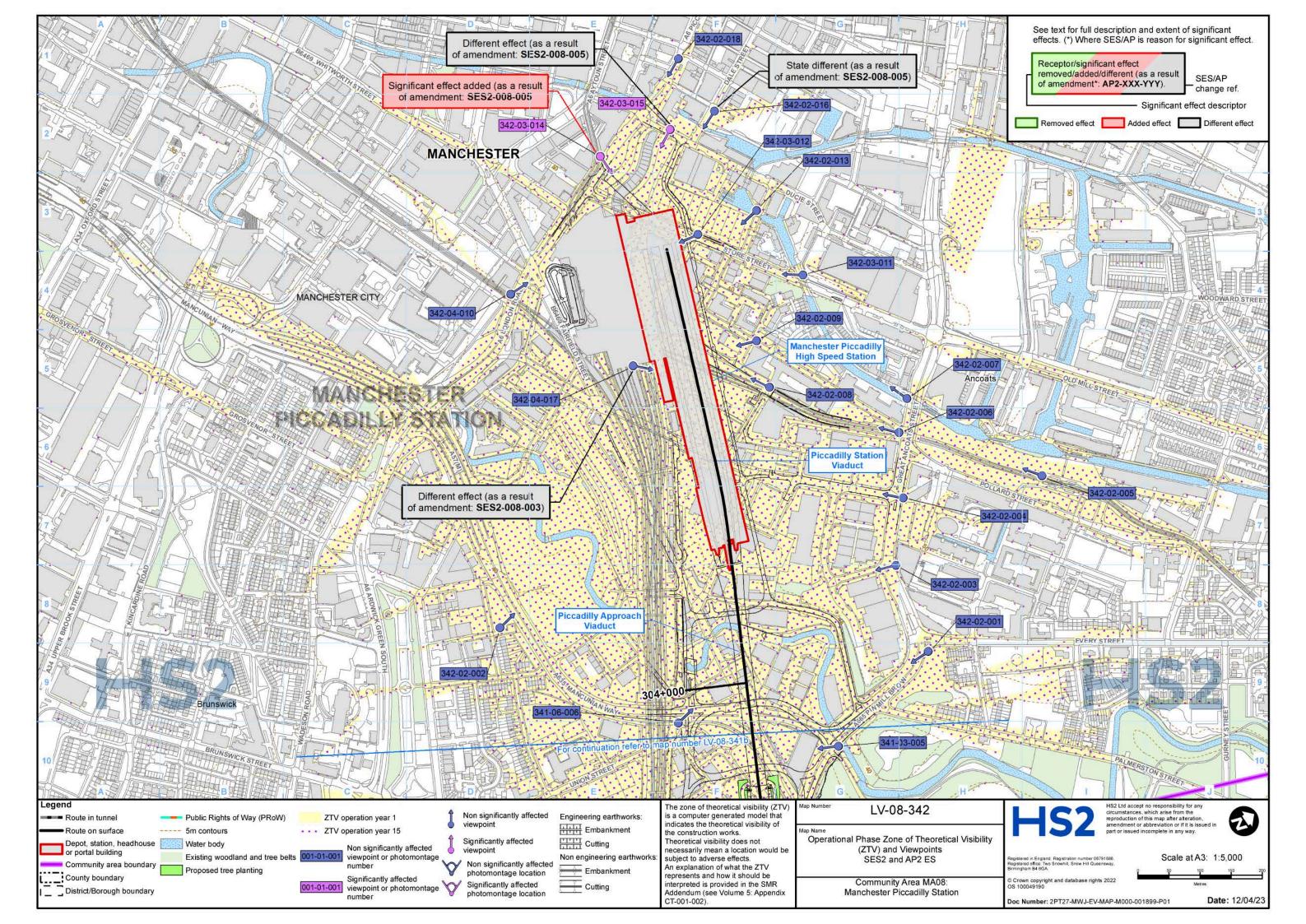
LV-08 – Operational Phase Zone of Theoretical Visibility (ZTV) and Viewpoints

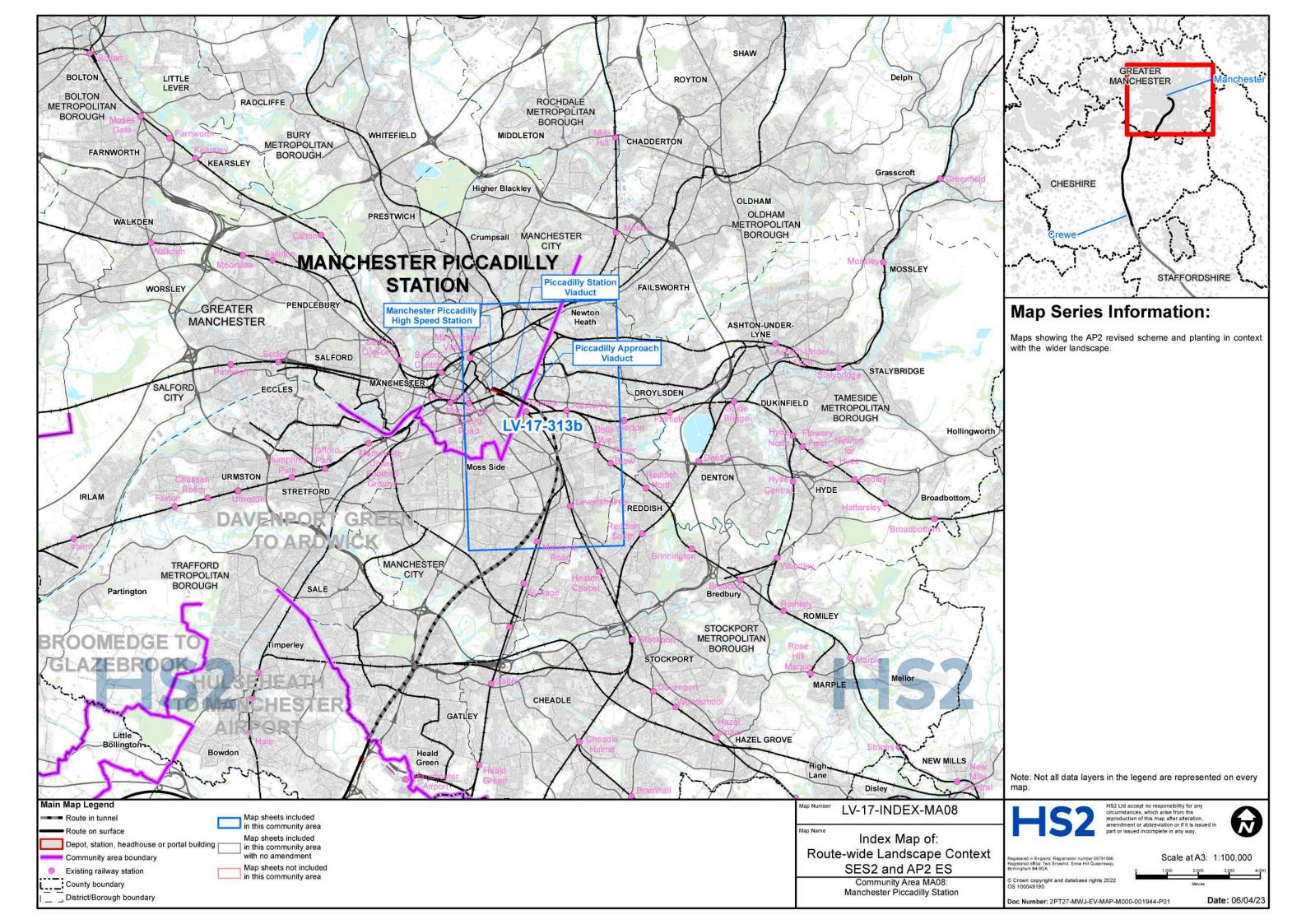
LV-17 – Route-wide Landscape Context

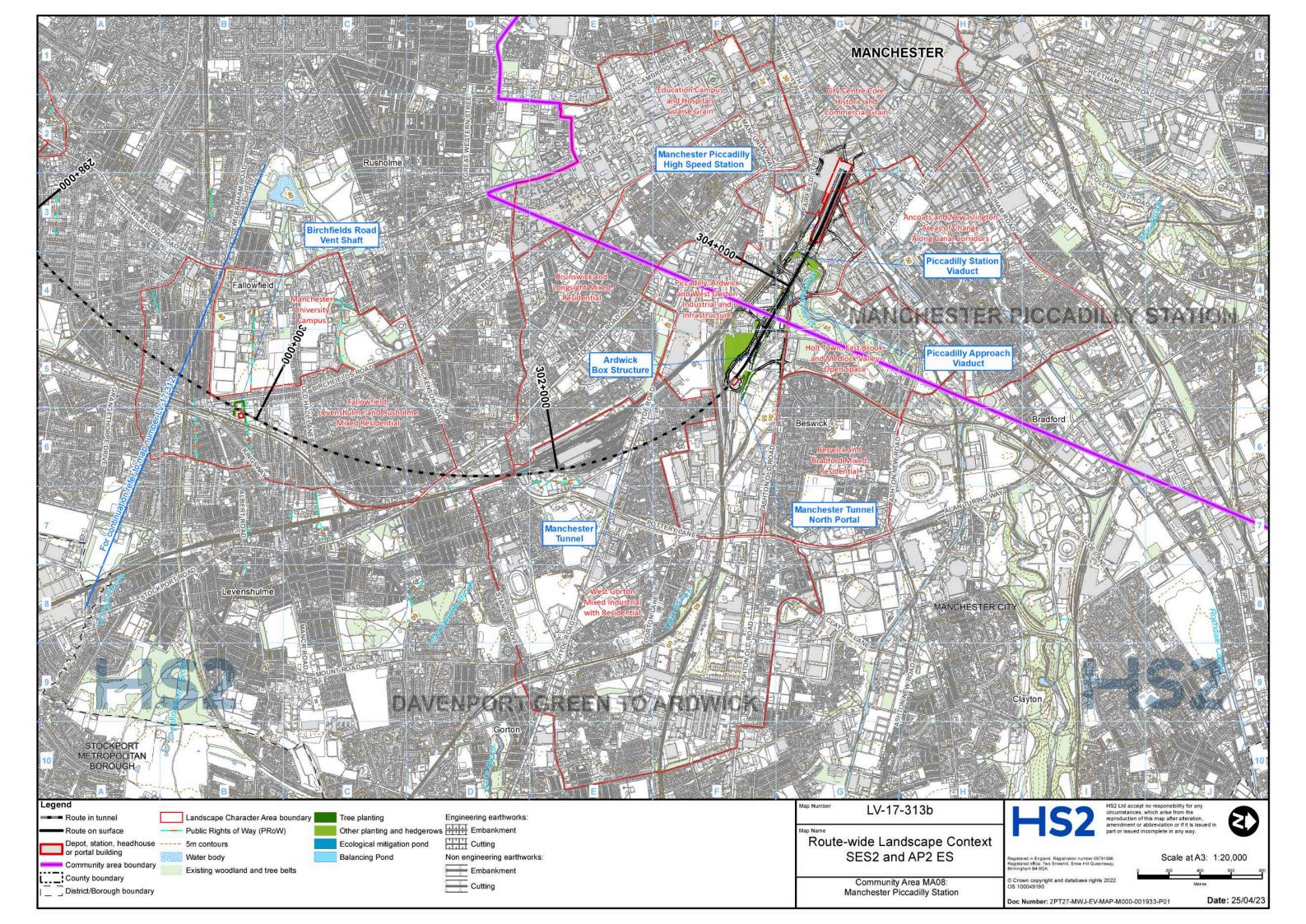












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