

High Speed Rail (Crewe – Manchester)

**Background information and data
accompanying SES2 and AP2 ES**

Map Book

Ecology and biodiversity

(EC-02, EC-04, EC-05, EC-06, EC-08, EC-09, EC-10, EC-11, EC-12)

Part 1

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Part 1



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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Contents

Mapping explanatory notes

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Map series name	Map series description	Map book part
EC-02 - Phase 1 Habitat (1:10,000)	This map series shows Phase 1 habitat survey information for land required and in the vicinity of the Proposed Scheme at a scale of 1:10,000. Where it has not been possible to gain access for field survey, the information is based on available desk studies and interpretation of aerial photography.	Background Information and Data map book - Ecology Part 1
EC-04 - Amphibians	This map series shows the results of amphibian surveys conducted to inform the environmental assessment. It principally details the results of great crested newt surveys conducted.	Background Information and Data map book - Ecology Part 1
EC-05 - Bats - Roost	This map series shows results of field surveys conducted to investigate the potential for trees and buildings/structures to support roosting bats. The maps show location of roosts confirmed by field survey and features identified as having a high or moderate potential to support roosting bats.	Background Information and Data map book - Ecology Part 1
EC-06 - Bat - Activity	This map series shows the location of bat activity surveys conducted to inform the environmental assessment. In addition it shows the location of the key bat foraging and commuting routes which have been established on the basis of the survey work conducted.	Background Information and Data map book - Ecology Part 2
EC-08 - Breeding Birds – Protected and Notable Species	This map series shows records of protected/notable breeding birds that are considered most relevant in considering the impacts of the Proposed Scheme on breeding birds. The location of nest sites for species such as barn owl and raptor species which may be liable to persecution are not displayed.	Background Information and Data map book - Ecology Part 2
EC-09 - Wintering and Passage Birds – Protected and Notable Species	This map series shows records of protected/notable wintering birds that are considered most relevant in considering the impacts of the Proposed Scheme.	Background Information and Data map book - Ecology Part 2
EC-10 - Phase 2 Habitat Survey	This map series shows the extent of detailed habitat surveys undertaken to inform the environmental assessment. The map shows the location of hedgerows that qualify as 'important hedgerows' under the wildlife and landscape criteria of the Hedgerows Regulations (1997).	Background Information and Data map book - Ecology Part 2
EC-11 - Other Protected and Notable Species (1)	This map series shows the extent of various protected species surveys conducted to inform the environmental assessment.	Background Information and Data map book - Ecology Part 2
EC-12 - Other Protected and Notable Species (2)	This map series shows the extent of various protected species surveys conducted to inform the environmental assessment.	Background Information and Data map book - Ecology Part 2

Mapping explanatory notes

This map book is part of the background information and data (BID) for Phase 2b of the proposed High Speed Two (HS2) rail network between Crewe and Manchester (the Proposed Scheme), and comprises ecological baseline data. This map book does not form part of the Supplementary Environmental Statement 2 (SES2) and the Additional Provision 2 Environmental Statement (AP2 ES), but presents relevant ecological information for the Proposed Scheme.

Copyright statements

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

Ordnance Survey data

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

Chainage

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

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

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

Map 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.

High Speed Rail (Crewe – Manchester)

Supplementary Environmental Statement 2 and Additional Provision 2 Environmental Statement

Data dictionary and definitions

Data dictionary and definitions

Legend features	Definition	Source	Copyright
250m radius from all water bodies where presence of GCN is confirmed	250m radius from all water bodies where presence of Great Crested Newt (GCN) is confirmed.	High Speed Two (HS2) Ltd	
500m radius from all water bodies where presence of GCN is confirmed	500m radius from all water bodies where presence of Great Crested Newt (GCN) is confirmed.	High Speed Two (HS2) Ltd	
50m radius from all water bodies where presence of GCN is confirmed	50m radius from all water bodies where presence of Great Crested Newt (GCN) is confirmed.	High Speed Two (HS2) Ltd	
Activity transect route	Transect route that was surveyed during bat activity surveys.	High Speed Two (HS2) Ltd	
Aquatic invertebrate survey location	Location where aquatic invertebrate surveys were conducted.	High Speed Two (HS2) Ltd	
Area contains new survey data	Areas where new survey data has been collected.	High Speed Two (HS2) Ltd	
Areas isolated by significant barriers to amphibian movement	Areas isolated by significant barriers to amphibian movement.	High Speed Two (HS2) Ltd	
Assumed key areas of foraging habitat	Likely areas of bat foraging habitat for local bat populations, derived from bat activity survey results.	High Speed Two (HS2) Ltd	
Assumed key commuting route	Key commuting and foraging bat routes that have been identified by an ecologist after review of available survey data and application of professional judgement.	High Speed Two (HS2) Ltd	
Bat activity static detector location	Location where bat activity static detectors were used during survey period.	High Speed Two (HS2) Ltd	
Bird of Conservation Concern	Field survey records of selected protected and/or notable breeding birds that are considered most relevant in considering the impacts of the Proposed Scheme on breeding birds.	High Speed Two (HS2) Ltd	
Breeding birds - survey extent	Area where breeding birds survey was conducted.	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.
Confirmed bat roost - building Potential to support roosting bats - buildings	Locations where bat roost survey has been completed within buildings. Buildings are categorised into those with potential to support bat roosts (high and medium potential) and those that have confirmed roosts. Confirmed roosts are further categorised into Hibernation, Maternity, Other or Multiple roosts.	High Speed Two (HS2) Ltd	
Confirmed bat roost - trees Potential to support roosting bats - trees	Locations where bat roost survey has been completed within trees. Trees are categorised into those with potential to support bat roosts (high and medium potential) and those that have confirmed roosts. Confirmed roosts are further categorised into Hibernation, Maternity, Other or Multiple roosts.	High Speed Two (HS2) Ltd	

Legend features	Definition	Source	Copyright
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.
County/Unitary Authority boundary	County and local authority 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.
Ditch vegetation survey	Extent of Ditch vegetation surveys.	High Speed Two (HS2) Ltd	
eDNA survey complete Survey incomplete Scoped in - HSI/walkover only Scoped in - no access permission Scoped out - no survey required	Areas where a GCN survey was completed. Survey varies from population size class assessment, presence/absence survey or scoping visit only where it was then scoped out or it was identified as requiring further survey.	High Speed Two (HS2) Ltd	
Fish survey location Terrestrial invertebrate survey extent	Location where fish and aquatic invertebrate surveys were conducted.	High Speed Two (HS2) Ltd	
'Important' Hedgerow confirmed by field survey Possibly 'Important' Hedgerow - no access available for survey	Location of those hedgerows that have been identified as 'important hedgerows' or possible 'important hedgerows' under the wildlife and landscape criteria in the Hedgerows Regulations (2007).	High Speed Two (HS2) Ltd	
Lake habitat	Extent of lake habitat surveys.	High Speed Two (HS2) Ltd	
Land potentially required during construction	Boundary defining the maximum possible extent of construction works required to build HS2 as far as the current level of design allows. This only covers surface works and includes all tunnel portals, vent shafts and headhouses, but does not apply to wholly tunnelled sections or to air rights. It also encompasses associated highway, access, drainage and utility works.	High Speed Two (HS2) Ltd	
National Vegetation Classification survey	Extent of National Vegetation Classification surveys.	High Speed Two (HS2) Ltd	
Other notable species relevant to assessment	Field survey records of selected protected and/or notable breeding birds that are considered most relevant in considering the impacts of the Proposed Scheme on breeding birds.	High Speed Two (HS2) Ltd	

Legend features	Definition	Source	Copyright
Otter: Active otter holt Potential otter holt Suitable habitat for otter	Location where otter surveys have been completed. Results vary from suitable habitat for otter, potential otter holt and active otter holt.	High Speed Two (HS2) Ltd	
Phase 1 Habitat	Phase 1 habitat survey information for land required and in the vicinity of the Proposed Scheme at a scale of 1:10,000. Where it has not been possible to gain access for field survey or the area mapped is between 250-500m from the boundary of the land potentially required during construction, the information is based on available desk study and interpretation of aerial photography.	High Speed Two (HS2) Ltd	
Pond survey: national pond survey PSYM rapid assessment method	Location and type of pond surveys conducted.	High Speed Two (HS2) Ltd	
River habitat survey extent	Extent of river habitat surveys.	High Speed Two (HS2) Ltd	
River macrophyte survey extent	Extent of river macrophyte surveys.	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	
Species listed on Annex I of the Birds Directive	Field survey records of selected protected and/or notable breeding birds that are considered most relevant in considering the impacts of the Proposed Scheme on breeding birds.	High Speed Two (HS2) Ltd	
Species listed on Annex I of the Birds Directive and Schedule 1 of the Wildlife and Countryside Act	Field survey records of selected protected and/or notable breeding birds that are considered most relevant in considering the impacts of the Proposed Scheme on breeding birds.	High Speed Two (HS2) Ltd	
Species listed on Schedule 1 of the Wildlife and Countryside Act	Field survey records of selected protected and/or notable breeding birds that are considered most relevant in considering the impacts of the Proposed Scheme on breeding birds.	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.
Water vole: Survey undertaken, presence confirmed Survey undertaken, assumed absent Watercourse potentially suitable for water vole, no or limited access for survey	Extent of water vole survey. Those areas where access was available either had confirmed presence or water voles were assumed absent.	High Speed Two (HS2) Ltd	

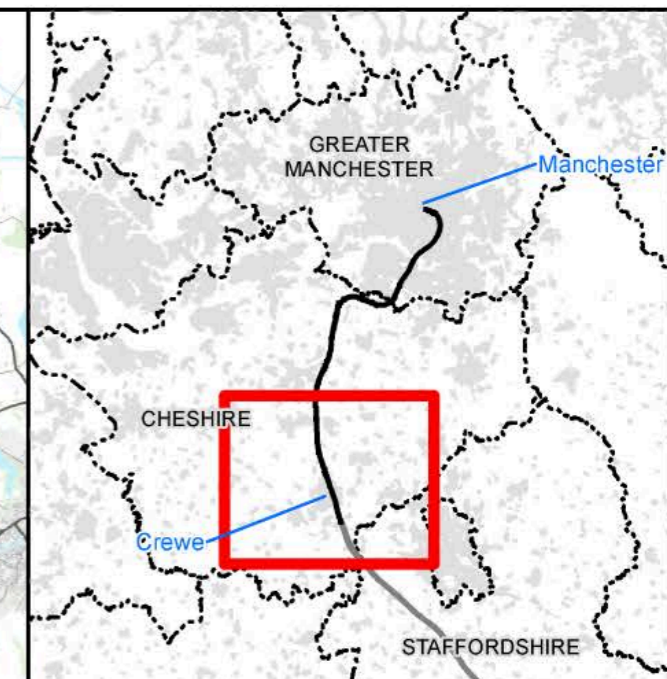
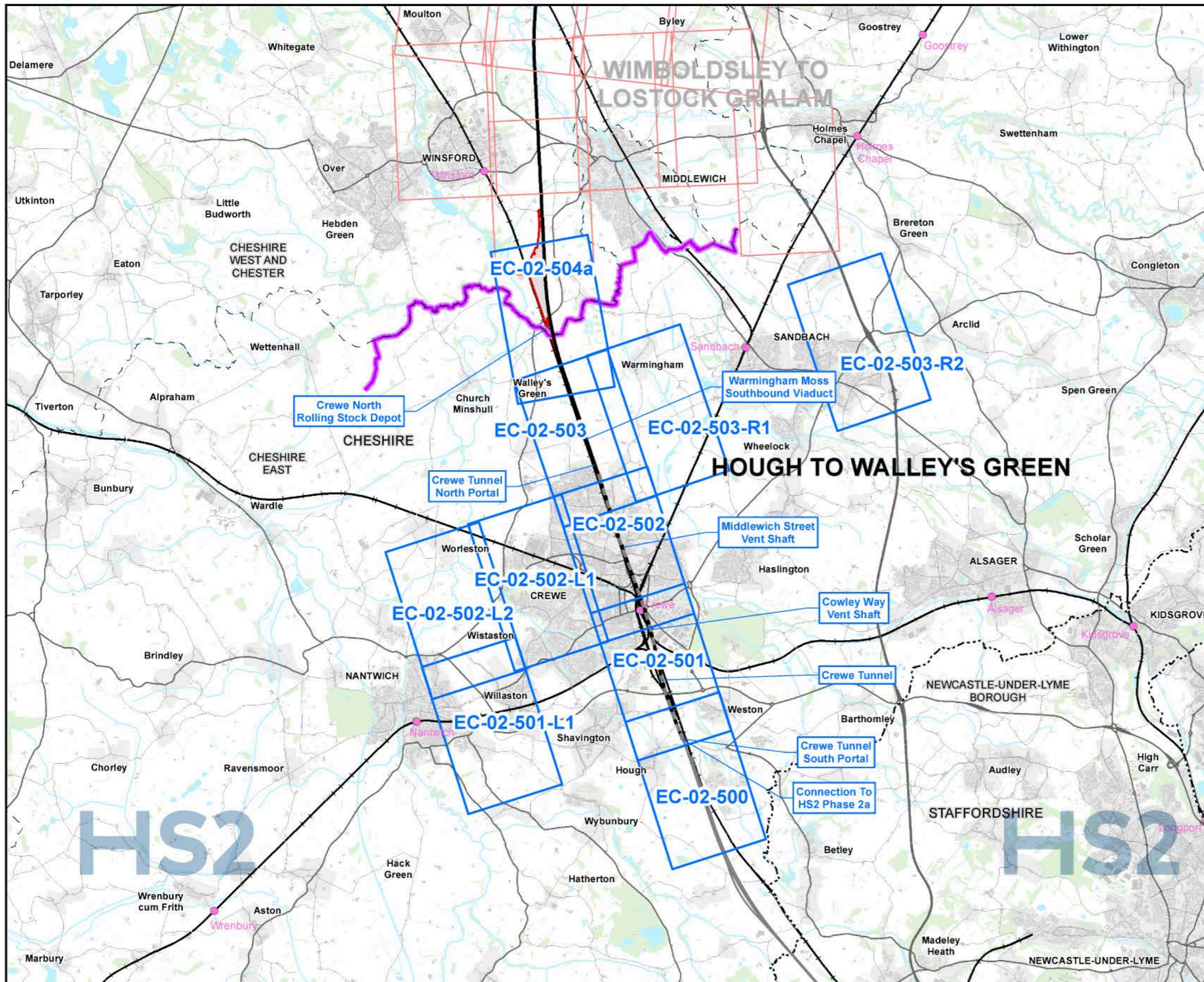
Legend features	Definition	Source	Copyright
Watercourse	Any channel through which water flows, can be natural or manmade. They are split into two categories (main rivers or ordinary watercourses) in England and Wales for regulation purposes.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2022.
White clawed crayfish: Manual search and/or trapping conducted and presence confirmed Manual search and/or trapping conducted and assumed absent Site identified as potentially suitable but no access available	Location where white clawed crayfish survey was conducted. Location categorised as to whether presence was confirmed, assumed absent or no access was available.	High Speed Two (HS2) Ltd	
Wintering & passage birds - survey extent	Area where wintering and passage birds survey was conducted.	High Speed Two (HS2) Ltd	
Woodland (not verified by survey)	Woodland areas derived from Ordnance Survey MasterMap data.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2022.
Woodland (verified by survey)	Woodland areas derived from Ordnance Survey MasterMap data, limited in extent to 500m from the CCB.	High Speed Two (HS2) Ltd	

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High Speed Rail (Crewe – Manchester)

**Background information and data accompanying
Supplementary Environmental Statement 2 and
Additional Provision 2 Environmental Statement**

EC-02 – Phase 1 Habitat (1:10,000)



Map Series Information:

This map series shows Phase 1 habitat survey information for land required and in the vicinity of the Proposed Scheme at a scale of 1:10,000. Where it has not been possible to gain access for field survey, the information is based on available desk studies and interpretation of aerial photography.

- 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 with amendment
 - Map sheet included in this community with no amendment
 - Map sheets not included in this community area

Map Number: EC-02-INDEX-MA01

Map Name: Index Map of:
Phase 1 Habitat (1:10,000)
SES2 and AP2 ES

Community Area MA01:
Hough to Walley's Green

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Scale at A3: 1:100,000

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

















Date: 29/03/23


















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




Phase 1 Habitat survey legend

Habitat Areas

-  Broadleaved woodland - semi-natural
-  Broadleaved woodland - plantation
-  Coniferous woodland - semi-natural
-  Coniferous woodland - plantation
-  Mixed woodland - semi-natural
-  Mixed woodland - plantation
-  Scrub - dense/continuous
-  Scrub - scattered
-  Broadleaved parkland/scattered trees
-  Coniferous parkland/scattered trees
-  Mixed parkland/scattered trees
-  Broadleaved woodland - recently felled
-  Coniferous woodland - recently felled
-  Mixed woodland - recently felled
-  Acid grassland - unimproved
-  Acid grassland - semi-improved
-  Neutral grassland - unimproved
-  Neutral grassland - semi-improved
-  Calcareous grassland - unimproved
-  Calcareous grassland - semi-improved
-  Improved grassland
-  Marsh/marshy grassland
-  Poor semi-improved grassland
-  Bracken - continuous
-  Bracken - scattered
-  Upland species-rich ledges
-  Other tall herb and fern - ruderal
-  Other tall herb and fern - non ruderal
-  Dry dwarf shrub heath - acid
-  Dry dwarf shrub heath - basic
-  Wet dwarf shrub heath
-  Lichen/bryophyte heath
-  Montane heath/dwarf herb
-  Dry heath/acid grassland
-  Wet heath/acid grassland
-  Blanket sphagnum bog
-  Raised sphagnum bog
-  Wet modified bog
-  Dry modified bog
-  Flush and spring - acid/neutral flush
-  Flush and spring - basic flush
-  Fen
-  Fen - valley mire
-  Fen - basin mire
-  Fen - flood plain mire
-  Peat - bare
-  Swamp
-  Marginal and inundation - inundation vegetation
-  Standing water
-  Standing water - eutrophic
-  Standing water - mesotrophic
-  Standing water - oligotrophic
-  Standing water - dystrophic
-  Standing water - marl
-  Standing water - brackish
-  Running water
-  Running water - eutrophic
-  Running water - mesotrophic
-  Running water - oligotrophic
-  Running water - dystrophic
-  Running water - marl
-  Running water - brackish

-  Inland cliff - acid/neutral
-  Inland cliff - basic
-  Scree - acid/neutral
-  Scree - basic
-  Limestone pavement
-  Other exposure - acid/neutral
-  Other exposure - basic
-  Cave
-  Quarry
-  Spoil
-  Mine
-  Refuse-tip
-  Cultivated/disturbed land - arable
-  Cultivated/disturbed land - amenity grassland
-  Cultivated/disturbed land - ephemeral/short perennial
-  Introduced shrub
-  Intact hedge - native species-rich
-  Intact hedge - species-poor
-  Defunct hedge - native species-rich
-  Defunct hedge - species-poor
-  Hedge with trees - native species-rich
-  Hedge with trees - species-poor
-  Fence
-  Wall
-  Dry ditch
-  Boundary removed
-  Earth bank
-  Caravan site
-  Buildings
-  Bare ground
-  Other habitat

- Linear Habitats**
-  Scrub - scattered
 -  Broadleaved parkland/scattered trees
 -  Coniferous parkland/scattered trees
 -  Mixed parkland/scattered trees
 -  Upland species-rich ledges
 -  Marginal and inundation - marginal vegetation
 -  Running water
 -  Running water - eutrophic
 -  Running water - mesotrophic
 -  Running water - oligotrophic
 -  Running water - dystrophic
 -  Running water - marl
 -  Running water - brackish
 -  Inland cliff
 -  Scree
 -  Intact hedge - native species-rich
 -  Intact hedge - species-poor
 -  Defunct hedge - native species-rich
 -  Defunct hedge - species-poor
 -  Hedge with trees - native species-rich
 -  Hedge with trees - species-poor
 -  Fence
 -  Wall
 -  Dry ditch
 -  Boundary removed
 -  Earth bank

- Point Habitats**
-  Scrub - scattered
 -  Broadleaved parkland/scattered trees
 -  Coniferous parkland/scattered trees

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Map Number	EC-02 - Legend
Map Name	EC-02 - Phase 1 Habitat Survey Legend

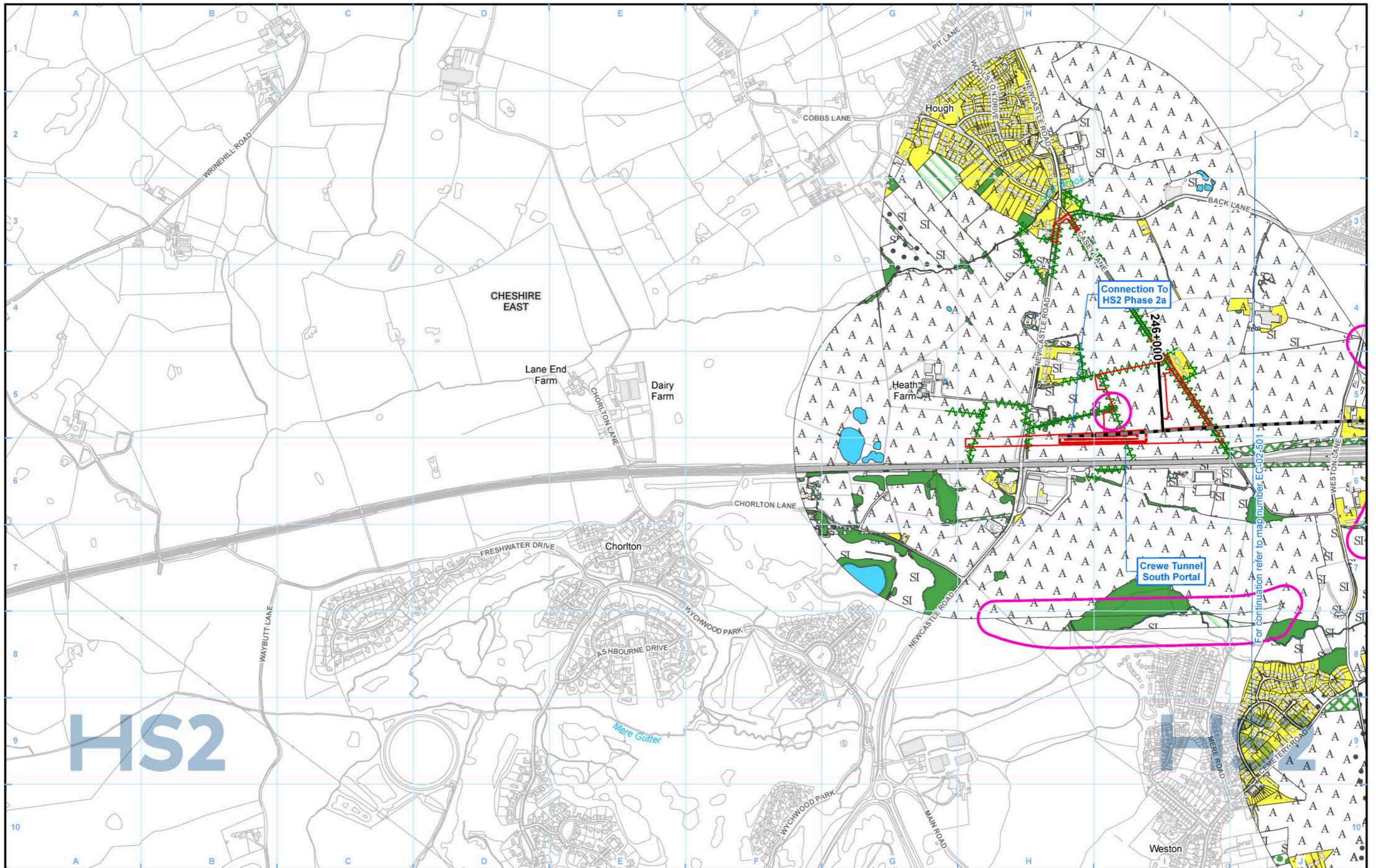
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Legend

- 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

For full legend please refer to EC-02 Legend page

- Area contains new survey data

Map Number: EC-02-500

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA01: Hough to Walley's Green

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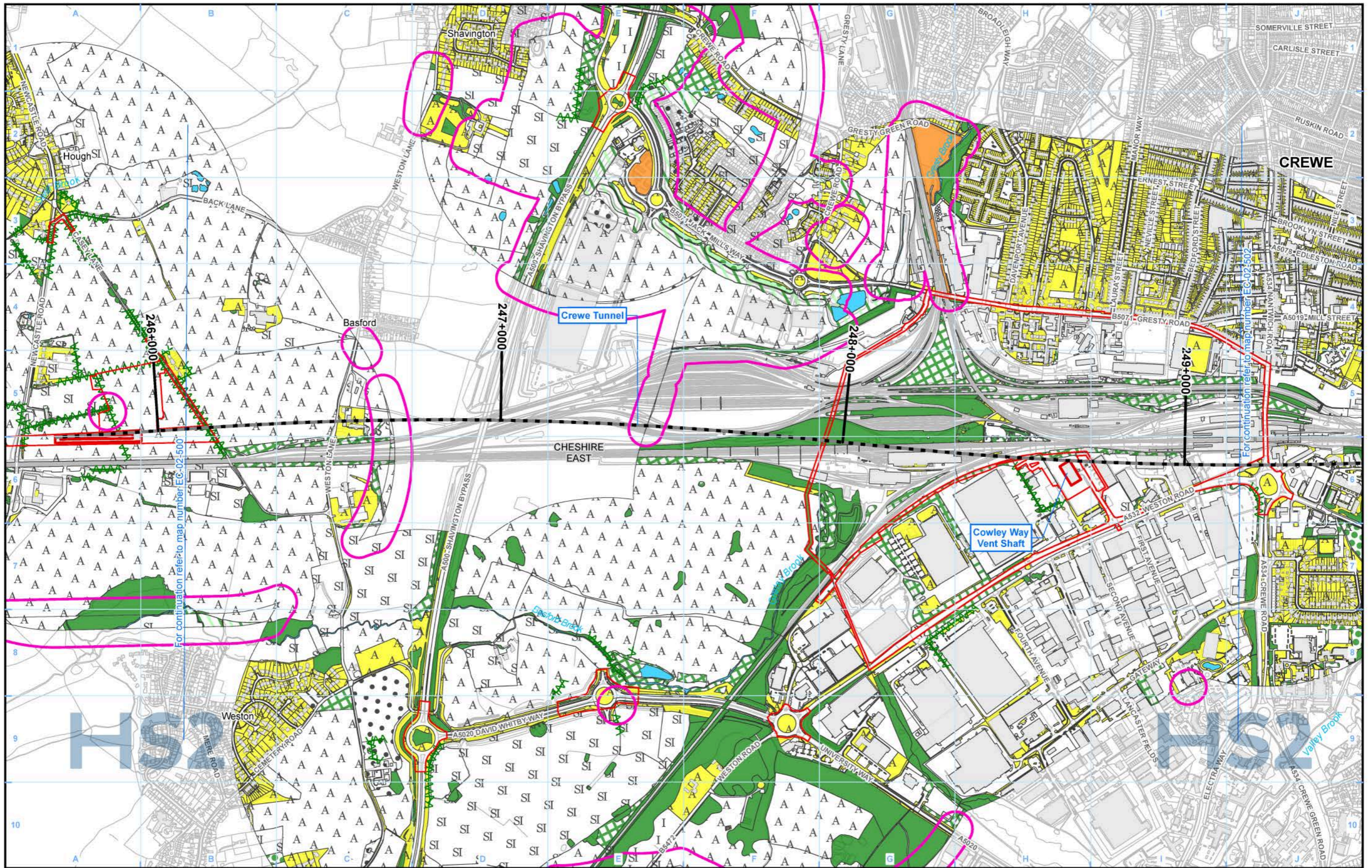
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Scale at A3: 1:10,000

100 200 300 400 Metres

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For full legend please refer to EC-02 Legend page

 Area contains new survey data

Map Number EC-02-501

Map Name Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA01: Hough to Walley's Green

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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

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number: EC-02-501-L1

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA01: Hough to Walley's Green

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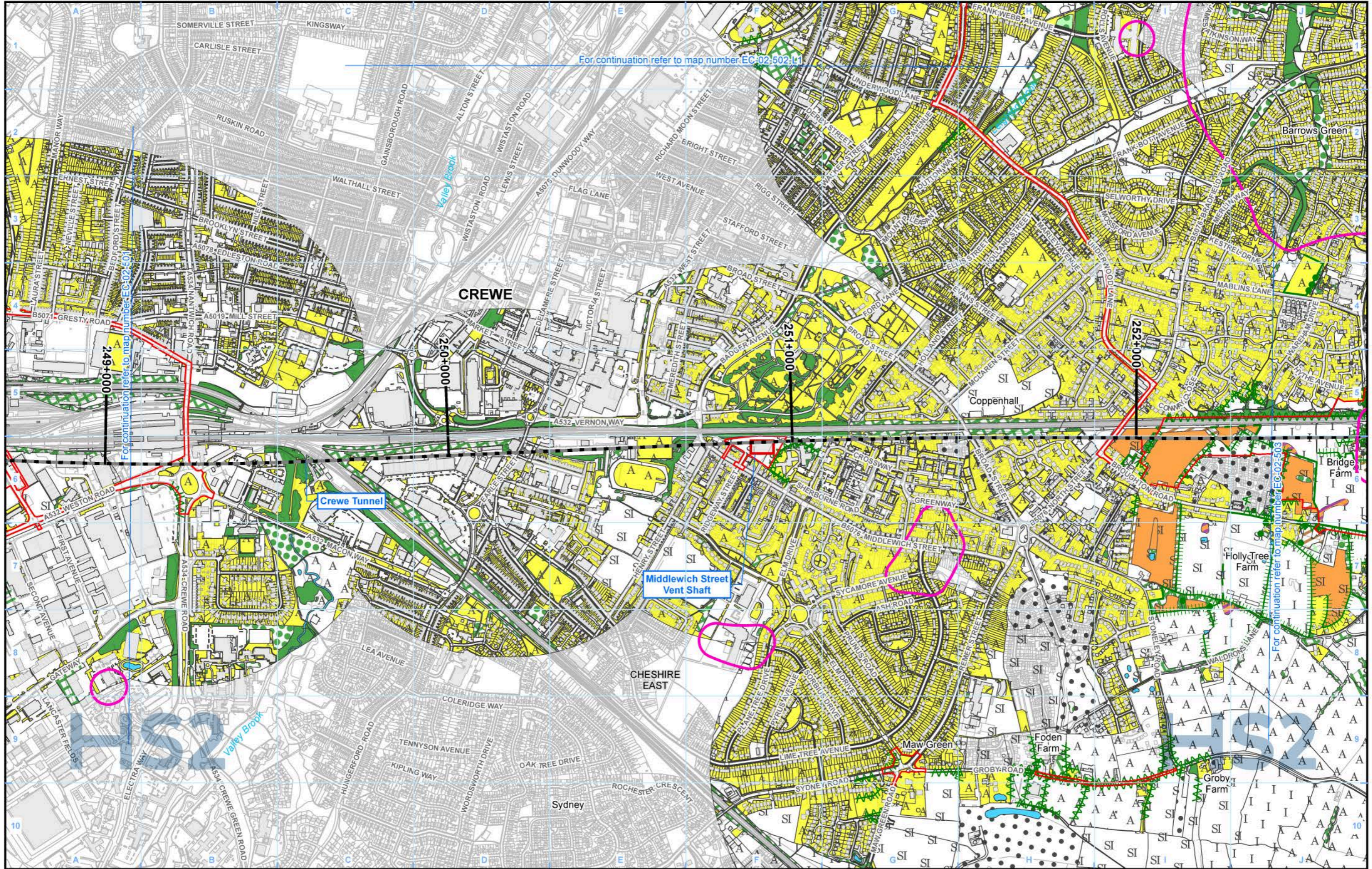
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For continuation refer to map number EC-02-502-L1



- 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

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number **EC-02-502**

Map Name **Phase 1 Habitat (1:10,000)
SES2 and AP2 ES**

Community Area MA01:
Hough to Walley's Green

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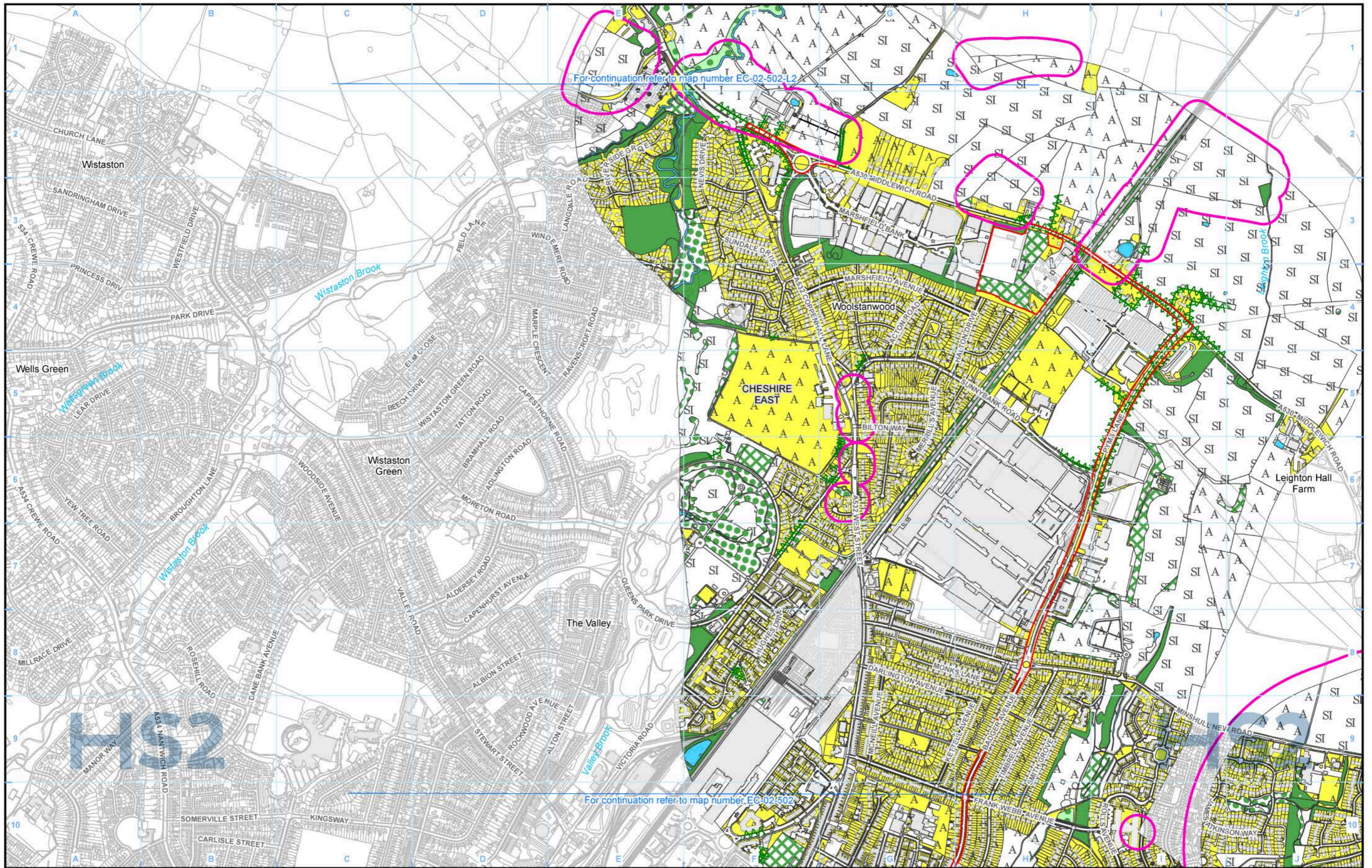
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Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Area contains new survey data
- Community area boundary
- County boundary
- District/Borough boundary

For full legend please refer to EC-02 Legend page

Map Number: EC-02-502-L1

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA01: Hough to Walley's Green

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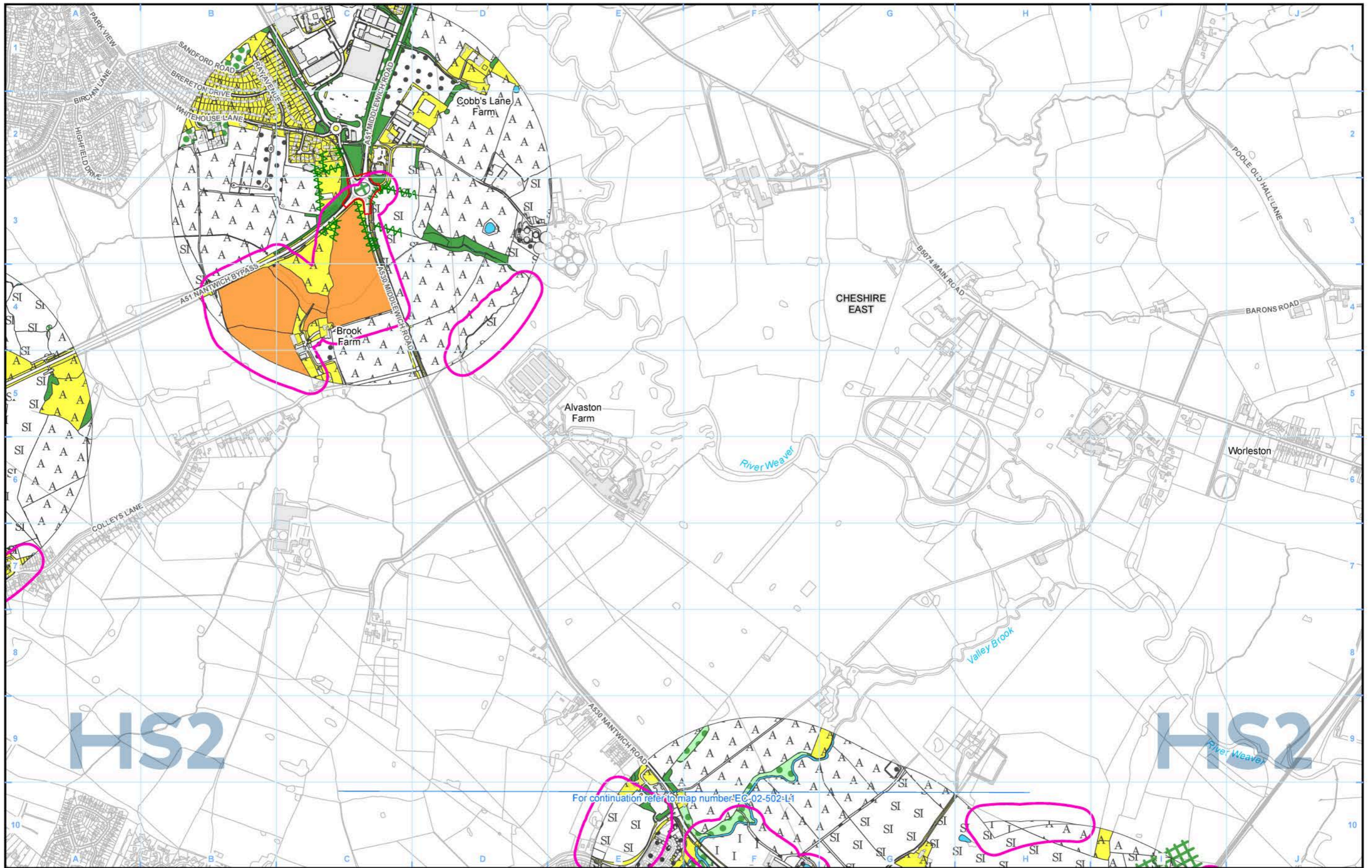
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Date: 29/03/23

Scale at A3: 1:10,000



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

For full legend please refer to EC-02 Legend page

Area contains new survey data

For continuation refer to map number: EC-02-502-L1

Map Number: **EC-02-502-L2**

Map Name: **Phase 1 Habitat (1:10,000) SES2 and AP2 ES**

Community Area MA01:
Hough to Walley's Green

HS2

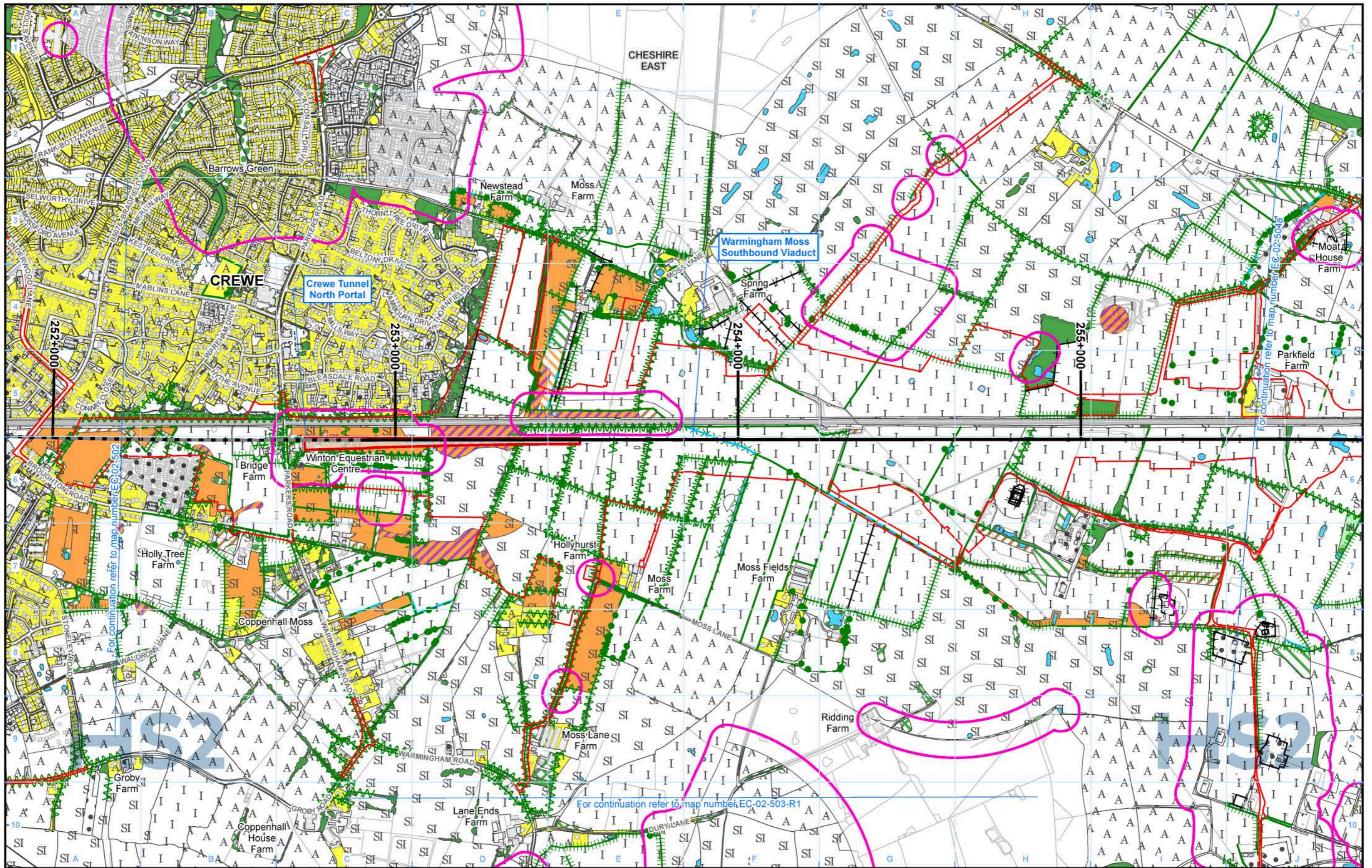
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Date: 29/03/23

Scale at A3: 1:10,000



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

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number
EC-02-503

Map Name
**Phase 1 Habitat (1:10,000)
SES2 and AP2 ES**

Community Area MA01:
Hough to Walley's Green

HS2

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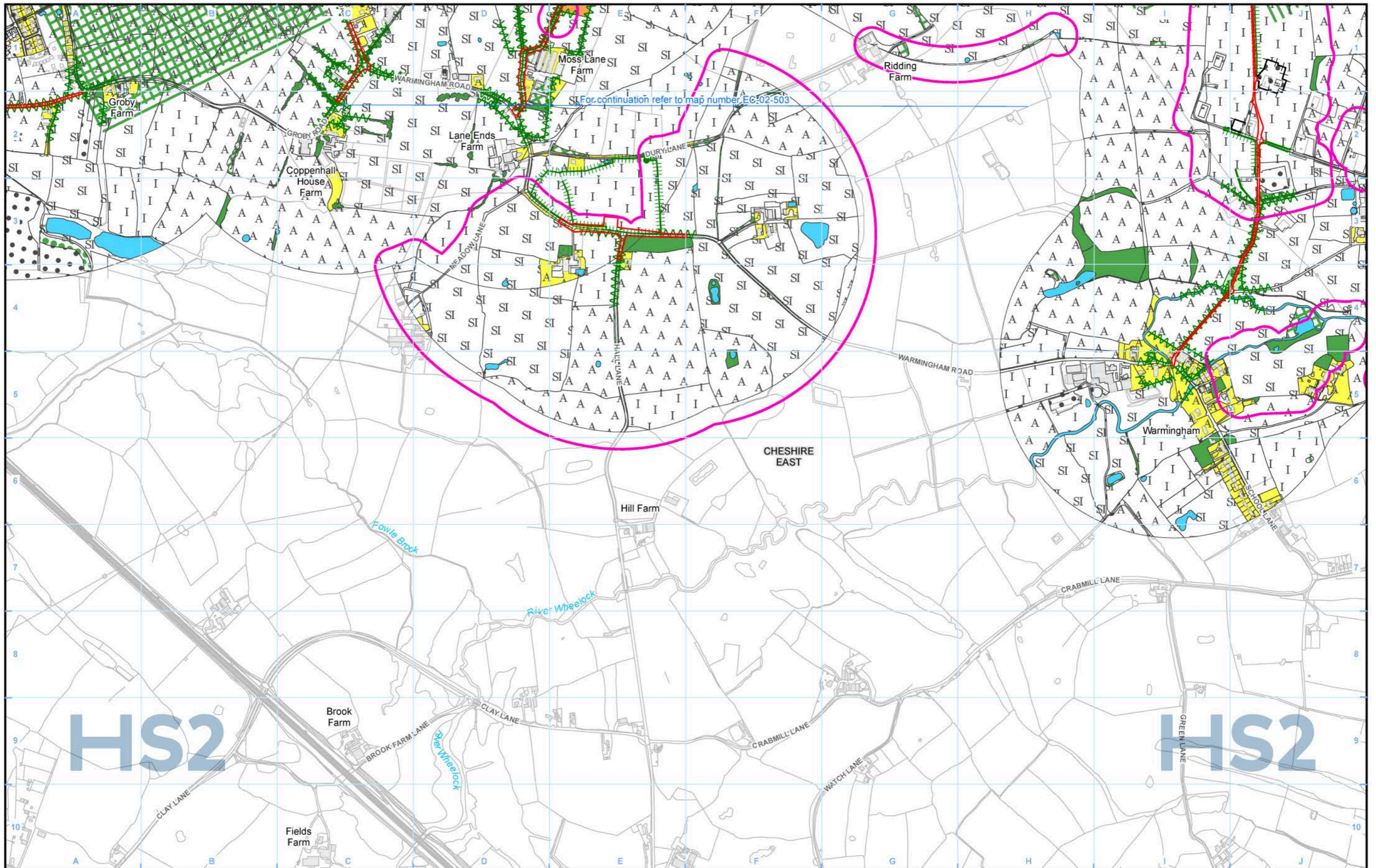
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Doc Number: 2PT27-MWJ-EV-MAP-M000-000772-P01

Date: 29/03/23



For continuation refer to map number EC:02-503

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

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number: EC-02-503-R1

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA01: Hough to Walley's Green

HS2

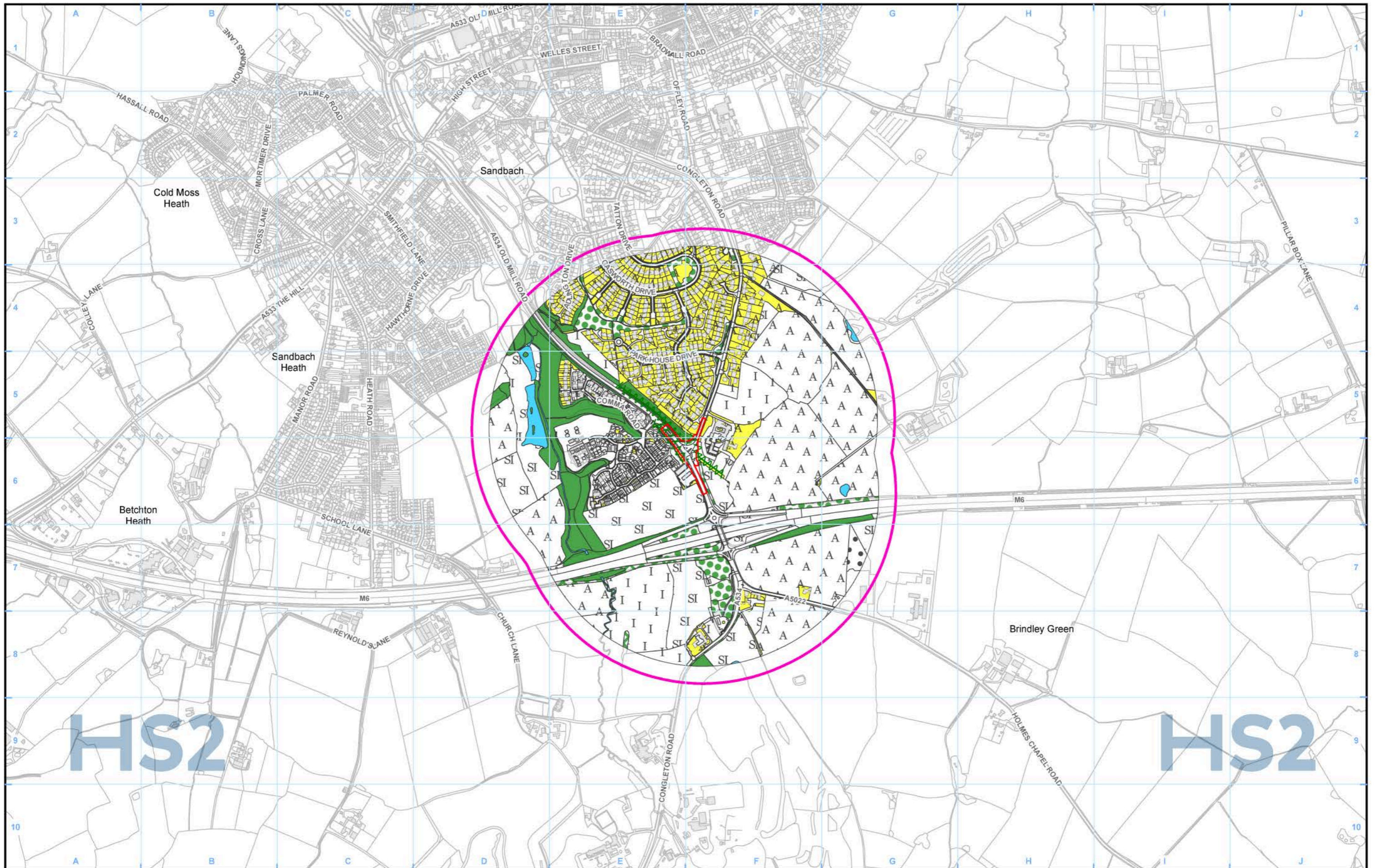
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Doc Number: 2PT27-MWJ-EV-MAP-M000-002819-P01

Scale at A3: 1:10,000

Date: 29/03/23



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary

For full legend please refer to EC-02 Legend page

- Area contains new survey data

Map Number **EC-02-503-R2**

Map Name **Phase 1 Habitat (1:10,000)
SES2 and AP2 ES**

**Community Area MA01:
Hough to Walley's Green**

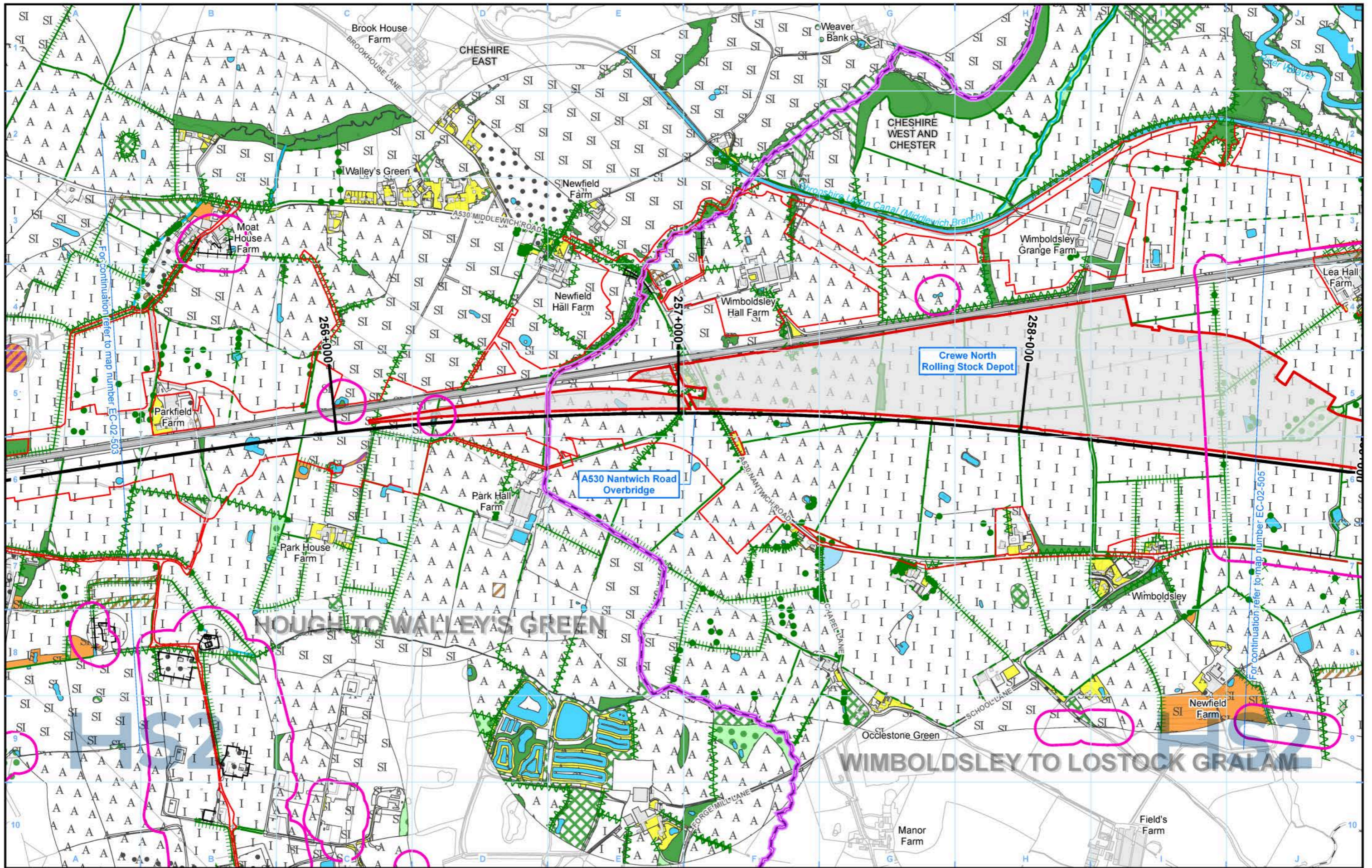
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Doc Number: 2PT27-MWJ-EV-MAP-M000-002596-P01 **Date: 29/03/23**



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary

Area contains new survey data

For full legend please refer to EC-02 Legend page

Map Number: EC-02-504a

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA01: Hough to Walley's Green

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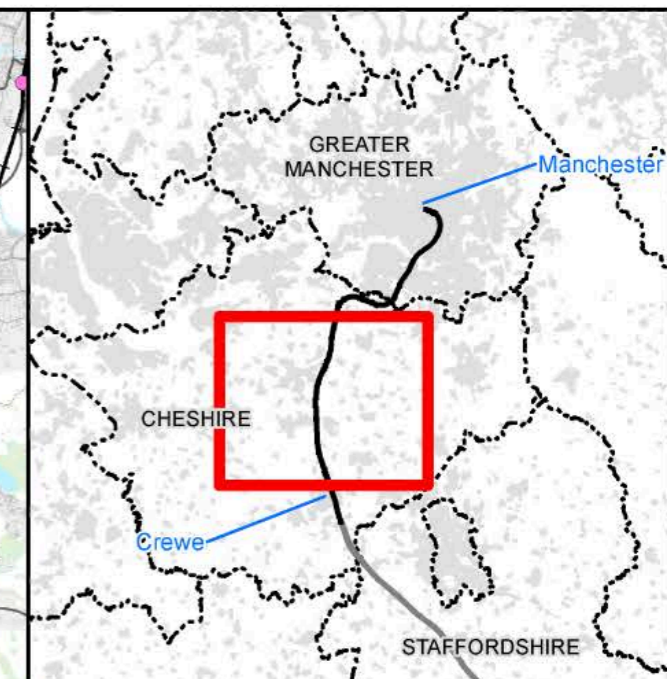
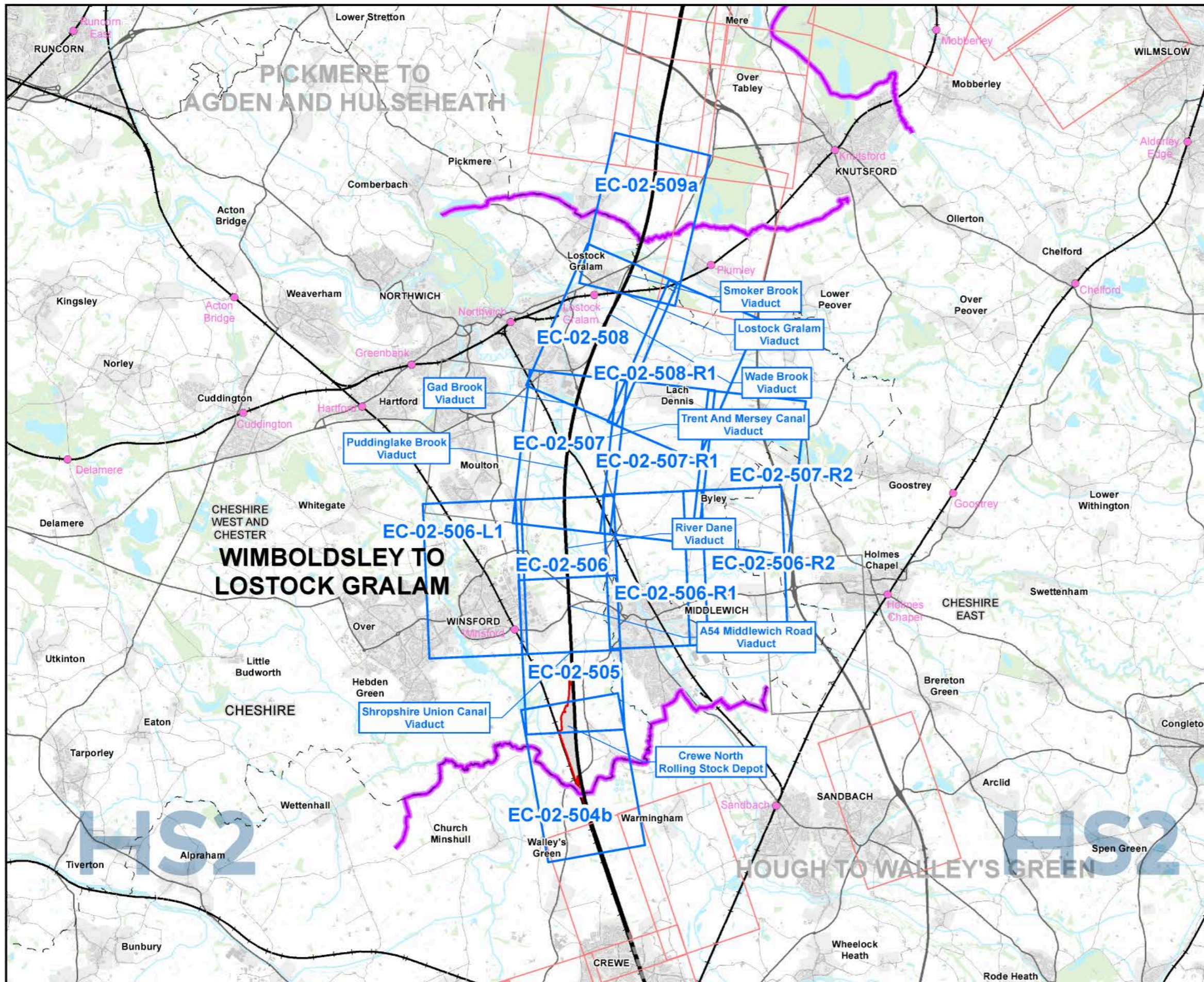
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Date: 29/03/23

Scale at A3: 1:10,000

Scale at A3: 1:10,000

Metres



Map Series Information:

This map series shows Phase 1 habitat survey information for land required and in the vicinity of the Proposed Scheme at a scale of 1:10,000. Where it has not been possible to gain access for field survey, the information is based on available desk studies and interpretation of aerial photography.

- 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 with amendment
 - Map sheet included in this community with no amendment
 - Map sheets not included in this community area

Map Number: EC-02-INDEX-MA02

Map Name: Index Map of:
Phase 1 Habitat (1:10,000)
SES2 and AP2 ES

Community Area MA02:
Wimboldsley to Lostock Gralam

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Doc Number: 2PT27-MWJ-EV-MAP-M000-000806-P01

Date: 29/03/23

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

Phase 1 Habitat survey legend

Habitat Areas

- Broadleaved woodland - semi-natural
- Broadleaved woodland - plantation
- Coniferous woodland - semi-natural
- Coniferous woodland - plantation
- Mixed woodland - semi-natural
- Mixed woodland - plantation
- Scrub - dense/continuous
- Scrub - scattered
- Broadleaved parkland/scattered trees
- Coniferous parkland/scattered trees
- Mixed parkland/scattered trees
- Broadleaved woodland - recently felled
- Coniferous woodland - recently felled
- Mixed woodland - recently felled
- Acid grassland - unimproved
- Acid grassland - semi-improved
- Neutral grassland - unimproved
- Neutral grassland - semi-improved
- Calcareous grassland - unimproved
- Calcareous grassland - semi-improved
- Improved grassland
- Marsh/marshy grassland
- Poor semi-improved grassland
- Bracken - continuous
- Bracken - scattered
- Upland species-rich ledges
- Other tall herb and fern - ruderal
- Other tall herb and fern - non ruderal
- Dry dwarf shrub heath - acid
- Dry dwarf shrub heath - basic
- Wet dwarf shrub heath
- Lichen/bryophyte heath
- Montane heath/dwarf herb
- Dry heath/acid grassland
- Wet heath/acid grassland
- Blanket sphagnum bog
- Raised sphagnum bog
- Wet modified bog
- Dry modified bog
- Flush and spring - acid/neutral flush
- Flush and spring - basic flush
- Fen
- Fen - valley mire
- Fen - basin mire
- Fen - flood plain mire
- Peat - bare
- Swamp
- Marginal and inundation - inundation vegetation
- Standing water
- Standing water - eutrophic
- Standing water - mesotrophic
- Standing water - oligotrophic
- Standing water - dystrophic
- Standing water - marl
- Standing water - brackish
- Running water
- Running water - eutrophic
- Running water - mesotrophic
- Running water - oligotrophic
- Running water - dystrophic
- Running water - marl
- Running water - brackish

- Inland cliff - acid/neutral
- Inland cliff - basic
- Scree - acid/neutral
- Scree - basic
- Limestone pavement
- Other exposure - acid/neutral
- Other exposure - basic
- Cave
- Quarry
- Spoil
- Mine
- Refuse-tip
- Cultivated/disturbed land - arable
- Cultivated/disturbed land - amenity grassland
- Cultivated/disturbed land - ephemeral/short perennial
- Introduced shrub
- Intact hedge - native species-rich
- Intact hedge - species-poor
- Defunct hedge - native species-rich
- Defunct hedge - species-poor
- Hedge with trees - native species-rich
- Hedge with trees - species-poor
- Fence
- Wall
- Dry ditch
- Boundary removed
- Earth bank
- Caravan site
- Buildings
- Bare ground
- Other habitat

- Linear Habitats**
- Scrub - scattered
 - Broadleaved parkland/scattered trees
 - Coniferous parkland/scattered trees
 - Mixed parkland/scattered trees
 - Upland species-rich ledges
 - Marginal and inundation - marginal vegetation
 - Running water
 - Running water - eutrophic
 - Running water - mesotrophic
 - Running water - oligotrophic
 - Running water - dystrophic
 - Running water - marl
 - Running water - brackish
 - Inland cliff
 - Scree
 - Intact hedge - native species-rich
 - Intact hedge - species-poor
 - Defunct hedge - native species-rich
 - Defunct hedge - species-poor
 - Hedge with trees - native species-rich
 - Hedge with trees - species-poor
 - Fence
 - Wall
 - Dry ditch
 - Boundary removed
 - Earth bank

- Point Habitats**
- Scrub - scattered
 - Broadleaved parkland/scattered trees
 - Coniferous parkland/scattered trees

HS2

HS2

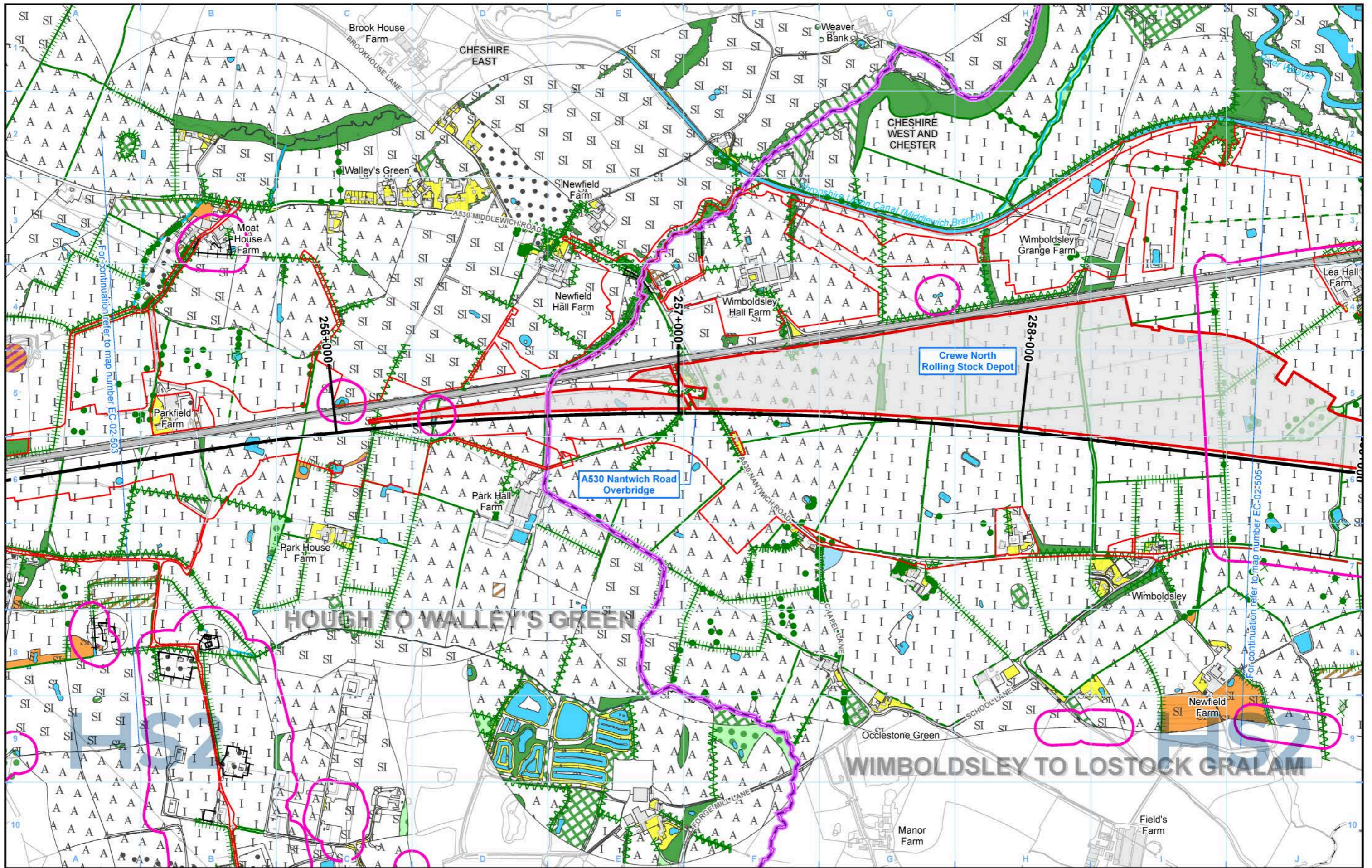
Map Number EC-02 - Legend
 Map Name EC-02 - Phase 1 Habitat Survey Legend

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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

For full legend please refer to EC-02 Legend page

- Area contains new survey data

Map Number: EC-02-504b

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gralam

HS2

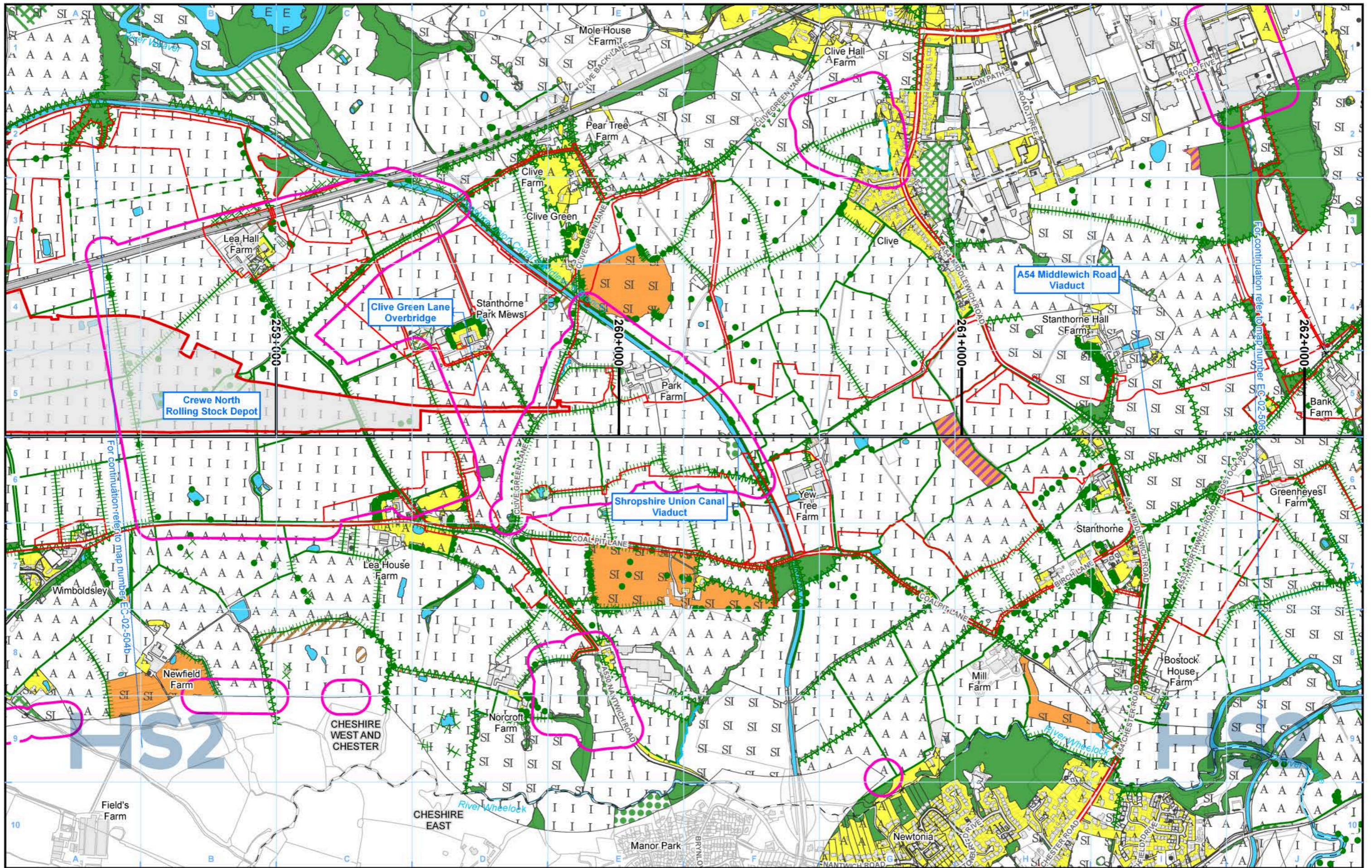
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Date: 29/03/23



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

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number EC-02-505

Map Name Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gralam

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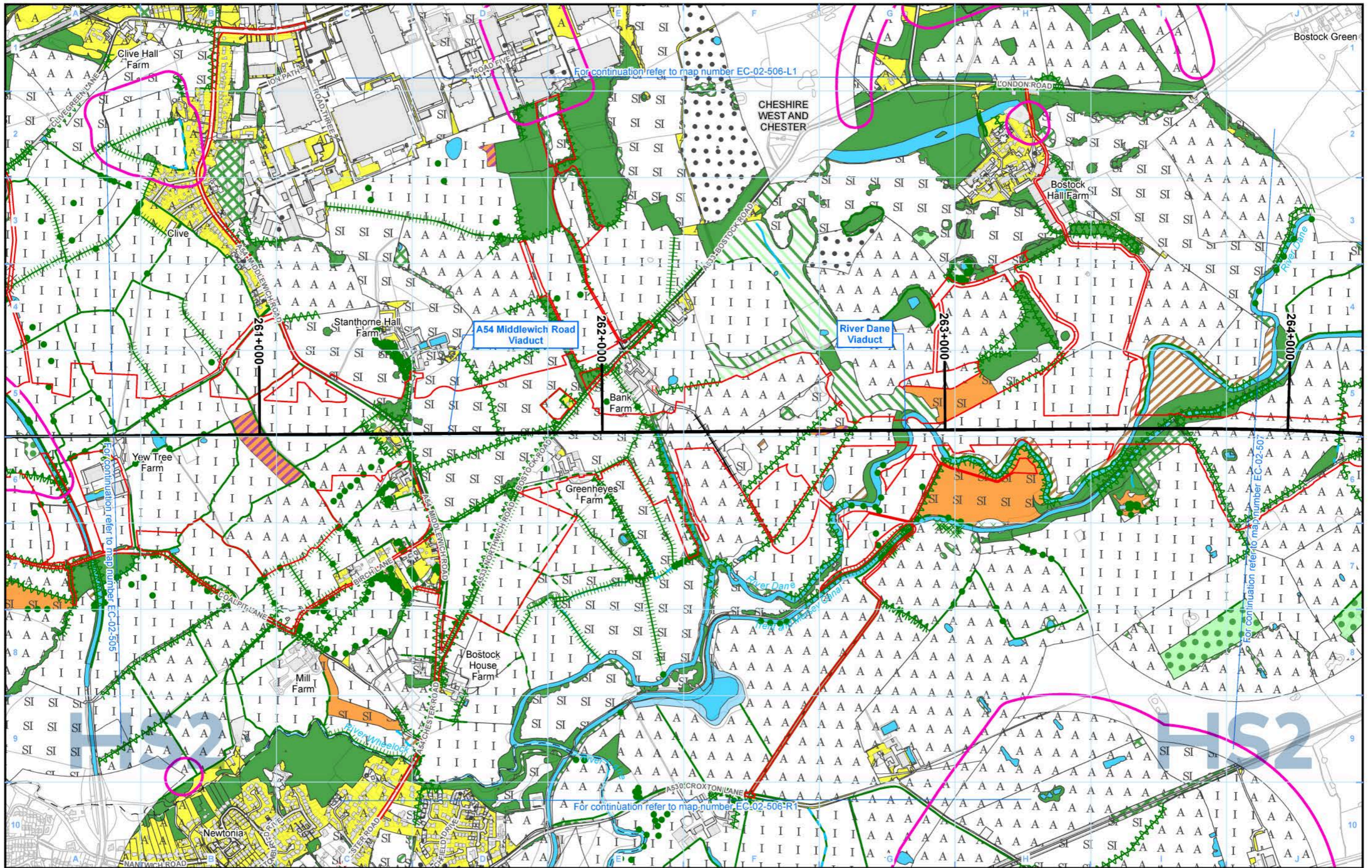
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Doc Number: 2PT27-MWJ-EV-MAP-M000-000775-P01



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

For full legend please refer to EC-02 Legend page

- Area contains new survey data

Map Number: EC-02-506

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gralam

HS2

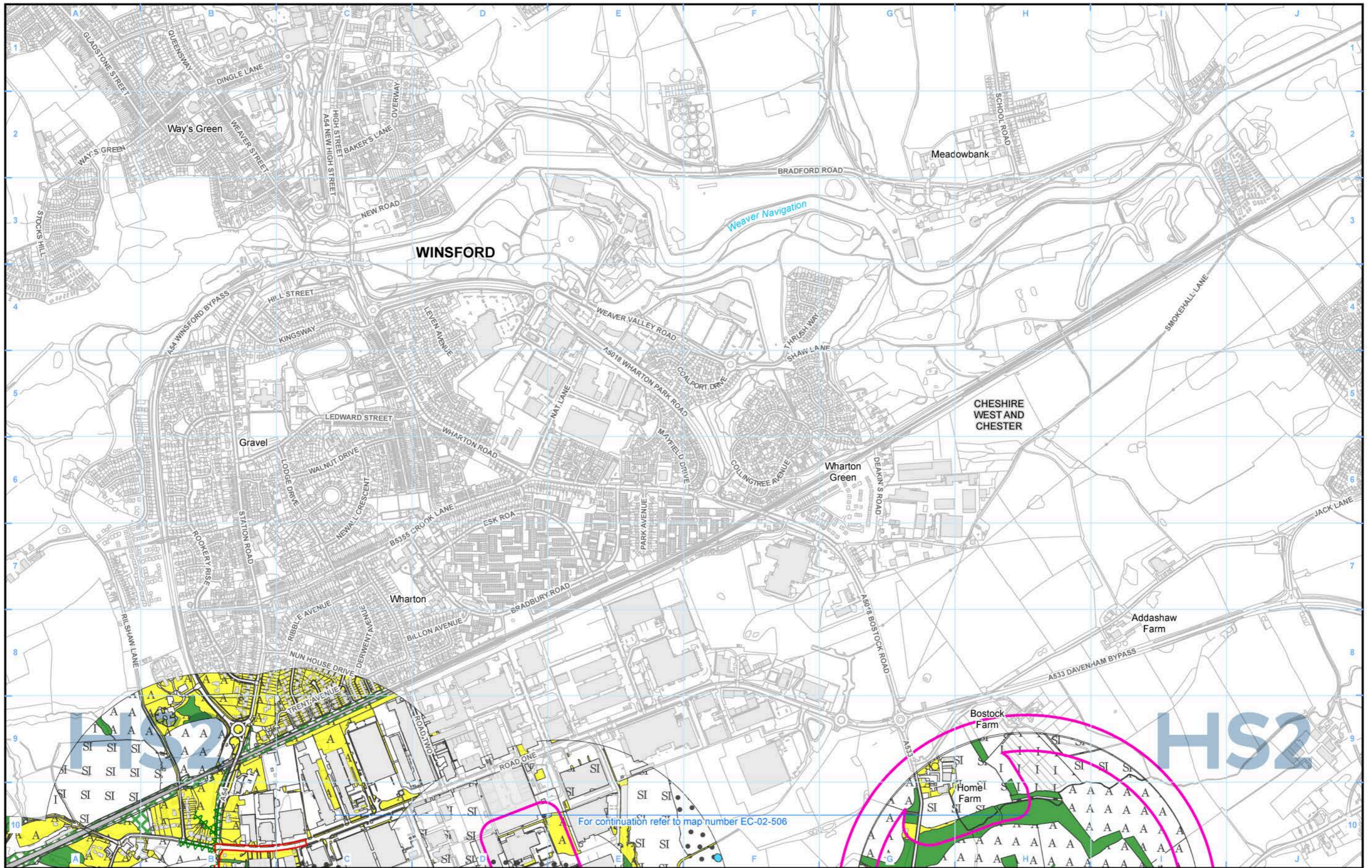
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Date: 29/03/23

Scale at A3: 1:10,000



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

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number **EC-02-506-L1**

Map Name
**Phase 1 Habitat (1:10,000)
 SES2 and AP2 ES**

Community Area MA02:
 Wimboldsley to Lostock Gralam

HS2

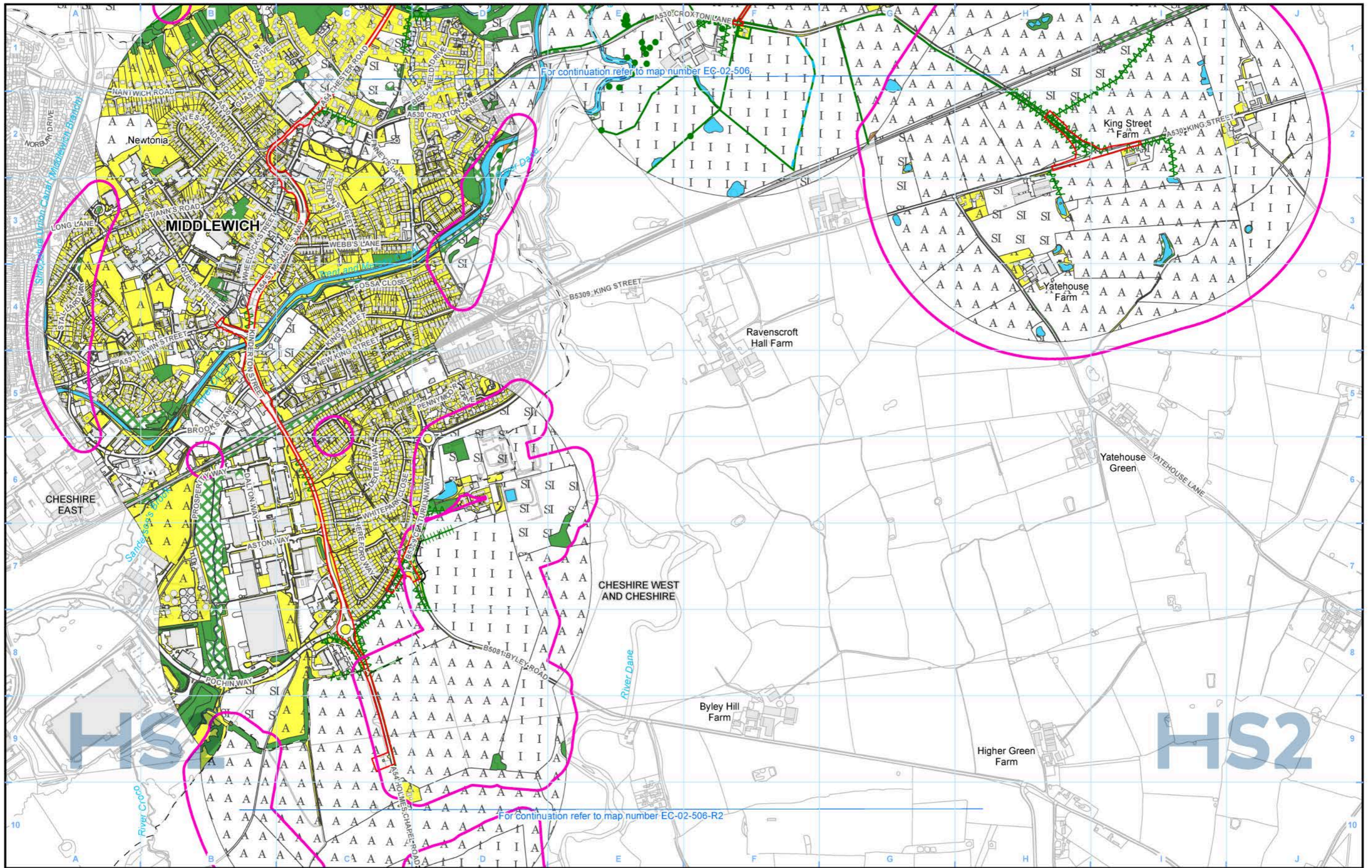
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Date: 29/03/23

Scale at A3: 1:10,000



For continuation refer to map number EC-02-506.

For continuation refer to map number EC-02-506-R2

Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Area contains new survey data
- Community area boundary
- County boundary
- District/Borough boundary

For full legend please refer to EC-02 Legend page

Map Number: EC-02-506-R1

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gralam

HS2

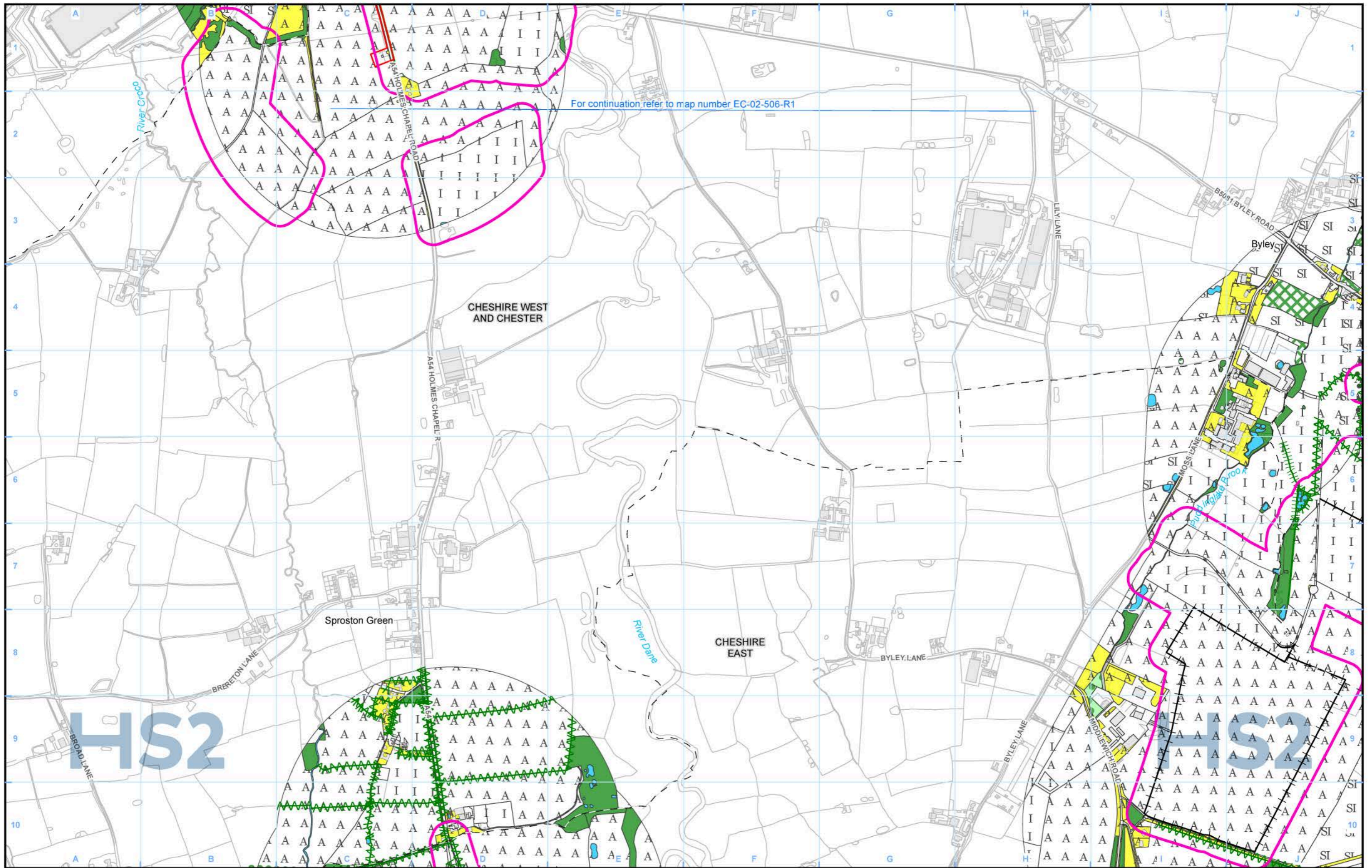
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For continuation refer to map number EC-02-506-R1

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

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number **EC-02-506-R2**

Map Name
Phase 1 Habitat (1:10,000)
SES2 and AP2 ES

Community Area MA02:
 Wimboldsley to Lostock Gralam

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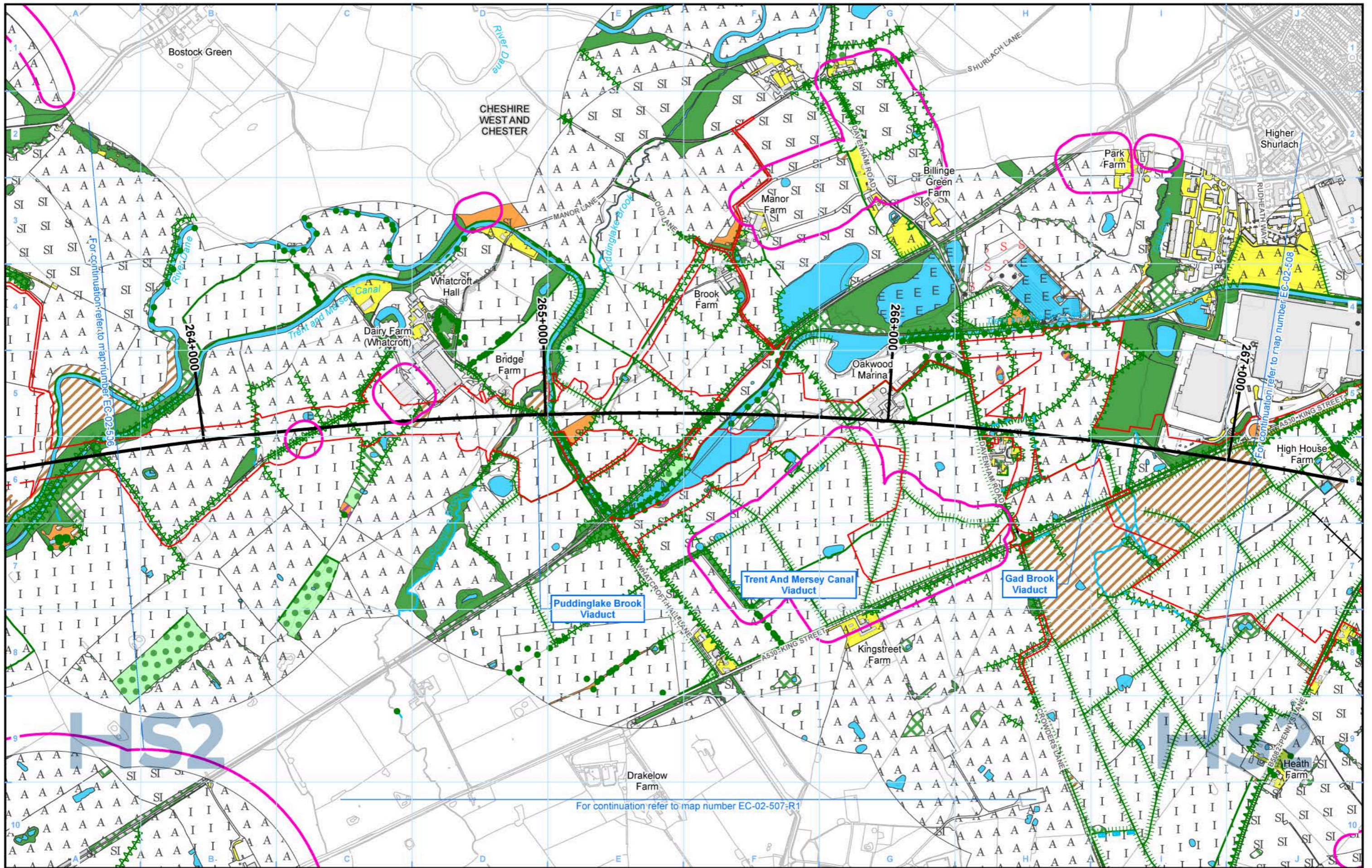
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Date: 29/03/23

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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
- For full legend please refer to EC-02 Legend page
- Area contains new survey data

Map Number **EC-02-507**

Map Name
Phase 1 Habitat (1:10,000)
SES2 and AP2 ES

Community Area MA02:
 Wimboldsley to Lostock Gralam

HS2

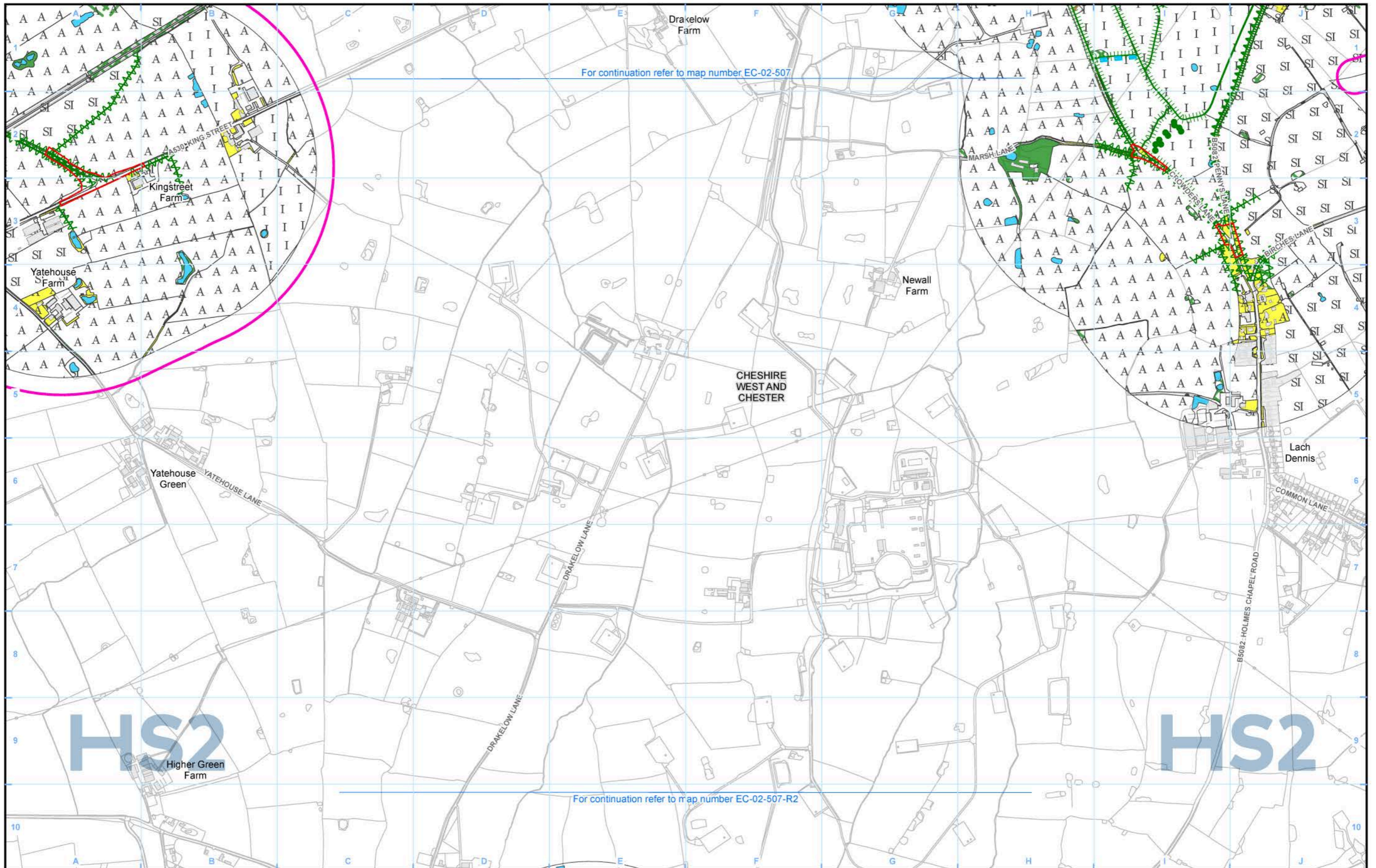
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Date: 29/03/23

Scale at A3: 1:10,000



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

For full legend please refer to EC-02 Legend page

- Area contains new survey data

Map Number **EC-02-507-R1**

Map Name **Phase 1 Habitat (1:10,000)
SES2 and AP2 ES**

**Community Area MA02:
Wimboldsley to Lostock Gralam**

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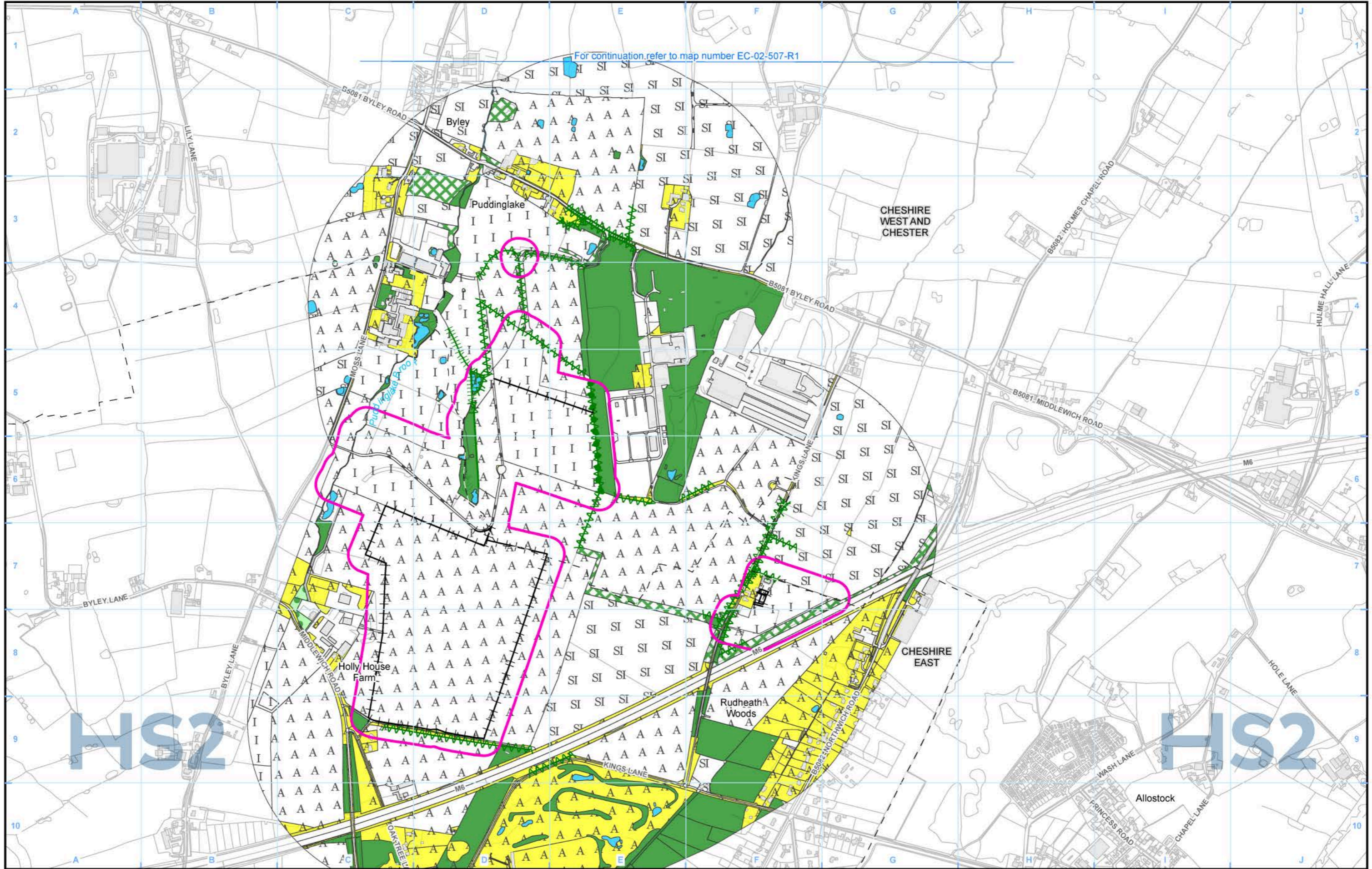
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Date: 29/03/23

For continuation refer to map number EC-02-507-R1



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

For full legend please refer to EC-02 Legend page

- Area contains new survey data

Map Number: EC-02-507-R2

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gralam

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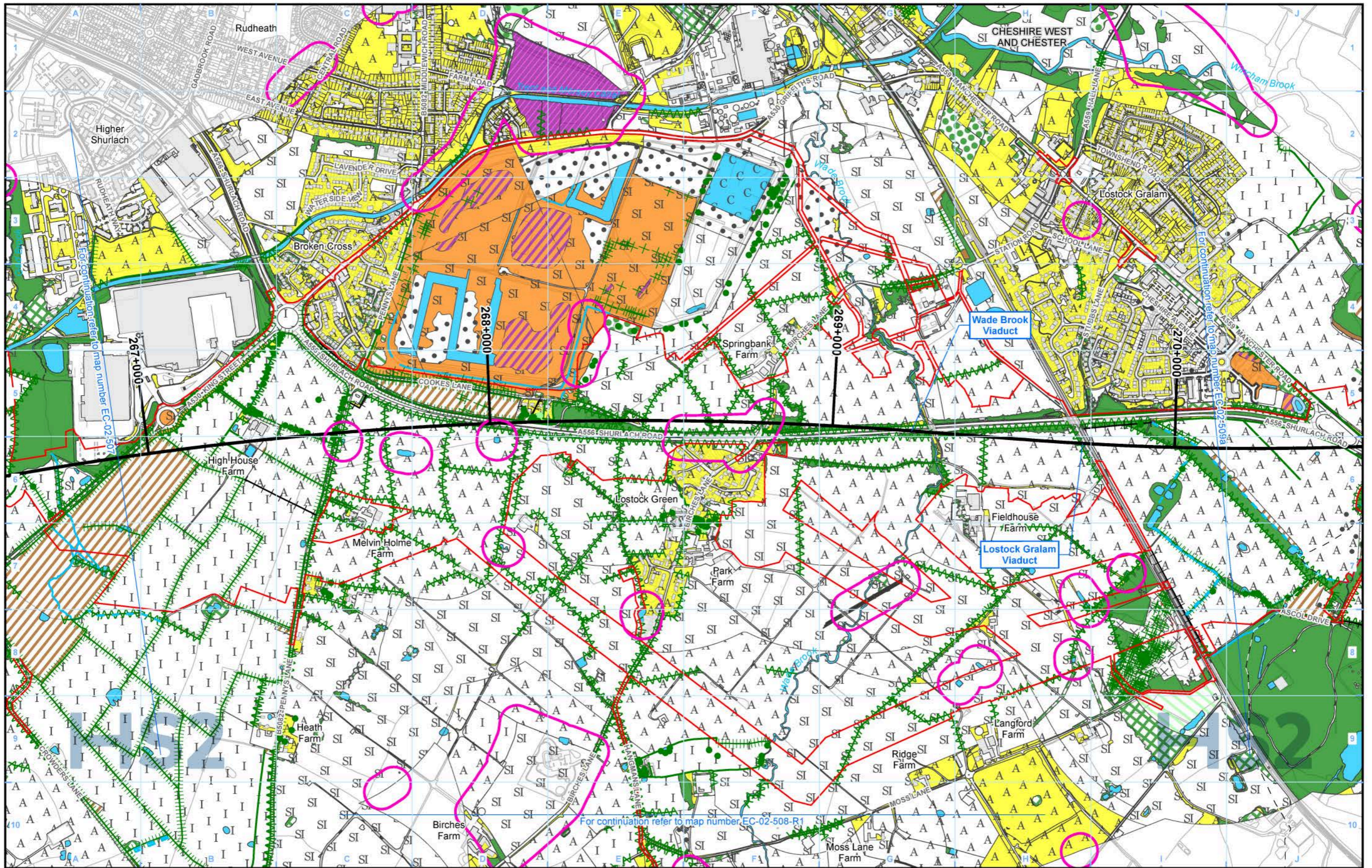
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Scale at A3: 1:10,000

Metres

Date: 29/03/23



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary

Area contains new survey data

For full legend please refer to EC-02 Legend page

Map Number: EC-02-508

Map Name: Phase 1 Habitat (1:10,000)
SES2 and AP2 ES

Community Area MA02:
Wimboldsley to Lostock Gralam

HS2

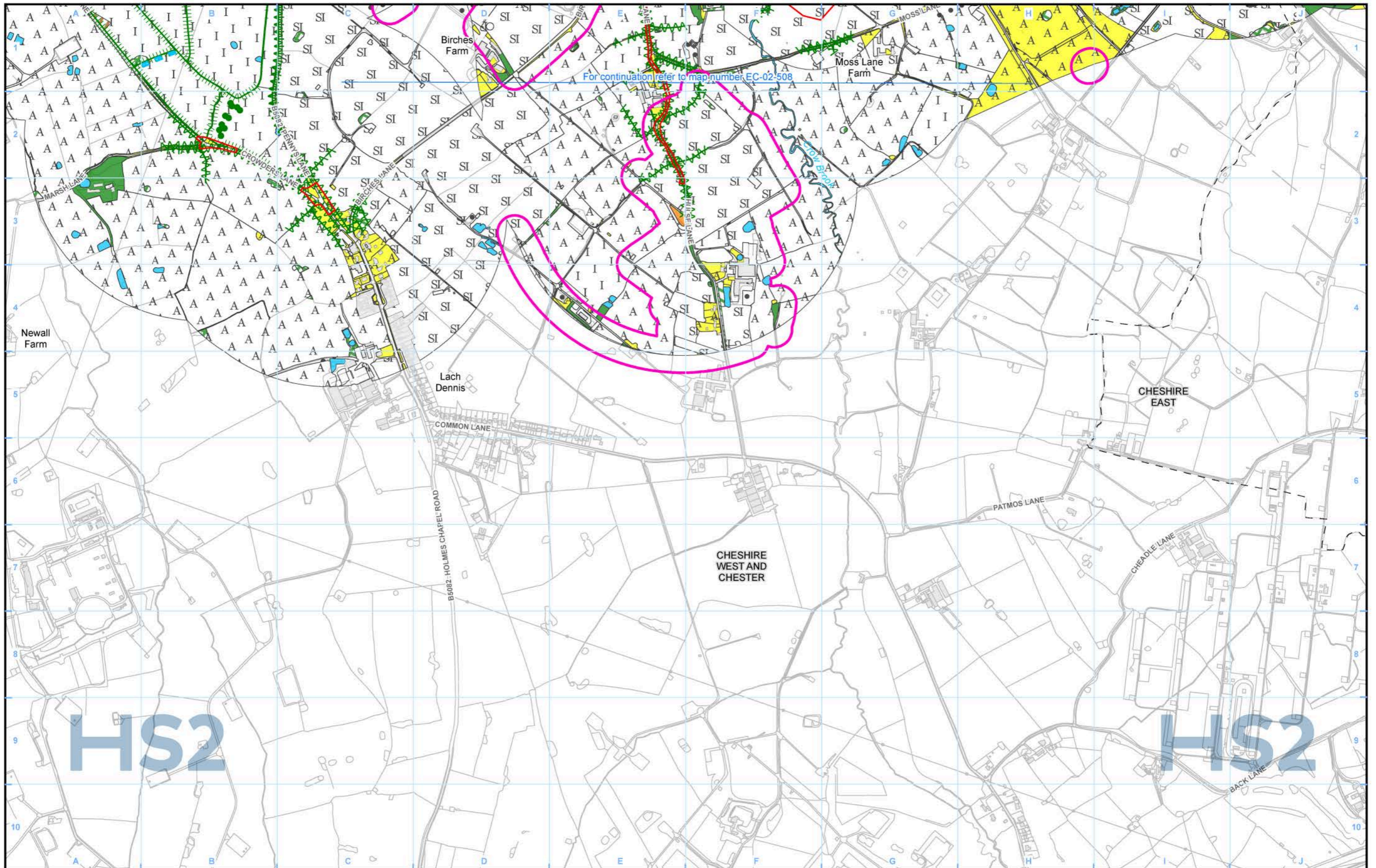
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Doc Number: 2PT27-MWJ-EV-MAP-M000-000778-P01

Date: 29/03/23



For continuation refer to map number EC-02-508

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

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number **EC-02-508-R1**

Map Name **Phase 1 Habitat (1:10,000)
SES2 and AP2 ES**

Community Area MA02:
Wimboldsley to Lostock Gralam

HS2

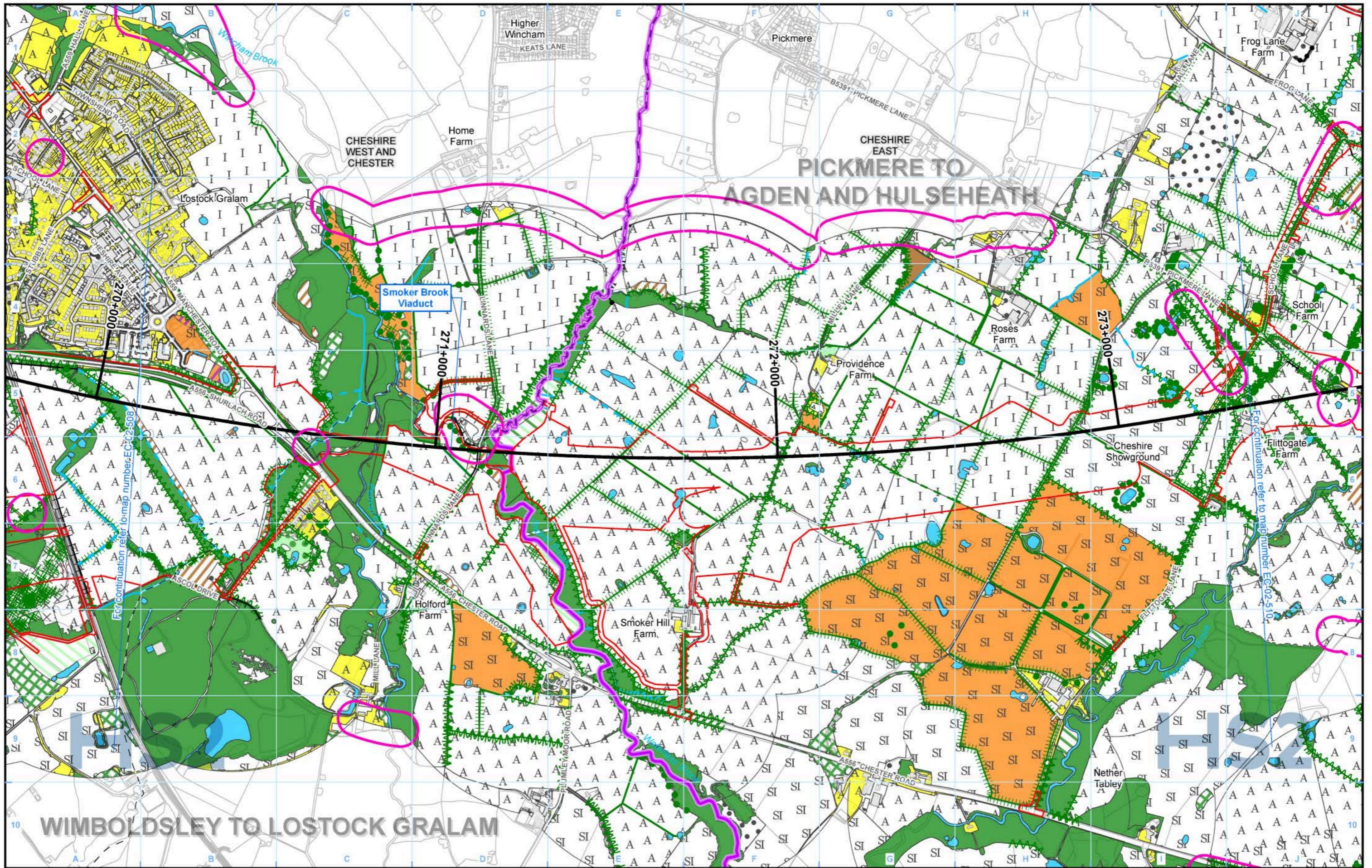
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Doc Number: 2PT27-MWJ-EV-MAP-M000-003603-P01

Date: 29/03/23



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary

Area contains new survey data

For full legend please refer to EC-02 Legend page

Map Number: EC-02-509a

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gralam

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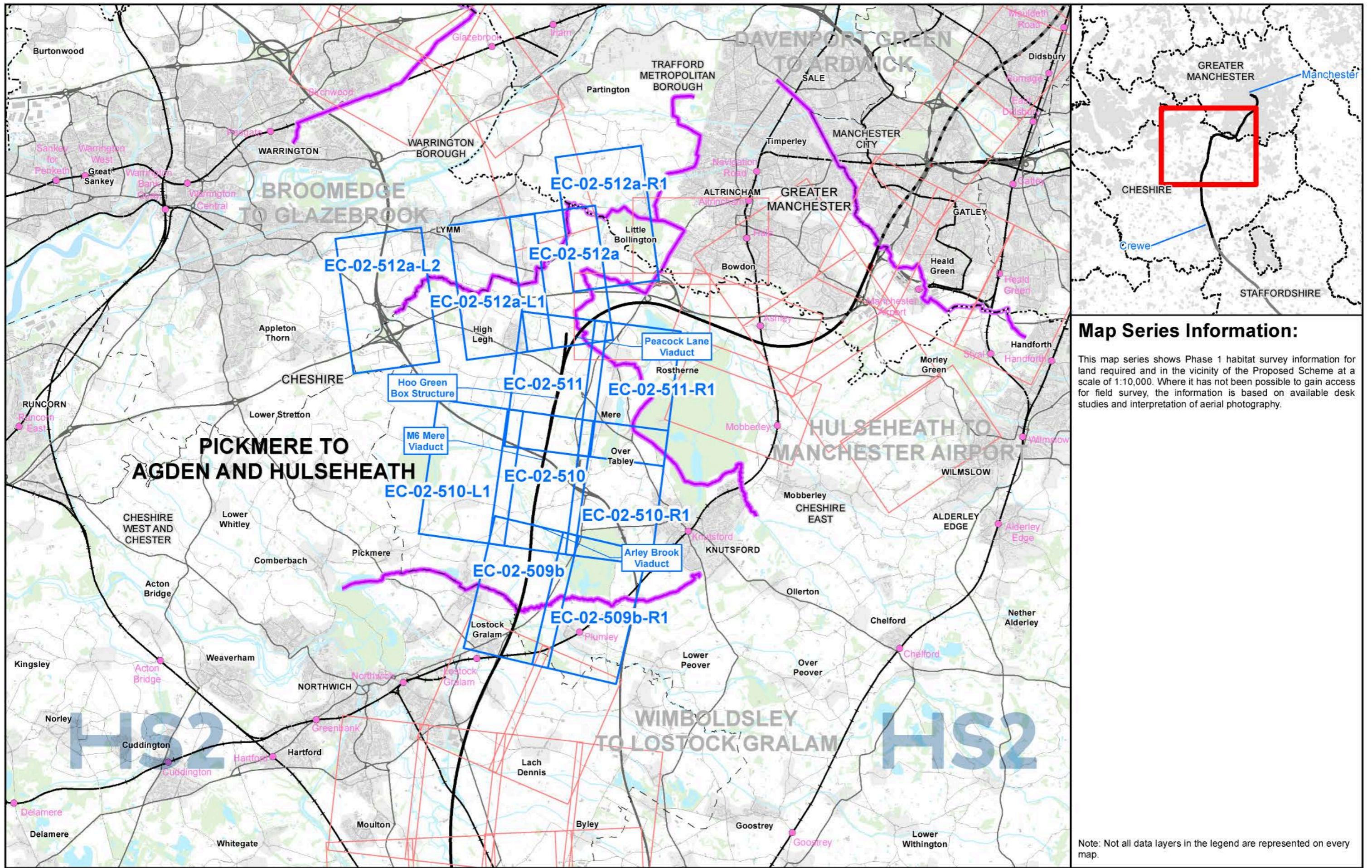
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Doc Number: 2PT27-MWJ-EV-MAP-M000-000779-P01

Date: 29/03/23



Map Series Information:

This map series shows Phase 1 habitat survey information for land required and in the vicinity of the Proposed Scheme at a scale of 1:10,000. Where it has not been possible to gain access for field survey, the information is based on available desk studies and interpretation of aerial photography.

- 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 with amendment
 - Map sheet included in this community with no amendment
 - Map sheets not included in this community area

Map Number: EC-02-INDEX-MA03

Map Name: Index Map of:
Phase 1 Habitat (1:10,000)
SES2 and AP2 ES

Community Area MA03:
Pickmere to Agden and Hulseheath

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

















Date: 29/03/23























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




Phase 1 Habitat survey legend

Habitat Areas

-  Broadleaved woodland - semi-natural
-  Broadleaved woodland - plantation
-  Coniferous woodland - semi-natural
-  Coniferous woodland - plantation
-  Mixed woodland - semi-natural
-  Mixed woodland - plantation
-  Scrub - dense/continuous
-  Scrub - scattered
-  Broadleaved parkland/scattered trees
-  Coniferous parkland/scattered trees
-  Mixed parkland/scattered trees
-  Broadleaved woodland - recently felled
-  Coniferous woodland - recently felled
-  Mixed woodland - recently felled
-  Acid grassland - unimproved
-  Acid grassland - semi-improved
-  Neutral grassland - unimproved
-  Neutral grassland - semi-improved
-  Calcareous grassland - unimproved
-  Calcareous grassland - semi-improved
-  Improved grassland
-  Marsh/marshy grassland
-  Poor semi-improved grassland
-  Bracken - continuous
-  Bracken - scattered
-  Upland species-rich ledges
-  Other tall herb and fern - ruderal
-  Other tall herb and fern - non ruderal
-  Dry dwarf shrub heath - acid
-  Dry dwarf shrub heath - basic
-  Wet dwarf shrub heath
-  Lichen/bryophyte heath
-  Montane heath/dwarf herb
-  Dry heath/acid grassland
-  Wet heath/acid grassland
-  Blanket sphagnum bog
-  Raised sphagnum bog
-  Wet modified bog
-  Dry modified bog
-  Flush and spring - acid/neutral flush
-  Flush and spring - basic flush
-  Fen
-  Fen - valley mire
-  Fen - basin mire
-  Fen - flood plain mire
-  Peat - bare
-  Swamp
-  Marginal and inundation - inundation vegetation
-  Standing water
-  Standing water - eutrophic
-  Standing water - mesotrophic
-  Standing water - oligotrophic
-  Standing water - dystrophic
-  Standing water - marl
-  Standing water - brackish
-  Running water
-  Running water - eutrophic
-  Running water - mesotrophic
-  Running water - oligotrophic
-  Running water - dystrophic
-  Running water - marl
-  Running water - brackish

-  Inland cliff - acid/neutral
-  Inland cliff - basic
-  Scree - acid/neutral
-  Scree - basic
-  Limestone pavement
-  Other exposure - acid/neutral
-  Other exposure - basic
-  Cave
-  Quarry
-  Spoil
-  Mine
-  Refuse-tip
-  Cultivated/disturbed land - arable
-  Cultivated/disturbed land - amenity grassland
-  Cultivated/disturbed land - ephemeral/short perennial
-  Introduced shrub
-  Intact hedge - native species-rich
-  Intact hedge - species-poor
-  Defunct hedge - native species-rich
-  Defunct hedge - species-poor
-  Hedge with trees - native species-rich
-  Hedge with trees - species-poor
-  Fence
-  Wall
-  Dry ditch
-  Boundary removed
-  Earth bank
-  Caravan site
-  Buildings
-  Bare ground
-  Other habitat

- Linear Habitats**
-  Scrub - scattered
 -  Broadleaved parkland/scattered trees
 -  Coniferous parkland/scattered trees
 -  Mixed parkland/scattered trees
 -  Upland species-rich ledges
 -  Marginal and inundation - marginal vegetation
 -  Running water
 -  Running water - eutrophic
 -  Running water - mesotrophic
 -  Running water - oligotrophic
 -  Running water - dystrophic
 -  Running water - marl
 -  Running water - brackish
 -  Inland cliff
 -  Scree
 -  Intact hedge - native species-rich
 -  Intact hedge - species-poor
 -  Defunct hedge - native species-rich
 -  Defunct hedge - species-poor
 -  Hedge with trees - native species-rich
 -  Hedge with trees - species-poor
 -  Fence
 -  Wall
 -  Dry ditch
 -  Boundary removed
 -  Earth bank

- Point Habitats**
-  Scrub - scattered
 -  Broadleaved parkland/scattered trees
 -  Coniferous parkland/scattered trees

HS2

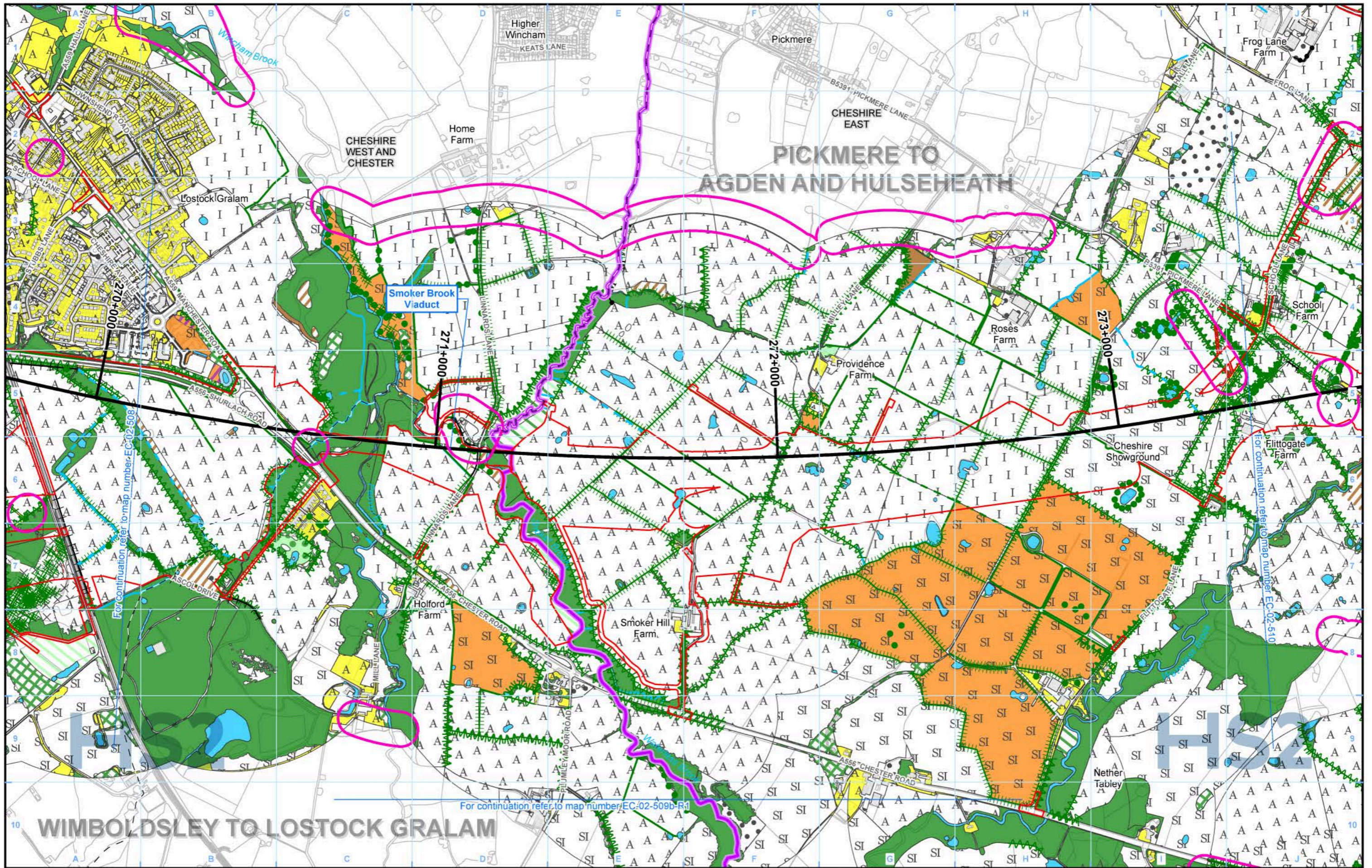
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Map Number EC-02 - Legend
 Map Name EC-02 - Phase 1 Habitat Survey Legend

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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

Area contains new survey data

For full legend please refer to EC-02 Legend page

Map Number: EC-02-509b

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

HS2

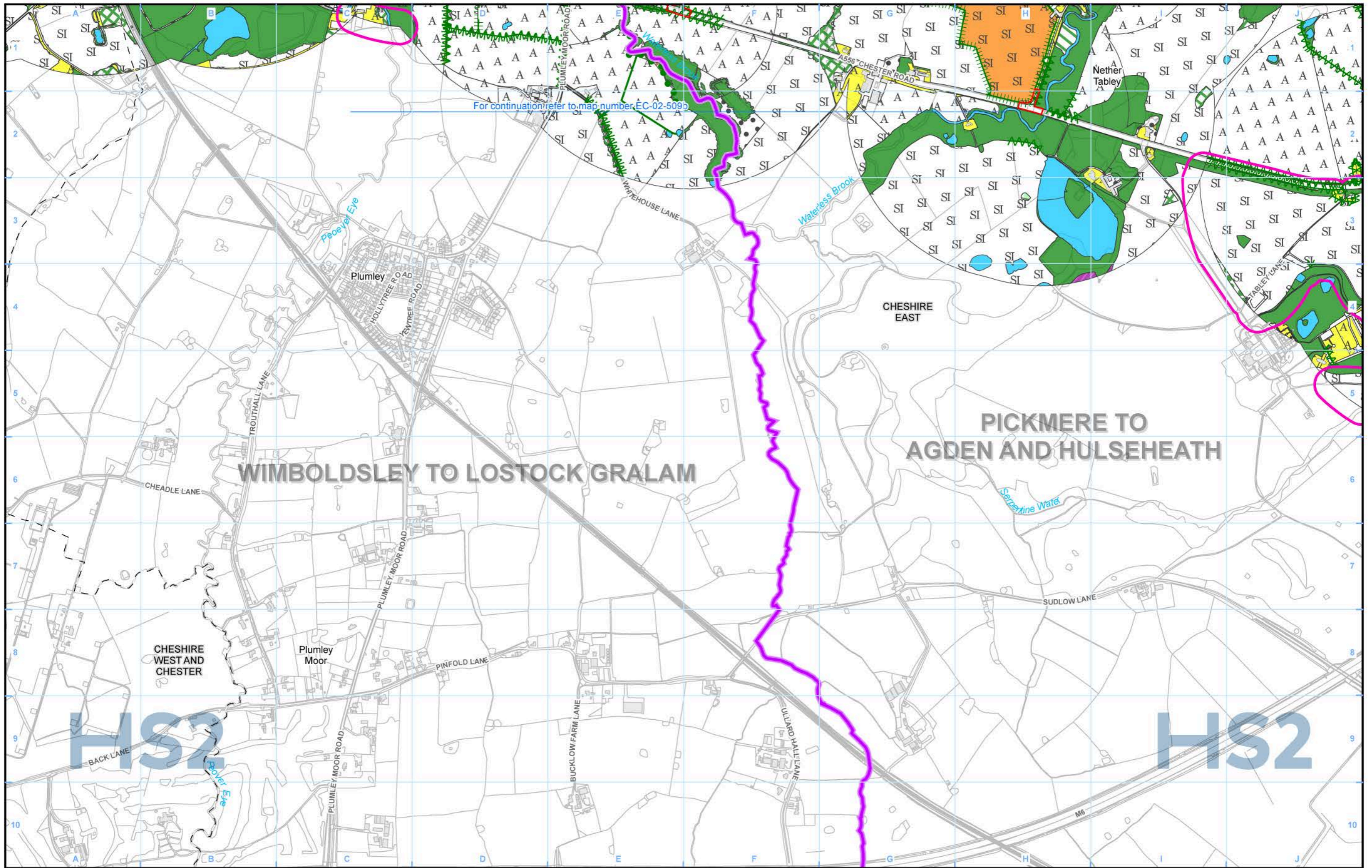
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Date: 29/03/23



WIMBOLDSLEY TO LOSTOCK GRALAM

PICKMERE TO AGDEN AND HULSEHEATH

Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Area contains new survey data
- Community area boundary
- County boundary
- District/Borough boundary

For full legend please refer to EC-02 Legend page

Map Number: EC-02-509b-R1

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

HS2

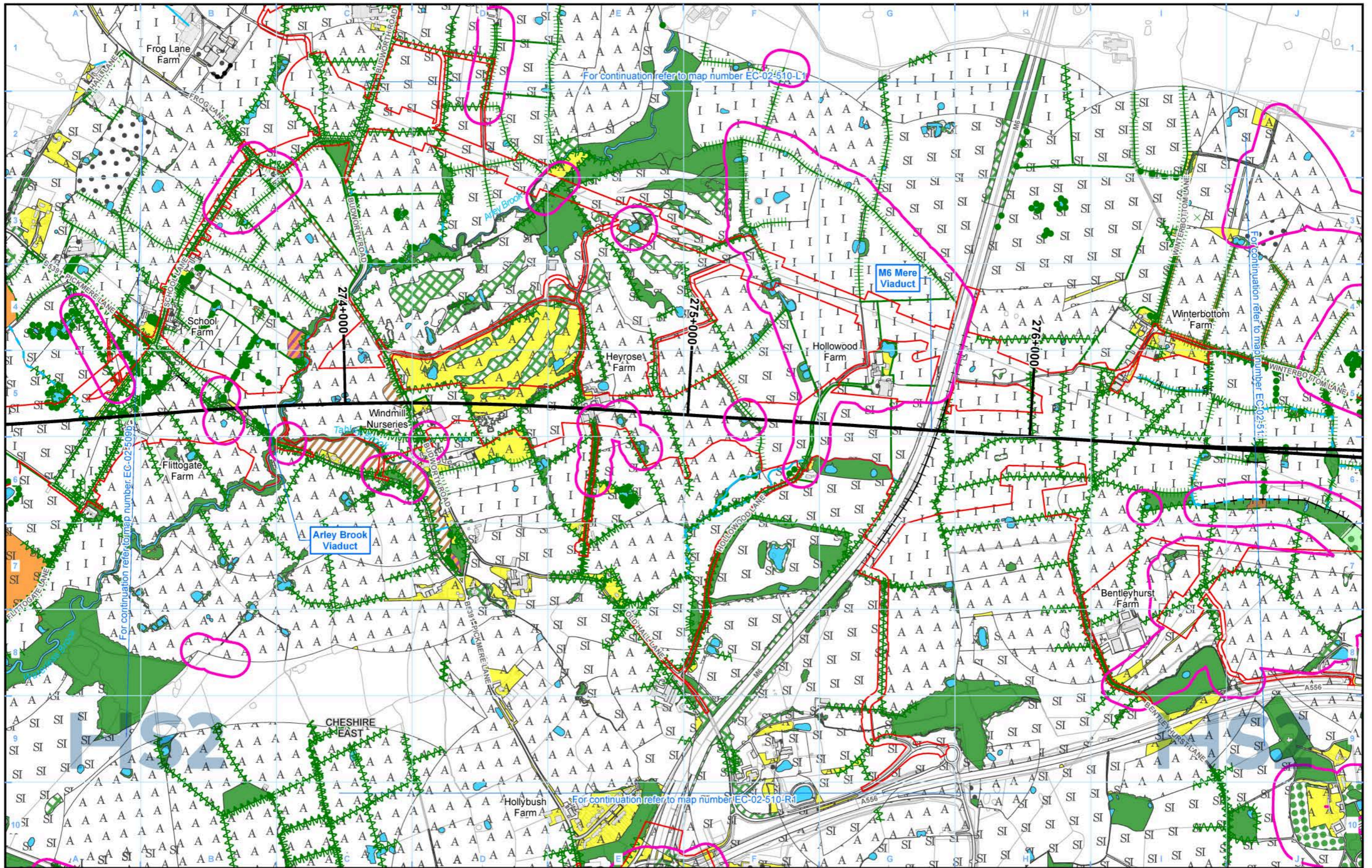
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Legend

- 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

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number
EC-02-510

Map Name
**Phase 1 Habitat (1:10,000)
SES2 and AP2 ES**

Community Area MA03:
Pickmere to Agden and Hulseath

HS2

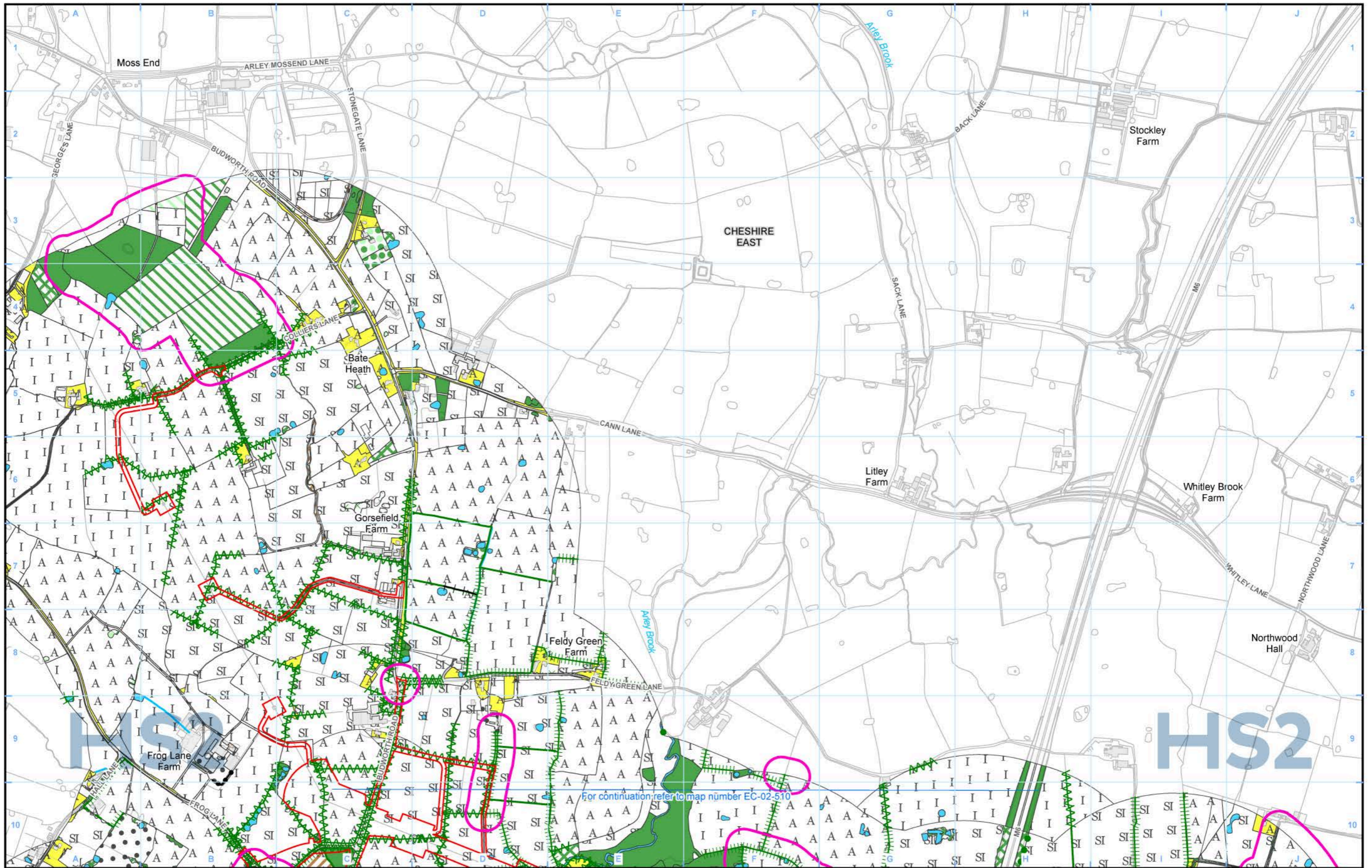
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Date: 29/03/23



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary

For full legend please refer to EC-02 Legend page

- Area contains new survey data

Map Number **EC-02-510-L1**

Map Name
**Phase 1 Habitat (1:10,000)
 SES2 and AP2 ES**

Community Area MA03:
 Pickmere to Agden and Hulseath

HS2

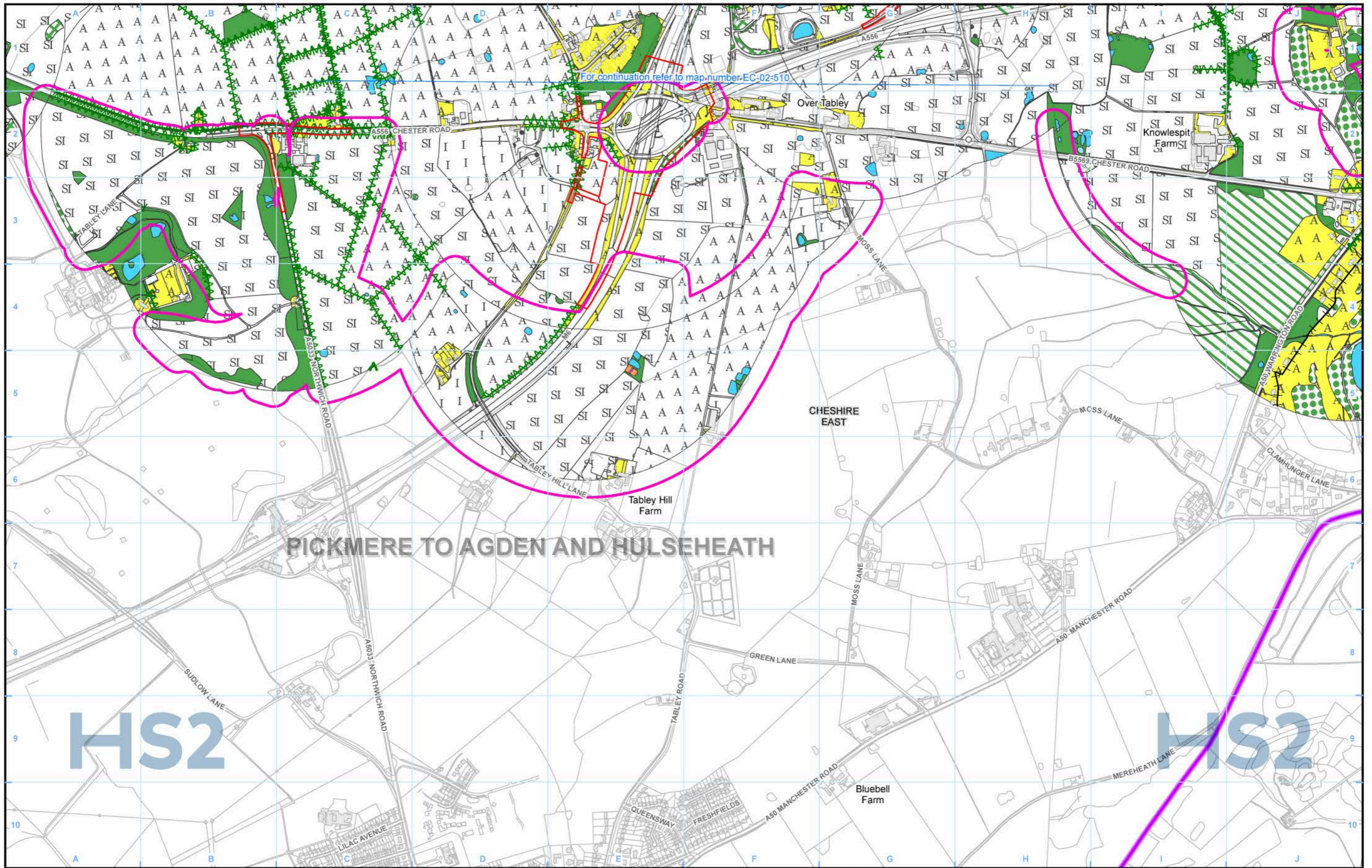
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Date: 29/03/23



For continuation refer to map number EC-02-510

PICKMERE TO AGDEN AND HULSEHEATH

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

For full legend please refer to EC-02 Legend page

- Area contains new survey data

Map Number: EC-02-510-R1

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

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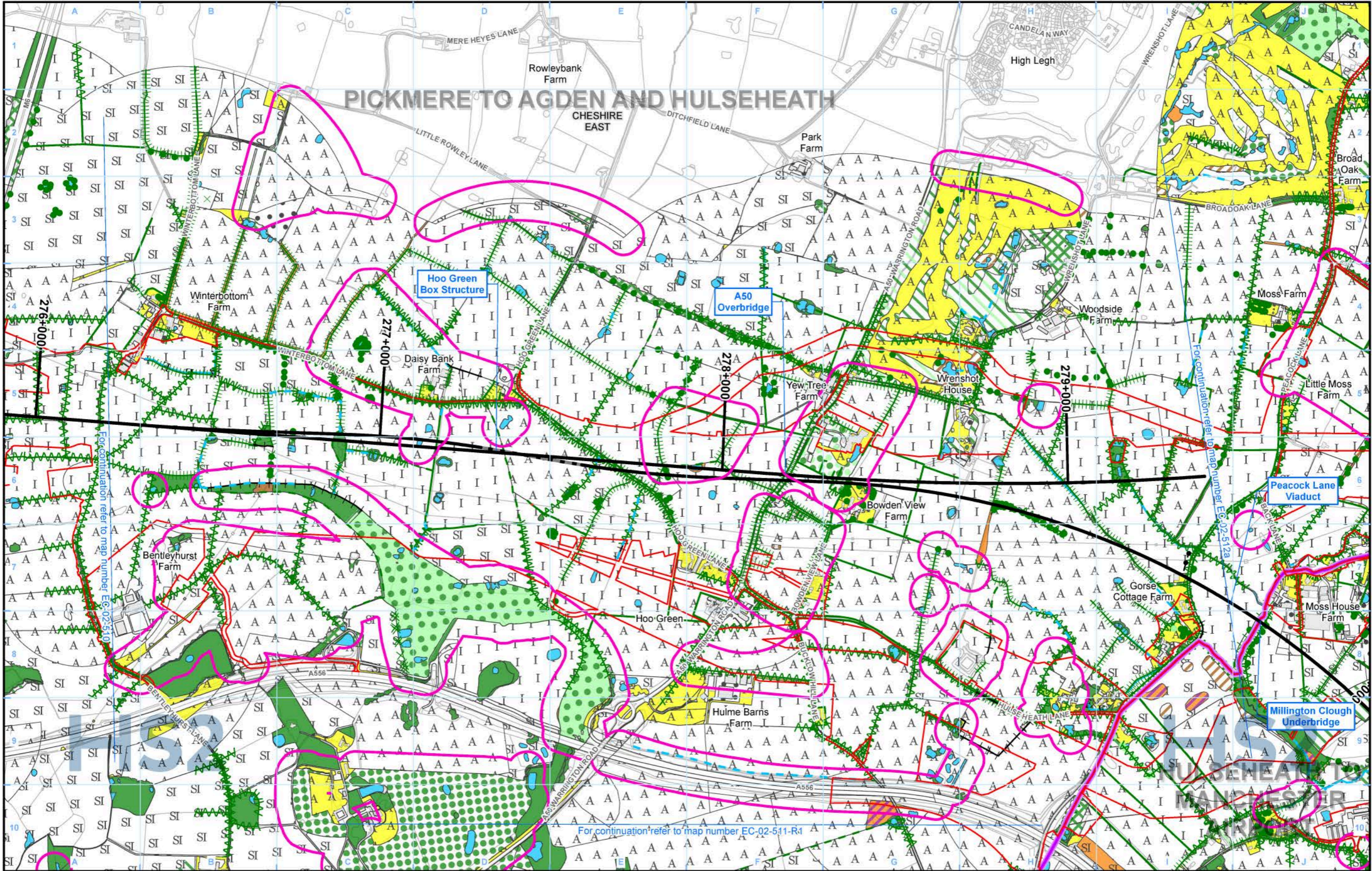
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Date: 29/03/23

PICKMERE TO AGDEN AND HULSEHEATH



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
- For full legend please refer to EC-02 Legend page
- Area contains new survey data

Map Number: EC-02-511

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

HS2

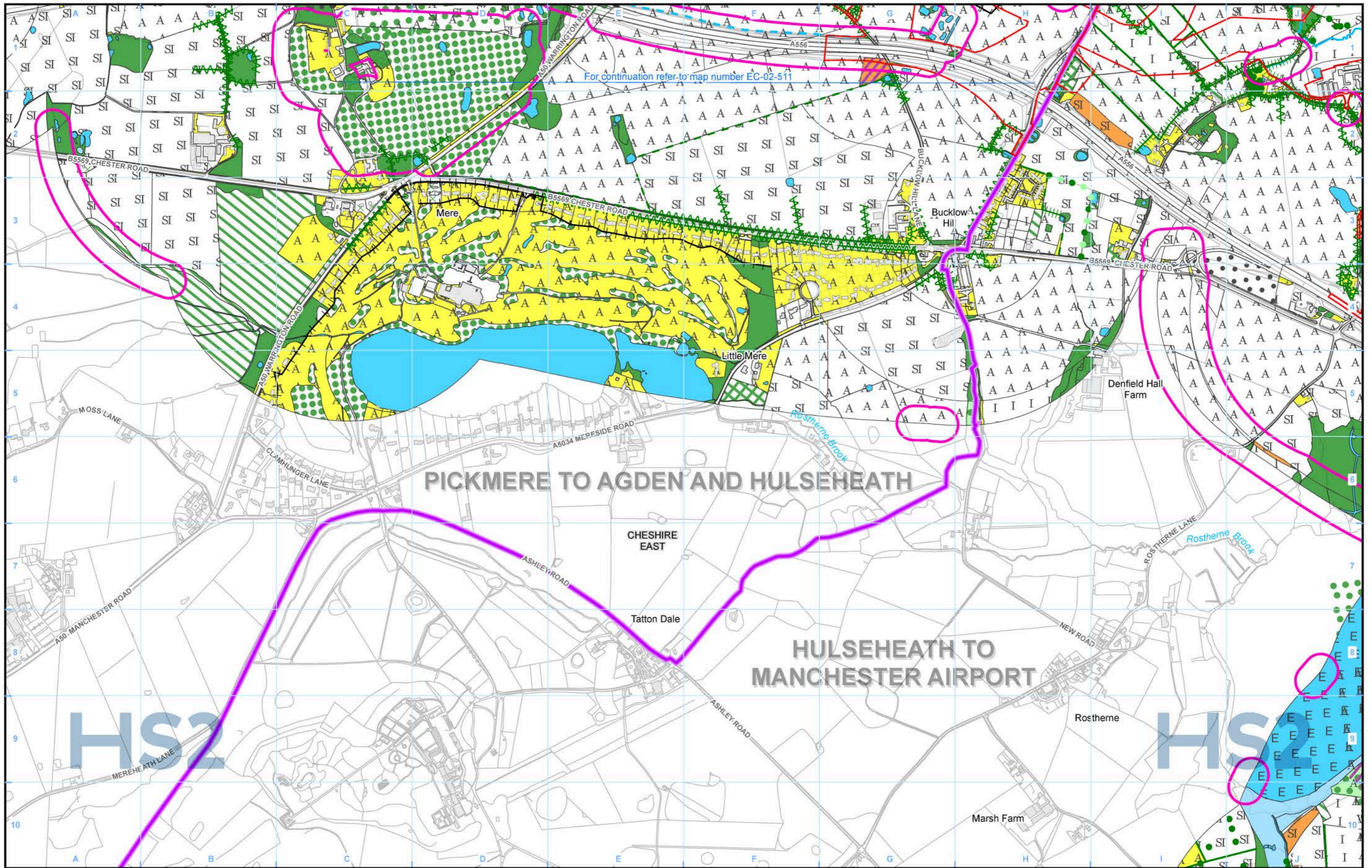
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Date: 29/03/23



For continuation refer to map number EC-02-511

PICKMERE TO AGDEN AND HULSEHEATH

HULSEHEATH TO MANCHESTER AIRPORT

Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Area contains new survey data
- Community area boundary
- County boundary
- District/Borough boundary

For full legend please refer to EC-02 Legend page

Map Number: EC-02-511-R1

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

HS2

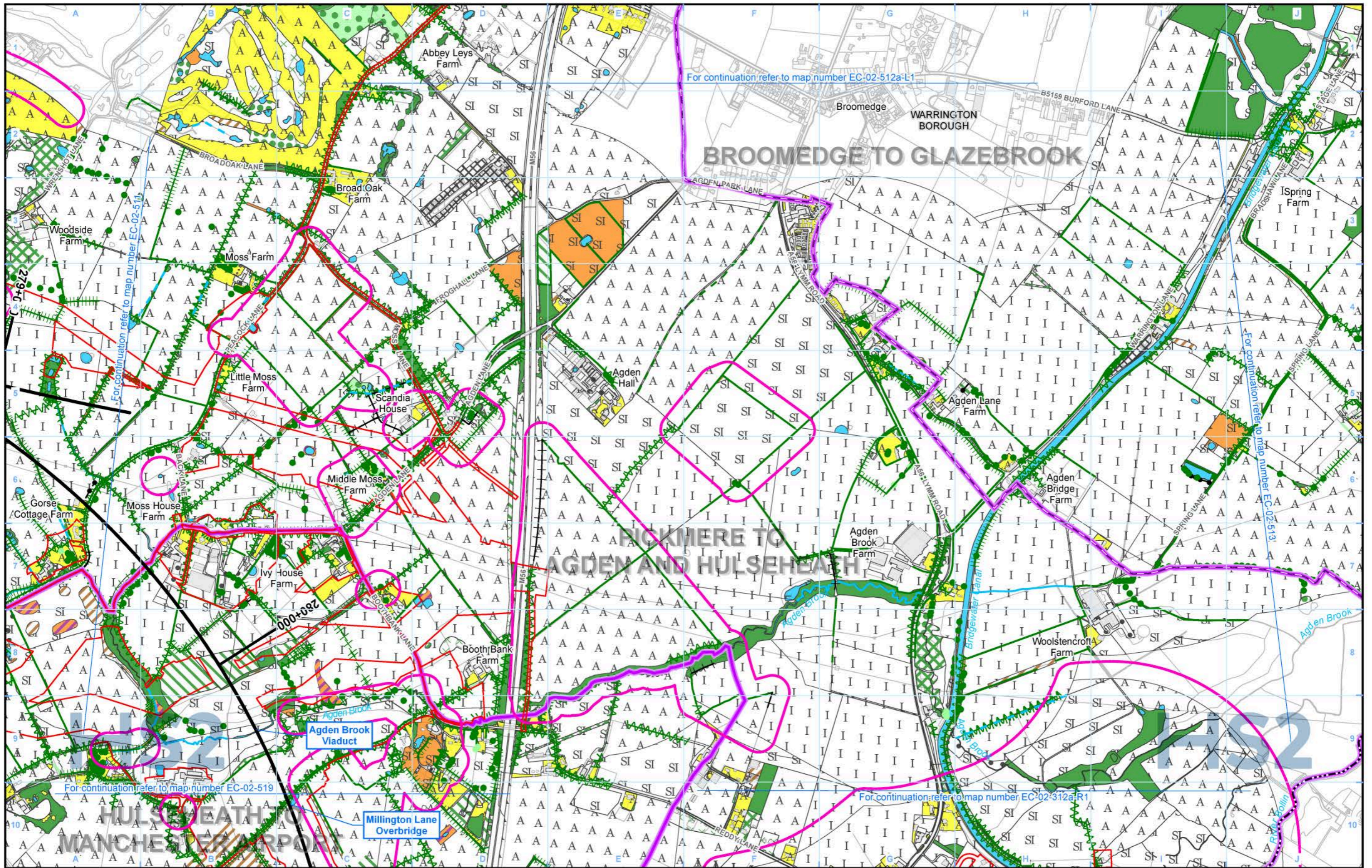
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Date: 29/03/23

Scale at A3: 1:10,000



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
- Area contains new survey data

For full legend please refer to EC-02 Legend page

Map Number: EC-02-512a

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

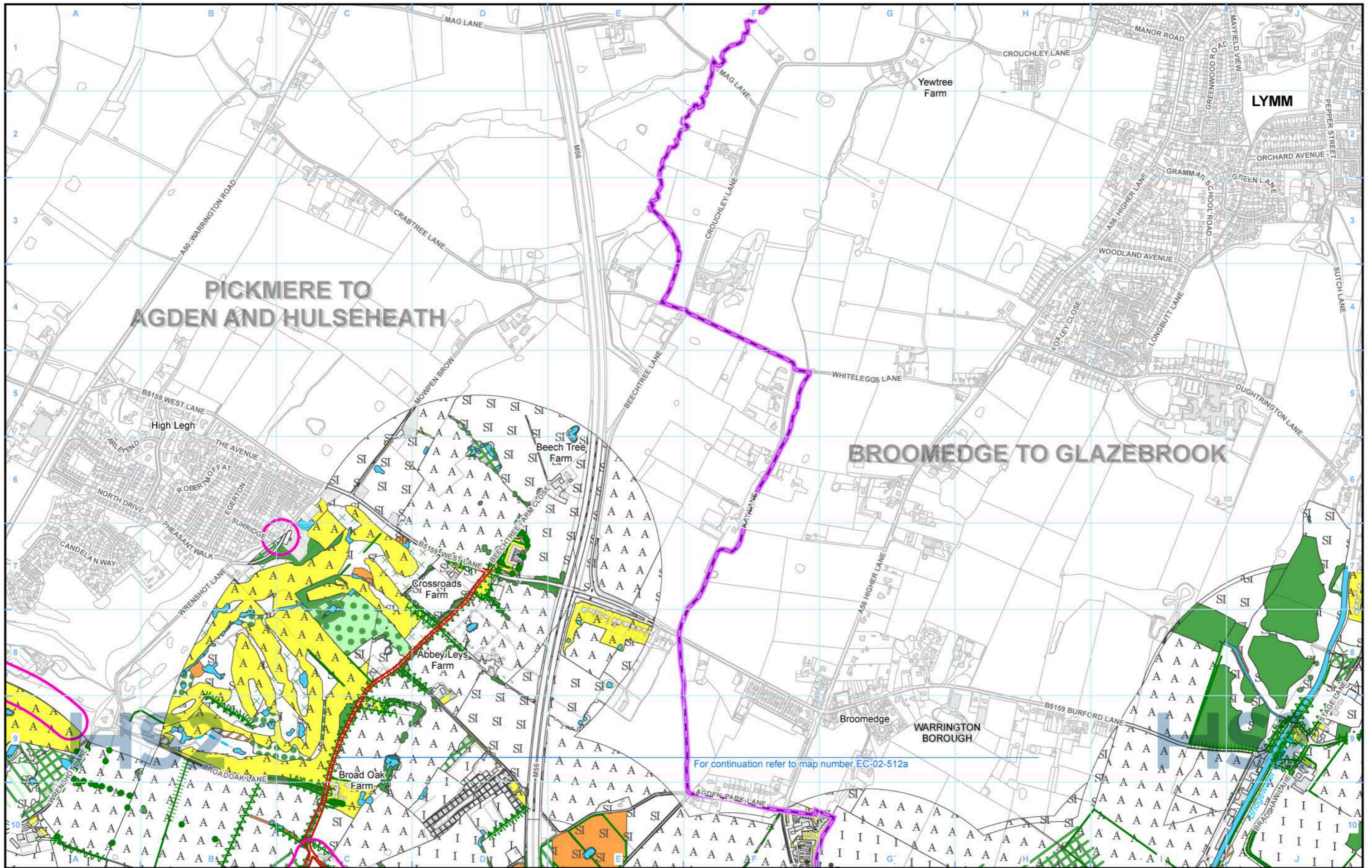
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Doc Number: 2PT27-MWJ-EV-MAP-M000-000783-P01

Date: 29/03/23



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary

For full legend please refer to EC-02 Legend page

- Area contains new survey data

Map Number: EC-02-512a-L1

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

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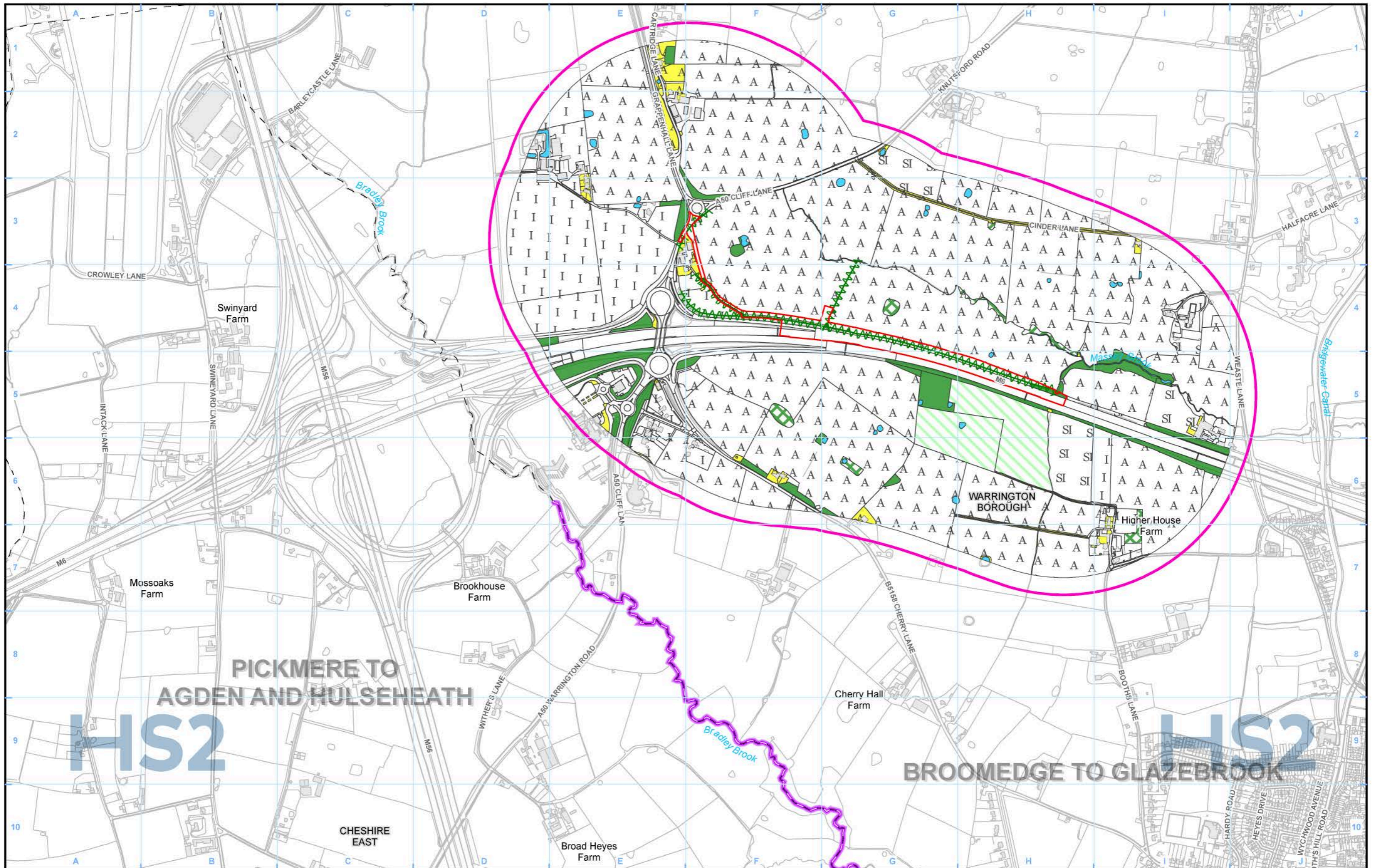
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Doc Number: 2PT27-MWJ-EV-MAP-M000-002816-P01

Date: 29/03/23

Scale at A3: 1:10,000

100 200 300 400 Metres



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

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number: EC-02-512a-L2

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

HS2

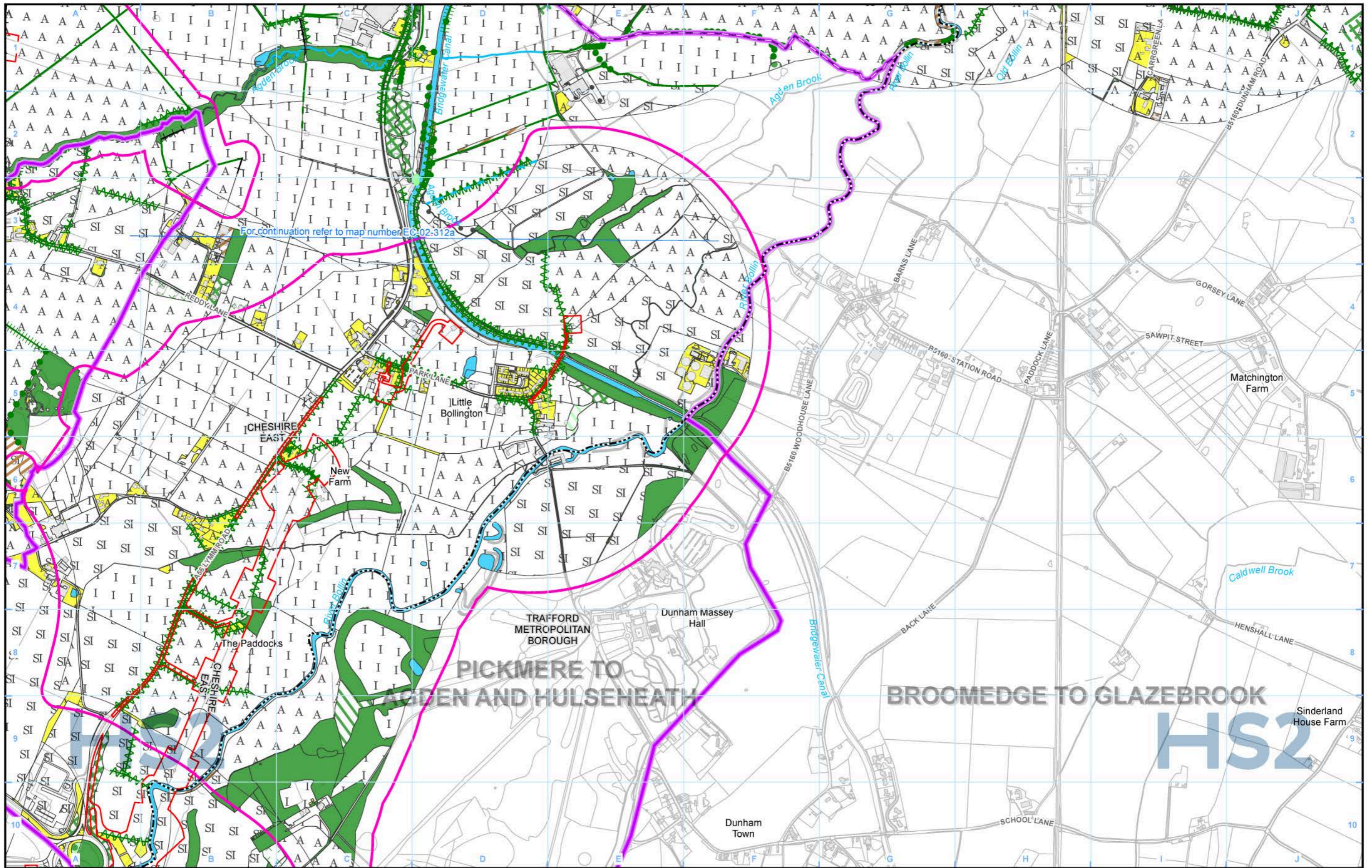
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For continuation refer to map number EC-02-312a

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

For full legend please refer to EC-02 Legend page

- Area contains new survey data

Map Number **EC-02-512a-R1**

Map Name **Phase 1 Habitat (1:10,000)
SES2 and AP2 ES**

Community Area MA03:
Pickmere to Agden and Hulseneath

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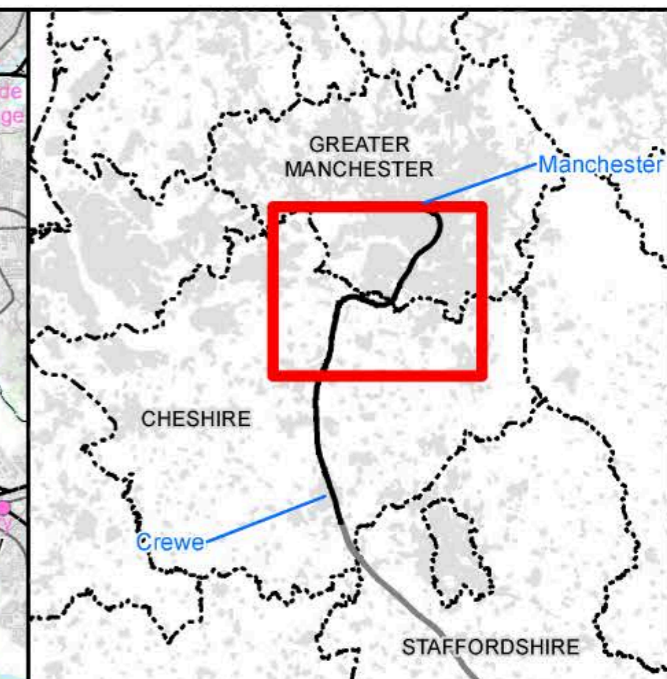
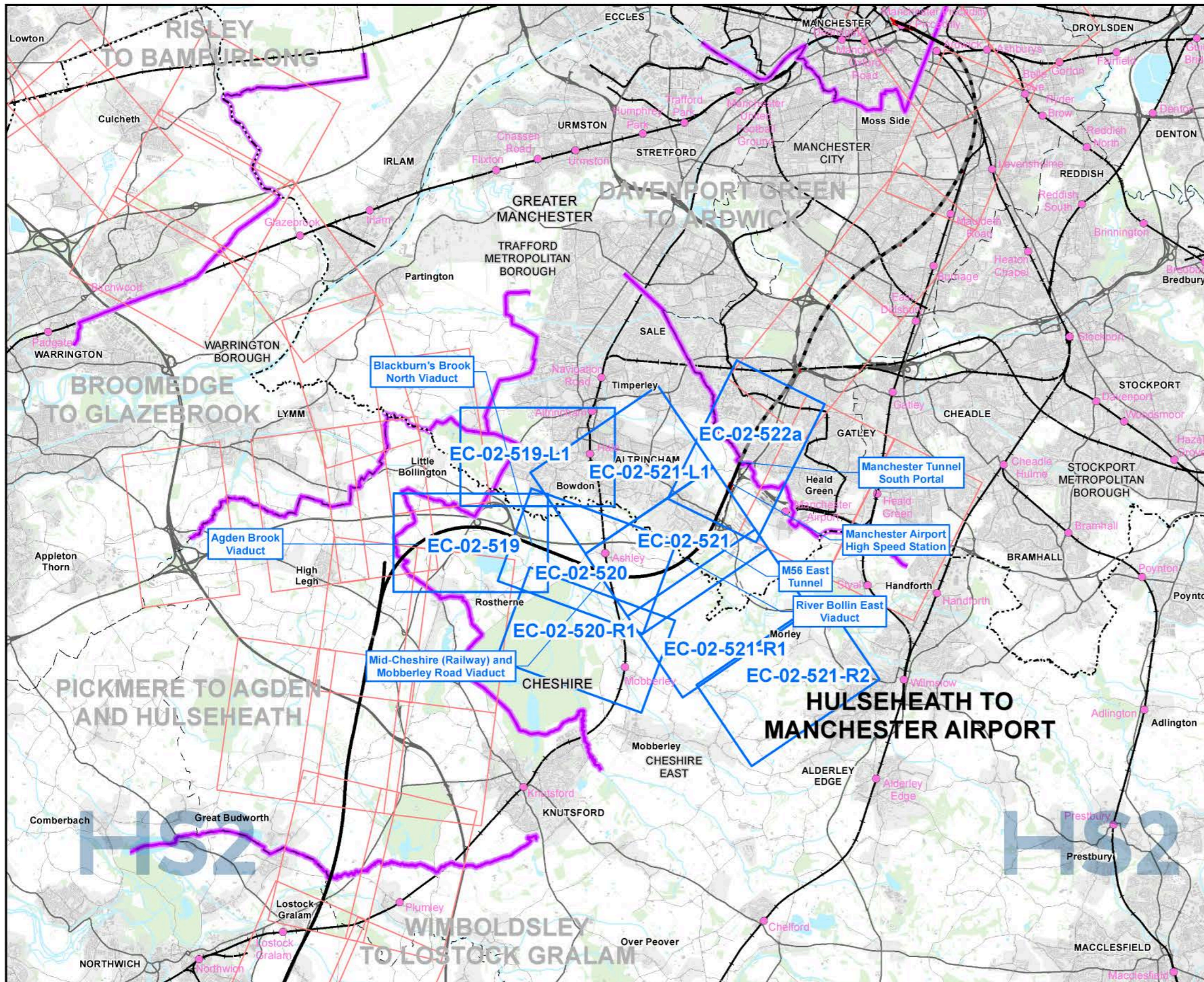
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Doc Number: 2PT27-MWJ-EV-MAP-M000-003683-P01

Date: 29/03/23

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Map Series Information:

This map series shows Phase 1 habitat survey information for land required and in the vicinity of the Proposed Scheme at a scale of 1:10,000. Where it has not been possible to gain access for field survey, the information is based on available desk studies and interpretation of aerial photography.

- 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 with amendment
 - Map sheet included in this community with no amendment
 - Map sheets not included in this community area

Map Number	EC-02-INDEX-MA06
Map Name	Index Map of: Phase 1 Habitat (1:10,000) SES2 and AP2 ES
	Community Area MA06: Hulseheath to Manchester Airport

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

















Date: 29/03/23


















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




Phase 1 Habitat survey legend

Habitat Areas

-  Broadleaved woodland - semi-natural
-  Broadleaved woodland - plantation
-  Coniferous woodland - semi-natural
-  Coniferous woodland - plantation
-  Mixed woodland - semi-natural
-  Mixed woodland - plantation
-  Scrub - dense/continuous
-  Scrub - scattered
-  Broadleaved parkland/scattered trees
-  Coniferous parkland/scattered trees
-  Mixed parkland/scattered trees
-  Broadleaved woodland - recently felled
-  Coniferous woodland - recently felled
-  Mixed woodland - recently felled
-  Acid grassland - unimproved
-  Acid grassland - semi-improved
-  Neutral grassland - unimproved
-  Neutral grassland - semi-improved
-  Calcareous grassland - unimproved
-  Calcareous grassland - semi-improved
-  Improved grassland
-  Marsh/marshy grassland
-  Poor semi-improved grassland
-  Bracken - continuous
-  Bracken - scattered
-  Upland species-rich ledges
-  Other tall herb and fern - ruderal
-  Other tall herb and fern - non ruderal
-  Dry dwarf shrub heath - acid
-  Dry dwarf shrub heath - basic
-  Wet dwarf shrub heath
-  Lichen/bryophyte heath
-  Montane heath/dwarf herb
-  Dry heath/acid grassland
-  Wet heath/acid grassland
-  Blanket sphagnum bog
-  Raised sphagnum bog
-  Wet modified bog
-  Dry modified bog
-  Flush and spring - acid/neutral flush
-  Flush and spring - basic flush
-  Fen
-  Fen - valley mire
-  Fen - basin mire
-  Fen - flood plain mire
-  Peat - bare
-  Swamp
-  Marginal and inundation - inundation vegetation
-  Standing water
-  Standing water - eutrophic
-  Standing water - mesotrophic
-  Standing water - oligotrophic
-  Standing water - dystrophic
-  Standing water - marl
-  Standing water - brackish
-  Running water
-  Running water - eutrophic
-  Running water - mesotrophic
-  Running water - oligotrophic
-  Running water - dystrophic
-  Running water - marl
-  Running water - brackish

-  Inland cliff - acid/neutral
-  Inland cliff - basic
-  Scree - acid/neutral
-  Scree - basic
-  Limestone pavement
-  Other exposure - acid/neutral
-  Other exposure - basic
-  Cave
-  Quarry
-  Spoil
-  Mine
-  Refuse-tip
-  Cultivated/disturbed land - arable
-  Cultivated/disturbed land - amenity grassland
-  Cultivated/disturbed land - ephemeral/short perennial
-  Introduced shrub
-  Intact hedge - native species-rich
-  Intact hedge - species-poor
-  Defunct hedge - native species-rich
-  Defunct hedge - species-poor
-  Hedge with trees - native species-rich
-  Hedge with trees - species-poor
-  Fence
-  Wall
-  Dry ditch
-  Boundary removed
-  Earth bank
-  Caravan site
-  Buildings
-  Bare ground
-  Other habitat

- Linear Habitats**
-  Scrub - scattered
 -  Broadleaved parkland/scattered trees
 -  Coniferous parkland/scattered trees
 -  Mixed parkland/scattered trees
 -  Upland species-rich ledges
 -  Marginal and inundation - marginal vegetation
 -  Running water
 -  Running water - eutrophic
 -  Running water - mesotrophic
 -  Running water - oligotrophic
 -  Running water - dystrophic
 -  Running water - marl
 -  Running water - brackish
 -  Inland cliff
 -  Scree
 -  Intact hedge - native species-rich
 -  Intact hedge - species-poor
 -  Defunct hedge - native species-rich
 -  Defunct hedge - species-poor
 -  Hedge with trees - native species-rich
 -  Hedge with trees - species-poor
 -  Fence
 -  Wall
 -  Dry ditch
 -  Boundary removed
 -  Earth bank

- Point Habitats**
-  Scrub - scattered
 -  Broadleaved parkland/scattered trees
 -  Coniferous parkland/scattered trees

HS2

HS2

Map Number	EC-02 - Legend
Map Name	EC-02 - Phase 1 Habitat Survey Legend

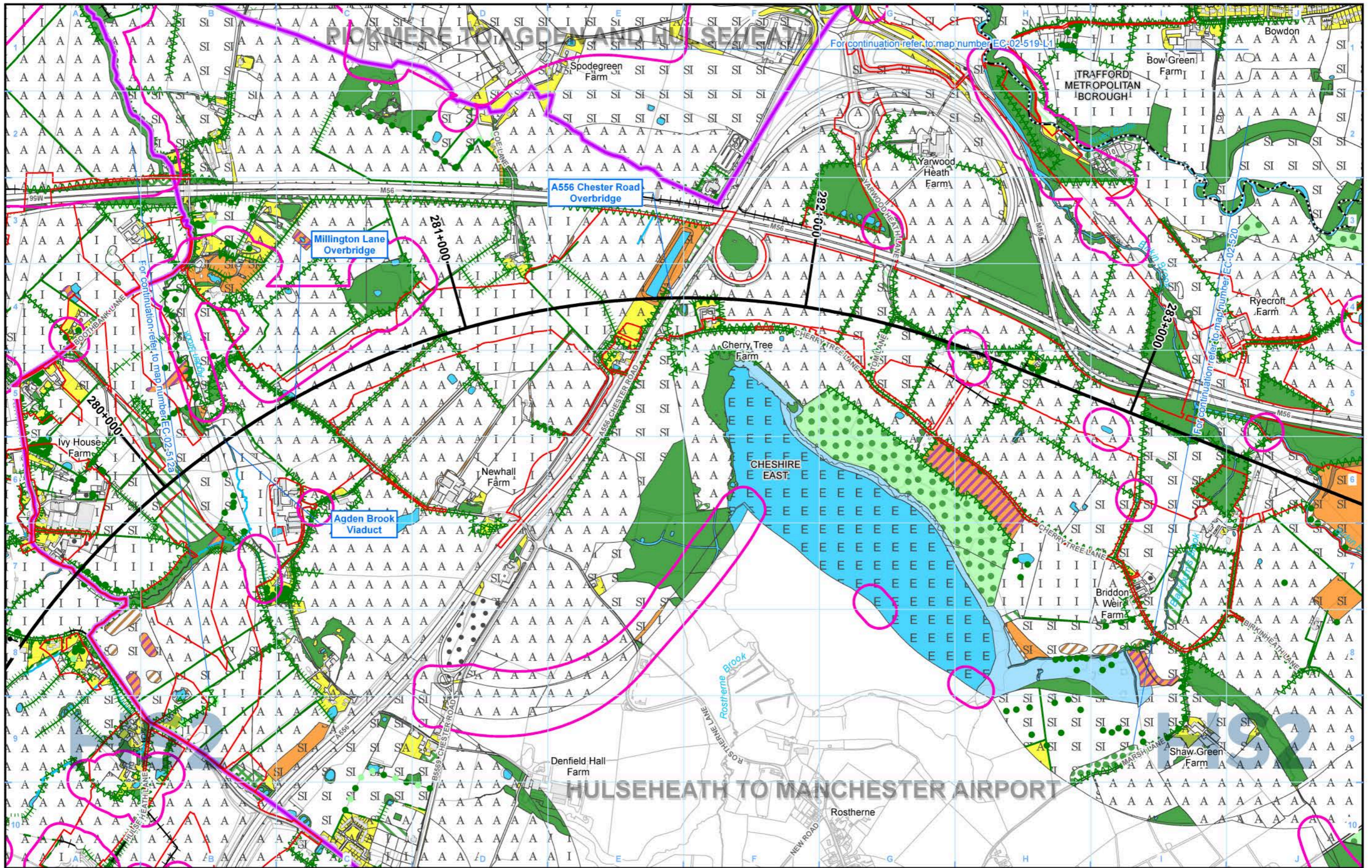
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Legend

- 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

Area contains new survey data

For full legend please refer to EC-02 Legend page

Map Number: EC-02-519

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA06: Hulse Heath to Manchester Airport

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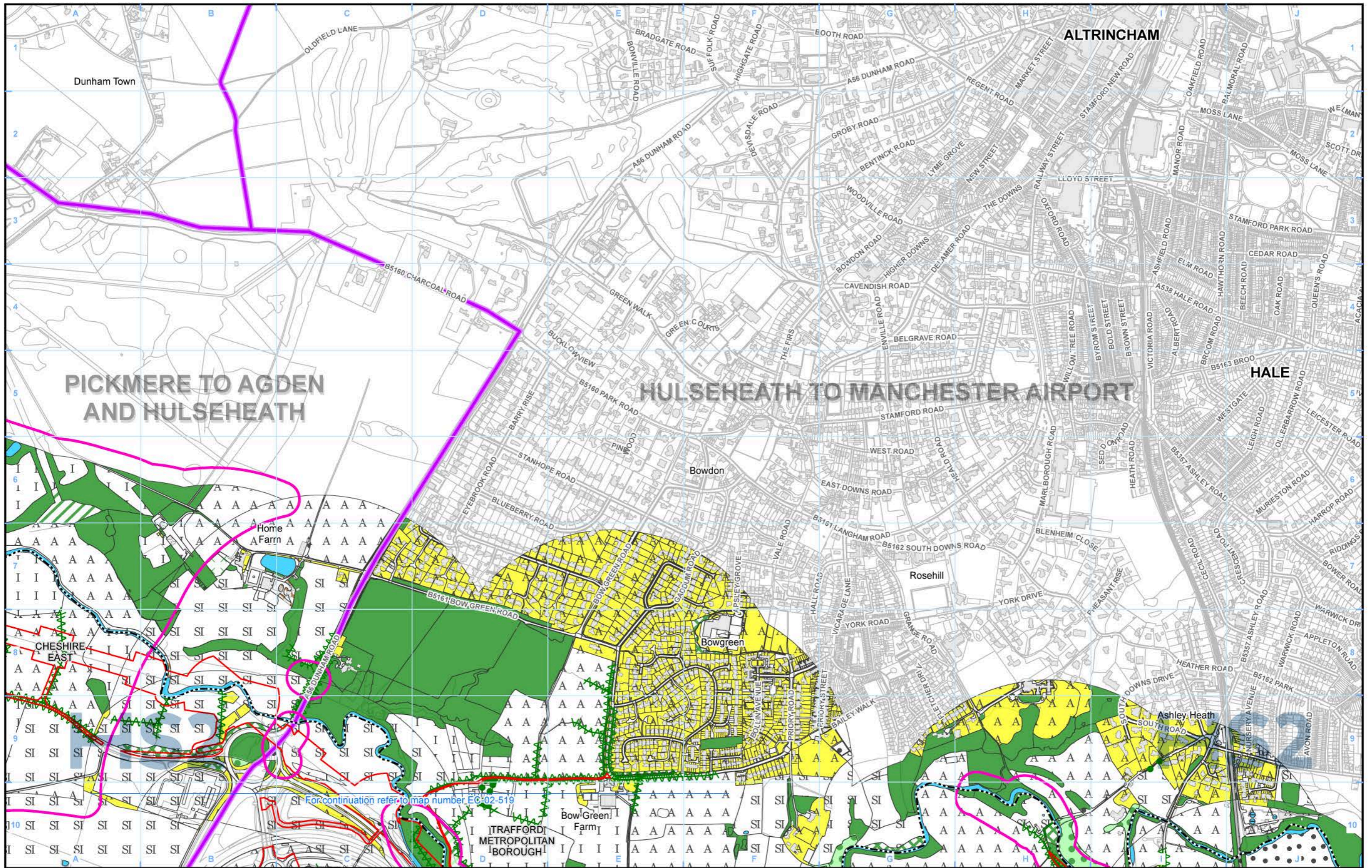
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Doc Number: 2PT27-MWJ-EV-MAP-M000-000792-P01

Date: 29/03/23



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

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number **EC-02-519-L1**

Map Name **Phase 1 Habitat (1:10,000)
SES2 and AP2 ES**

Community Area MA06:
Hulse Heath to Manchester Airport

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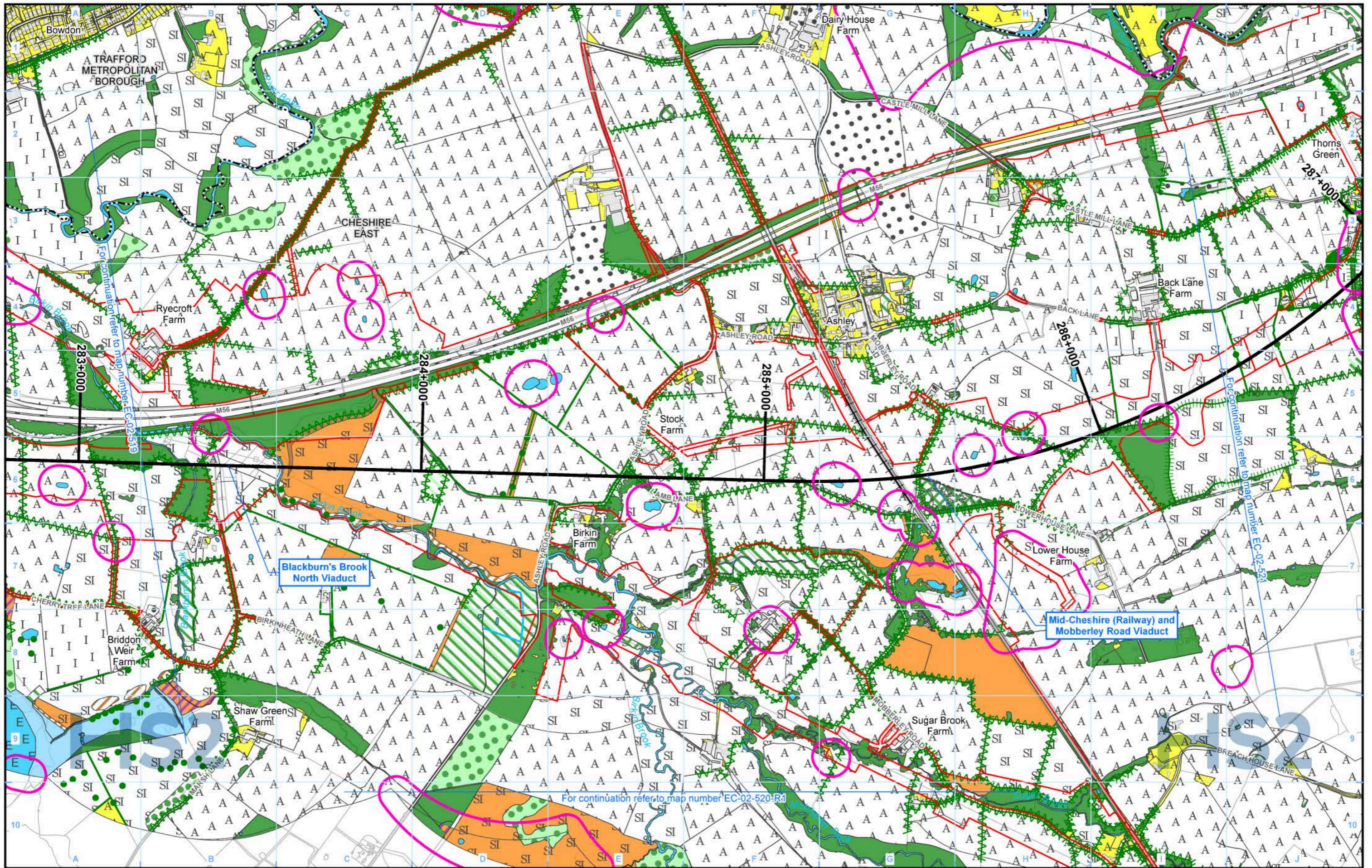
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Doc Number: 2PT27-MWJ-EV-MAP-M000-002825-P01

Date: 29/03/23



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary

Area contains new survey data

For full legend please refer to EC-02 Legend page

Map Number
EC-02-520

Map Name
**Phase 1 Habitat (1:10,000)
SES2 and AP2 ES**

Community Area MA06:
Hulse Heath to Manchester Airport

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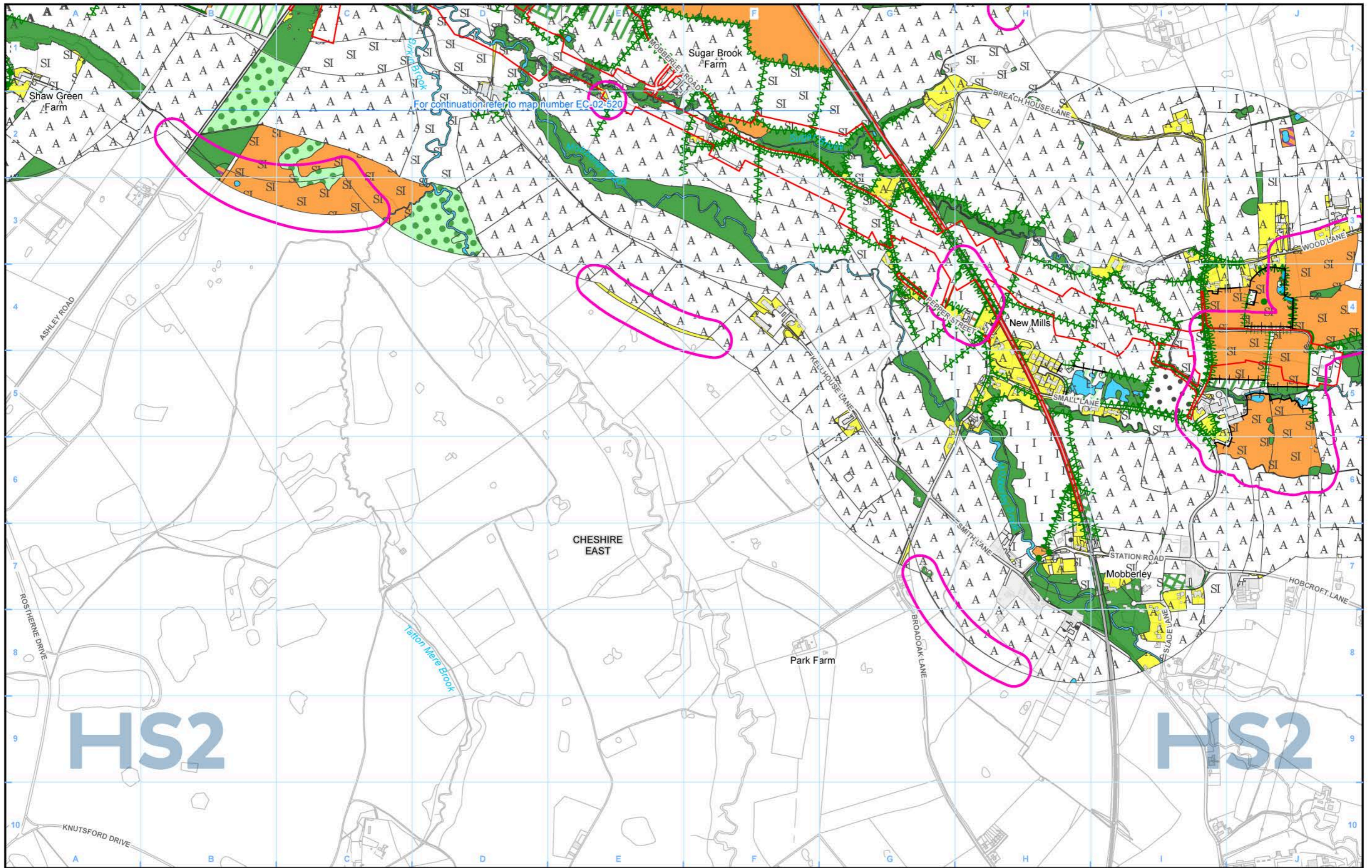
Doc Number: 2PT27-MWJ-EV-MAP-M000-000793-P01

Date: 29/03/23

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100 200 300 400
Metres

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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

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number **EC-02-520-R1**

Map Name **Phase 1 Habitat (1:10,000)
SES2 and AP2 ES**

Community Area MA06:
Hulseheath to Manchester Airport

HS2

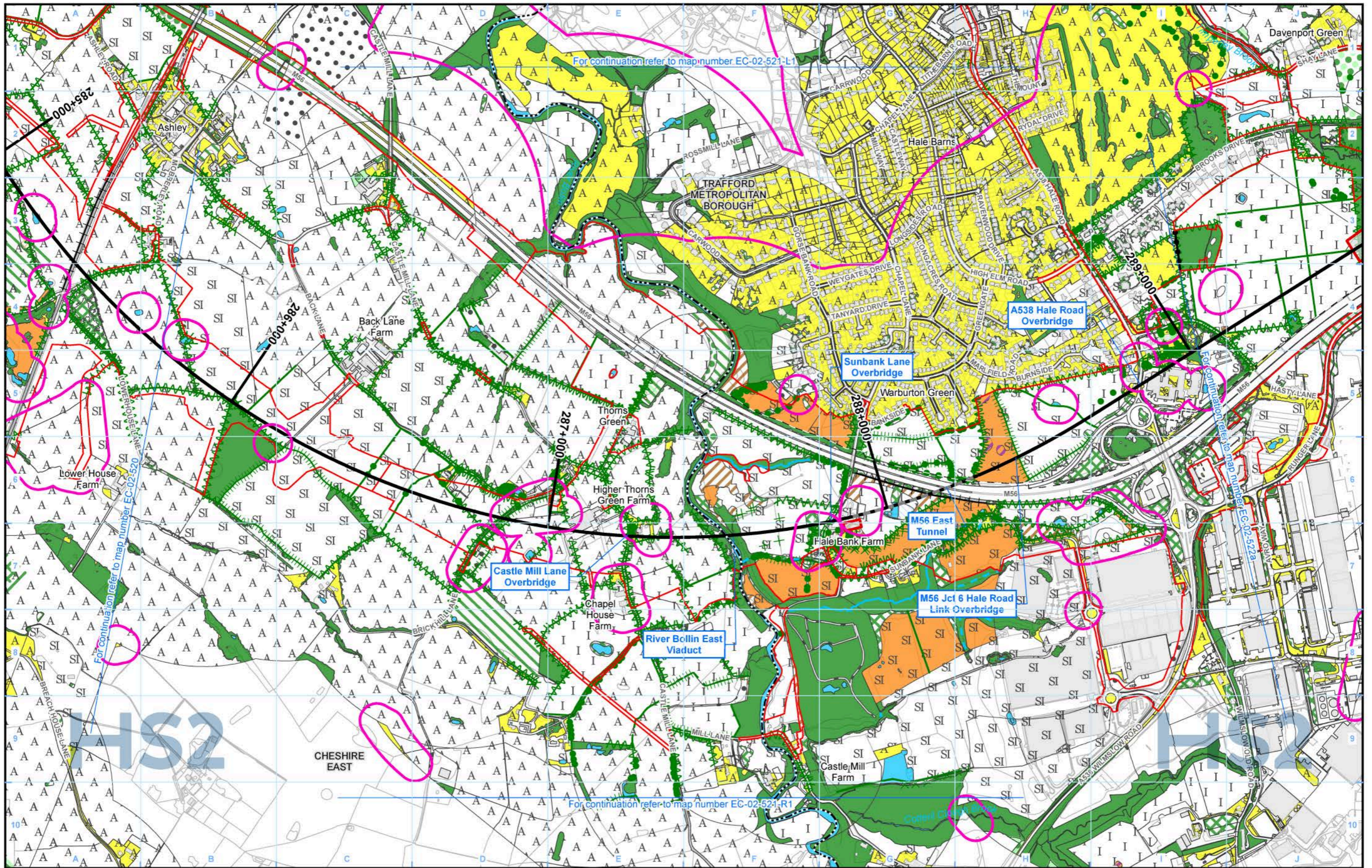
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Map Number	EC-02-521
Map Name	Phase 1 Habitat (1:10,000) SES2 and AP2 ES
	Community Area MA06: Hulseheath to Manchester Airport

HS2


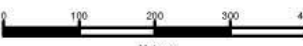
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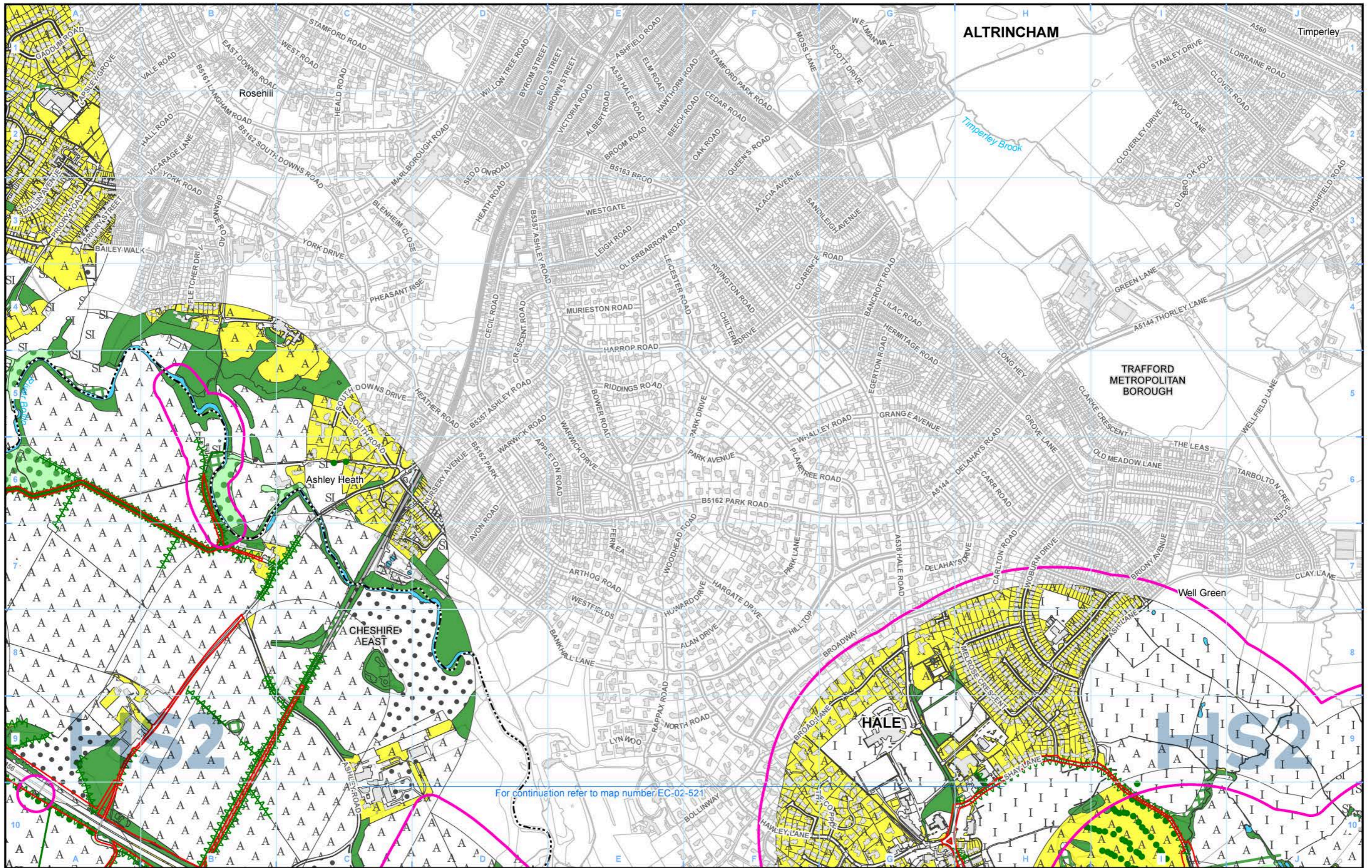
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Doc Number: 2PT27-MWJ-EV-MAP-M000-000794-P01

Date: 29/03/23



For continuation refer to map number EC-02-521

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

Area contains new survey data

For full legend please refer to EC-02 Legend page

Map Number: EC-02-521-L1

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA06: Hulseheath to Manchester Airport

HS2

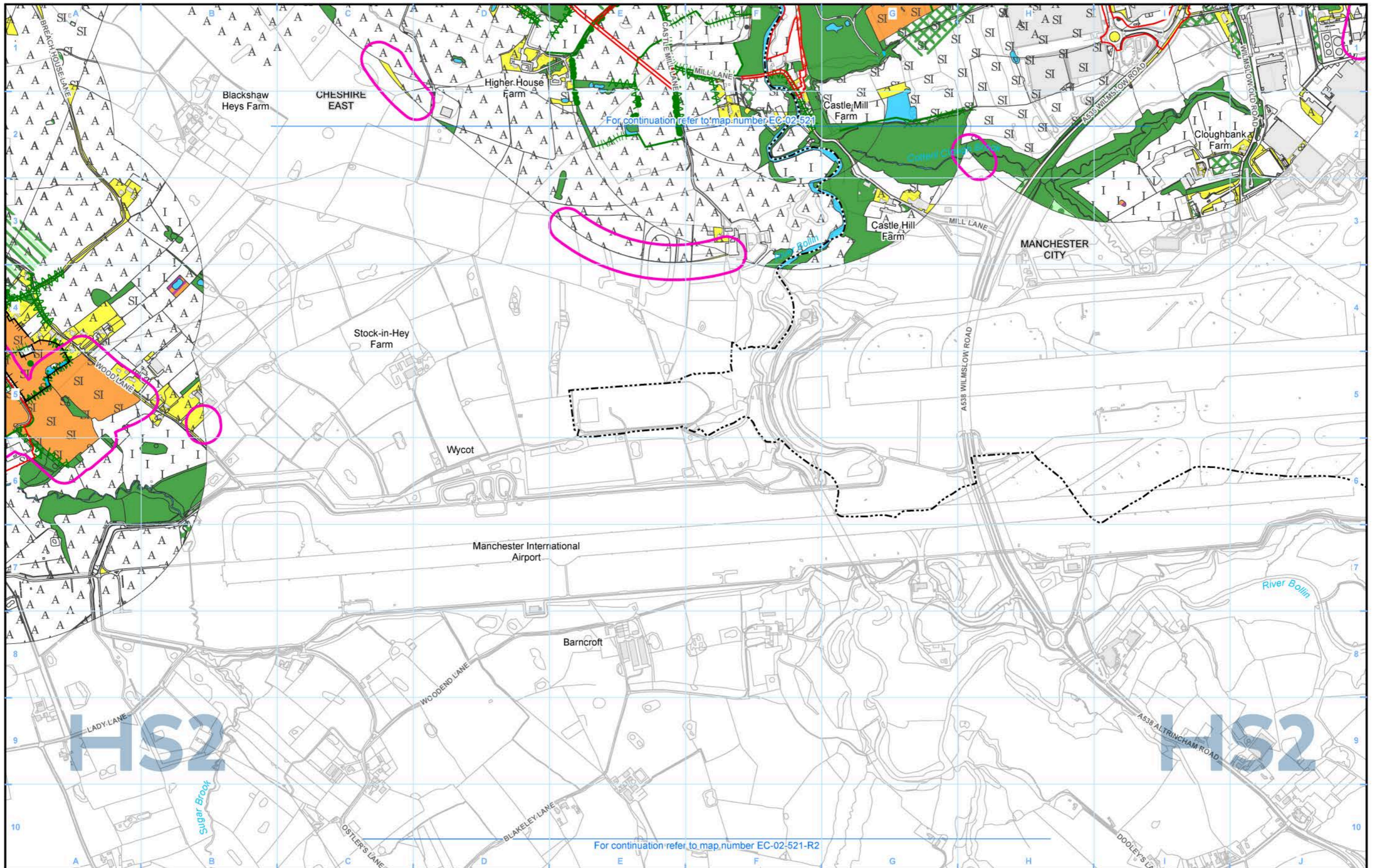
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Date: 29/03/23



For continuation refer to map number EC-02-521-R1

For continuation refer to map number EC-02-521-R2

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

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number: EC-02-521-R1

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA06: Hulseheath to Manchester Airport

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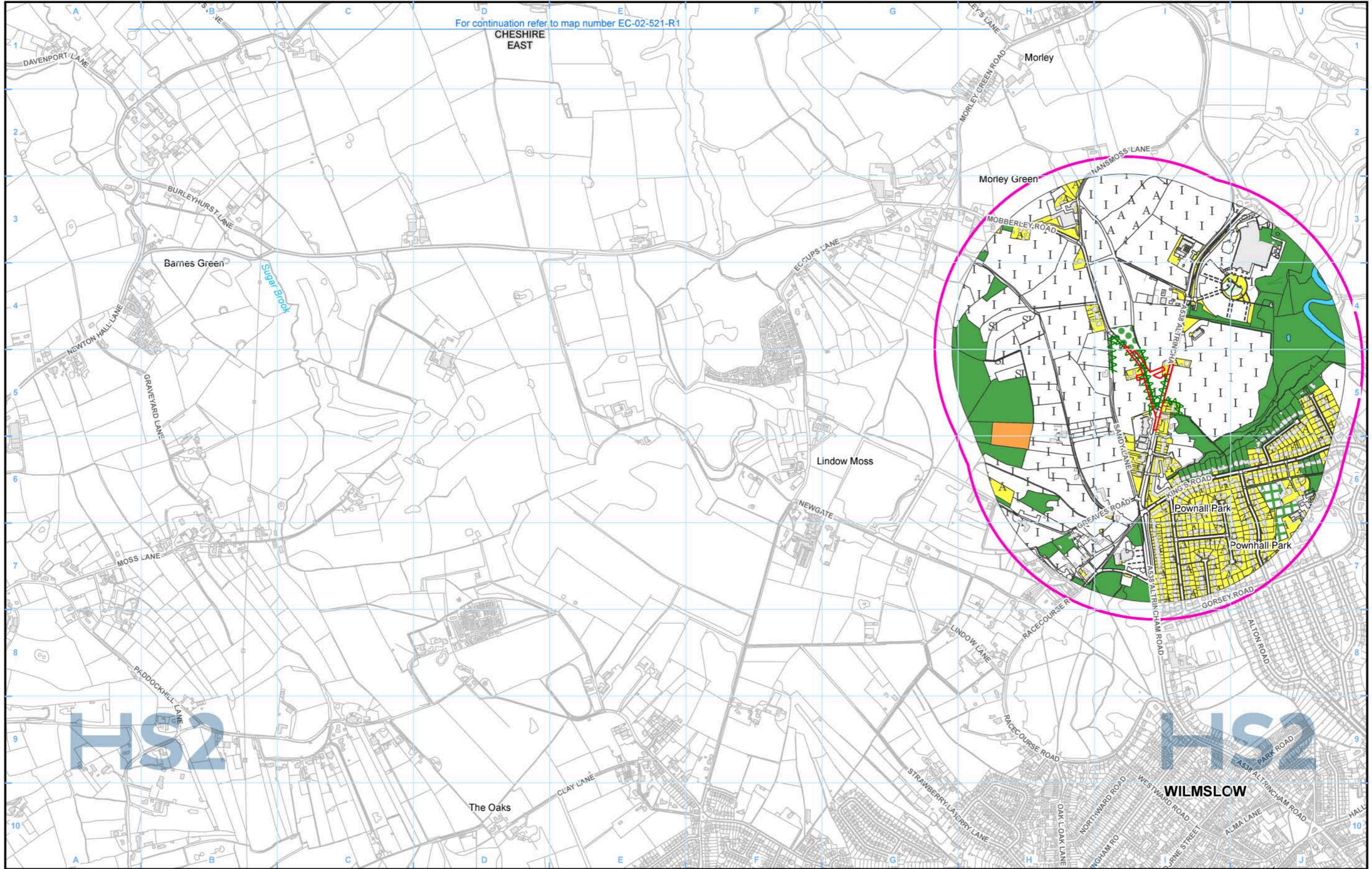
Scale at A3: 1:10,000

Doc Number: 2PT27-MWJ-EV-MAP-M000-002827-P01

Date: 29/03/23

For continuation refer to map number EC-02-521-R1

CHESHIRE EAST



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Area contains new survey data
- Community area boundary
- County boundary
- District/Borough boundary

For full legend please refer to EC-02 Legend page

Map Number: EC-02-521-R2

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA06: Hulseheath to Manchester Airport

HS2

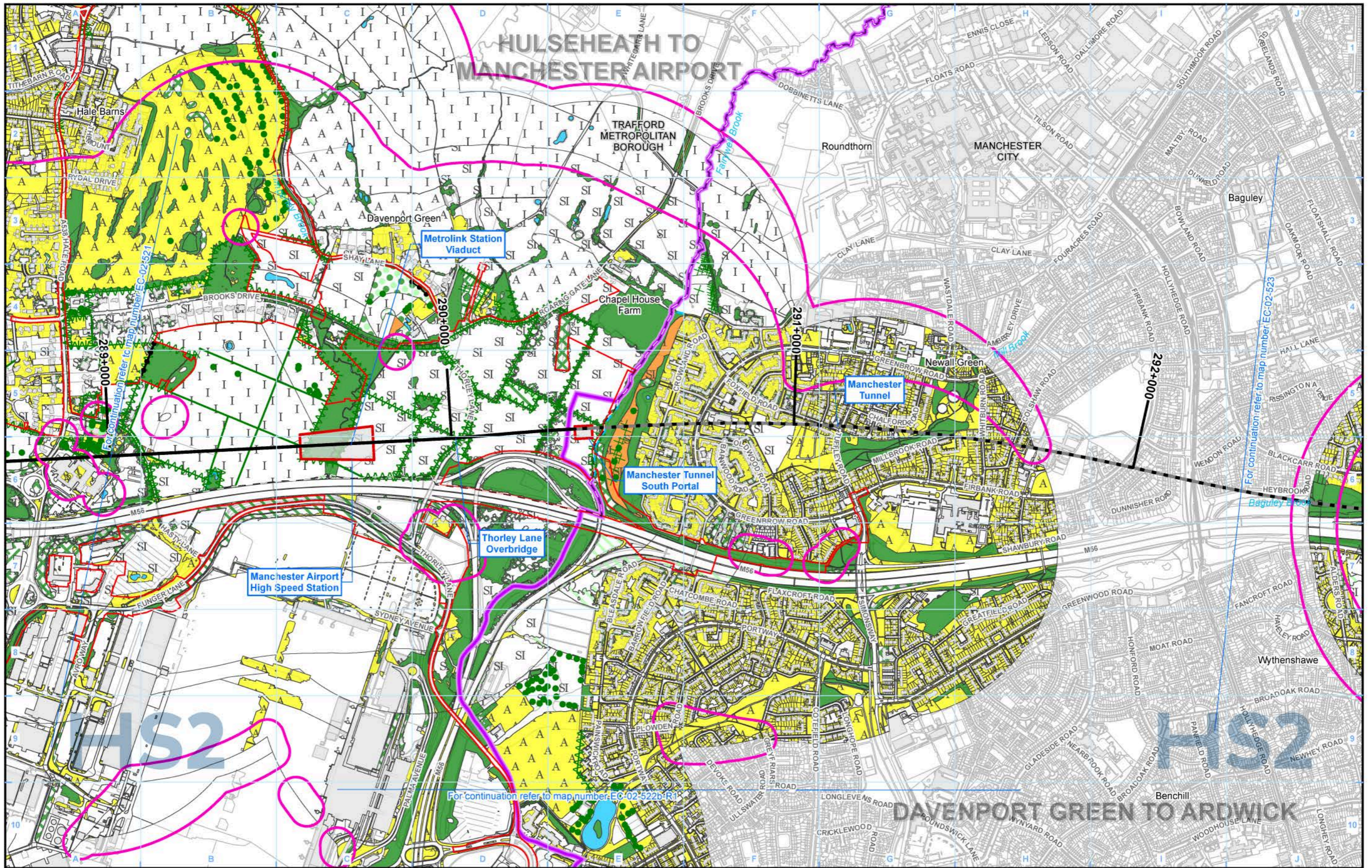
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Date: 29/03/23



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary
- Area contains new survey data

For full legend please refer to EC-02 Legend page

Map Number: EC-02-522a

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA06: Hulseheath to Manchester Airport

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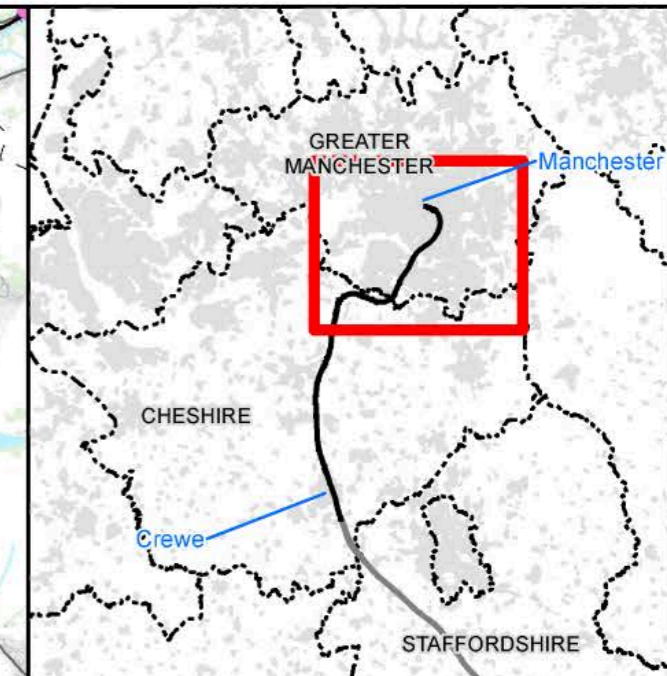
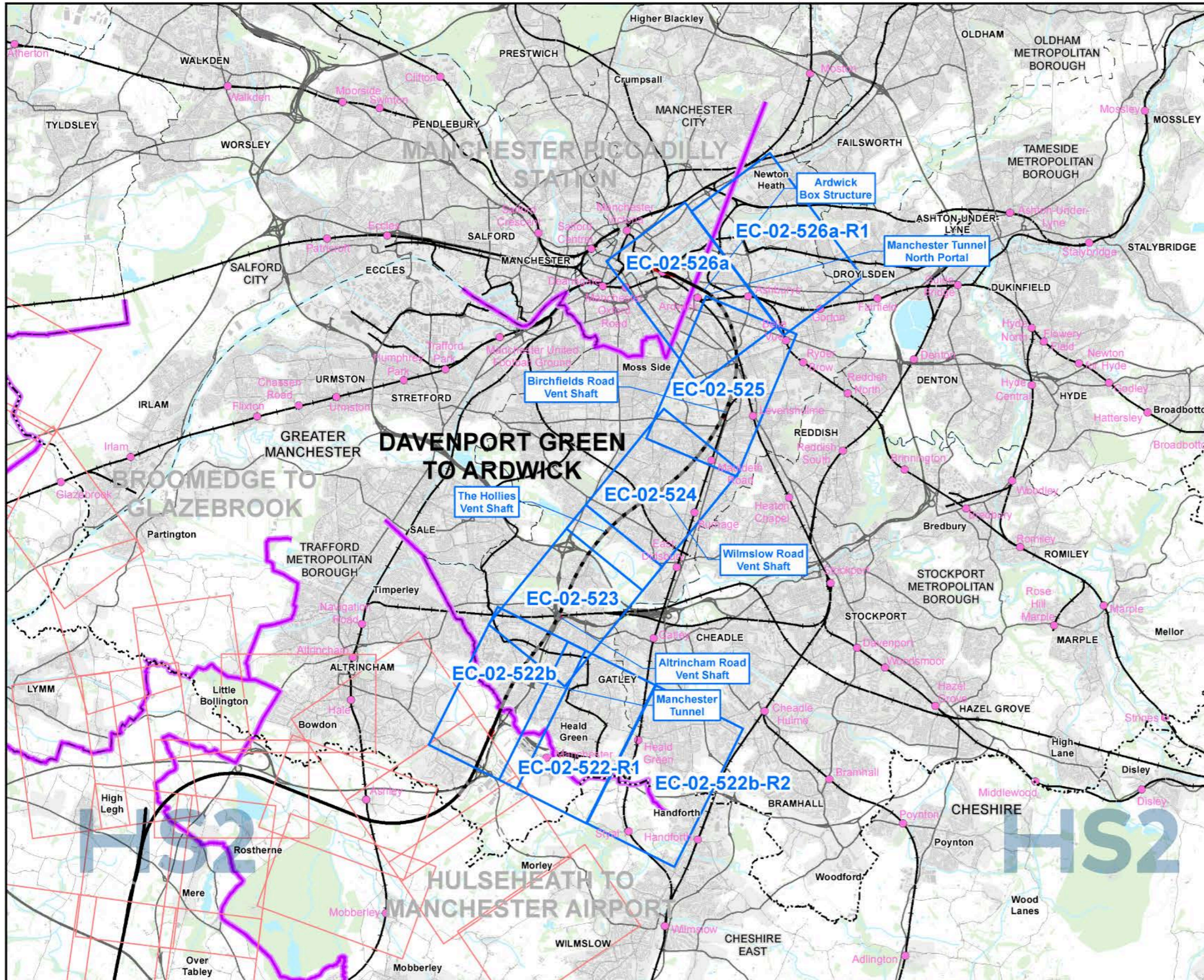
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Doc Number: 2PT27-MWJ-EV-MAP-M000-000795-P01

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Map Series Information:

This map series shows Phase 1 habitat survey information for land required and in the vicinity of the Proposed Scheme at a scale of 1:10,000. Where it has not been possible to gain access for field survey, the information is based on available desk studies and interpretation of aerial photography.

- 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 with amendment
 - Map sheet included in this community with no amendment
 - Map sheets not included in this community area

Map Number: EC-02-INDEX-MA07

Map Name: Index Map of:
Phase 1 Habitat (1:10,000)
SES2 and AP2 ES

Community Area MA07:
Davenport Green to Ardwick

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Doc Number: 2PT27-MWJ-EV-MAP-M000-000811-P01

Date: 29/03/23

Phase 1 Habitat survey legend

Habitat Areas	
	Broadleaved woodland - semi-natural
	Broadleaved woodland - plantation
	Coniferous woodland - semi-natural
	Coniferous woodland - plantation
	Mixed woodland - semi-natural
	Mixed woodland - plantation
	Scrub - dense/continuous
	Scrub - scattered
	Broadleaved parkland/scattered trees
	Coniferous parkland/scattered trees
	Mixed parkland/scattered trees
	Broadleaved woodland - recently felled
	Coniferous woodland - recently felled
	Mixed woodland - recently felled
	Acid grassland - unimproved
	Acid grassland - semi-improved
	Neutral grassland - unimproved
	Neutral grassland - semi-improved
	Calcareous grassland - unimproved
	Calcareous grassland - semi-improved
	Improved grassland
	Marsh/marshy grassland
	Poor semi-improved grassland
	Bracken - continuous
	Bracken - scattered
	Upland species-rich ledges
	Other tall herb and fern - ruderal
	Other tall herb and fern - non ruderal
	Dry dwarf shrub heath - acid
	Dry dwarf shrub heath - basic
	Wet dwarf shrub heath
	Lichen/bryophyte heath
	Montane heath/dwarf herb
	Dry heath/acid grassland
	Wet heath/acid grassland
	Blanket sphagnum bog
	Raised sphagnum bog
	Wet modified bog
	Dry modified bog
	Flush and spring - acid/neutral flush
	Flush and spring - basic flush
	Fen
	Fen - valley mire
	Fen - basin mire
	Fen - flood plain mire
	Peat - bare
	Swamp
	Marginal and inundation - inundation vegetation
	Standing water
	Standing water - eutrophic
	Standing water - mesotrophic
	Standing water - oligotrophic
	Standing water - dystrophic
	Standing water - marl
	Standing water - brackish
	Running water
	Running water - eutrophic
	Running water - mesotrophic
	Running water - oligotrophic
	Running water - dystrophic
	Running water - marl
	Running water - brackish

	Inland cliff - acid/neutral
	Inland cliff - basic
	Scree - acid/neutral
	Scree - basic
	Limestone pavement
	Other exposure - acid/neutral
	Other exposure - basic
	Cave
	Quarry
	Spoil
	Mine
	Refuse-tip
	Cultivated/disturbed land - arable
	Cultivated/disturbed land - amenity grassland
	Cultivated/disturbed land - ephemeral/short perennial
	Introduced shrub
	Intact hedge - native species-rich
	Intact hedge - species-poor
	Defunct hedge - native species-rich
	Defunct hedge - species-poor
	Hedge with trees - native species-rich
	Hedge with trees - species-poor
	Fence
	Wall
	Dry ditch
	Boundary removed
	Earth bank
	Caravan site
	Buildings
	Bare ground
	Other habitat

Linear Habitats	
	Scrub - scattered
	Broadleaved parkland/scattered trees
	Coniferous parkland/scattered trees
	Mixed parkland/scattered trees
	Upland species-rich ledges
	Marginal and inundation - marginal vegetation
	Running water
	Running water - eutrophic
	Running water - mesotrophic
	Running water - oligotrophic
	Running water - dystrophic
	Running water - marl
	Running water - brackish
	Inland cliff
	Scree
	Intact hedge - native species-rich
	Intact hedge - species-poor
	Defunct hedge - native species-rich
	Defunct hedge - species-poor
	Hedge with trees - native species-rich
	Hedge with trees - species-poor
	Fence
	Wall
	Dry ditch
	Boundary removed
	Earth bank

Point Habitats	
	Scrub - scattered
	Broadleaved parkland/scattered trees
	Coniferous parkland/scattered trees

HS2

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Map Number	EC-02 - Legend
Map Name	EC-02 - Phase 1 Habitat Survey Legend

HS2

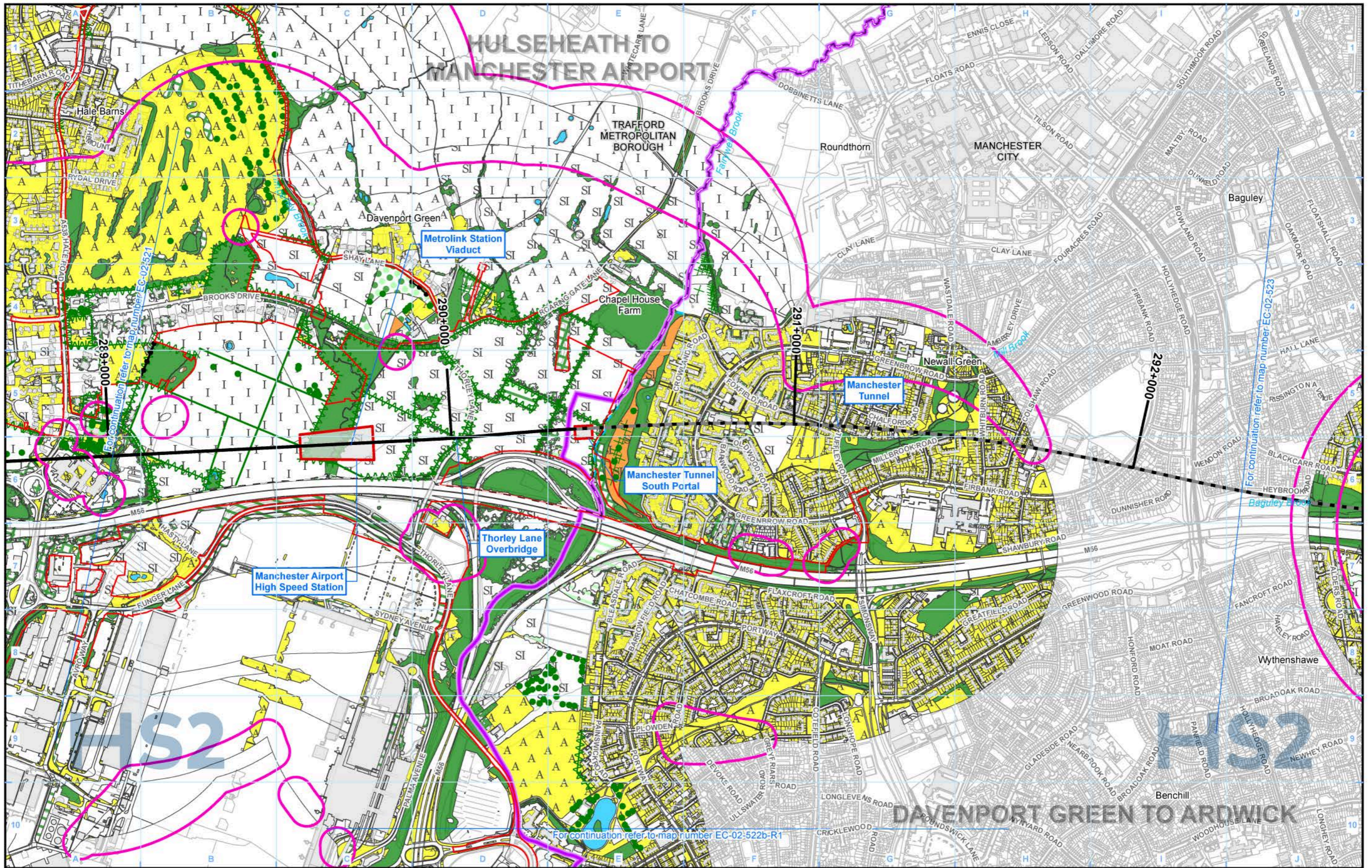
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Legend

- 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

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number: EC-02-522b

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA07: Davenport Green to Ardwick

HS2

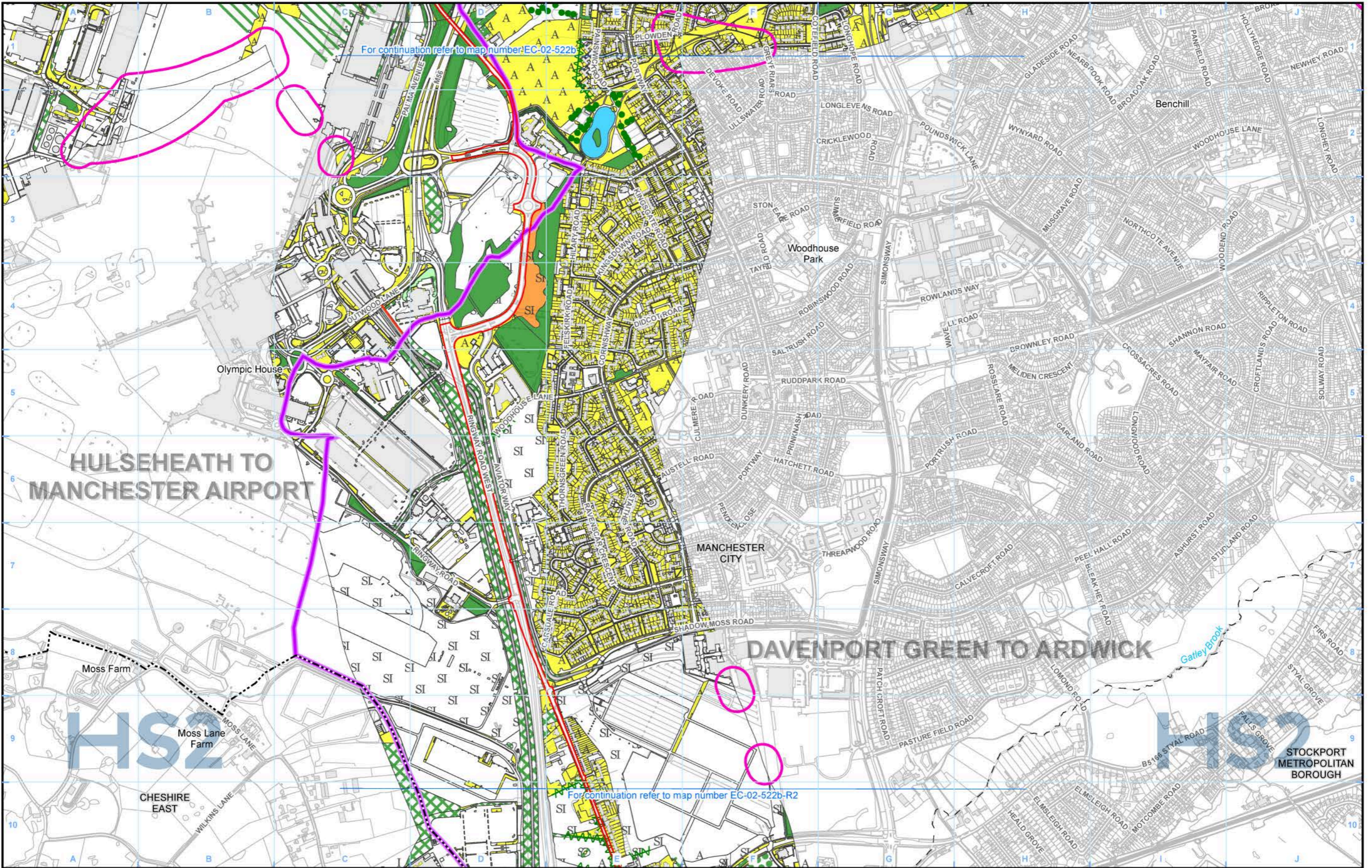
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Date: 29/03/23



For continuation refer to map number EC-02-522b

For continuation refer to map number EC-02-522b-R2

HULSEHEATH TO MANCHESTER AIRPORT

DAVENPORT GREEN TO ARDWICK

- 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
- For full legend please refer to EC-02 Legend page
- Area contains new survey data

Map Number: EC-02-522b-R1

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA07: Davenport Green to Ardwick

HS2

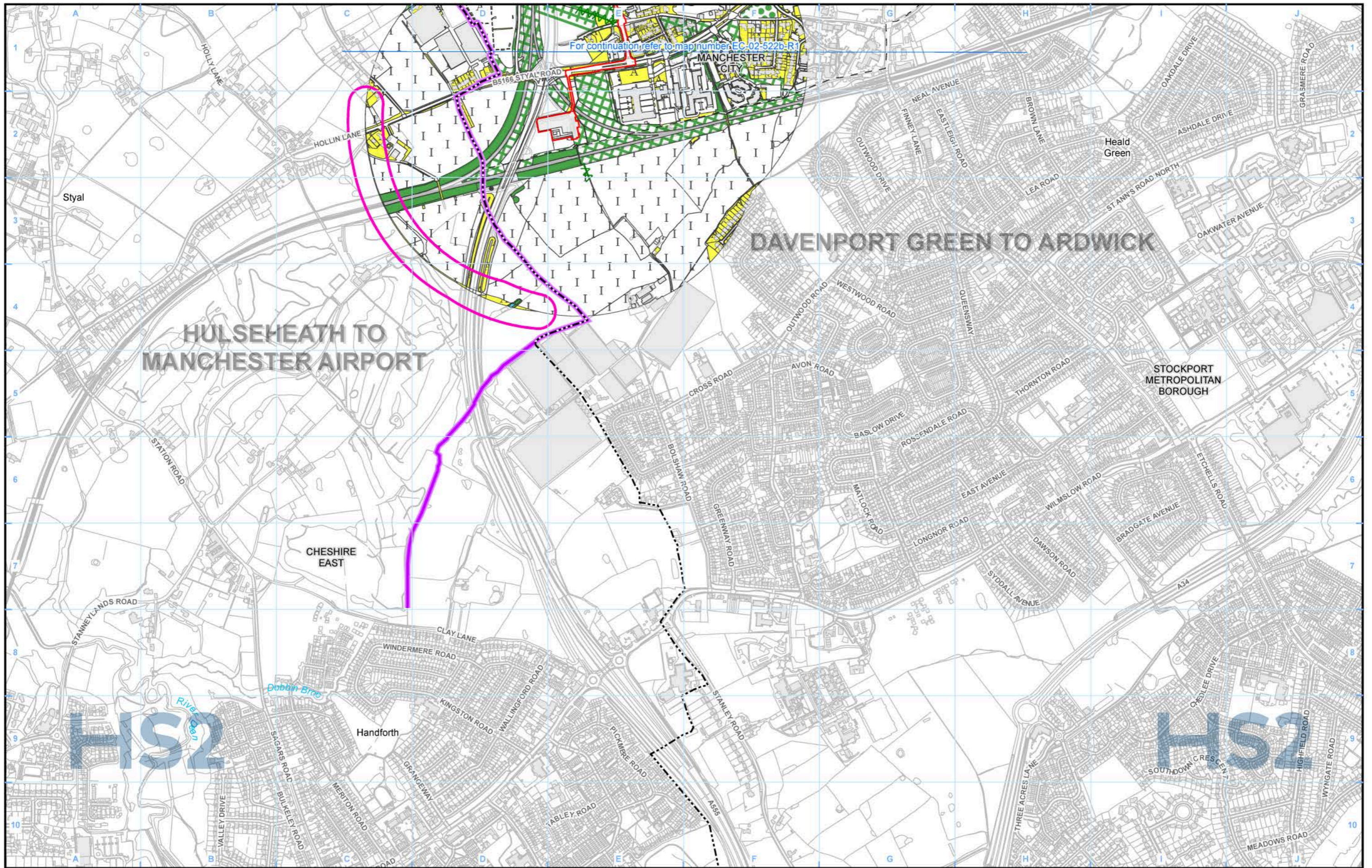
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Date: 29/03/23

Scale at A3: 1:10,000



For continuation refer to map number EC-02-522b-R1

HULSEHEATH TO MANCHESTER AIRPORT

DAVENPORT GREEN TO ARDWICK

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

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number: EC-02-522b-R2

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA07: Davenport Green to Ardwick

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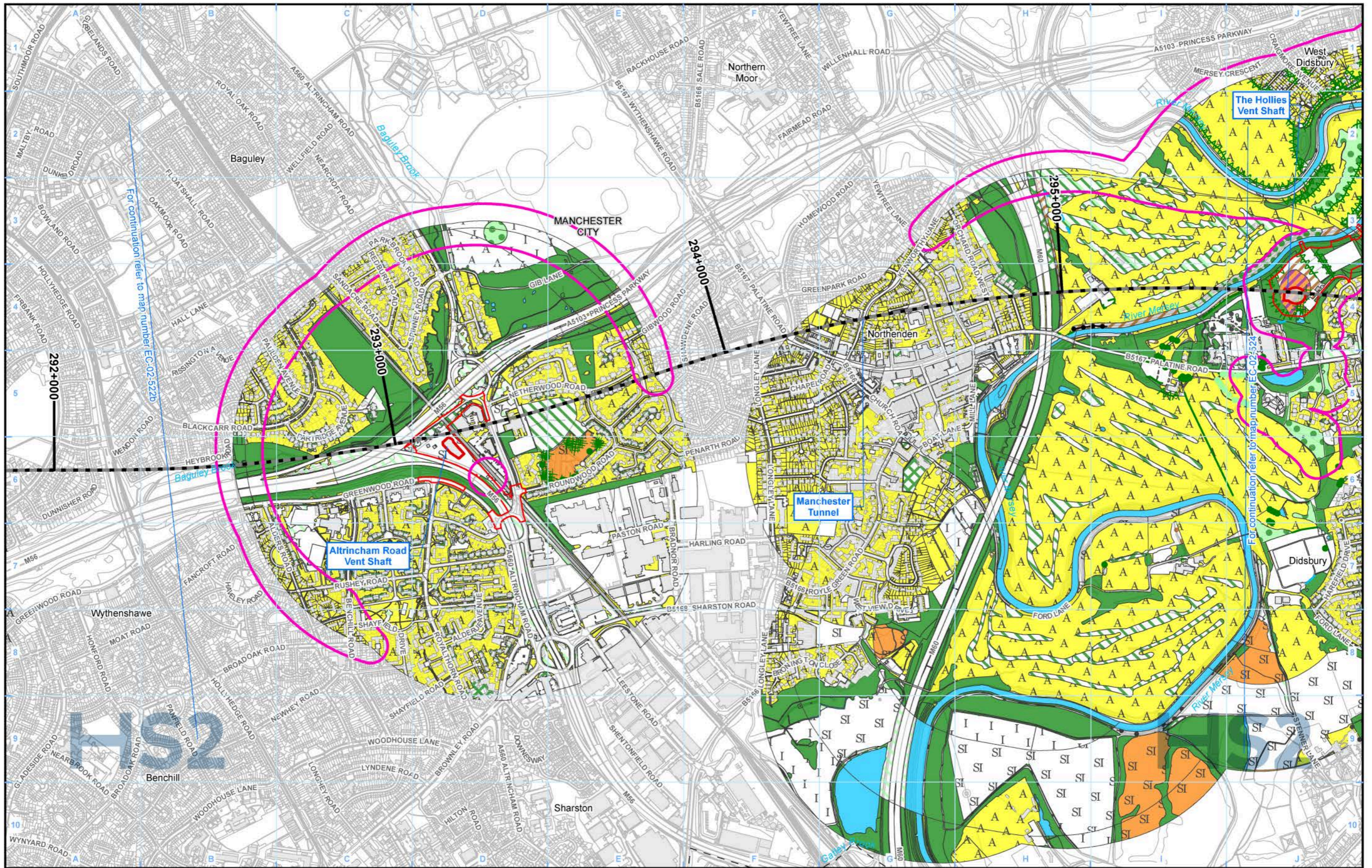
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Legend

- 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

Area contains new survey data

For full legend please refer to EC-02 Legend page

Map Number: EC-02-523

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA07: Davenport Green to Ardwick

HS2

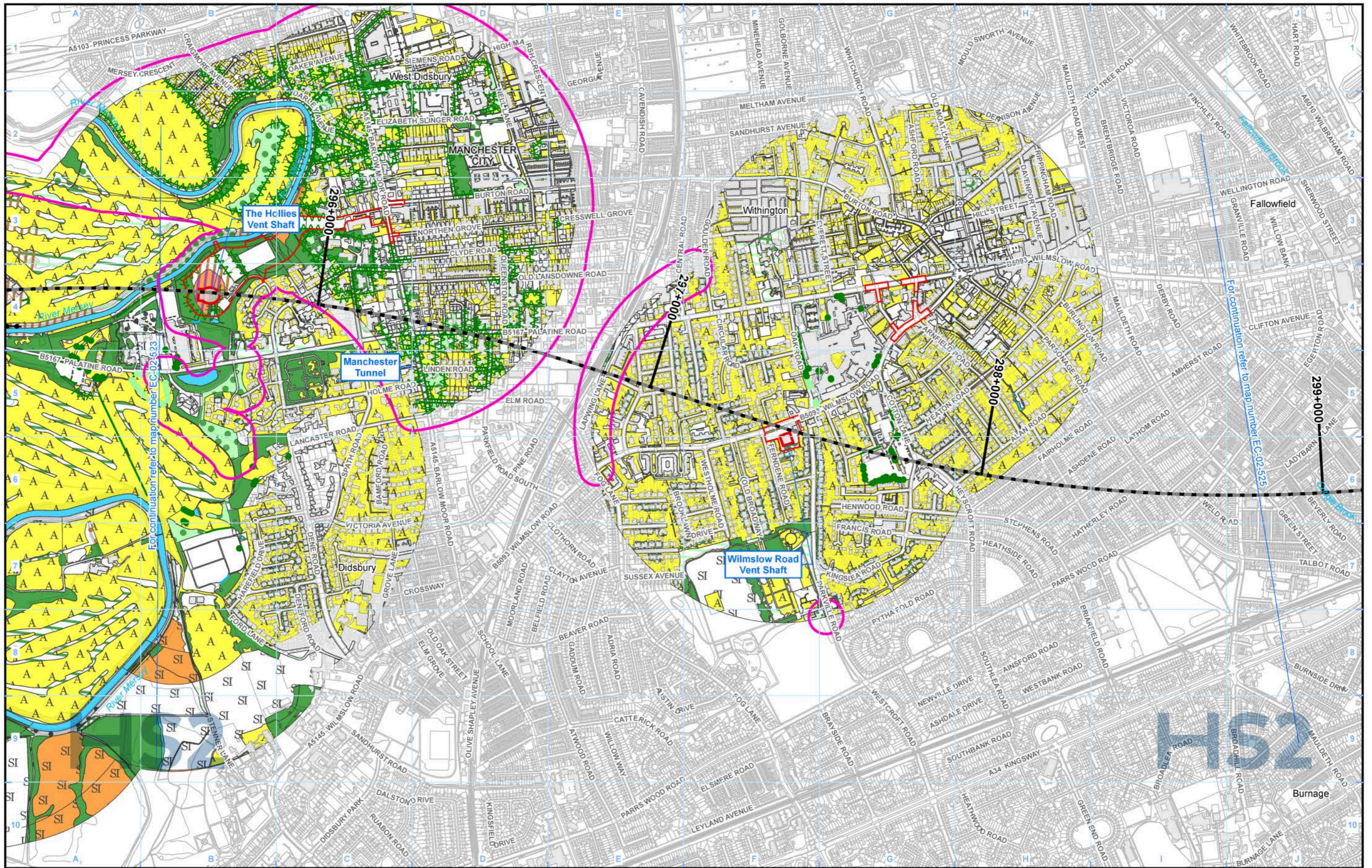
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- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Land potentially required during construction
 - Community area boundary
 - County boundary
 - District/Borough boundary

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number
EC-02-524

Map Name
**Phase 1 Habitat (1:10,000)
SES2 and AP2 ES**

Community Area MA07:
Davenport Green to Ardwick

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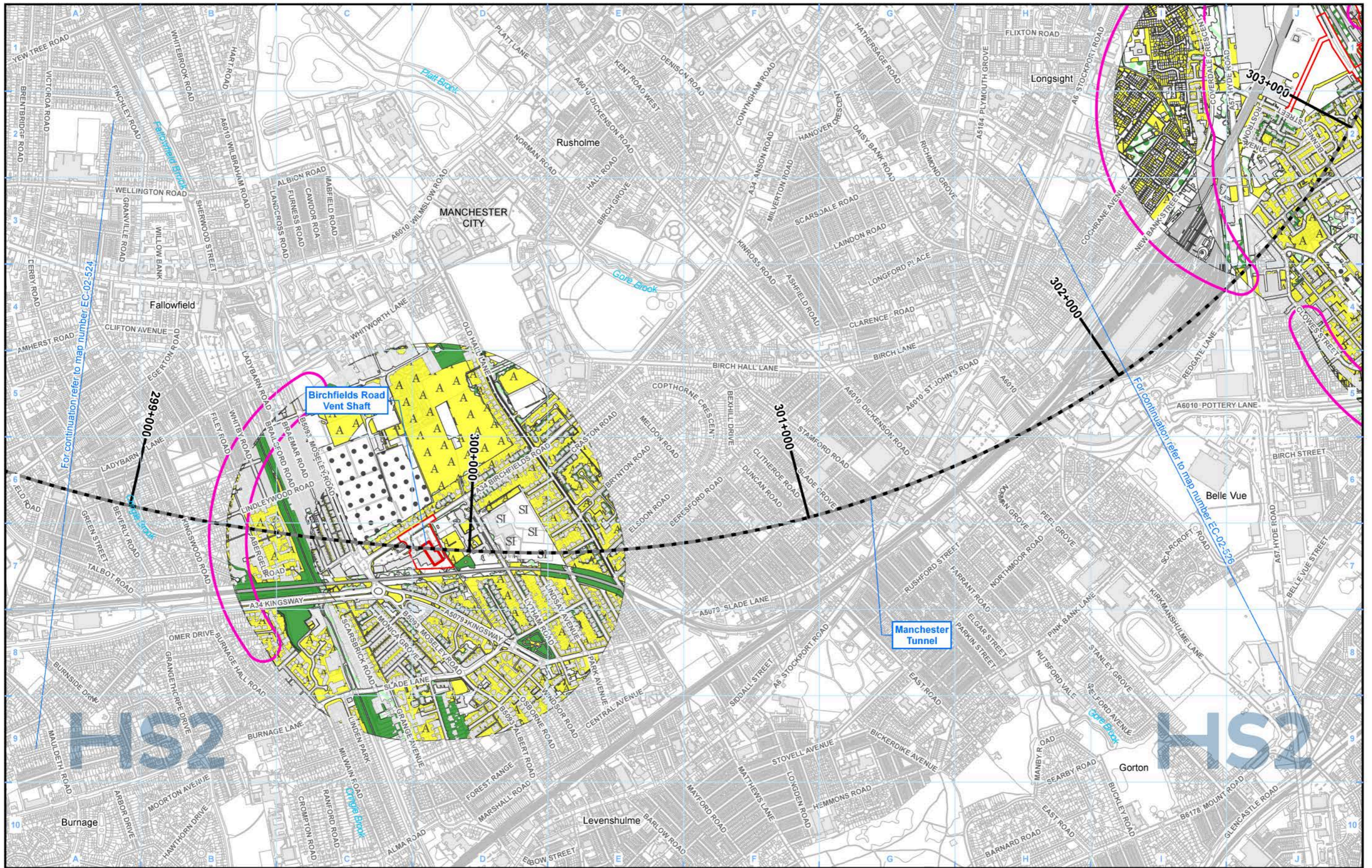
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Scale at A3: 1:10,000

Metres

Date: 29/03/23



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number **EC-02-525**

Map Name **Phase 1 Habitat (1:10,000) SES2 and AP2 ES**

Community Area MA07: Davenport Green to Ardwick

HS2

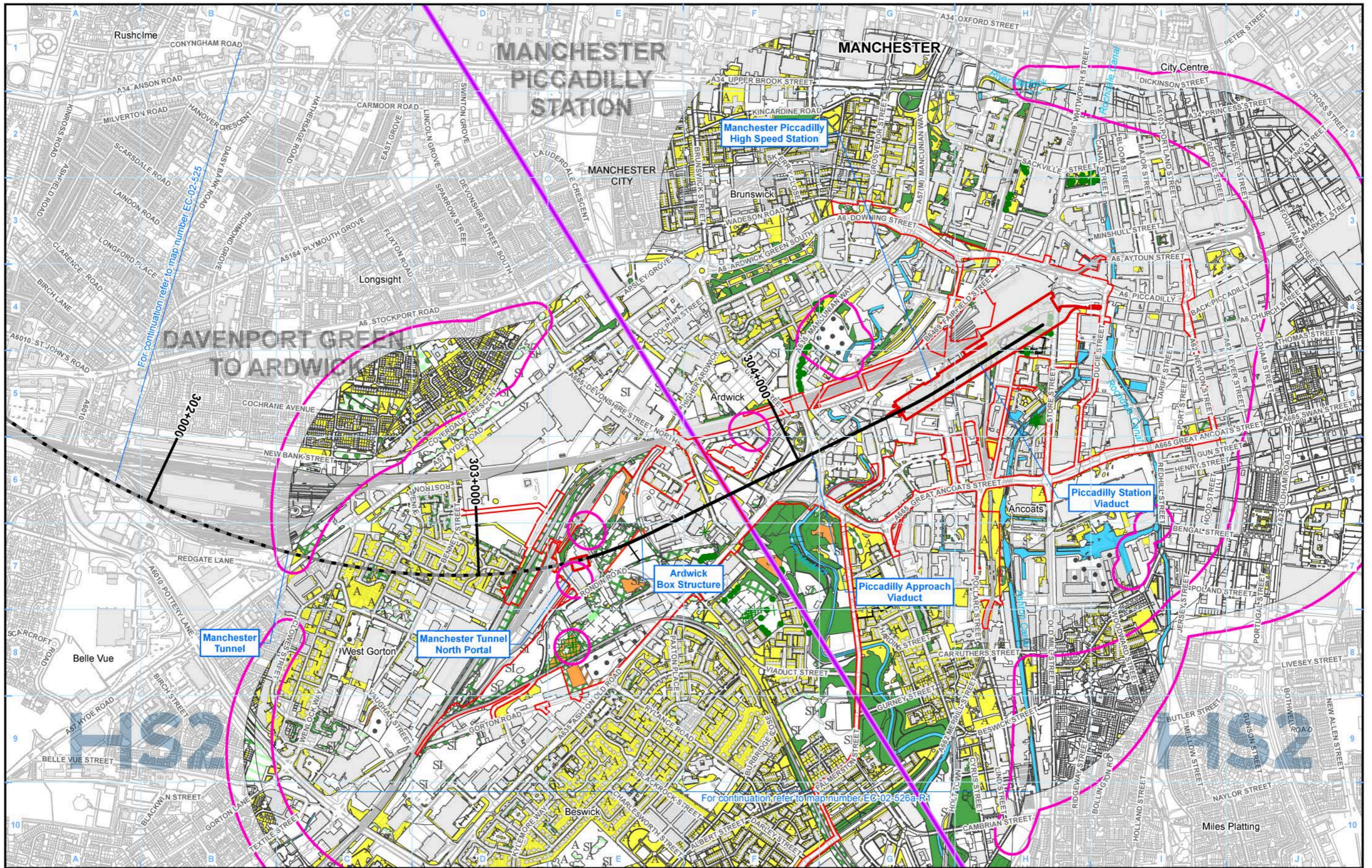
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Date: 29/03/23



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

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number EC-02-526a

Map Name Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA07: Davenport Green to Ardwick

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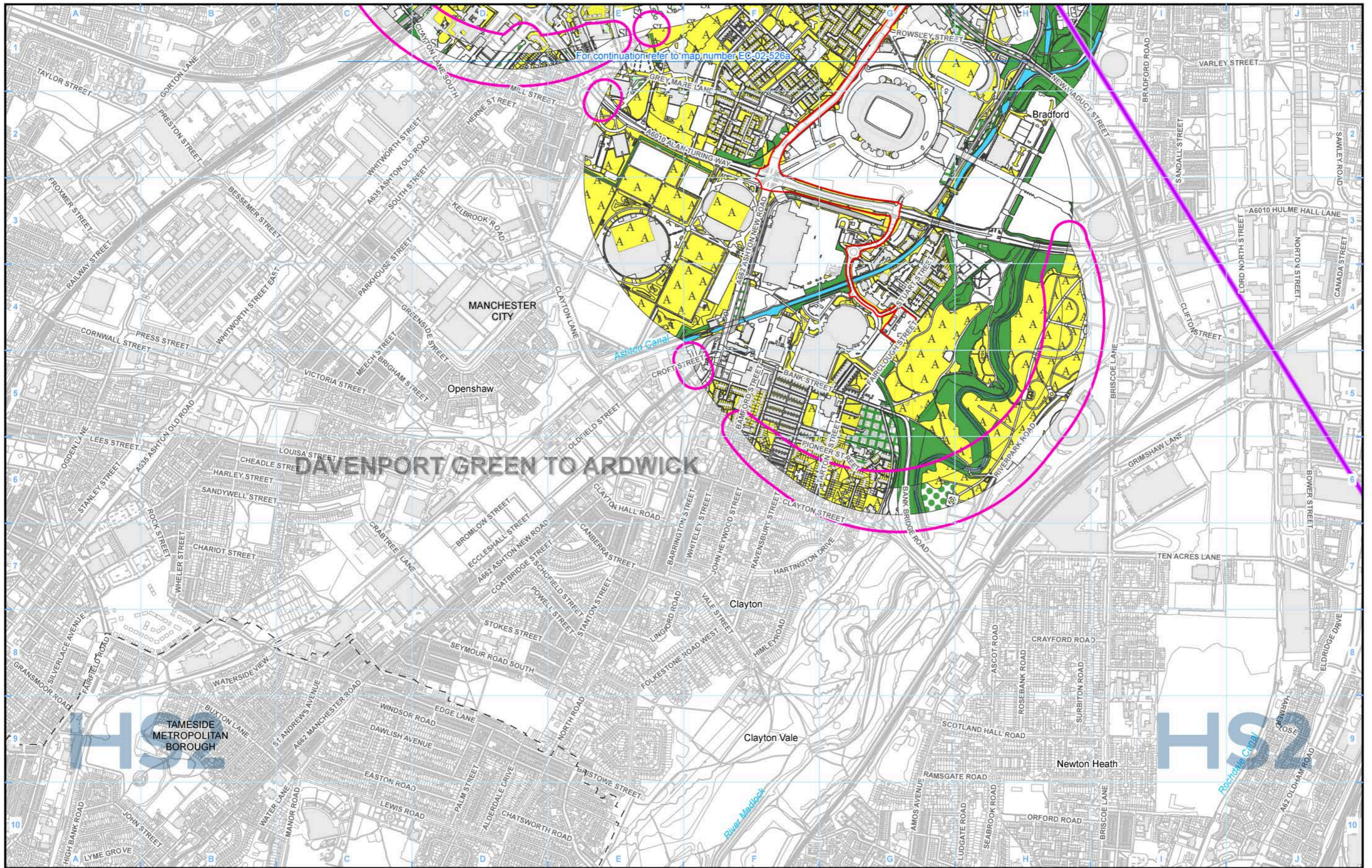
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Date: 29/03/23



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number **EC-02-526a-R1**

Map Name **Phase 1 Habitat (1:10,000) SES2 and AP2 ES**

Community Area MA07: Davenport Green to Ardwick

HS2

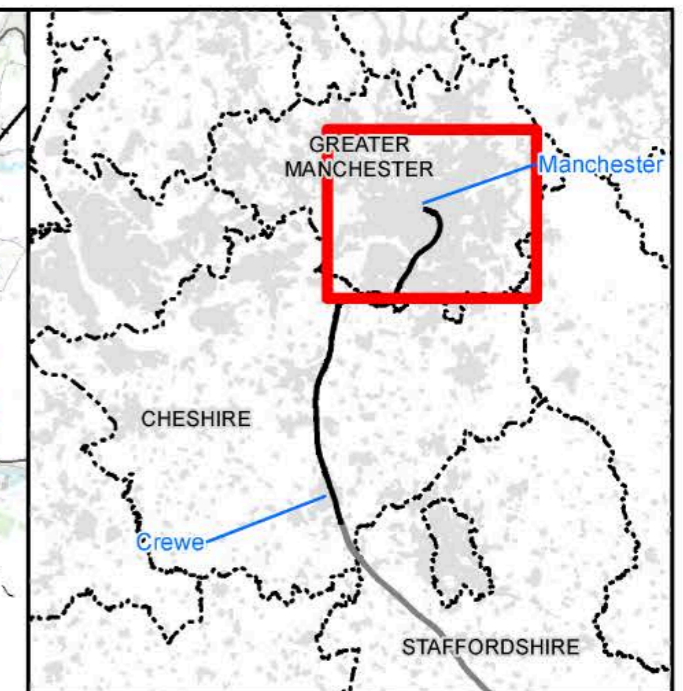
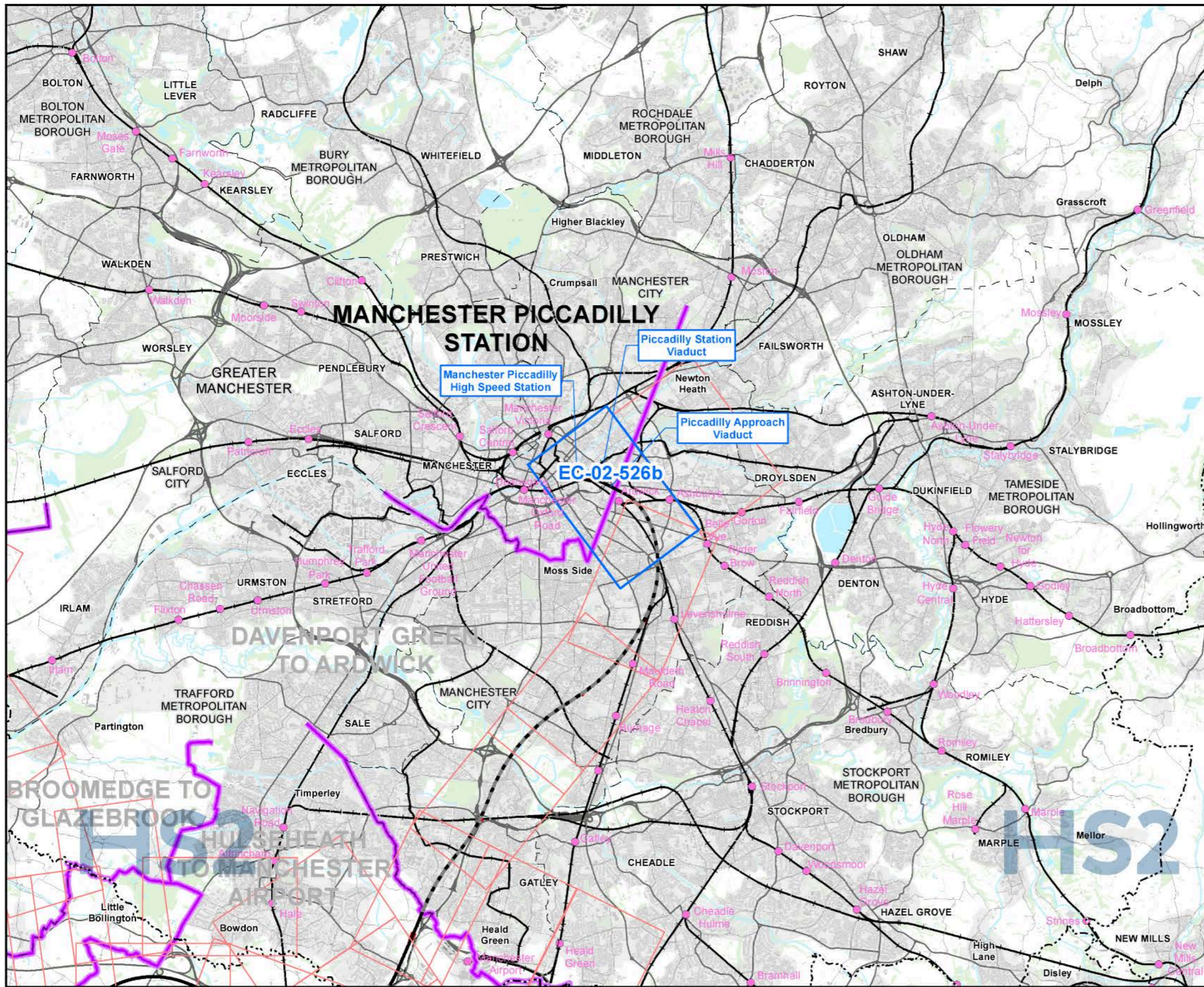
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Doc Number: 2PT27-MWJ-EV-MAP-M000-003609-P01

Date: 29/03/23

Scale at A3: 1:10,000



Map Series Information:

This map series shows Phase 1 habitat survey information for land required and in the vicinity of the Proposed Scheme at a scale of 1:10,000. Where it has not been possible to gain access for field survey, the information is based on available desk studies and interpretation of aerial photography.

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 with amendment
	Map sheet included in this community with no amendment
	Map sheets not included in this community area

Map Number	EC-02-INDEX-MA08
Map Name	Index Map of: Phase 1 Habitat (1:10,000) SES2 and AP2 ES Community Area MA08: Manchester Piccadilly Station

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Doc Number: 2PT27-MWJ-EV-MAP-M000-000812-P01 Date: 29/03/23

Phase 1 Habitat survey legend

Habitat Areas	
	Broadleaved woodland - semi-natural
	Broadleaved woodland - plantation
	Coniferous woodland - semi-natural
	Coniferous woodland - plantation
	Mixed woodland - semi-natural
	Mixed woodland - plantation
	Scrub - dense/continuous
	Scrub - scattered
	Broadleaved parkland/scattered trees
	Coniferous parkland/scattered trees
	Mixed parkland/scattered trees
	Broadleaved woodland - recently felled
	Coniferous woodland - recently felled
	Mixed woodland - recently felled
	Acid grassland - unimproved
	Acid grassland - semi-improved
	Neutral grassland - unimproved
	Neutral grassland - semi-improved
	Calcareous grassland - unimproved
	Calcareous grassland - semi-improved
	Improved grassland
	Marsh/marshy grassland
	Poor semi-improved grassland
	Bracken - continuous
	Bracken - scattered
	Upland species-rich ledges
	Other tall herb and fern - ruderal
	Other tall herb and fern - non ruderal
	Dry dwarf shrub heath - acid
	Dry dwarf shrub heath - basic
	Wet dwarf shrub heath
	Lichen/bryophyte heath
	Montane heath/dwarf herb
	Dry heath/acid grassland
	Wet heath/acid grassland
	Blanket sphagnum bog
	Raised sphagnum bog
	Wet modified bog
	Dry modified bog
	Flush and spring - acid/neutral flush
	Flush and spring - basic flush
	Fen
	Fen - valley mire
	Fen - basin mire
	Fen - flood plain mire
	Peat - bare
	Swamp
	Marginal and inundation - inundation vegetation
	Standing water
	Standing water - eutrophic
	Standing water - mesotrophic
	Standing water - oligotrophic
	Standing water - dystrophic
	Standing water - marl
	Standing water - brackish
	Running water
	Running water - eutrophic
	Running water - mesotrophic
	Running water - oligotrophic
	Running water - dystrophic
	Running water - marl
	Running water - brackish

	Inland cliff - acid/neutral
	Inland cliff - basic
	Scree - acid/neutral
	Scree - basic
	Limestone pavement
	Other exposure - acid/neutral
	Other exposure - basic
	Cave
	Quarry
	Spoil
	Mine
	Refuse-tip
	Cultivated/disturbed land - arable
	Cultivated/disturbed land - amenity grassland
	Cultivated/disturbed land - ephemeral/short perennial
	Introduced shrub
	Intact hedge - native species-rich
	Intact hedge - species-poor
	Defunct hedge - native species-rich
	Defunct hedge - species-poor
	Hedge with trees - native species-rich
	Hedge with trees - species-poor
	Fence
	Wall
	Dry ditch
	Boundary removed
	Earth bank
	Caravan site
	Buildings
	Bare ground
	Other habitat

Linear Habitats	
	Scrub - scattered
	Broadleaved parkland/scattered trees
	Coniferous parkland/scattered trees
	Mixed parkland/scattered trees
	Upland species-rich ledges
	Marginal and inundation - marginal vegetation
	Running water
	Running water - eutrophic
	Running water - mesotrophic
	Running water - oligotrophic
	Running water - dystrophic
	Running water - marl
	Running water - brackish
	Inland cliff
	Scree
	Intact hedge - native species-rich
	Intact hedge - species-poor
	Defunct hedge - native species-rich
	Defunct hedge - species-poor
	Hedge with trees - native species-rich
	Hedge with trees - species-poor
	Fence
	Wall
	Dry ditch
	Boundary removed
	Earth bank

Point Habitats	
	Scrub - scattered
	Broadleaved parkland/scattered trees
	Coniferous parkland/scattered trees

HS2

HS2

Map Number	EC-02 - Legend
Map Name	EC-02 - Phase 1 Habitat Survey Legend

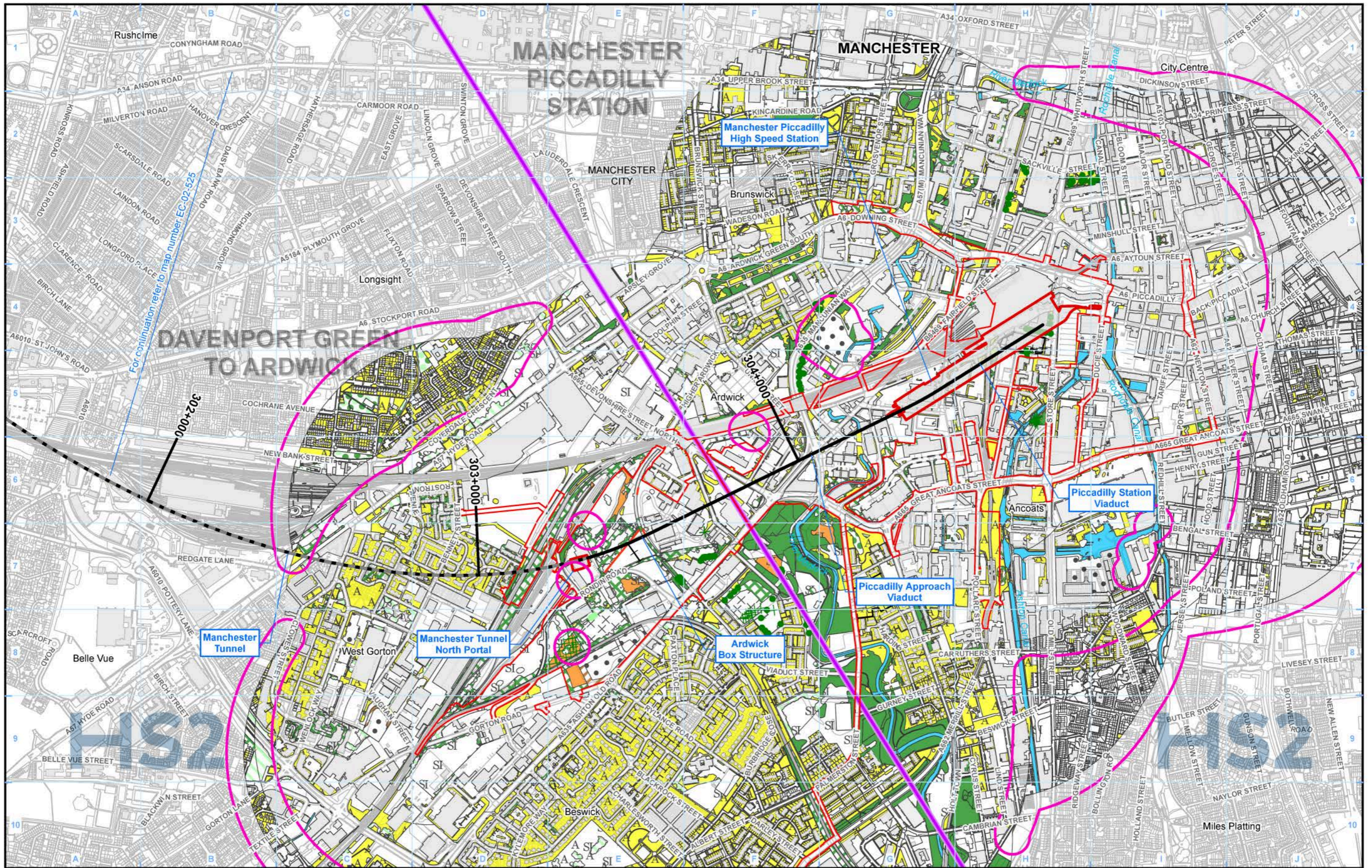
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Doc Number: 2PT27-MWJ-EV-MAP-M000-003680-P01 **Date:** 29/03/23



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number: EC-02-526b

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Community Area MA08: Manchester Piccadilly Station

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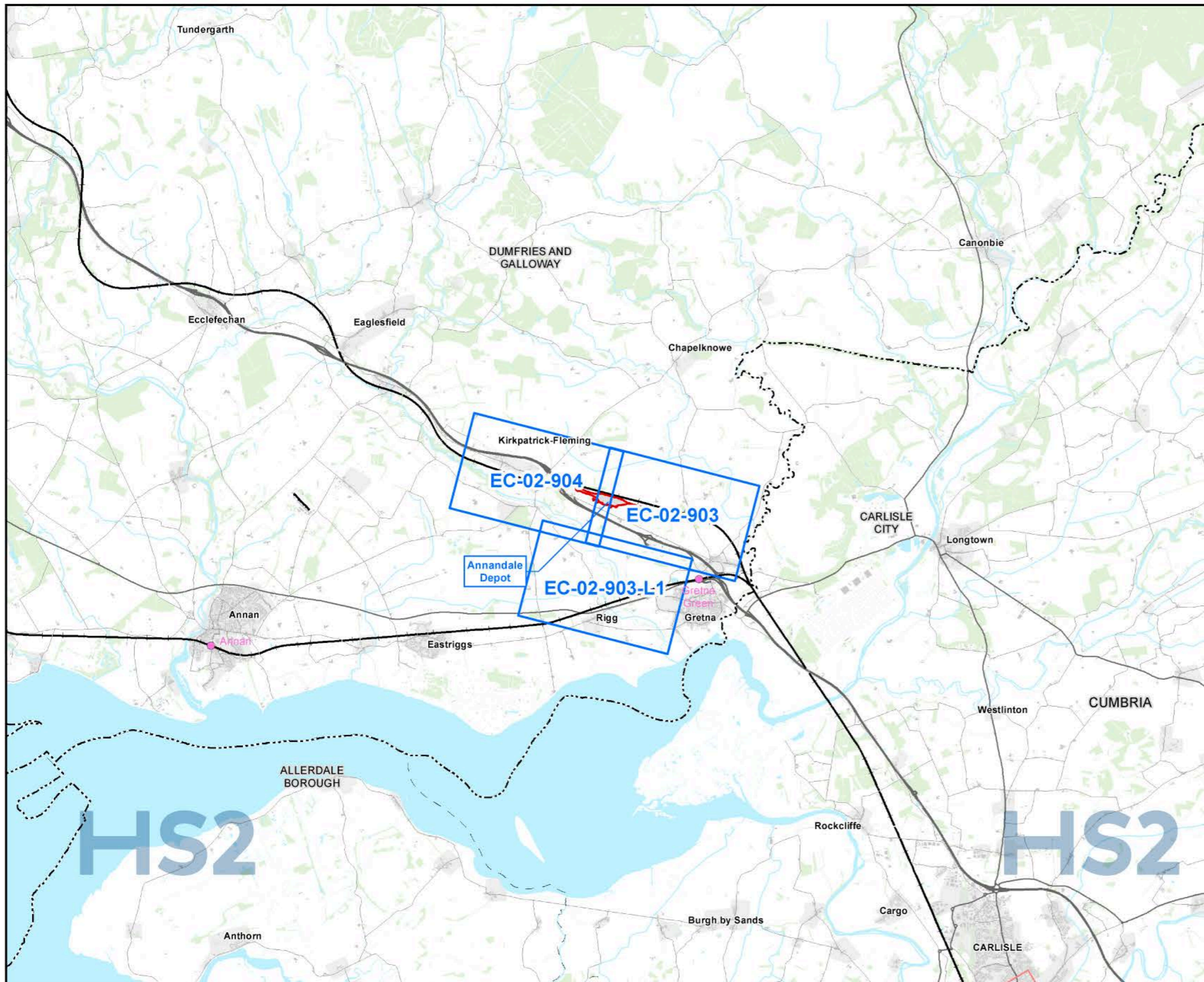
Scale at A3: 1:10,000

OS 100049190

Doc Number: 2PT27-MWJ-EV-MAP-M000-000801-P01

Date: 29/03/23

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Map Series Information:

This map series shows Phase 1 habitat survey information for land required and in the vicinity of the Proposed Scheme at a scale of 1:10,000. Where it has not been possible to gain access for field survey, the information is based on available desk studies and interpretation of aerial photography.

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

- 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	EC-02-INDEX-ADEP
Map Name	Index Map of: Phase 1 Habitat (1:10,000) SES2 and AP2 ES
	Off-route ADEP: Annandale Depot

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Doc Number: 2PT27-MWJ-EV-MAP-M000-000814-P01 Date: 25/01/23

Phase 1 Habitat survey legend

Habitat Areas	
	Broadleaved woodland - semi-natural
	Broadleaved woodland - plantation
	Coniferous woodland - semi-natural
	Coniferous woodland - plantation
	Mixed woodland - semi-natural
	Mixed woodland - plantation
	Scrub - dense/continuous
	Scrub - scattered
	Broadleaved parkland/scattered trees
	Coniferous parkland/scattered trees
	Mixed parkland/scattered trees
	Broadleaved woodland - recently felled
	Coniferous woodland - recently felled
	Mixed woodland - recently felled
	Acid grassland - unimproved
	Acid grassland - semi-improved
	Neutral grassland - unimproved
	Neutral grassland - semi-improved
	Calcareous grassland - unimproved
	Calcareous grassland - semi-improved
	Improved grassland
	Marsh/marshy grassland
	Poor semi-improved grassland
	Bracken - continuous
	Bracken - scattered
	Upland species-rich ledges
	Other tall herb and fern - ruderal
	Other tall herb and fern - non ruderal
	Dry dwarf shrub heath - acid
	Dry dwarf shrub heath - basic
	Wet dwarf shrub heath
	Lichen/bryophyte heath
	Montane heath/dwarf herb
	Dry heath/acid grassland
	Wet heath/acid grassland
	Blanket sphagnum bog
	Raised sphagnum bog
	Wet modified bog
	Dry modified bog
	Flush and spring - acid/neutral flush
	Flush and spring - basic flush
	Fen
	Fen - valley mire
	Fen - basin mire
	Fen - flood plain mire
	Peat - bare
	Swamp
	Marginal and inundation - inundation vegetation
	Standing water
	Standing water - eutrophic
	Standing water - mesotrophic
	Standing water - oligotrophic
	Standing water - dystrophic
	Standing water - marl
	Standing water - brackish
	Running water
	Running water - eutrophic
	Running water - mesotrophic
	Running water - oligotrophic
	Running water - dystrophic
	Running water - marl
	Running water - brackish

	Inland cliff - acid/neutral
	Inland cliff - basic
	Scree - acid/neutral
	Scree - basic
	Limestone pavement
	Other exposure - acid/neutral
	Other exposure - basic
	Cave
	Quarry
	Spoil
	Mine
	Refuse-tip
	Cultivated/disturbed land - arable
	Cultivated/disturbed land - amenity grassland
	Cultivated/disturbed land - ephemeral/short perennial
	Introduced shrub
	Intact hedge - native species-rich
	Intact hedge - species-poor
	Defunct hedge - native species-rich
	Defunct hedge - species-poor
	Hedge with trees - native species-rich
	Hedge with trees - species-poor
	Fence
	Wall
	Dry ditch
	Boundary removed
	Earth bank
	Caravan site
	Buildings
	Bare ground
	Other habitat

Linear Habitats	
	Scrub - scattered
	Broadleaved parkland/scattered trees
	Coniferous parkland/scattered trees
	Mixed parkland/scattered trees
	Upland species-rich ledges
	Marginal and inundation - marginal vegetation
	Running water
	Running water - eutrophic
	Running water - mesotrophic
	Running water - oligotrophic
	Running water - dystrophic
	Running water - marl
	Running water - brackish
	Inland cliff
	Scree
	Intact hedge - native species-rich
	Intact hedge - species-poor
	Defunct hedge - native species-rich
	Defunct hedge - species-poor
	Hedge with trees - native species-rich
	Hedge with trees - species-poor
	Fence
	Wall
	Dry ditch
	Boundary removed
	Earth bank

Point Habitats	
	Scrub - scattered
	Broadleaved parkland/scattered trees
	Coniferous parkland/scattered trees

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Map Number	EC-02 - Legend
Map Name	EC-02 - Phase 1 Habitat Survey Legend

HS2

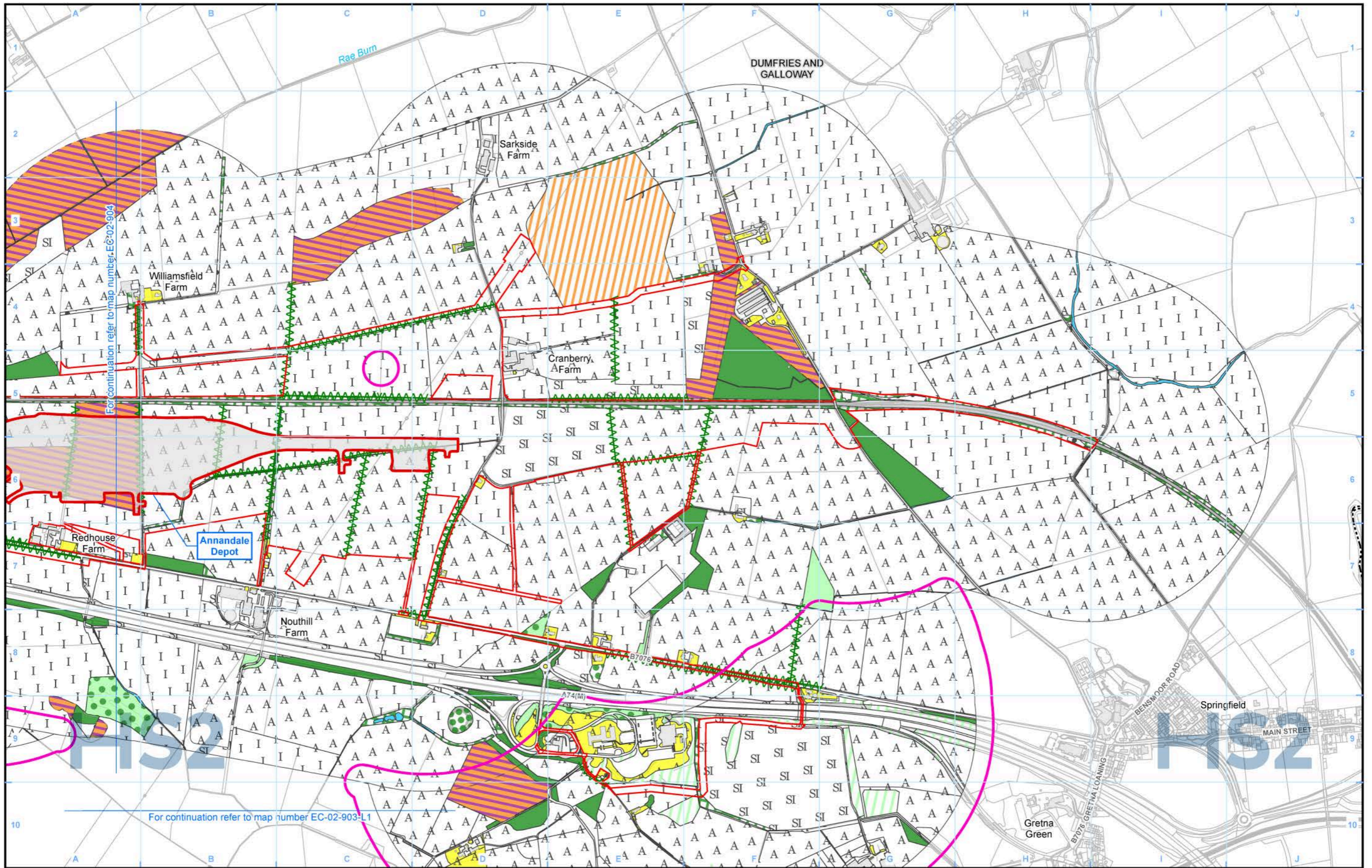
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Date: 29/03/23



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number: EC-02-903

Map Name: Phase 1 Habitat (1:10,000) SES2 and AP2 ES

Off-route ADEP: Annandale Depot

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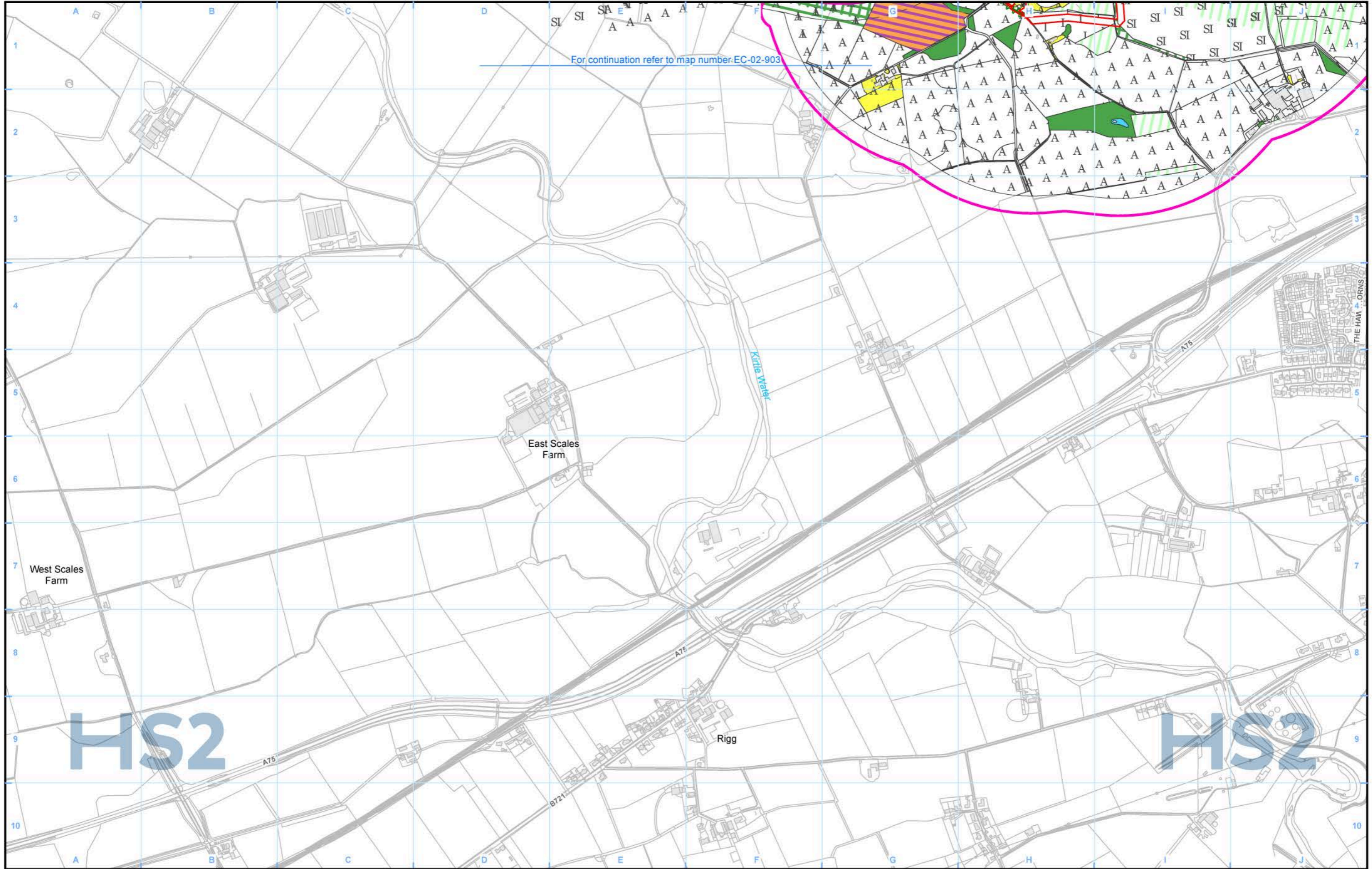
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Scale at A3: 1:10,000

Date: 29/03/23



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary

For full legend please refer to EC-02 Legend page

Area contains new survey data

Map Number **EC-02-903-L1**

Map Name
**Phase 1 Habitat (1:10,000)
SES2 and AP2 ES**

Off-route ADEP:
Annandale Depot

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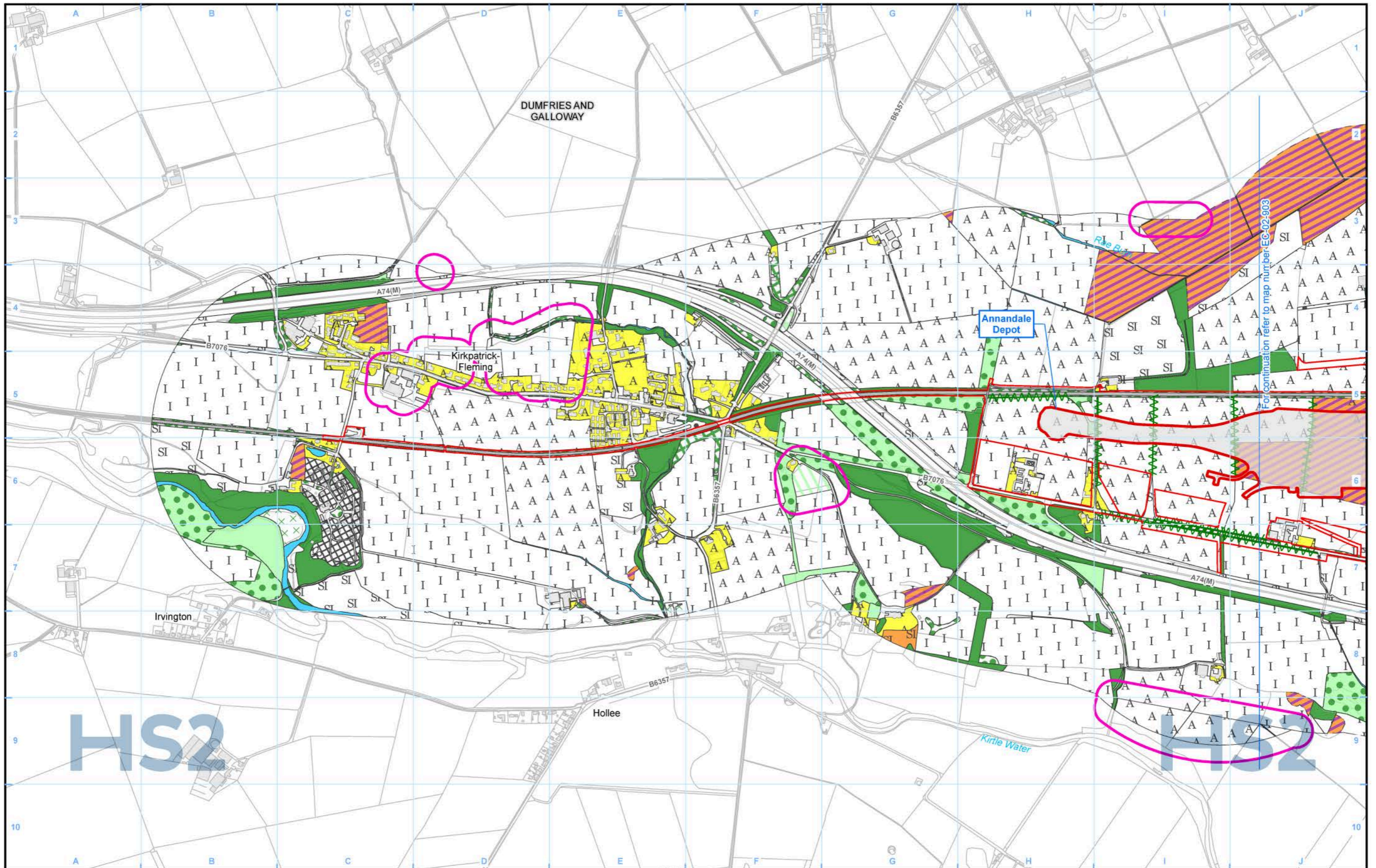
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Date: 29/03/23

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For continuation refer to map number EC-02-903

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
- Area contains new survey data

For full legend please refer to EC-02 Legend page

Map Number **EC-02-904**

Map Name
**Phase 1 Habitat (1:10,000)
SES2 and AP2 ES**

Off-route ADEP:
Annandale Depot

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Doc Number: 2PT27-MWJ-EV-MAP-M000-002672-P01

Date: 29/03/23

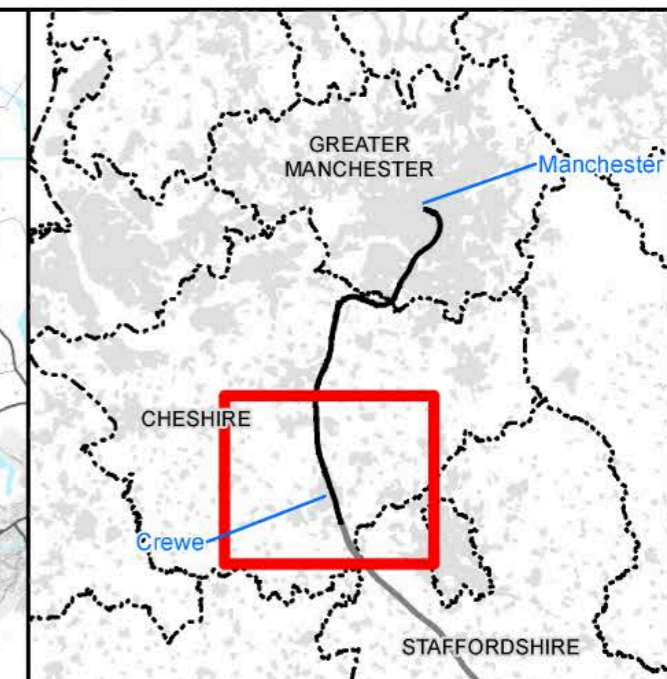
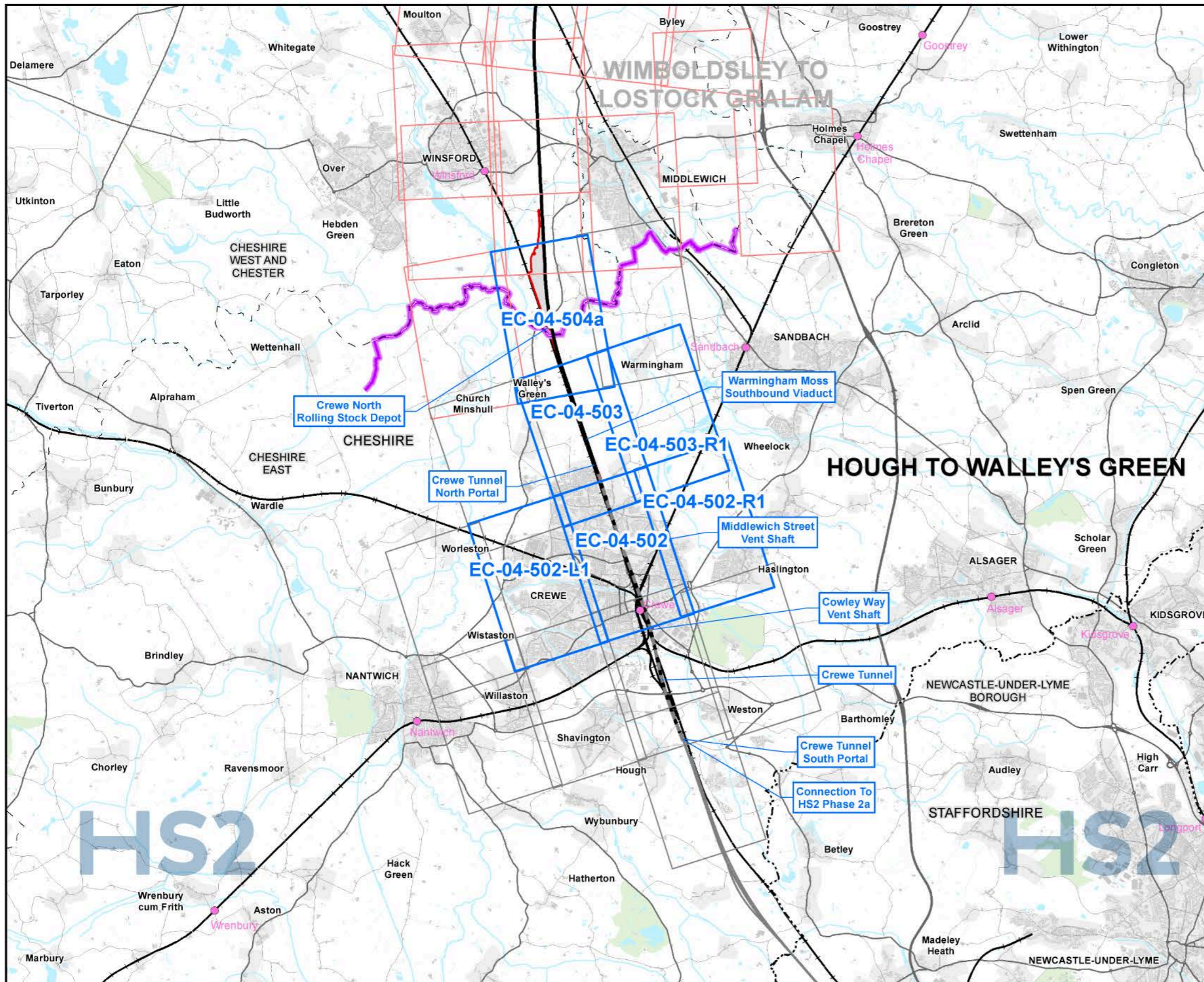
Scale at A3: 1:10,000

100 200 300 400
Metres

High Speed Rail (Crewe – Manchester)

**Background information and data accompanying
Supplementary Environmental Statement 2 and
Additional Provision 2 Environmental Statement**

EC-04 – Amphibians



Map Series Information:

This map series shows the results of amphibian surveys conducted to inform the environmental assessment. It principally details the results of great crested newt surveys conducted.

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

Map Number	EC-04-INDEX-MA01
Map Name	Index Map of: Amphibians SES2 and AP2 ES Community Area MA01: Hough to Walley's Green

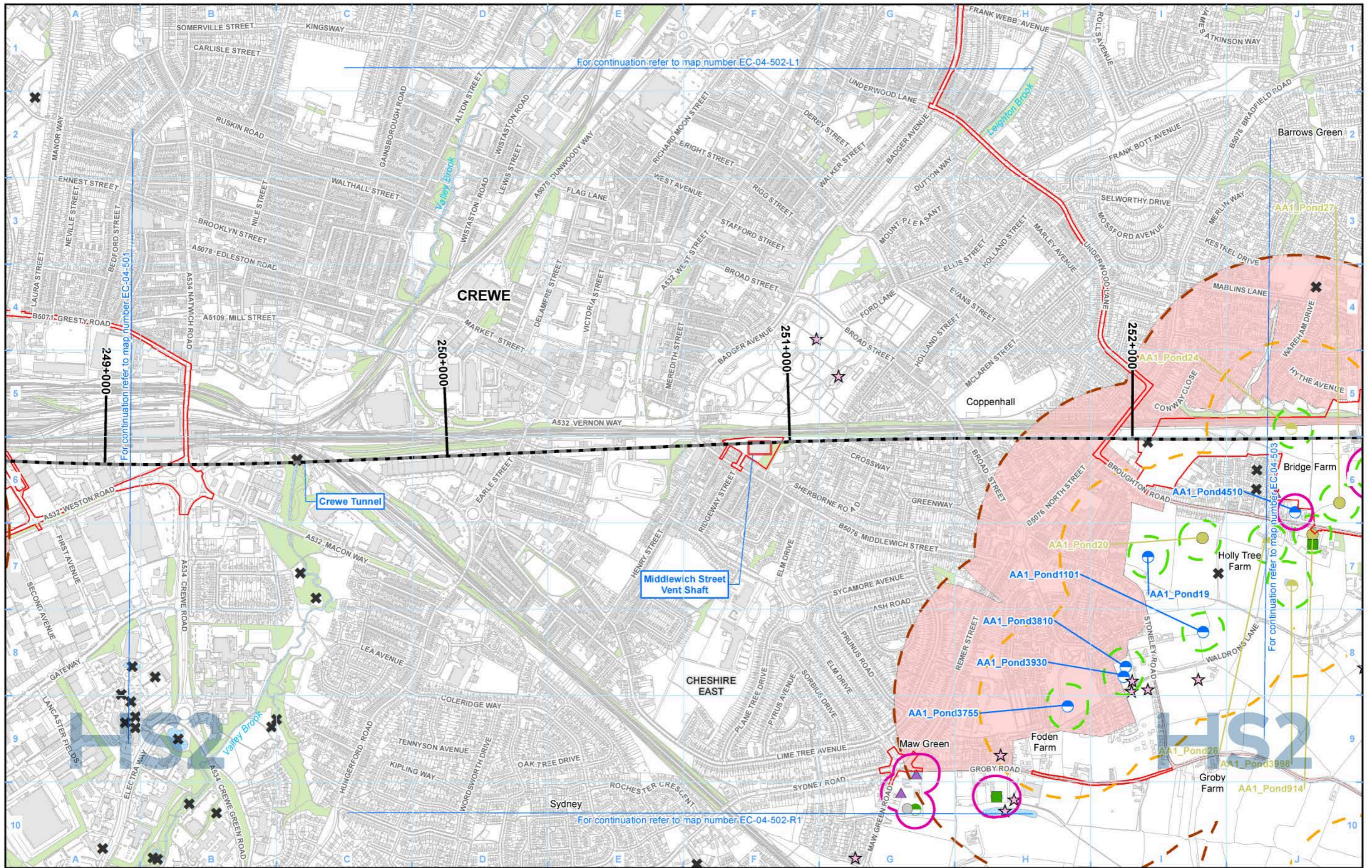
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- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Land potentially required during construction
 - Community area boundary
 - County boundary
 - District/Borough boundary
 - Watercourse
 - Water body
 - Woodland (not verified by survey)
 - Area contains new survey data
 - eDNA survey complete - GCN assumed absent

- GCN present (6 visits) - small population (1 - 10 adults)
- GCN present (less than 6 visits) - small population (1 - 10 adults)
- GCN confirmed present - no size class determined
- Survey complete, GCN assumed absent
- Survey incomplete, no GCN found
- Scoped in - Habitat Suitability Index (HSI)/walkover only

- Scoped in - no access permission
- Scoped out - no survey required
- 50m radius from all water bodies where presence of GCN is confirmed
- 250m radius from all water bodies where presence of GCN is confirmed
- 500m radius from all water bodies where presence of GCN is confirmed
- Areas isolated by significant barriers to amphibian movement

Note: GCN = Great Crested Newts

Map Number: EC-04-502

Map Name: Amphibians SES2 and AP2 ES

Community Area MA01: Hough to Walley's Green

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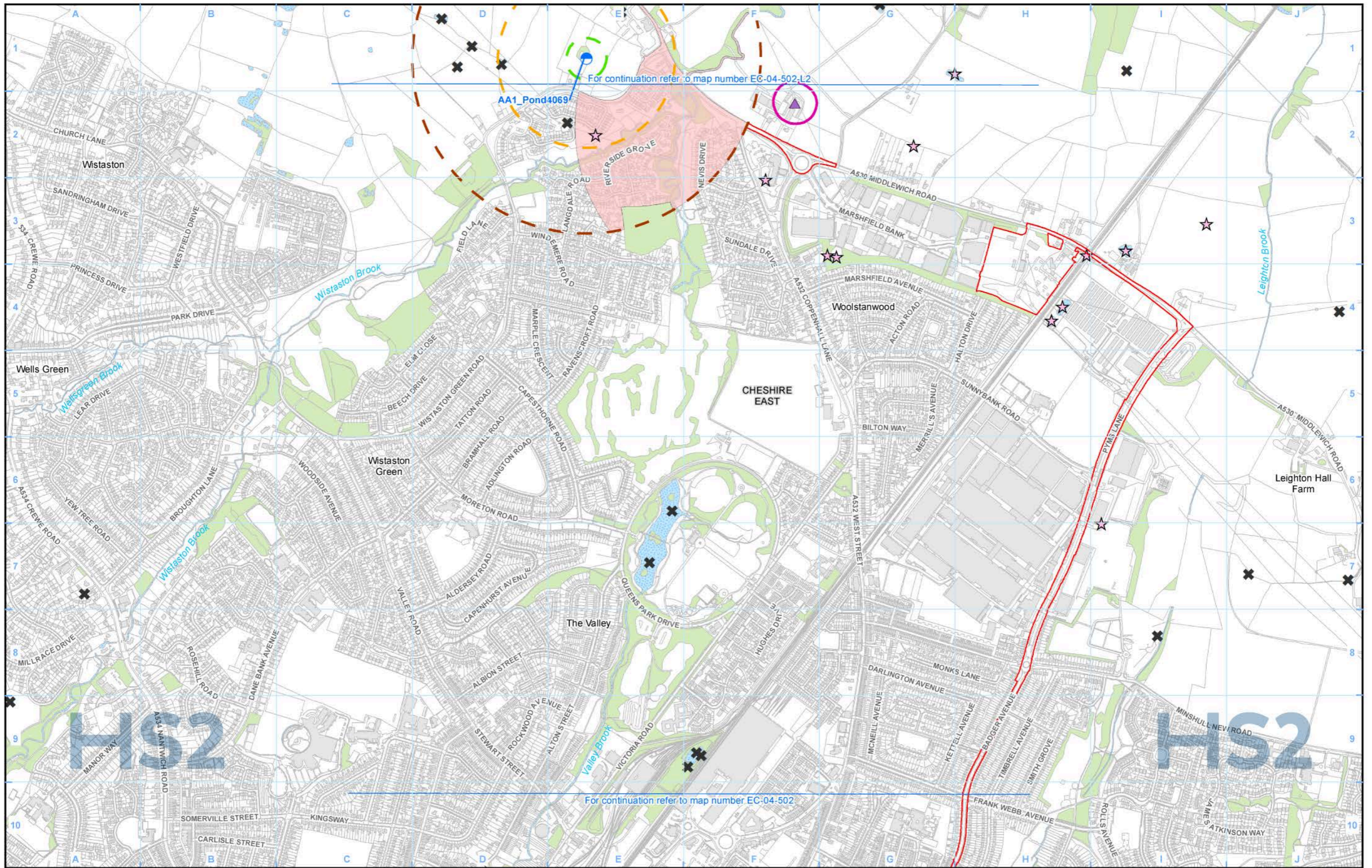
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Date: 13/04/23



Legend

Note: GCN = Great Crested Newts

Map Number	EC-04-502-L1
Map Name	Amphibians SES2 and AP2 ES
	Community Area MA01: Hough to Walley's Green

HS2

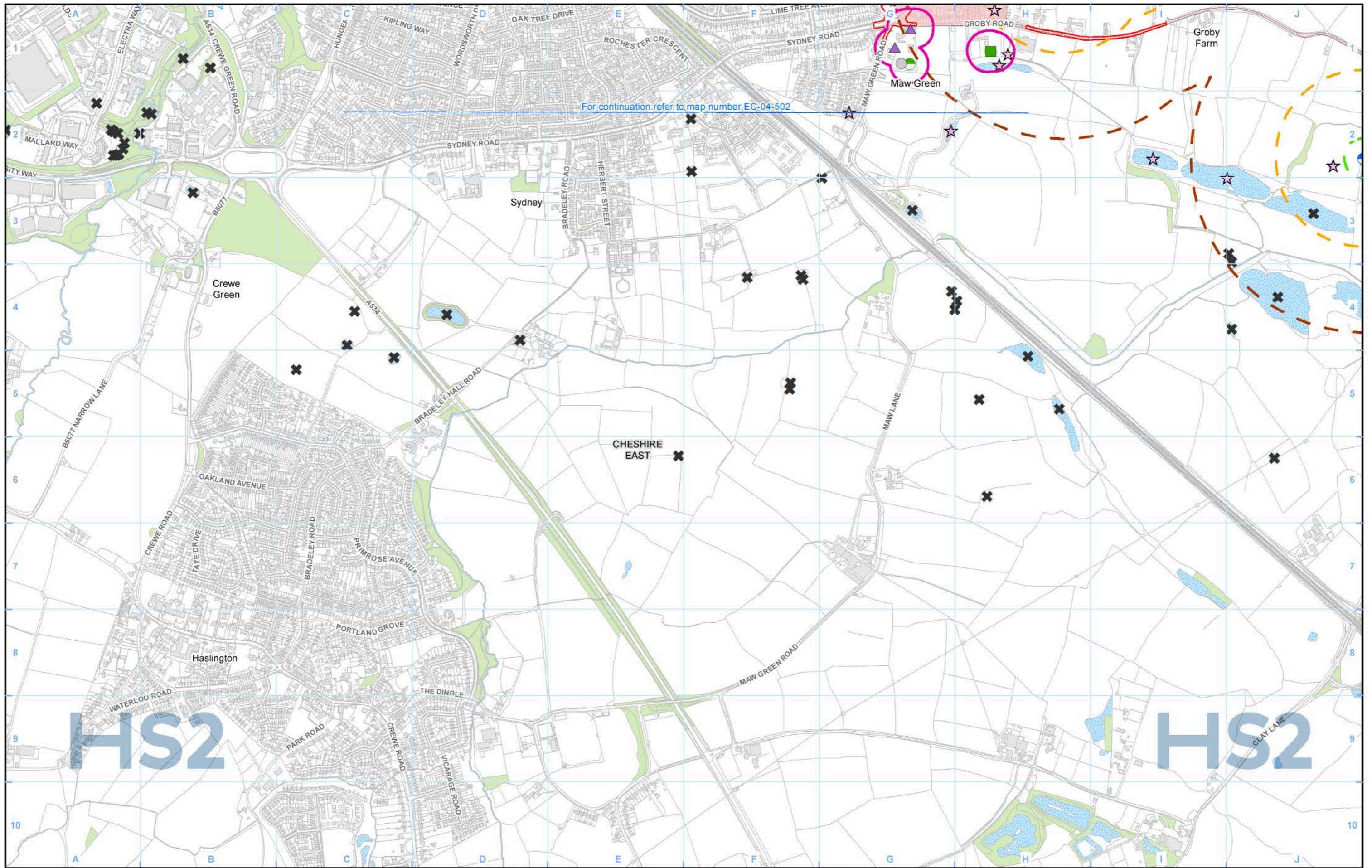
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Doc Number: 2PT27-MWJ-EV-MAP-M000-002961-P01

Date: 13/04/23

Scale at A3: 1:10,000



For continuation refer to map number EC-04-502

- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Land potentially required during construction
 - Community area boundary
 - County boundary
 - District/Borough boundary
 - Watercourse
 - Water body
 - Woodland (not verified by survey)
 - Area contains new survey data
 - eDNA survey complete - GCN assumed absent

- GCN confirmed present - no size class determined
- Survey complete, GCN assumed absent
- Survey incomplete, no GCN found
- Scoped in - Habitat Suitability Index (HSI)/walkover only
- Scoped in - no access permission
- Scoped out - no survey required

- 50m radius from all water bodies where presence of GCN is confirmed
- 250m radius from all water bodies where presence of GCN is confirmed
- 500m radius from all water bodies where presence of GCN is confirmed
- Areas isolated by significant barriers to amphibian movement

Note: GCN = Great Crested Newts

Map Number: EC-04-502-R1

Map Name: Amphibians SES2 and AP2 ES

Community Area MA01: Hough to Walley's Green

HS2

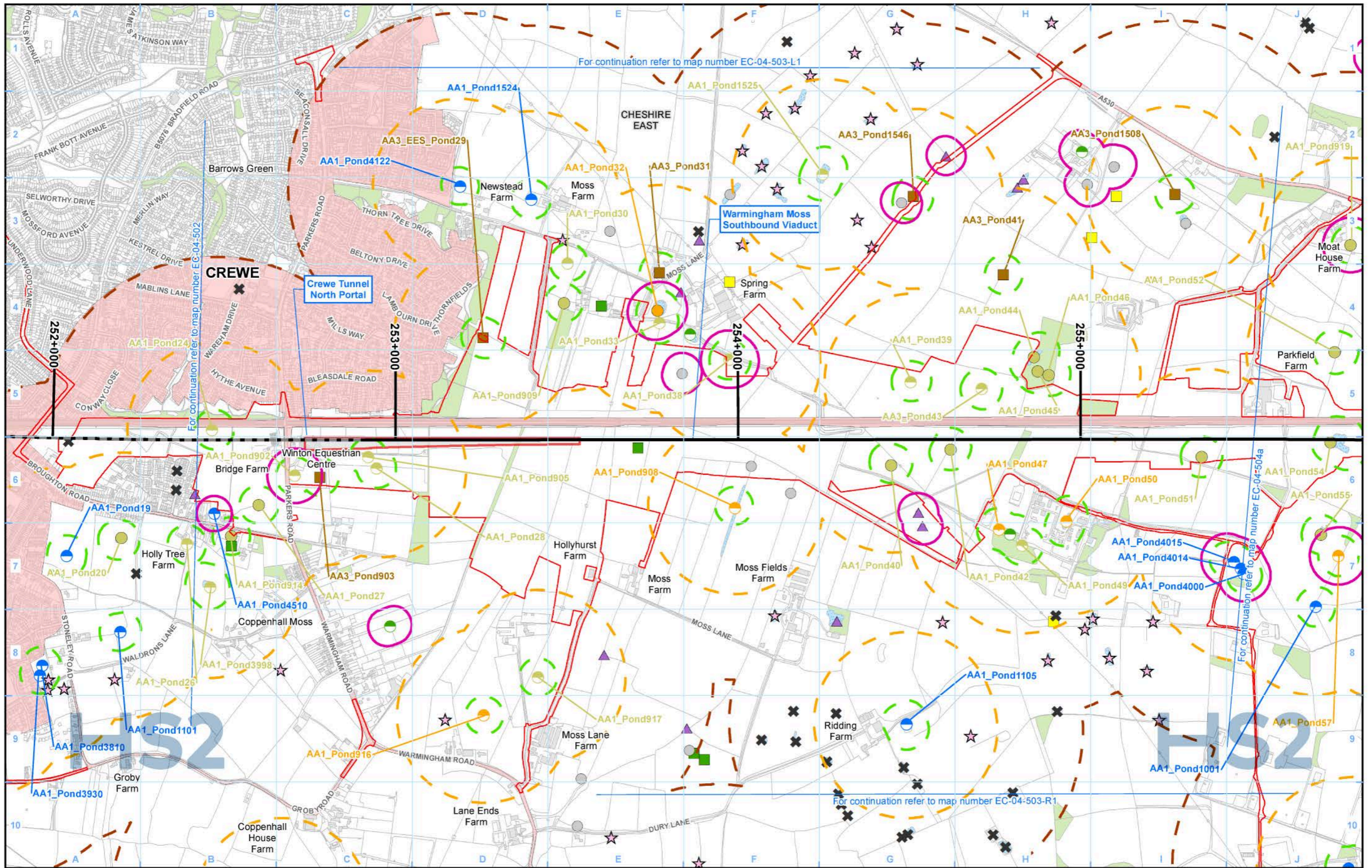
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Date: 13/04/23

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For continuation refer to map number EC-04-503-L1

For continuation refer to map number EC-04-504a

For continuation refer to map number EC-04-503-R1

Legend	
	Route in tunnel
	Route on surface
	Depot, station, headhouse or portal building
	Land potentially required during construction
	Community area boundary
	County boundary
	District/Borough boundary
	Watercourse
	Water body
	Woodland (not verified by survey)
	Area contains new survey data
	eDNA survey complete - result inconclusive
	eDNA survey complete - GCN present
	eDNA survey complete - GCN assumed absent
	GCN present (6 visits) - medium population (11 - 99 adults)
	GCN present (6 visits) - small population (1 - 10 adults)
	GCN confirmed present - no size class determined
	Survey complete, GCN assumed absent
	GCN present (less than 6 visits) - medium population (11 - 99 adults)
	GCN present (less than 6 visits) - small population (1 - 10 adults)
	Survey incomplete, no GCN found
	Scoped in - Habitat Suitability Index (HSI)/walkover only
	Scoped in - no access permission
	Scoped out - no survey required
	50m radius from all water bodies where presence of GCN is confirmed
	250m radius from all water bodies where presence of GCN is confirmed
	500m radius from all water bodies where presence of GCN is confirmed
	Areas isolated by significant barriers to amphibian movement

Note: GCN = Great Crested Newts

Map Number	EC-04-503
Map Name	Amphibians SES2 and AP2 ES
Community Area MA01: Hough to Walley's Green	

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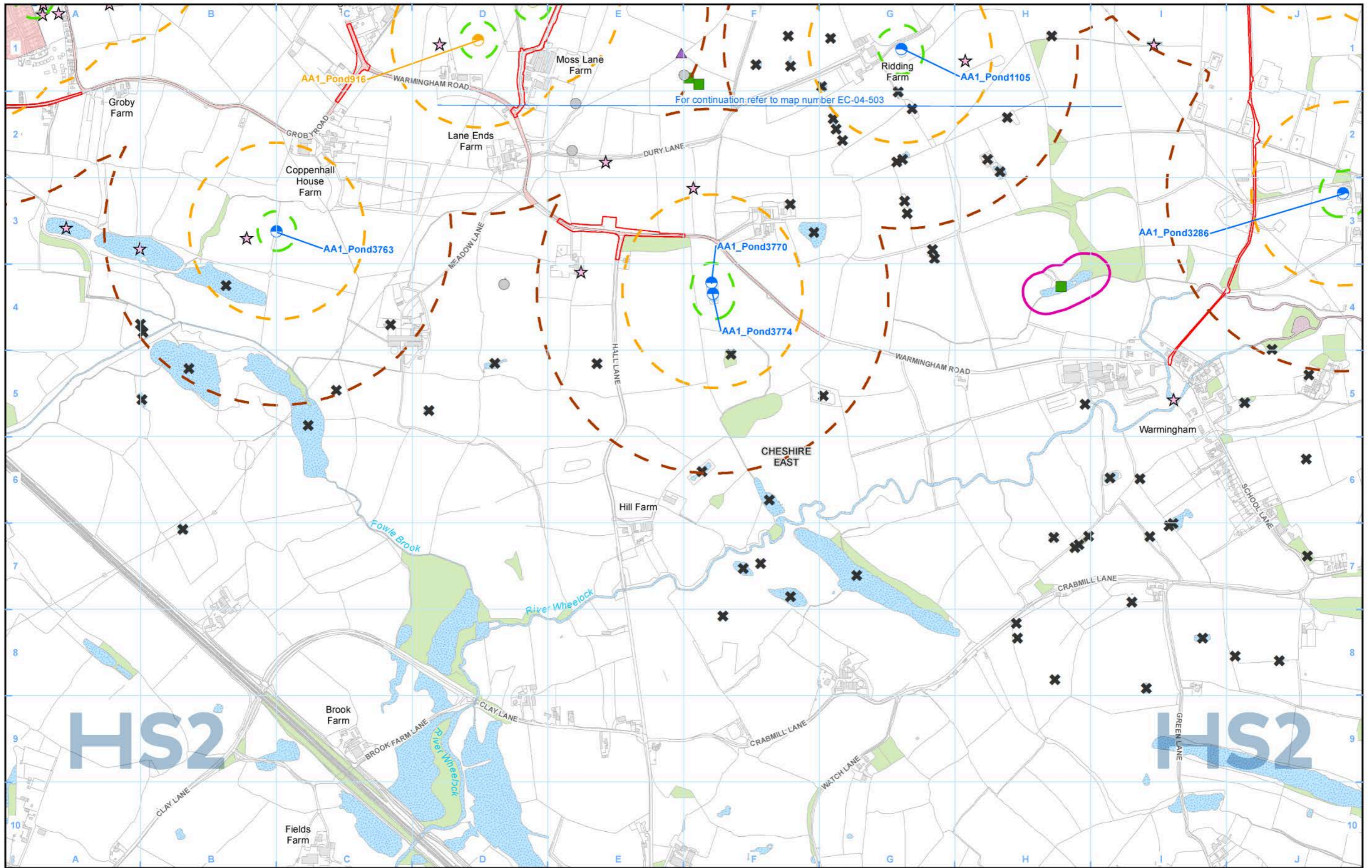
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Doc Number: 2PT27-MWJ-EV-MAP-M000-000949-P01

Scale at A3: 1:10,000

Metres

Date: 13/04/23



For continuation refer to map number EC-04-503

- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Land potentially required during construction
 - Community area boundary
 - County boundary
 - District/Borough boundary
 - Watercourse
 - Water body
 - Woodland (not verified by survey)
 - Area contains new survey data
 - eDNA survey complete - GCN assumed absent

- GCN present (less than 6 visits) - medium population (11 - 99 adults)
- GCN present (less than 6 visits) - small population (1 - 10 adults)
- GCN confirmed present - no size class determined
- Survey incomplete, no GCN found
- Scoped in - Habitat Suitability Index (HSI)/walkover only
- Scoped in - no access permission
- Scoped out - no survey required

- 50m radius from all water bodies where presence of GCN is confirmed
- 250m radius from all water bodies where presence of GCN is confirmed
- 500m radius from all water bodies where presence of GCN is confirmed
- Areas isolated by significant barriers to amphibian movement

Note: GCN = Great Crested Newts

Map Number: EC-04-503-R1

Map Name: Amphibians SES2 and AP2 ES

Community Area MA01: Hough to Walley's Green

HS2

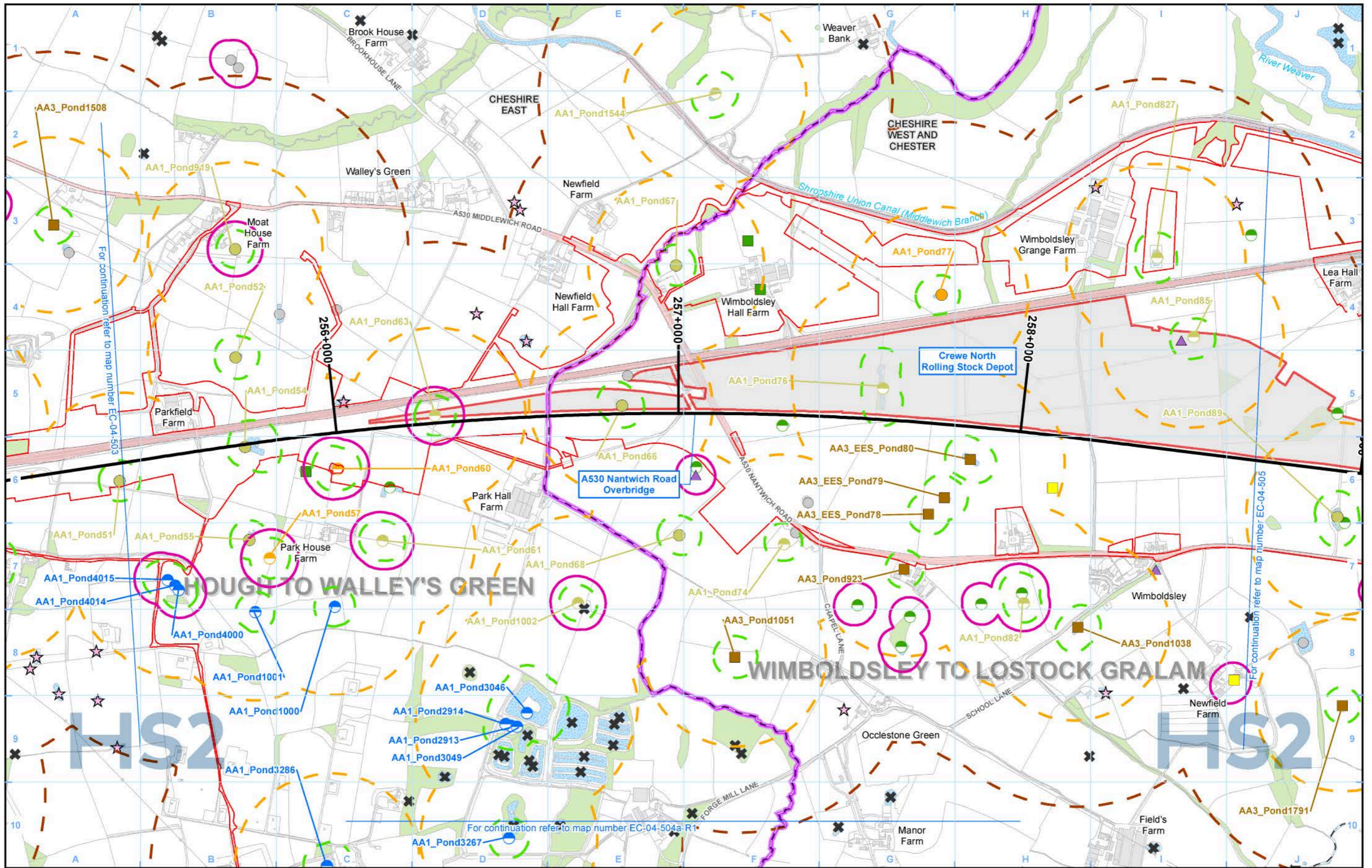
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Doc Number: 2PT27-MWJ-EV-MAP-M000-002965-P01

Date: 13/04/23



Legend

<ul style="list-style-type: none"> Route in tunnel Route on surface Depot, station, headhouse or portal building Land potentially required during construction Community area boundary County boundary 	<ul style="list-style-type: none"> District/Borough boundary Watercourse Water body Woodland (not verified by survey) Area contains new survey data eDNA survey complete - result inconclusive 	<ul style="list-style-type: none"> eDNA survey complete - GCN present eDNA survey complete - GCN assumed absent GCN present (6 visits) - medium population (11 - 99 adults) GCN present (6 visits) - small population (1 - 10 adults) GCN confirmed present - no size class determined GCN present (6 visits) - small population (1 - 10 adults) 	<ul style="list-style-type: none"> GCN present (less than 6 visits) - medium population (11 - 99 adults) GCN present (less than 6 visits) - small population (1 - 10 adults) Survey complete, GCN assumed absent Survey incomplete, no GCN found Scoped in - Habitat Suitability Index (HSI)/walkover only Scoped in - no access permission Scoped out - no survey required 	<ul style="list-style-type: none"> 50m radius from all water bodies where presence of GCN is confirmed 250m radius from all water bodies where presence of GCN is confirmed 500m radius from all water bodies where presence of GCN is confirmed Areas isolated by significant barriers to amphibian movement
--	--	--	--	---

Note: GCN = Great Crested Newts

Map Number: EC-04-504a

Map Name: Amphibians SES2 and AP2 ES

Community Area MA01: Hough to Walley's Green

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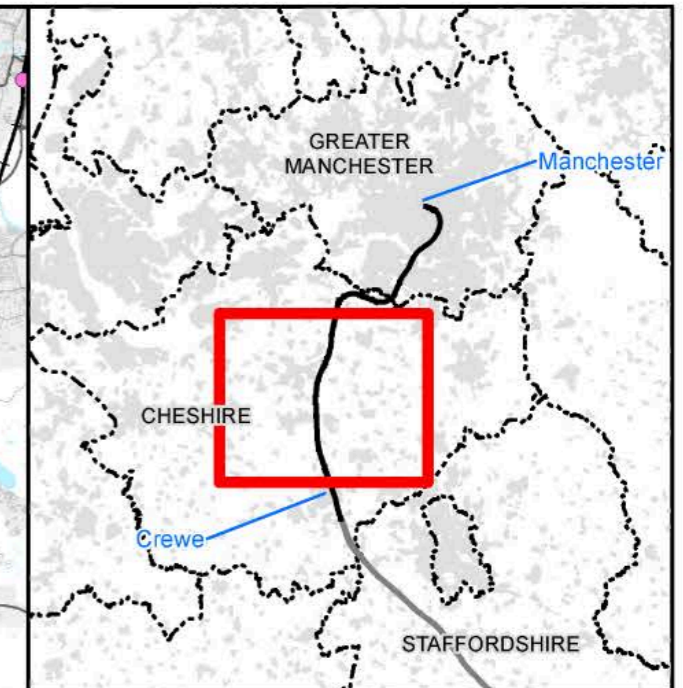
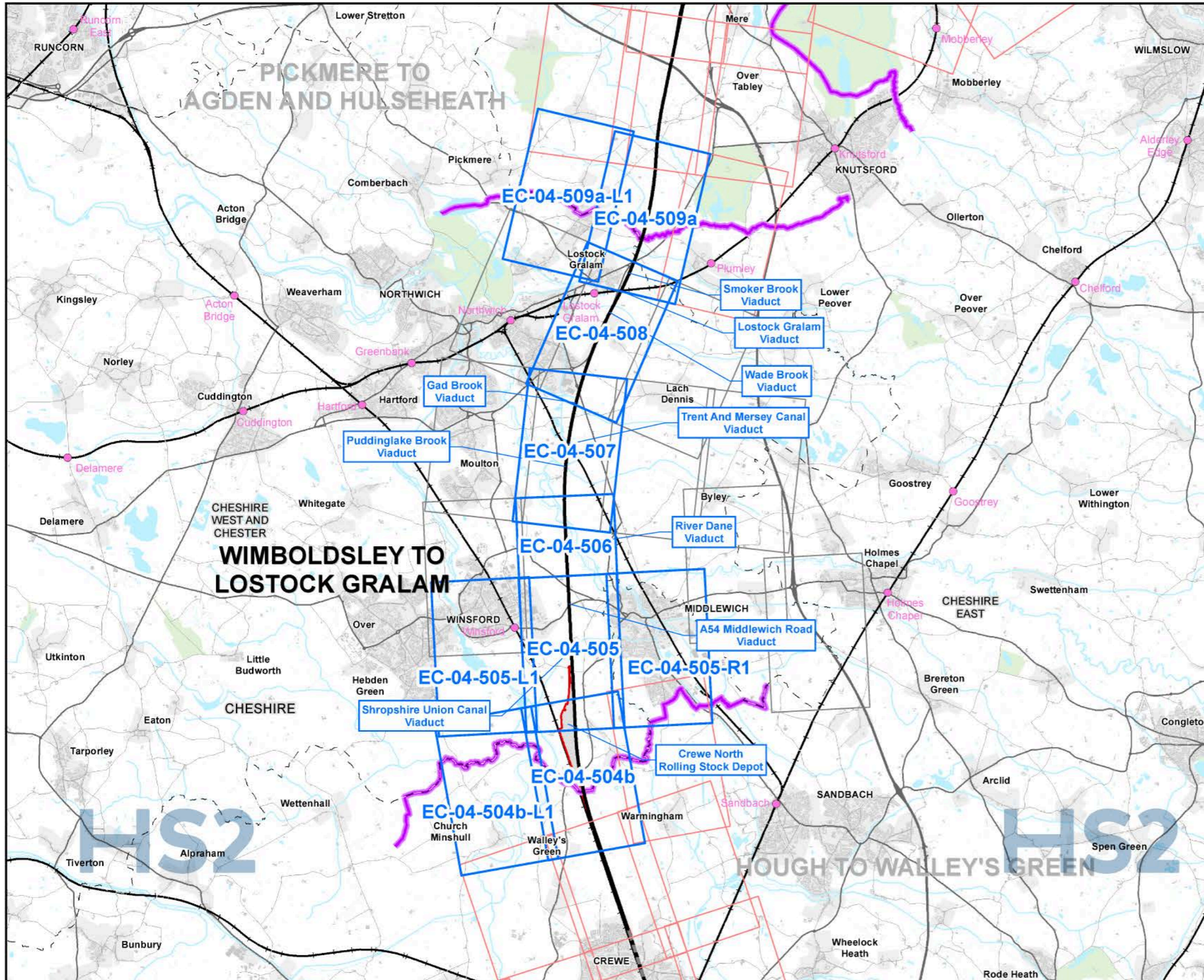
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Doc Number: 2PT27-MWJ-EV-MAP-M000-000950-P01

Date: 13/04/23

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Map Series Information:

This map series shows the results of amphibian surveys conducted to inform the environmental assessment. It principally details the results of great crested newt surveys conducted.

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

Map Number	EC-04-INDEX-MA02
Map Name	Index Map of: Amphibians SES2 and AP2 ES Community Area MA02: Wimboldsley to Lostock Gralam

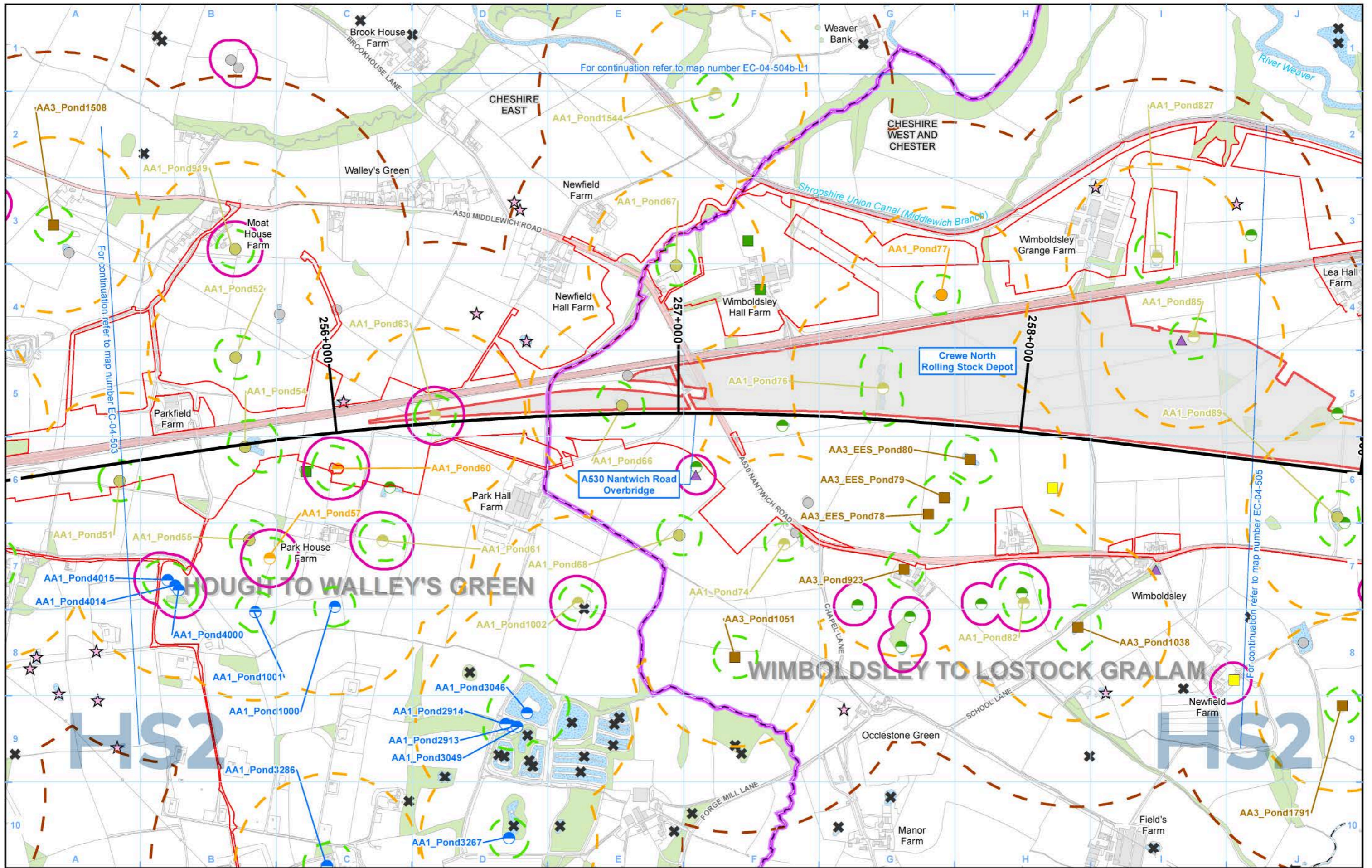
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Doc Number: 2PT27-MWJ-EV-MAP-M000-000983-P01 Date: 06/04/23



Legend

<ul style="list-style-type: none"> Route in tunnel Route on surface Depot, station, headhouse or portal building Land potentially required during construction Community area boundary County boundary 	<ul style="list-style-type: none"> District/Borough boundary Watercourse Water body Woodland (not verified by survey) Area contains new survey data eDNA survey complete - result inconclusive 	<ul style="list-style-type: none"> eDNA survey complete - GCN present eDNA survey complete - GCN assumed absent GCN present (6 visits) - medium population (11 - 99 adults) GCN present (6 visits) - small population (1 - 10 adults) GCN confirmed present - no size class determined GCN present (6 visits) - small population (1 - 10 adults) 	<ul style="list-style-type: none"> GCN present (less than 6 visits) - medium population (11 - 99 adults) GCN present (less than 6 visits) - small population (1 - 10 adults) Survey complete, GCN assumed absent Survey incomplete, no GCN found Scoped in - Habitat Suitability Index (HSI)/walkover only Scoped in - no access permission Scoped out - no survey required 	<ul style="list-style-type: none"> 50m radius from all water bodies where presence of GCN is confirmed 250m radius from all water bodies where presence of GCN is confirmed 500m radius from all water bodies where presence of GCN is confirmed Areas isolated by significant barriers to amphibian movement
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Note: GCN = Great Crested Newts

Map Number: EC-04-504b

Map Name: Amphibians SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gralam

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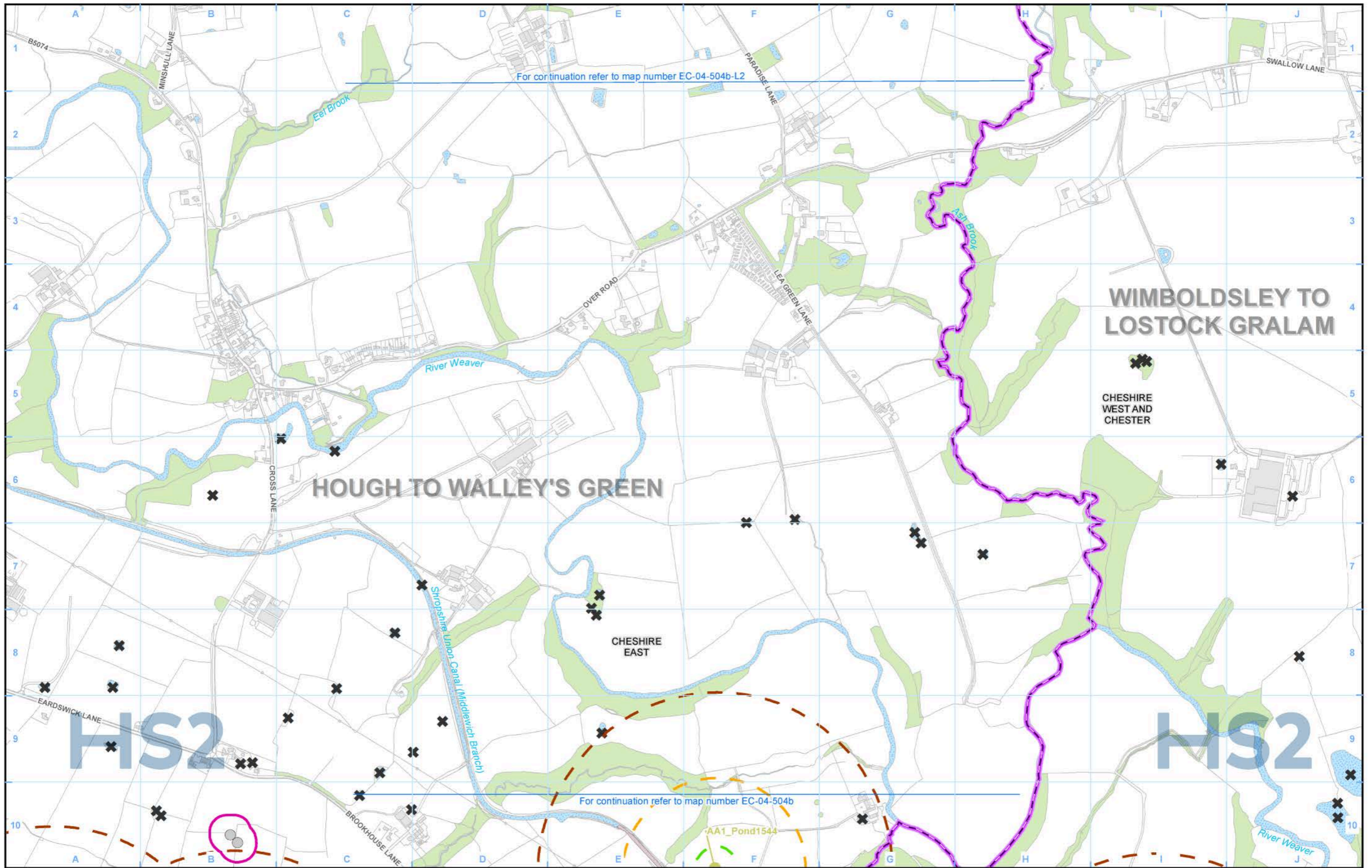
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Doc Number: 2PT27-MWJ-EV-MAP-M000-000951-P01

Date: 13/04/23

Scale at A3: 1:10,000

Metres



For continuation refer to map number EC-04-504b-L2

For continuation refer to map number EC-04-504b

- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Land potentially required during construction
 - Community area boundary
 - County boundary
 - District/Borough boundary
 - Watercourse
 - Water body
 - Woodland (not verified by survey)
 - Area contains new survey data
 - GCN present (less than 6 visits) - small population (1 - 10 adults)

- Survey incomplete, no GCN found
- Scoped out - no survey required
- 50m radius from all water bodies where presence of GCN is confirmed
- 250m radius from all water bodies where presence of GCN is confirmed
- 500m radius from all water bodies where presence of GCN is confirmed
- Areas isolated by significant barriers to amphibian movement

Note: GCN = Great Crested Newts

Map Number	EC-04-504b-L1
Map Name	Amphibians SES2 and AP2 ES
	Community Area MA02: Wimboldsley to Lostock Gralam

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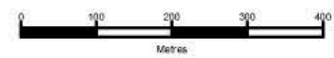
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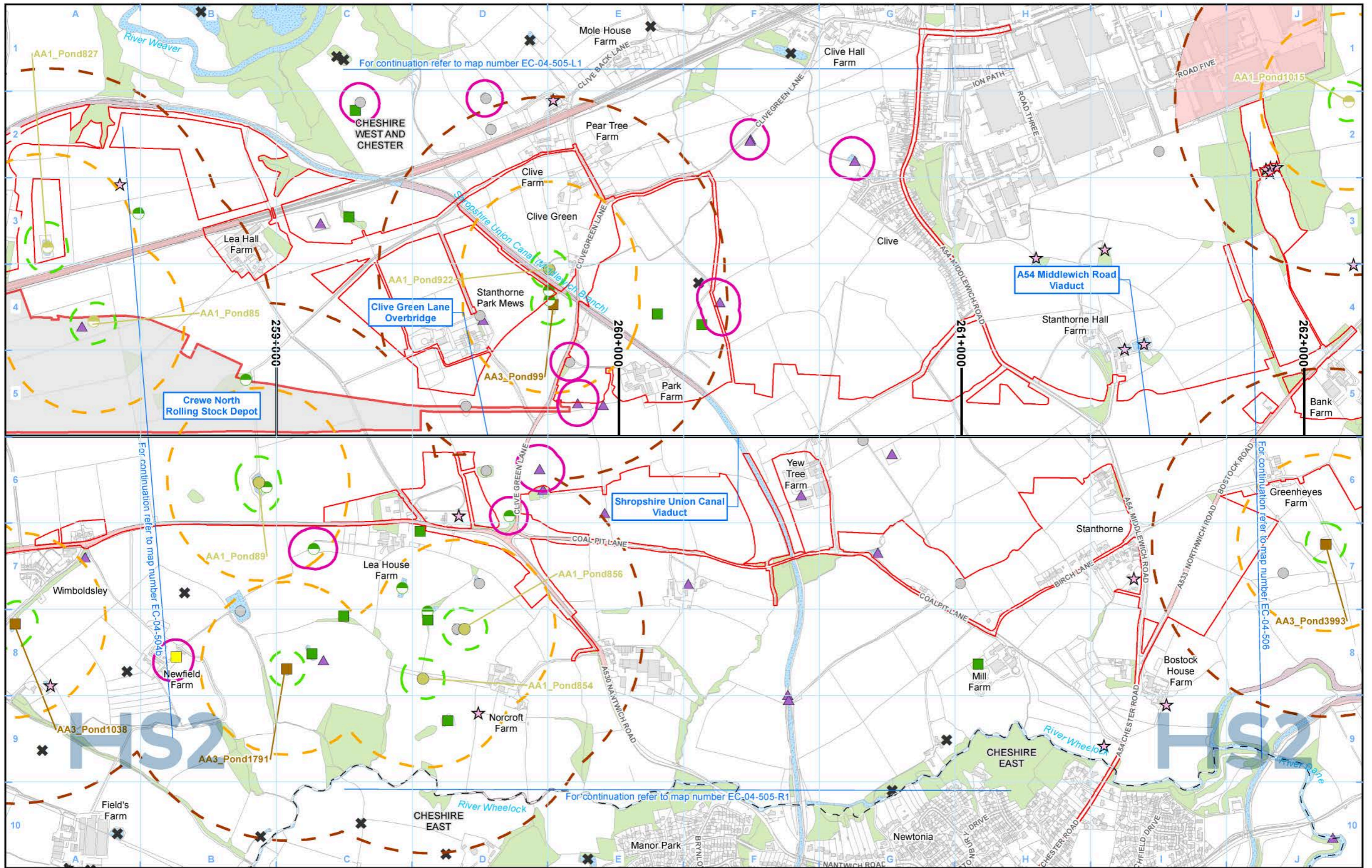
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Scale at A3: 1:10,000

Doc Number: 2PT27-MWJ-EV-MAP-M000-002967-P01

Date: 13/04/23





- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Land potentially required during construction
 - Community area boundary
 - County boundary
 - District/Borough boundary
 - Watercourse
 - Water body
 - Woodland (not verified by survey)
 - Area contains new survey data
 - eDNA survey complete - result inconclusive
 - eDNA survey complete - GCN present
 - eDNA survey complete - GCN assumed absent
 - GCN present (6 visits) - small population (1 - 10 adults)
 - GCN present (less than 6 visits) - small population (1 - 10 adults)
 - Survey complete, GCN assumed absent
 - Survey incomplete, no GCN found
 - Scoped in - Habitat Suitability Index (HSI)/walkover only
 - Scoped in - no access permission
 - Scoped out - no survey required
 - 50m radius from all water bodies where presence of GCN is confirmed
 - 250m radius from all water bodies where presence of GCN is confirmed
 - 500m radius from all water bodies where presence of GCN is confirmed
 - Areas isolated by significant barriers to amphibian movement

For continuation refer to map number EC-04-505-L1

For continuation refer to map number EC-04-505-R1

For continuation refer to map number EC-04-506

For continuation refer to map number EC-04-506

Map Number: EC-04-505

Map Name: Amphibians SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gralam

Note: GCN = Great Crested Newts

Map Number: EC-04-505

Map Name: Amphibians SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gralam

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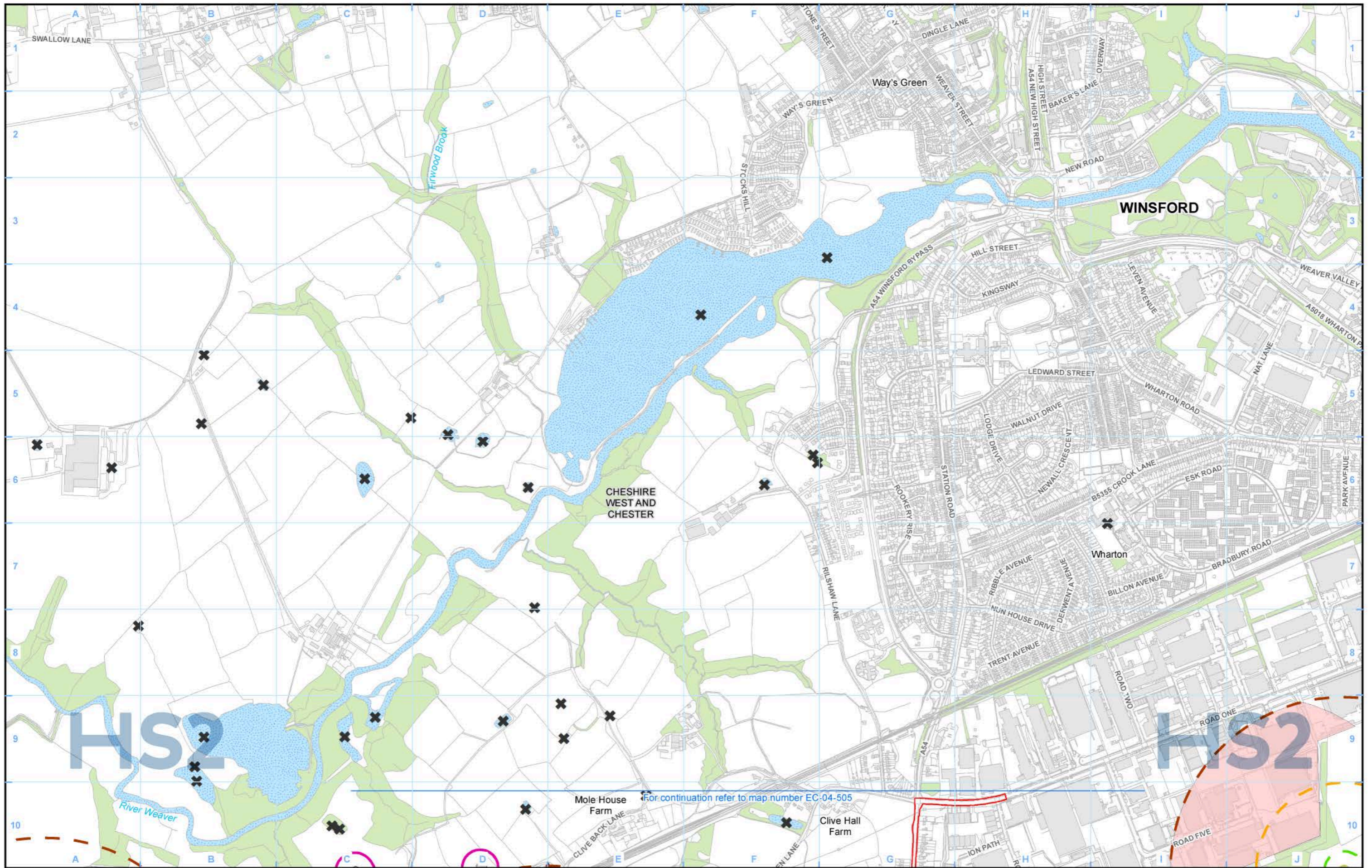
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Date: 13/04/23



- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Land potentially required during construction
 - Community area boundary
 - County boundary
 - District/Borough boundary
 - Watercourse
 - Water body
 - Woodland (not verified by survey)
 - Area contains new survey data
 - GCN present (less than 6 visits) - small population (1 - 10 adults)
 - Survey incomplete, no GCN found
 - Scoped in - no access permission
 - Scoped out - no survey required
 - 50m radius from all water bodies where presence of GCN is confirmed
 - 250m radius from all water bodies where presence of GCN is confirmed
 - 500m radius from all water bodies where presence of GCN is confirmed
 - Areas isolated by significant barriers to amphibian movement

Map Number: EC-04-505-L1

Map Name: Amphibians SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gtalam

Note: GCN = Great Crested Newts

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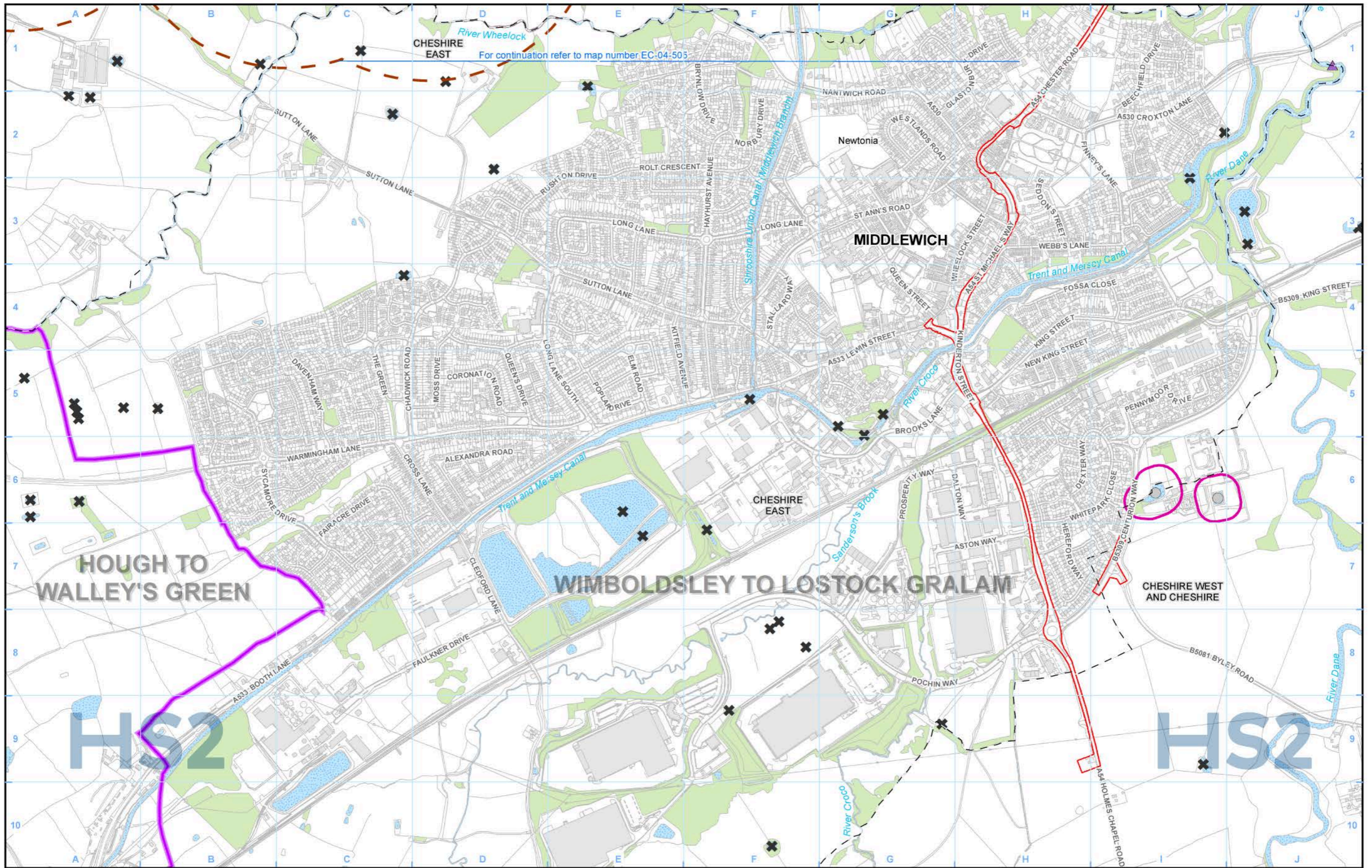
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Doc Number: 2PT27-MWJ-EV-MAP-M000-002968-P01

Date: 13/04/23



- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Land potentially required during construction
 - Community area boundary
 - County boundary
 - District/Borough boundary
 - Watercourse
 - Water body
 - Woodland (not verified by survey)
 - Area contains new survey data
 - Survey incomplete, no GCN found
 - Scoped in - Habitat Suitability Index (HSI)/walkover only
 - Scoped out - no survey required
 - 500m radius from all water bodies where presence of GCN is confirmed
 - Areas isolated by significant barriers to amphibian movement

Note: GCN = Great Crested Newts

Map Number: EC-04-505-R1
 Map Name: Amphibians SES2 and AP2 ES
 Community Area MA02: Wimboldsley to Lostock Gralam

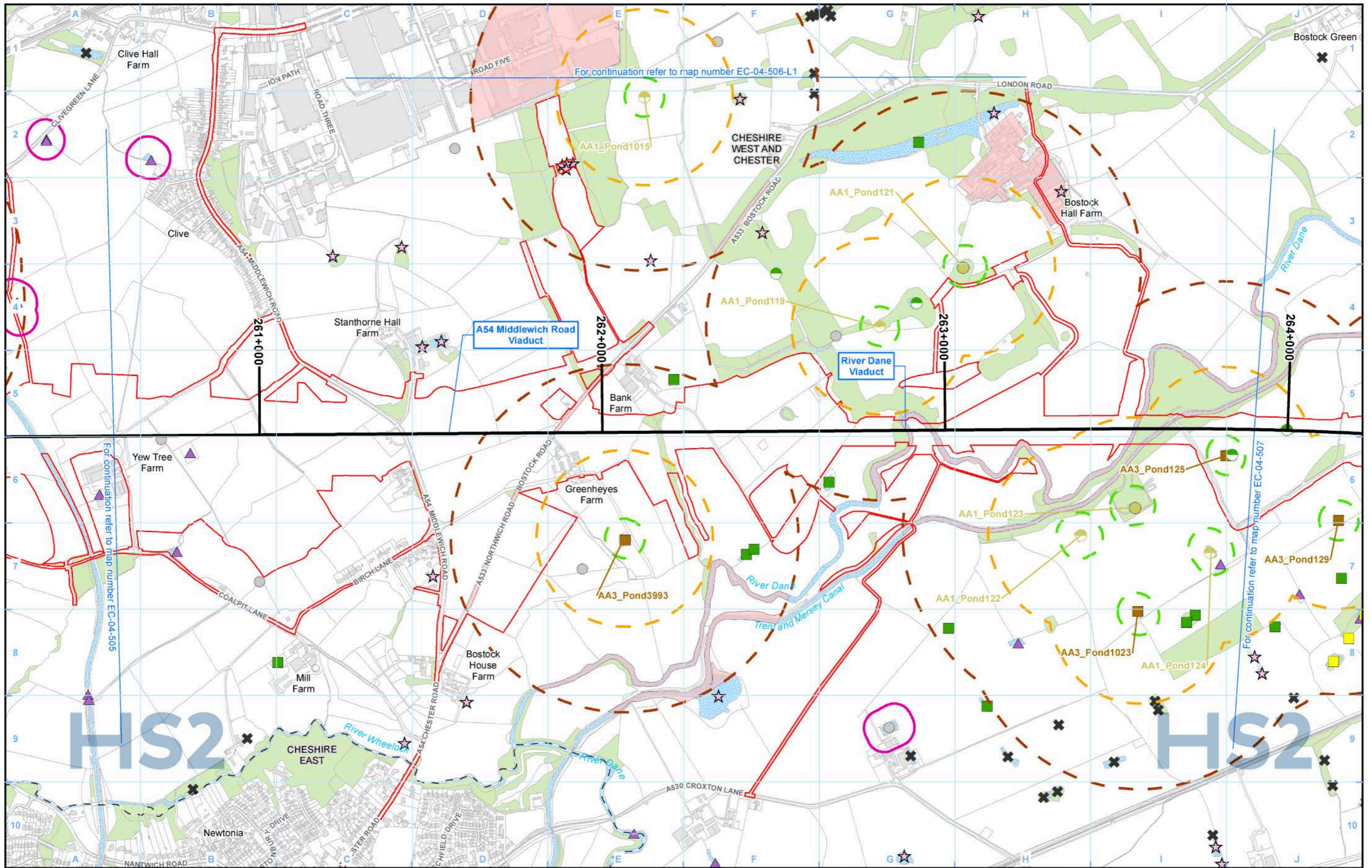
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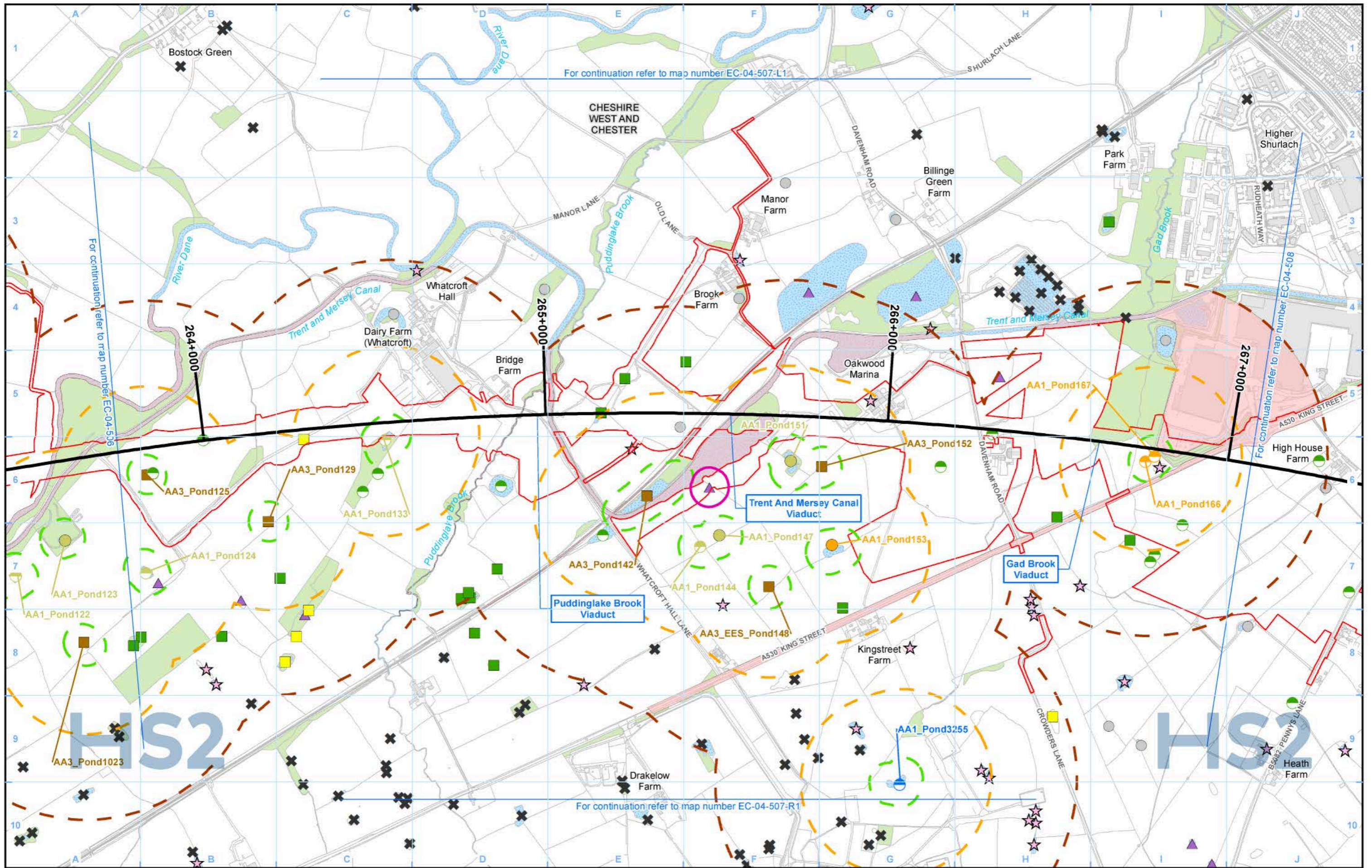


For continuation refer to map number EC-04-506-L1

For continuation refer to map number EC-04-507

Legend <ul style="list-style-type: none"> Route in tunnel Route on surface Depot, station, headhouse or portal building Land potentially required during construction Community area boundary County boundary District/Borough boundary Watercourse Water body Woodland (not verified by survey) Area contains new survey data eDNA survey complete - result inconclusive eDNA survey complete - GCN present eDNA survey complete - GCN assumed absent GCN present (6 visits) - small population (1 - 10 adults) GCN present (less than 6 visits) - small population (1 - 10 adults) Survey complete, GCN assumed absent Survey incomplete, no GCN found Scoped in - Habitat Suitability Index (HSI)/walkover only Scoped in - no access permission Scoped out - no survey required 50m radius from all water bodies where presence of GCN is confirmed 250m radius from all water bodies where presence of GCN is confirmed 500m radius from all water bodies where presence of GCN is confirmed Areas isolated by significant barriers to amphibian movement 		<p>Map Number: EC-04-506</p> <p>Map Name: Amphibians SES2 and AP2 ES</p> <p>Community Area MA02: Wimboldsley to Lostock Gram</p>		<p>HS2</p> <p>Registered in England. Registration number 06791686. Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6QA.</p> <p>Scale at A3: 1:10,000</p> <p>© Crown copyright and database rights 2022. OS 100049190</p> <p>Doc Number: 2PT27-MWJ-EV-MAP-M000-000953-P01</p> <p>Date: 13/04/23</p>	
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Note: GCN = Great Crested Newts



Legend

<ul style="list-style-type: none"> Route in tunnel Route on surface Depot, station, headhouse or portal building Land potentially required during construction Community area boundary County boundary 	<ul style="list-style-type: none"> District/Borough boundary Watercourse Water body Woodland (not verified by survey) Area contains new survey data eDNA survey complete - result inconclusive 	<ul style="list-style-type: none"> eDNA survey complete - GCN present eDNA survey complete - GCN assumed absent GCN present (6 visits) - medium population (11 - 99 adults) GCN present (6 visits) - small population (1 - 10 adults) GCN present (less than 6 visits) - medium population (11 - 99 adults) GCN present (less than 6 visits) - small population (1 - 10 adults) GCN confirmed present - no size class determined Survey complete, GCN assumed absent 	<ul style="list-style-type: none"> Survey incomplete, no GCN found Scoped in - Habitat Suitability Index (HSI)/walkover only Scoped in - no access permission Scoped out - no survey required GCN present (less than 6 visits) - medium population (11 - 99 adults) GCN present (less than 6 visits) - small population (1 - 10 adults) GCN confirmed present - no size class determined Survey complete, GCN assumed absent 	<ul style="list-style-type: none"> 50m radius from all water bodies where presence of GCN is confirmed 250m radius from all water bodies where presence of GCN is confirmed 500m radius from all water bodies where presence of GCN is confirmed Areas isolated by significant barriers to amphibian movement
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Note: GCN = Great Crested Newts

Map Number: EC-04-507

Map Name: Amphibians SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gram

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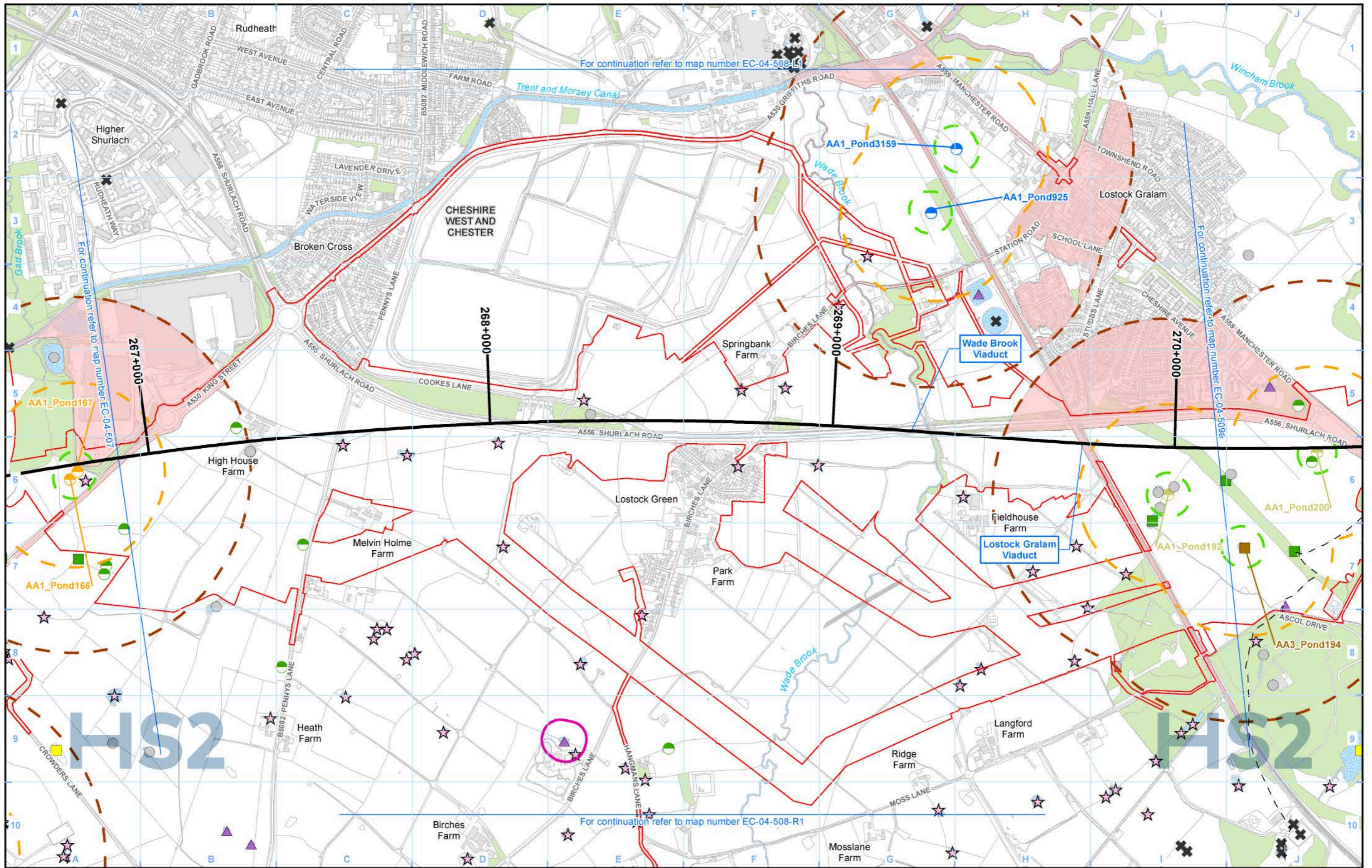
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Date: 13/04/23



- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Land potentially required during construction
 - Community area boundary
 - County boundary
 - District/Borough boundary
 - Watercourse
 - Water body
 - Woodland (not verified by survey)
 - Area contains new survey data
 - eDNA survey complete - result inconclusive

- eDNA survey complete - GCN present
- eDNA survey complete - GCN assumed absent
- GCN present (less than 6 visits) - medium population (11 - 99 adults)
- GCN present (less than 6 visits) - small population (1 - 10 adults)

- GCN confirmed present - no size class determined
- Survey complete, GCN assumed absent
- Survey incomplete, no GCN found
- Scoped in - Habitat Suitability Index (HSI)/walkover only

- Scoped in - no access permission
- Scoped out - no survey required
- 50m radius from all water bodies where presence of GCN is confirmed
- 250m radius from all water bodies where presence of GCN is confirmed
- 500m radius from all water bodies where presence of GCN is confirmed
- Areas isolated by significant barriers to amphibian movement

- For continuation refer to map number EC-04-508-L1
- For continuation refer to map number EC-04-508-R1

Note: GCN = Great Crested Newts

Map Number: EC-04-508

Map Name: Amphibians SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gralam

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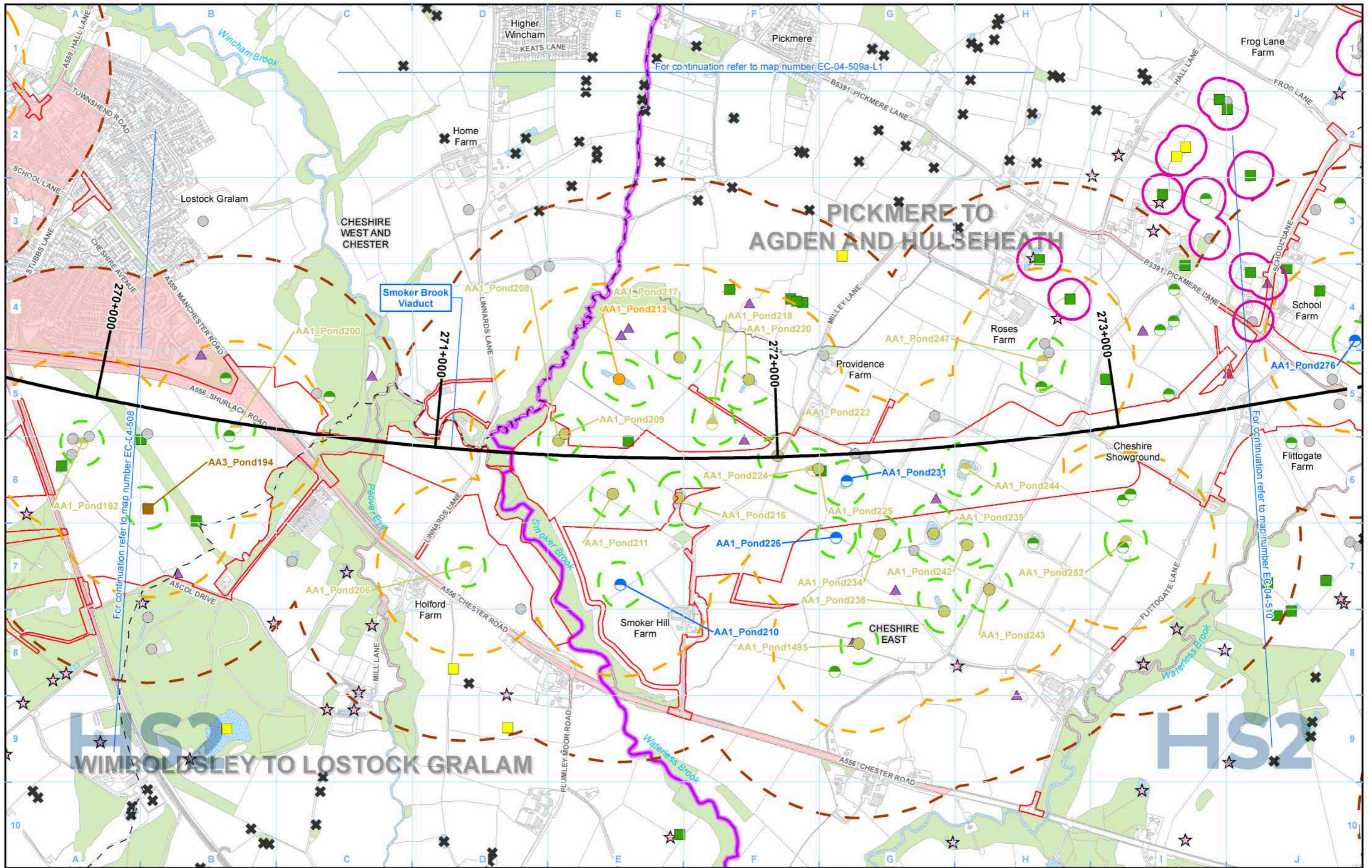
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Date: 13/04/23

Scale at A3: 1:10,000

Metres



Legend

<ul style="list-style-type: none"> Route in tunnel Route on surface Depot, station, headhouse or portal building Land potentially required during construction Community area boundary County boundary 	<ul style="list-style-type: none"> District/Borough boundary Watercourse Water body Woodland (not verified by survey) Area contains new survey data eDNA survey complete - result inconclusive 	<ul style="list-style-type: none"> eDNA survey complete - GCN present eDNA survey complete - GCN assumed absent GCN present (6 visits) - medium population (11 - 99 adults) GCN present (6 visits) - small population (1 - 10 adults) GCN present (less than 6 visits) - small population (1 - 10 adults) GCN confirmed present - no size class determined Survey complete, GCN assumed absent Survey incomplete, no GCN found 	<ul style="list-style-type: none"> Scoped in - Habitat Suitability Index (HSI)/walkover only Scoped in - no access permission Scoped out - no survey required 50m radius from all water bodies where presence of GCN is confirmed 250m radius from all water bodies where presence of GCN is confirmed 500m radius from all water bodies where presence of GCN is confirmed Areas isolated by significant barriers to amphibian movement
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Note: GCN = Great Crested Newts

Map Number: EC-04-509a

Map Name: Amphibians SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gralam

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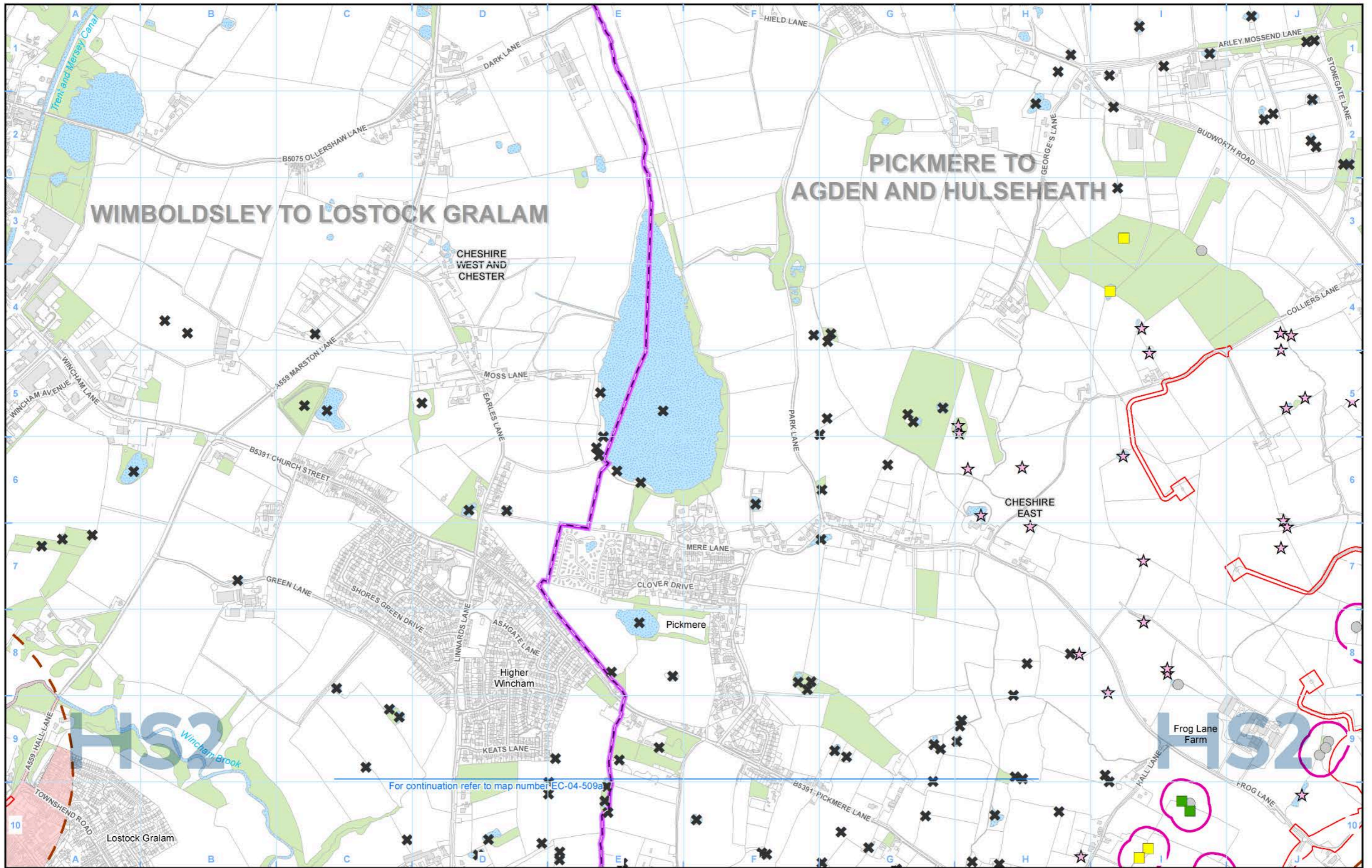
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Date: 13/04/23



- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Land potentially required during construction
 - Community area boundary
 - County boundary
 - District/Borough boundary
 - Watercourse
 - Water body
 - Woodland (not verified by survey)
 - Area contains new survey data
 - eDNA survey complete - result inconclusive

- eDNA survey complete - GCN assumed absent
- Survey incomplete, no GCN found
- Scoped in - no access permission
- Scoped out - no survey required
- 500m radius from all water bodies where presence of GCN is confirmed
- Areas isolated by significant barriers to amphibian movement

Note: GCN = Great Crested Newts

Map Number: EC-04-509a-L1

Map Name: Amphibians SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gralam

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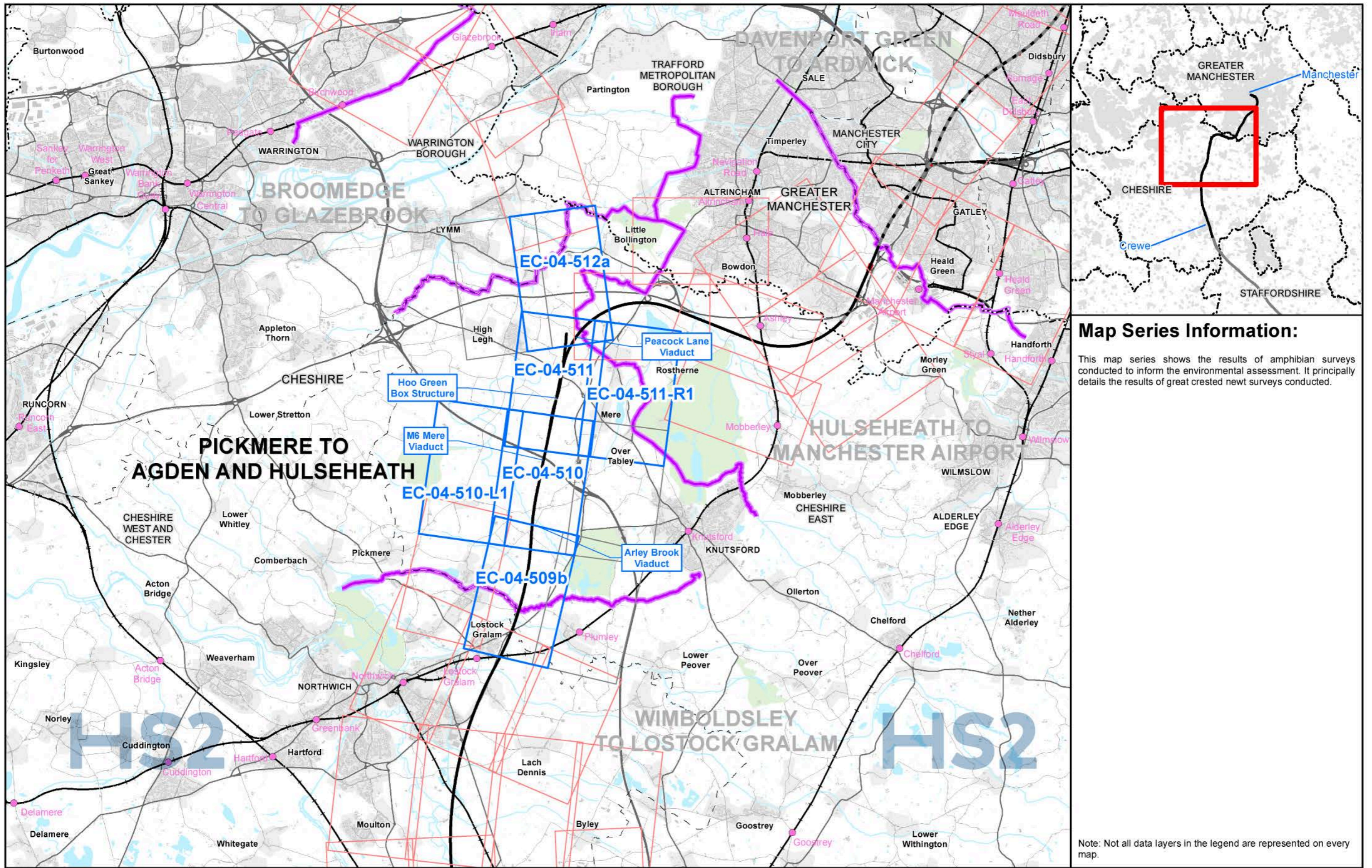
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Date: 13/04/23

Scale at A3: 1:10,000

Metres

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Map Series Information:
 This map series shows the results of amphibian surveys conducted to inform the environmental assessment. It principally details the results of great crested newt surveys conducted.

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

Main Map Legend

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

Map Number	EC-04-INDEX-MA03
Map Name	Index Map of: Amphibians SES2 and AP2 ES Community Area MA03: Pickmere to Agden and Hulseheath

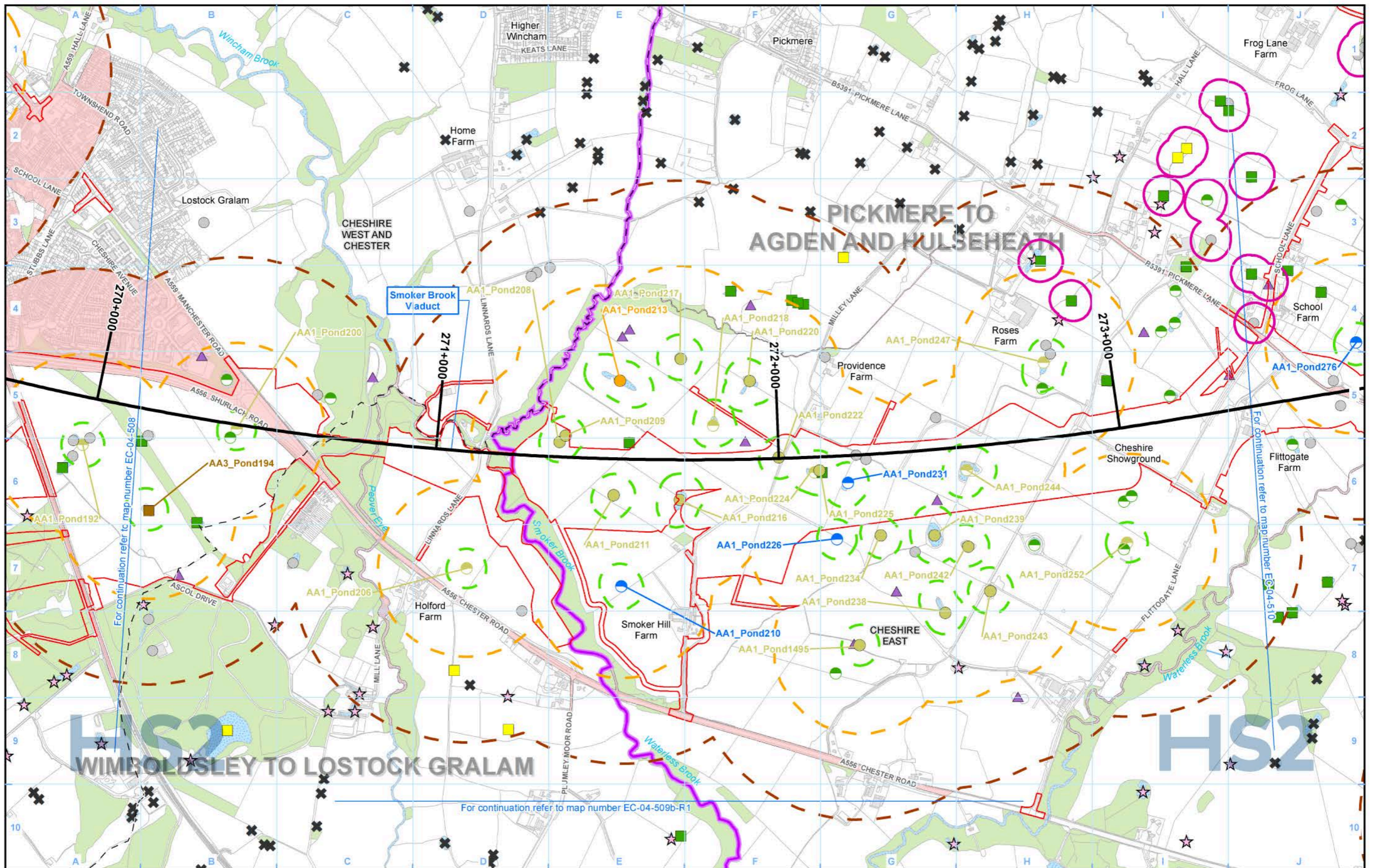
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Legend

<ul style="list-style-type: none"> Route in tunnel Route on surface Depot, station, headhouse or portal building Land potentially required during construction Community area boundary County boundary 	<ul style="list-style-type: none"> District/Borough boundary Watercourse Water body Woodland (not verified by survey) Area contains new survey data eDNA survey complete - result inconclusive 	<ul style="list-style-type: none"> eDNA survey complete - GCN present eDNA survey complete - GCN assumed absent GCN present (6 visits) - medium population (11 - 99 adults) GCN present (6 visits) - small population (1 - 10 adults) GCN present (less than 6 visits) - small population (1 - 10 adults) GCN confirmed present - no size class determined Survey complete, GCN assumed absent Survey incomplete, no GCN found 	<ul style="list-style-type: none"> Scoped in - Habitat Suitability Index (HSI)/walkover only Scoped in - no access permission Scoped out - no survey required 50m radius from all water bodies where presence of GCN is confirmed 250m radius from all water bodies where presence of GCN is confirmed 500m radius from all water bodies where presence of GCN is confirmed Areas isolated by significant barriers to amphibian movement
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Note: GCN = Great Crested Newts

Map Number: EC-04-509b

Map Name: Amphibians SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

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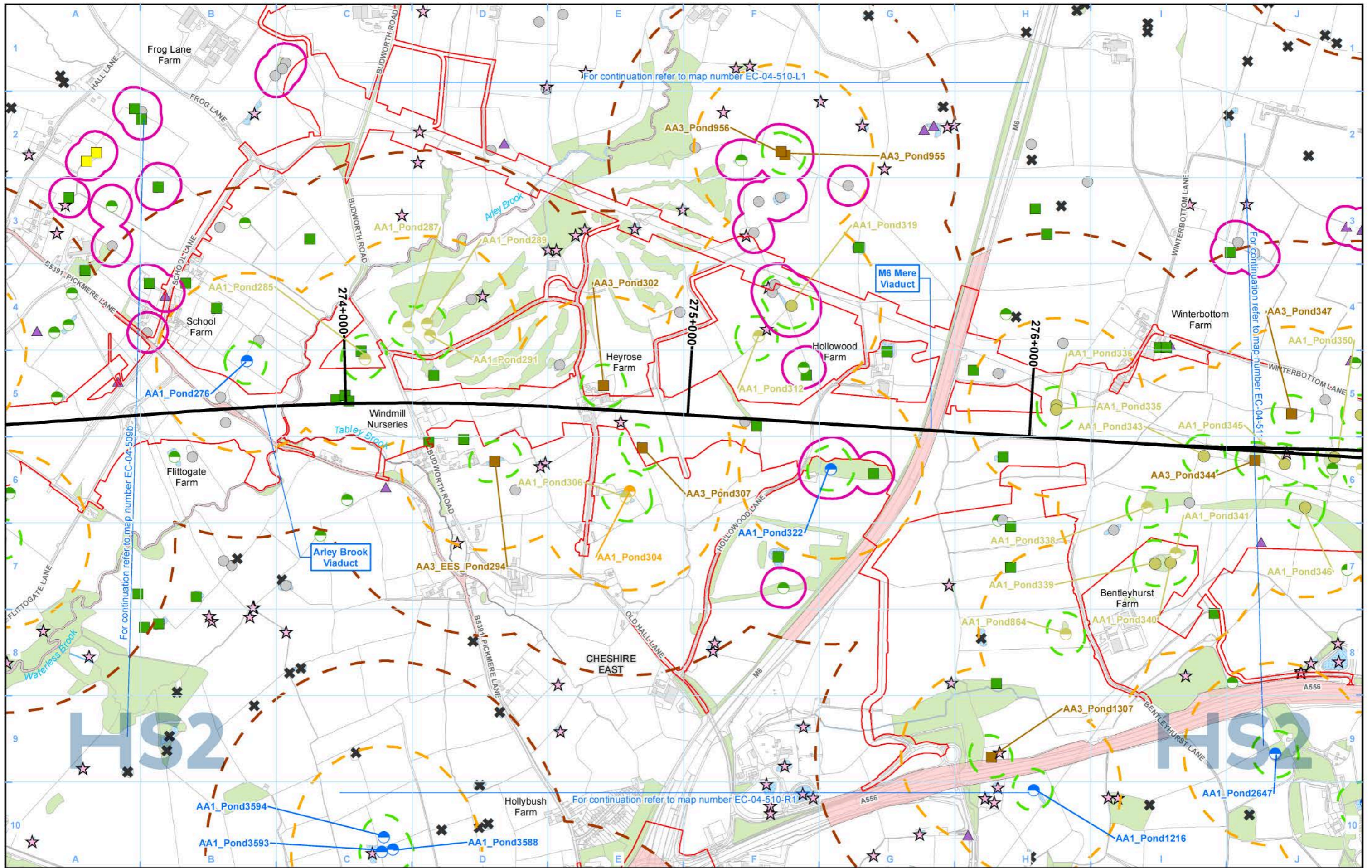
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Date: 13/04/23

Scale at A3: 1:10,000



- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Land potentially required during construction
 - Community area boundary
 - County boundary
 - District/Borough boundary
 - Watercourse
 - Water body
 - Woodland (not verified by survey)
 - Area contains new survey data
 - eDNA survey complete - result inconclusive

- eDNA survey complete - GCN present
- eDNA survey complete - GCN assumed absent
- GCN present (6 visits) - small population (1 - 10 adults)
- GCN present (less than 6 visits) - small population (1 - 10 adults)
- GCN present (less than 6 visits) - medium population (11 - 99 adults)
- GCN present (less than 6 visits) - small population (1 - 10 adults)
- GCN confirmed present - no size class determined
- Survey complete, GCN assumed absent
- Survey incomplete, no GCN found

- Scoped in - Habitat Suitability Index (HSI)/walkover only
- Scoped in - no access permission
- Scoped out - no survey required
- 50m radius from all water bodies where presence of GCN is confirmed
- 250m radius from all water bodies where presence of GCN is confirmed
- 500m radius from all water bodies where presence of GCN is confirmed
- Areas isolated by significant barriers to amphibian movement

Note: GCN = Great Crested Newts

Map Number: EC-04-510

Map Name: Amphibians SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

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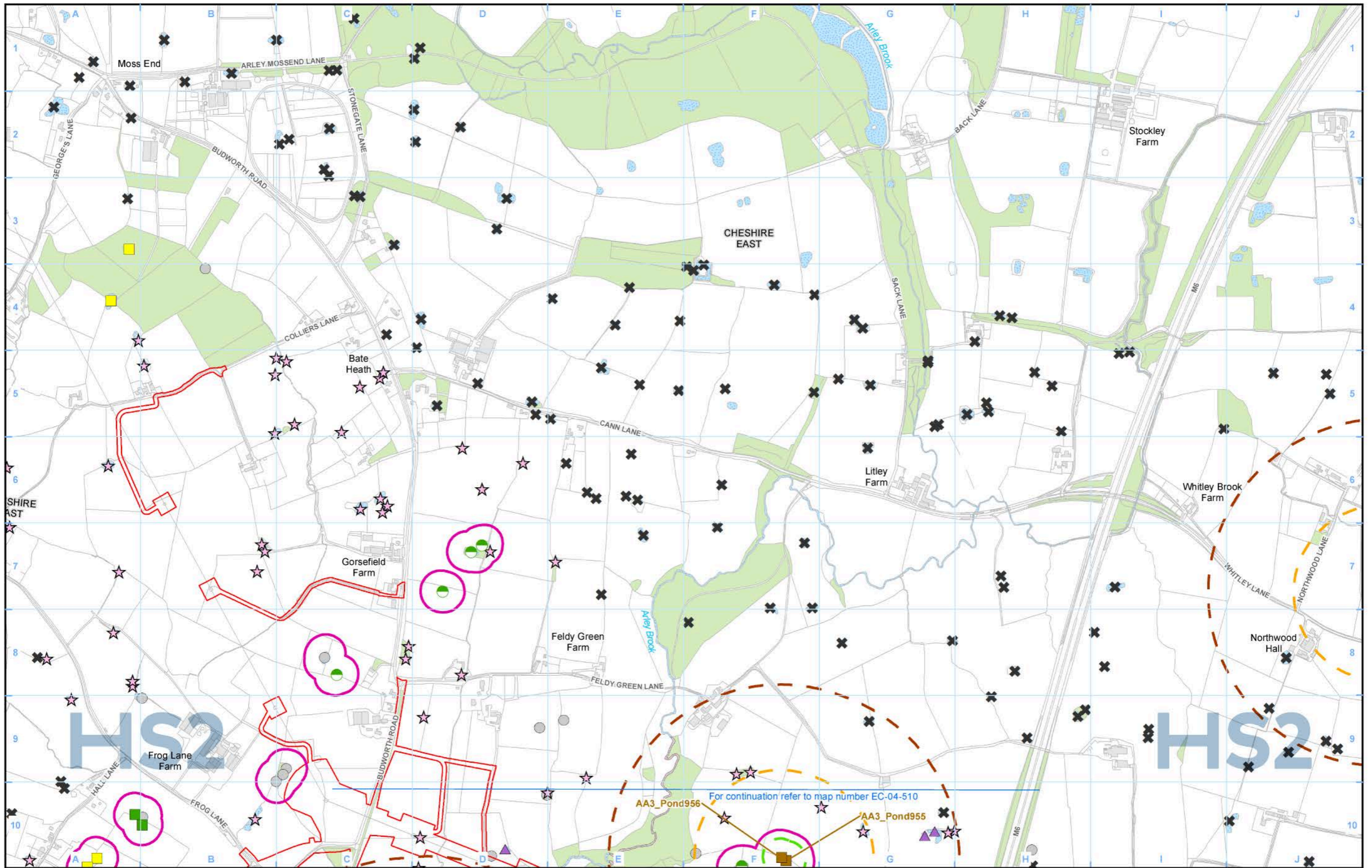
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Date: 13/04/23

Scale at A3: 1:10,000

Metres



- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Land potentially required during construction
 - Community area boundary
 - County boundary
 - District/Borough boundary
 - Watercourse
 - Water body
 - Woodland (not verified by survey)
 - Area contains new survey data
 - eDNA survey complete - result inconclusive

- eDNA survey complete - GCN present
- eDNA survey complete - GCN assumed absent
- Survey complete, GCN assumed absent
- Survey incomplete, no GCN found
- Scoped in - Habitat Suitability Index (HSI)/walkover only
- Scoped in - no access permission
- Scoped out - no survey required

- 50m radius from all water bodies where presence of GCN is confirmed
- 250m radius from all water bodies where presence of GCN is confirmed
- 500m radius from all water bodies where presence of GCN is confirmed
- Areas isolated by significant barriers to amphibian movement

Note: GCN = Great Crested Newts

Map Number: EC-04-510-L1

Map Name: Amphibians SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

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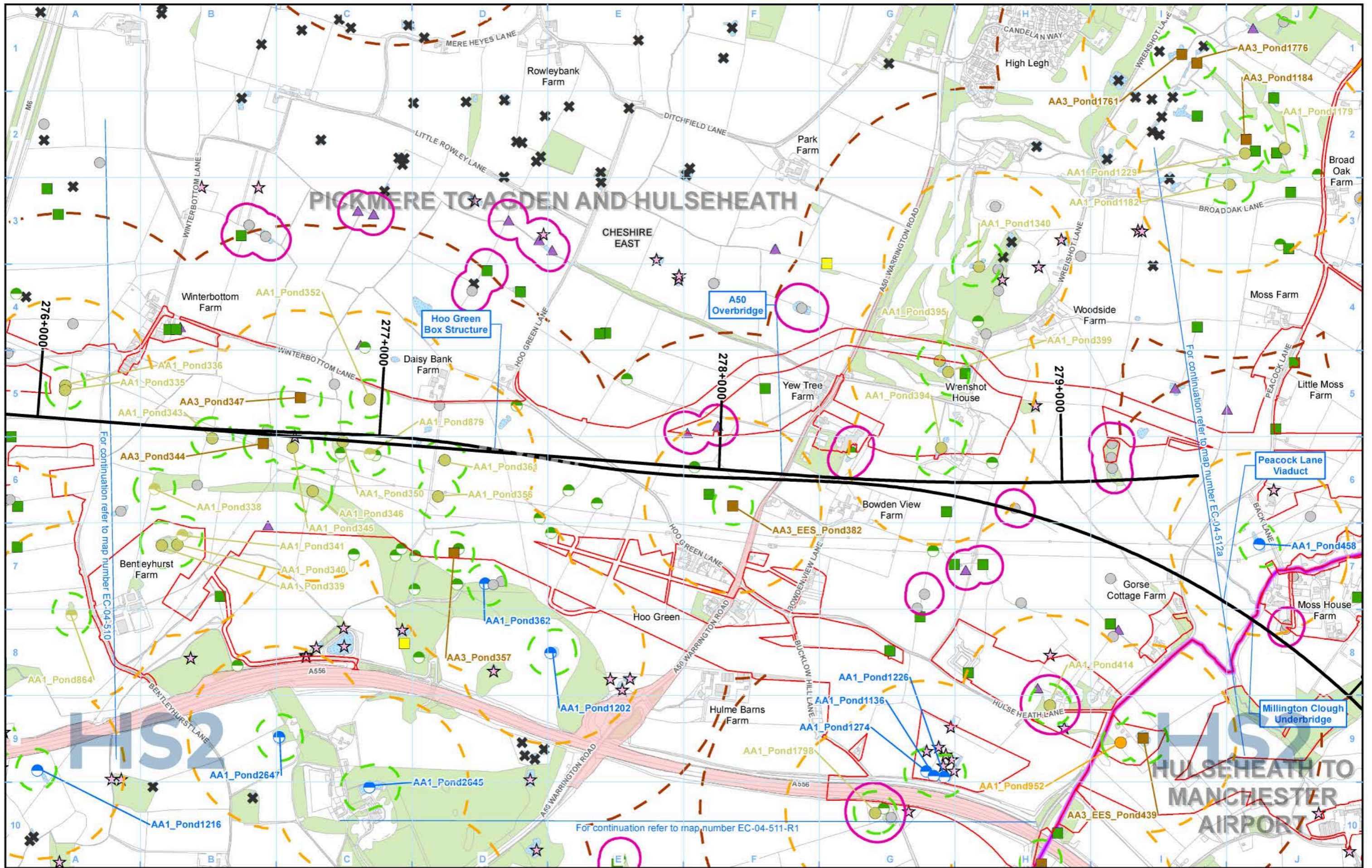
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Doc Number: 2PT27-MWJ-EV-MAP-M000-002919-P01

Date: 13/04/23

Scale at A3: 1:10,000

Metres



Legend

<ul style="list-style-type: none"> Route in tunnel Route on surface Depot, station, headhouse or portal building Land potentially required during construction Community area boundary County boundary 	<ul style="list-style-type: none"> District/Borough boundary Watercourse Water body Woodland (not verified by survey) Area contains new survey data eDNA survey complete - result inconclusive 	<ul style="list-style-type: none"> eDNA survey complete - GCN present eDNA survey complete - GCN assumed absent GCN present (6 visits) - medium population (11 - 99 adults) GCN present (6 visits) - small population (1 - 10 adults) GCN present (less than 6 visits) - small population (1 - 10 adults) GCN confirmed present - no size class determined Survey complete, GCN assumed absent Survey incomplete, no GCN found 	<ul style="list-style-type: none"> Scoped in - Habitat Suitability Index (HSI)/walkover only Scoped in - no access permission Scoped out - no survey required 50m radius from all water bodies where presence of GCN is confirmed 250m radius from all water bodies where presence of GCN is confirmed 500m radius from all water bodies where presence of GCN is confirmed Areas isolated by significant barriers to amphibian movement
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Note: GCN = Great Crested Newts

Map Number: EC-04-511

Map Name: Amphibians SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

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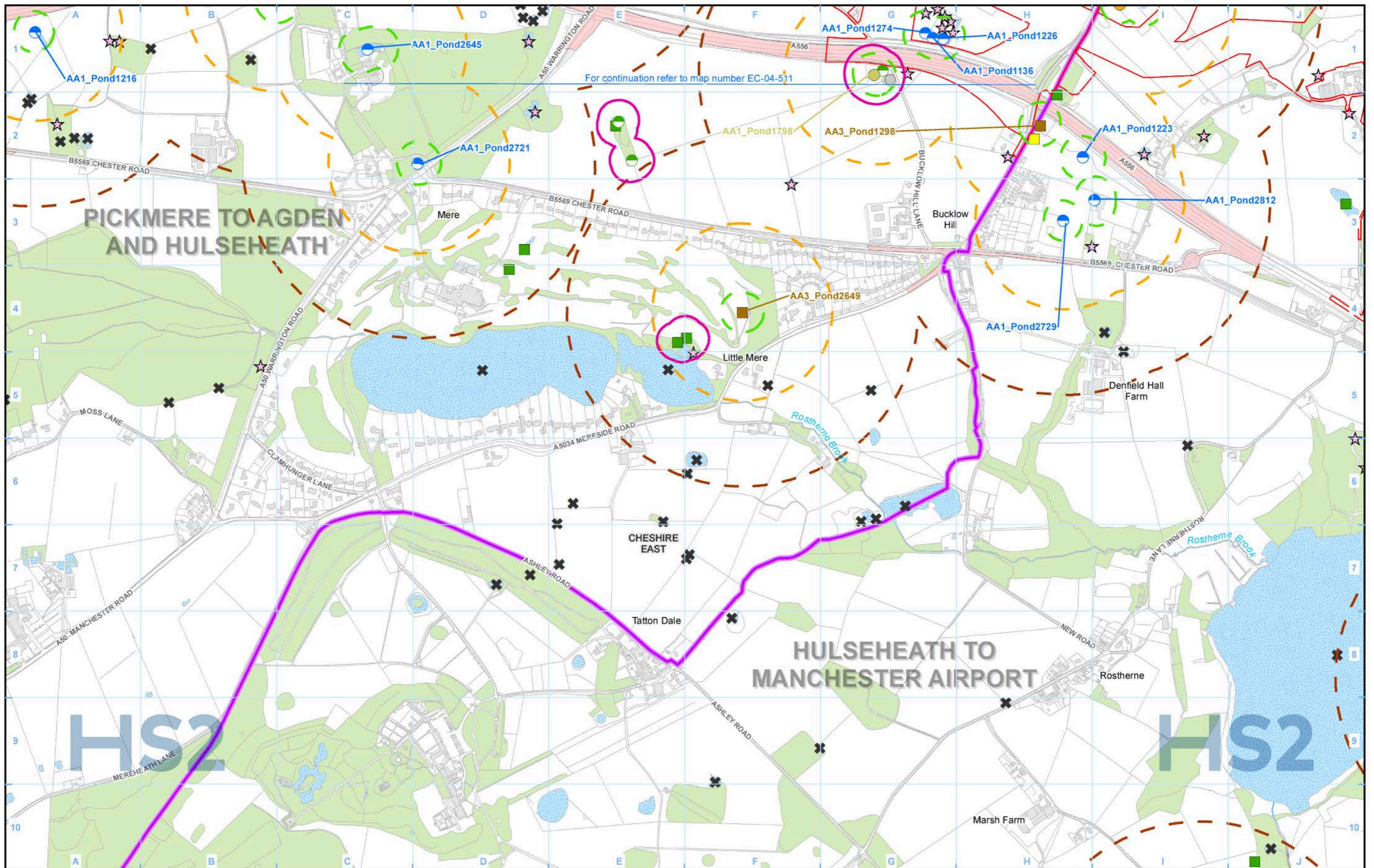
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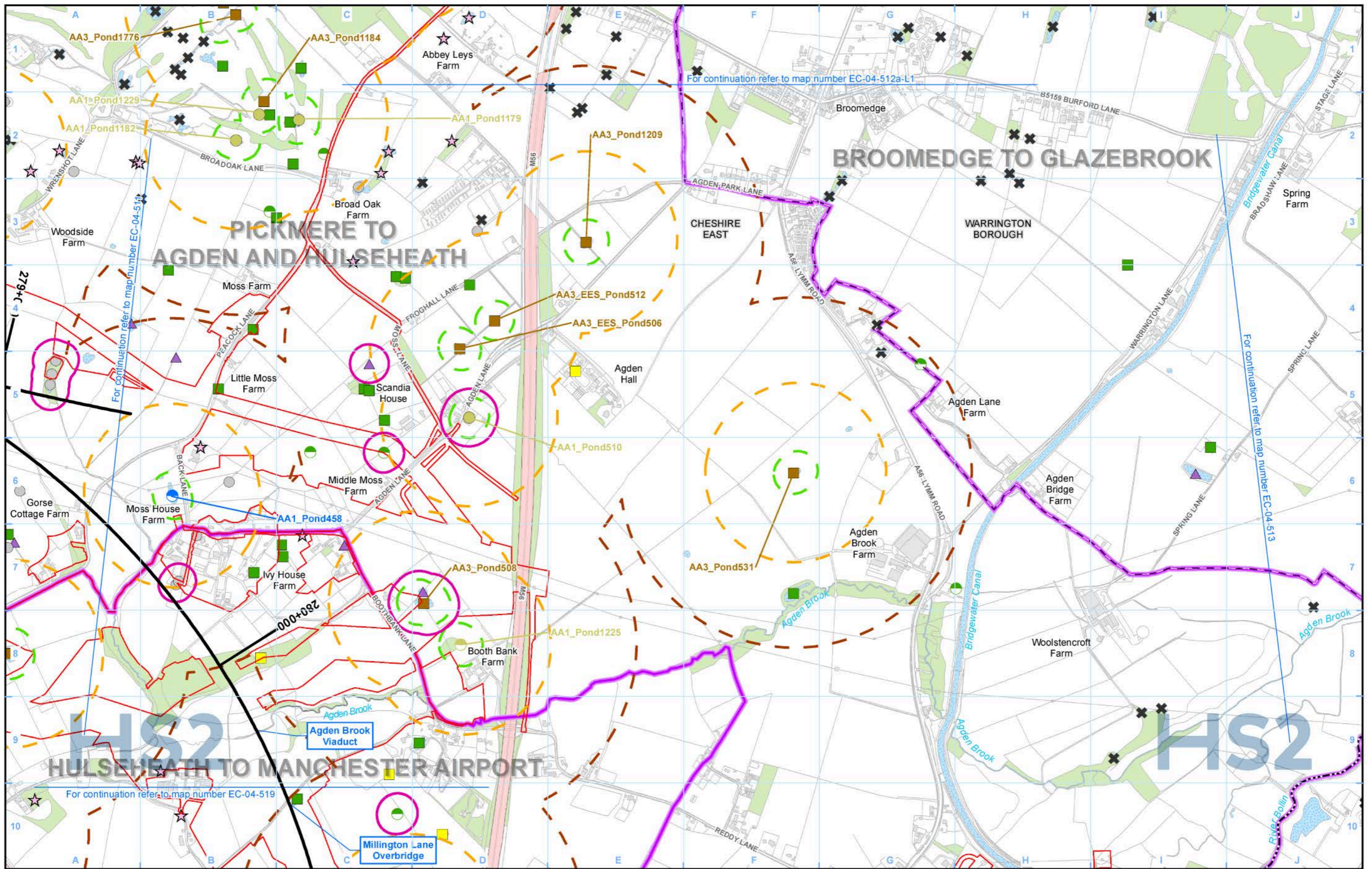
Scale at A3: 1:10,000

Doc Number: 2PT27-MWJ-EV-MAP-M000-000959-P01

Date: 13/04/23



Legend <ul style="list-style-type: none"> Route in tunnel Route on surface Depot, station, headhouse or portal building Land potentially required during construction Community area boundary County boundary District/Borough boundary Watercourse Water body Woodland (not verified by survey) Area contains new survey data eDNA survey complete - result inconclusive eDNA survey complete - GCN present eDNA survey complete - GCN assumed absent GCN present (6 visits) - medium population (11 - 99 adults) GCN present (6 visits) - small population (1 - 10 adults) GCN confirmed present - no size class determined Survey complete, GCN assumed absent Survey incomplete, no GCN found Scoped in - no access permission Scoped out - no survey required 50m radius from all water bodies where presence of GCN is confirmed 250m radius from all water bodies where presence of GCN is confirmed 500m radius from all water bodies where presence of GCN is confirmed Areas isolated by significant barriers to amphibian movement 		<p>Map Number: EC-04-511-R1</p> <p>Map Name: Amphibians SES2 and AP2 ES</p> <p>Community Area MA03: Pickmere to Agden and Hulseheath</p>		<p>HS2</p> <p>Registered in England. Registration number 06791686. Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6QA.</p> <p>© Crown copyright and database rights 2022. OS 100049190</p> <p>Doc Number: 2PT27-MWJ-EV-MAP-M000-002920-P01</p>	
<p>Note: GCN = Great Crested Newts</p>		<p>Scale at A3: 1:10,000</p>		<p>Date: 13/04/23</p>	



Legend

<ul style="list-style-type: none"> Route in tunnel Route on surface Depot, station, headhouse or portal building Land potentially required during construction Community area boundary County boundary 	<ul style="list-style-type: none"> District/Borough boundary Watercourse Water body Woodland (not verified by survey) Area contains new survey data eDNA survey complete - result inconclusive 	<ul style="list-style-type: none"> eDNA survey complete - GCN present eDNA survey complete - GCN assumed absent GCN present (6 visits) - small population (1 - 10 adults) GCN present (less than 6 visits) - small population (1 - 10 adults) 	<ul style="list-style-type: none"> GCN confirmed present - no size class determined Survey complete, GCN assumed absent Survey incomplete, no GCN found Scoped in - Habitat Suitability Index (HSI)/walkover only 	<ul style="list-style-type: none"> Scoped in - no access permission Scoped out - no survey required 	<ul style="list-style-type: none"> 50m radius from all water bodies where presence of GCN is confirmed 250m radius from all water bodies where presence of GCN is confirmed 500m radius from all water bodies where presence of GCN is confirmed Areas isolated by significant barriers to amphibian movement
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Note: GCN = Great Crested Newts

Map Number: EC-04-512a

Map Name: Amphibians SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

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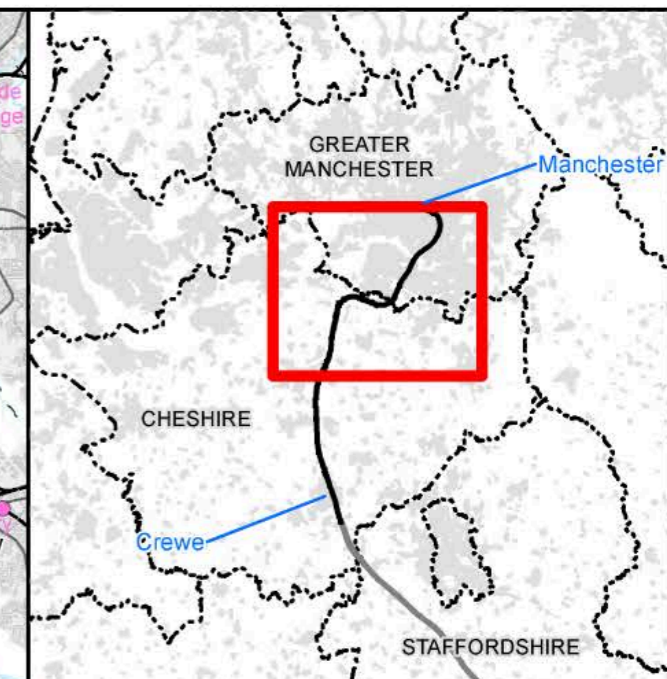
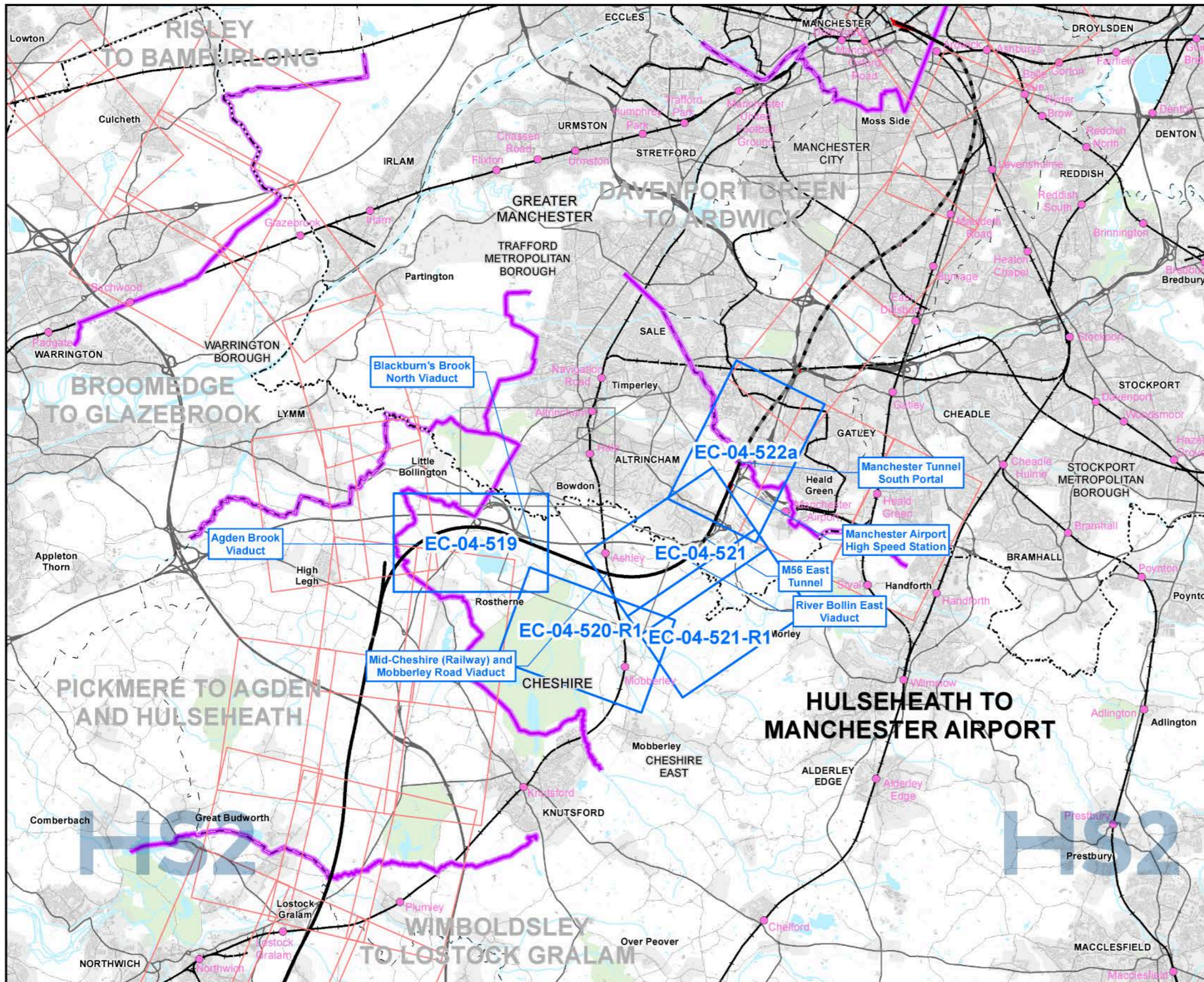
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Date: 13/04/23

Scale at A3: 1:10,000

Metres

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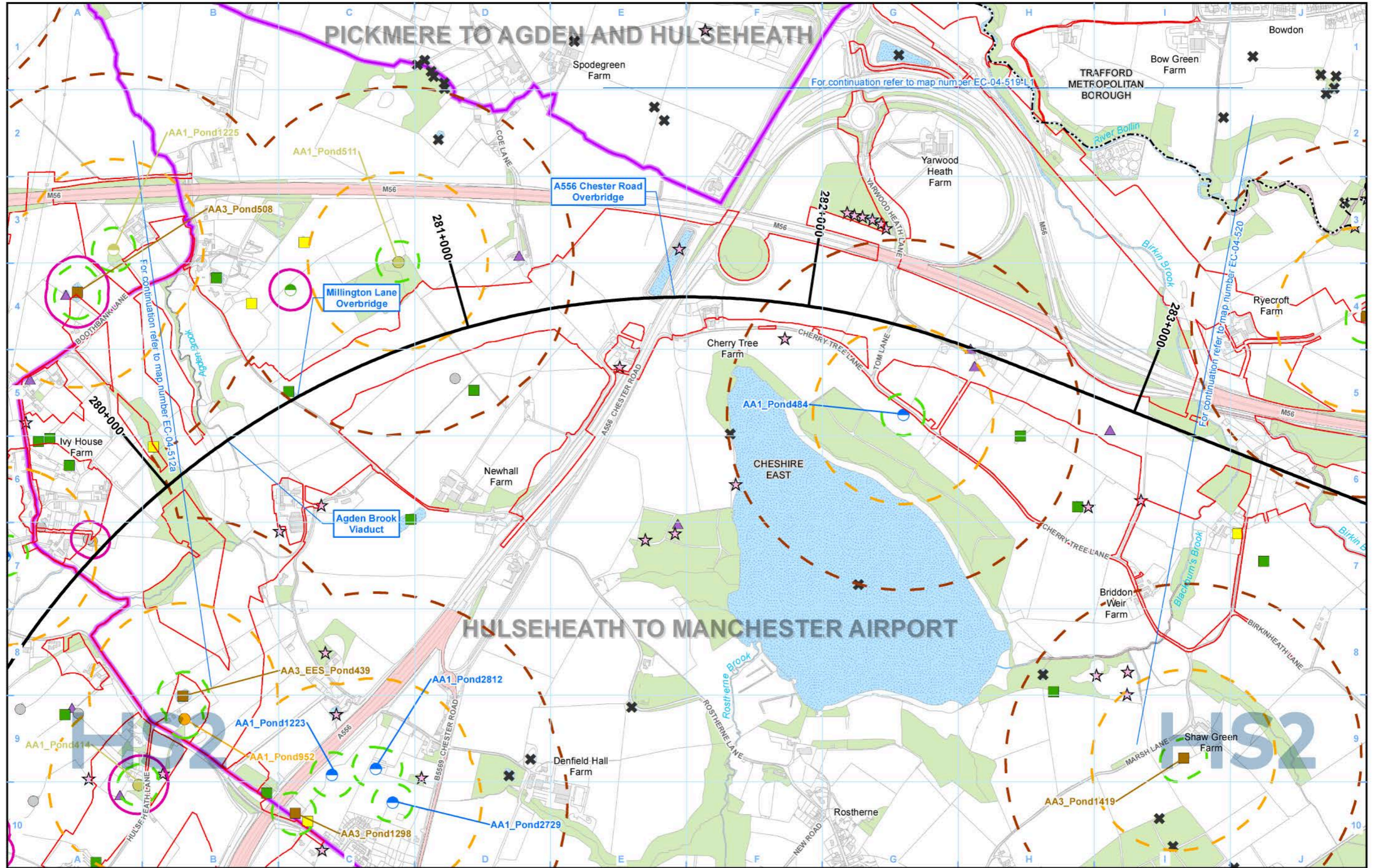
Map Series Information:

This map series shows the results of amphibian surveys conducted to inform the environmental assessment. It principally details the results of great crested newt surveys conducted.

<p>Main Map Legend</p> <ul style="list-style-type: none"> Route in tunnel Route on surface Depot, station, headhouse or portal building Community area boundary Existing railway station County boundary District/Borough boundary Map sheets included in this community area Map sheets included in this community area with no amendment Map sheets not included in this community area 	
<p>Map Number: EC-04-INDEX-MA06</p> <p>Map Name: Index Map of: Amphibians SES2 and AP2 ES Community Area MA06: Hulseheath to Manchester Airport</p>	<p>HS2</p> <p>Registered in England. Registration number 06791686. Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6QA.</p> <p>Scale at A3: 1:100,000</p> <p>© Crown copyright and database rights 2022. OS 100049190</p> <p>Doc Number: 2PT27-MWJ-EV-MAP-M000-000987-P01</p> <p>Date: 06/04/23</p>

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

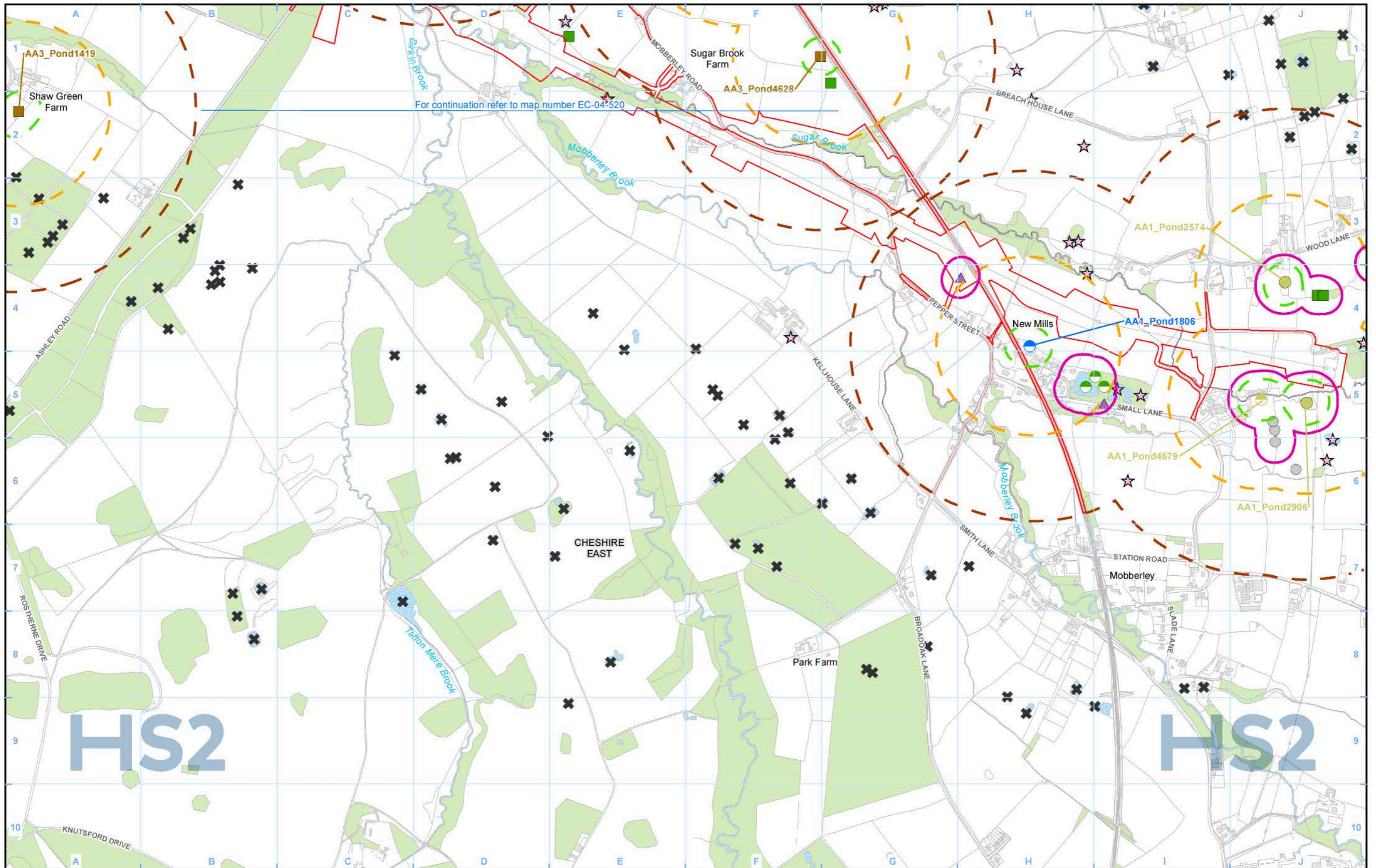
PICKMERE TO AGDEN AND HULSEHEATH



HULSEHEATH TO MANCHESTER AIRPORT

Legend <ul style="list-style-type: none"> Route in tunnel Route on surface Depot, station, headhouse or portal building Land potentially required during construction Community area boundary County boundary District/Borough boundary Watercourse Water body Woodland (not verified by survey) Area contains new survey data eDNA survey complete - result inconclusive eDNA survey complete - GCN present eDNA survey complete - GCN assumed absent GCN present (6 visits) - medium population (11 - 99 adults) GCN present (6 visits) - small population (1 - 10 adults) GCN present (less than 6 visits) - small population (1 - 10 adults) GCN confirmed present - no size class determined Survey complete, GCN assumed absent Survey incomplete, no GCN found Scoped in - Habitat Suitability Index (HSI)/walkover only Scoped in - no access permission Scoped out - no survey required 50m radius from all water bodies where presence of GCN is confirmed 250m radius from all water bodies where presence of GCN is confirmed 500m radius from all water bodies where presence of GCN is confirmed Areas isolated by significant barriers to amphibian movement 		Map Number: EC-04-519 Map Name: Amphibians SES2 and AP2 ES Community Area MA06: Hulseheath to Manchester Airport	<p>HS2 Ltd accept no responsibility for any inaccuracies, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.</p> <p>Registered in England: Registration number 06791586 Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6QA.</p> <p>© Crown copyright and database rights 2022. OS 100049190</p> <p>Scale at A3: 1:10,000</p> <p>Doc Number: 2PT27-MWJ-EV-MAP-M000-000969-P01</p> <p>Date: 28/04/23</p>
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Note: GCN = Great Crested Newts



Legend

Map Number: EC-04-520-R1

Map Name: Amphibians SES2 and AP2 ES

Community Area MA06: Hulseheath to Manchester Airport

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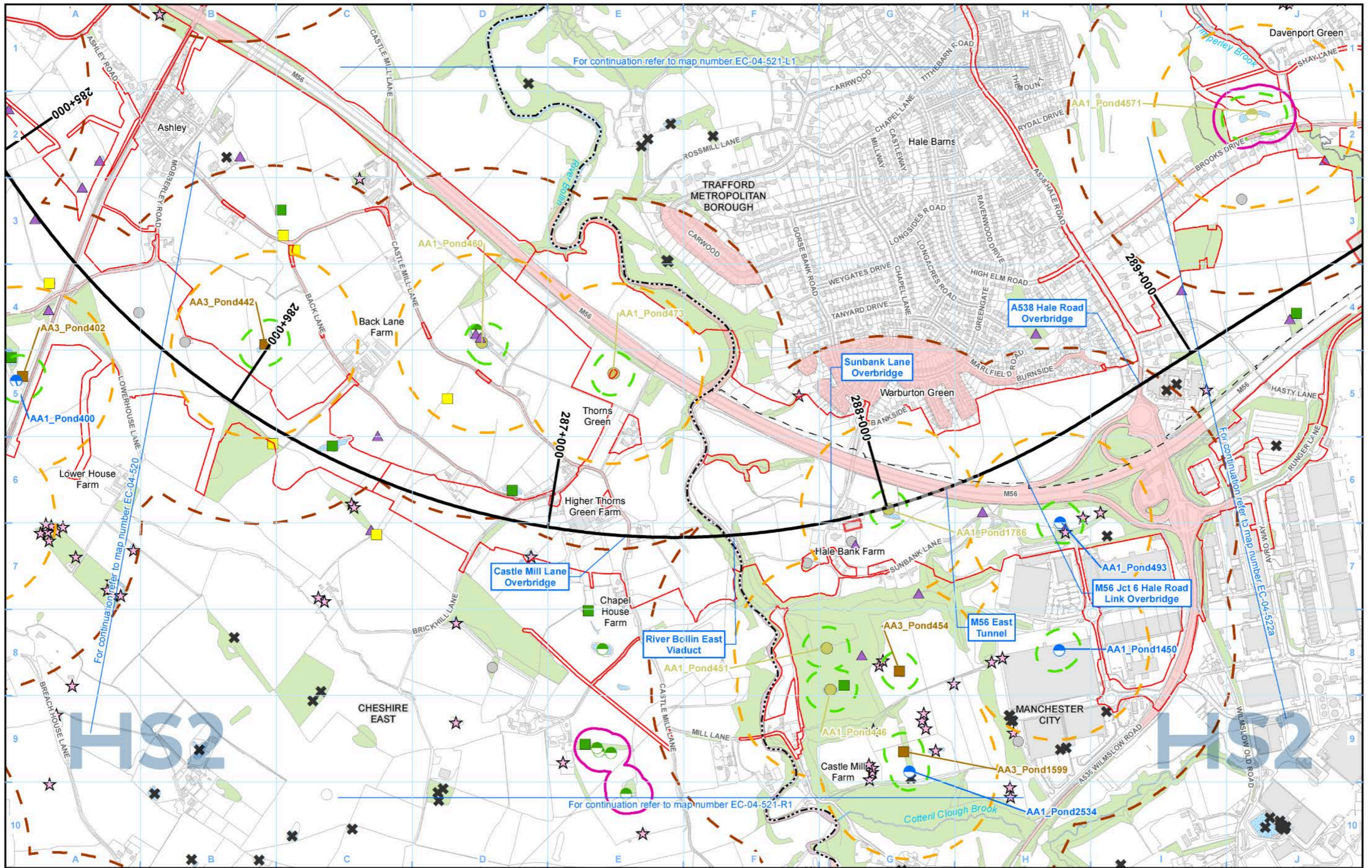
Doc Number: 2PT27-MWJ-EV-MAP-M000-003048-P01

Date: 28/04/23

Scale at A3: 1:10,000

Metres

Note: GCN = Great Crested Newts



For continuation refer to map number EC-04-521-L1

For continuation refer to map number EC-04-520

For continuation refer to map number EC-04-522a

For continuation refer to map number EC-04-521-R1

- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Land potentially required during construction
 - Community area boundary
 - County boundary
 - District/Borough boundary
 - Watercourse
 - Water body
 - Woodland (not verified by survey)
 - Area contains new survey data
 - eDNA survey complete - result inconclusive

- eDNA survey complete - GCN present
- eDNA survey complete - GCN assumed absent
- GCN present (6 visits) - small population (1 - 10 adults)
- GCN present (less than 6 visits) - small population (1 - 10 adults)
- GCN confirmed present - no size class determined
- Survey complete, GCN assumed absent
- Survey incomplete, no GCN found
- Scoped in - Habitat Suitability Index (HSI)/walkover only
- Scoped in - no access permission
- Scoped out - no survey required
- 50m radius from all water bodies where presence of GCN is confirmed
- 250m radius from all water bodies where presence of GCN is confirmed
- 500m radius from all water bodies where presence of GCN is confirmed
- Areas isolated by significant barriers to amphibian movement

- GCN confirmed present - no size class determined
- Survey complete, GCN assumed absent
- Survey incomplete, no GCN found
- Scoped in - Habitat Suitability Index (HSI)/walkover only
- Scoped in - no access permission
- Scoped out - no survey required
- 50m radius from all water bodies where presence of GCN is confirmed
- 250m radius from all water bodies where presence of GCN is confirmed
- 500m radius from all water bodies where presence of GCN is confirmed
- Areas isolated by significant barriers to amphibian movement

- GCN confirmed present - no size class determined
- Survey complete, GCN assumed absent
- Survey incomplete, no GCN found
- Scoped in - Habitat Suitability Index (HSI)/walkover only
- Scoped in - no access permission
- Scoped out - no survey required
- 50m radius from all water bodies where presence of GCN is confirmed
- 250m radius from all water bodies where presence of GCN is confirmed
- 500m radius from all water bodies where presence of GCN is confirmed
- Areas isolated by significant barriers to amphibian movement

- GCN confirmed present - no size class determined
- Survey complete, GCN assumed absent
- Survey incomplete, no GCN found
- Scoped in - Habitat Suitability Index (HSI)/walkover only
- Scoped in - no access permission
- Scoped out - no survey required
- 50m radius from all water bodies where presence of GCN is confirmed
- 250m radius from all water bodies where presence of GCN is confirmed
- 500m radius from all water bodies where presence of GCN is confirmed
- Areas isolated by significant barriers to amphibian movement

- GCN confirmed present - no size class determined
- Survey complete, GCN assumed absent
- Survey incomplete, no GCN found
- Scoped in - Habitat Suitability Index (HSI)/walkover only
- Scoped in - no access permission
- Scoped out - no survey required
- 50m radius from all water bodies where presence of GCN is confirmed
- 250m radius from all water bodies where presence of GCN is confirmed
- 500m radius from all water bodies where presence of GCN is confirmed
- Areas isolated by significant barriers to amphibian movement

Note: GCN = Great Crested Newts

Map Number: EC-04-521

Map Name: Amphibians SES2 and AP2 ES

Community Area MA06: Hulseheath to Manchester Airport

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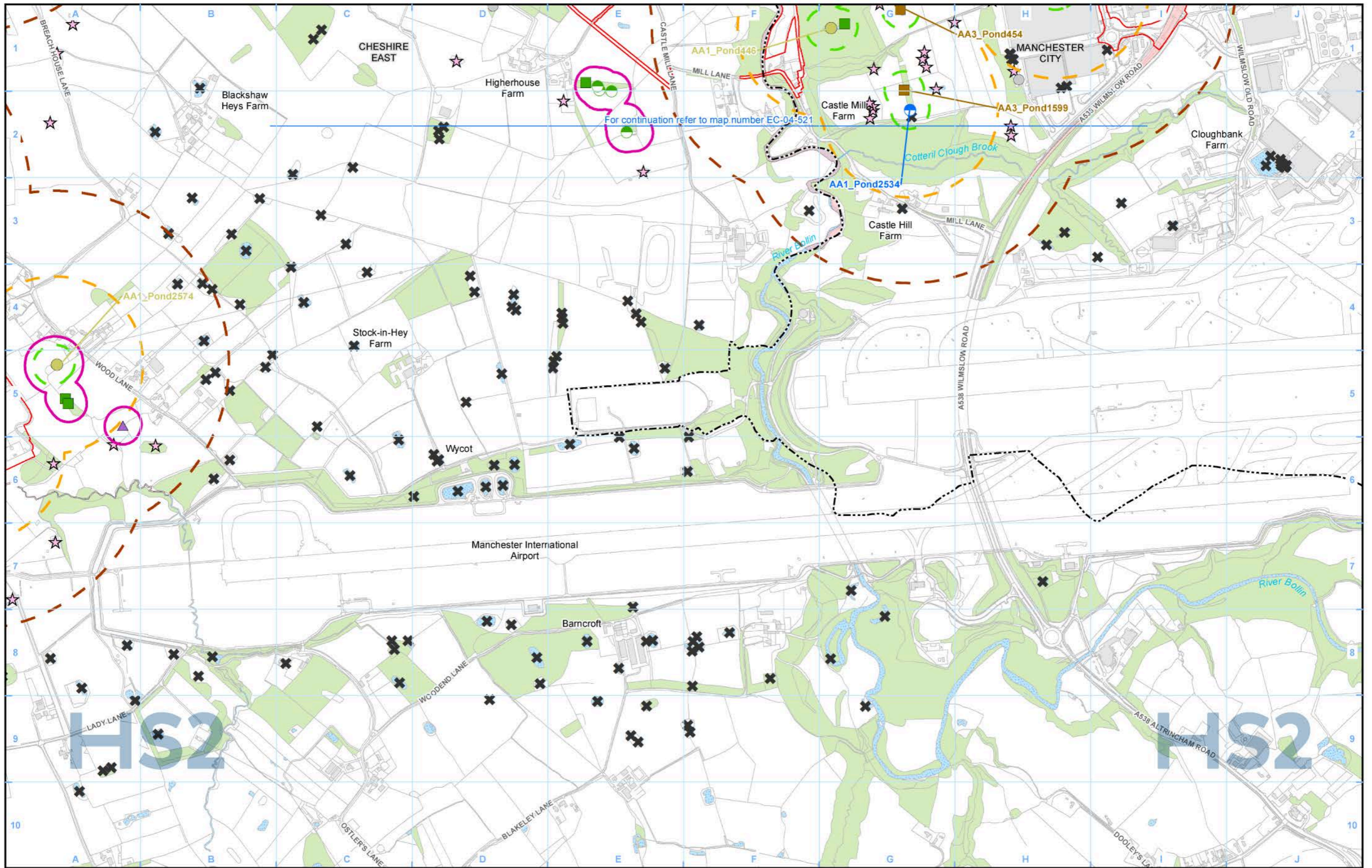
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Doc Number: 2PT27-MWJ-EV-MAP-M000-000971-P01

Date: 28/04/23

Scale at A3: 1:10,000

Metres



Legend

<ul style="list-style-type: none"> Route in tunnel Route on surface Depot, station, headhouse or portal building Land potentially required during construction Community area boundary County boundary 	<ul style="list-style-type: none"> District/Borough boundary Watercourse Water body Woodland (not verified by survey) Area contains new survey data eDNA survey complete - GCN present 	<ul style="list-style-type: none"> eDNA survey complete - GCN assumed absent GCN present (6 visits) - small population (1 - 10 adults) GCN confirmed present - no size class determined Survey complete, GCN assumed absent Survey incomplete, no GCN found Scoped in - Habitat Suitability Index (HSI)/walkover only 	<ul style="list-style-type: none"> Scoped in - no access permission Scoped out - no survey required 50m radius from all water bodies where presence of GCN is confirmed 250m radius from all water bodies where presence of GCN is confirmed 500m radius from all water bodies where presence of GCN is confirmed Areas isolated by significant barriers to amphibian movement
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Note: GCN = Great Crested Newts

Map Number: EC-04-521-R1

Map Name: Amphibians SES2 and AP2 ES

Community Area MA06: Hulseheath to Manchester Airport

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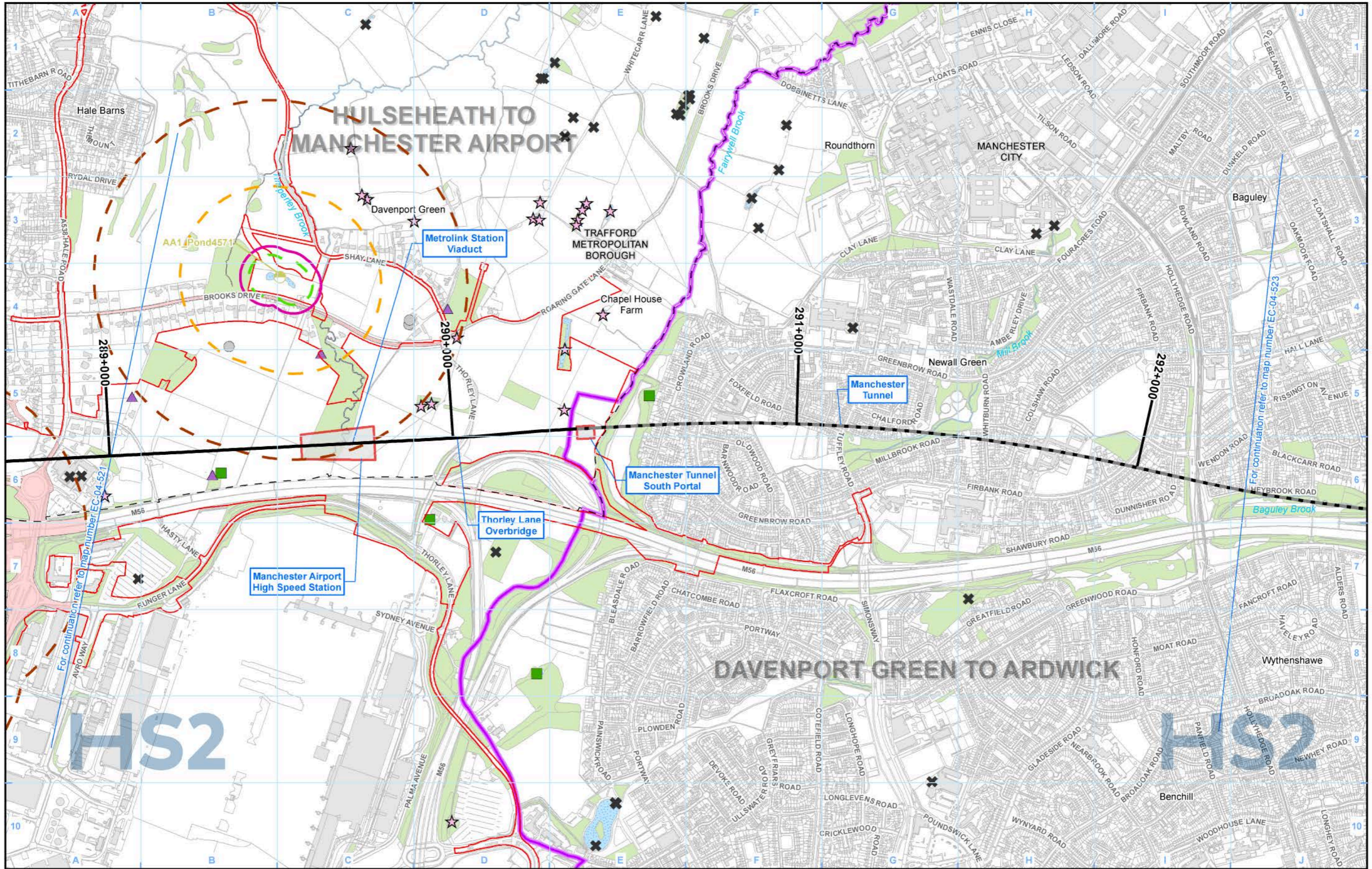
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Doc Number: 2PT27-MWJ-EV-MAP-M000-004651-P01

Date: 28/04/23

Scale at A3: 1:10,000

Metres



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary
- Watercourse
- Water body
- Woodland (not verified by survey)
- Area contains new survey data
- eDNA survey complete - GCN assumed absent
- GCN present (less than 6 visits) - small population (1 - 10 adults)
- Survey incomplete, no GCN found
- Scoped in - Habitat Suitability Index (HSI)/walkover only
- Scoped in - no access permission
- Scoped out - no survey required
- 50m radius from all water bodies where presence of GCN is confirmed
- 250m radius from all water bodies where presence of GCN is confirmed
- 500m radius from all water bodies where presence of GCN is confirmed
- Areas isolated by significant barriers to amphibian movement

Map Number: EC-04-522a

Map Name: Amphibians SES2 and AP2 ES

Community Area MA06: Hulseheath to Manchester Airport

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Doc Number: 2PT27-MWJ-EV-MAP-M000-000972-P01

Date: 28/04/23

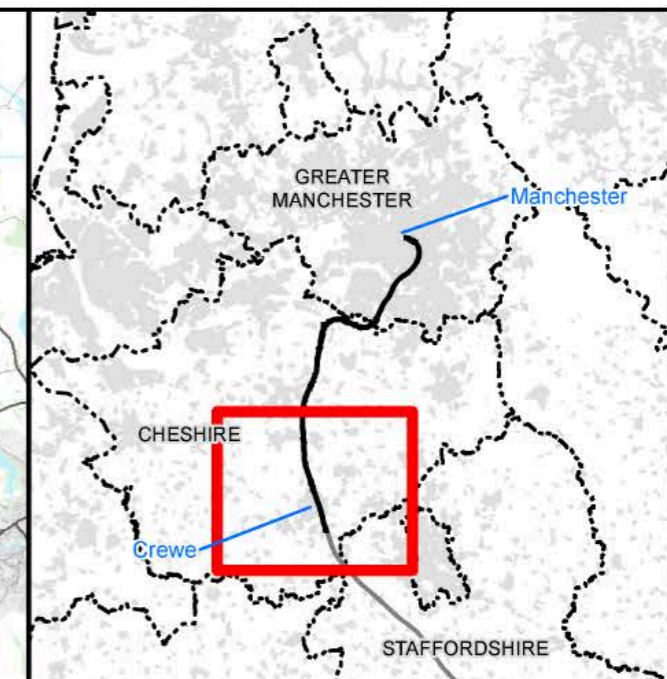
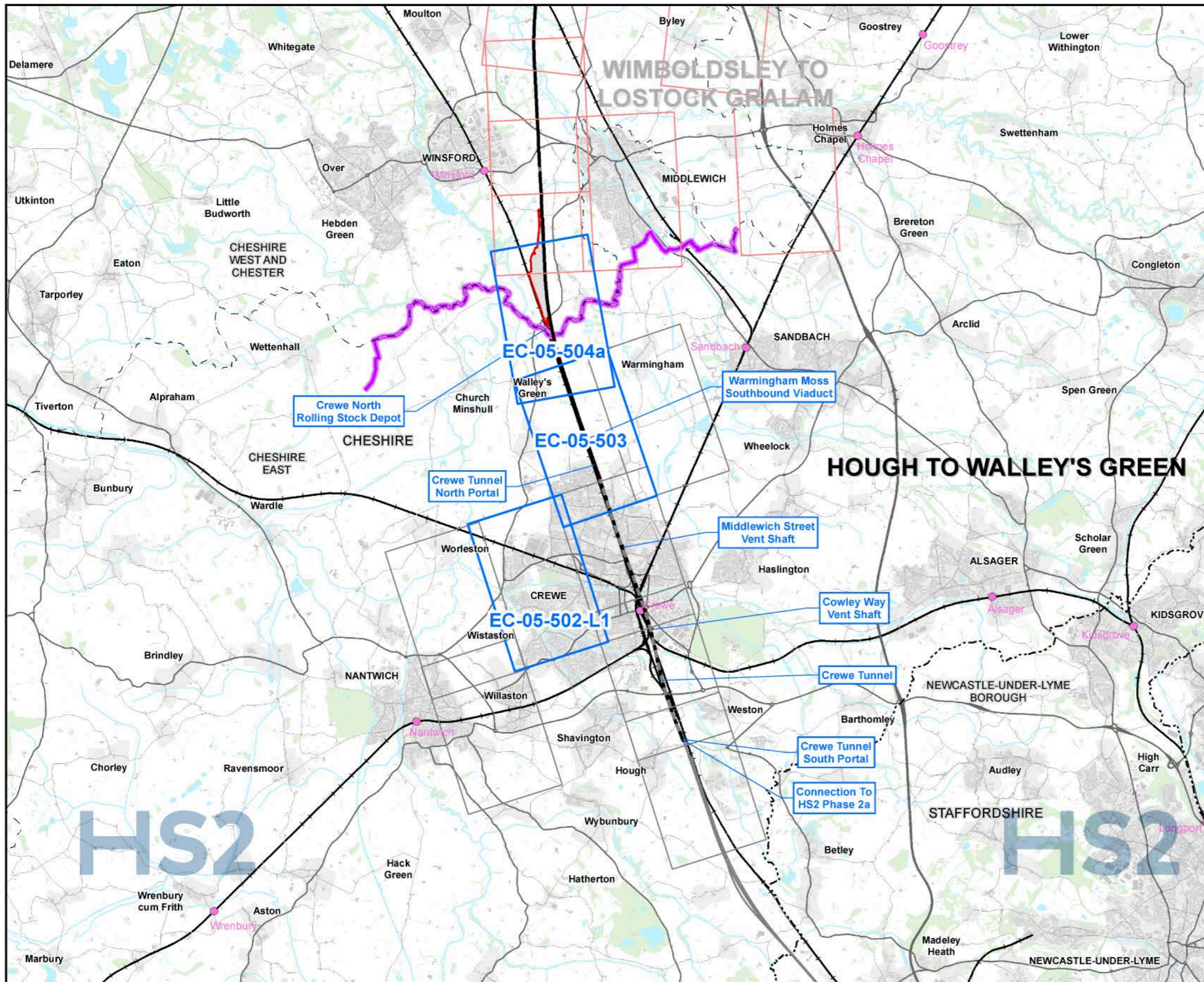
Note: GCN = Great Crested Newts

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High Speed Rail (Crewe – Manchester)

**Background information and data accompanying
Supplementary Environmental Statement 2 and
Additional Provision 2 Environmental Statement**

EC-05 – Bats - Roost



Map Series Information:

This map series shows results of field surveys conducted to investigate the potential for trees and buildings/structures to support roosting bats. The maps show location of roosts confirmed by field survey and features identified as having a high or moderate potential to support roosting bats.

Main Map Legend

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

Map Number	EC-05-INDEX-MA01
Map Name	Index Map of: Bat - Roosts SES2 and AP2 ES
	Community Area MA01: Hough to Walley's Green

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0 1,000 2,000 3,000 4,000 Metres

Doc Number: 2PT27-MWJ-EV-MAP-M000-001028-P01 Date: 23/03/23

For continuation refer to map number EC-05-502-L2

For continuation refer to map number EC-05-502



Legend		Confirmed bat roost - trees:		Confirmed bat roost - building:		Potential to support roosting bats - buildings:	
Route in tunnel	Watercourse	Hibernation roost	Hibernation roost	High	Moderate	High	Moderate
Route on surface	Water body	Maternity roost	Maternity roost	Other roost	Multiple roost types	High	Moderate
Depot, station, headhouse or portal building	Woodland (verified by survey)	Other roost	Multiple roost types	Multiple roost types	Multiple roost types	High	Moderate
Land potentially required during construction	Area contains new survey data						
Community area boundary							
County boundary							
District/Borough boundary							

Map Number	EC-05-502-L1
Map Name	Bat - Roosts SES2 and AP2 ES
	Community Area MA01: Hough to Walley's Green

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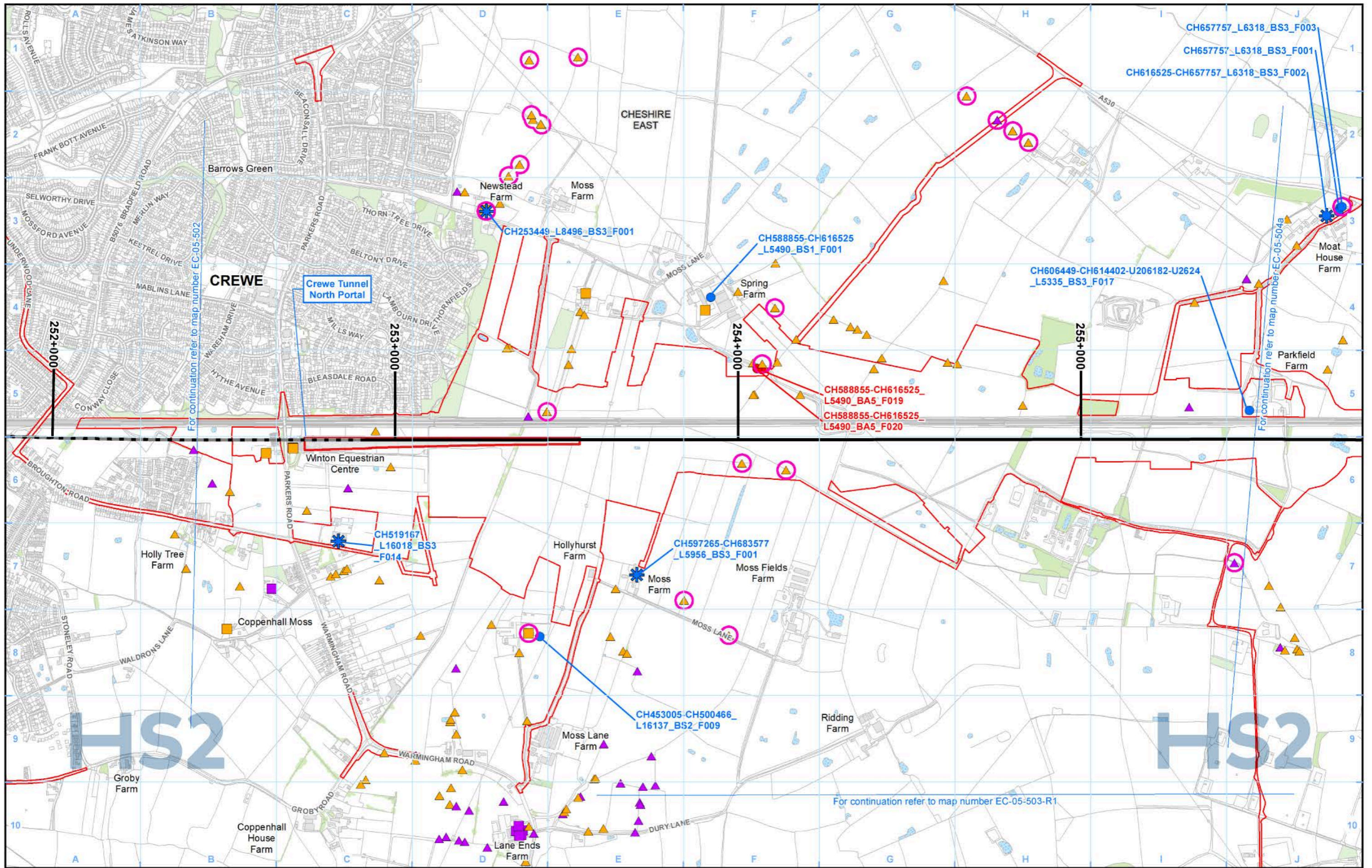
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Doc Number: 2PT27-MWJ-EV-MAP-M000-003657-P01

Date: 31/03/23



Legend

Confirmed bat roost - trees:	Confirmed bat roost - building:	Potential to support roosting bats - buildings:
Hibernation roost	Hibernation roost	High
Maternity roost	Maternity roost	Moderate
Other roost	Other roost	Potential to support roosting bats - trees:
Multiple roost types	Multiple roost types	High
		Moderate

Map Number	EC-05-503
Map Name	Bat - Roosts SES2 and AP2 ES
	Community Area MA01: Hough to Walley's Green

HS2

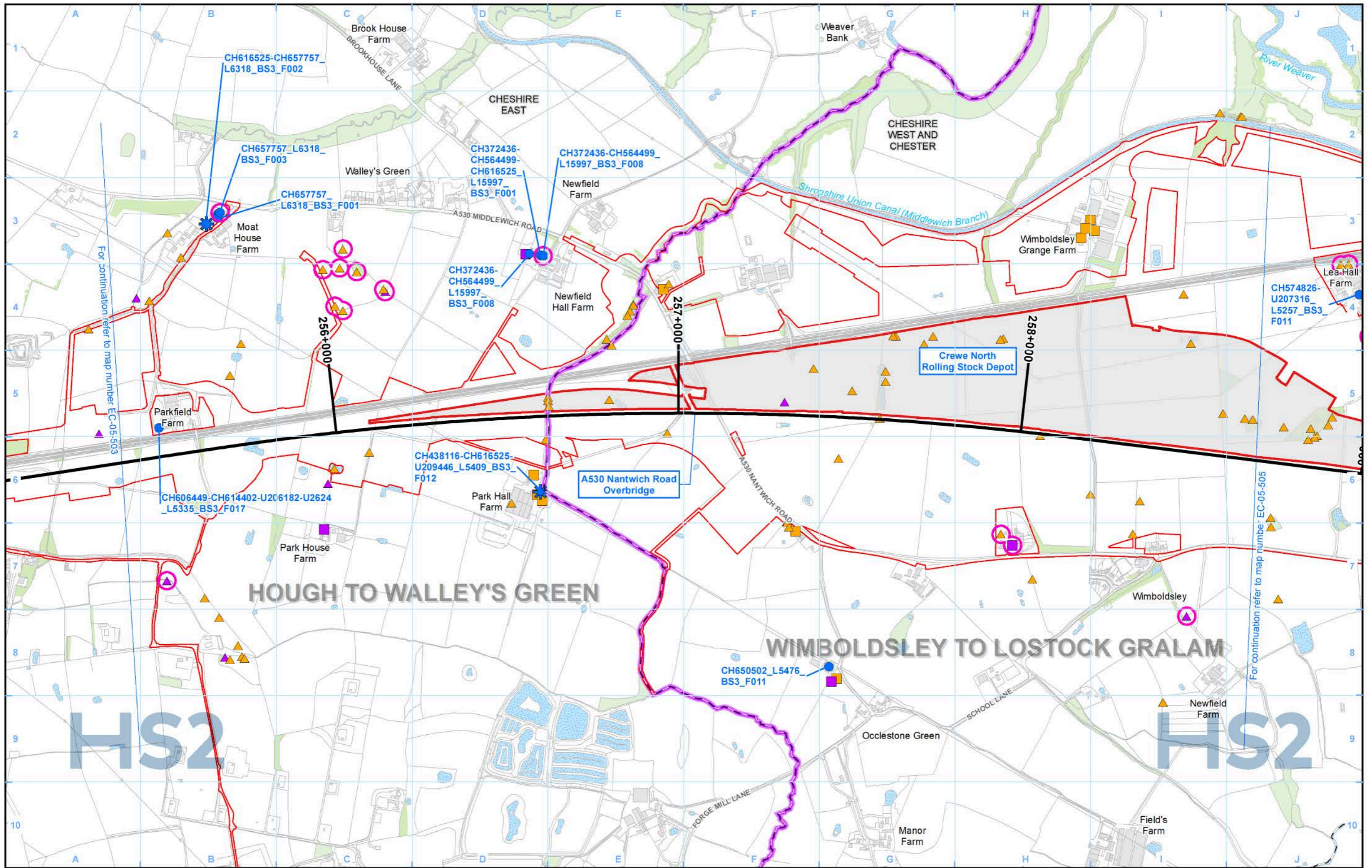
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Doc Number: 2PT27-MWJ-EV-MAP-M000-000995-P01

Date: 31/03/23



Legend

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Map Number	EC-05-504a
Map Name	Bat - Roosts SES2 and AP2 ES
Community Area MA01: Hough to Walley's Green	

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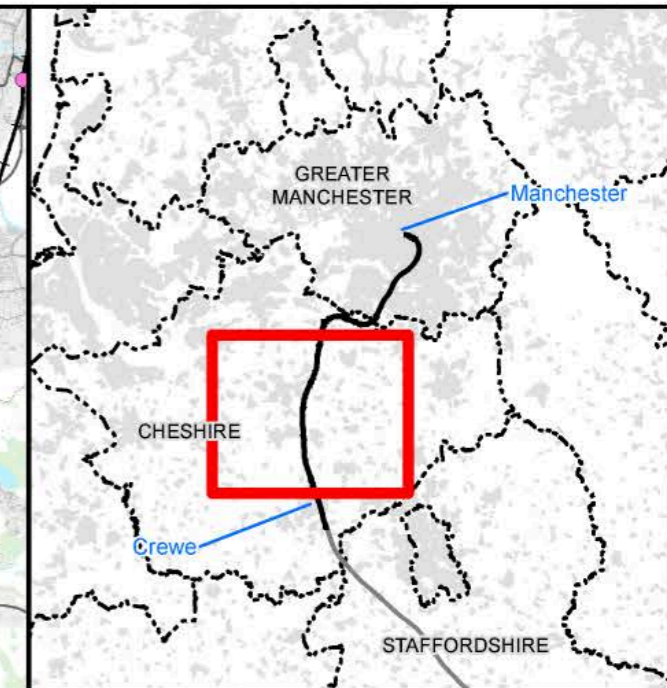
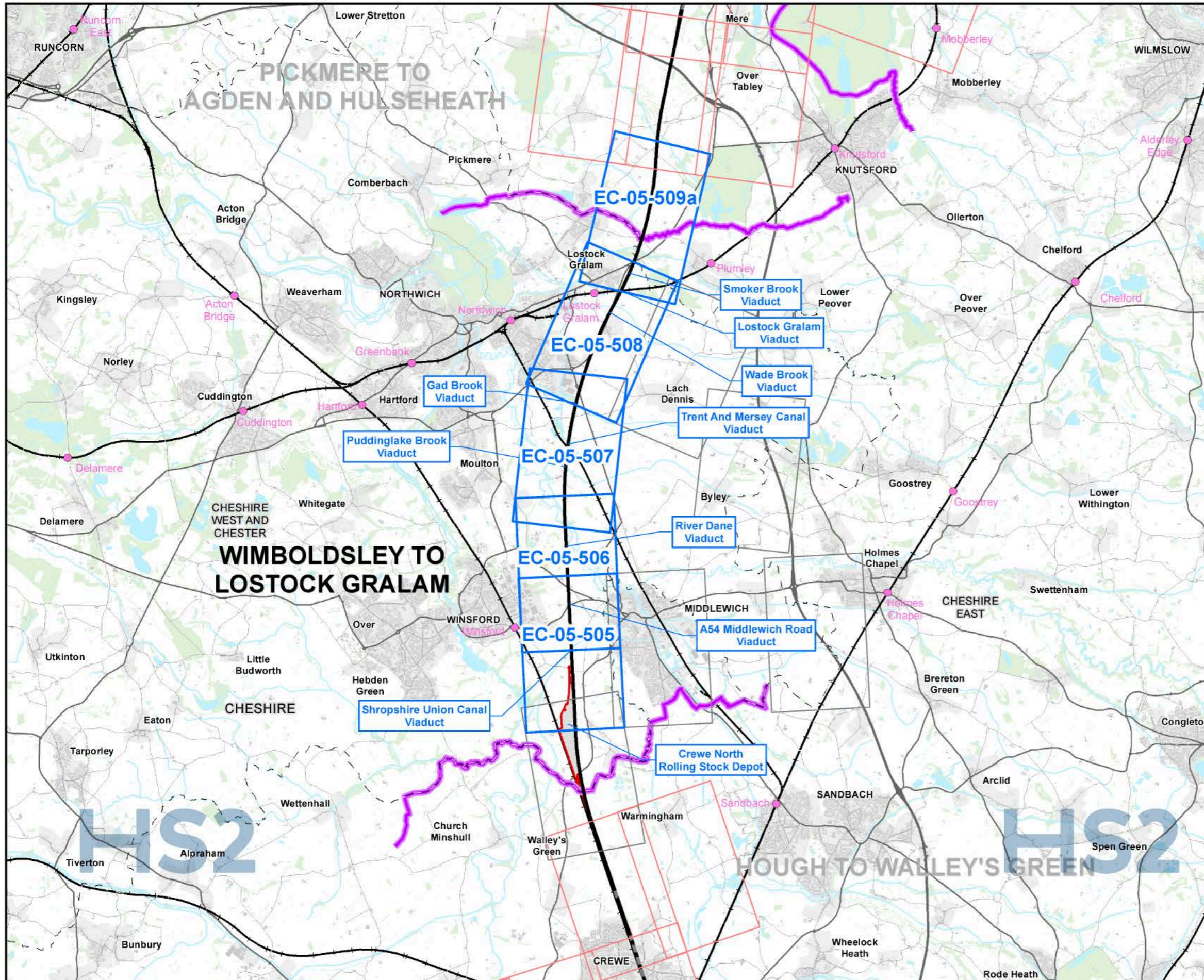
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Doc Number: 2PT27-MWJ-EV-MAP-M000-000996-P01

Date: 31/03/23

Scale at A3: 1:10,000

Metres



Map Series Information:

This map series shows results of field surveys conducted to investigate the potential for trees and buildings/structures to support roosting bats. The maps show location of roosts confirmed by field survey and features identified as having a high or moderate potential to support roosting bats.

Main Map Legend

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

Map Number	EC-05-INDEX-MA02
Map Name	Index Map of: Bat - Roosts SES2 and AP2 ES
	Community Area MA02: Wimboldsley to Lostock Gralam

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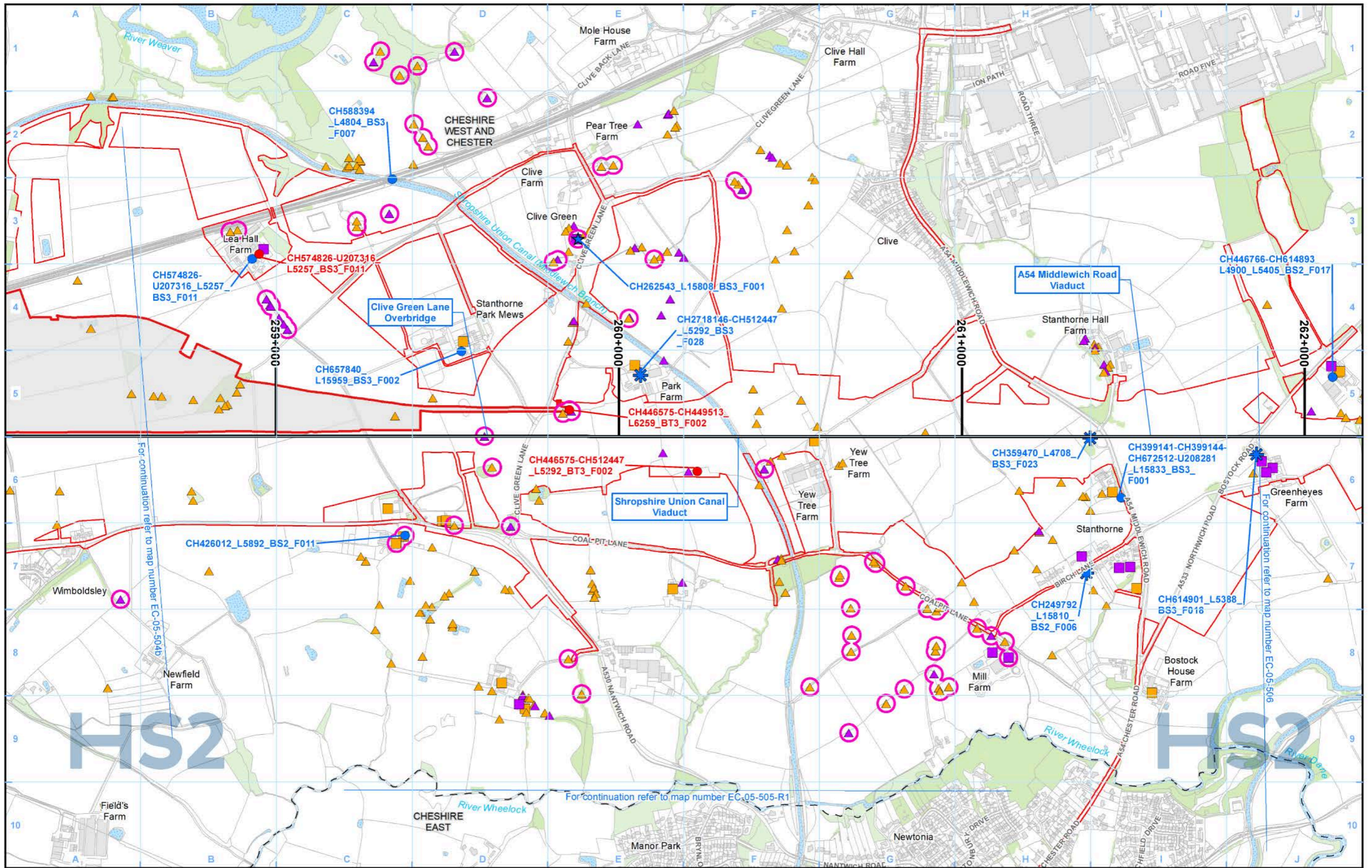
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001029-P01 Date: 23/03/23



Legend

Map Number	EC-05-505
Map Name	Bat - Roosts SES2 and AP2 ES
Community Area MA02: Wimboldsley to Lostock Gralam	

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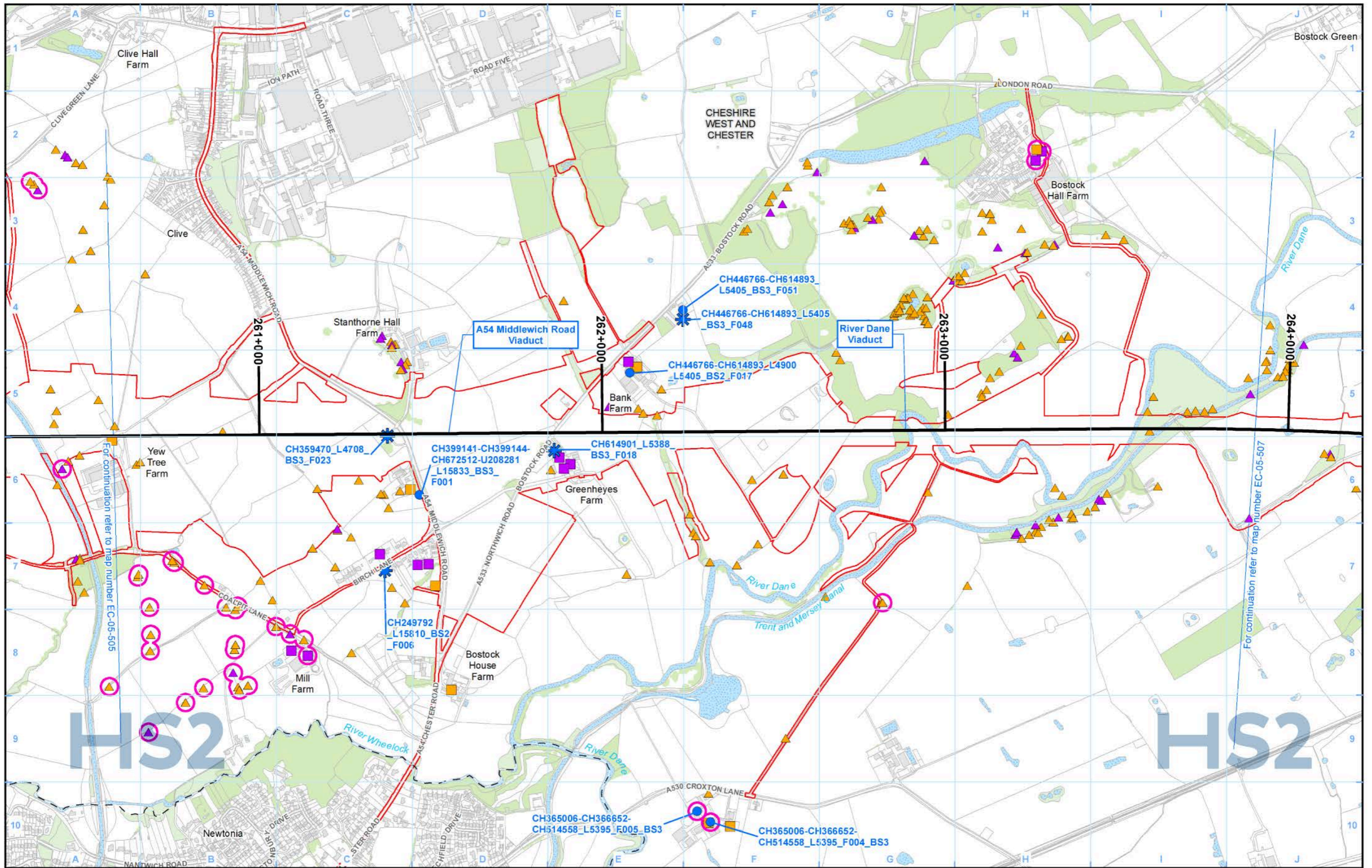
Date: 31/03/23

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Scale at A3: 1:10,000

Metres



Legend

Map Number	EC-05-506
Map Name	Bat - Roosts SES2 and AP2 ES
	Community Area MA02: Wimboldsley to Lostock Gralam

HS2

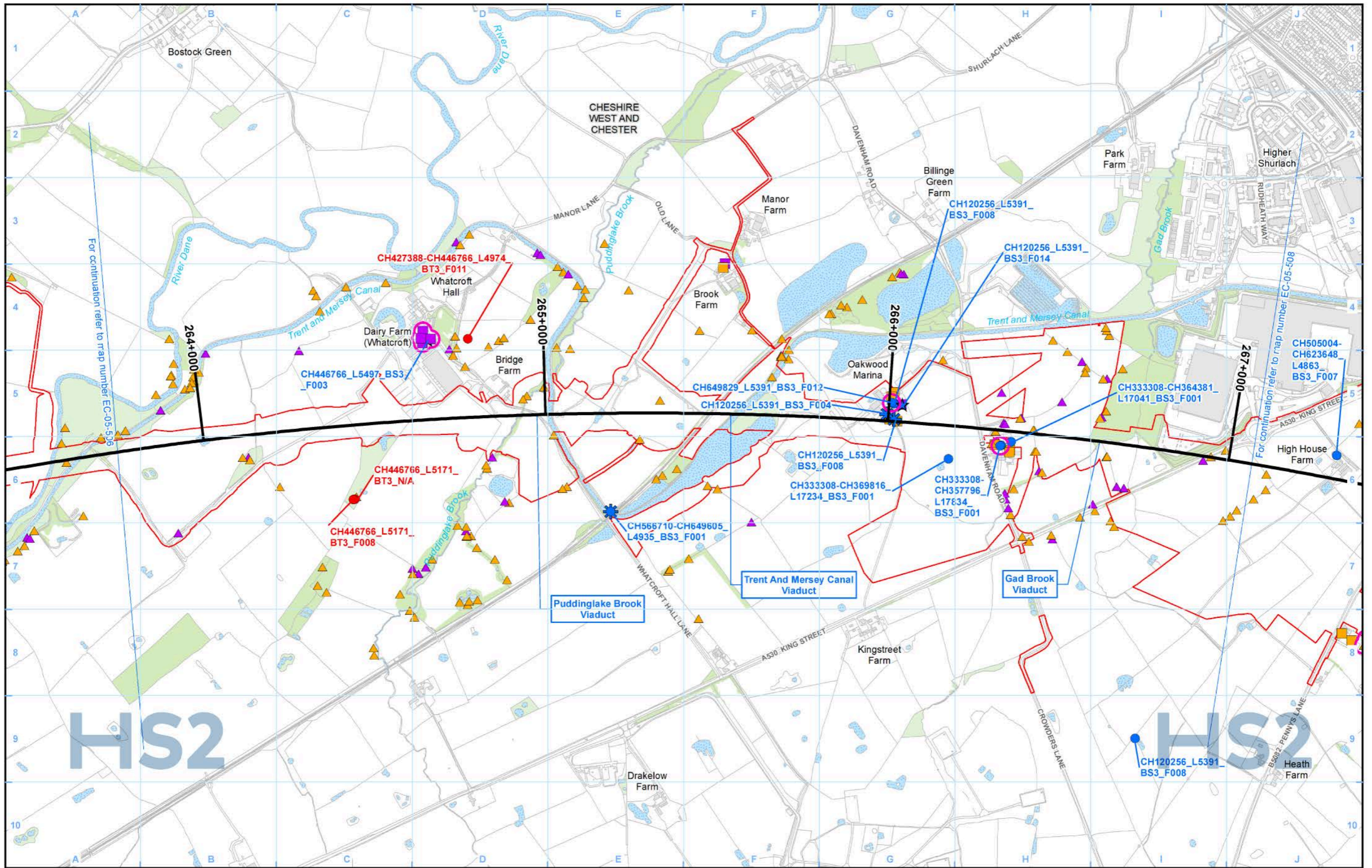
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Doc Number: 2PT27-MWJ-EV-MAP-M000-000999-P01

Date: 31/03/23



Legend

Confirmed bat roost - trees:	Confirmed bat roost - building:	Potential to support roosting bats - buildings:
Hibernation roost	Hibernation roost	High
Maternity roost	Maternity roost	Moderate
Other roost	Other roost	Potential to support roosting bats - trees:
Multiple roost types	Multiple roost types	High
		Moderate

Map Number	EC-05-507
Map Name	Bat - Roosts SES2 and AP2 ES
Community Area MA02: Wimboldsley to Lostock Gralam	

HS2

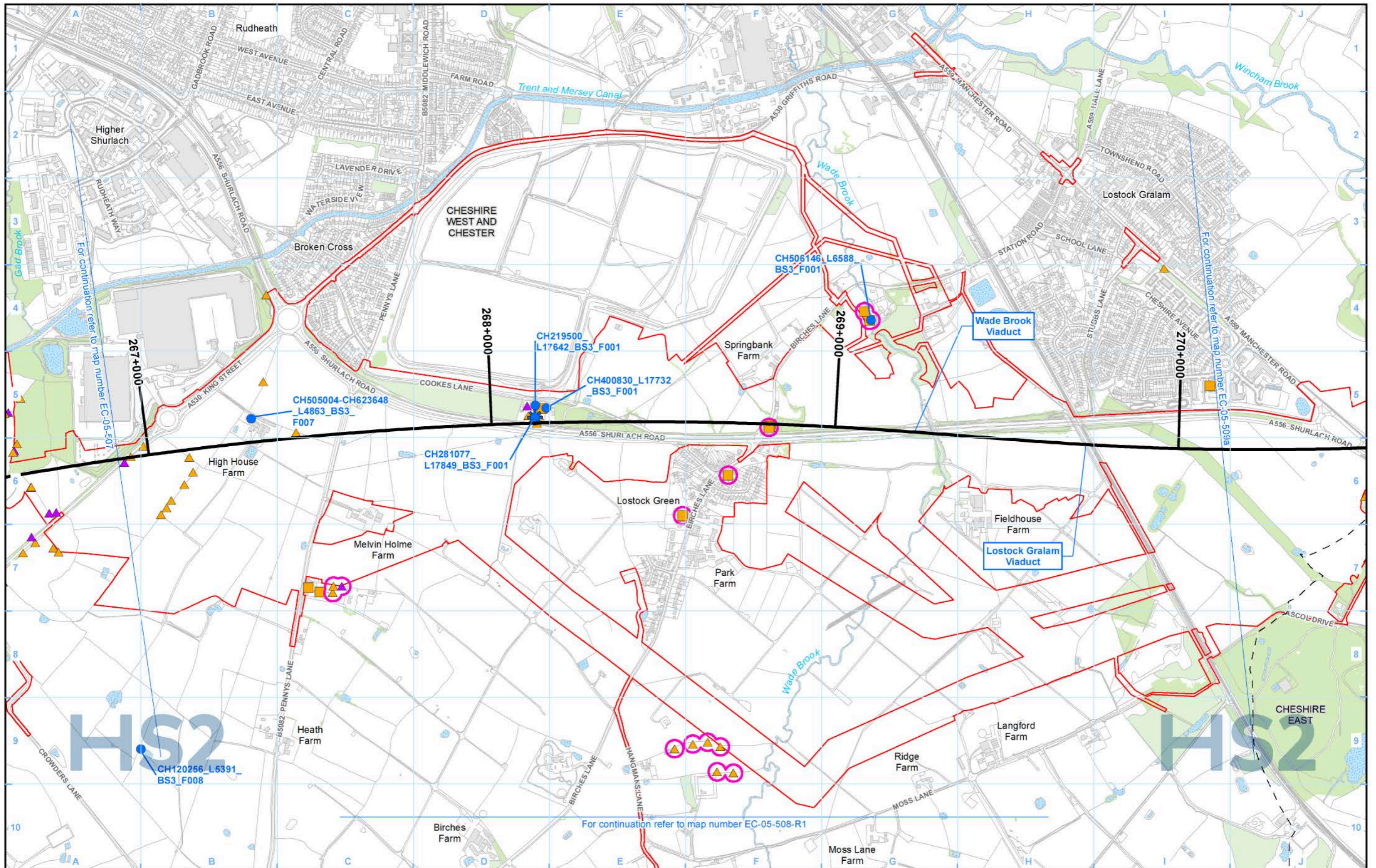
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001000-P01

Scale at A3: 1:10,000

Date: 31/03/23



Legend

<ul style="list-style-type: none"> — 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 	<ul style="list-style-type: none"> — Watercourse ▭ Water body ▭ Woodland (verified by survey) ▭ Area contains new survey data 	<p>Confirmed bat roost - trees:</p> <ul style="list-style-type: none"> ◆ Hibernation roost ★ Maternity roost ● Other roost ✳ Multiple roost types 	<p>Confirmed bat roost - building:</p> <ul style="list-style-type: none"> ◆ Hibernation roost ★ Maternity roost ● Other roost ✳ Multiple roost types 	<p>Potential to support roosting bats - buildings:</p> <ul style="list-style-type: none"> ▭ High ▭ Moderate <p>Potential to support roosting bats - trees:</p> <ul style="list-style-type: none"> ▭ High ▭ Moderate
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Map Number: EC-05-508

Map Name: **Bat - Roosts
SES2 and AP2 ES**

Community Area MA02:
Wimboldsley to Lostock Gralam

HS2

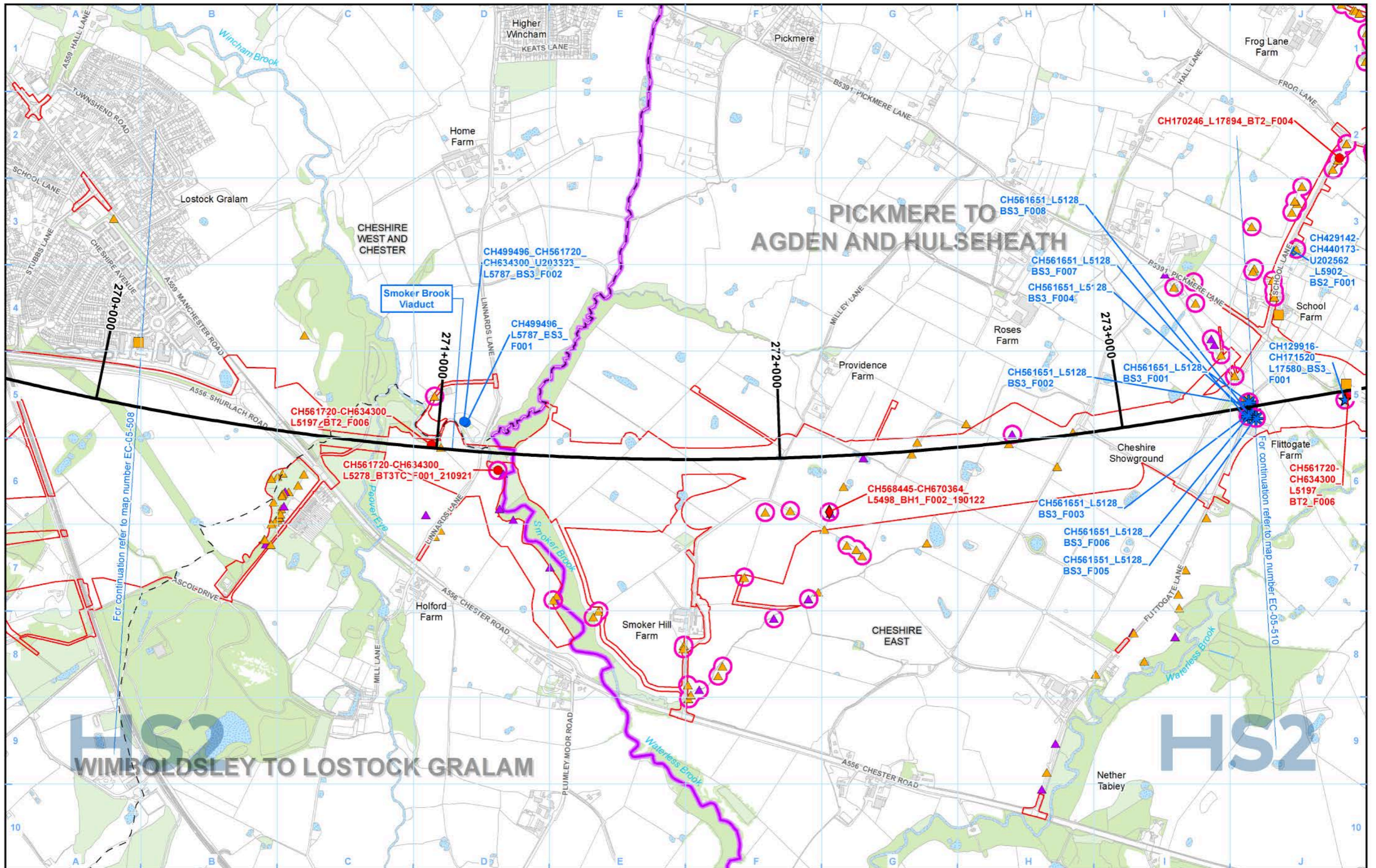
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001001-P01

Scale at A3: 1:10,000

Date: 31/03/23



Legend

Confirmed bat roost - trees:	Confirmed bat roost - building:	Potential to support roosting bats - buildings:
Hibernation roost	Hibernation roost	High
Maternity roost	Maternity roost	Moderate
Other roost	Other roost	Potential to support roosting bats - trees:
Multiple roost types	Multiple roost types	High
		Moderate

Map Number	EC-05-509a
Map Name	Bat - Roosts SES2 and AP2 ES
	Community Area MA02: Wimboldsley to Lostock Gralam

HS2

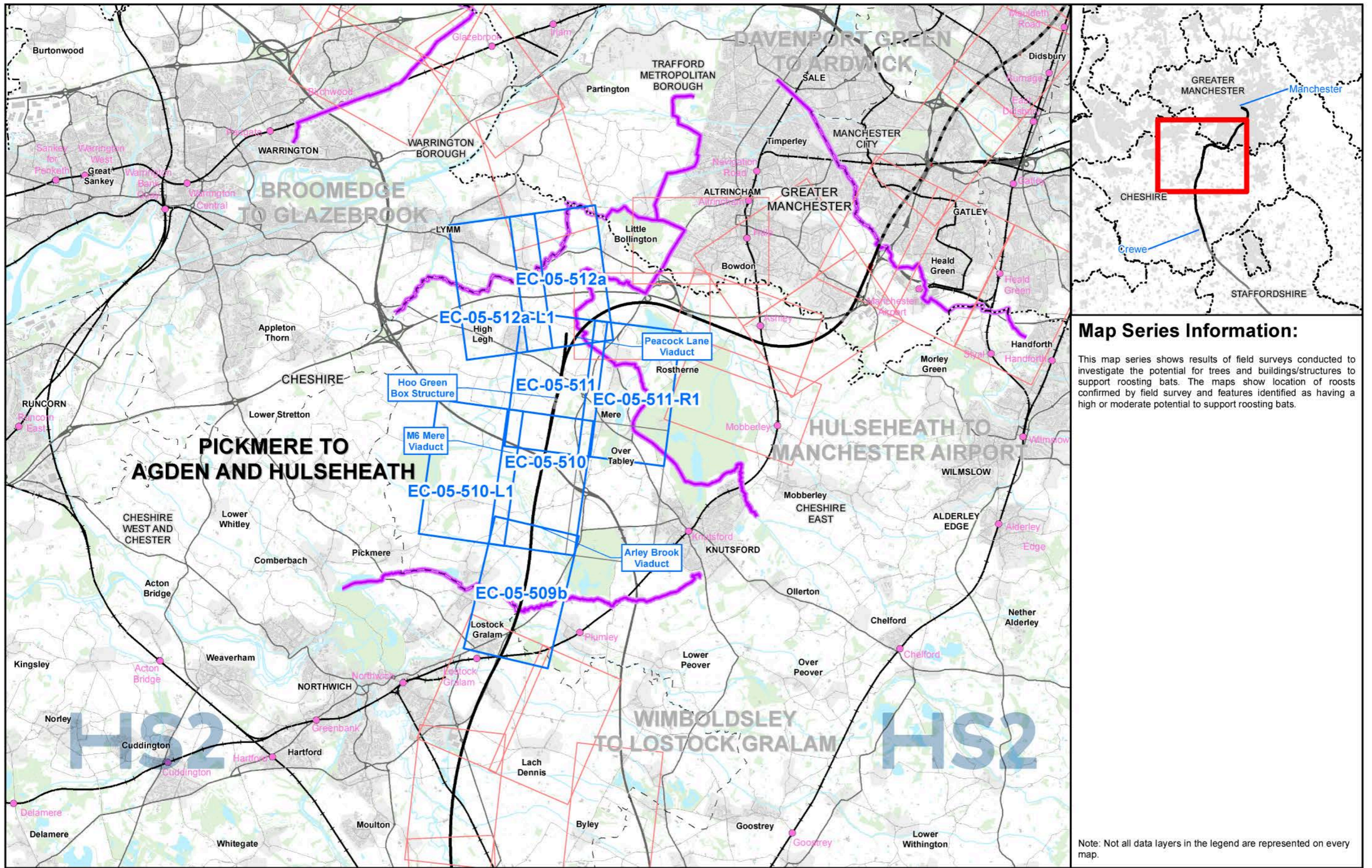
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001002-P01

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Date: 31/03/23



Map Series Information:

This map series shows results of field surveys conducted to investigate the potential for trees and buildings/structures to support roosting bats. The maps show location of roosts confirmed by field survey and features identified as having a high or moderate potential to support roosting bats.

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

Main Map Legend

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

Map Number: EC-05-INDEX-MA03

Map Name: Index Map of:
Bat - Roosts
SES2 and AP2 ES

Community Area MA03:
Pickmere to Agden and Hulseheath

HS2

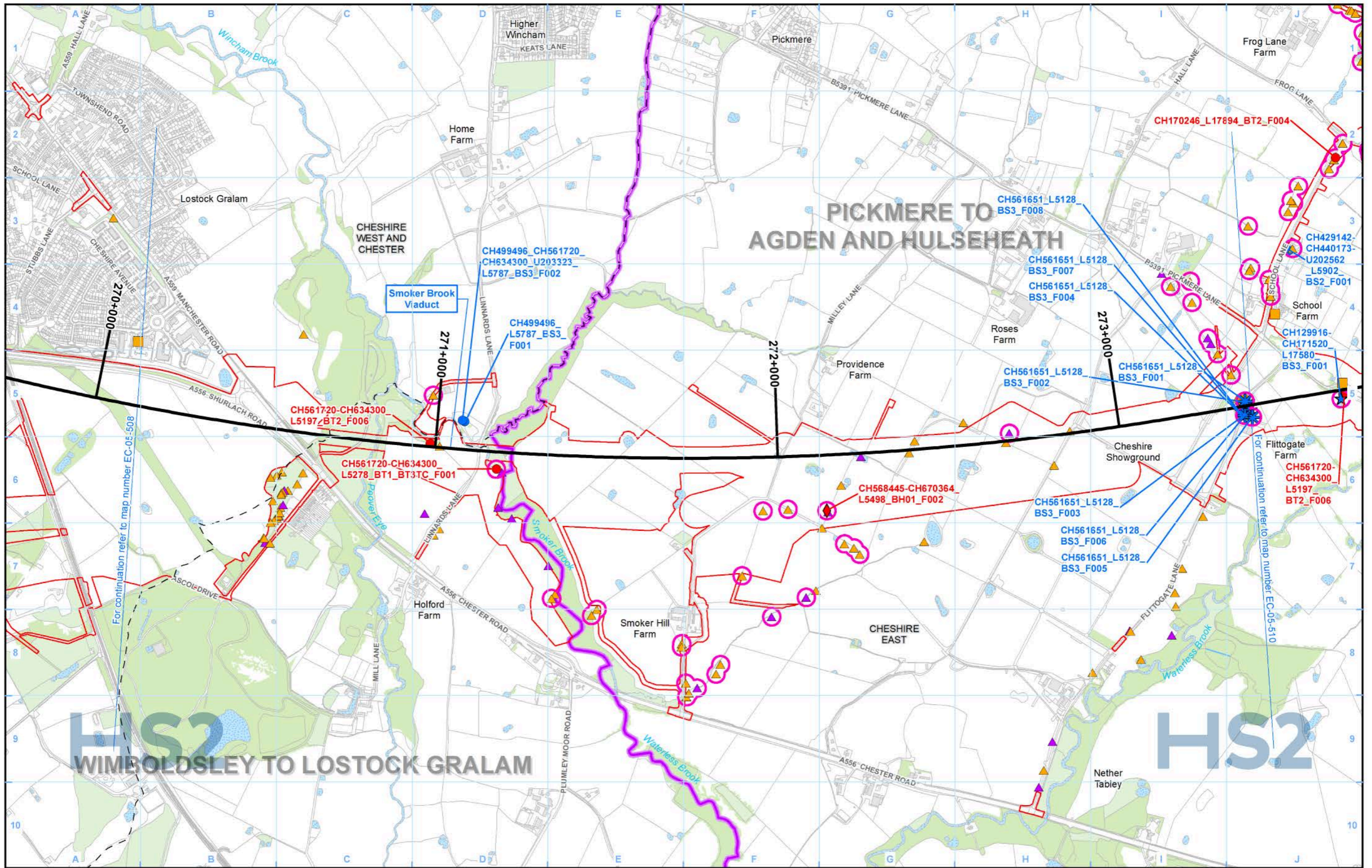
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0 1,000 2,000 3,000 4,000 Metres

Doc Number: 2PT27-MWJ-EV-MAP-M000-001030-P01 Date: 23/03/23



Legend

Map Number	EC-05-509b
Map Name	Bat - Roosts SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

HS2

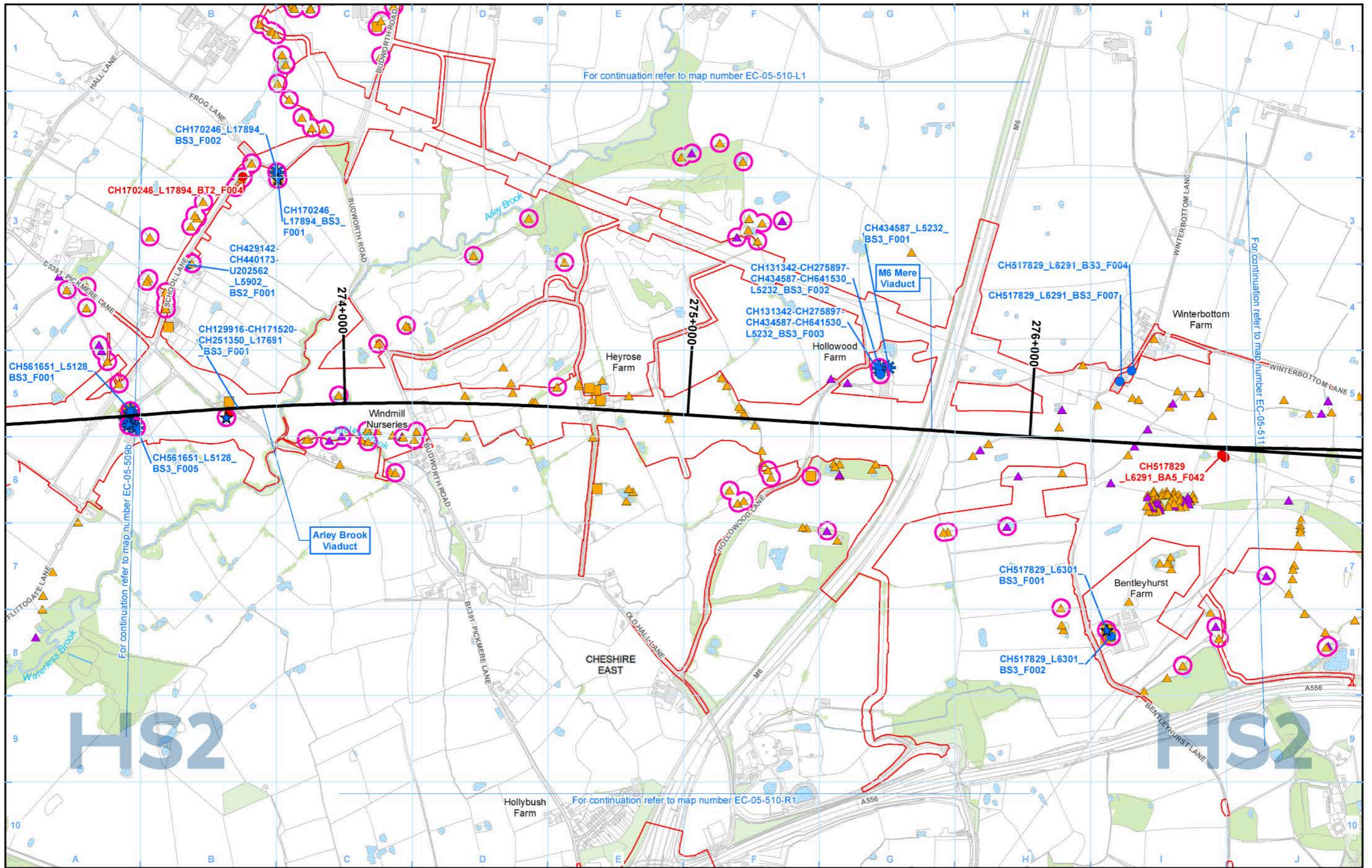
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Date: 31/03/23

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For continuation refer to map number EC-05-510-L1

For continuation refer to map number EC-05-511

For continuation refer to map number EC-05-510-R1

Legend

Route in tunnel	Watercourse
Route on surface	Water body
Depot, station, headhouse or portal building	Woodland (verified by survey)
Land potentially required during construction	Area contains new survey data
Community area boundary	
County boundary	
District/Borough boundary	

Confirmed bat roost - trees:	Confirmed bat roost - building:	Potential to support roosting bats - buildings:
Hibernation roost	Hibernation roost	High
Maternity roost	Maternity roost	Moderate
Other roost	Other roost	Potential to support roosting bats - trees:
Multiple roost types	Multiple roost types	High
		Moderate

Map Number	EC-05-510
Map Name	Bat - Roosts SES2 and AP2 ES
	Community Area MA03: Pickmere to Agden and Hulseheath

HS2

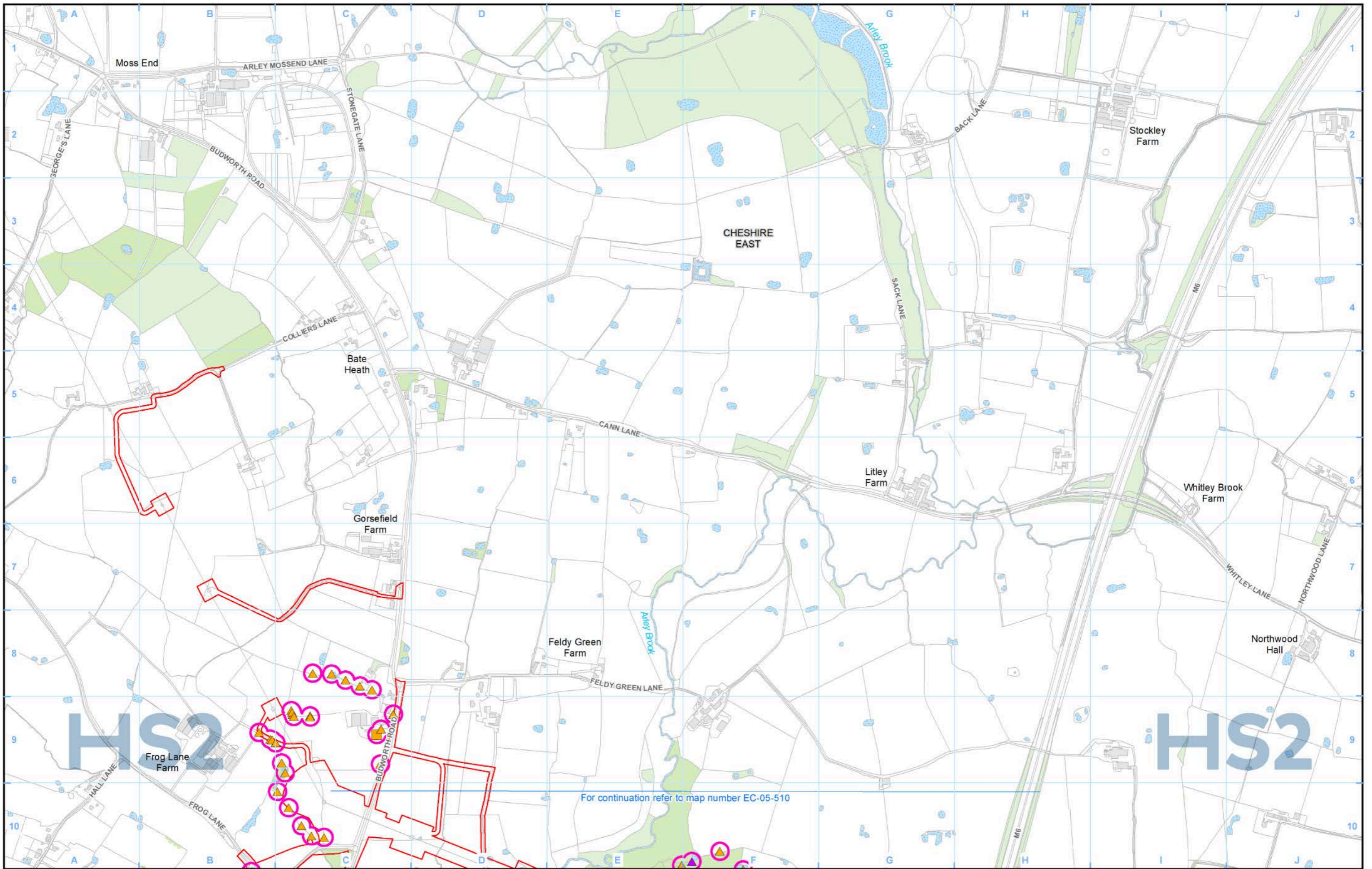
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Scale at A3: 1:10,000

Date: 31/03/23



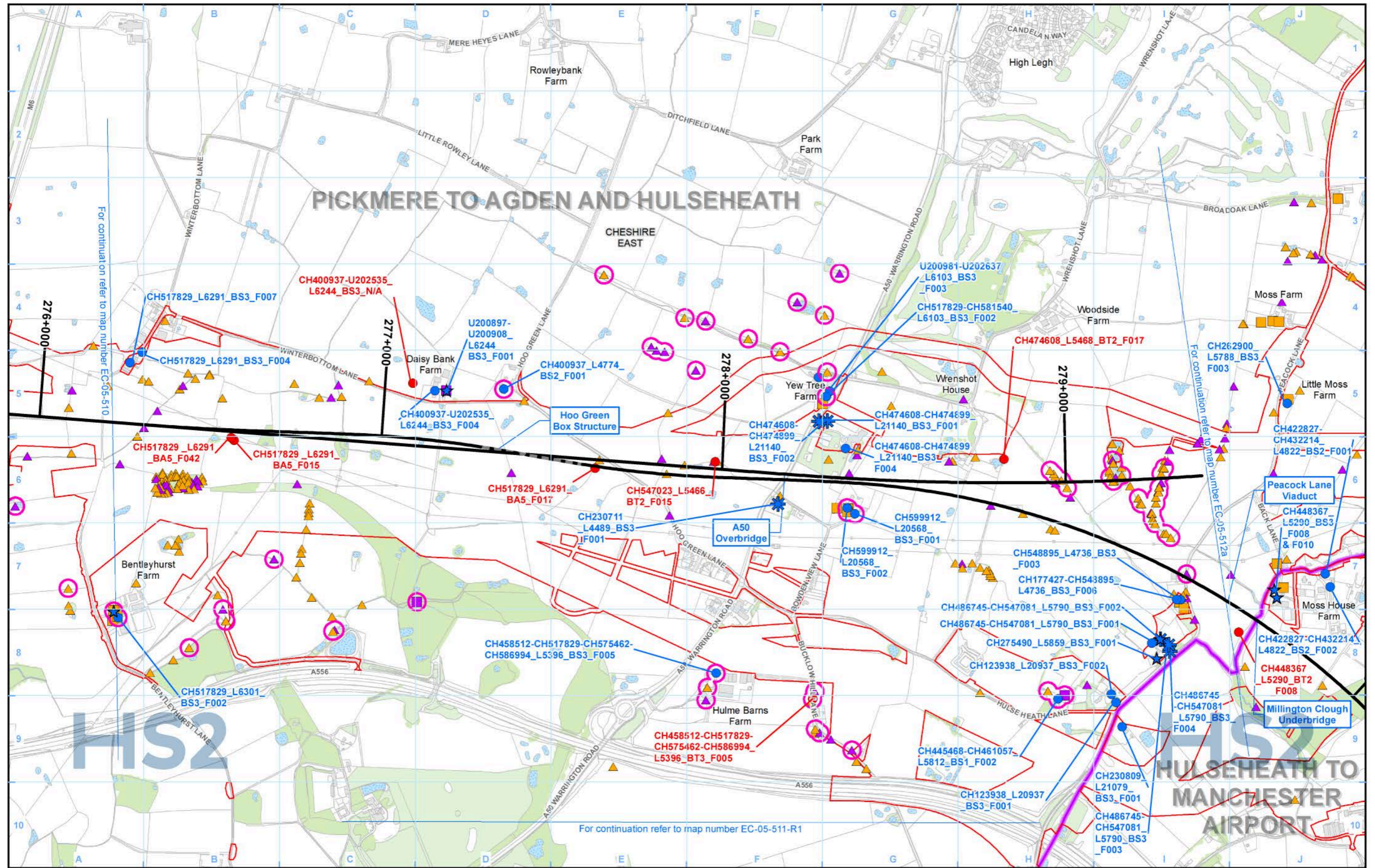
For continuation refer to map number EC-05-510

Legend

- | | | | | |
|--|---|--|---|---|
| <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> Watercourse Water body Woodland (verified by survey) Area contains new survey data | <p>Confirmed bat roost - trees:</p> <ul style="list-style-type: none"> Hibernation roost Maternity roost Other roost Multiple roost types | <p>Confirmed bat roost - building:</p> <ul style="list-style-type: none"> Hibernation roost Maternity roost Other roost Multiple roost types | <p>Potential to support roosting bats - buildings:</p> <ul style="list-style-type: none"> High Moderate <p>Potential to support roosting bats - trees:</p> <ul style="list-style-type: none"> High Moderate |
|--|---|--|---|---|

Map Number	EC-05-510-L1
Map Name	Bat - Roosts SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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	<p>Scale at A3: 1:10,000</p> <p>Metres</p> <p>Date: 31/03/23</p>	



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary
- Watercourse
- Water body
- Woodland (verified by survey)
- Area contains new survey data

Confirmed bat roost - trees:

- Hibernation roost
- Maternity roost
- Other roost
- Multiple roost types

Confirmed bat roost - building:

- Hibernation roost
- Maternity roost
- Other roost
- Multiple roost types

Potential to support roosting bats - buildings:

- High
- Moderate

Potential to support roosting bats - trees:

- High
- Moderate

Map Number: EC-05-511

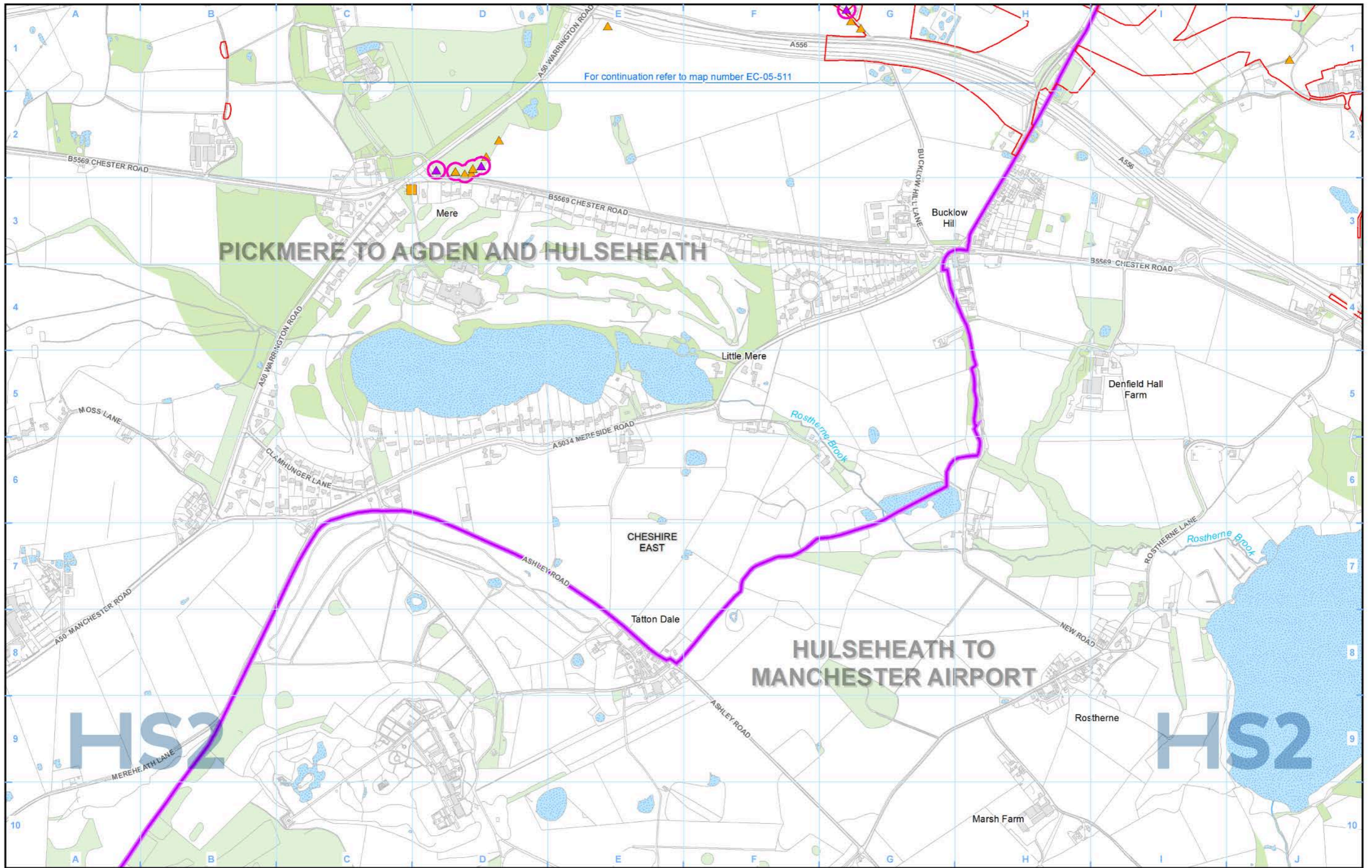
Map Name: Bat - Roosts SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

HIS2

Scale at A3: 1:10,000

Doc Number: 2PT27-MWJ-EV-MAP-M000-001005-P01 Date: 31/03/23



Legend

	Route in tunnel		Watercourse
	Route on surface		Water body
	Depot, station, headhouse or portal building		Woodland (verified by survey)
	Land potentially required during construction		Area contains new survey data
	Community area boundary		
	County boundary		
	District/Borough boundary		

Confirmed bat roost - trees:	Confirmed bat roost - building:	Potential to support roosting bats - buildings:
Hibernation roost	Hibernation roost	High
Maternity roost	Maternity roost	Moderate
Other roost	Other roost	Potential to support roosting bats - trees:
Multiple roost types	Multiple roost types	High
		Moderate

Map Number	EC-05-511-R1
Map Name	Bat - Roosts SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

HS2

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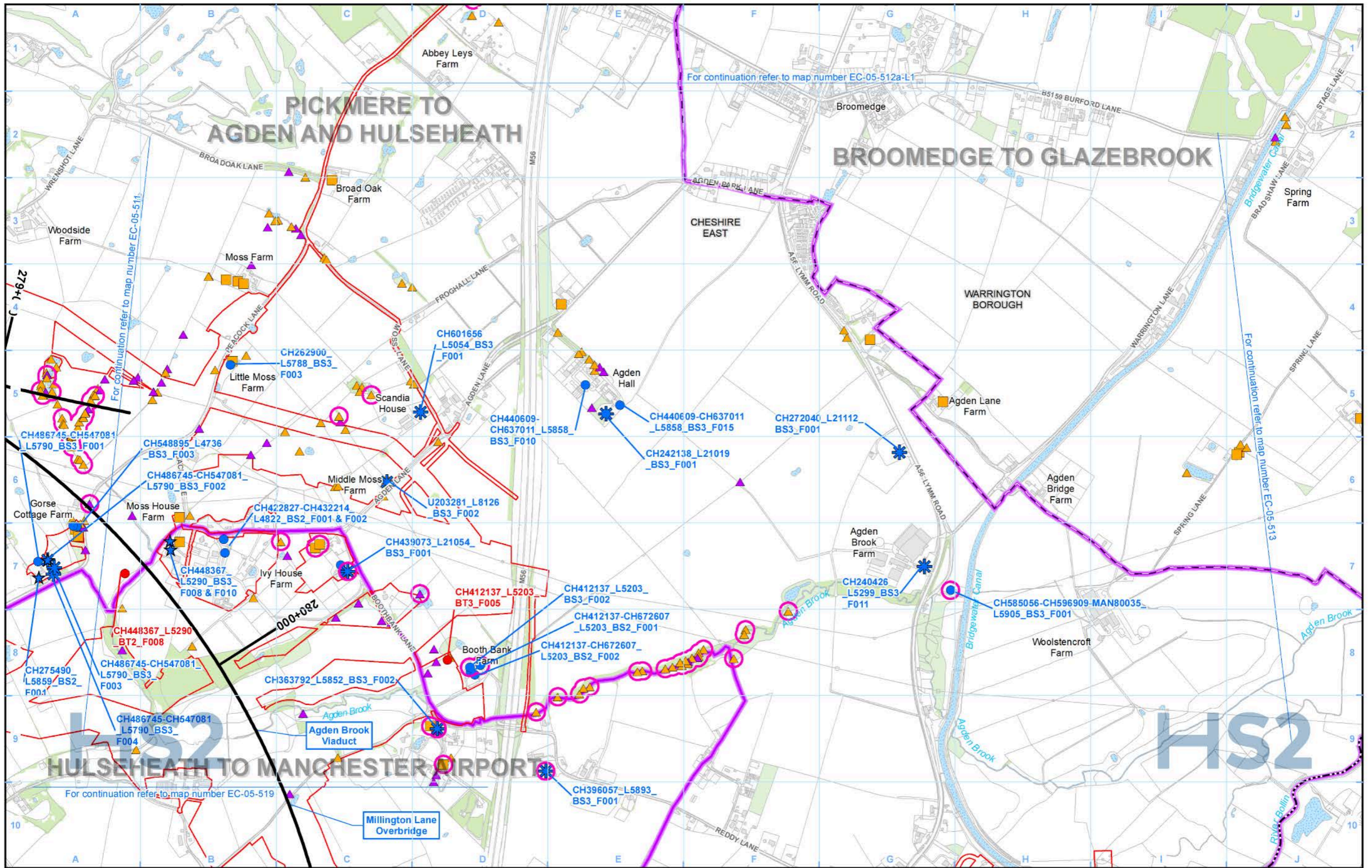
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Doc Number: 2PT27-MWJ-EV-MAP-M000-003662-P01

Date: 31/03/23

Scale at A3: 1:10,000

Metres



Legend

<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Watercourse Water body Woodland (verified by survey) Area contains new survey data 	<p>Confirmed bat roost - trees:</p> <ul style="list-style-type: none"> Hibernation roost Maternity roost Other roost Multiple roost types 	<p>Confirmed bat roost - building:</p> <ul style="list-style-type: none"> Hibernation roost Maternity roost Other roost Multiple roost types 	<p>Potential to support roosting bats - buildings:</p> <ul style="list-style-type: none"> High Moderate <p>Potential to support roosting bats - trees:</p> <ul style="list-style-type: none"> High Moderate
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Map Number: EC-05-512a

Map Name: Bat - Roosts SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

HS2

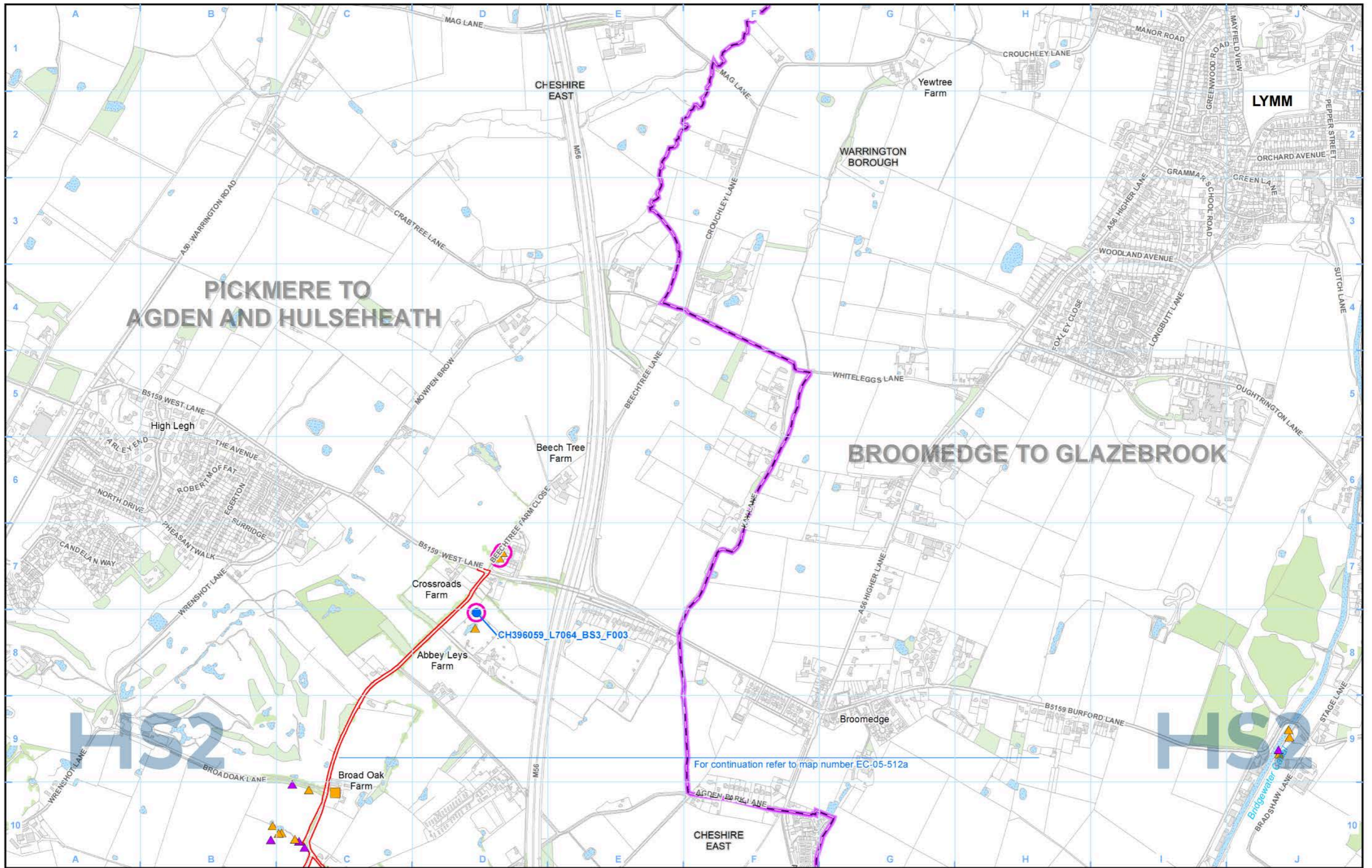
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Date: 31/03/23



PICKMERE TO AGDEN AND HULSEHEATH

BROOMEDGE TO GLAZEBROOK

Legend

Map Number	EC-05-512a-L1
Map Name	Bat - Roosts SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

HS2

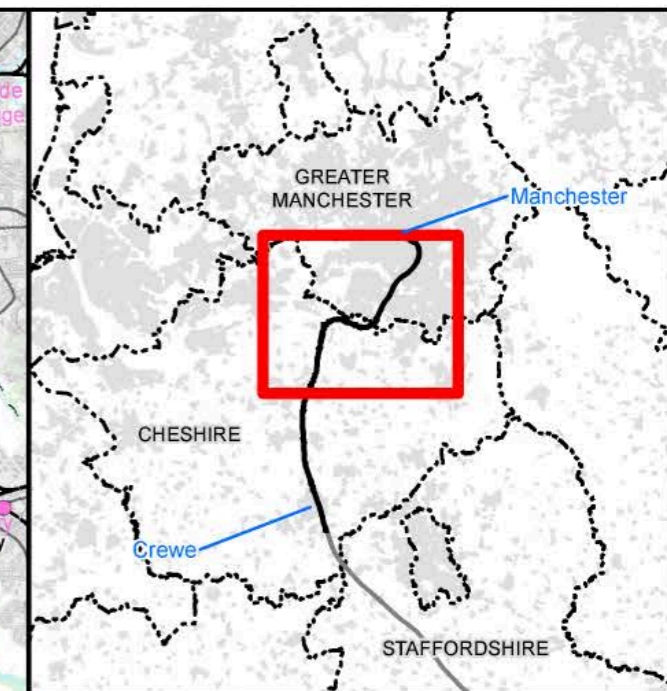
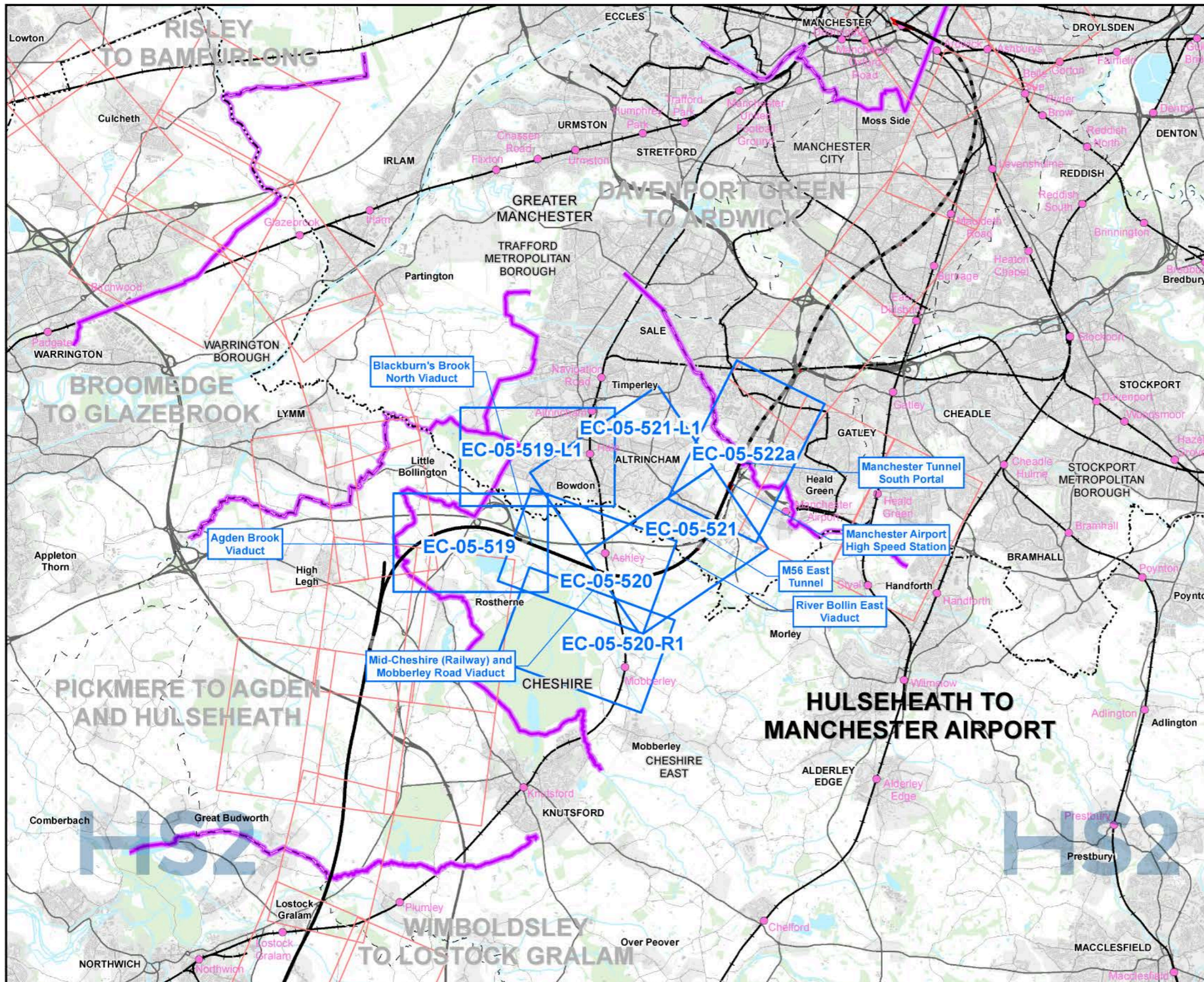
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Doc Number: 2PT27-MWJ-EV-MAP-M000-003615-P01

Date: 31/03/23



Map Series Information:

This map series shows results of field surveys conducted to investigate the potential for trees and buildings/structures to support roosting bats. The maps show location of roosts confirmed by field survey and features identified as having a high or moderate potential to support roosting bats.

Main Map Legend

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

Map Number	EC-05-INDEX-MA06
Map Name	Index Map of: Bat - Roosts SES2 and AP2 ES
Community Area MA06: Hulseheath to Manchester Airport	

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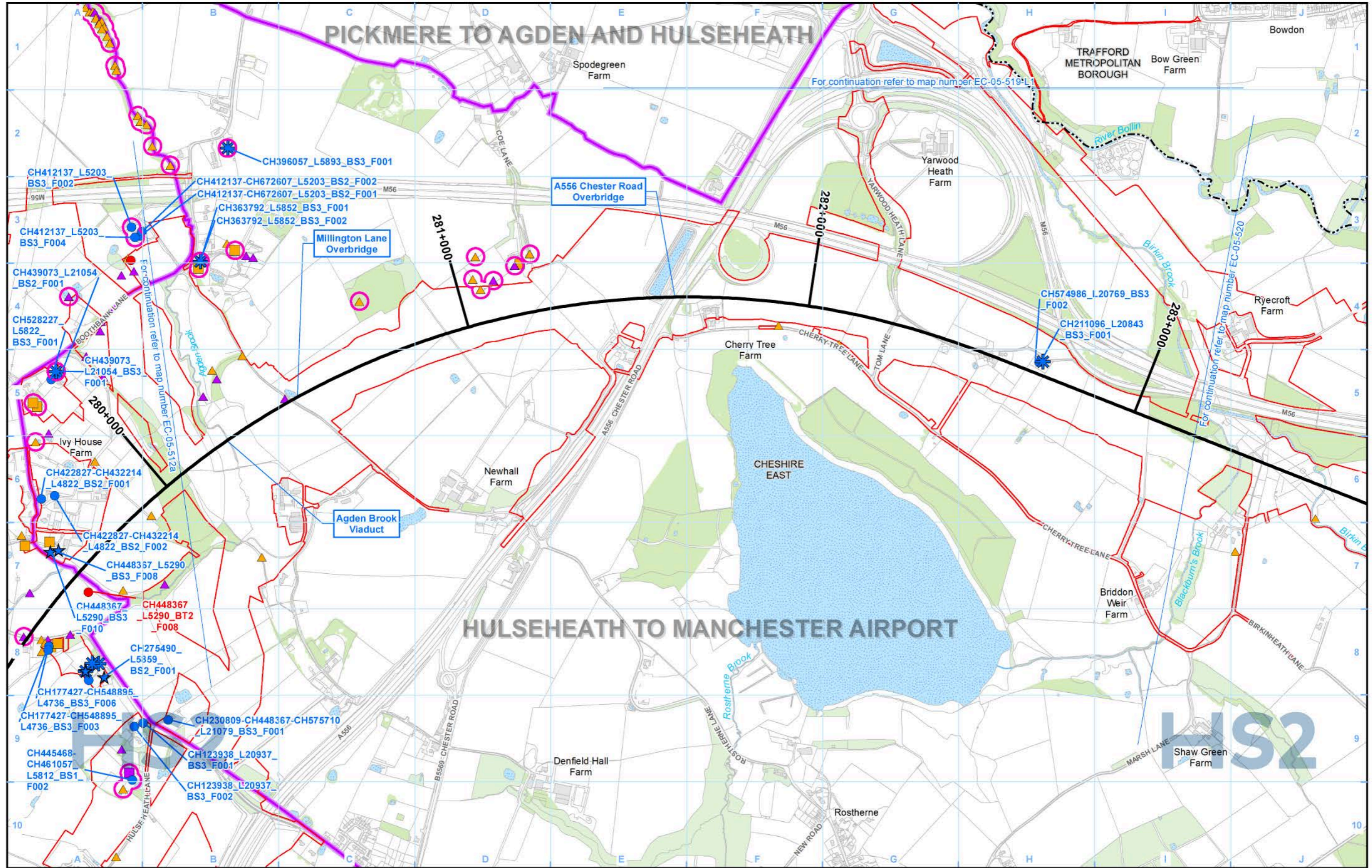
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0 1,000 2,000 3,000 4,000 Metres

Doc Number: 2PT27-MWJ-EV-MAP-M000-001033-P01 Date: 23/03/23



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary
- Watercourse
- Water body
- Woodland (verified by survey)
- Area contains new survey data

Confirmed bat roost - trees:

- Hibernation roost
- Maternity roost
- Other roost
- Multiple roost types

Confirmed bat roost - building:

- Hibernation roost
- Maternity roost
- Other roost
- Multiple roost types

Potential to support roosting bats - buildings:

- High
- Moderate

Potential to support roosting bats - trees:

- High
- Moderate

Map Number: EC-05-519

Map Name: Bat - Roosts SES2 and AP2 ES

Community Area MA06: Hulseheath to Manchester Airport

HS2

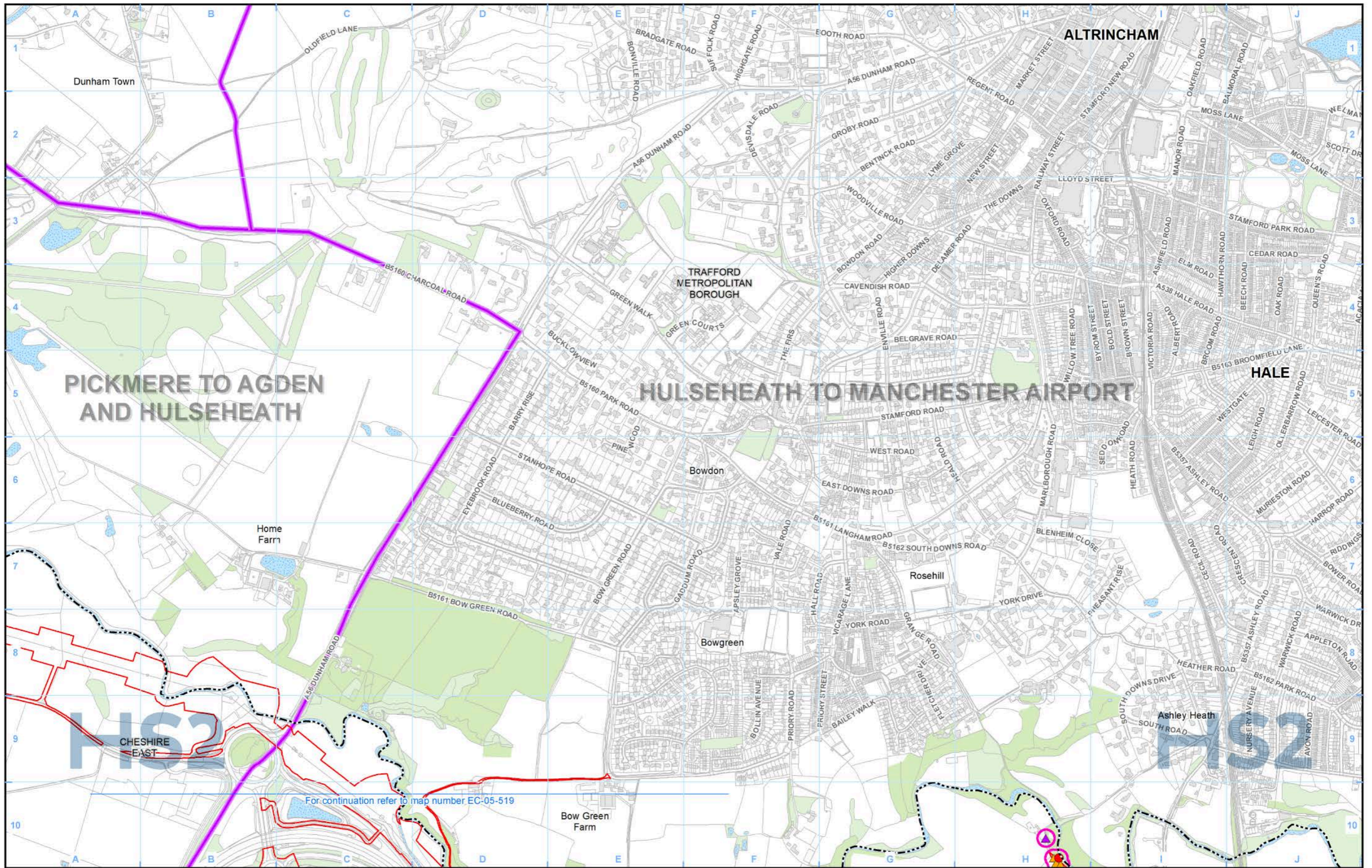
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Date: 31/03/23



PICKMERE TO AGDEN AND HULSEHEATH

HULSEHEATH TO MANCHESTER AIRPORT

Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary
- Watercourse
- Water body
- Woodland (verified by survey)
- Area contains new survey data

Confirmed bat roost - trees:

- Hibernation roost
- Maternity roost
- Other roost
- Multiple roost types

Confirmed bat roost - building:

- Hibernation roost
- Maternity roost
- Other roost
- Multiple roost types

Potential to support roosting bats - buildings:

- High
- Moderate

Potential to support roosting bats - trees:

- High
- Moderate

Map Number: **EC-05-519-L1**

Map Name: **Bat - Roosts SES2 and AP2 ES**

Community Area MA06:
Hulseheath to Manchester Airport

HS2

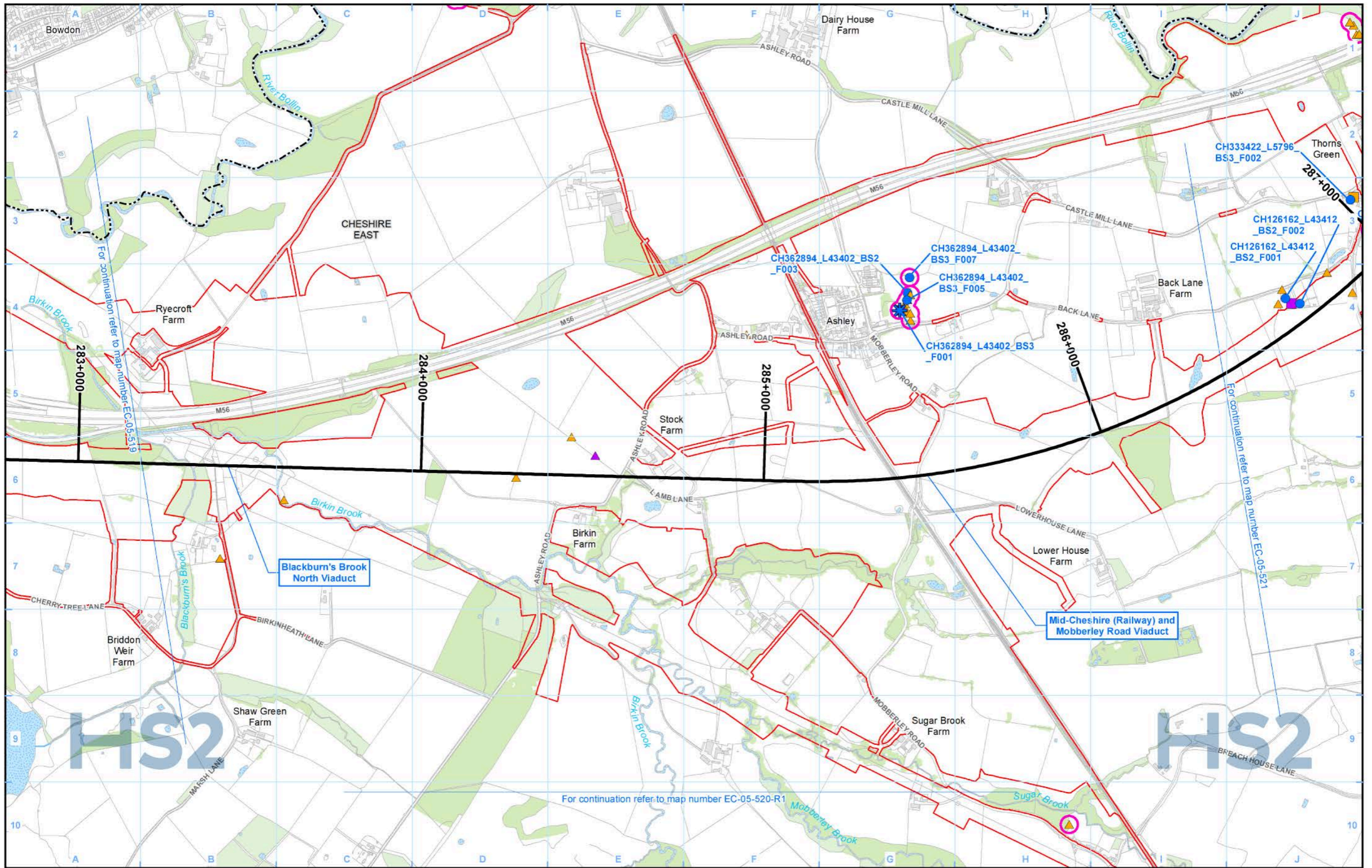
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Doc Number: 2PT27-MWJ-EV-MAP-M000-003667-P01

Date: 31/03/23



Legend	
	Route in tunnel
	Route on surface
	Depot, station, headhouse or portal building
	Land potentially required during construction
	Community area boundary
	County boundary
	District/Borough boundary
	Watercourse
	Water body
	Woodland (verified by survey)
	Area contains new survey data

Confirmed bat roost - trees:		Confirmed bat roost - building:	
	Hibernation roost		Hibernation roost
	Maternity roost		Maternity roost
	Other roost		Other roost
	Multiple roost types		Multiple roost types

Potential to support roosting bats - buildings:		Potential to support roosting bats - trees:	
	High		High
	Moderate		Moderate

Map Number	EC-05-520
Map Name	Bat - Roosts SES2 and AP2 ES
Community Area MA06: Hulseheath to Manchester Airport	

HS2

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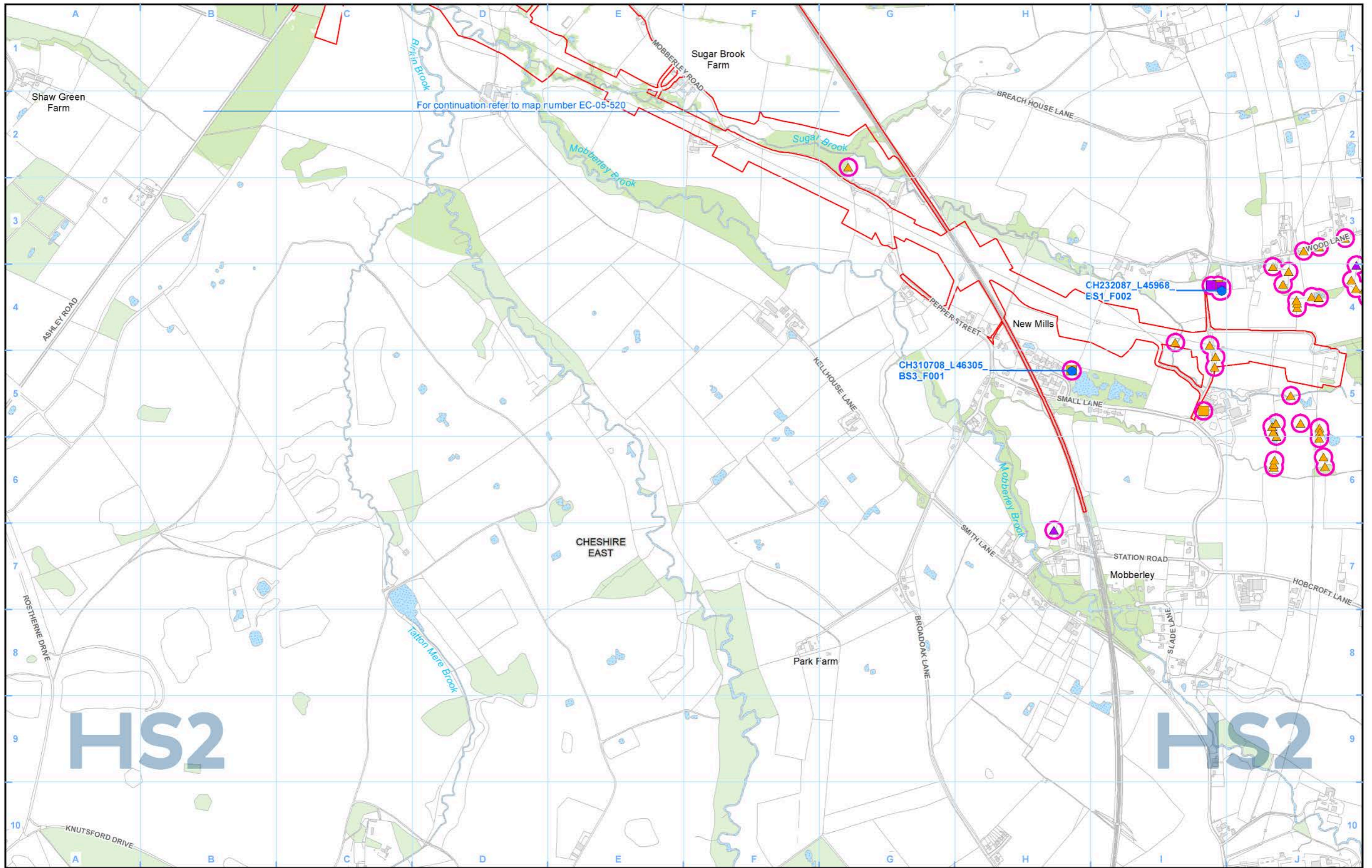
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Date: 31/03/23

Scale at A3: 1:10,000

Metres



Legend	
	Route in tunnel
	Route on surface
	Depot, station, headhouse or portal building
	Land potentially required during construction
	Community area boundary
	County boundary
	District/Borough boundary
	Watercourse
	Water body
	Woodland (verified by survey)
	Area contains new survey data

Confirmed bat roost - trees:		Confirmed bat roost - building:		Potential to support roosting bats - buildings:	
	Hibernation roost		Hibernation roost		High
	Maternity roost		Maternity roost		Moderate
	Other roost		Other roost		High
	Multiple roost types		Multiple roost types		Moderate

Map Number	EC-05-520-R1
Map Name	Bat - Roosts SES2 and AP2 ES
Community Area MA06: Hulseheath to Manchester Airport	

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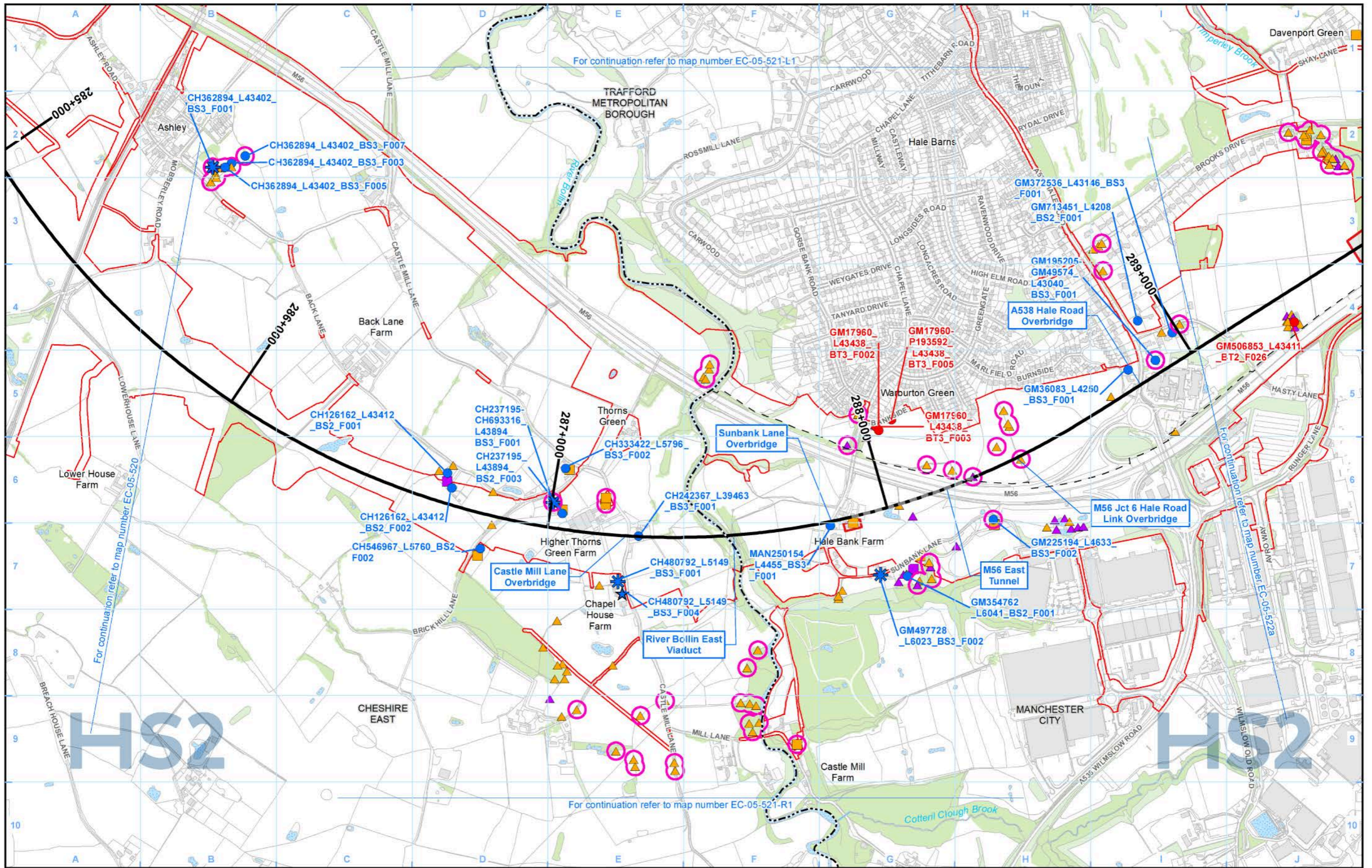
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Doc Number: 2PT27-MWJ-EV-MAP-M000-003617-P01

Scale at A3: 1:10,000

Metres

Date: 31/03/23



Legend

Map Number	EC-05-521
Map Name	Bat - Roosts SES2 and AP2 ES
Community Area	MA06: Hulse Heath to Manchester Airport

HS2

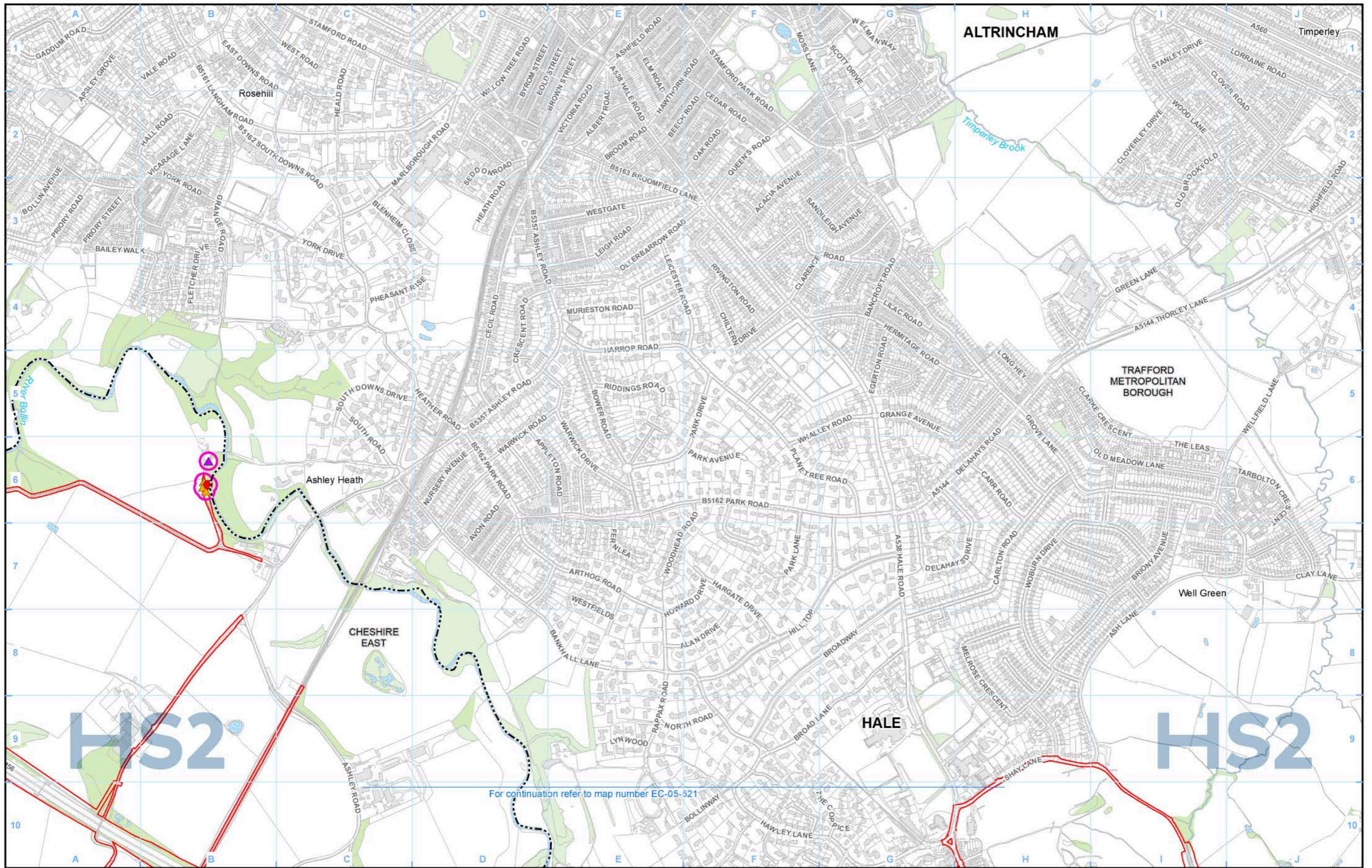
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001017-P01

Date: 31/03/23



Legend

Confirmed bat roost - trees:	Confirmed bat roost - building:	Potential to support roosting bats - buildings:
Hibernation roost	Hibernation roost	High
Maternity roost	Maternity roost	Moderate
Other roost	Other roost	Potential to support roosting bats - trees:
Multiple roost types	Multiple roost types	High
		Moderate

Map Number	EC-05-521-L1
Map Name	Bat - Roosts SES2 and AP2 ES
	Community Area MA06: Hulseheath to Manchester Airport

HS2

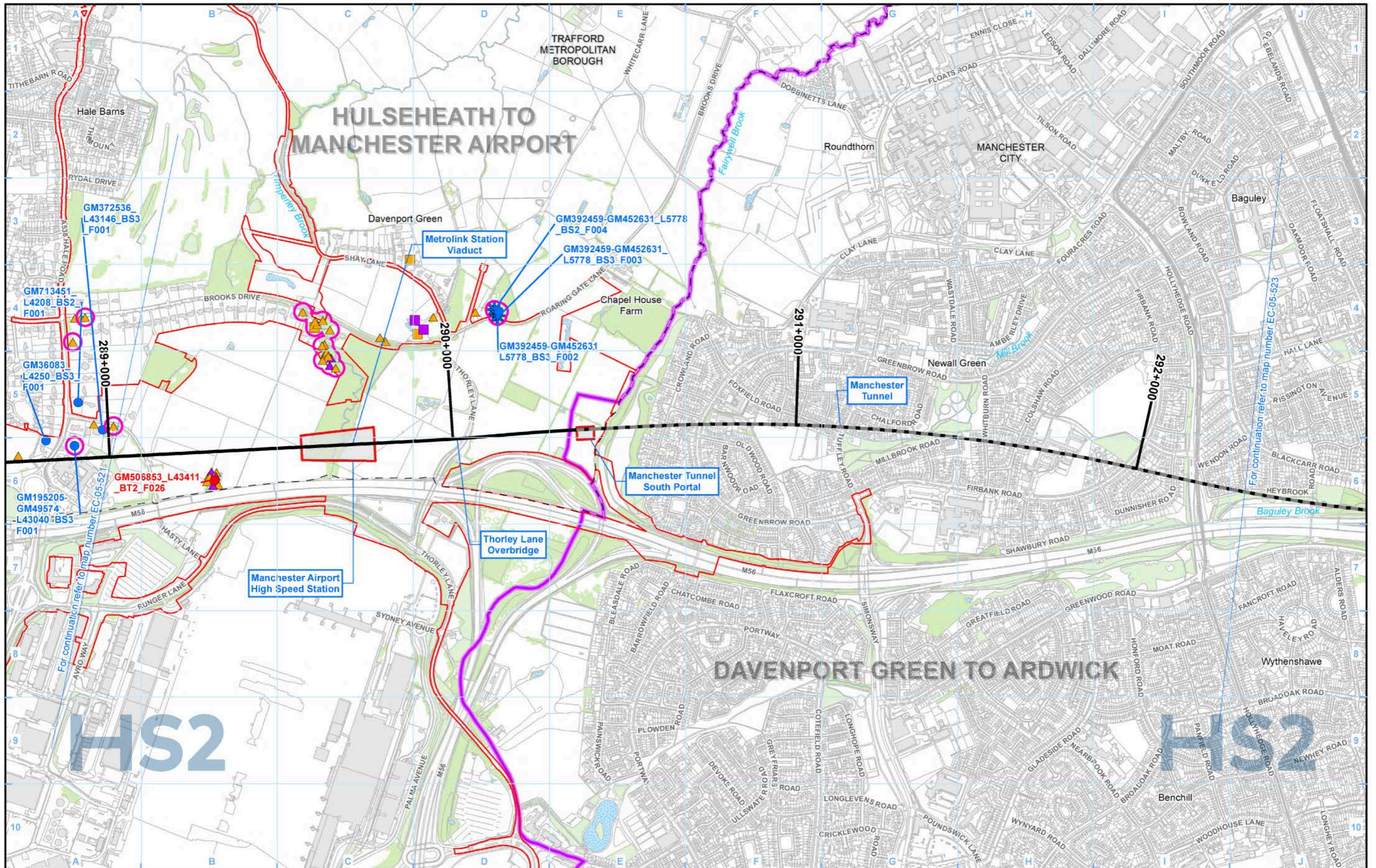
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Doc Number: 2PT27-MWJ-EV-MAP-M000-003668-P01

Scale at A3: 1:10,000

Date: 31/03/23



Legend

Route in tunnel	Watercourse
Route on surface	Water body
Depot, station, headhouse or portal building	Woodland (verified by survey)
Land potentially required during construction	Area contains new survey data
Community area boundary	
County boundary	
District/Borough boundary	

Confirmed bat roost - trees:	Confirmed bat roost - building:	Potential to support roosting bats - buildings:
Hibernation roost	Hibernation roost	High
Maternity roost	Maternity roost	Moderate
Other roost	Other roost	Potential to support roosting bats - trees:
Multiple roost types	Multiple roost types	High
		Moderate

Map Number	EC-05-522a
Map Name	Bat - Roosts SES2 and AP2 ES
	Community Area MA06: Hulseheath to Manchester Airport

HS2

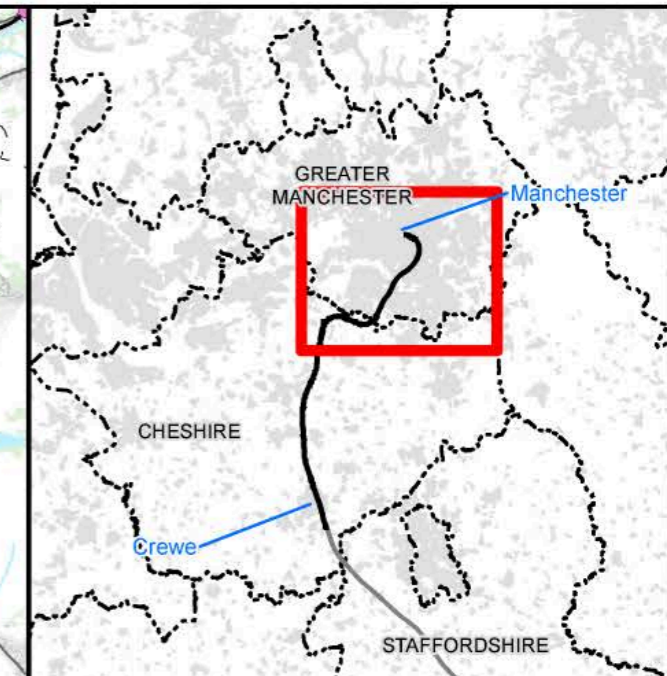
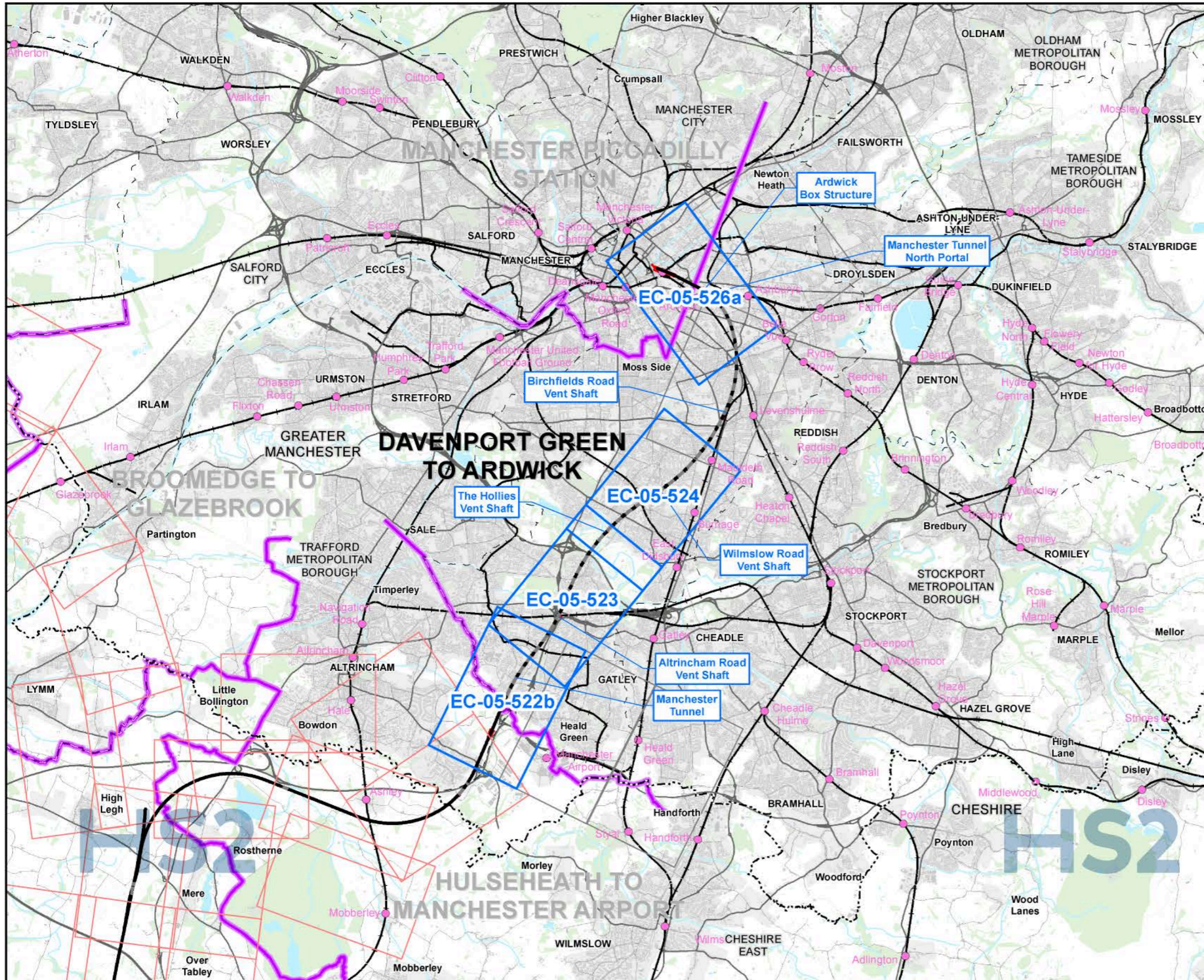
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001018-P01

Date: 31/03/23



Map Series Information:

This map series shows results of field surveys conducted to investigate the potential for trees and buildings/structures to support roosting bats. The maps show location of roosts confirmed by field survey and features identified as having a high or moderate potential to support roosting bats.

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

Map Number	EC-05-INDEX-MA07
Map Name	Index Map of: Bat - Roosts SES2 and AP2 ES
Community Area MA07: Davenport Green to Ardwick	

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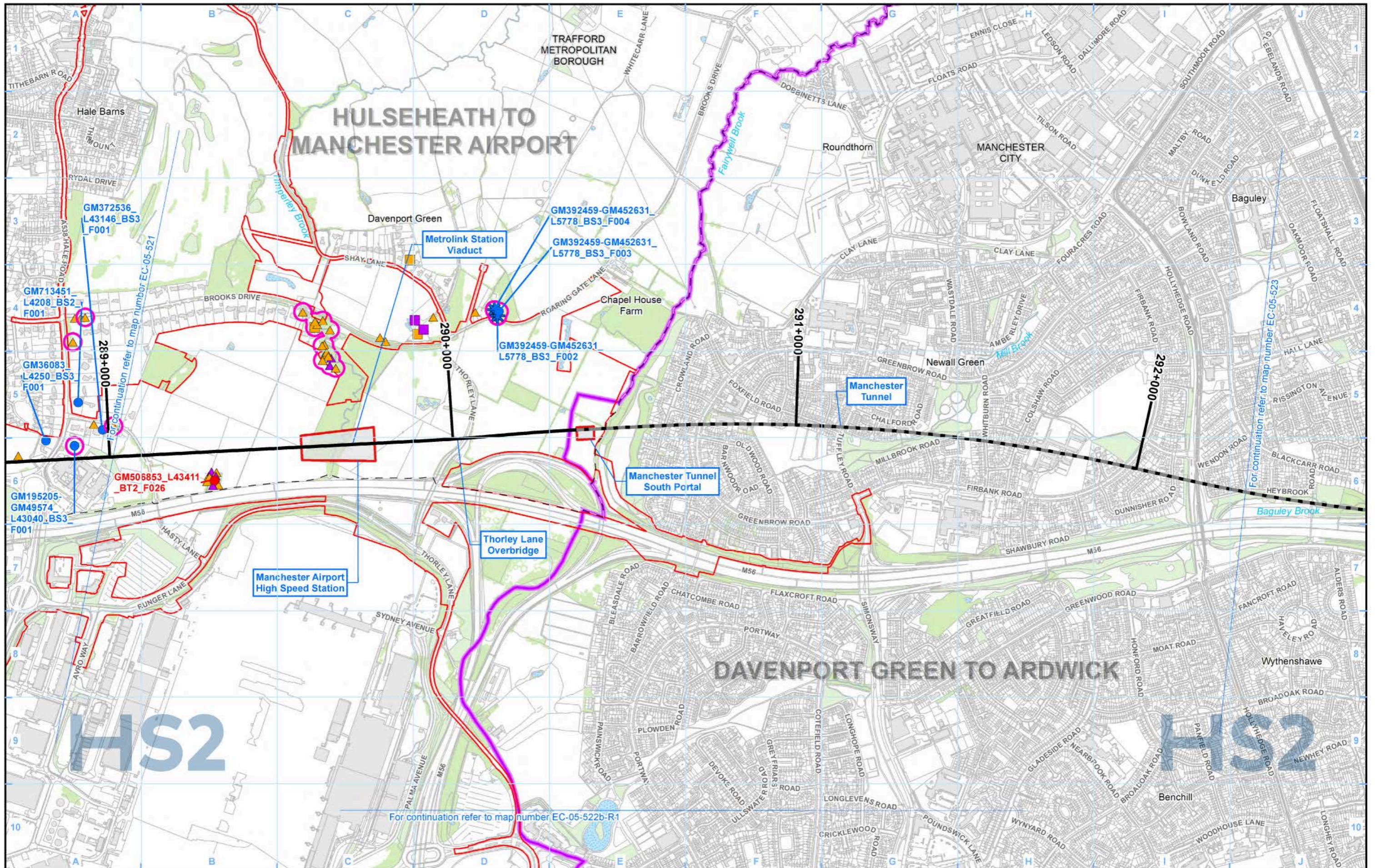
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001034-P01

Date: 23/03/23



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community area boundary
- County boundary
- District/Borough boundary
- Watercourse
- Water body
- Woodland (verified by survey)
- Area contains new survey data

Confirmed bat roost - trees:

- Hibernation roost
- Maternity roost
- Other roost
- Multiple roost types

Confirmed bat roost - building:

- Hibernation roost
- Maternity roost
- Other roost
- Multiple roost types

Potential to support roosting bats - buildings:

- High
- Moderate

Potential to support roosting bats - trees:

- High
- Moderate

Map Number: EC-05-522b

Map Name: Bat - Roosts SES2 and AP2 ES

Community Area MA07: Davenport Green to Ardwick

HS2

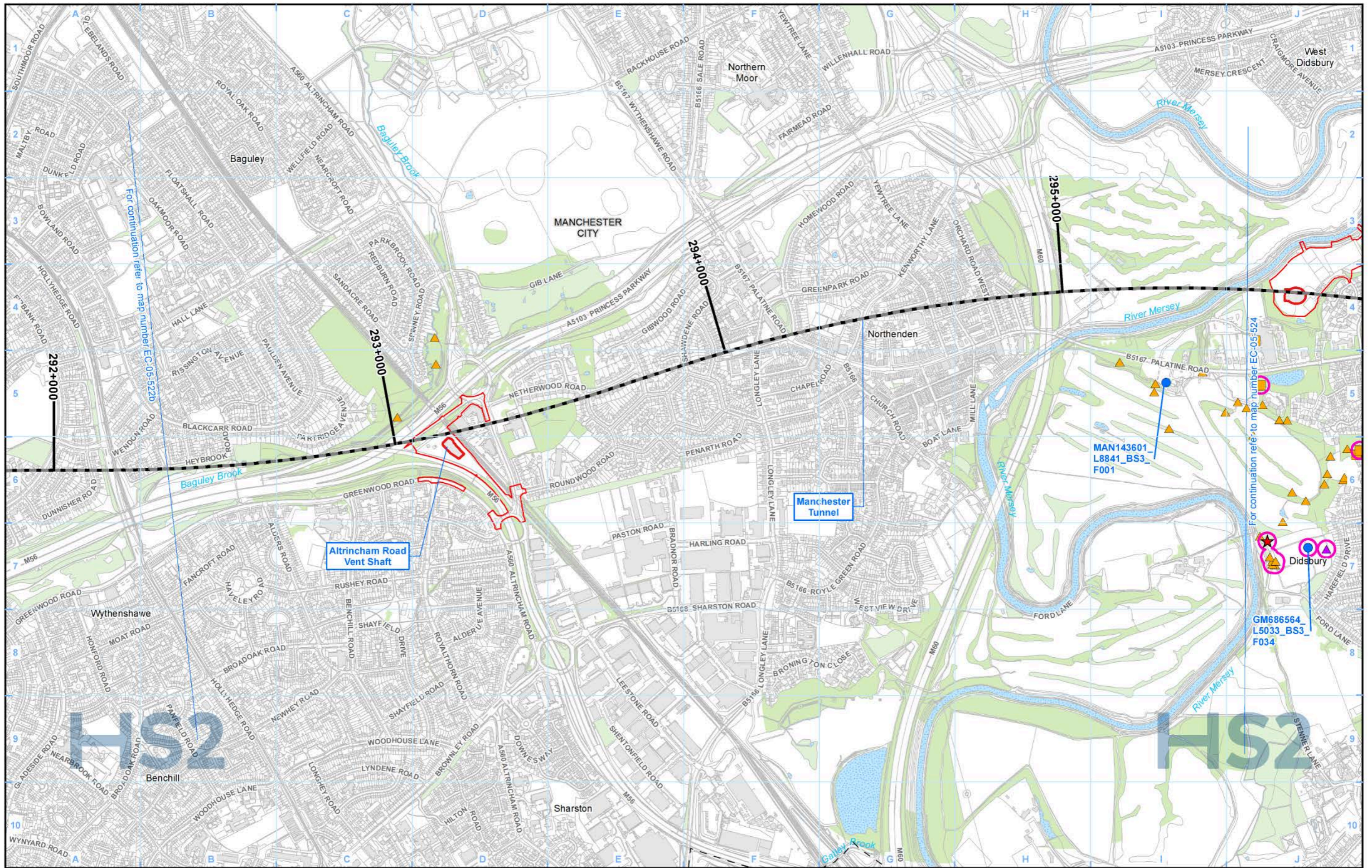
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001019-P01

Date: 03/04/23



Legend		Confirmed bat roost - trees:		Confirmed bat roost - building:		Potential to support roosting bats - buildings:	
	Route in tunnel		Hibernation roost		Hibernation roost		High
	Route on surface		Maternity roost		Maternity roost		Moderate
	Depot, station, headhouse or portal building		Other roost		Other roost		High
	Land potentially required during construction		Multiple roost types		Multiple roost types		Moderate
	Community area boundary						
	County boundary						
	District/Borough boundary						
	Watercourse						
	Water body						
	Woodland (verified by survey)						
	Area contains new survey data						

Map Number	EC-05-523
Map Name	Bat - Roosts SES2 and AP2 ES
	Community Area MA07: Davenport Green to Ardwick

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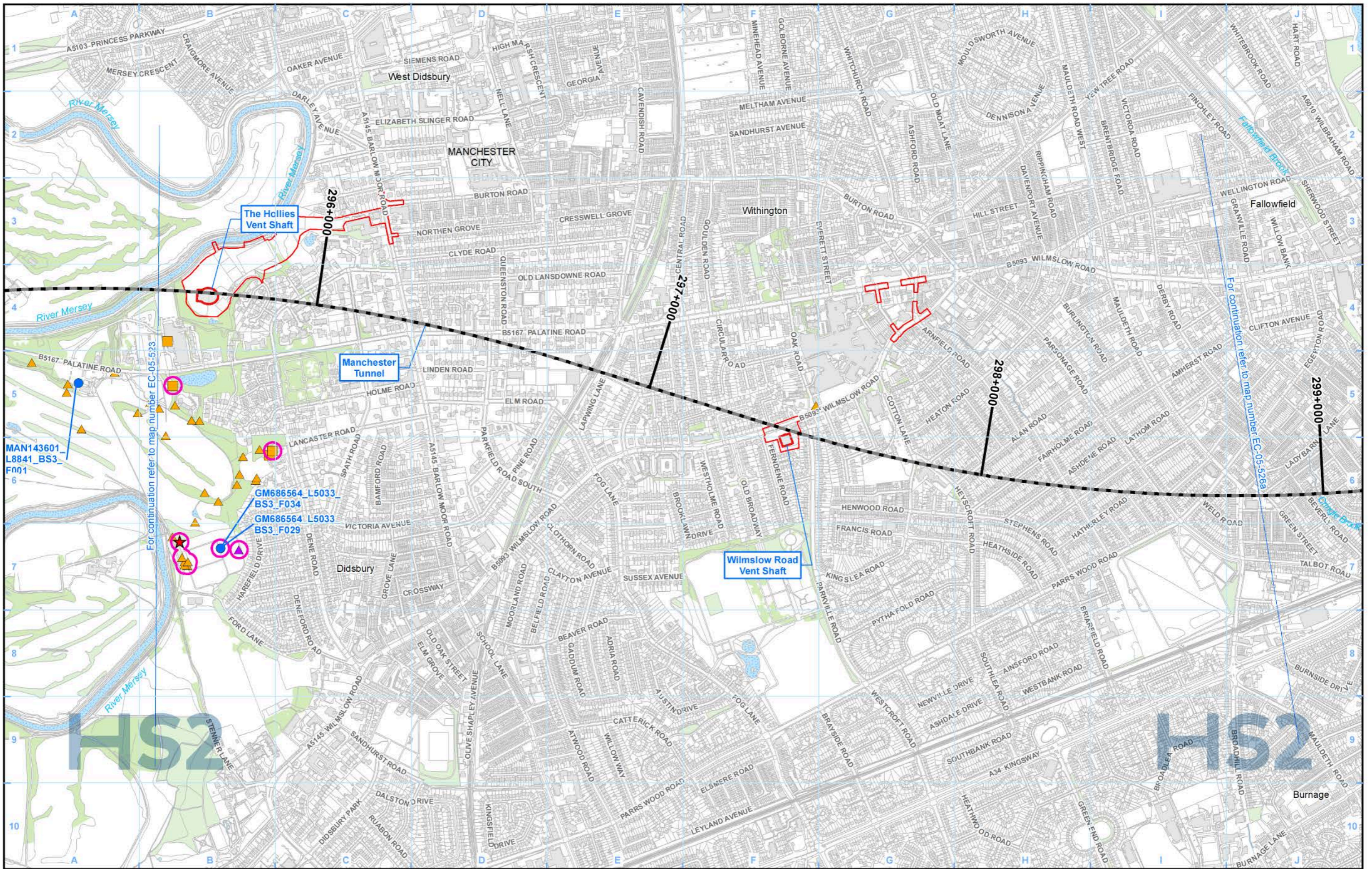
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Date: 31/03/23



Legend

Route in tunnel	Watercourse
Route on surface	Water body
Depot, station, headhouse or portal building	Woodland (verified by survey)
Land potentially required during construction	Area contains new survey data
Community area boundary	
County boundary	
District/Borough boundary	

Confirmed bat roost - trees: Hibernation roost	Confirmed bat roost - building: Hibernation roost	Potential to support roosting bats - buildings: High
Confirmed bat roost - trees: Maternity roost	Confirmed bat roost - building: Maternity roost	Potential to support roosting bats - buildings: Moderate
Confirmed bat roost - trees: Other roost	Confirmed bat roost - building: Other roost	Potential to support roosting bats - trees: High
Confirmed bat roost - trees: Multiple roost types	Confirmed bat roost - building: Multiple roost types	Potential to support roosting bats - trees: Moderate

Map Number	EC-05-524
Map Name	Bat - Roosts SES2 and AP2 ES
Community Area MA07: Davenport Green to Ardwick	

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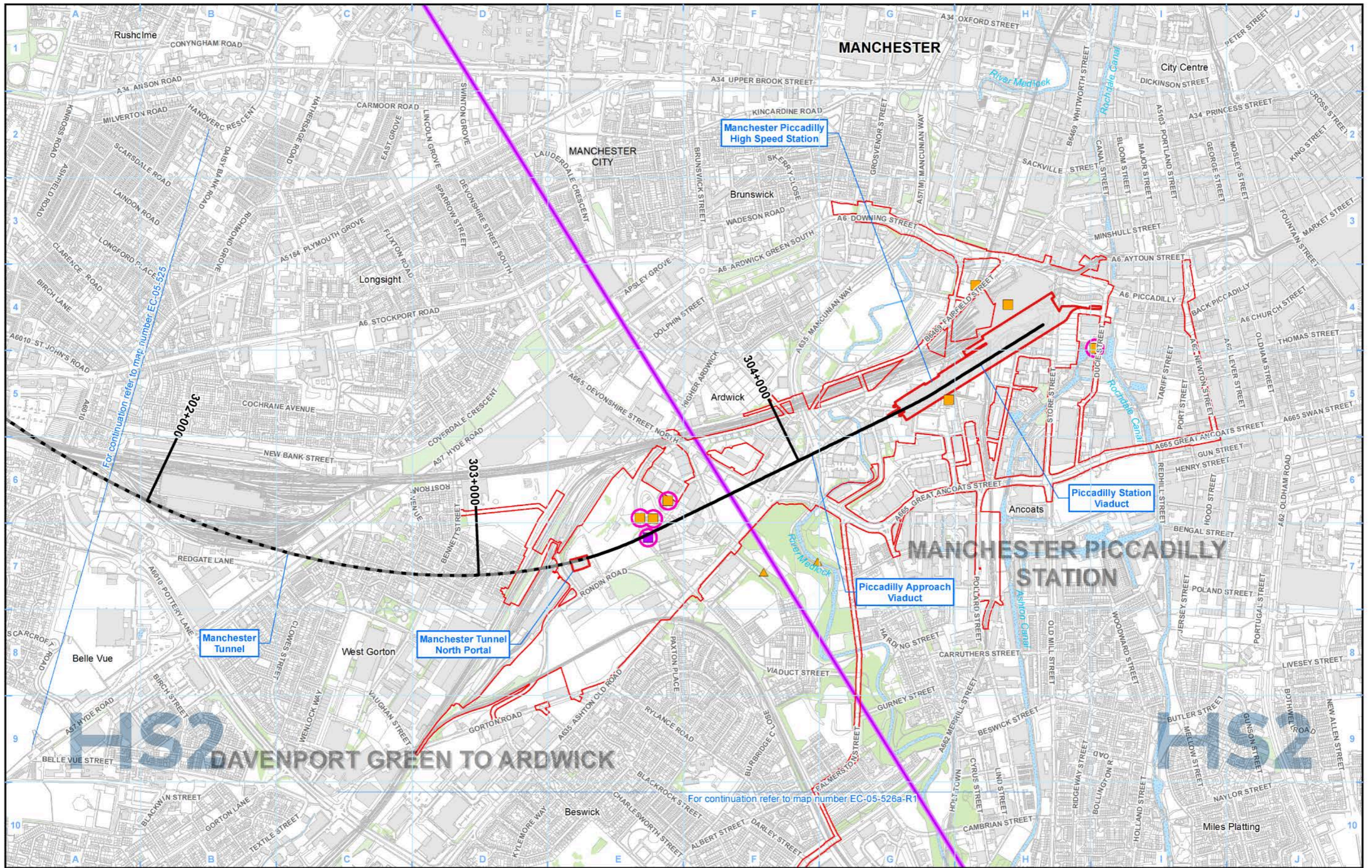
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Date: 31/03/23



Legend

Route in tunnel	Watercourse
Route on surface	Water body
Depot, station, headhouse or portal building	Woodland (verified by survey)
Land potentially required during construction	Area contains new survey data
Community area boundary	
County boundary	
District/Borough boundary	

Confirmed bat roost - trees:	Confirmed bat roost - building:	Potential to support roosting bats - buildings:
Hibernation roost	Hibernation roost	High
Maternity roost	Maternity roost	Moderate
Other roost	Other roost	Potential to support roosting bats - trees:
Multiple roost types	Multiple roost types	High
		Moderate

Map Number	EC-05-526a
Map Name	Bat - Roosts SES2 and AP2 ES
	Community Area MA07: Davenport Green to Ardwick

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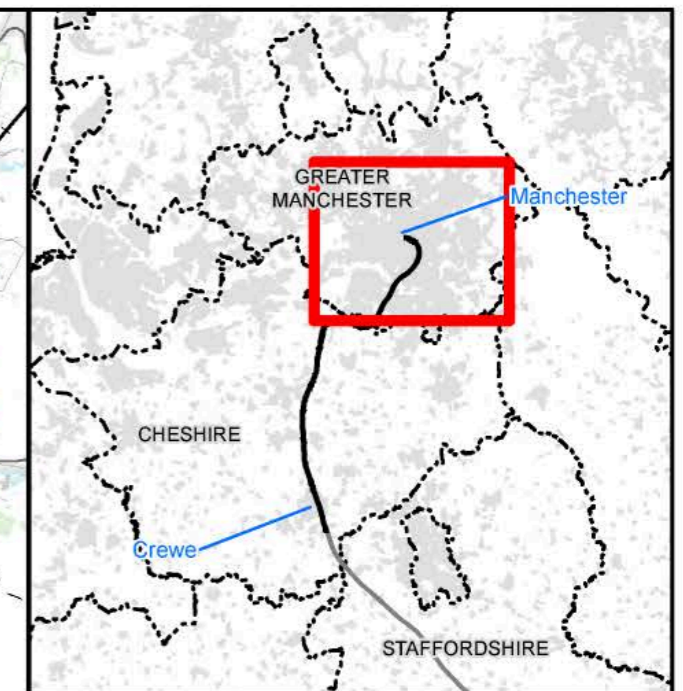
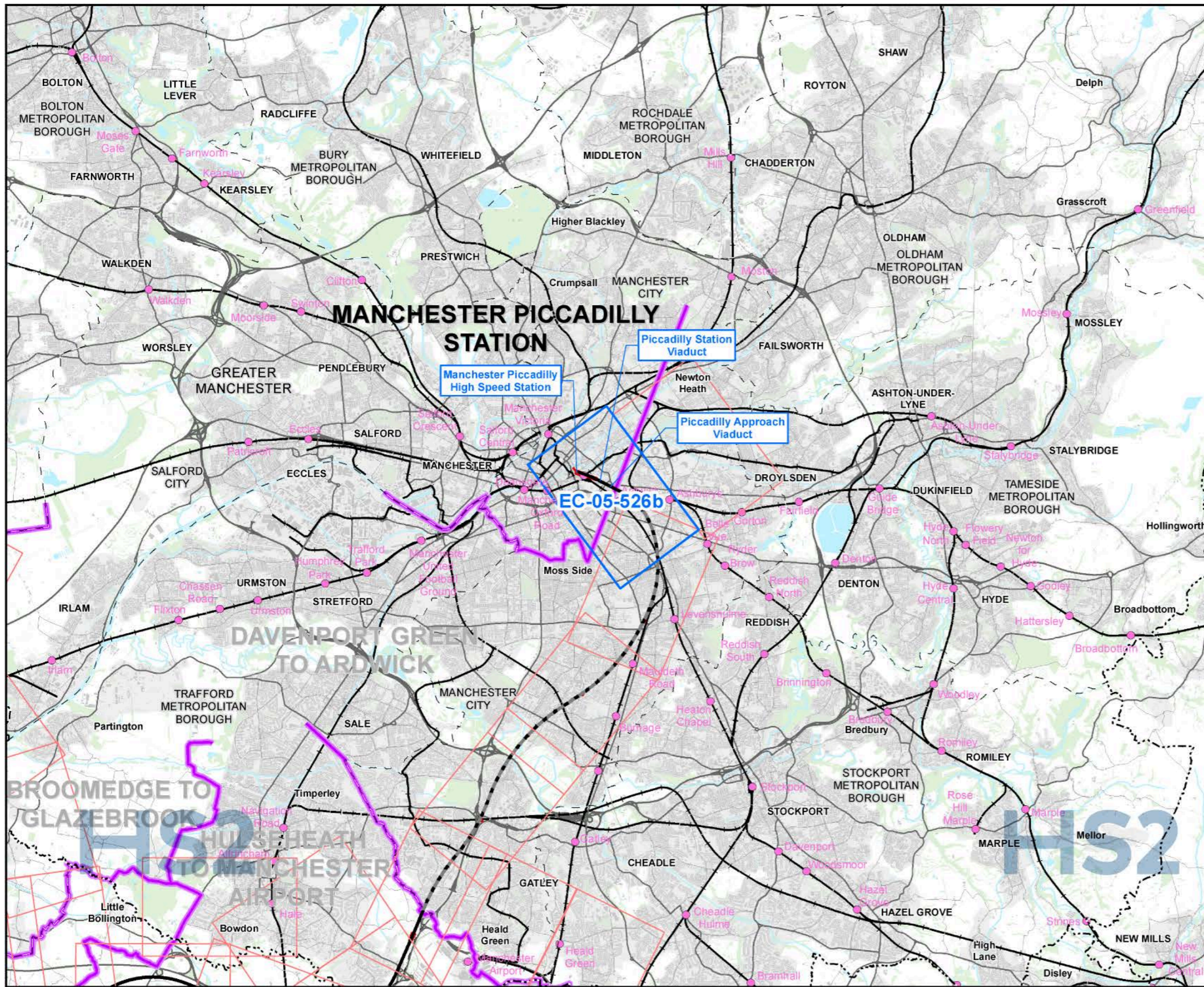
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Date: 31/03/23



Map Series Information:

This map series shows results of field surveys conducted to investigate the potential for trees and buildings/structures to support roosting bats. The maps show location of roosts confirmed by field survey and features identified as having a high or moderate potential to support roosting bats.

Main Map Legend

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

Map Number	EC-05-INDEX-MA08
Map Name	Index Map of: Bat - Roosts SES2 and AP2 ES
Community Area MA08: Manchester Piccadilly Station	

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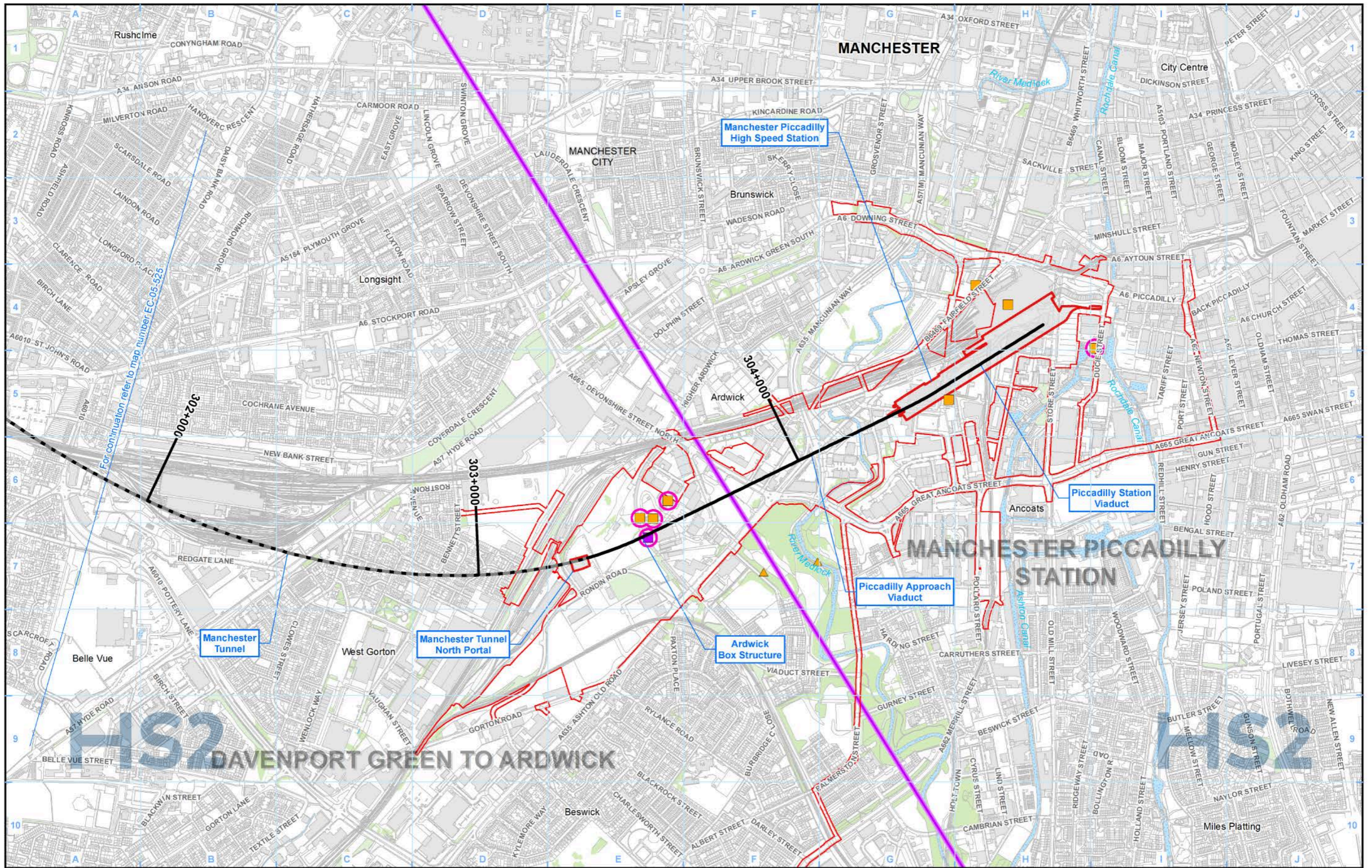
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Date: 23/03/23



Legend

- Route in tunnel (dashed black line)
- Route on surface (solid black line)
- Depot, station, headhouse or portal building (red outline)
- Land potentially required during construction (red outline)
- Community area boundary (purple line)
- County boundary (dotted black line)
- District/Borough boundary (dashed grey line)
- Watercourse (blue line)
- Water body (blue area)
- Woodland (verified by survey) (green area)
- Area contains new survey data (pink outline)

Confirmed bat roost - trees:

- Hibernation roost (red diamond)
- Maternity roost (red star)
- Other roost (red circle)
- Multiple roost types (red asterisk)

Confirmed bat roost - building:

- Hibernation roost (blue diamond)
- Maternity roost (blue star)
- Other roost (blue circle)
- Multiple roost types (blue asterisk)

Potential to support roosting bats - buildings:

- High (purple square)
- Moderate (orange square)

Potential to support roosting bats - trees:

- High (purple triangle)
- Moderate (orange triangle)

Map Number: EC-05-526b

Map Name: Bat - Roosts SES2 and AP2 ES

Community Area MA08: Manchester Piccadilly Station

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