

# **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 2

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Part 2





Department  
for Transport

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

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

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RAMBOLL | TYPESA | COSTAIN

**MWJV**

Mott MacDonald | WSP

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# Contents

Mapping explanatory notes

Data dictionary and definitions

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	

<b>Legend features</b>	<b>Definition</b>	<b>Source</b>	<b>Copyright</b>
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	



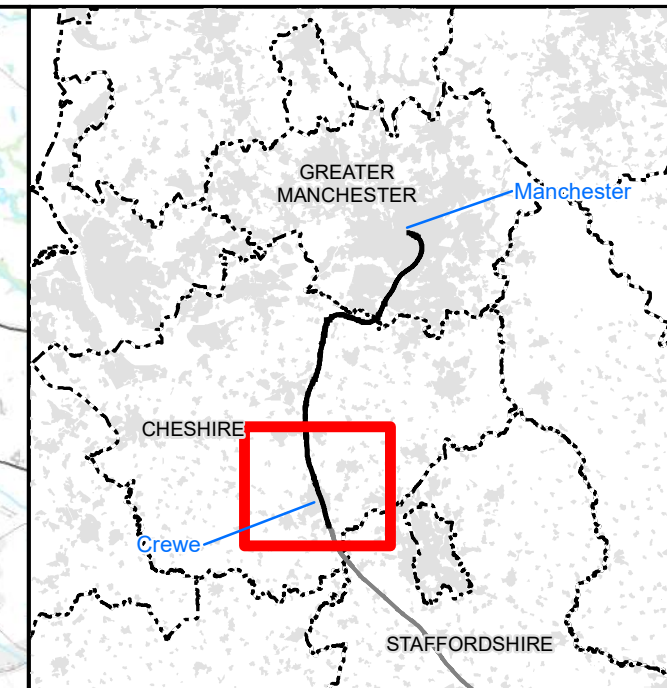
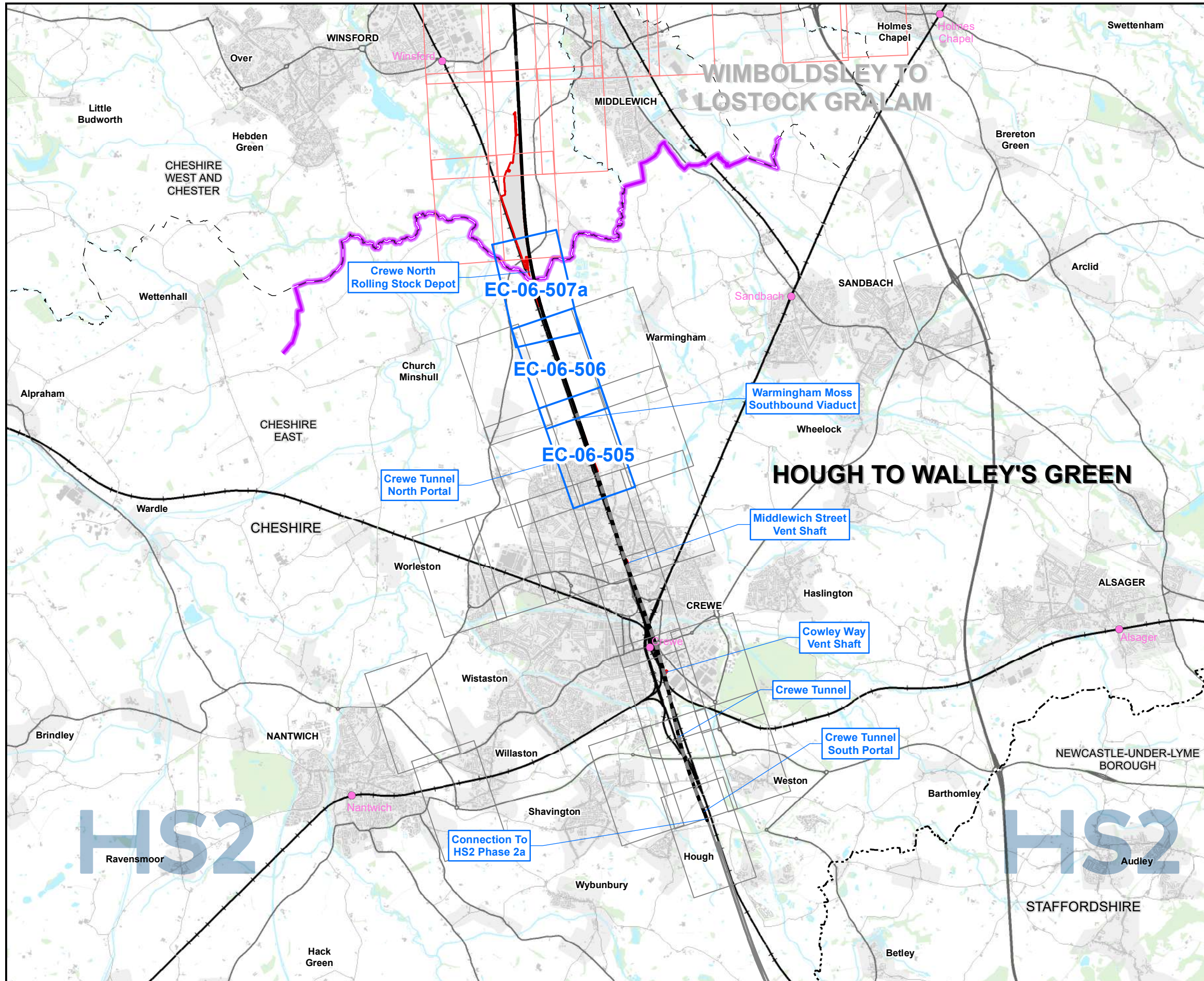
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## **High Speed Rail (Crewe – Manchester)**

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

EC-06 – Bats - Activity





**Map Series Information:**

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.

- 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-06-INDEX-MA01
Map Name	Index Map of: Bat - Activity SES2 and AP2 ES Community Area MA01: Hough to Walley's Green

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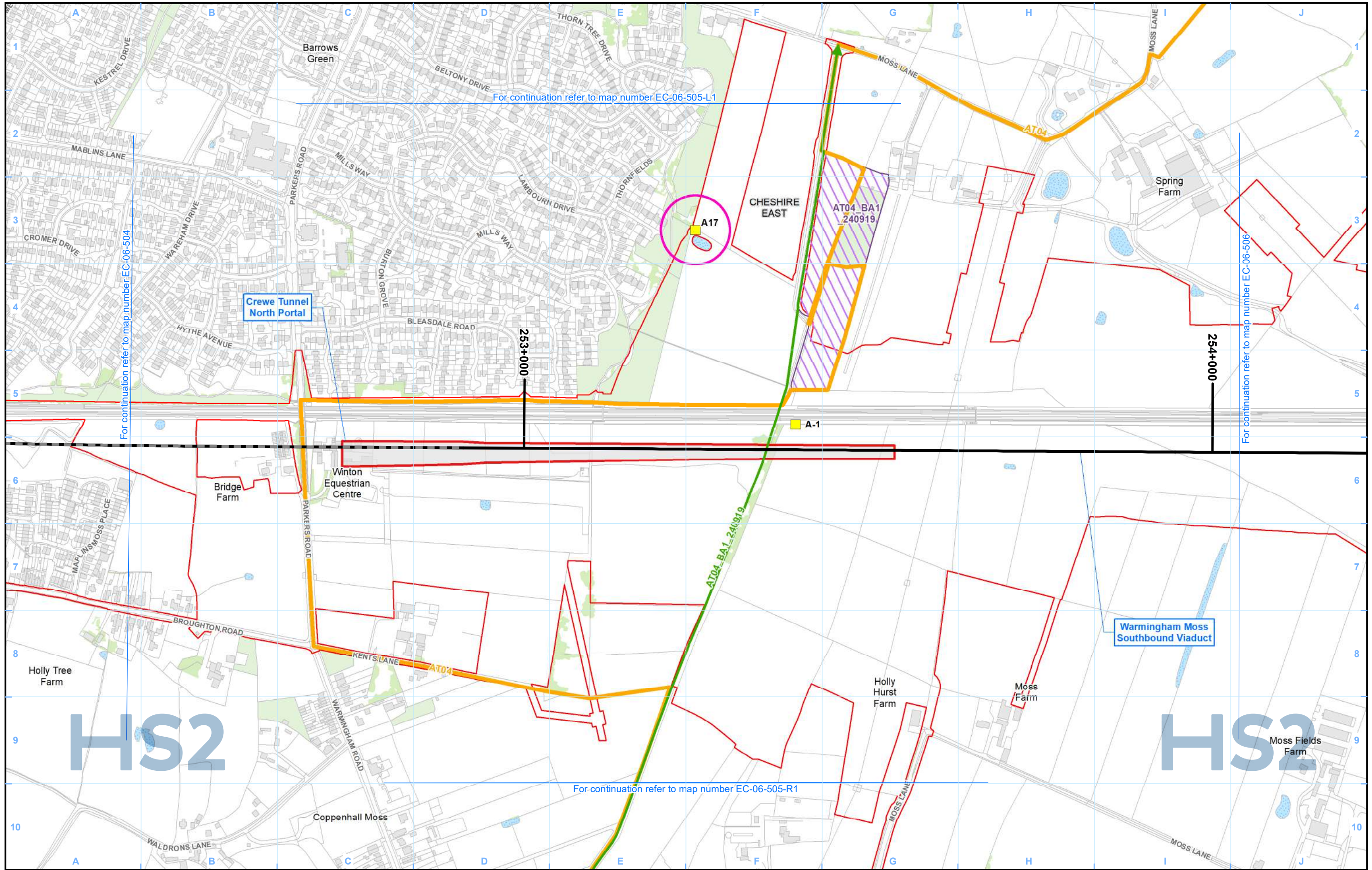
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For continuation refer to map number EC-06-505-L1

For continuation refer to map number EC-06-504

For continuation refer to map number EC-06-506

For continuation refer to map number EC-06-505-R1

Legend		

Map Number	EC-06-505
Map Name	Bat - Activity SES2 and AP2 ES
	Community Area MA01: Hough to Walley's Green

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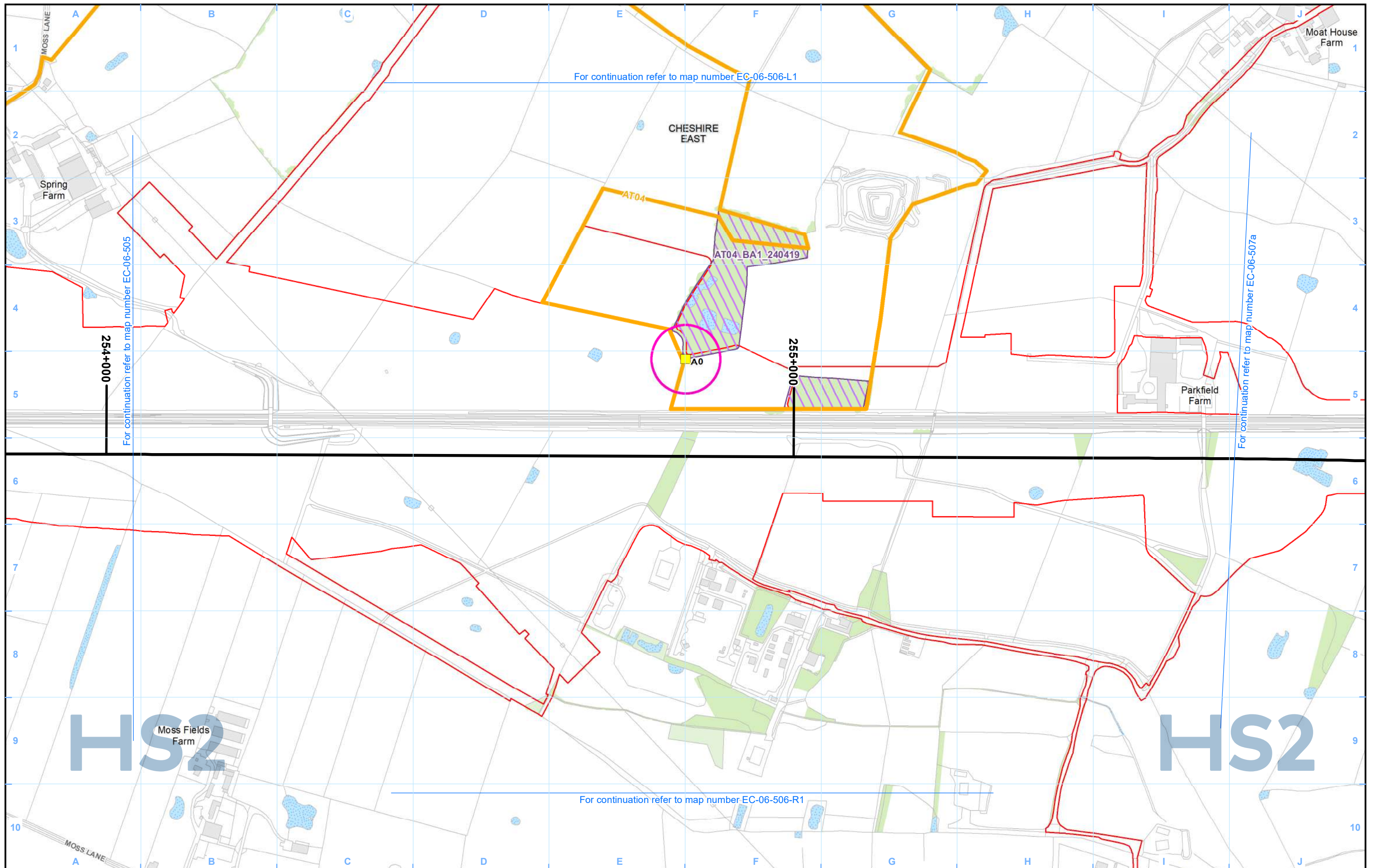
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Scale at A3: 1:5,000

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Date: 31/03/23





**Legend**

Route in tunnel	Watercourse	Bat activity static detector location
Route on surface	Water body	Activity transect route
Depot, station, headhouse or portal building	Woodland (verified by survey)	Assumed key commuting route
Land potentially required during construction	Area contains new survey data	Assumed key areas of foraging habitat
Community area boundary		
County boundary		
District/Borough boundary		

Map Number	EC-06-506
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA01: Hough to Walley's Green	

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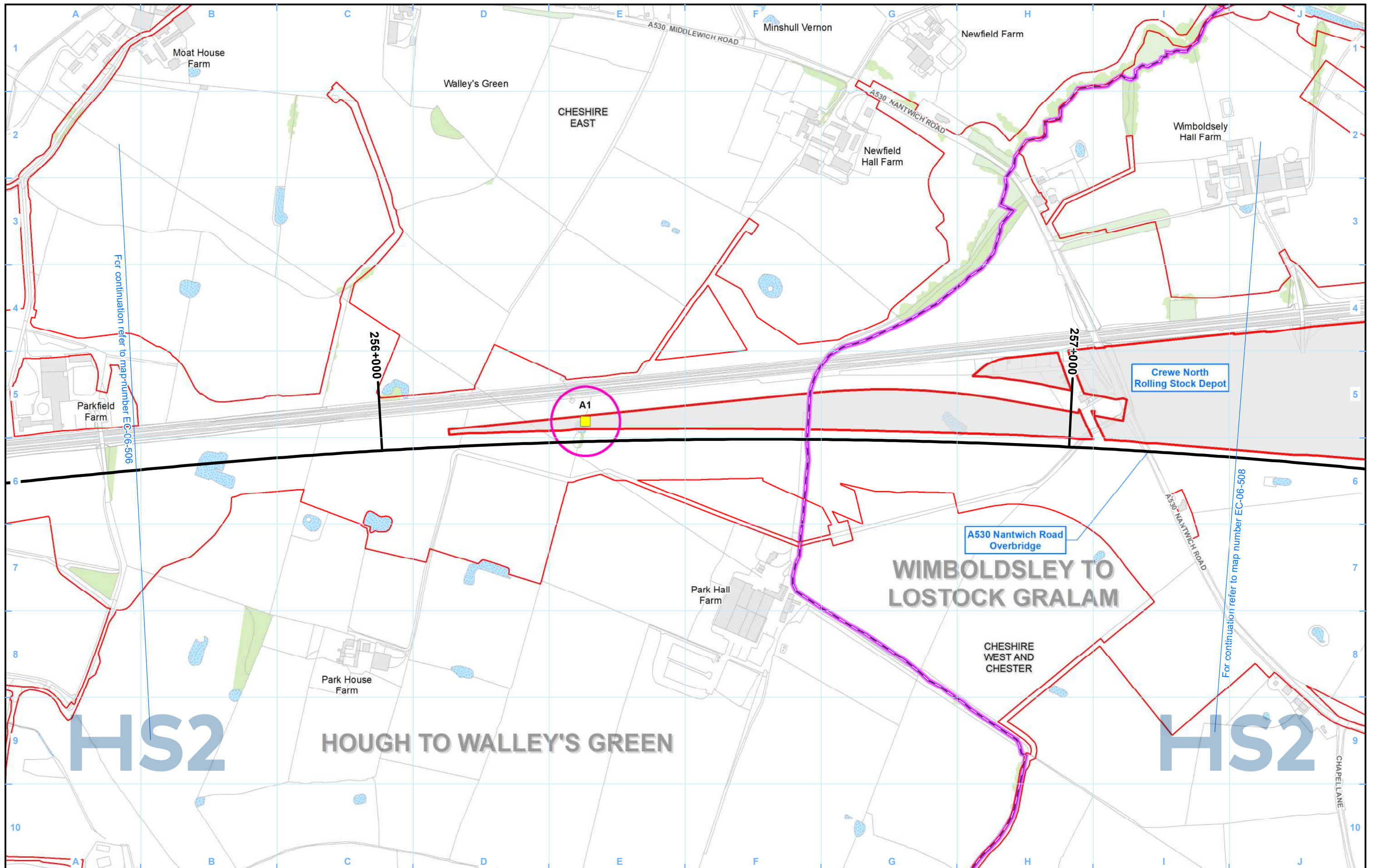
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Legend			
	Route in tunnel		Bat activity static detector location
	Route on surface		Activity transect route
	Depot, station, headhouse or portal building		Assumed key commuting route
	Land potentially required during construction		Area contains new survey data
	Community area boundary		Assumed key areas of foraging habitat
	County boundary		
	District/Borough boundary		
	Watercourse		
	Water body		
	Woodland (verified by survey)		

Map Number	EC-06-507a
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA01:	Hough to Walley's Green

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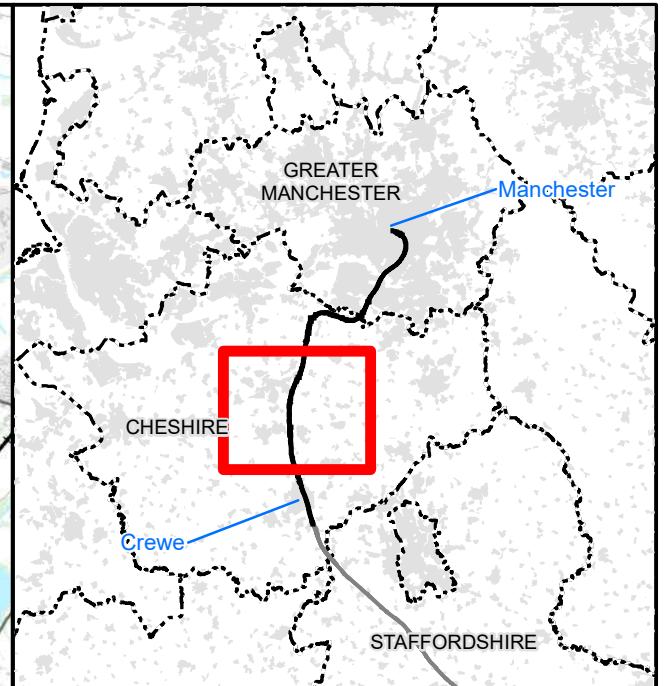
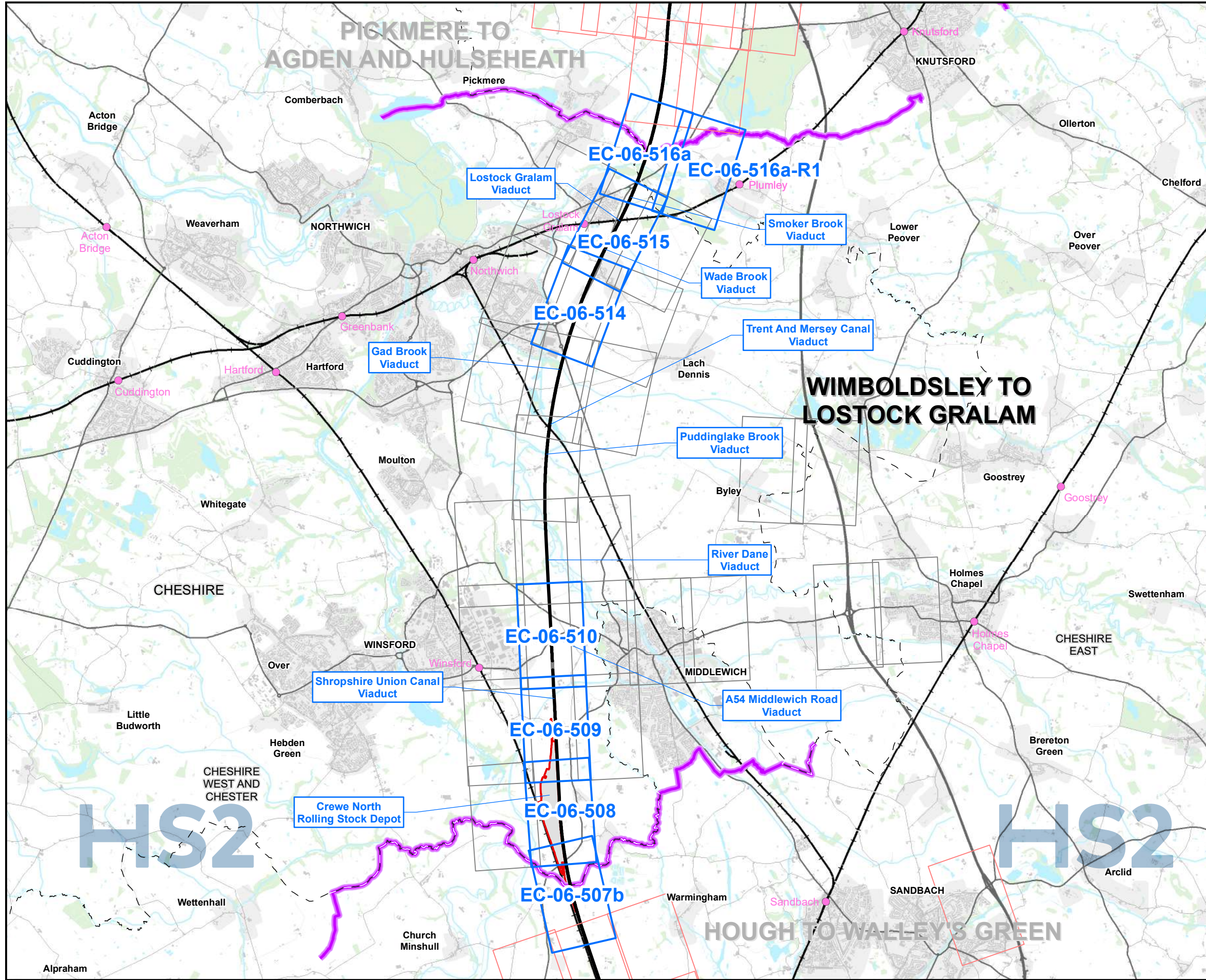
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**Map Series Information:**

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.

**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-06-INDEX-MA02
Map Name	Index Map of: Bat - Activity SES2 and AP2 ES Community Area MA02: Wimboldsley to Lostock Gralam

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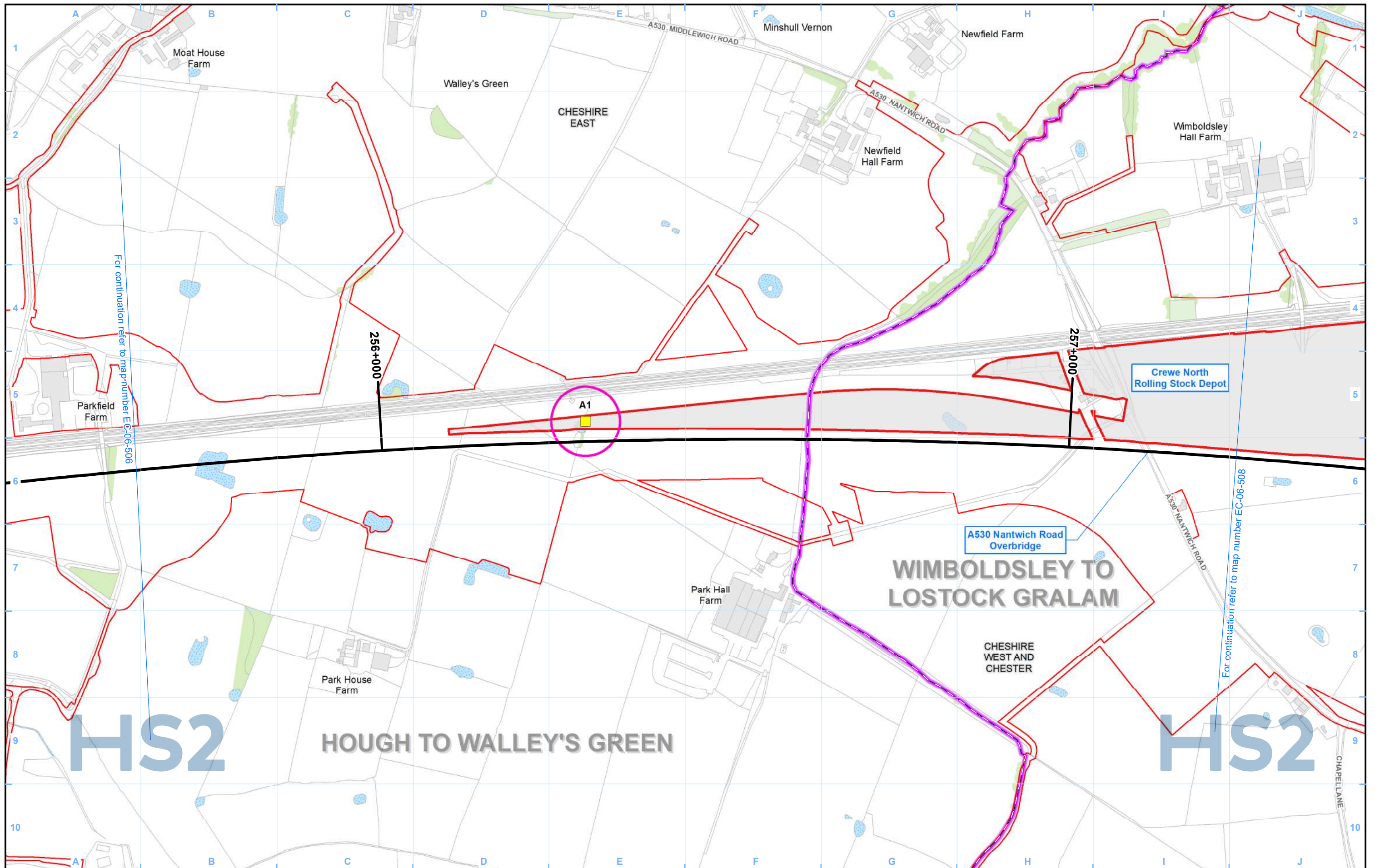
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Note: Not all data layers in the legend are represented on every map.






**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
-  Bat activity static detector location
-  Activity transect route
-  Assumed key commuting route
-  Assumed key areas of foraging habitat

Map Number	EC-06-507b
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA02: Wimboldsley to Lostock Gralam	

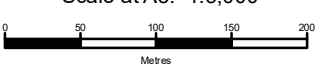


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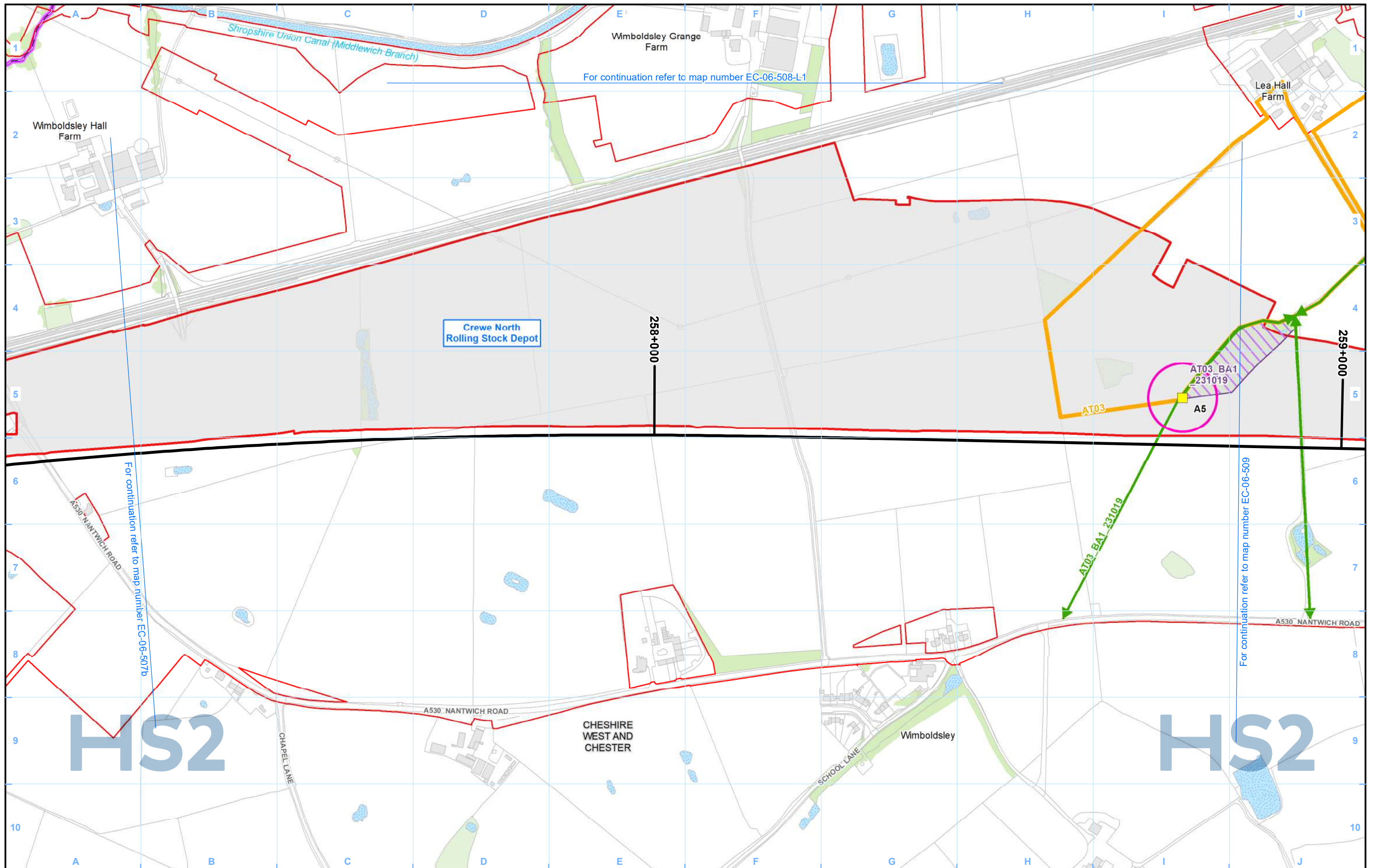
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Legend		

Map Number	EC-06-508
Map Name	Bat - Activity SES2 and AP2 ES
	Community Area MA02: Wimboldsley to Lostock Gralam

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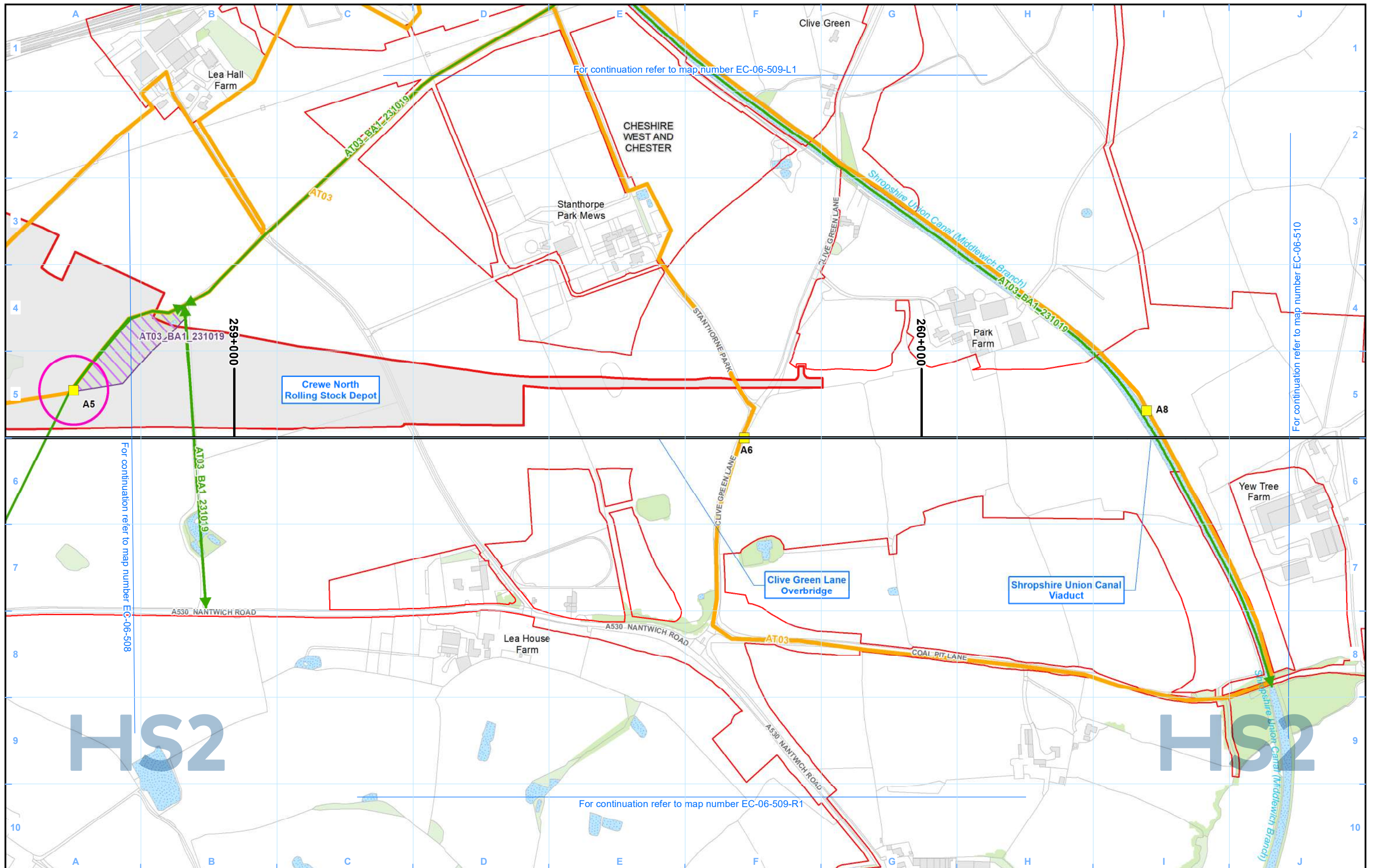
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- Legend**
- Route in tunnel
  - Route on surface
  - Depot, station, headhouse or portal building
  - Land potentially required during construction
  - Community area boundary
  - County boundary
  - District/Borough boundary
  - Watercourse
  - Water body
  - Woodland (verified by survey)
  - Area contains new survey data
  - Bat activity static detector location
  - Activity transect route
  - Assumed key commuting route
  - Assumed key areas of foraging habitat

Map Number	EC-06-509
Map Name	<b>Bat - Activity SES2 and AP2 ES</b>
	Community Area MA02: Wimboldsley to Lostock Gralam

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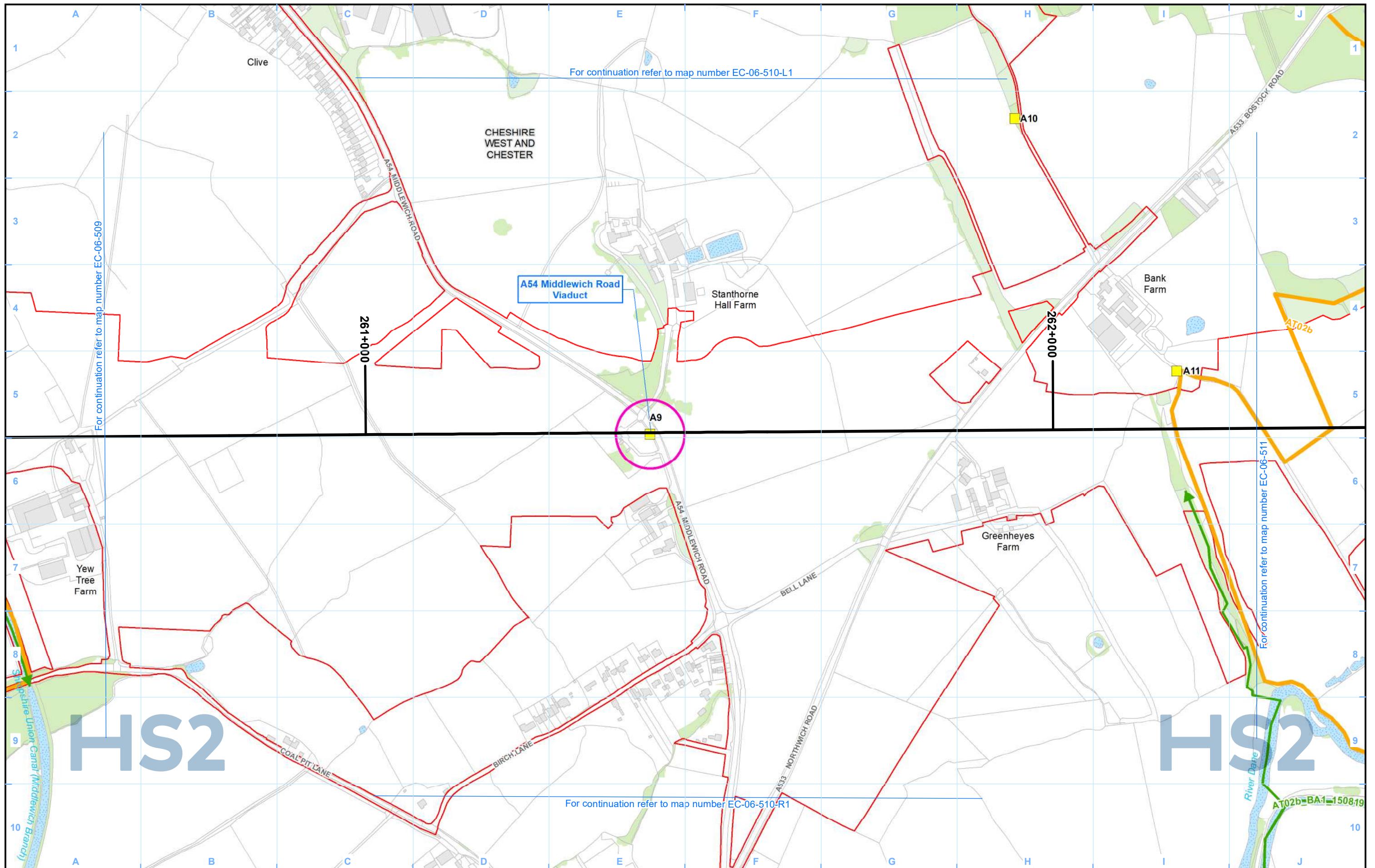
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Legend		

Map Number	EC-06-510
Map Name	Bat - Activity SES2 and AP2 ES
	Community Area MA02: Wimboldsley to Lostock Gralam

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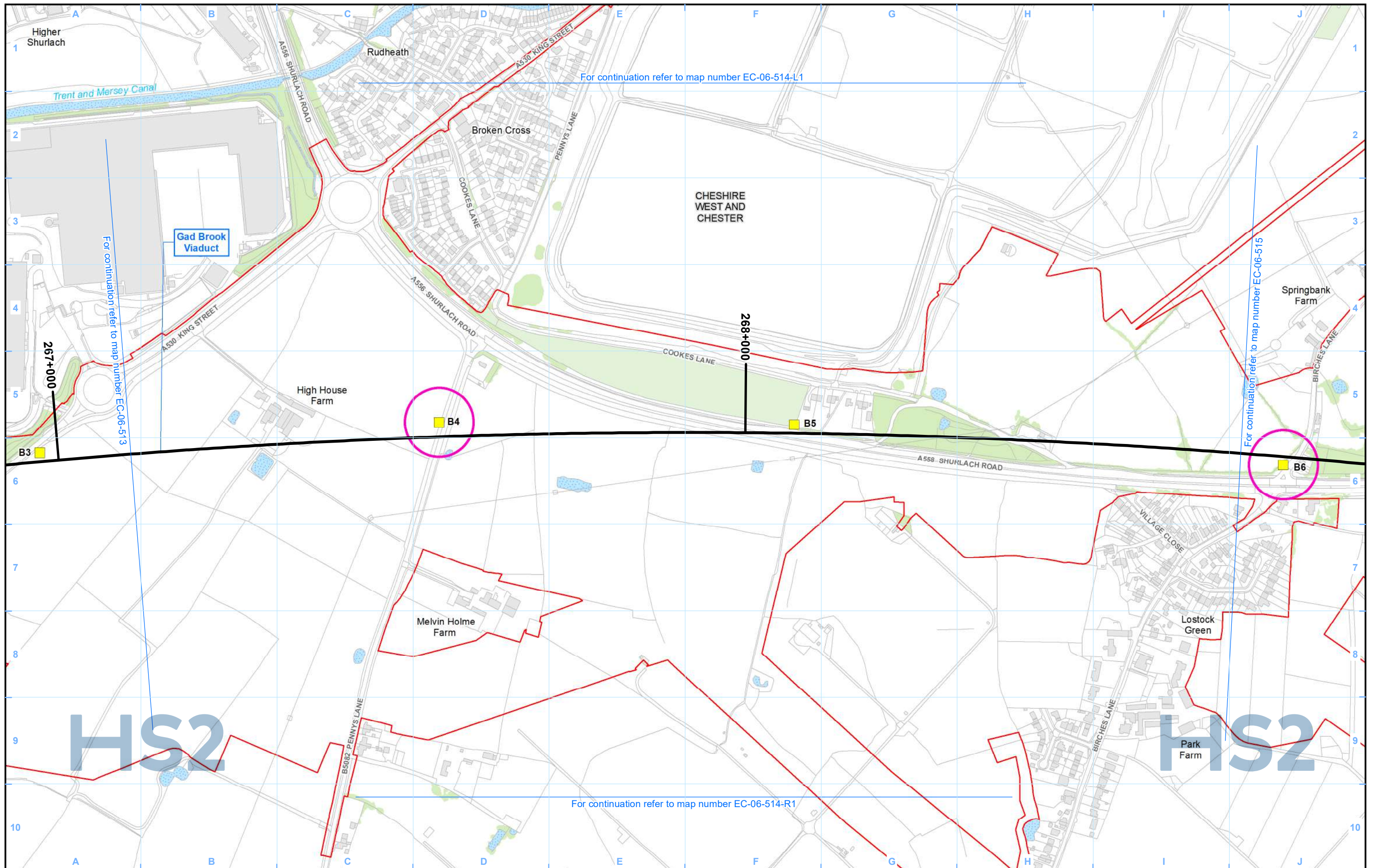
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For continuation refer to map number EC-06-514-L1

For continuation refer to map number EC-06-513

For continuation refer to map number EC-06-515

For continuation refer to map number EC-06-514-R1

Legend		

Map Number	EC-06-514
Map Name	Bat - Activity SES2 and AP2 ES
	Community Area MA02: Wimboldsley to Lostock Gralam

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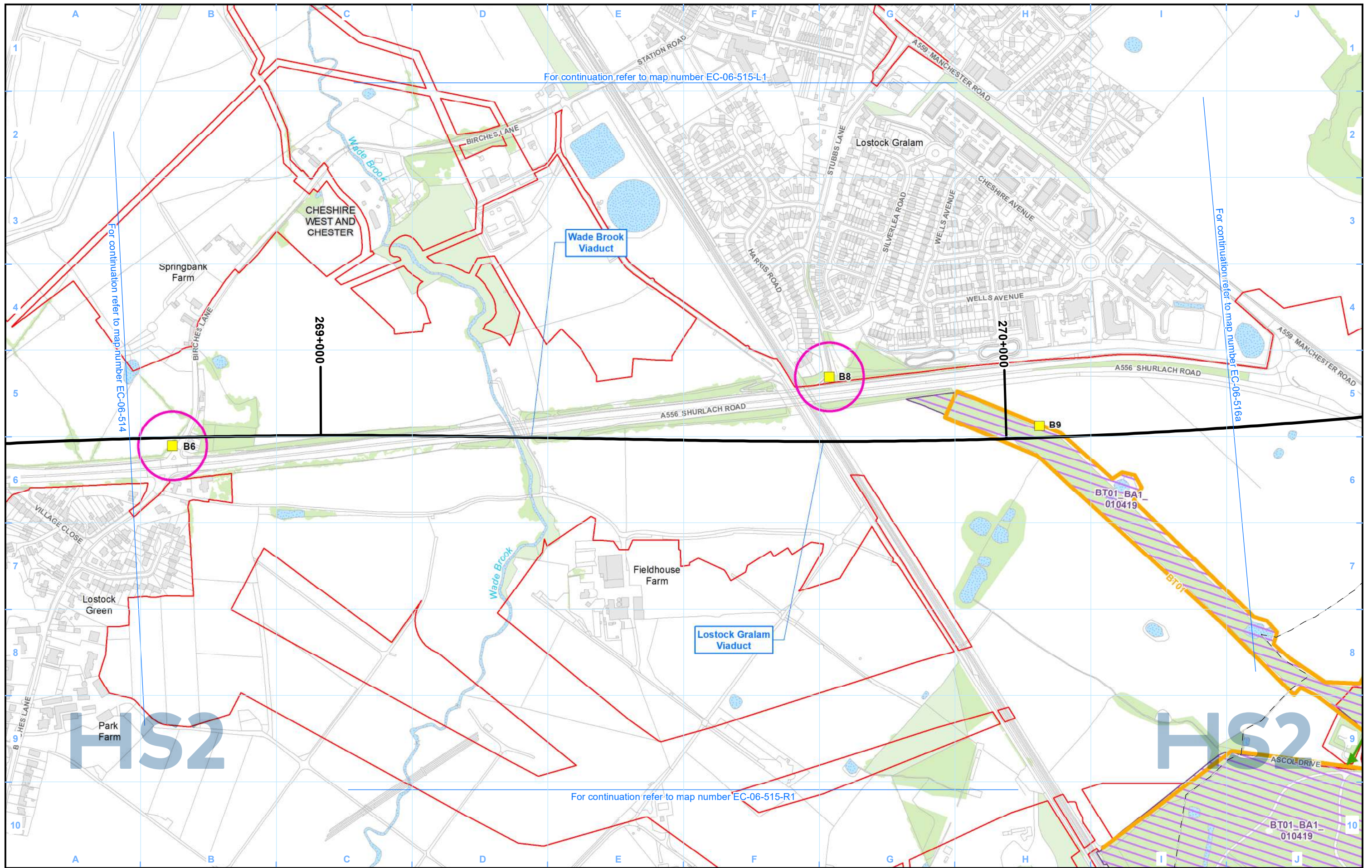
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Scale at A3: 1:5,000

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For continuation refer to map number EC-06-515-L1

For continuation refer to map number EC-06-516a

For continuation refer to map number EC-06-515-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 (verified by survey)
  - Area contains new survey data
  - Bat activity static detector location
  - Activity transect route
  - Assumed key commuting route
  - Assumed key areas of foraging habitat

Map Number	EC-06-515
Map Name	Bat - Activity SES2 and AP2 ES
	Community Area MA02: Wimboldsley to Lostock Gralam

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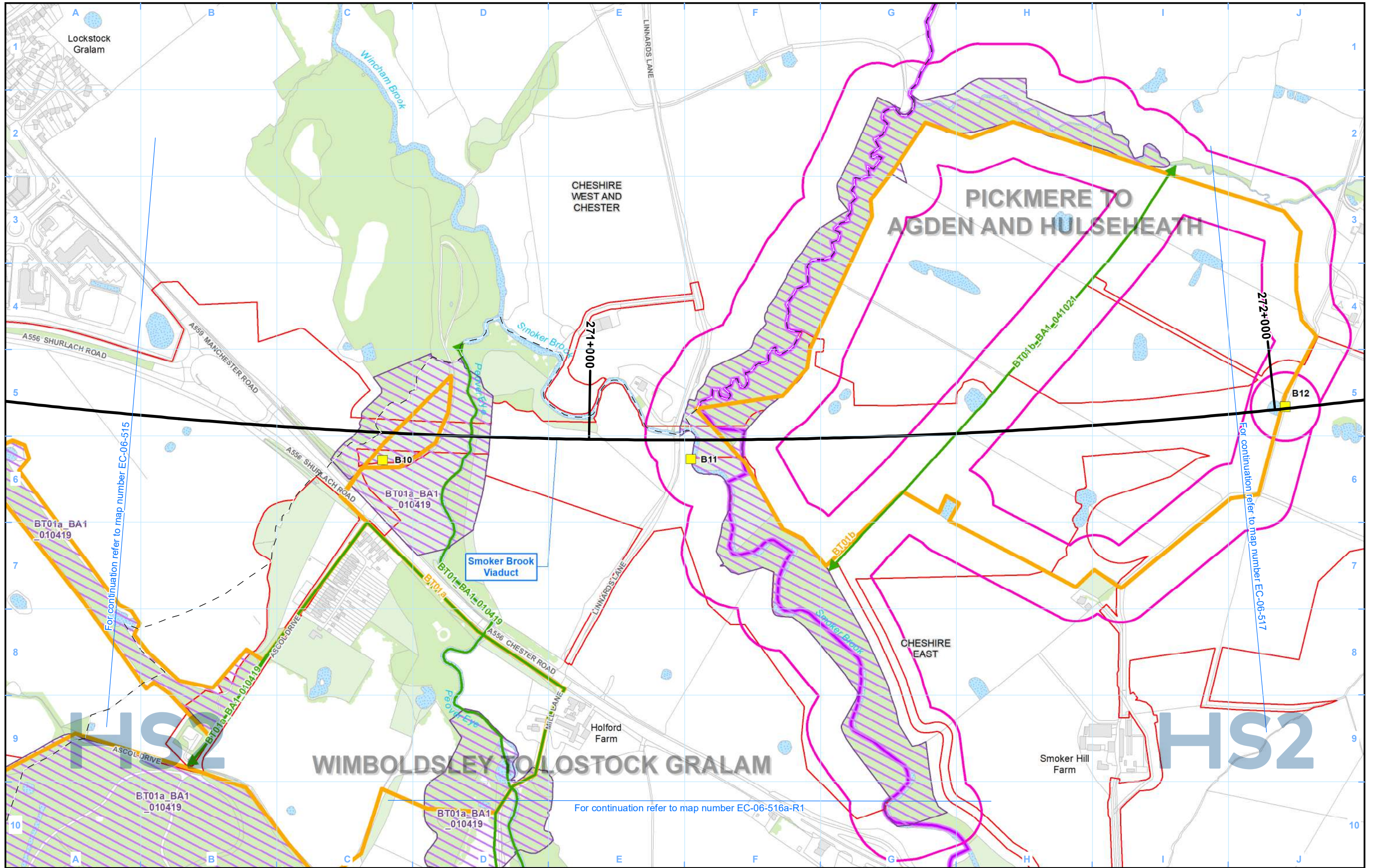
Doc Number: 2PT27-MWJ-EV-MAP-M000-001054-P01

Scale at A3: 1:5,000

0 50 100 150 200  
Metres

Date: 31/03/23





**Legend**

Route in tunnel	Watercourse	Bat activity static detector location
Route on surface	Water body	Activity transect route
Depot, station, headhouse or portal building	Woodland (verified by survey)	Assumed key commuting route
Land potentially required during construction	Area contains new survey data	Assumed key areas of foraging habitat
Community area boundary		
County boundary		
District/Borough boundary		

Map Number	EC-06-516a
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA02: Wimboldsley to Lostock Gralam	

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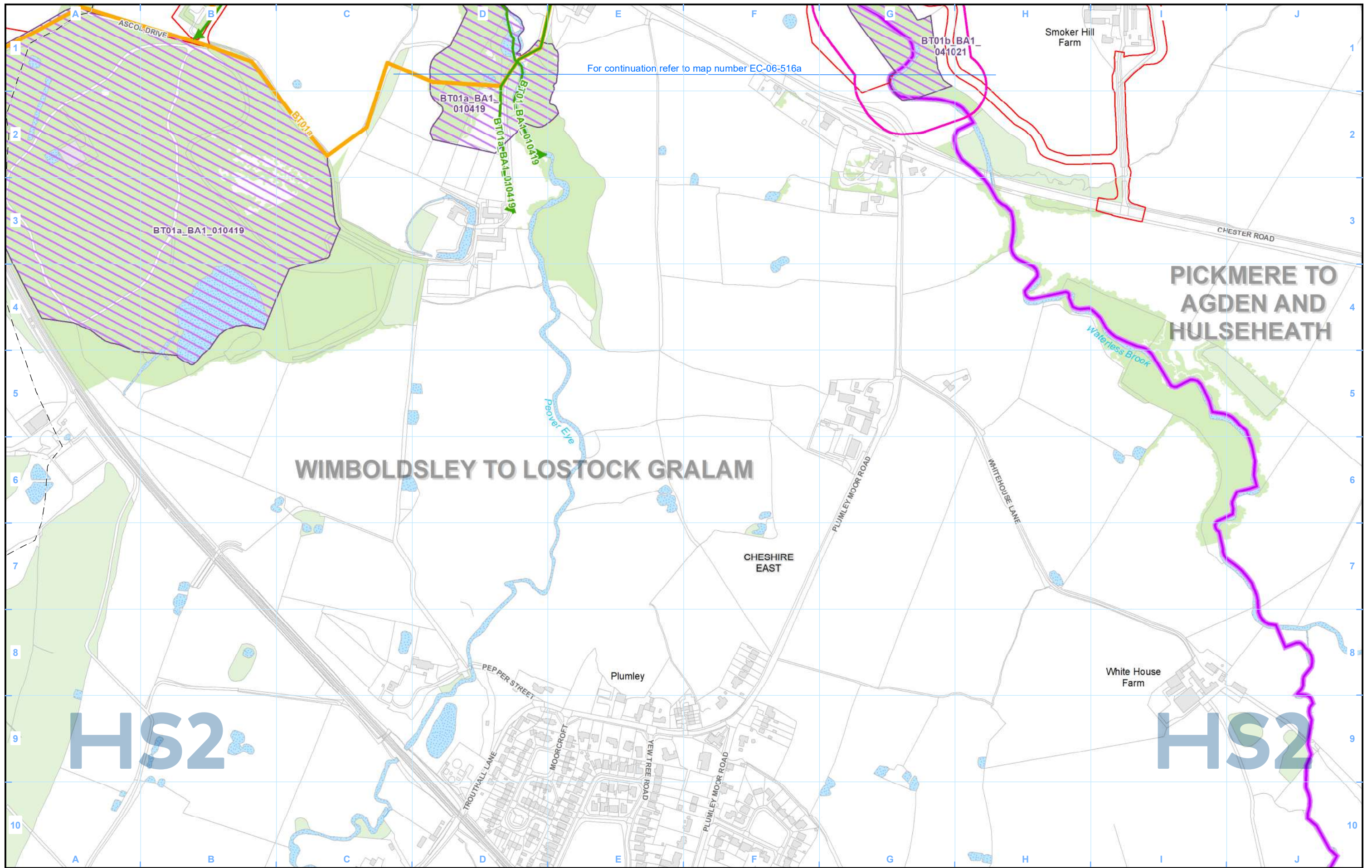
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001055-P01

Date: 31/03/23





For continuation refer to map number EC-06-516a

# WIMBOLDSLEY TO LOSTOCK GRALAM

# PICKMERE TO AGDEN AND HULSEHEATH

**Legend**

Route in tunnel	Watercourse	Bat activity static detector location
Route on surface	Water body	Activity transect route
Depot, station, headhouse or portal building	Woodland (verified by survey)	Assumed key commuting route
Land potentially required during construction	Area contains new survey data	Assumed key areas of foraging habitat
Community area boundary		
County boundary		
District/Borough boundary		

Map Number	EC-06-516a-R1
Map Name	Bat - Activity SES2 and AP2 ES
	Community Area MA02: Wimboldsley to Lostock Gralam

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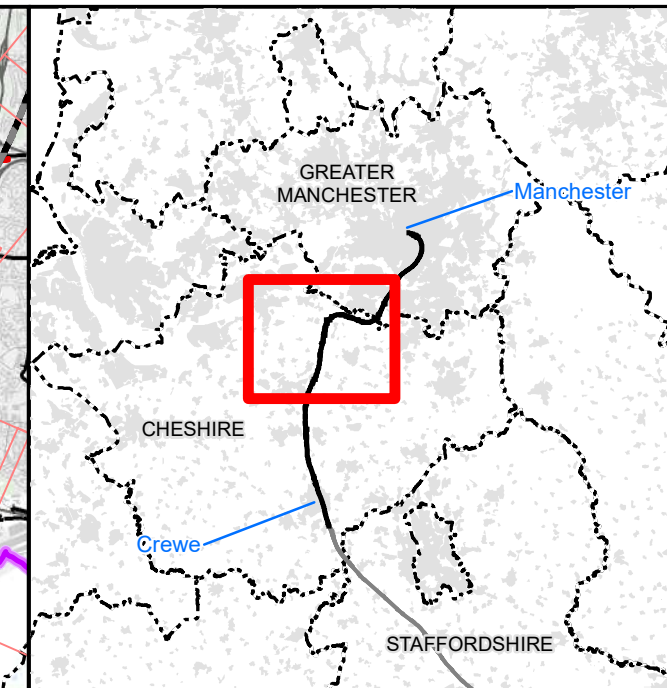
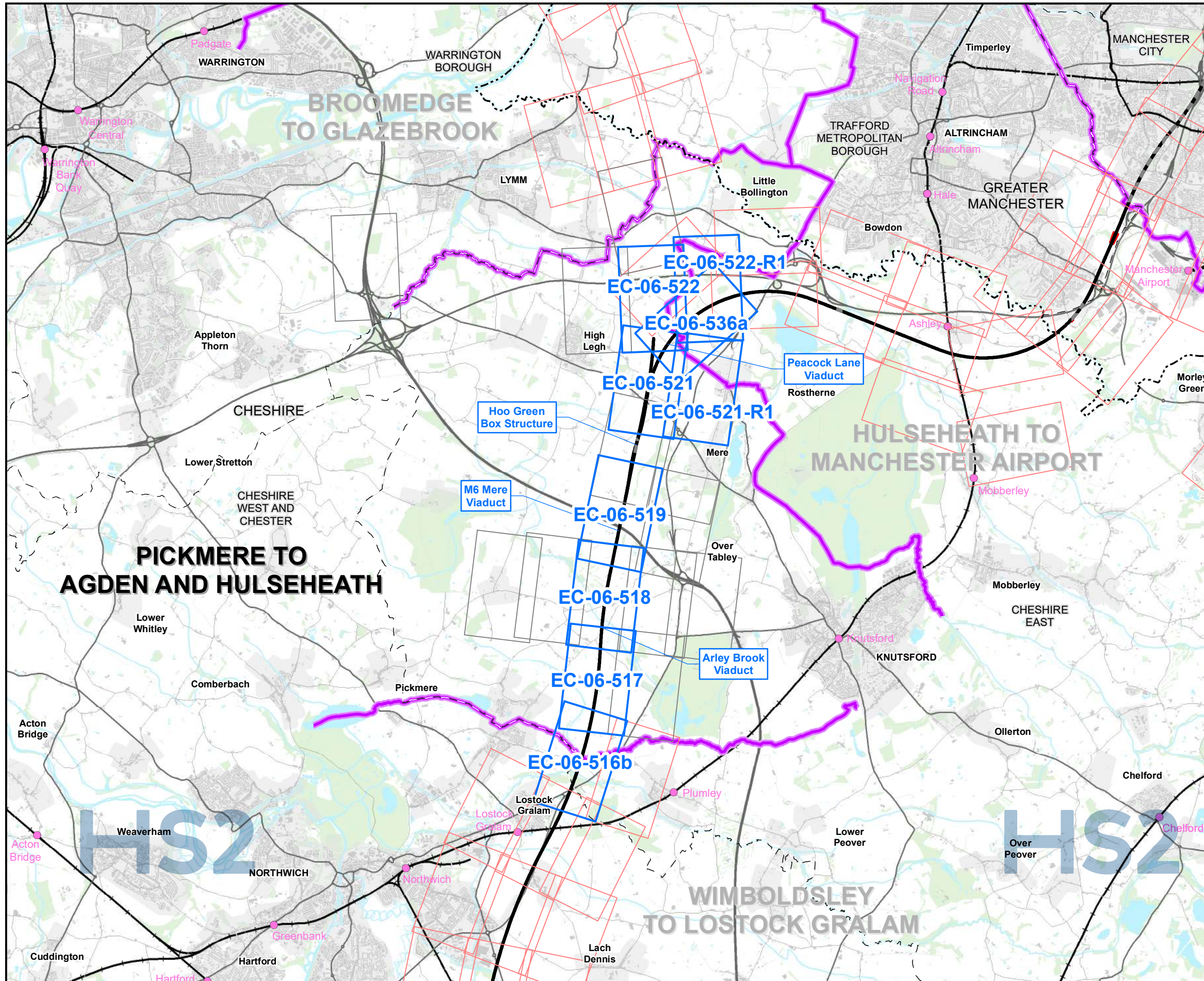
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Scale at A3: 1:5,000

Doc Number: 2PT27-MWJ-EV-MAP-M000-002743-P01

Date: 31/03/23





**Map Series Information:**

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.

- 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-06-INDEX-MA03

Map Name: Index Map of:  
Bat - Activity  
SES2 and AP2 ES  
Community Area MA03:  
Pickmere to Agden and Hulseheath

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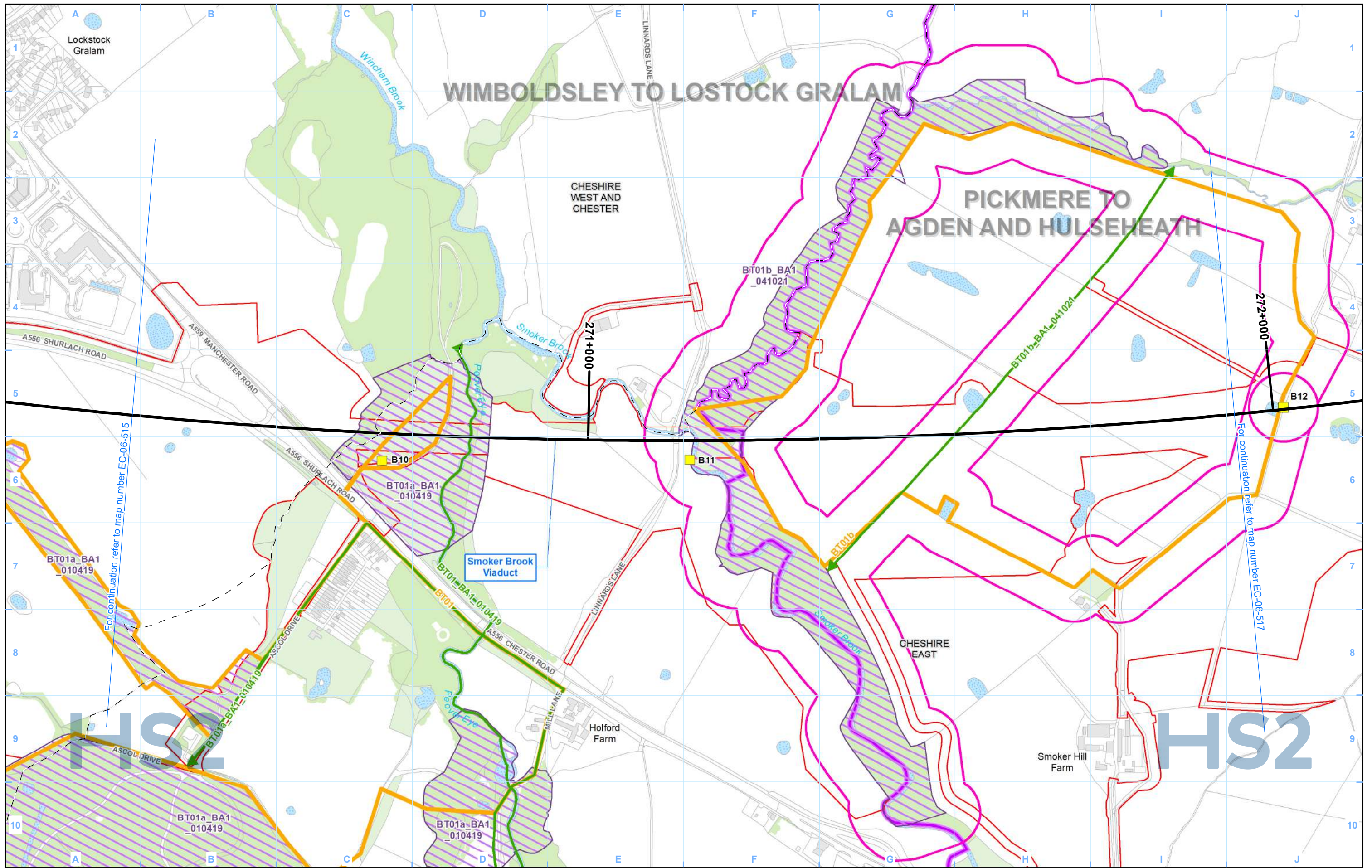
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001103-P01

Date: 31/03/23

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





**Legend**

Route in tunnel	Watercourse	Bat activity static detector location
Route on surface	Water body	Activity transect route
Depot, station, headhouse or portal building	Woodland (verified by survey)	Assumed key commuting route
Land potentially required during construction	Area contains new survey data	Assumed key areas of foraging habitat
Community area boundary		
County boundary		
District/Borough boundary		

Map Number	EC-06-516b
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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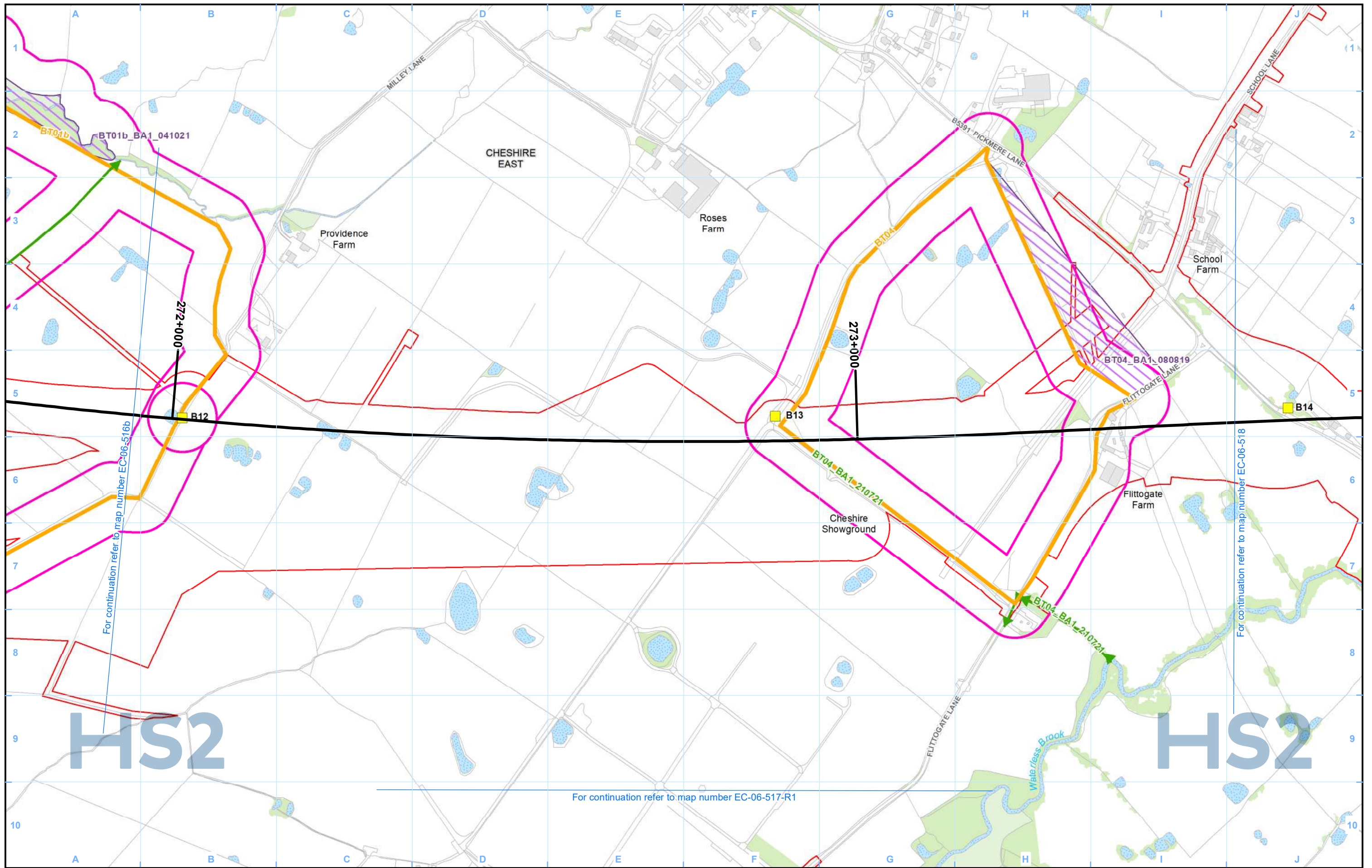
Doc Number: 2PT27-MWJ-EV-MAP-M000-001056-P01

Scale at A3: 1:5,000

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Metres

Date: 31/03/23





**Legend**

Route in tunnel	Watercourse	Bat activity static detector location
Route on surface	Water body	Activity transect route
Depot, station, headhouse or portal building	Woodland (verified by survey)	Assumed key commuting route
Land potentially required during construction	Area contains new survey data	Assumed key areas of foraging habitat
Community area boundary		
County boundary		
District/Borough boundary		

Map Number	EC-06-517
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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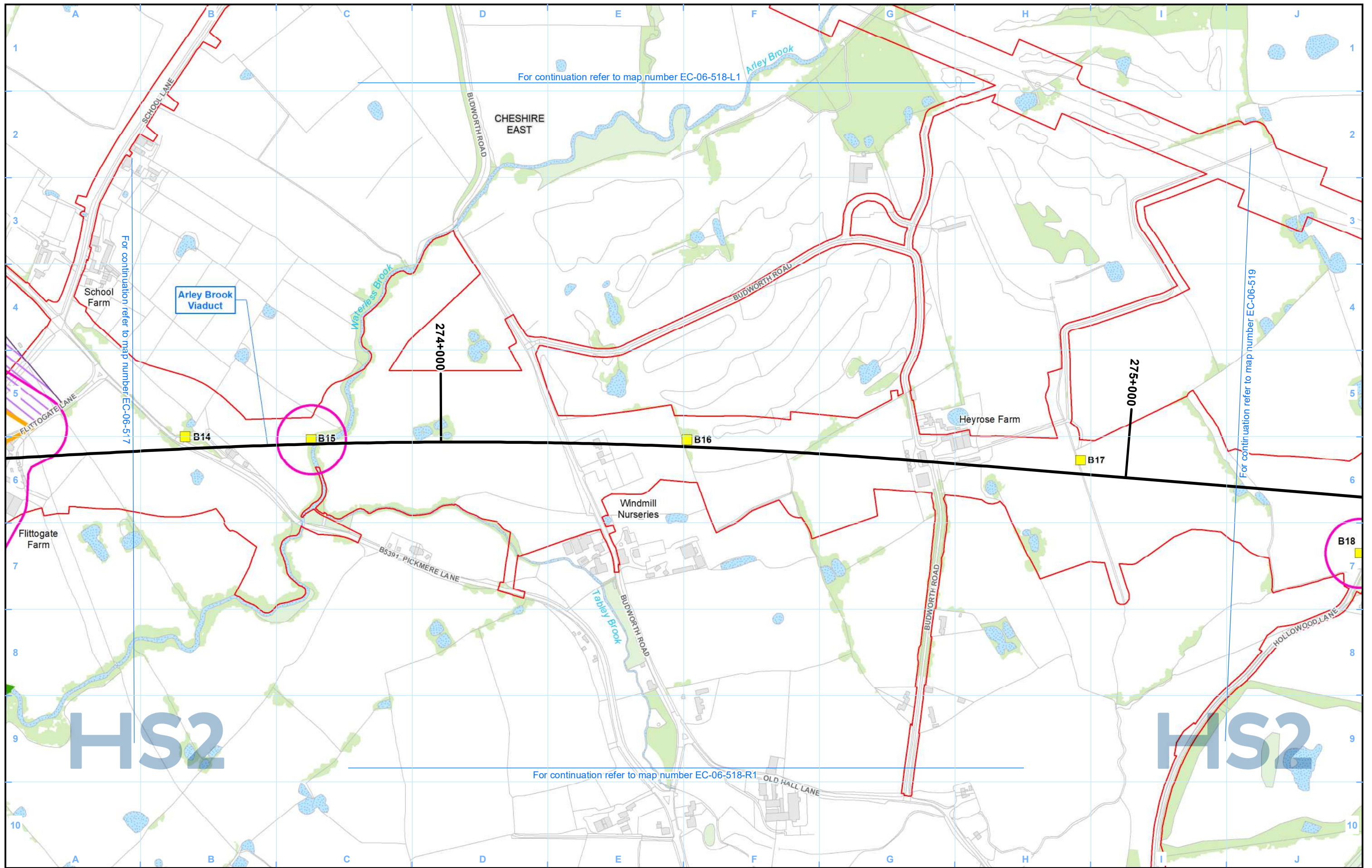
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Scale at A3: 1:5,000

Doc Number: 2PT27-MWJ-EV-MAP-M000-001057-P01

Date: 31/03/23





For continuation refer to map number EC-06-518-L1

For continuation refer to map number EC-06-517

For continuation refer to map number EC-06-519

For continuation refer to map number EC-06-518-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 (verified by survey)
  - Area contains new survey data
  - Bat activity static detector location
  - Activity transect route
  - Assumed key commuting route
  - Assumed key areas of foraging habitat

Map Number	EC-06-518
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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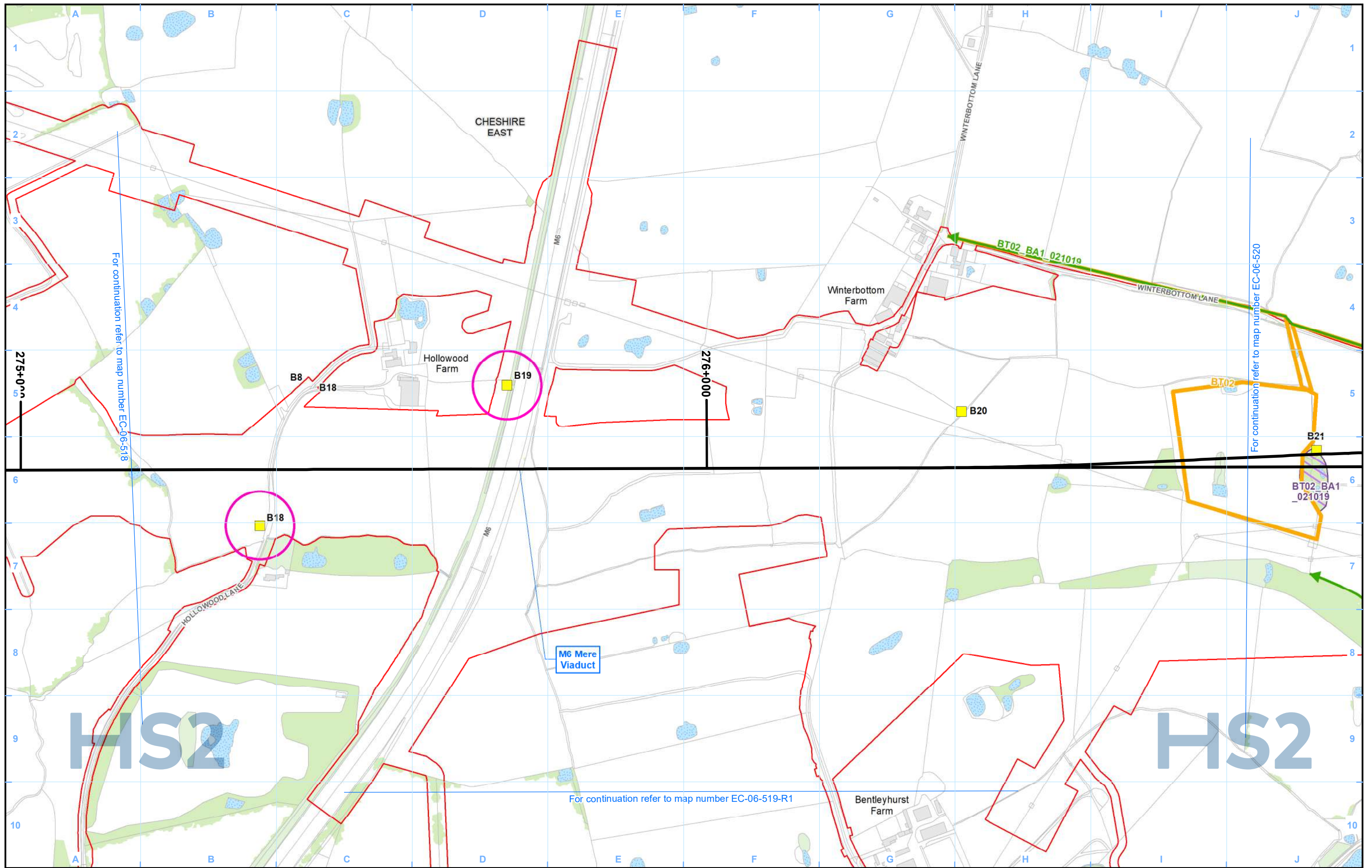
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Scale at A3: 1:5,000

Metres

Date: 31/03/23





**Legend**

Route in tunnel	Watercourse	Bat activity static detector location
Route on surface	Water body	Activity transect route
Depot, station, headhouse or portal building	Woodland (verified by survey)	Assumed key commuting route
Land potentially required during construction	Area contains new survey data	Assumed key areas of foraging habitat
Community area boundary		
County boundary		
District/Borough boundary		

Map Number	EC-06-519
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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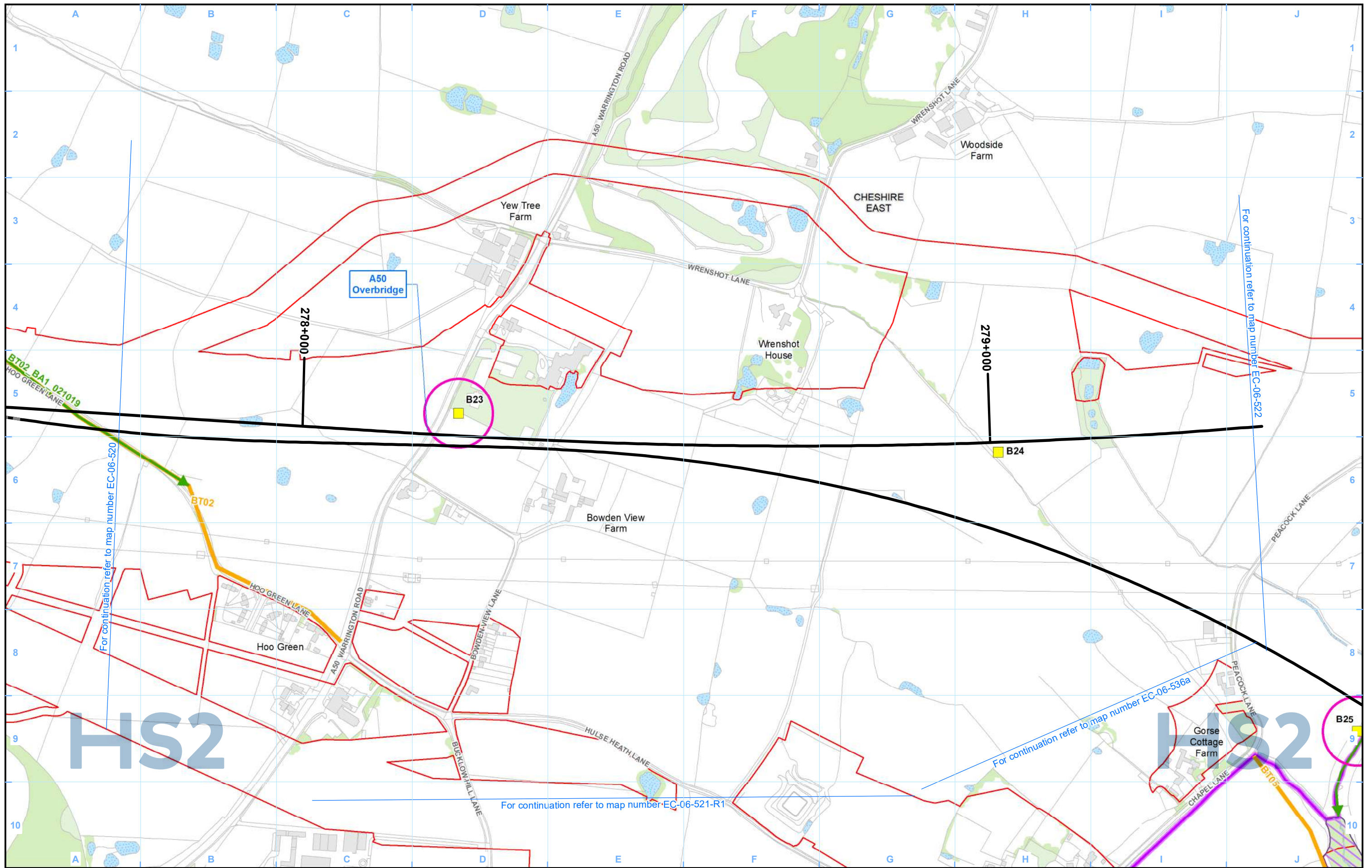
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001059-P01

Date: 31/03/23





Legend			
	Route in tunnel		Bat activity static detector location
	Route on surface		Activity transect route
	Depot, station, headhouse or portal building		Assumed key commuting route
	Land potentially required during construction		Area contains new survey data
	Community area boundary		Assumed key areas of foraging habitat
	County boundary		
	District/Borough boundary		
	Watercourse		
	Water body		
	Woodland (verified by survey)		

Map Number	EC-06-521
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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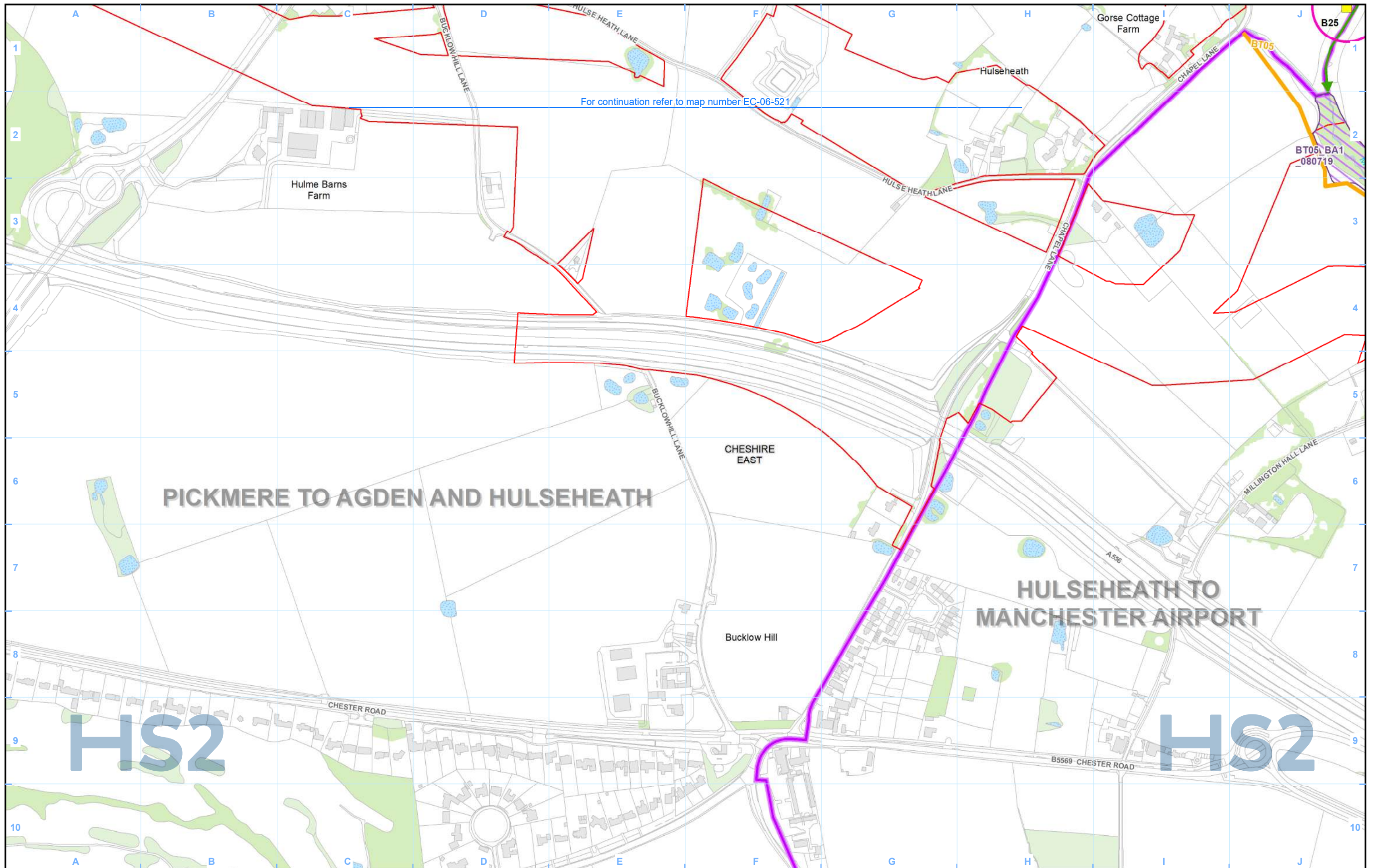
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Scale at A3: 1:5,000

Metres

Date: 31/03/23





**Legend**

Route in tunnel	Watercourse	Bat activity static detector location
Route on surface	Water body	Activity transect route
Depot, station, headhouse or portal building	Woodland (verified by survey)	Assumed key commuting route
Land potentially required during construction	Area contains new survey data	Assumed key areas of foraging habitat
Community area boundary		
County boundary		
District/Borough boundary		

Map Number	EC-06-521-R1
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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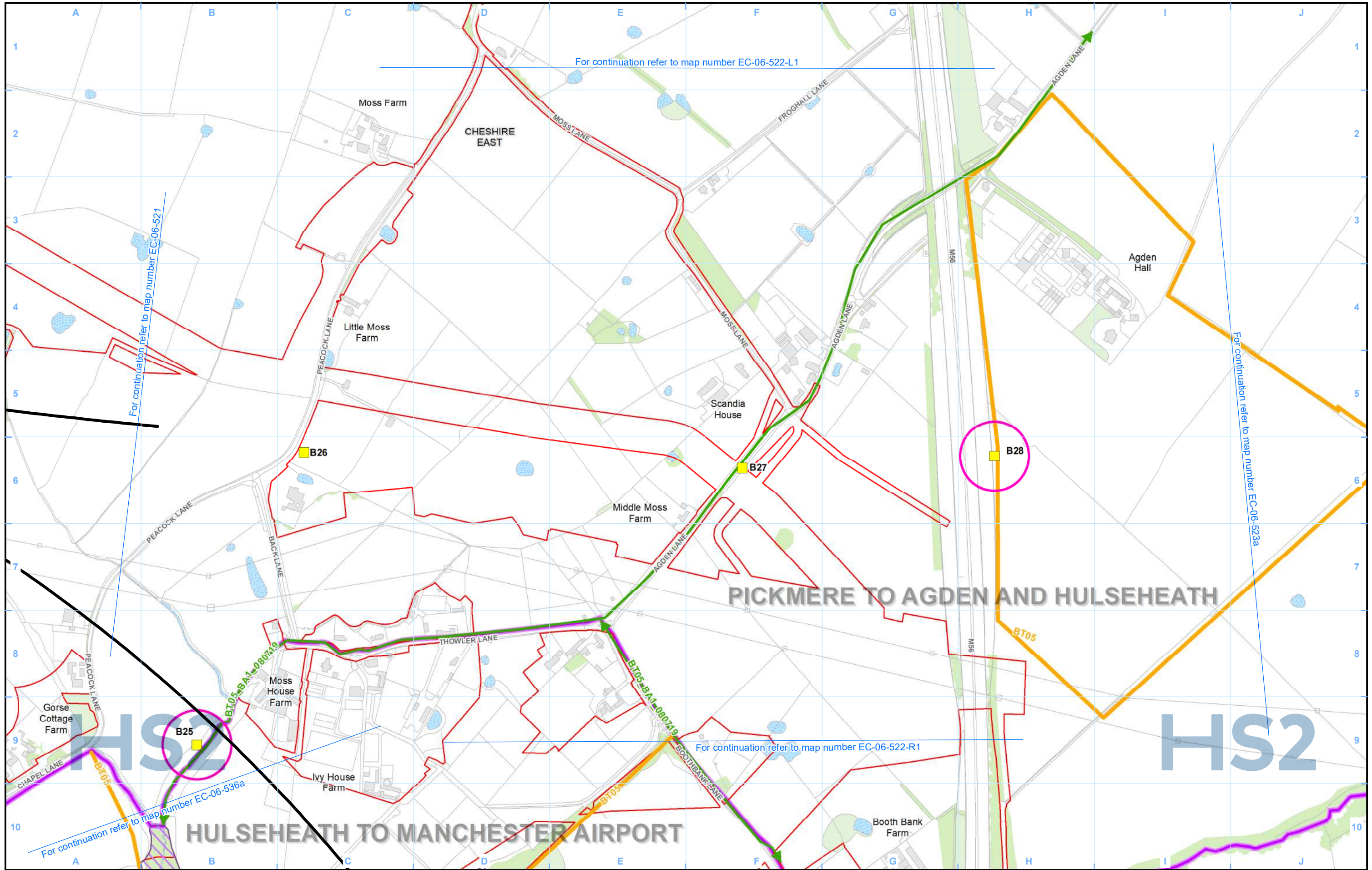
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Doc Number: 2PT27-MWJ-EV-MAP-M000-003185-P01

Date: 31/03/23





For continuation refer to map number EC-06-522-L1

For continuation refer to map number EC-06-521

For continuation refer to map number EC-06-523a

For continuation refer to map number EC-06-522-R1

For continuation refer to map number EC-06-536a

Legend			
	Route in tunnel		Bat activity static detector location
	Route on surface		Activity transect route
	Depot, station, headhouse or portal building		Assumed key commuting route
	Land potentially required during construction		Area contains new survey data
	Community area boundary		Assumed key areas of foraging habitat
	County boundary		Watercourse
	District/Borough boundary		Water body
			Woodland (verified by survey)

Map Number	EC-06-522
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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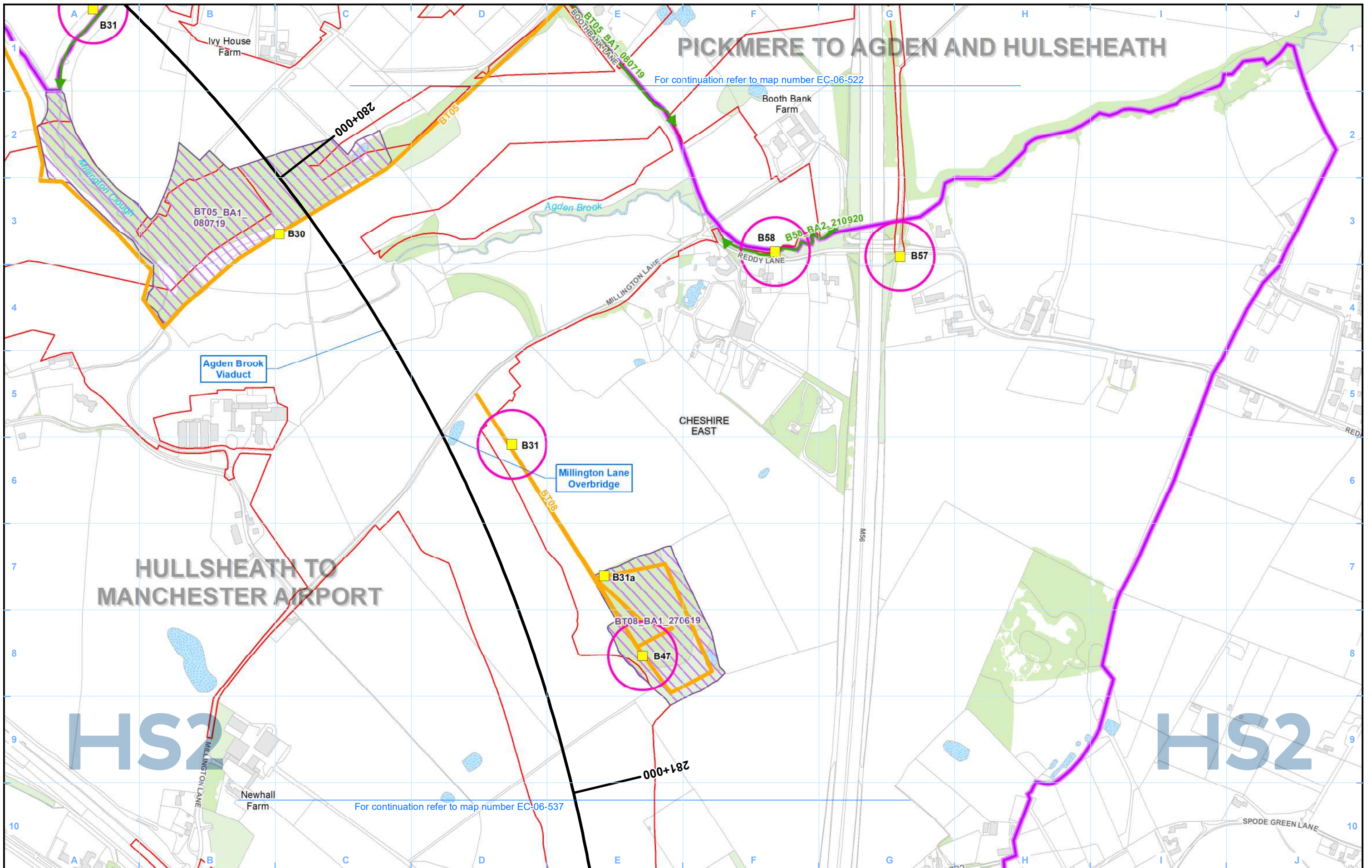
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# PICKMERE TO AGDEN AND HULSEHEATH

For continuation refer to map number EC-06-522



- 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
  - Bat activity static detector location
  - Activity transect route
  - Assumed key commuting route
  - Assumed key areas of foraging habitat

Map Number EC-06-522-R1

Map Name **Bat - Activity SES2 and AP2 ES**

Community Area MA03:  
Pickmere to Agden and Hulseheath

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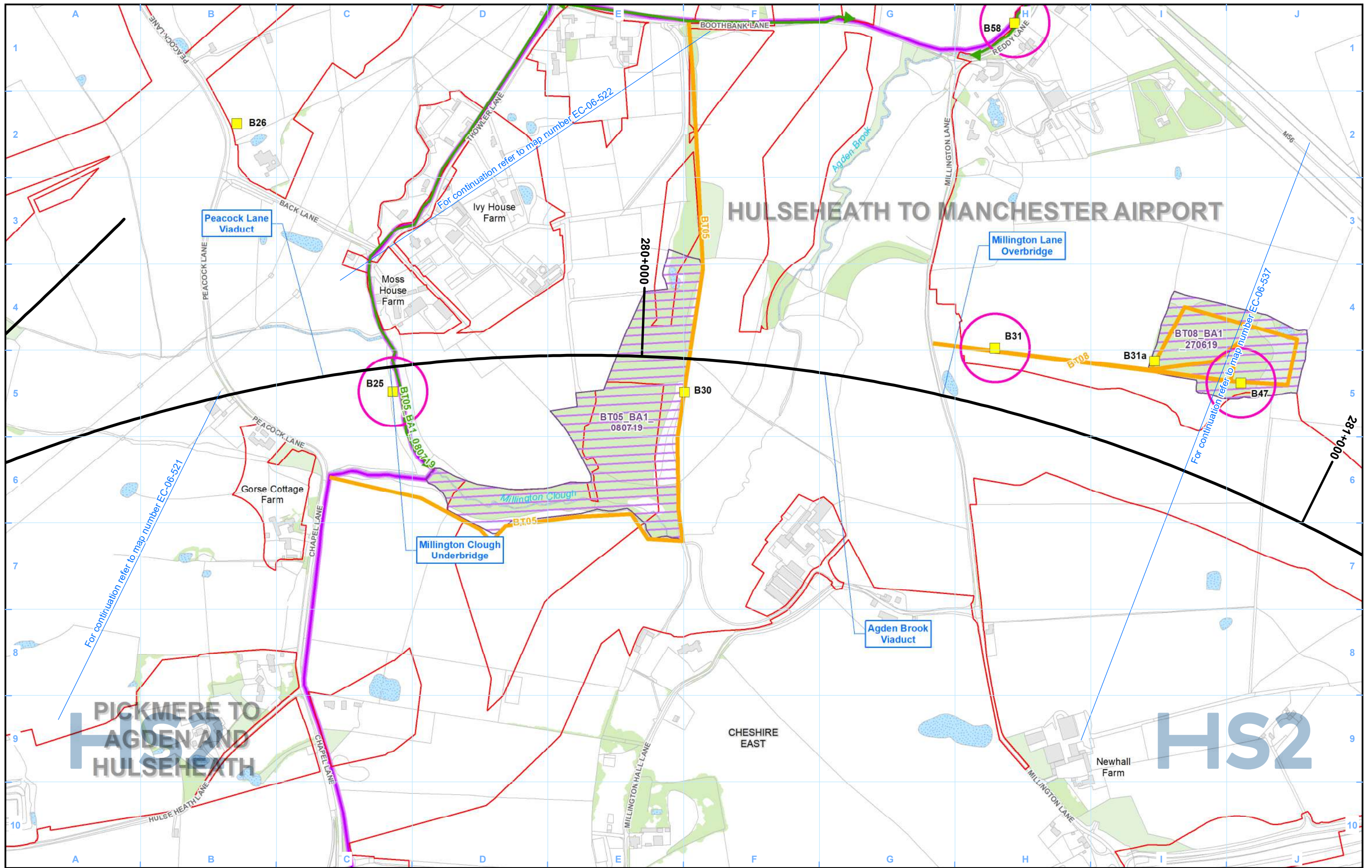
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Date: 31/03/23





Legend			
	Route in tunnel		Bat activity static detector location
	Route on surface		Activity transect route
	Depot, station, headhouse or portal building		Assumed key commuting route
	Land potentially required during construction		Assumed key areas of foraging habitat
	Community area boundary		Watercourse
	County boundary		Water body
	District/Borough boundary		Woodland (verified by survey)
	Area contains new survey data		

Map Number	EC-06-536a
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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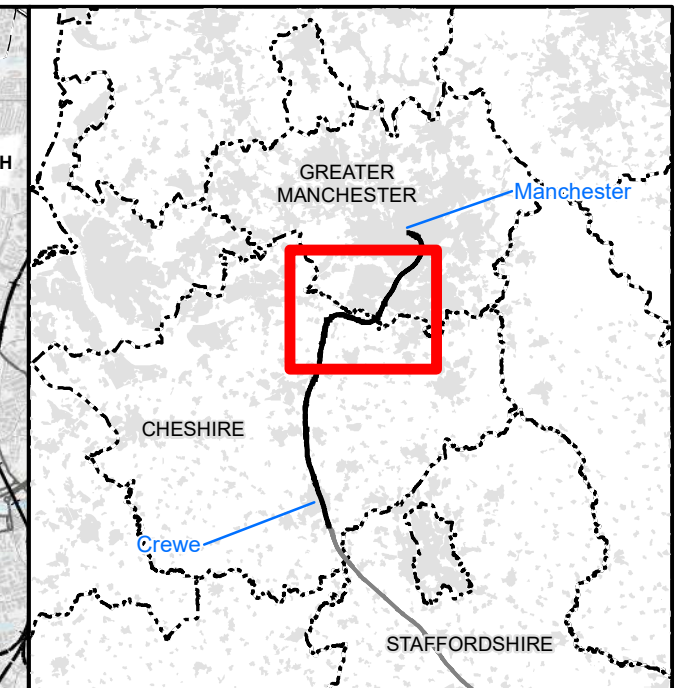
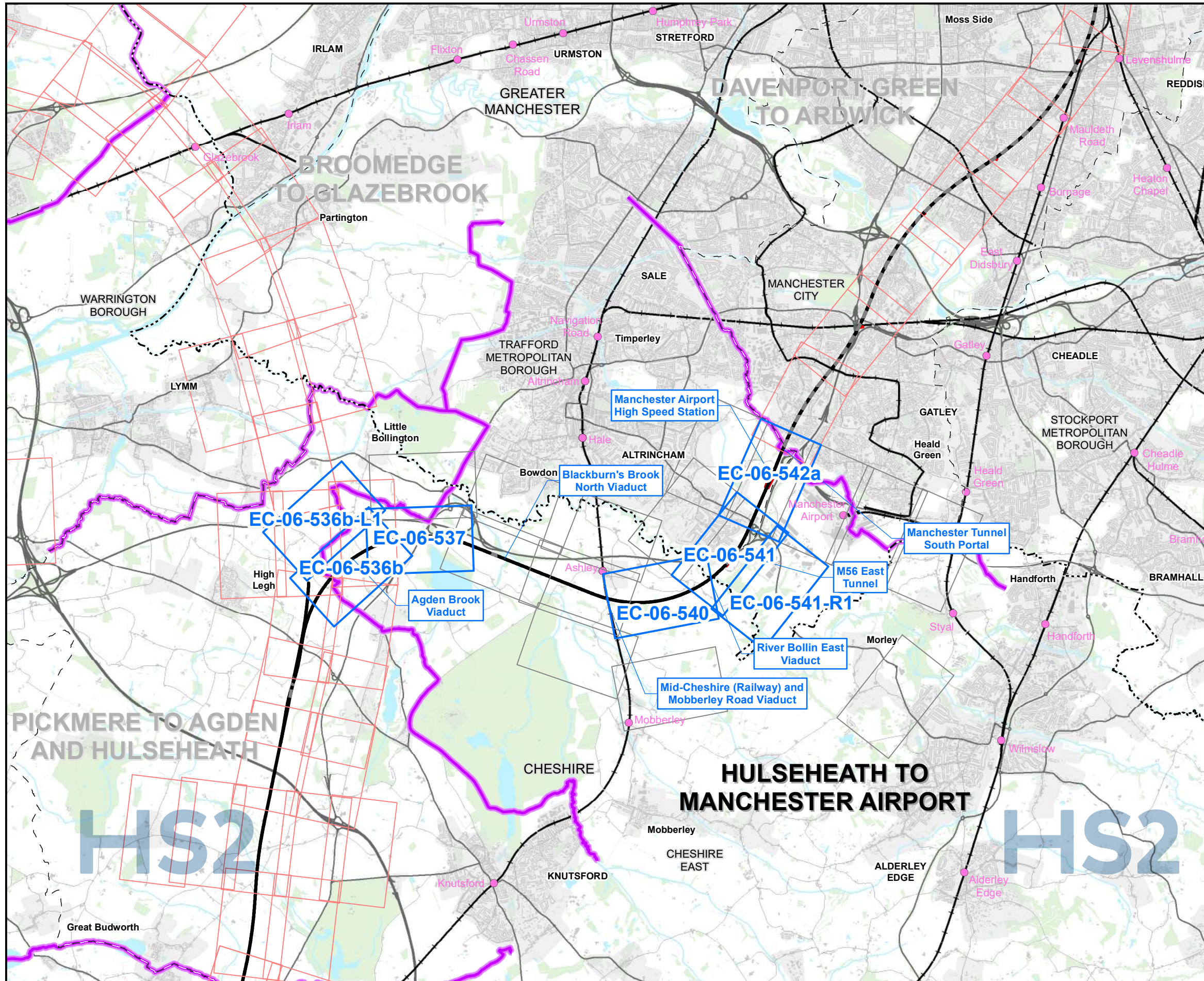
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001078-P01

Date: 31/03/23





**Map Series Information:**

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.

**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-06-INDEX-MA06
Map Name	Index Map of: Bat - Activity SES2 and AP2 ES Community Area MA06: Hulseheath to Manchester Airport

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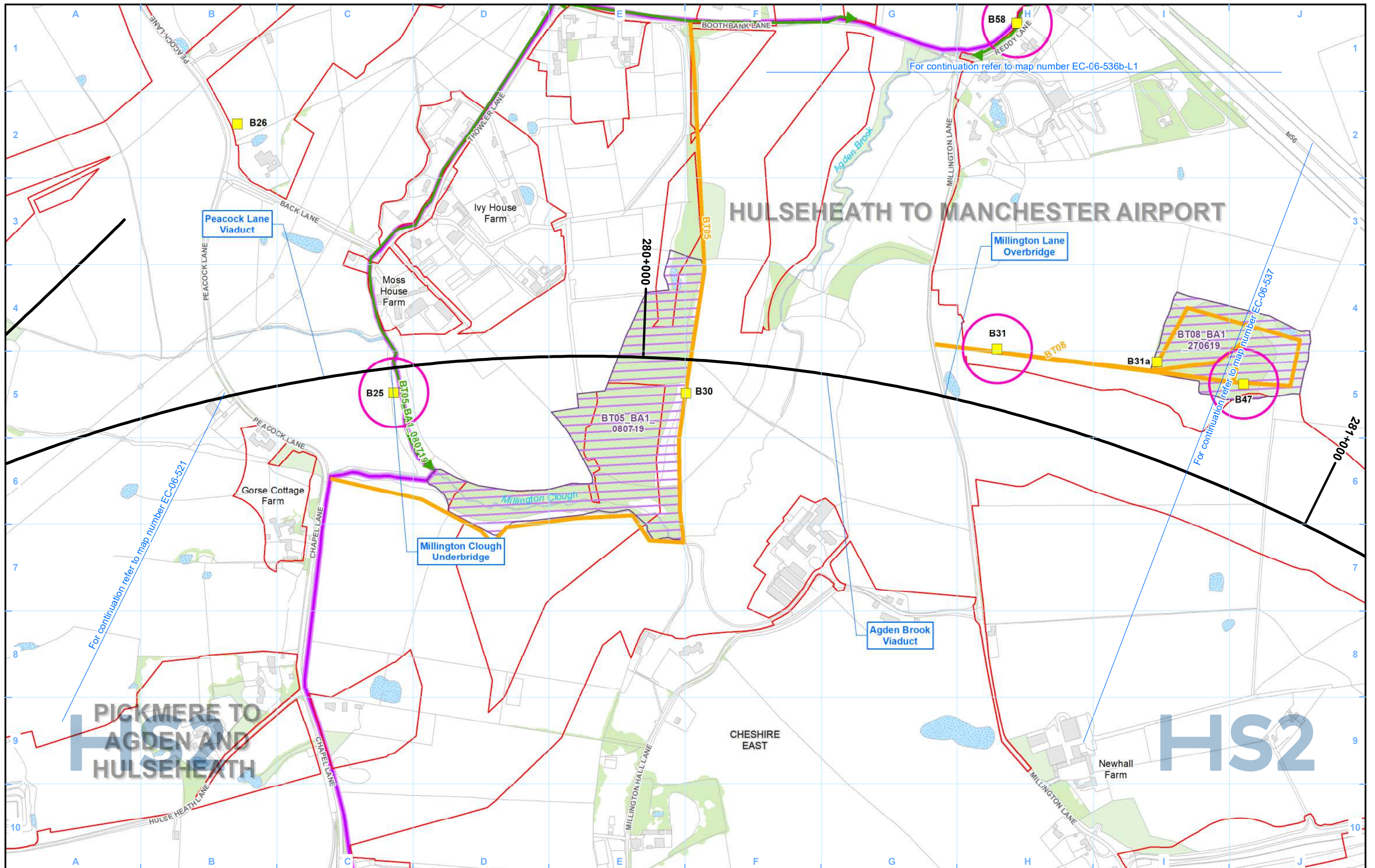
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Scale at A3: 1:75,000

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Doc Number: 2PT27-MWJ-EV-MAP-M000-001106-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
- Bat activity static detector location
- Activity transect route
- Assumed key commuting route
- Assumed key areas of foraging habitat

Map Number	EC-06-536b
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA06: Hulseheath to Manchester Airport	

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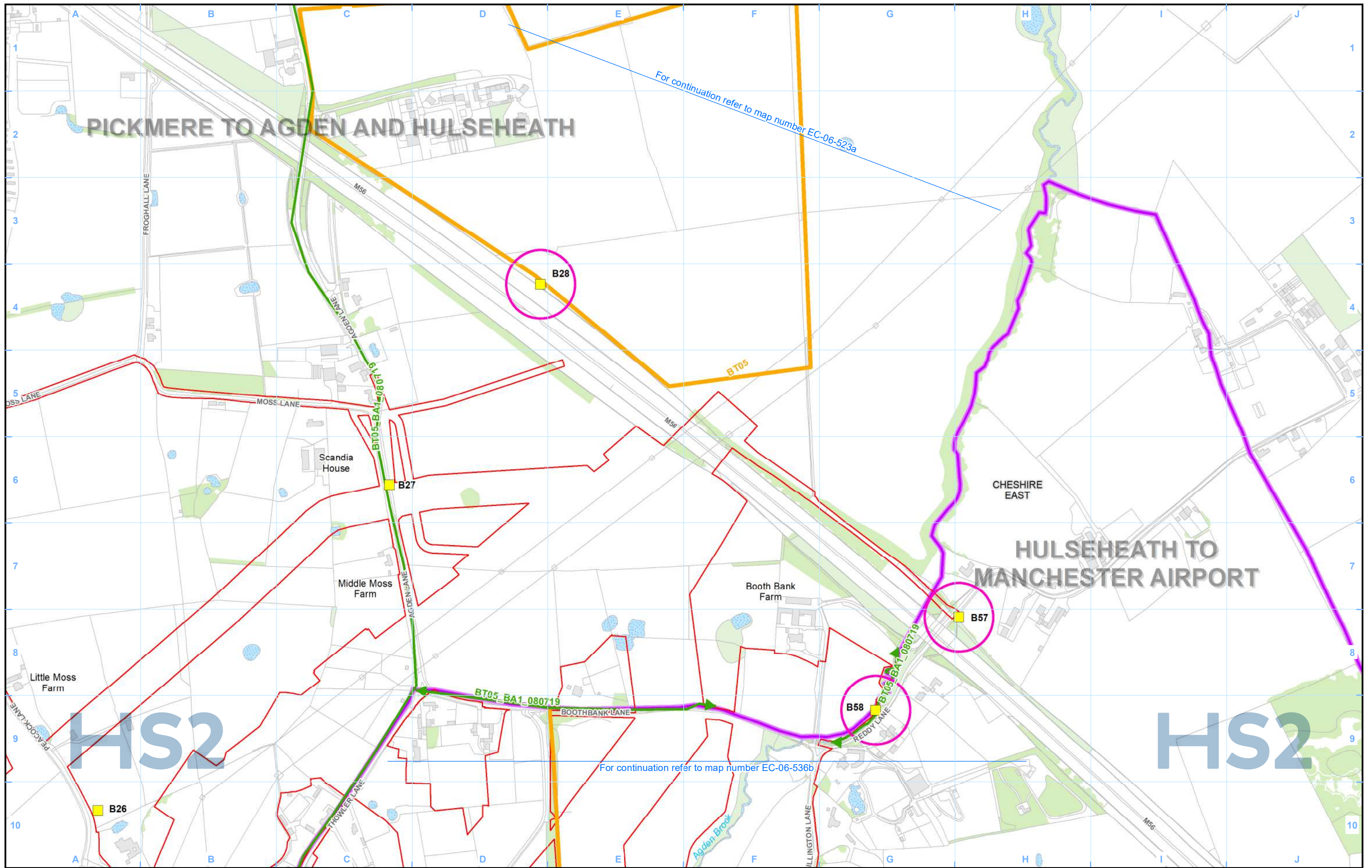
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001079-P01

Date: 31/03/23





For continuation refer to map number EC-06-523a

For continuation refer to map number EC-06-536b

Legend		

Map Number	EC-06-536b-L1
Map Name	Bat - Activity SES2 and AP2 ES
	Community Area MA06: Hulseheath to Manchester Airport

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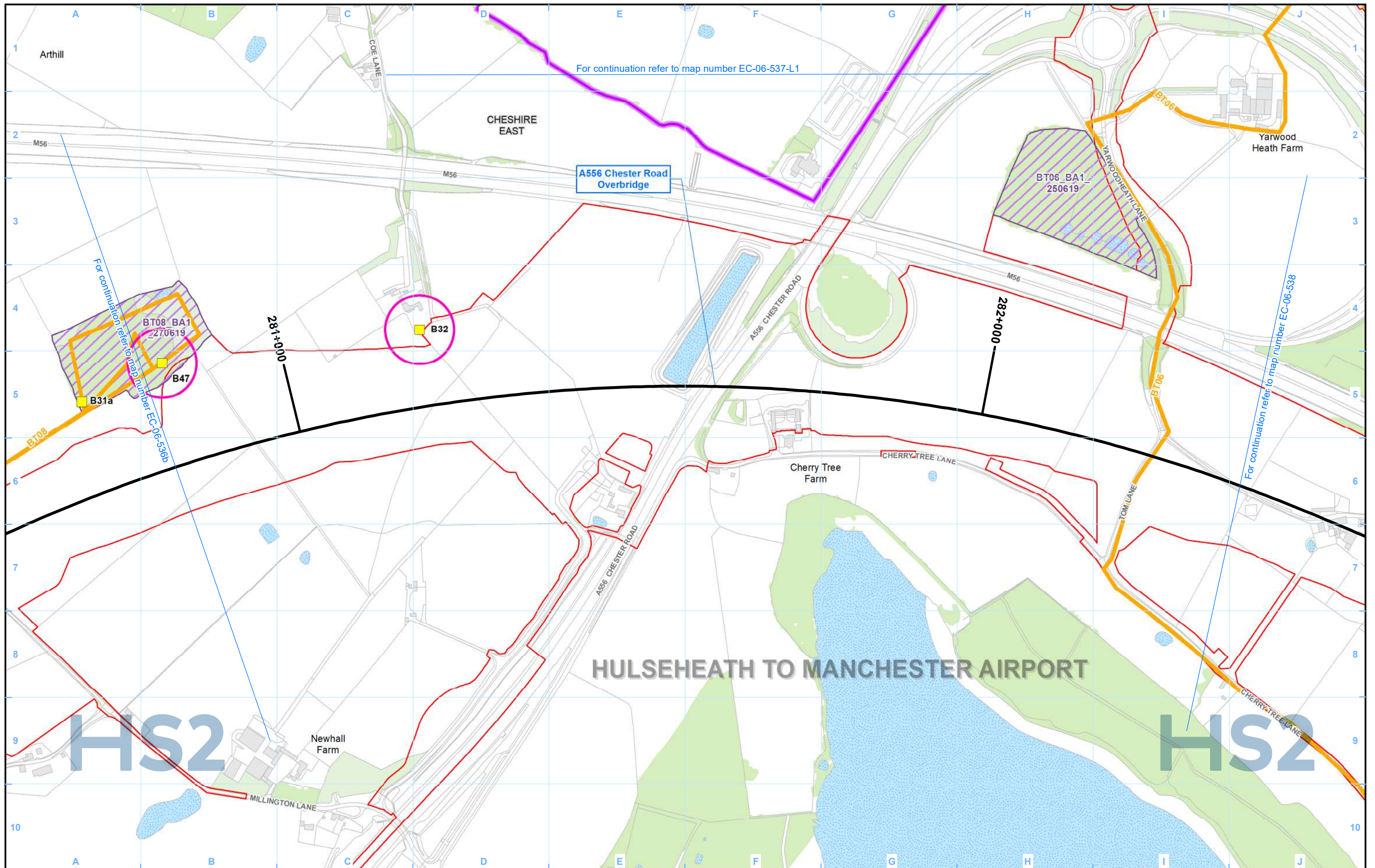
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Scale at A3: 1:5,000

Metres

Date: 31/03/23





Legend			
	Route in tunnel		Bat activity static detector location
	Route on surface		Activity transect route
	Depot, station, headhouse or portal building		Assumed key commuting route
	Land potentially required during construction		Area contains new survey data
	Community area boundary		Assumed key areas of foraging habitat
	County boundary		
	District/Borough boundary		
	Watercourse		
	Water body		
	Woodland (verified by survey)		

Map Number	EC-06-537
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA06: Hulseheath to Manchester Airport	

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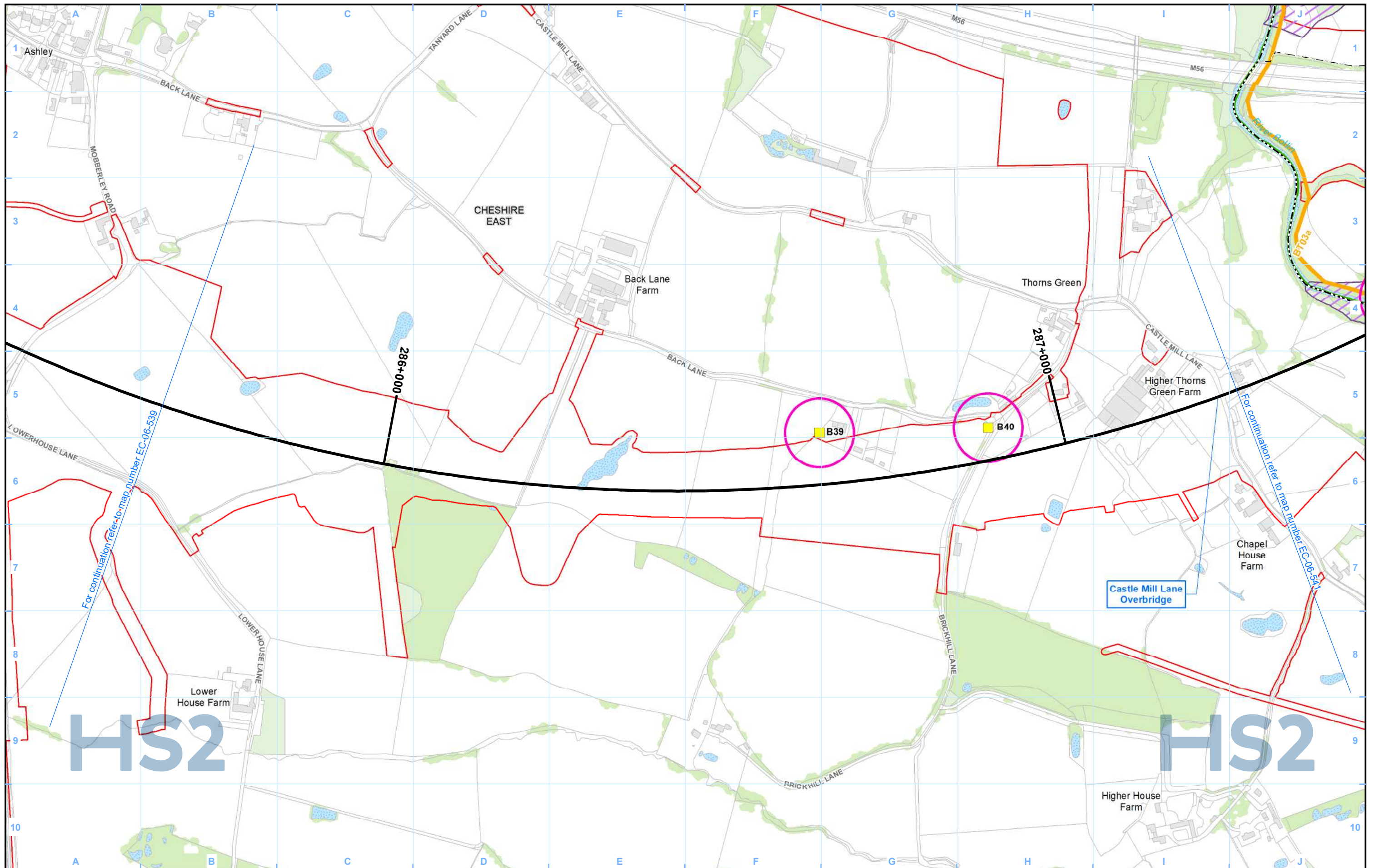
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Scale at A3: 1:5,000

Metres

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
- Bat activity static detector location
- Activity transect route
- Assumed key commuting route
- Assumed key areas of foraging habitat

Map Number	EC-06-540
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA06: Hulseheath to Manchester Airport	

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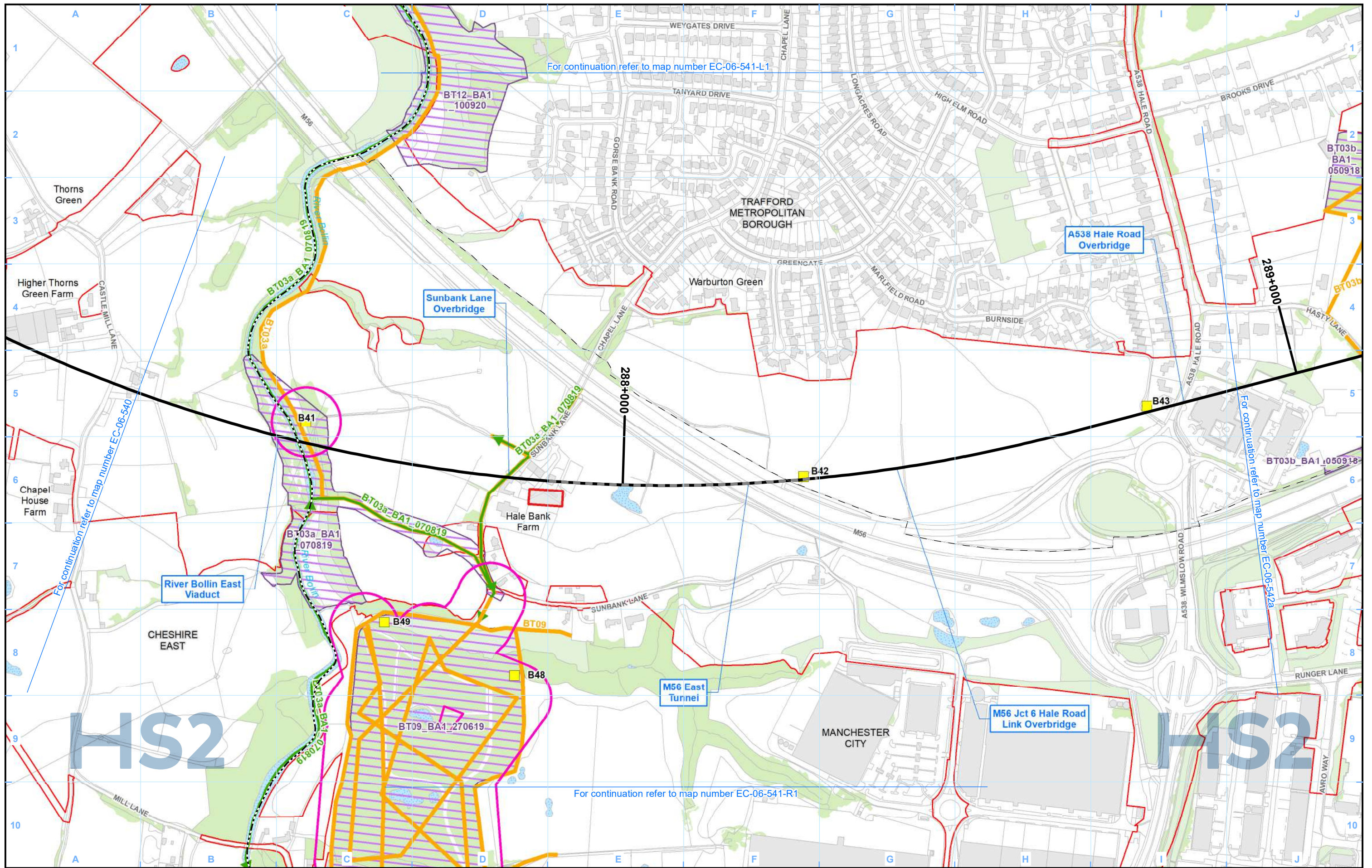
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Legend		

Map Number	EC-06-541
Map Name	Bat - Activity SES2 and AP2 ES
	Community Area MA06: Hulseheath to Manchester Airport

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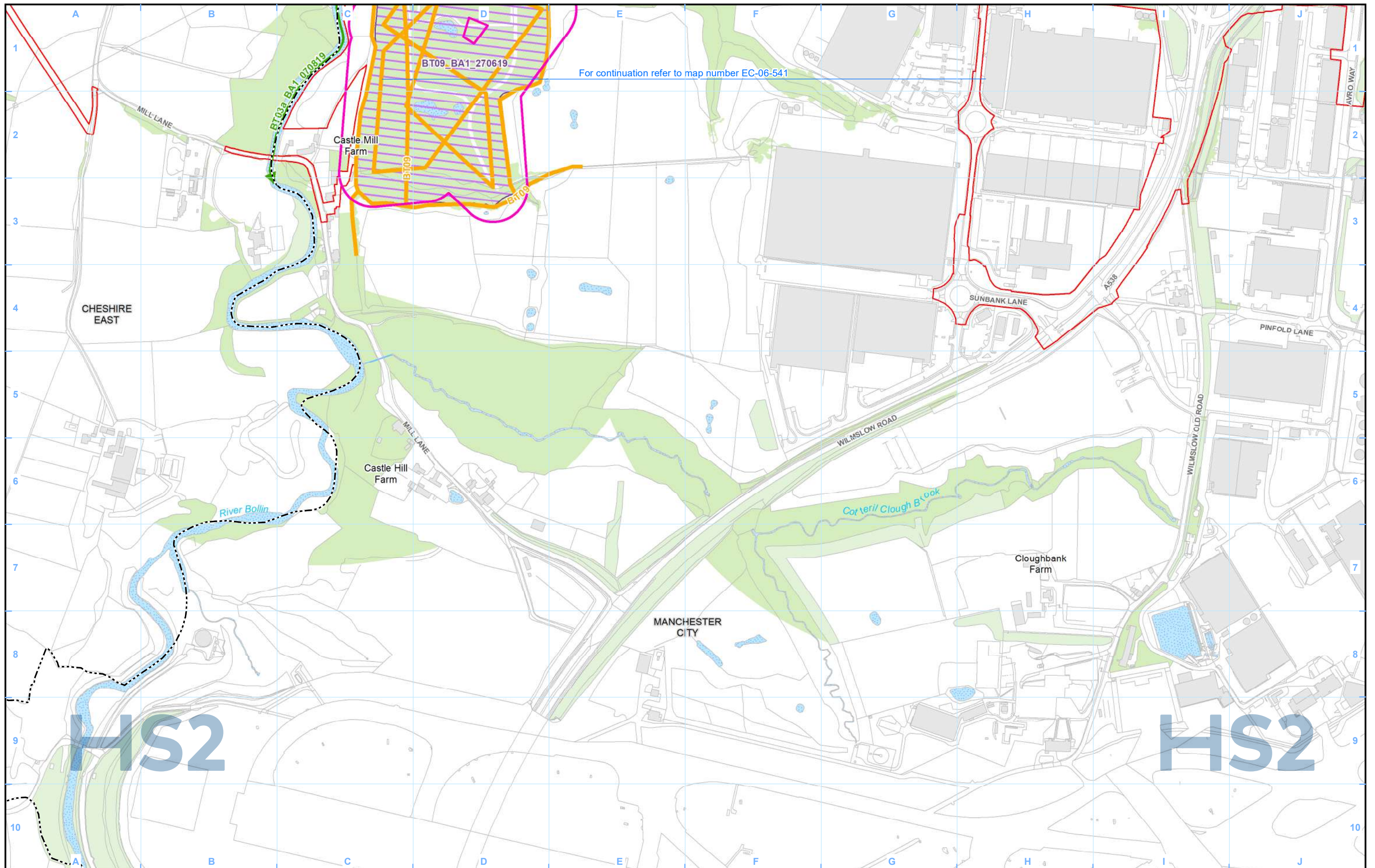
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Scale at A3: 1:5,000

Metres

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
- Bat activity static detector location
- Activity transect route
- Assumed key commuting route
- Assumed key areas of foraging habitat

Map Number	EC-06-541-R1
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA06: Hulseheath to Manchester Airport	

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Doc Number: 2PT27-MWJ-EV-MAP-M000-002797-P01

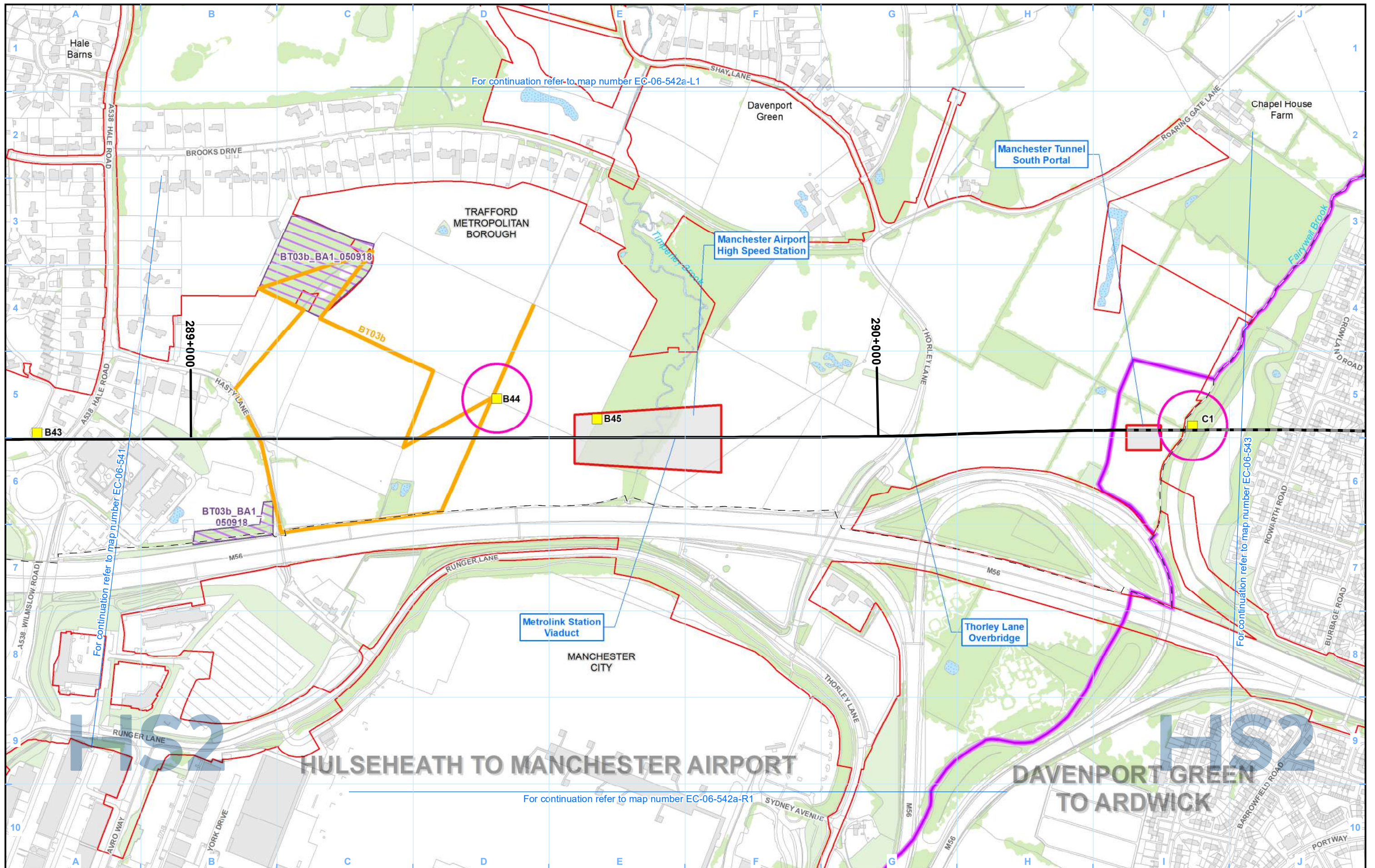
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Legend		

Map Number	EC-06-542a
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA06: Hulseheath to Manchester Airport	

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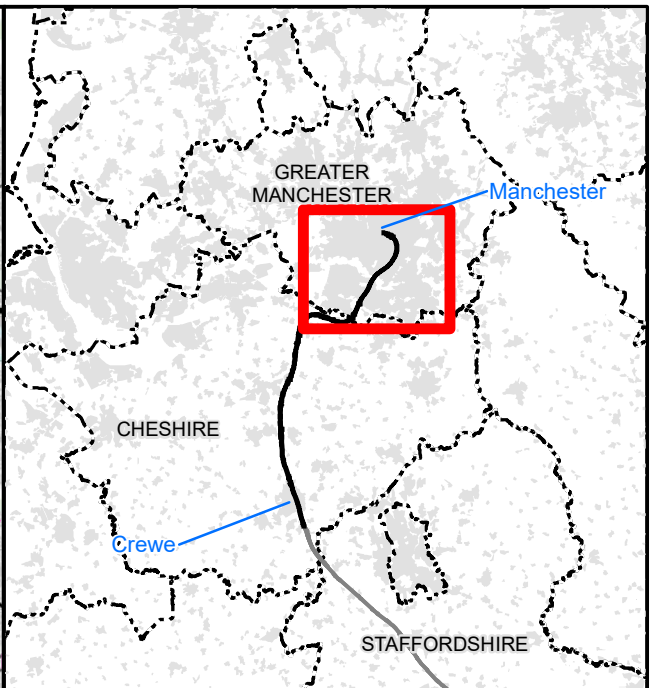
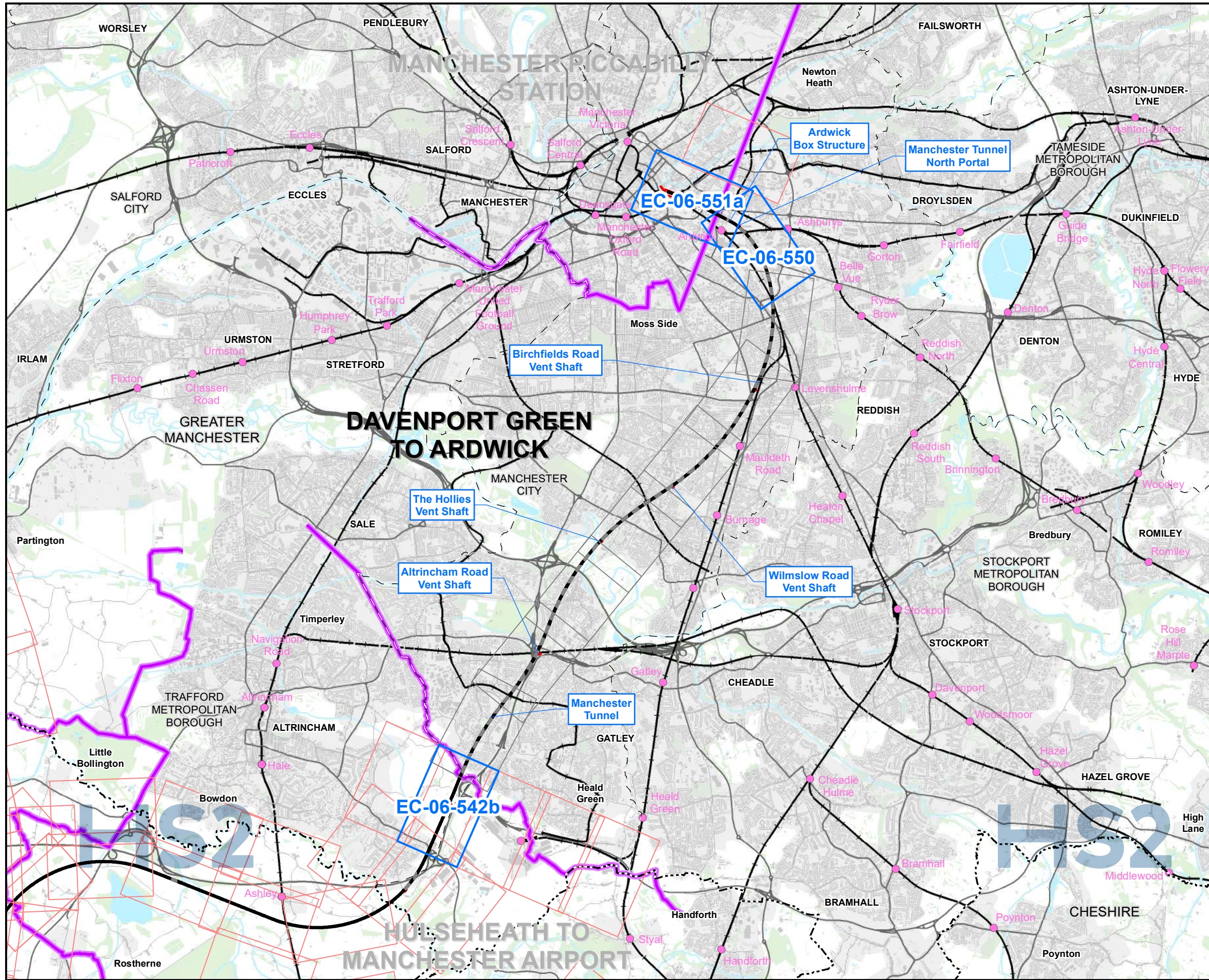
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Date: 31/03/23



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**Map Series Information:**

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.

**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-06-INDEX-MA07

Map Name: Index Map of:  
Bat - Activity  
SES2 and AP2 ES  
Community Area MA07:  
Davenport Green to Ardwick

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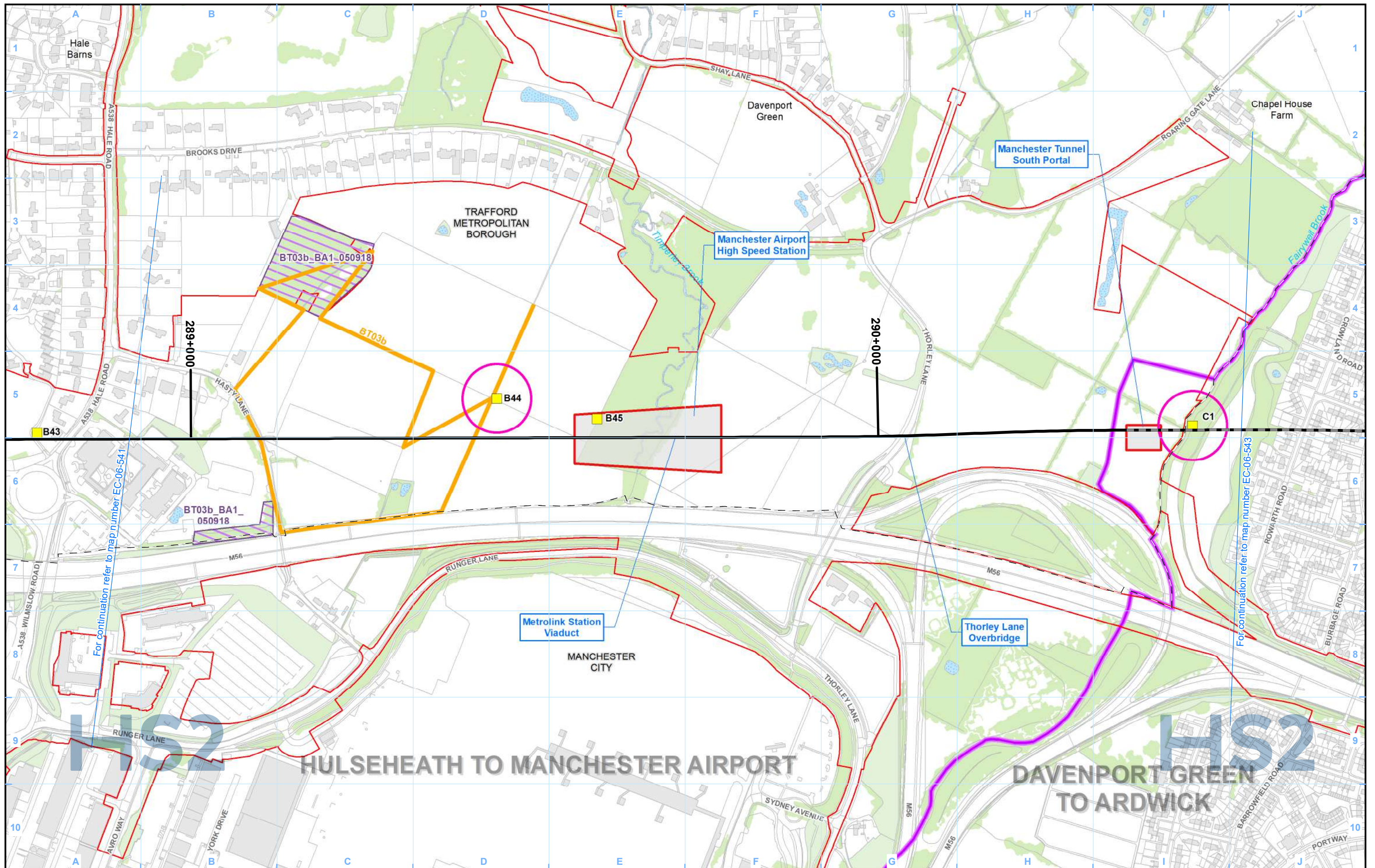
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001107-P01 Date: 31/03/23

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





Legend		

Map Number	EC-06-542b
Map Name	Bat - Activity SES2 and AP2 ES
Community Area MA07: Davenport Green to Ardwick	

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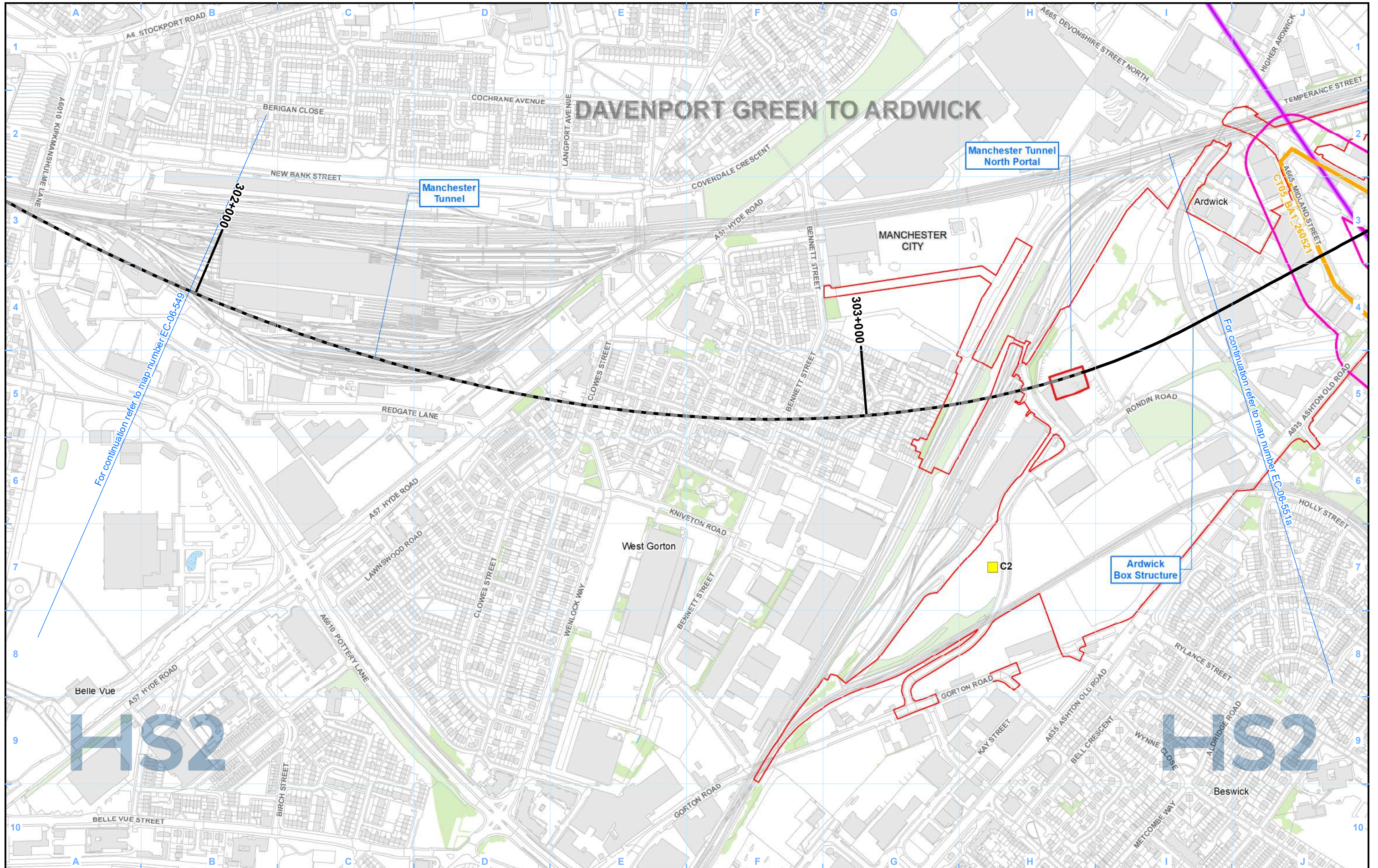
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Scale at A3: 1:5,000

Metres

Date: 31/03/23





Legend					
	Route in tunnel		Watercourse		Bat activity static detector location
	Route on surface		Water body		Activity transect route
	Depot, station, headhouse or portal building		Woodland (verified by survey)		Assumed key commuting route
	Land potentially required during construction		Area contains new survey data		Assumed key areas of foraging habitat
	Community area boundary				
	County boundary				
	District/Borough boundary				

Map Number	EC-06-550
Map Name	Bat - Activity SES2 and AP2 ES
	Community Area MA07: Davenport Green to Ardwick

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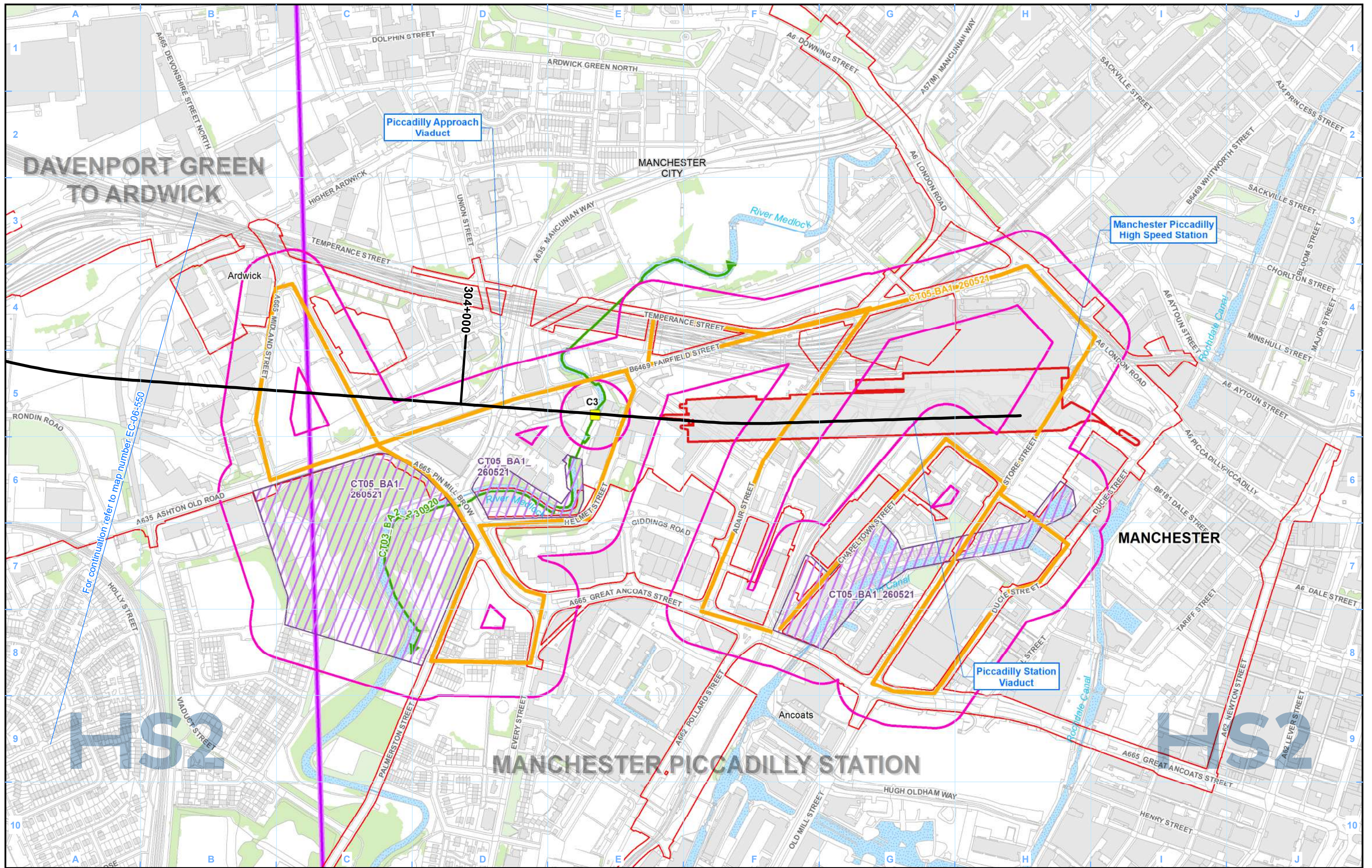
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001094-P01

Date: 31/03/23





Legend			
	Route in tunnel		Bat activity static detector location
	Route on surface		Activity transect route
	Depot, station, headhouse or portal building		Assumed key commuting route
	Land potentially required during construction		Assumed key areas of foraging habitat
	Community area boundary		Watercourse
	County boundary		Water body
	District/Borough boundary		Woodland (verified by survey)
			Area contains new survey data

Map Number	EC-06-551a
Map Name	Bat - Activity SES2 and AP2 ES
	Community Area MA07: Davenport Green to Ardwick

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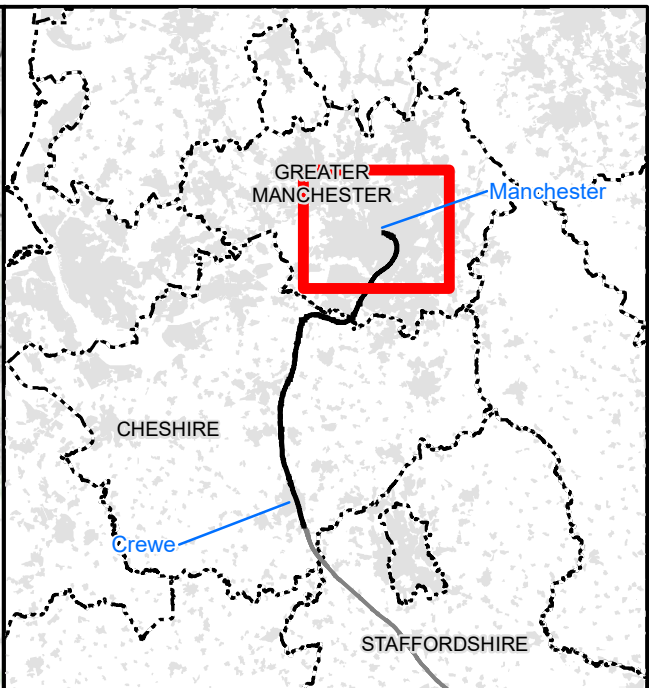
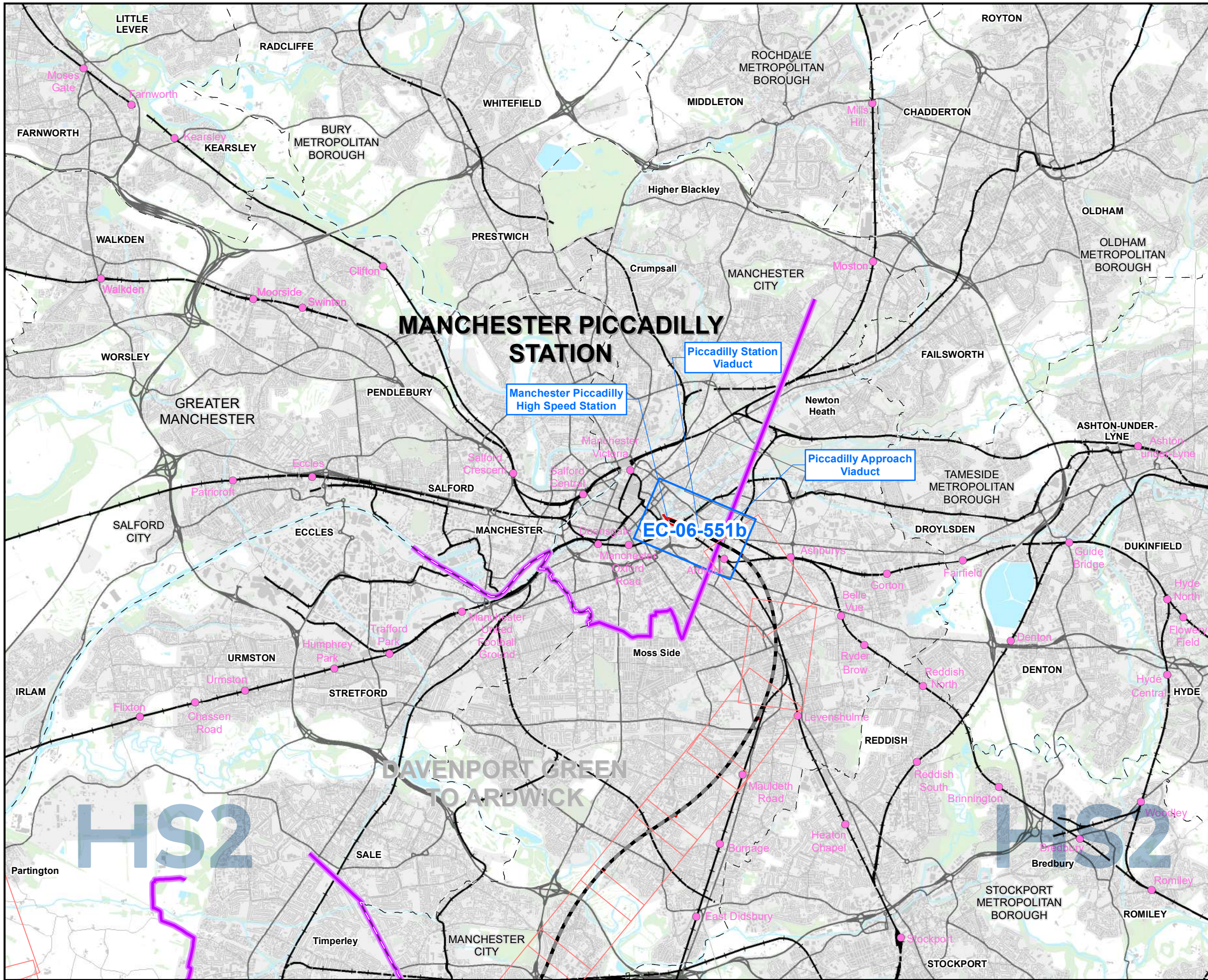
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Scale at A3: 1:5,000

Metres

Date: 31/03/23





**Map Series Information:**

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.

**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-06-INDEX-MA08
Map Name	Index Map of: Bat - Activity SES2 and AP2 ES Community Area MA08: Manchester Piccadilly Station

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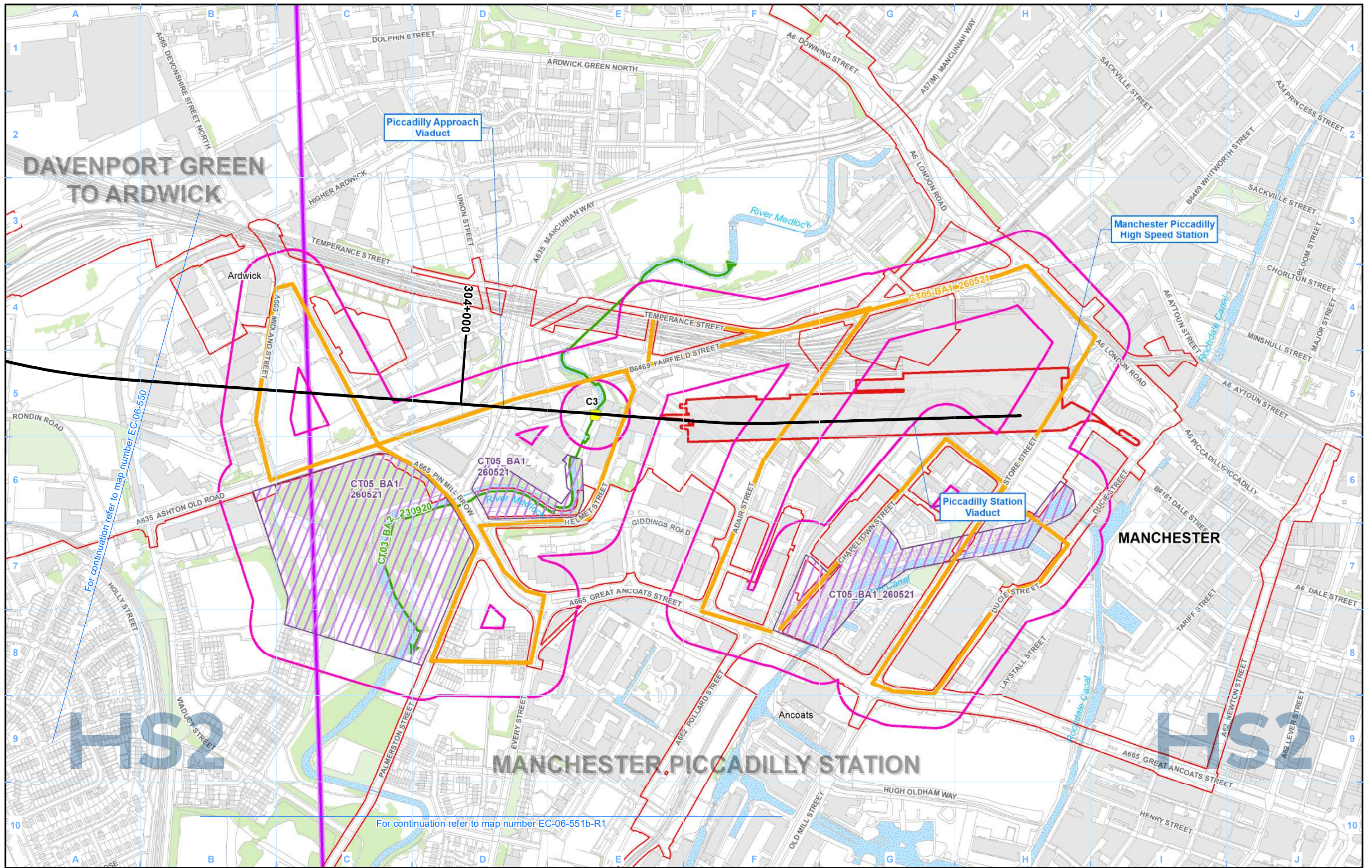
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DAVENPORT GREEN TO ARDWICK

Manchester Piccadilly High Speed Station

Piccadilly Station Viaduct

MANCHESTER PICCADILLY STATION

- 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
  - Bat activity static detector location
  - Activity transect route
  - Assumed key commuting route
  - Assumed key areas of foraging habitat

Map Number	EC-06-551b
Map Name	Bat - Activity SES2 and AP2 ES
	Community Area MA08: Manchester Piccadilly Station

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Doc Number: 2PT27-MWJ-EV-MAP-M000-001096-P01

Scale at A3: 1:5,000

Metres

Date: 31/03/23

For continuation refer to map number EC-06-550

For continuation refer to map number EC-06-551b-R1

304+000

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CT03\_BA2\_230920

CT05\_BA1\_260521

CT05\_BA1\_260521

C3



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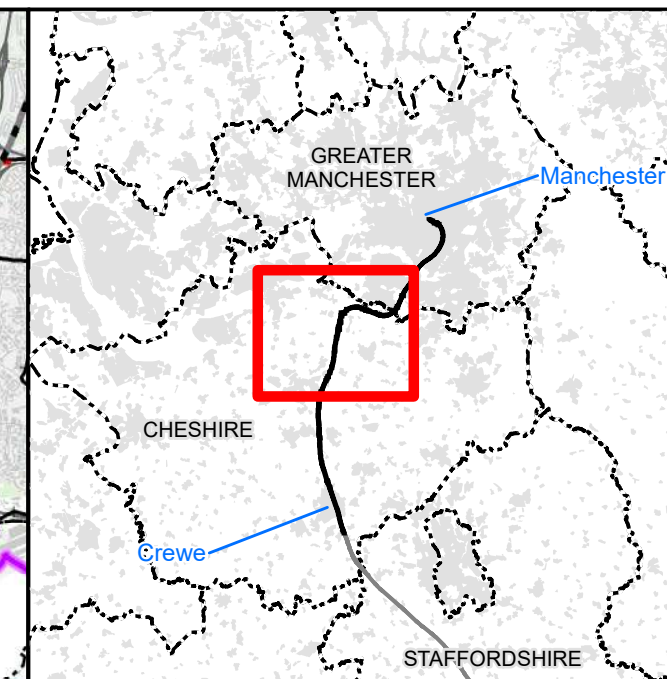
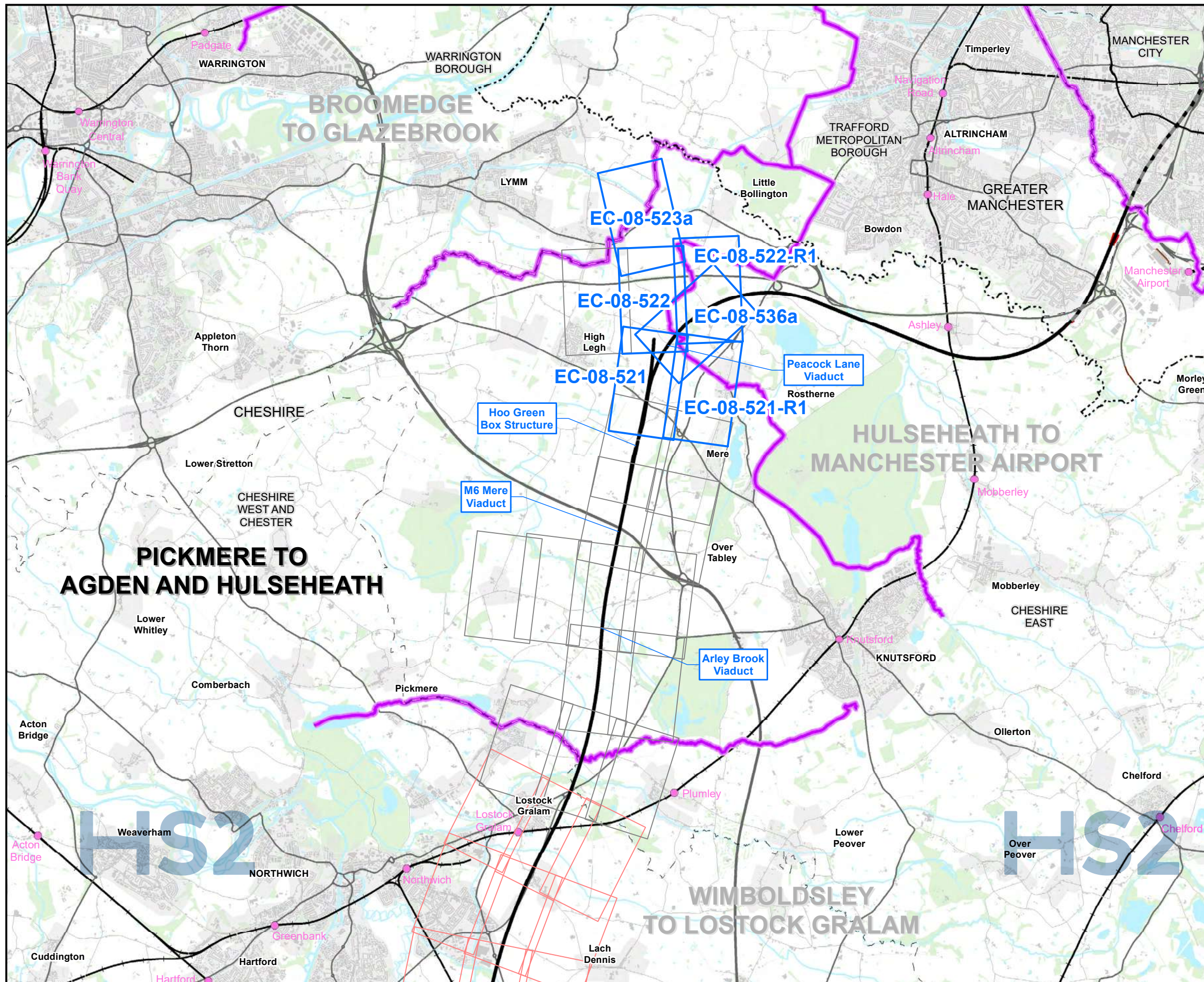


## **High Speed Rail (Crewe – Manchester)**

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

EC-08 – Breeding Birds - Protected and Notable Species





**Map Series Information:**

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.

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

Map Number EC-08-INDEX-MA03

Map Name Index Map of:  
Breeding Birds – Protected and Notable Species  
SES2 and AP2 ES  
Community Area MA03:  
Pickmere to Agden and Hulseheath

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Date: 28/03/23



**BTO SPECIES CODES**

AC	Arctic Skua	DN	Dunlin	JD	Jackdaw	PO	Pochard	T.	Teal
AE	Arctic Tern	DO	Dotterel	K.	Kestrel	PS	Purple Sandpiper	TC	Treecreeper
AF	Little Tern	DR	Spotted Redshank	KF	Kingfisher	PT	Pintail	TD	Turtle Dove
AK	Spotted Crake	DV	Rock Dove (not feral)	KI	Kittiwake	PU	Puffin	TE	Sandwich Tern
AV	Avocet	DW	Dartford Warbler	KN	Knot	PW	Pied Wagtail	TK	Temminck's Stint
B.	Blackbird	E.	Eider	KT	Red Kite	PX	Peafowl/Peacock	TL	Leach's Petrel
BA	Bar-tailed Godwit	EA	Golden Eagle	L.	Lapwing	Q.	Quail	TM	Storm Petrel
BC	Blackcap	ED	Red-backed Shrike	LA	Lapland Bunting	R.	Robin	TN	Stone-curlew
BF	Bullfinch	EG	Egyptian Goose	LB	Lesser Black-backed Gull	RA	Razorbill	TO	Tawny Owl
BG	Brent Goose	ET	Little Egret	LE	Long-eared Owl	RB	Reed Bunting	TP	Tree Pipit
BH	Black-headed Gull	F.	Fulmar	LG	Little Grebe	RC	Rock Pipit	TS	Tree Sparrow
BI	Bittern	FC	Firecrest	LI	Linnet	RE	Redwing	TT	Turnstone
BJ	Black Tern	FF	Fieldfare	LM	Lady Amherst's Pheasant	RG	Red Grouse	TU	Tufted Duck
BK	Black Grouse	FP	Feral Pigeon	LO	Little Owl	RH	Red-throated Diver	TW	Twite
BL	Brambling	FV	Red-footed Falcon	LP	Little Ringed Plover	RI	Ring-necked Parakeet	TY	Black Guillemot
BN	Black-necked Grebe	FW	Guineafowl (Helmeted)	LR	Redpoll (Lesser)	RK	Redshank	VI	Savi's Warbler
BO	Barn Owl	G.	Green Woodpecker	LS	Lesser Spotted Woodpecker	RL	Red-legged Partridge	W.	Wheatear
BR	Bearded Tit	GA	Gadwall	LT	Long-tailed Tit	RM	Red-breasted Merganser	WA	Water Rail
BS	Berwick's Swan	GB	Great Black-backed Gull	LU	Little Gull	RN	Raven	WC	Whinchat
BT	Blue Tit	GC	Goldcrest	LW	Lesser Whitethroat	RO	Rook	WG	White-fronted Goose
BU	Bluethroat	GD	Goosander	M.	Mistle Thrush	RP	Ringed Plover	WH	Whitethroat
BV	Black-throated Diver	GE	Green Sandpiper	MA	Mallard	RQ	Red-crested Pochard	WK	Woodcock
BW	Black-tailed Godwit	GF	Golden Pheasant	MG	Magpie	RS	Roseate Tern	WL	Woodlark
BX	Black Redstart	GG	Great Crested Grebe	MH	Moorhen	RT	Redstart	WM	Whimbrel
BY	Barnacle Goose	GH	Grasshopper Warbler	ML	Merlin	RU	Ruff	WN	Wigeon
BZ	Buzzard	GI	Goshawk	MN	Mandarin Duck	RW	Reed Warbler	WO	Wood Warbler
C.	Carrion Crow	GJ	Greylag Goose	MO	Montagu's Harrier	RY	Ruddy Duck	WP	Woodpigeon
CA	Cormorant	GK	Greenshank	MP	Meadow Pipit	RZ	Ring Ouzel	WR	Wren
CB	Corn Bunting	GL	Grey Wagtail	MR	Marsh Harrier	S.	Skylark	WS	Whooper Swan
CC	Chiffchaff	GN	Goldeneye	MS	Mute Swan	SA	Shag	WT	Willow Tit
CD	Collared Dove	GO	Goldfinch	MT	Marsh Tit	SB	Snow Bunting	WW	Willow Warbler
CE	Corncrake	GP	Golden Plover	MU	Mediterranean Gull	SC	Stonechat	WY	Wryneck
CF	Chough	GR	Greenfinch	MW	Marsh Warbler	SD	Stock Dove	Y.	Yellowhammer
CG	Canada Goose	GS	Great Spotted Woodpecker	MX	Manx Shearwater	SE	Short-eared Owl	YW	Yellow Wagtail
CH	Chaffinch	GT	Great Tit	N.	Nightingale	SF	Spotted Flycatcher	ZF	Feral/hybrid mallard type
CI	Crested Tit	GU	Guillemot	ND	Great Northern Diver	SG	Starling	ZL	Feral/hybrid goose
CK	Cuckoo	GV	Grey Plover	NH	Nuthatch	SH	Sparrowhawk		
CL	Cirl Bunting	GW	Garden Warbler	NJ	Nightjar	SI	Swift		
CM	Common Gull	GX	Gannet	NK	Red-necked Phalarope	SK	Siskin		
CN	Common Tern	GY	Garganey	NS	Serin	SL	Swallow		
CO	Coot	H.	Grey Heron	NX	Great Skua	SM	Sand Martin		
CP	Capercaillie	HC	Hooded Crow	OC	Oystercatcher	SN	Snipe		
CR	Crossbill (Common)	HF	Hawfinch	OD	Wood Sandpiper	SP	Scaup		
CS	Common Sandpiper	HG	Herring Gull	OL	Golden Oriole	SQ	Scarlet Rosefinch		
CT	Coal Tit	HH	Hen Harrier	OP	Osprey	SS	Sanderling		
CU	Curlew	HM	House Martin	P.	Grey Partridge	ST	Song Thrush		
CW	Cetti's Warbler	HP	Hoopoe	PE	Peregrine	SU	Shelduck		
CX	Common Scoter	HS	House Sparrow	PF	Pied Flycatcher	SV	Shoveler		
CY	Scottish Crossbill	HY	Hobby	PG	Pink-footed Goose	SW	Sedge Warbler		
D.	Dunnock	HZ	Honey Buzzard	PH	Pheasant	SX	Shorelark		
DI	Dipper	J.	Jay	PM	Ptarmigan	SZ	Slavonian Grebe		



Map Number EC-08 Legend  
 Map Name EC-08 BTO Bird Species Legend

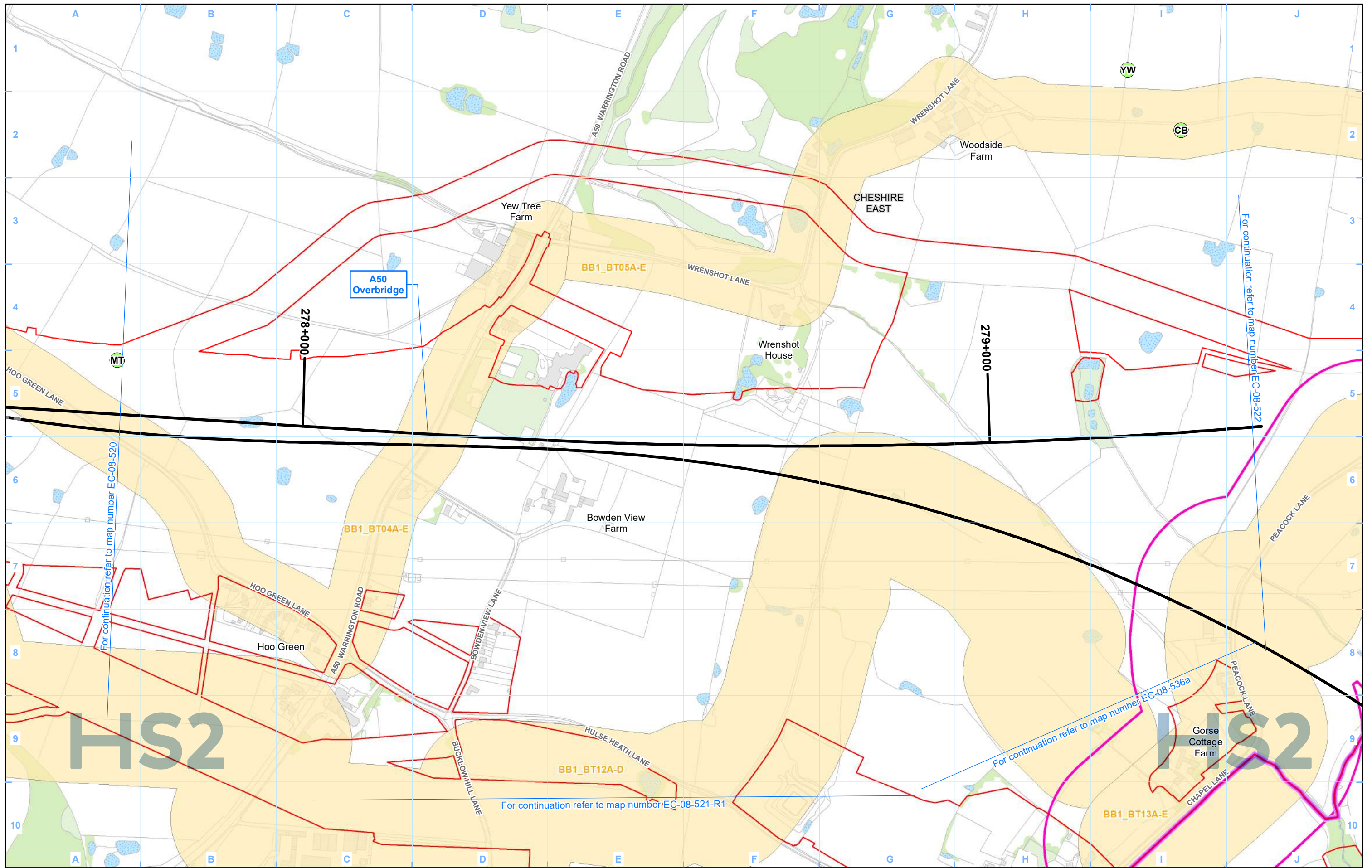
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Date: 25/03/23





**Legend**

Route in tunnel	Watercourse	Species listed on Annex I of the Birds Directive	Species listed on Annex I of the Birds Directive and Schedule 1 of the Wildlife and Countryside Act	Breeding birds - survey extent
Route on surface	Water body	Species listed on Schedule 1 of the Wildlife and Countryside Act	Birds of Conservation Concern	
Depot, station, headhouse or portal building	Woodland (verified by survey)	Area contains new survey data	Other notable species relevant to assessment	
Land potentially required during construction				
Community area boundary				
County boundary				
District/Borough boundary				

For full legend please refer to EC-08 - Bird Species Legend Page

Map Number **EC-08-521**

Map Name **Breeding Birds – Protected and Notable Species SES2 and AP2 ES**

Community Area MA03: Pickmere to Agden and Hulseheath

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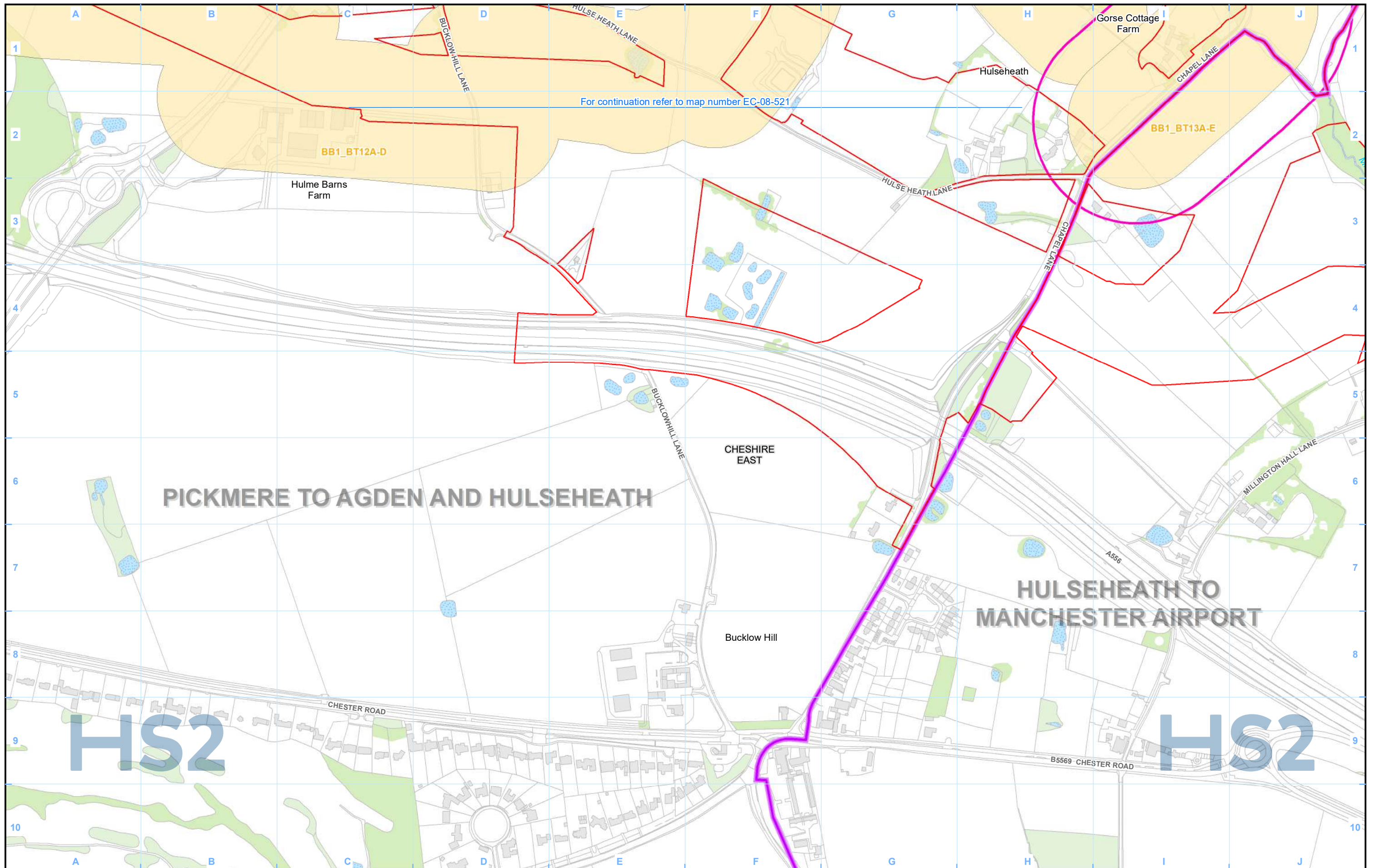
Date: 25/03/23

Scale at A3: 1:5,000

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For continuation refer to map number EC-08-521

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
	Watercourse
	Water body
	Woodland (verified by survey)
	Species listed on Annex I of the Birds Directive
	Species listed on Schedule 1 of the Wildlife and Countryside Act
	Species listed on Annex I of the Birds Directive and Schedule 1 of the Wildlife and Countryside Act
	Birds of Conservation Concern
	Other notable species relevant to assessment
	Breeding birds - survey extent

For full legend please refer to EC-08 - Bird Species Legend Page

Map Number	EC-08-521-R1
Map Name	Breeding Birds – Protected and Notable Species SES2 and AP2 ES Community Area MA03: Pickmere to Agden and Hulseheath

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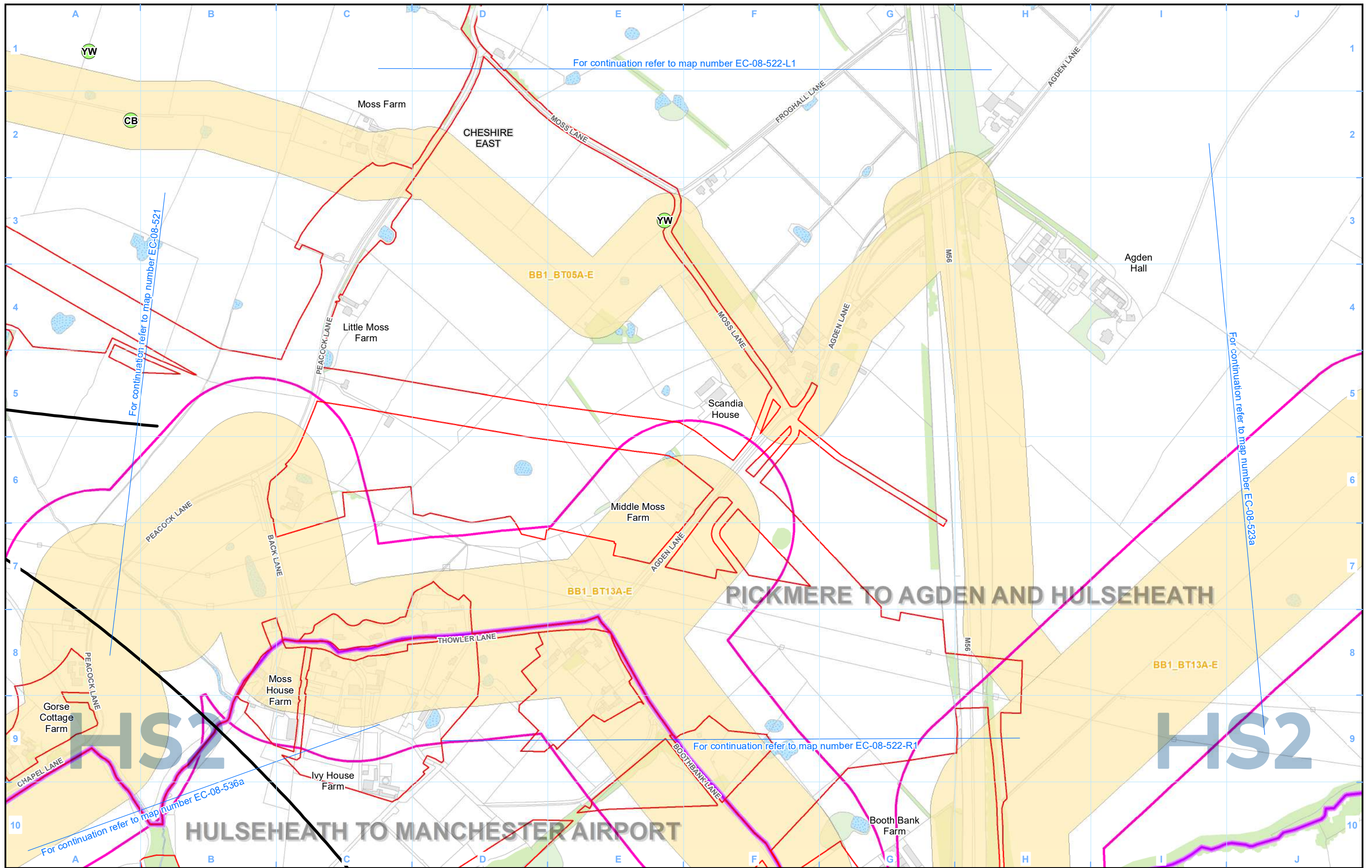
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Doc Number: 2PT27-MWJ-EV-MAP-M000-003243-P01

Date: 25/03/23





**Legend**

Route in tunnel	Watercourse	Species listed on Annex I of the Birds Directive	Species listed on Annex I of the Birds Directive and Schedule 1 of the Wildlife and Countryside Act	Breeding birds - survey extent
Route on surface	Water body	Species listed on Schedule 1 of the Wildlife and Countryside Act	Birds of Conservation Concern	Other notable species relevant to assessment
Depot, station, headhouse or portal building	Woodland (verified by survey)	Area contains new survey data		
Land potentially required during construction				
Community area boundary				
County boundary				
District/Borough boundary				

For full legend please refer to EC-08 - Bird Species Legend Page

Map Number: EC-08-522

Map Name: Breeding Birds – Protected and Notable Species SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

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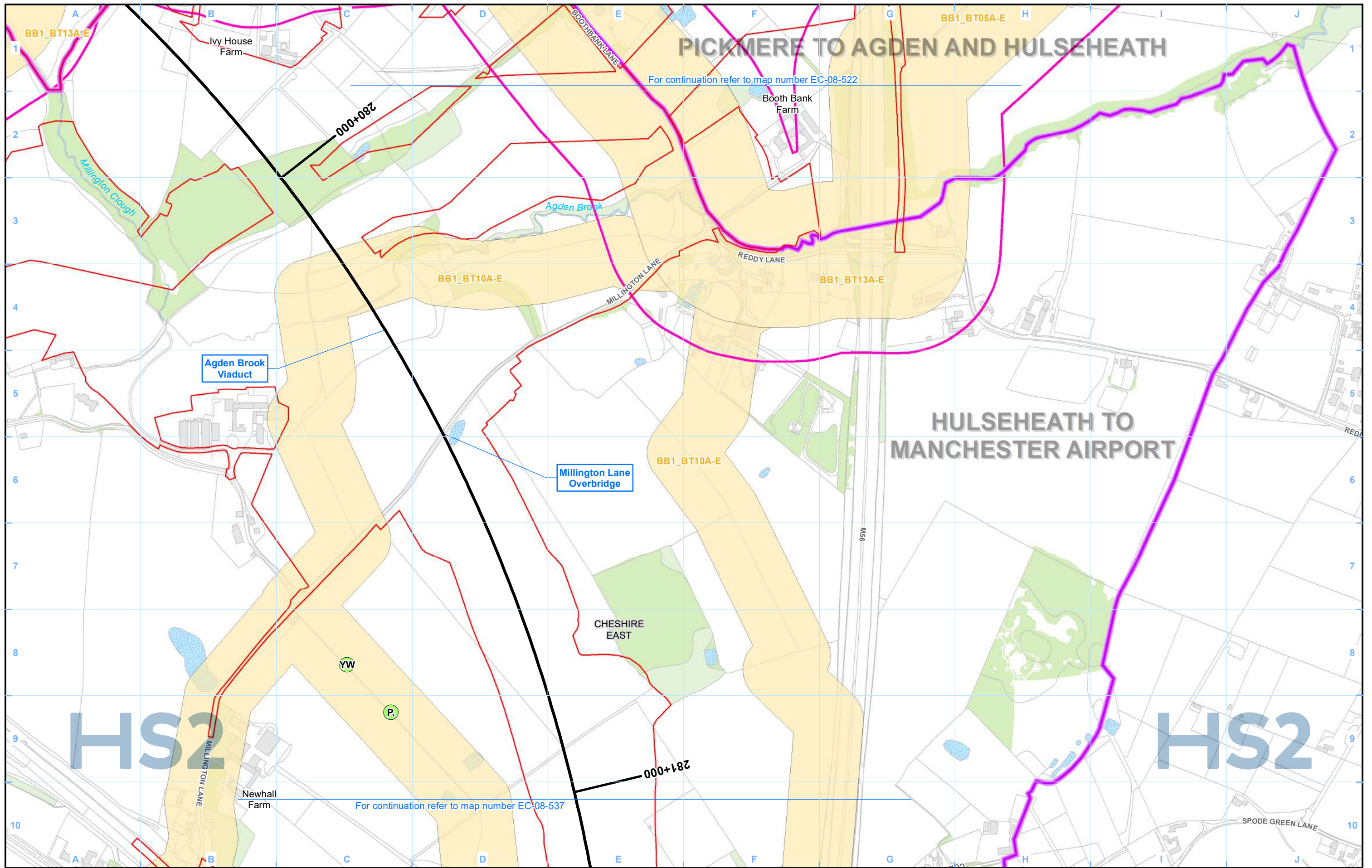
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Date: 25/03/23

Scale at A3: 1:5,000

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**Legend**

<ul style="list-style-type: none"> <li>Route in tunnel</li> <li>Route on surface</li> <li>Depot, station, headhouse or portal building</li> <li>Land potentially required during construction</li> <li>Community area boundary</li> <li>County boundary</li> <li>District/Borough boundary</li> </ul>	<ul style="list-style-type: none"> <li>Watercourse</li> <li>Water body</li> <li>Woodland (verified by survey)</li> </ul>	<ul style="list-style-type: none"> <li>Species listed on Annex I of the Birds Directive</li> <li>Species listed on Schedule 1 of the Wildlife and Countryside Act</li> </ul>	<ul style="list-style-type: none"> <li>Species listed on Annex I of the Birds Directive and Schedule 1 of the Wildlife and Countryside Act</li> <li>Birds of Conservation Concern</li> <li>Other notable species relevant to assessment</li> </ul>	<ul style="list-style-type: none"> <li>Breeding birds - survey extent</li> </ul>
---	--	--	--	--

For full legend please refer to EC-08 - Bird Species Legend Page

Map Number: EC-08-522-R1

Map Name: Breeding Birds – Protected and Notable Species SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

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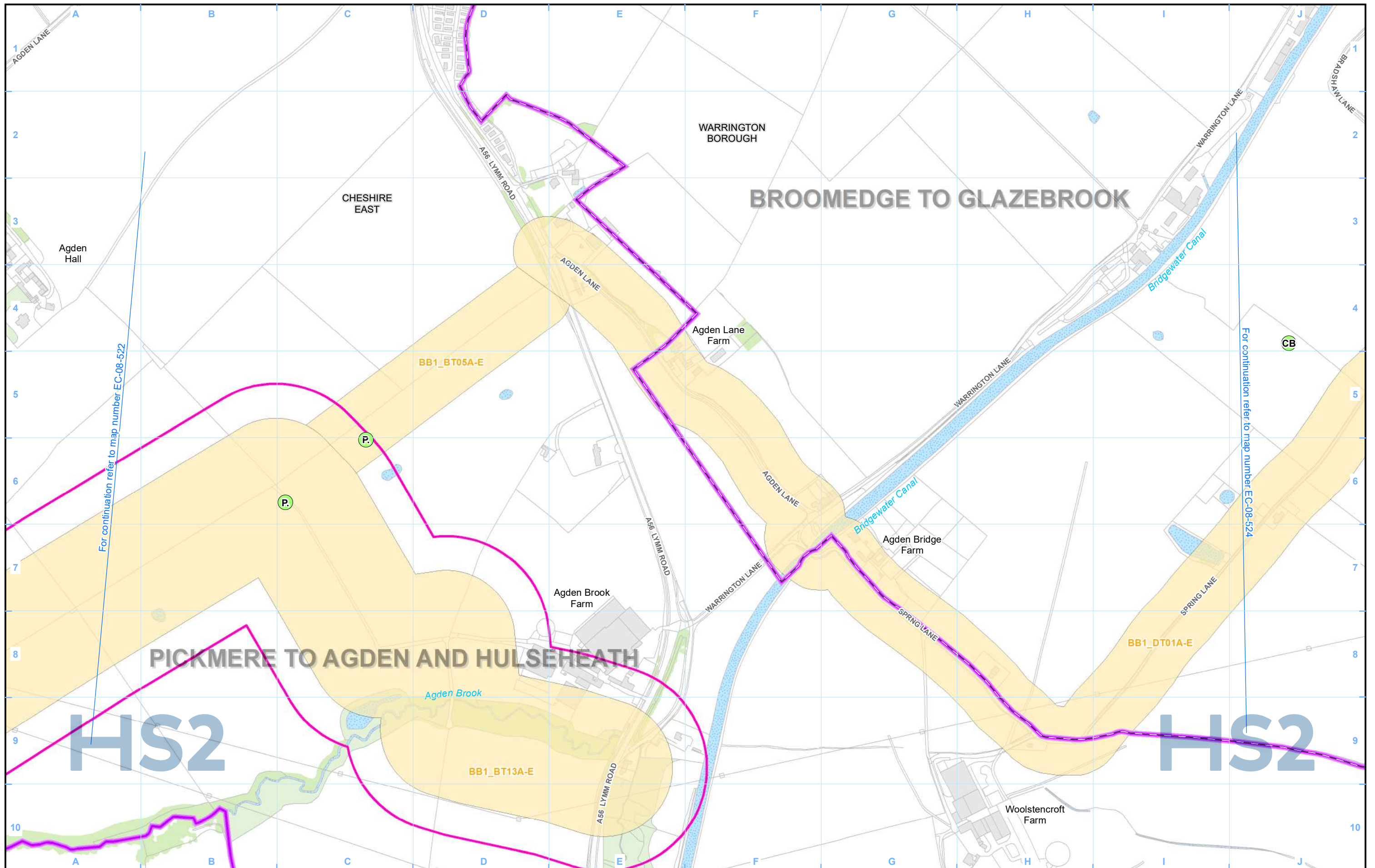
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Date: 25/03/23

Scale at A3: 1:5,000

0 50 100 150 200 Metres





**Legend**

Route in tunnel	Watercourse	Species listed on Annex I of the Birds Directive	Species listed on Annex I of the Birds Directive and Schedule 1 of the Wildlife and Countryside Act	Breeding birds - survey extent
Route on surface	Water body	Species listed on Schedule 1 of the Wildlife and Countryside Act	Birds of Conservation Concern	Other notable species relevant to assessment
Depot, station, headhouse or portal building	Woodland (verified by survey)	Area contains new survey data		
Land potentially required during construction				
Community area boundary				
County boundary				
District/Borough boundary				

For full legend please refer to EC-08 - Bird Species Legend Page

Map Number: EC-08-523a

Map Name: Breeding Birds – Protected and Notable Species SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

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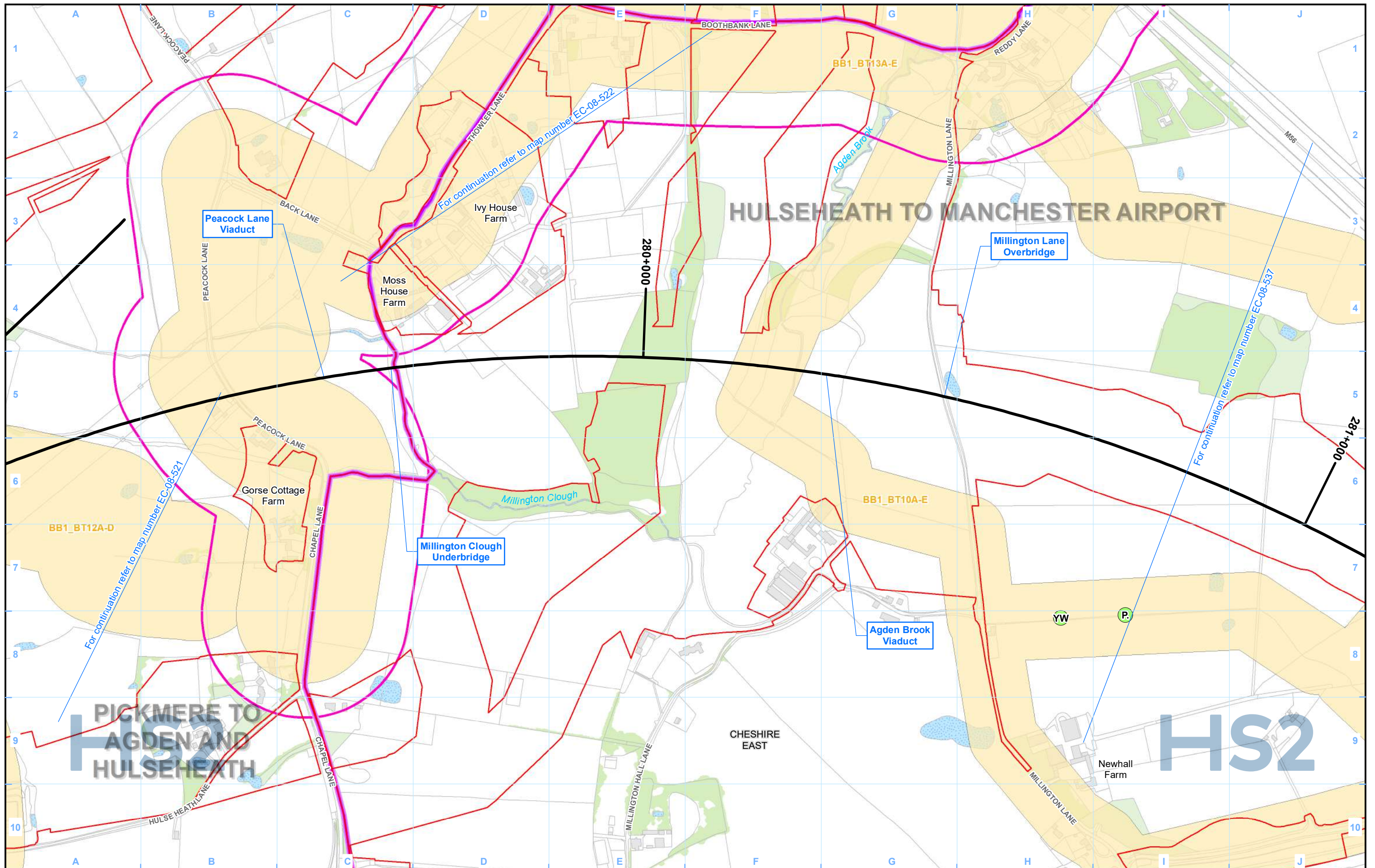
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Date: 25/03/23

Scale at A3: 1:5,000

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**Legend**

<ul style="list-style-type: none"> <li> Route in tunnel</li> <li> Route on surface</li> <li> Depot, station, headhouse or portal building</li> <li> Land potentially required during construction</li> <li> Community area boundary</li> <li> County boundary</li> <li> District/Borough boundary</li> </ul>	<ul style="list-style-type: none"> <li> Watercourse</li> <li> Water body</li> <li> Woodland (verified by survey)</li> <li> Area contains new survey data</li> </ul>	<ul style="list-style-type: none"> <li> Species listed on Annex I of the Birds Directive</li> <li> Species listed on Schedule 1 of the Wildlife and Countryside Act</li> <li> Birds of Conservation Concern</li> <li> Other notable species relevant to assessment</li> </ul>	<ul style="list-style-type: none"> <li> Breeding birds - survey extent</li> </ul>
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For full legend please refer to EC-08 - Bird Species Legend Page

Map Number: EC-08-536a

Map Name: Breeding Birds – Protected and Notable Species SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

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Date: 25/03/23

Scale at A3: 1:5,000

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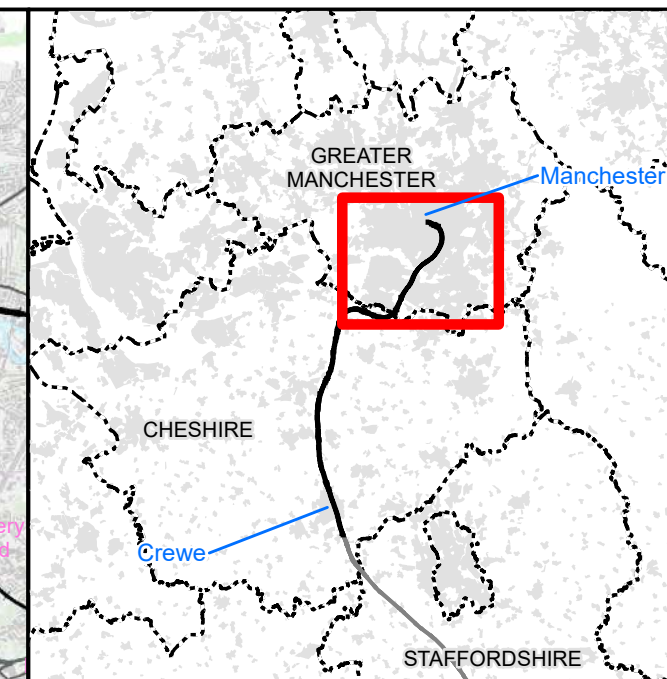
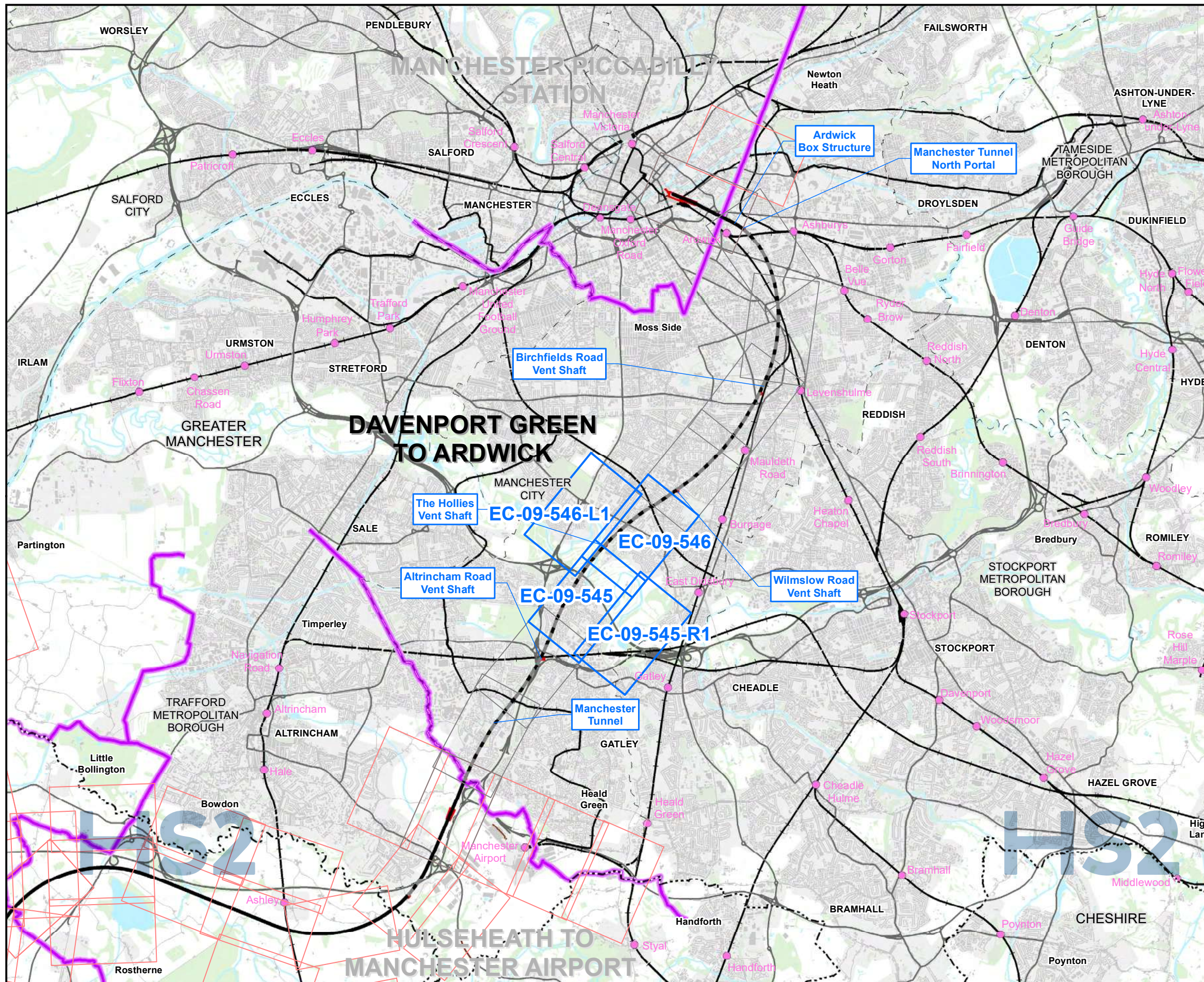


## **High Speed Rail (Crewe – Manchester)**

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

EC-09 – Wintering and Passage Birds - Protected and Notable Species





### Map Series Information:

This map series shows records of protected/notable wintering birds that are considered most relevant in considering the impacts of the Proposed Scheme.

#### Main Map Legend

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

Map Number	EC-09-INDEX-MA07
Map Name	Index Map of: Wintering and Passage Birds – Protected and Notable Species SES2 and AP2 ES Community Area MA07: Davenport Green to Ardwick

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Doc Number: 2PT27-MWJ-EV-MAP-M000-001299-P01 Date: 28/03/23



**BTO SPECIES CODES**

AC	Arctic Skua	DN	Dunlin	JD	Jackdaw	PO	Pochard	T.	Teal
AE	Arctic Tern	DO	Dotterel	K.	Kestrel	PS	Purple Sandpiper	TC	Treecreeper
AF	Little Tern	DR	Spotted Redshank	KF	Kingfisher	PT	Pintail	TD	Turtle Dove
AK	Spotted Crake	DV	Rock Dove (not feral)	KI	Kittiwake	PU	Puffin	TE	Sandwich Tern
AV	Avocet	DW	Dartford Warbler	KN	Knot	PW	Pied Wagtail	TK	Temminck's Stint
B.	Blackbird	E.	Eider	KT	Red Kite	PX	Peafowl/Peacock	TL	Leach's Petrel
BA	Bar-tailed Godwit	EA	Golden Eagle	L.	Lapwing	Q.	Quail	TM	Storm Petrel
BC	Blackcap	ED	Red-backed Shrike	LA	Lapland Bunting	R.	Robin	TN	Stone-curlew
BF	Bullfinch	EG	Egyptian Goose	LB	Lesser Black-backed Gull	RA	Razorbill	TO	Tawny Owl
BG	Brent Goose	ET	Little Egret	LE	Long-eared Owl	RB	Reed Bunting	TP	Tree Pipit
BH	Black-headed Gull	F.	Fulmar	LG	Little Grebe	RC	Rock Pipit	TS	Tree Sparrow
BI	Bittern	FC	Firecrest	LI	Linnet	RE	Redwing	TT	Turnstone
BJ	Black Tern	FF	Fieldfare	LM	Lady Amherst's Pheasant	RG	Red Grouse	TU	Tufted Duck
BK	Black Grouse	FP	Feral Pigeon	LO	Little Owl	RH	Red-throated Diver	TW	Twite
BL	Brambling	FV	Red-footed Falcon	LP	Little Ringed Plover	RI	Ring-necked Parakeet	TY	Black Guillemot
BN	Black-necked Grebe	FW	Guineafowl (Helmeted)	LR	Redpoll (Lesser)	RK	Redshank	VI	Savi's Warbler
BO	Barn Owl	G.	Green Woodpecker	LS	Lesser Spotted Woodpecker	RL	Red-legged Partridge	W.	Wheatear
BR	Bearded Tit	GA	Gadwall	LT	Long-tailed Tit	RM	Red-breasted Merganser	WA	Water Rail
BS	Berwick's Swan	GB	Great Black-backed Gull	LU	Little Gull	RN	Raven	WC	Whinchat
BT	Blue Tit	GC	Goldcrest	LW	Lesser Whitethroat	RO	Rook	WG	White-fronted Goose
BU	Bluethroat	GD	Goosander	M.	Mistle Thrush	RP	Ringed Plover	WH	Whitethroat
BV	Black-throated Diver	GE	Green Sandpiper	MA	Mallard	RQ	Red-crested Pochard	WK	Woodcock
BW	Black-tailed Godwit	GF	Golden Pheasant	MG	Magpie	RS	Roseate Tern	WL	Woodlark
BX	Black Redstart	GG	Great Crested Grebe	MH	Moorhen	RT	Redstart	WM	Whimbrel
BY	Barnacle Goose	GH	Grasshopper Warbler	ML	Merlin	RU	Ruff	WN	Wigeon
BZ	Buzzard	GI	Goshawk	MN	Mandarin Duck	RW	Reed Warbler	WO	Wood Warbler
C.	Carrion Crow	GJ	Greylag Goose	MO	Montagu's Harrier	RY	Ruddy Duck	WP	Woodpigeon
CA	Cormorant	GK	Greenshank	MP	Meadow Pipit	RZ	Ring Ouzel	WR	Wren
CB	Corn Bunting	GL	Grey Wagtail	MR	Marsh Harrier	S.	Skylark	WS	Whooper Swan
CC	Chiffchaff	GN	Goldeneye	MS	Mute Swan	SA	Shag	WT	Willow Tit
CD	Collared Dove	GO	Goldfinch	MT	Marsh Tit	SB	Snow Bunting	WW	Willow Warbler
CE	Corncrake	GP	Golden Plover	MU	Mediterranean Gull	SC	Stonechat	WY	Wryneck
CF	Chough	GR	Greenfinch	MW	Marsh Warbler	SD	Stock Dove	Y.	Yellowhammer
CG	Canada Goose	GS	Great Spotted Woodpecker	MX	Manx Shearwater	SE	Short-eared Owl	YW	Yellow Wagtail
CH	Chaffinch	GT	Great Tit	N.	Nightingale	SF	Spotted Flycatcher	ZF	Feral/hybrid mallard type
CI	Crested Tit	GU	Guillemot	ND	Great Northern Diver	SG	Starling	ZL	Feral/hybrid goose
CK	Cuckoo	GV	Grey Plover	NH	Nuthatch	SH	Sparrowhawk		
CL	Cirl Bunting	GW	Garden Warbler	NJ	Nightjar	SI	Swift		
CM	Common Gull	GX	Gannet	NK	Red-necked Phalarope	SK	Siskin		
CN	Common Tern	GY	Garganey	NS	Serin	SL	Swallow		
CO	Coot	H.	Grey Heron	NX	Great Skua	SM	Sand Martin		
CP	Capercaillie	HC	Hooded Crow	OC	Oystercatcher	SN	Snipe		
CR	Crossbill (Common)	HF	Hawfinch	OD	Wood Sandpiper	SP	Scaup		
CS	Common Sandpiper	HG	Herring Gull	OL	Golden Oriole	SQ	Scarlet Rosefinch		
CT	Coal Tit	HH	Hen Harrier	OP	Osprey	SS	Sanderling		
CU	Curlew	HM	House Martin	P.	Grey Partridge	ST	Song Thrush		
CW	Cetti's Warbler	HP	Hoopoe	PE	Peregrine	SU	Shelduck		
CX	Common Scoter	HS	House Sparrow	PF	Pied Flycatcher	SV	Shoveler		
CY	Scottish Crossbill	HY	Hobby	PG	Pink-footed Goose	SW	Sedge Warbler		
D.	Dunnock	HZ	Honey Buzzard	PH	Pheasant	SX	Shorelark		
DI	Dipper	J.	Jay	PM	Ptarmigan	SZ	Slavonian Grebe		



Map Number	EC-09 Legend
Map Name	EC-09 BTO Bird Species Legend

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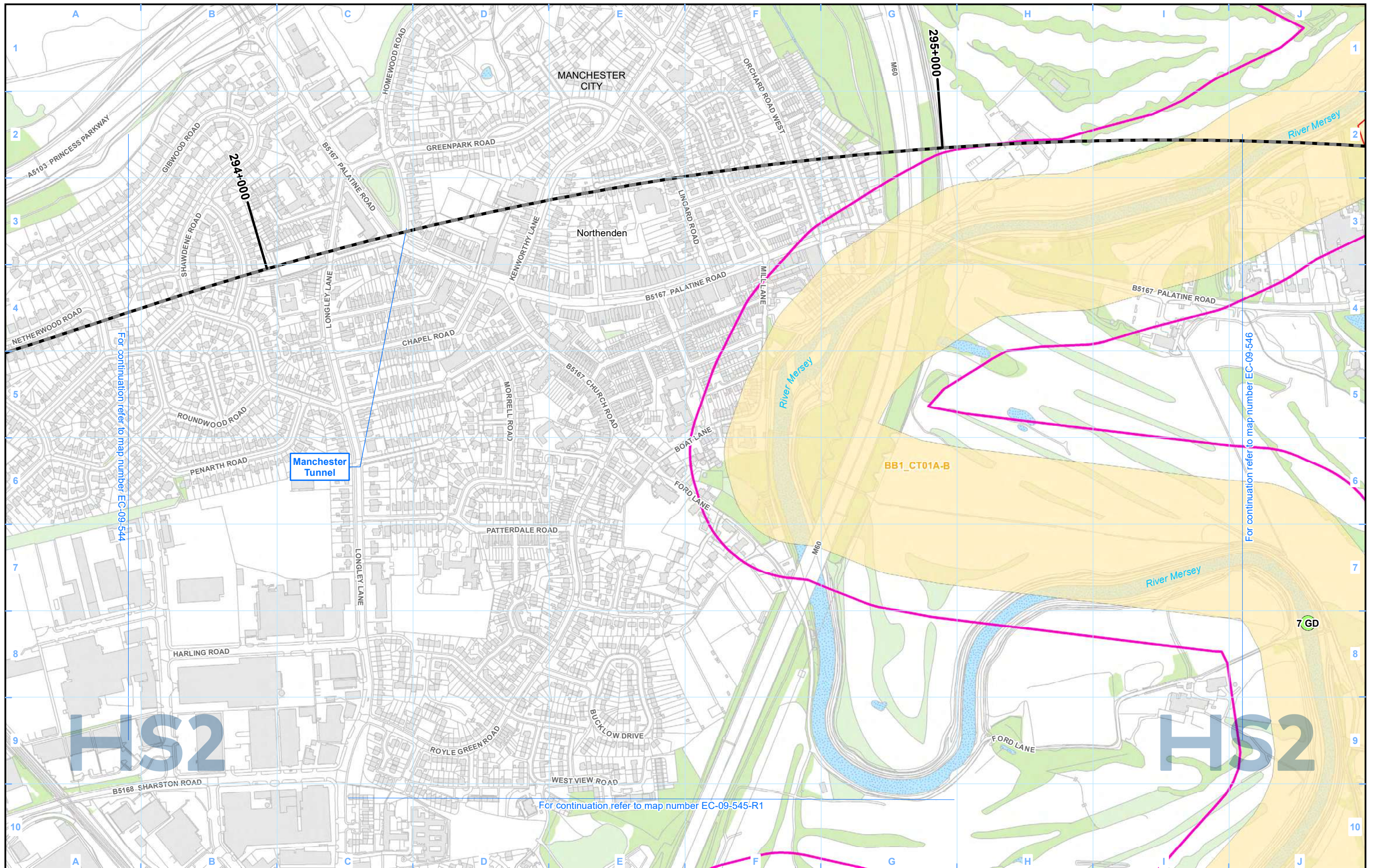
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**Doc Number:** 2DE01-MWJ-EV-MAP-M000-004052-P01 **Date:** 25/03/23





**Legend**

Route in tunnel	Watercourse	Species listed on Annex I of the Birds Directive	Species listed on Annex I of the Birds Directive and Schedule 1 of the Wildlife and Countryside Act	Wintering & passage birds - survey extent
Route on surface	Water body	Species listed on Schedule 1 of the Wildlife and Countryside Act	Birds of Conservation Concern	Other notable species relevant to assessment
Depot, station, headhouse or portal building	Woodland (verified by survey)	Area contains new survey data		
Land potentially required during construction				
Community area boundary				
County boundary				
District/Borough boundary				

For full legend please refer to EC-09 - Bird Species Legend Page

Map Number: EC-09-545

Map Name: Wintering and Passage Birds – Protected and Notable Species SES2 and AP2 ES

Community Area MA07: Davenport Green to Ardwick

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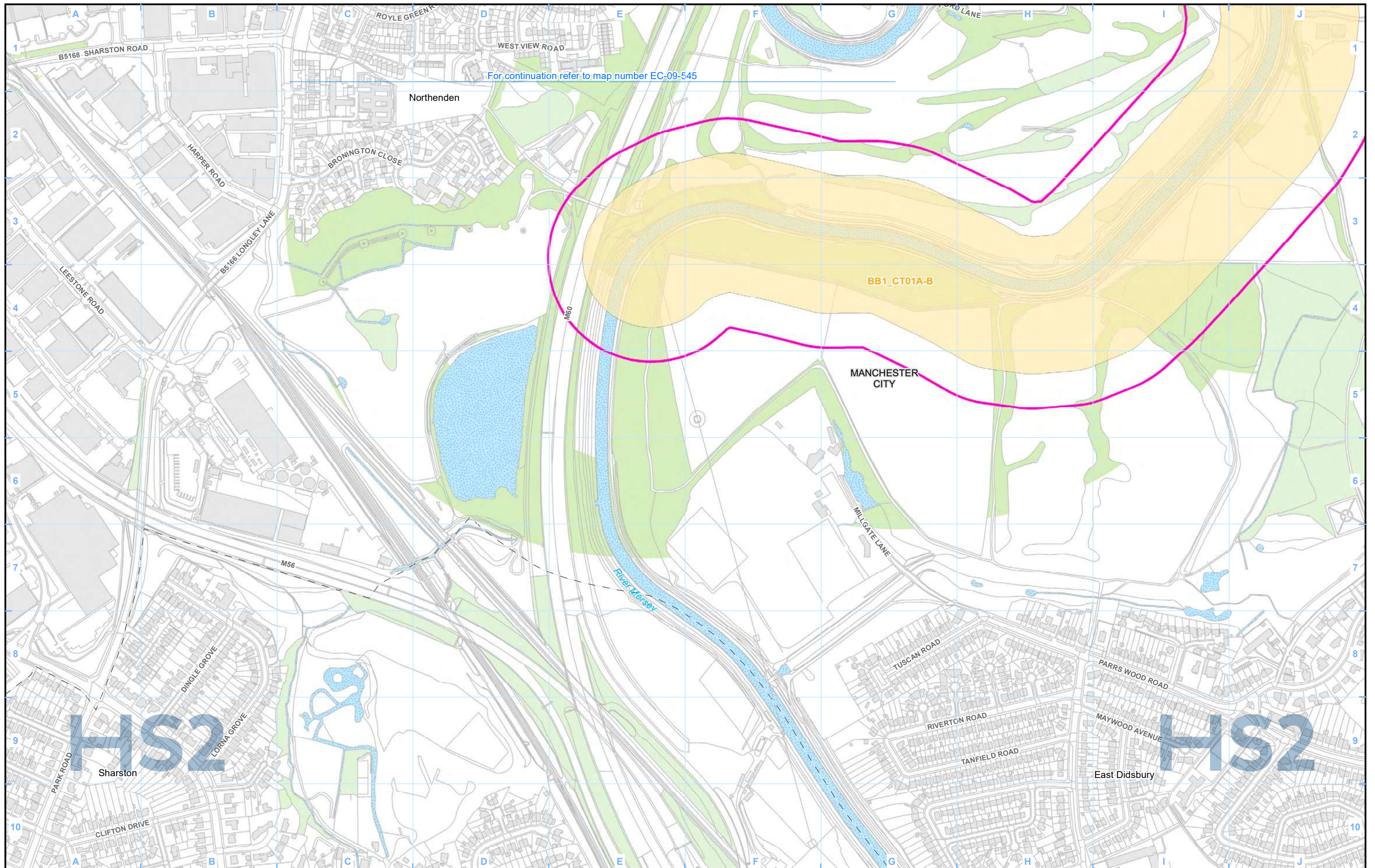
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Scale at A3: 1:5,000

Doc Number: 2PT27-MWJ-EV-MAP-M000-001281-P01

Date: 25/03/23



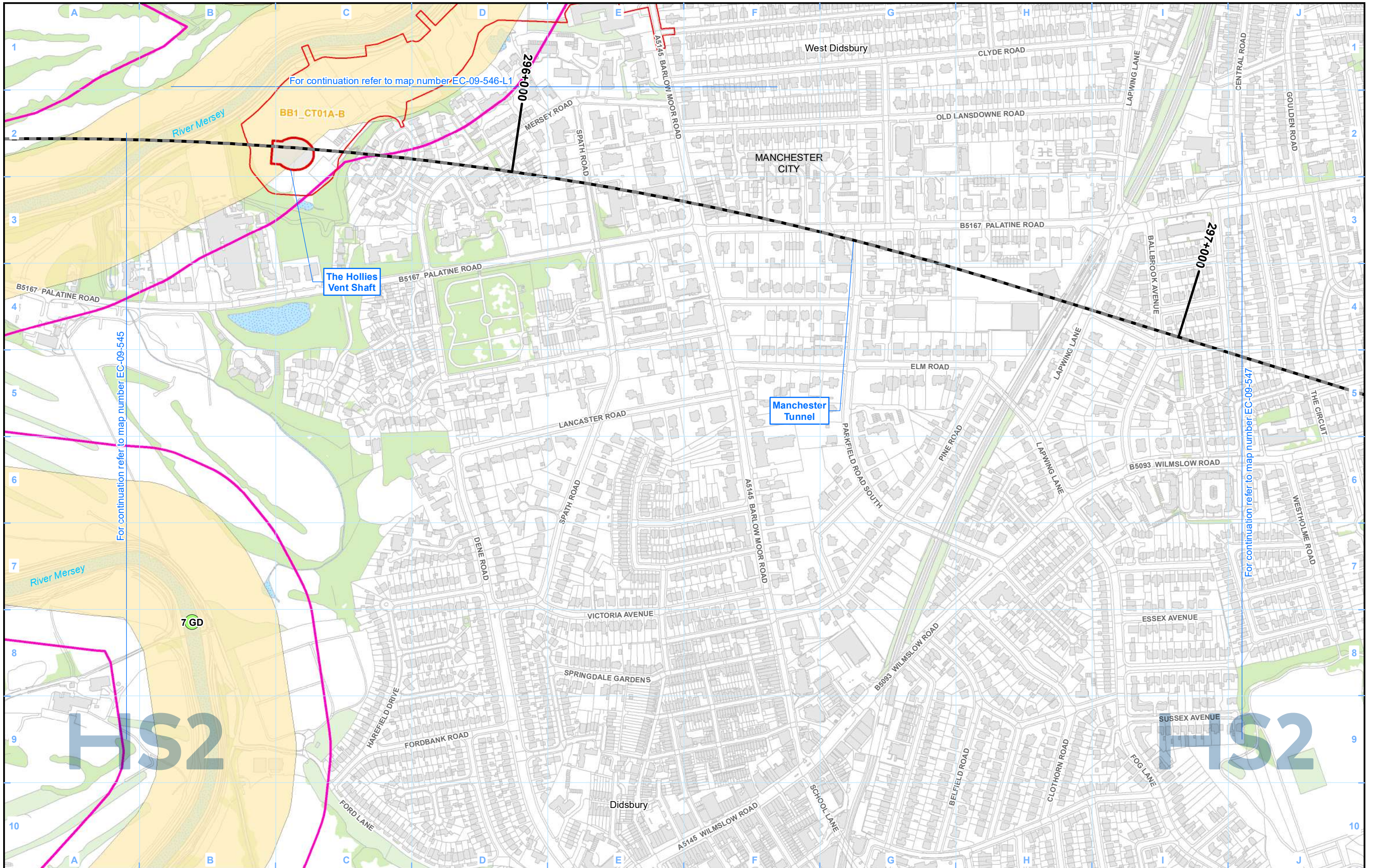


For continuation refer to map number EC-09-545

<b>Legend</b> <ul style="list-style-type: none"> <li> Route in tunnel</li> <li> Route on surface</li> <li> Depot, station, headhouse or portal building</li> <li> Land potentially required during construction</li> <li> Community area boundary</li> <li> County boundary</li> <li> District/Borough boundary</li> </ul>		<ul style="list-style-type: none"> <li> Watercourse</li> <li> Water body</li> <li> Woodland (verified by survey)</li> <li> Area contains new survey data</li> </ul>		<ul style="list-style-type: none"> <li> Species listed on Annex I of the Birds Directive</li> <li> Species listed on Schedule 1 of the Wildlife and Countryside Act</li> <li> Birds of Conservation Concern</li> <li> Other notable species relevant to assessment</li> </ul>		<ul style="list-style-type: none"> <li> Wintering &amp; passage birds - survey extent</li> </ul>	
<p>Map Number: EC-09-545-R1</p> <p>Map Name: Wintering and Passage Birds – Protected and Notable Species SES2 and AP2 ES</p> <p>Community Area MA07: Davenport Green to Ardwick</p>				<p>HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.</p> <p>Registered in England. Registration number 06791686. Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6GA.</p> <p>© Crown copyright and database rights 2022 OS 100049190</p> <p>Doc Number: 2PT27-MWJ-EV-MAP-M000-004501-P01</p>		<p>Scale at A3: 1:5,000</p> <p>Metres</p> <p>Date: 25/03/23</p>	

For full legend please refer to EC-09 - Bird Species Legend Page





**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)
- Species listed on Annex I of the Birds Directive
- Species listed on Schedule 1 of the Wildlife and Countryside Act
- Species listed on Annex I of the Birds Directive and Schedule 1 of the Wildlife and Countryside Act
- Birds of Conservation Concern
- Other notable species relevant to assessment
- Wintering & passage birds - survey extent

For full legend please refer to EC-09 - Bird Species Legend Page

Map Number: **EC-09-546**

Map Name: **Wintering and Passage Birds – Protected and Notable Species SES2 and AP2 ES**

Community Area MA07: Davenport Green to Ardwick

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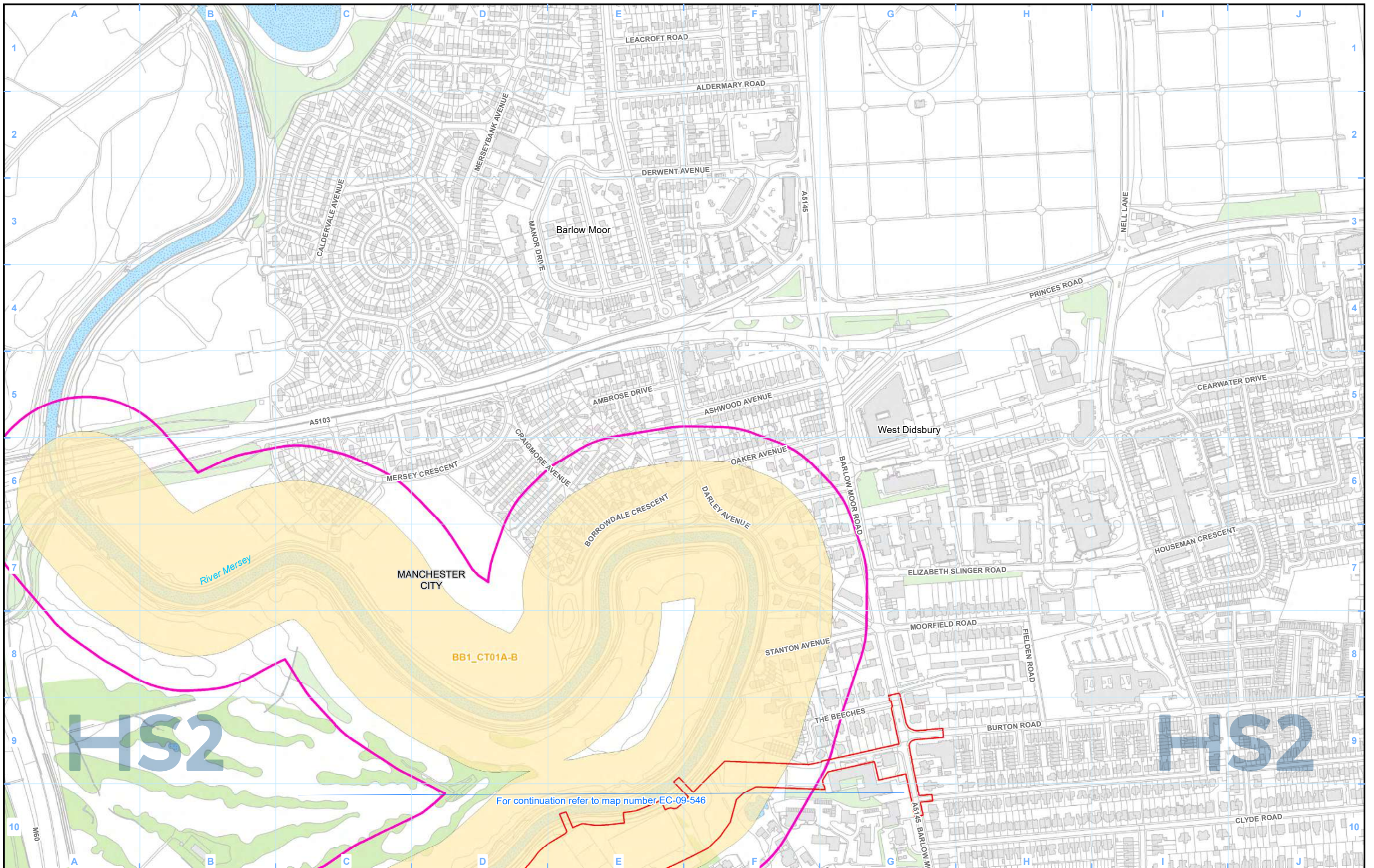
Date: 25/03/23

Scale at A3: 1:5,000

0 50 100 150 200 Metres

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**Legend**

Route in tunnel	Watercourse	Species listed on Annex I of the Birds Directive	Species listed on Annex I of the Birds Directive and Schedule 1 of the Wildlife and Countryside Act	Wintering & passage birds - survey extent
Route on surface	Water body	Species listed on Schedule 1 of the Wildlife and Countryside Act	Birds of Conservation Concern	Other notable species relevant to assessment
Depot, station, headhouse or portal building	Woodland (verified by survey)	Area contains new survey data		
Land potentially required during construction				
Community area boundary				
County boundary				
District/Borough boundary				

For full legend please refer to EC-09 - Bird Species Legend Page

Map Number **EC-09-546-L1**

Map Name **Wintering and Passage Birds – Protected and Notable Species SES2 and AP2 ES**

Community Area MA07: Davenport Green to Ardwick

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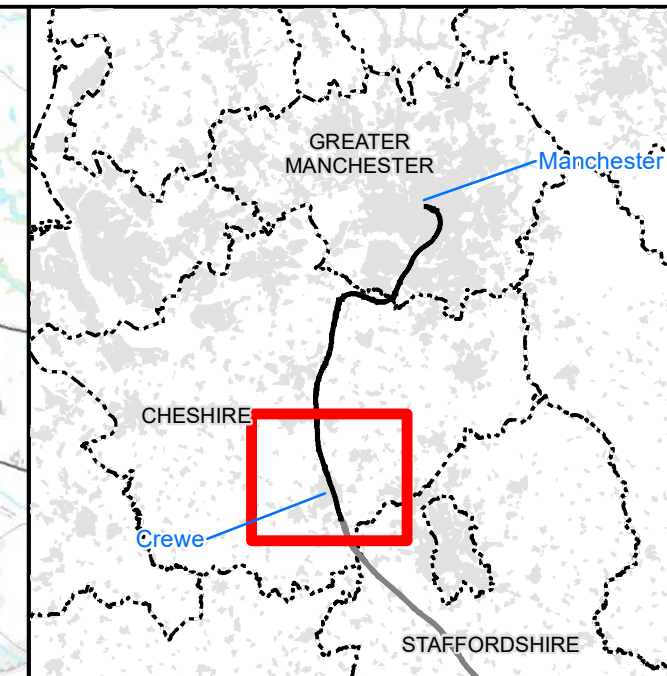
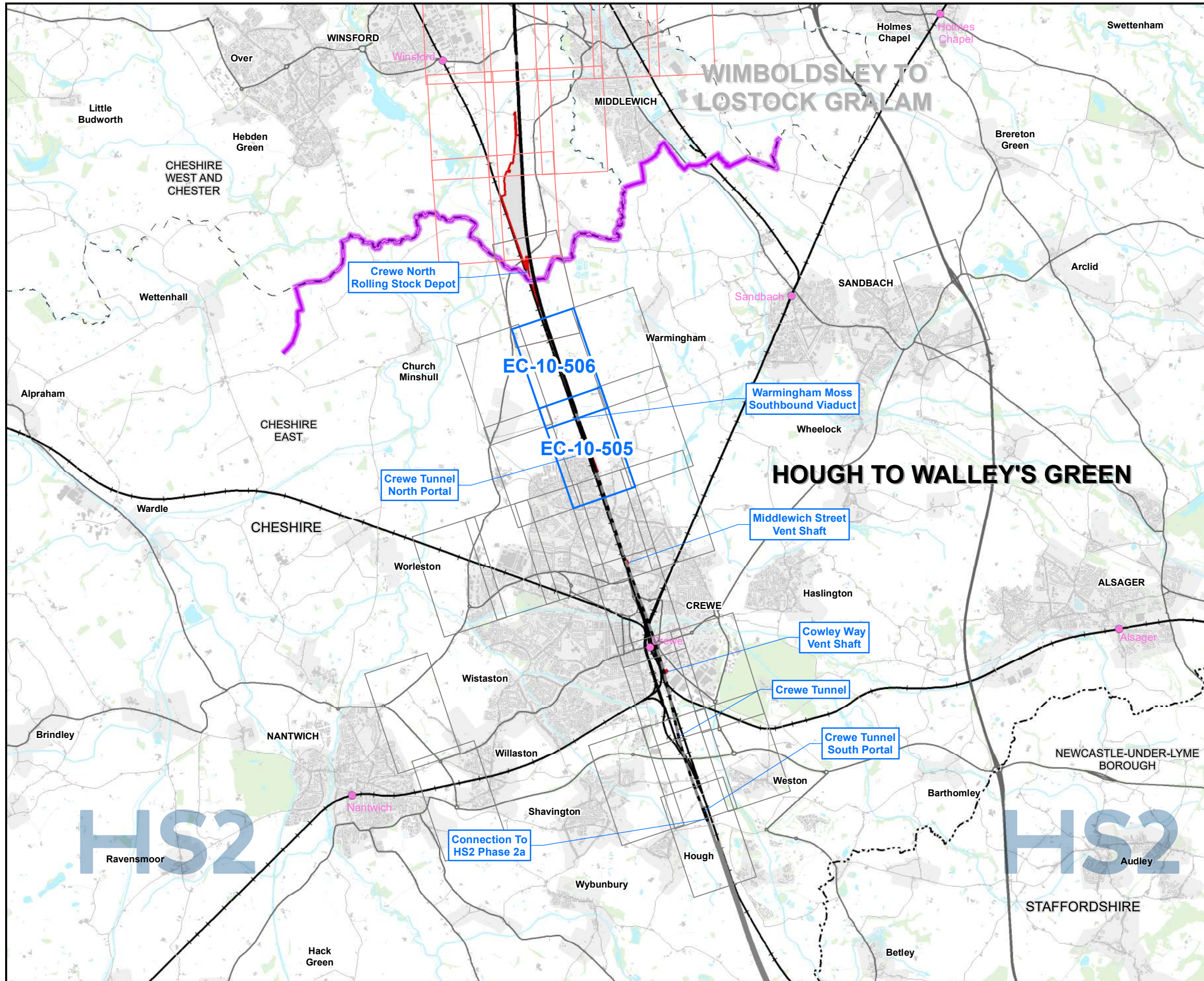


## **High Speed Rail (Crewe – Manchester)**

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

EC-10 – Phase 2 Habitat Survey





**Map Series Information:**

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).

**Main Map Legend**

Route in tunnel	Map sheets included in this community area with ammendment
Route on surface	Map sheet included in this community with no ammendment
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-10-INDEX-MA01
Map Name	Index Map of: Phase 2 Habitat Survey SES2 and AP2 ES Community Area MA01: Hough to Walley's Green

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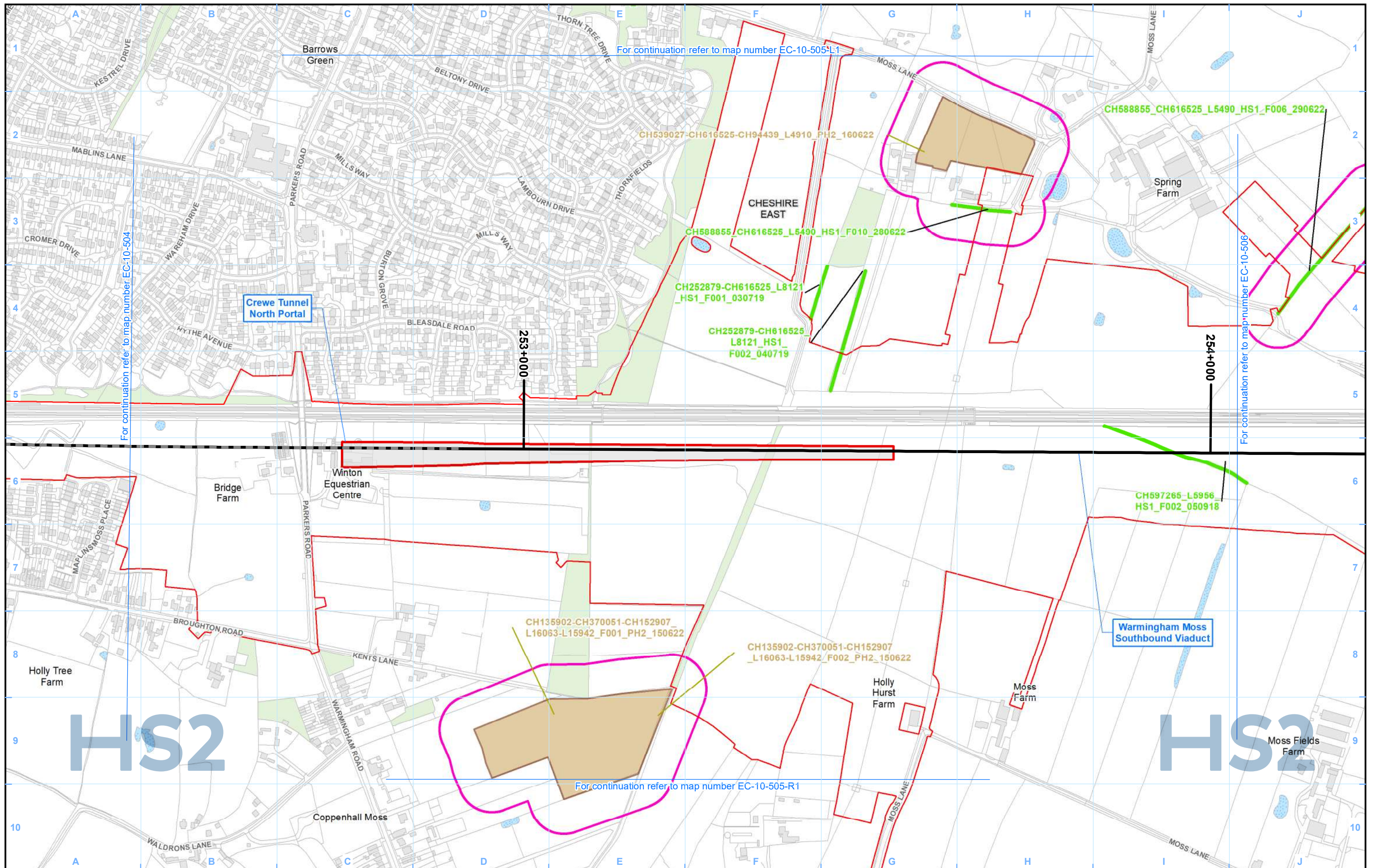
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001366-P01

Date: 29/03/23

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





For continuation refer to map number EC-10-504

For continuation refer to map number EC-10-505-L1

For continuation refer to map number EC-10-506

For continuation refer to map number EC-10-505-R1

Legend			
	Depot, station, headhouse or portal building		Watercourse
	Land potentially required during construction		Water body
	Community area boundary		National Vegetation Classification survey
	County boundary		Woodland (verified by survey)
	District/Borough boundary		'Important' Hedgerow confirmed by field survey
	Area contains new survey data		Possible 'Important Hedgerow' - no access available for survey
	River macrophyte survey extent		River habitat survey extent
	Lake habitat		

Map Number	EC-10-505
Map Name	Phase 2 Habitat Survey SES2 and AP2 ES
	Community Area MA01: Hough to Walley's Green

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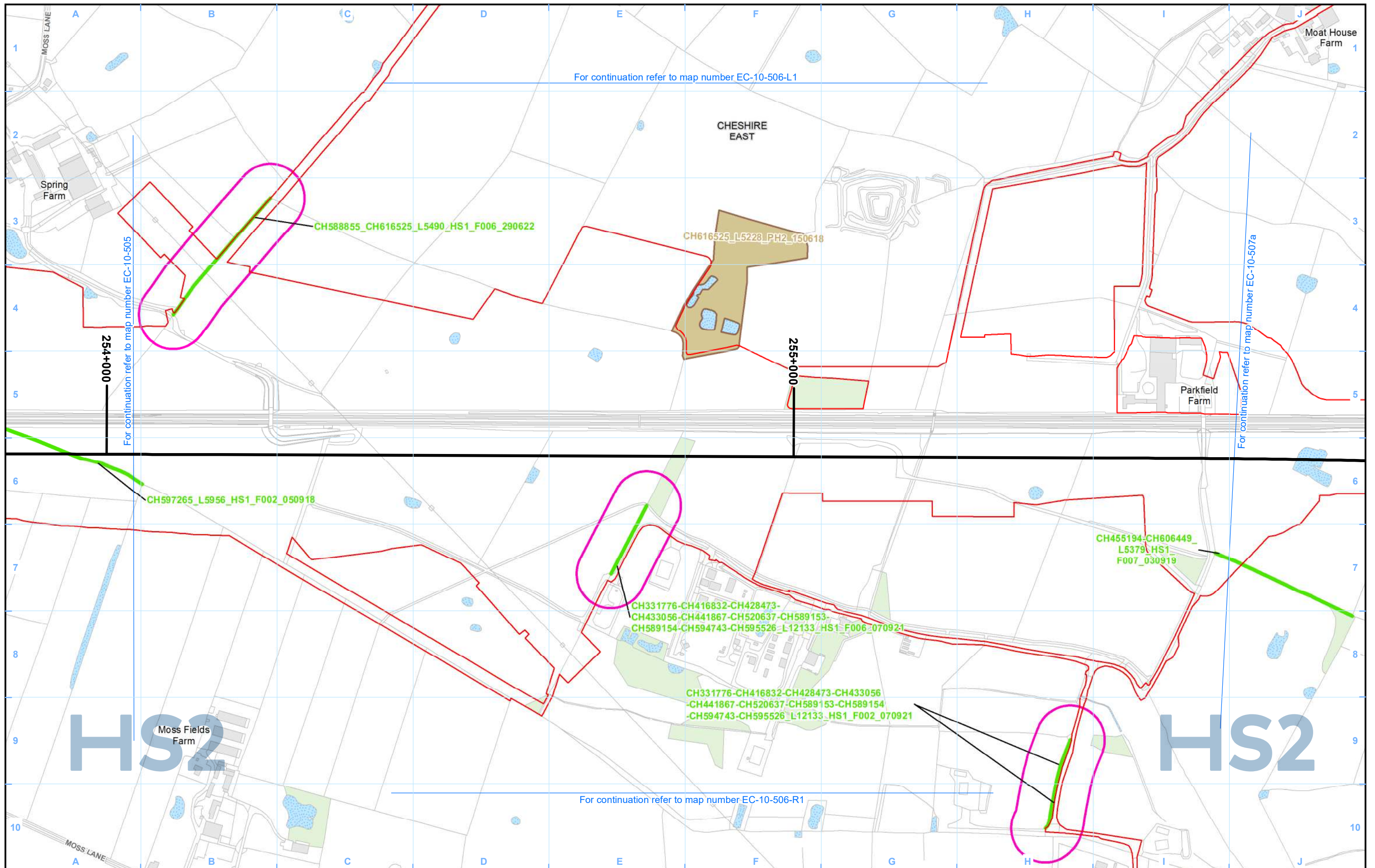
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Legend			
	Depot, station, headhouse or portal building		Watercourse
	Land potentially required during construction		Water body
	Community area boundary		National Vegetation Classification survey
	County boundary		Ditch vegetation survey
	District/Borough boundary		Woodland (verified by survey)
	'Important' Hedgerow confirmed by field survey		'Important' Hedgerow confirmed by field survey
	Possible 'Important Hedgerow' - no access available for survey		River macrophyte survey extent
			River habitat survey extent
			Lake habitat

Map Number	EC-10-506
Map Name	Phase 2 Habitat Survey SES2 and AP2 ES
	Community Area MA01: Hough to Walley's Green

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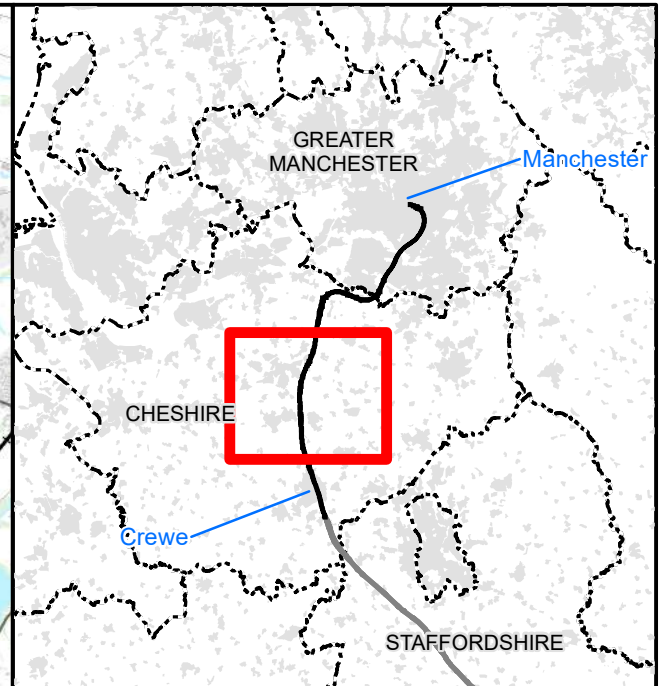
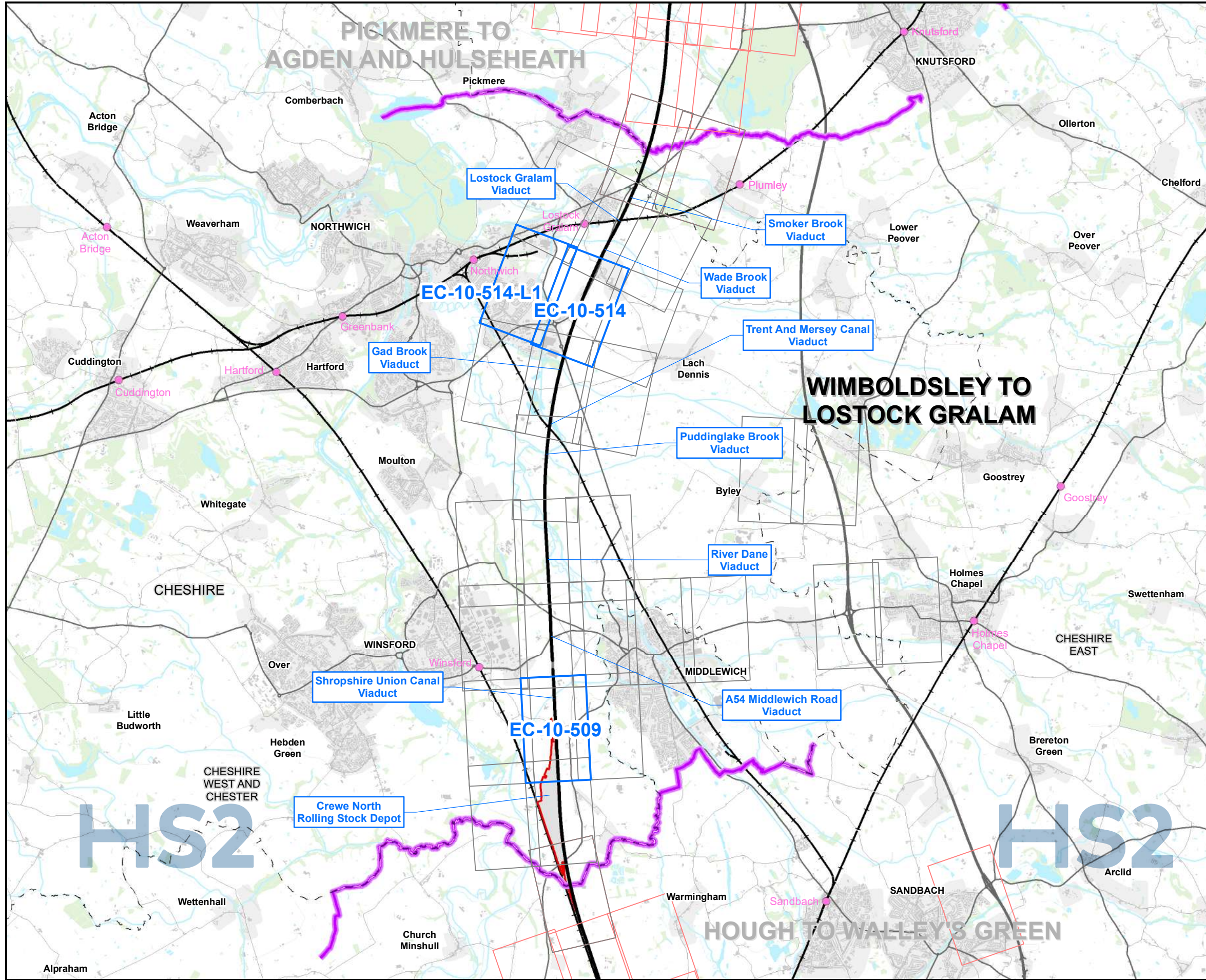
Metres

Date: 29/03/23



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**Map Series Information:**

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).

Main Map Legend	
Route in tunnel	Map sheets included in this community area with ammendment
Route on surface	Map sheet included in this community with no ammendment
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-10-INDEX-MA02
Map Name	Index Map of: Phase 2 Habitat Survey SES2 and AP2 ES Community Area MA02: Wimboldsley to Lostock Gralam

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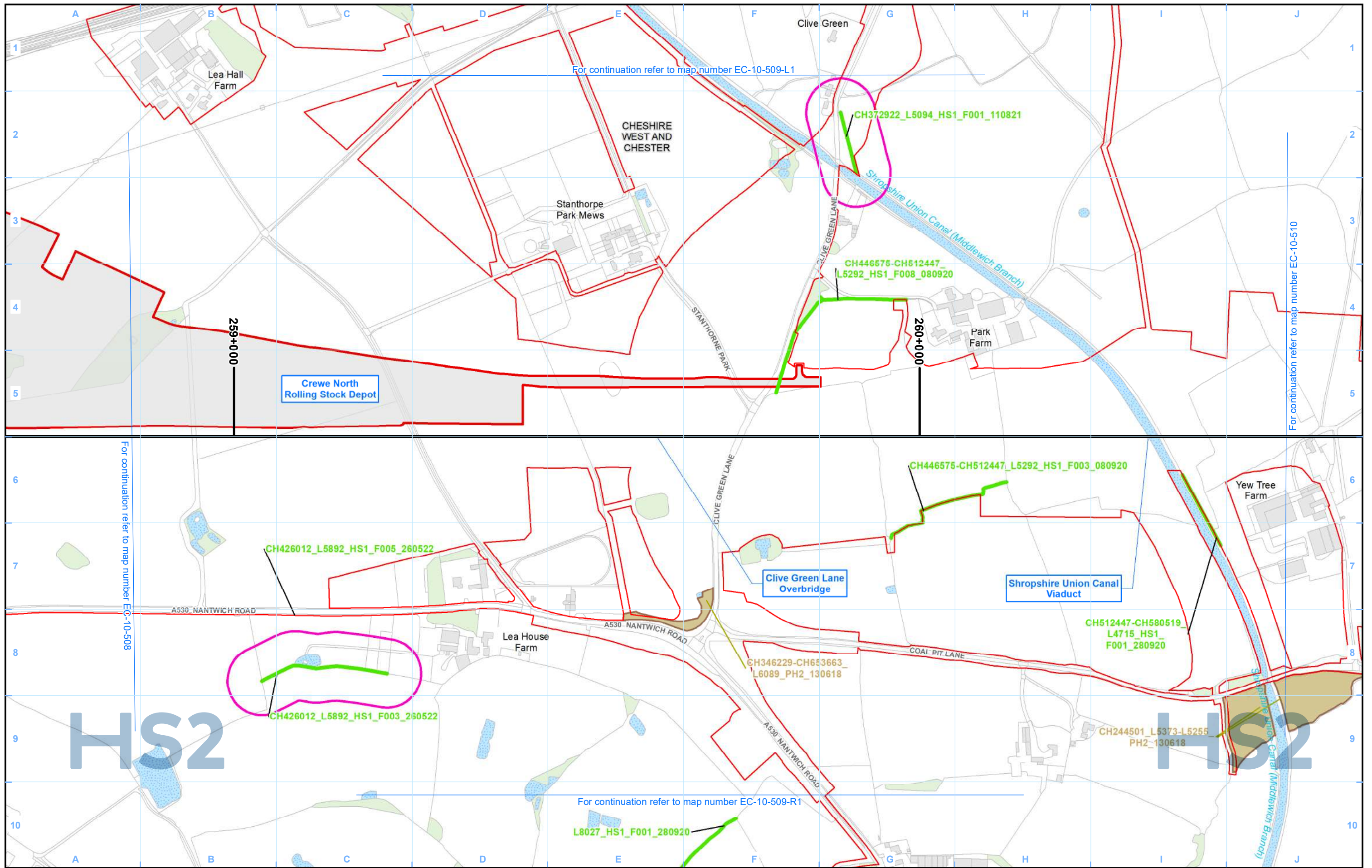
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**Legend**

Depot, station, headhouse or portal building	Watercourse	National Vegetation Classification survey	River macrophyte survey extent
Land potentially required during construction	Water body	Ditch vegetation survey	River habitat survey extent
Community area boundary	Woodland (verified by survey)	'Important' Hedgerow confirmed by field survey	Lake habitat
County boundary	Area contains new survey data	Possible 'Important Hedgerow' - no access available for survey	
District/Borough boundary			

Map Number: EC-10-509

Map Name: Phase 2 Habitat Survey  
SES2 and AP2 ES

Community Area MA02:  
Wimboldsley to Lostock Gralam

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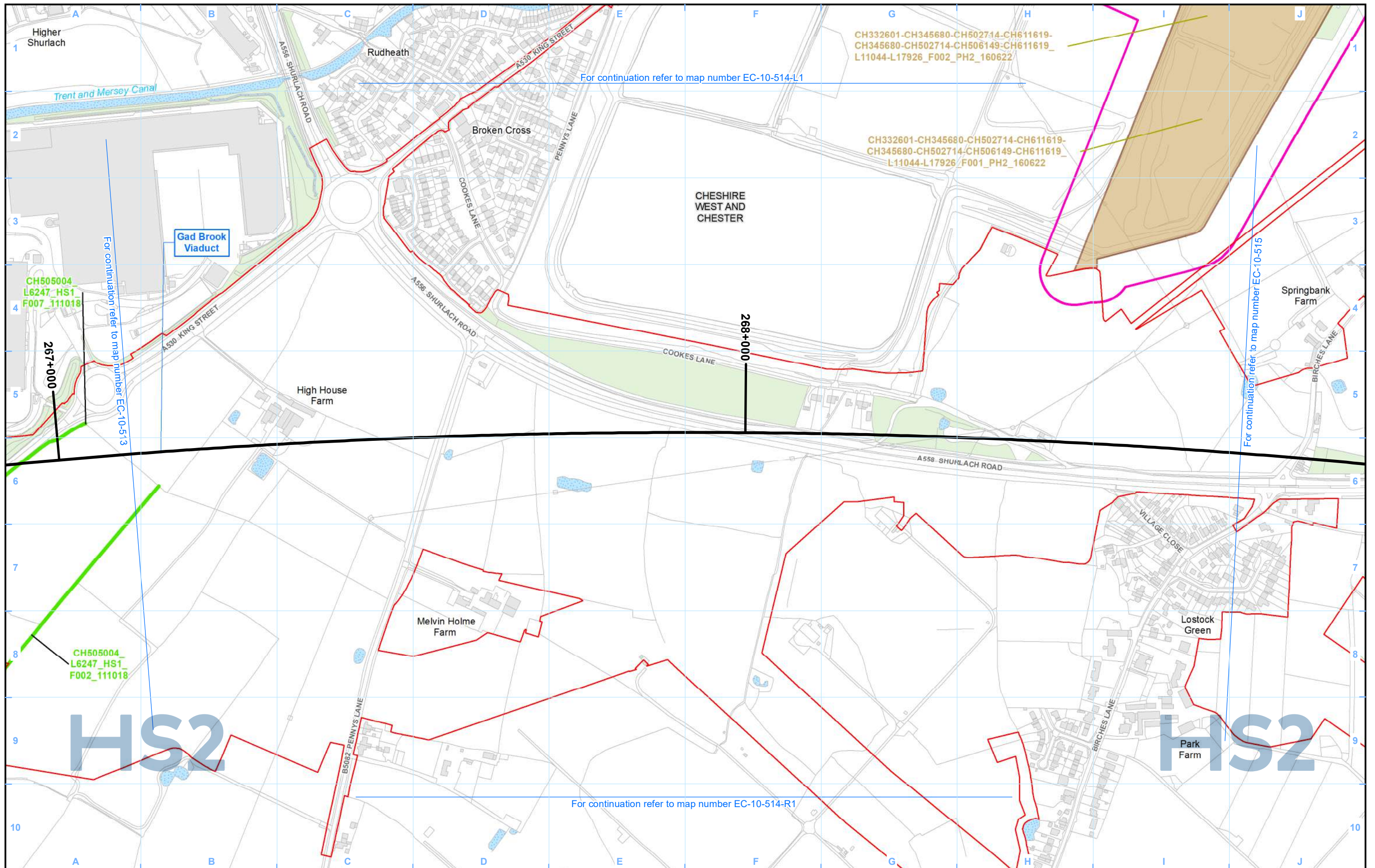
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001313-P01

Date: 29/03/23





Legend			
	Depot, station, headhouse or portal building		Watercourse
	Land potentially required during construction		Water body
	Community area boundary		National Vegetation Classification survey
	County boundary		Ditch vegetation survey
	District/Borough boundary		'Important' Hedgerow confirmed by field survey
			Possible 'Important Hedgerow' - no access available for survey
			River macrophyte survey extent
			River habitat survey extent
			Lake habitat

Map Number	EC-10-514
Map Name	Phase 2 Habitat Survey SES2 and AP2 ES
	Community Area MA02: Wimboldsley to Lostock Gralam

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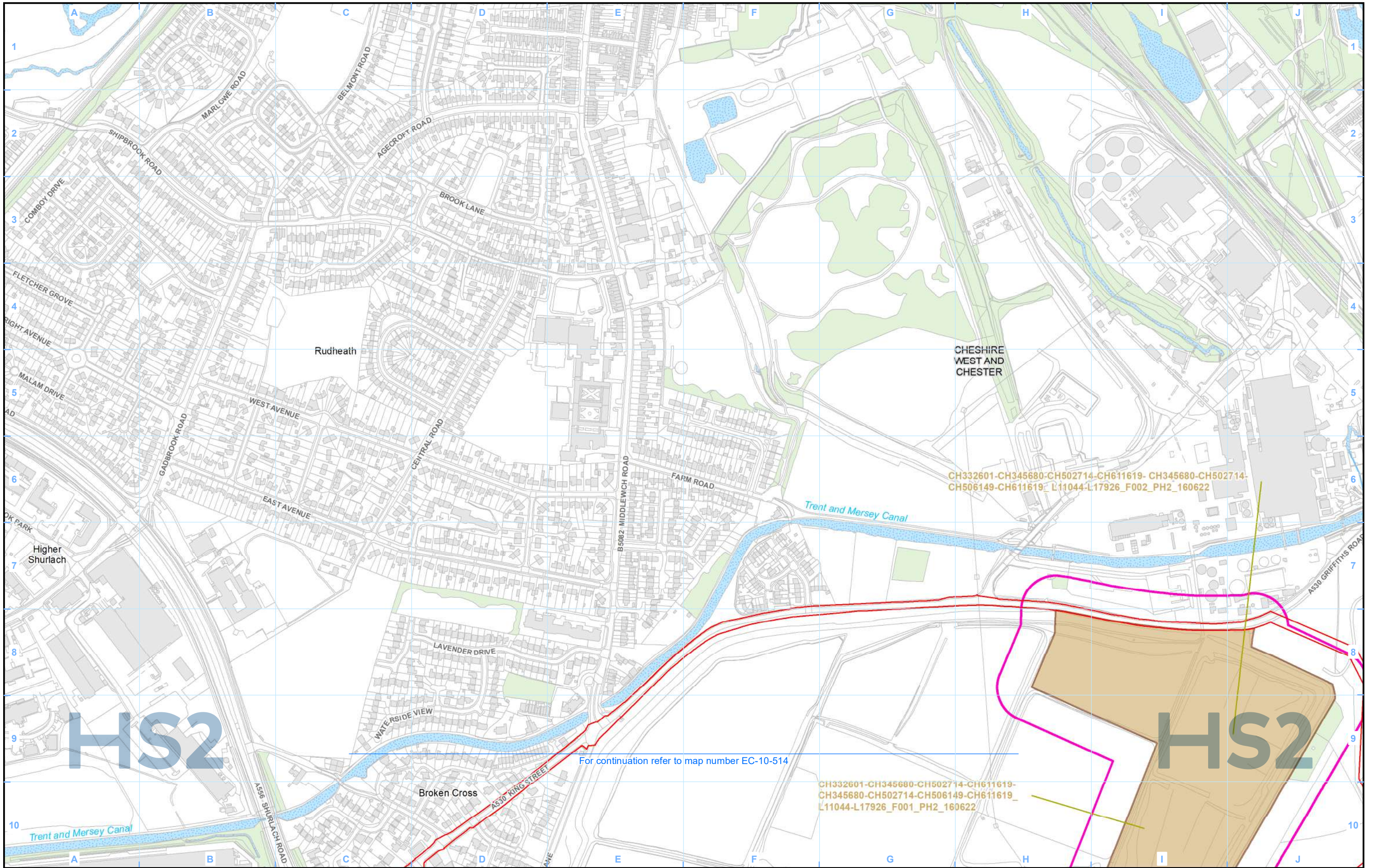
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For continuation refer to map number EC-10-514

Legend			
	Depot, station, headhouse or portal building		Watercourse
	Land potentially required during construction		Water body
	Community area boundary		National Vegetation Classification survey
	County boundary		Ditch vegetation survey
	District/Borough boundary		Woodland (verified by survey)
			'Important' Hedgerow confirmed by field survey
			Possible 'Important Hedgerow' - no access available for survey
			River macrophyte survey extent
			River habitat survey extent
			Lake habitat

Map Number	EC-10-514-L1
Map Name	Phase 2 Habitat Survey SES2 and AP2 ES
	Community Area MA02: Wimboldsley to Lostock Gralam

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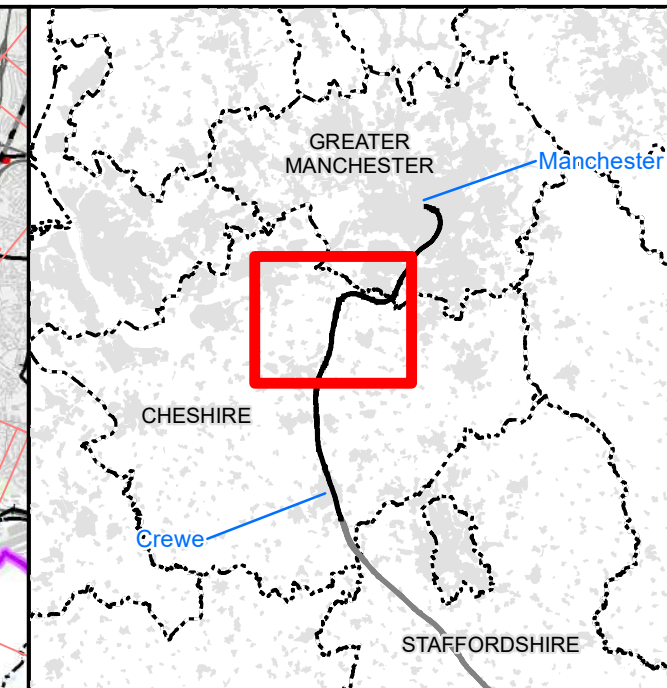
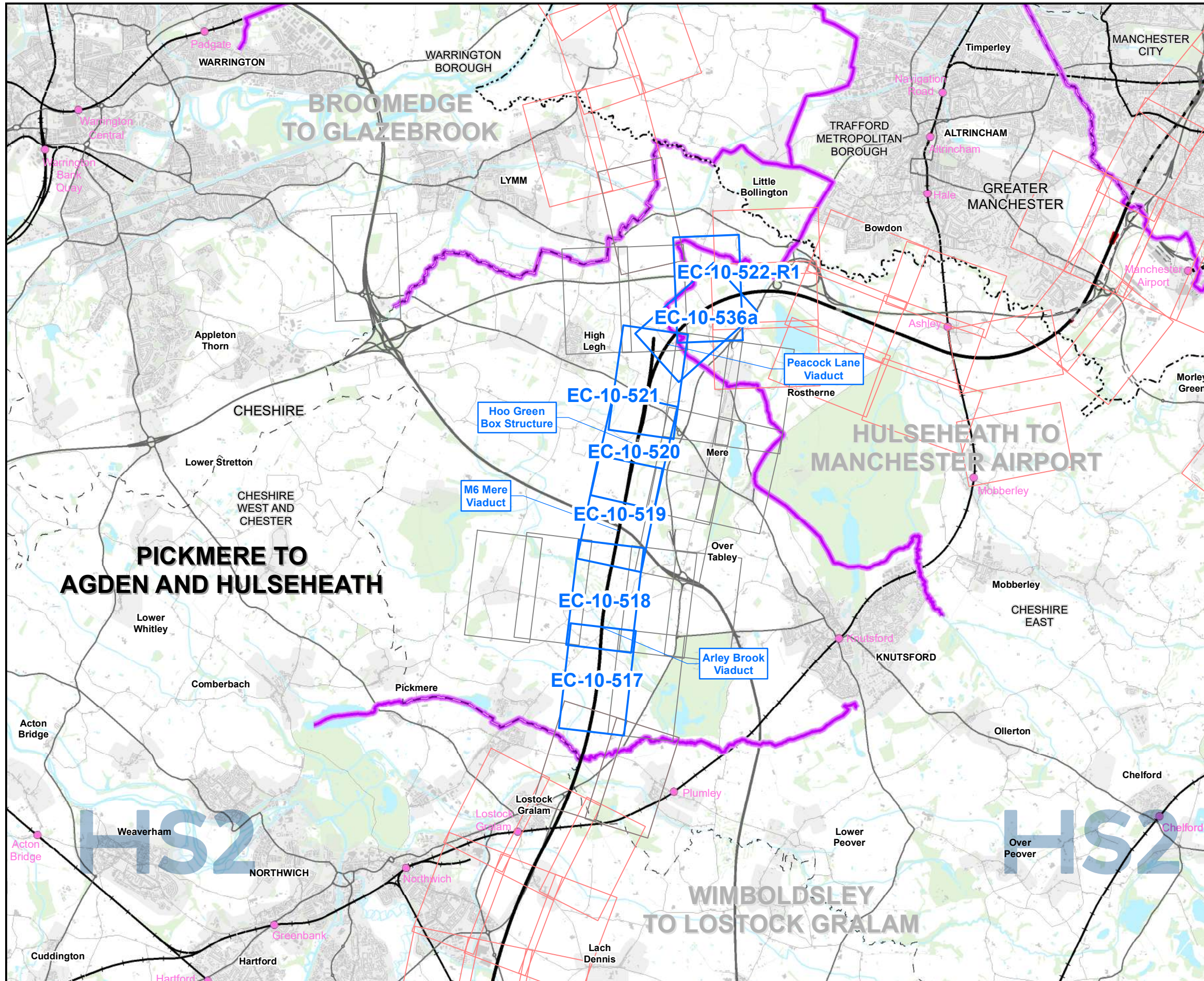
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**Main Map Legend**

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

Map Number	EC-10-INDEX-MA03
Map Name	Index Map of: Phase 2 Habitat Survey SES2 and AP2 ES Community Area MA03: Pickmere to Agden and Hulseheath

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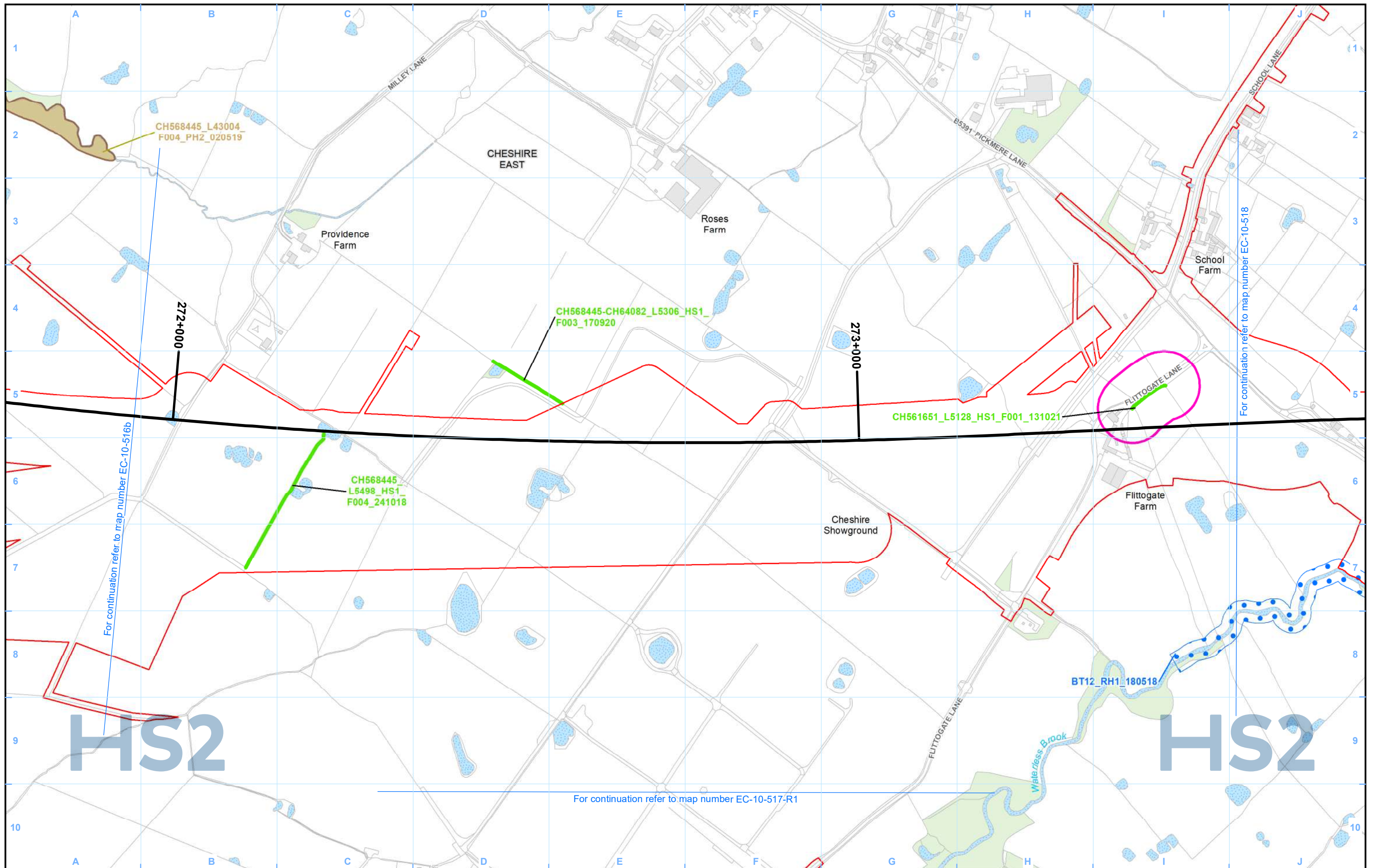
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For continuation refer to map number EC-10-516b

For continuation refer to map number EC-10-518

For continuation refer to map number EC-10-517-R1

Legend			
	Depot, station, headhouse or portal building		Watercourse
	Land potentially required during construction		Water body
	Community area boundary		National Vegetation Classification survey
	County boundary		Ditch vegetation survey
	District/Borough boundary		Woodland (verified by survey)
	'Important' Hedgerow confirmed by field survey		Possible 'Important Hedgerow' - no access available for survey
	Area contains new survey data		Lake habitat
	River macrophyte survey extent		River habitat survey extent

Map Number	EC-10-517
Map Name	Phase 2 Habitat Survey SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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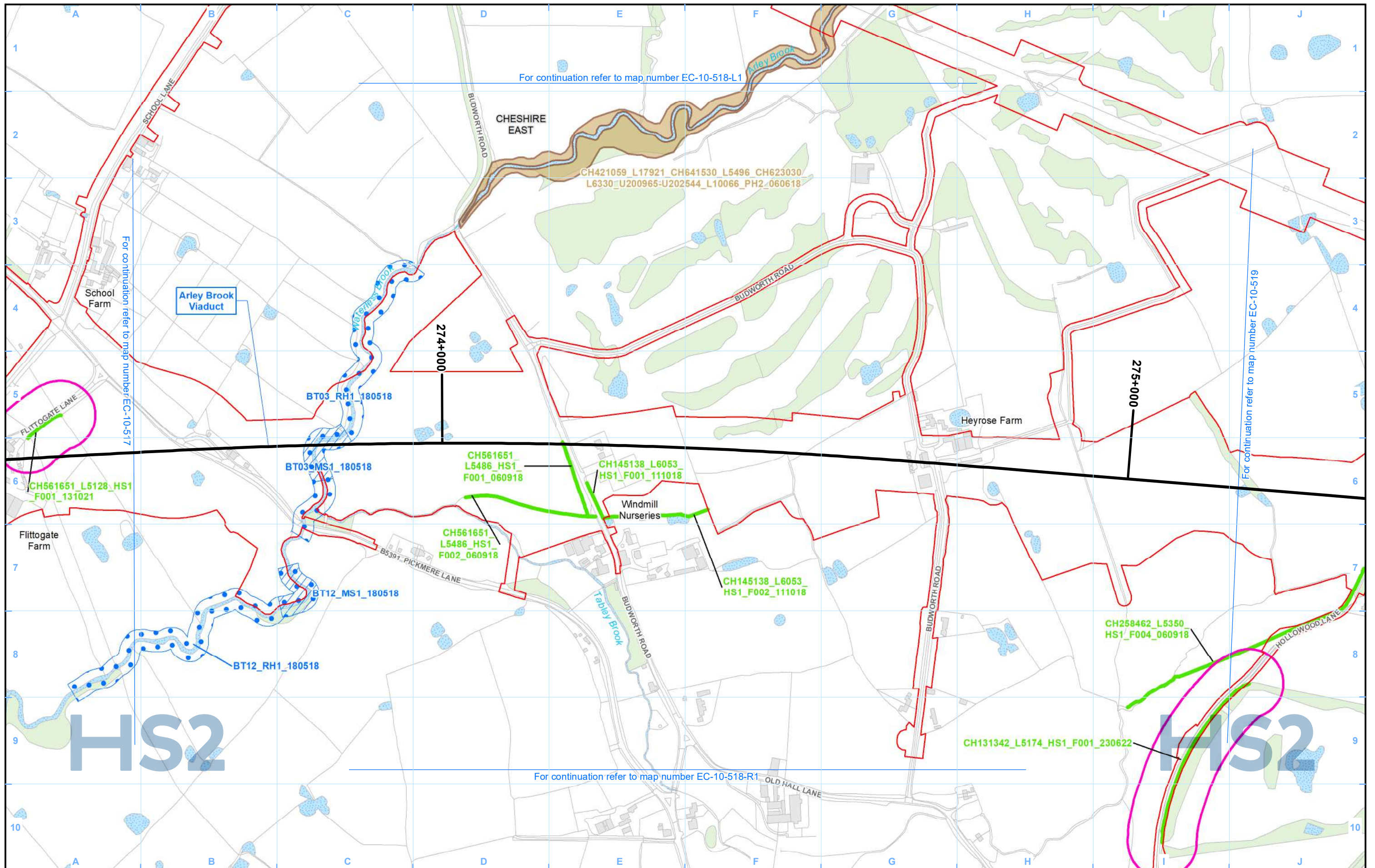
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For continuation refer to map number EC-10-518-L1

For continuation refer to map number EC-10-517

For continuation refer to map number EC-10-519

For continuation refer to map number EC-10-518-R1

Legend			
	Depot, station, headhouse or portal building		Watercourse
	Land potentially required during construction		Water body
	Community area boundary		National Vegetation Classification survey
	County boundary		Ditch vegetation survey
	District/Borough boundary		'Important' Hedgerow confirmed by field survey
	River macrophyte survey extent		Possible 'Important Hedgerow' - no access available for survey
	River habitat survey extent		
	Lake habitat		
	Woodland (verified by survey)		

Map Number	EC-10-518
Map Name	Phase 2 Habitat Survey SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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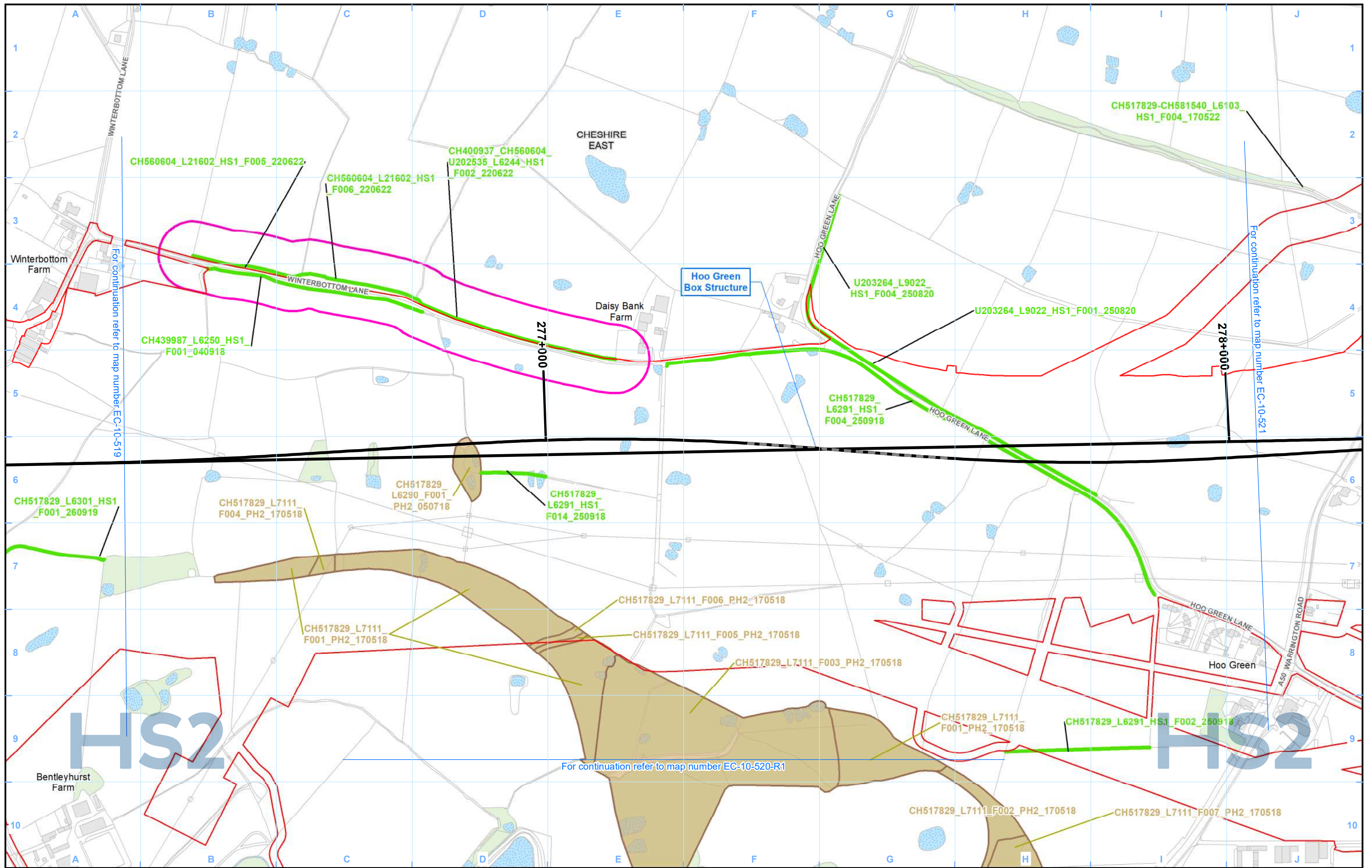
Doc Number: 2PT27-MWJ-EV-MAP-M000-001323-P01

Date: 29/03/23









Legend			
	Depot, station, headhouse or portal building		Watercourse
	Land potentially required during construction		Water body
	Community area boundary		National Vegetation Classification survey
	County boundary		Ditch vegetation survey
	District/Borough boundary		'Important' Hedgerow confirmed by field survey
	Woodland (verified by survey)		Possible 'Important Hedgerow' - no access available for survey
	Area contains new survey data		River macrophyte survey extent
			River habitat survey extent
			Lake habitat

Map Number	EC-10-520
Map Name	Phase 2 Habitat Survey SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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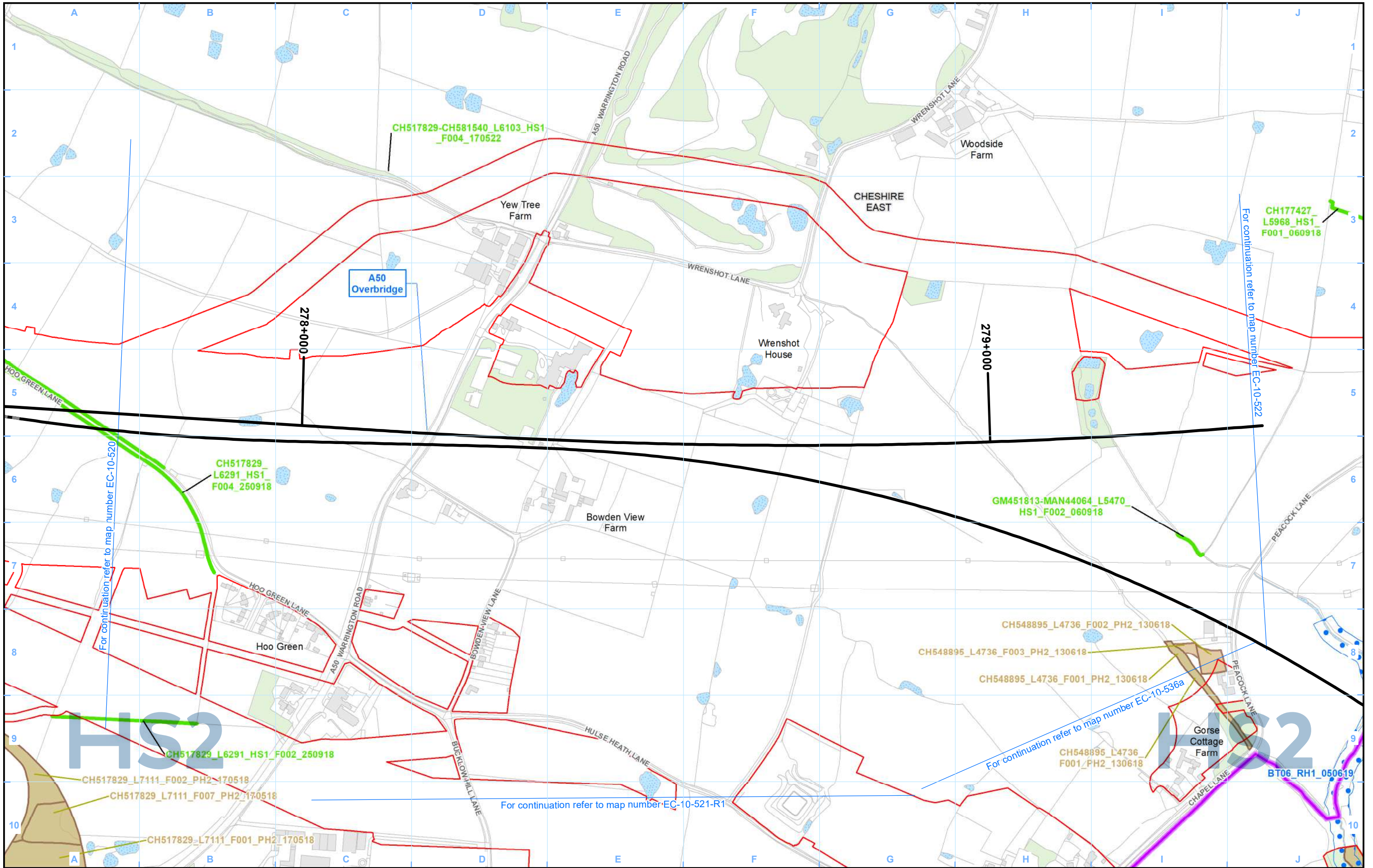
Doc Number: 2PT27-MWJ-EV-MAP-M000-001325-P01

Scale at A3: 1:5,000

Metres

Date: 29/03/23





Legend			
	Depot, station, headhouse or portal building		Watercourse
	Land potentially required during construction		Water body
	Community area boundary		National Vegetation Classification survey
	County boundary		Ditch vegetation survey
	District/Borough boundary		'Important' Hedgerow confirmed by field survey
			Possible 'Important Hedgerow' - no access available for survey
			Woodland (verified by survey)
			Area contains new survey data
			River macrophyte survey extent
			River habitat survey extent
			Lake habitat

Map Number	EC-10-521
Map Name	Phase 2 Habitat Survey SES2 and AP2 ES
	Community Area MA03: Pickmere to Agden and Hulseheath

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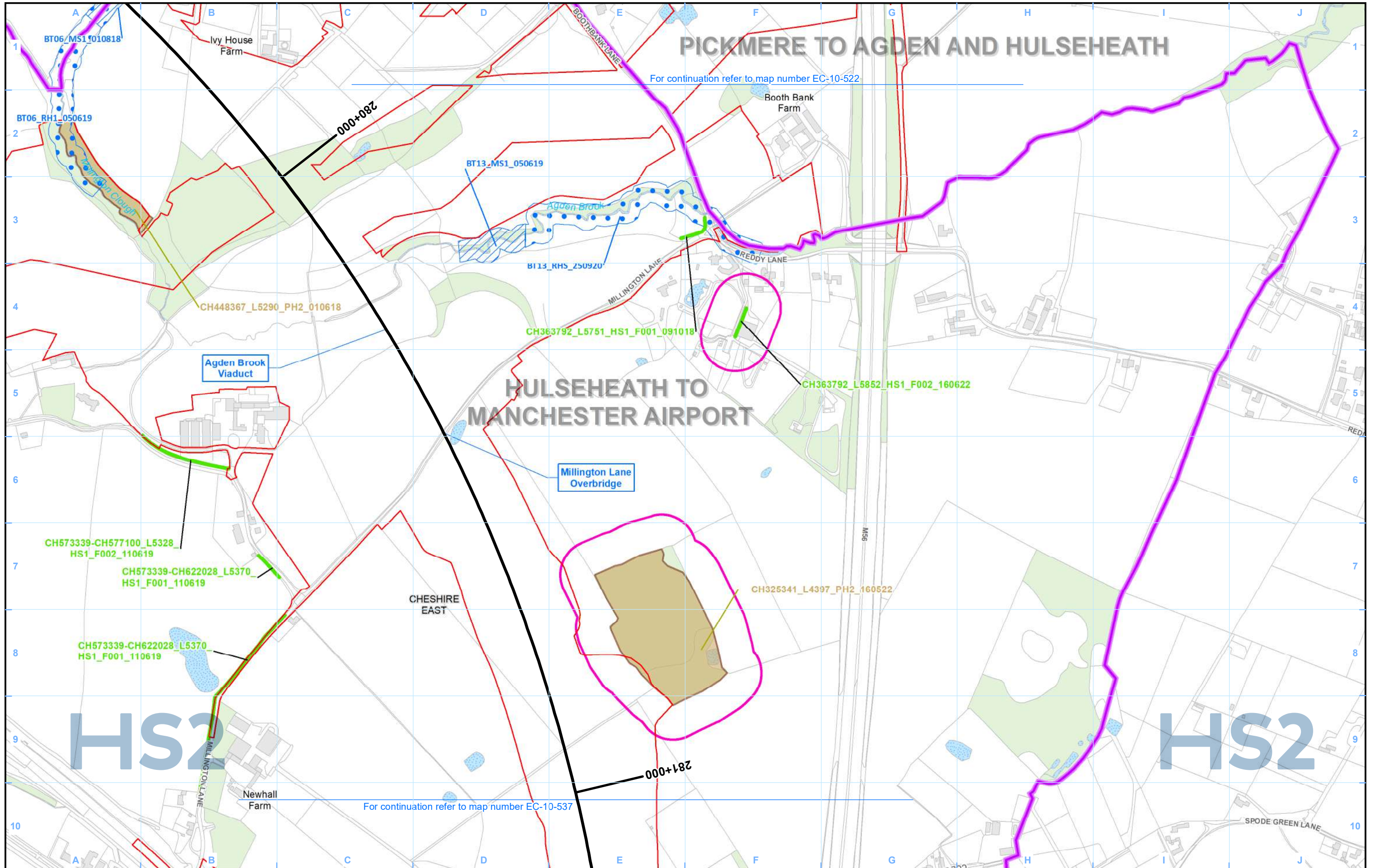


# PICKMERE TO AGDEN AND HULSEHEATH

For continuation refer to map number EC-10-522

# HULSEHEATH TO MANCHESTER AIRPORT

For continuation refer to map number EC-10-537



Legend	
	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)
	'Important' Hedgerow confirmed by field survey
	Possible 'Important Hedgerow' - no access available for survey
	National Vegetation Classification survey
	Ditch vegetation survey
	River macrophyte survey extent
	River habitat survey extent
	Lake habitat

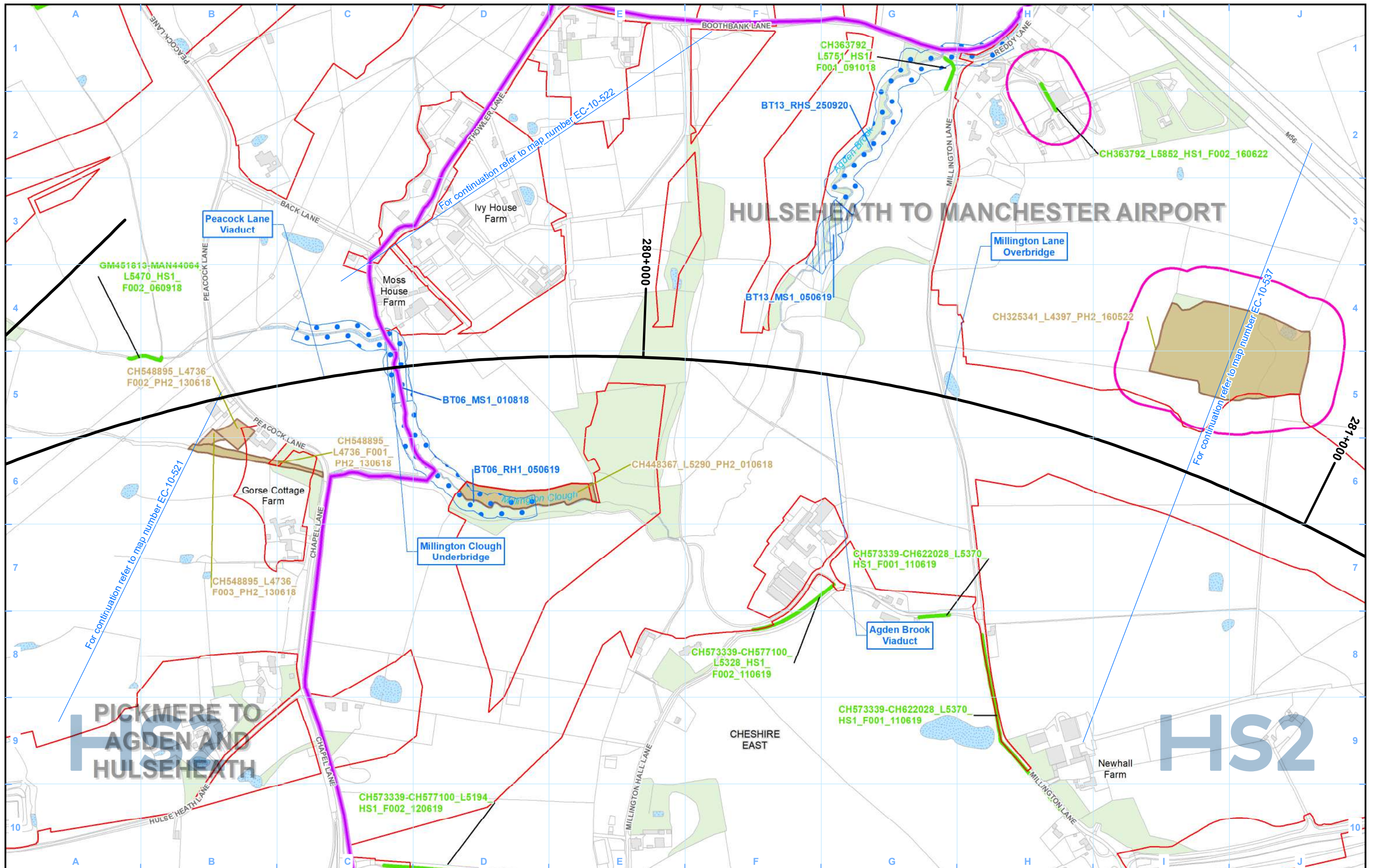
Map Number	EC-10-522-R1
Map Name	Phase 2 Habitat Survey SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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Legend			
	Depot, station, headhouse or portal building		Watercourse
	Land potentially required during construction		Water body
	Community area boundary		National Vegetation Classification survey
	County boundary		Ditch vegetation survey
	District/Borough boundary		'Important' Hedgerow confirmed by field survey
			Possible 'Important Hedgerow' - no access available for survey
			River macrophyte survey extent
			River habitat survey extent
			Lake habitat

Map Number	EC-10-536a
Map Name	Phase 2 Habitat Survey SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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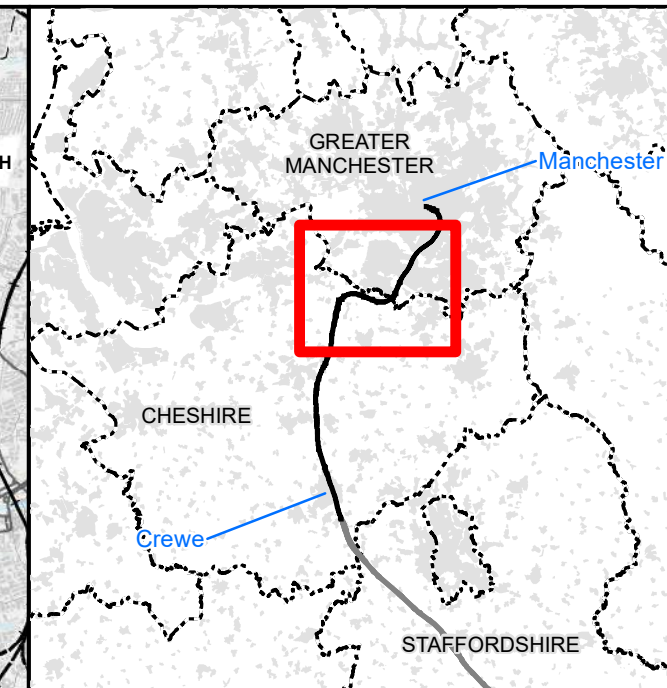
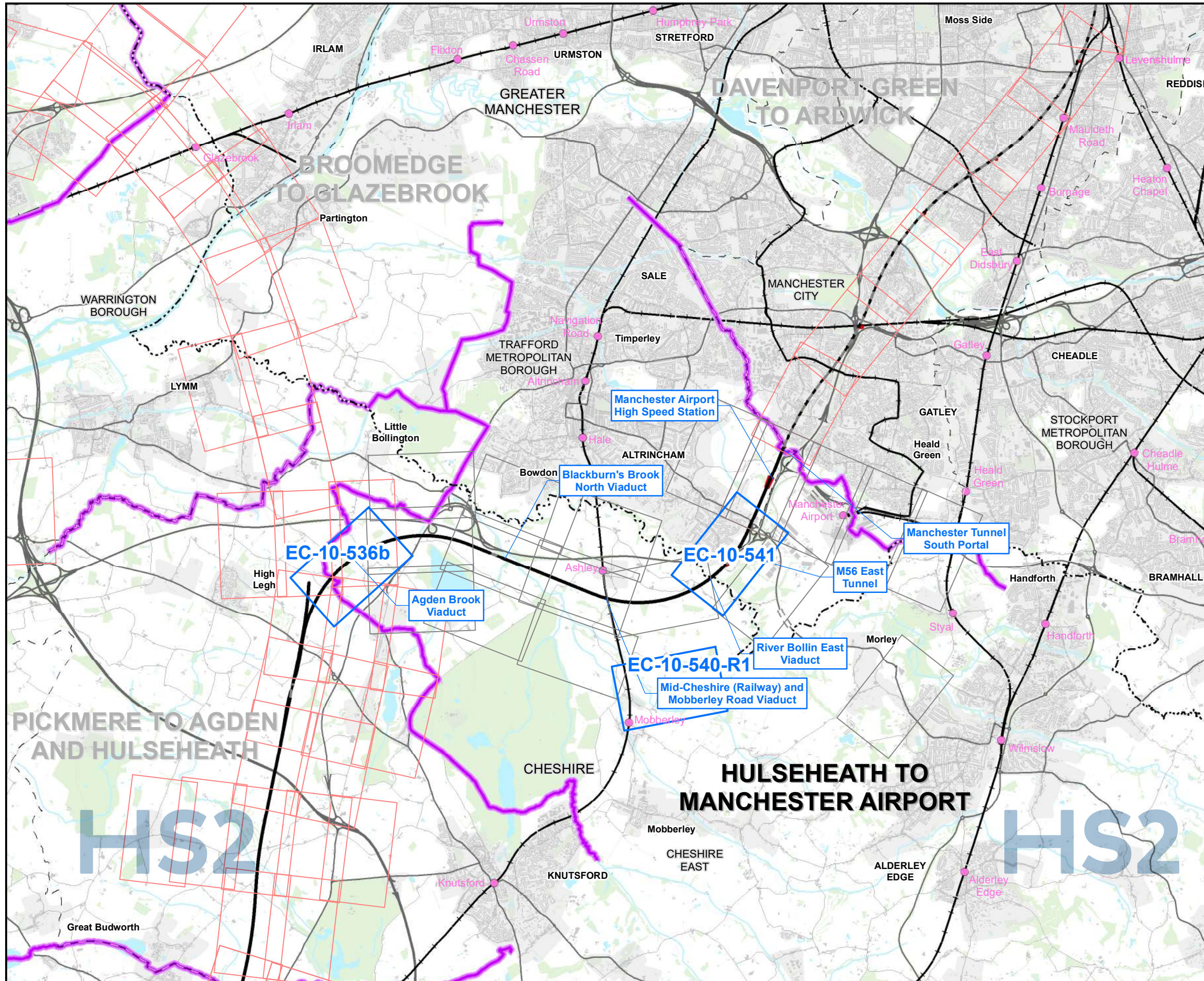
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Scale at A3: 1:5,000

Metres

Date: 29/03/23





**Map Series Information:**

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).

Main Map Legend	
Route in tunnel	Map sheets included in this community area with ammendment
Route on surface	Map sheet included in this community with no ammendment
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-10-INDEX-MA06
Map Name	Index Map of: Phase 2 Habitat Survey SES2 and AP2 ES Community Area MA06: Hulseheath to Manchester Airport

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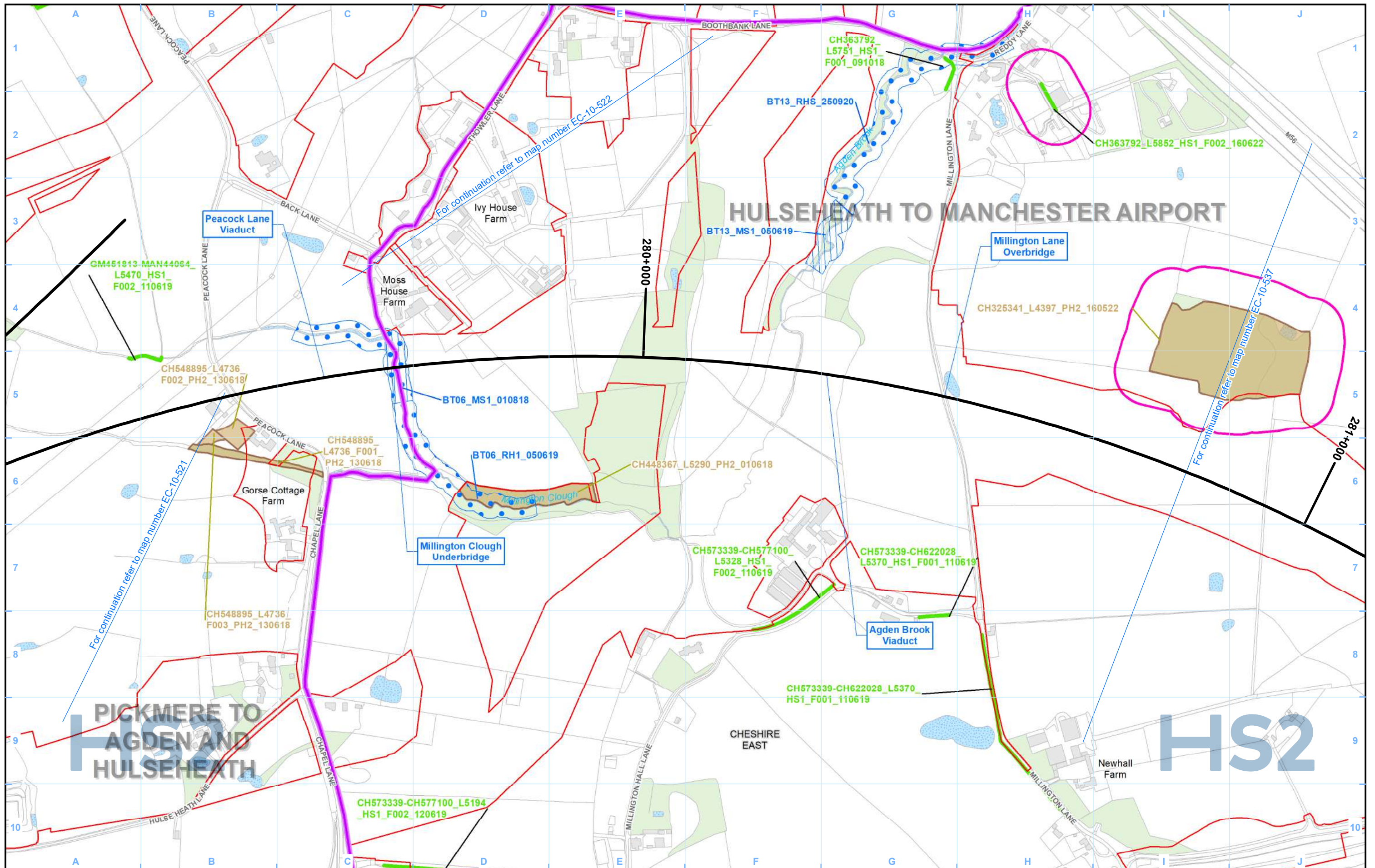
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001371-P01 **Date:** 29/03/23





Legend			
	Depot, station, headhouse or portal building		Watercourse
	Land potentially required during construction		Water body
	Community area boundary		National Vegetation Classification survey
	County boundary		Ditch vegetation survey
	District/Borough boundary		Woodland (verified by survey)
			'Important' Hedgerow confirmed by field survey
			Possible 'Important Hedgerow' - no access available for survey
			River macrophyte survey extent
			River habitat survey extent
			Lake habitat

Map Number	EC-10-536b
Map Name	Phase 2 Habitat Survey SES2 and AP2 ES
Community Area MA06: Hulseheath to Manchester Airport	

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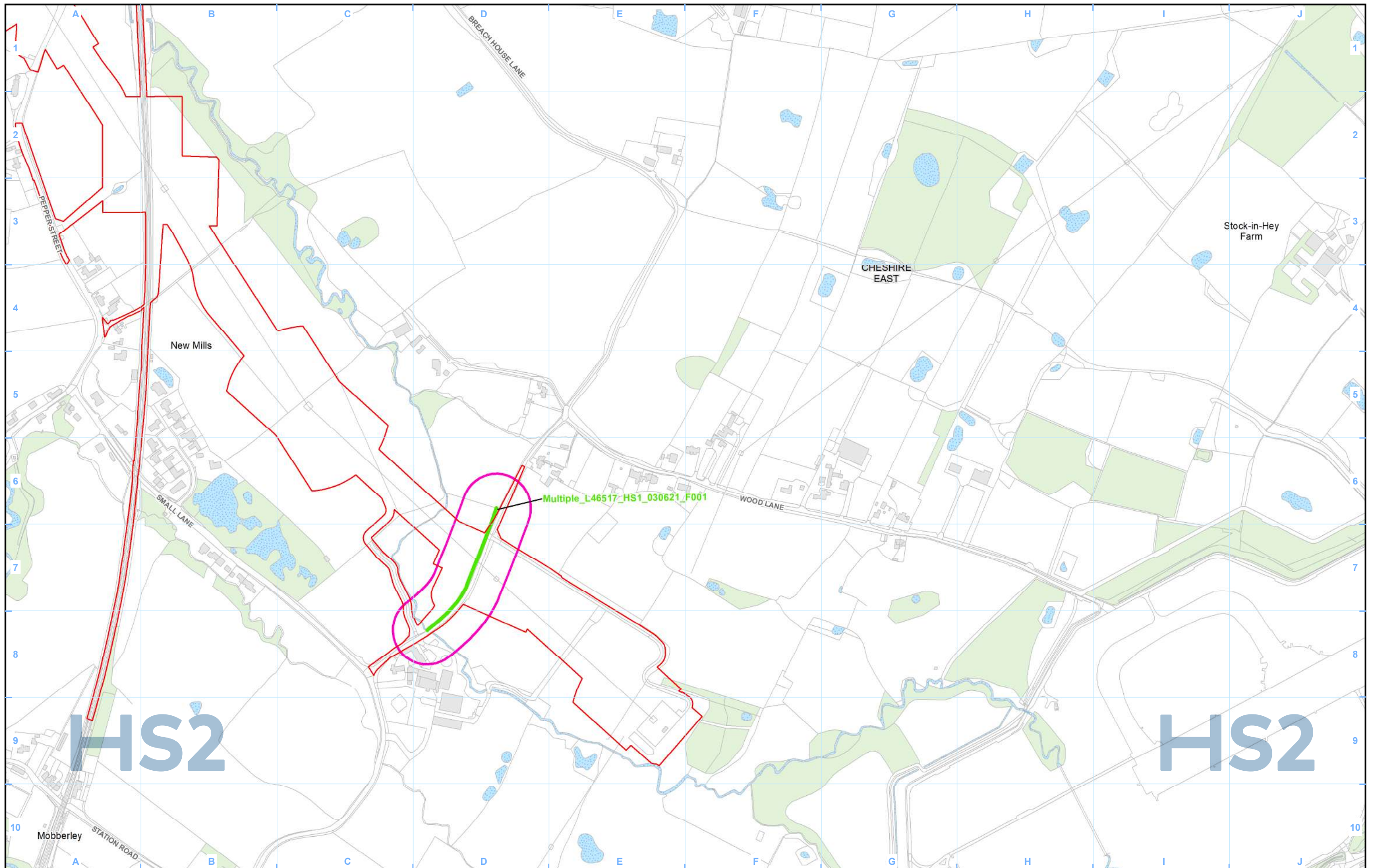
Doc Number: 2PT27-MWJ-EV-MAP-M000-001344-P01

Scale at A3: 1:5,000

Metres

Date: 29/03/23





Legend			
	Depot, station, headhouse or portal building		Watercourse
	Land potentially required during construction		Water body
	Community area boundary		'Important' Hedgerow confirmed by field survey
	County boundary		Possible 'Important Hedgerow' - no access available for survey
	District/Borough boundary		National Vegetation Classification survey
	Area contains new survey data		Ditch vegetation survey
	Woodland (verified by survey)		River macrophyte survey extent
	Area contains new survey data		River habitat survey extent
			Lake habitat

Map Number	EC-10-540-R1
Map Name	Phase 2 Habitat Survey SES2 and AP2 ES
Community Area MA06: Hulseheath to Manchester Airport	

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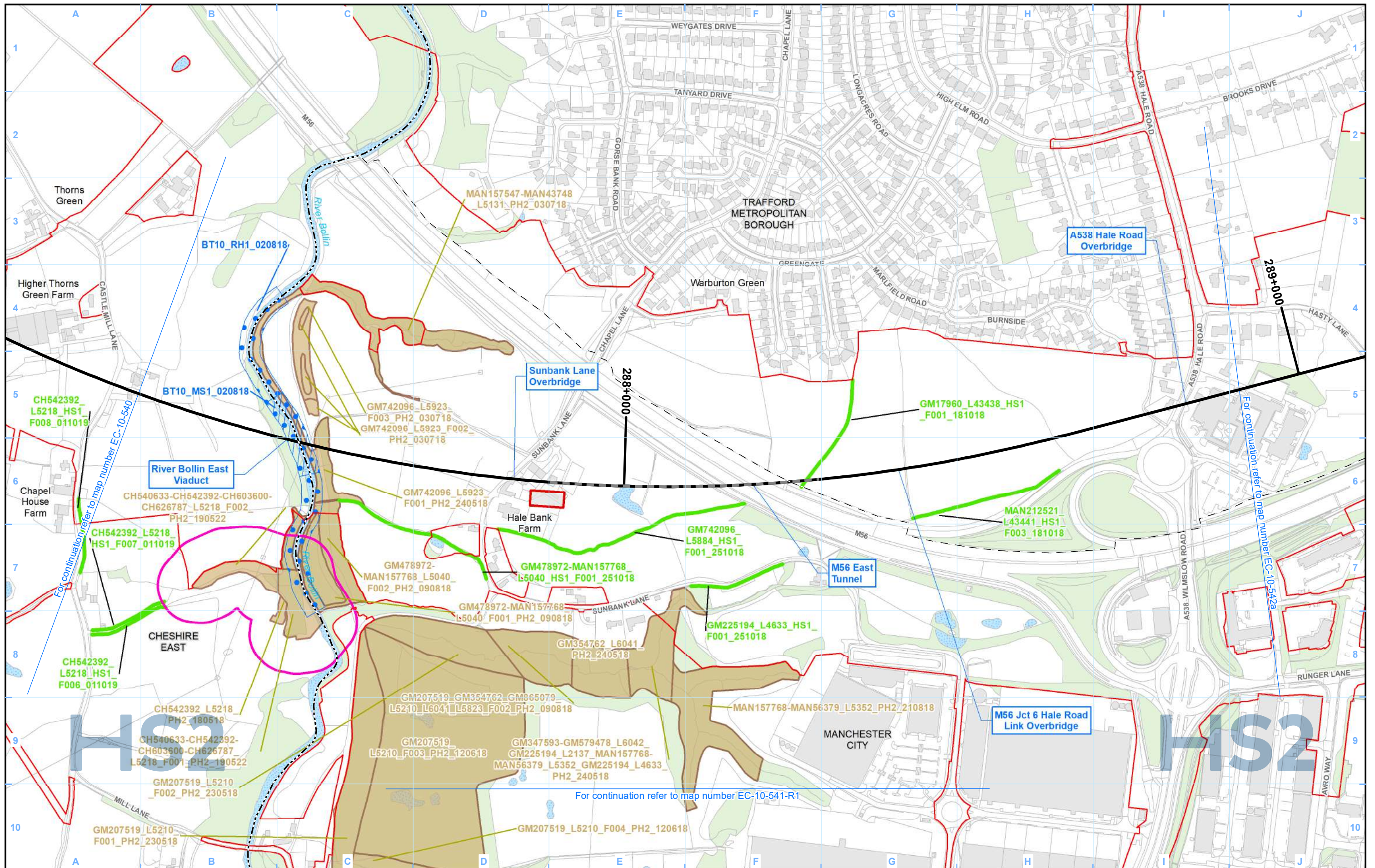
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Scale at A3: 1:5,000

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Legend			
	Depot, station, headhouse or portal building		Watercourse
	Land potentially required during construction		Water body
	Community area boundary		National Vegetation Classification survey
	County boundary		Ditch vegetation survey
	District/Borough boundary		'Important' Hedgerow confirmed by field survey
			Possible 'Important Hedgerow' - no access available for survey
			River macrophyte survey extent
			River habitat survey extent
			Lake habitat
			Woodland (verified by survey)
			Area contains new survey data

Map Number	EC-10-541
Map Name	Phase 2 Habitat Survey SES2 and AP2 ES
	Community Area MA06: Hulseheath to Manchester Airport

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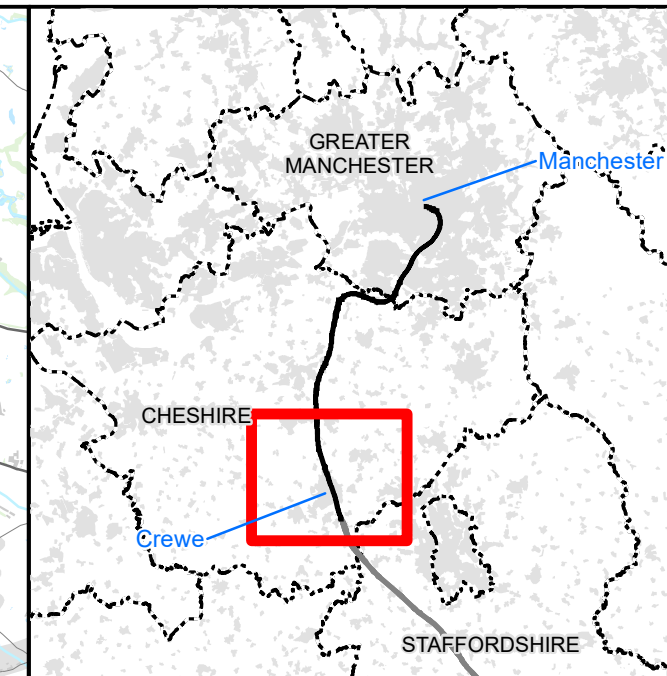
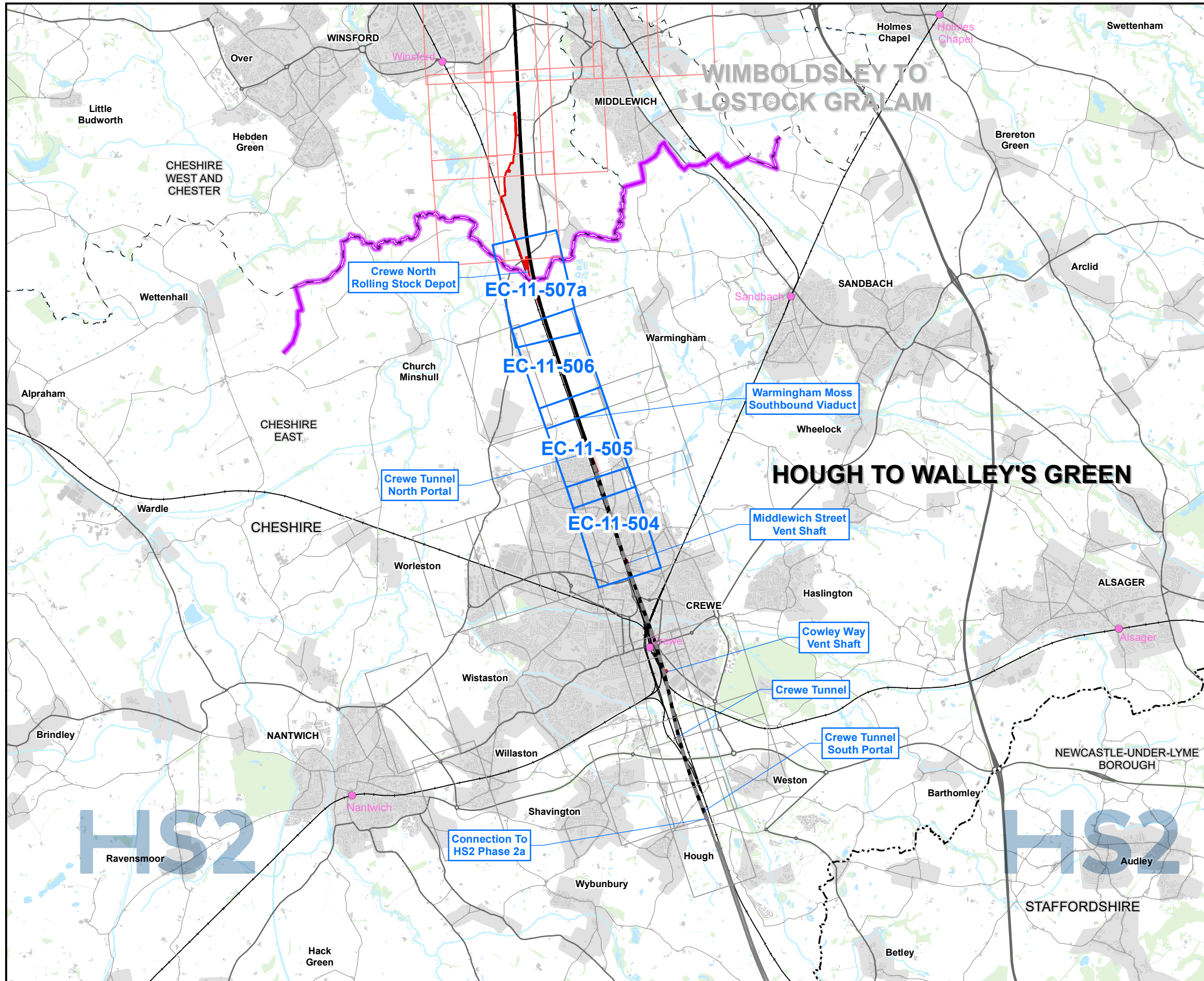


## **High Speed Rail (Crewe – Manchester)**

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

EC-11 – Other Protected and Notable Species (1)





**Map Series Information:**

This map series shows the extent of various protected species surveys conducted to inform the environmental assessment.

**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-11-INDEX-MA01  
 Map Name Index Map of:  
 Other Protected and Notable  
 Species (1) SES2 and AP2 ES  
 Community Area MA01:  
 Hough to Walley's Green

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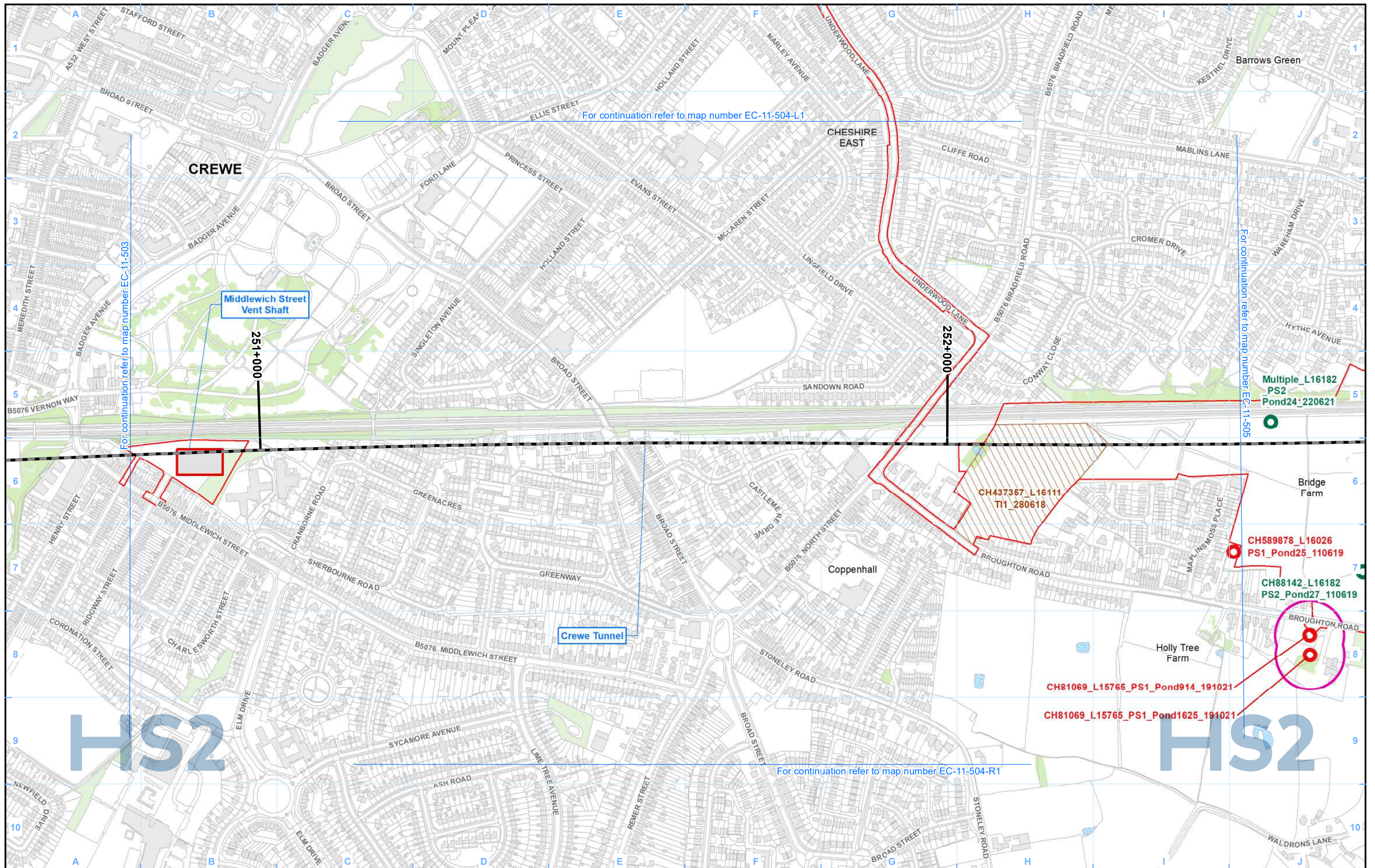
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For continuation refer to map number EC-11-503

For continuation refer to map number EC-11-504-L1

For continuation refer to map number EC-11-505

For continuation refer to map number EC-11-504-R1

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

- Otter:**
- Active otter holt
  - Potential otter holt
  - Suitable habitat for otter

- 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

- Pond survey:**
- Pond survey - national pond survey
  - Pond survey - PSYM
  - Pond survey - rapid assessment method

- Fish:**
- Fish survey location
  - Terrestrial Invertebrate**
  - Terrestrial invertebrate survey extent

Map Number **EC-11-504**

Map Name **Other Protected and Notable Species (1) SES2 and AP2 ES**

Community Area MA01:  
Hough to Walley's Green

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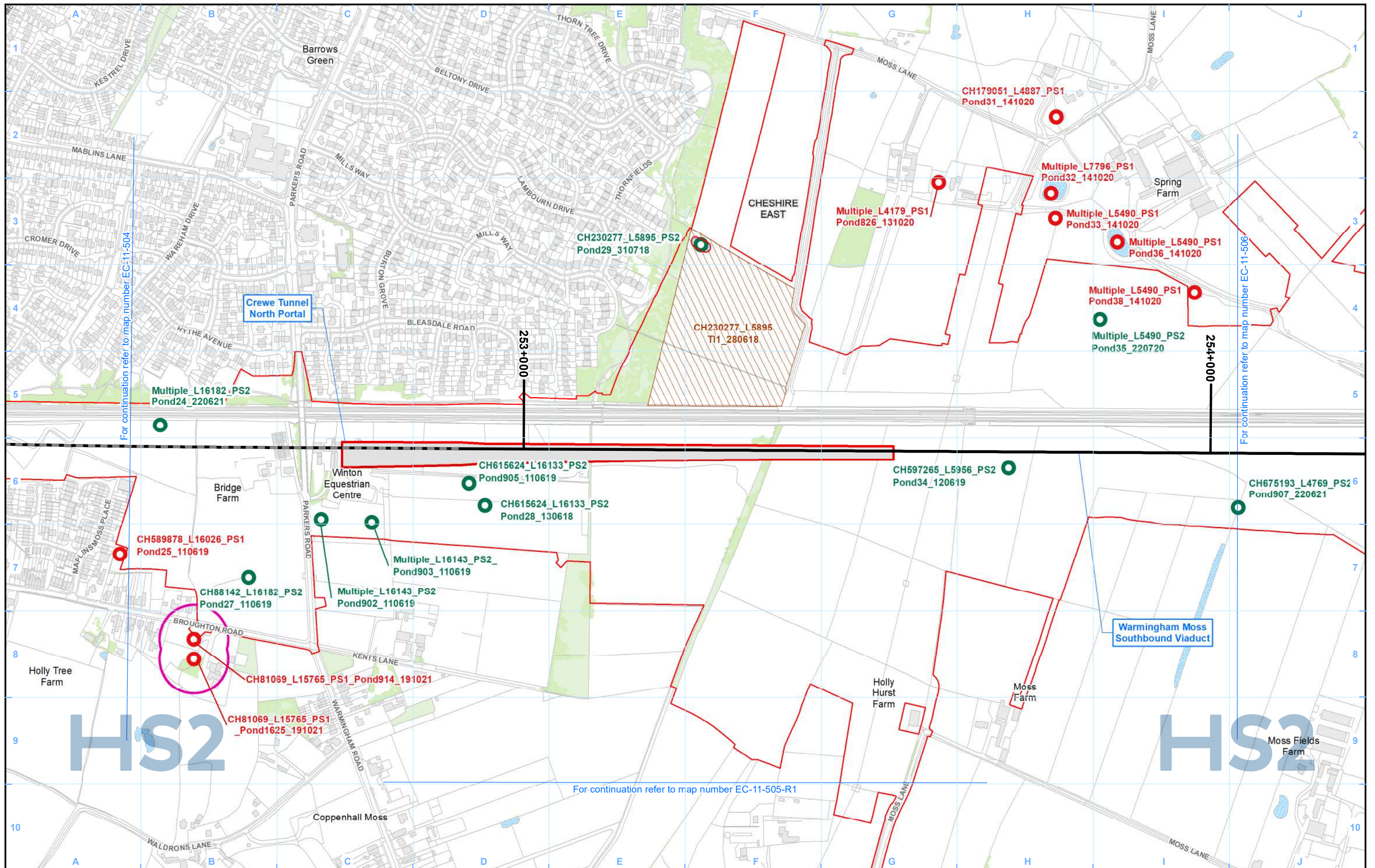
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001380-P01

Date: 12/04/23





For continuation refer to map number EC-11-504

For continuation refer to map number EC-11-506

For continuation refer to map number EC-11-505-R1

**Legend**

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| <ul style="list-style-type: none"> <li> Route in tunnel</li> <li> Route on surface</li> <li> Depot, station, headhouse or portal building</li> <li> Land potentially required during construction</li> <li> Community area boundary</li> <li> County boundary</li> </ul> | <ul style="list-style-type: none"> <li> Watercourse</li> <li> Water body</li> <li> Woodland (verified by survey)</li> <li> Area contains new survey data</li> </ul> | <p><b>Otter:</b></p> <ul style="list-style-type: none"> <li> Active otterholt</li> <li> Potential otterholt</li> <li> Suitable habitat for otter</li> </ul> | <p><b>White clawed crayfish:</b></p> <ul style="list-style-type: none"> <li> Manual search and/or trapping conducted and presence confirmed</li> <li> Manual search and/or trapping conducted and assumed absent</li> <li> Site identified as potentially suitable but no access available</li> </ul> | <p><b>Pond survey:</b></p> <ul style="list-style-type: none"> <li> Pond survey - national pond survey</li> <li> Pond survey - PSYM</li> <li> Pond survey - rapid assessment method</li> </ul> | <p><b>Fish:</b></p> <ul style="list-style-type: none"> <li> Fish survey location</li> <li><b>Terrestrial Invertebrate</b></li> <li> Terrestrial invertebrate survey extent</li> </ul> |
|--|---|---|---|---|---|

Map Number	EC-11-505
Map Name	Other Protected and Notable Species (1) SES2 and AP2 ES
Community Area MA01: Hough to Walley's Green	

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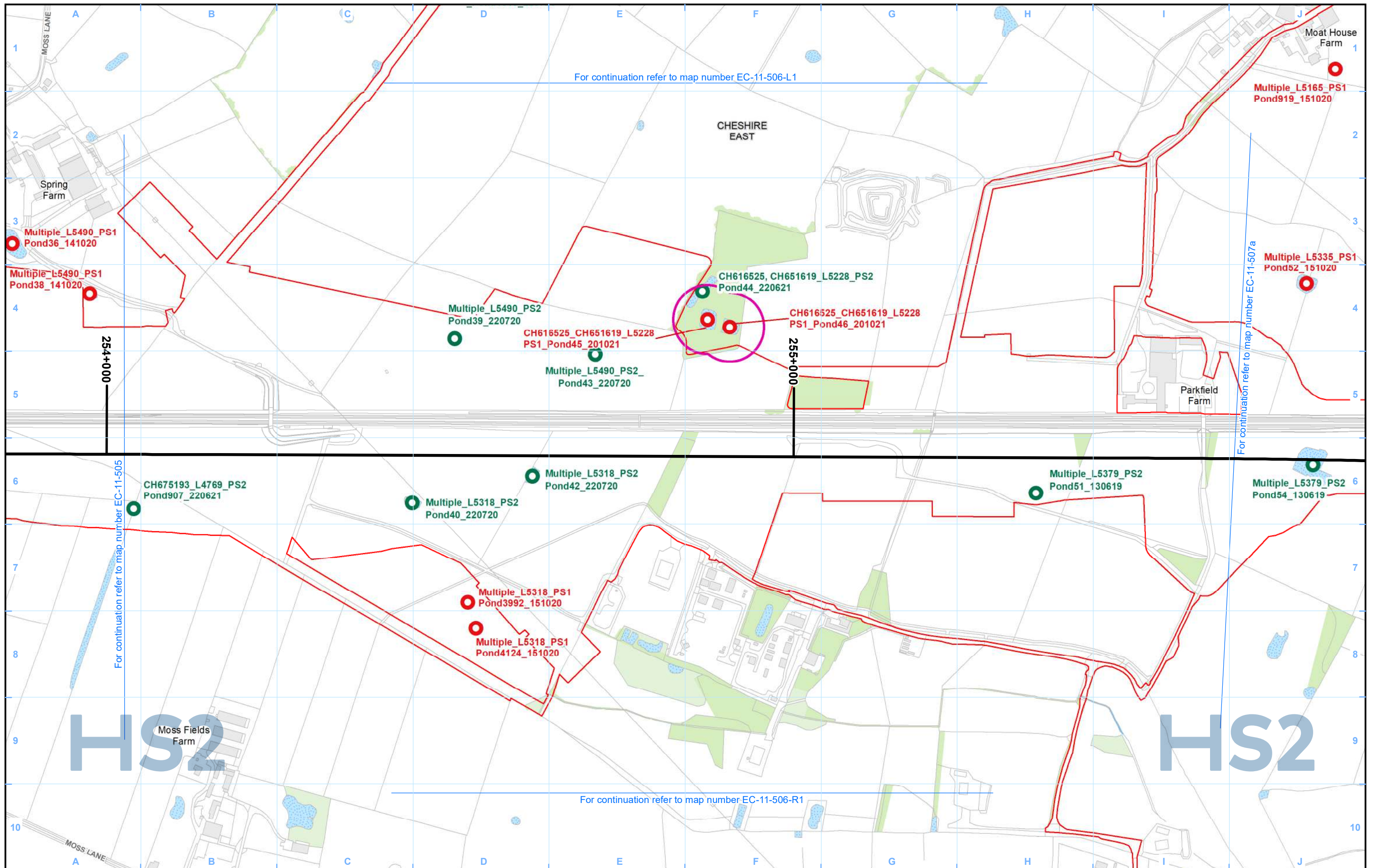
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For continuation refer to map number EC-11-506-L1

For continuation refer to map number EC-11-507a

For continuation refer to map number EC-11-505

For continuation refer to map number EC-11-506-R1

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

- Otter:**
- Active otter holt
  - Potential otter holt
  - Suitable habitat for otter

- 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

- Pond survey:**
- Pond survey - national pond survey
  - Pond survey - PSYM
  - Pond survey - rapid assessment method

- Fish:**
- Fish survey location
  - Terrestrial invertebrate**
  - Terrestrial invertebrate survey extent

Map Number: EC-11-506

Map Name: Other Protected and Notable Species (1) SES2 and AP2 ES

Community Area MA01: Hough to Walley's Green

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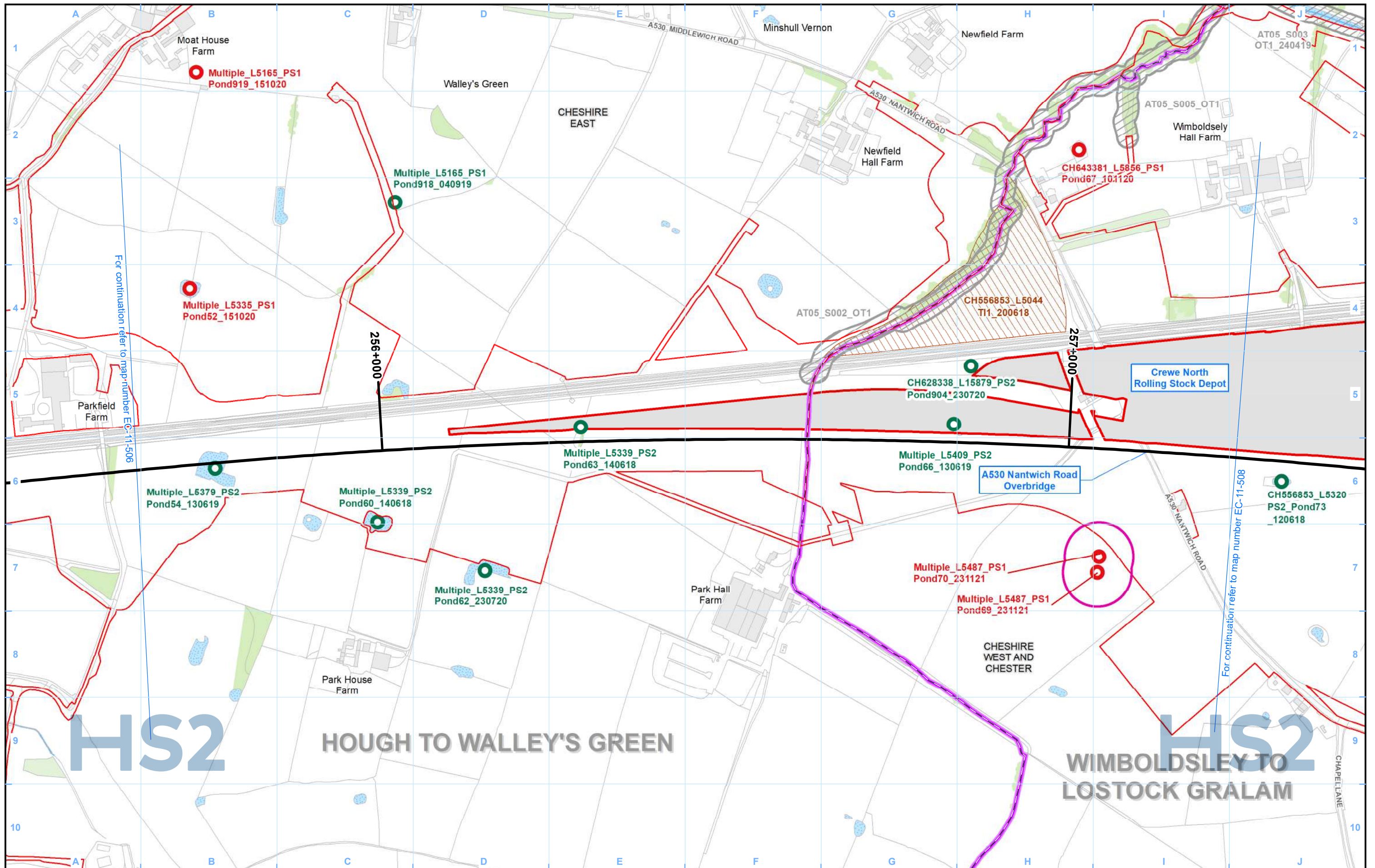
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**Legend**

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

- Watercourse
- Water body
- Woodland (verified by survey)
- Area contains new survey data

**Otter:**

- Active otterholt
- Potential otterholt
- Suitable habitat for otter

**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

**Pond survey:**

- Pond survey - national pond survey
- Pond survey - PSYM
- Pond survey - rapid assessment method

**Fish:**

- Fish survey location
- Terrestrial invertebrate
- Terrestrial invertebrate survey extent

Map Number: EC-11-507a

Map Name: Other Protected and Notable Species (1) SES2 and AP2 ES

Community Area MA01: Hough to Walley's Green

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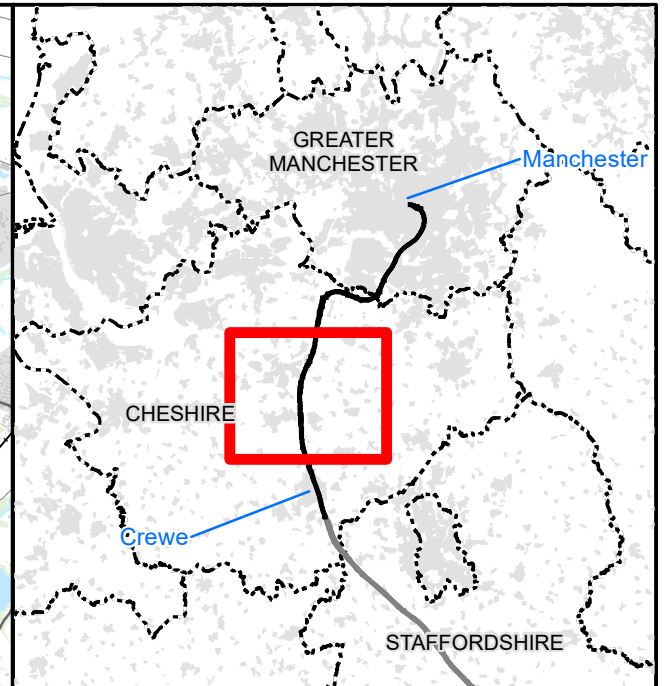
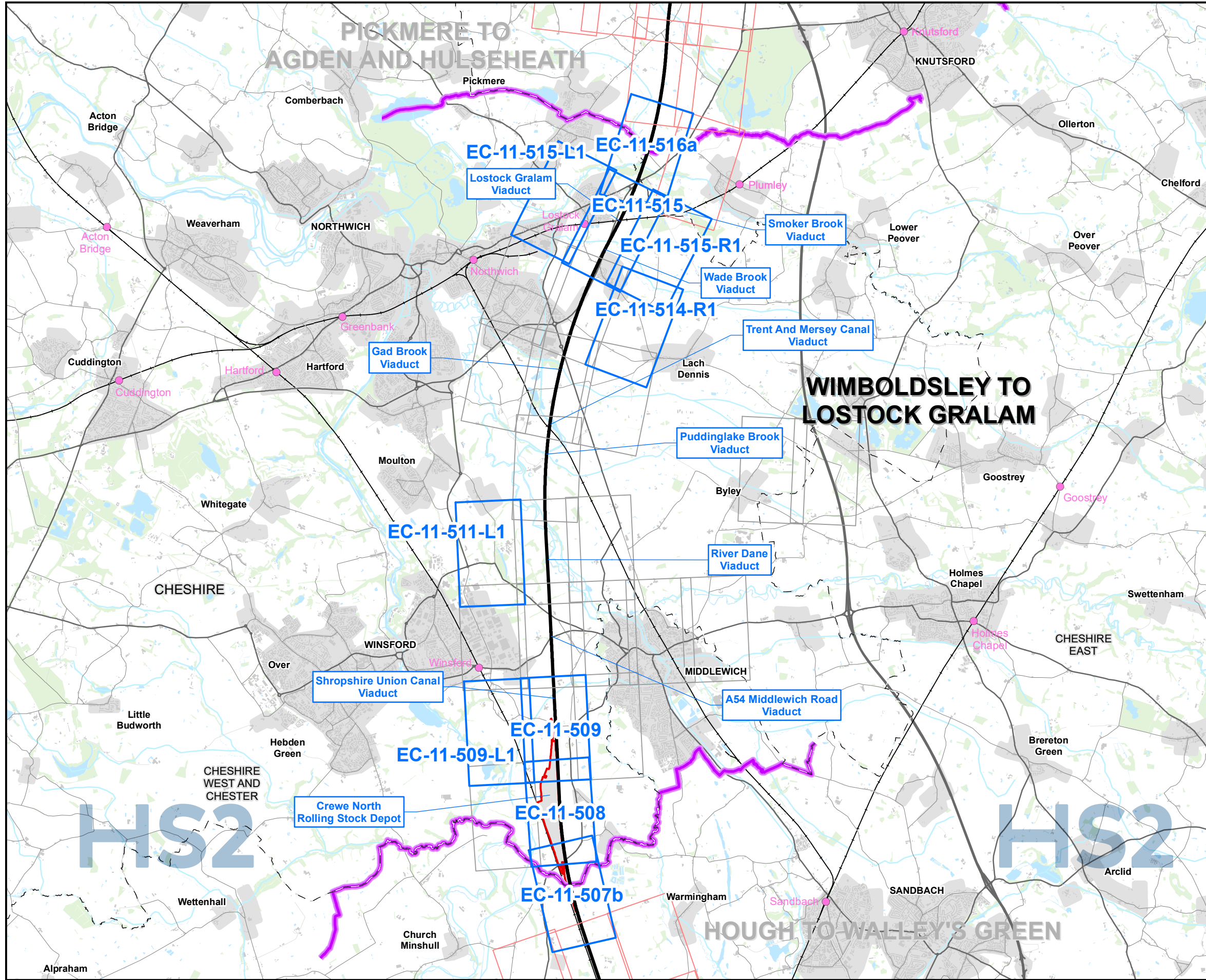
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Metres



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**Map Series Information:**  
 This map series shows the extent of various protected species surveys conducted to inform the environmental assessment.

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-11-INDEX-MA02
Map Name	Index Map of: Other Protected and Notable Species (1) SES2 and AP2 ES
	Community Area MA02: Wimboldsley to Lostock Gralam

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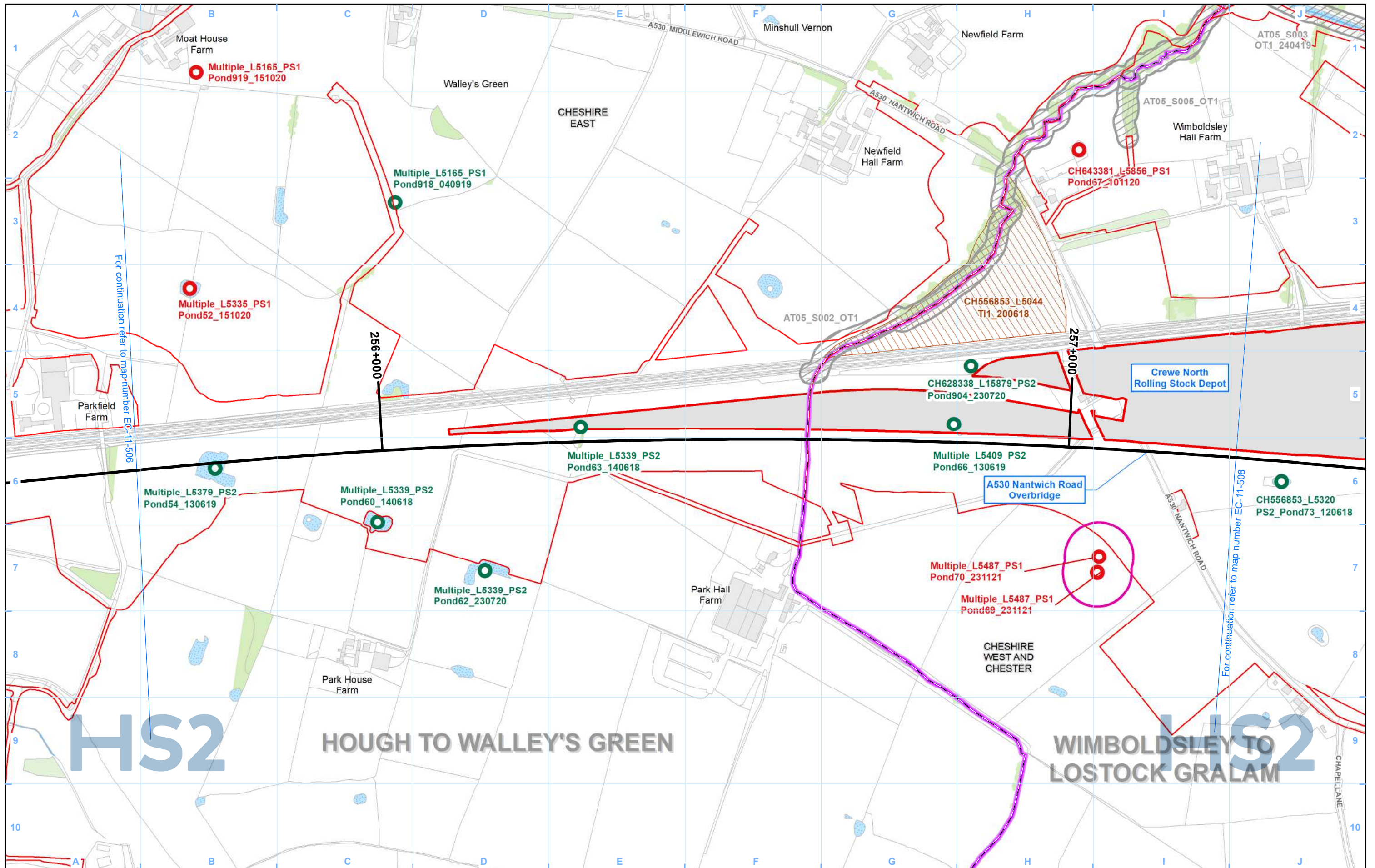
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- Legend**
- Route in tunnel
  - Route on surface
  - Depot, station, headhouse or portal building
  - Land potentially required during construction
  - Community area boundary
  - County boundary
  - Watercourse
  - Water body
  - Woodland (verified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

- Otter:**
- Active otter holt
  - Potential otter holt
  - Suitable habitat for otter

- 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

- Pond survey:**
- Pond survey - national pond survey
  - Pond survey - PSYM
  - Pond survey - rapid assessment method

- Fish:**
- Fish survey location
  - Terrestrial Invertebrate**
  - Terrestrial invertebrate survey extent

Map Number: EC-11-507b

Map Name: Other Protected and Notable Species (1) SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gralam

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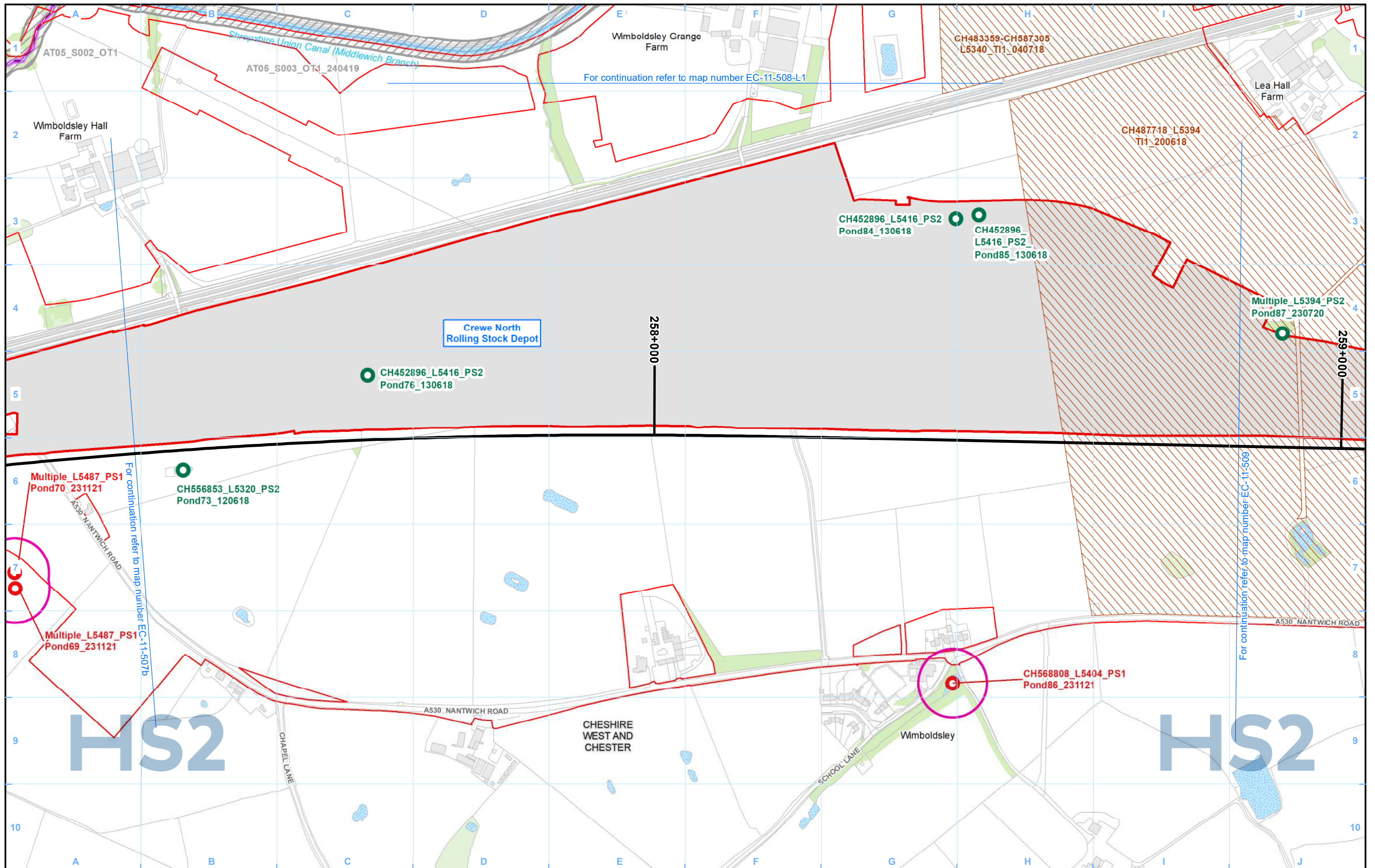
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- Legend**
- Route in tunnel
  - Route on surface
  - Depot, station, headhouse or portal building
  - Land potentially required during construction
  - Community area boundary
  - County boundary
  - Watercourse
  - Water body
  - Woodland (verified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

- Otter:**
- Active otter holt
  - Potential otter holt
  - Suitable habitat for otter

- 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

- Pond survey:**
- Pond survey - national pond survey
  - Pond survey - PSYM
  - Pond survey - rapid assessment method

- Fish:**
- Fish survey location
  - Terrestrial Invertebrate**
  - Terrestrial invertebrate survey extent

Map Number: EC-11-508

Map Name: Other Protected and Notable Species (1) SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gralam

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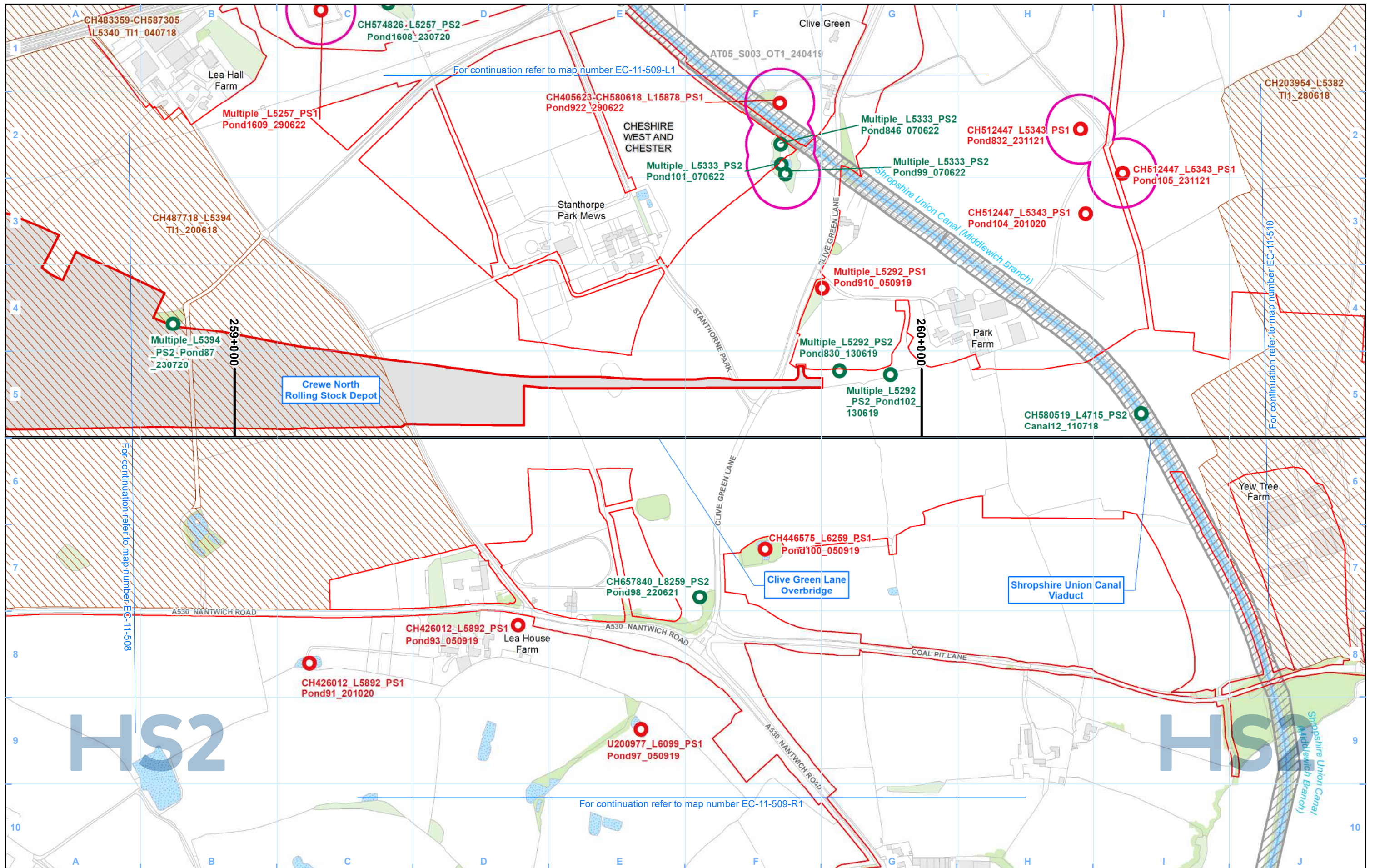
Doc Number: 2PT27-MWJ-EV-MAP-M000-001385-P01

Date: 12/04/23

Scale at A3: 1:5,000

Metres





**Legend**

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

**Otter:**

- Active otterholt
- Potential otterholt
- Suitable habitat for otter

**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

**Pond survey:**

- Pond survey - national pond survey
- Pond survey - PSYM
- Pond survey - rapid assessment method

**Fish:**

- Fish survey location
- Terrestrial invertebrate
- Terrestrial invertebrate survey extent

Map Number: EC-11-509

Map Name: Other Protected and Notable Species (1) SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Grlam

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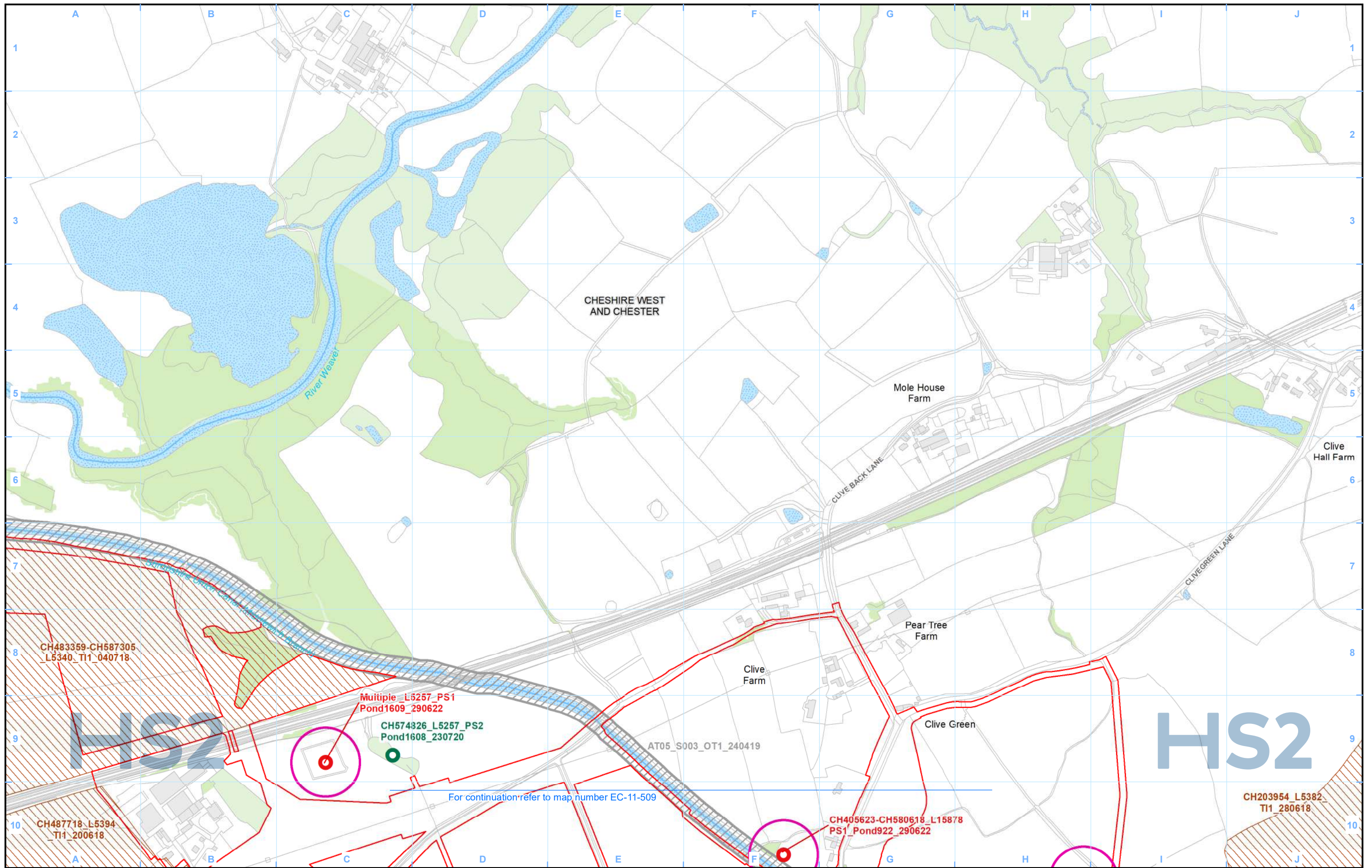
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**Legend**

	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		

**Otter:**

	Active otter holt
	Potential otter holt
	Suitable habitat for otter

**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

**Pond survey:**

	Pond survey - national pond survey
	Pond survey - PSYM
	Pond survey - rapid assessment method

**Fish:**

	Fish survey location
	Terrestrial invertebrate
	Terrestrial invertebrate survey extent

Map Number	EC-11-509-L1
Map Name	Other Protected and Notable Species (1) SES2 and AP2 ES
Community Area MA02: Wimboldsley to Lostock Gralam	

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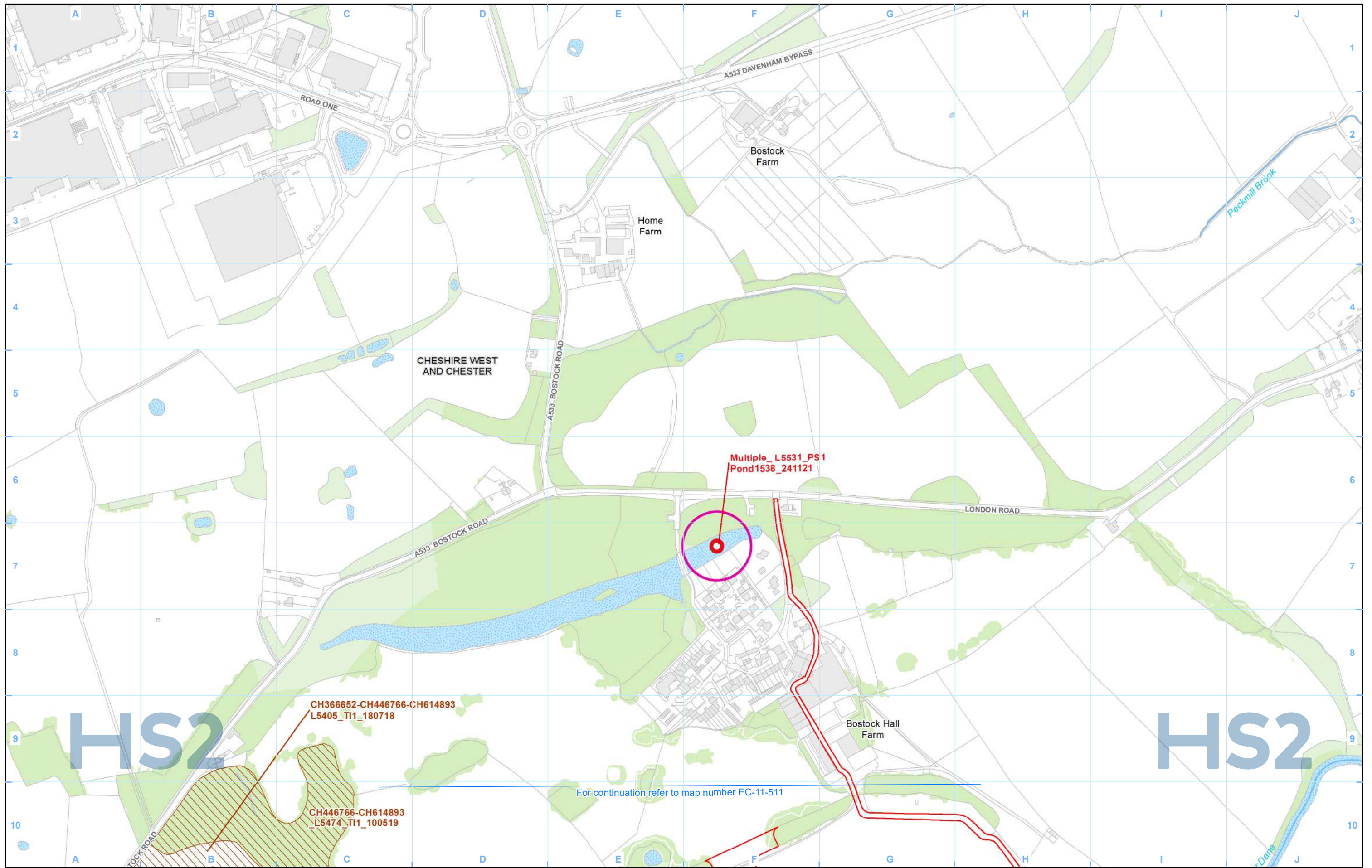
Date: 12/04/23

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Metres

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For continuation refer to map number EC-11-511

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

- Watercourse
- Water body
- Woodland (verified by survey)
- Area contains new survey data

- Otter:**
- Active otter holt
  - Potential otter holt
  - Suitable habitat for otter

- 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

- Pond survey:**
- Pond survey - national pond survey
  - Pond survey - PSYM
  - Pond survey - rapid assessment method

- Fish:**
- Fish survey location
  - Terrestrial Invertebrate
  - Terrestrial invertebrate survey extent

Map Number: EC-11-511-L1

Map Name: Other Protected and Notable Species (1) SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gralam

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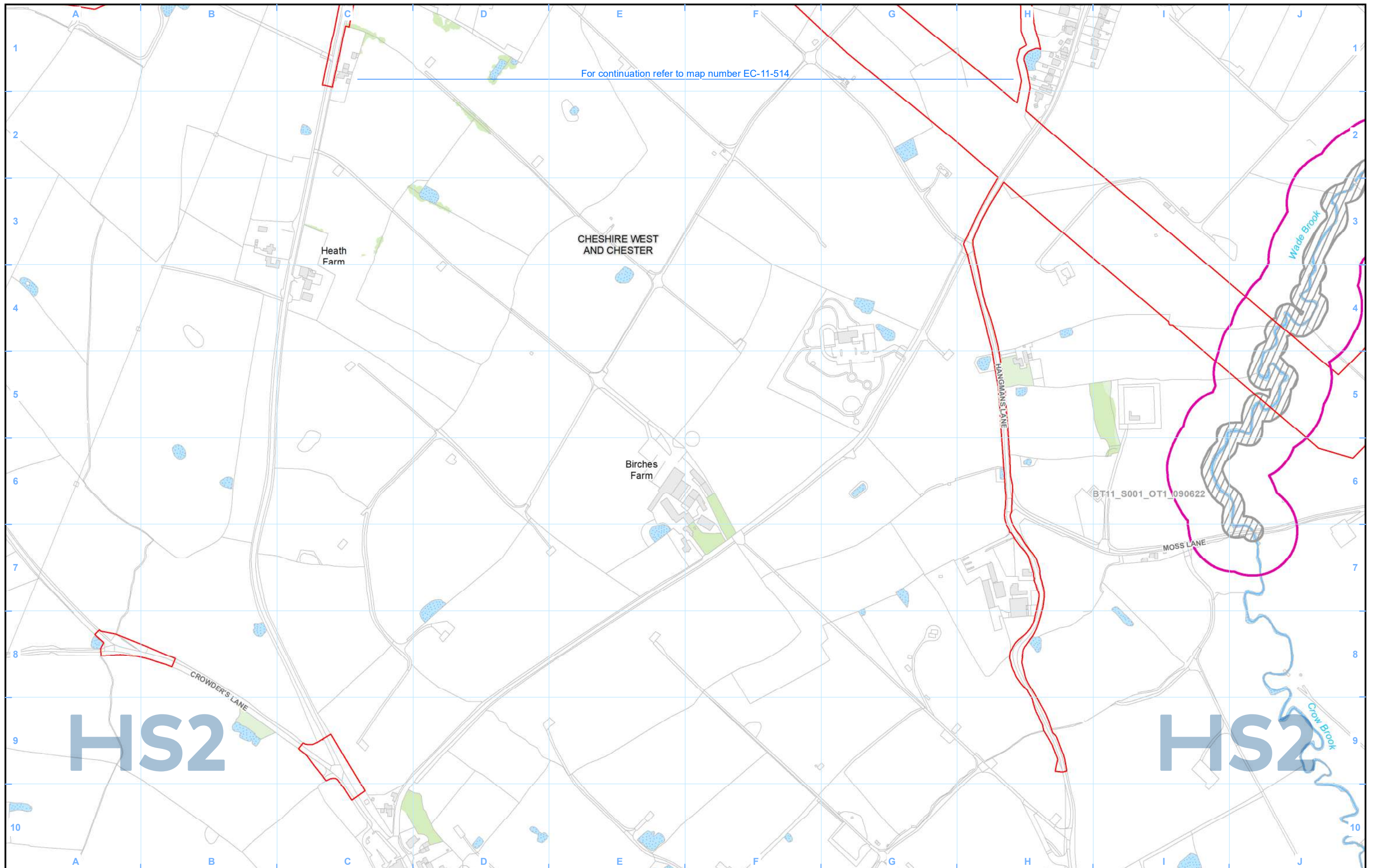
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Date: 12/04/23

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Metres

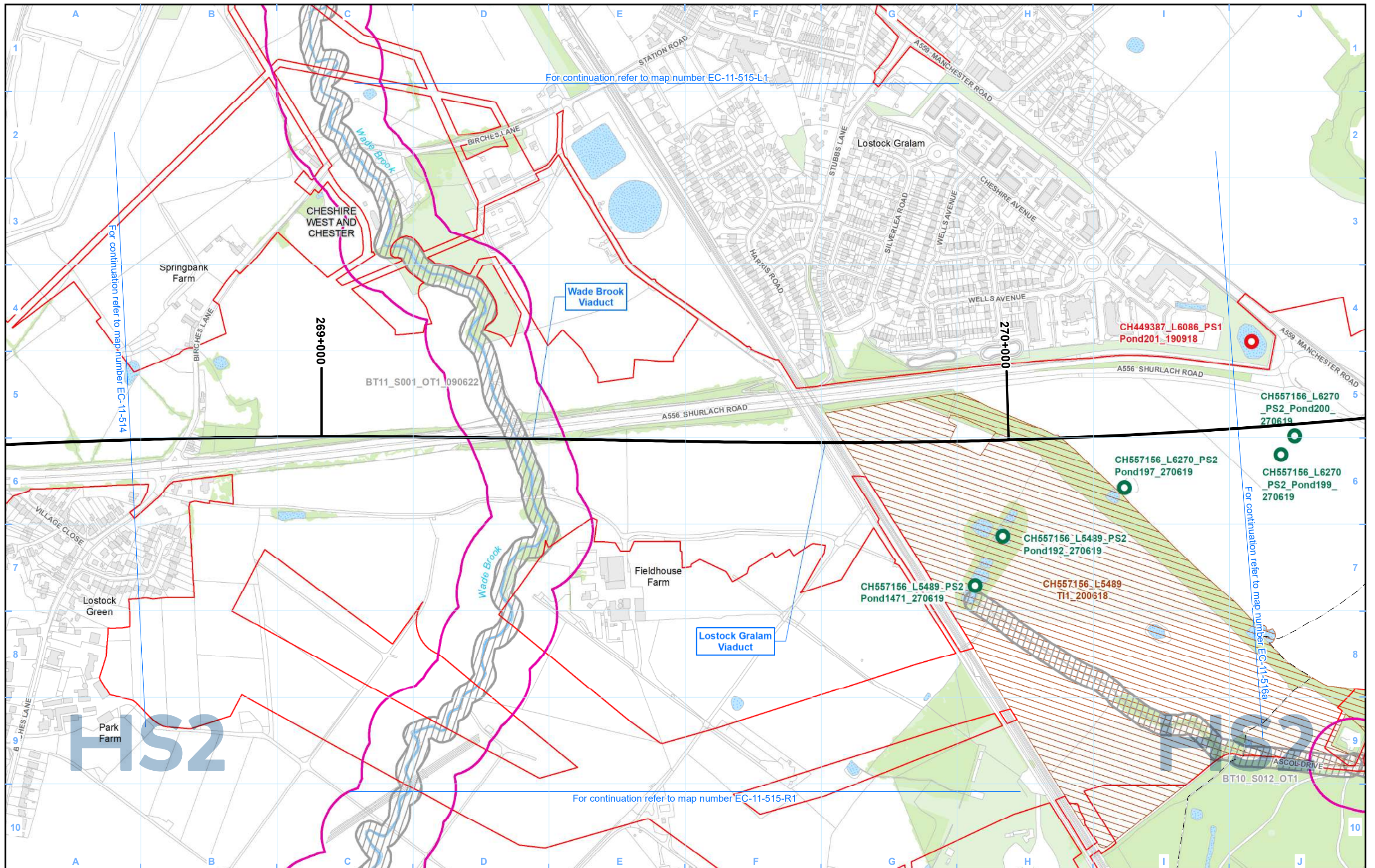




For continuation refer to map number EC-11-514

<b>Legend</b> <ul style="list-style-type: none"> <li> Route in tunnel</li> <li> Route on surface</li> <li> Depot, station, headhouse or portal building</li> <li> Land potentially required during construction</li> <li> Community area boundary</li> <li> County boundary</li> </ul>		<ul style="list-style-type: none"> <li> Watercourse</li> <li> Water body</li> <li> Woodland (verified by survey)</li> <li> Area contains new survey data</li> </ul>		<b>Otter:</b> <ul style="list-style-type: none"> <li> Active otter holt</li> <li> Potential otter holt</li> <li> Suitable habitat for otter</li> </ul>		<b>White clawed crayfish:</b> <ul style="list-style-type: none"> <li> Manual search and/or trapping conducted and presence confirmed</li> <li> Manual search and/or trapping conducted and assumed absent</li> <li> Site identified as potentially suitable but no access available</li> </ul>		<b>Pond survey:</b> <ul style="list-style-type: none"> <li> Pond survey - national pond survey</li> <li> Pond survey - PSYM</li> <li> Pond survey - rapid assessment method</li> </ul>		<b>Fish:</b> <ul style="list-style-type: none"> <li> Fish survey location</li> <li><b>Terrestrial Invertebrate</b></li> <li> Terrestrial invertebrate survey extent</li> </ul>	
<b>Map Number</b> EC-11-514-R1				<small>Registered in England. Registration number 06791686. Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6GA.</small>		<b>Map Name</b> <b>Other Protected and Notable Species (1) SES2 and AP2 ES</b>		<b>Scale at A3: 1:5,000</b> 			
<b>Community Area MA02:</b> Wimboldsley to Lostock Gralam		<small>© Crown copyright and database rights 2022 OS 100049190</small>		<small>Doc Number: 2PT27-MWJ-EV-MAP-M000-003413-P01</small>		<small>Date: 12/04/23</small>					





For continuation refer to map number EC-11-515-L1

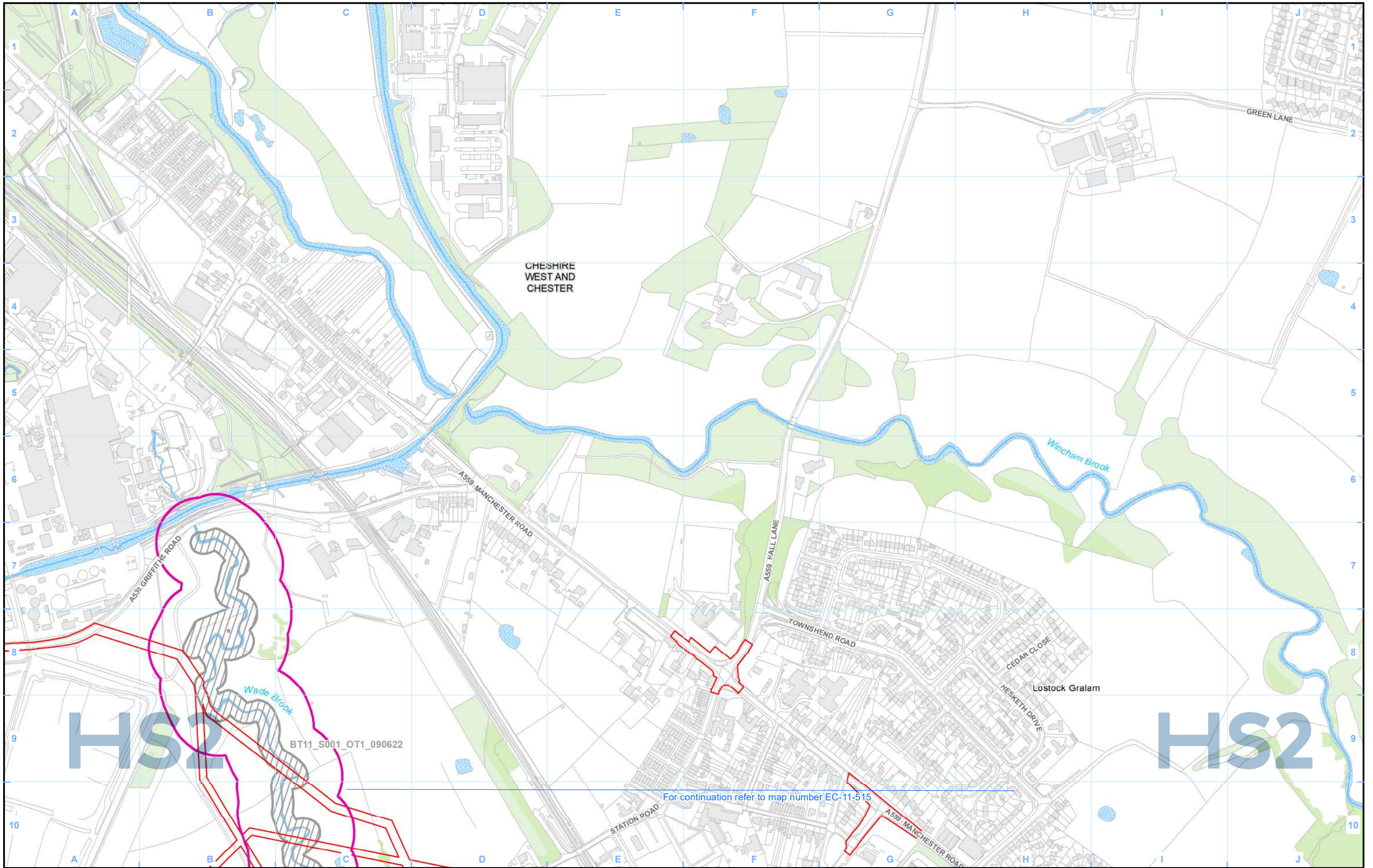
For continuation refer to map number EC-11-514

For continuation refer to map number EC-11-516a

For continuation refer to map number EC-11-515-R1

<b>Legend</b> <ul style="list-style-type: none"> <li>Route in tunnel</li> <li>Route on surface</li> <li>Depot, station, headhouse or portal building</li> <li>Land potentially required during construction</li> <li>Community area boundary</li> <li>County boundary</li> </ul>		<ul style="list-style-type: none"> <li>Watercourse</li> <li>Water body</li> <li>Woodland (verified by survey)</li> <li>Area contains new survey data</li> </ul>		<b>Otter:</b> <ul style="list-style-type: none"> <li>Active otterholt</li> <li>Potential otterholt</li> <li>Suitable habitat for otter</li> </ul>		<b>White clawed crayfish:</b> <ul style="list-style-type: none"> <li>Manual search and/or trapping conducted and presence confirmed</li> <li>Manual search and/or trapping conducted and assumed absent</li> <li>Site identified as potentially suitable but no access available</li> </ul>		<b>Pond survey:</b> <ul style="list-style-type: none"> <li>Pond survey - national pond survey</li> <li>Pond survey - PSYM</li> <li>Pond survey - rapid assessment method</li> </ul>		<b>Fish:</b> <ul style="list-style-type: none"> <li>Fish survey location</li> <li>Terrestrial invertebrate</li> <li>Terrestrial invertebrate survey extent</li> </ul>	
<b>Map Number</b> EC-11-515 <b>Map Name</b> Other Protected and Notable Species (1) SES2 and AP2 ES <b>Community Area MA02:</b> Wimboldsley to Lostock Gralam			<b>HS2</b> <small>Registered in England. Registration number 06791686. Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6QA.</small> <small>© Crown copyright and database rights 2022 OS 100049190</small> <b>Doc Number:</b> 2PT27-MWJ-EV-MAP-M000-001392-P01 <b>Date:</b> 12/04/23								





Legend	
	Route in tunnel
	Route on surface
	Depot, station, headhouse or portal building
	Land potentially required during construction
	Community area boundary
	County boundary
	Watercourse
	Water body
	Woodland (verified by survey)
	Area contains new survey data
	Otter: Active otter holt
	Potential otter holt
	Suitable habitat for otter
	White clawed crayfish: Manual search and/or trapping conducted and presence confirmed
	White clawed crayfish: Manual search and/or trapping conducted and assumed absent
	White clawed crayfish: Site identified as potentially suitable but no access available
	Pond survey: Pond survey - national pond survey
	Pond survey - PSYM
	Pond survey - rapid assessment method
	Fish: Fish survey location
	Terrestrial invertebrate: Terrestrial invertebrate survey extent

Map Number	EC-11-515-L1
Map Name	Other Protected and Notable Species (1) SES2 and AP2 ES
Community Area MA02: Wimboldsley to Lostock Gralam	

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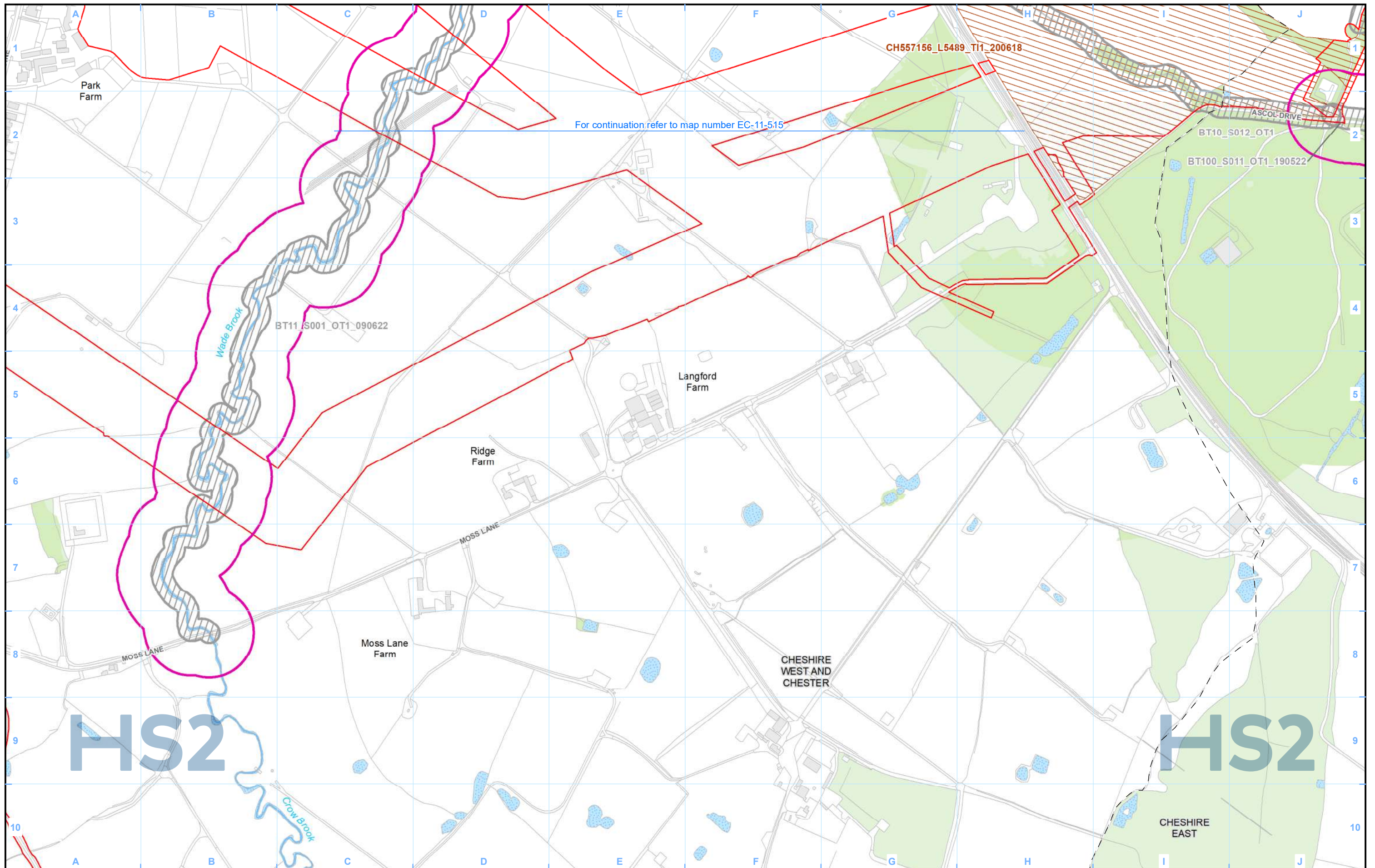
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Metres

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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
	Watercourse
	Water body
	Woodland (verified by survey)
	Area contains new survey data
	Otter: Active otter holt
	Potential otter holt
	Suitable habitat for otter
	White clawed crayfish: Manual search and/or trapping conducted and presence confirmed
	White clawed crayfish: Manual search and/or trapping conducted and assumed absent
	White clawed crayfish: Site identified as potentially suitable but no access available
	Pond survey: Pond survey - national pond survey
	Pond survey - PSYM
	Pond survey - rapid assessment method
	Fish: Fish survey location
	Terrestrial invertebrate: Terrestrial invertebrate survey extent

Map Number	EC-11-515-R1
Map Name	Other Protected and Notable Species (1) SES2 and AP2 ES
Community Area MA02: Wimboldsley to Lostock Gralam	

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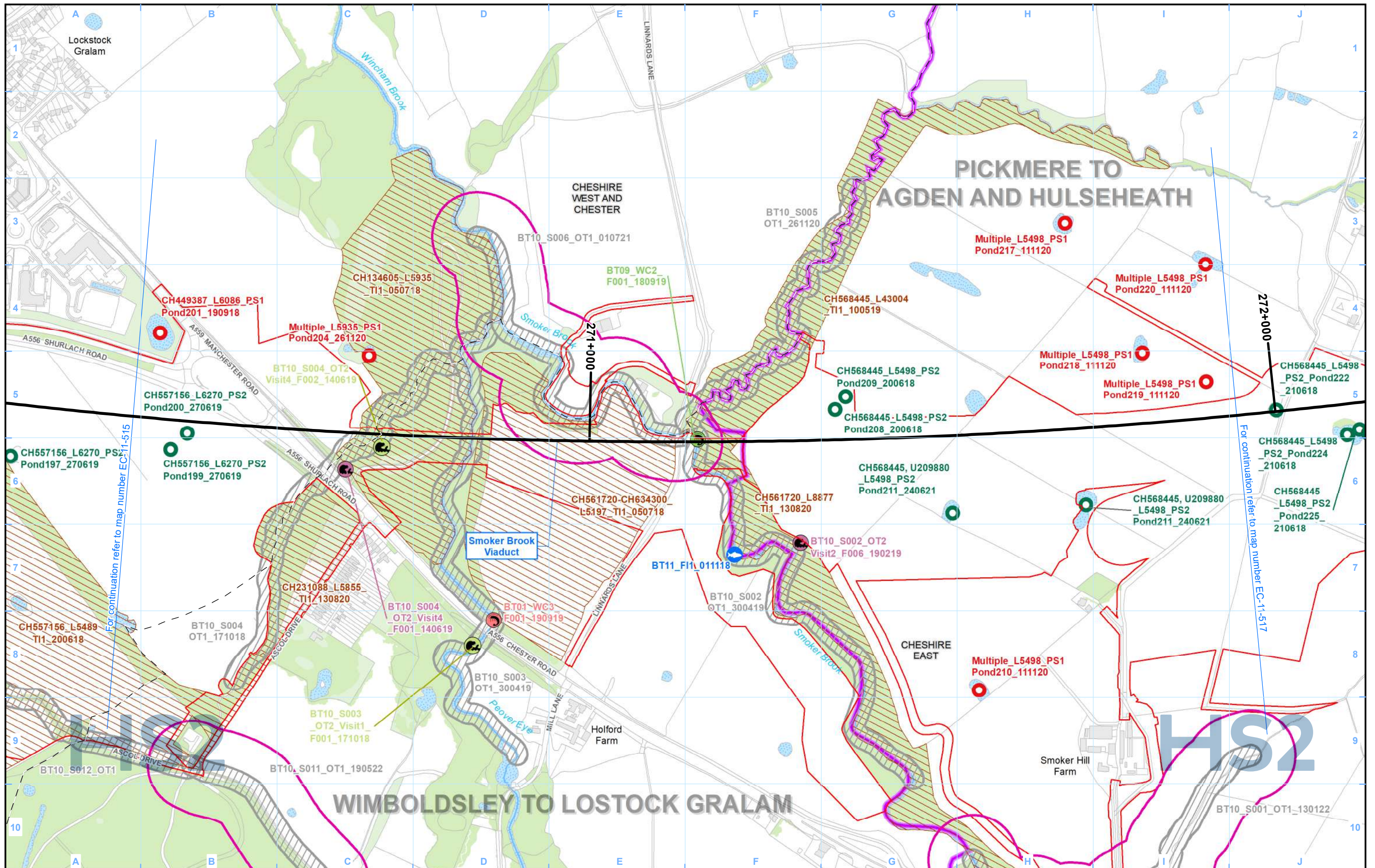
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Date: 12/04/23

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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
  - Watercourse
  - Water body
  - Woodland (verified by survey)
  - Area contains new survey data

- Otter:**
- Active otterholt
  - Potential otterholt
  - Suitable habitat for otter

- 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

- Pond survey:**
- Pond survey - national pond survey
  - Pond survey - PSYM
  - Pond survey - rapid assessment method

- Fish:**
- Fish survey location
  - Terrestrial invertebrate
  - Terrestrial invertebrate survey extent

Map Number: EC-11-516a

Map Name: Other Protected and Notable Species (1) SES2 and AP2 ES

Community Area MA02: Wimboldsley to Lostock Gralam

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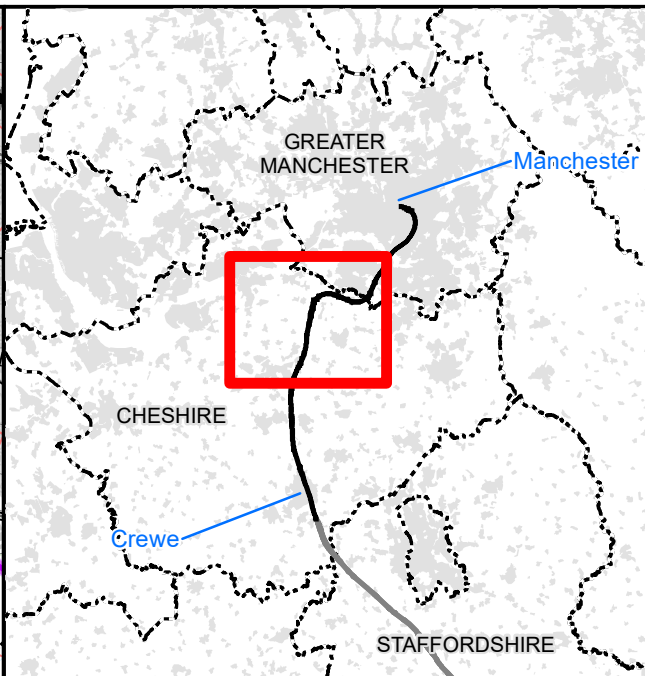
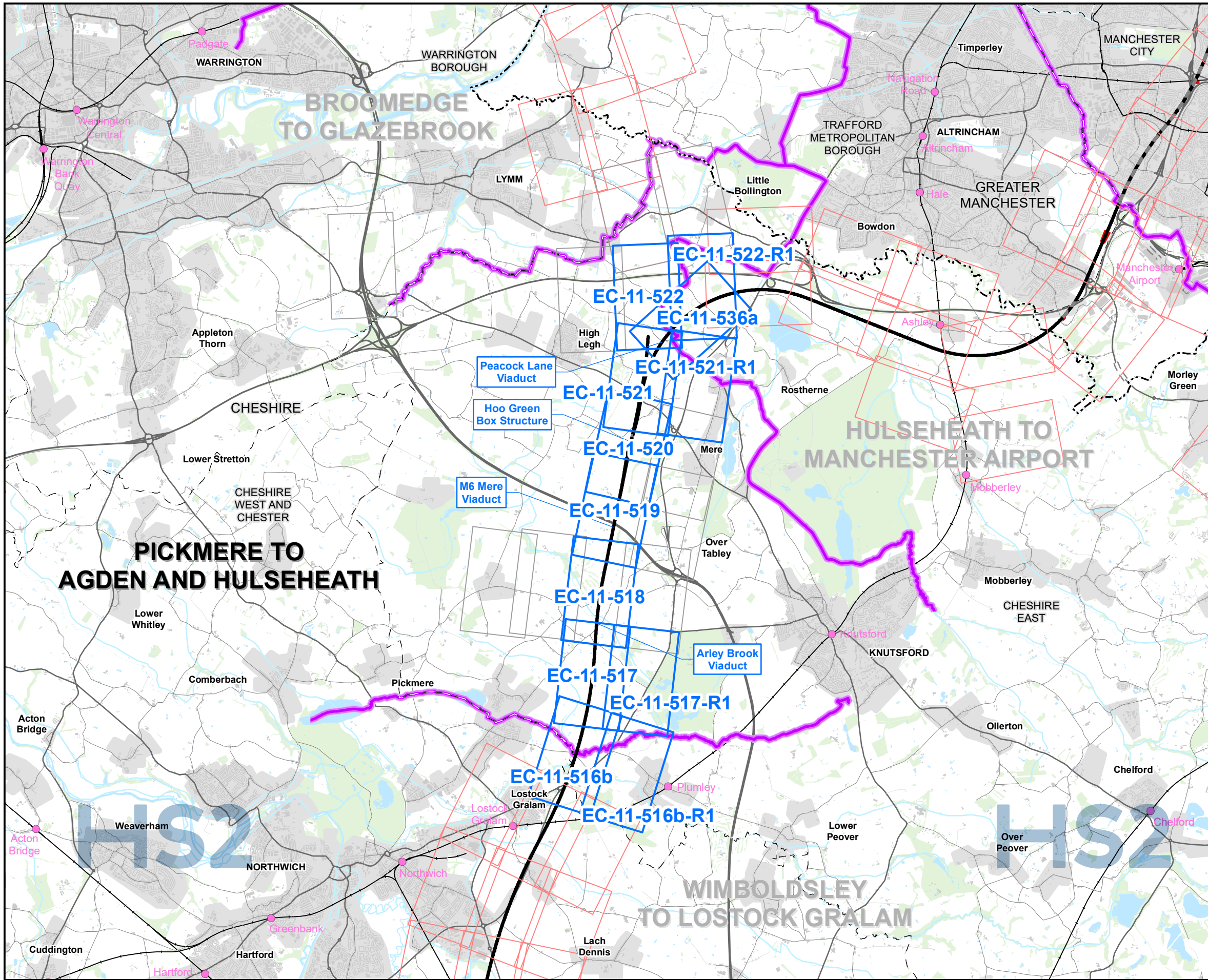
Doc Number: 2PT27-MWJ-EV-MAP-M000-001393-P01

Date: 12/04/23



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**Map Series Information:**  
 This map series shows the extent of various protected species surveys conducted to inform the environmental assessment.

- 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-11-INDEX-MA03  
 Map Name: Index Map of:  
 Other Protected and Notable  
 Species (1) SES2 and AP2 ES  
 Community Area MA03:  
 Pickmere to Agden and Hulseheath

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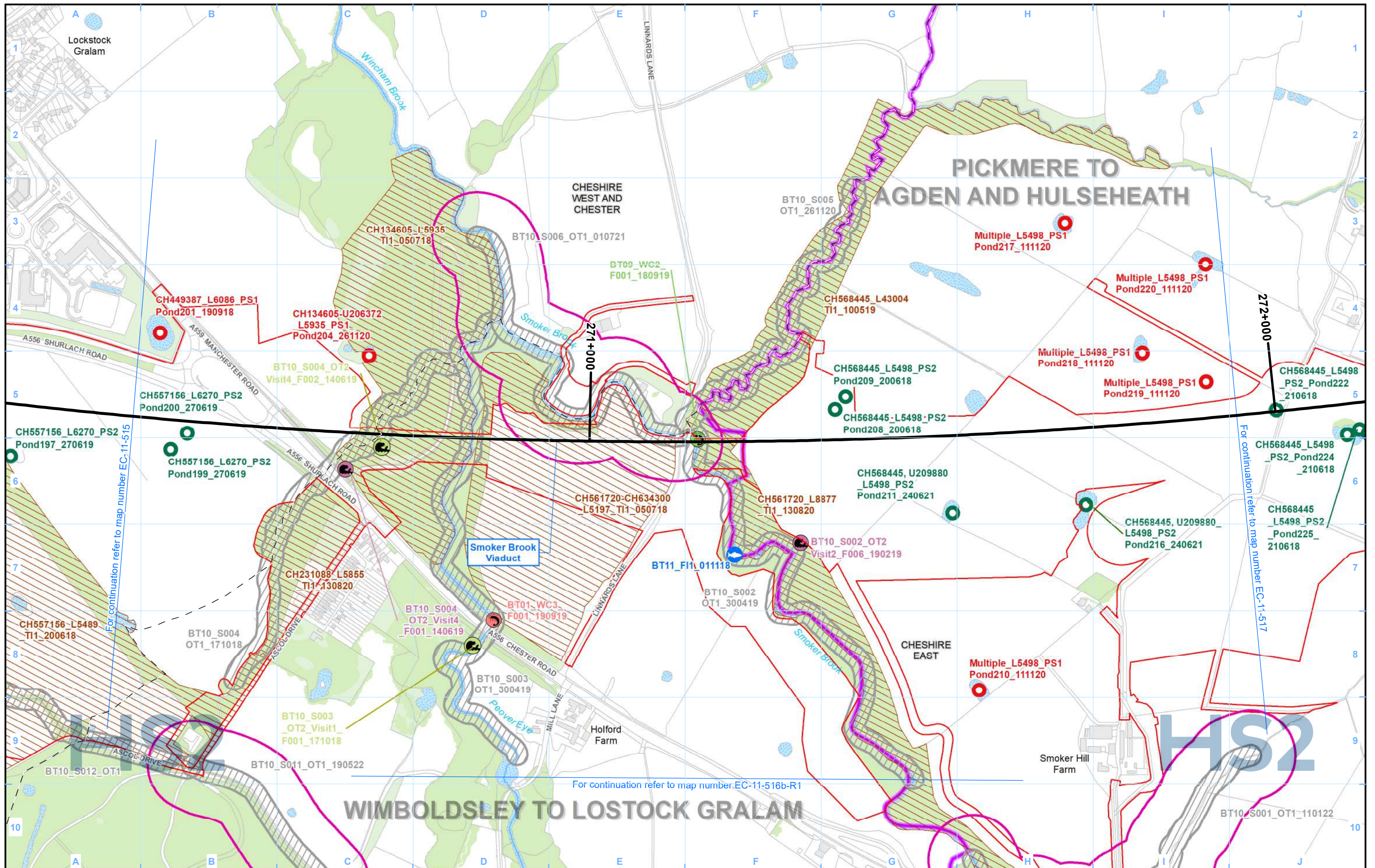
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001441-P01 **Date:** 12/04/23





- Legend**
- Route in tunnel
  - Route on surface
  - Depot, station, headhouse or portal building
  - Land potentially required during construction
  - Community area boundary
  - County boundary
  - Watercourse
  - Water body
  - Woodland (verified by survey)
  - Area contains new survey data
  - Otter:**
  - Active otterholt
  - Potential otterholt
  - Suitable habitat for otter
  - 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
  - Pond survey:**
  - Pond survey - national pond survey
  - Pond survey - PSYM
  - Pond survey - rapid assessment method
  - Fish:**
  - Fish survey location
  - Terrestrial invertebrate**
  - Terrestrial invertebrate survey extent

- Map Number** EC-11-516b
- Map Name** Other Protected and Notable Species (1) SES2 and AP2 ES
- Community Area MA03:**  
Pickmere to Agden and Hulseheath

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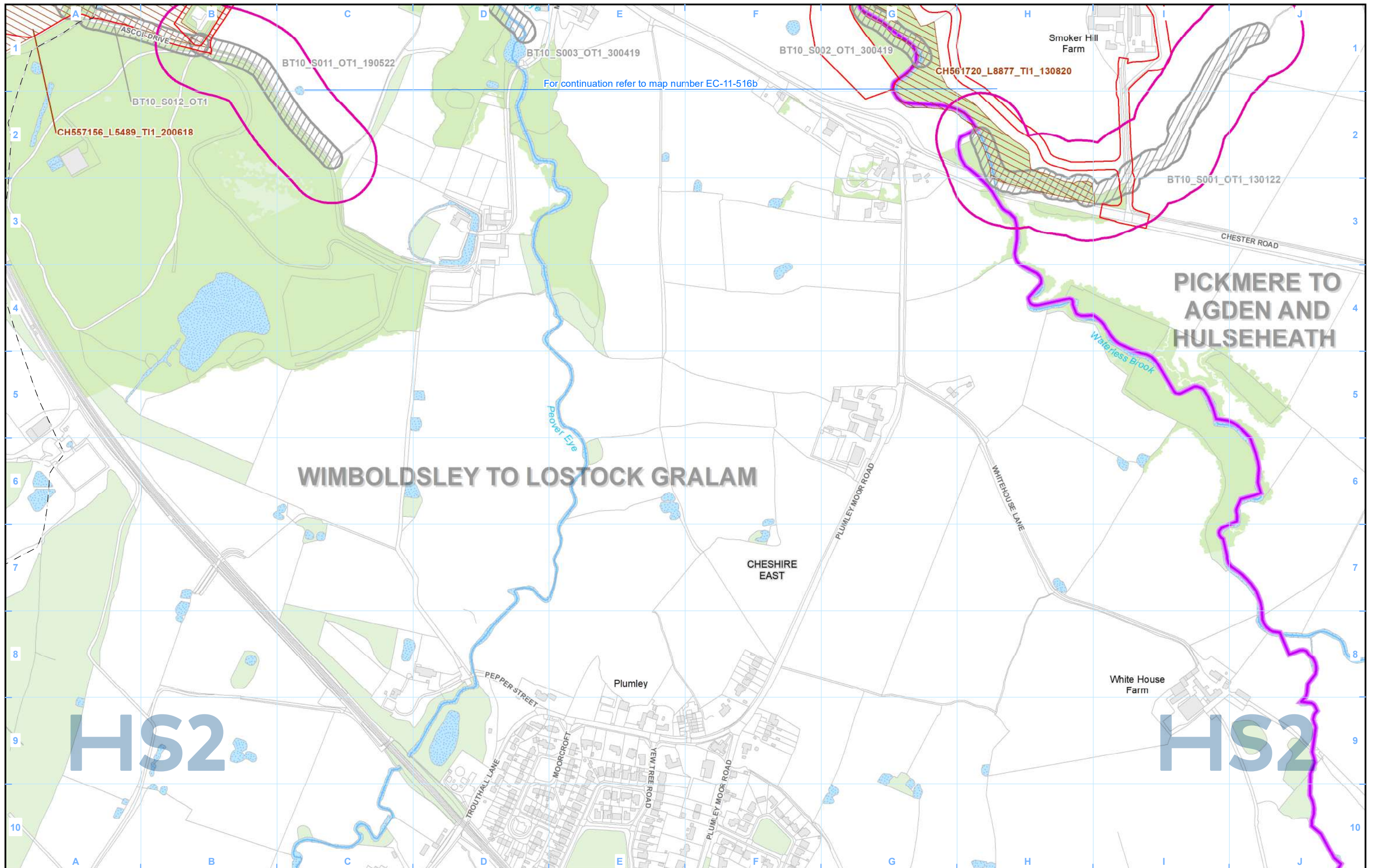
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Scale at A3: 1:5,000

0 50 100 150 200 Metres





**WIMBOLDSLEY TO LOSTOCK GRALAM**

**PICKMERE TO AGDEN AND HULSEHEATH**

**HS2**

**HS2**

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

- Otter:**
- Active otter holt
  - Potential otter holt
  - Suitable habitat for otter

- 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

- Pond survey:**
- Pond survey - national pond survey
  - Pond survey - PSYM
  - Pond survey - rapid assessment method

- Fish:**
- Fish survey location
  - Terrestrial invertebrate
  - Terrestrial invertebrate survey extent

Map Number **EC-11-516b-R1**

Map Name **Other Protected and Notable Species (1) SES2 and AP2 ES**

Community Area MA03:  
Pickmere to Agden and Hulseheath

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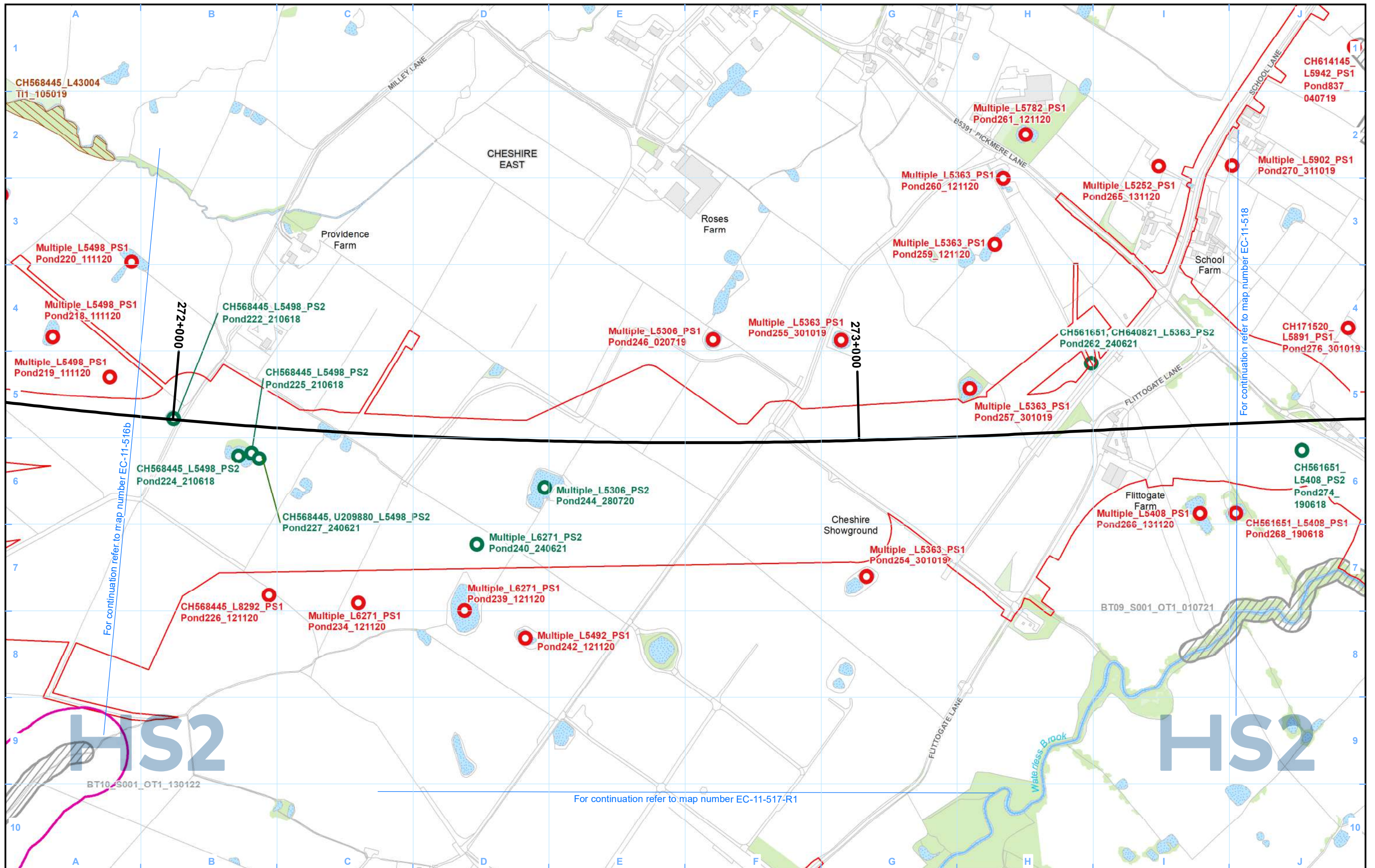
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Date: 12/04/23





**Legend**

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

**Otter:**

- Active otterholt
- Potential otterholt
- Suitable habitat for otter

**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

**Pond survey:**

- Pond survey - national pond survey
- Pond survey - PSYM
- Pond survey - rapid assessment method

**Fish:**

- Fish survey location
- Terrestrial invertebrate
- Terrestrial invertebrate survey extent

Map Number: EC-11-517

Map Name: Other Protected and Notable Species (1) SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

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Date: 12/04/23

Scale at A3: 1:5,000

Metres

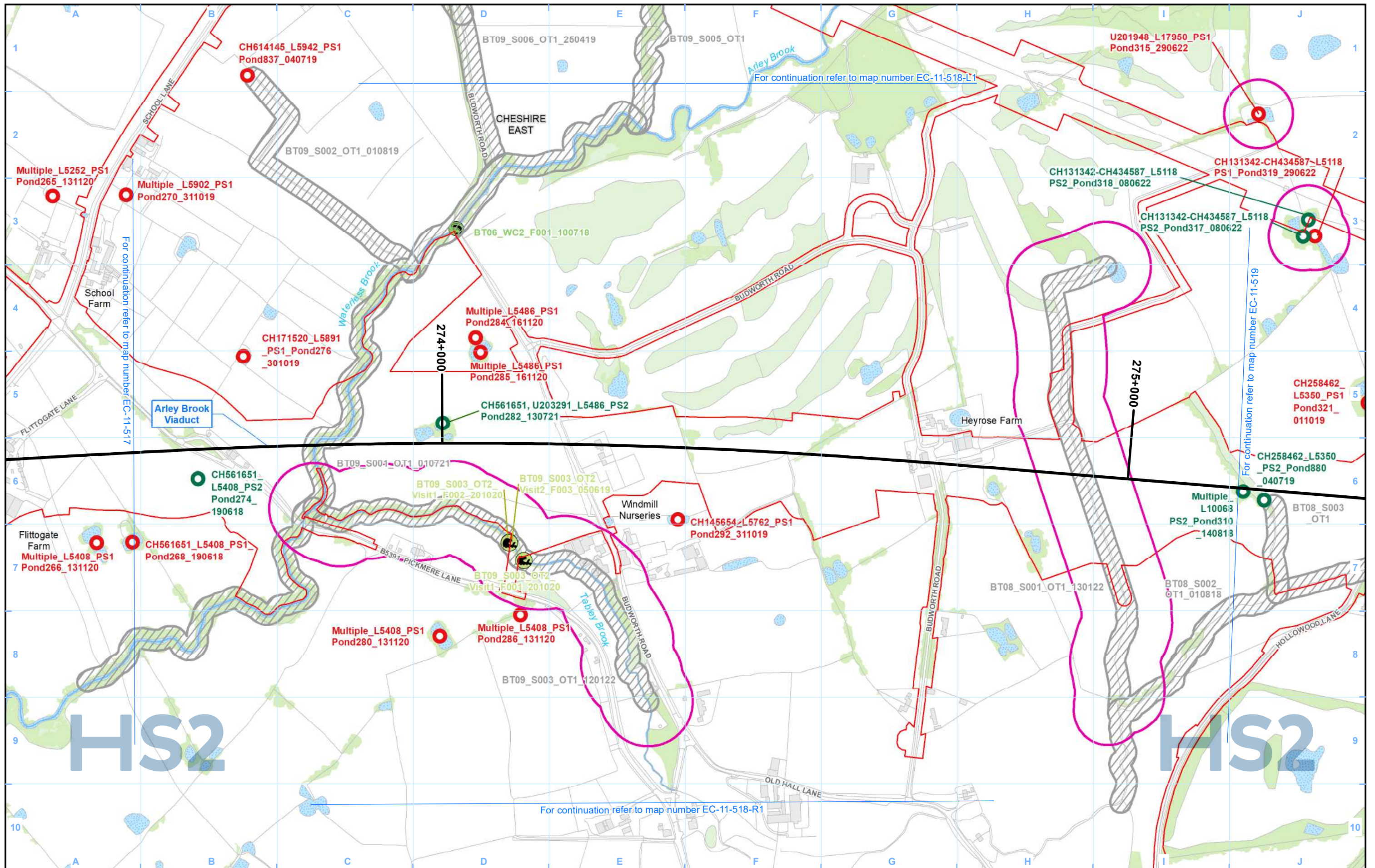




For continuation refer to map number EC-11-517

<b>Legend</b> <ul style="list-style-type: none"> <li>Route in tunnel</li> <li>Route on surface</li> <li>Depot, station, headhouse or portal building</li> <li>Land potentially required during construction</li> <li>Community area boundary</li> <li>County boundary</li> </ul>		<ul style="list-style-type: none"> <li>Watercourse</li> <li>Water body</li> <li>Woodland (verified by survey)</li> <li>Area contains new survey data</li> </ul>		<b>Otter:</b> <ul style="list-style-type: none"> <li>Active otterholt</li> <li>Potential otterholt</li> <li>Suitable habitat for otter</li> </ul>		<b>White clawed crayfish:</b> <ul style="list-style-type: none"> <li>Manual search and/or trapping conducted and presence confirmed</li> <li>Manual search and/or trapping conducted and assumed absent</li> <li>Site identified as potentially suitable but no access available</li> </ul>		<b>Pond survey:</b> <ul style="list-style-type: none"> <li>Pond survey - national pond survey</li> <li>Pond survey - PSYM</li> <li>Pond survey - rapid assessment method</li> </ul>		<b>Fish:</b> <ul style="list-style-type: none"> <li>Fish survey location</li> <li>Terrestrial invertebrate</li> <li>Terrestrial invertebrate survey extent</li> </ul>	
<b>Map Number</b> EC-11-517-R1				<small>Registered in England. Registration number 06791686. Registered office: Two Snowhill, Snow Hill Queensway, Birmingham B4 6GA.</small> <small>© Crown copyright and database rights 2022 OS 100049190</small>		<b>Map Name</b> <b>Other Protected and Notable Species (1) SES2 and AP2 ES</b>		<b>Scale at A3: 1:5,000</b> 			
<b>Community Area MA03:</b> Pickmere to Agden and Hulseheath		<small>Doc Number: 2PT27-MWJ-EV-MAP-M000-003417-P01</small>		<small>Date: 12/04/23</small>							





Legend		Otter:		White clawed crayfish:		Pond survey:		Fish:	
	Route in tunnel		Active otter holt		Manual search and/or trapping conducted and presence confirmed		Pond survey - national pond survey		Fish survey location
	Route on surface		Potential otter holt		Manual search and/or trapping conducted and assumed absent		Pond survey - PSYM		Terrestrial invertebrate
	Depot, station, headhouse or portal building		Suitable habitat for otter		Site identified as potentially suitable but no access available		Pond survey - rapid assessment method		Terrestrial invertebrate survey extent
	Land potentially required during construction								
	Community area boundary								
	County boundary								
	Watercourse								
	Water body								
	Woodland (verified by survey)								
	Area contains new survey data								

Map Number	EC-11-518
Map Name	Other Protected and Notable Species (1) SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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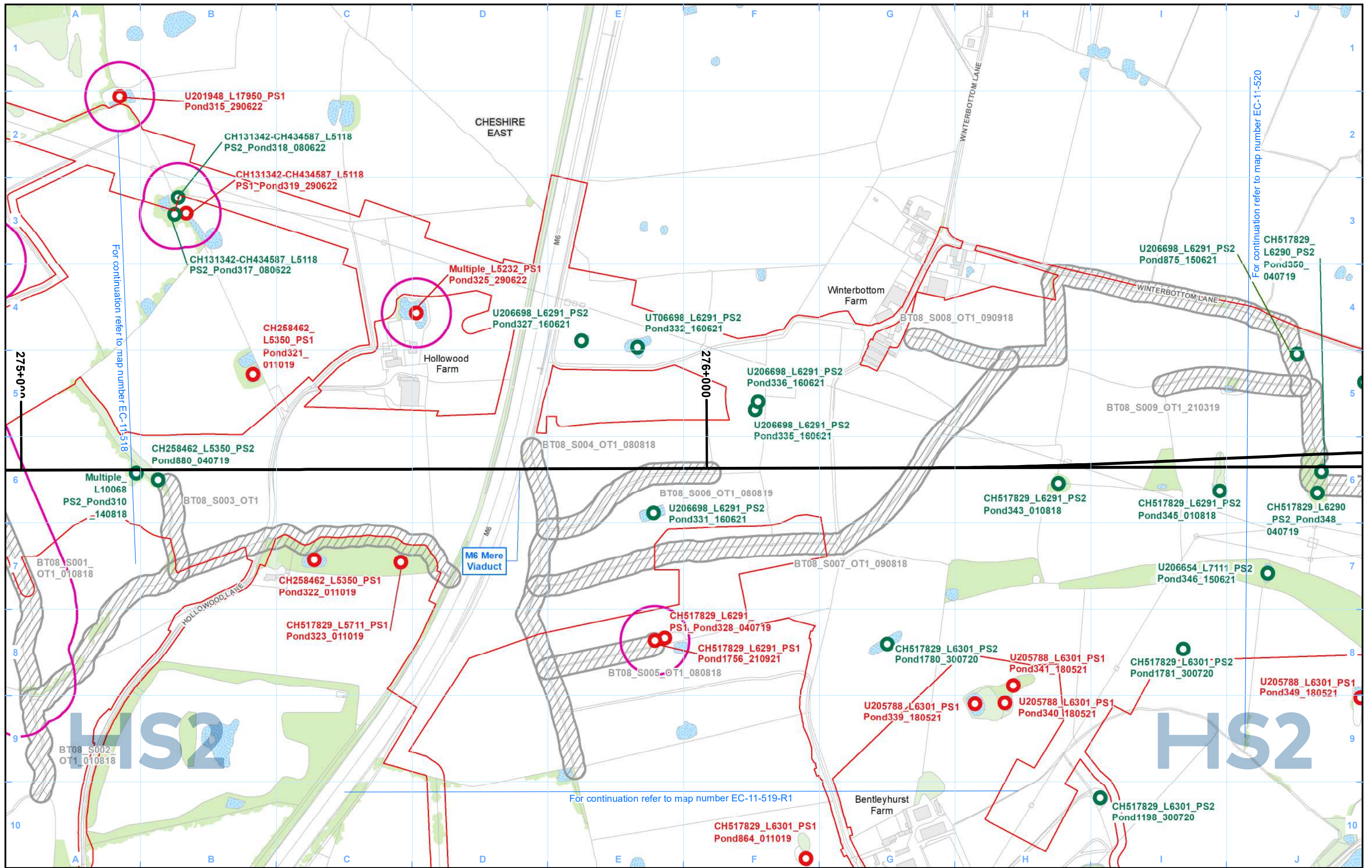
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001396-P01

Scale at A3: 1:5,000

Date: 12/04/23





**Legend**

<ul style="list-style-type: none"> <li> Route in tunnel</li> <li> Route on surface</li> <li> Depot, station, headhouse or portal building</li> <li> Land potentially required during construction</li> <li> Community area boundary</li> <li> County boundary</li> </ul>	<ul style="list-style-type: none"> <li> Watercourse</li> <li> Water body</li> <li> Woodland (verified by survey)</li> <li> Area contains new survey data</li> </ul>	<p><b>Otter:</b></p> <ul style="list-style-type: none"> <li> Active otterholt</li> <li> Potential otterholt</li> <li> Suitable habitat for otter</li> </ul>	<p><b>White clawed crayfish:</b></p> <ul style="list-style-type: none"> <li> Manual search and/or trapping conducted and presence confirmed</li> <li> Manual search and/or trapping conducted and assumed absent</li> <li> Site identified as potentially suitable but no access available</li> </ul>	<p><b>Pond survey:</b></p> <ul style="list-style-type: none"> <li> Pond survey - national pond survey</li> <li> Pond survey - PSYM</li> <li> Pond survey - rapid assessment method</li> </ul>	<p><b>Fish:</b></p> <ul style="list-style-type: none"> <li> Fish survey location</li> <li><b>Terrestrial Invertebrate</b></li> <li> Terrestrial invertebrate survey extent</li> </ul>
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Map Number: EC-11-519

Map Name: Other Protected and Notable Species (1) SES2 and AP2 ES

Community Area MA03: Pickmere to Agden and Hulseheath

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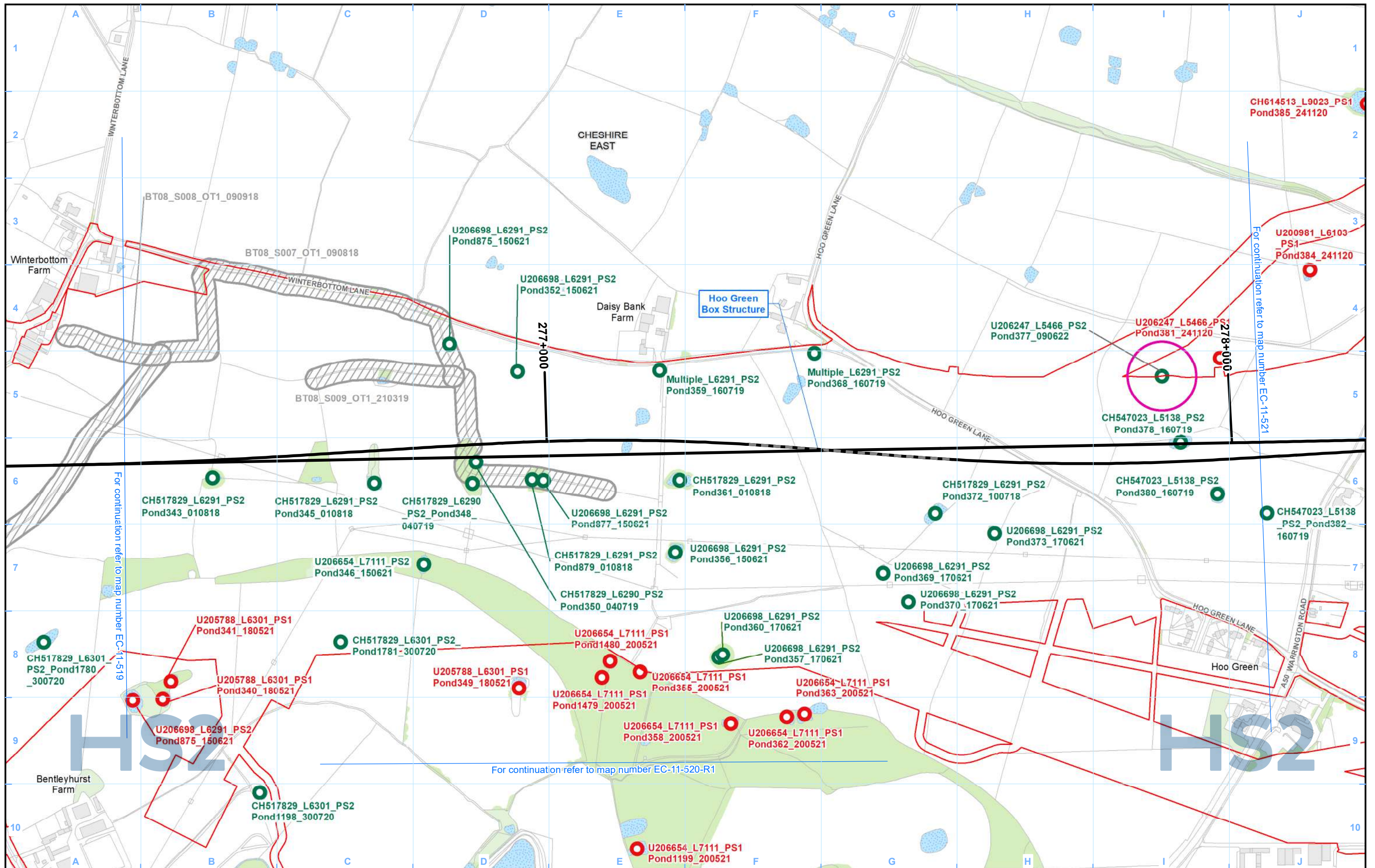
Metres

For continuation refer to map number EC-11-520

For continuation refer to map number EC-11-519-R1

For continuation refer to map number EC-11-518





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

- Otter:**
- Active otter holt
  - Potential otter holt
  - Suitable habitat for otter

- 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

- Pond survey:**
- Pond survey - national pond survey
  - Pond survey - PSYM
  - Pond survey - rapid assessment method

- Fish:**
- Fish survey location
  - Terrestrial invertebrate**
  - Terrestrial invertebrate survey extent

Map Number: EC-11-520

Map Name: Other Protected and Notable Species (1) SES2 and AP2 ES

Community Area MA03:  
Pickmere to Agden and Hulseheath

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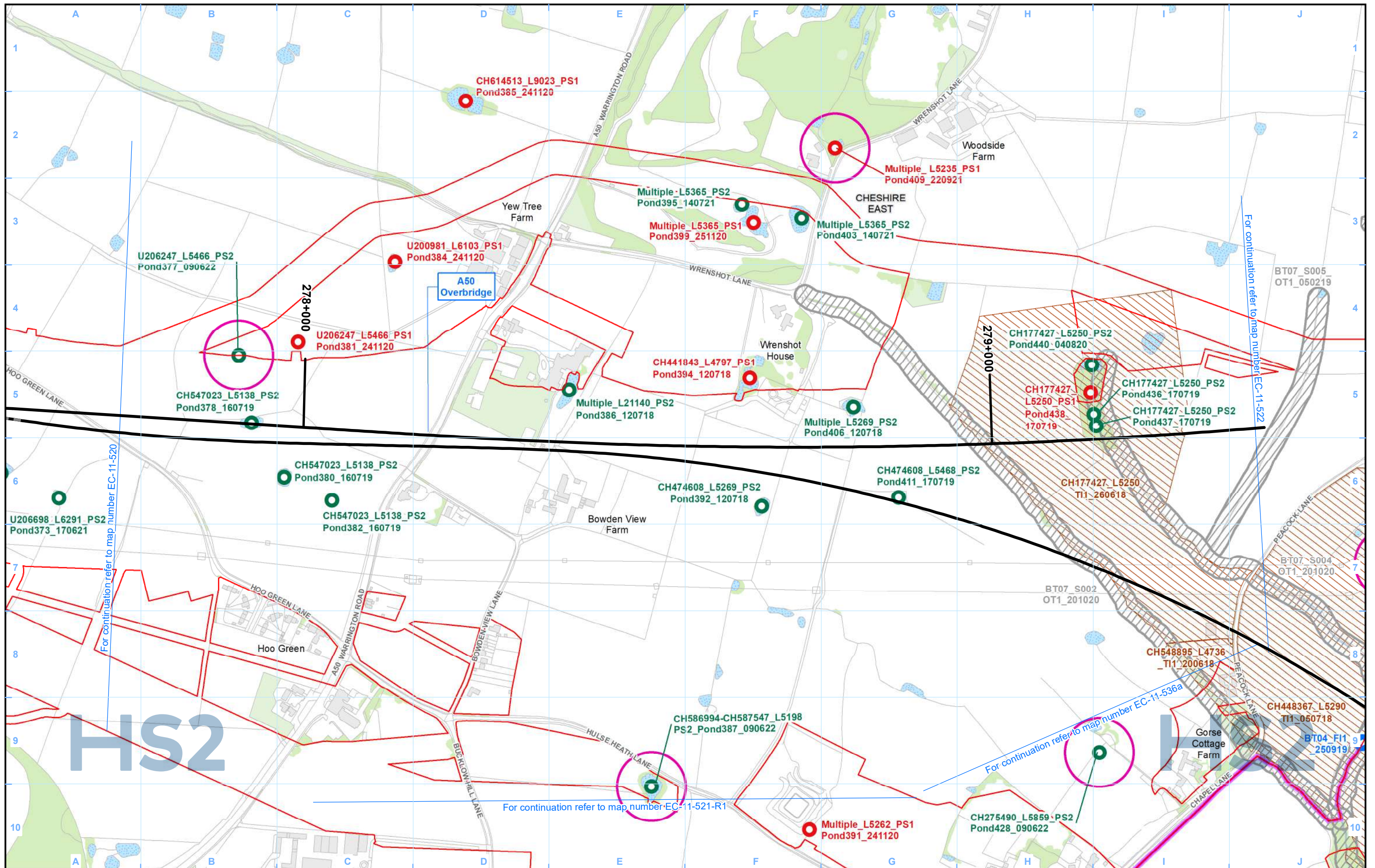
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001398-P01

Date: 12/04/23





Legend		Otter:		White clawed crayfish:		Pond survey:		Fish:	
	Route in tunnel		Active otter holt		Manual search and/or trapping conducted and presence confirmed		Pond survey - national pond survey		Fish survey location
	Route on surface		Potential otter holt		Manual search and/or trapping conducted and assumed absent		Pond survey - PSYM		Terrestrial invertebrate
	Depot, station, headhouse or portal building		Suitable habitat for otter		Site identified as potentially suitable but no access available		Pond survey - rapid assessment method		Terrestrial invertebrate survey extent
	Land potentially required during construction								
	Community area boundary								
	County boundary								
	Watercourse								
	Water body								
	Woodland (verified by survey)								
	Area contains new survey data								

Map Number	EC-11-521
Map Name	Other Protected and Notable Species (1) SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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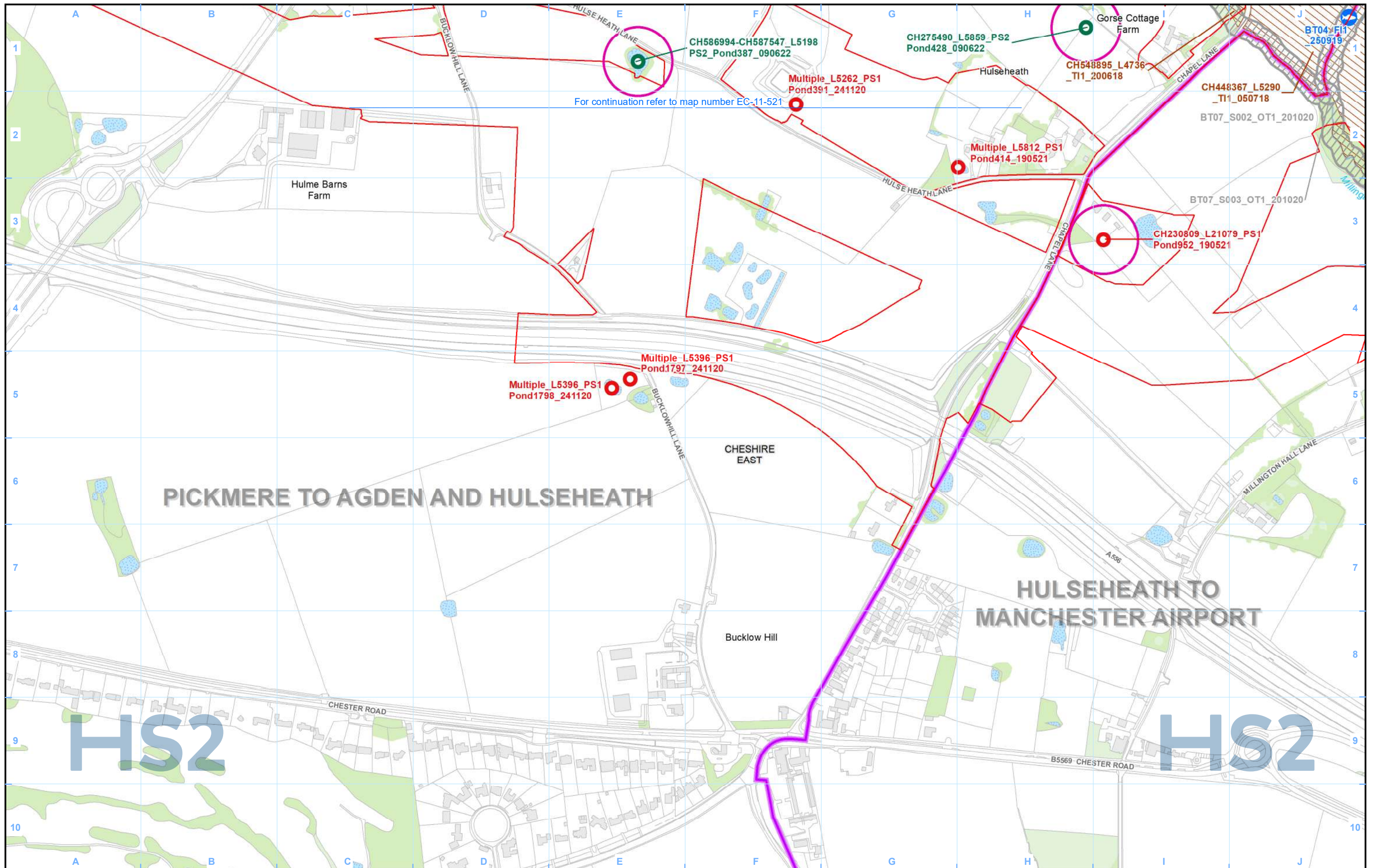
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Scale at A3: 1:5,000

Metres

Date: 12/04/23





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

- Otter:**
- Active otter holt
  - Potential otter holt
  - Suitable habitat for otter

- 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

- Pond survey:**
- Pond survey - national pond survey
  - Pond survey - PSYM
  - Pond survey - rapid assessment method

- Fish:**
- Fish survey location
  - Terrestrial Invertebrate**
  - Terrestrial invertebrate survey extent

Map Number: EC-11-521-R1

Map Name: Other Protected and Notable Species (1) SES2 and AP2 ES

Community Area MA03:  
Pickmere to Agden and Hulseheath

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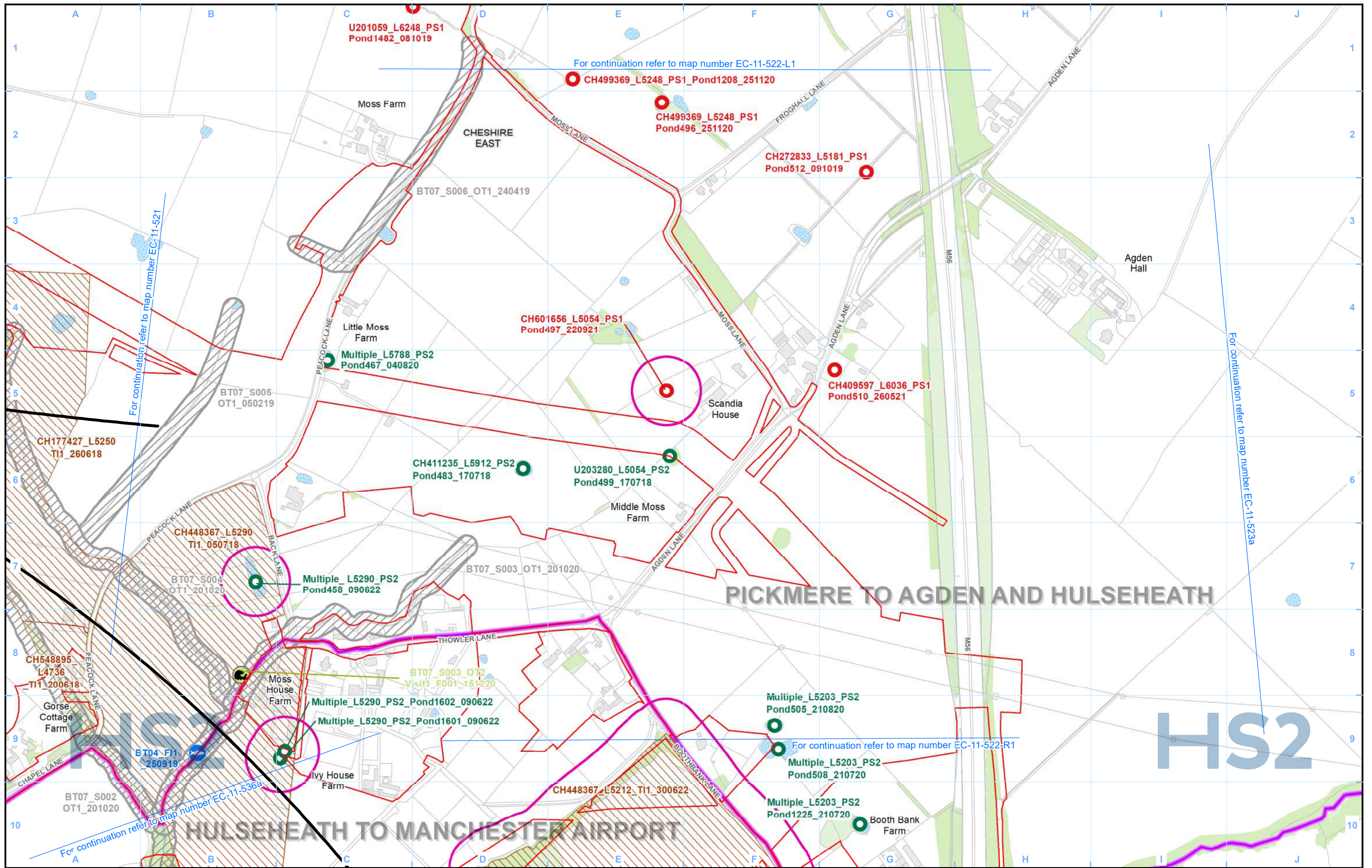
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Doc Number: 2PT27-MWJ-EV-MAP-M000-003423-P01

Date: 12/04/23





Legend	
	Route in tunnel
	Route on surface
	Depot, station, headhouse or portal building
	Land potentially required during construction
	Community area boundary
	County boundary
	Watercourse
	Water body
	Woodland (verified by survey)
	Area contains new survey data
	Otter: Active otter holt
	Otter: Potential otter holt
	Suitable habitat for otter
	White clawed crayfish: Manual search and/or trapping conducted and presence confirmed
	White clawed crayfish: Manual search and/or trapping conducted and assumed absent
	White clawed crayfish: Site identified as potentially suitable but no access available
	Pond survey: Pond survey - national pond survey
	Pond survey: Pond survey - PSYM
	Pond survey: Pond survey - rapid assessment method
	Fish: Fish survey location
	Terrestrial invertebrate: Terrestrial invertebrate survey extent

Map Number	EC-11-522
Map Name	Other Protected and Notable Species (1) SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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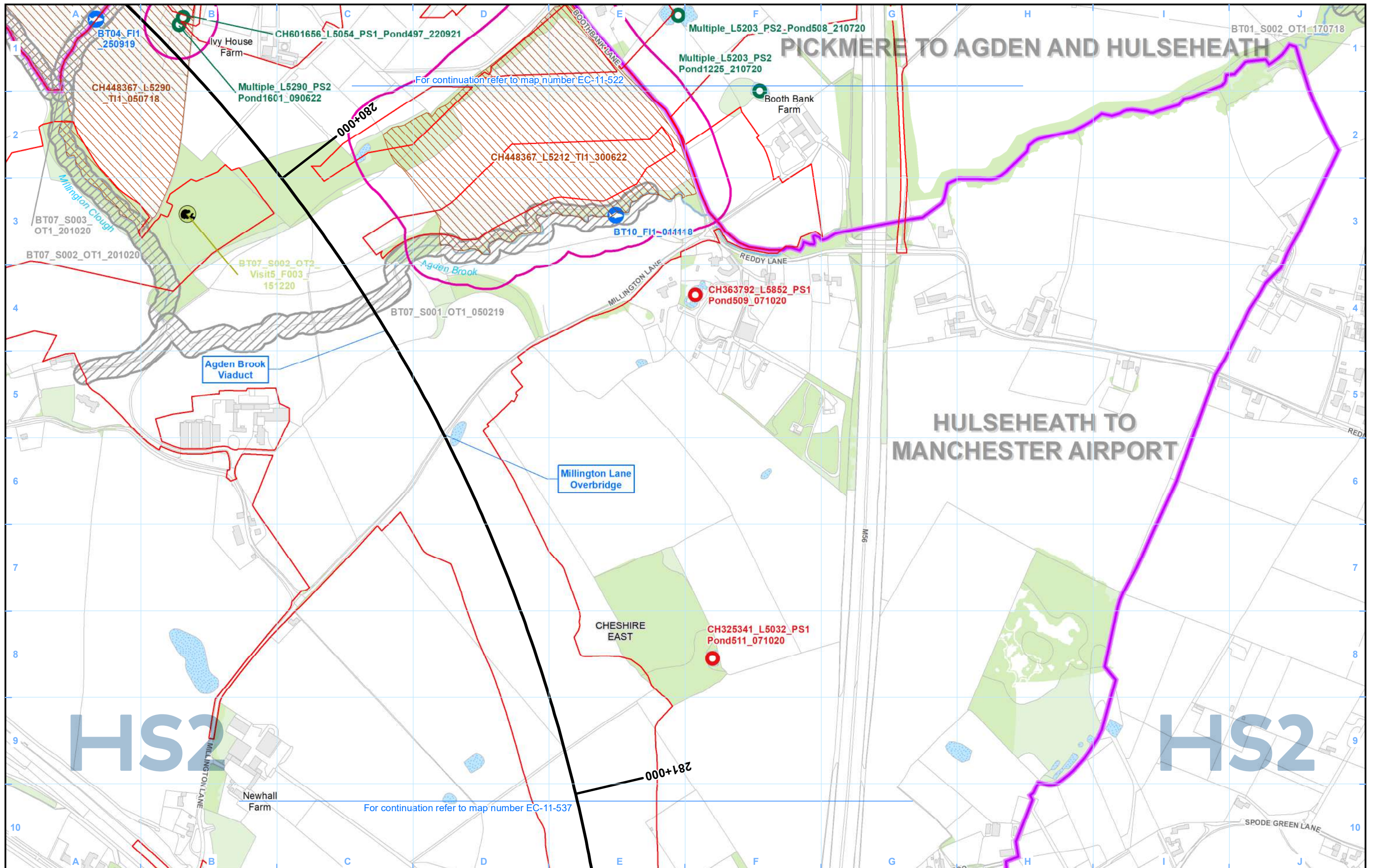
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Date: 12/04/23

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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
	Watercourse
	Water body
	Woodland (verified by survey)
	Area contains new survey data
	Otter: Active otter holt
	Otter: Potential otter holt
	Otter: Suitable habitat for otter
	White clawed crayfish: Manual search and/or trapping conducted and presence confirmed
	White clawed crayfish: Manual search and/or trapping conducted and assumed absent
	White clawed crayfish: Site identified as potentially suitable but no access available
	Pond survey: Pond survey - national pond survey
	Pond survey: Pond survey - PSYM
	Pond survey: Pond survey - rapid assessment method
	Fish: Fish survey location
	Terrestrial invertebrate: Terrestrial invertebrate survey extent

Map Number	EC-11-522-R1
Map Name	Other Protected and Notable Species (1) SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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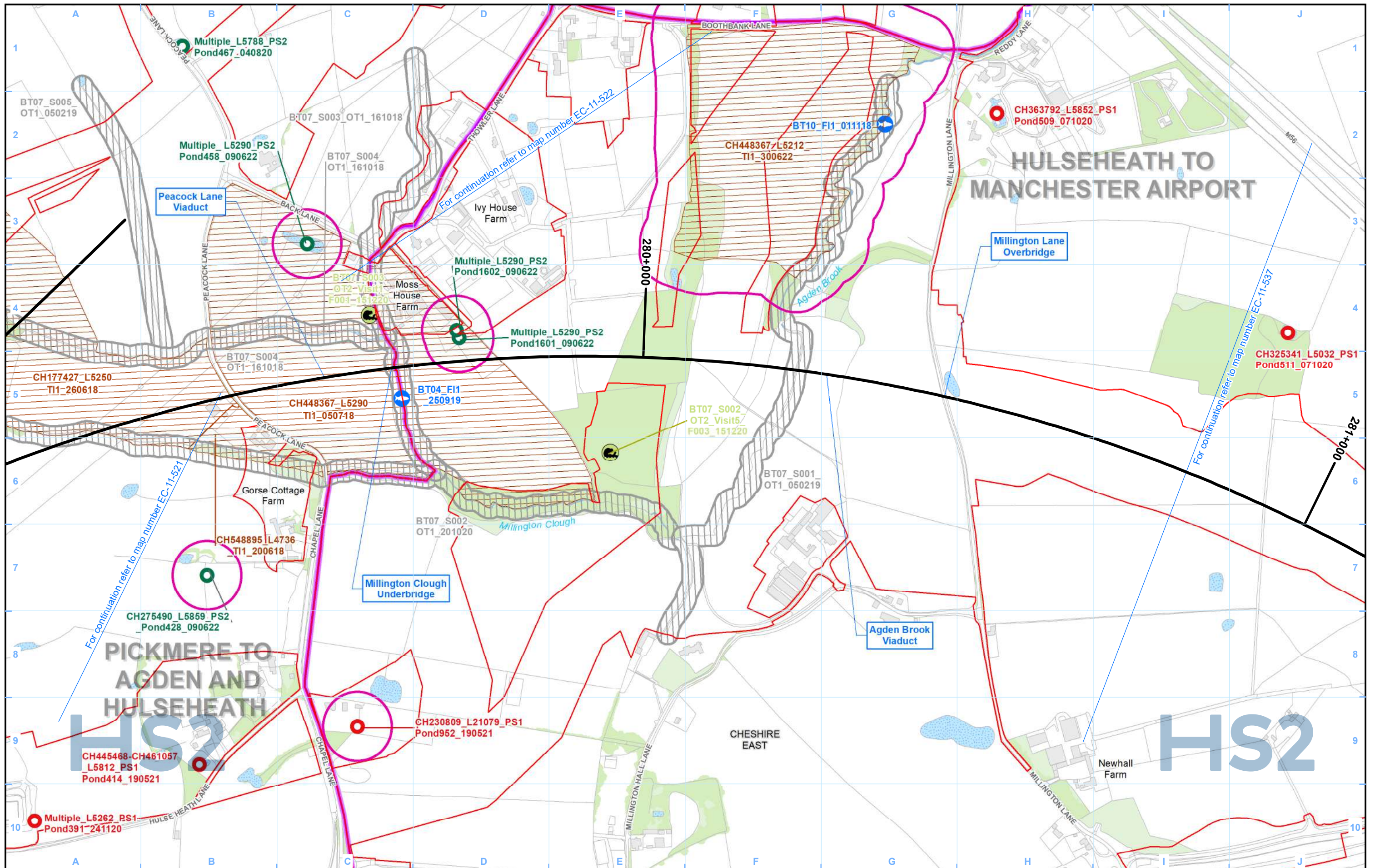
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Scale at A3: 1:5,000

Metres

Date: 12/04/23





Legend		Otter:		White clawed crayfish:		Pond survey:		Fish:	
	Route in tunnel		Active otter holt		Manual search and/or trapping conducted and presence confirmed		Pond survey - national pond survey		Fish survey location
	Route on surface		Potential otter holt		Manual search and/or trapping conducted and assumed absent		Pond survey - PSYM		Terrestrial invertebrate
	Depot, station, headhouse or portal building		Suitable habitat for otter		Site identified as potentially suitable but no access available		Pond survey - rapid assessment method		Terrestrial invertebrate survey extent
	Land potentially required during construction								
	Community area boundary								
	County boundary								
	Watercourse								
	Water body								
	Woodland (verified by survey)								
	Area contains new survey data								

Map Number	EC-11-536a
Map Name	Other Protected and Notable Species (1) SES2 and AP2 ES
Community Area MA03: Pickmere to Agden and Hulseheath	

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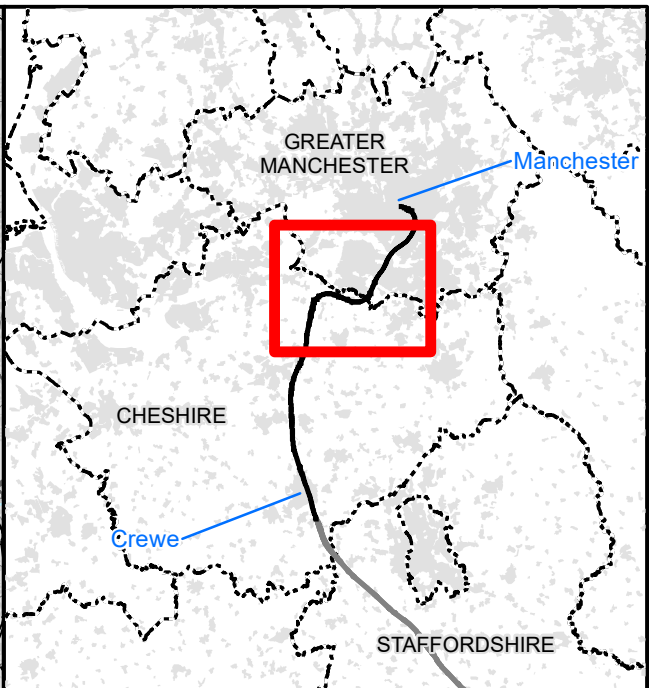
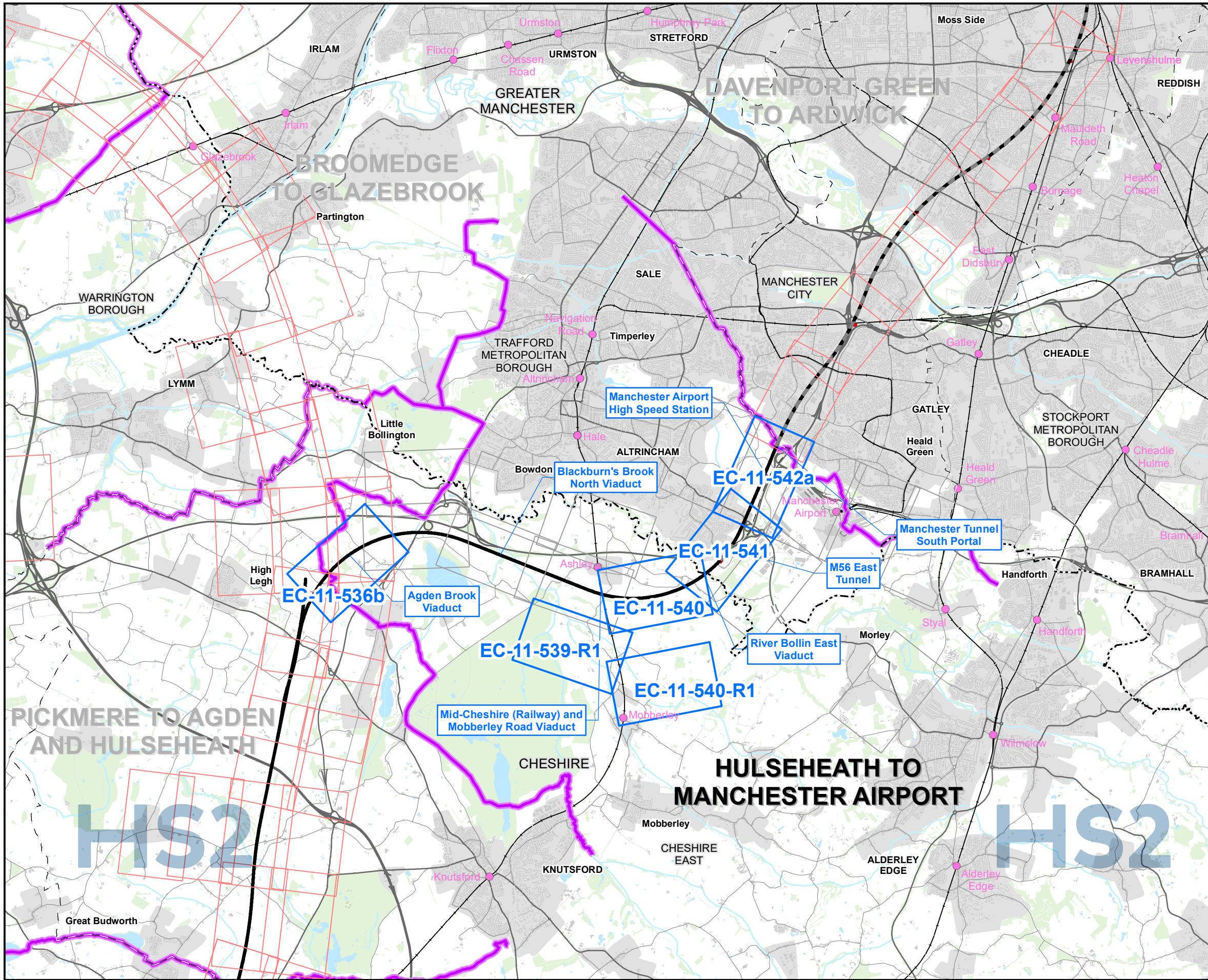
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**Map Series Information:**  
 This map series shows the extent of various protected species surveys conducted to inform the environmental assessment.

**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-11-INDEX-MA06  
 Map Name: Index Map of:  
 Other Protected and Notable Species (1) SES2 and AP2 ES  
 Community Area MA06:  
 Hulseheath to Manchester Airport

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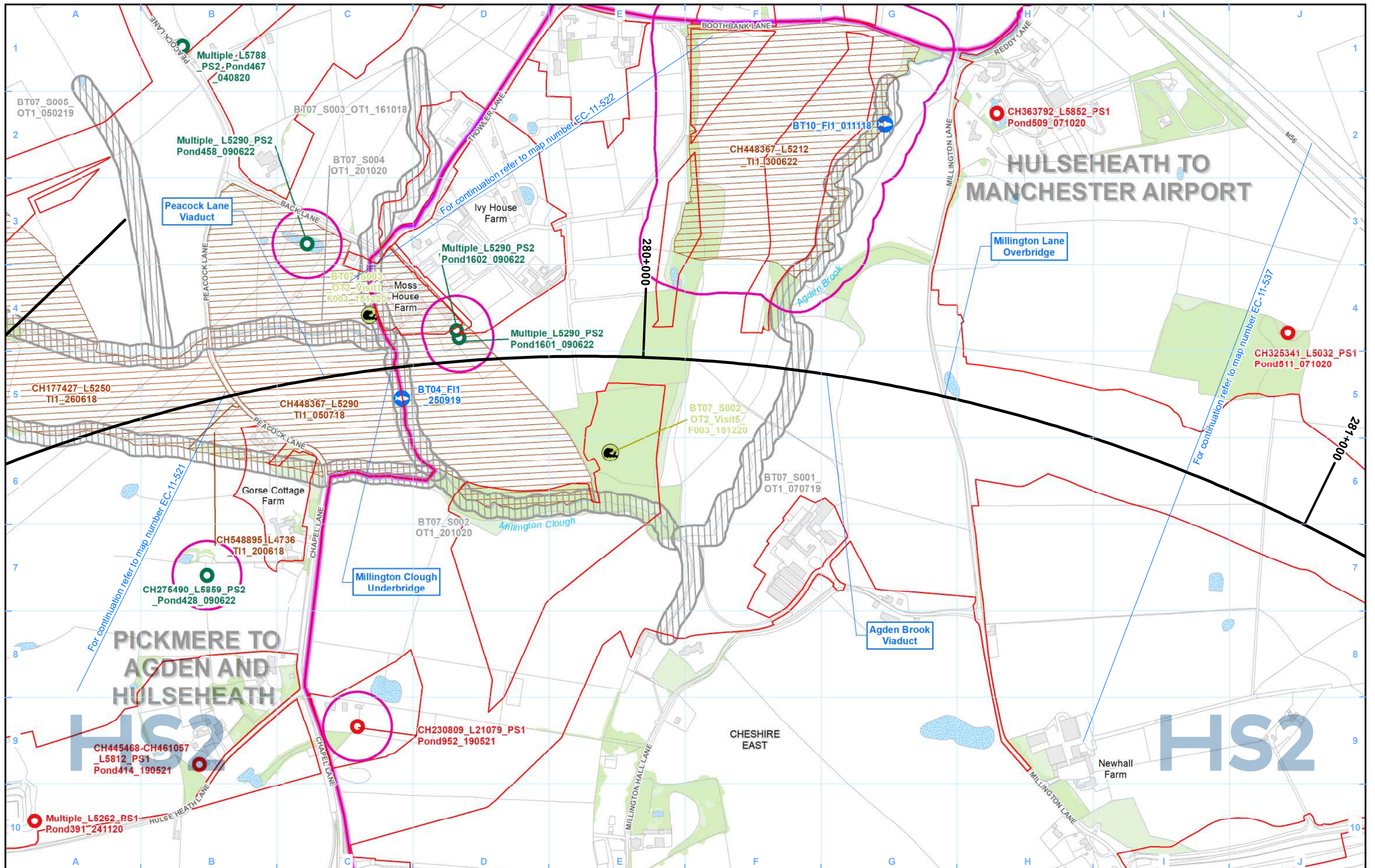
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001444-P01 **Date:** 12/04/23

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





Legend		Otter:		White clawed crayfish:		Pond survey:		Fish:	
	Route in tunnel		Active otter holt		Manual search and/or trapping conducted and presence confirmed		Pond survey - national pond survey		Fish survey location
	Route on surface		Potential otter holt		Manual search and/or trapping conducted and assumed absent		Pond survey - PSYM		Terrestrial invertebrate
	Depot, station, headhouse or portal building		Suitable habitat for otter		Site identified as potentially suitable but no access available		Pond survey - rapid assessment method		Terrestrial invertebrate survey extent
	Land potentially required during construction								
	Community area boundary								
	County boundary								
	Watercourse								
	Water body								
	Woodland (verified by survey)								
	Area contains new survey data								

Map Number	EC-11-536b
Map Name	Other Protected and Notable Species (1) SES2 and AP2 ES
Community Area MA06: Hulseheath to Manchester Airport	

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Doc Number: 2PT27-MWJ-EV-MAP-M000-001417-P01

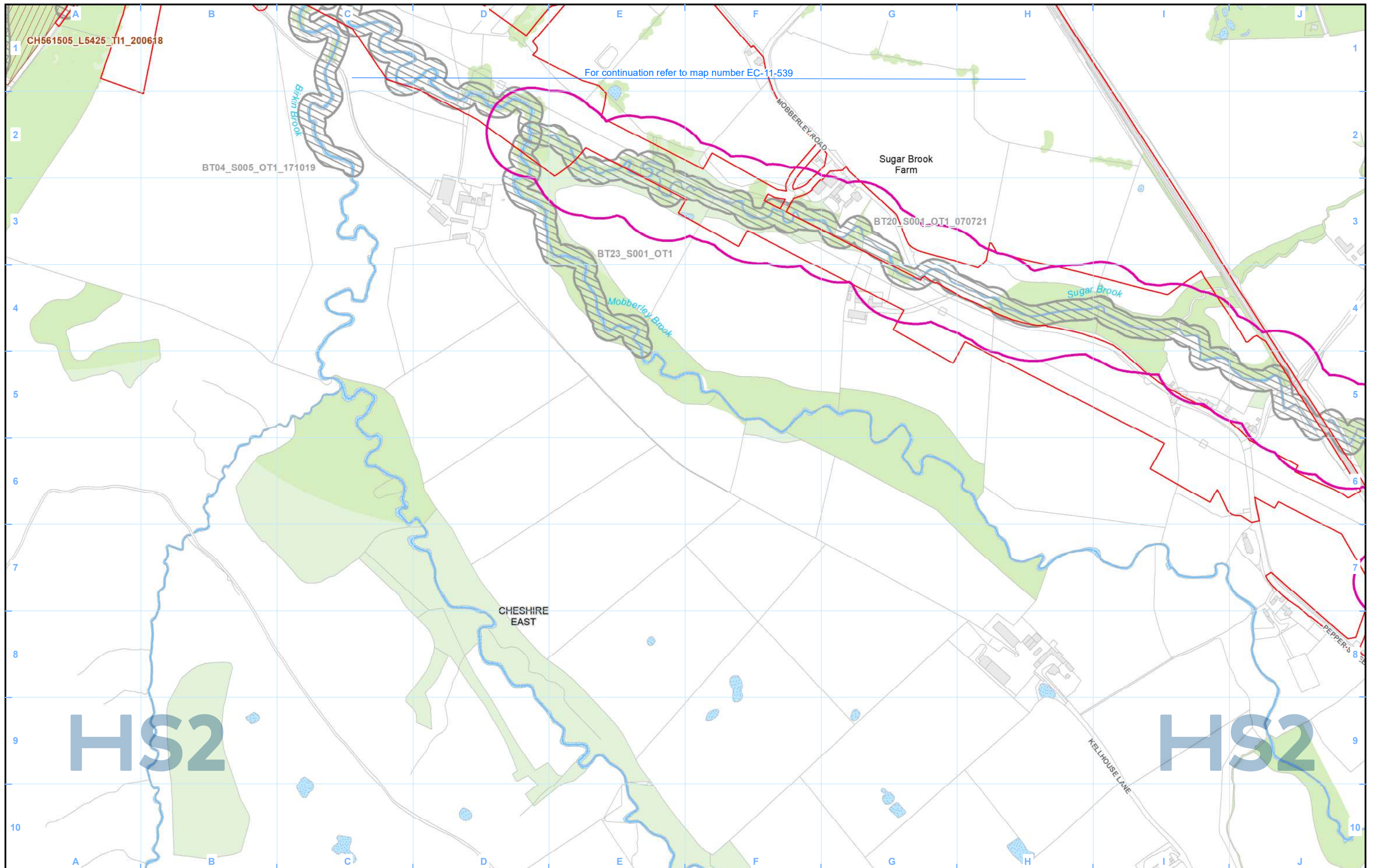
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Legend	
	Route in tunnel
	Route on surface
	Depot, station, headhouse or portal building
	Land potentially required during construction
	Community area boundary
	County boundary
	Watercourse
	Water body
	Woodland (verified by survey)
	Area contains new survey data
	Active otter holt
	Potential otter holt
	Suitable habitat for otter
	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
	Pond survey - national pond survey
	Pond survey - PSYM
	Pond survey - rapid assessment method
	Fish survey location
	Terrestrial invertebrate survey extent

Map Number	EC-11-539-R1
Map Name	Other Protected and Notable Species (1) SES2 and AP2 ES
Community Area MA06: Hulseheath to Manchester Airport	

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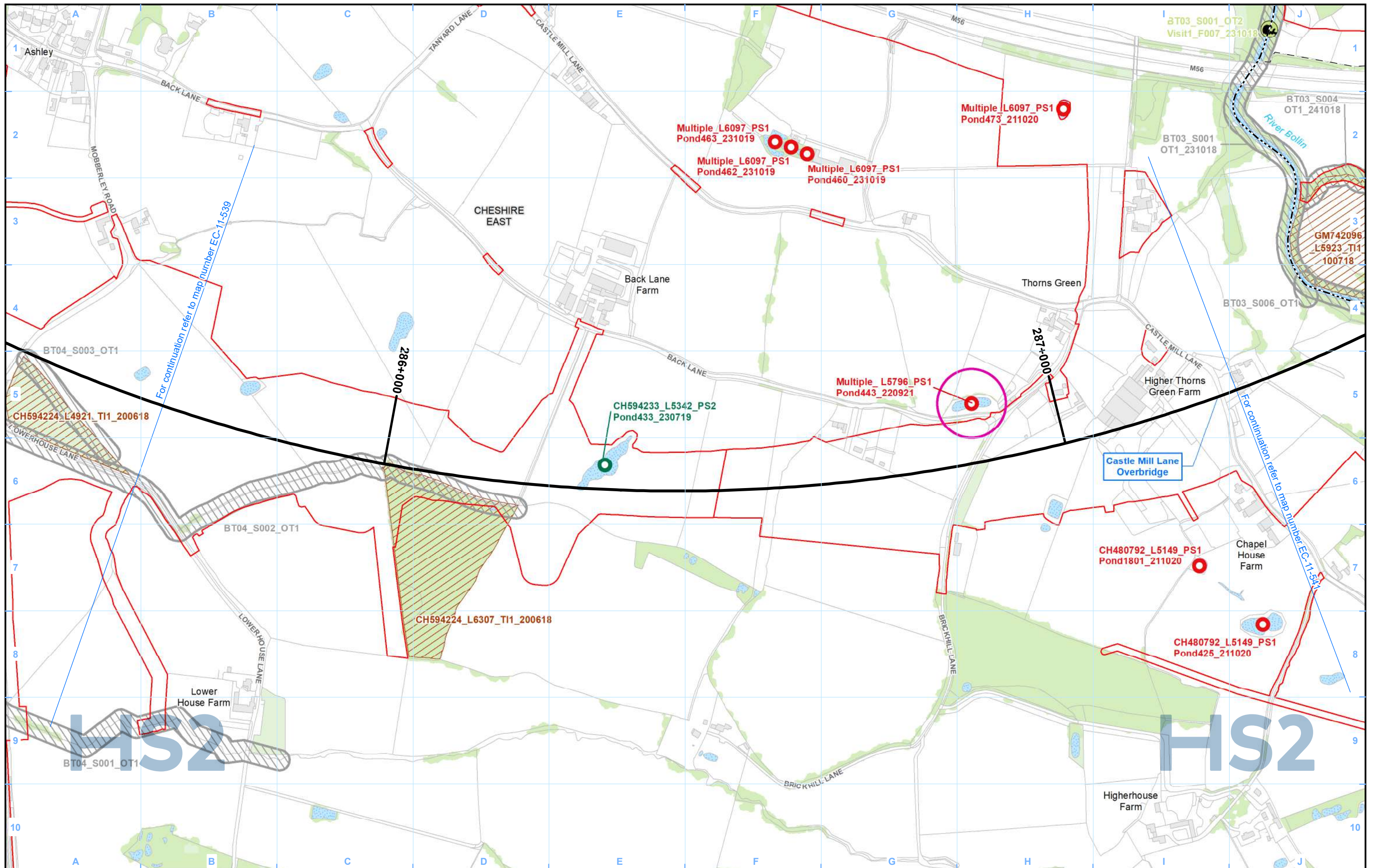
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**Legend**


Map Number	EC-11-540
Map Name	Other Protected and Notable Species (1) SES2 and AP2 ES
Community Area MA06: Hulseheath to Manchester Airport	

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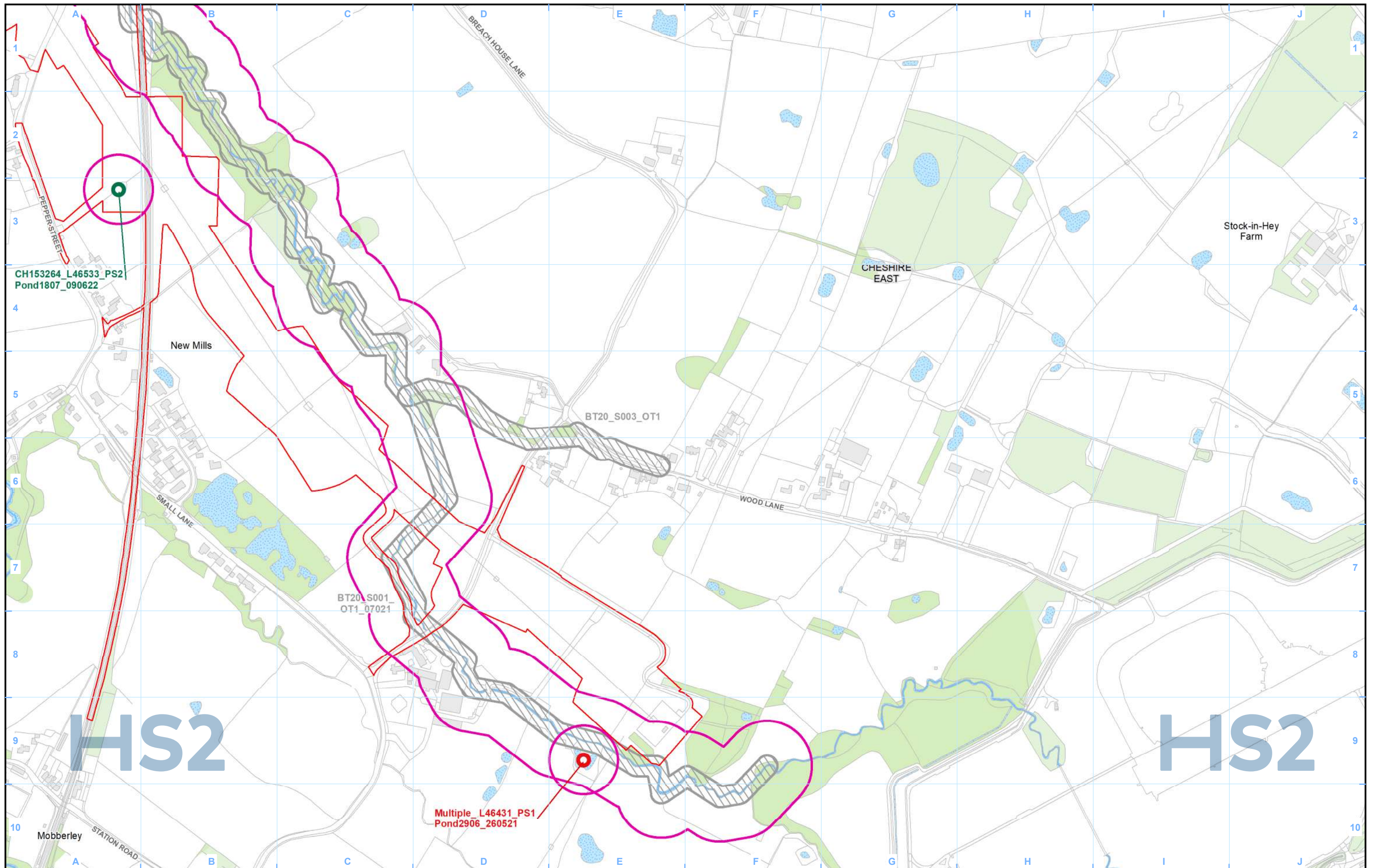
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Doc Number: 2PT27-MWJ-EV-MAP-M000-001421-P01

Date: 12/04/23





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	
<b>Otter:</b>	<b>White clawed crayfish:</b>
Active otterholt	Manual search and/or trapping conducted and presence confirmed
Potential otterholt	Manual search and/or trapping conducted and assumed absent
Suitable habitat for otter	Site identified as potentially suitable but no access available
	<b>Pond survey:</b>
	Pond survey - national pond survey
	Pond survey - PSYM
	Pond survey - rapid assessment method
	<b>Fish:</b>
	Fish survey location
	<b>Terrestrial invertebrate</b>
	Terrestrial invertebrate survey extent

Map Number	EC-11-540-R1
Map Name	Other Protected and Notable Species (1) SES2 and AP2 ES
	Community Area MA06: Hulseheath to Manchester Airport

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Doc Number: 2PT27-MWJ-EV-MAP-M000-003441-P01

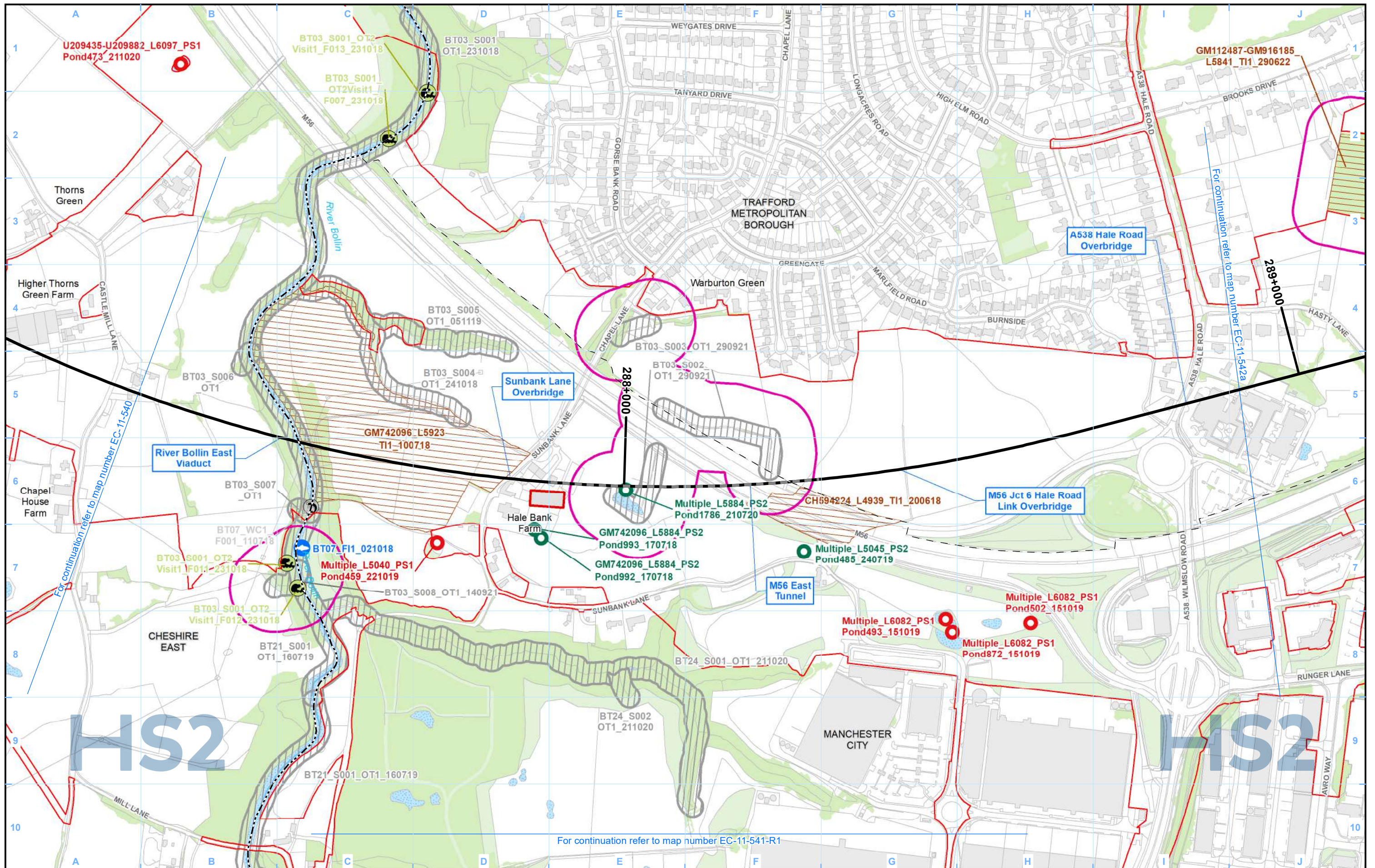
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Metres

Date: 12/04/23

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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
  - Watercourse
  - Water body
  - Woodland (verified by survey)
  - Area contains new survey data

- Otter:**
- Active otter holt
  - Potential otter holt
  - Suitable habitat for otter

- 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

- Pond survey:**
- Pond survey - national pond survey
  - Pond survey - PSYM
  - Pond survey - rapid assessment method

- Fish:**
- Fish survey location
  - Terrestrial Invertebrate**
  - Terrestrial invertebrate survey extent

Map Number: EC-11-541

Map Name: Other Protected and Notable Species (1) SES2 and AP2 ES

Community Area MA06: Hulse Heath to Manchester Airport

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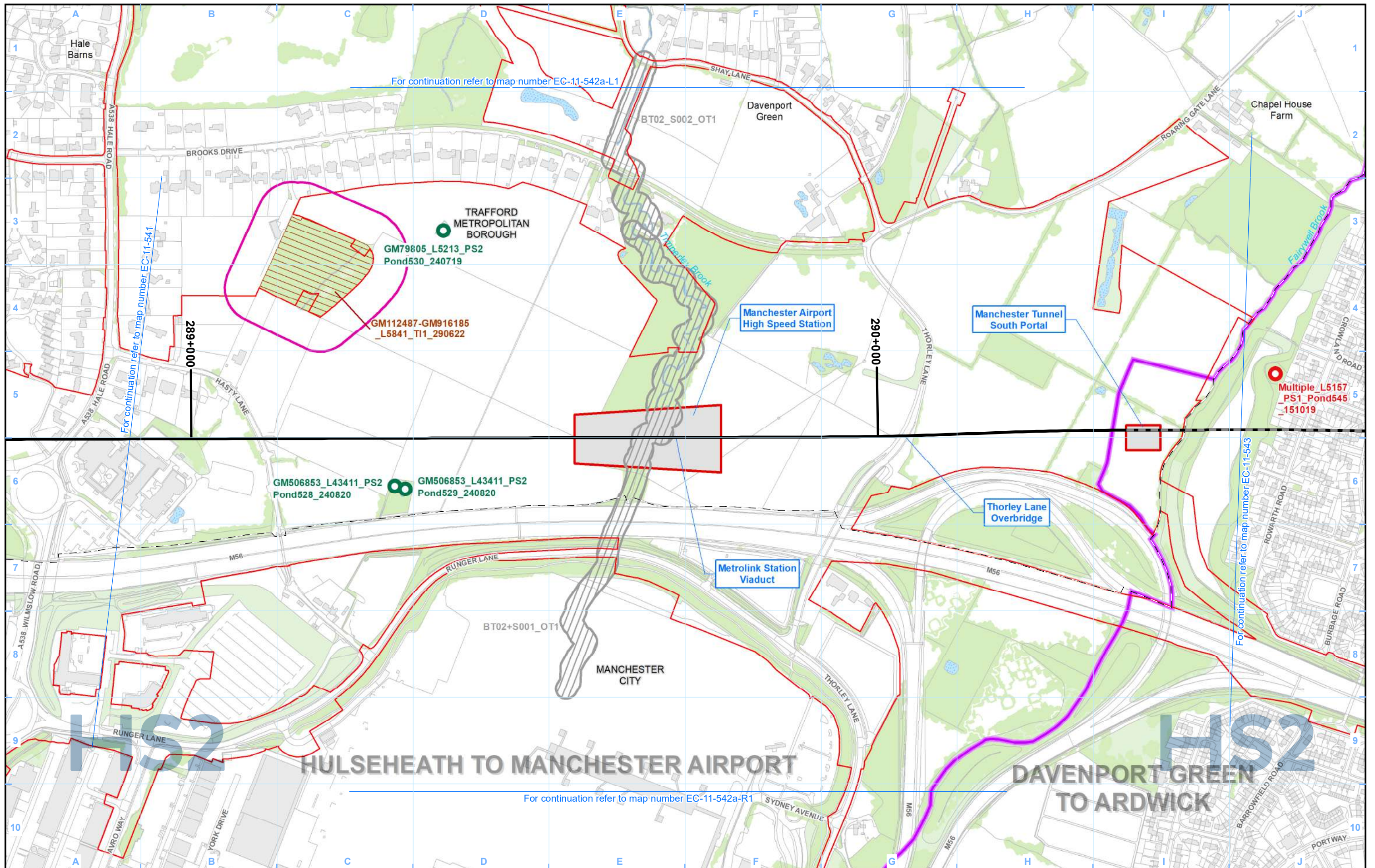
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Date: 12/04/23





Legend	
	Route in tunnel
	Route on surface
	Depot, station, headhouse or portal building
	Land potentially required during construction
	Community area boundary
	County boundary
	Watercourse
	Water body
	Woodland (verified by survey)
	Area contains new survey data
	Otter: Active otter holt
	Potential otter holt
	Suitable habitat for otter
	White clawed crayfish: Manual search and/or trapping conducted and presence confirmed
	White clawed crayfish: Manual search and/or trapping conducted and assumed absent
	White clawed crayfish: Site identified as potentially suitable but no access available
	Pond survey: Pond survey - national pond survey
	Pond survey: Pond survey - PSYM
	Pond survey: Pond survey - rapid assessment method
	Fish: Fish survey location
	Terrestrial invertebrate: Terrestrial invertebrate survey extent

Map Number	EC-11-542a
Map Name	Other Protected and Notable Species (1) SES2 and AP2 ES
Community Area MA06: Hulseheath to Manchester Airport	

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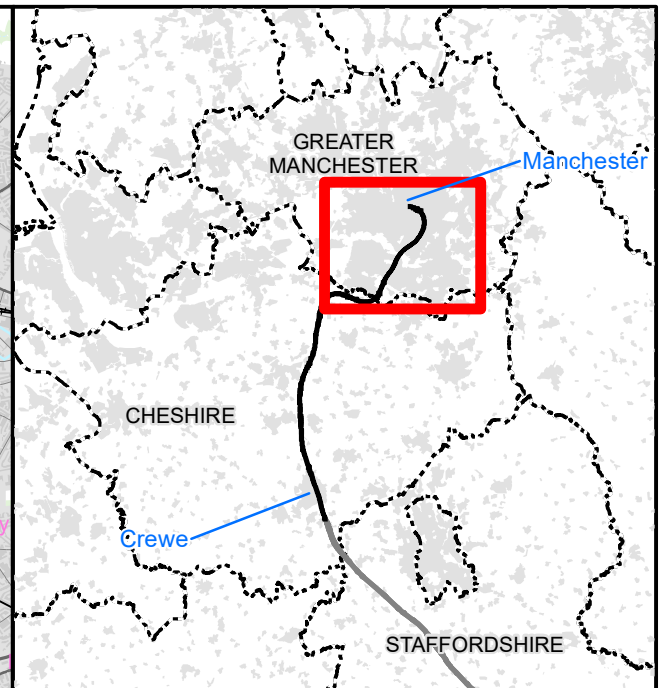
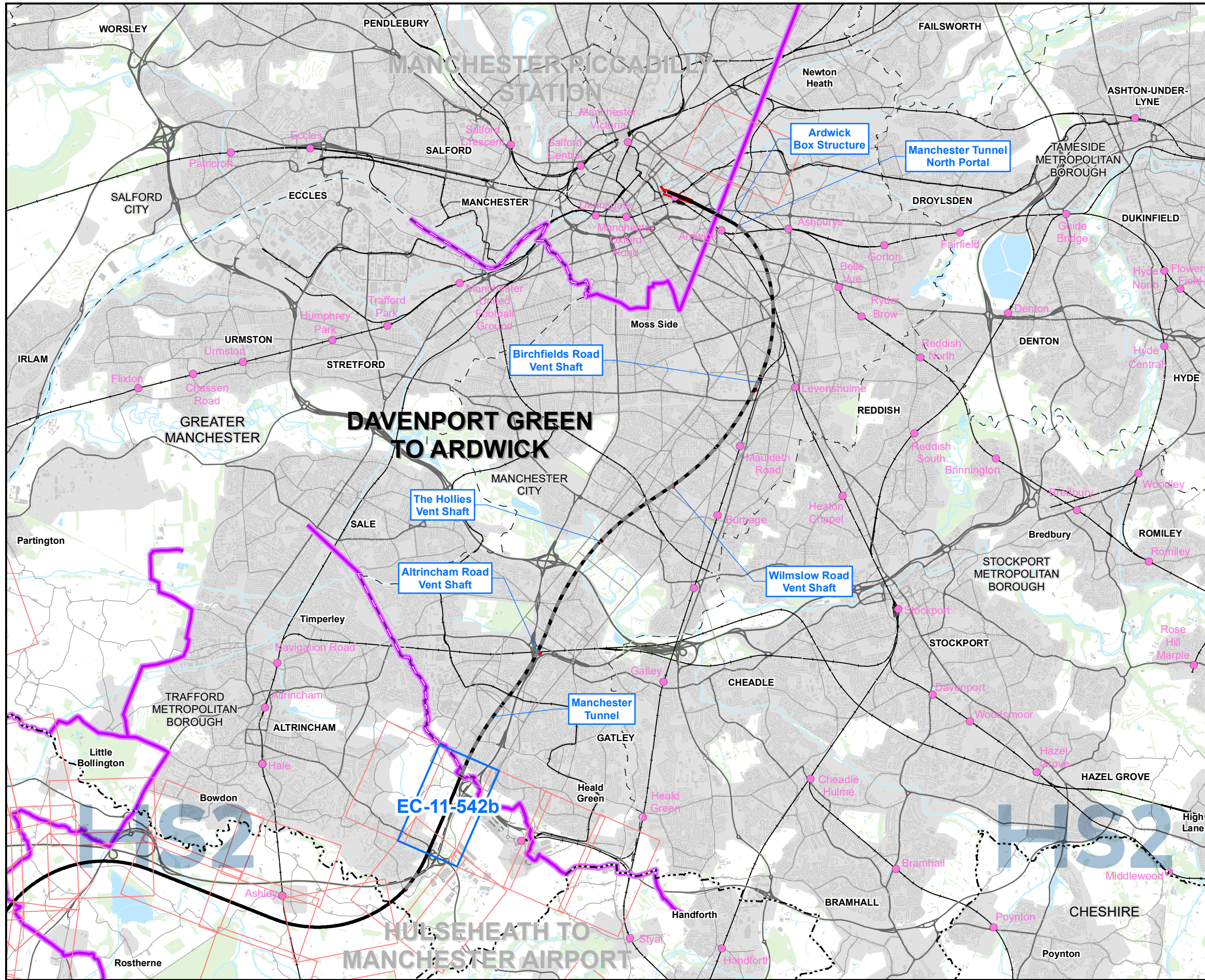
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**Map Series Information:**

This map series shows the extent of various protected species surveys conducted to inform the environmental assessment.

**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-11-INDEX-MA07
Map Name	Index Map of: Other Protected and Notable Species (1) SES2 and AP2 ES
	Community Area MA07: Davenport Green to Ardwick

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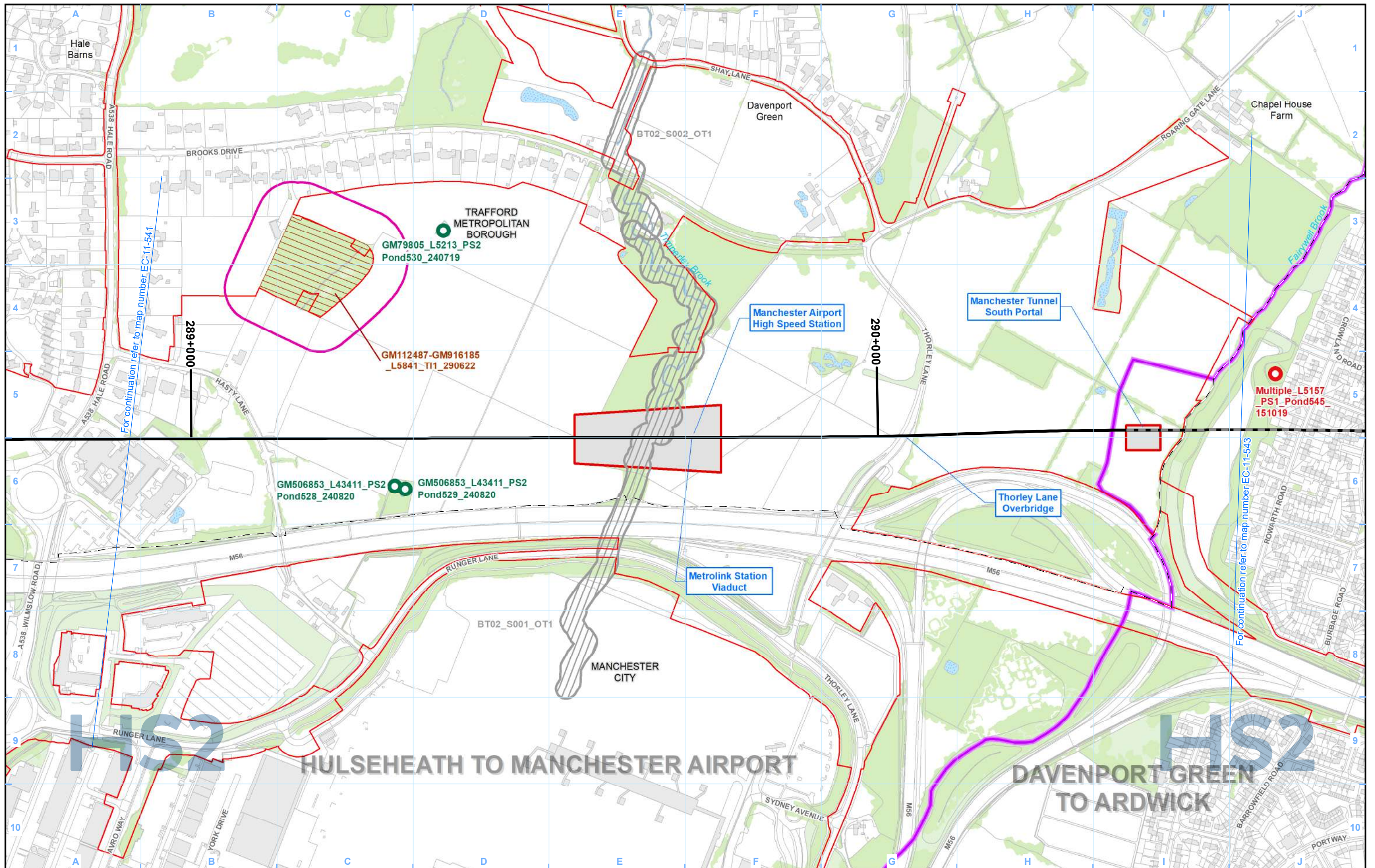
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Legend	
	Route in tunnel
	Route on surface
	Depot, station, headhouse or portal building
	Land potentially required during construction
	Community area boundary
	County boundary
	Watercourse
	Water body
	Woodland (verified by survey)
	Area contains new survey data
	Otter: Active otter holt
	Otter: Potential otter holt
	Suitable habitat for otter
	White clawed crayfish: Manual search and/or trapping conducted and presence confirmed
	White clawed crayfish: Manual search and/or trapping conducted and assumed absent
	White clawed crayfish: Site identified as potentially suitable but no access available
	Pond survey: national pond survey
	Pond survey: PSYM
	Pond survey: rapid assessment method
	Fish: Fish survey location
	Terrestrial invertebrate: Terrestrial invertebrate survey extent

Map Number	EC-11-542b
Map Name	Other Protected and Notable Species (1) SES2 and AP2 ES
Community Area MA07: Davenport Green to Ardwick	

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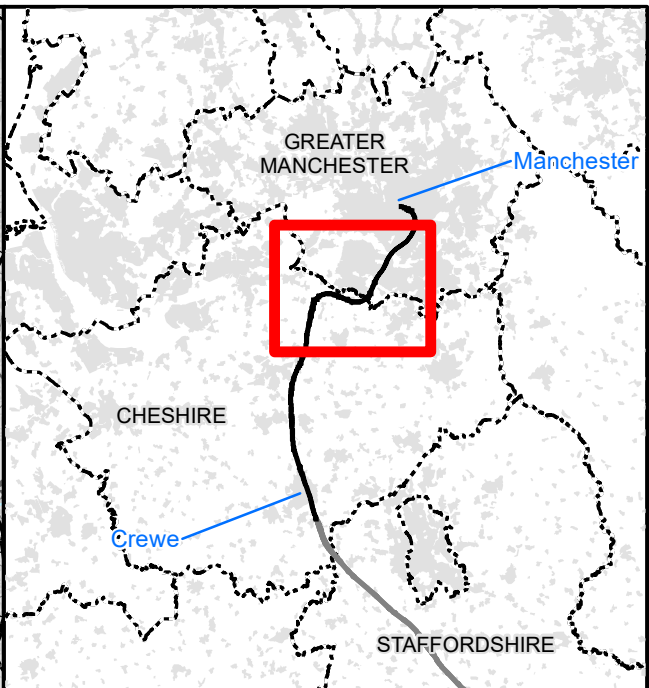
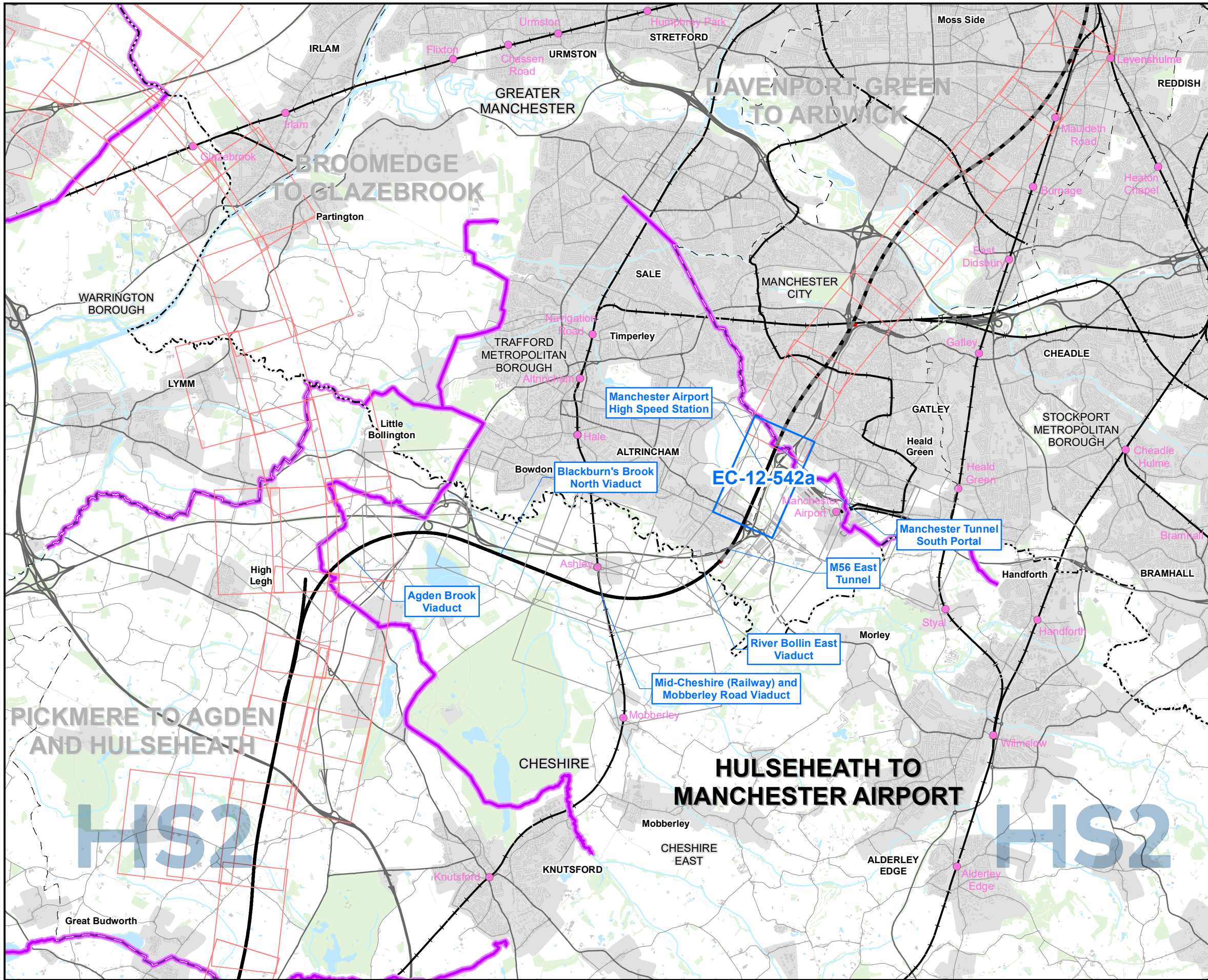


## **High Speed Rail (Crewe – Manchester)**

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

EC-12 – Other Protected and Notable Species (2)





**Map Series Information:**  
 This map series shows the extent of various protected species surveys conducted to inform the environmental assessment.

**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-12-INDEX-MA06
Map Name	Index Map of: Other Protected and Notable Species (2) SES2 AND AP2 ES Community Area MA06: Hulseheath to Manchester Airport

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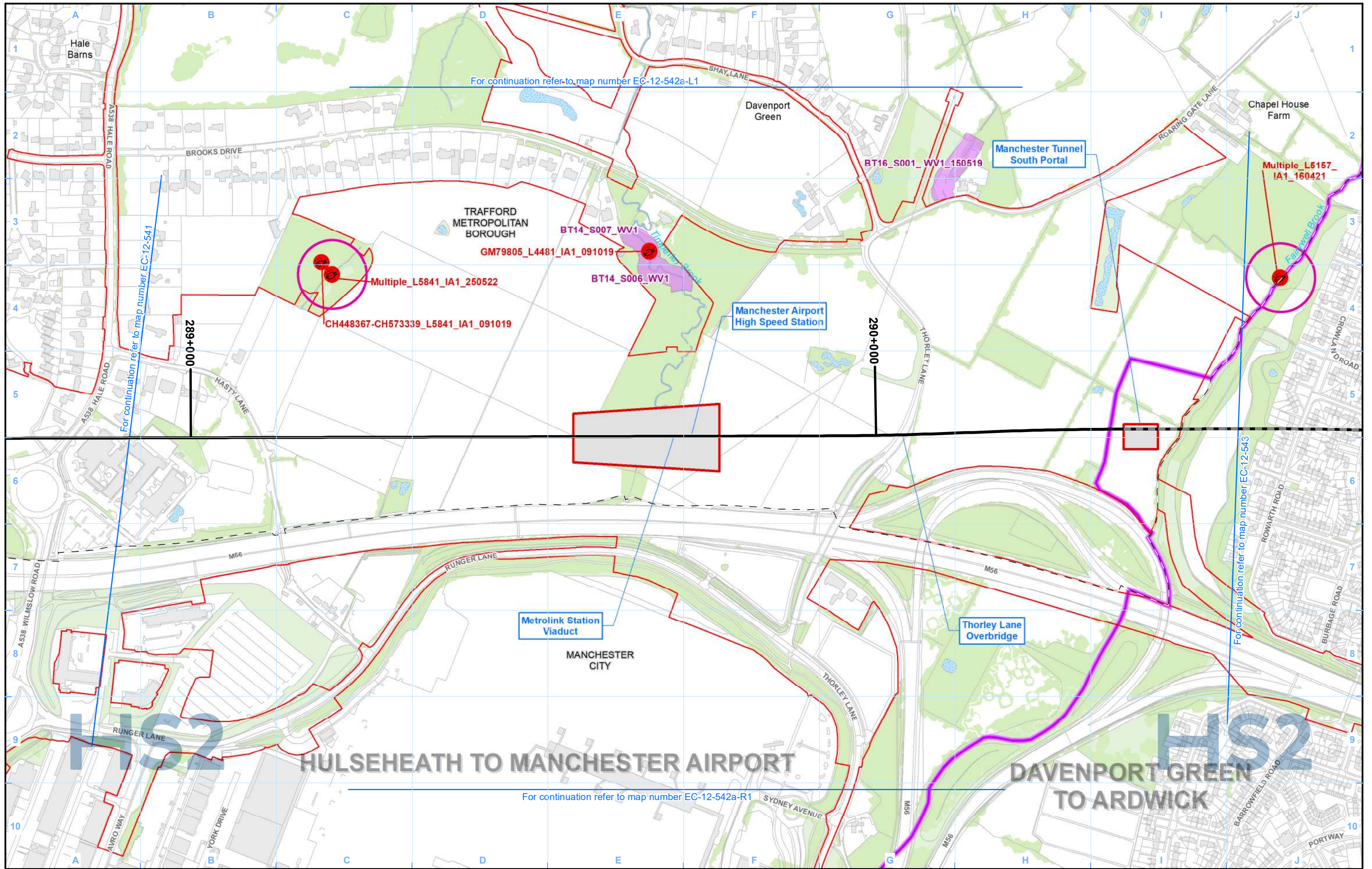
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Legend			
	Route in tunnel		Watercourse
	Route on surface		Water body
	Depot, station, headhouse or portal building		Woodland (verified by survey)
	Land potentially required during construction		Area contains new survey data
	Community area boundary		Aquatic invertebrate survey location
	County boundary		Water vole: Water vole survey undertaken - presence confirmed
	District/Borough boundary		Water vole survey undertaken - assumed absent
			Watercourse potentially suitable for water vole - no or limited access for survey

Map Number	EC-12-542a
Map Name	Other Protected and Notable Species (2) SES2 AND AP2 ES Community Area MA06: Hulseheath to Manchester Airport

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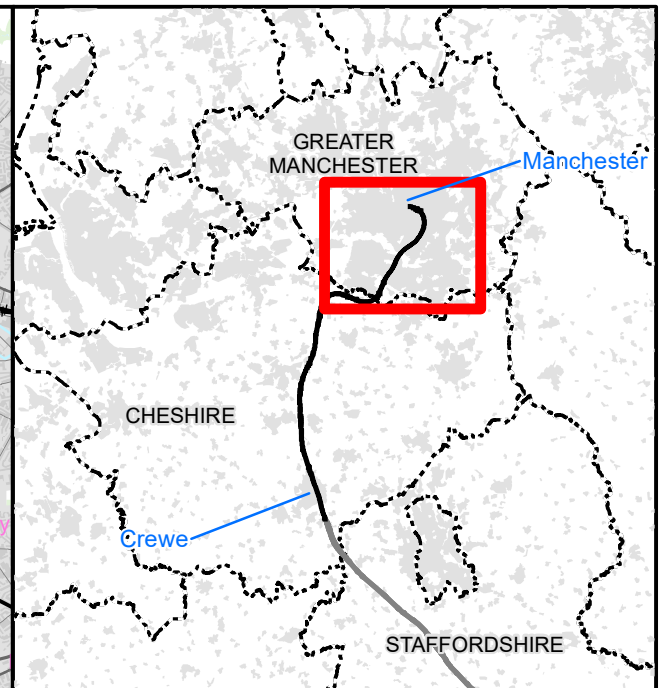
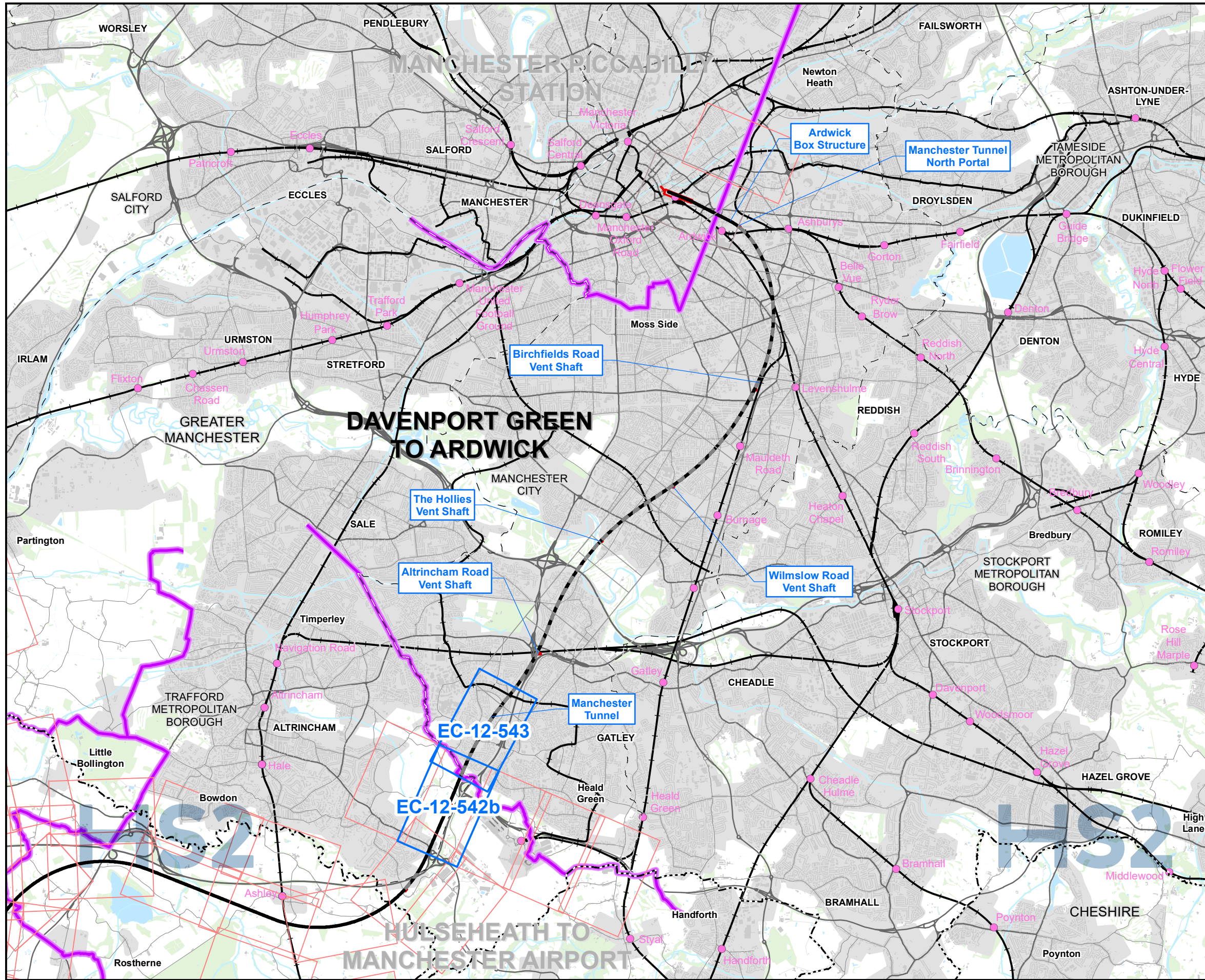
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Date: 29/03/23

Scale at A3: 1:5,000

0 50 100 150 200 Metres





**Map Series Information:**

This map series shows the extent of various protected species surveys conducted to inform the environmental assessment.

**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-12-INDEX-MA07
Map Name	Index Map of: Other Protected and Notable Species (2) SES2 AND AP2 ES Community Area MA07: Davenport Green to Ardwick

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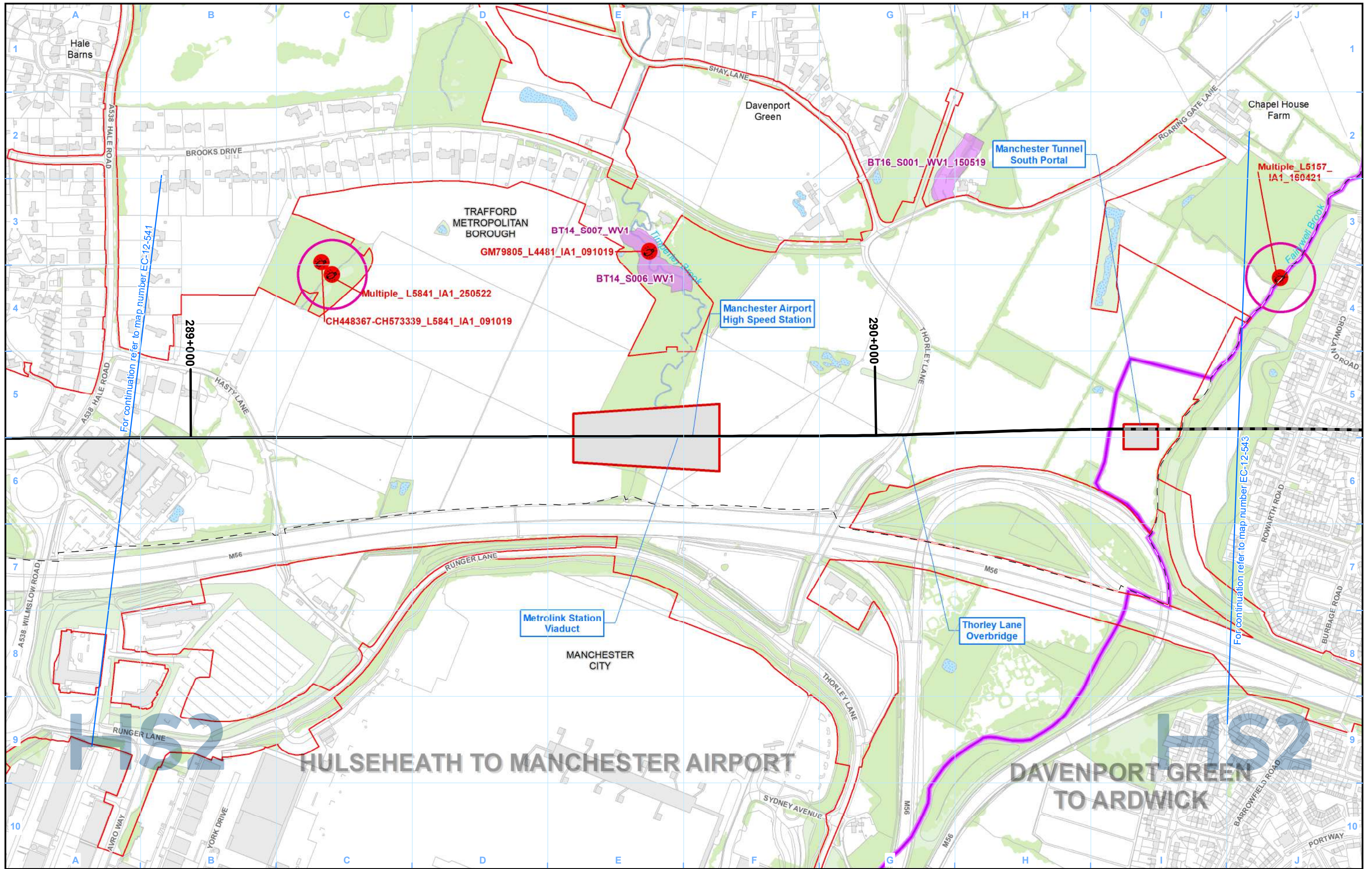
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- Legend**
- Route in tunnel
  - Route on surface
  - Depot, station, headhouse or portal building
  - Land potentially required during construction
  - Community area boundary
  - County boundary
  - District/Borough boundary

- Watercourse
- Water body
- Woodland (verified by survey)
- Area contains new survey data
- Aquatic invertebrate:
  - Aquatic invertebrate survey location

- Water vole:**
- Water vole survey undertaken - presence confirmed
  - Water vole survey undertaken - assumed absent
  - Watercourse potentially suitable for water vole - no or limited access for survey

Map Number: EC-12-542b

Map Name: Other Protected and Notable Species (2)

SES2 AND AP2 ES

Community Area MA07: Davenport Green to Ardwick

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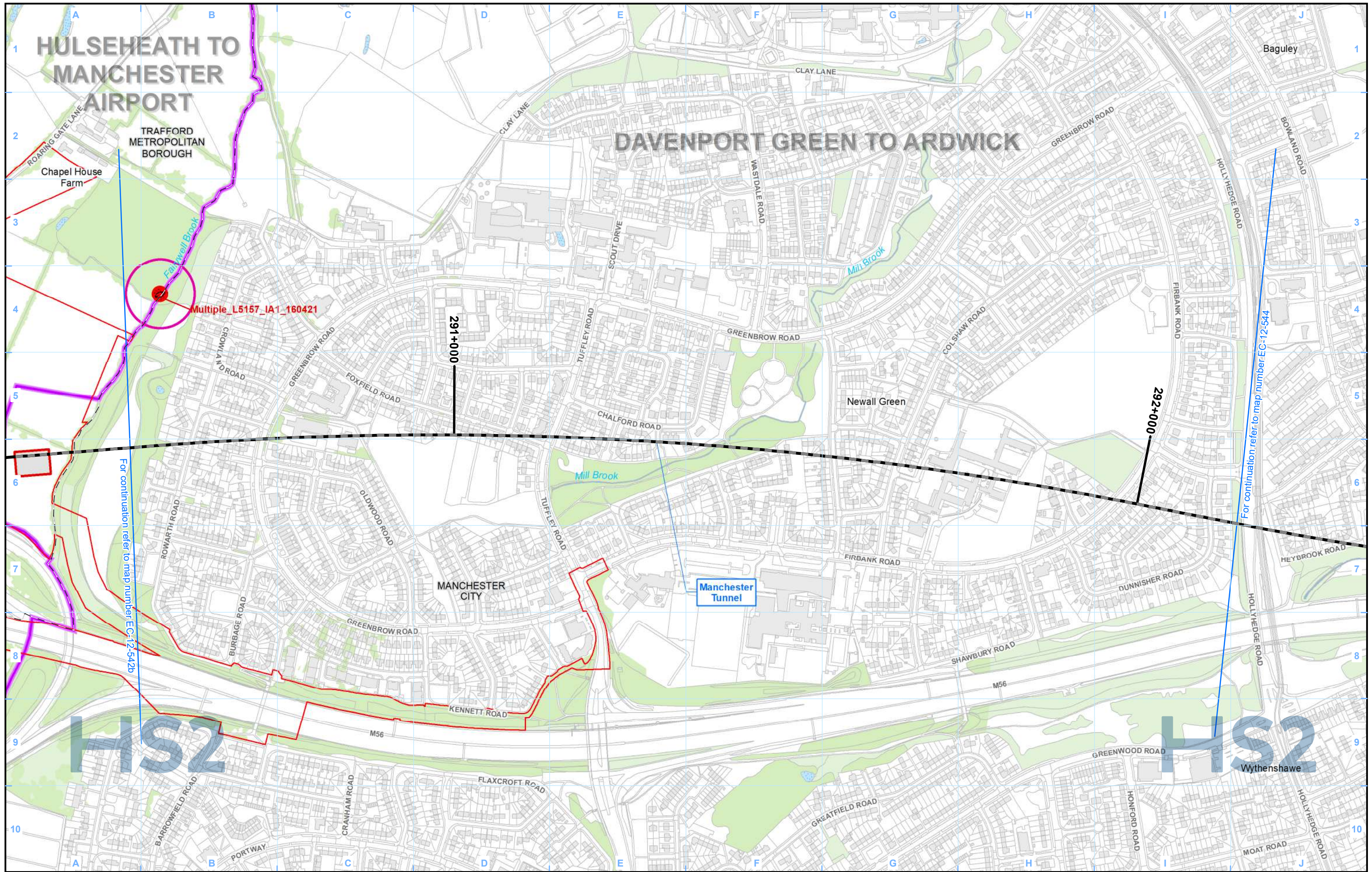
Doc Number: 2PT27-MWJ-EV-MAP-M000-001559-P01

Date: 29/03/23

Scale at A3: 1:5,000

0 50 100 150 200 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
- Aquatic invertebrate:
  - Aquatic invertebrate survey location

**Water vole:**

- Water vole survey undertaken - presence confirmed
- Water vole survey undertaken - assumed absent
- Watercourse potentially suitable for water vole - no or limited access for survey

Map Number: EC-12-543

Map Name: Other Protected and Notable Species (2)

SES2 AND AP2 ES

Community Area MA07: Davenport Green to Ardwick

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