

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

### **Background information and data**

### **Map Book**

Ecology (EC-02, EC-04, EC-05, EC-06, EC-07, EC-08, EC-09, EC-10, EC-11, EC-12) Part 3



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### **Background information and data Map Book**

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

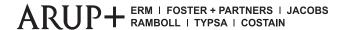
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A report prepared for High Speed Two (HS2) Limited:





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#### **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 within 250m of the CCB of the Proposed Scheme at a scale of 1:10,000. Where it has not been possible to gain access for field surveys, or the area mapped is between 250-500m from the CCB, 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 Statement. It principally details the results of Great Crested Newt surveys. In addition, it shows the location of any 'exceptional' populations of common amphibians recorded.	Background Information and Data map book – Ecology Part 2
EC-05 – Bat - Roost	This map series shows results of field surveys conducted to investigate the potential for trees, buildings, or structures to support roosting bats. It shows the location of roosts confirmed by field surveys and features identified as having a high or moderate potential to support roosting bats.	Background Information and Data map book – Ecology Part 3
EC-06 – Bat - Activity	This map series shows the location of bat activity surveys conducted to inform the Environmental Statement. In addition, it shows the location of the key bat foraging and commuting routes, which have been established based on the survey work conducted.	Background Information and Data map book – Ecology Part 3
EC-07 - Reptiles	This map series shows the extent and results of survey work for common reptiles, undertaken to inform the Environmental Statement.	Background Information and Data map book – Ecology Part 2
EC-08 - Breeding Birds – Protected and Notable Species	This map series shows records of protected and/or notable breeding birds considering the impacts of the Proposed Scheme. 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 4
EC-09 - Wintering and Passage Birds – Protected and Notable Species	This map series shows records of selected protected and/or notable wintering birds considering the impacts of the Proposed Scheme.	Background Information and Data map book – Ecology Part 4
EC-10 - Phase 2 Habitat Survey	This map series shows the extent of detailed habitat surveys undertaken to inform the Environmental Statement. The map shows the location of hedgerows that qualify as 'Important hedgerows' under the Hedgerows Regulations (1997).	Background Information and Data map book – Ecology Part 1
EC-11 - Other Protected and Notable Species (1)	This map series shows the extent of protected species surveys conducted to inform the Environmental Statement.	Background Information and Data map book – Ecology Part 5
EC-12 - Other Protected and Notable Species (2)	This map series shows the extent of protected species surveys conducted to inform the Environmental Statement.	Background Information and Data map book – Ecology Part 5

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

#### Chainage

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

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

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

#### **Map orientation**

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 Leeds or Manchester to the right.



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

Background Information and Data Data dictionary and definitions

### Data dictionary and definitions

Legend features	Definition	Source	Copyright
Activity transect route	Transect route that was surveyed during bat activity surveys.	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	
Community area boundary	The Environmental Statement has been split into eight 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. 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	
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 2019.
Depot, station, headhouse or portal building	Extends to cover operational footprint of each depot and station and the footprint of each tunnel vent shaft and headhouse at surface level. Excludes any ancillary buildings associated with these structures.	High Speed Two (HS2) Ltd	
District/borough/Unitary authority boundary	Ordnance Survey local authority boundary mapping.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2019.

Legend features	Definition	Source	Copyright
Land potentially required during construction	Boundary defining the maximum possible extent of construction works required to build HS2 as far as the current level of design allows. This only covers surface works and includes all tunnel portals, vent shafts and headhouses, but does not apply to wholly tunnelled sections or to air rights. It also encompasses associated highway, access, drainage and utility works.		
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	
Water body	Any mass of water having definite hydrological, physical, chemical and biological characteristics.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2019.
Watercourse	Any channel through which water flows, can be natural or manmade. They are split into two categories (main rivers or ordinary watercourses) in England and Wales for regulation purposes.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2019.
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 2019.
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	

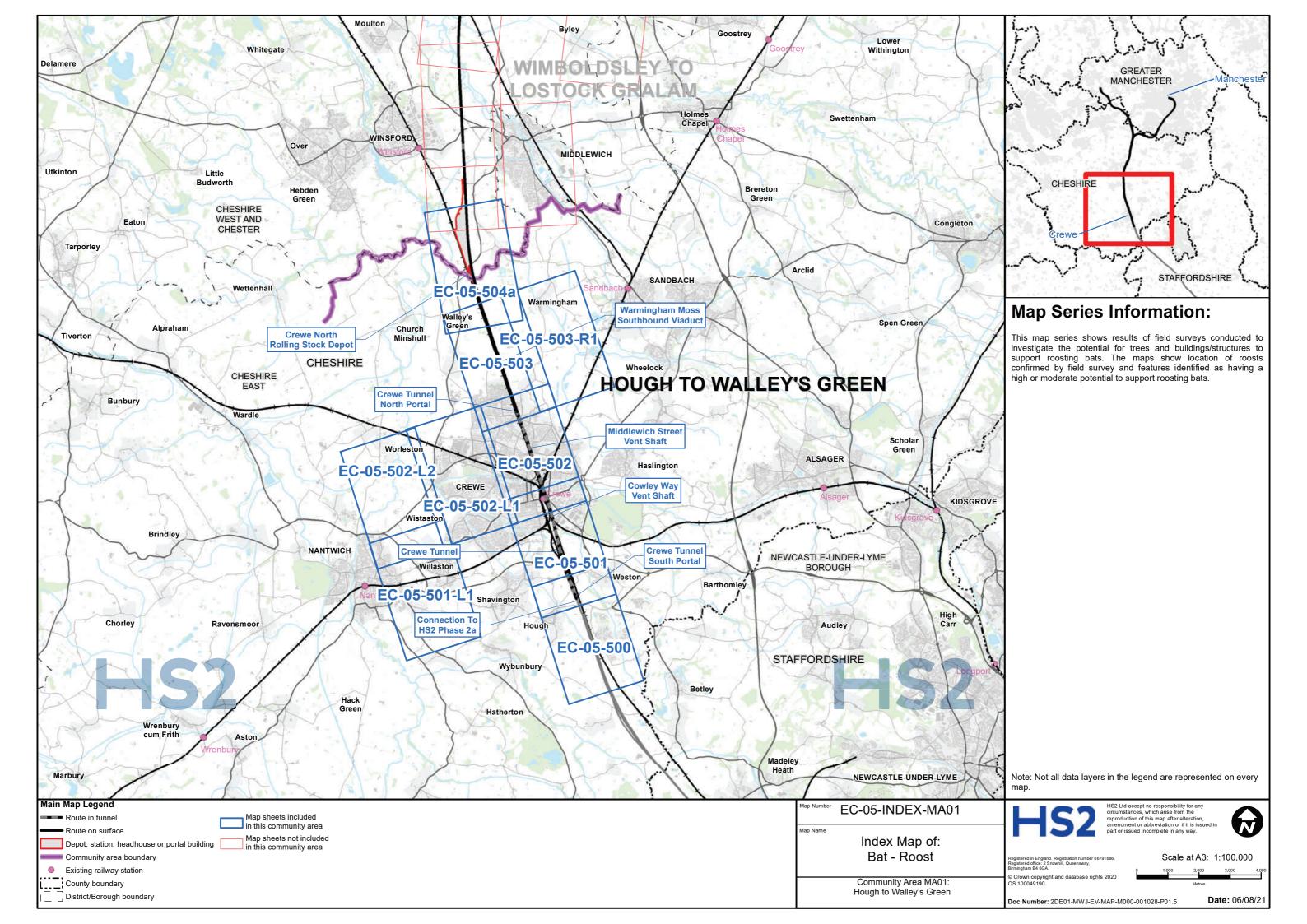
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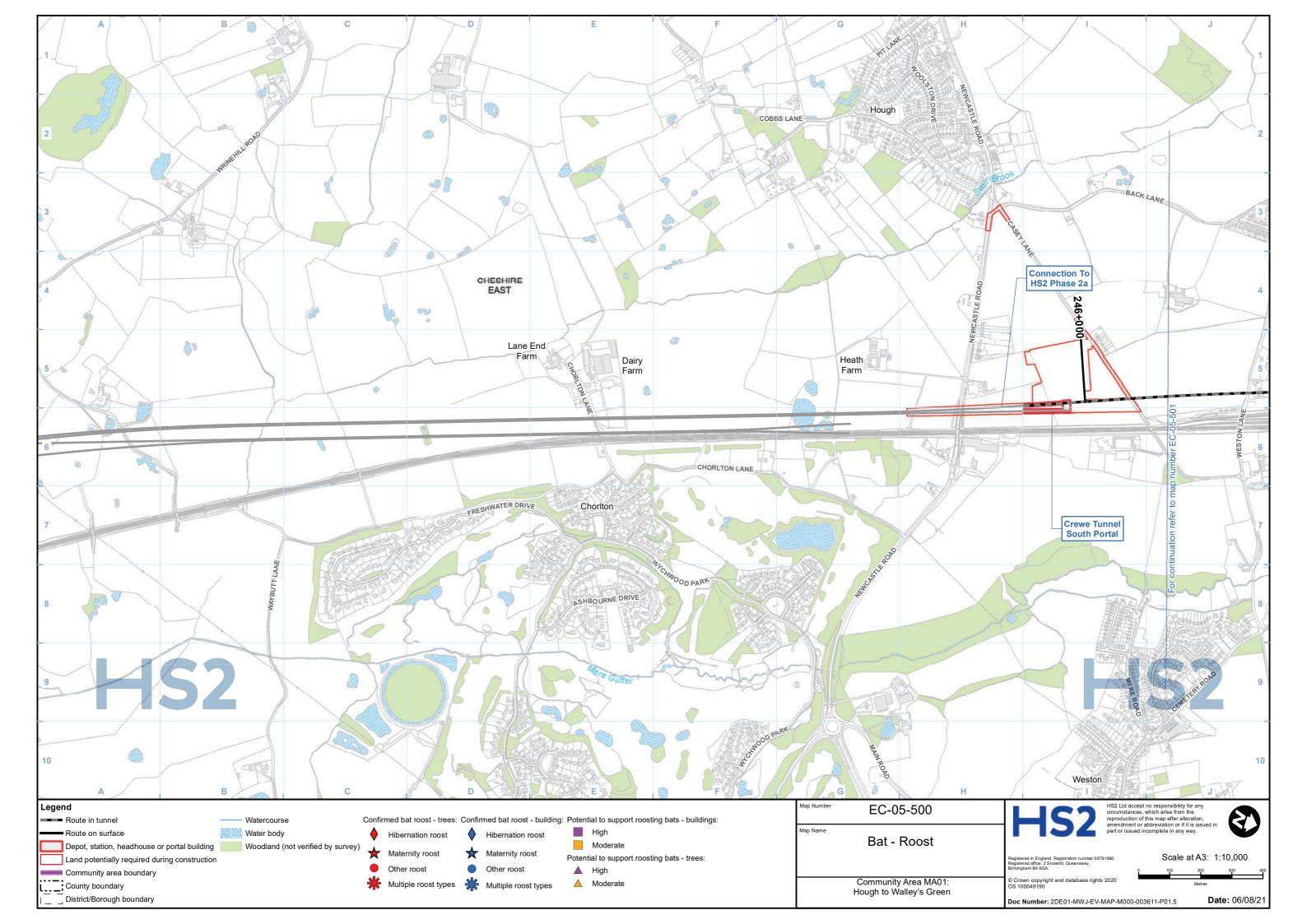
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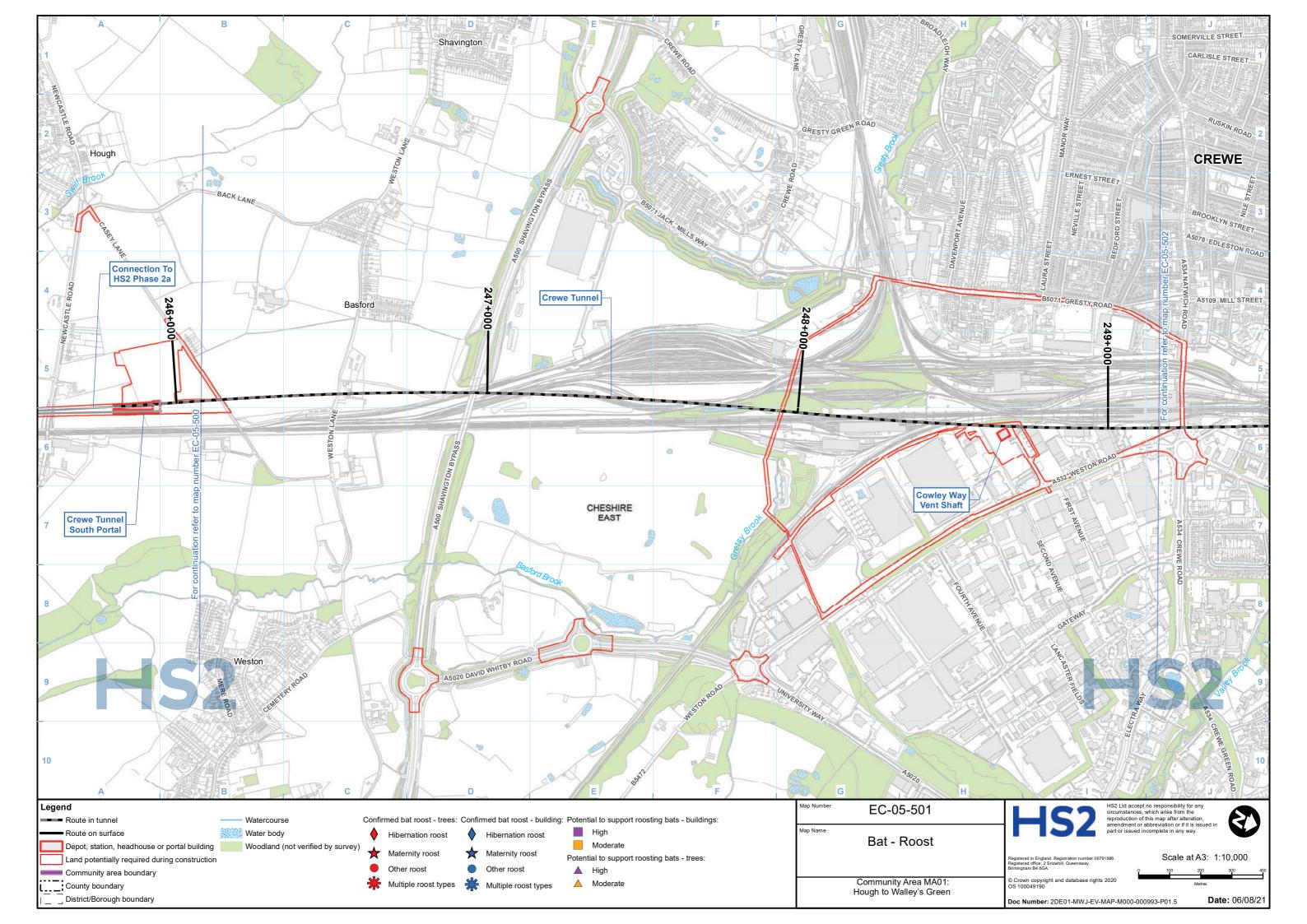


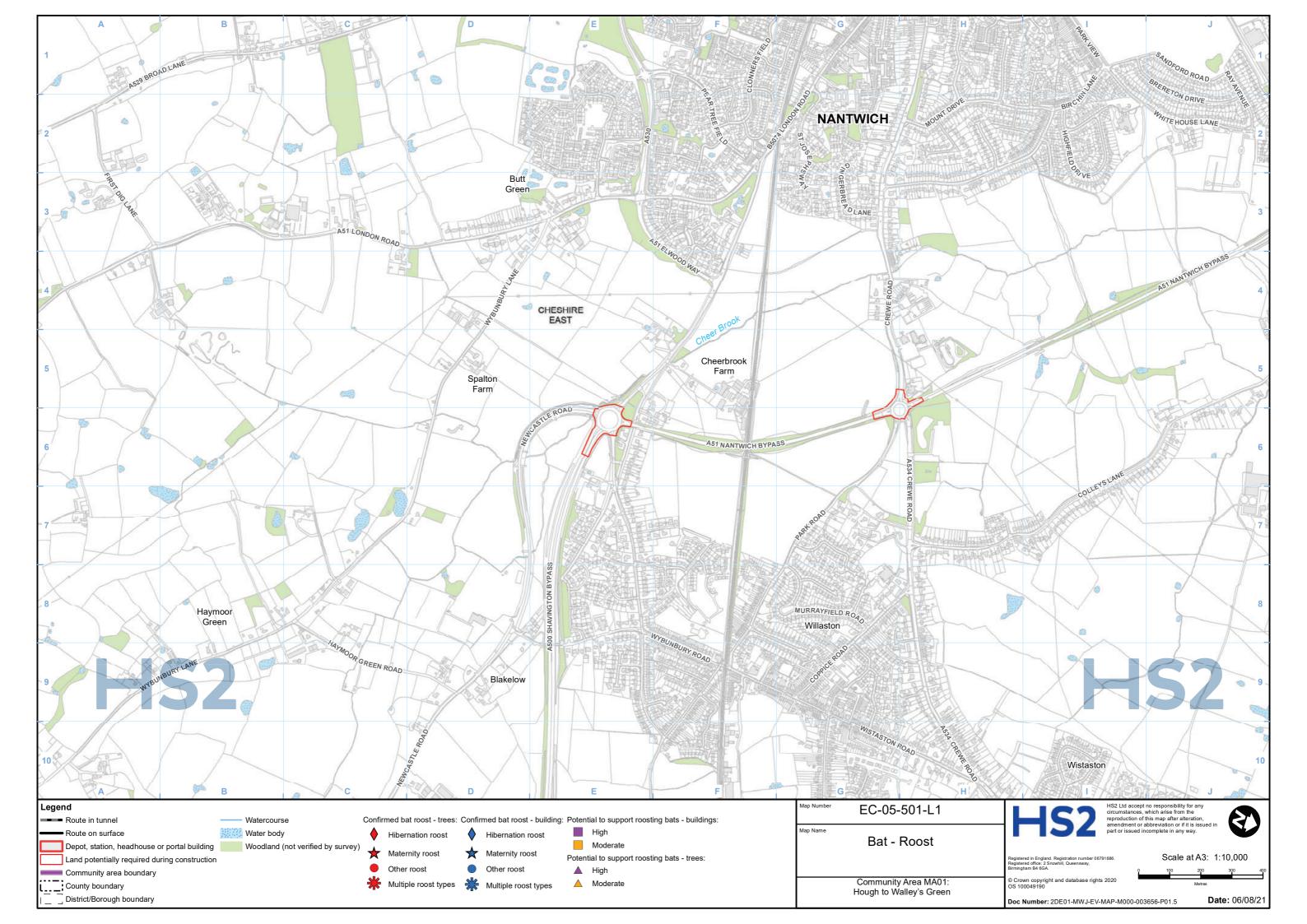
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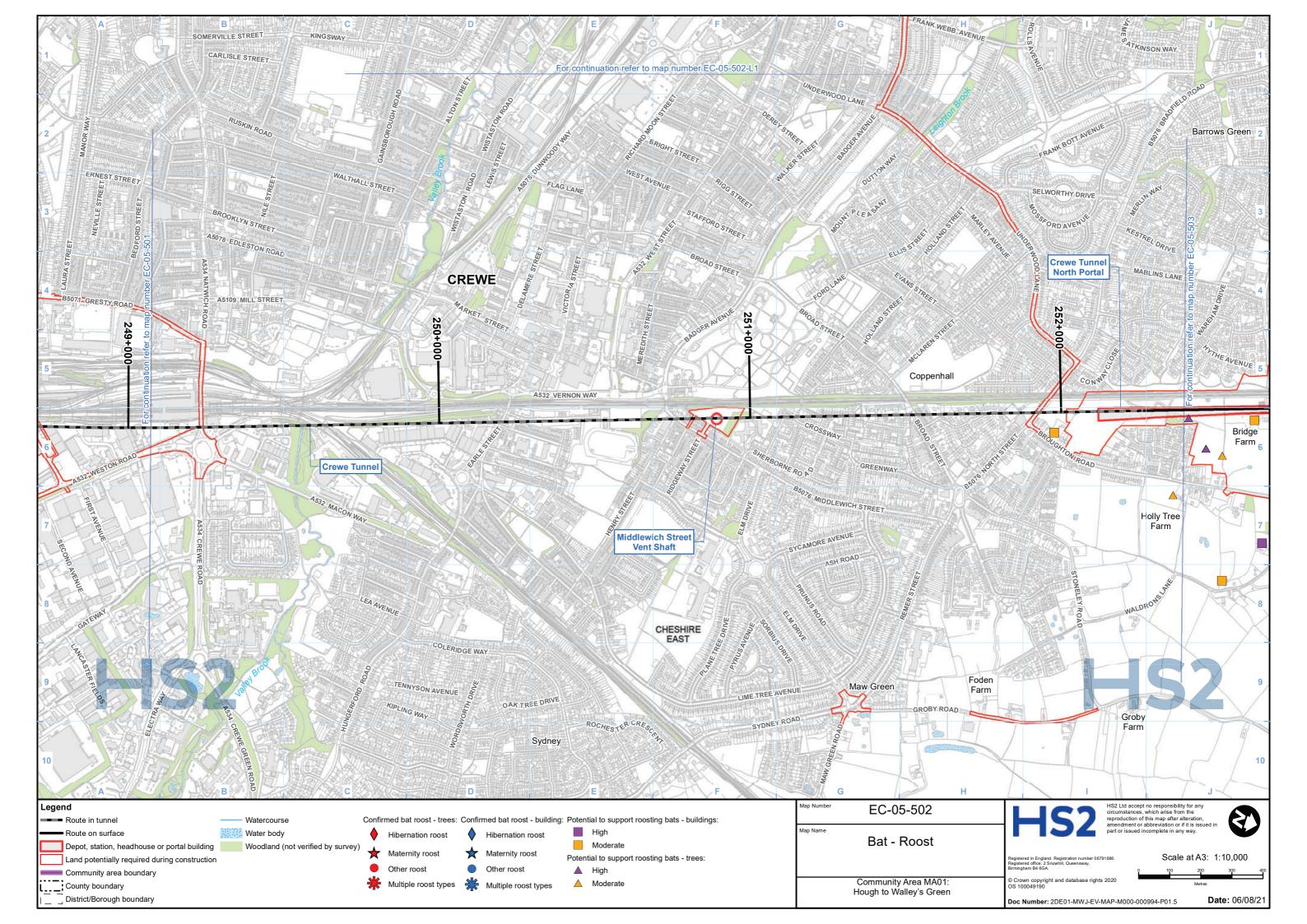
Background Information and Data EC-05 - Bat - Roost

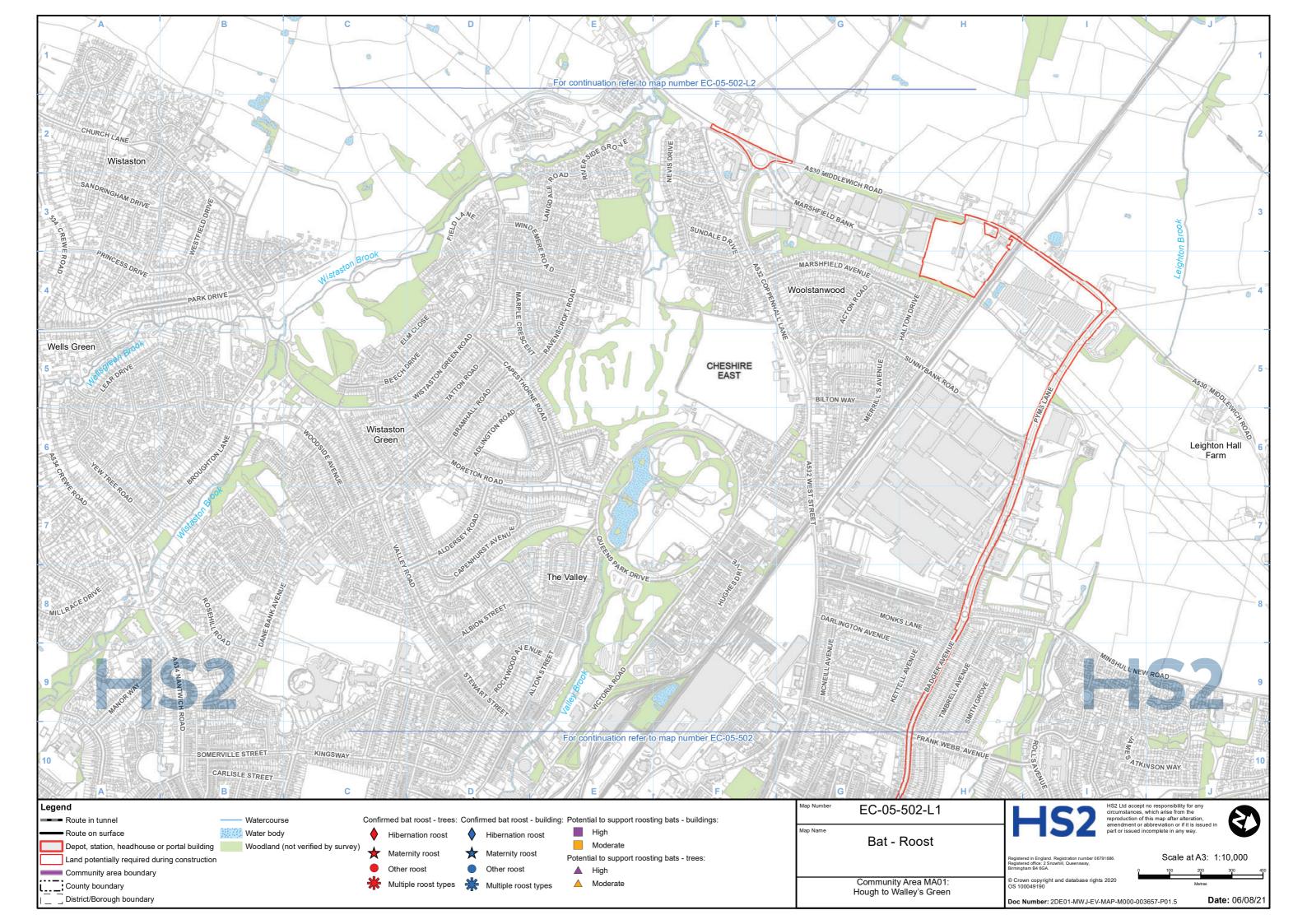


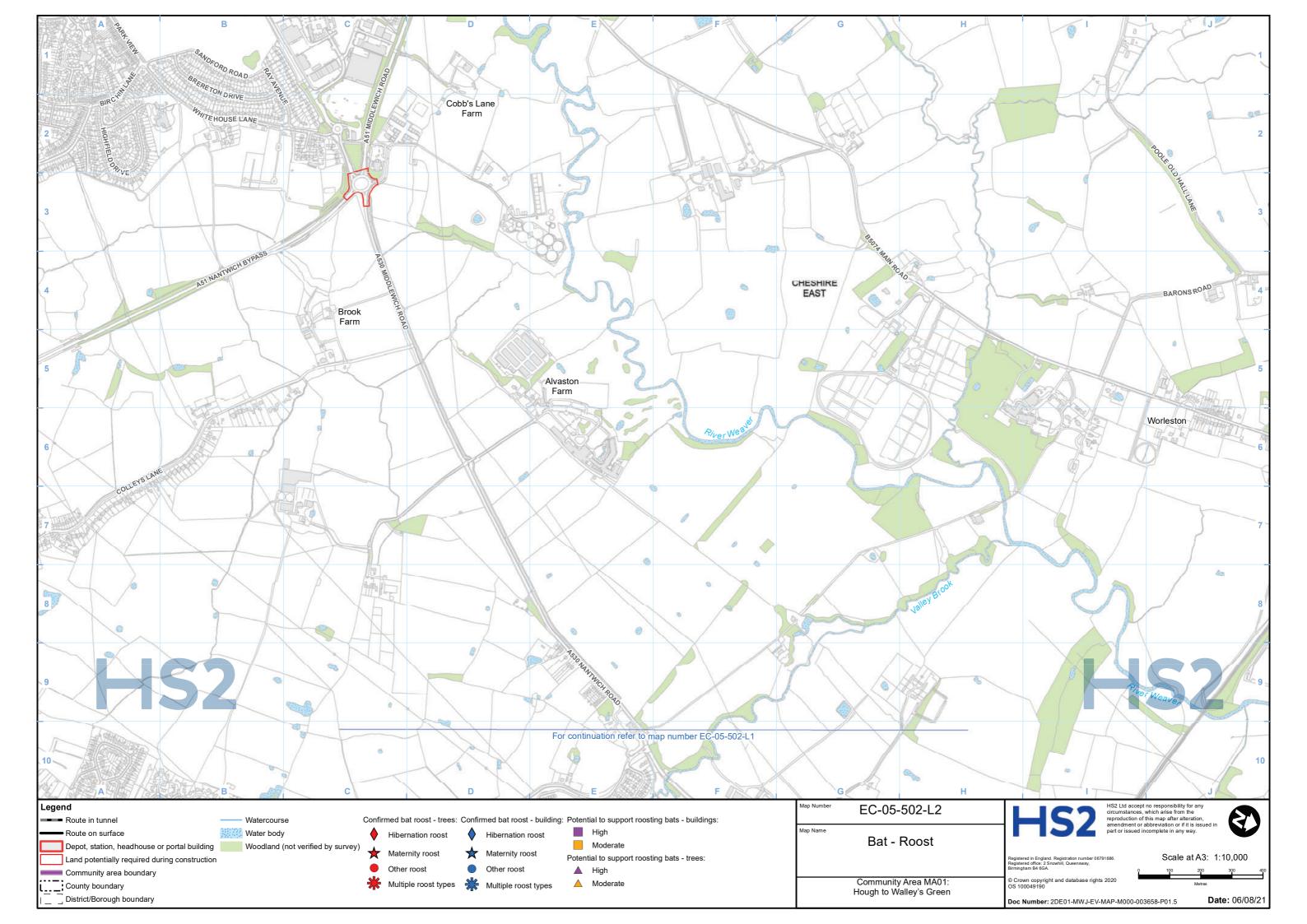


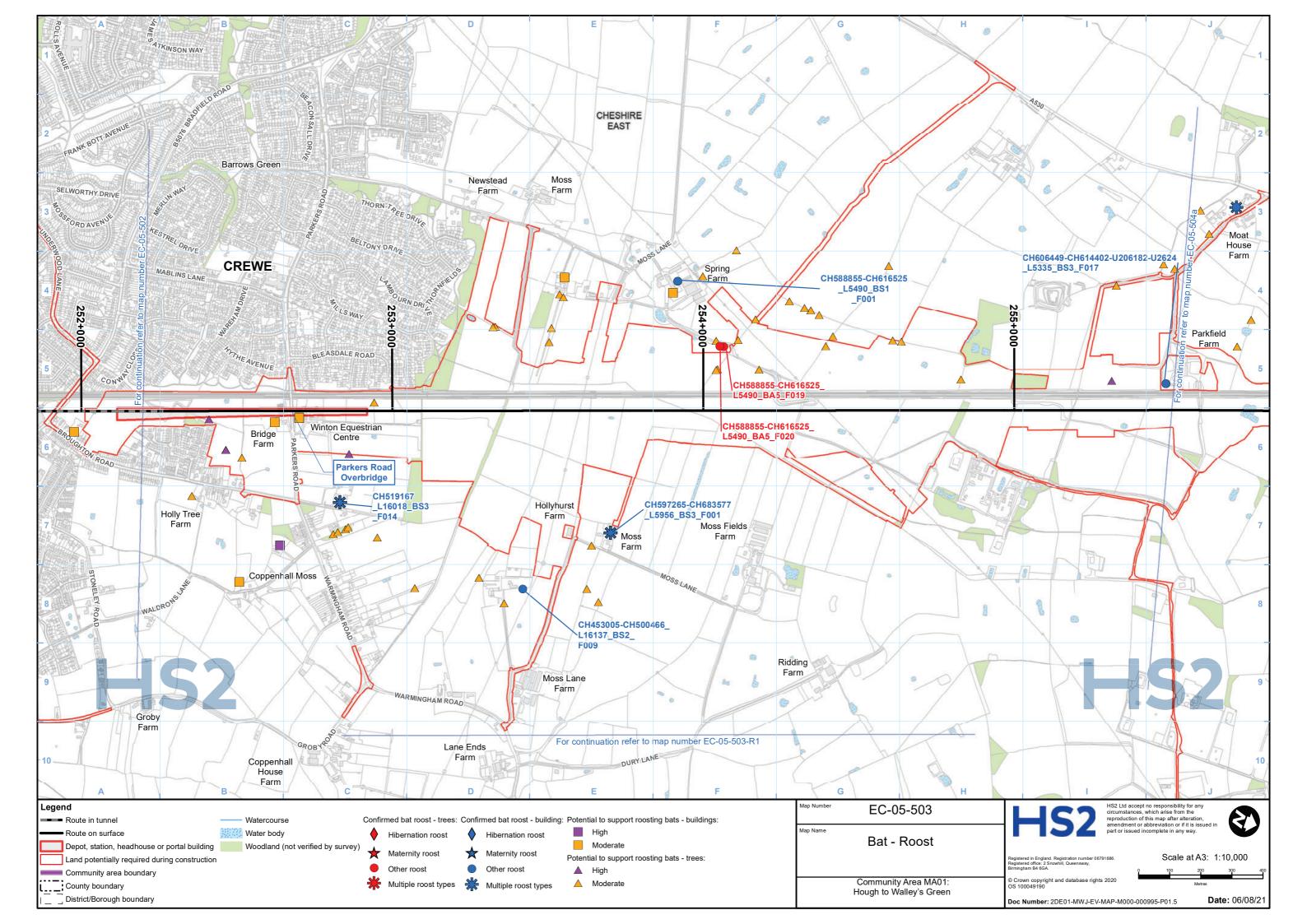


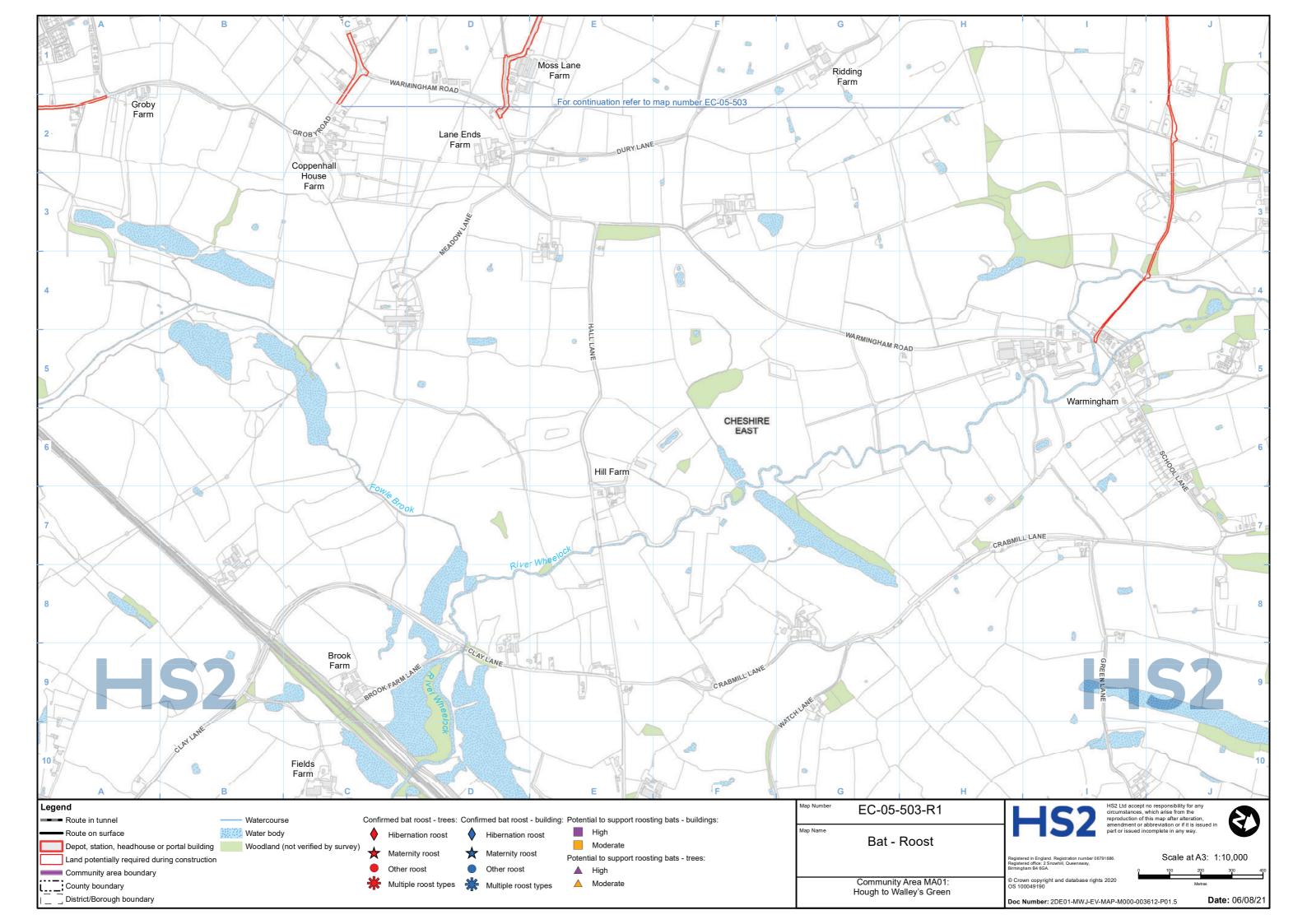


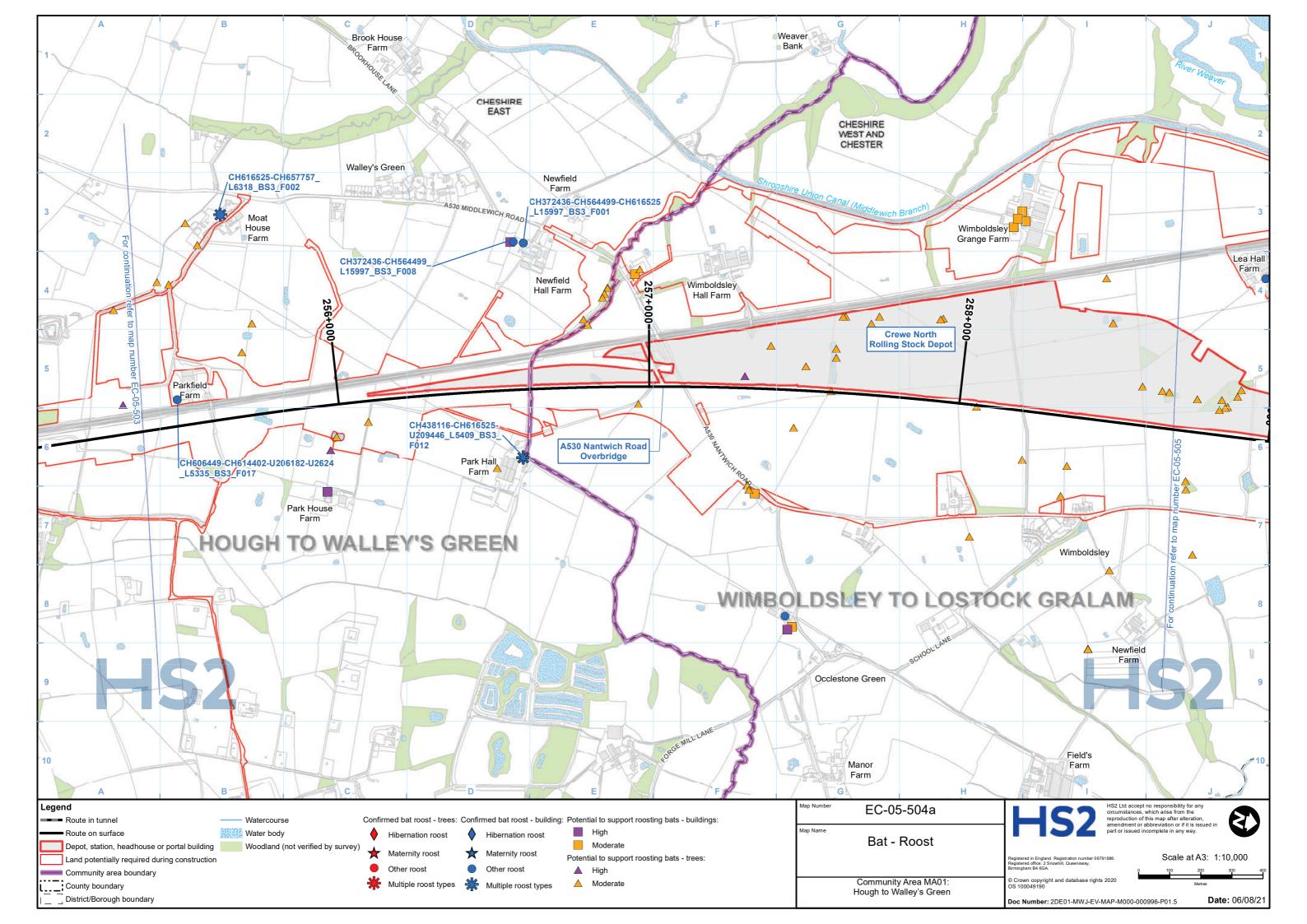


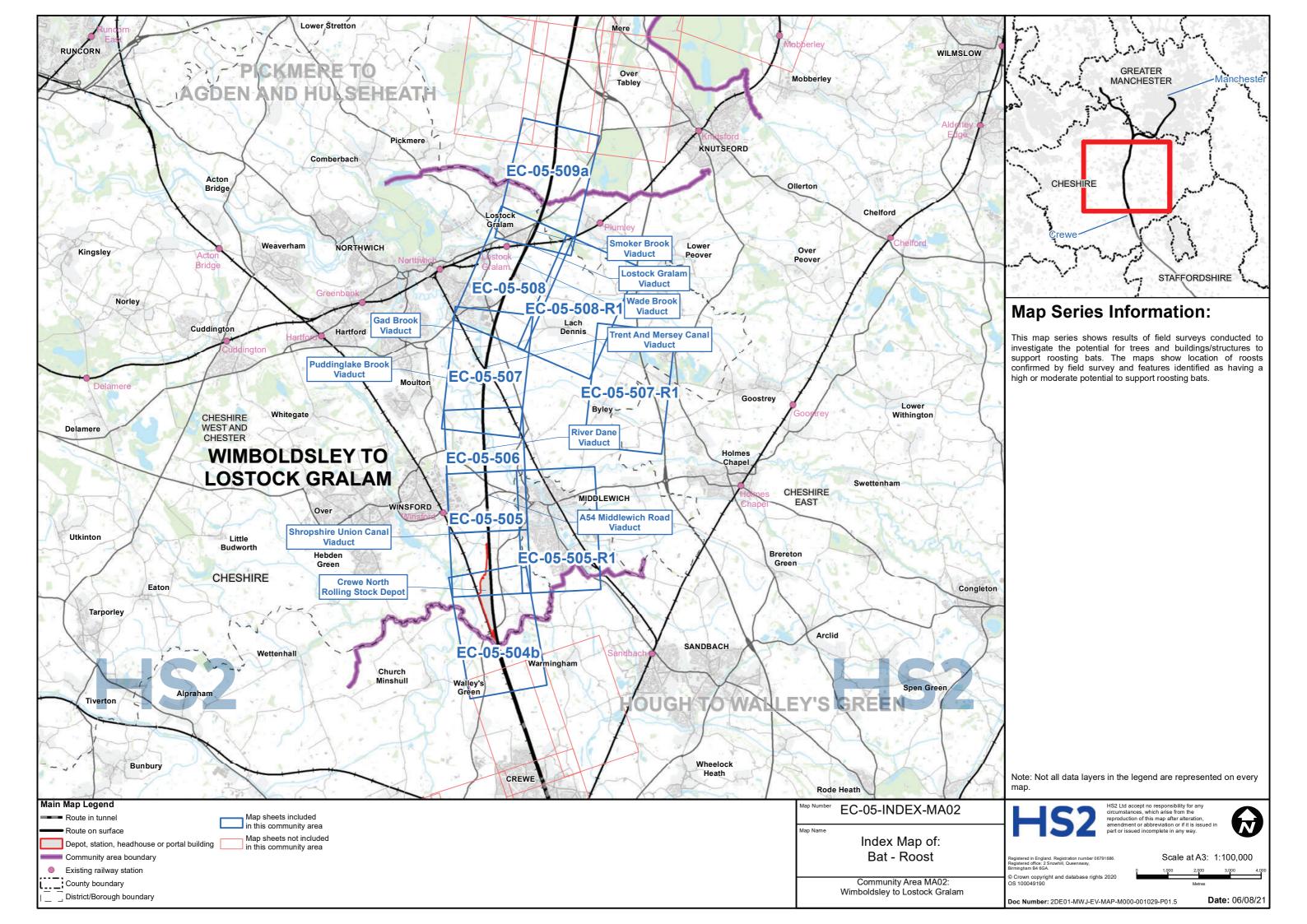


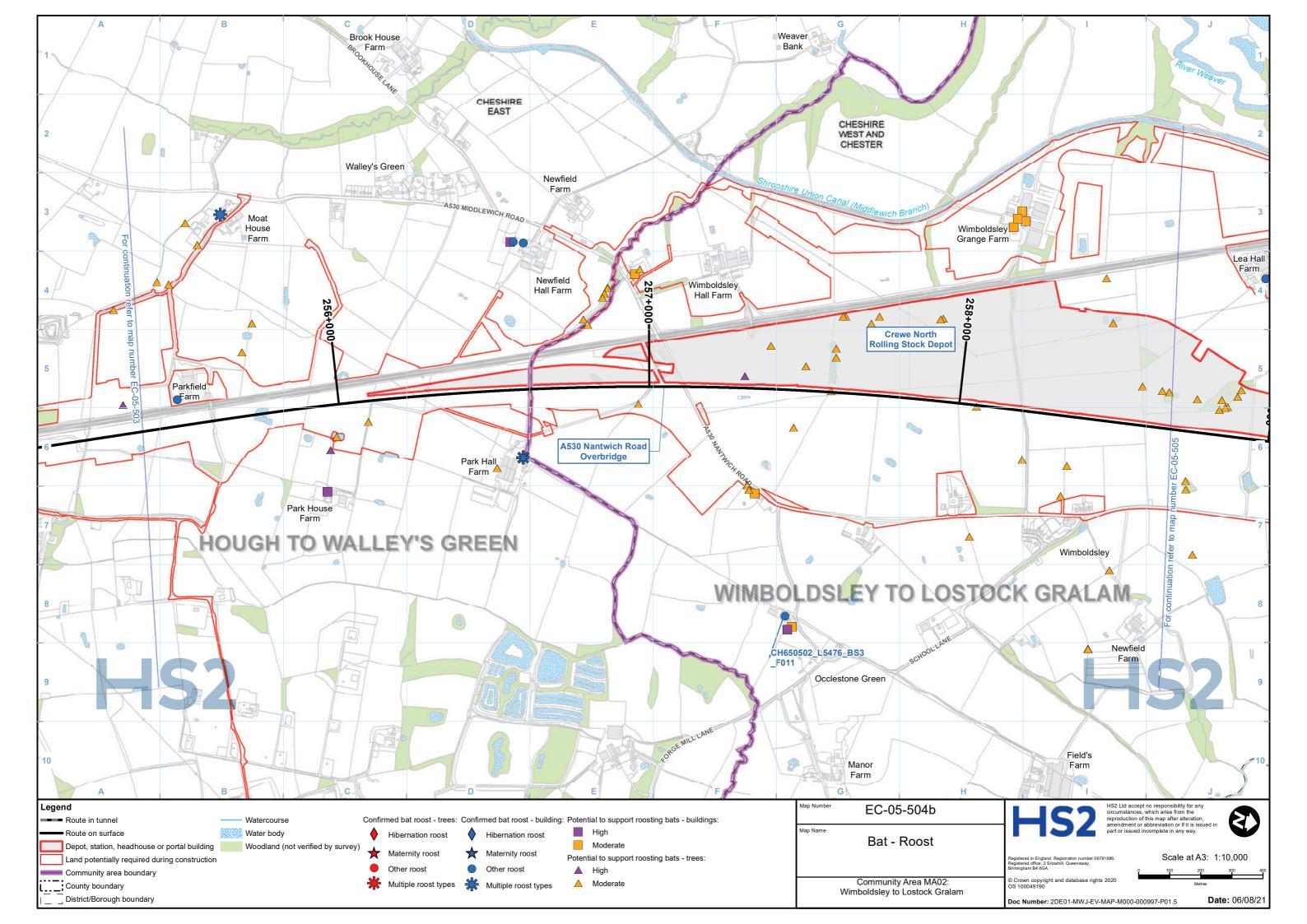


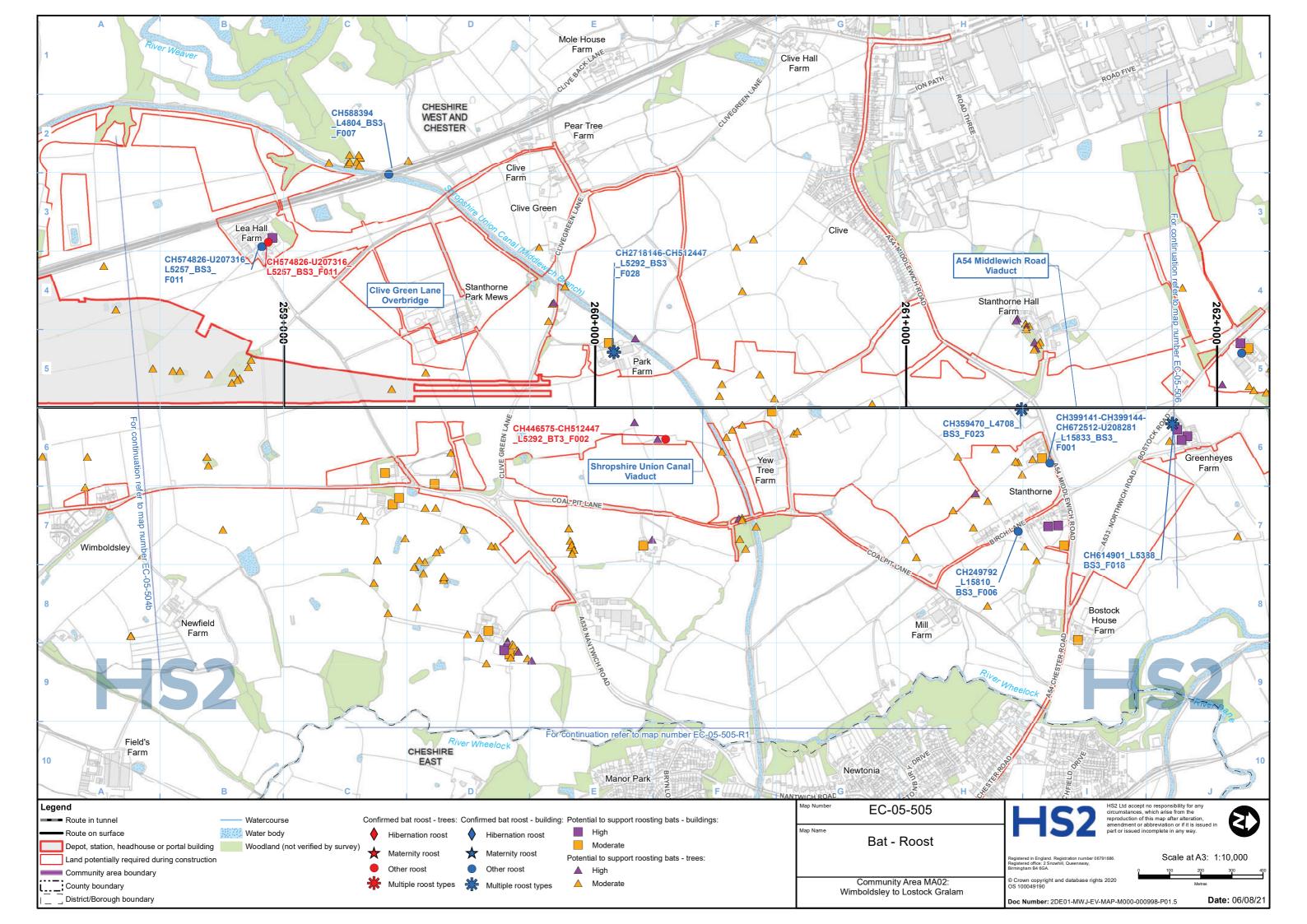


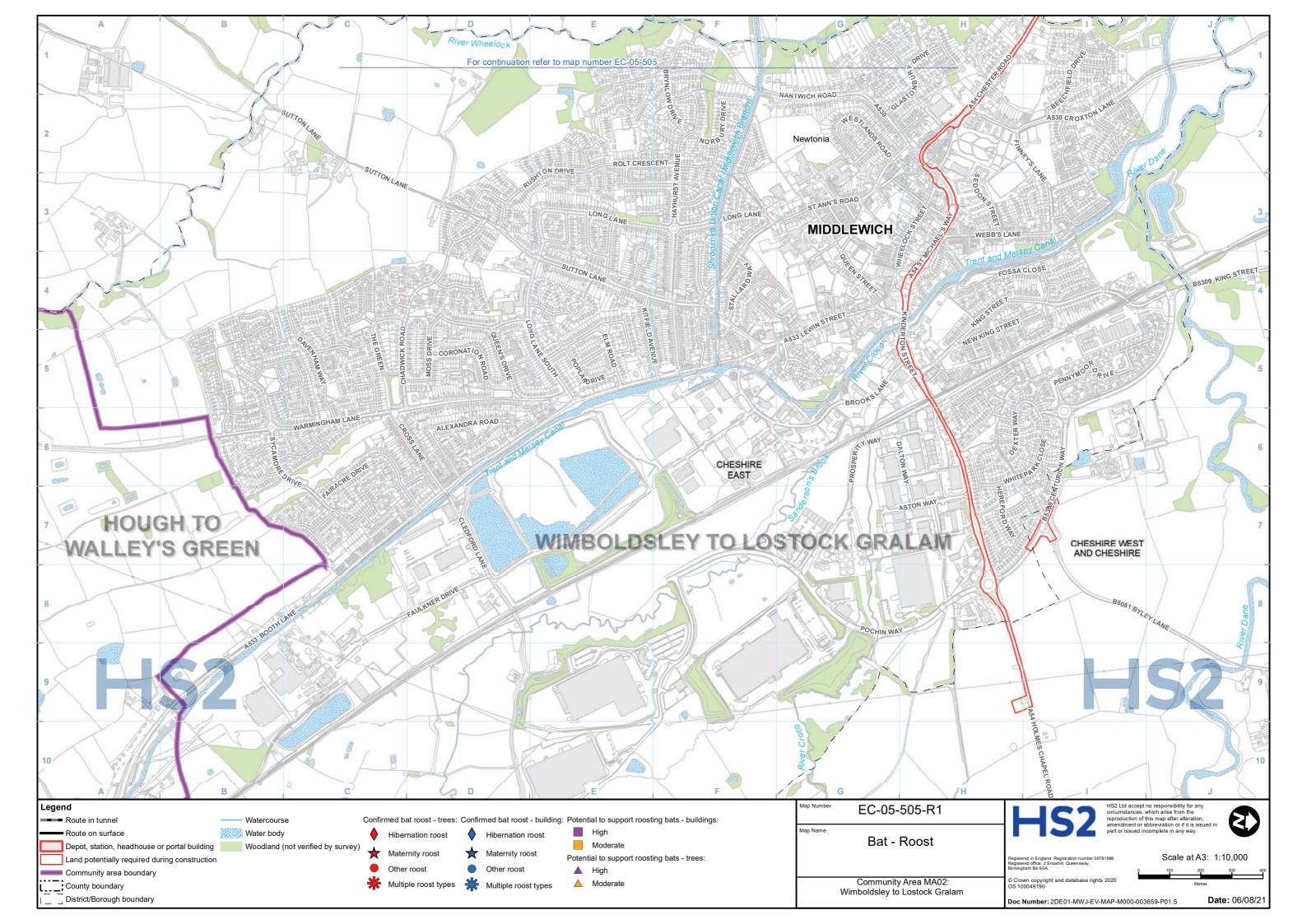


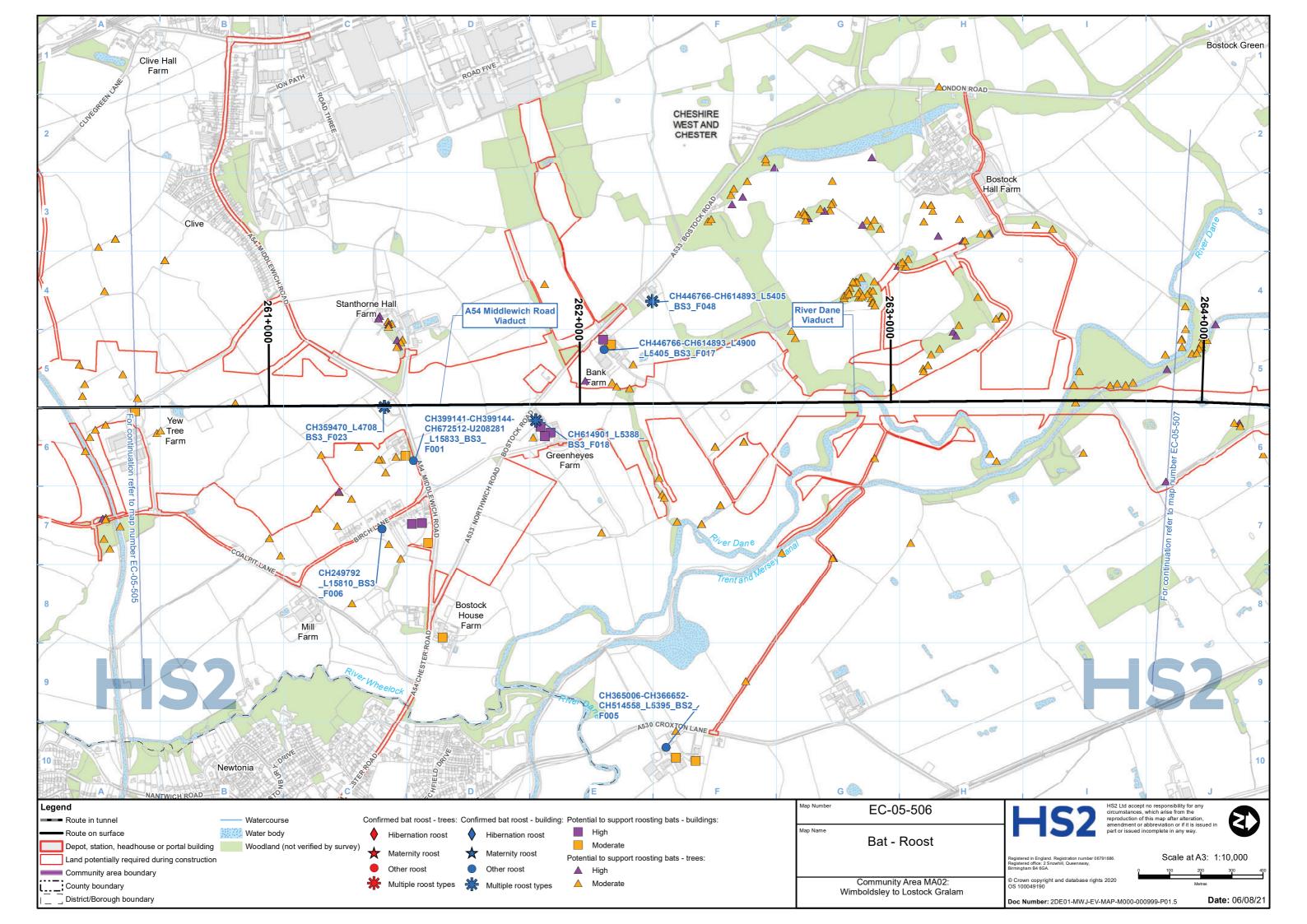


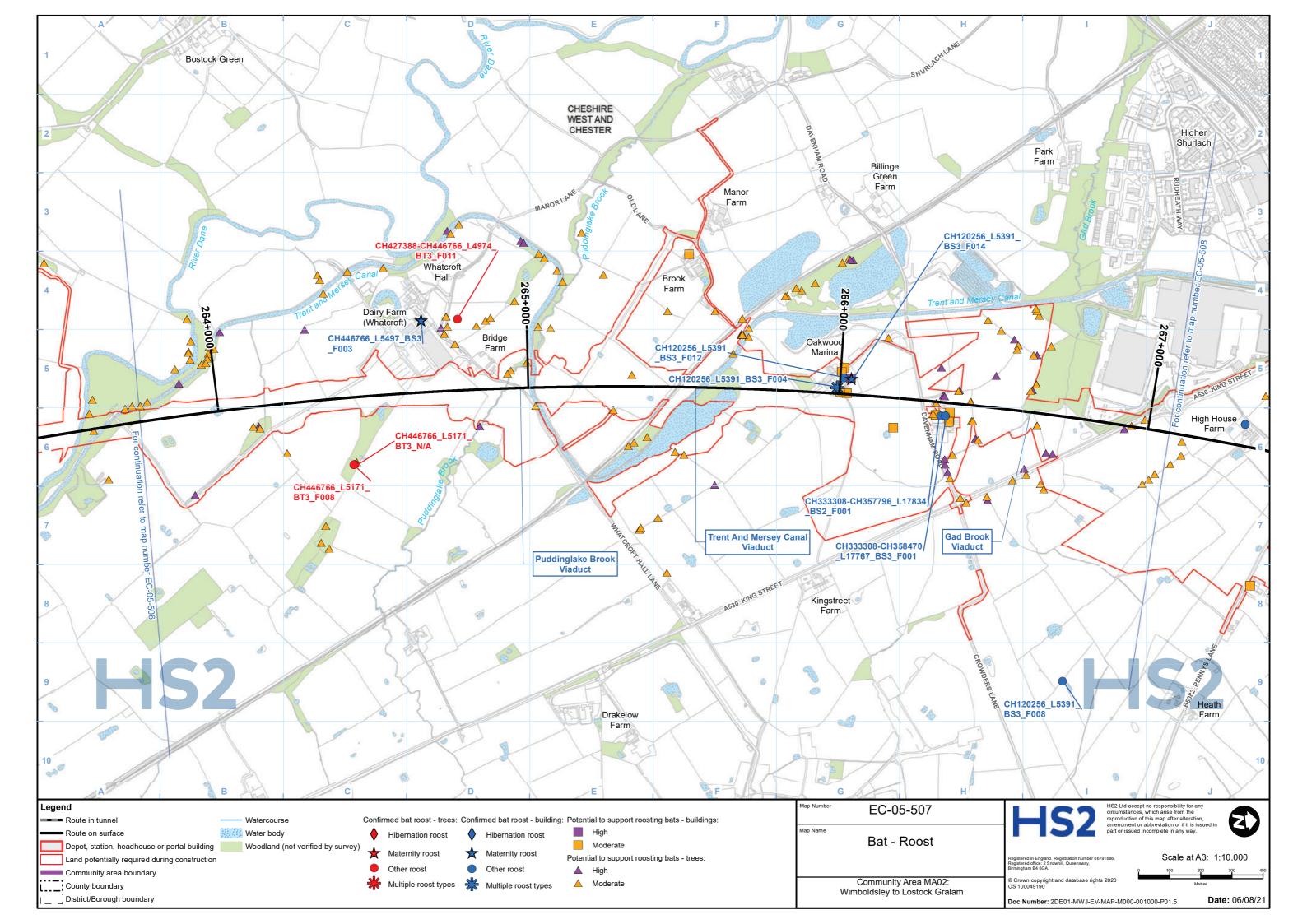


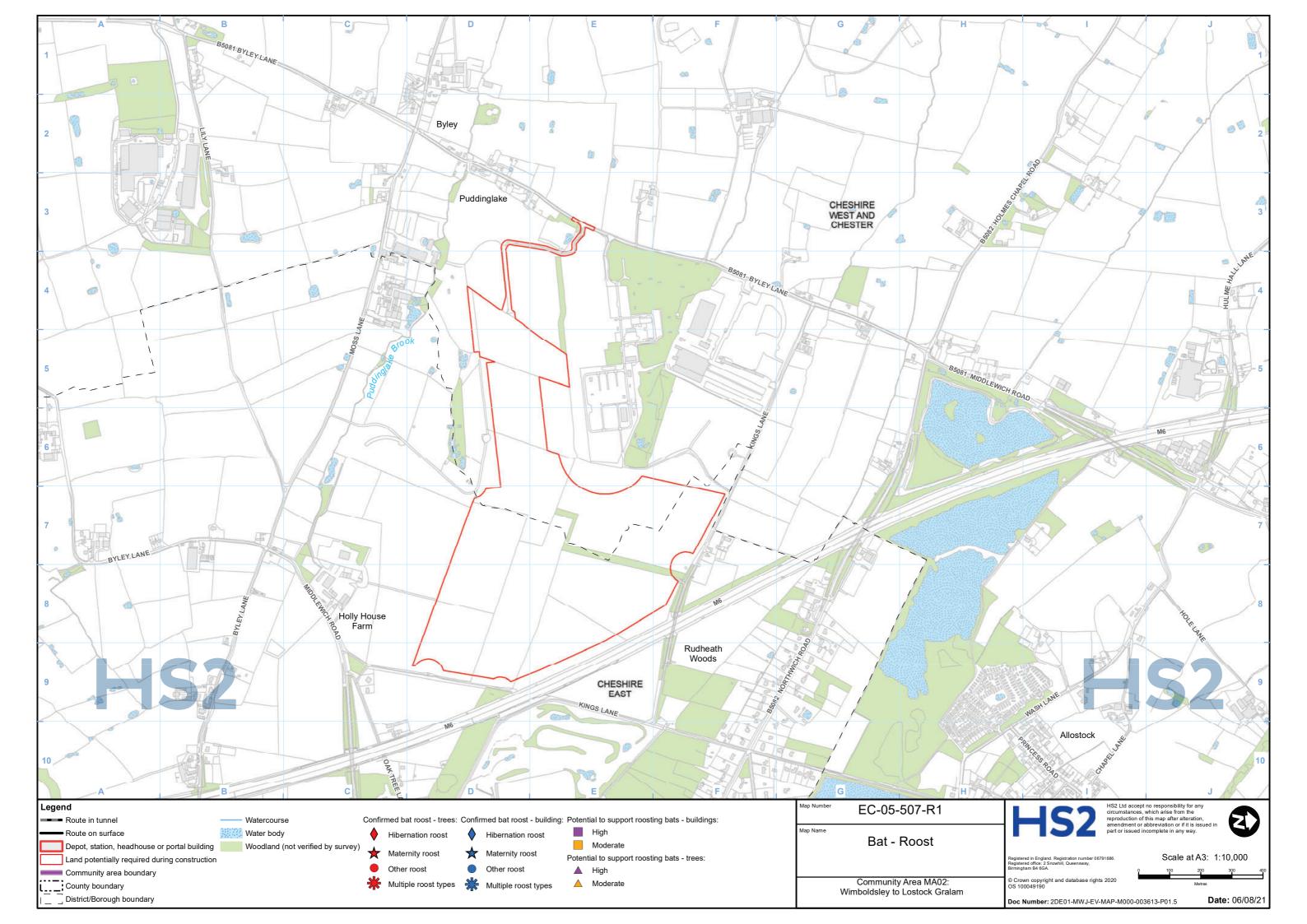


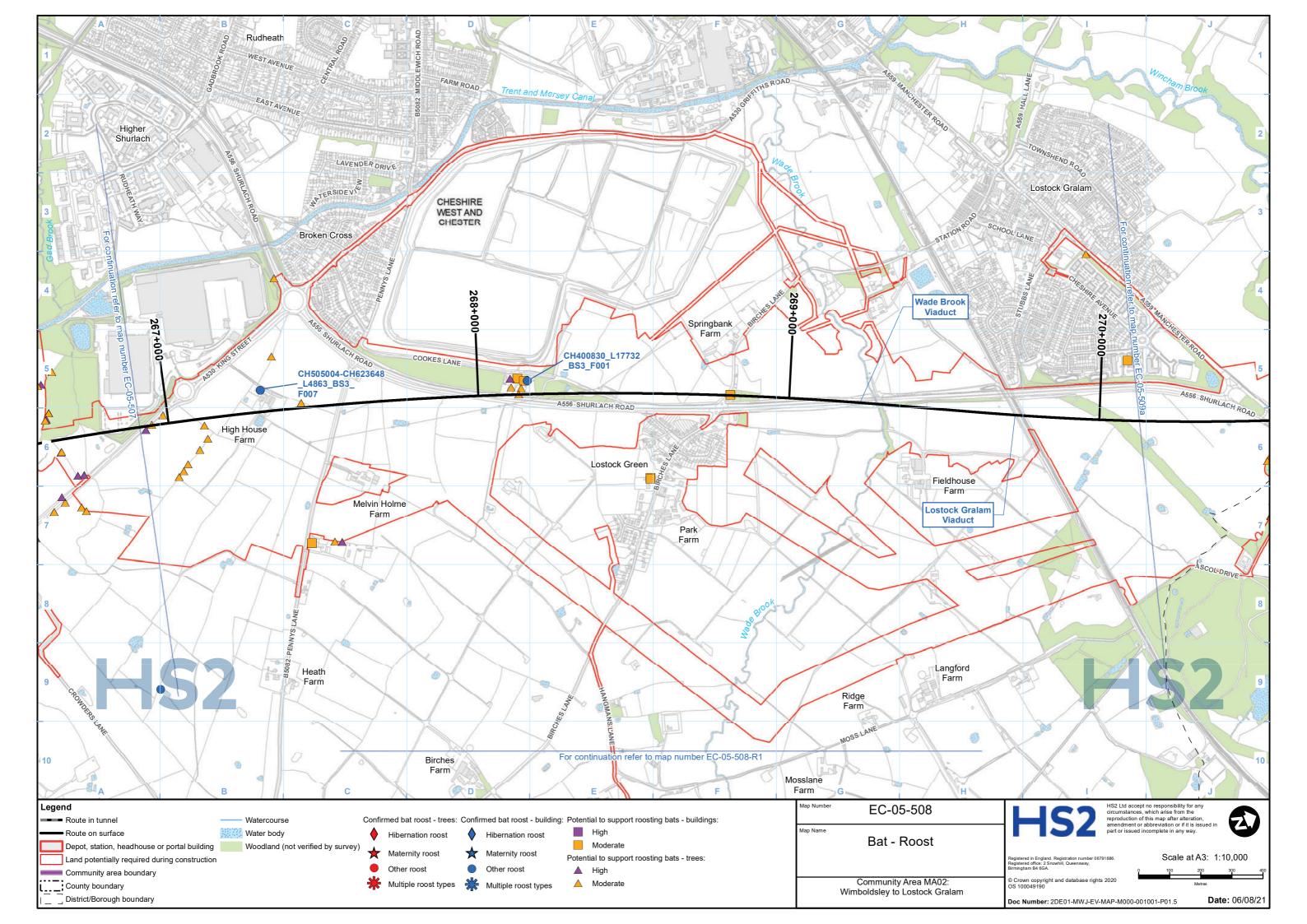


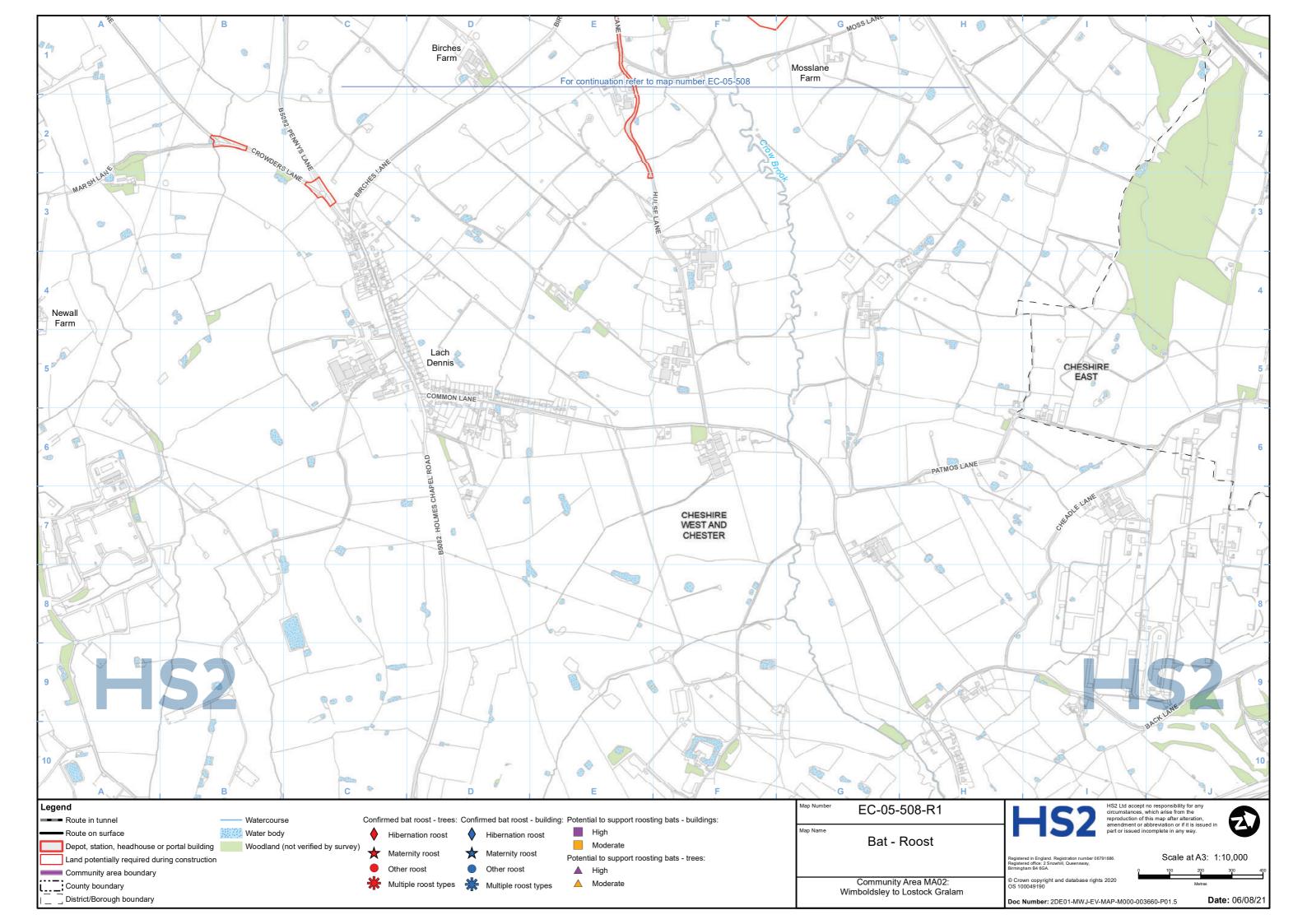


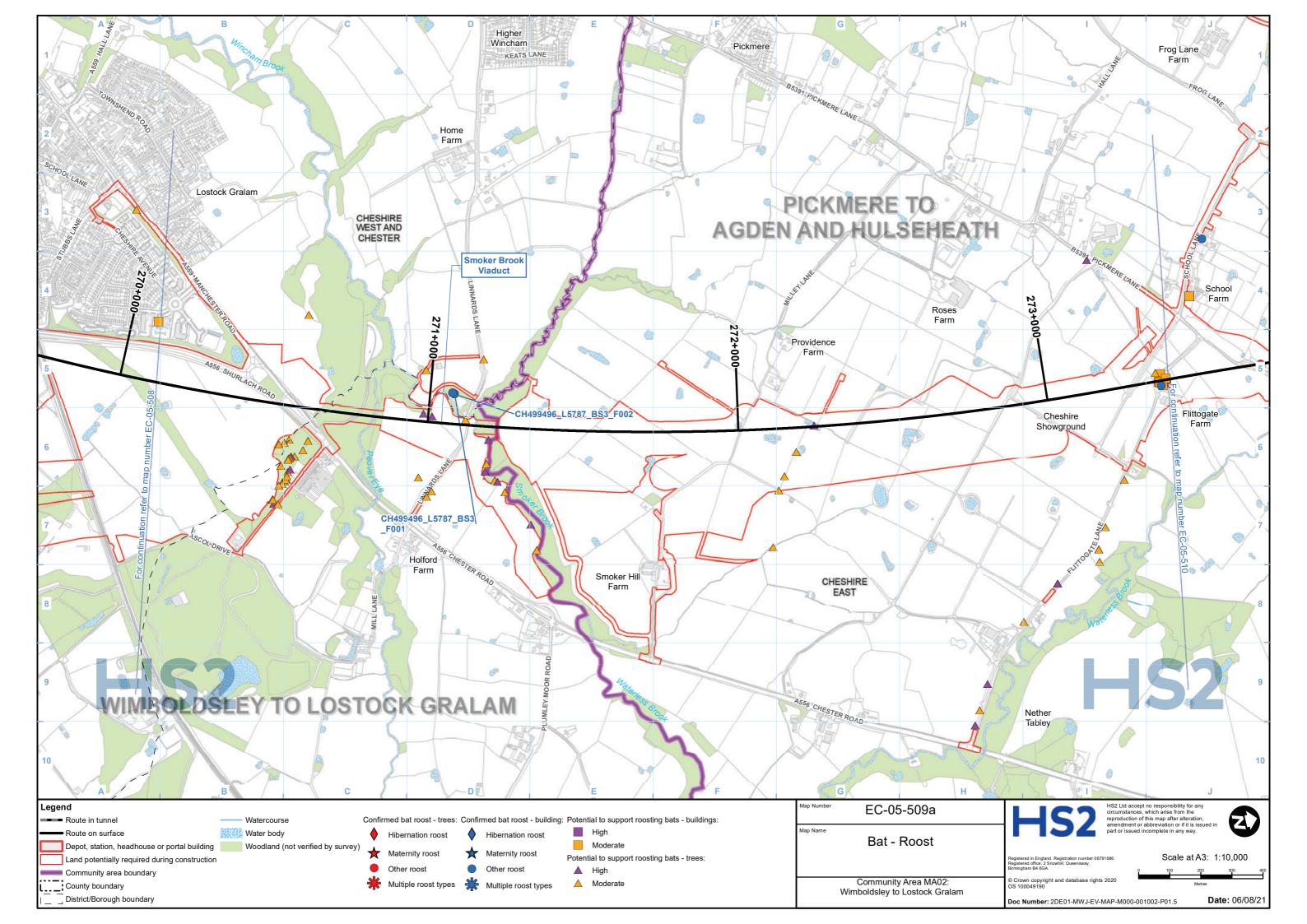


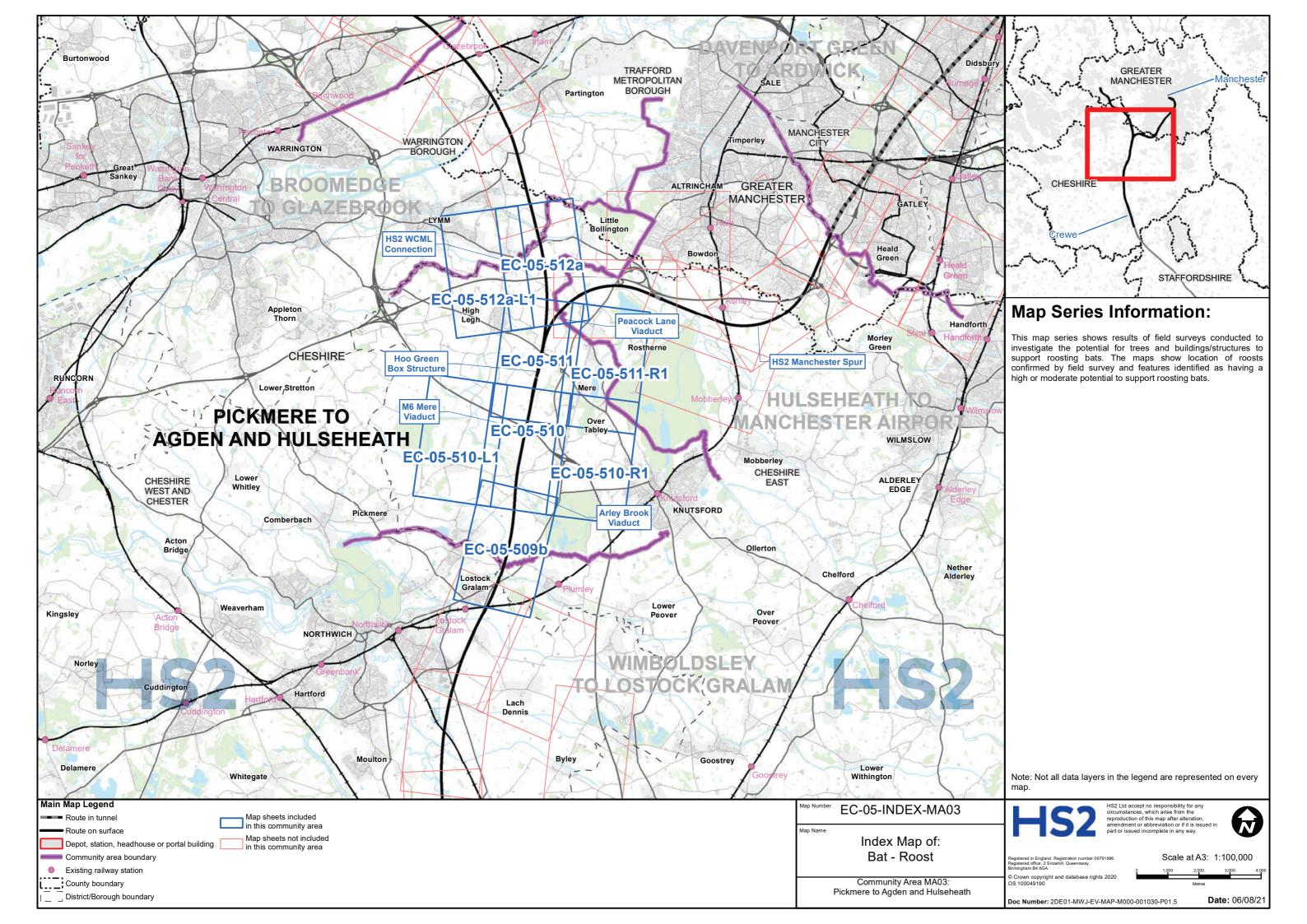


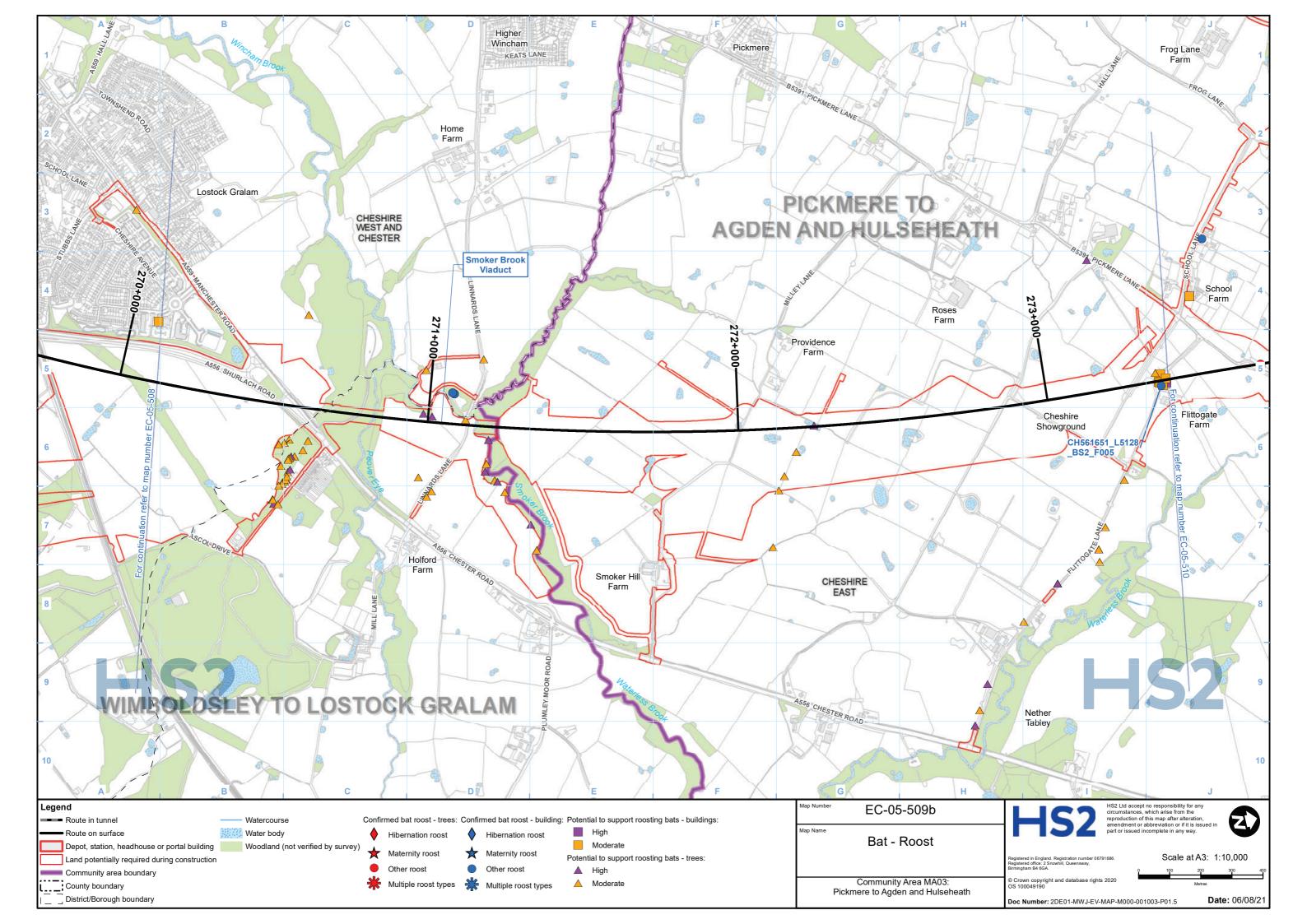


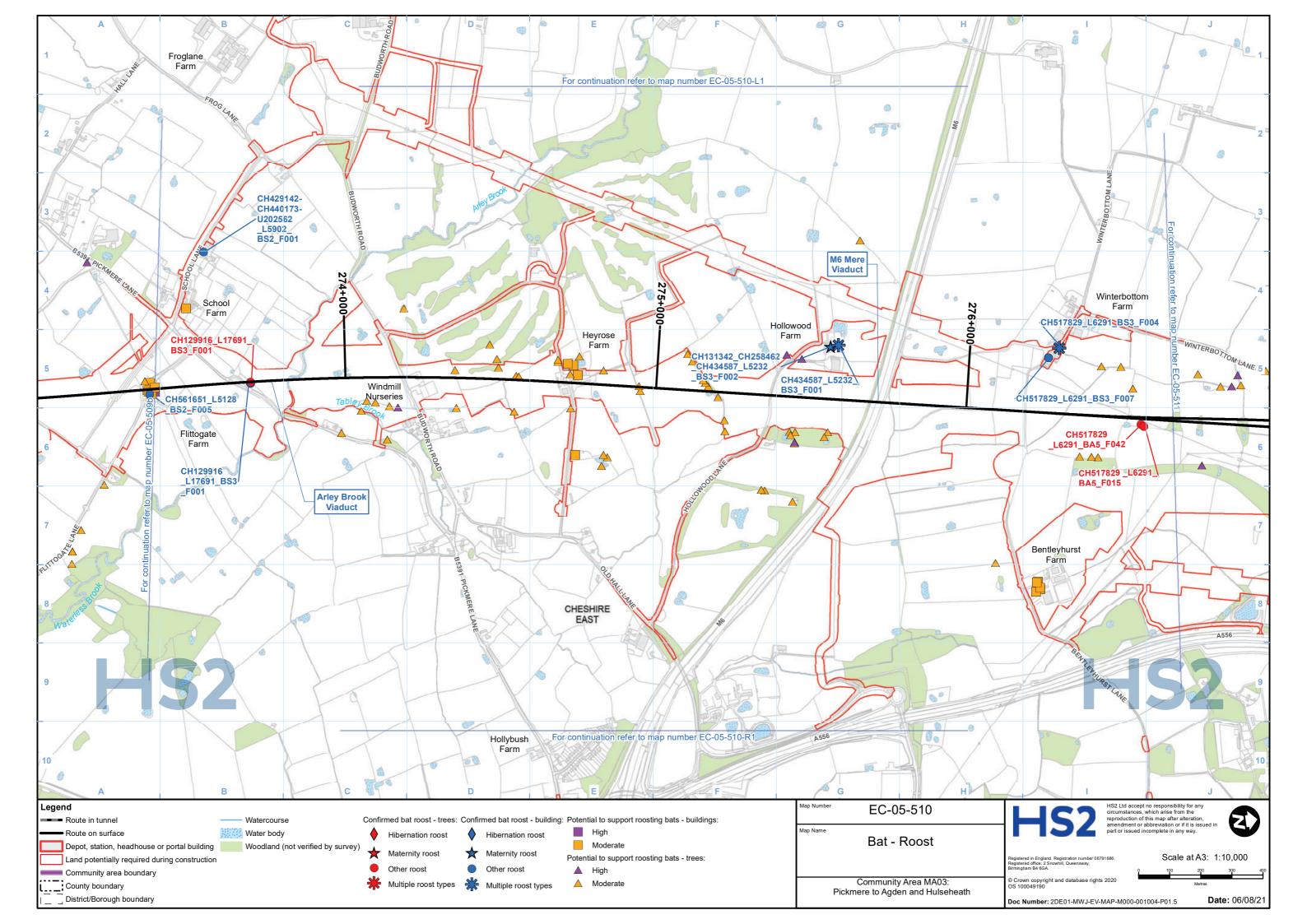


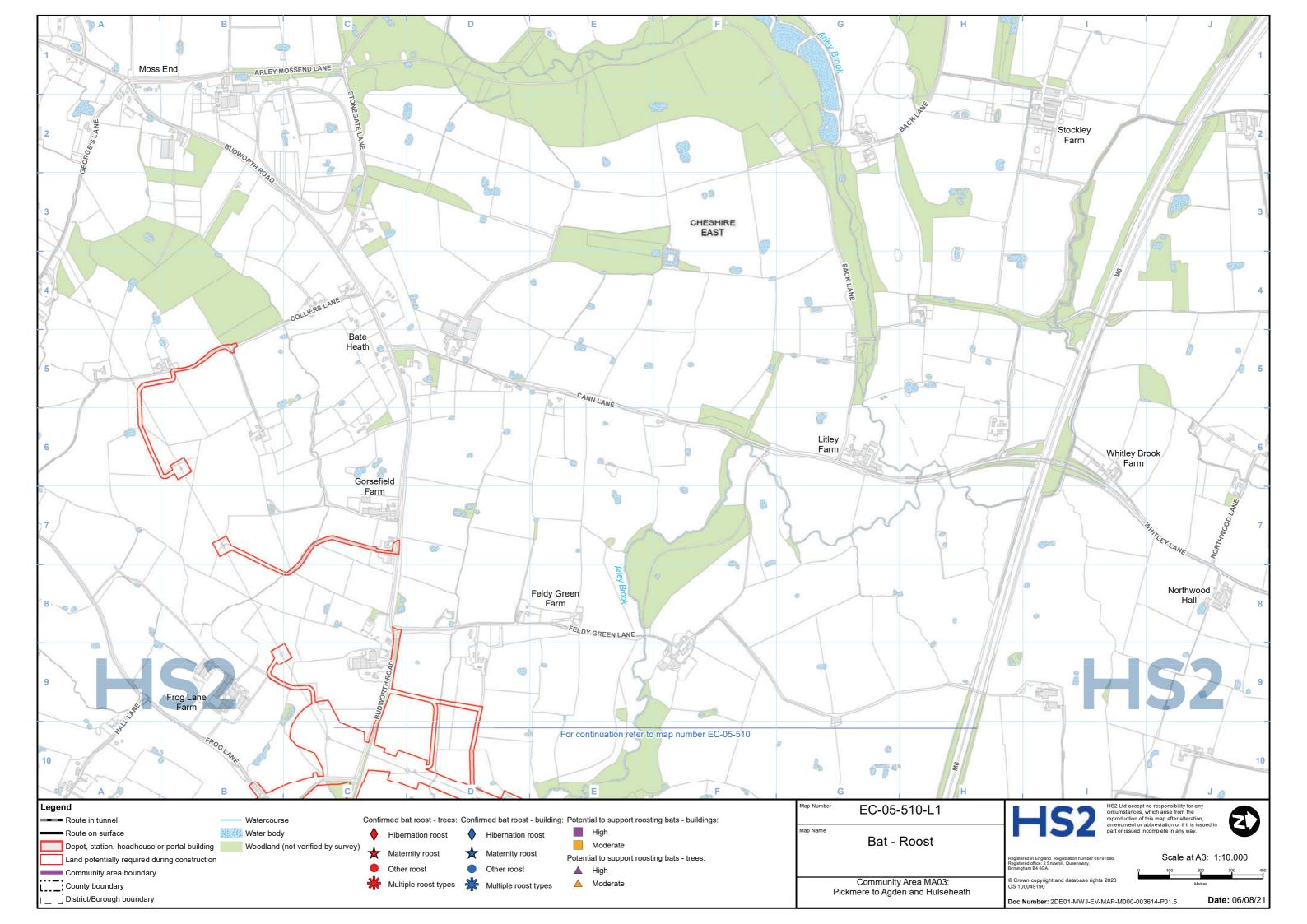


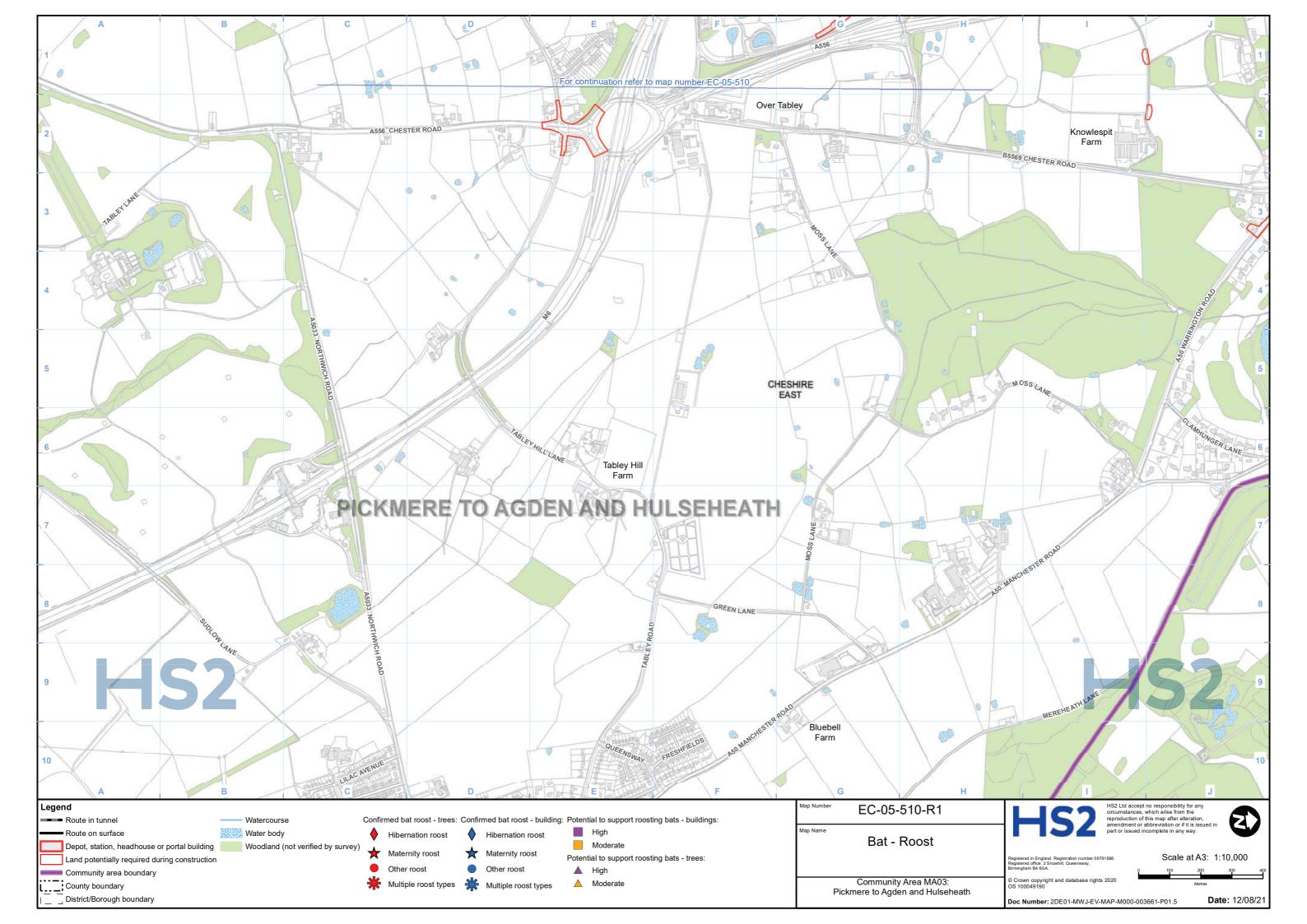


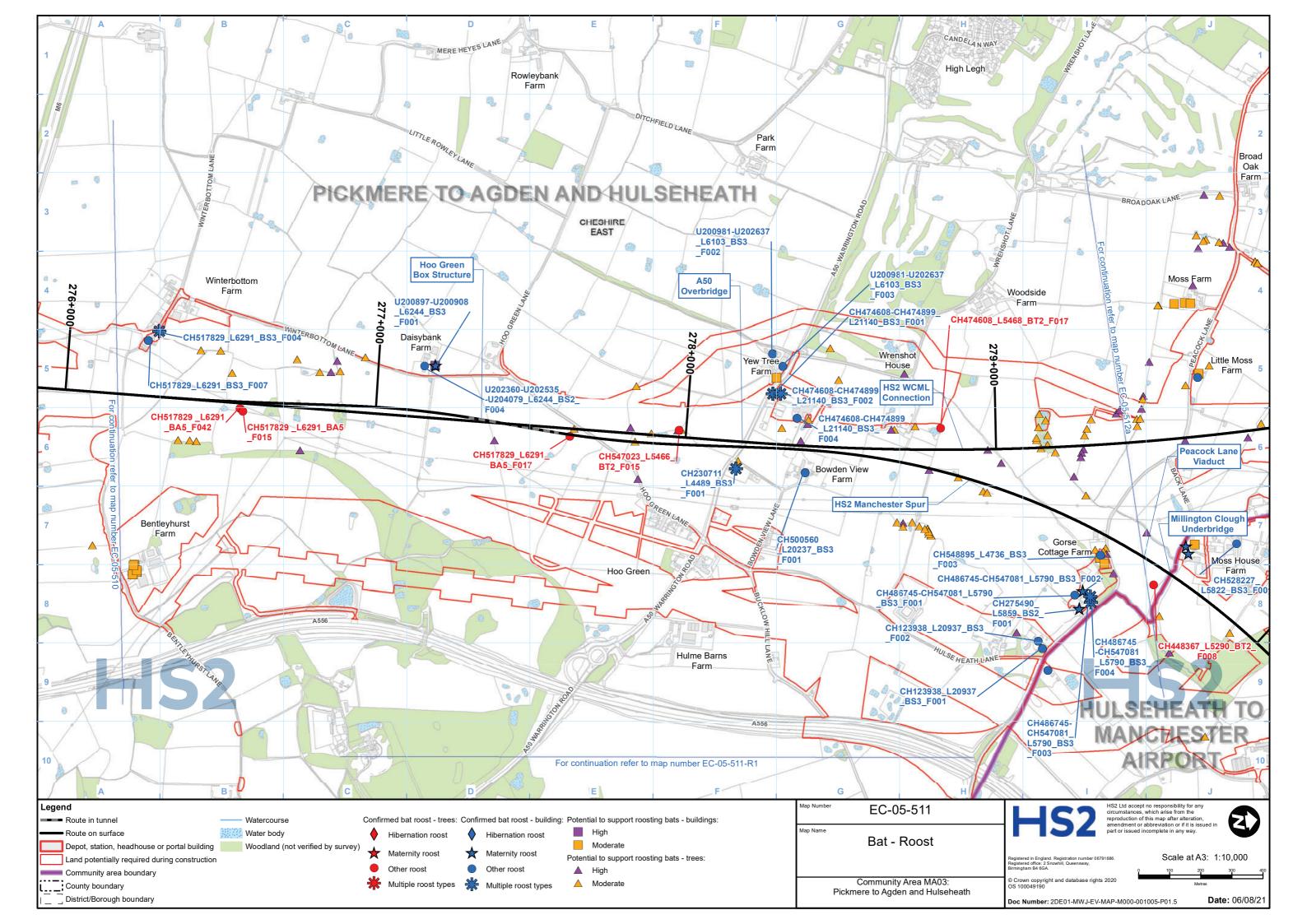


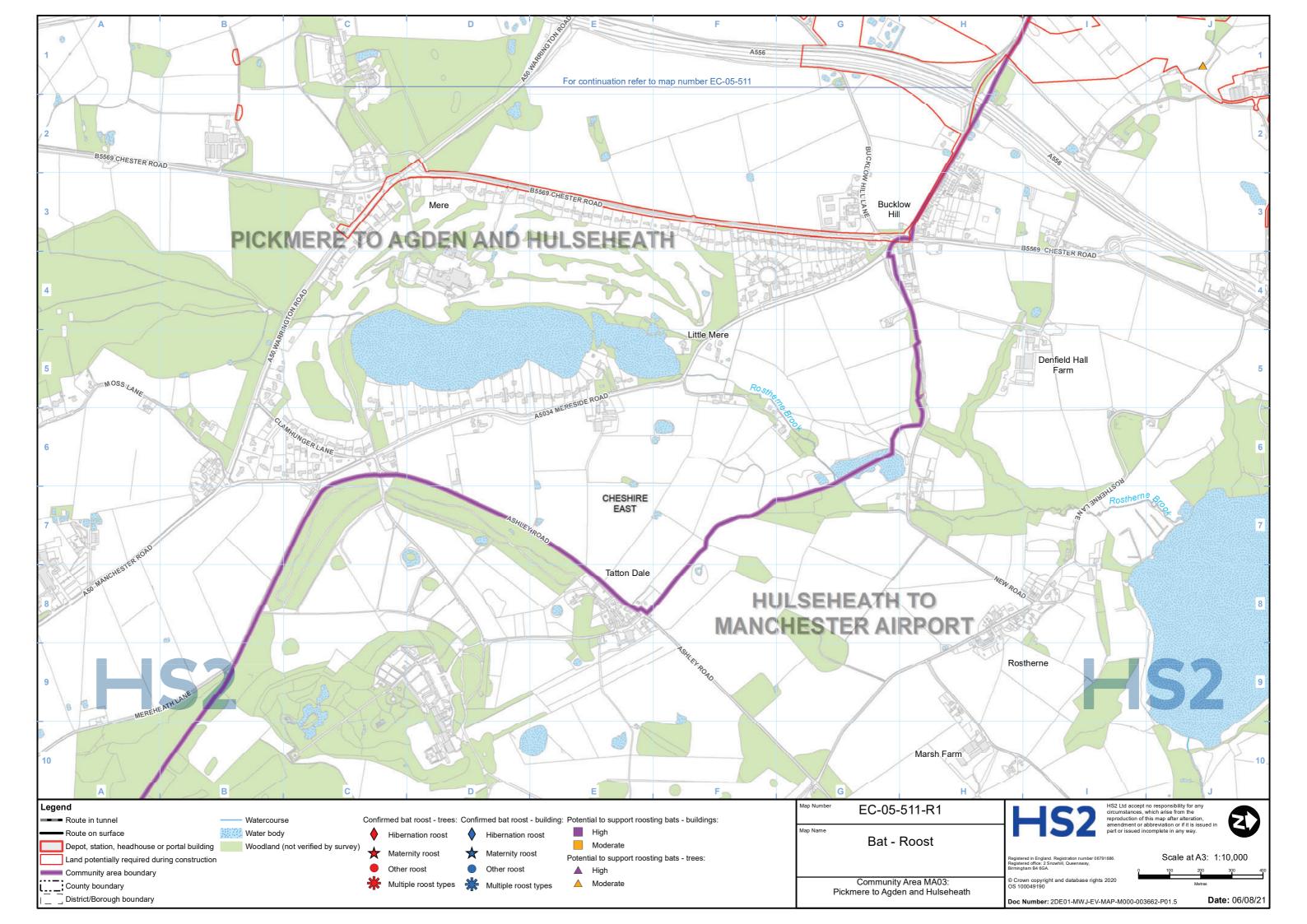


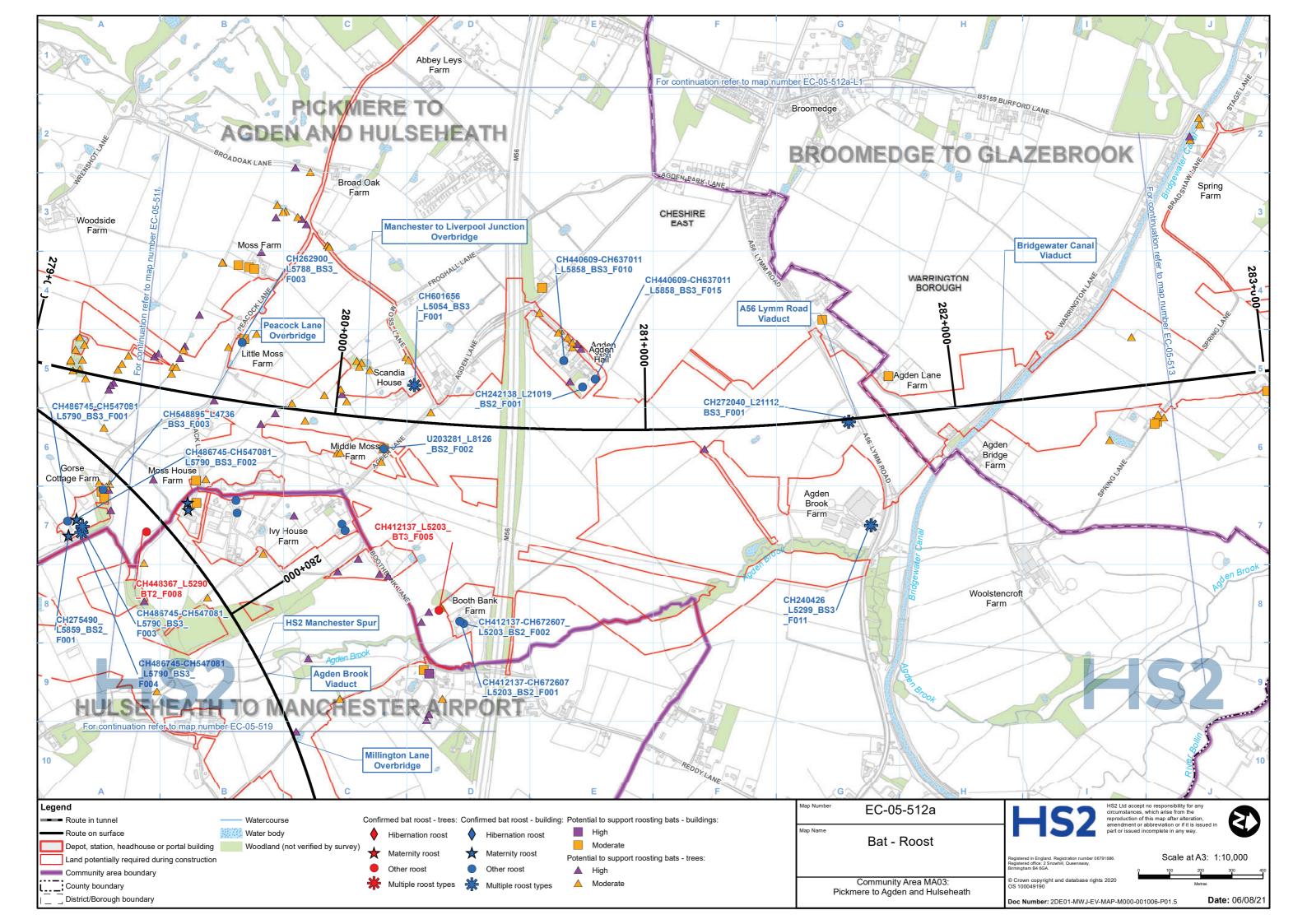


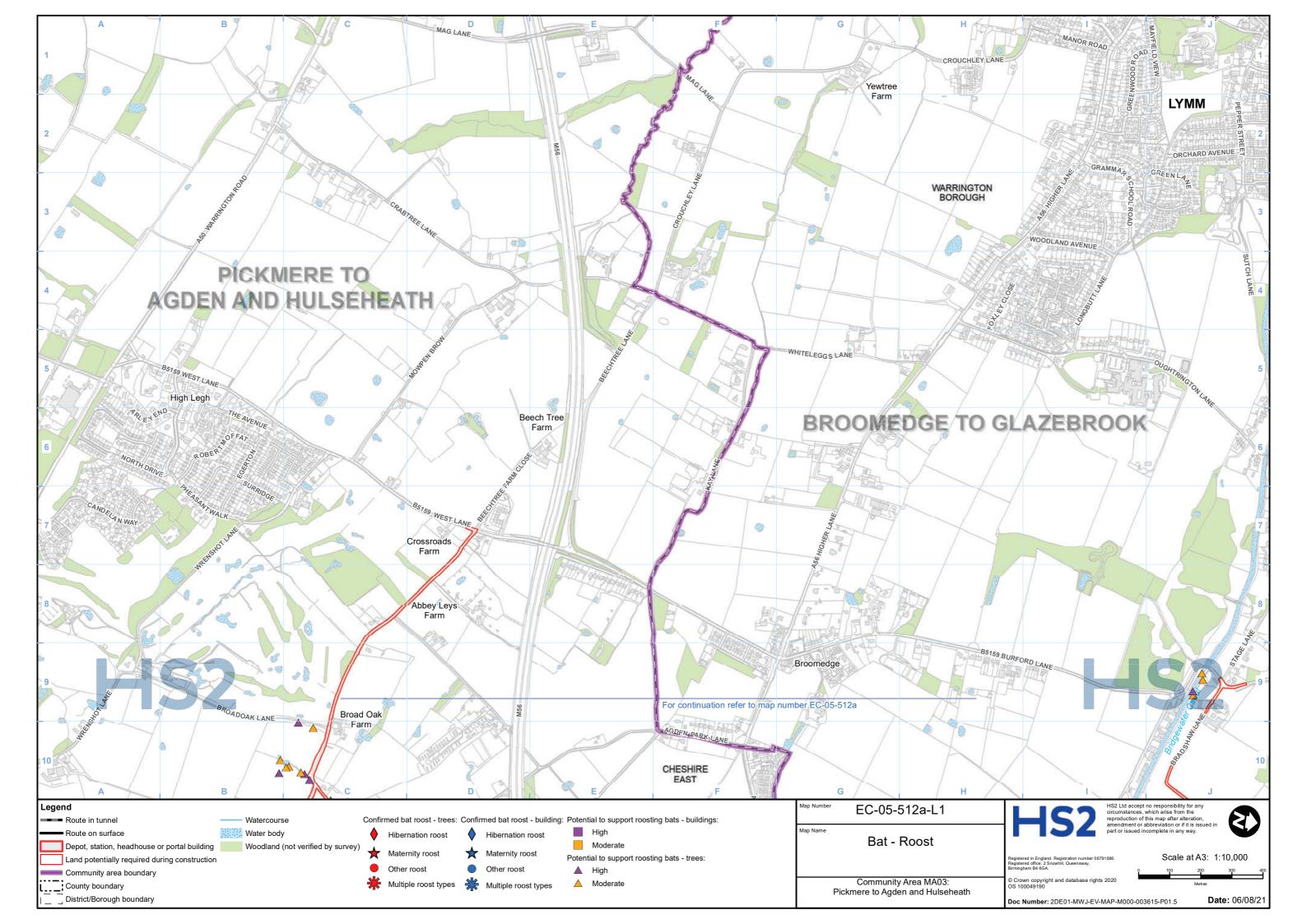






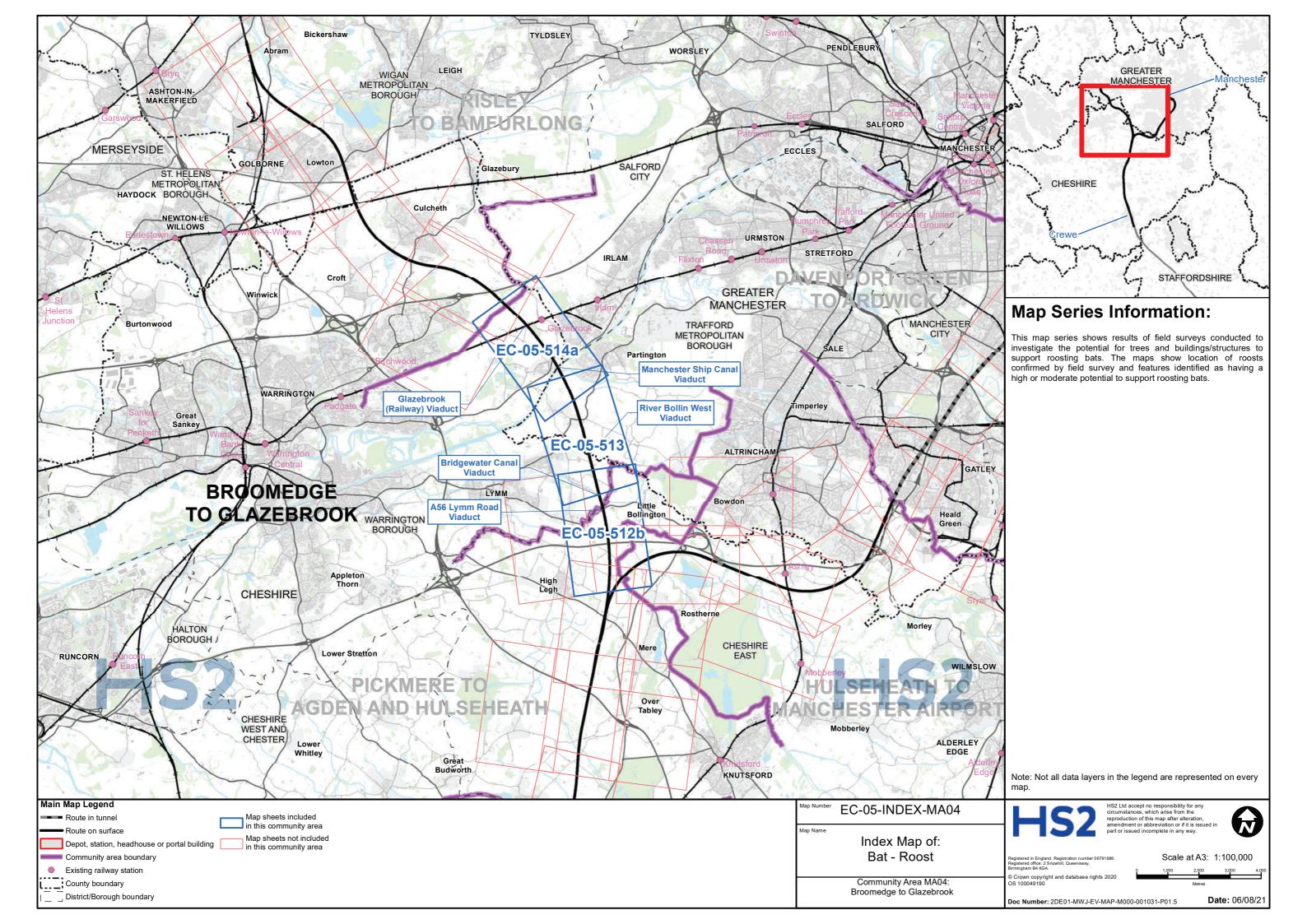


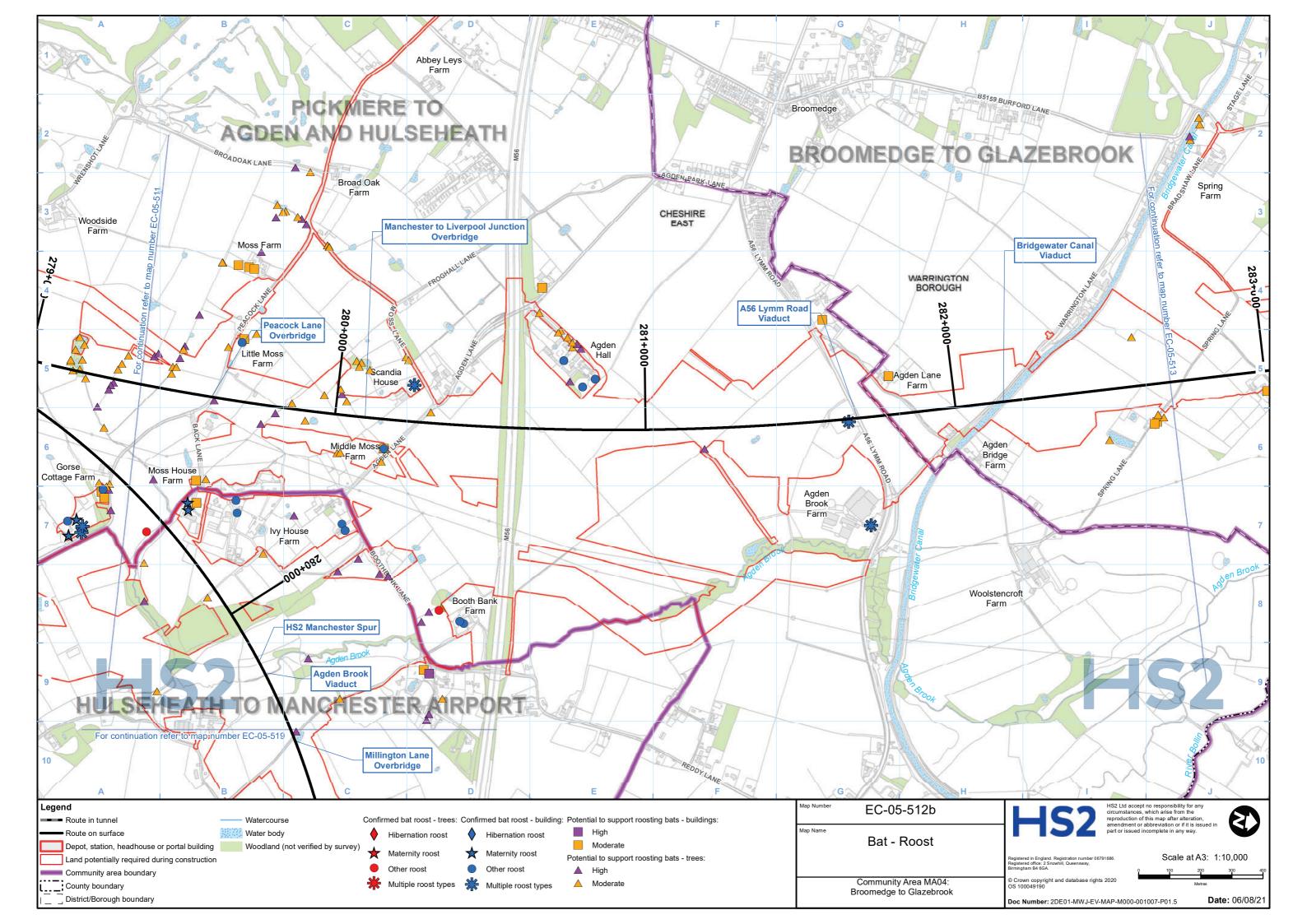


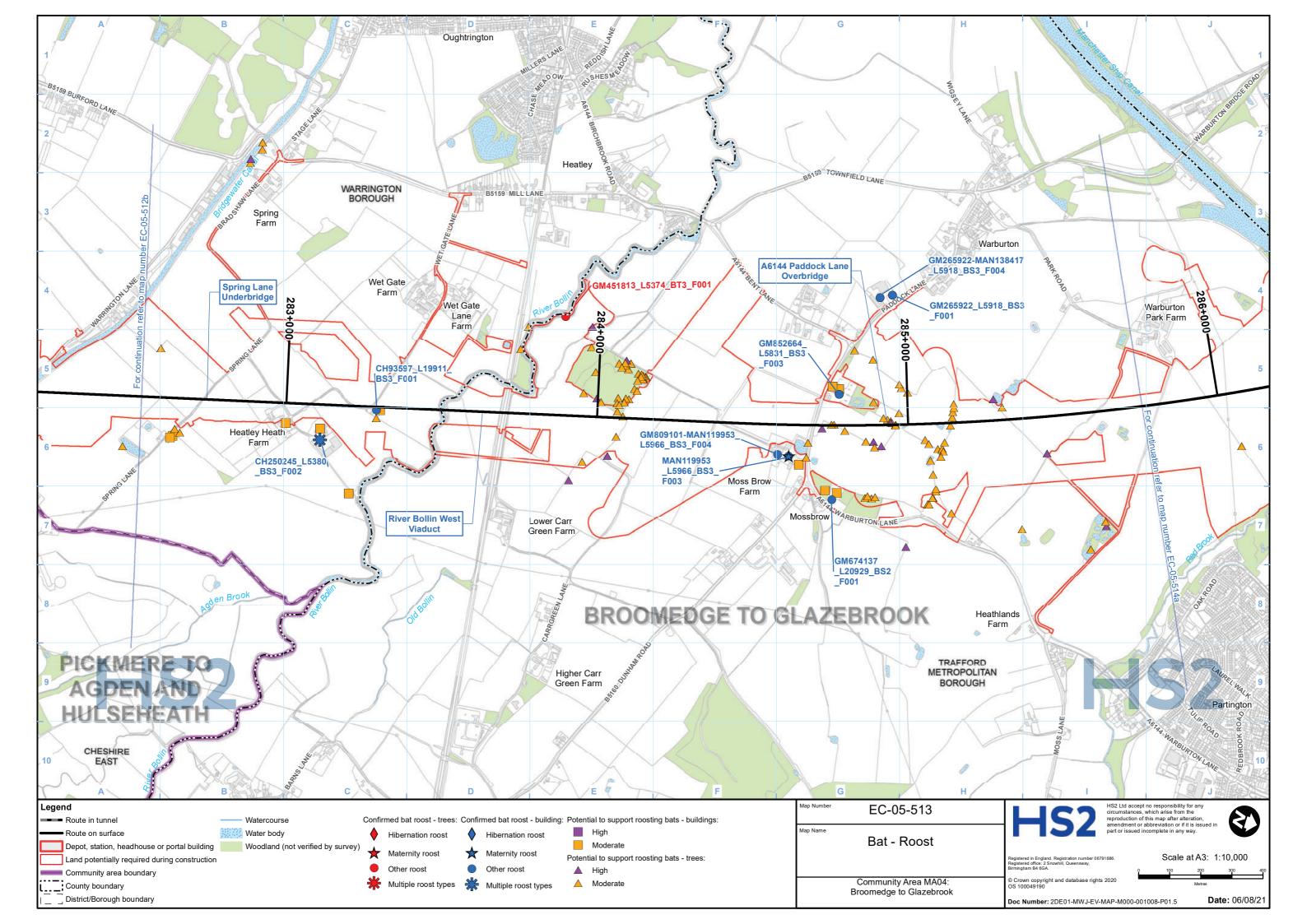


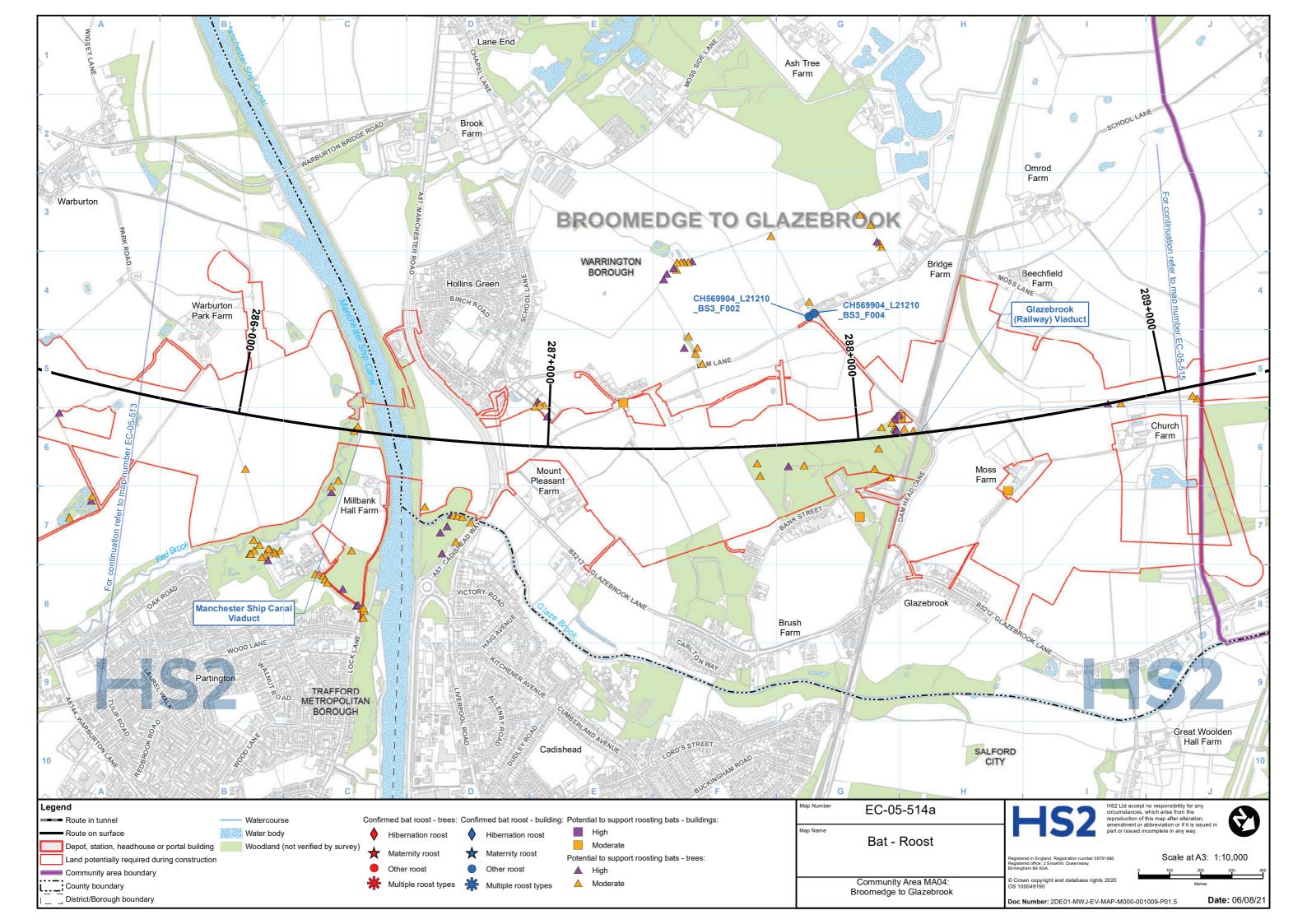
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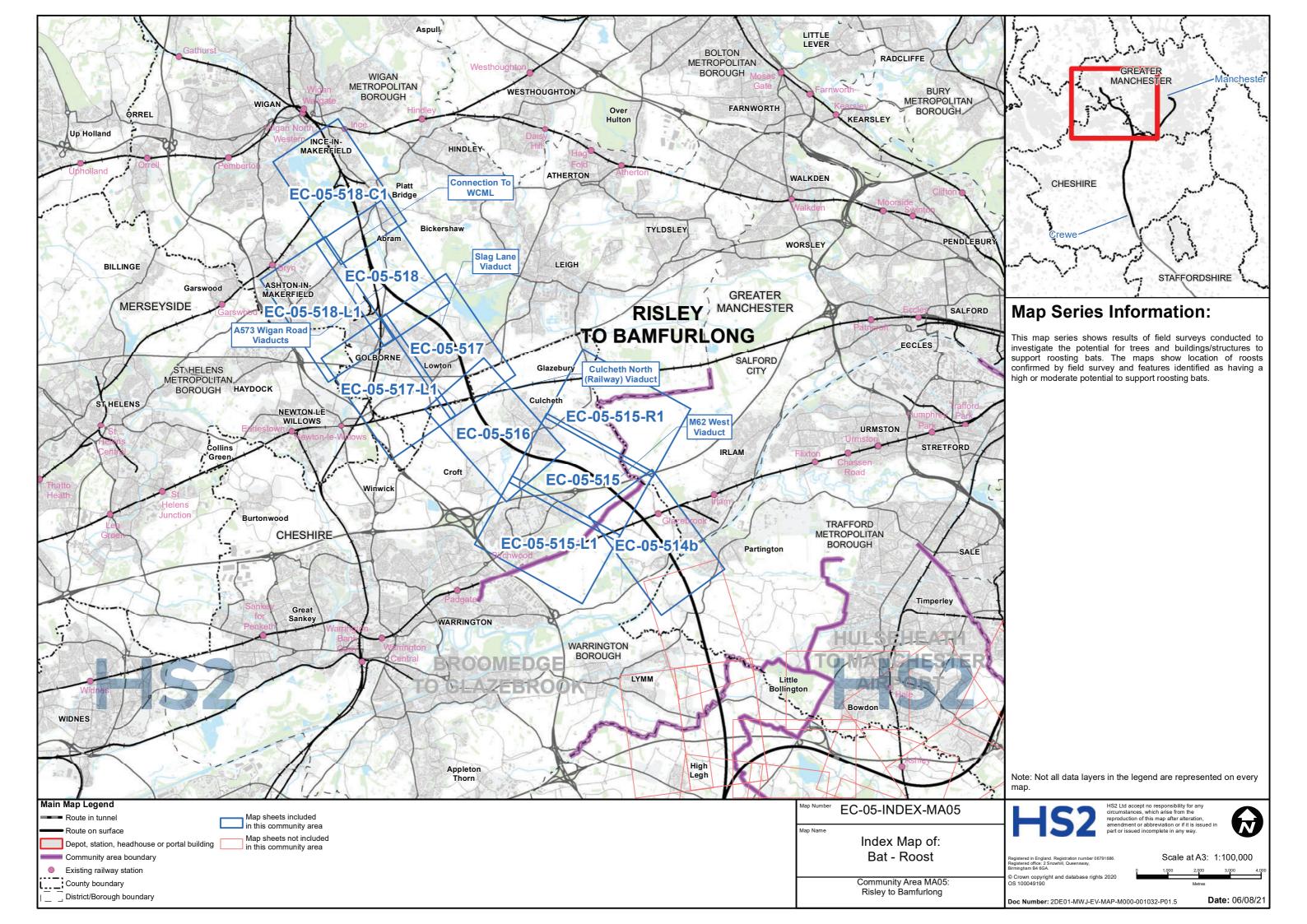
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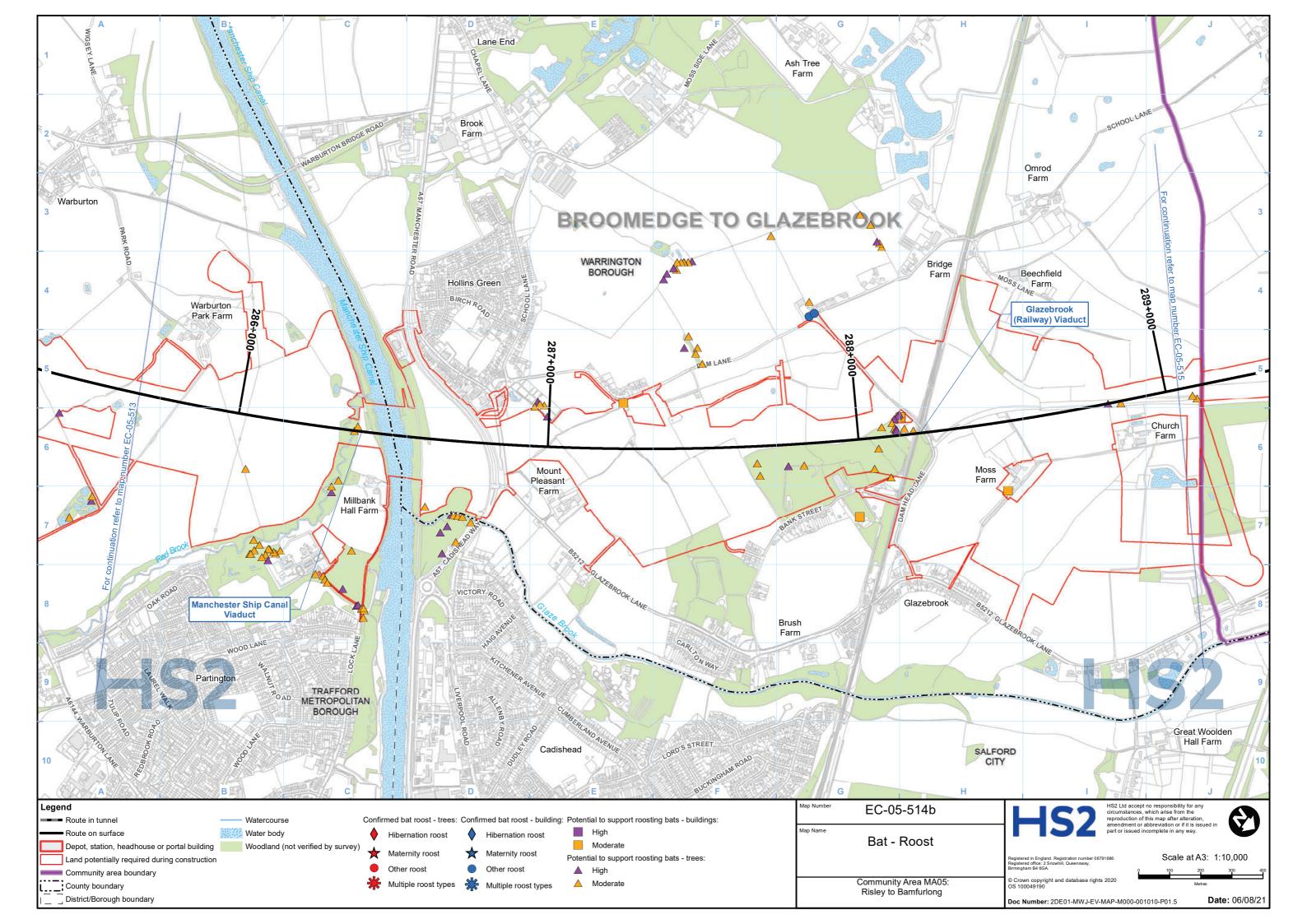


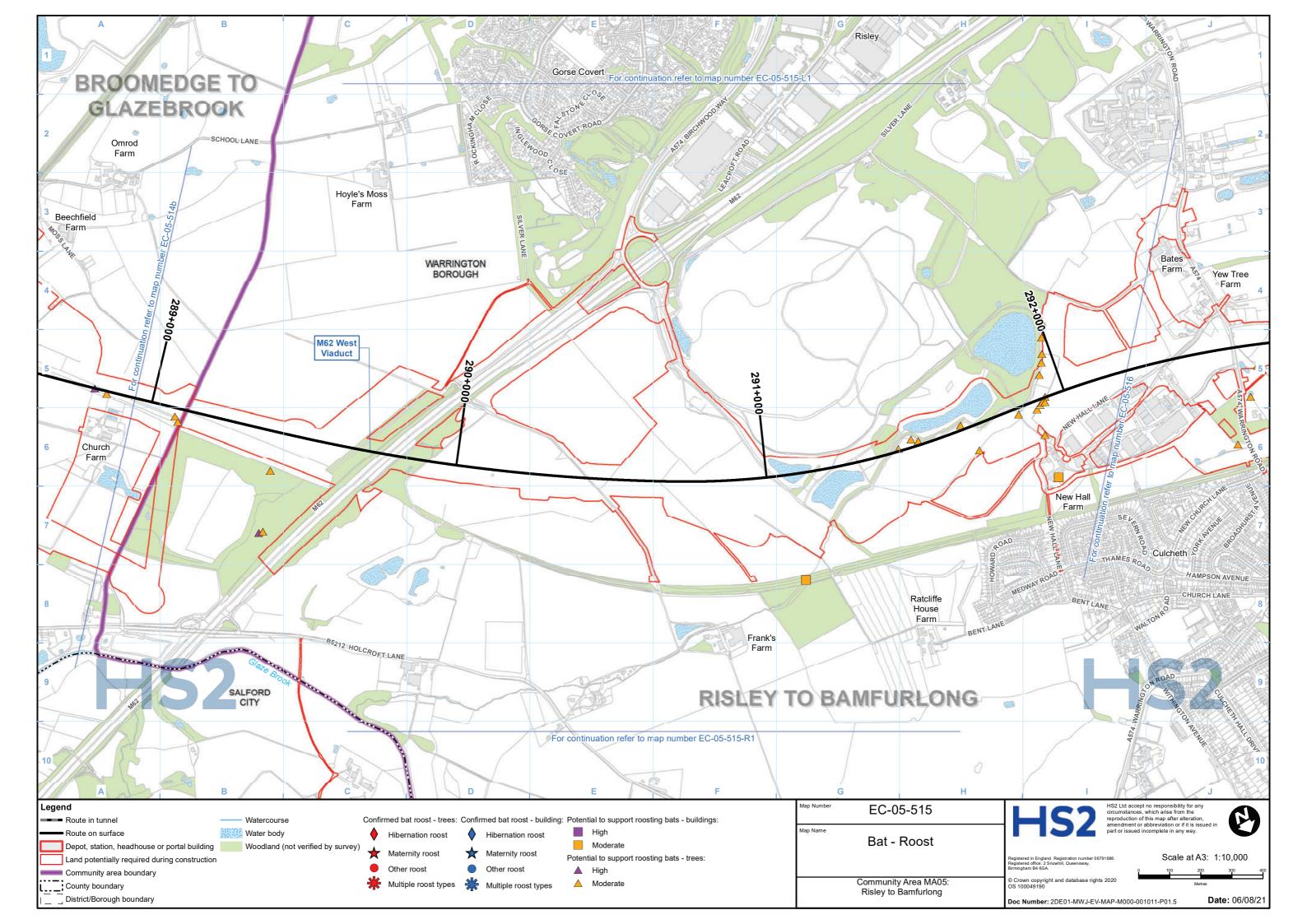


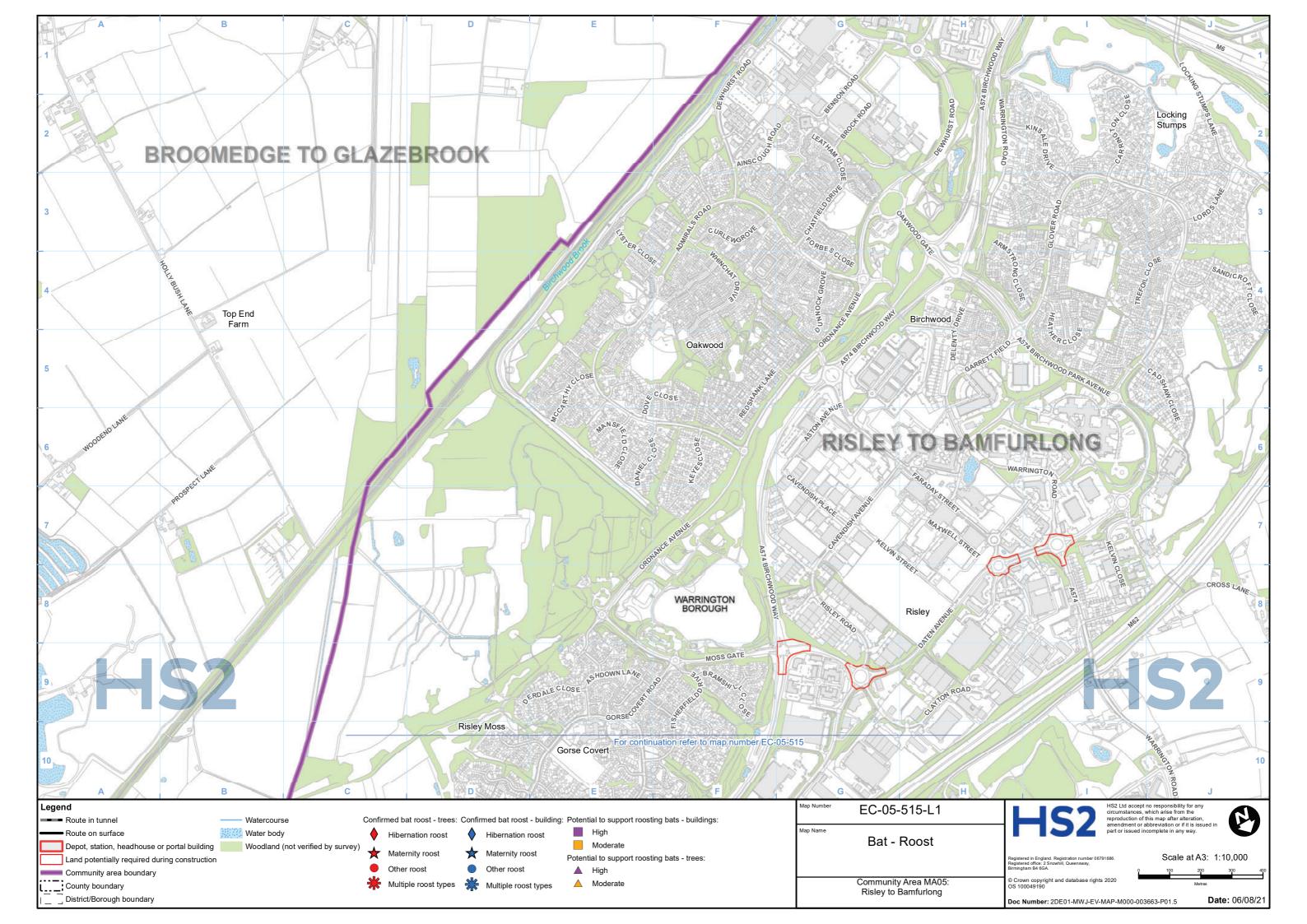


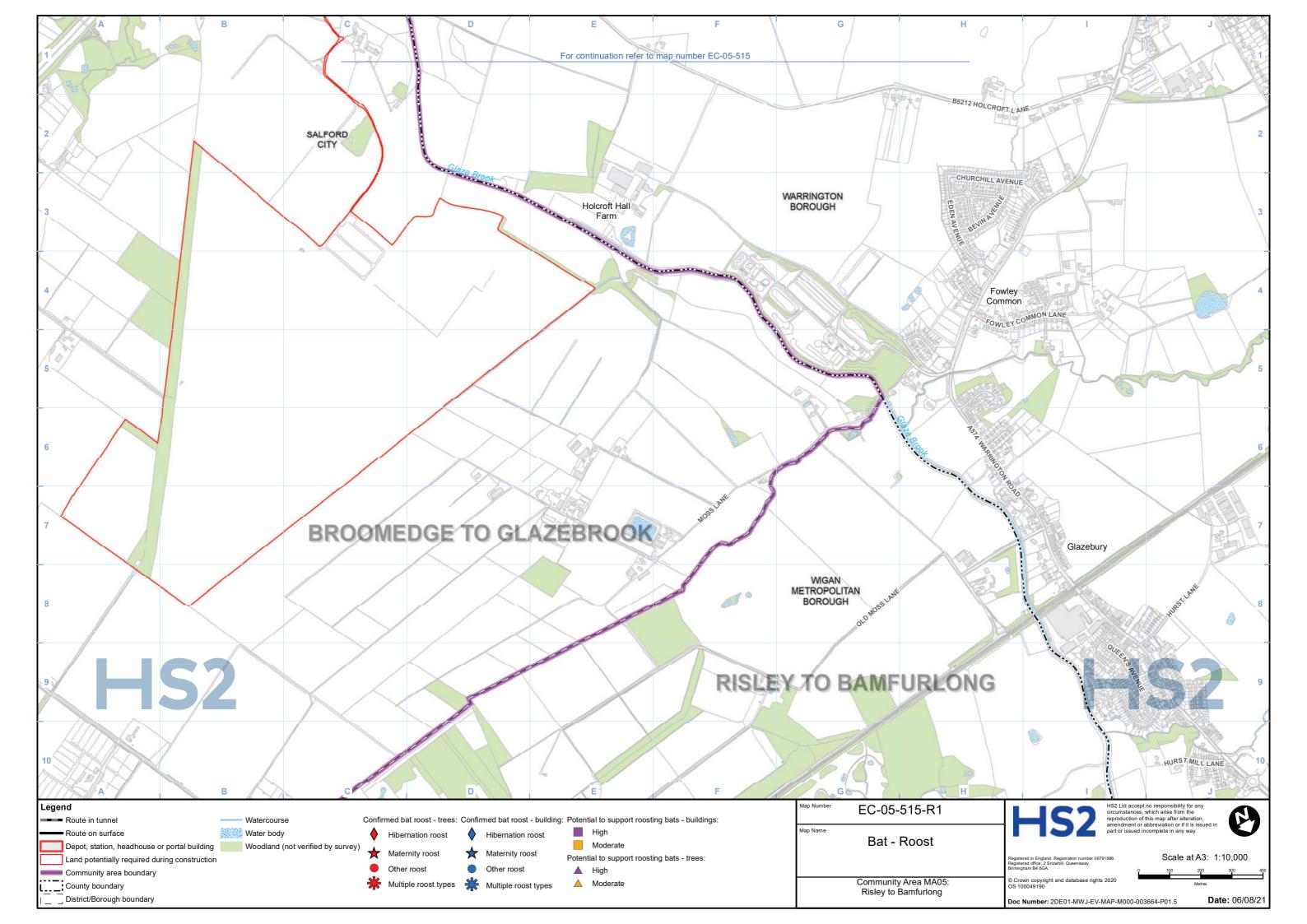


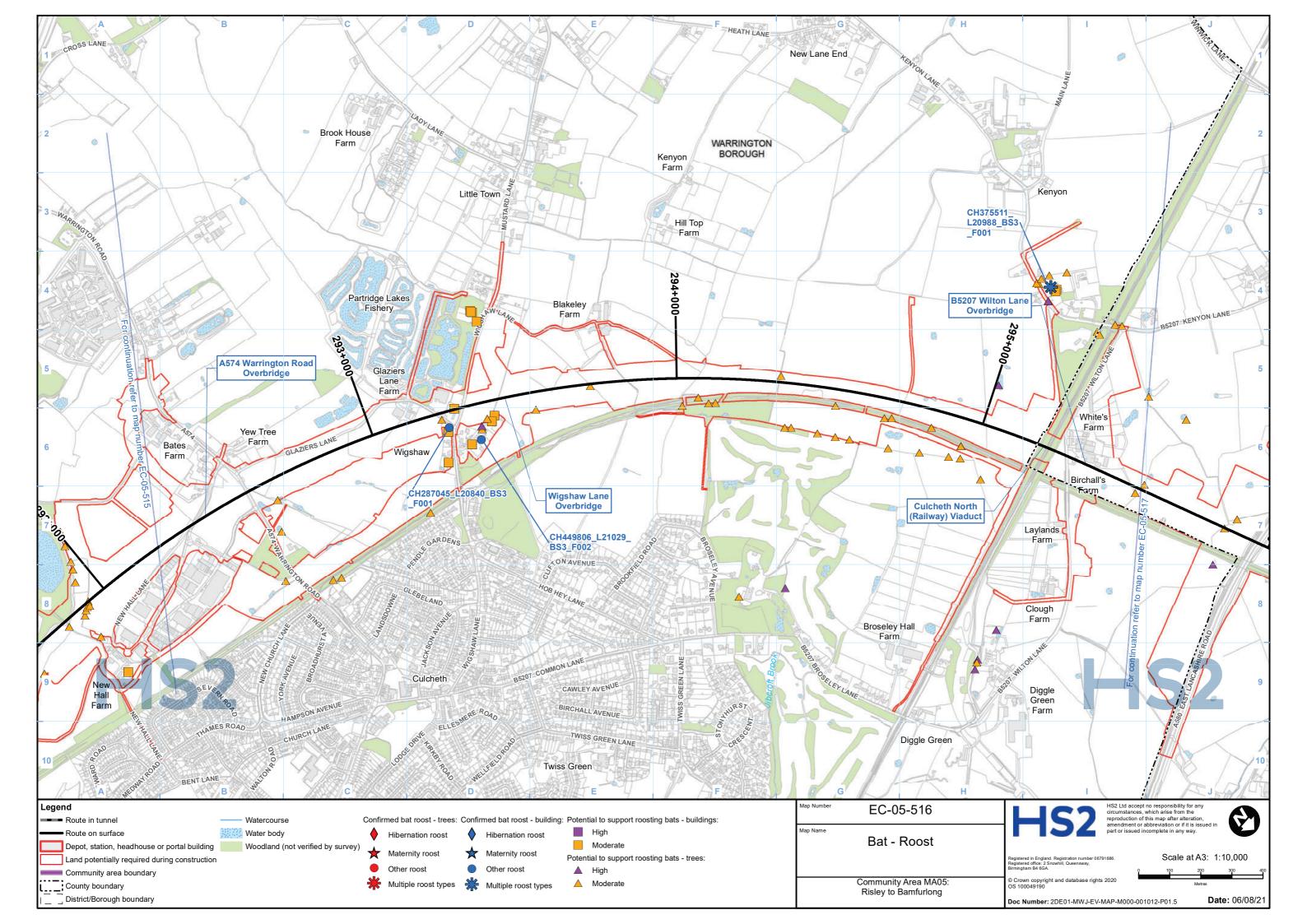


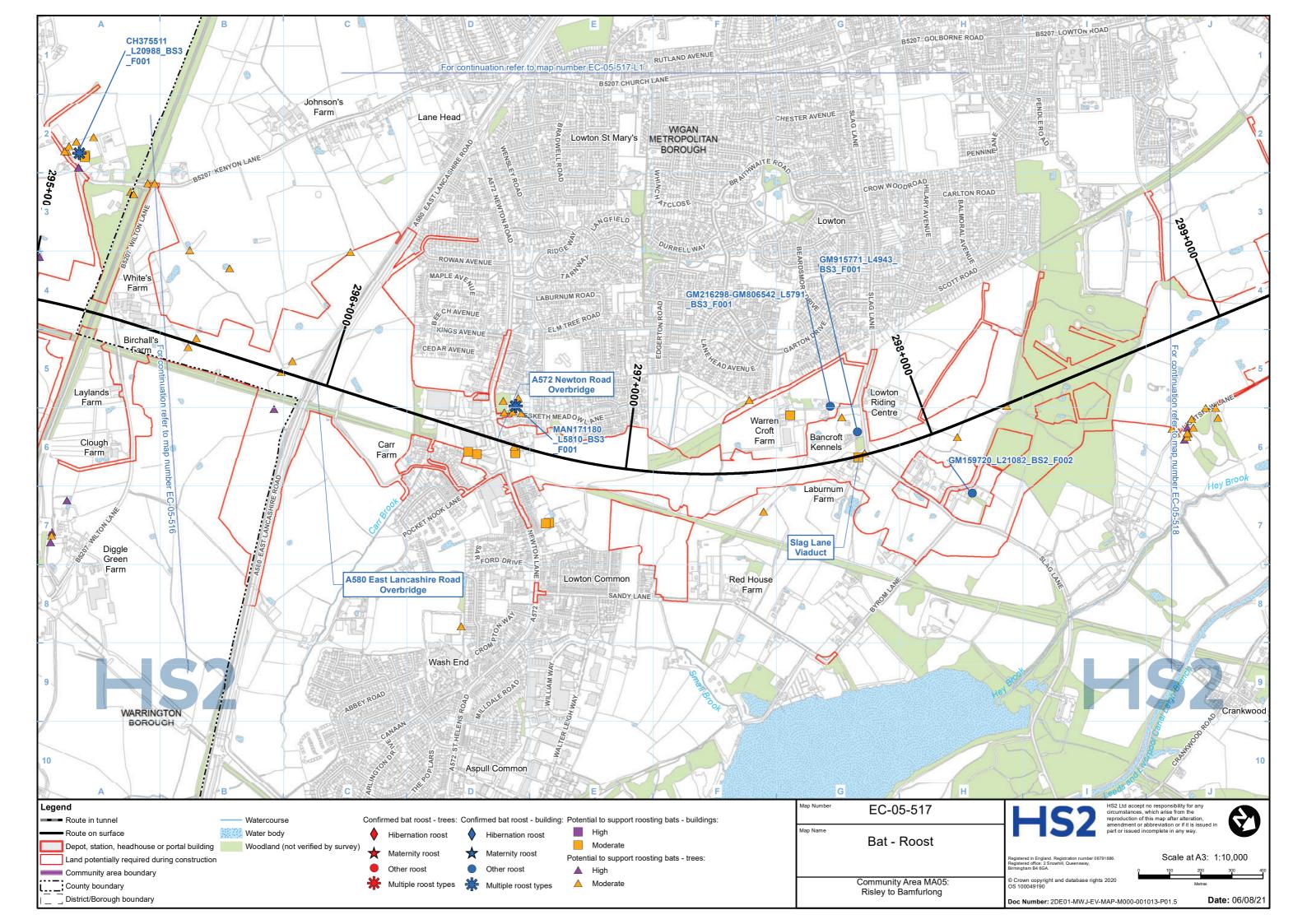


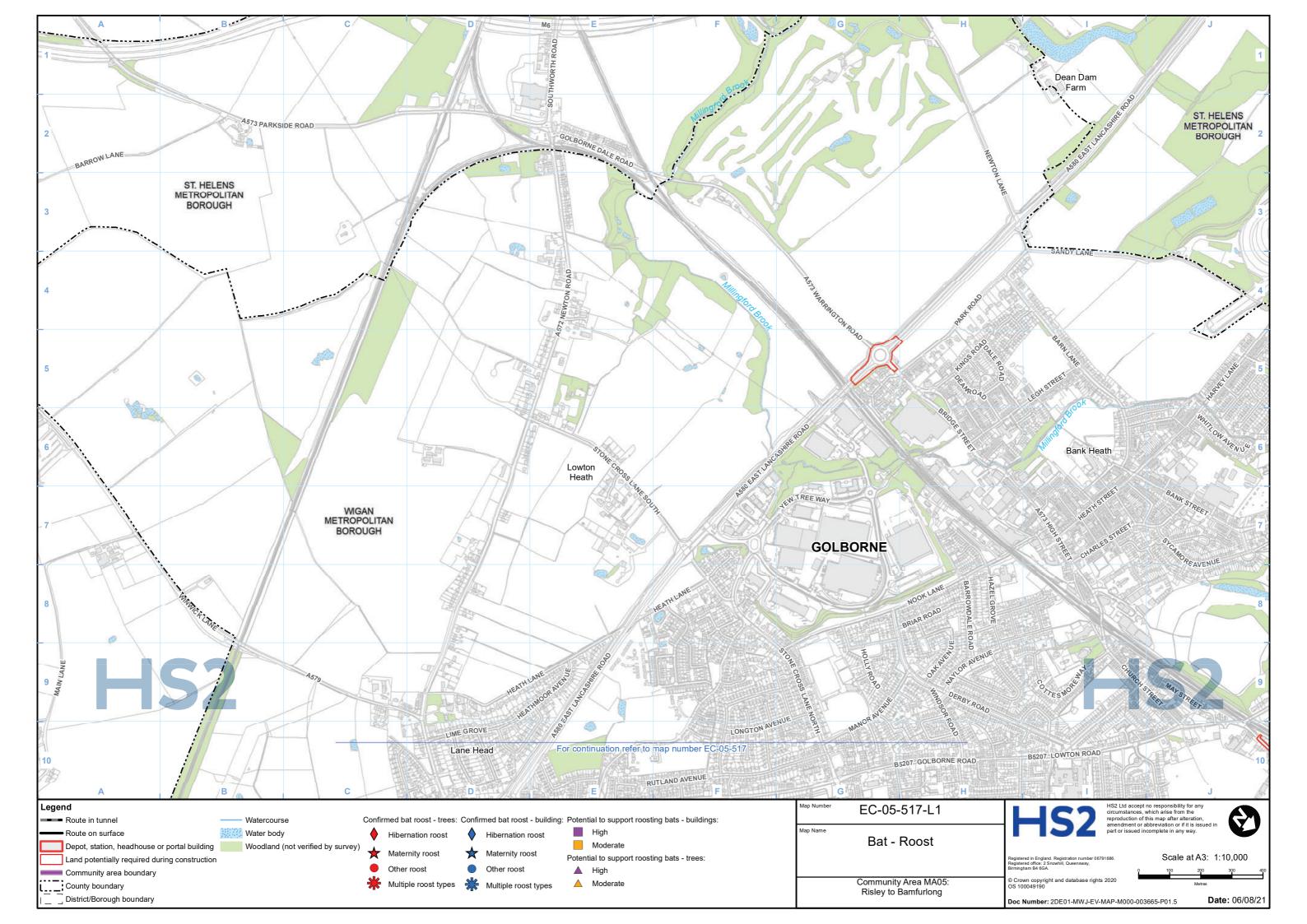


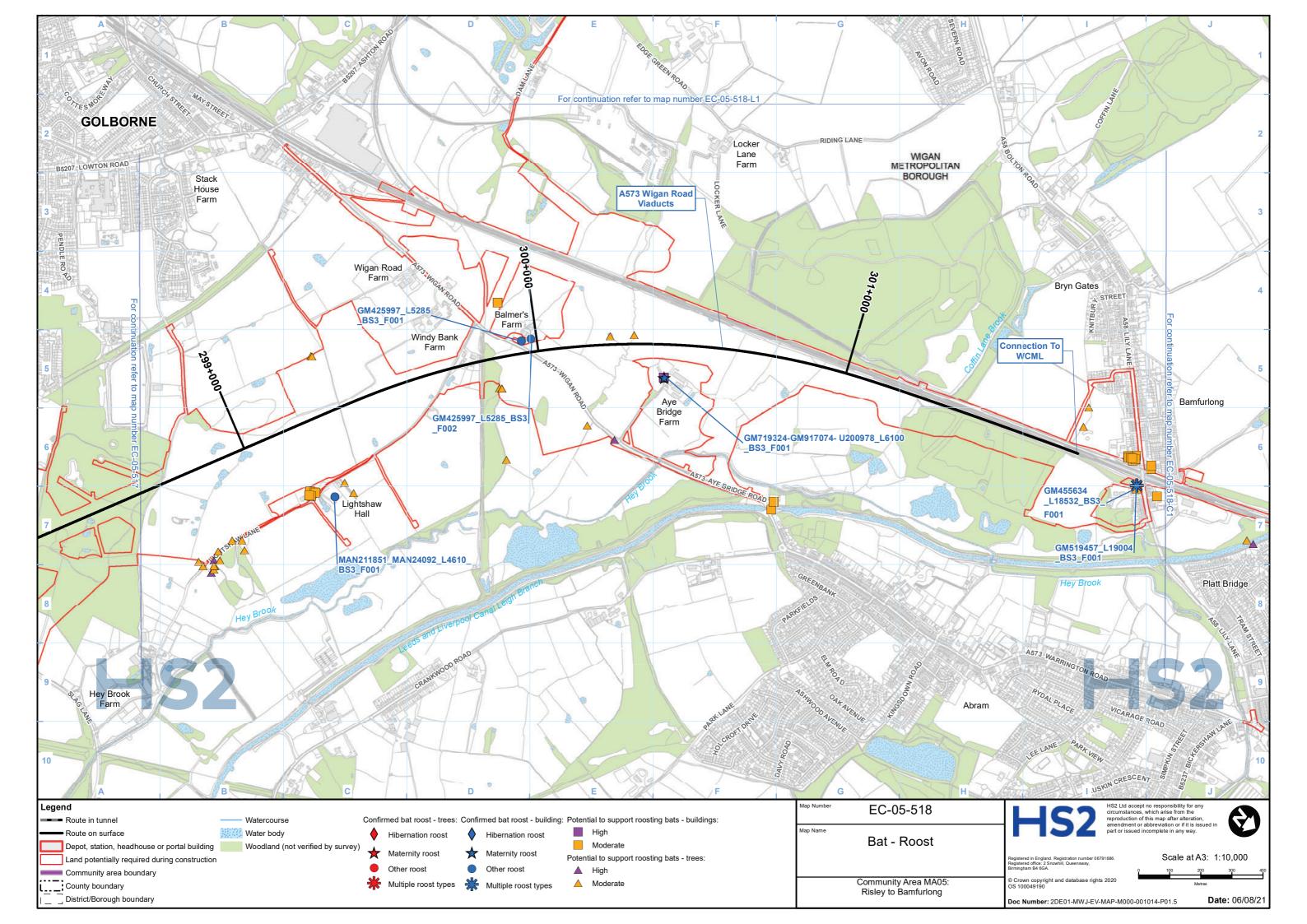


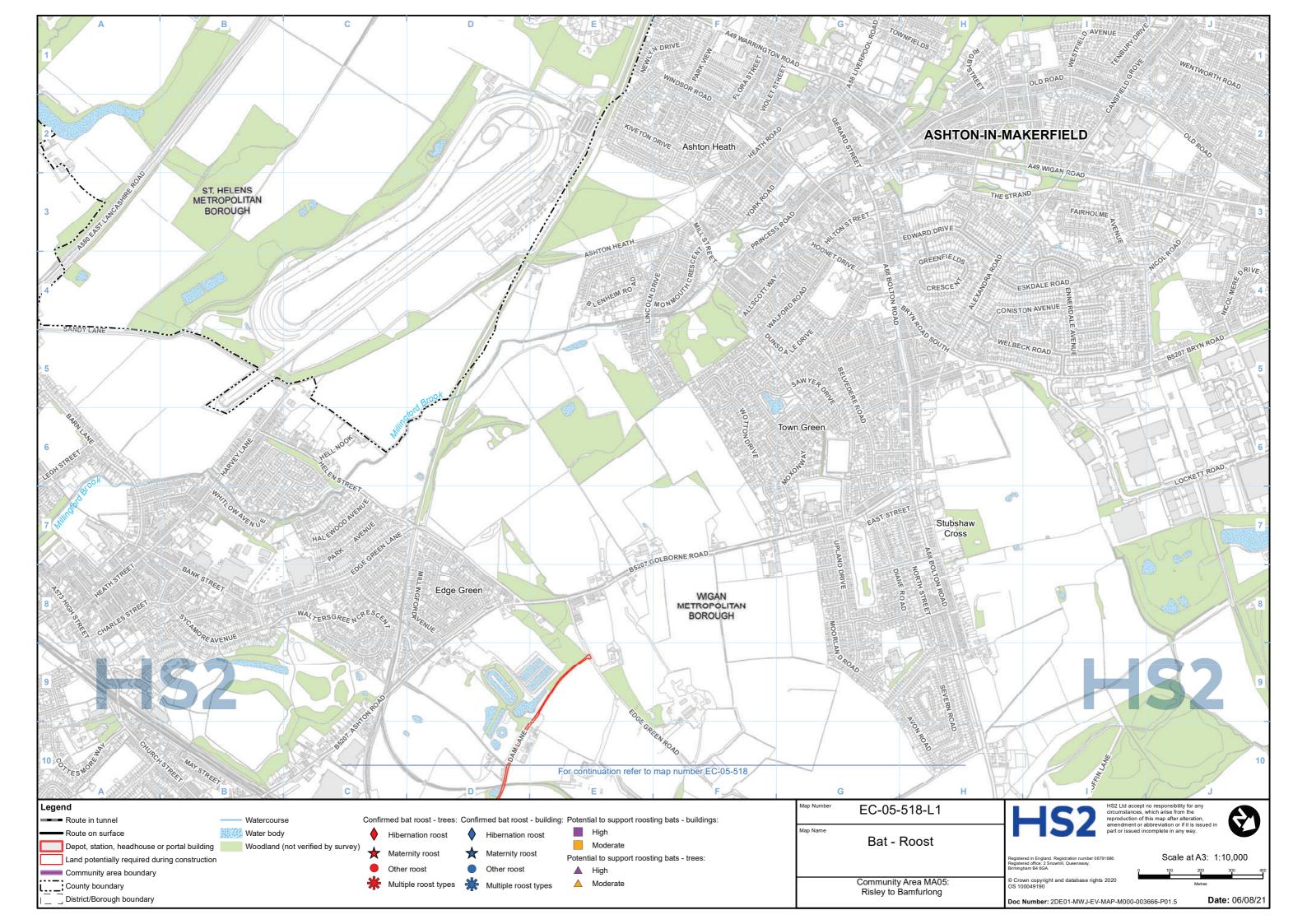


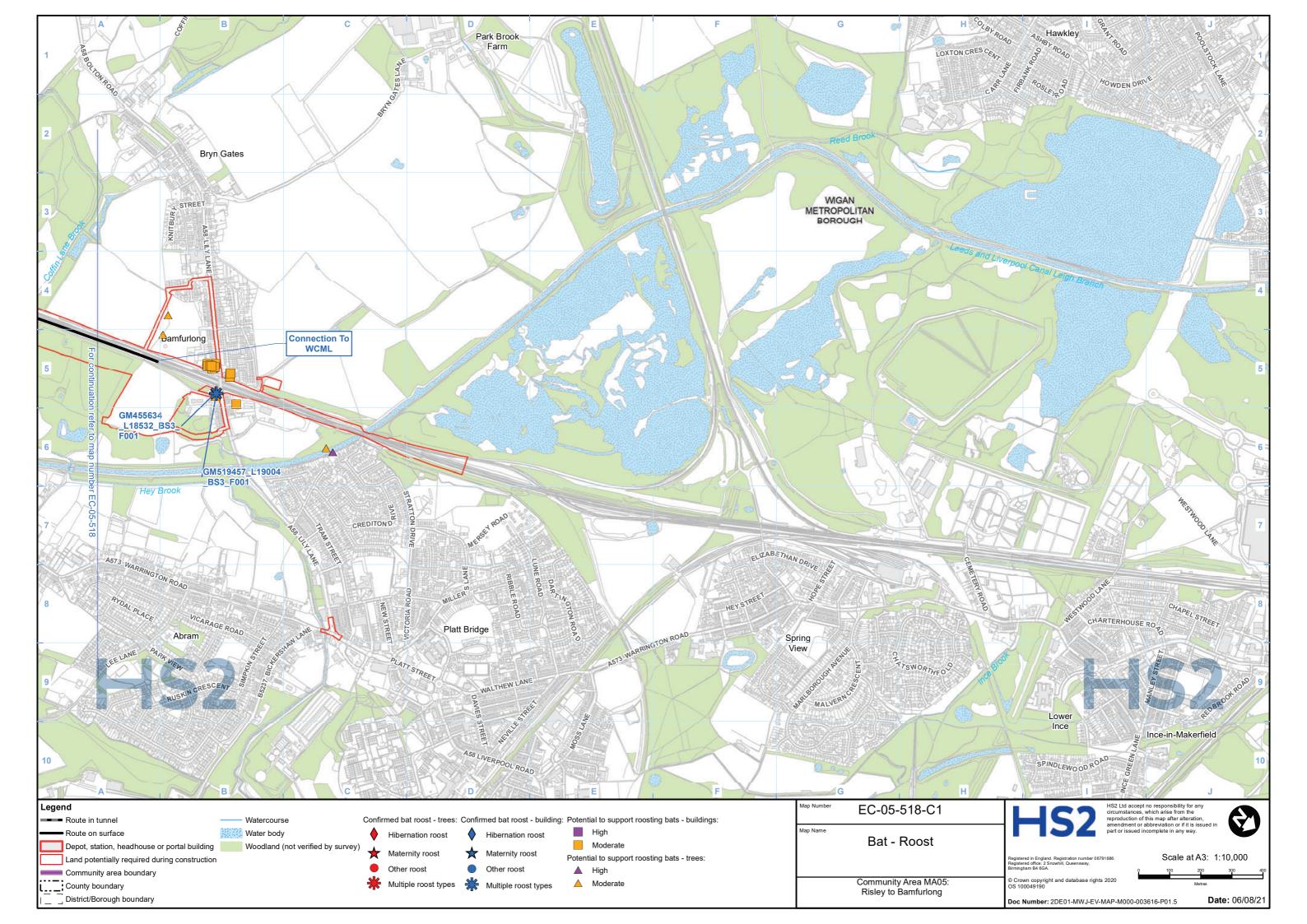






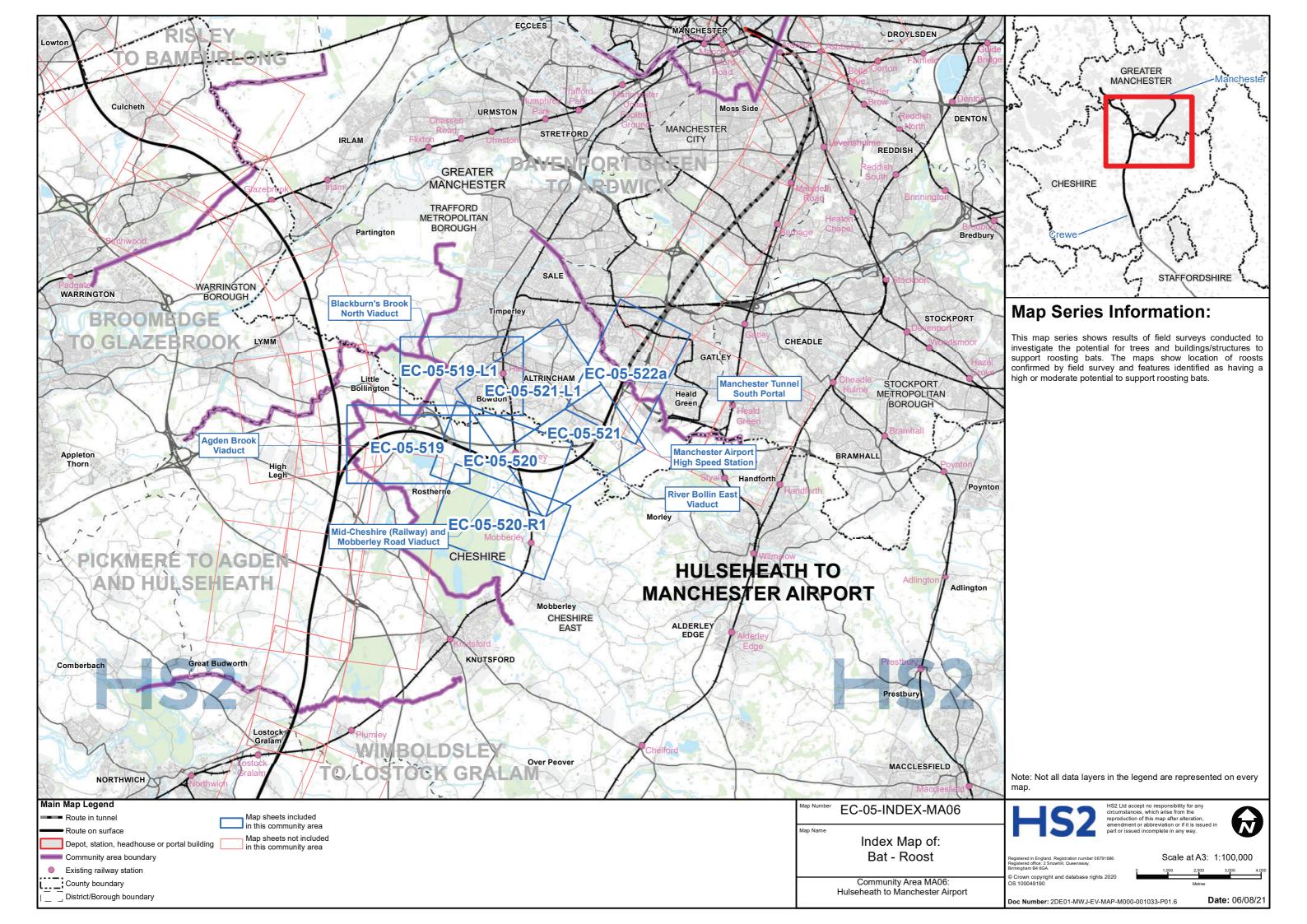


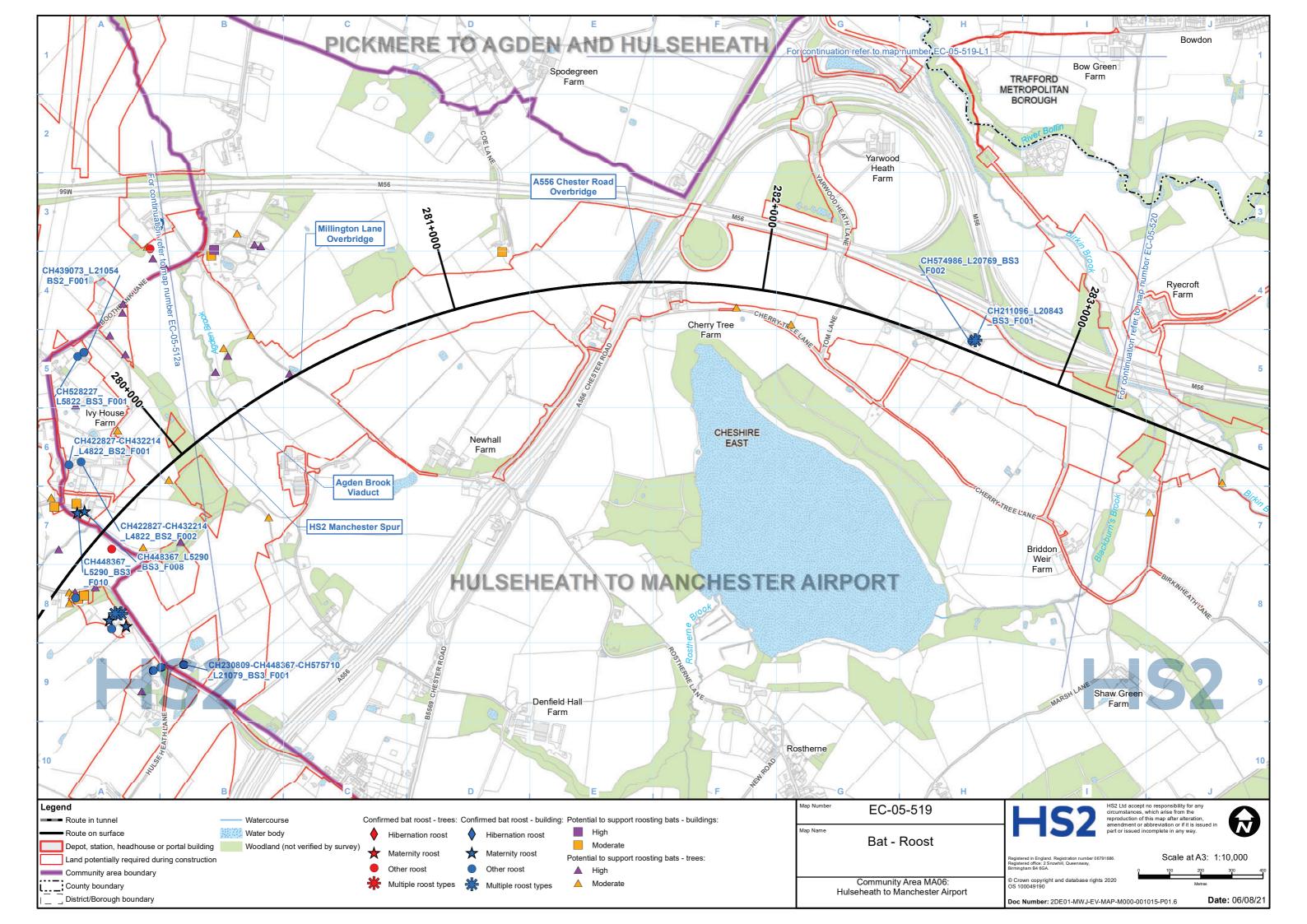


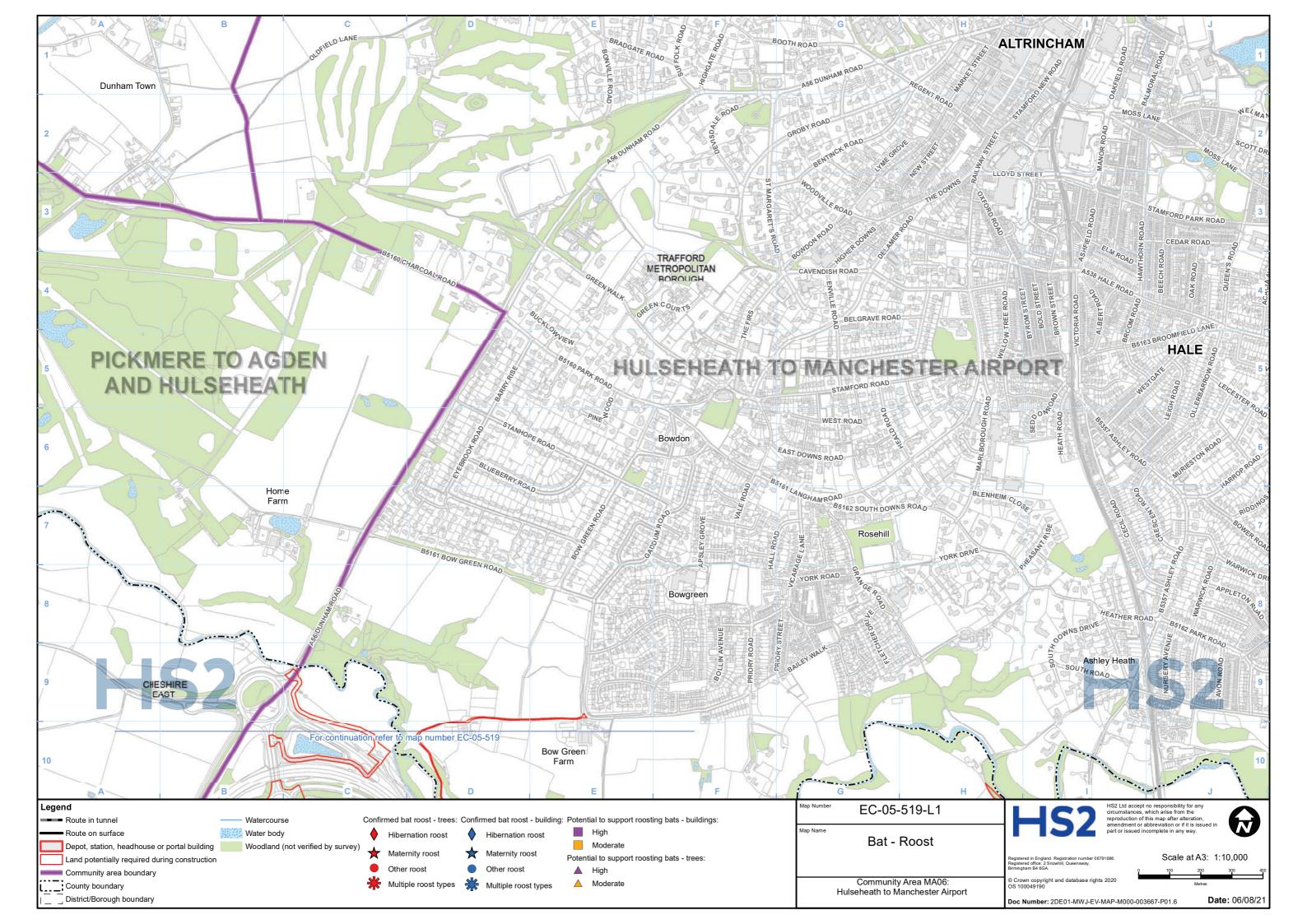


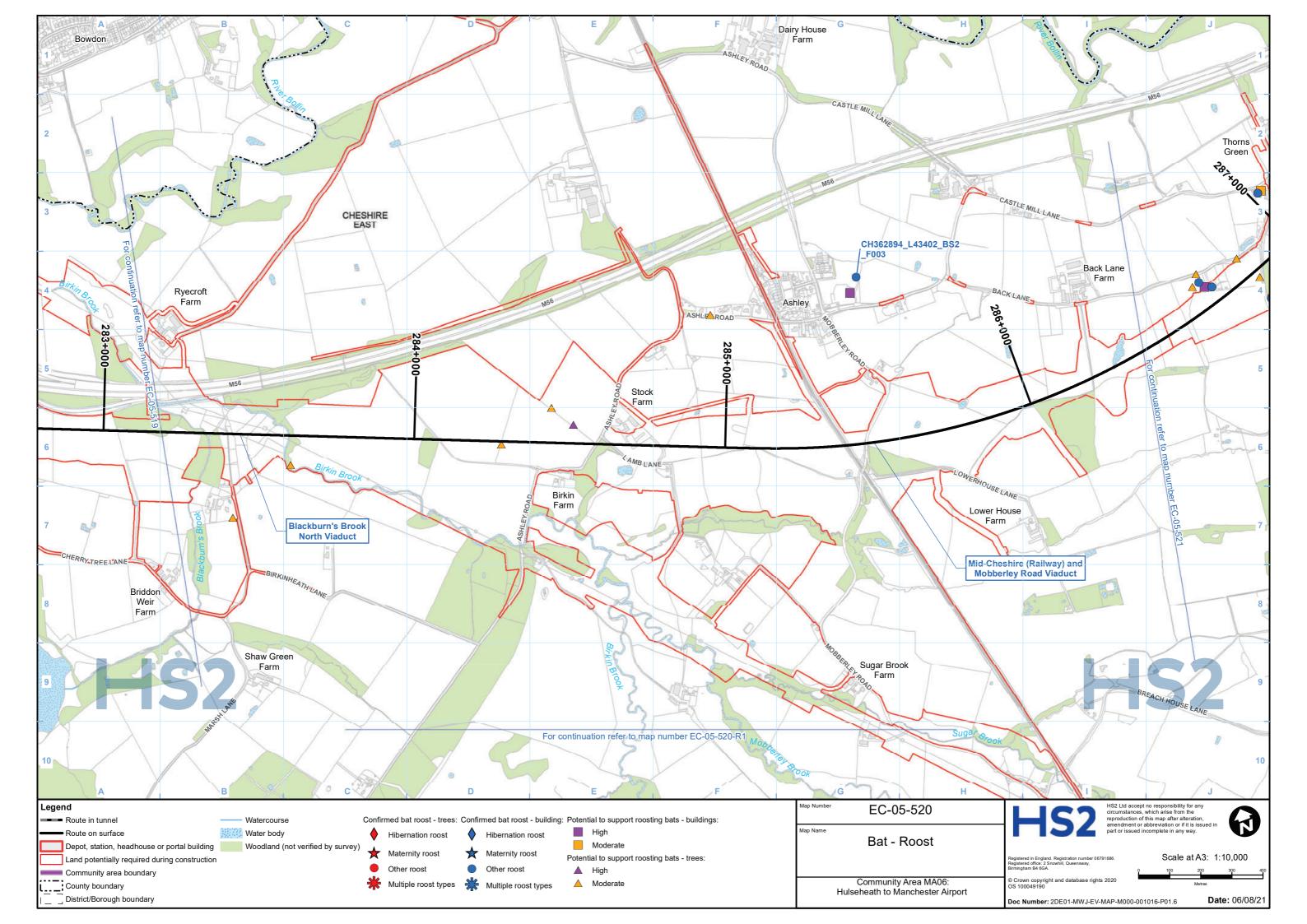
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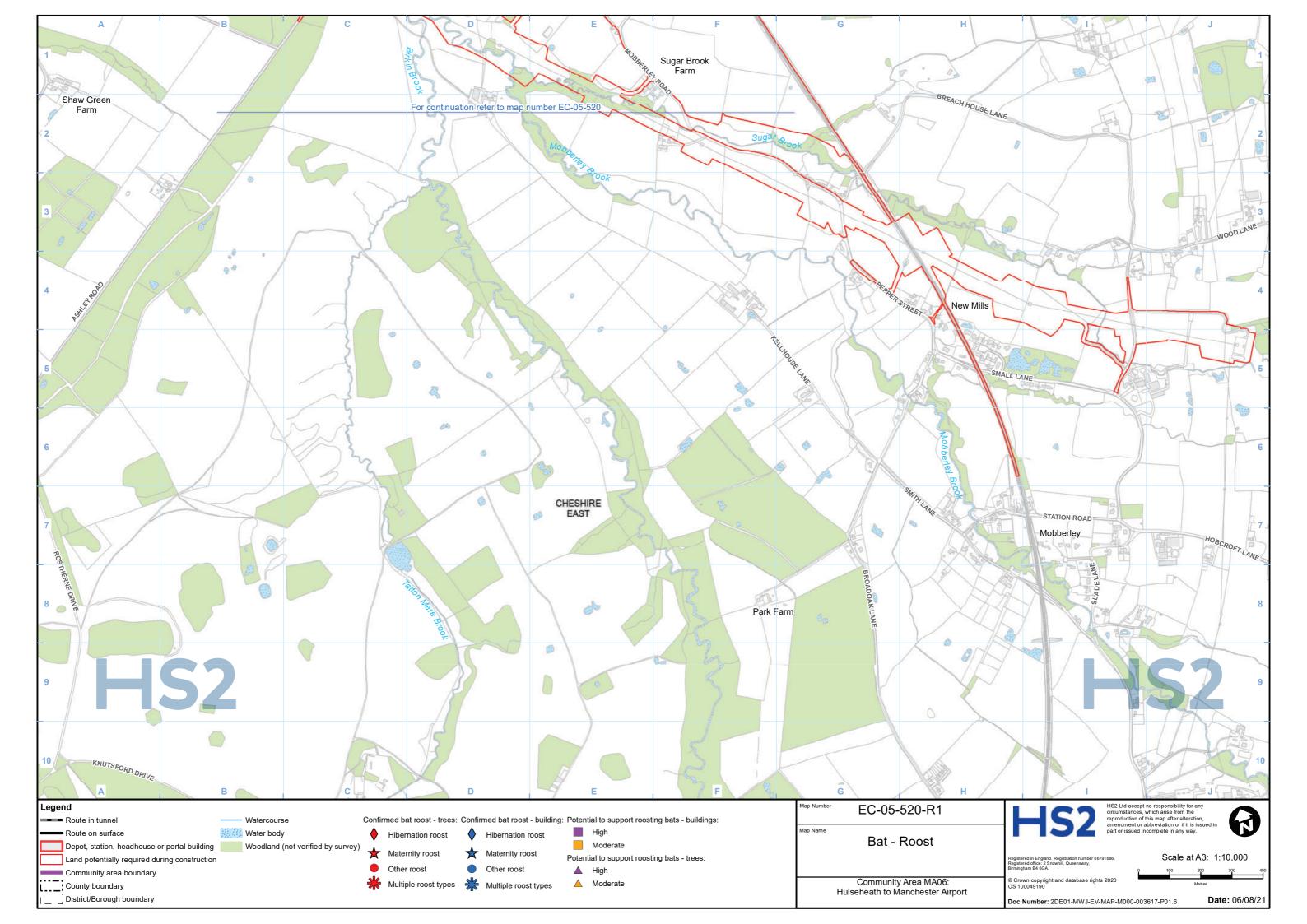
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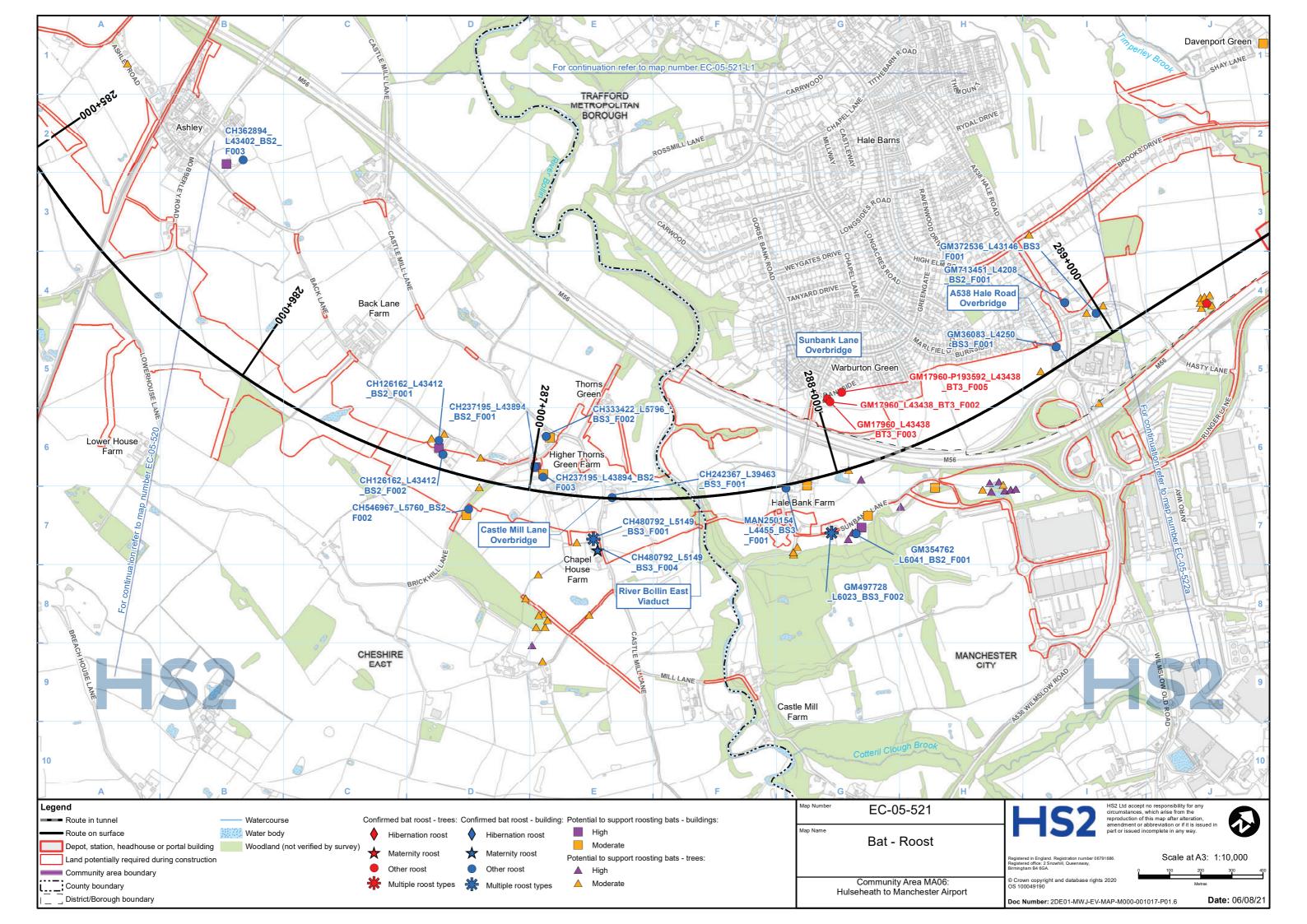


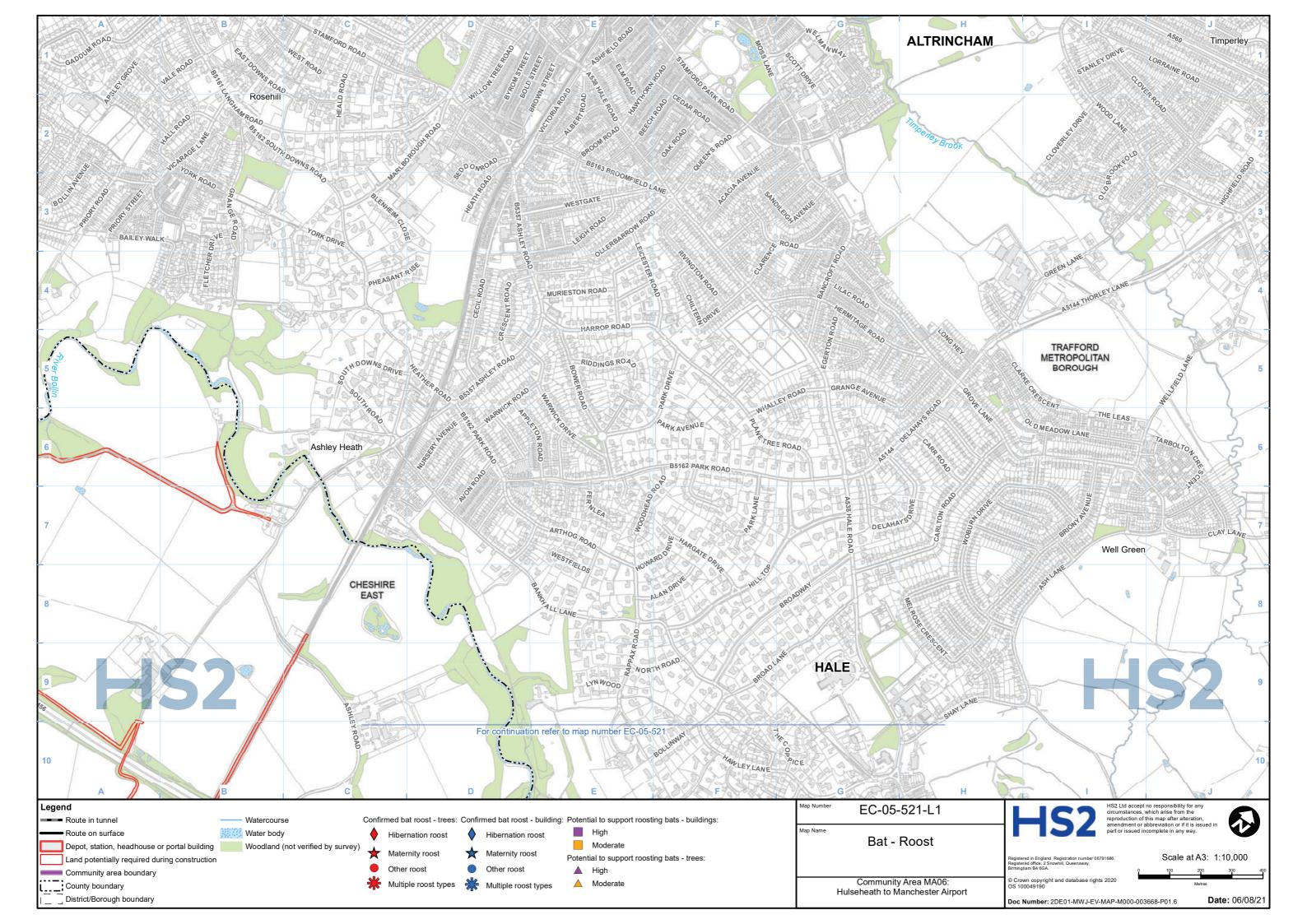


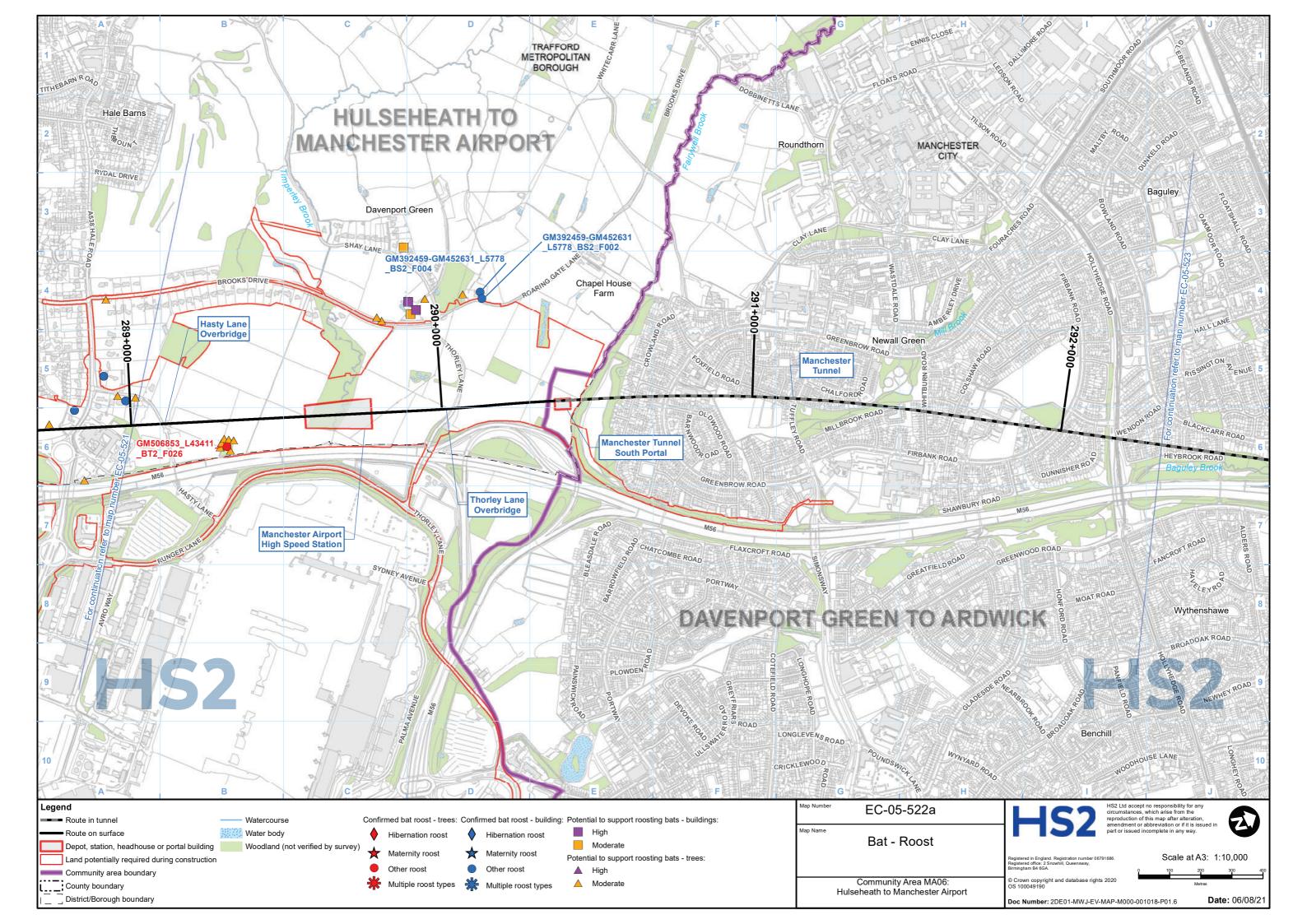


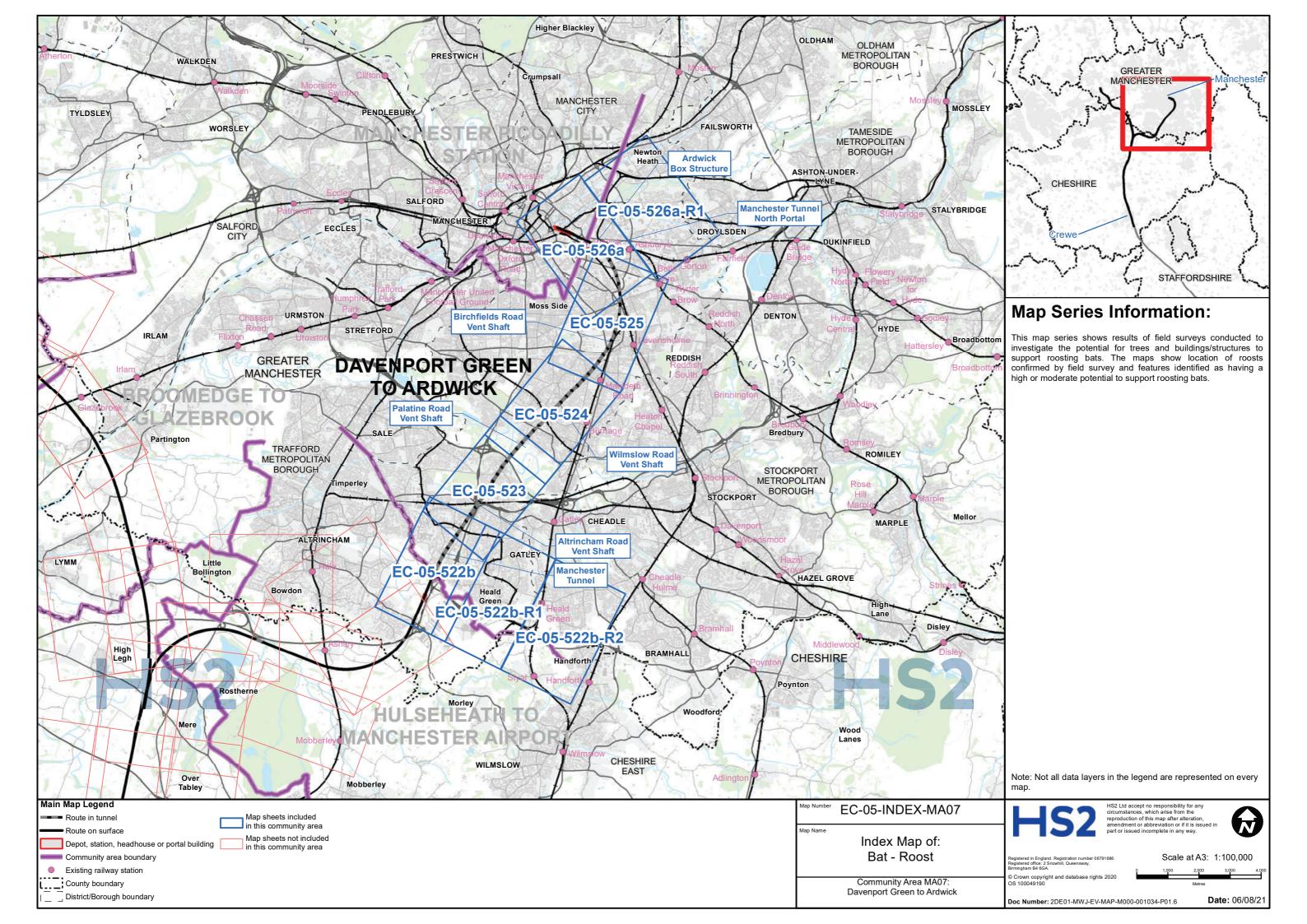


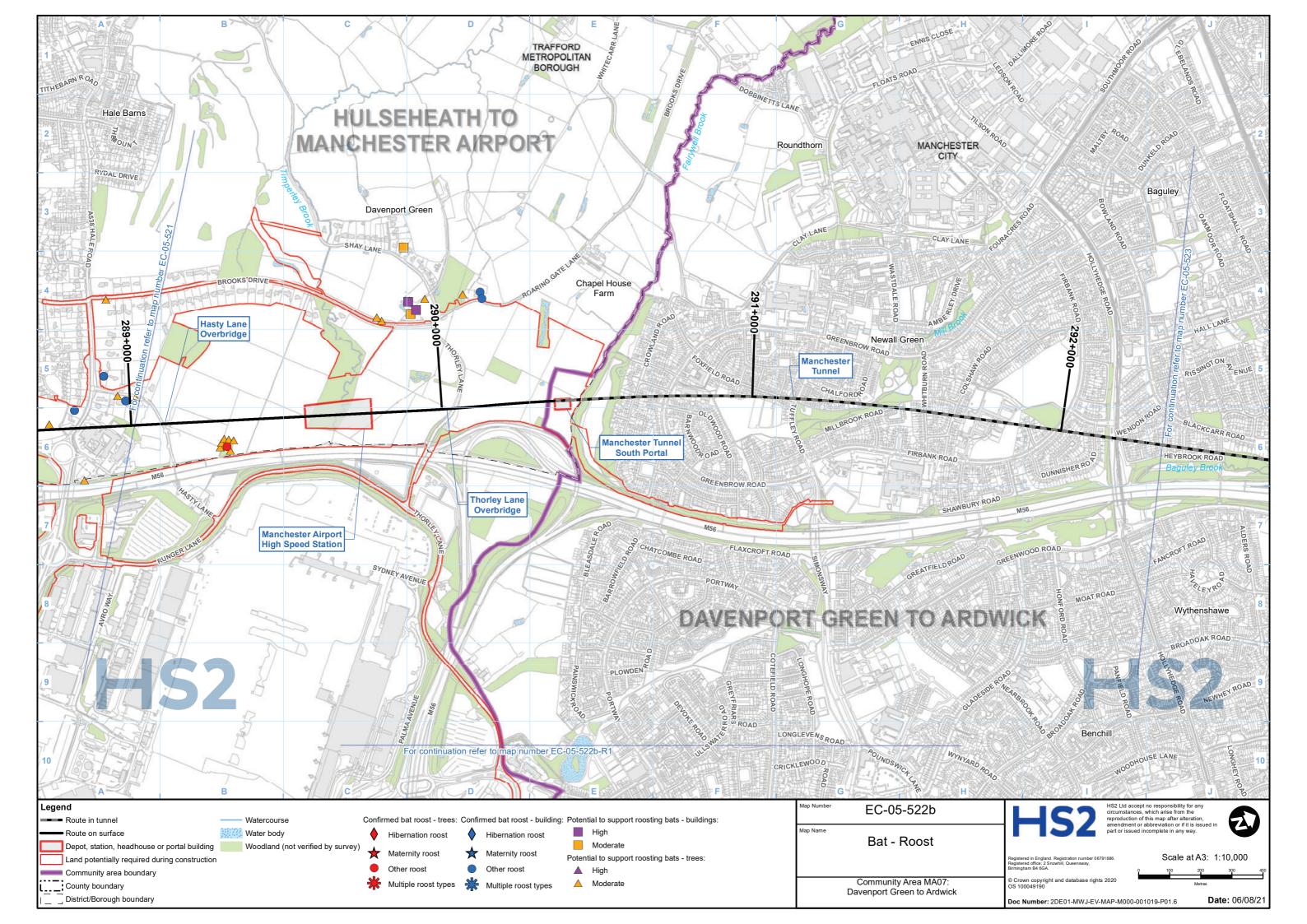


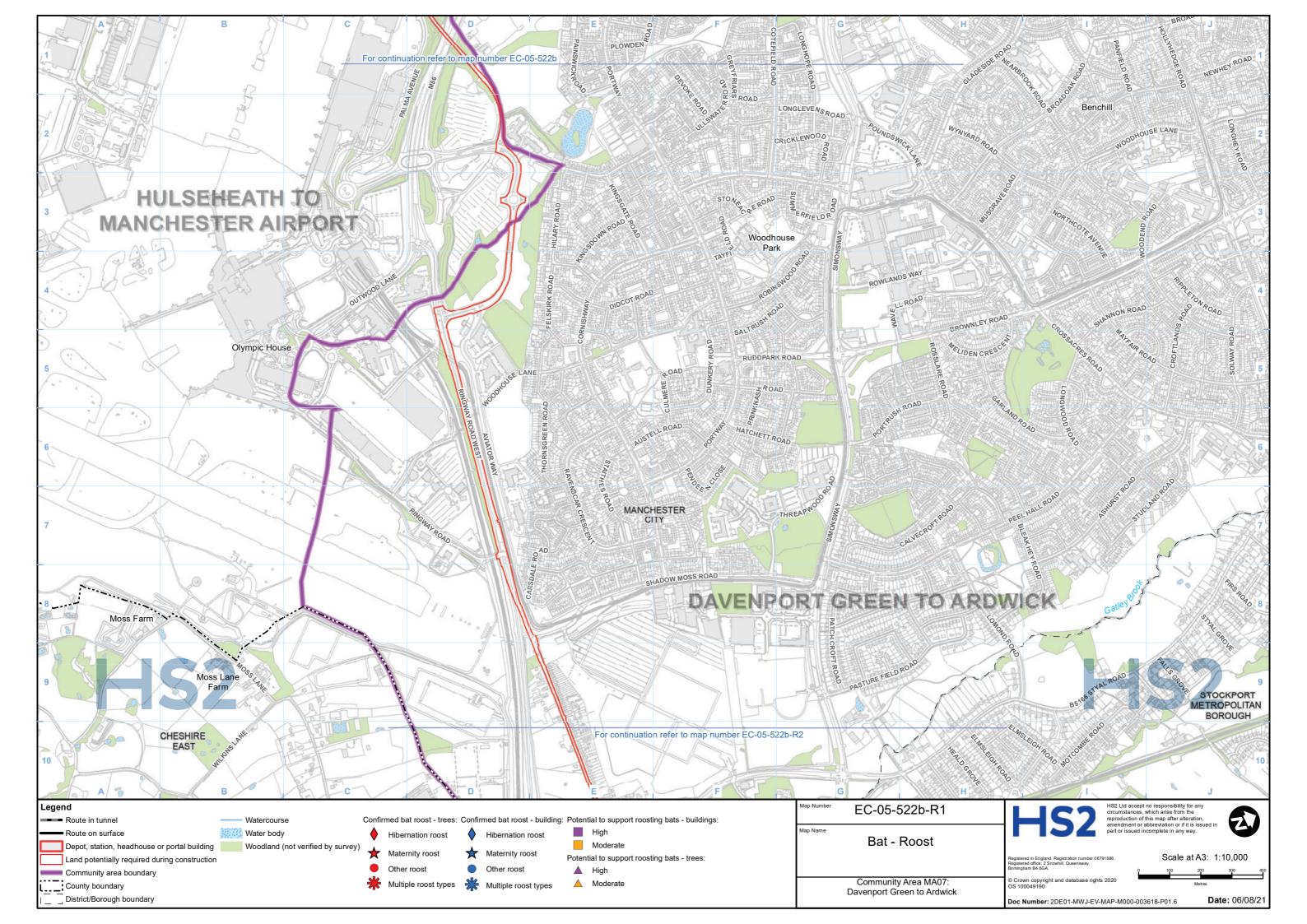


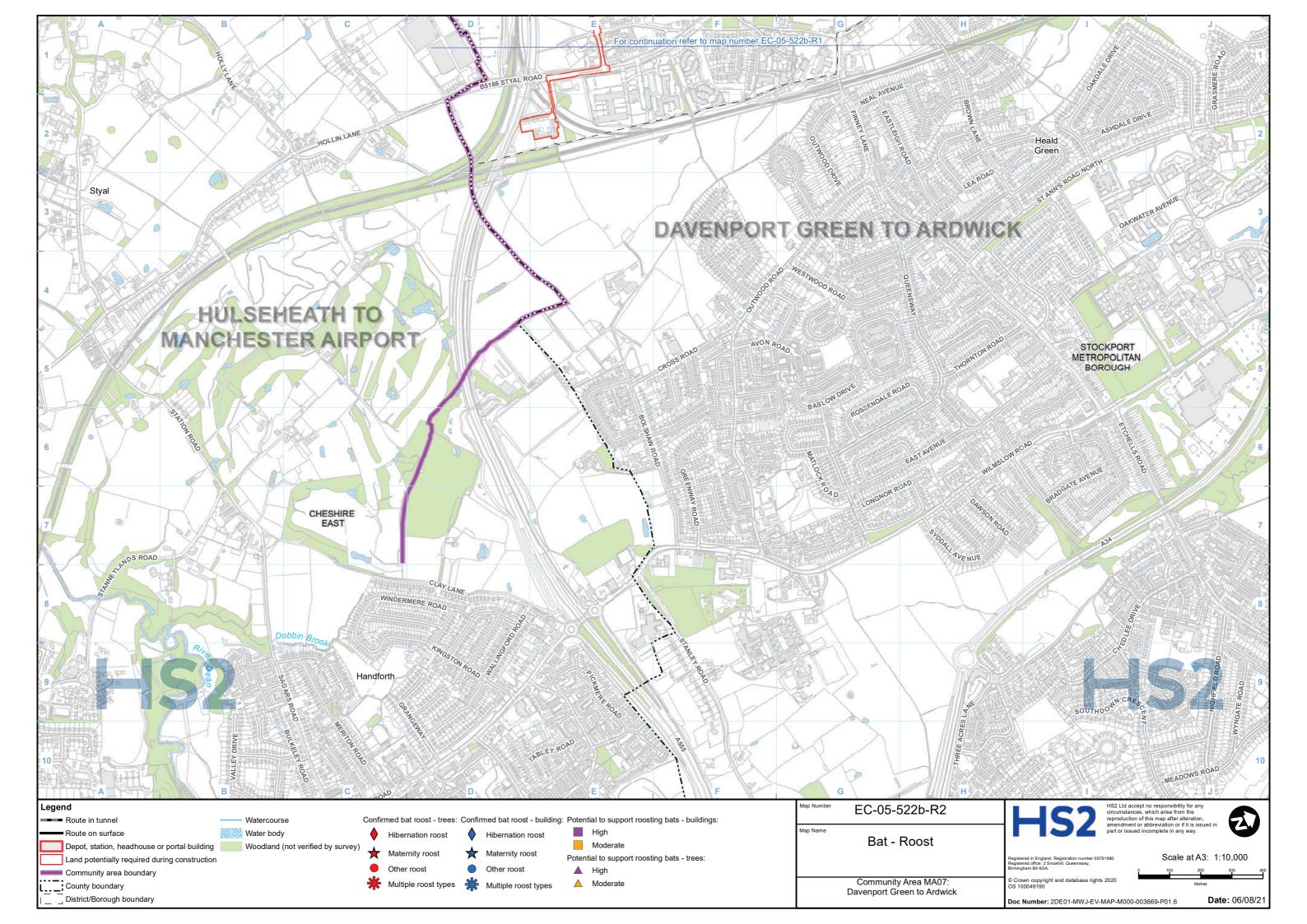


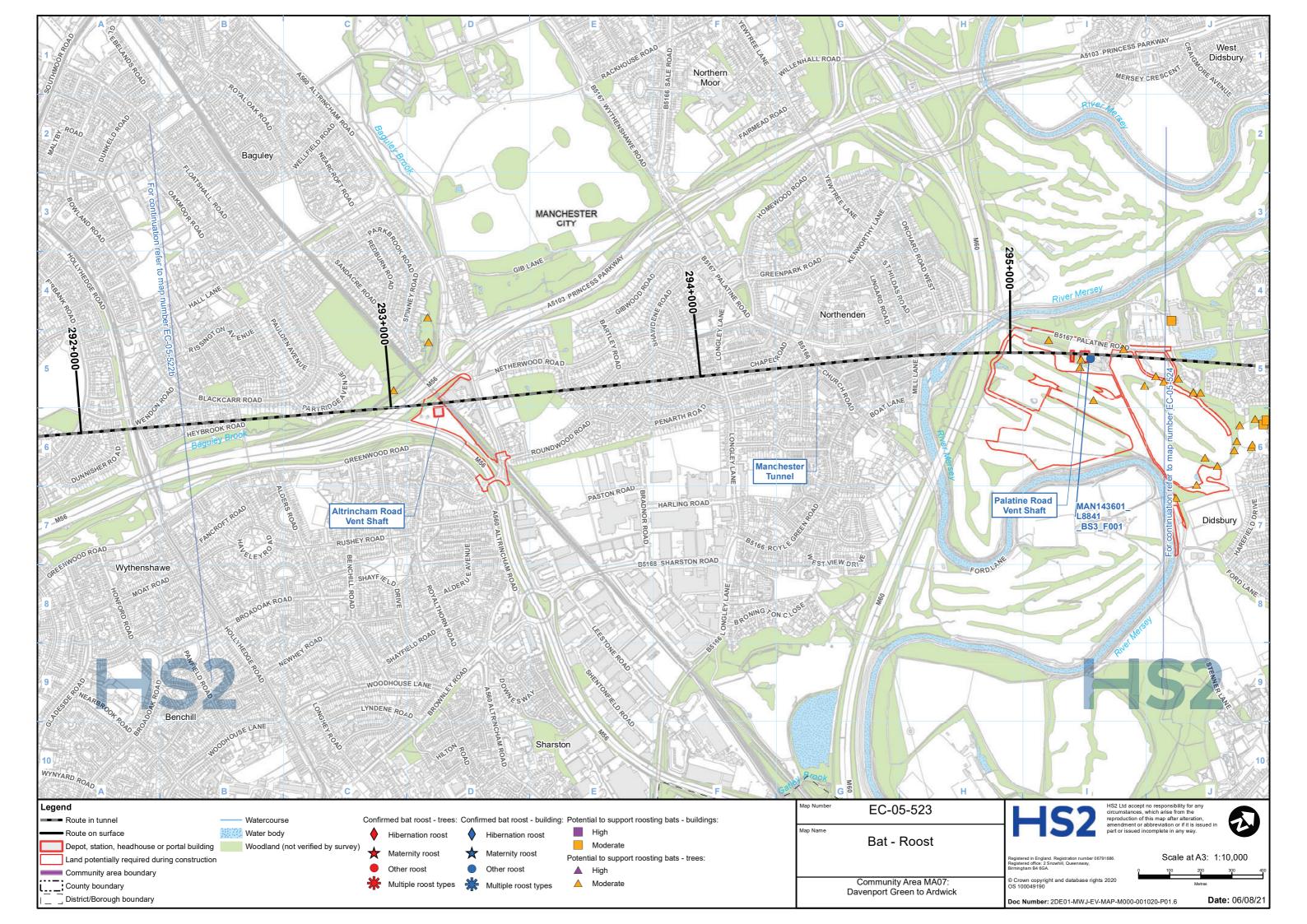


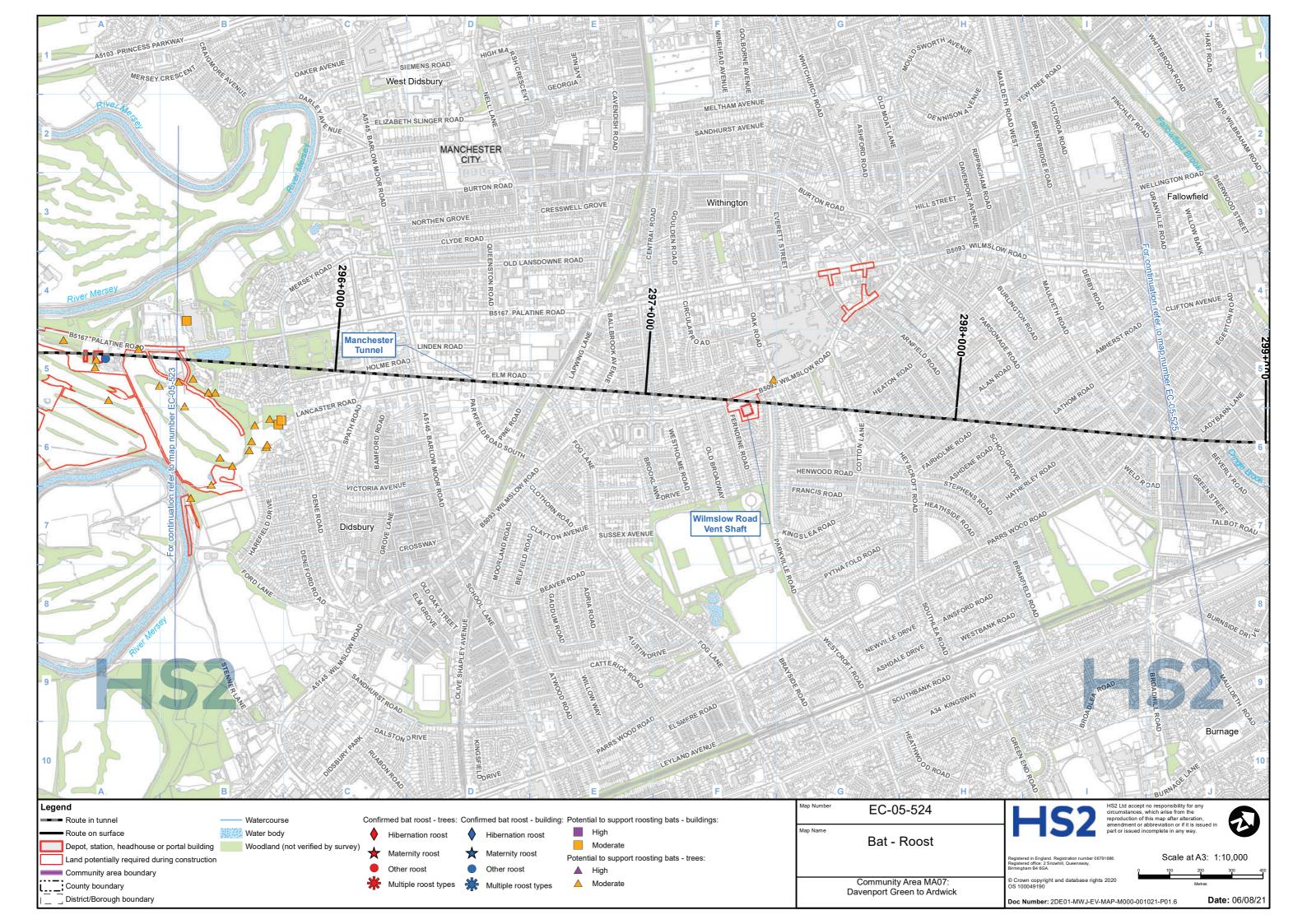


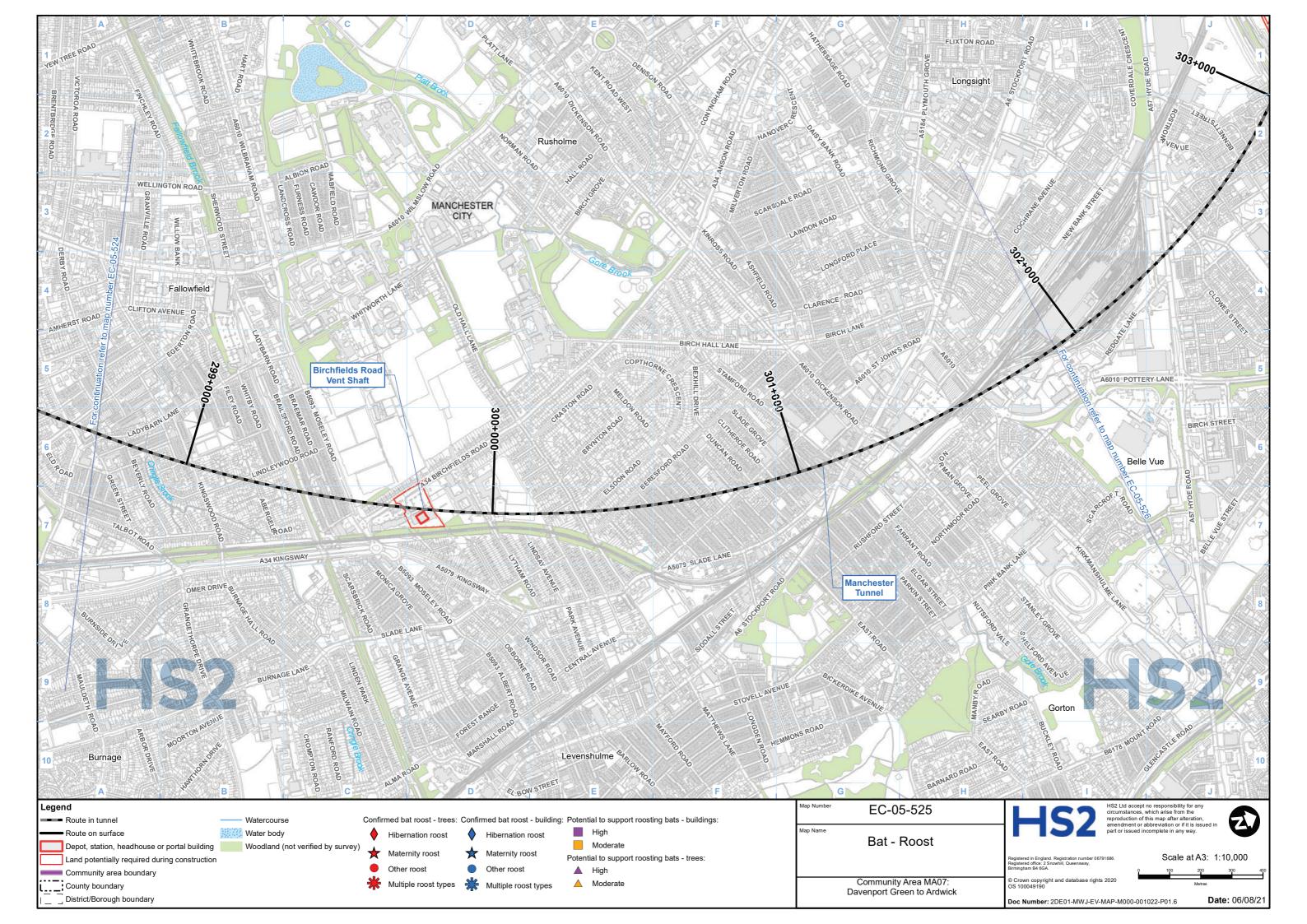


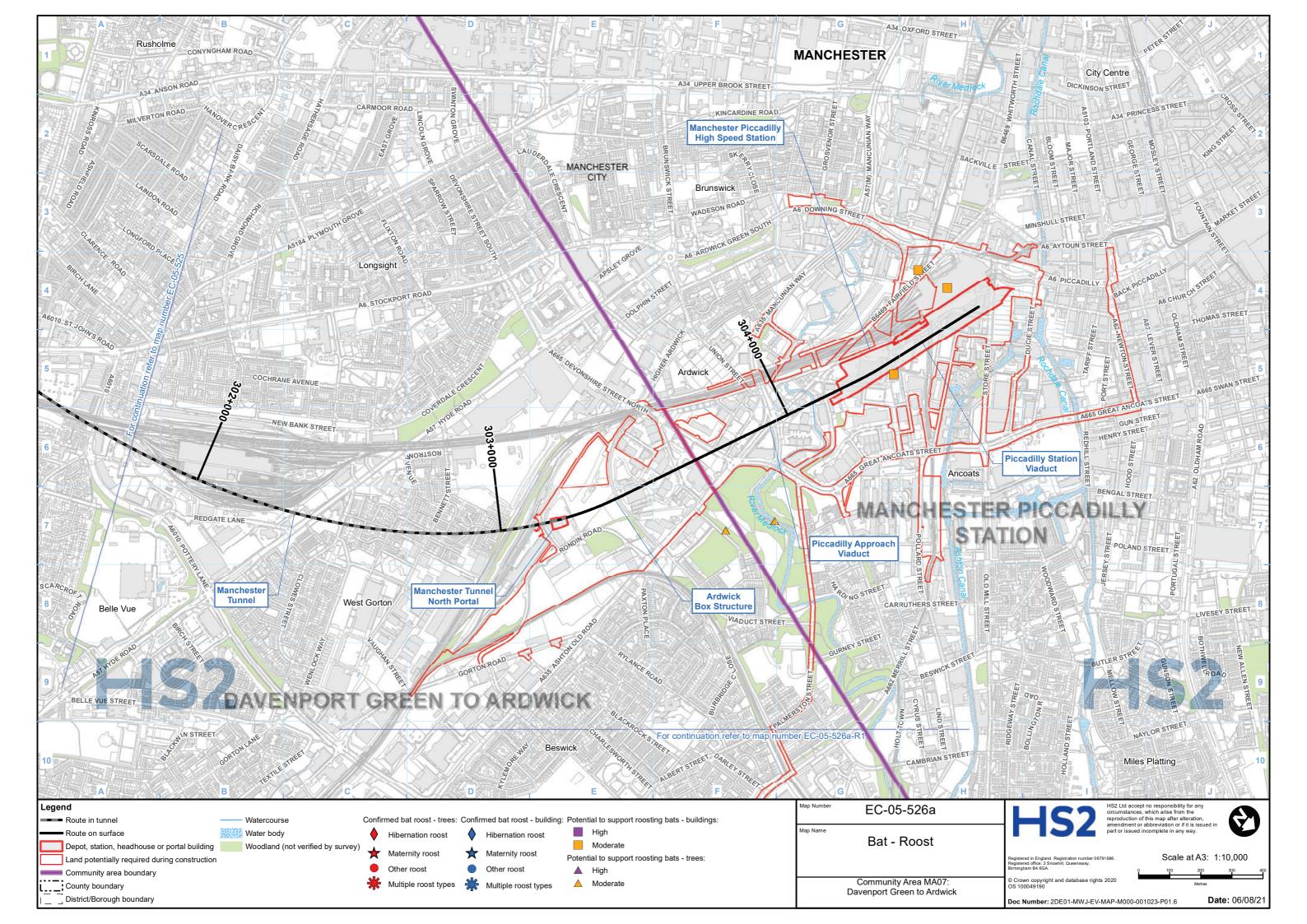


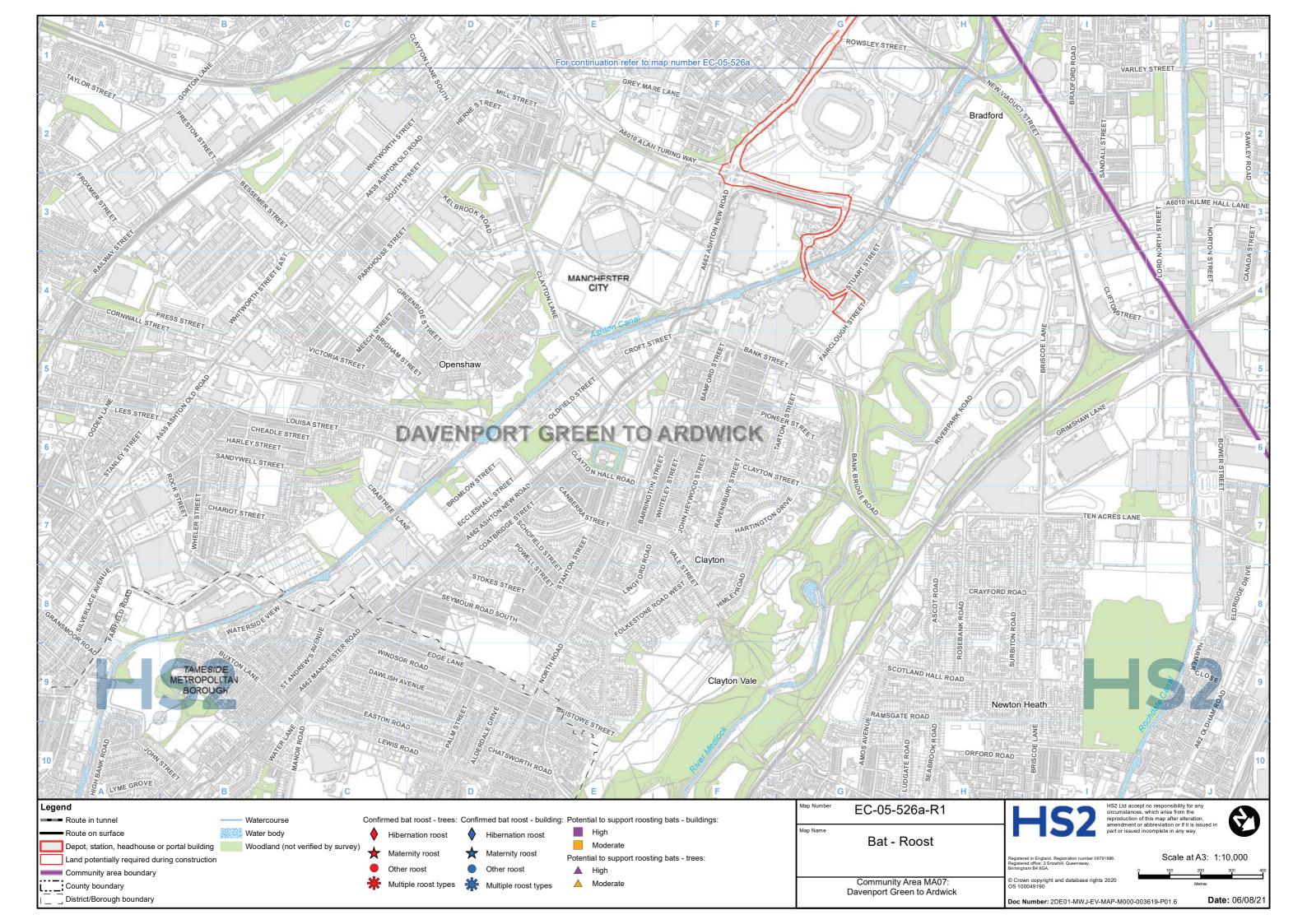






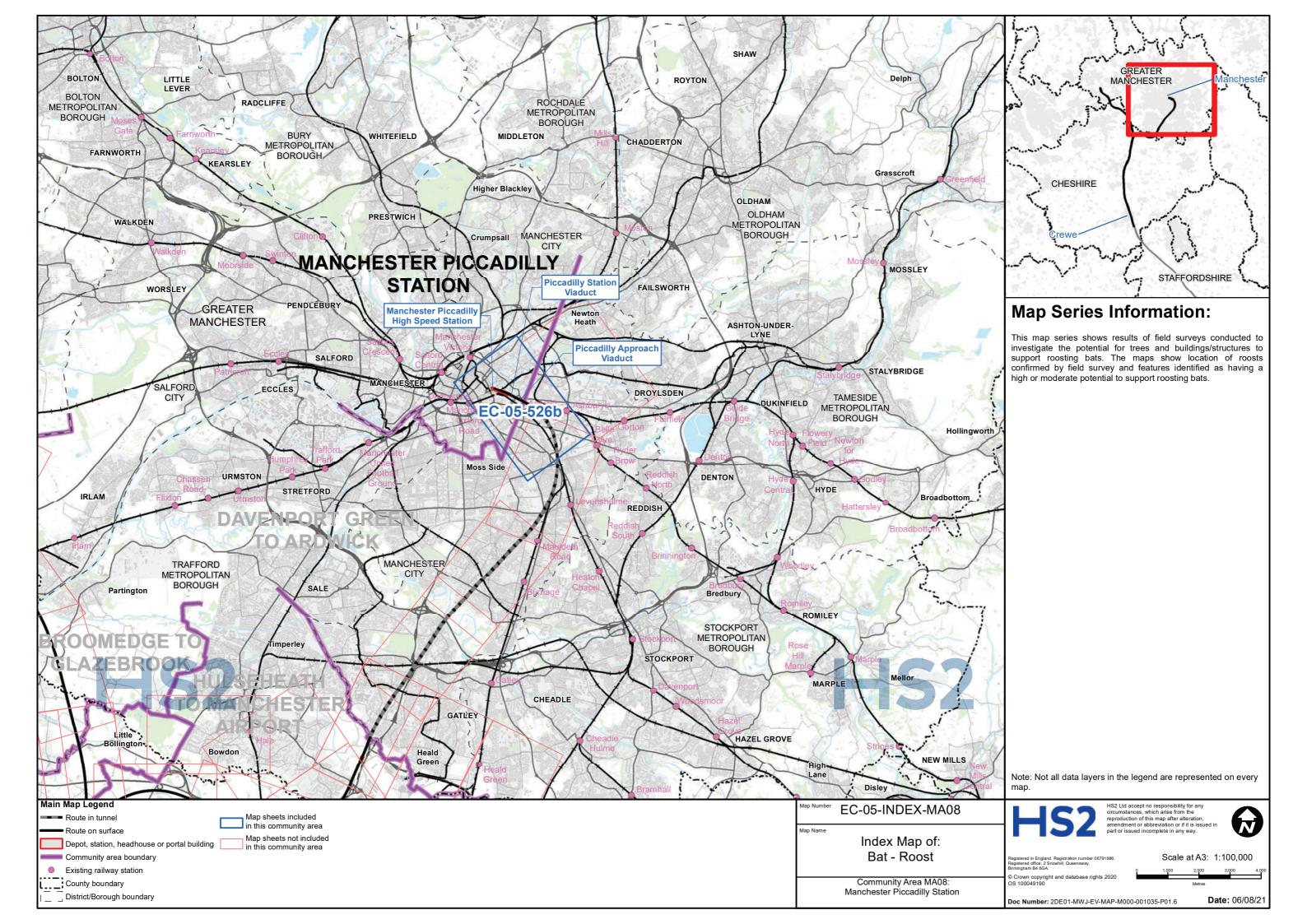


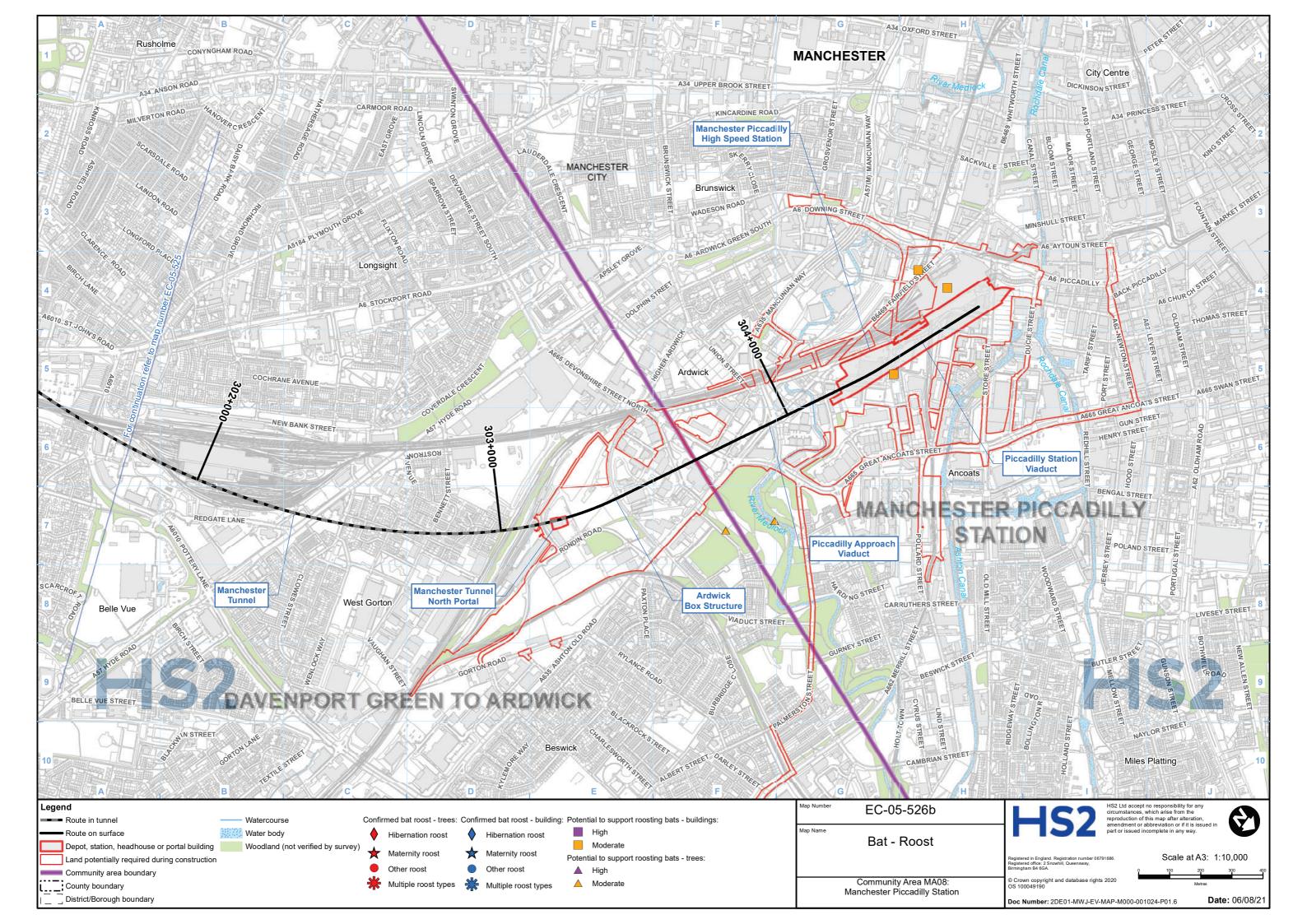




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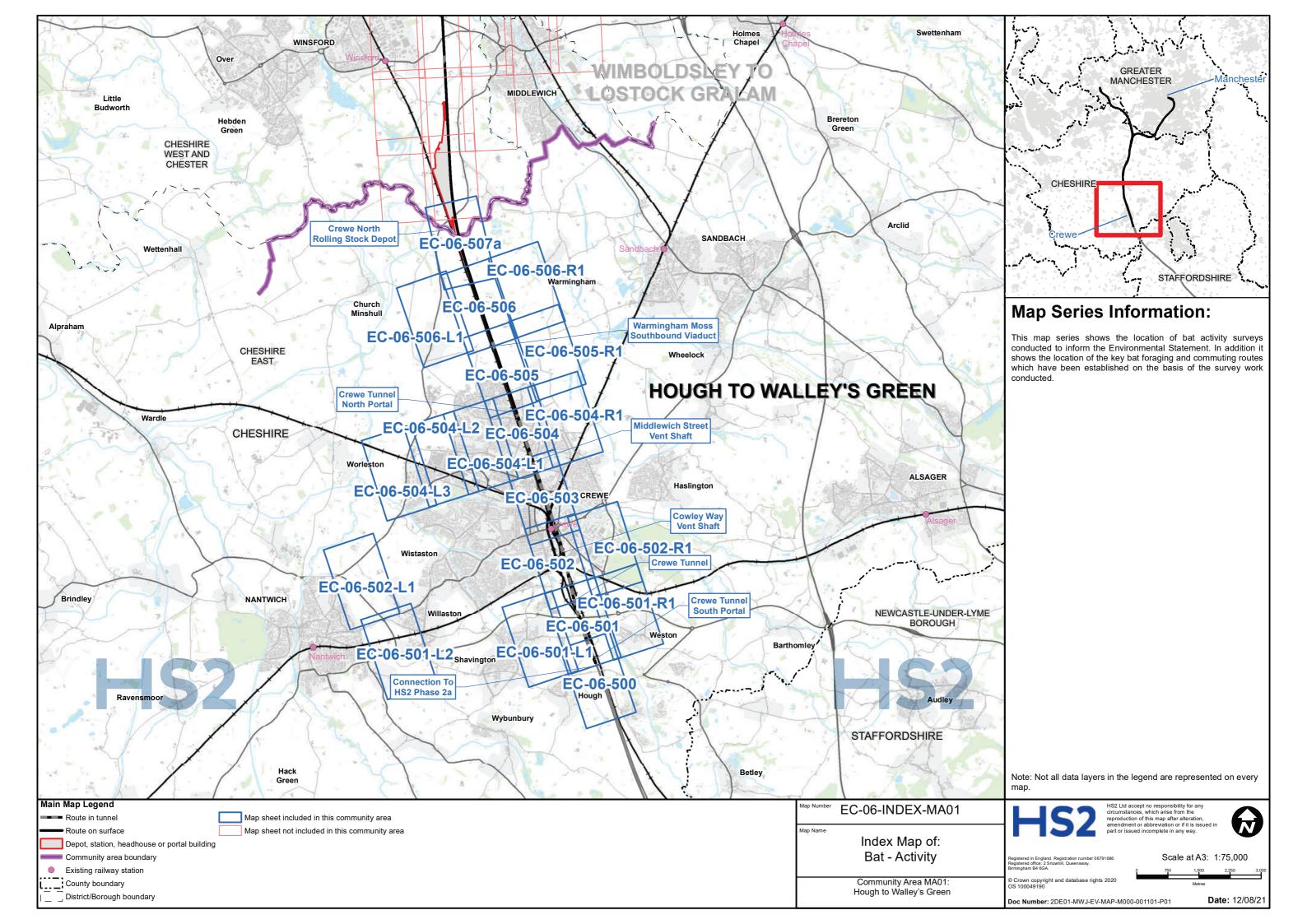
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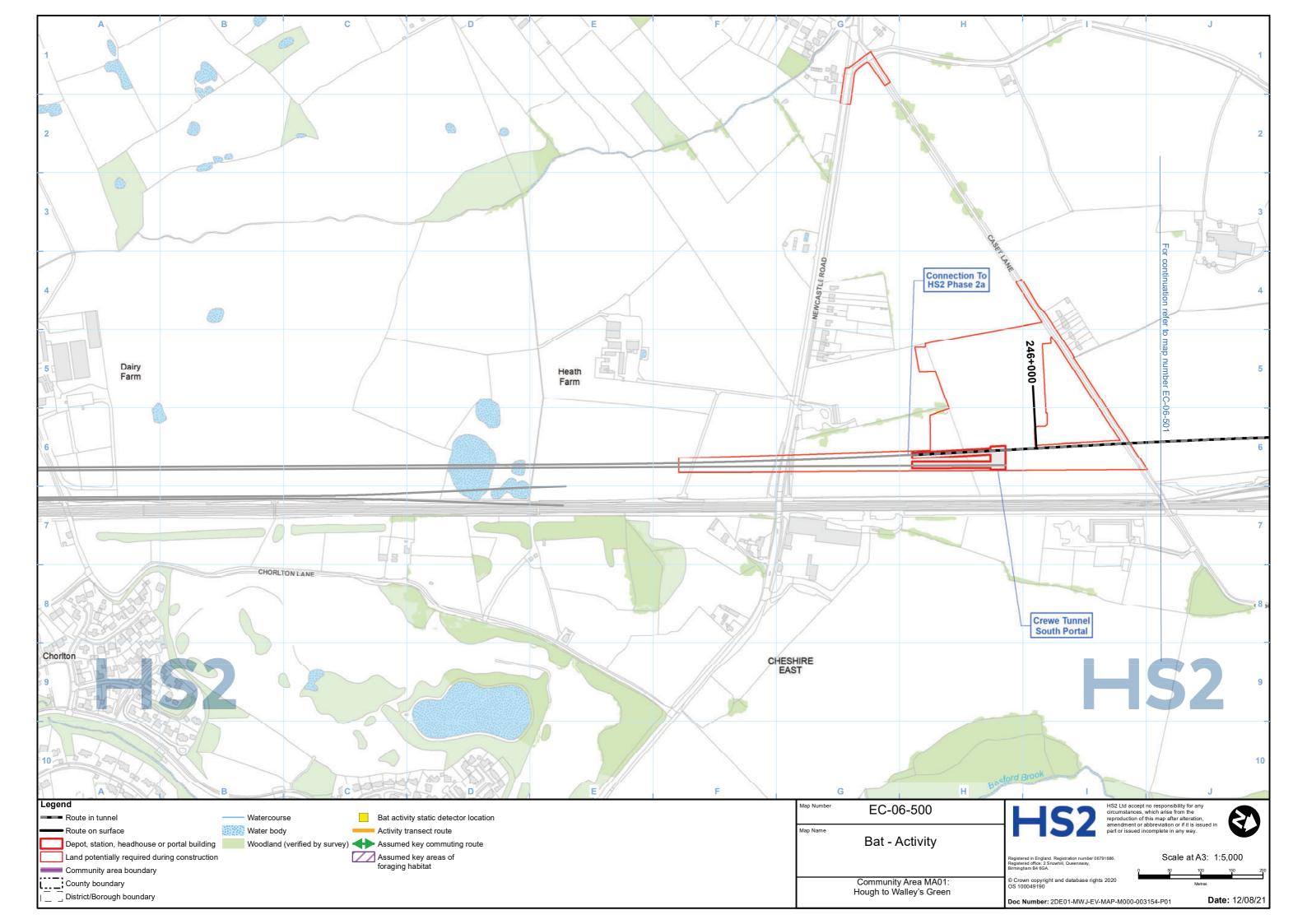
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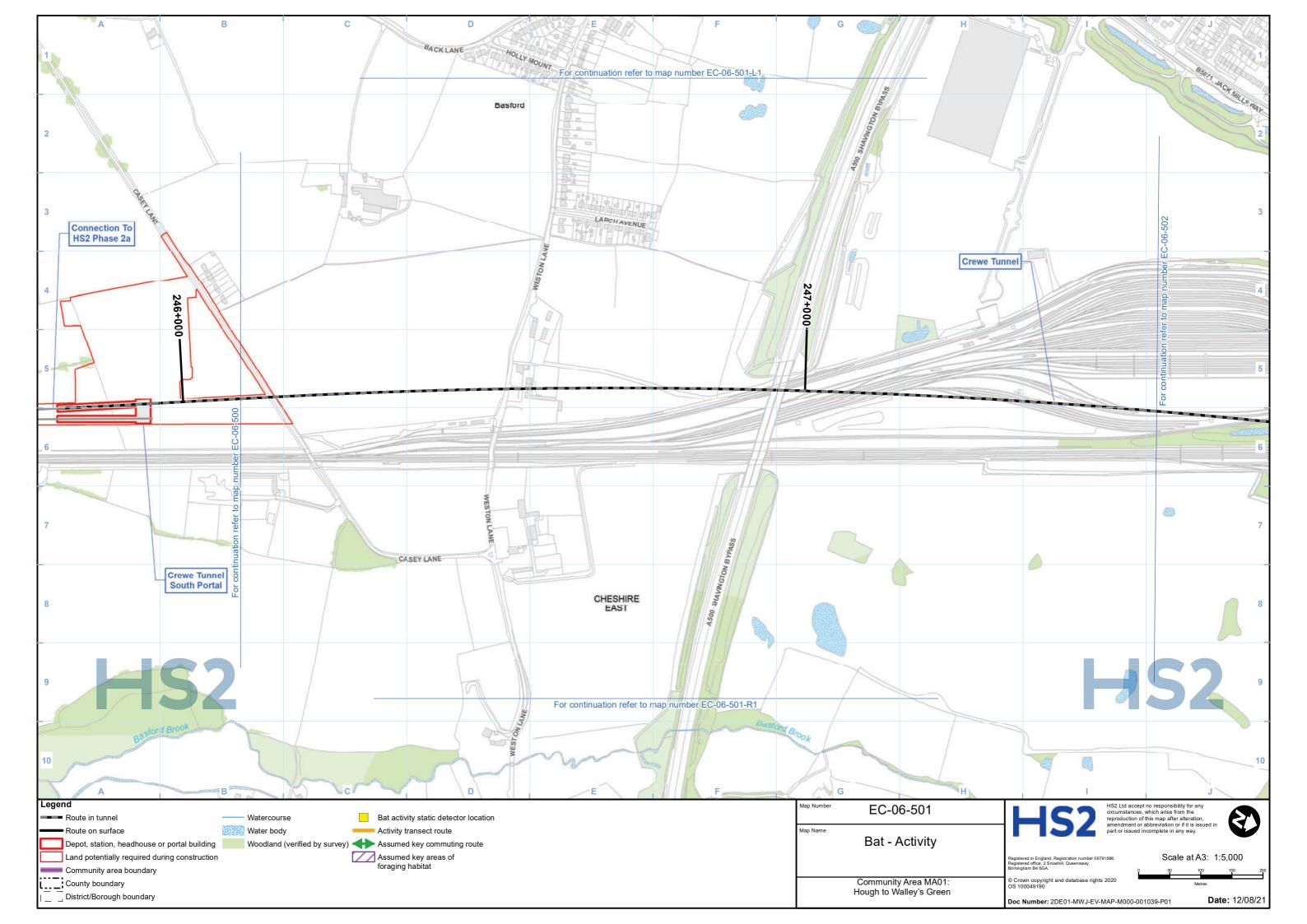


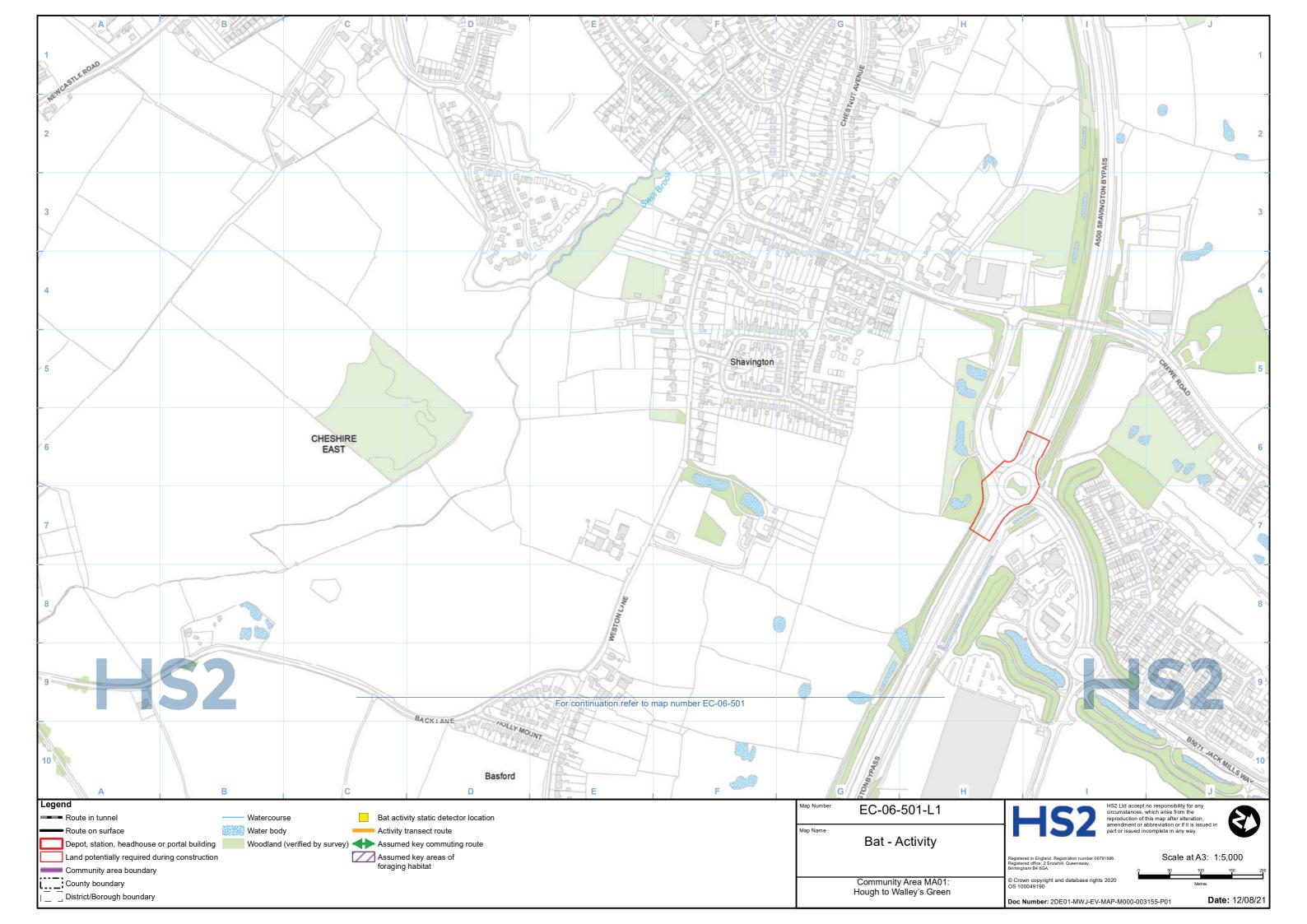
## **High Speed Rail** (Crewe – Manchester)

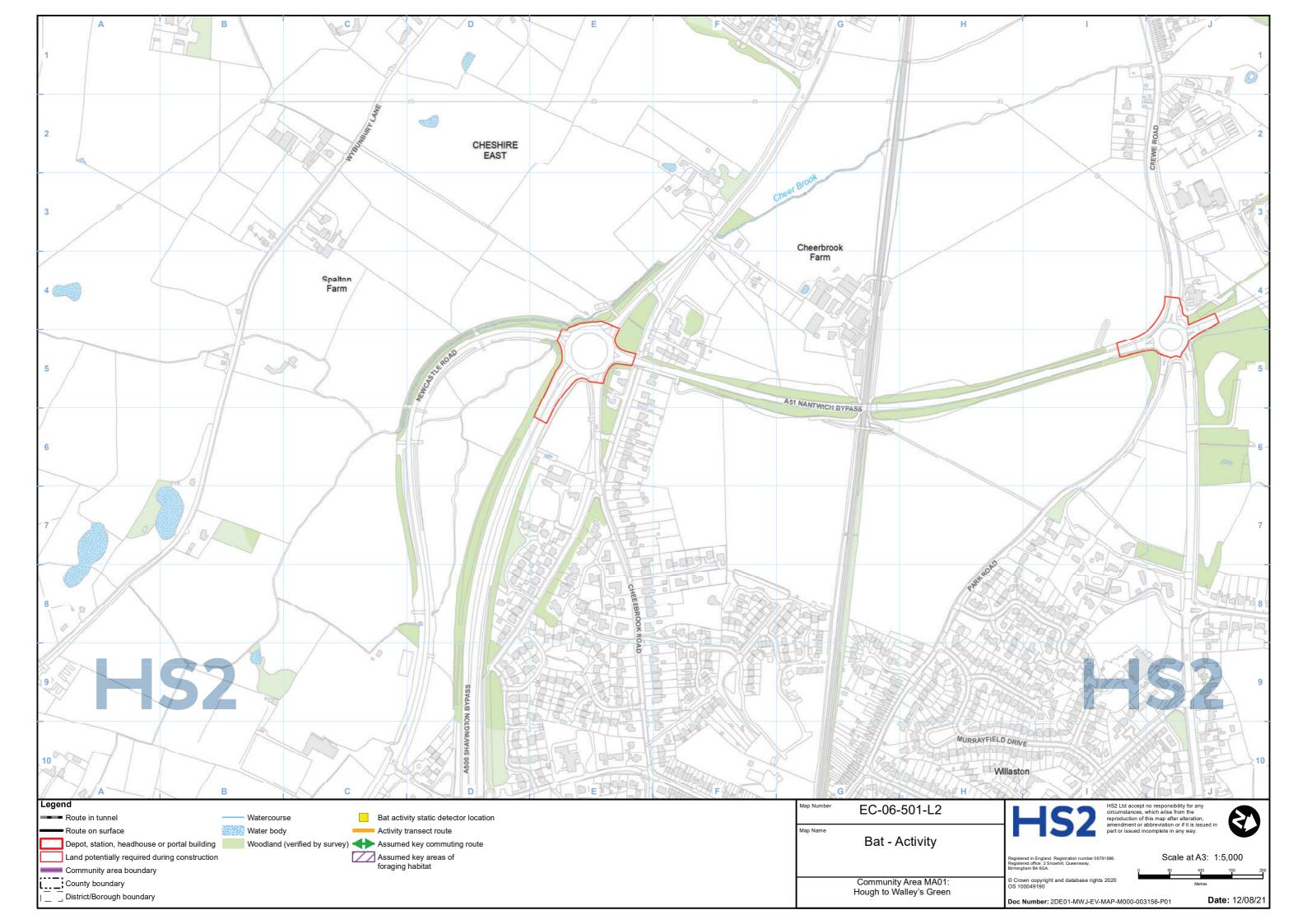
Background Information and Data EC-06 - Bat - Activity

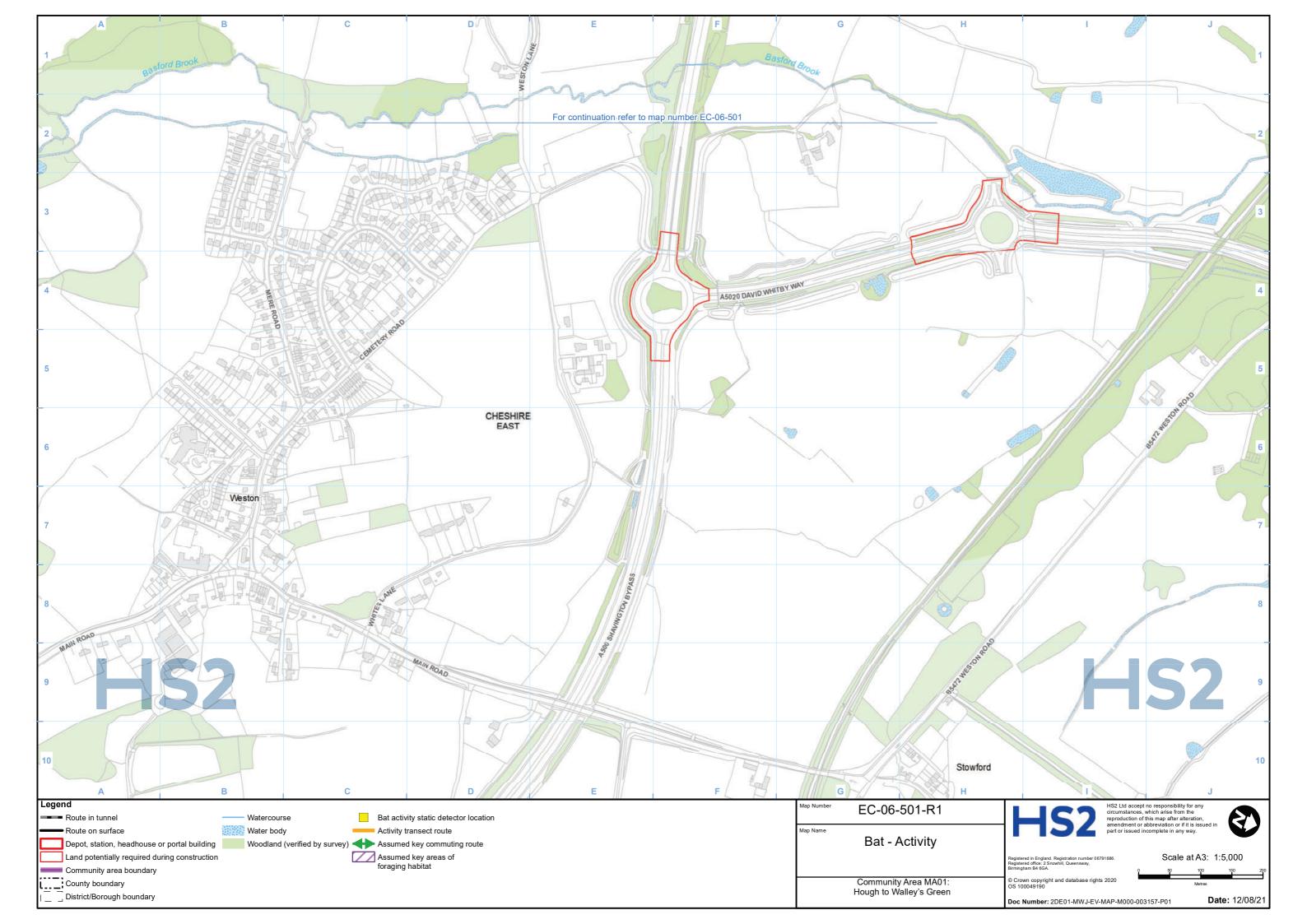


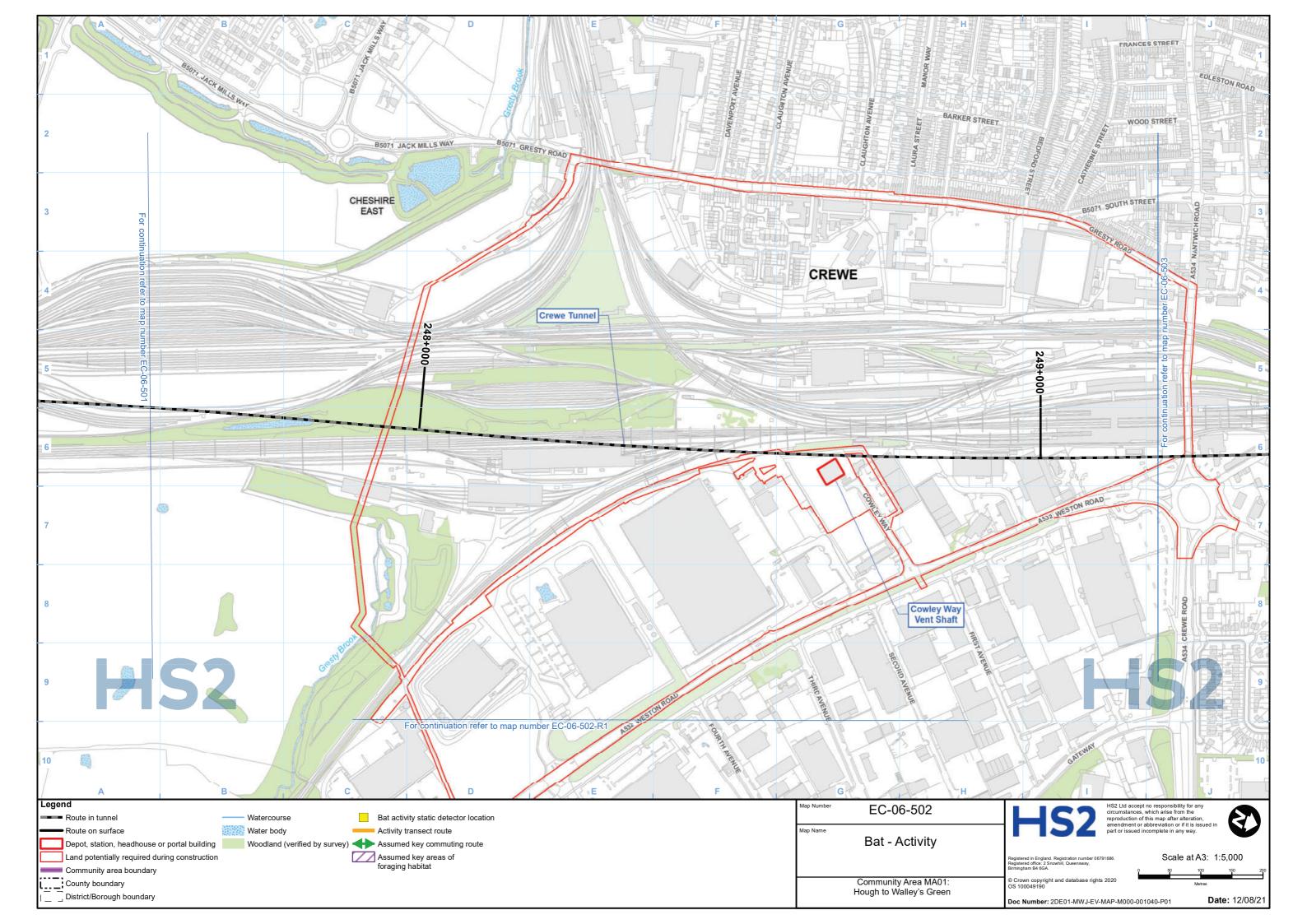


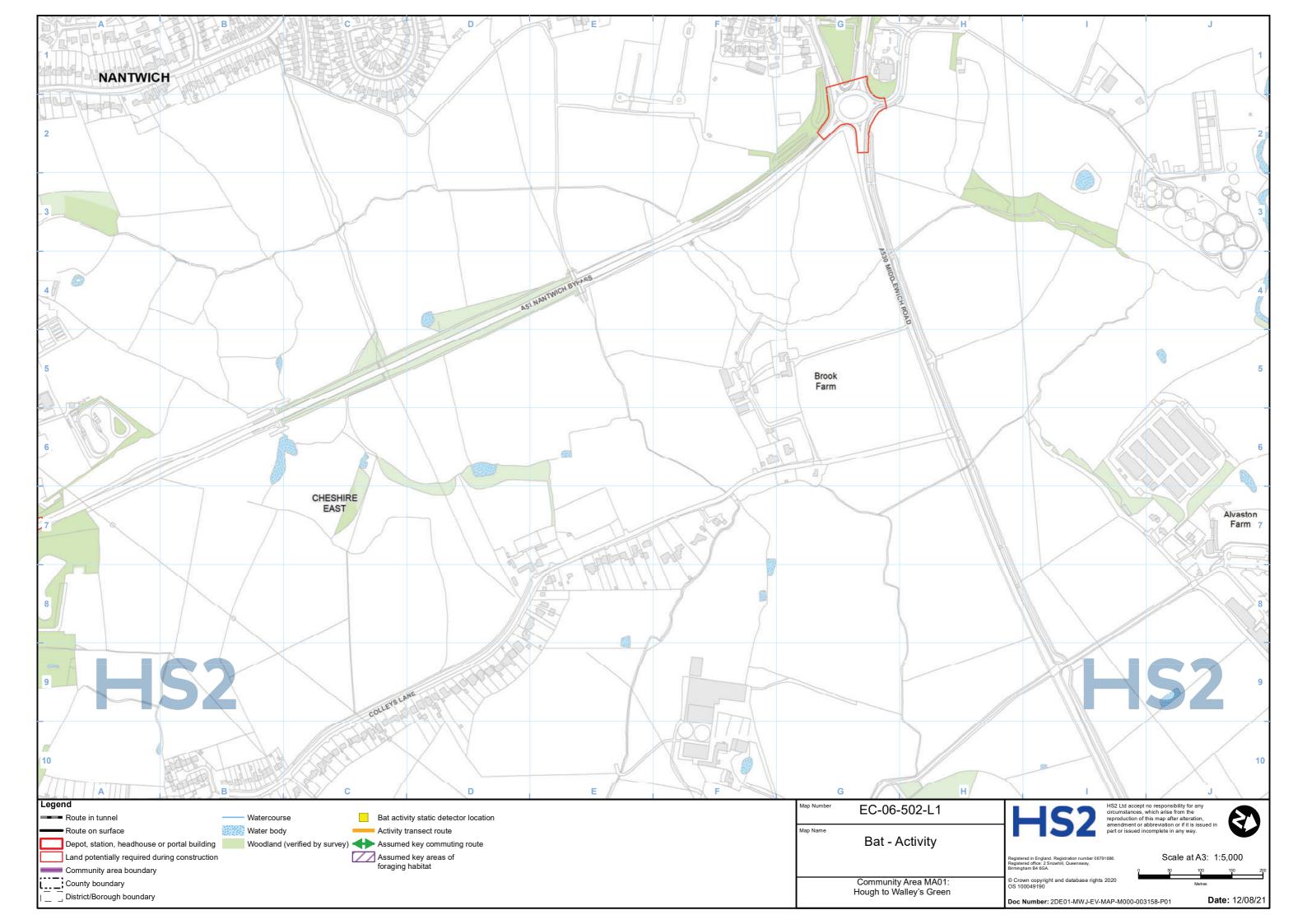


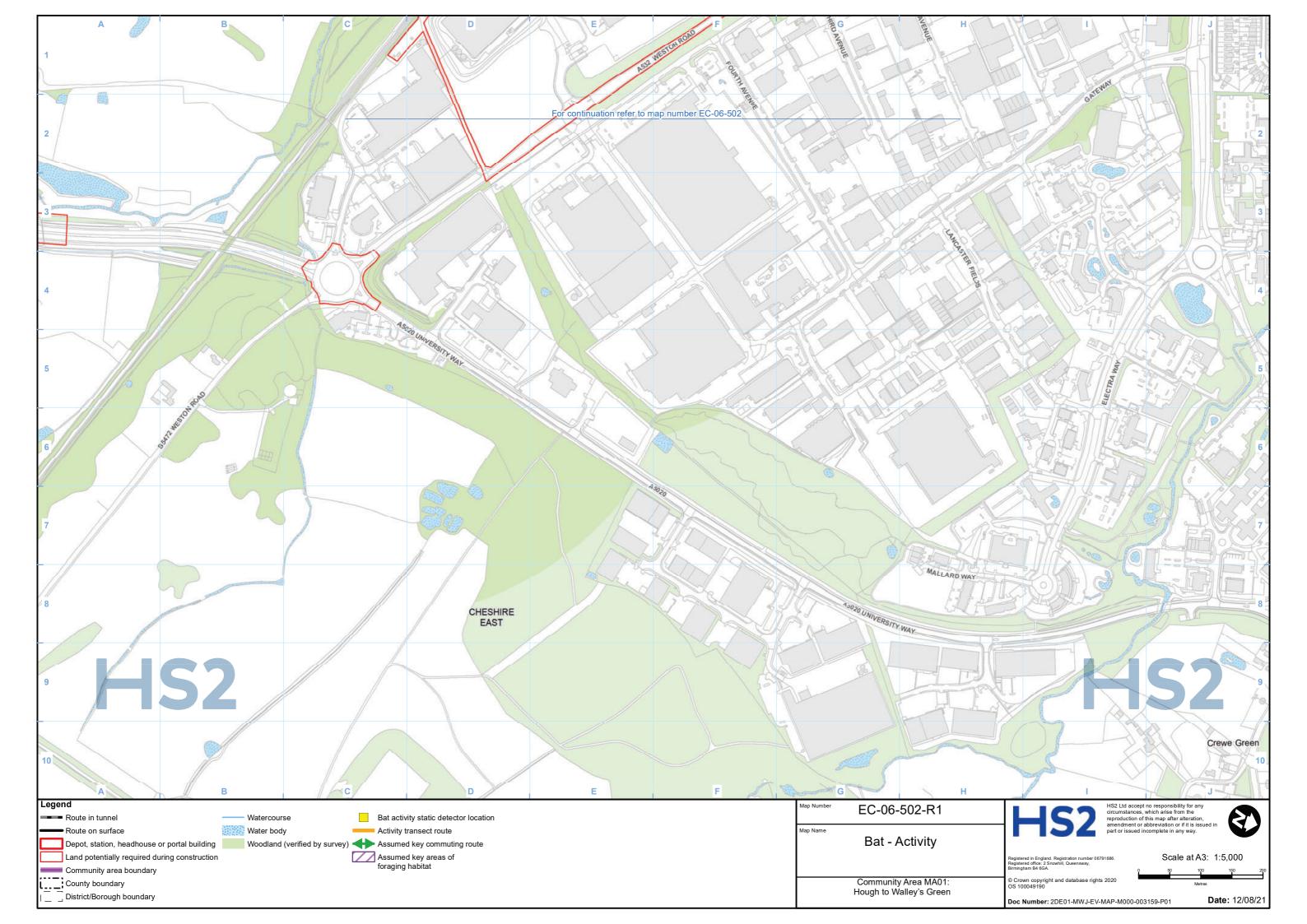


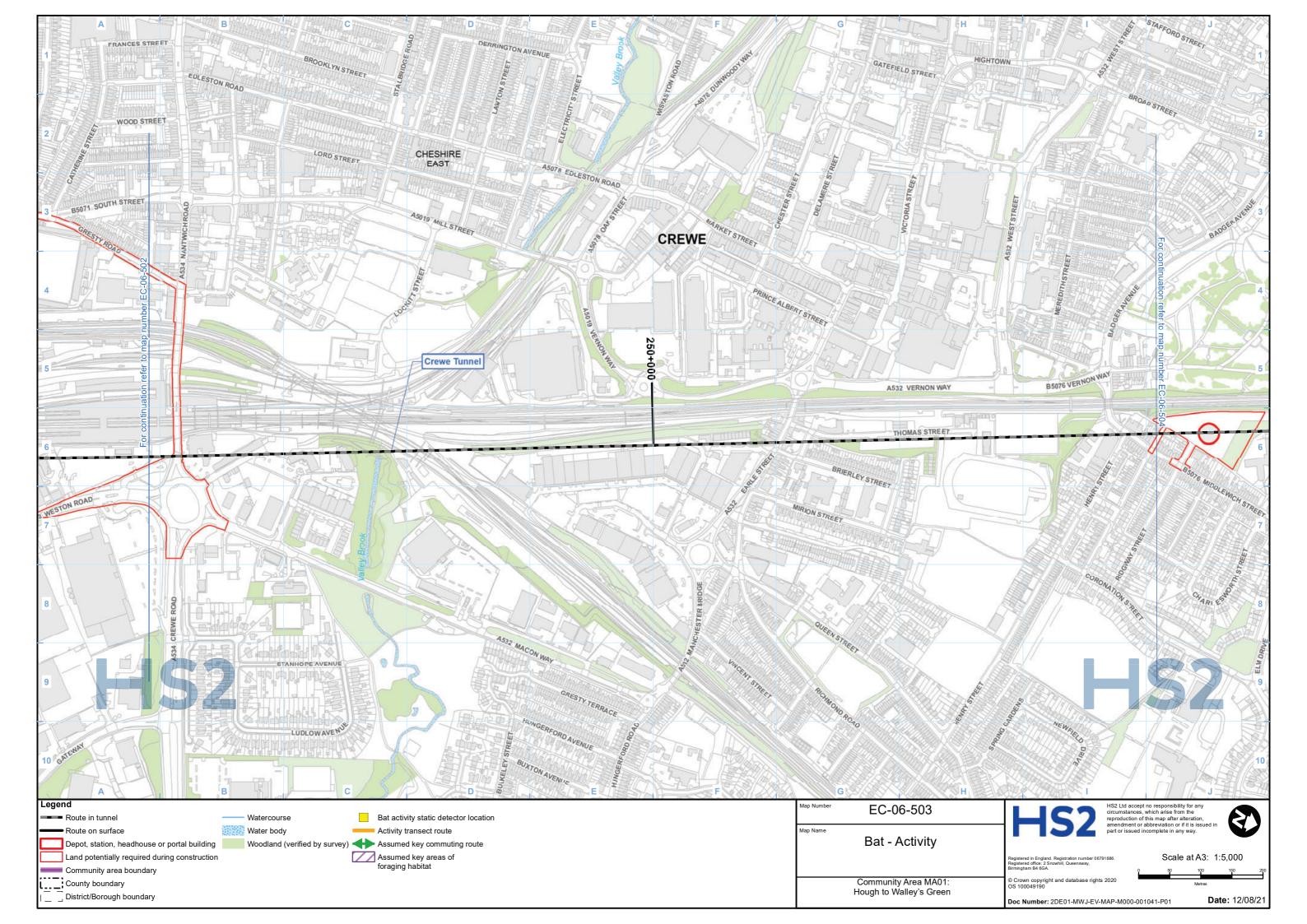


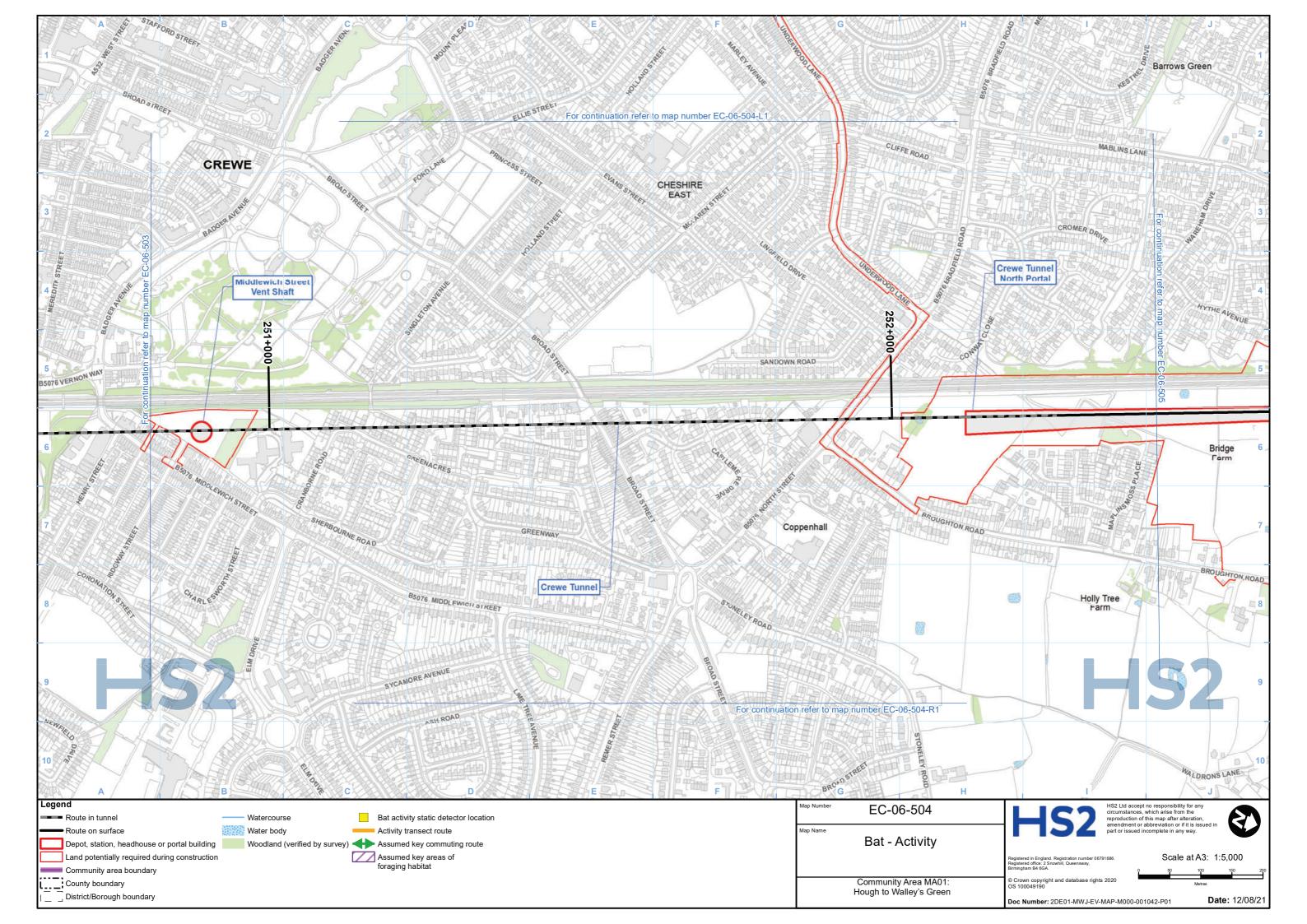


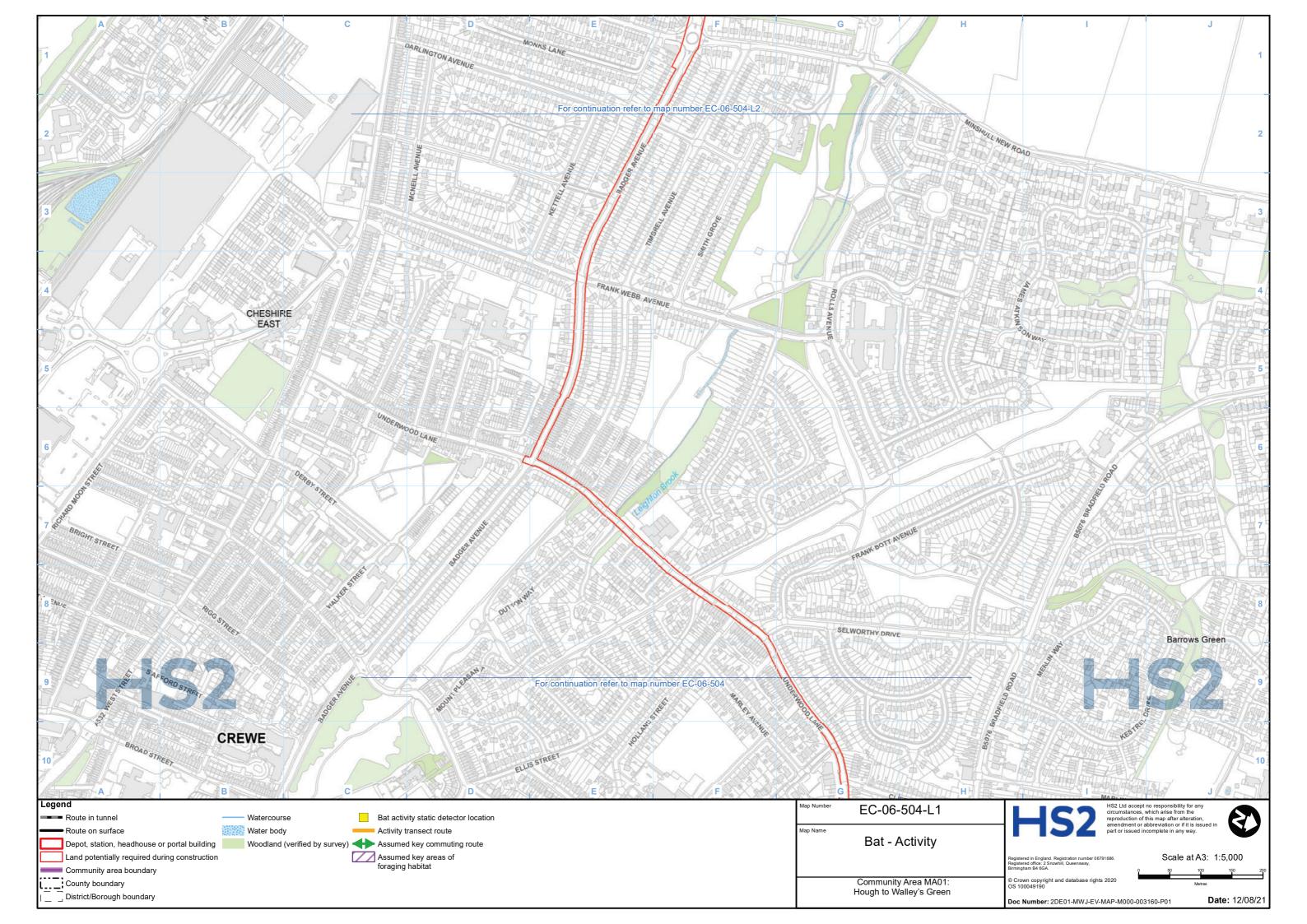


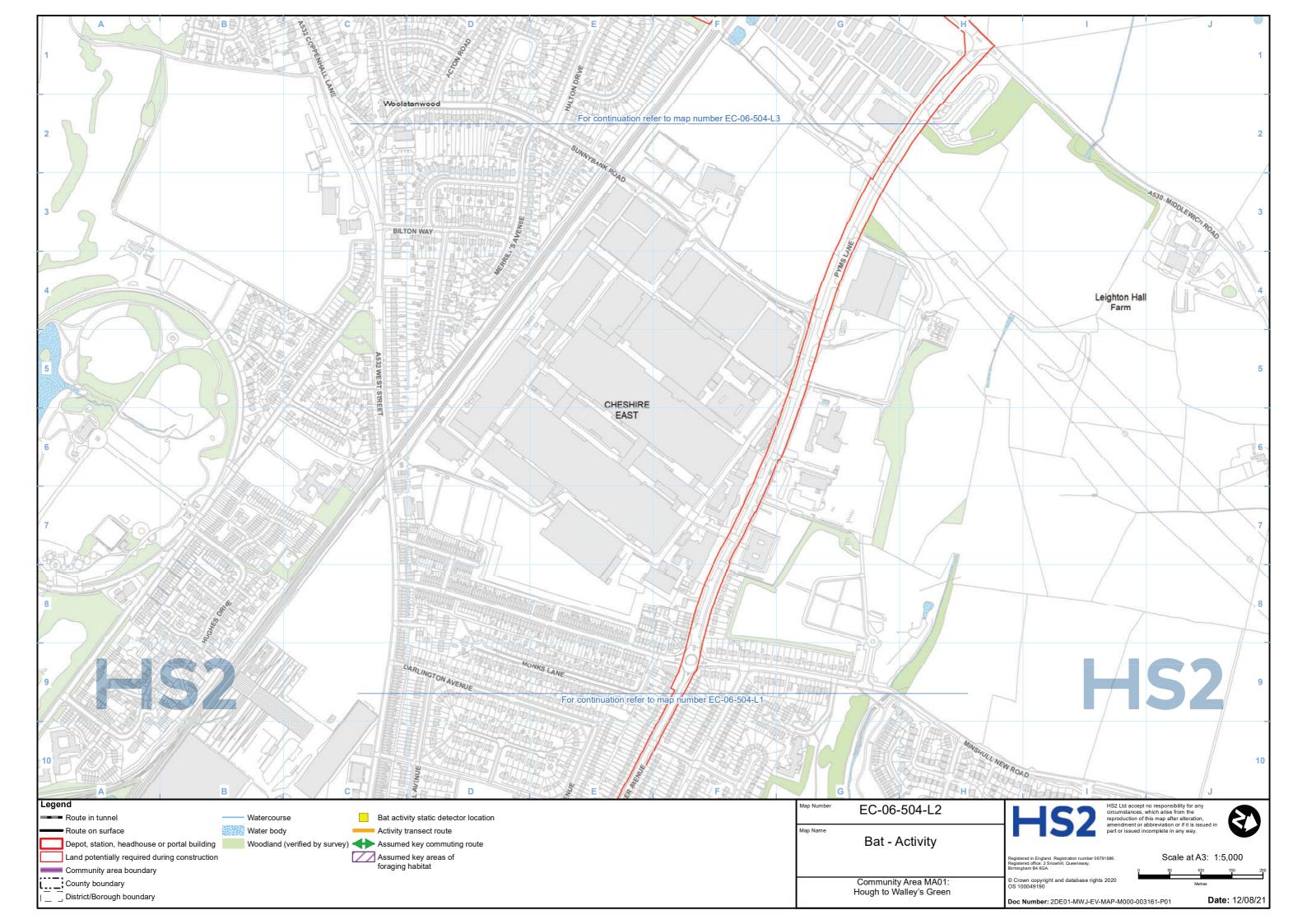


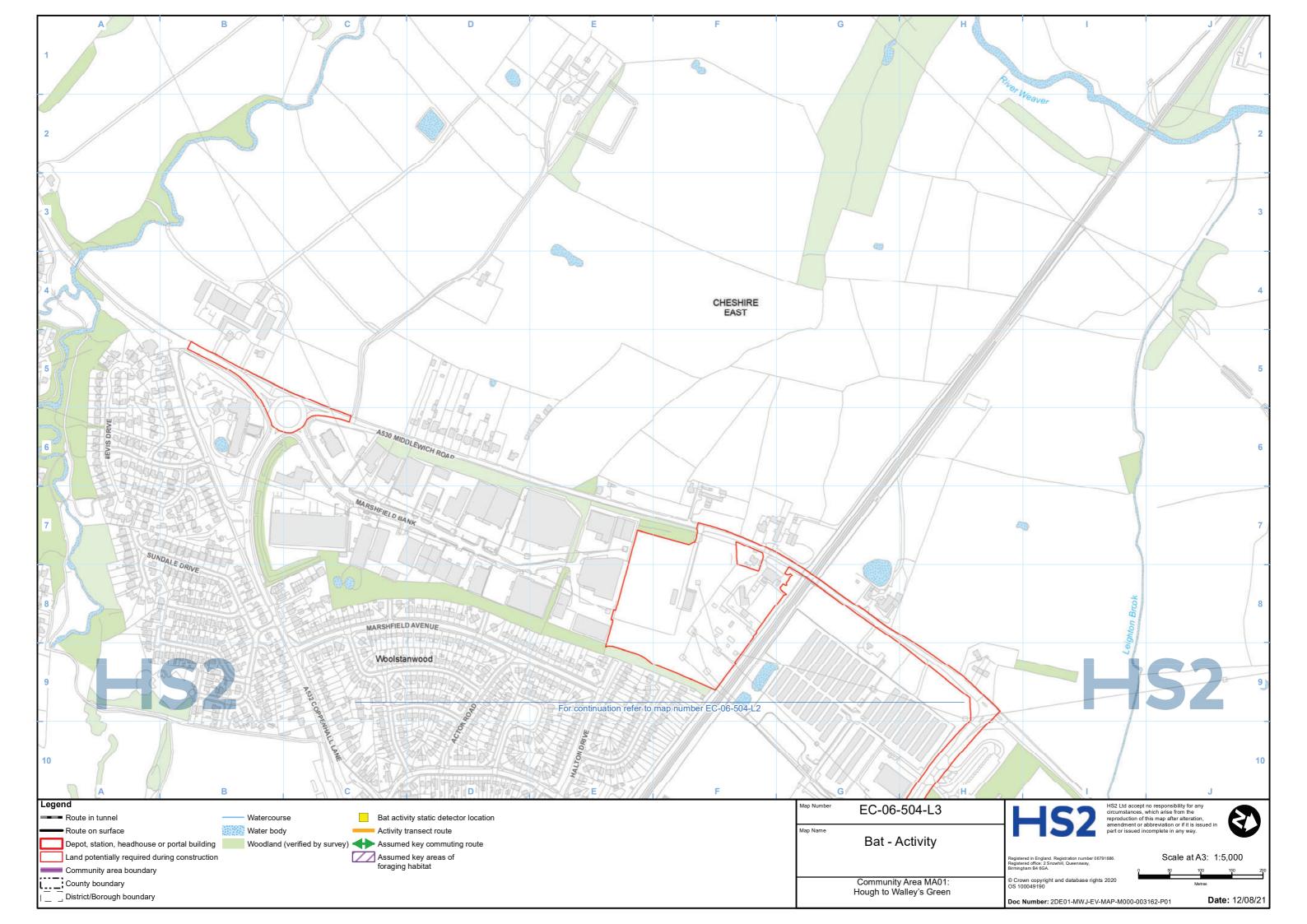


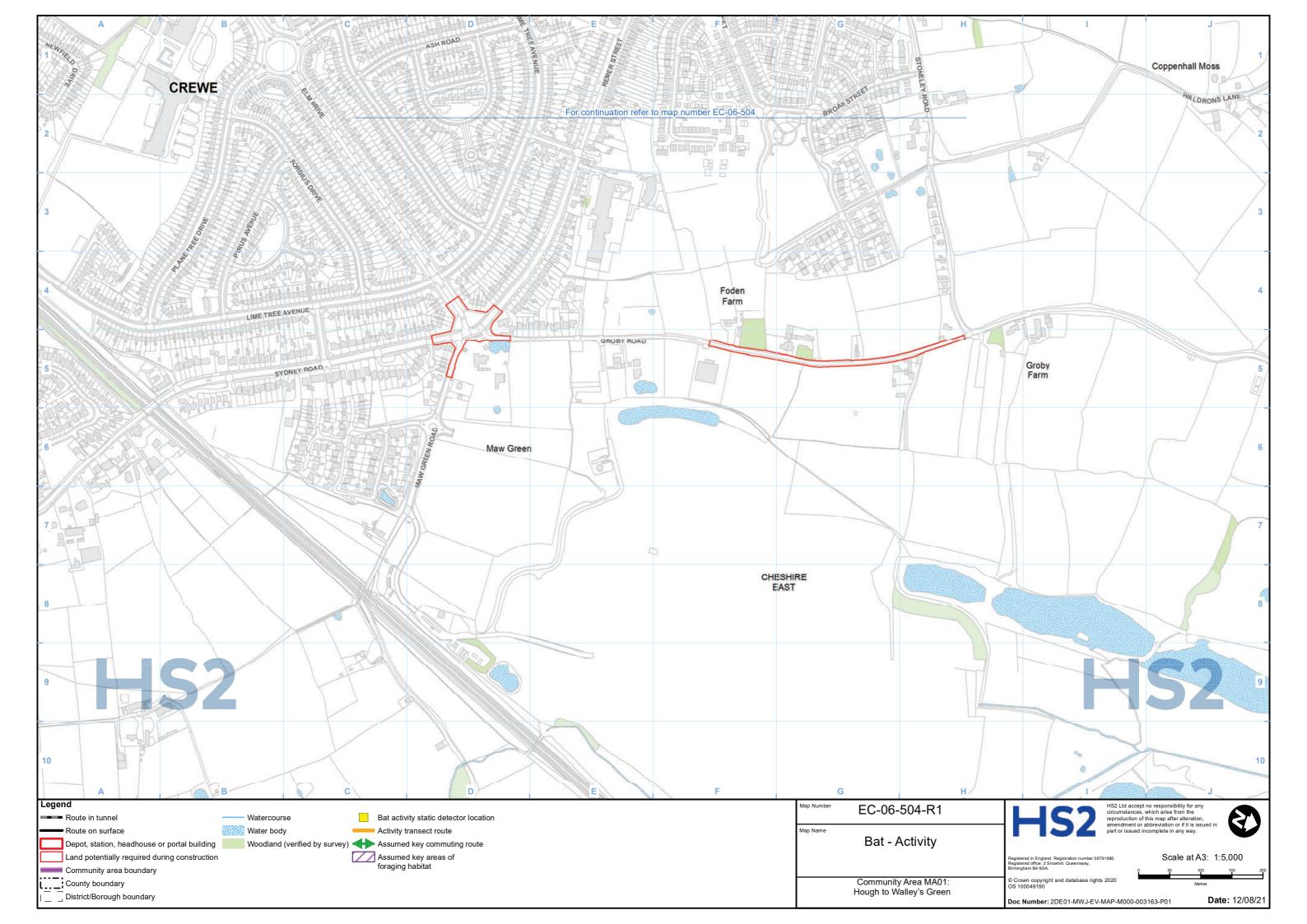


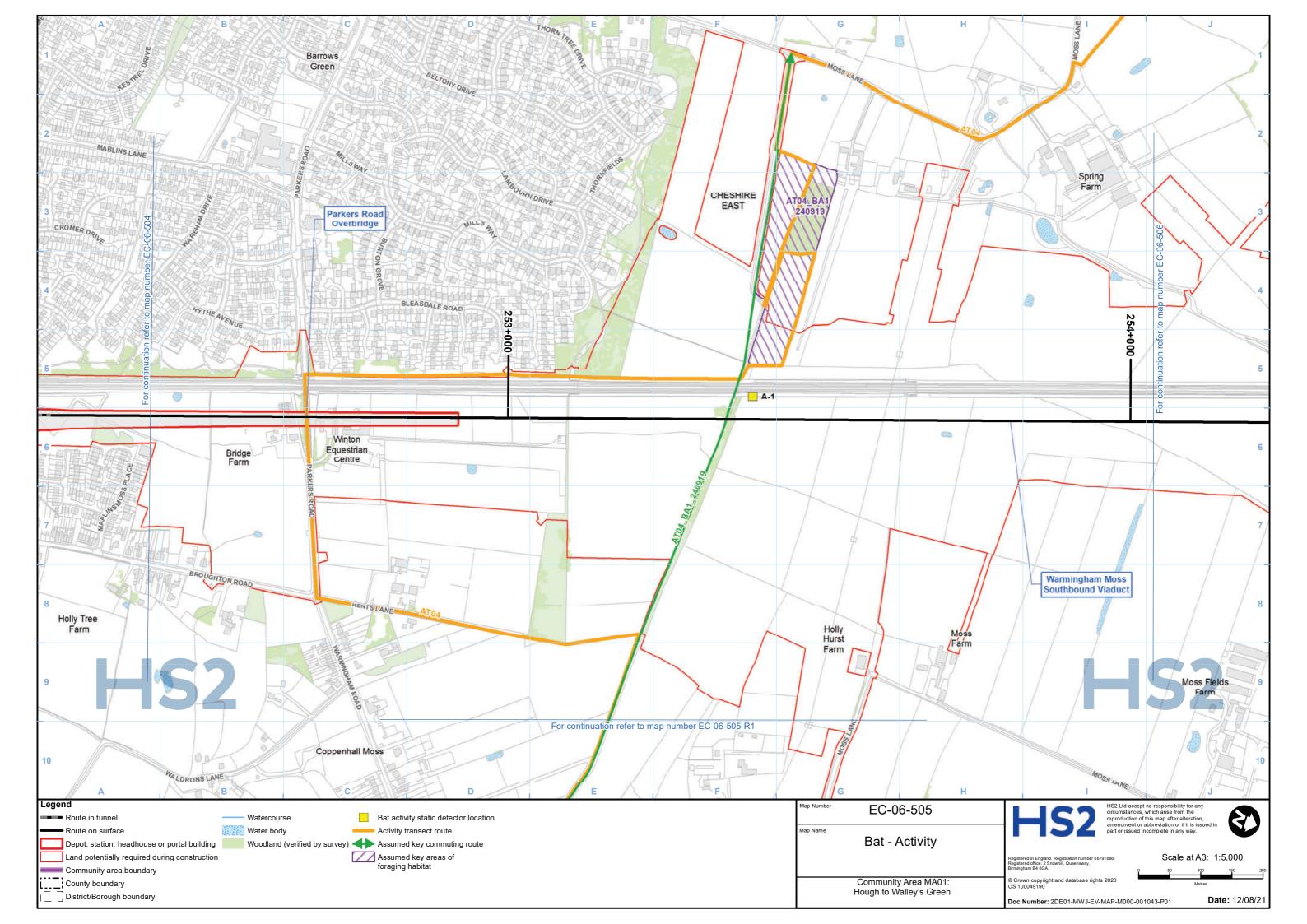


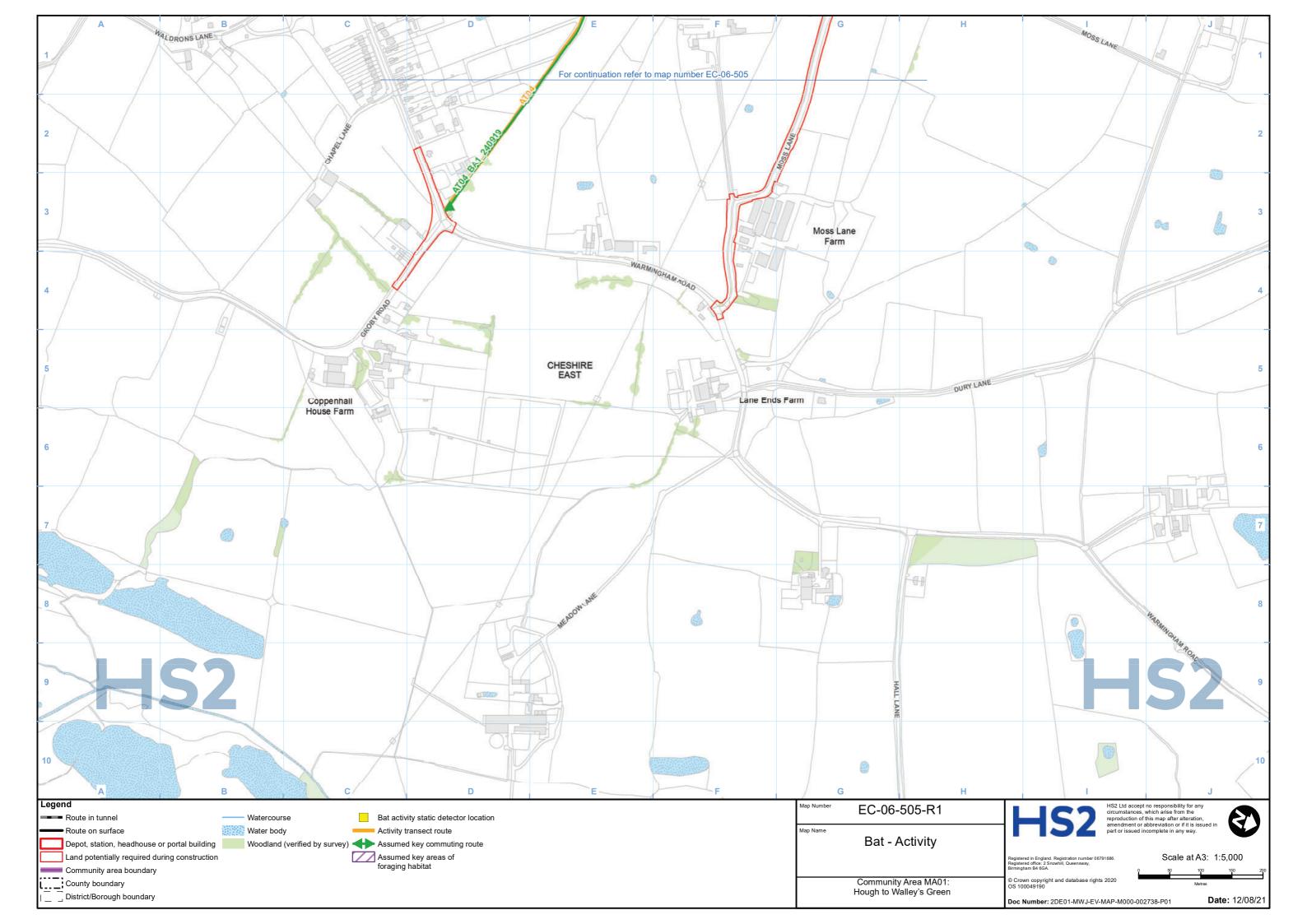


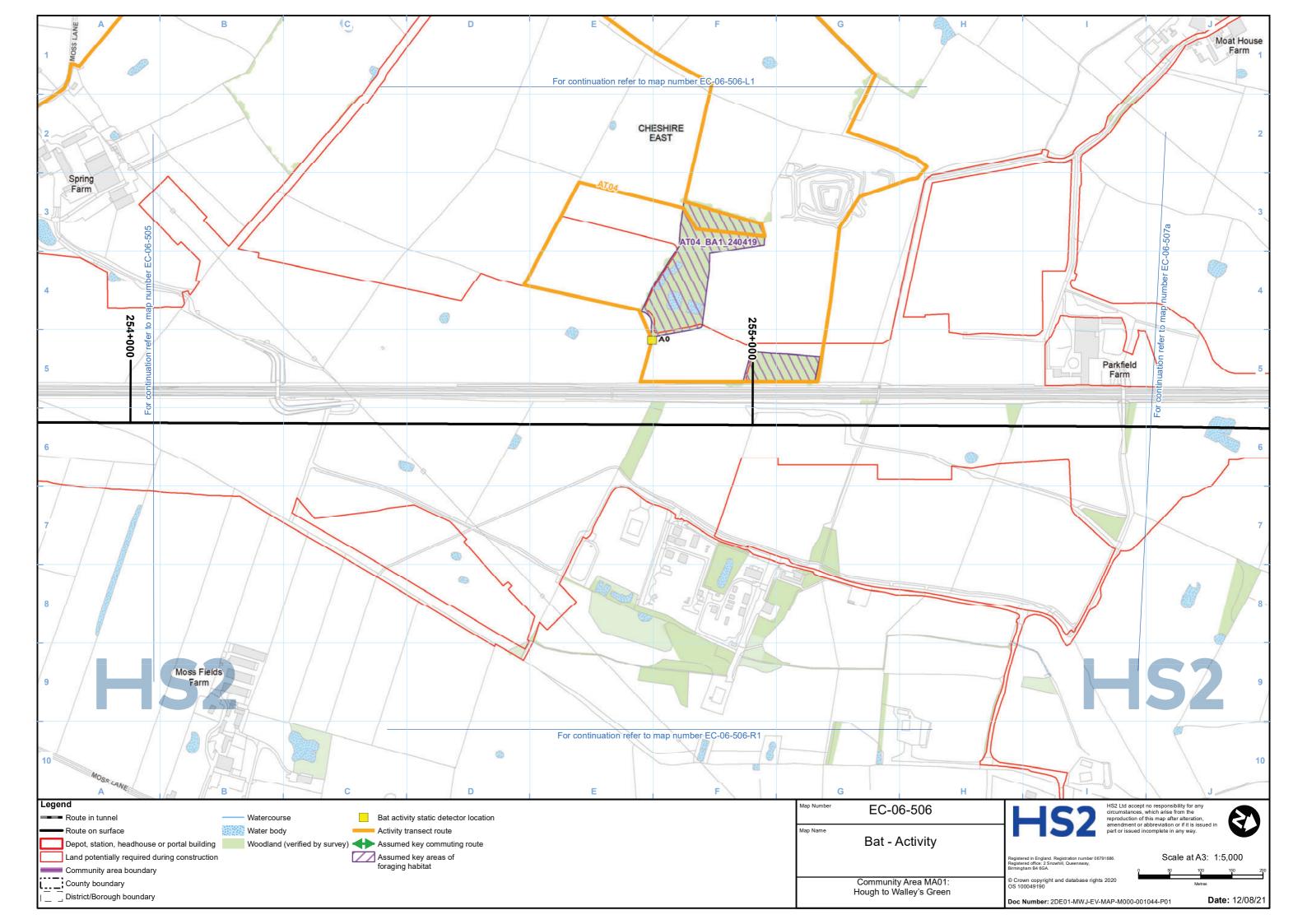


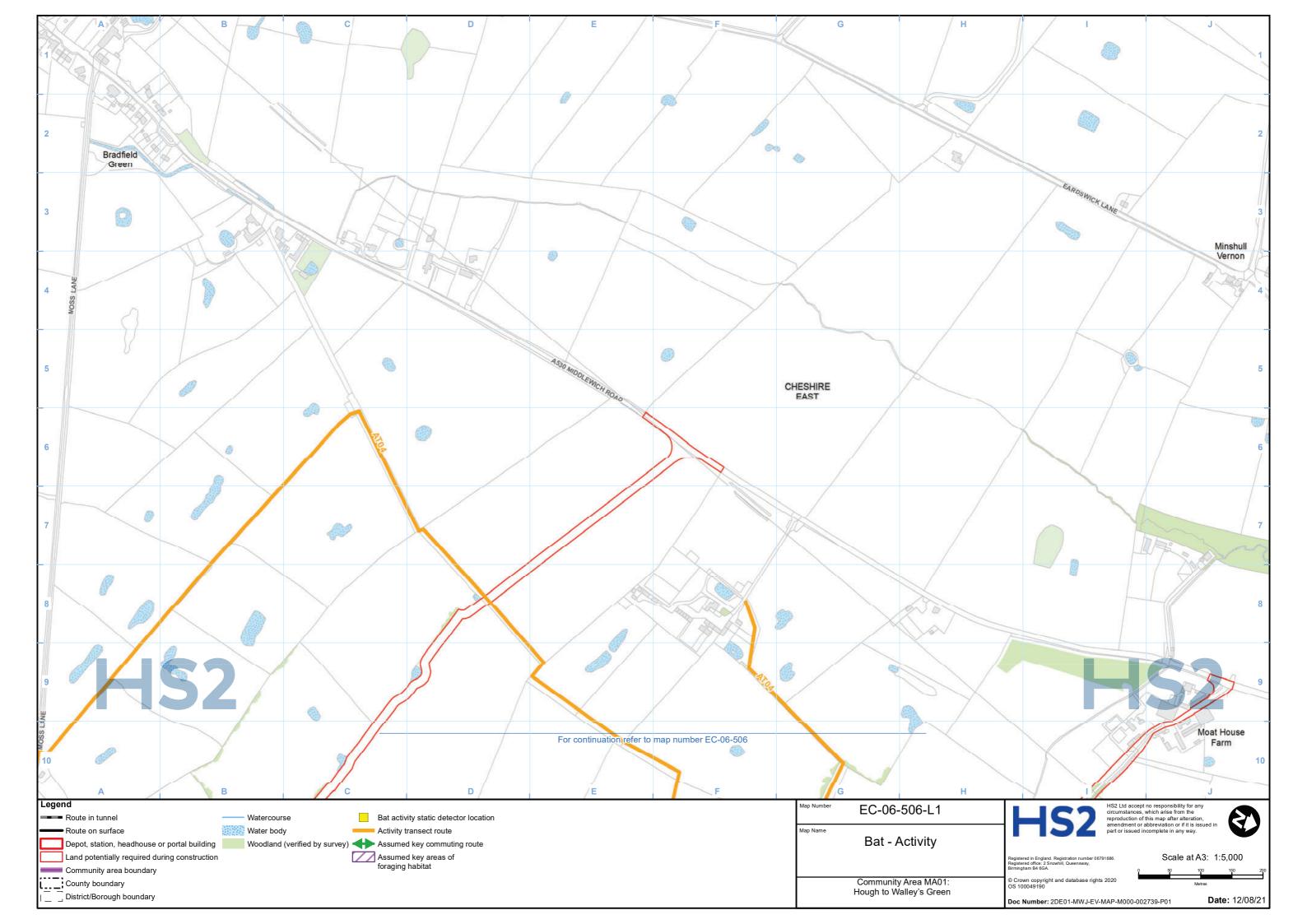


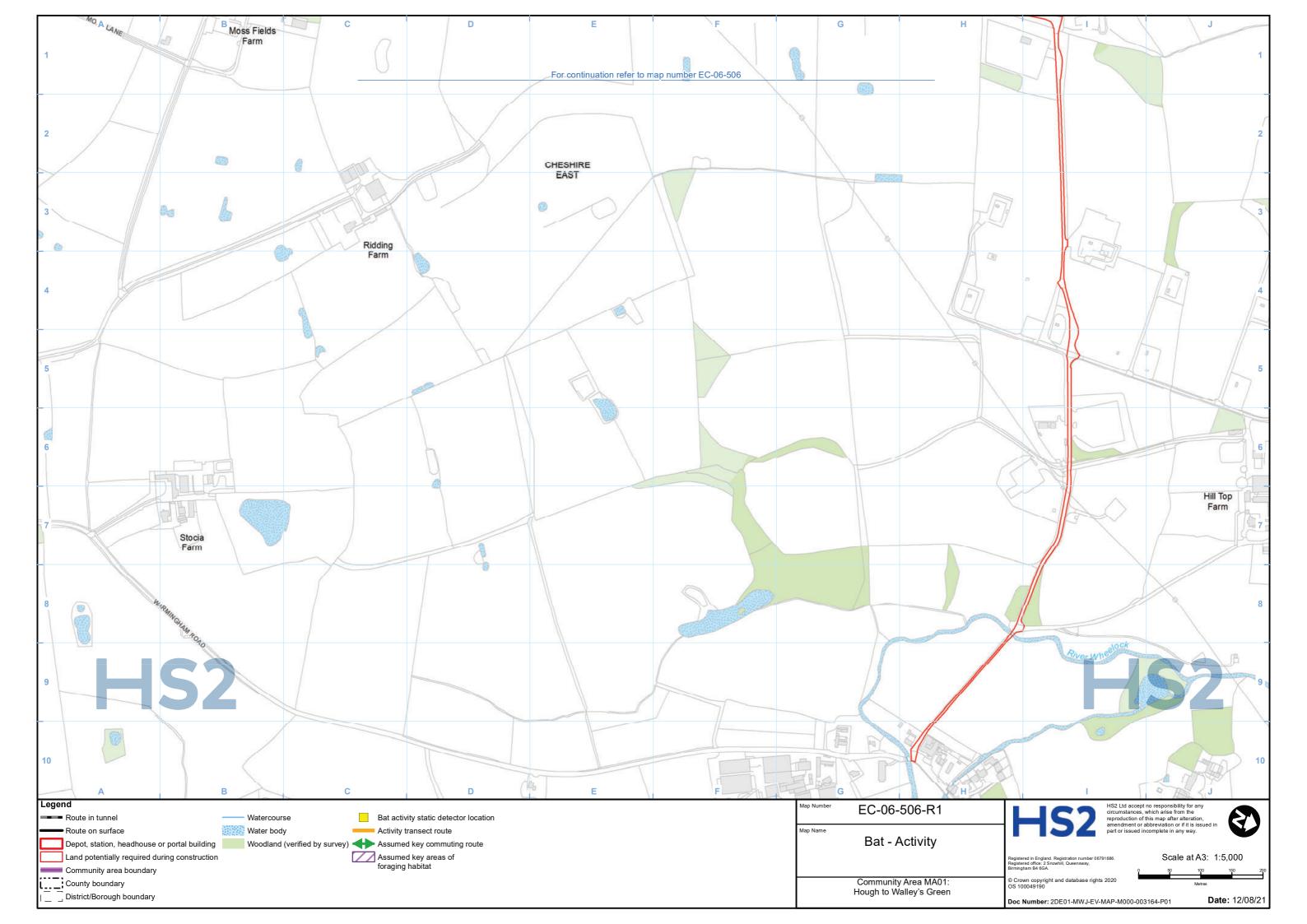


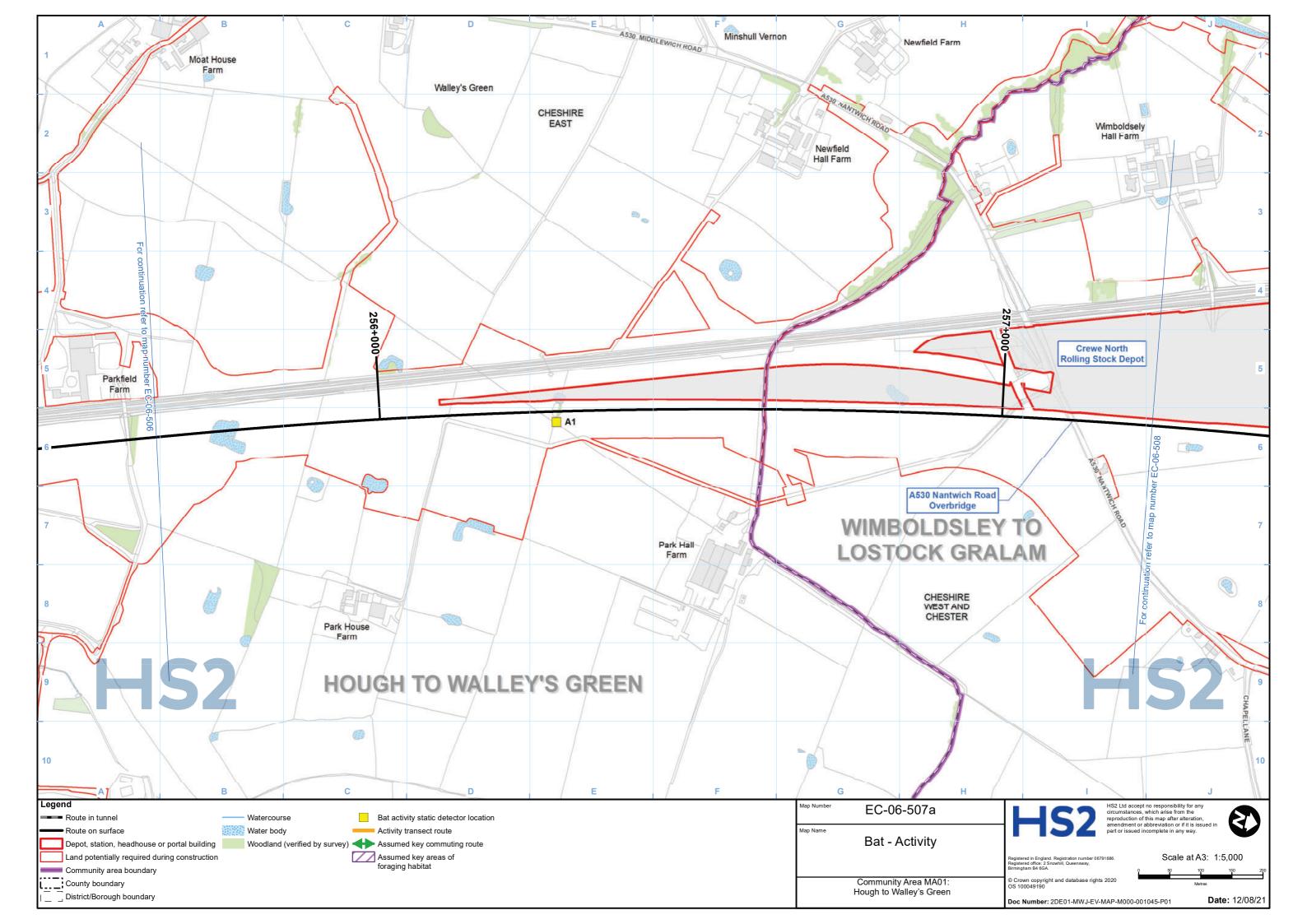






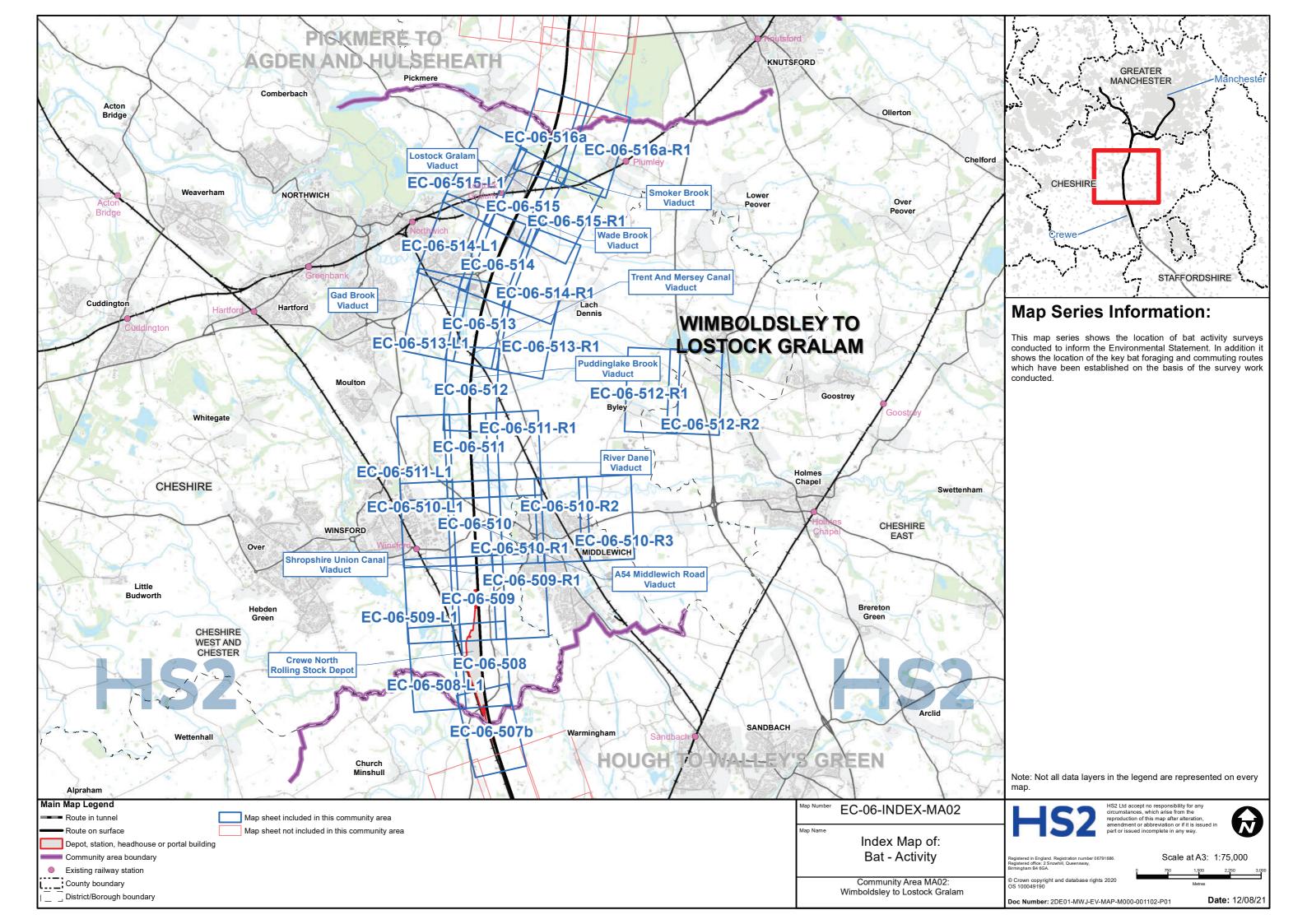


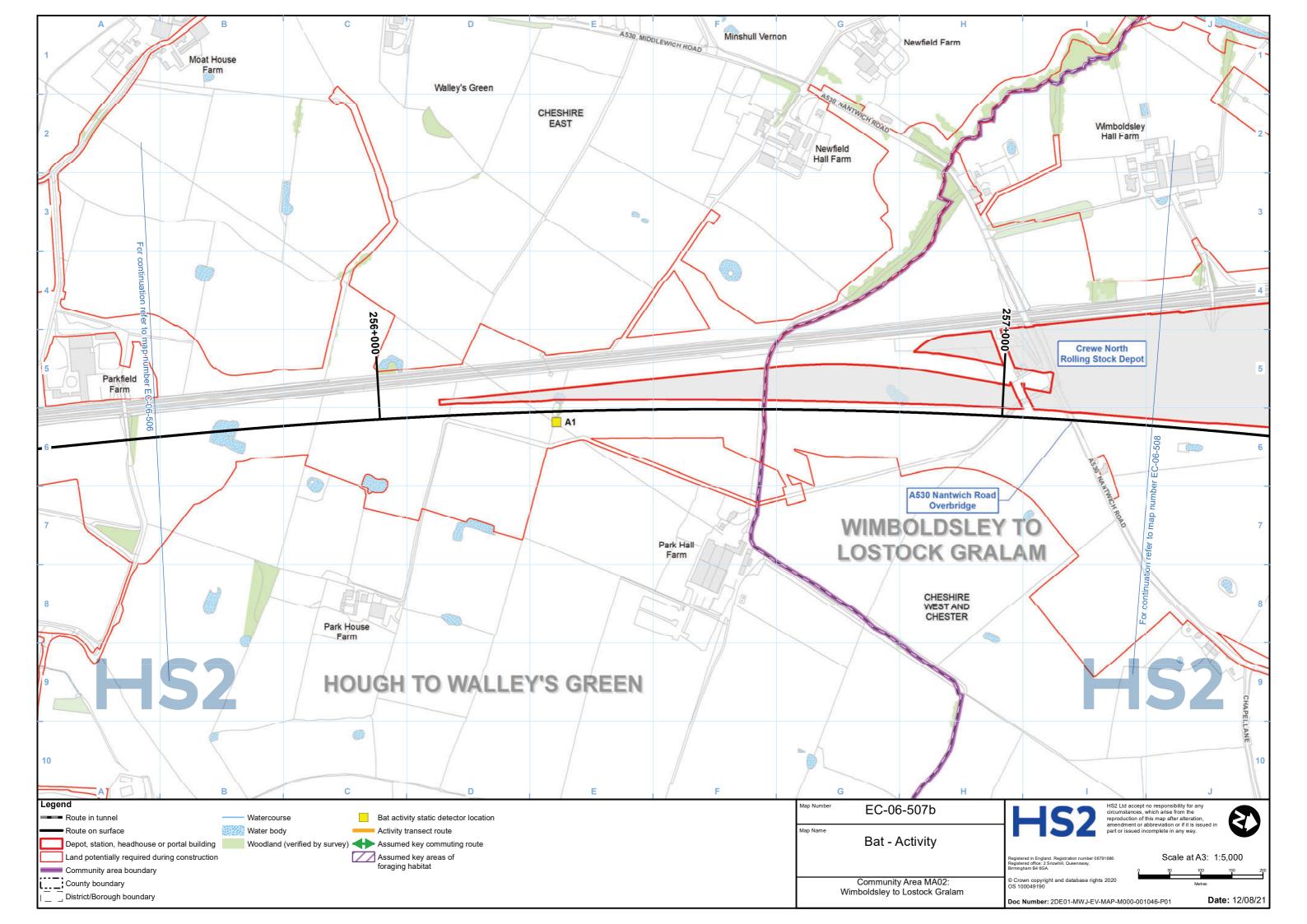


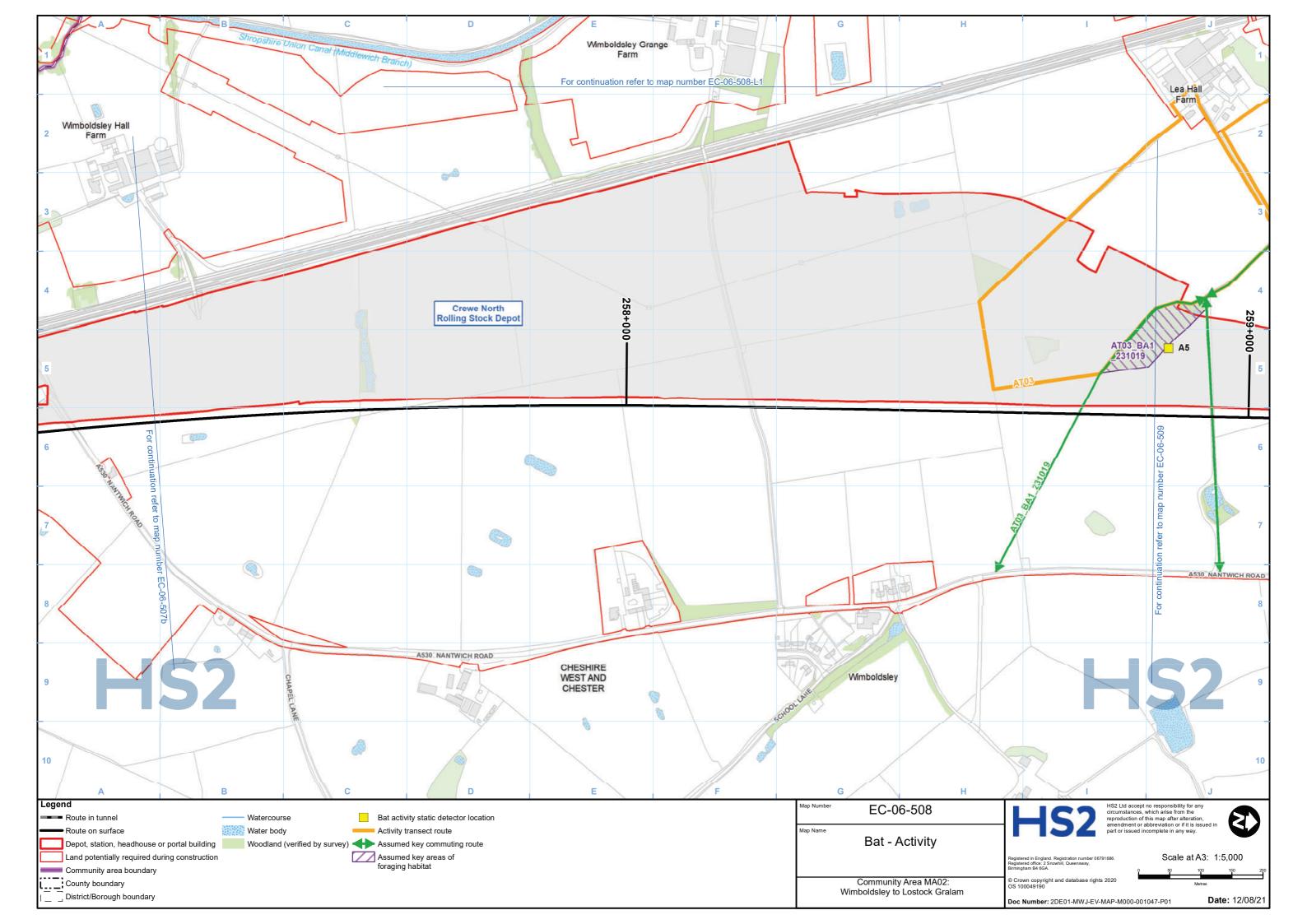


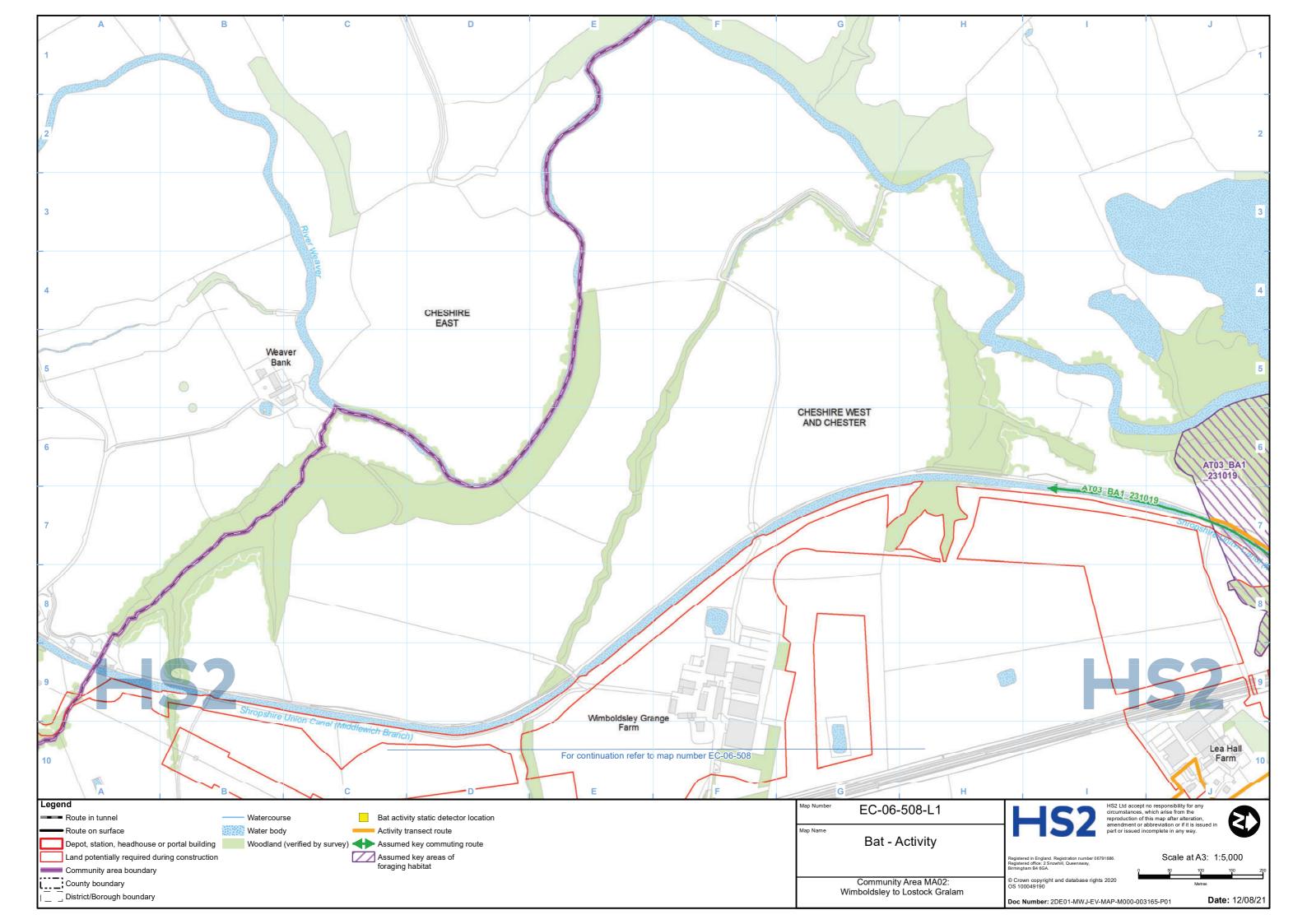
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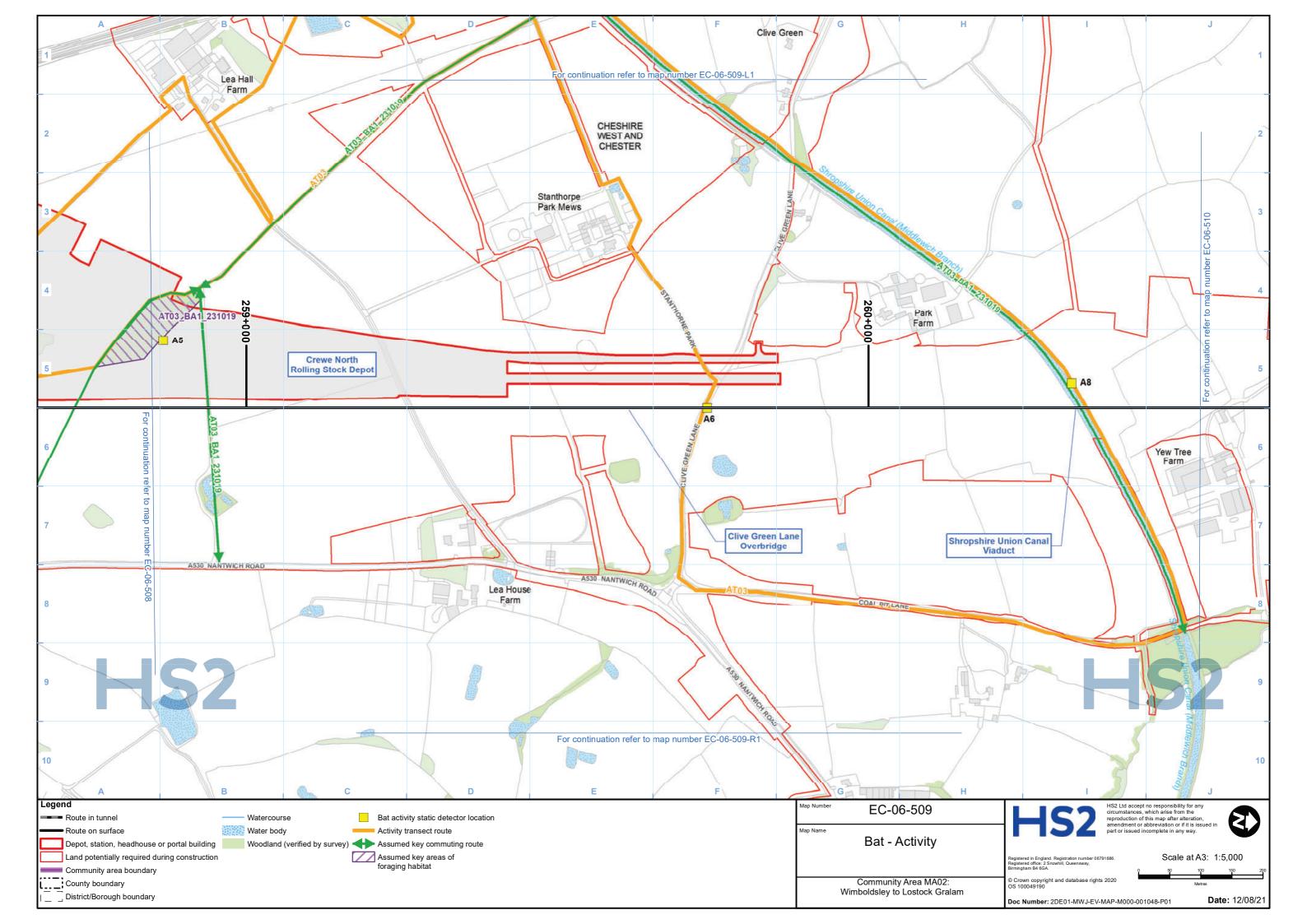
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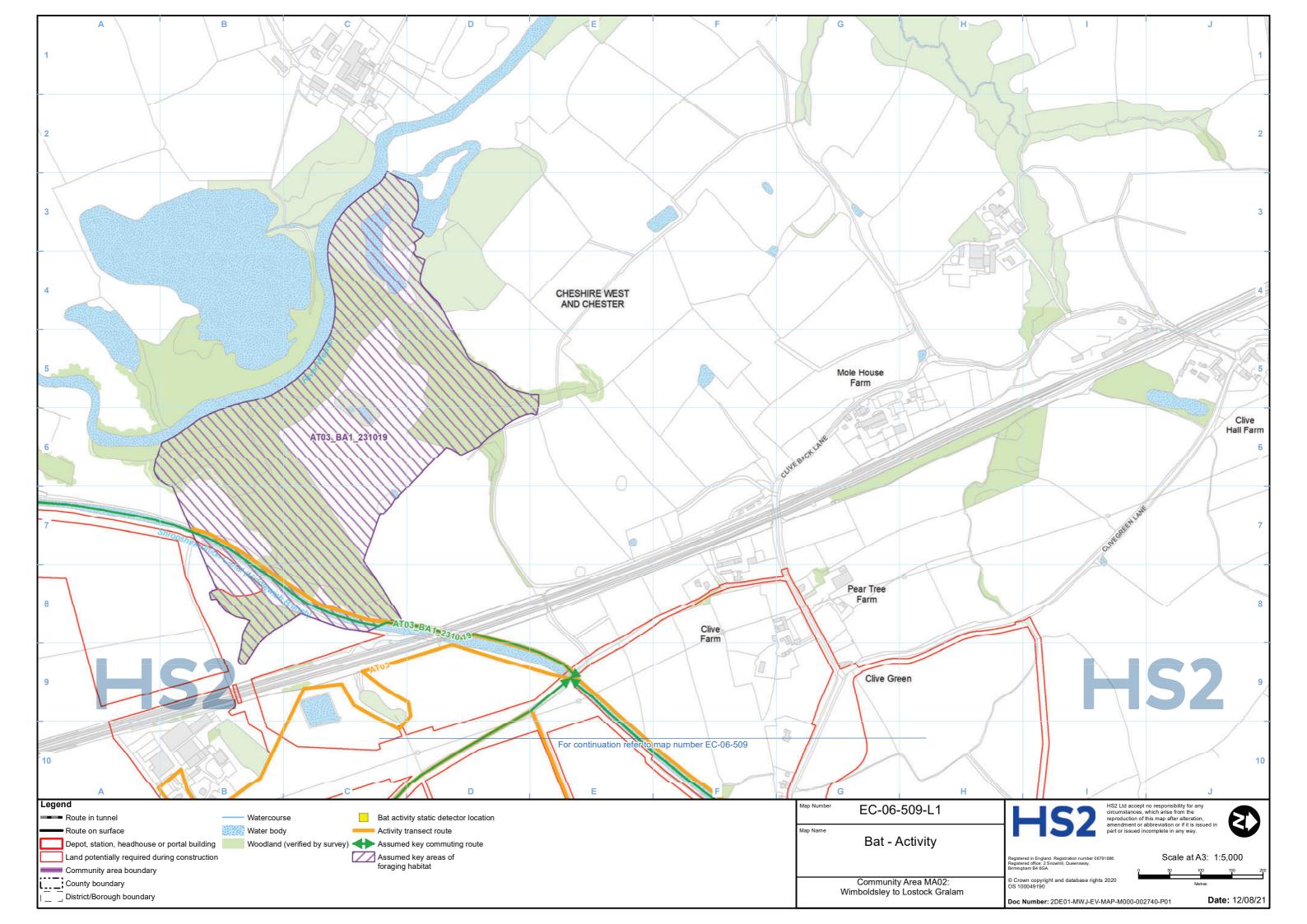


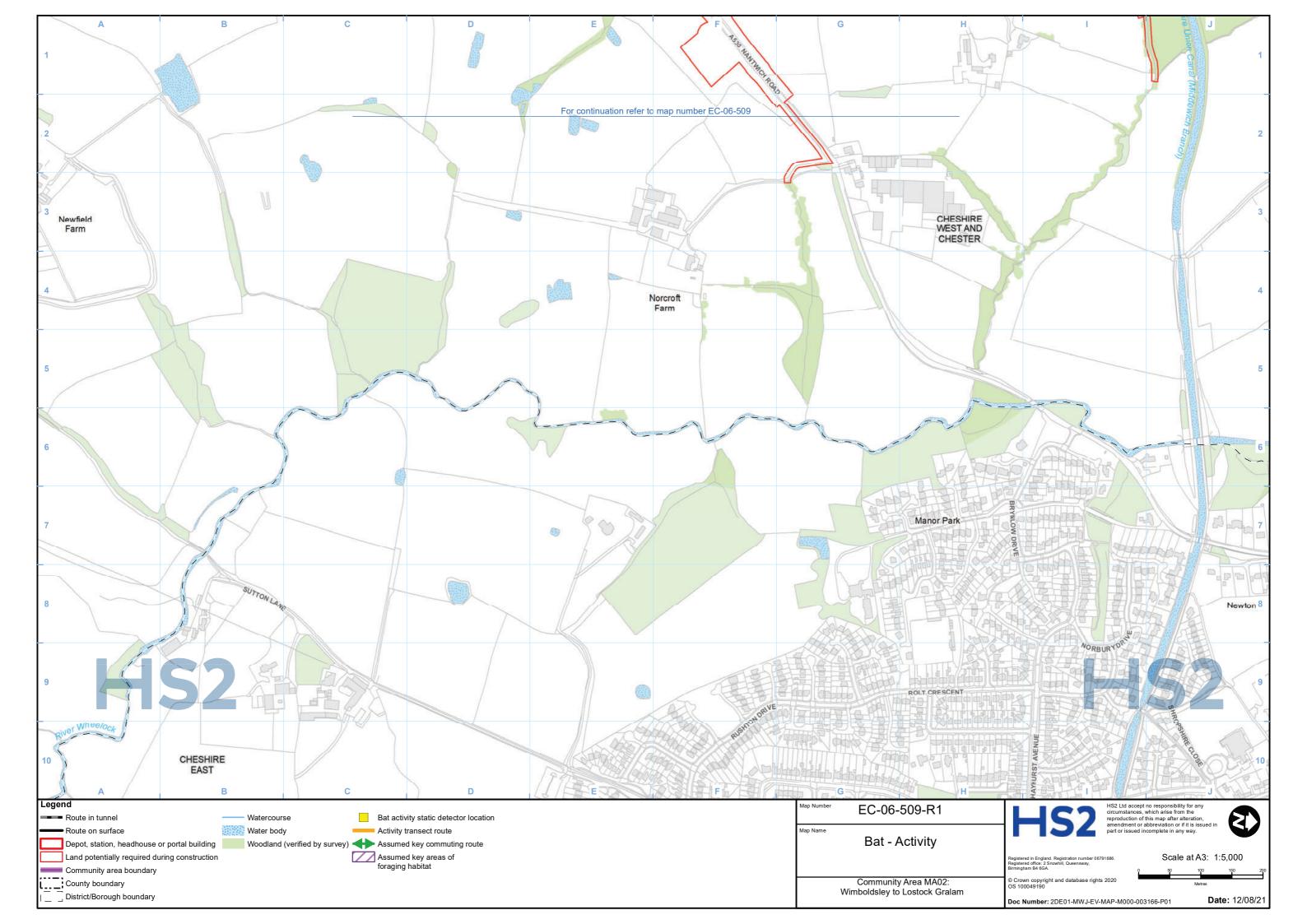


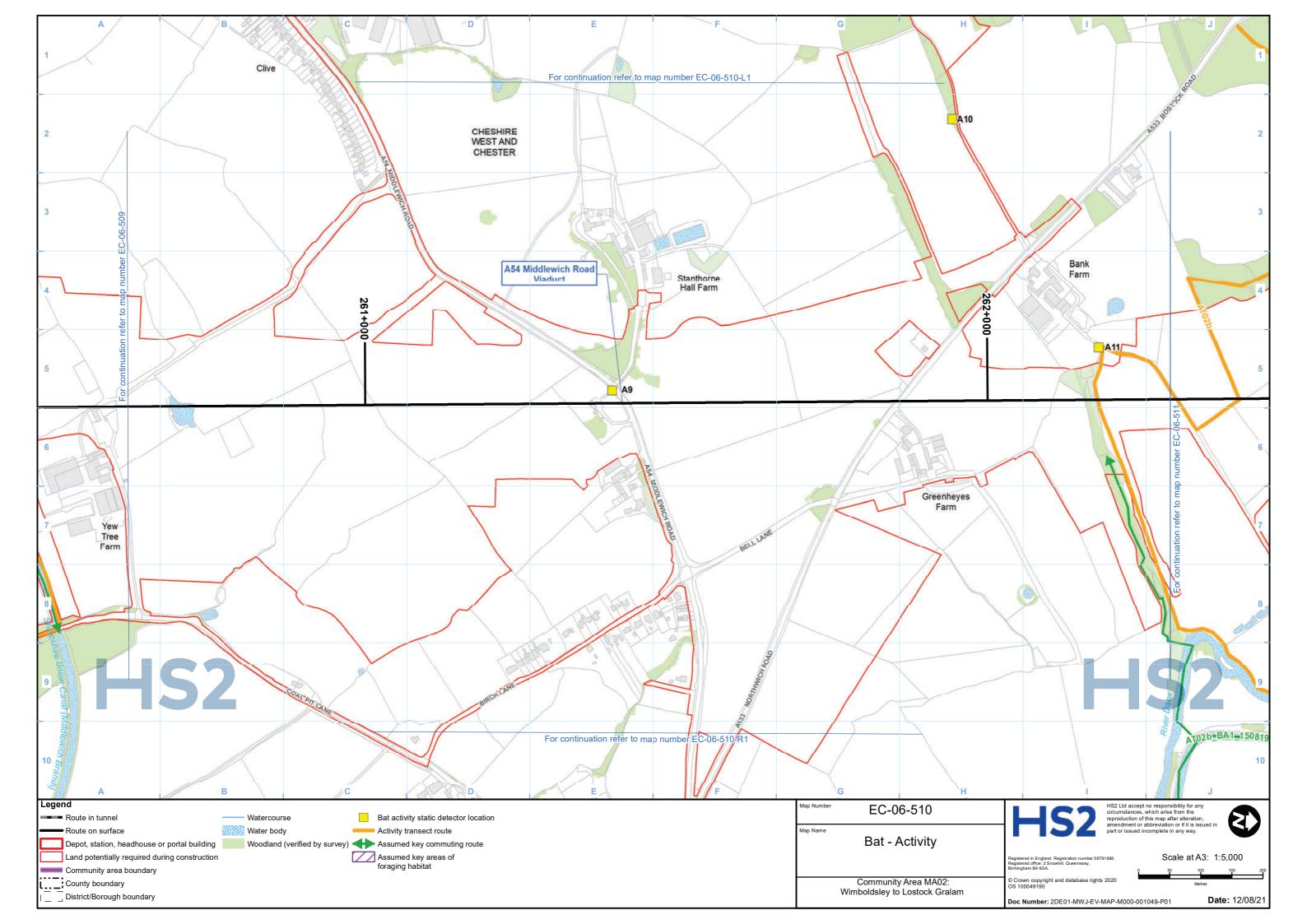


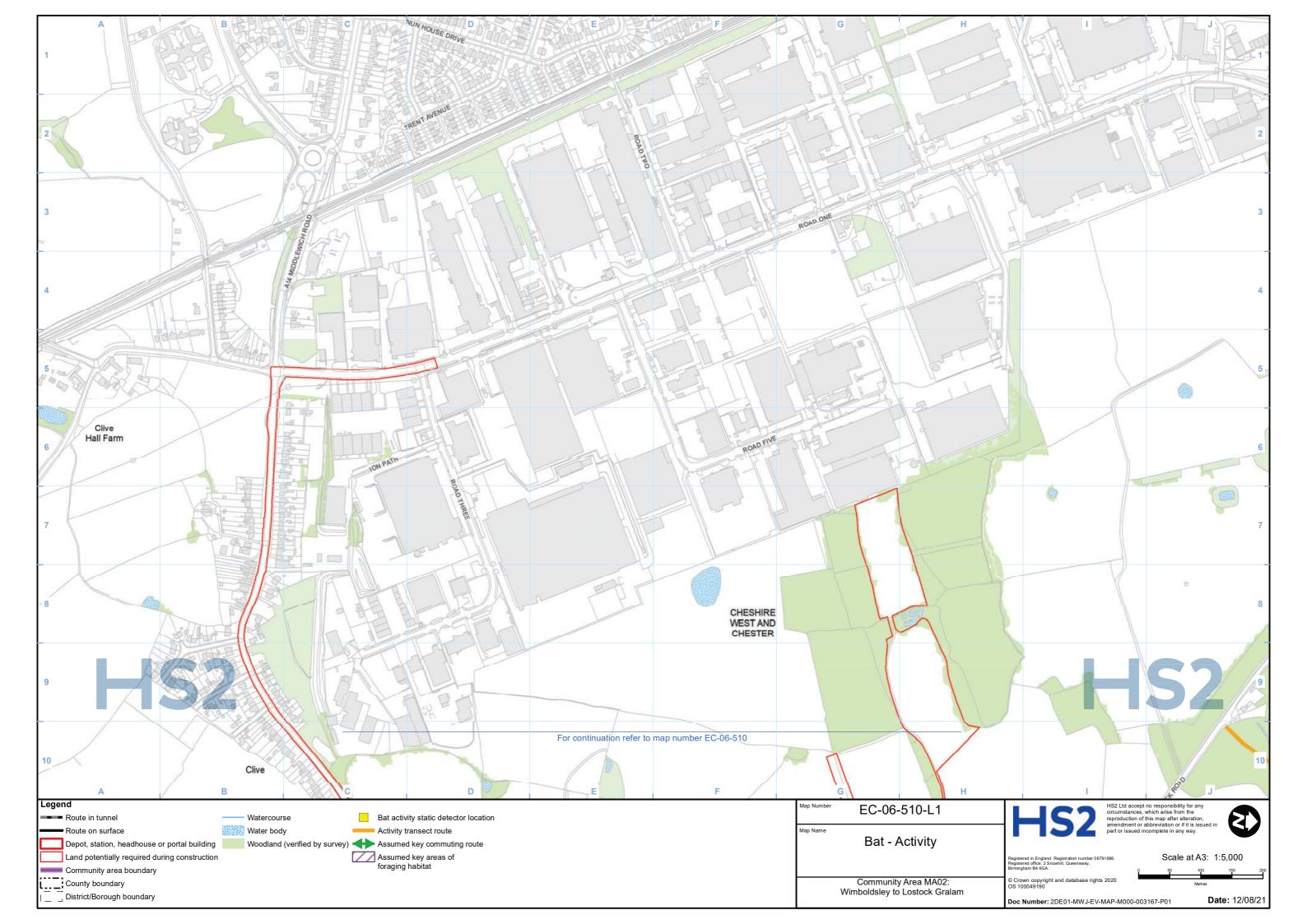


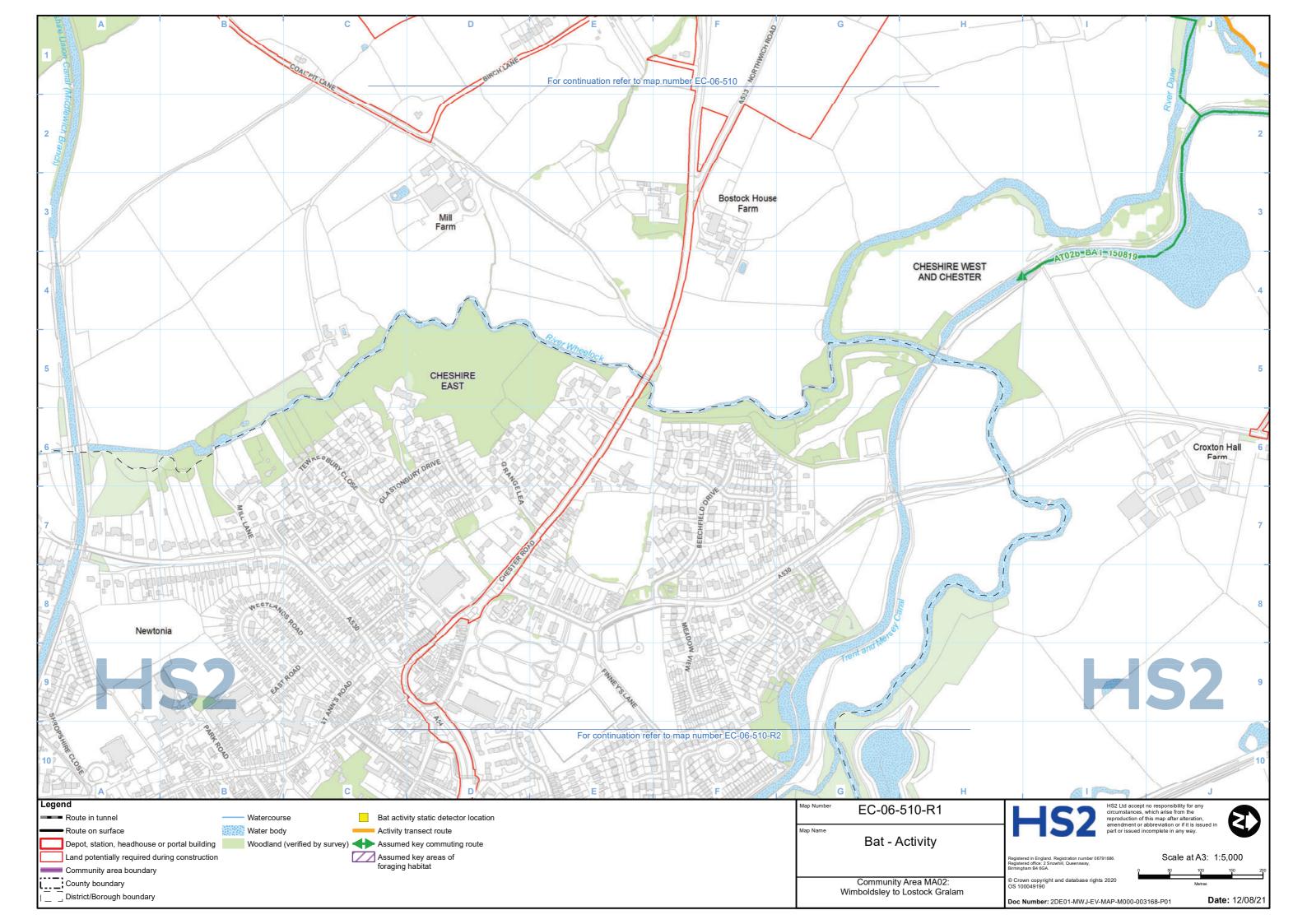


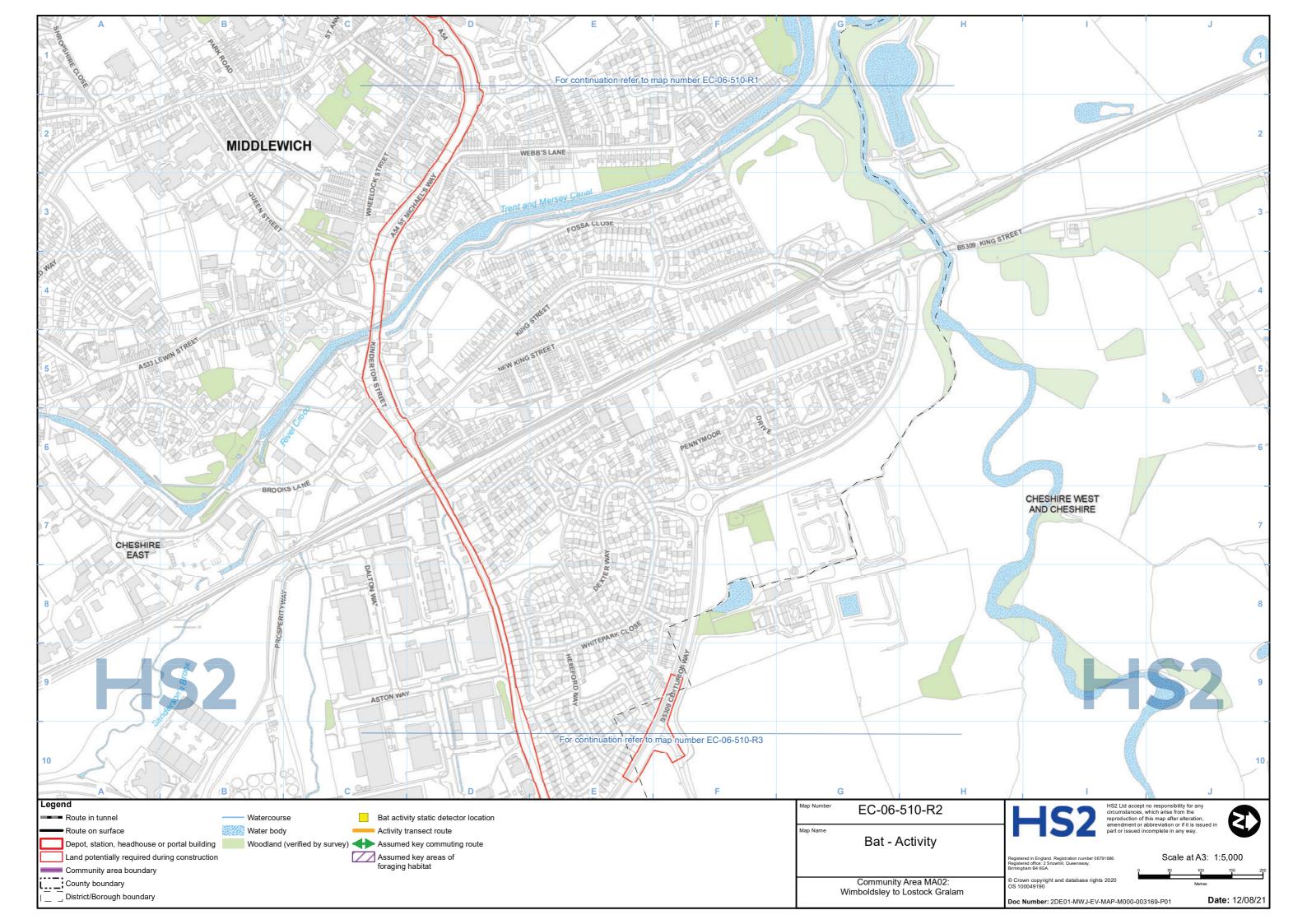


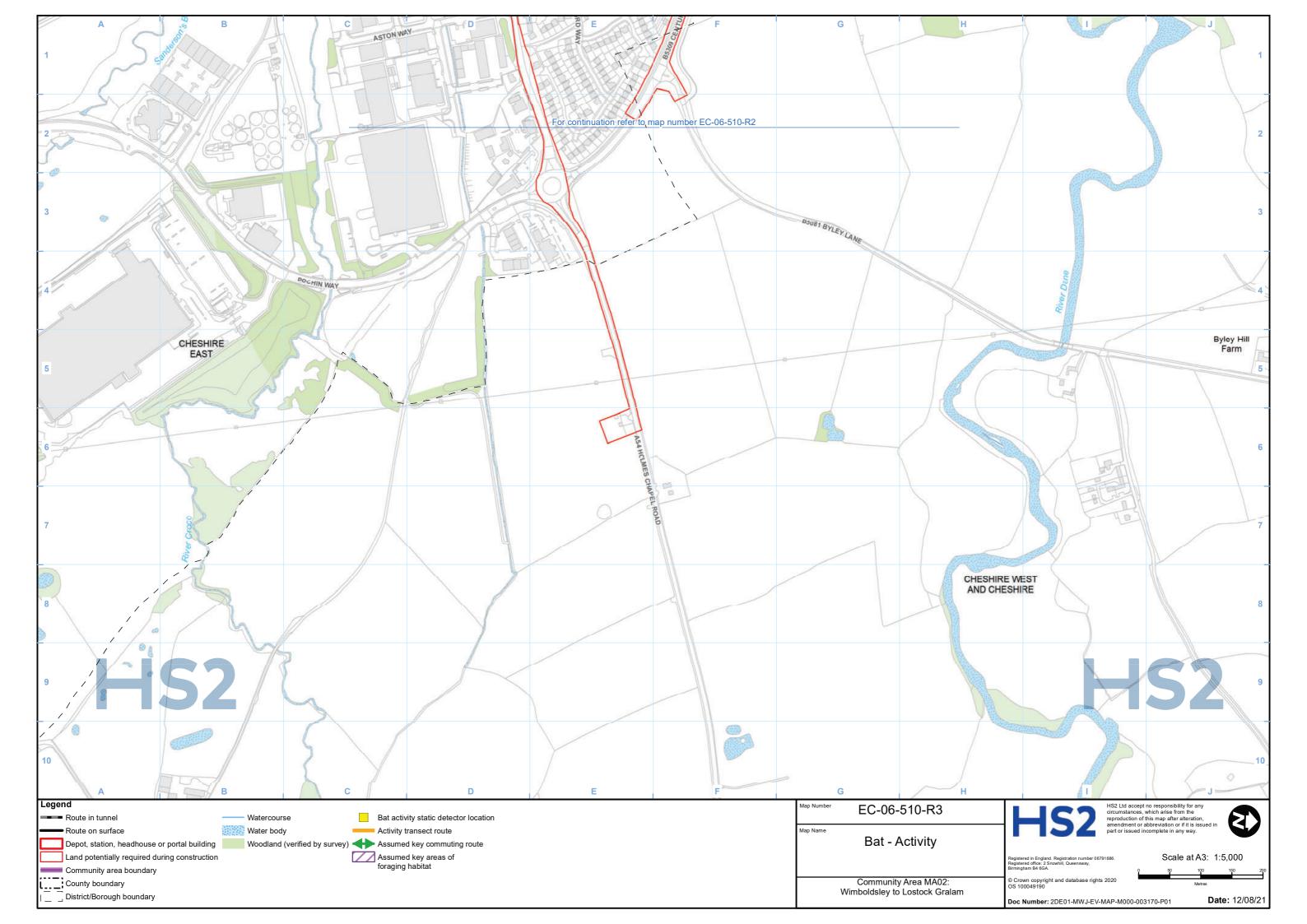


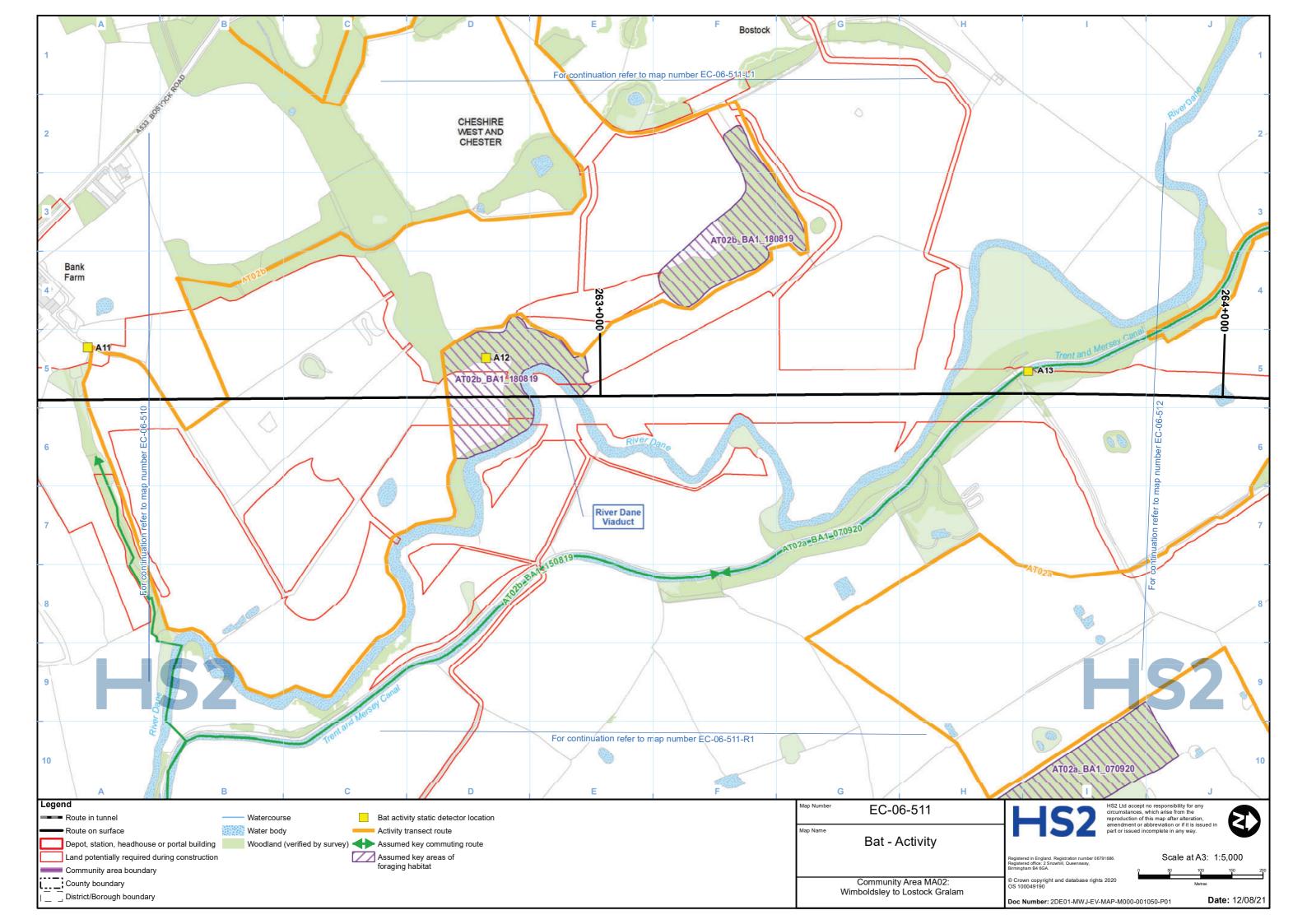


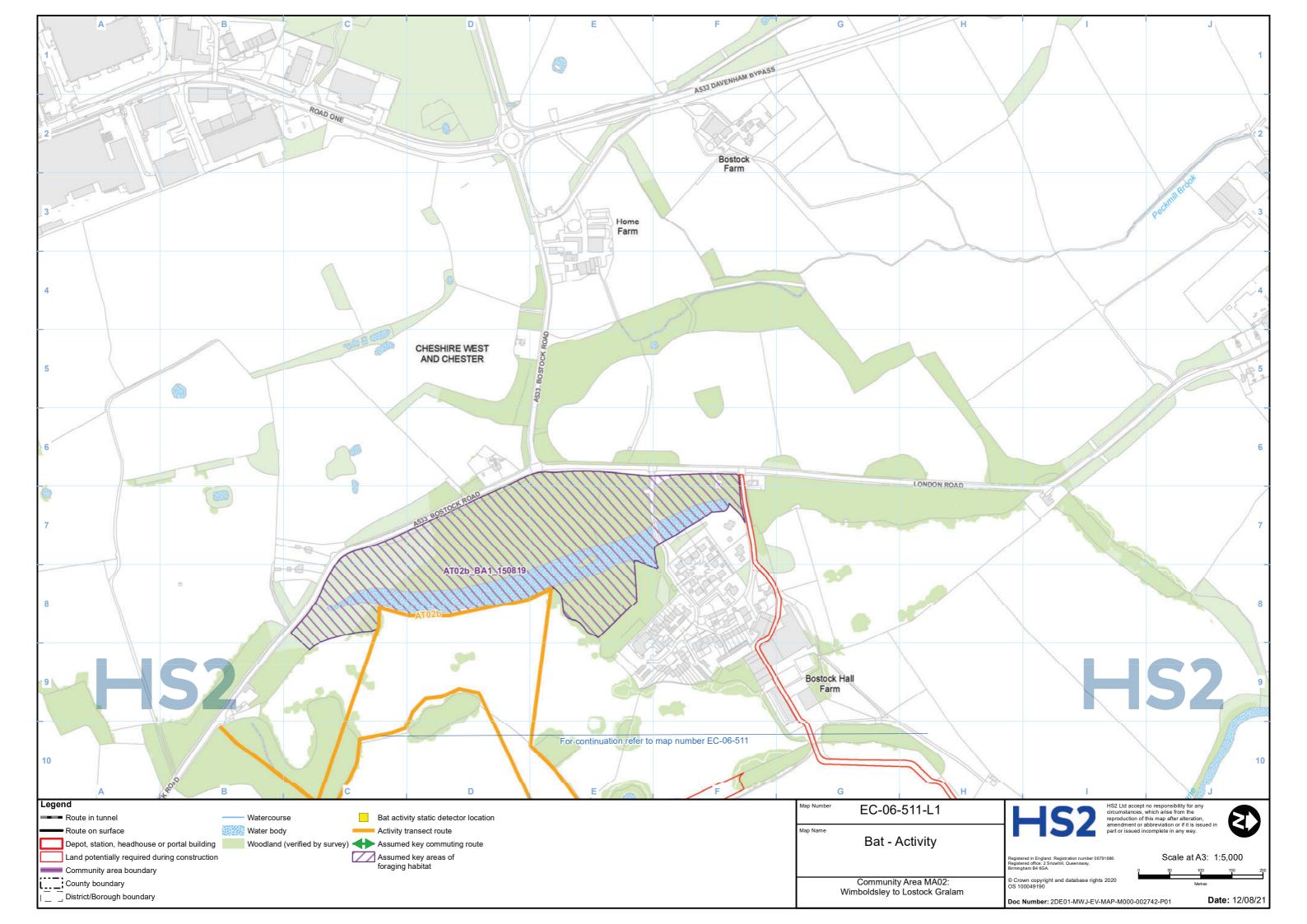


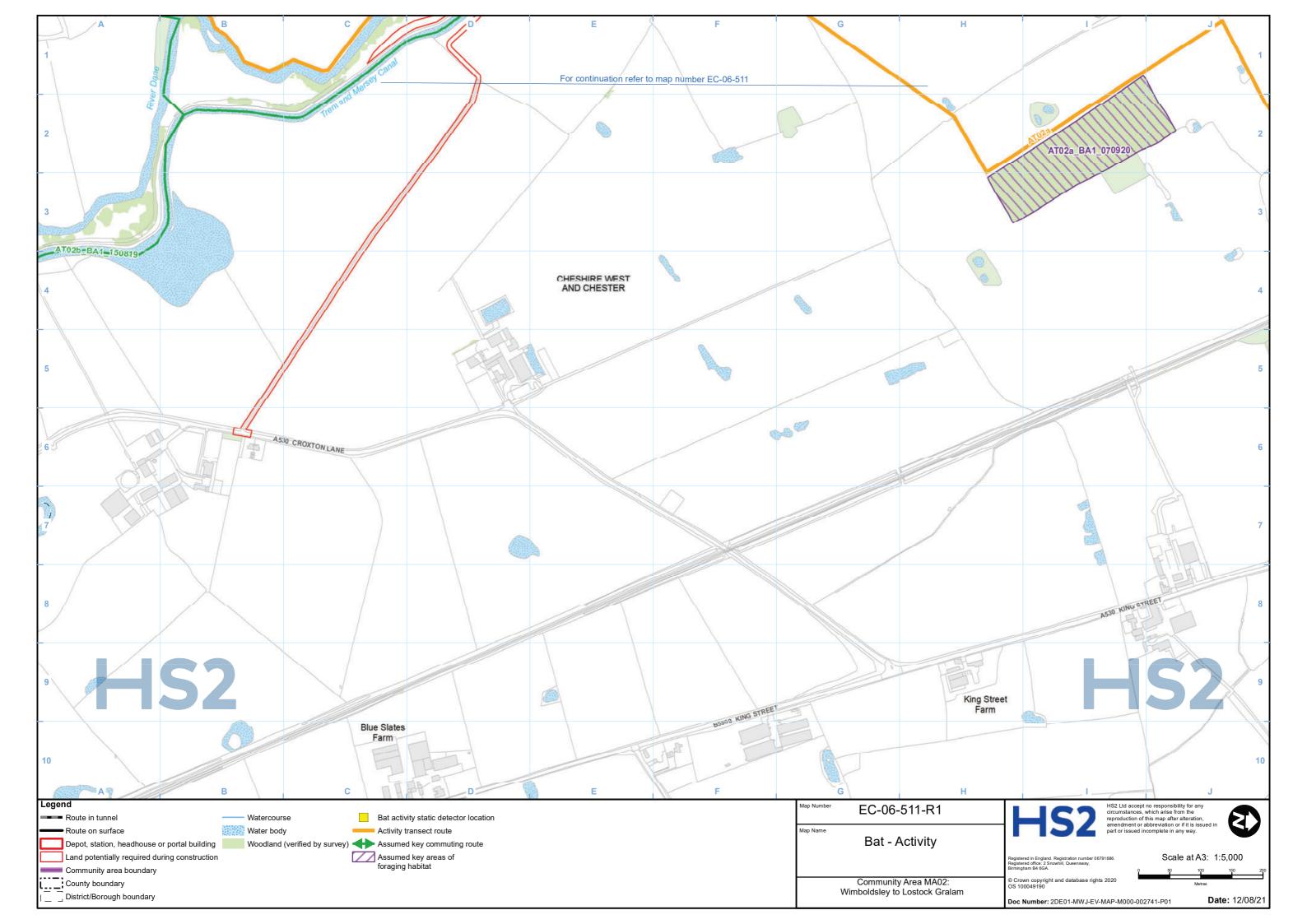


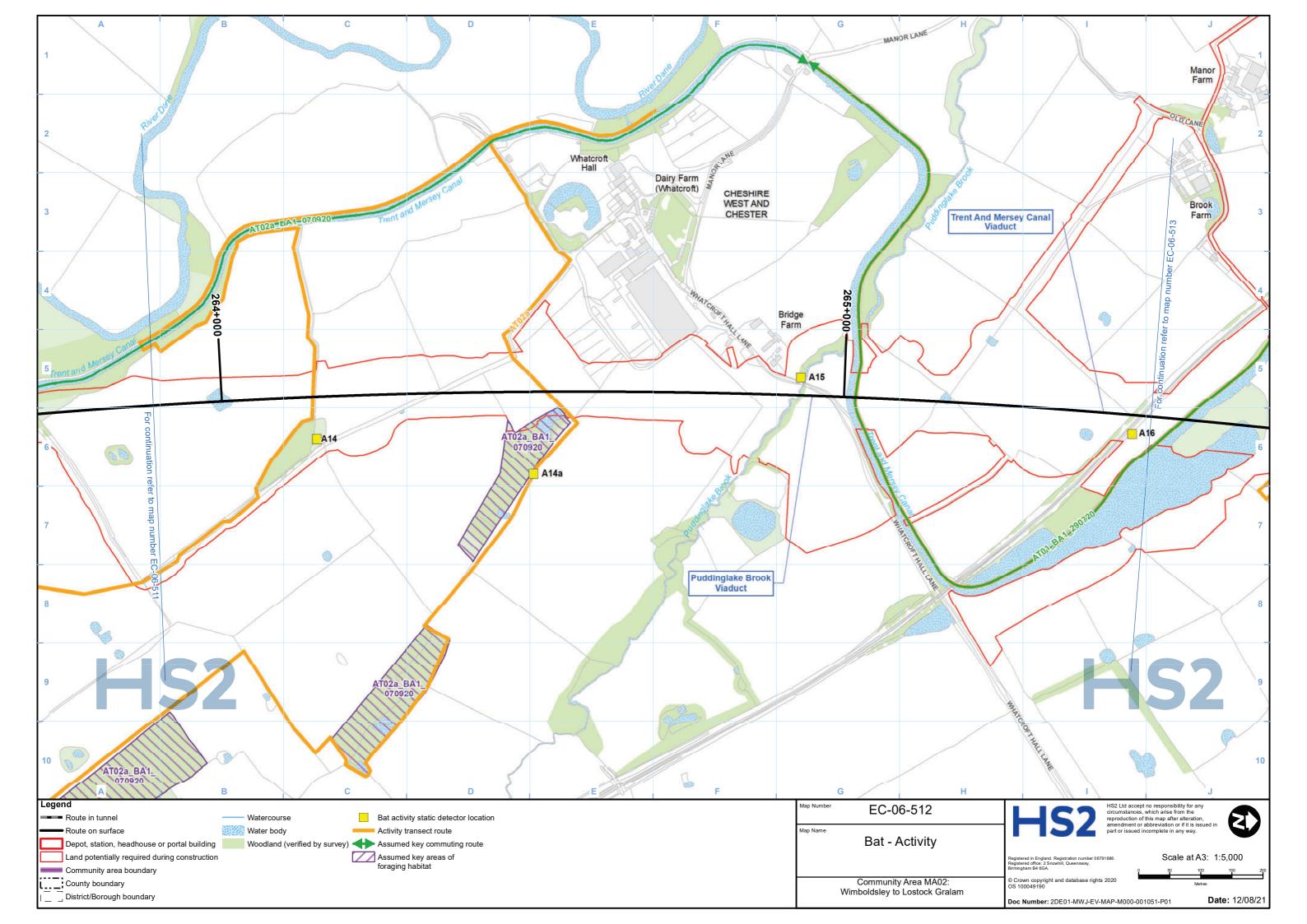


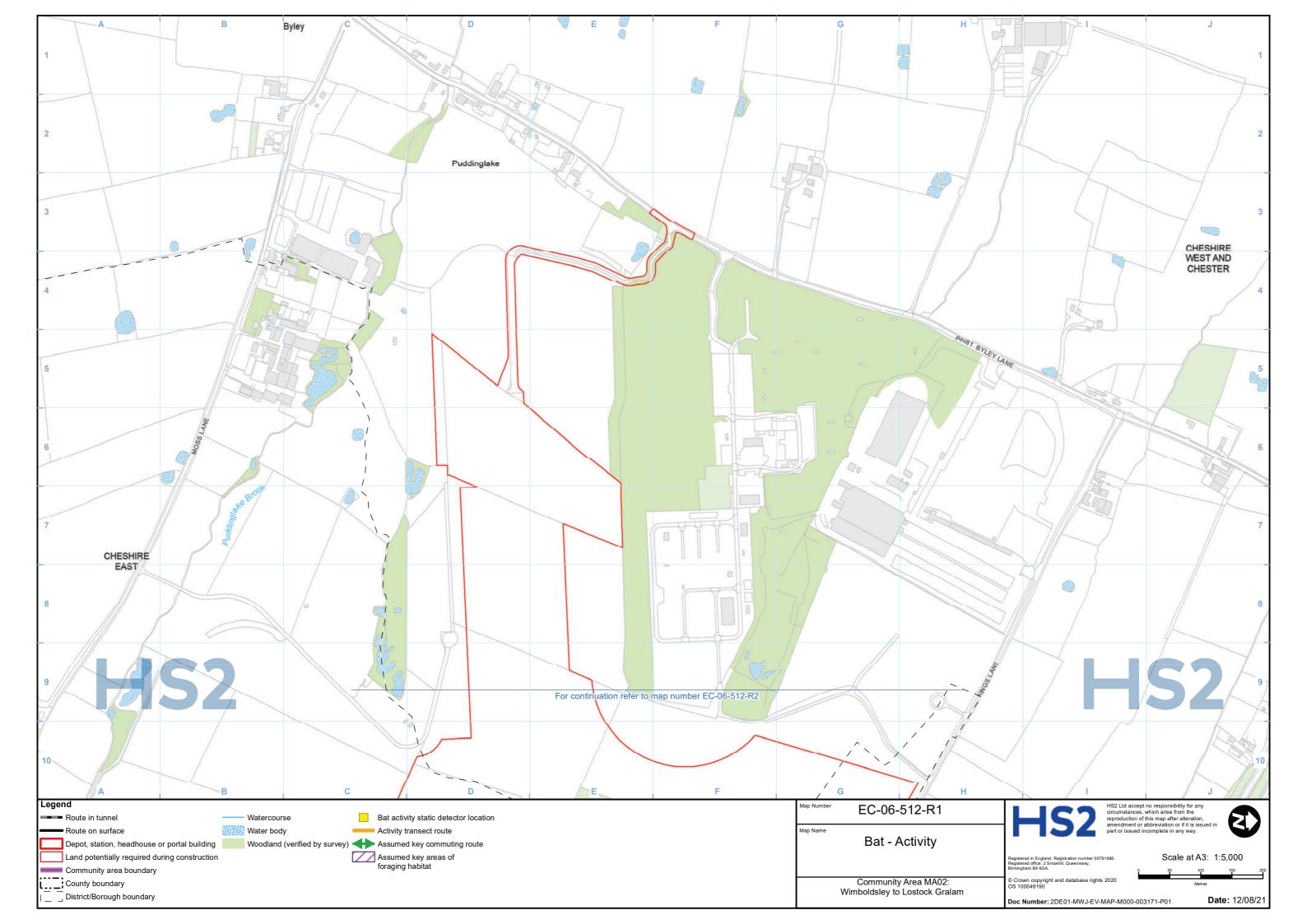


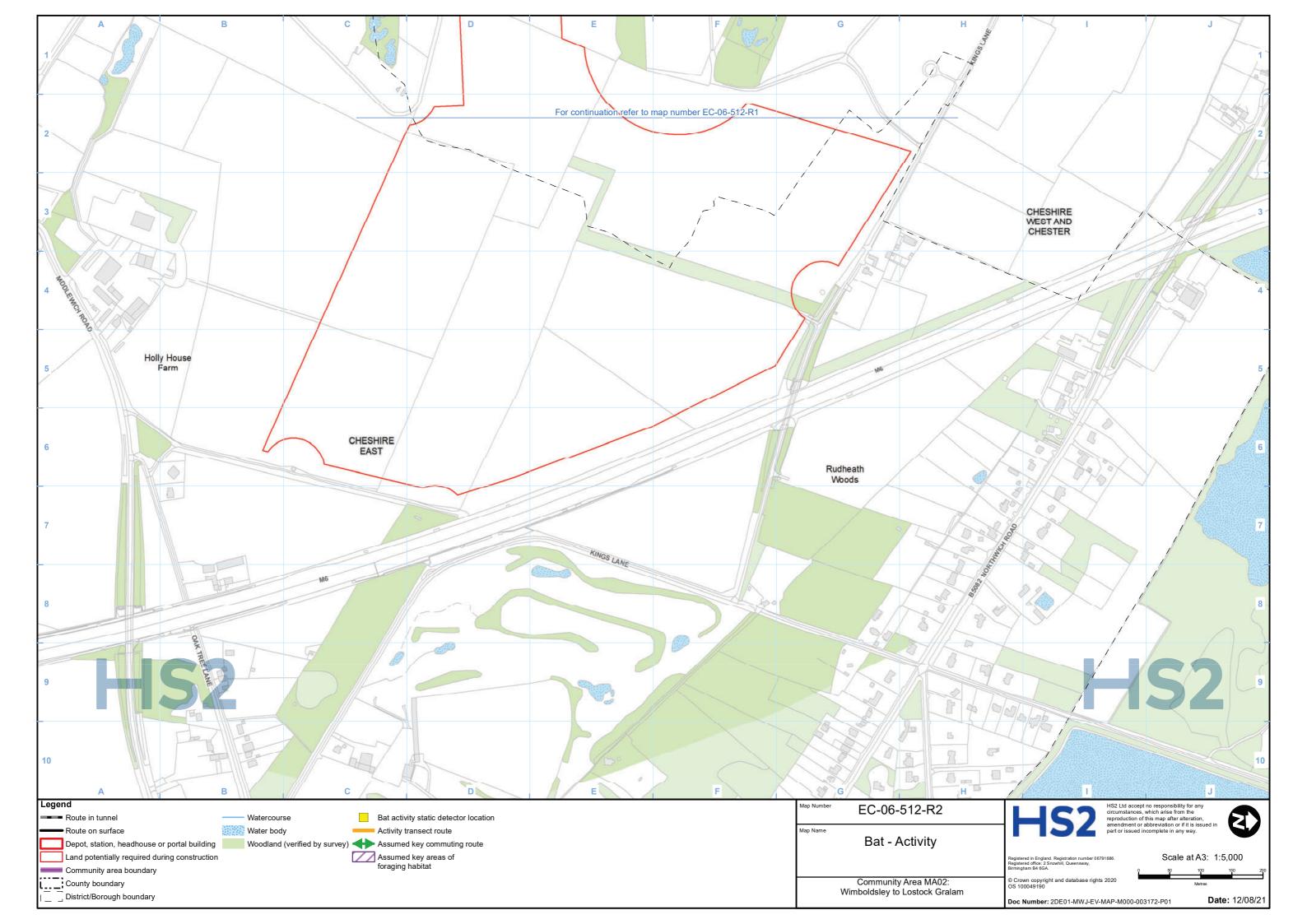


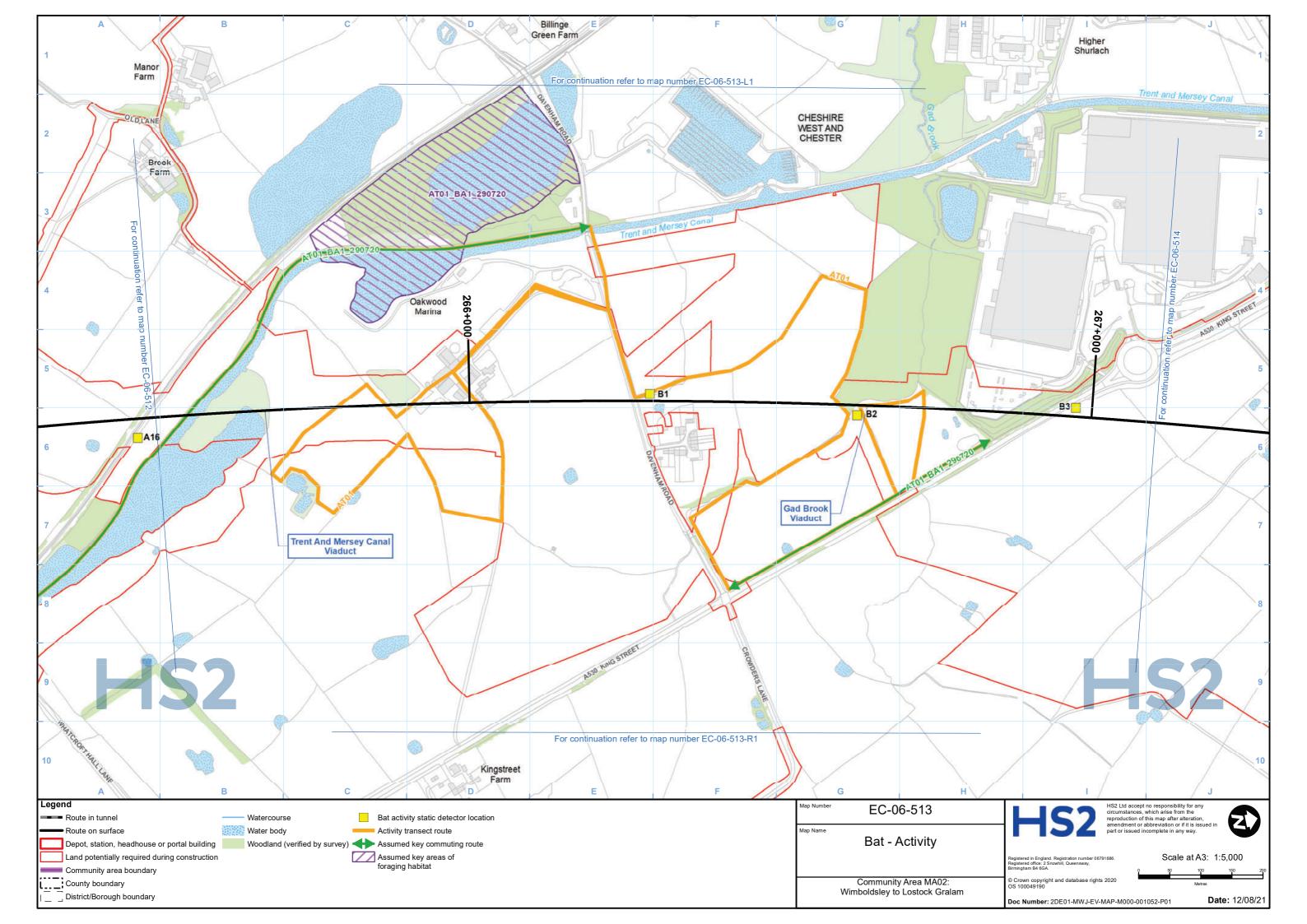


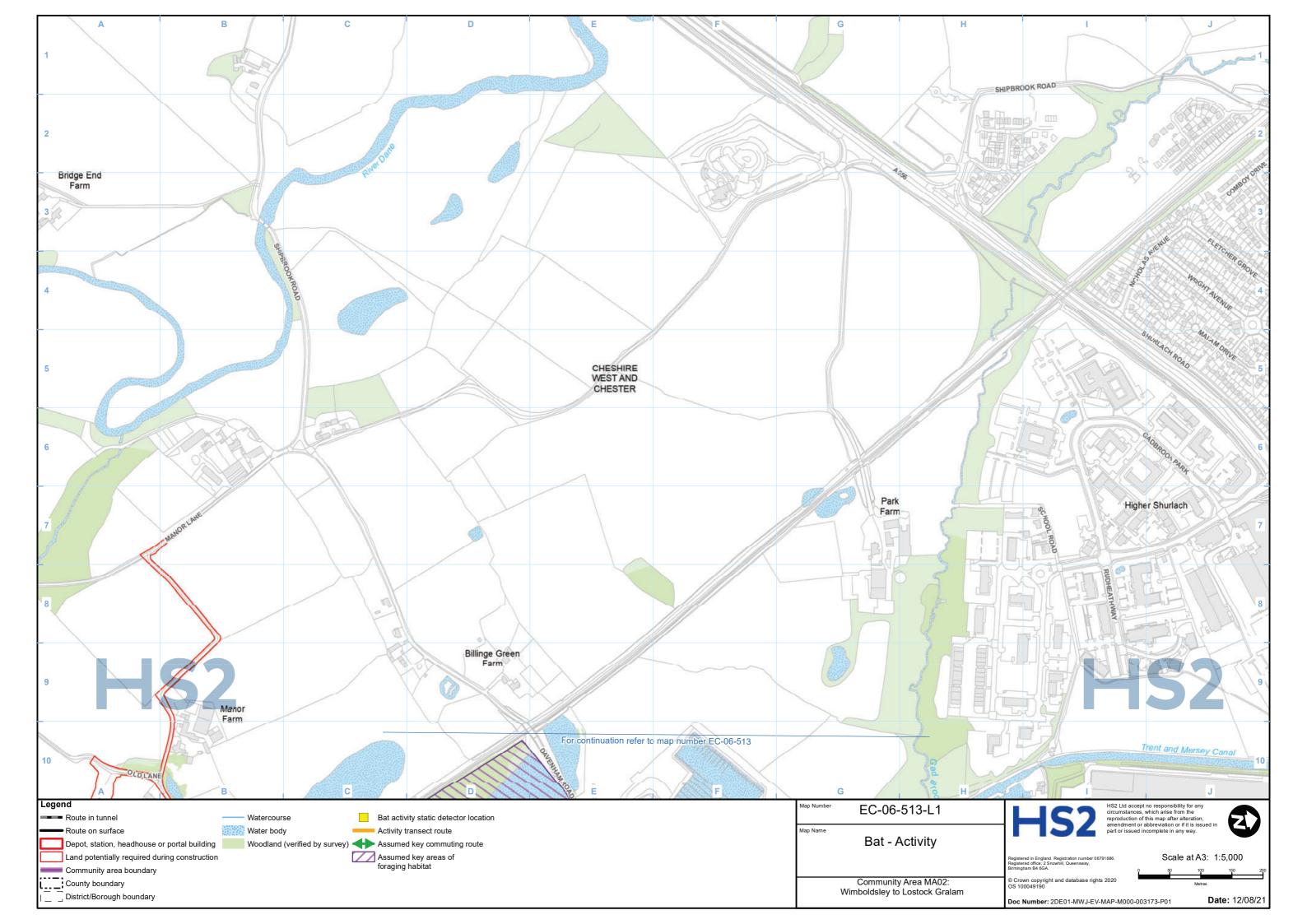


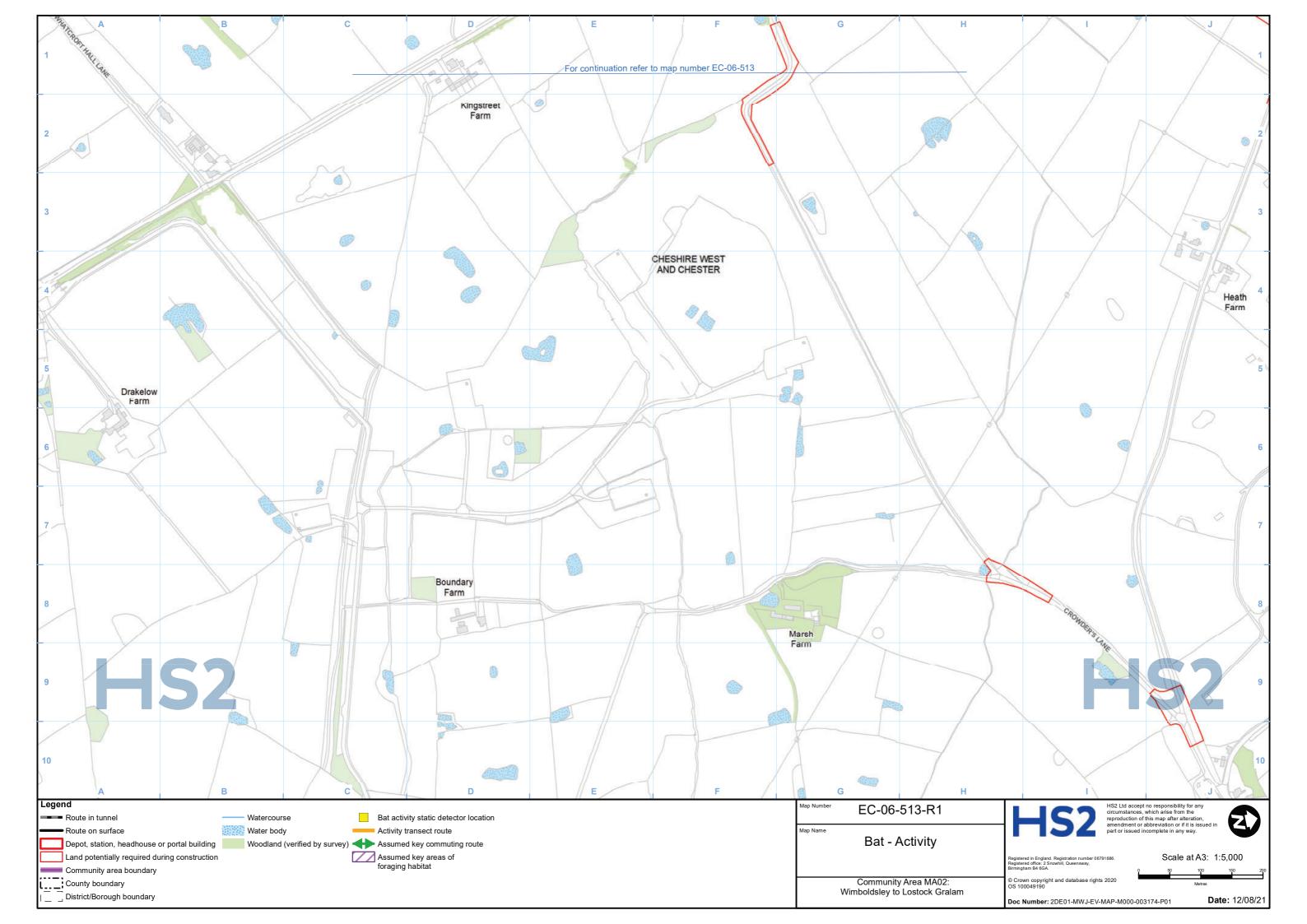


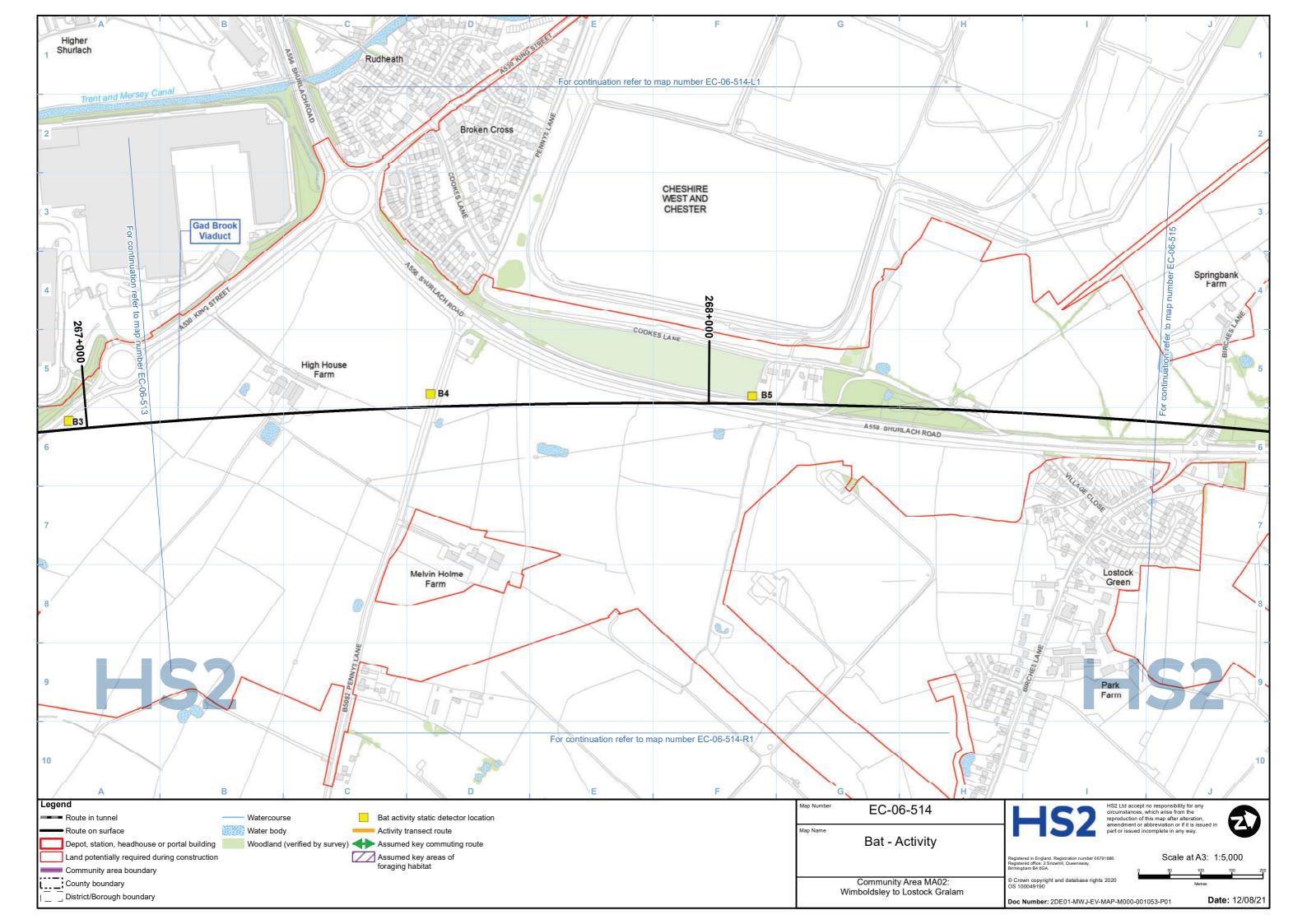


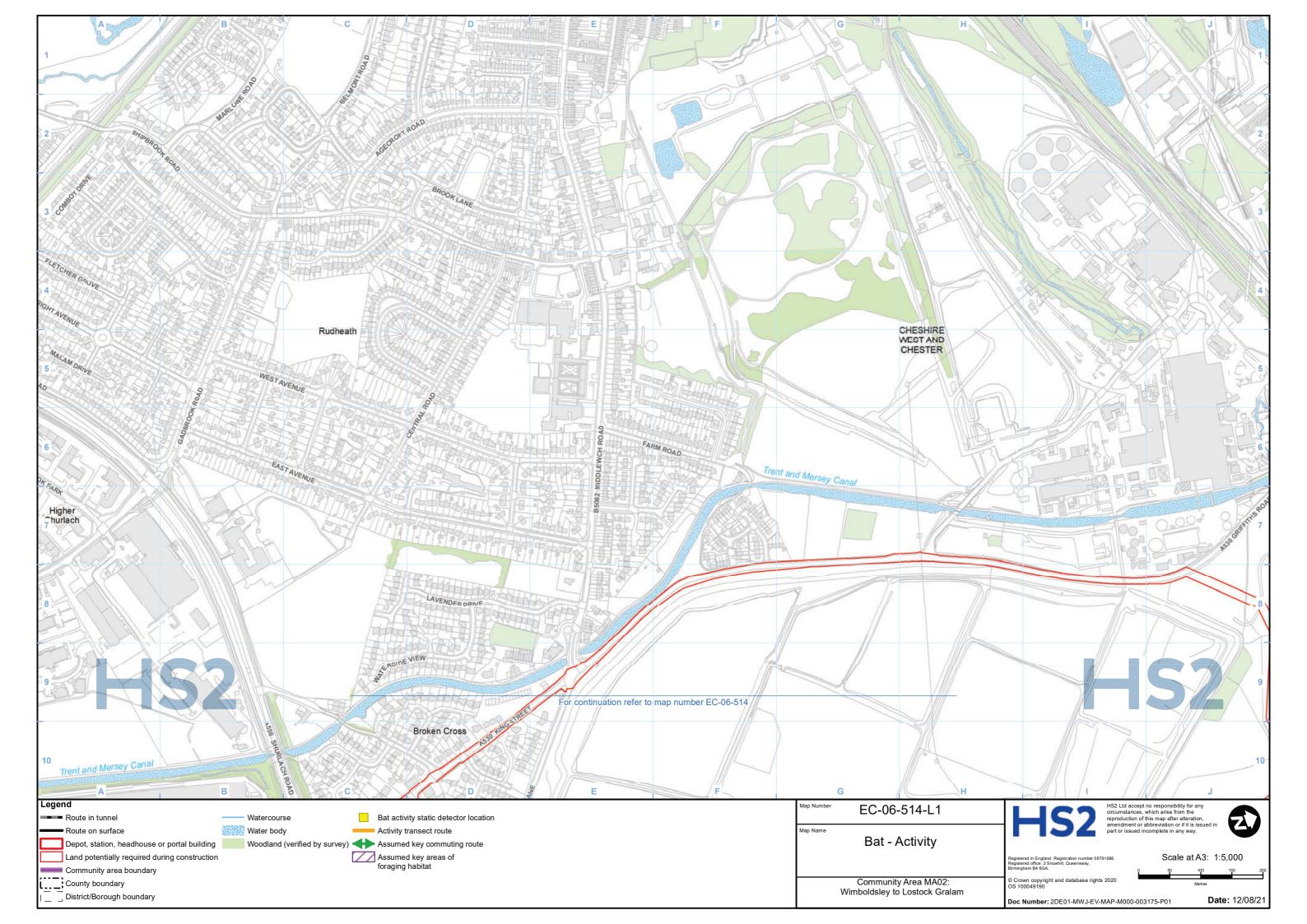


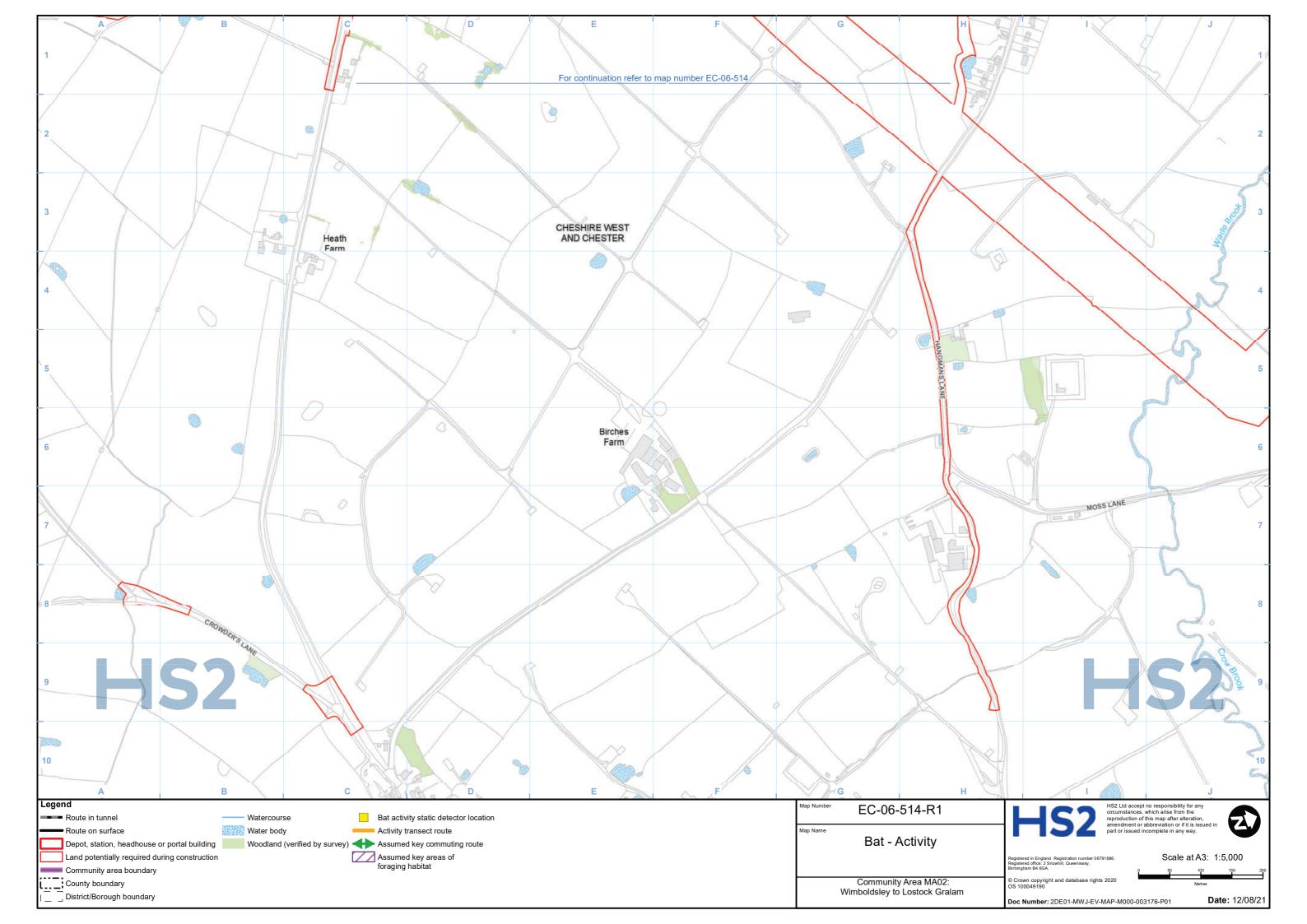


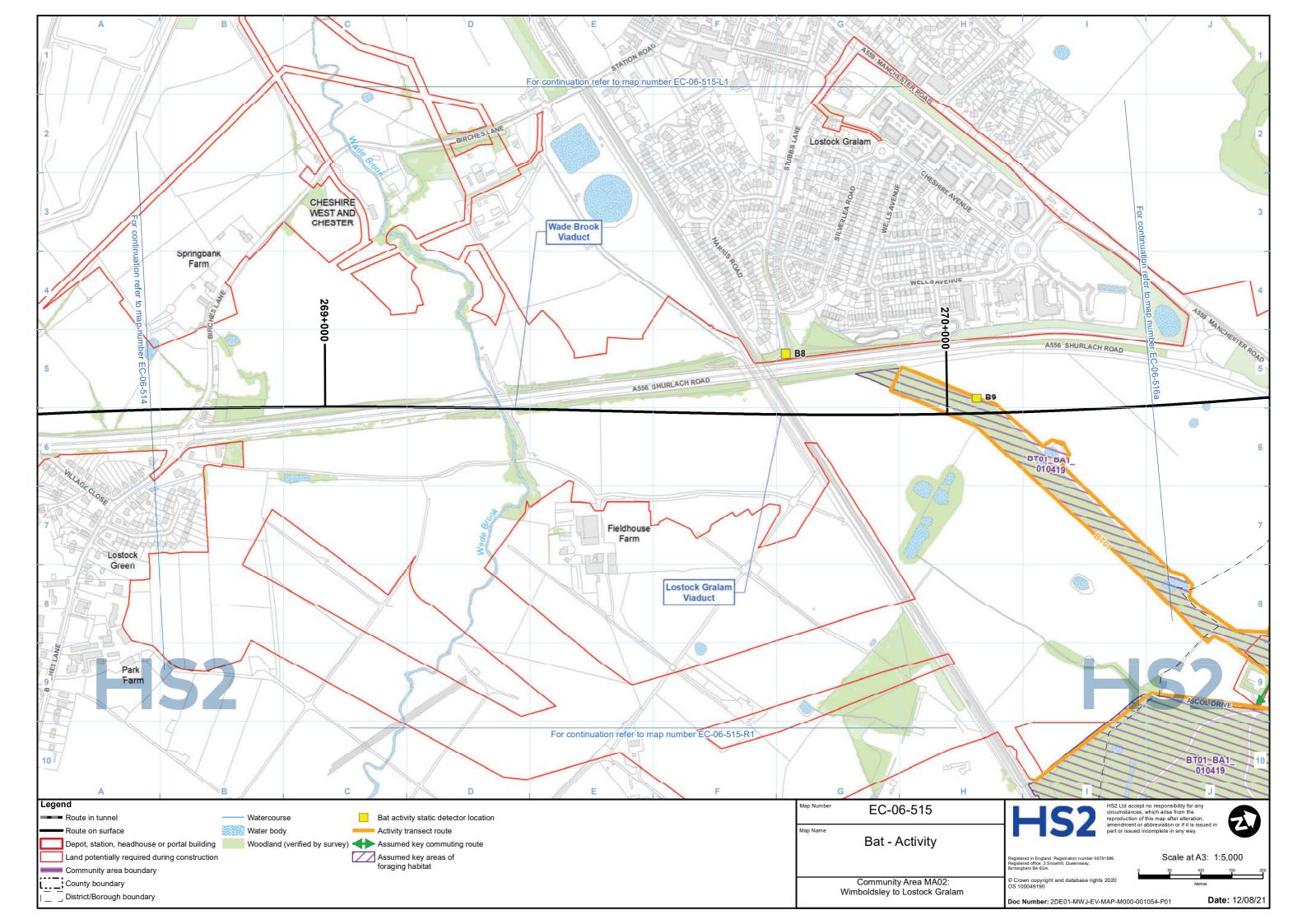


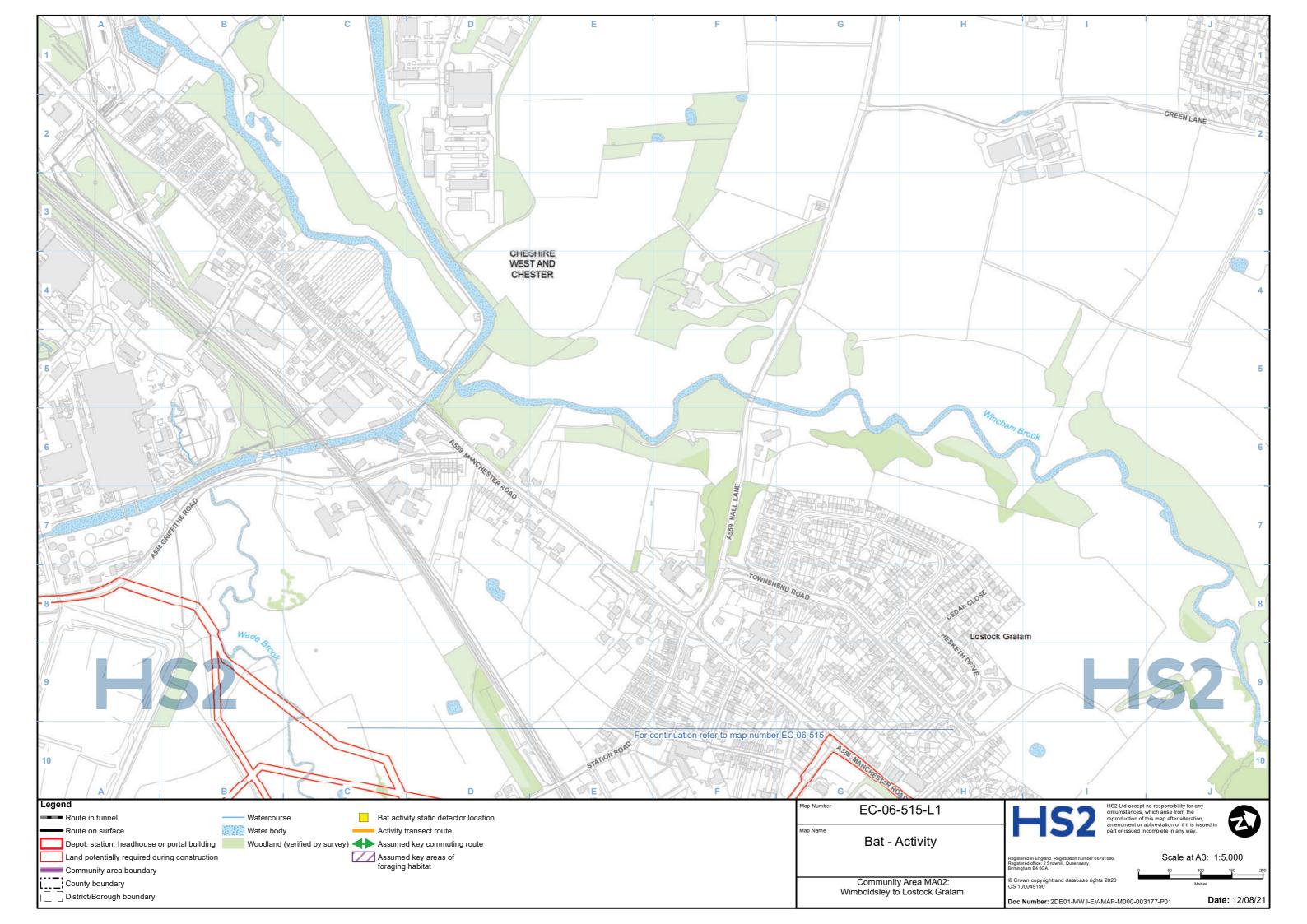


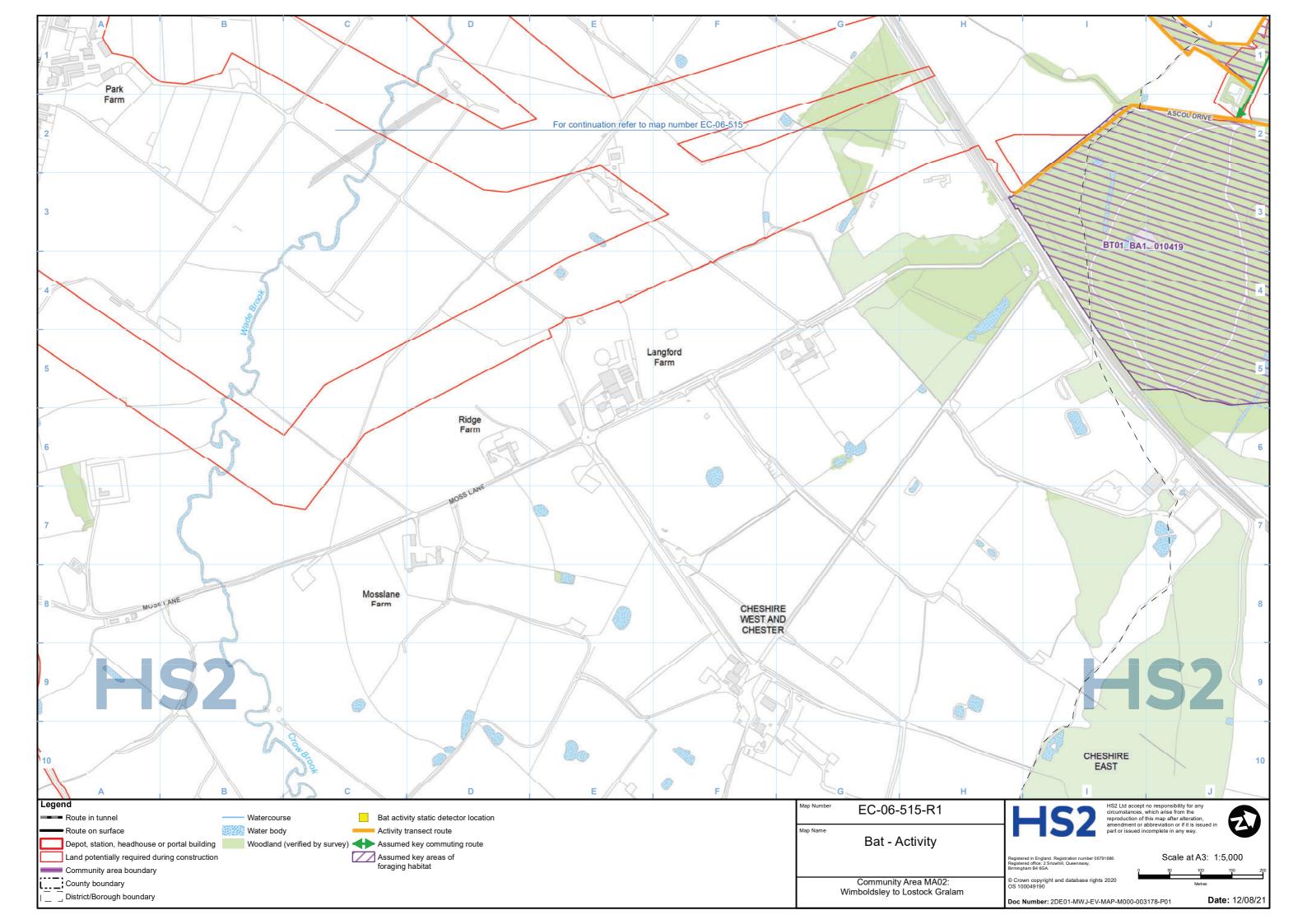


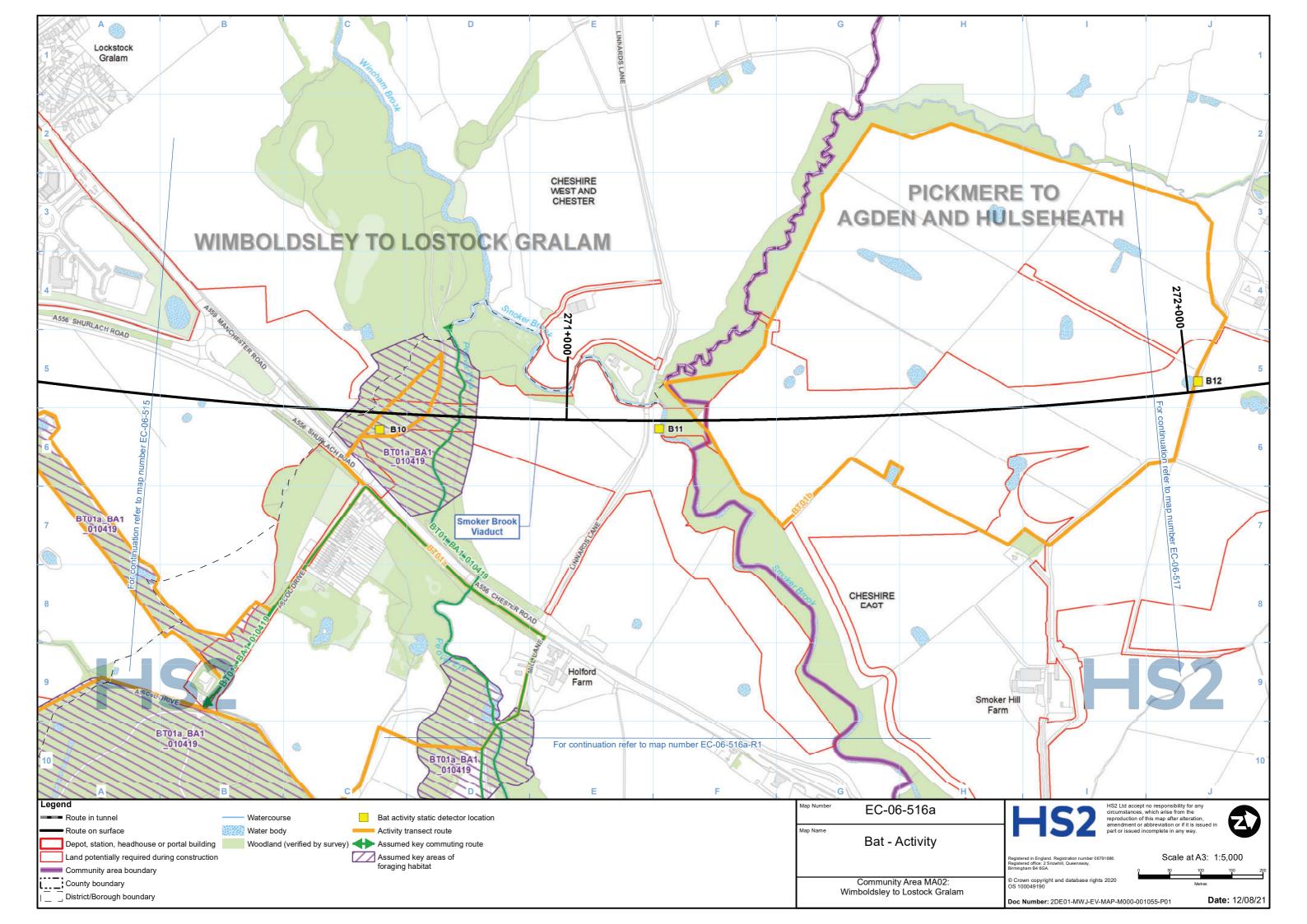


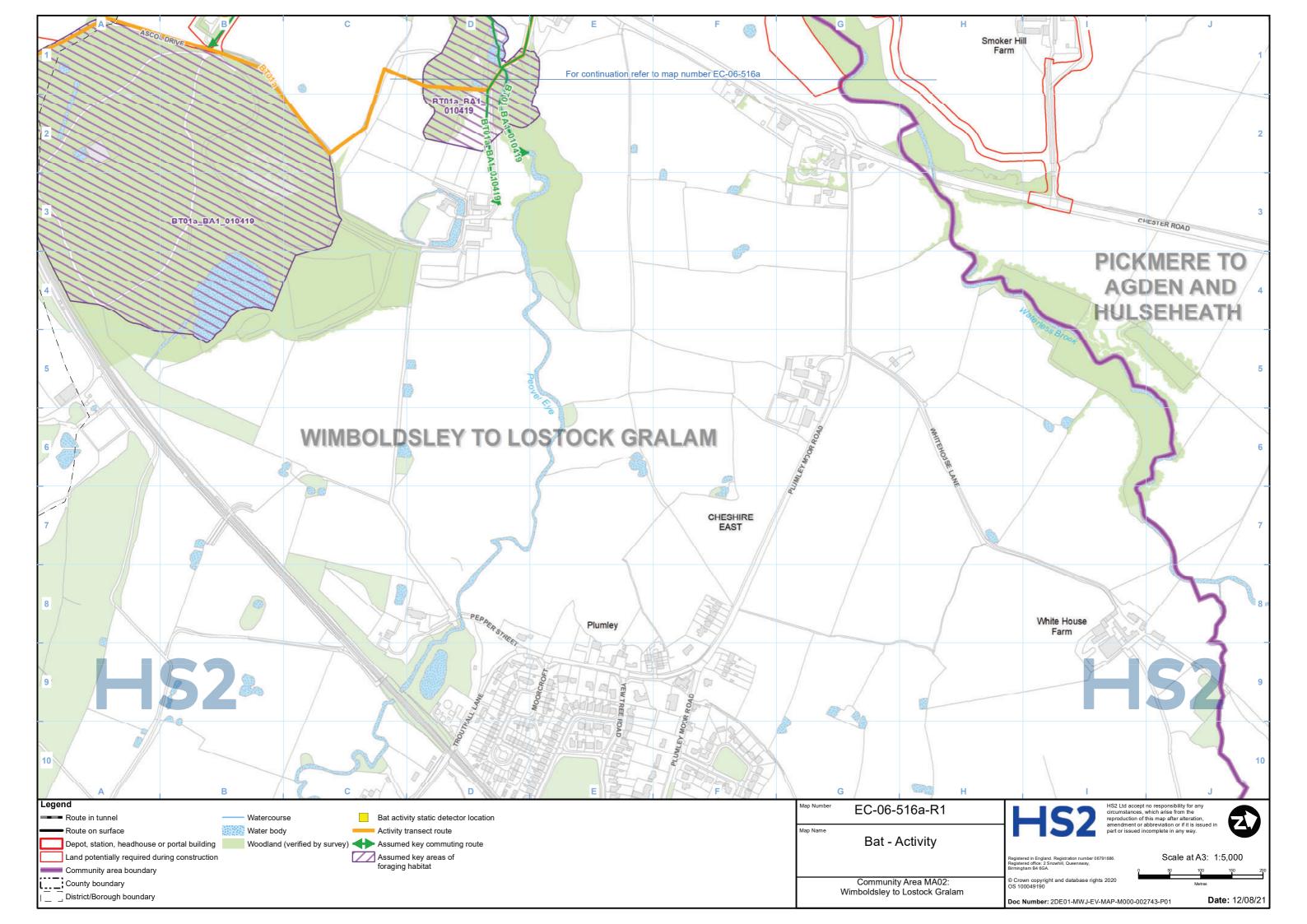






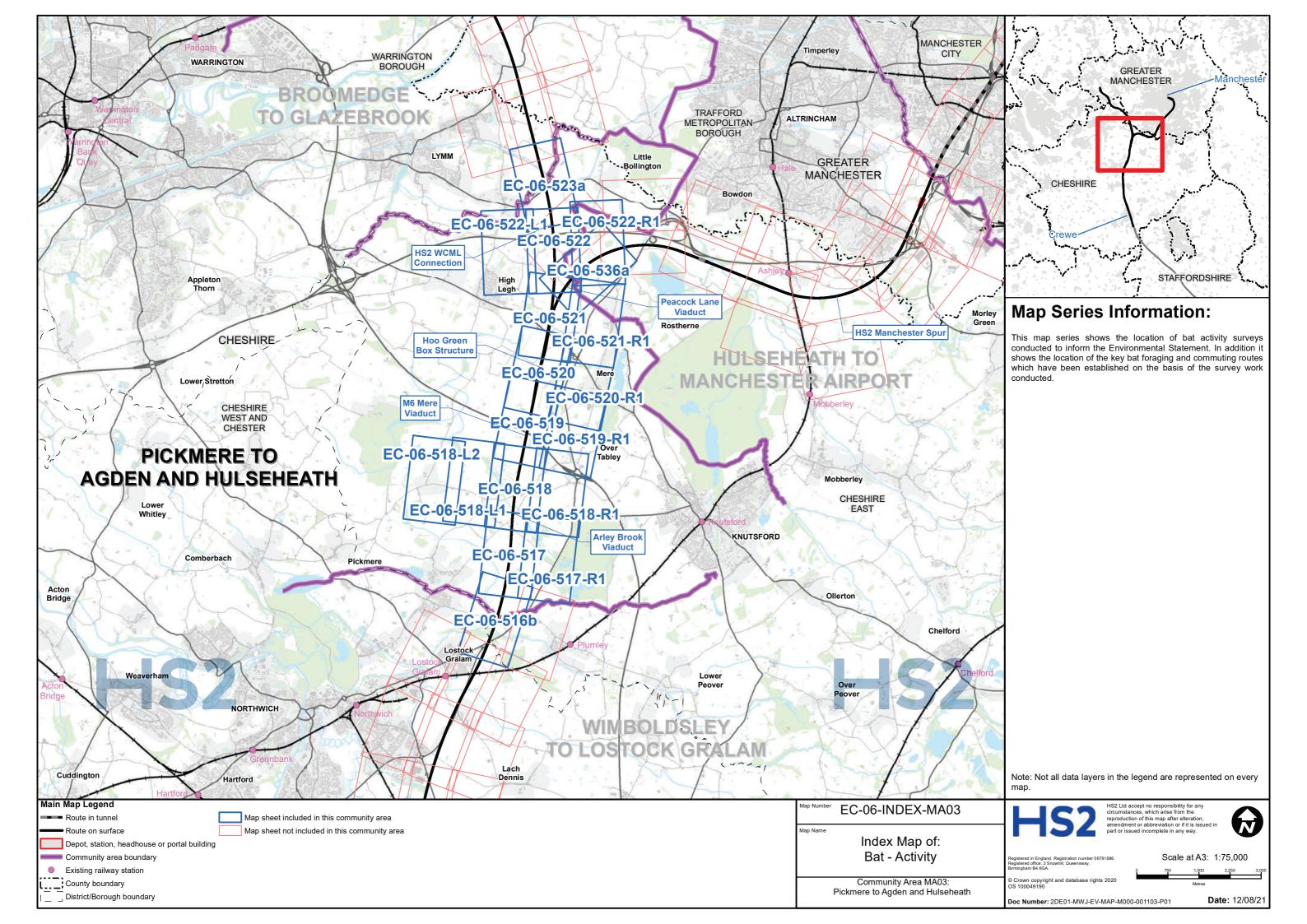


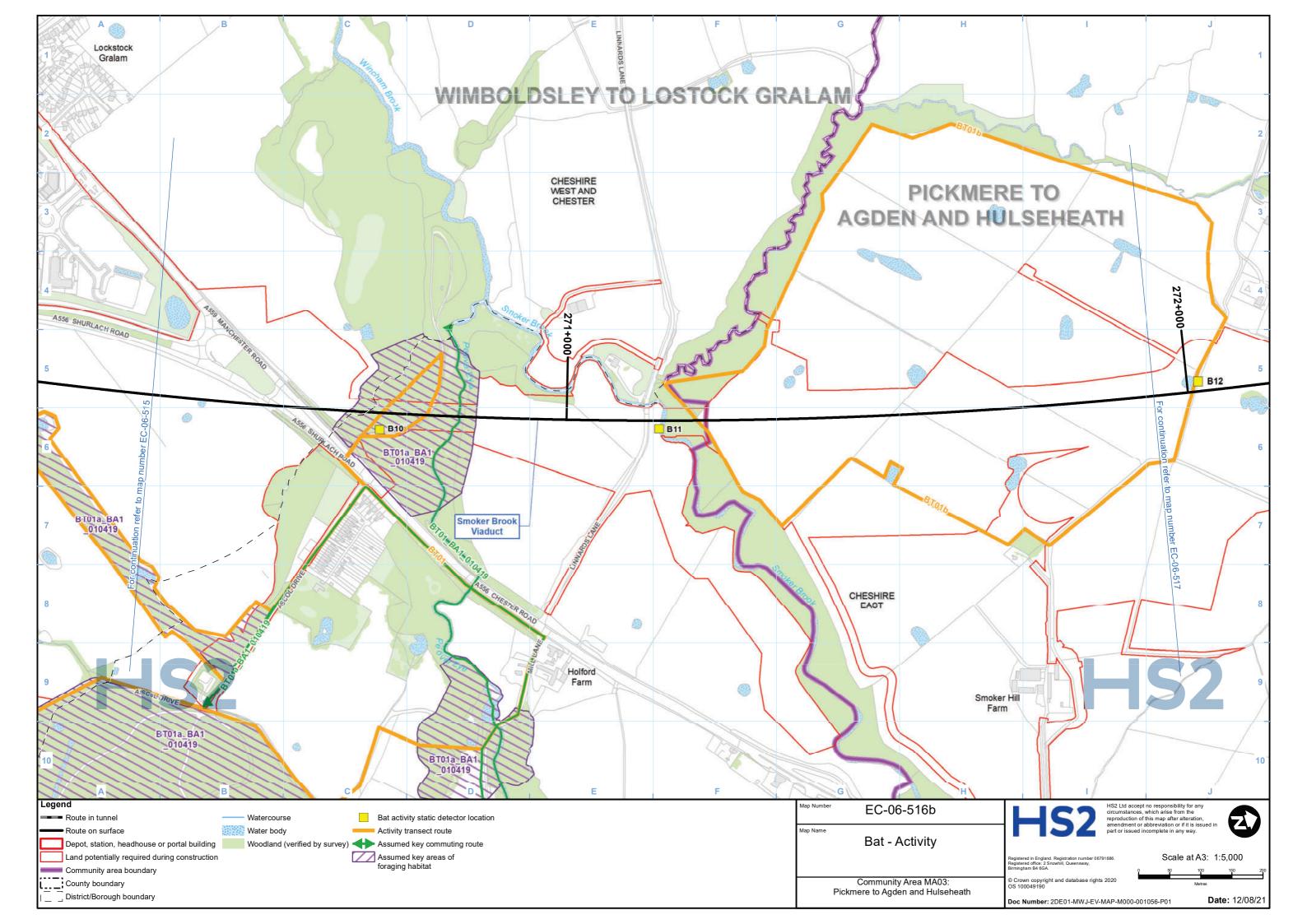


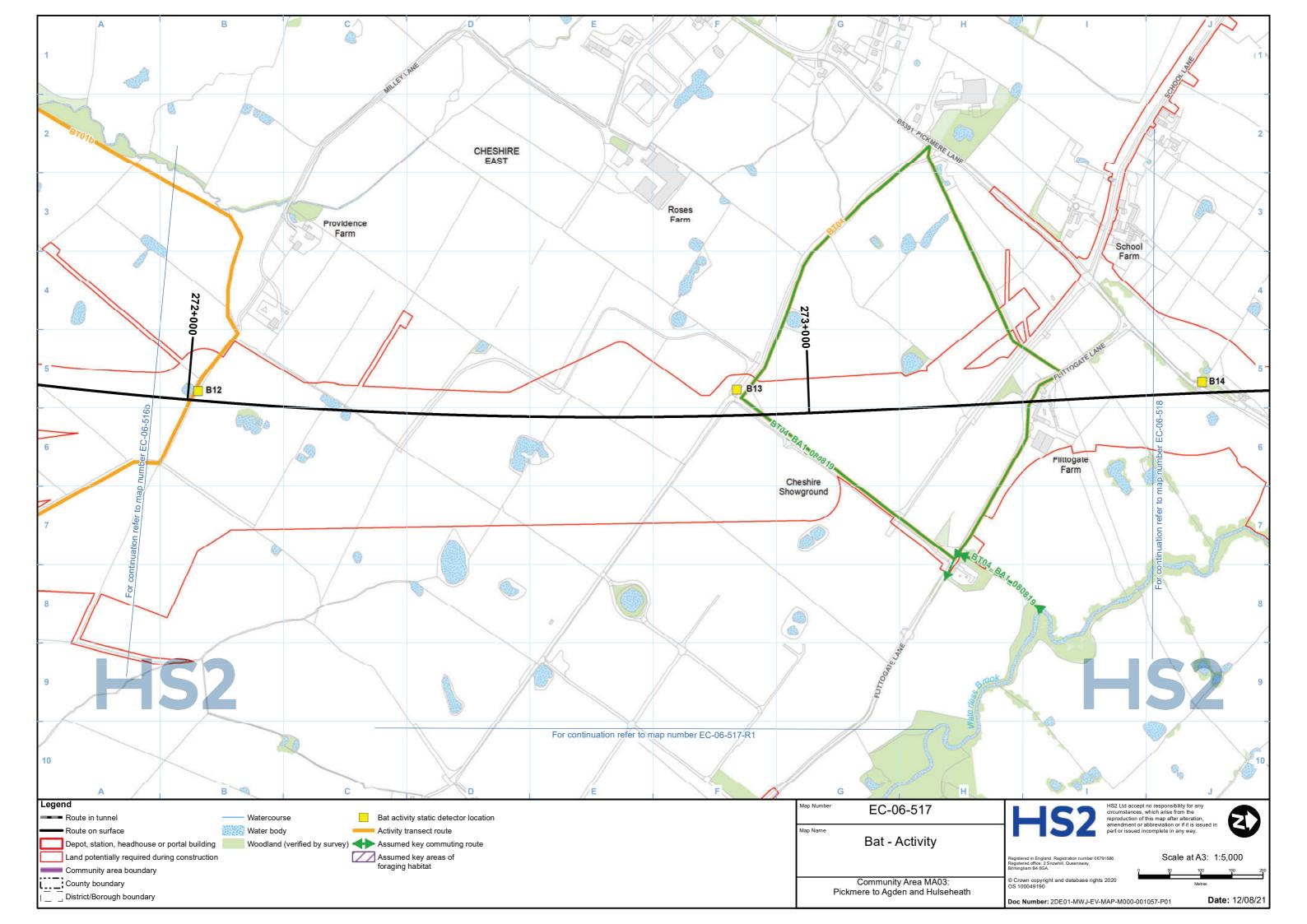


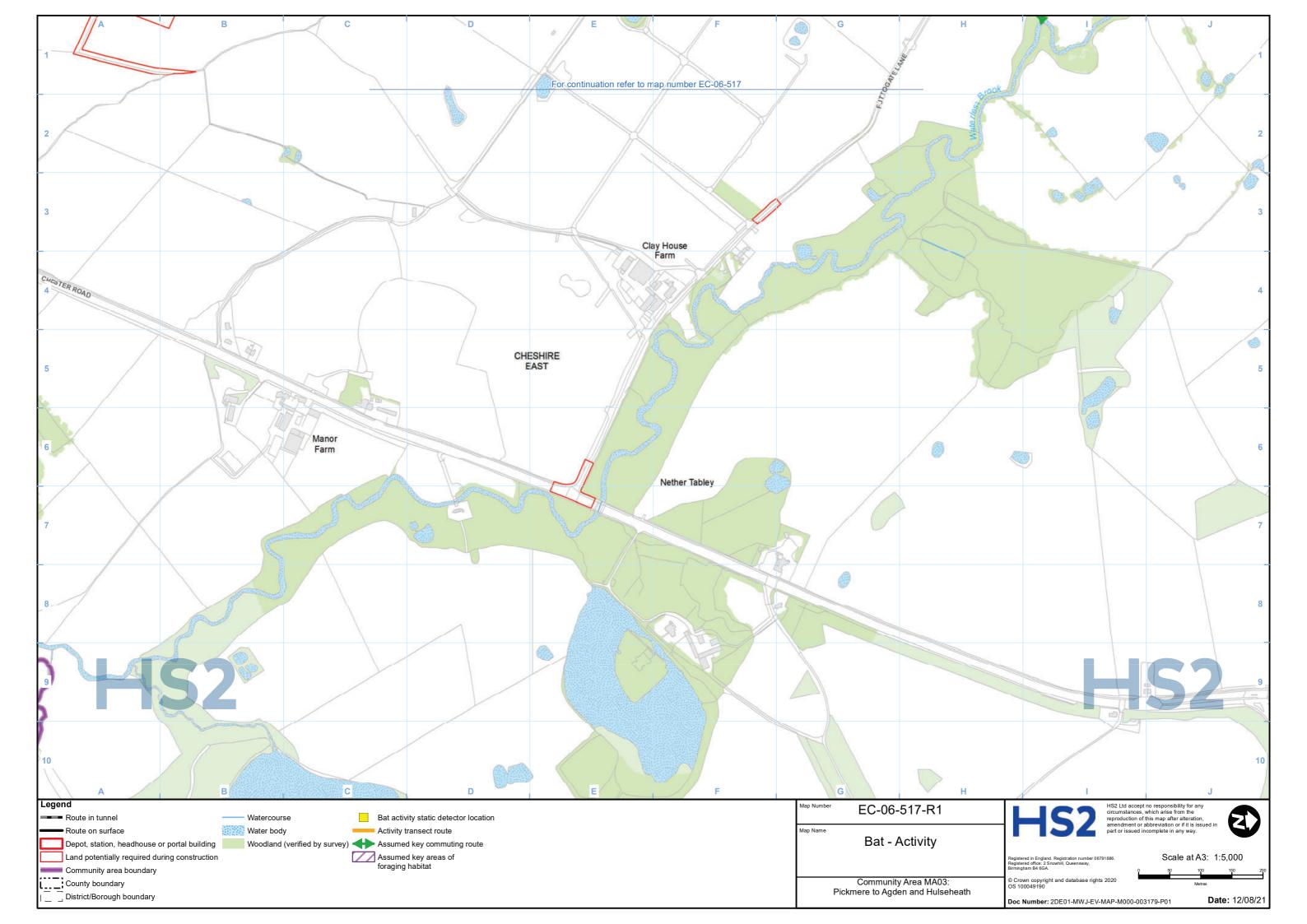
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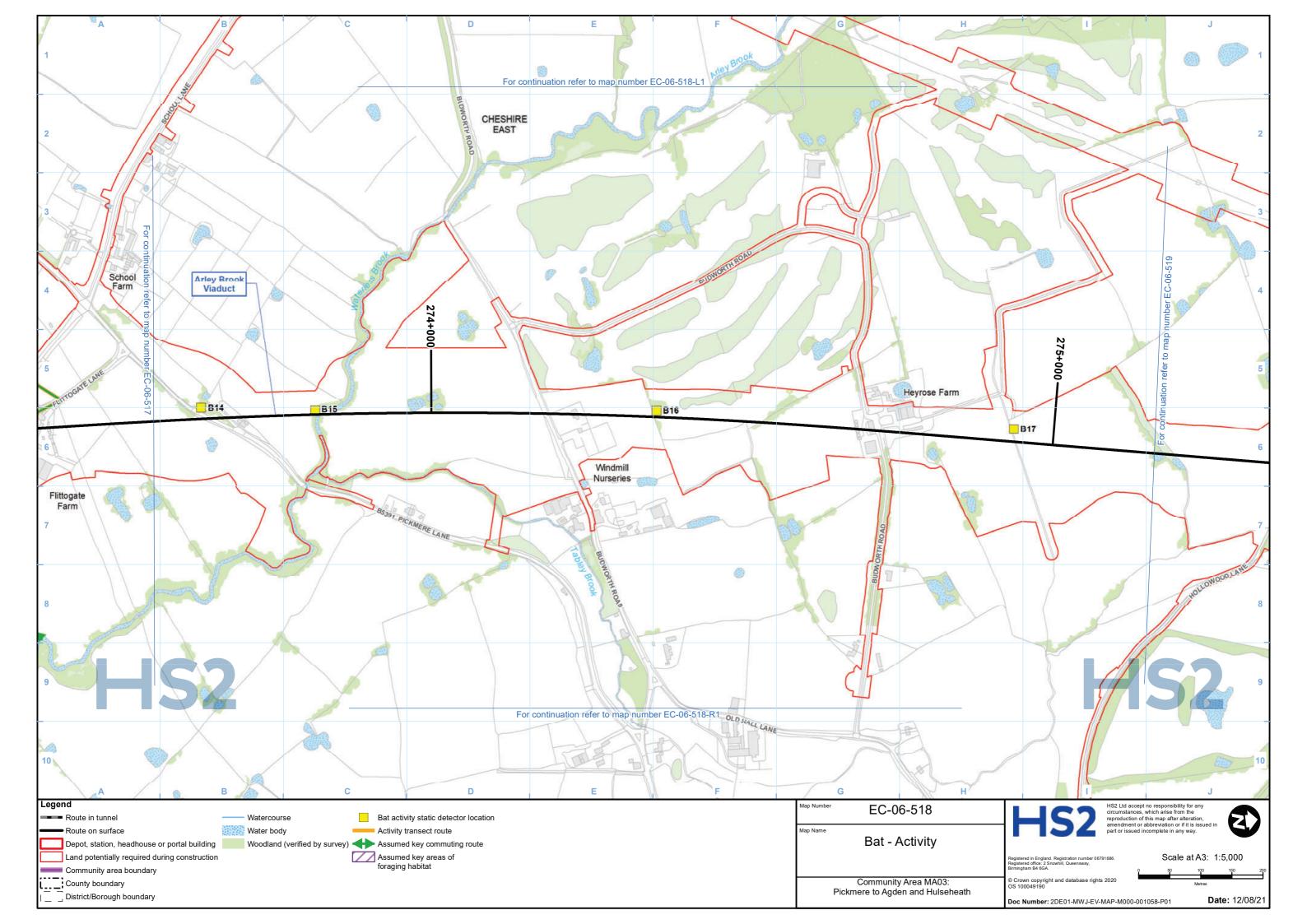
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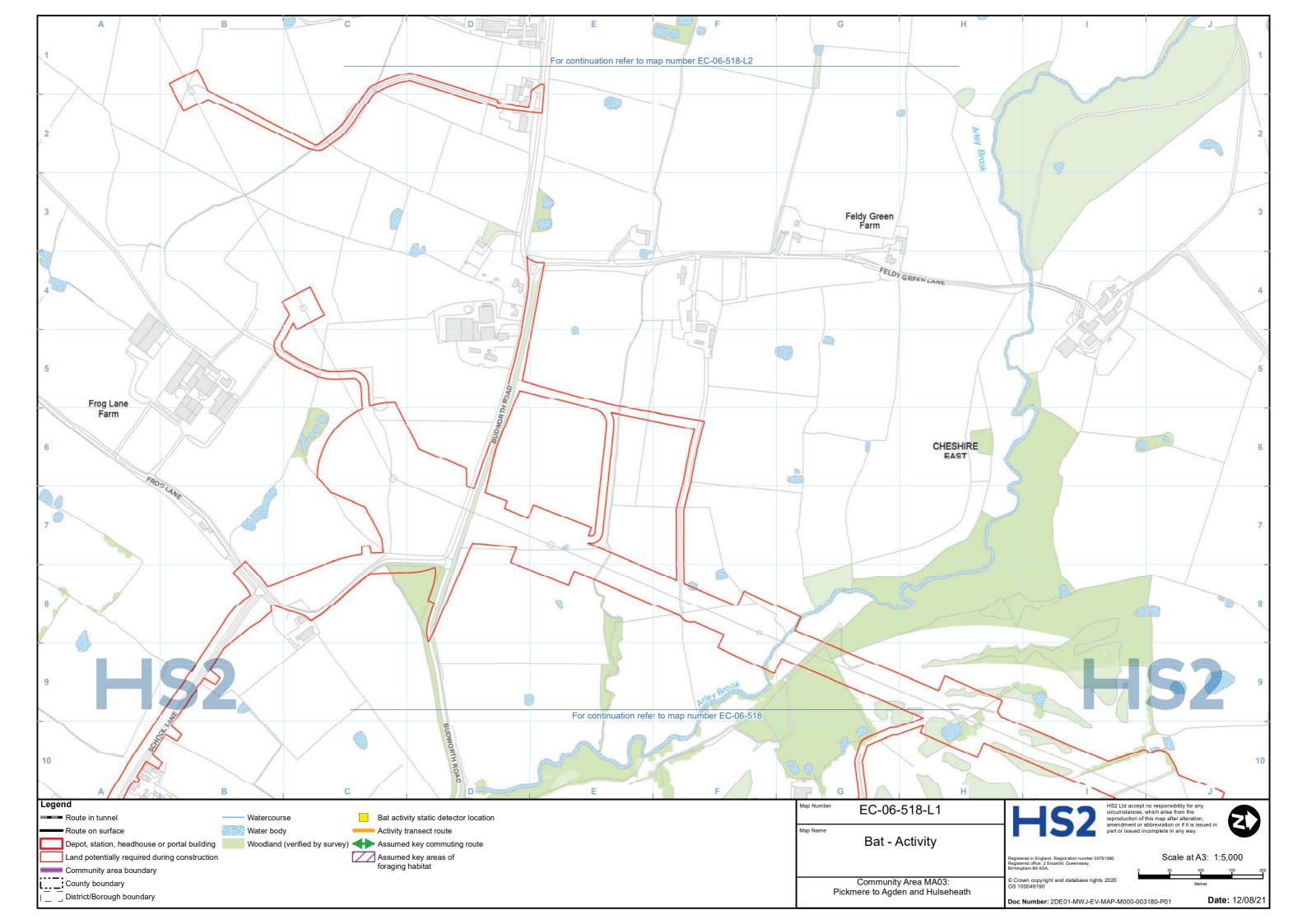


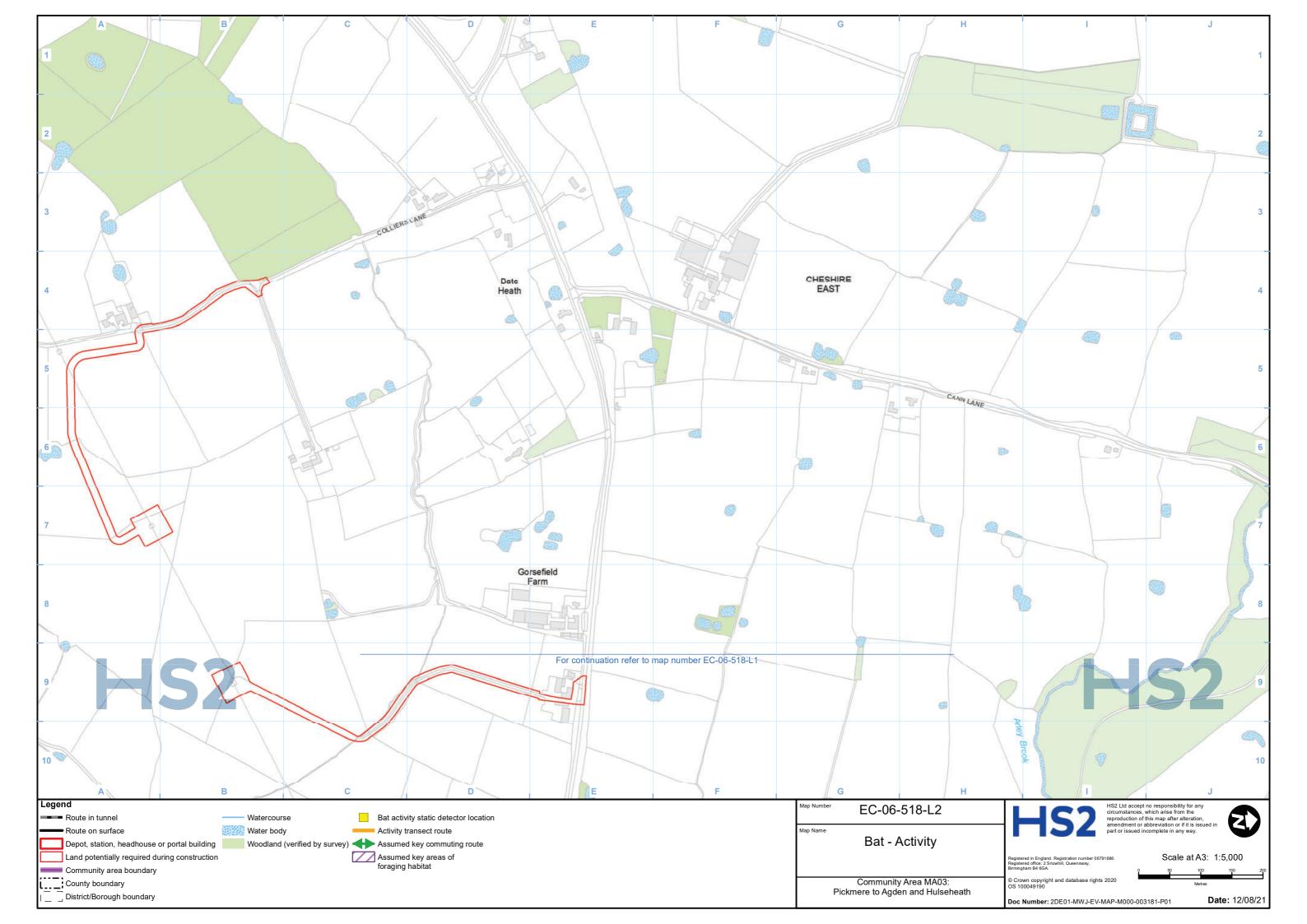


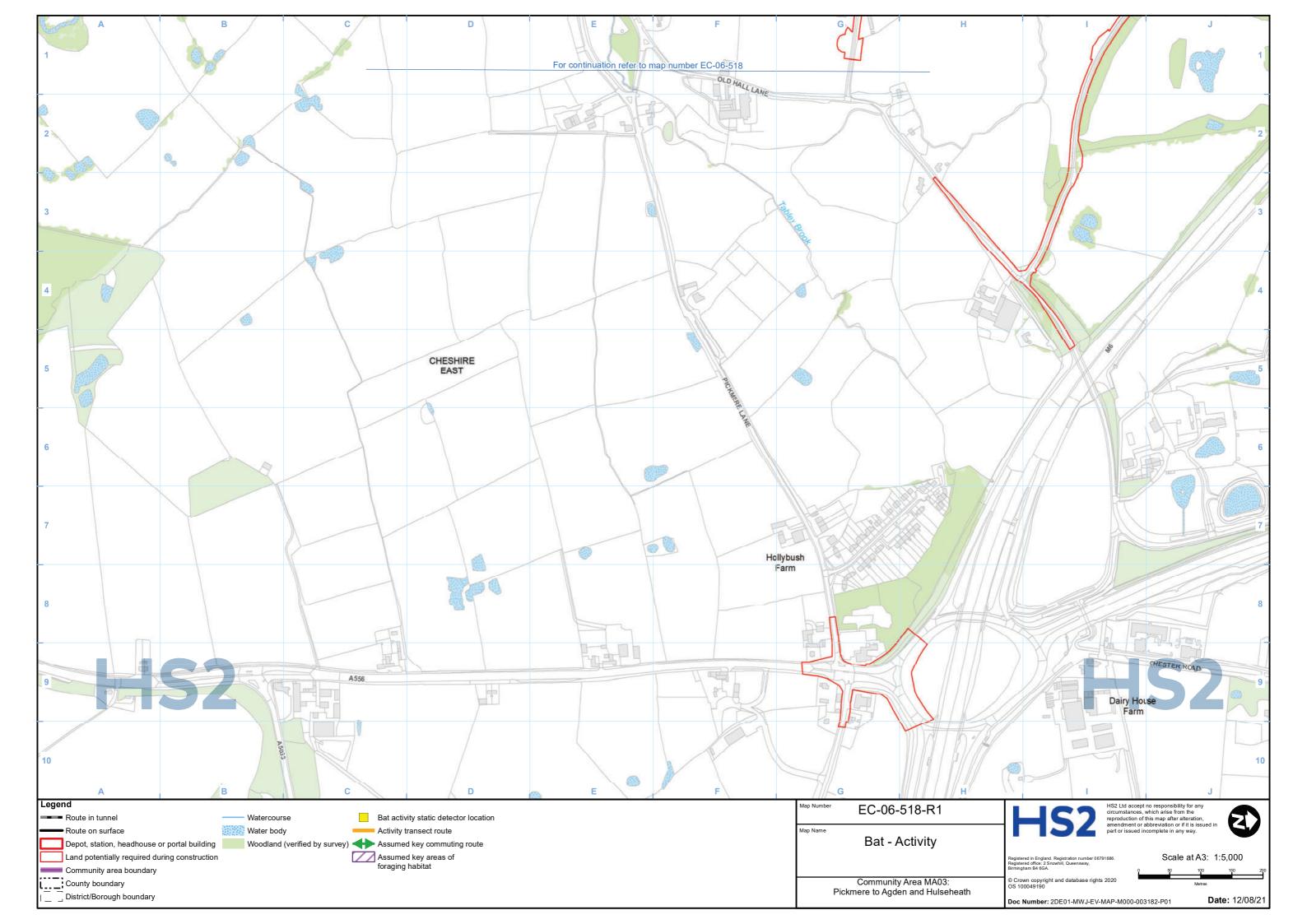


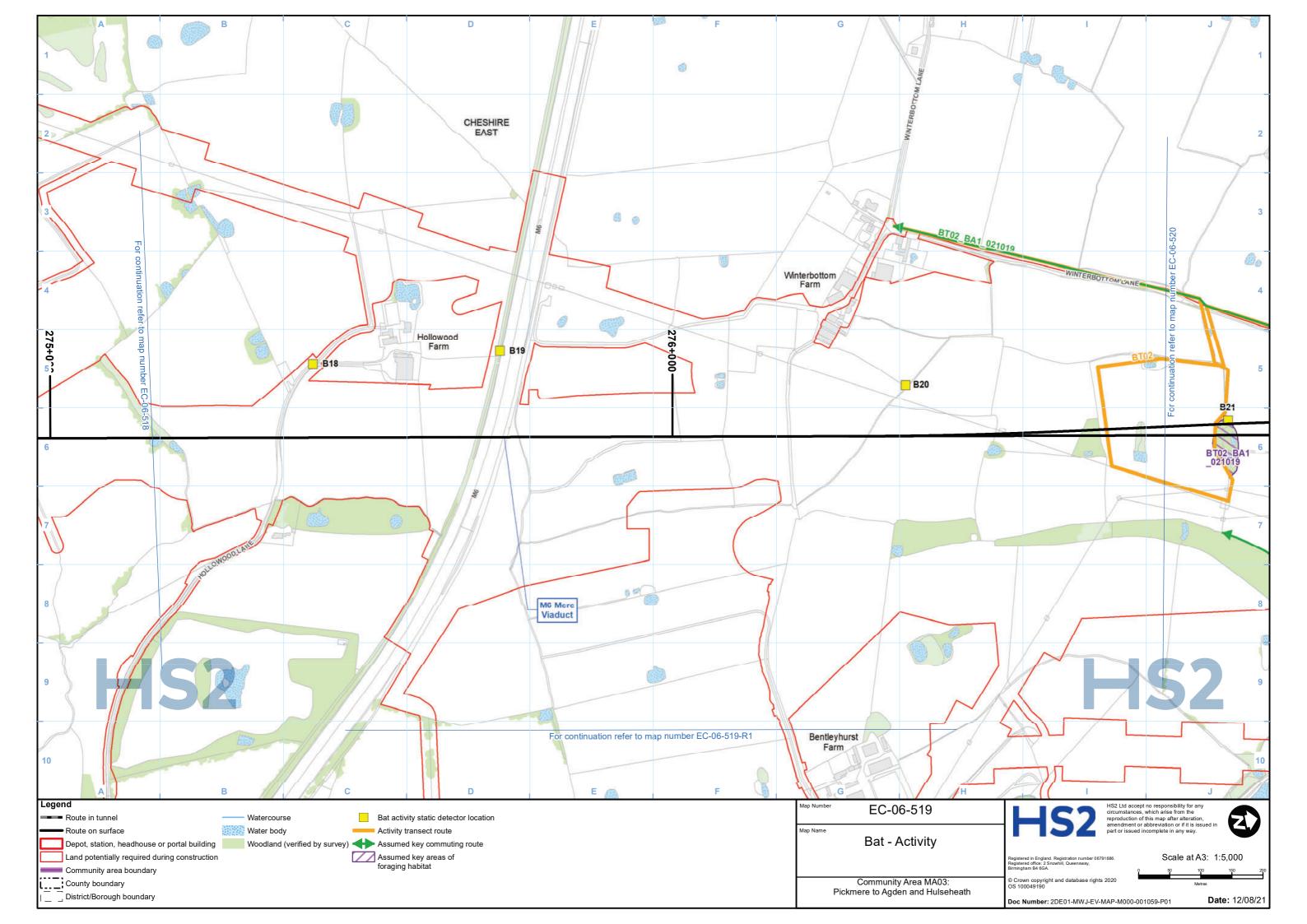


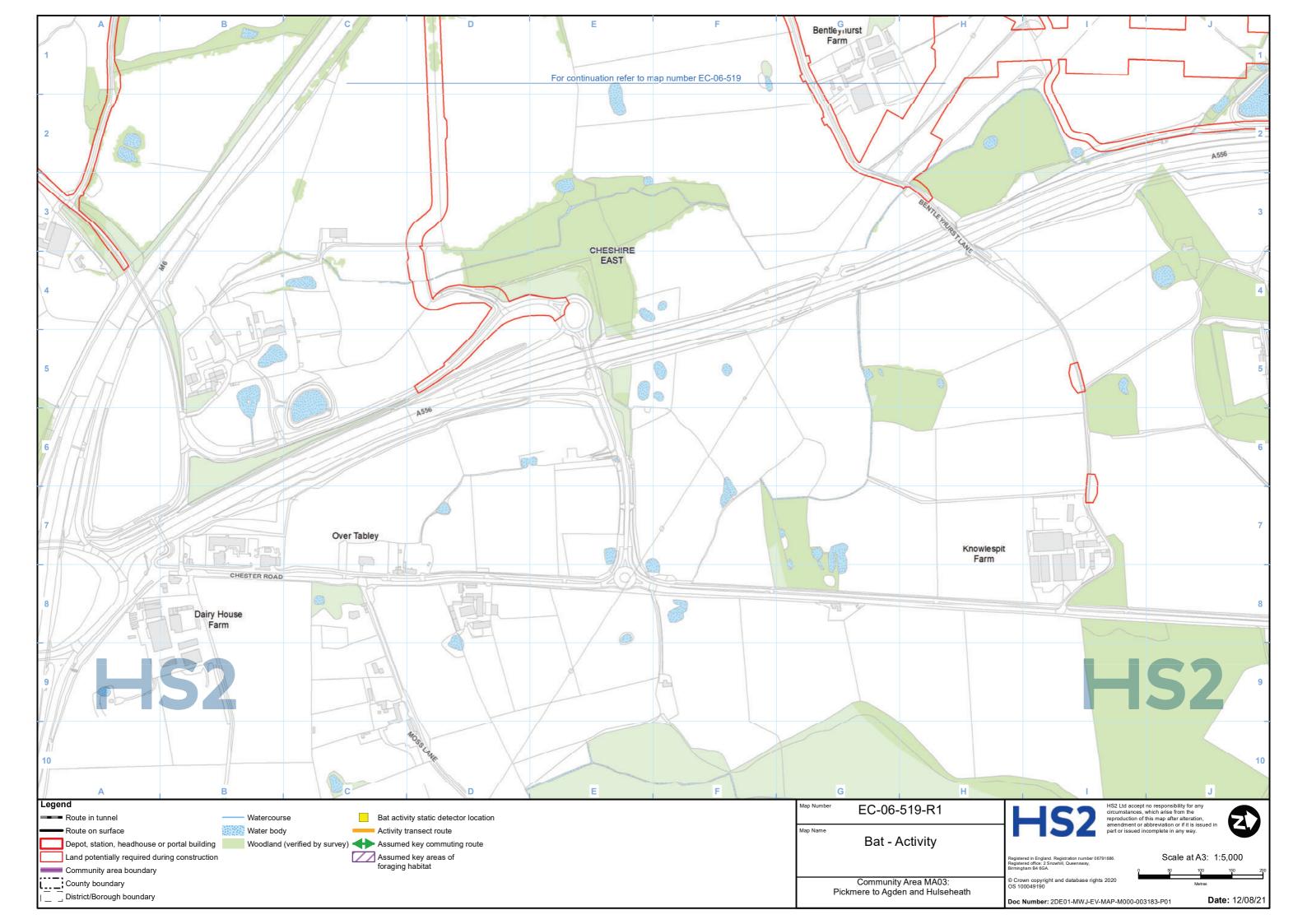


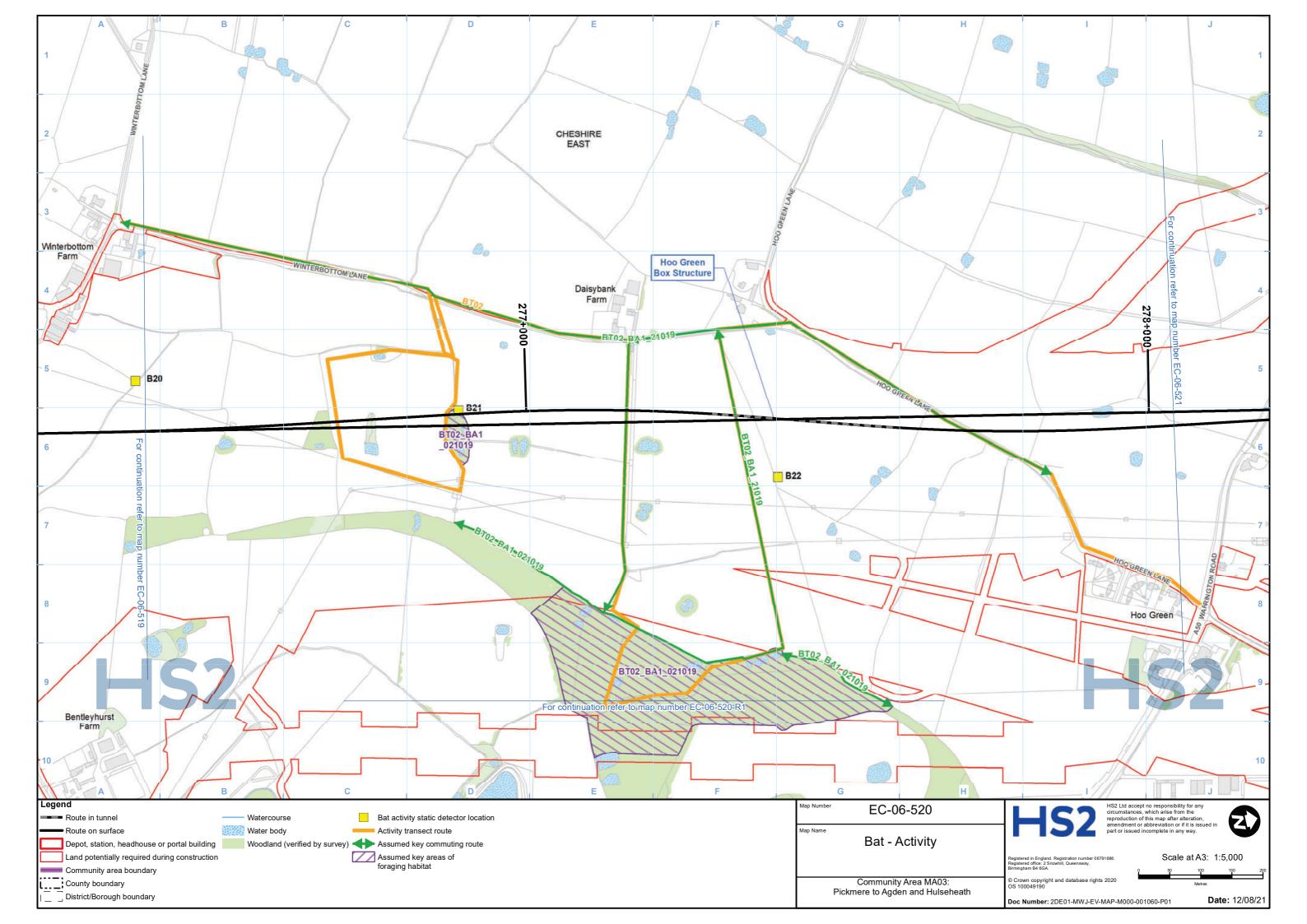


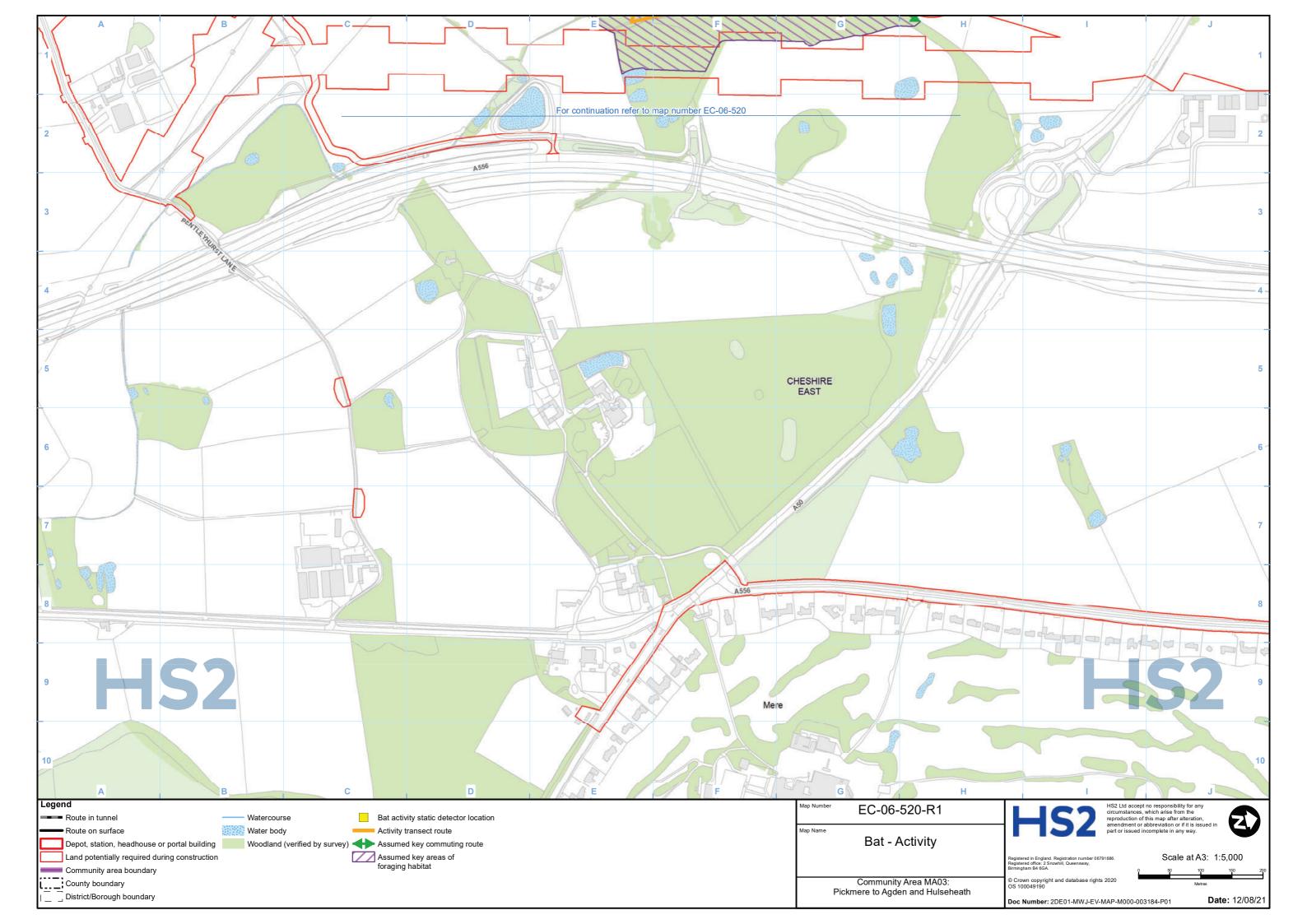


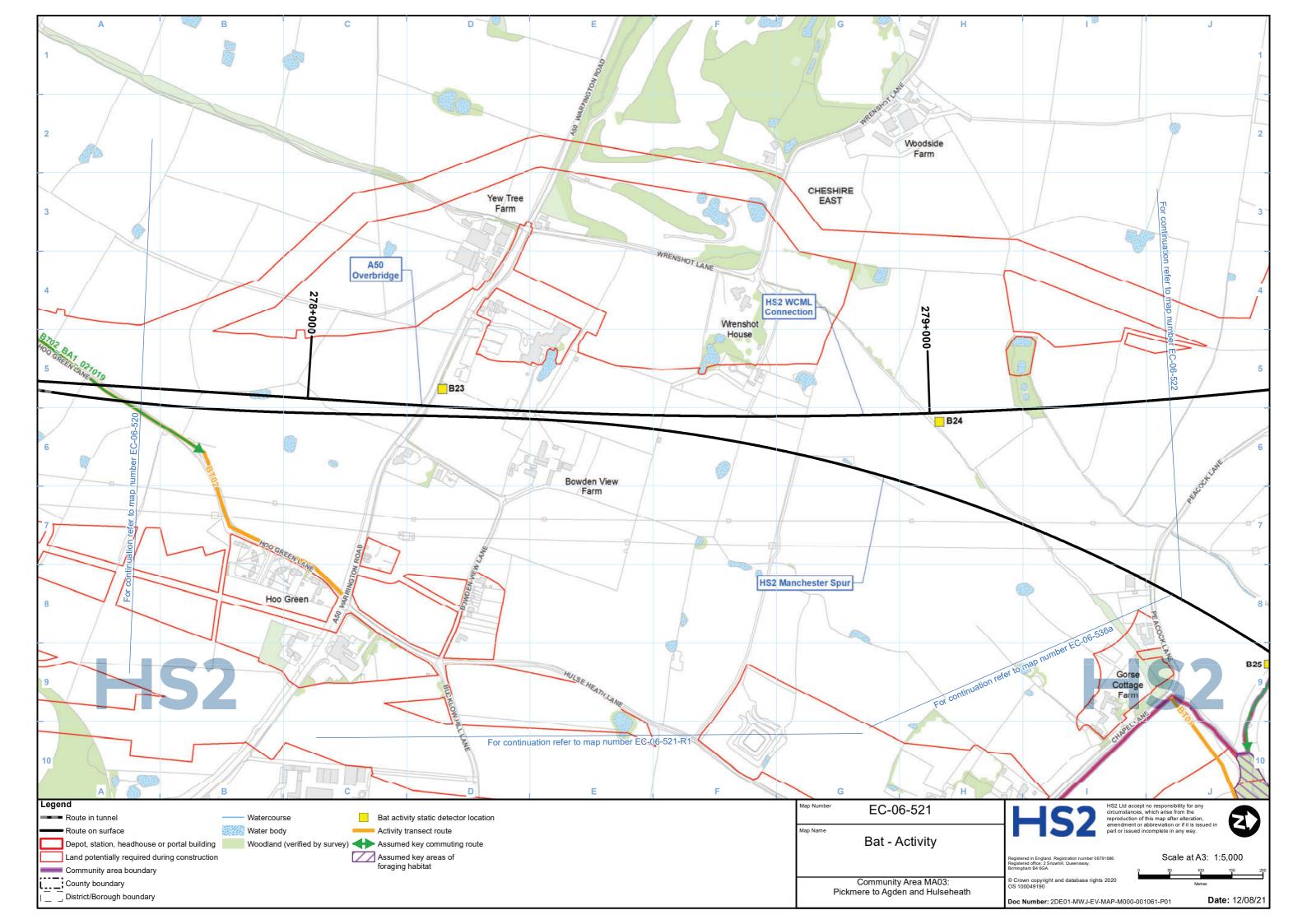


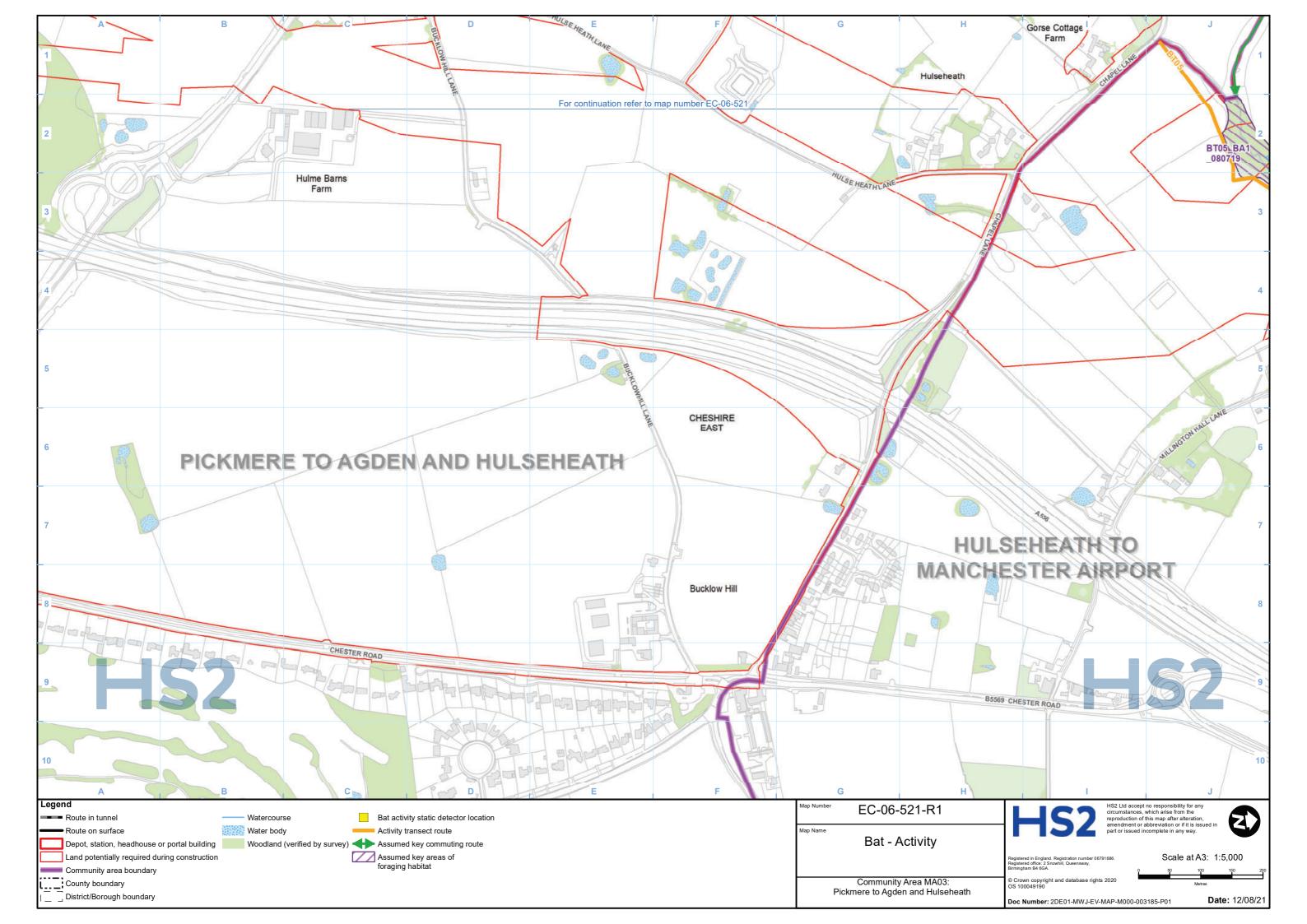


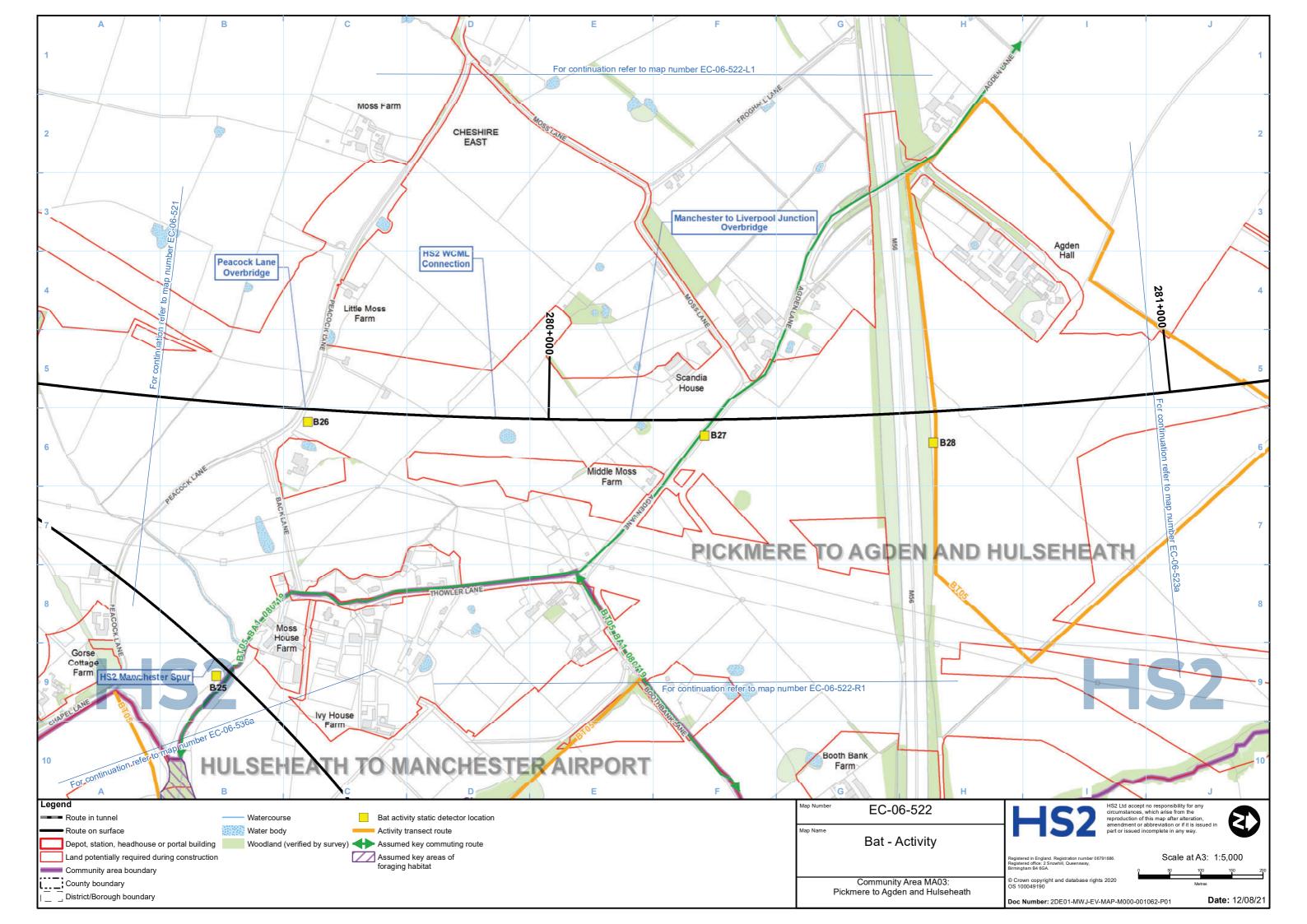


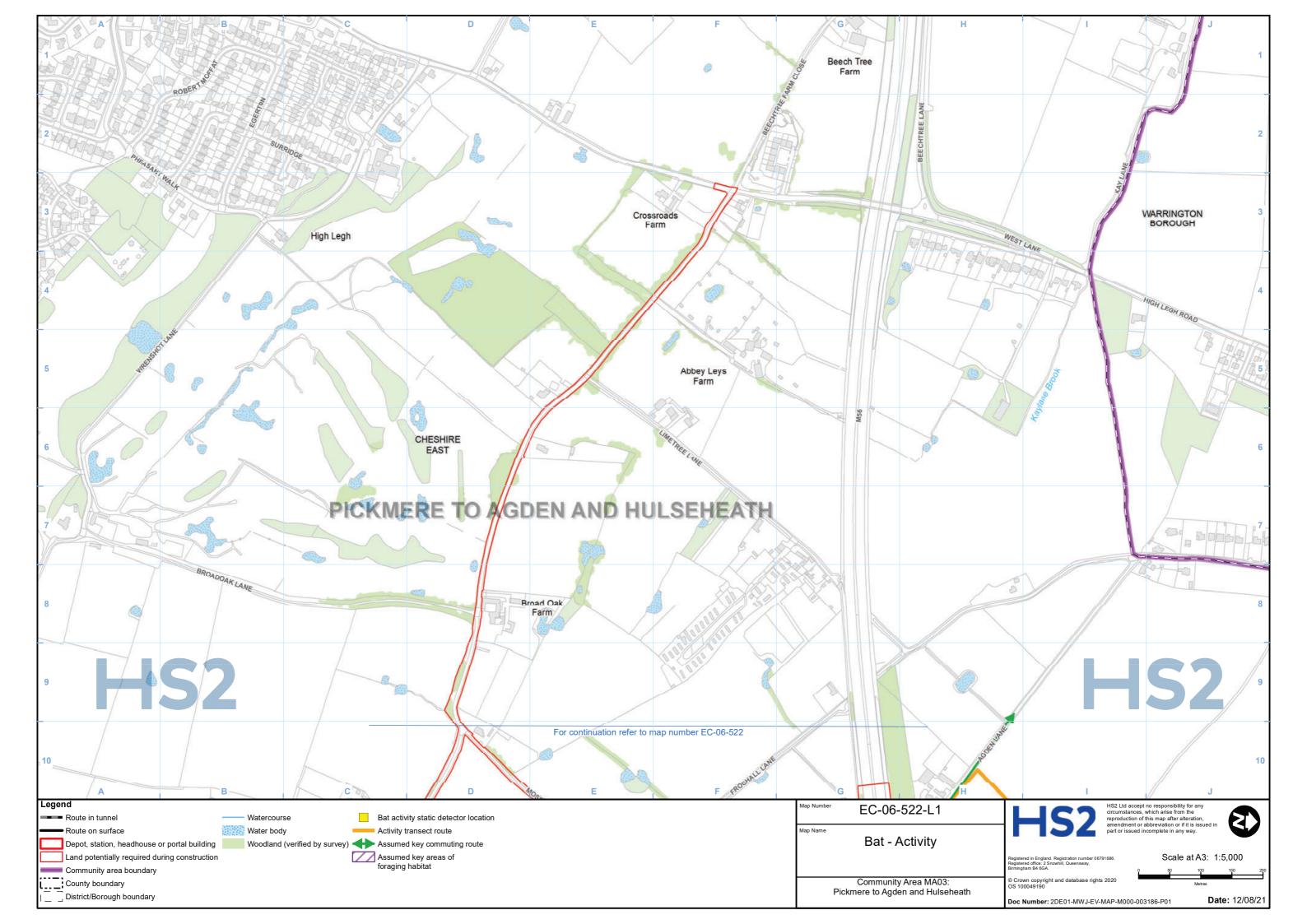


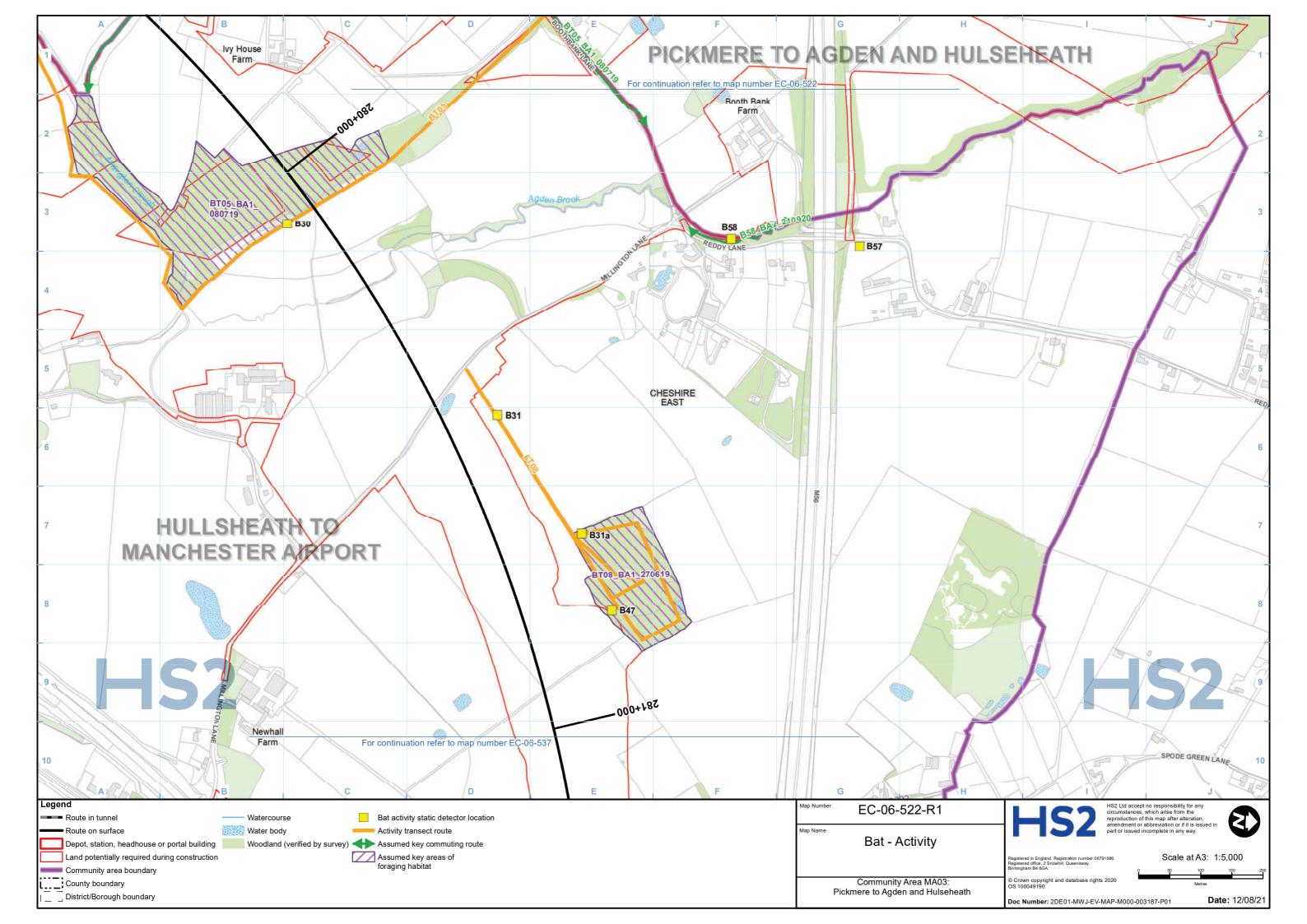


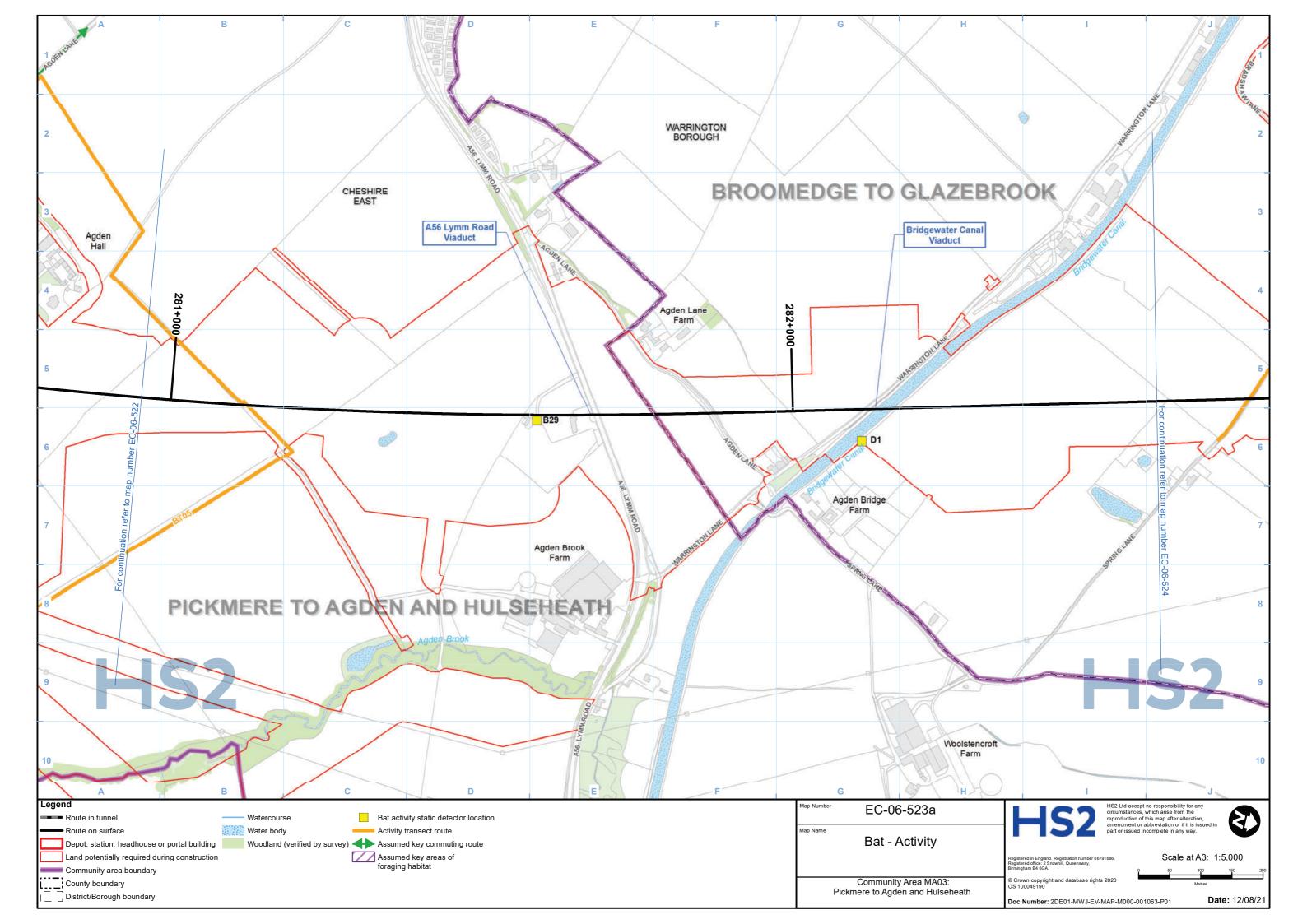


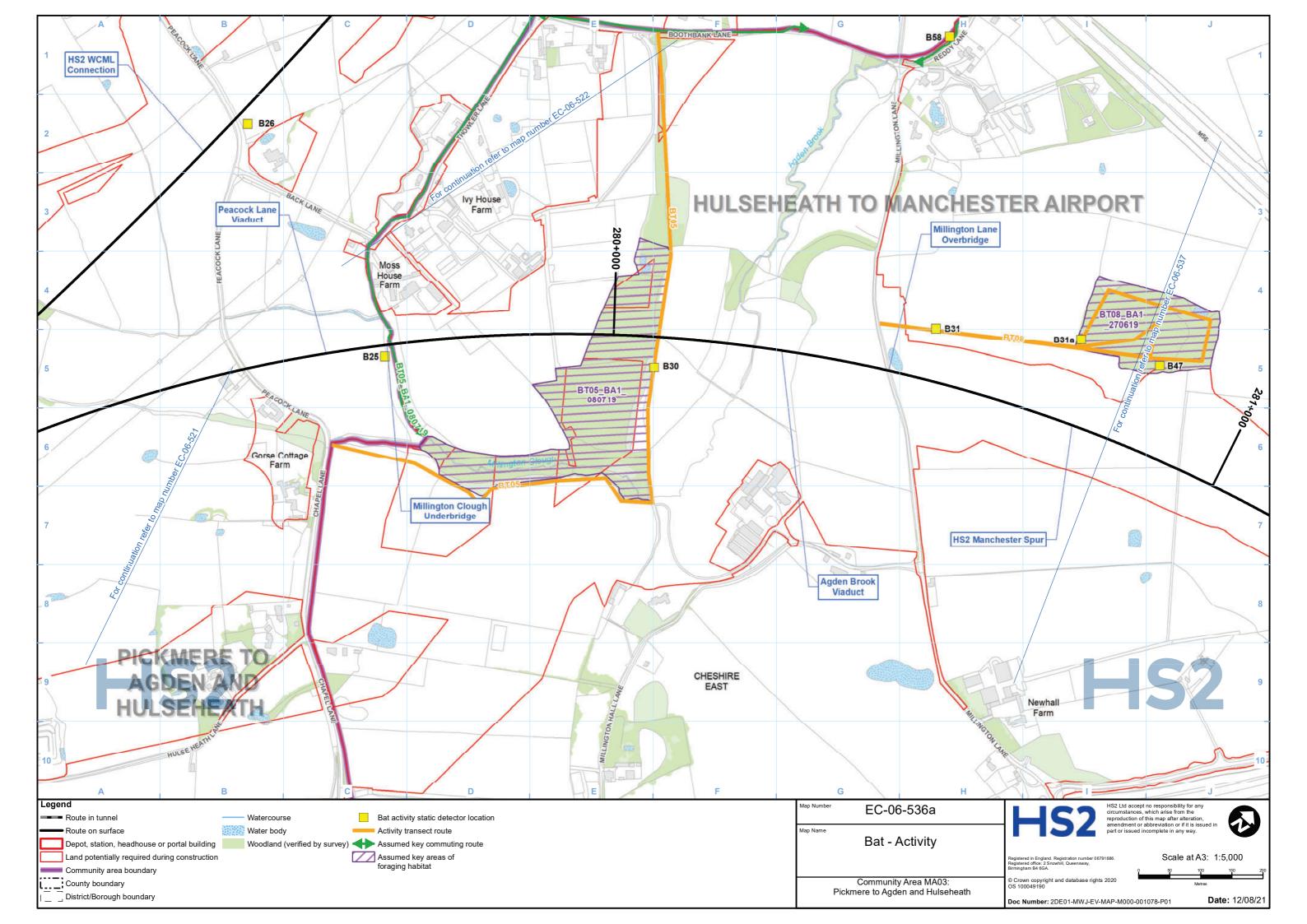






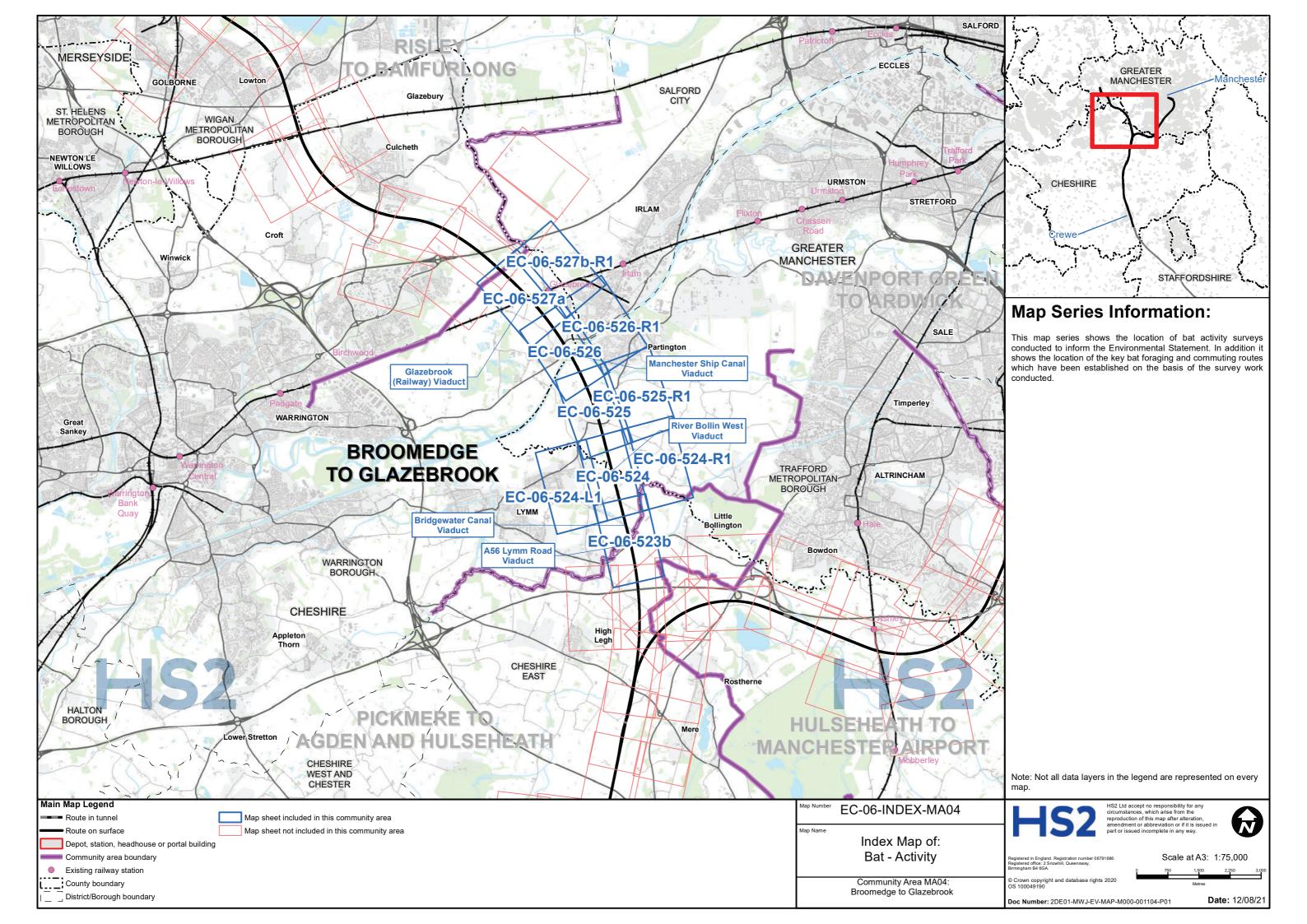


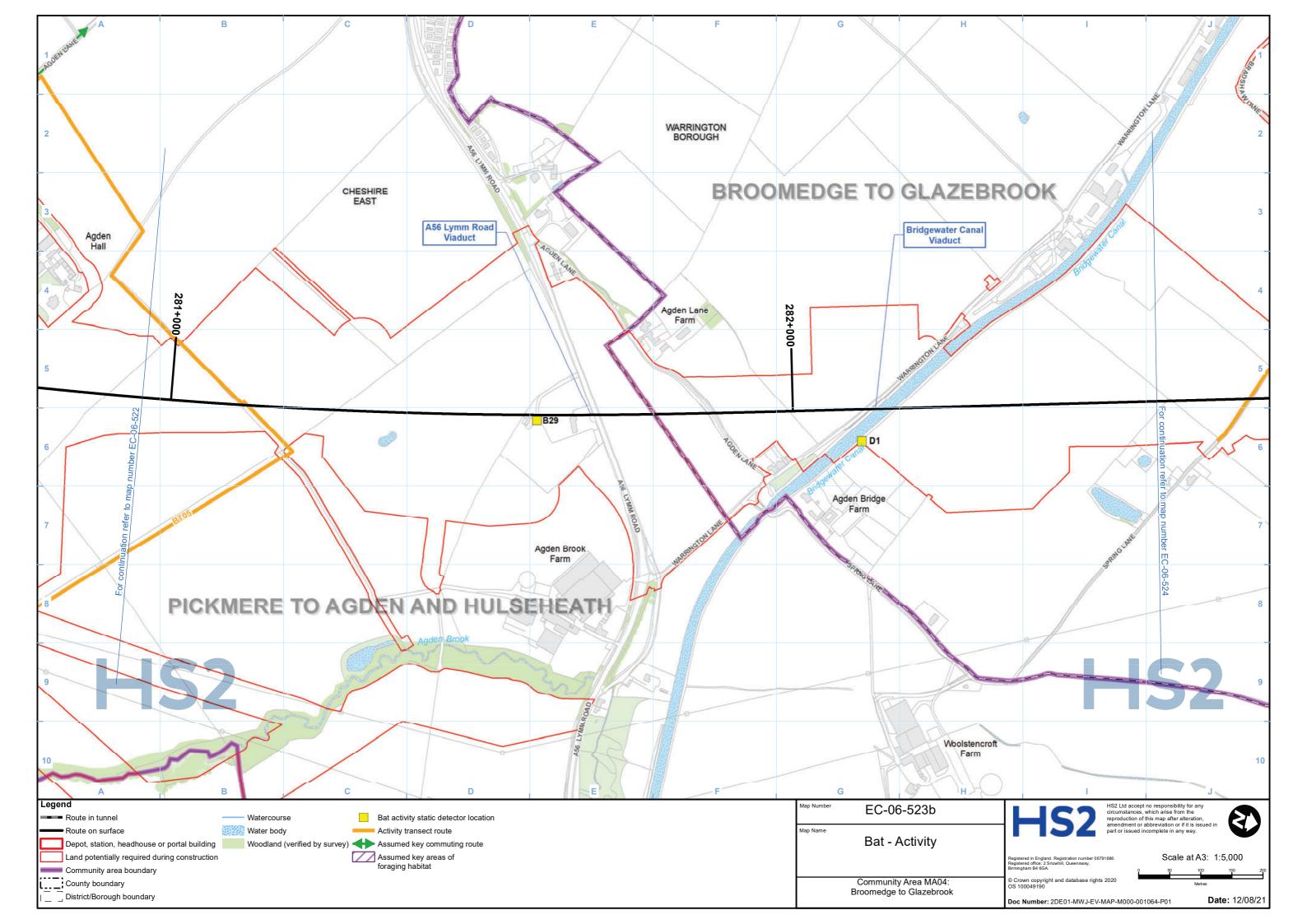


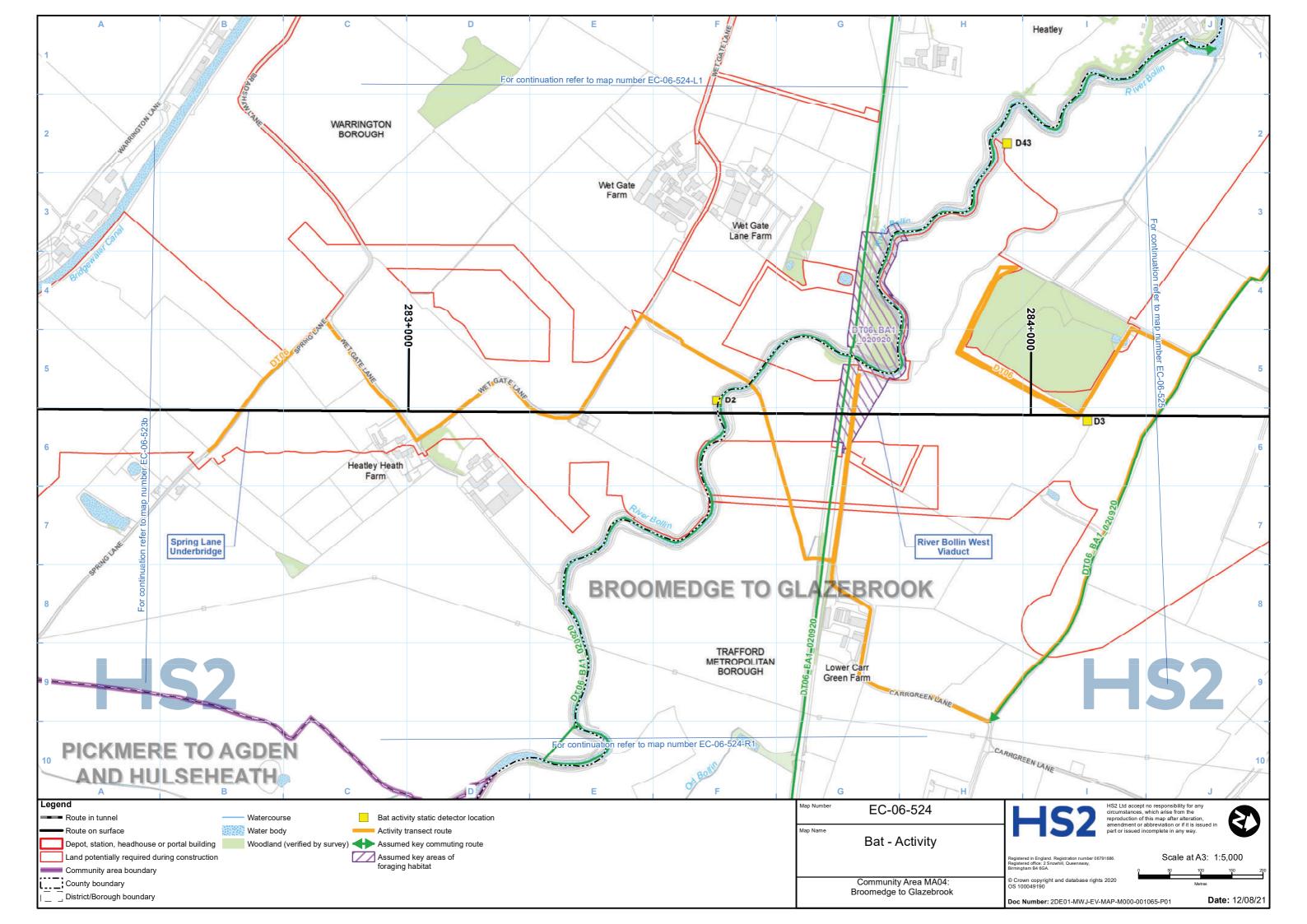


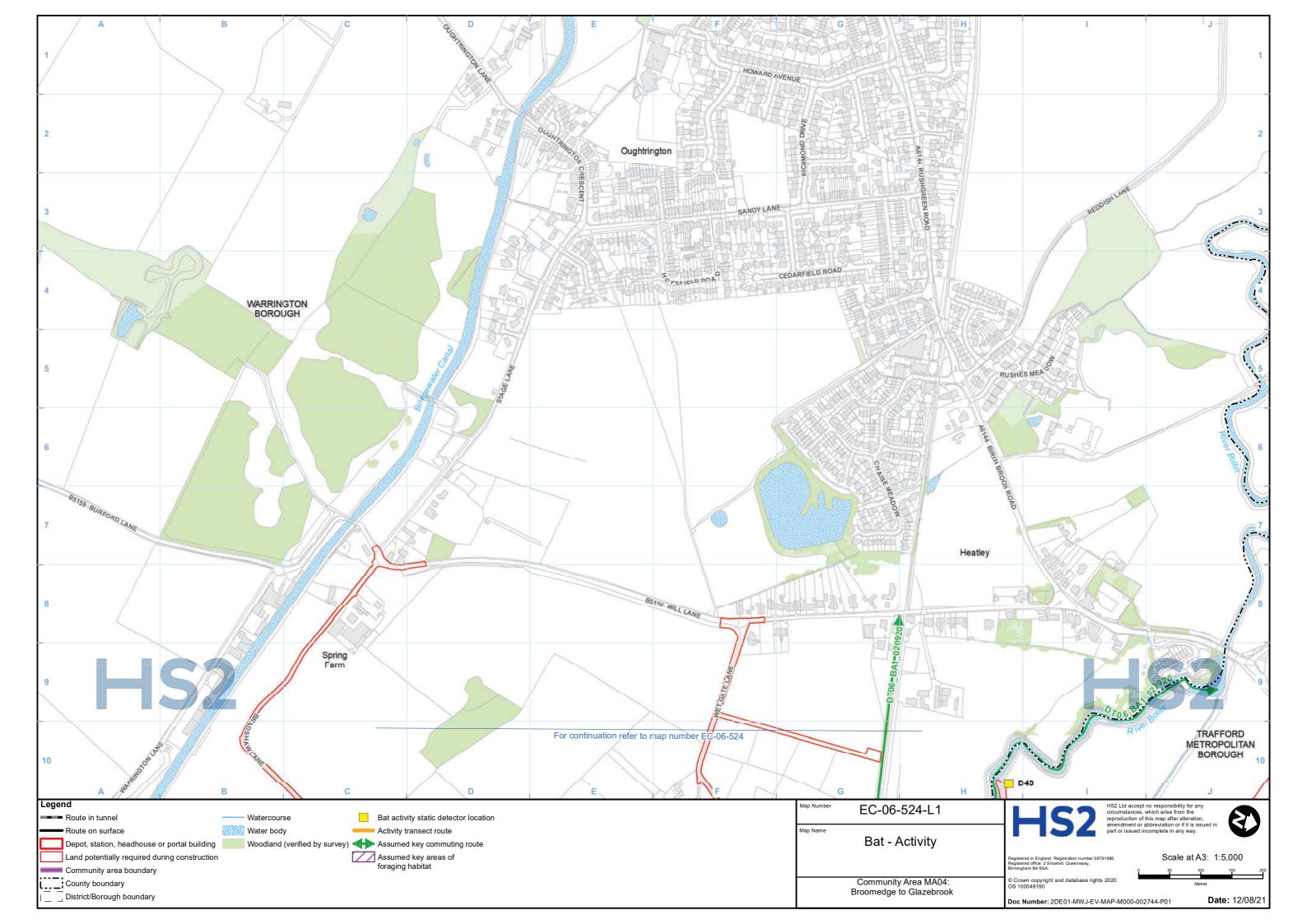
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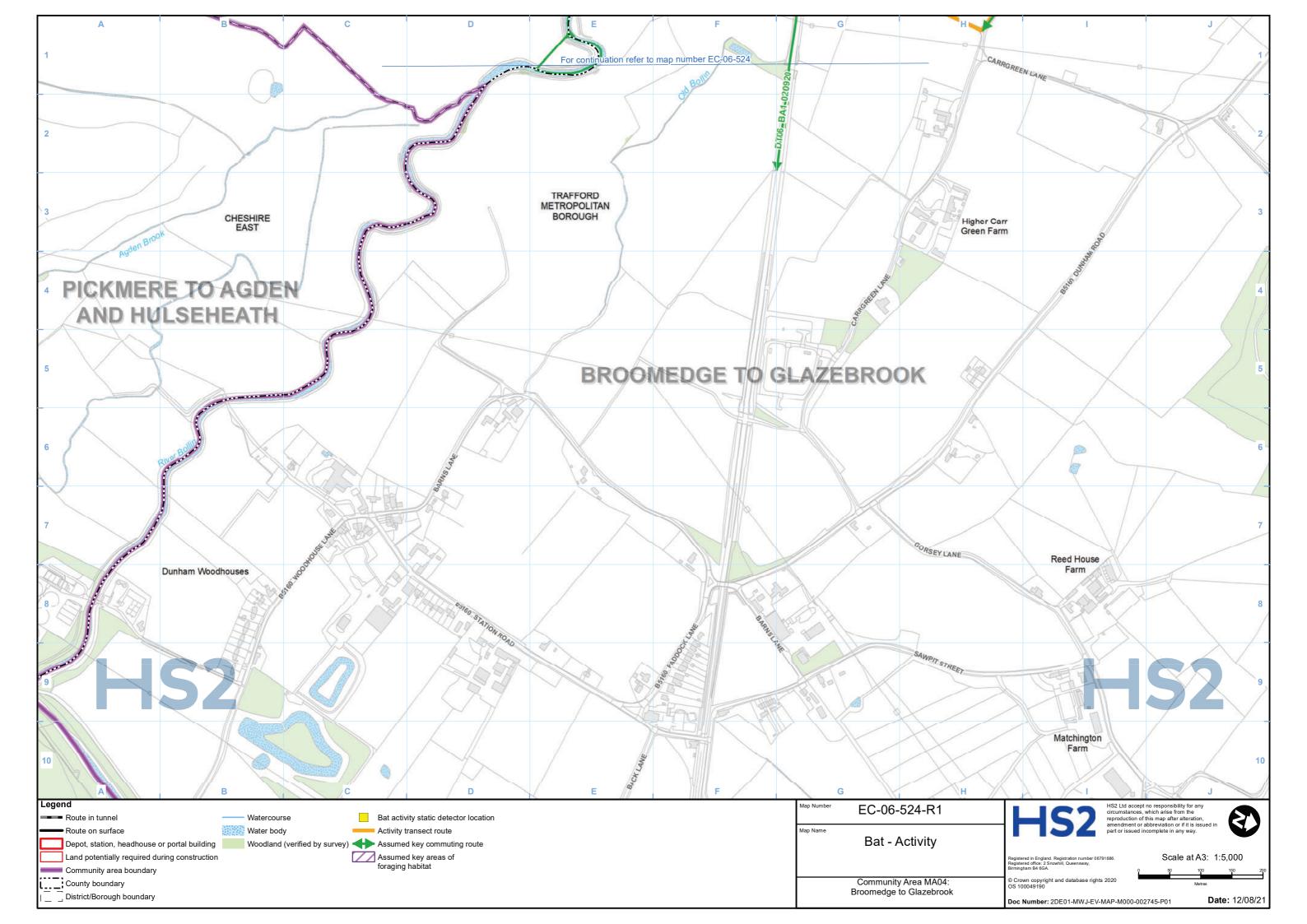
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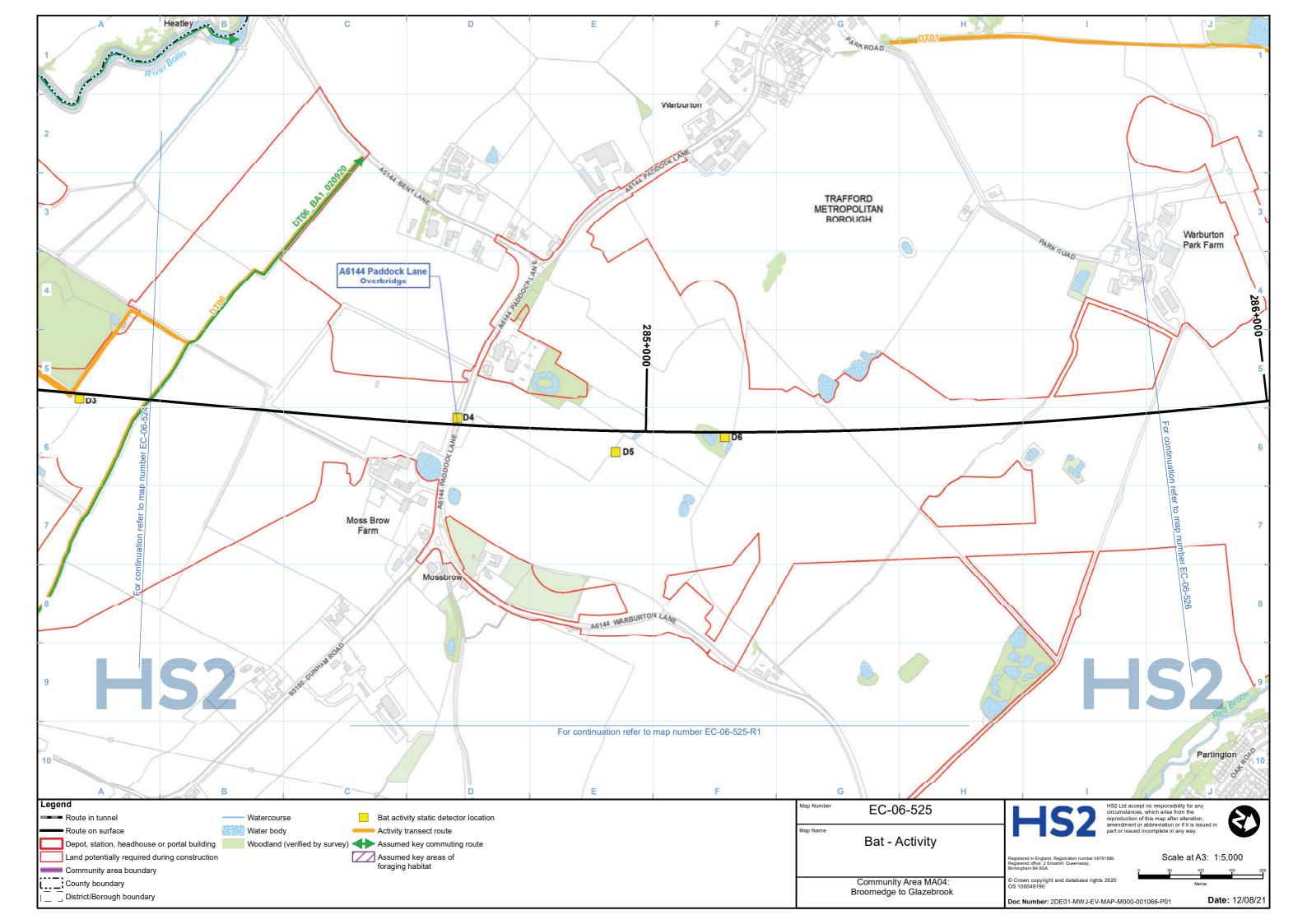


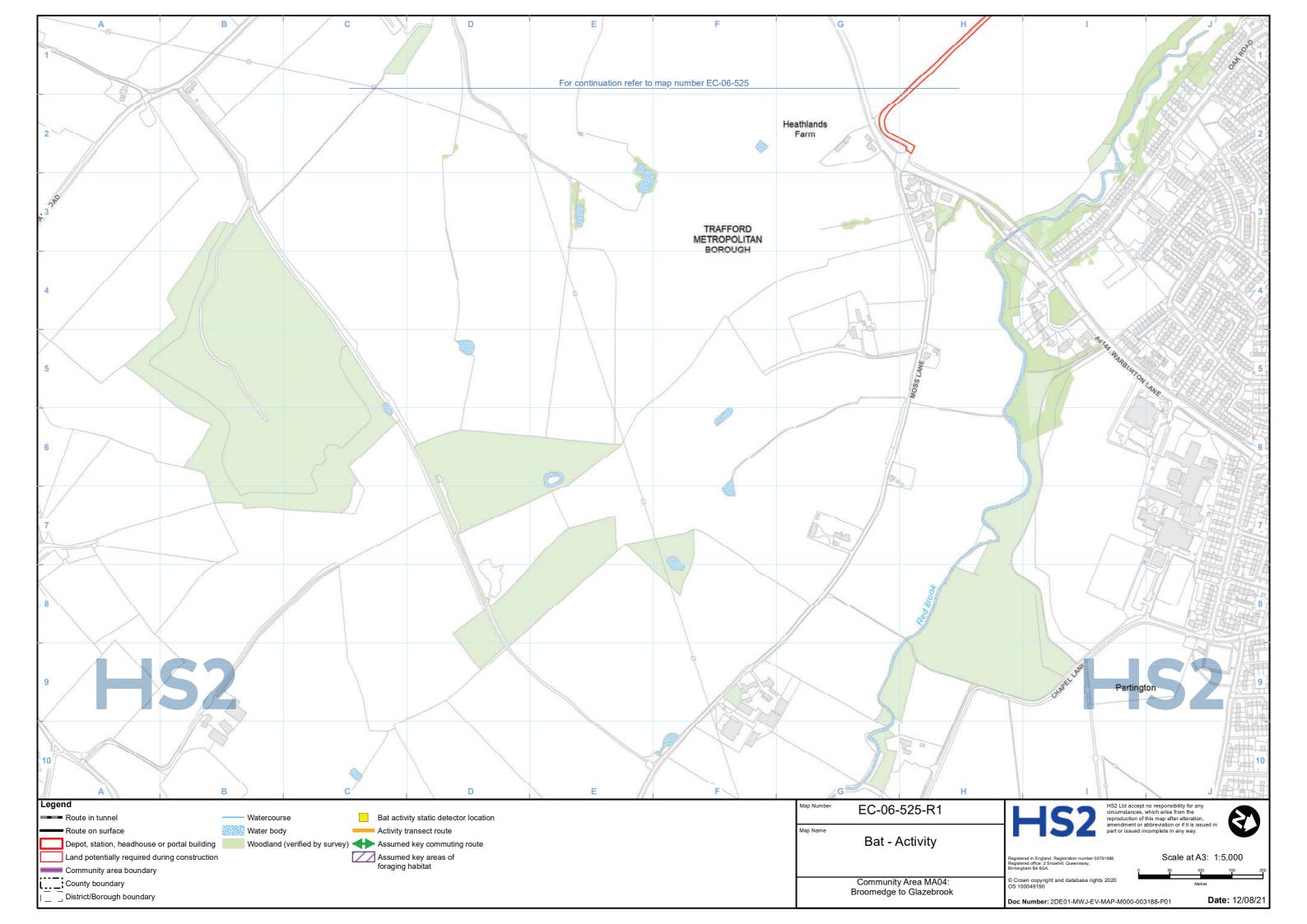


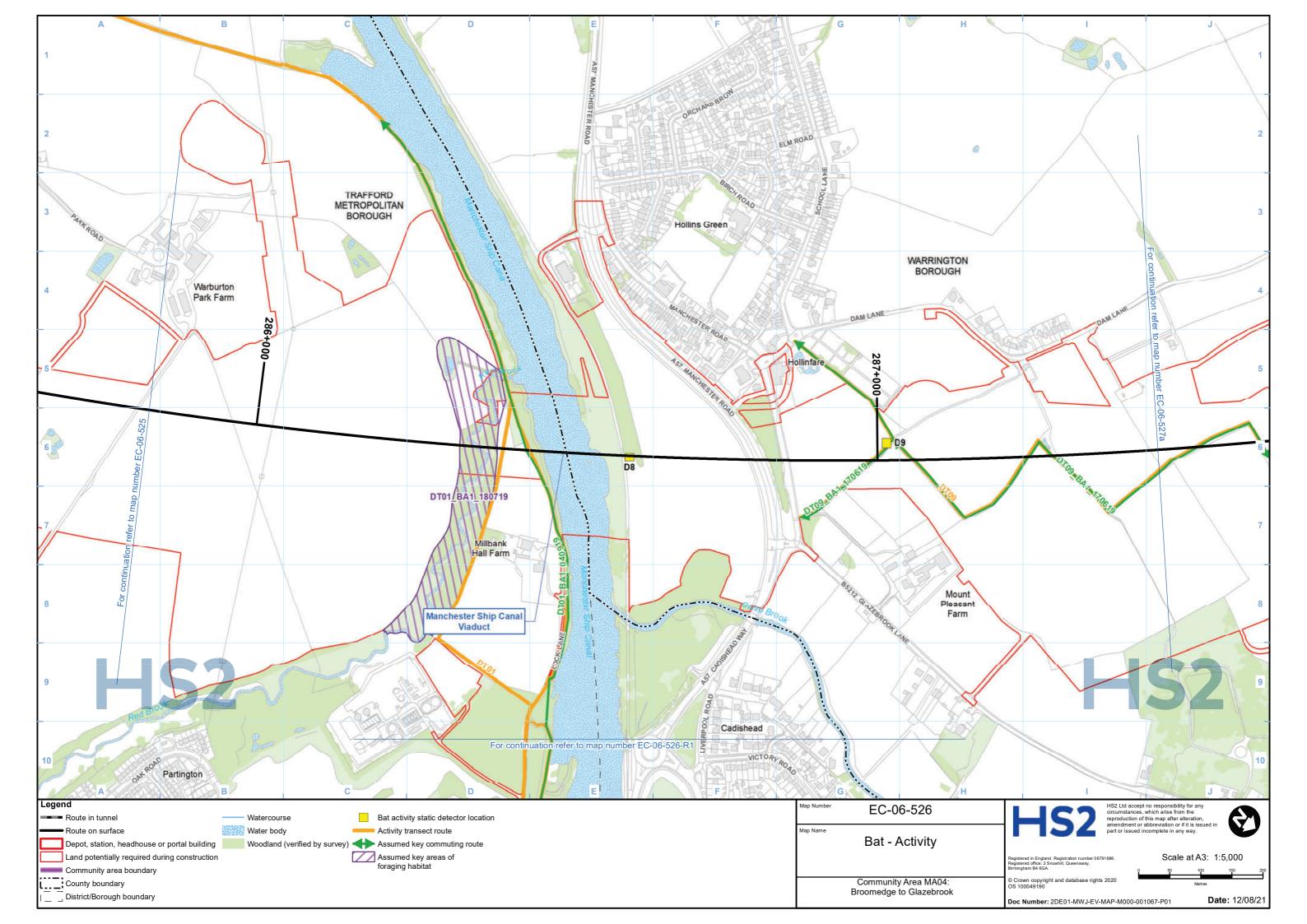


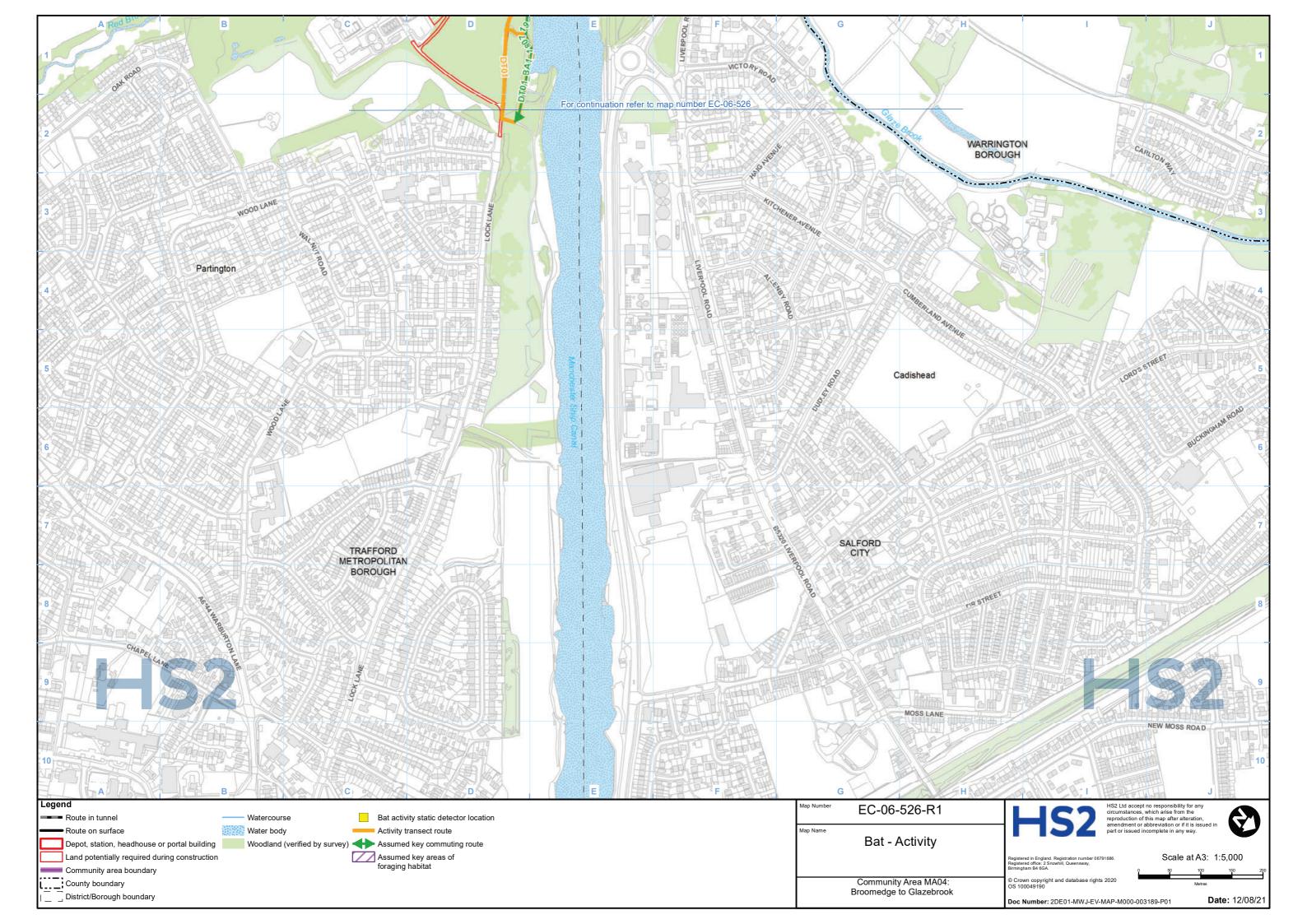


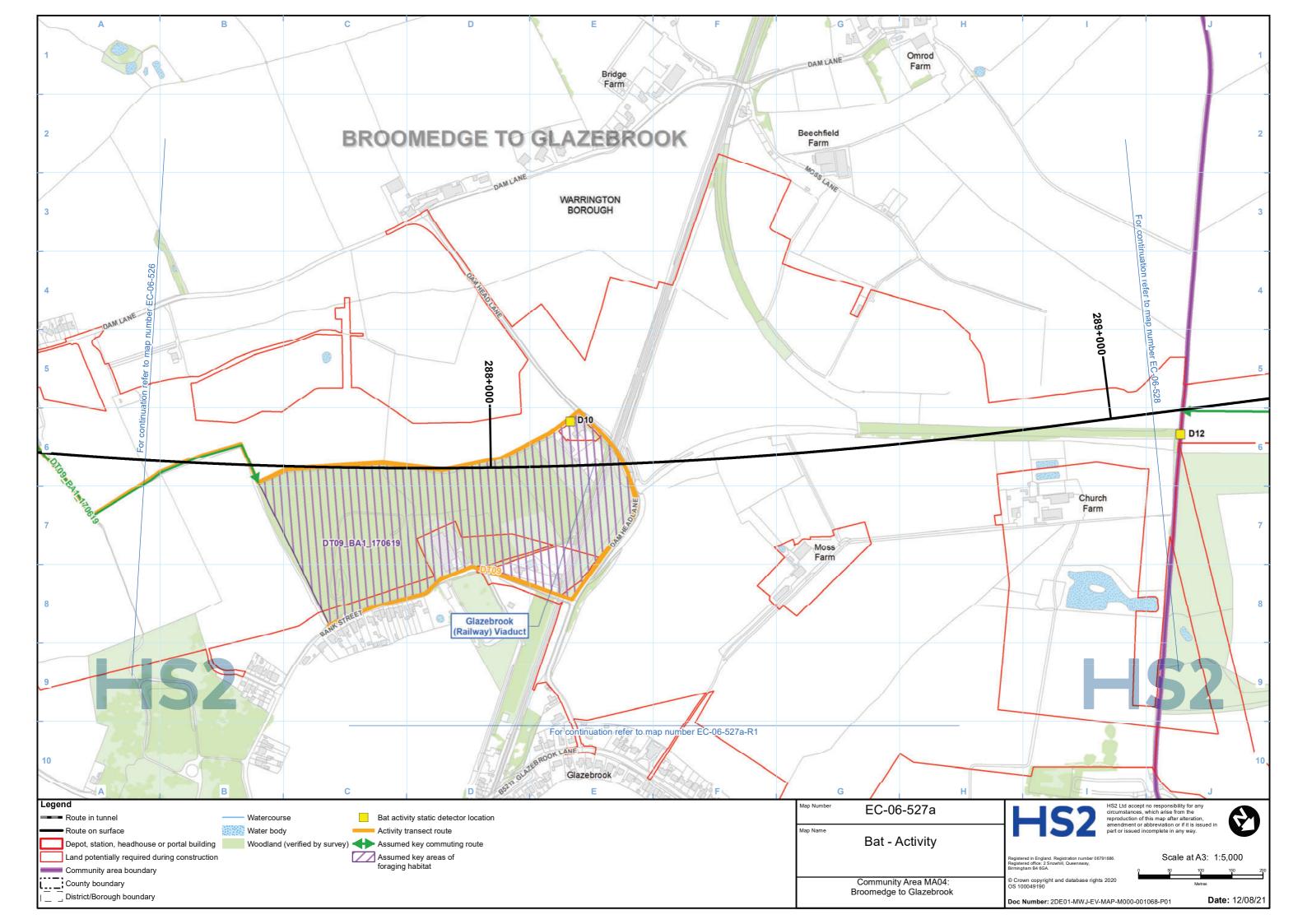


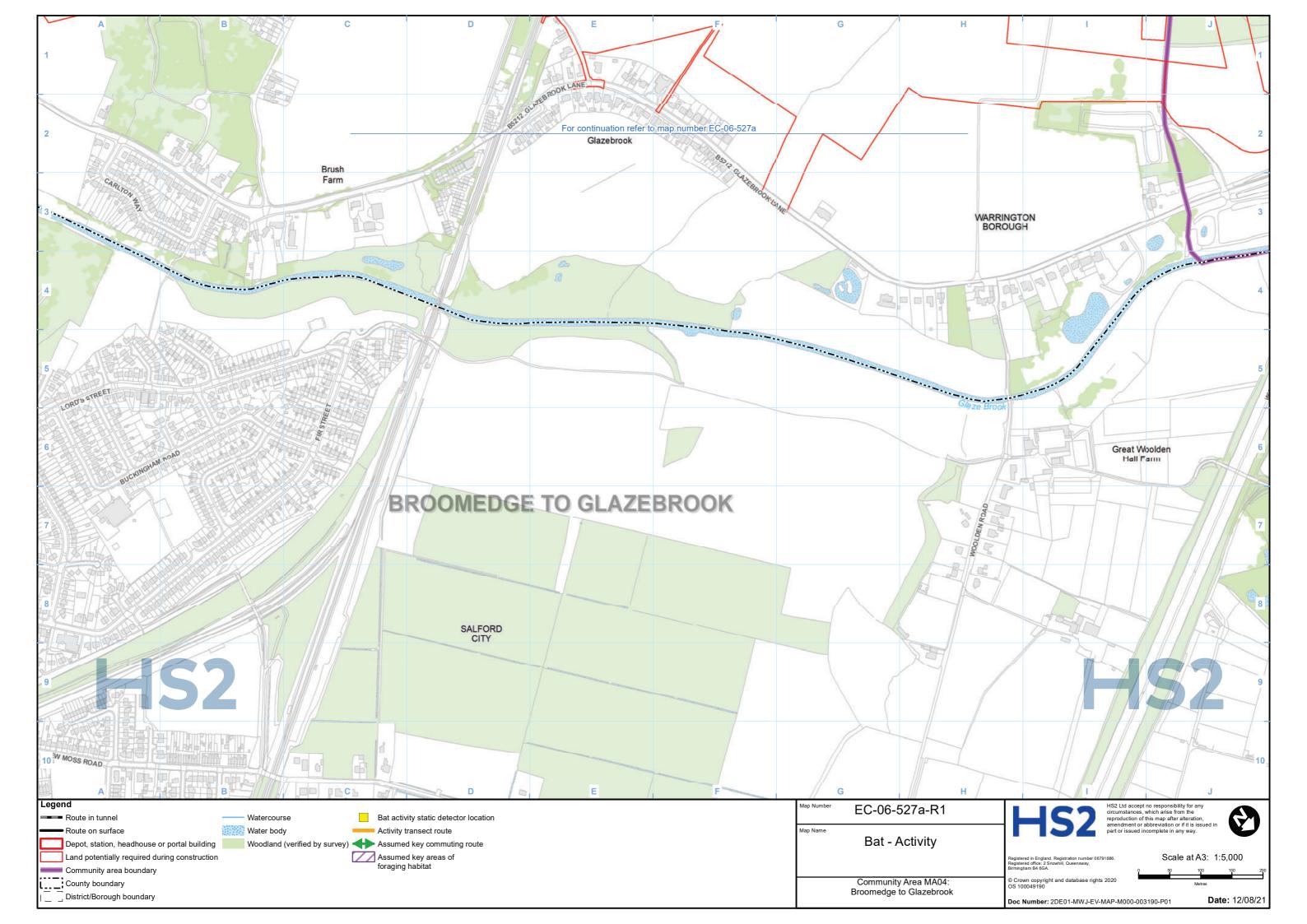






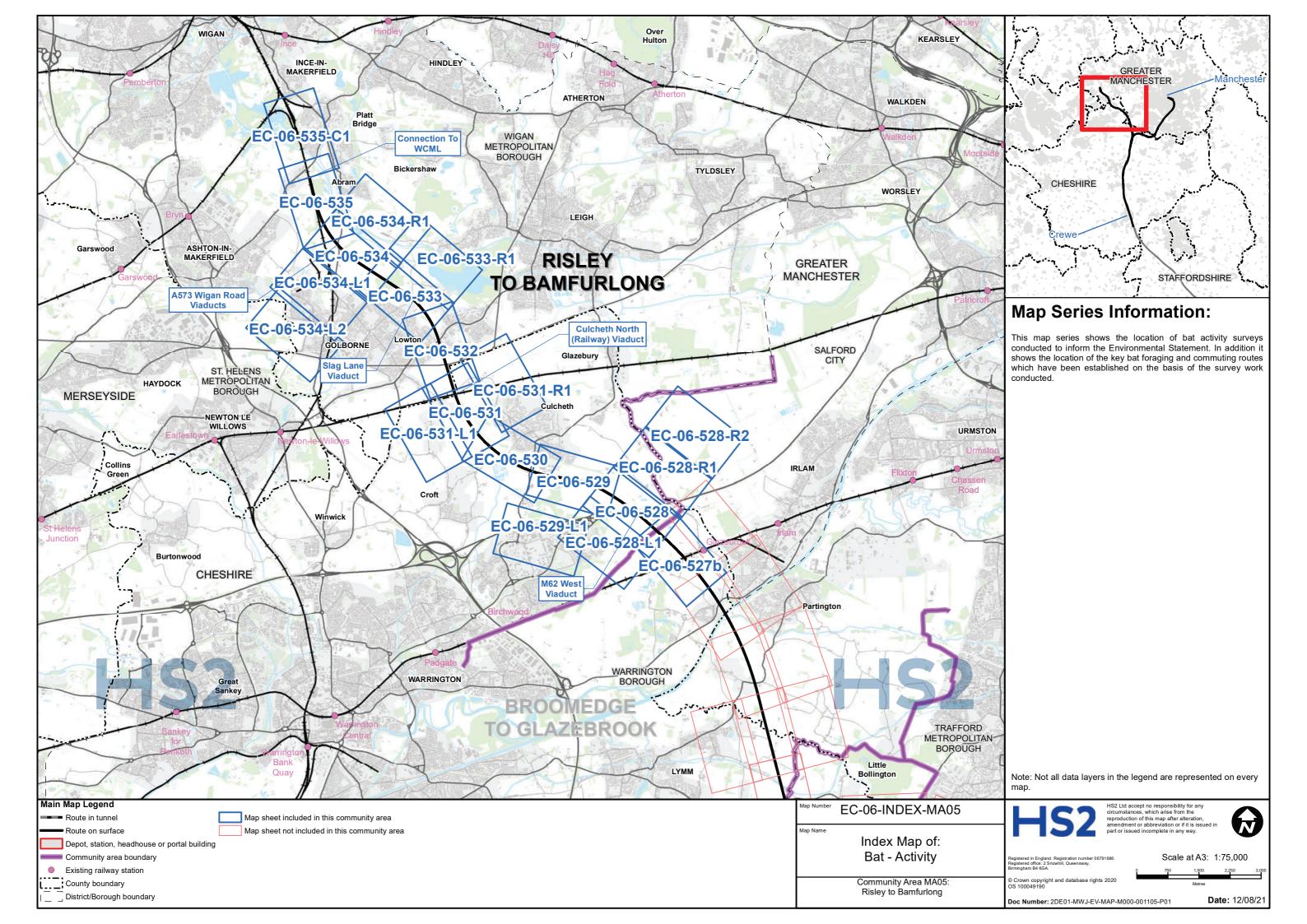


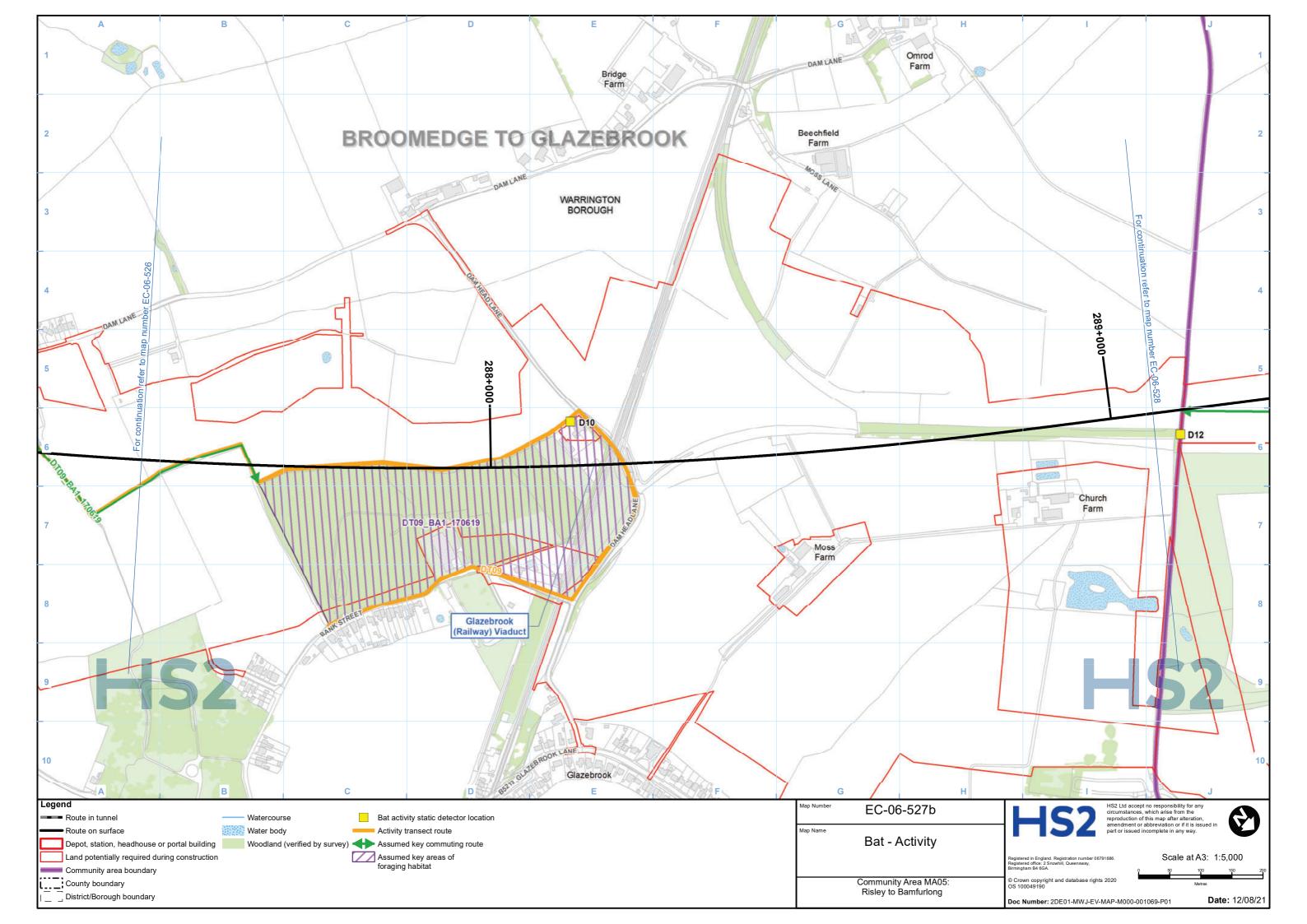


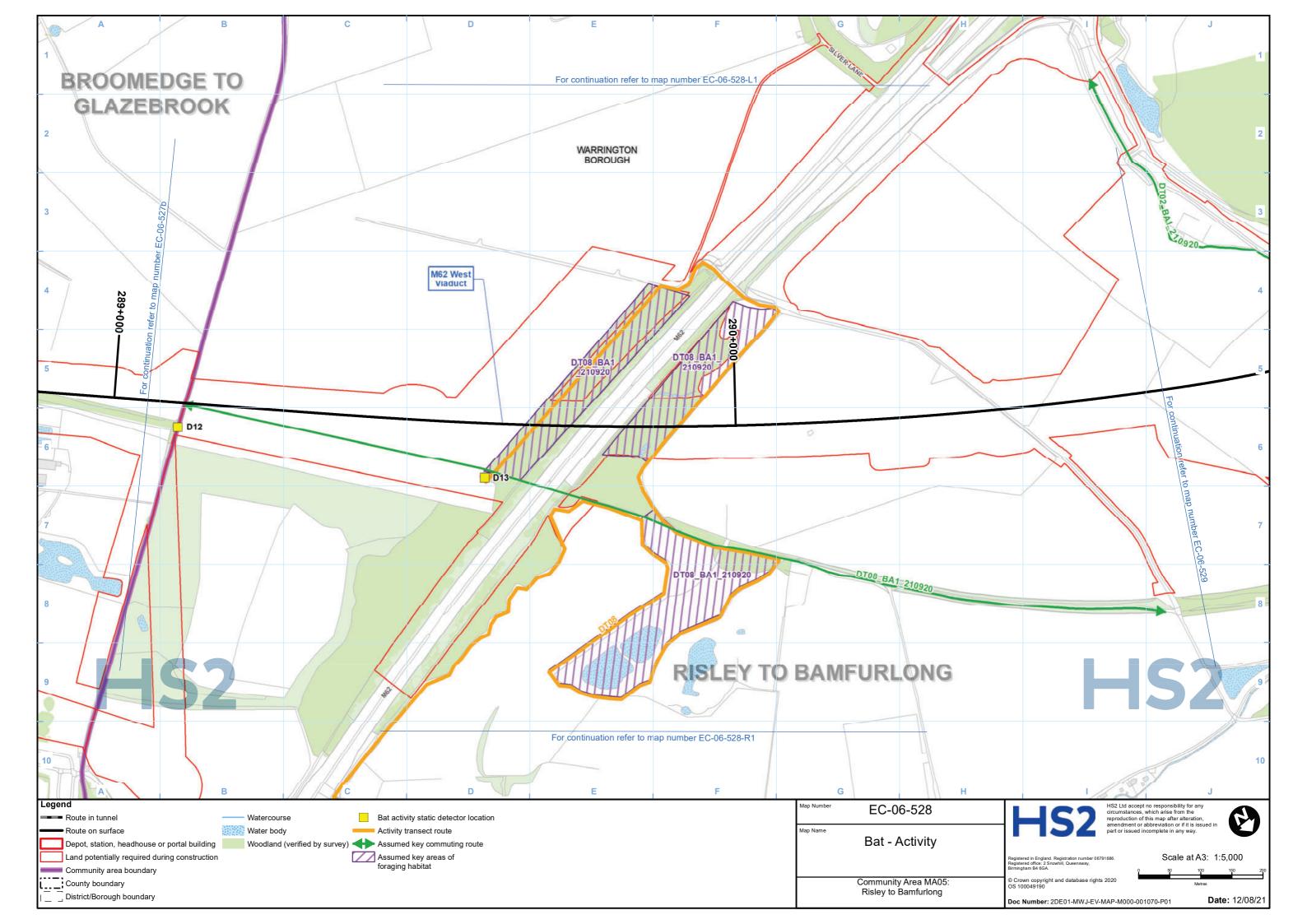


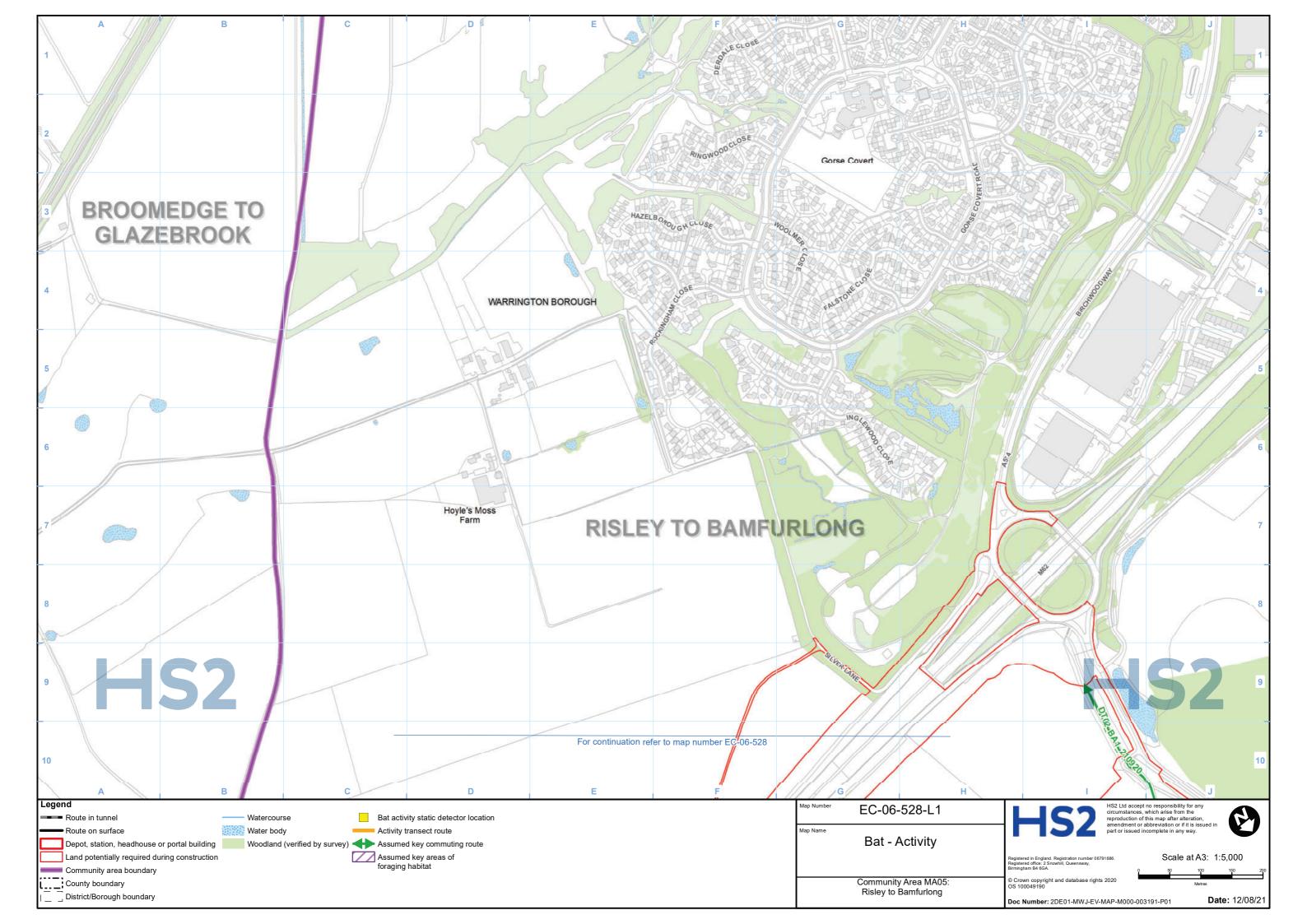
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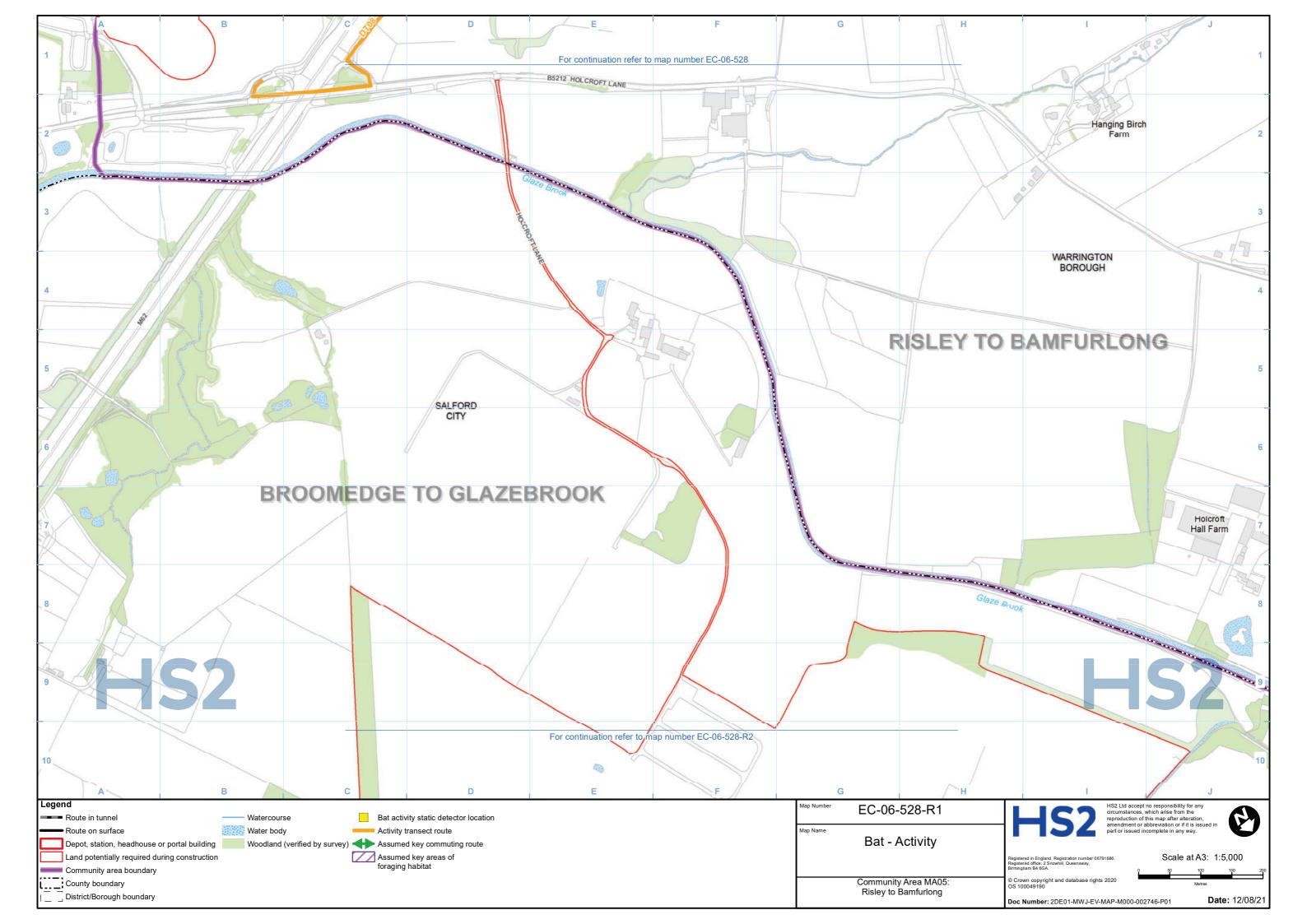
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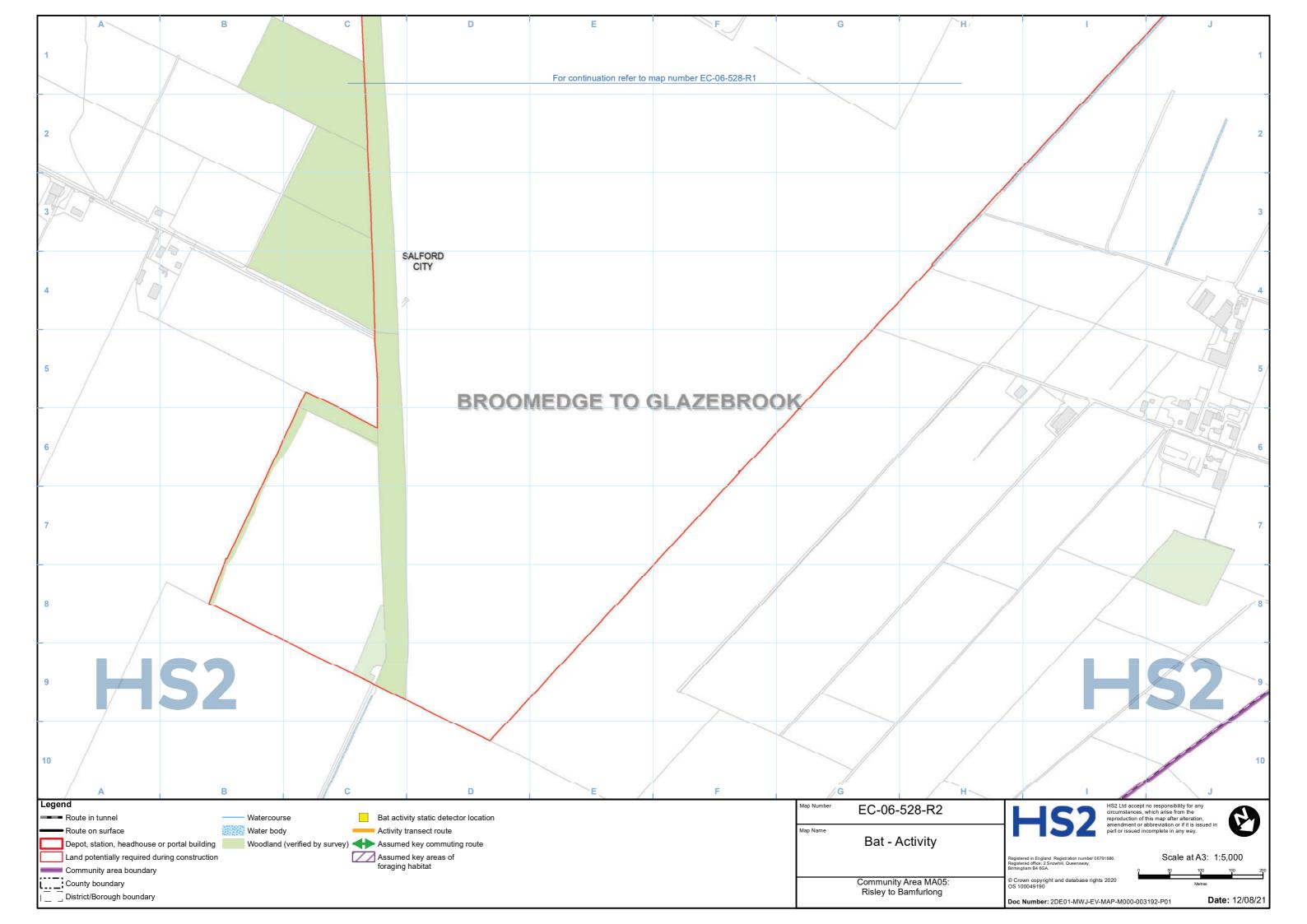


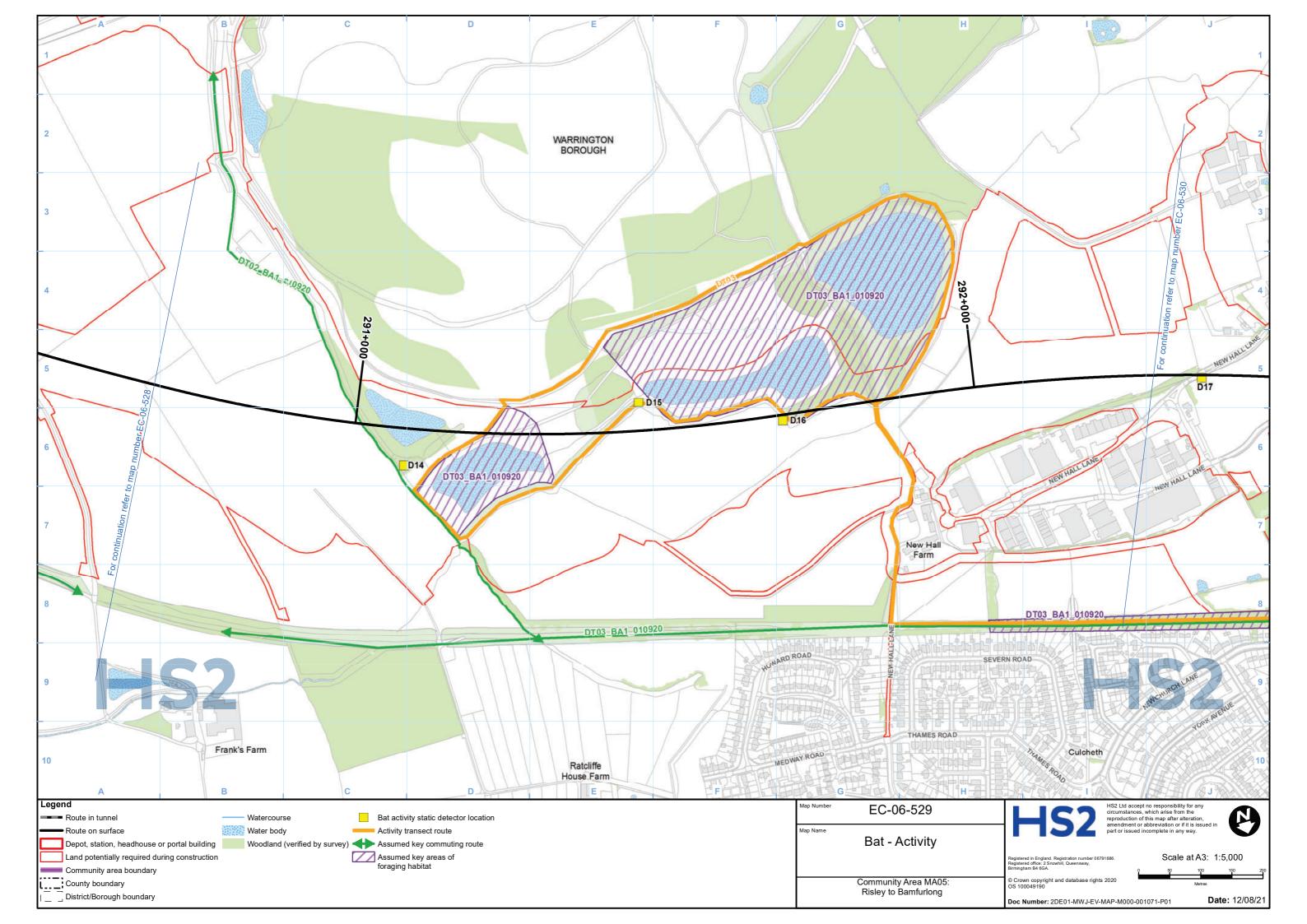


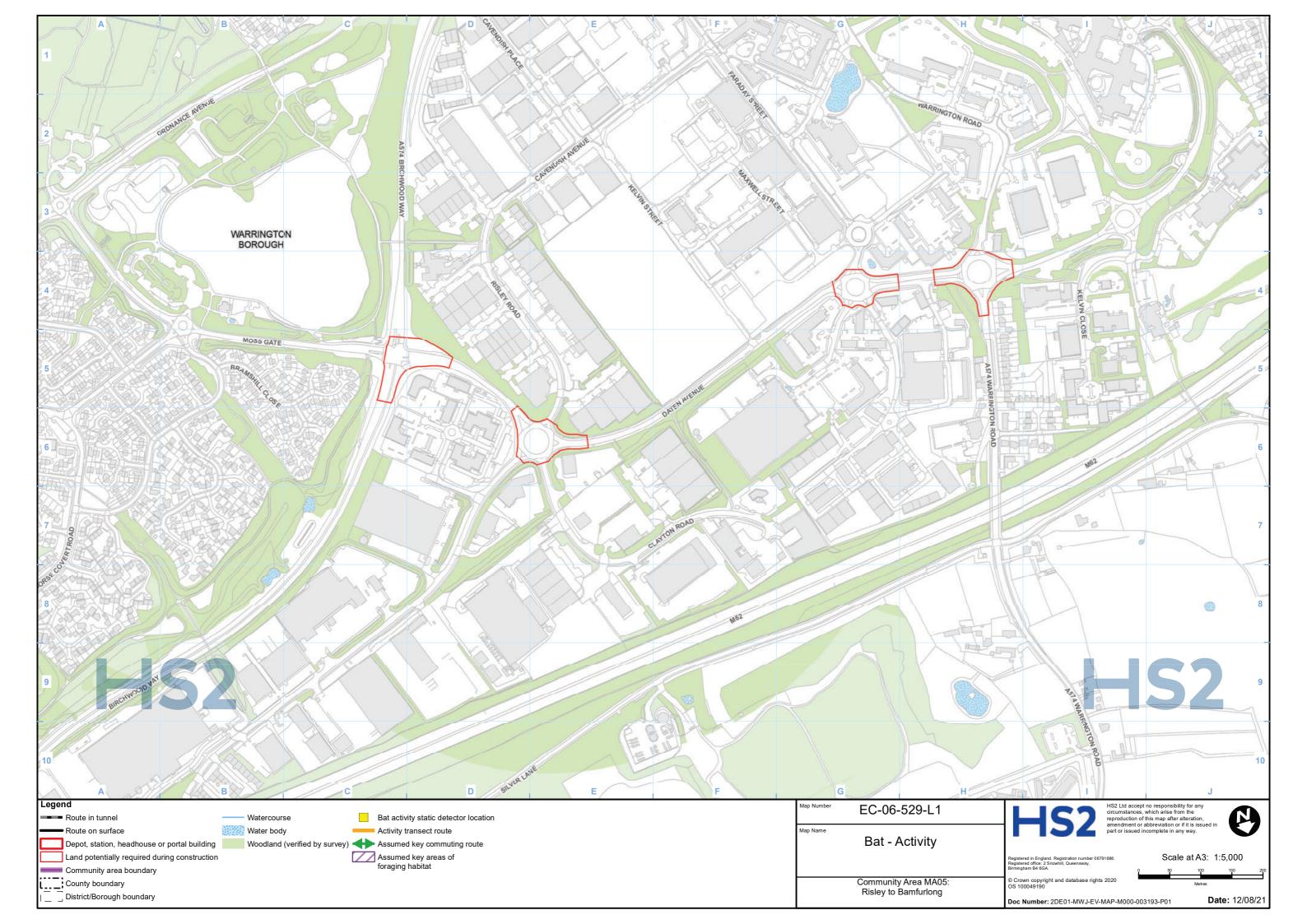


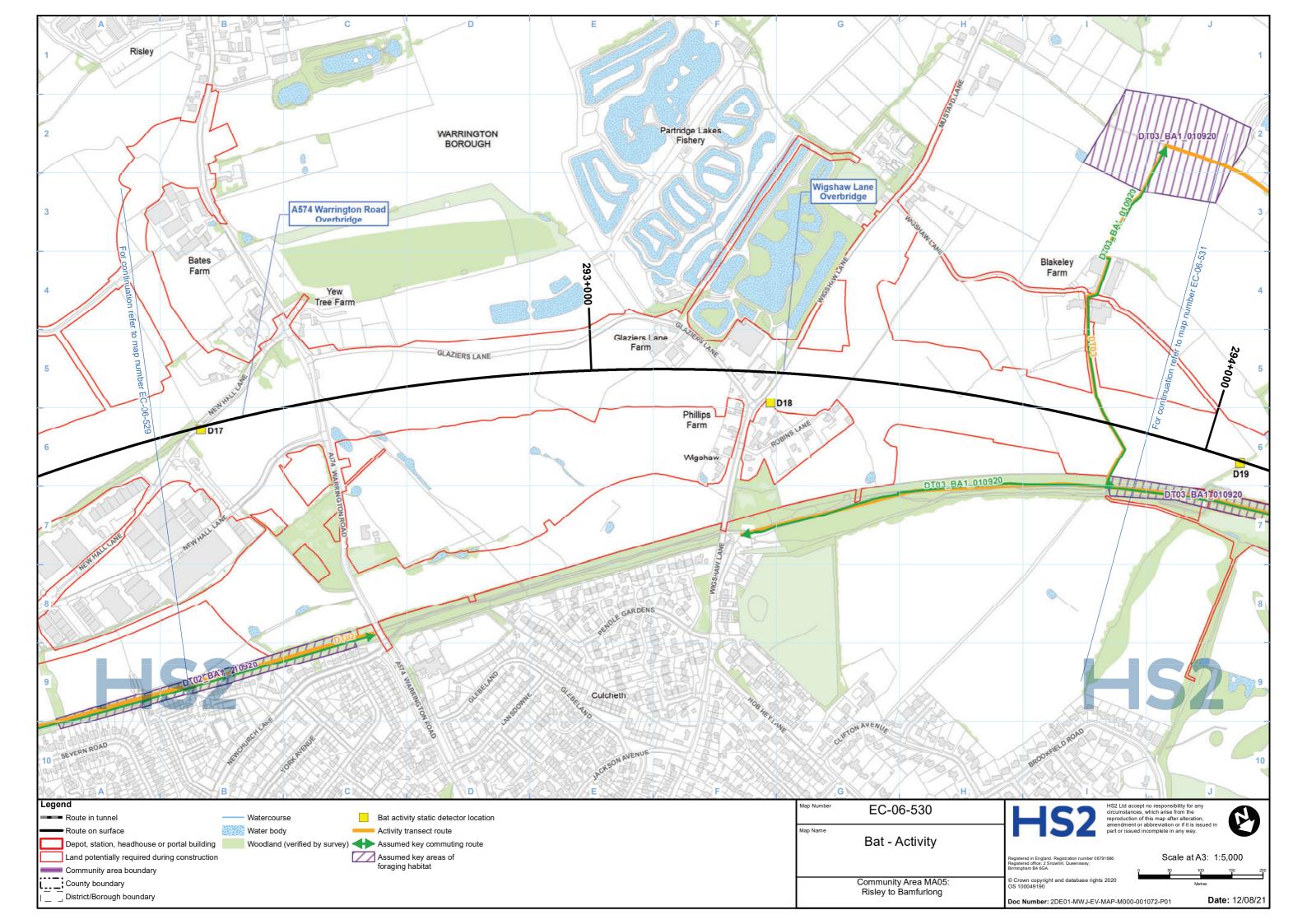


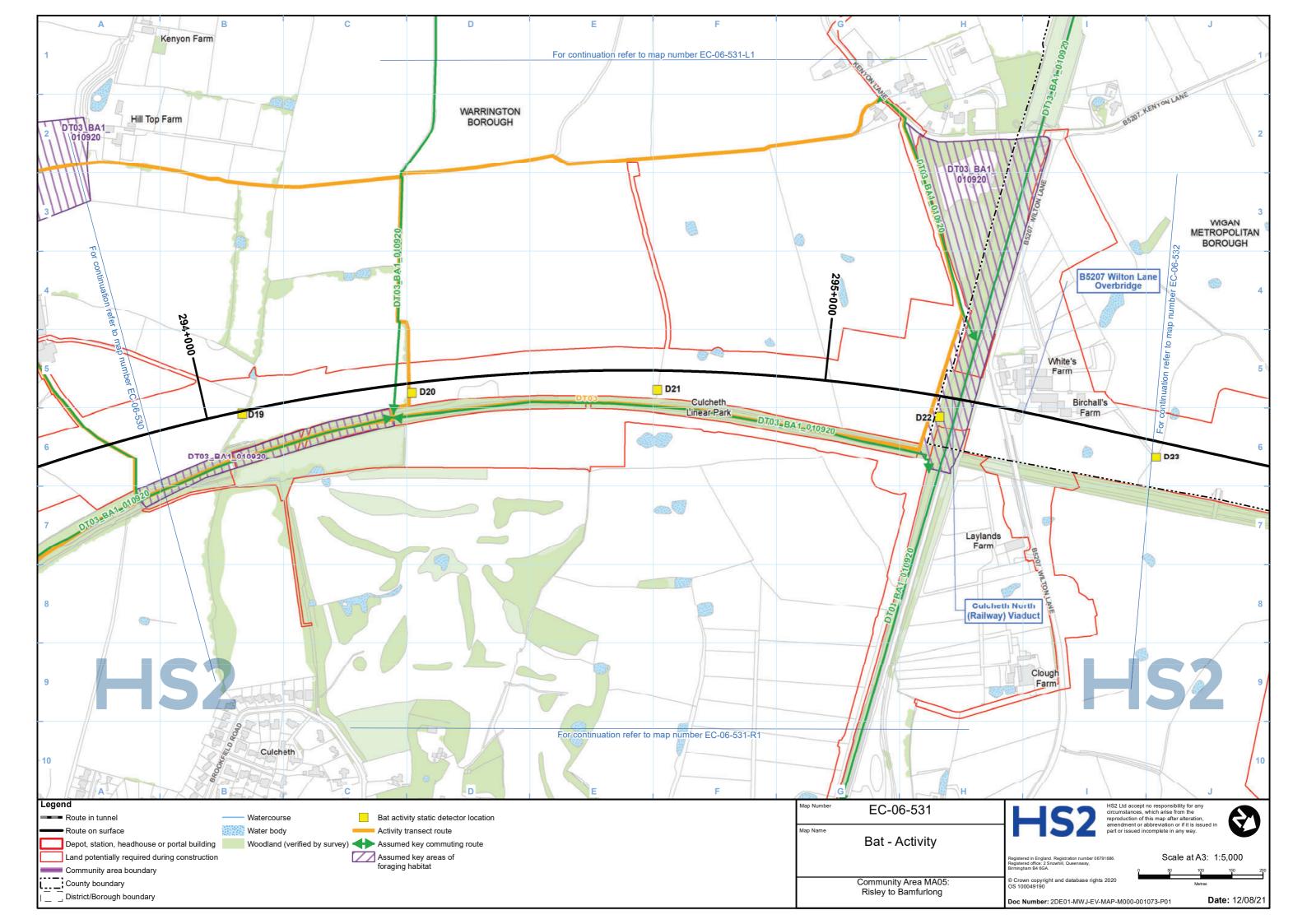


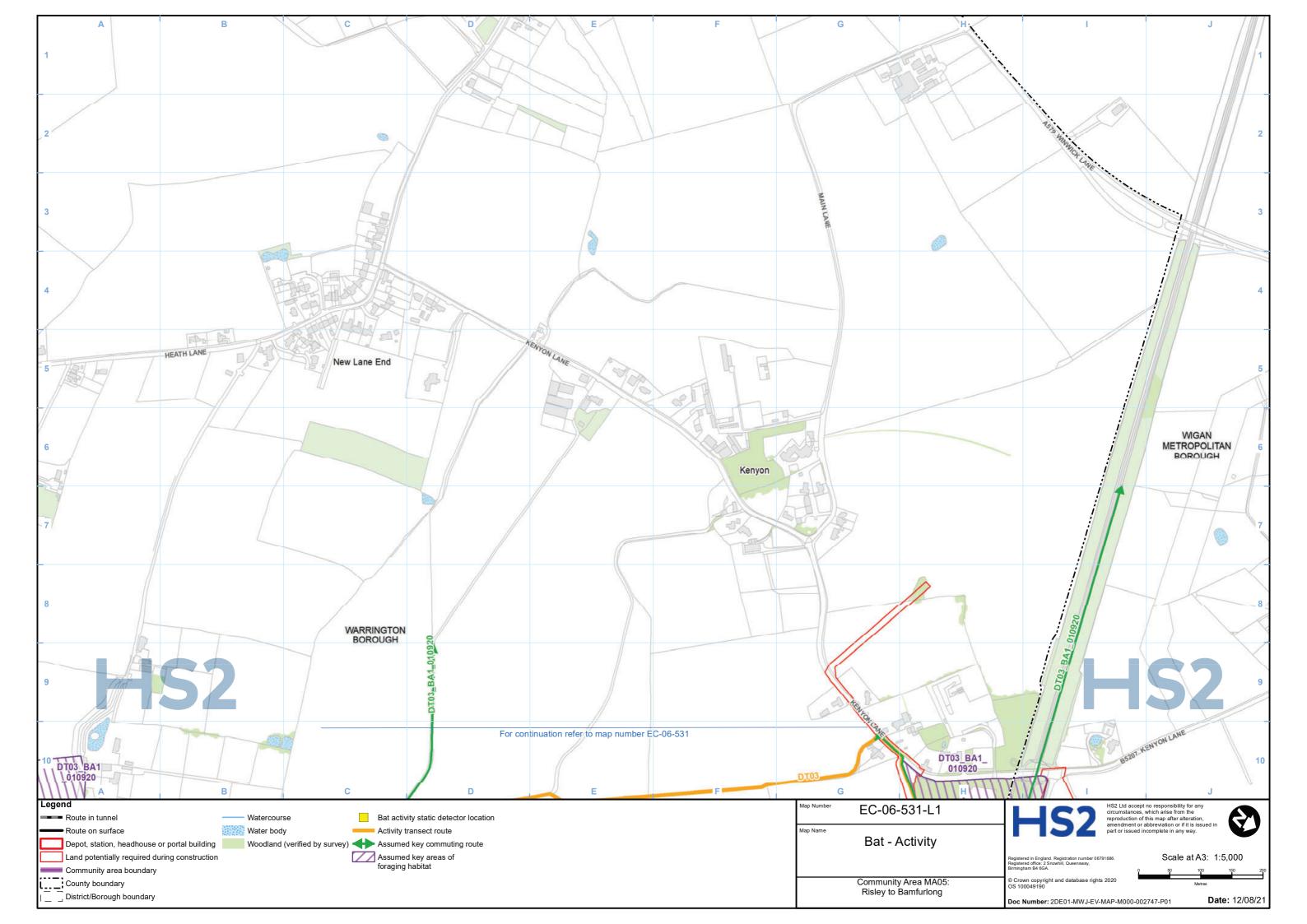


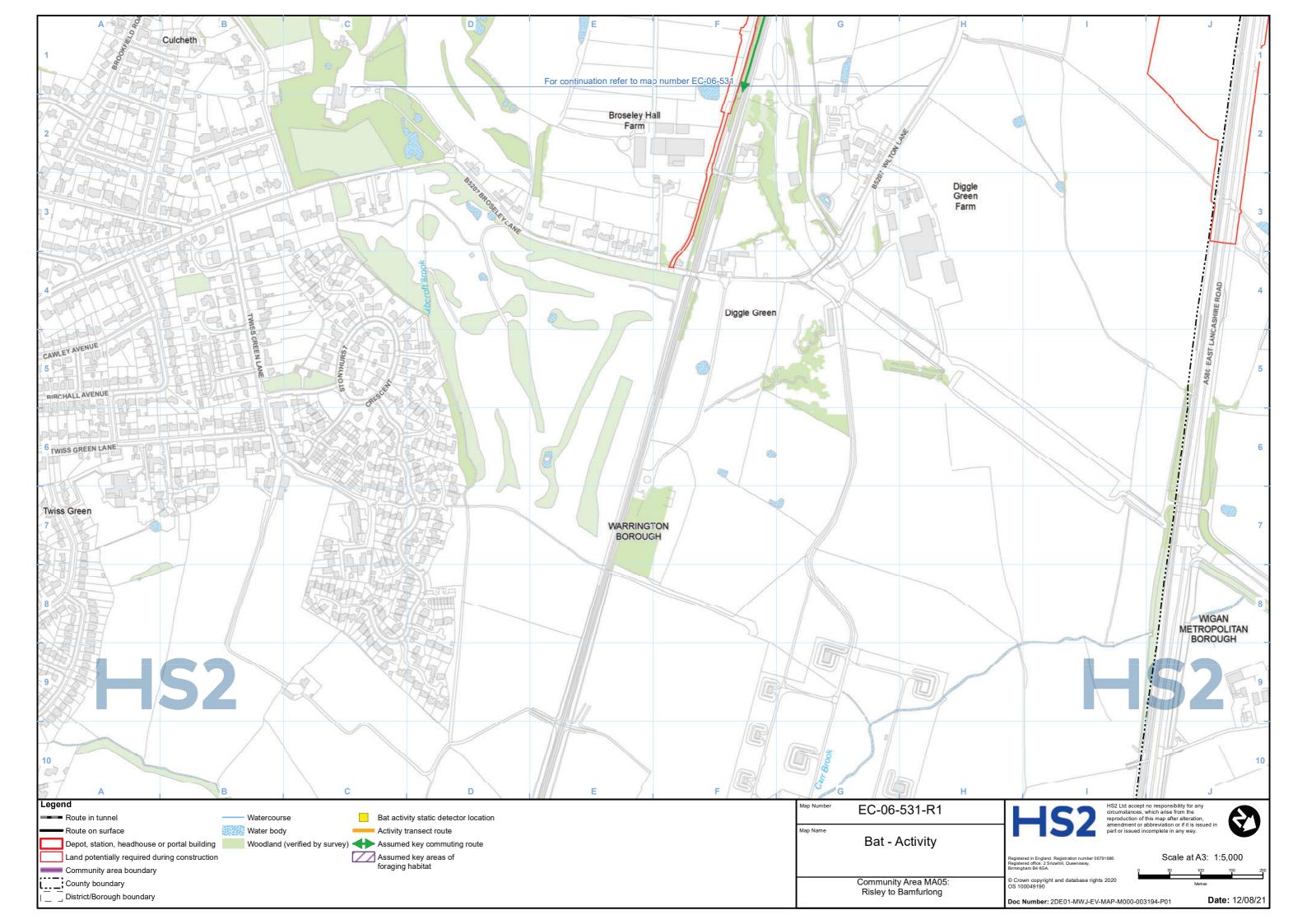


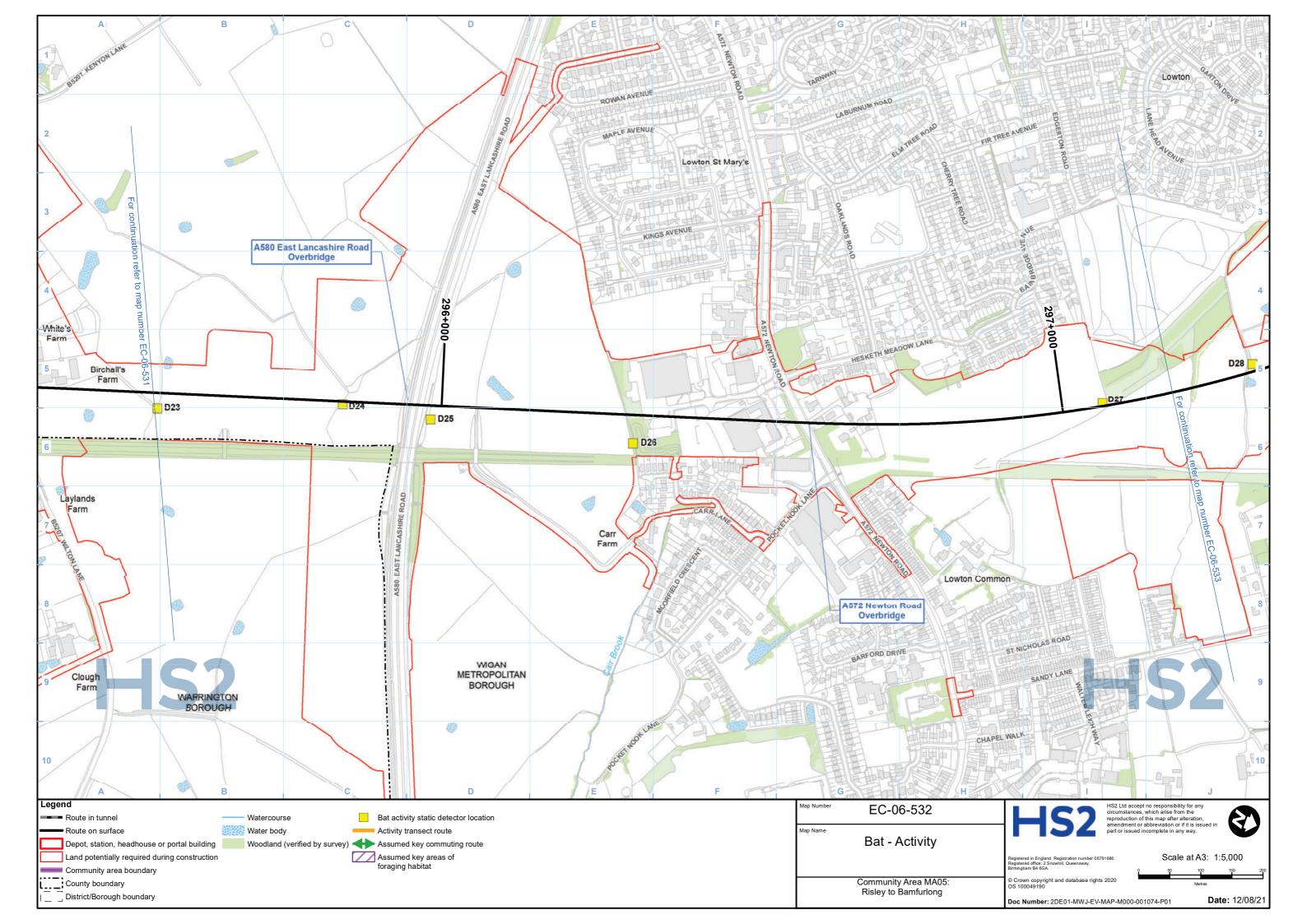


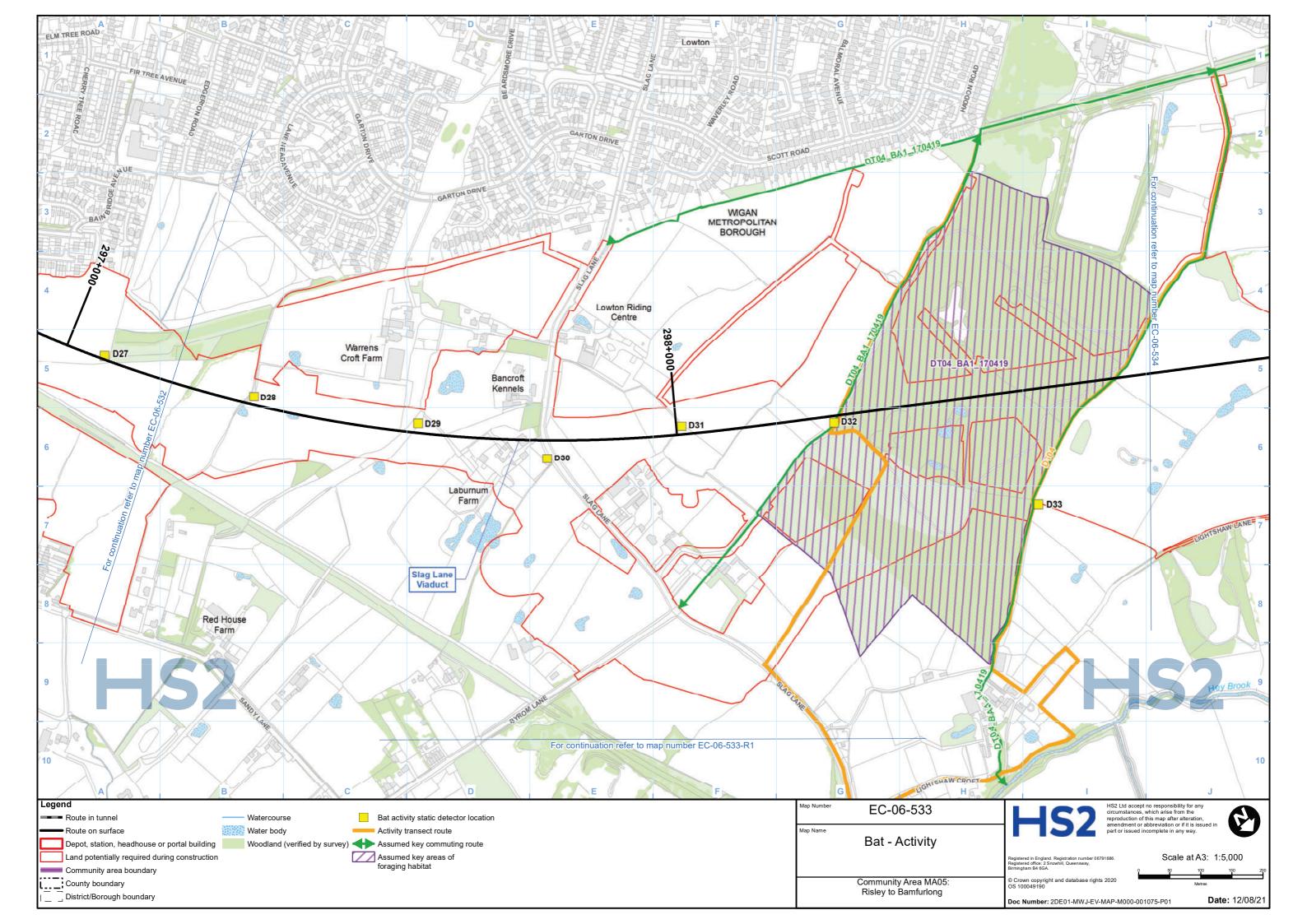


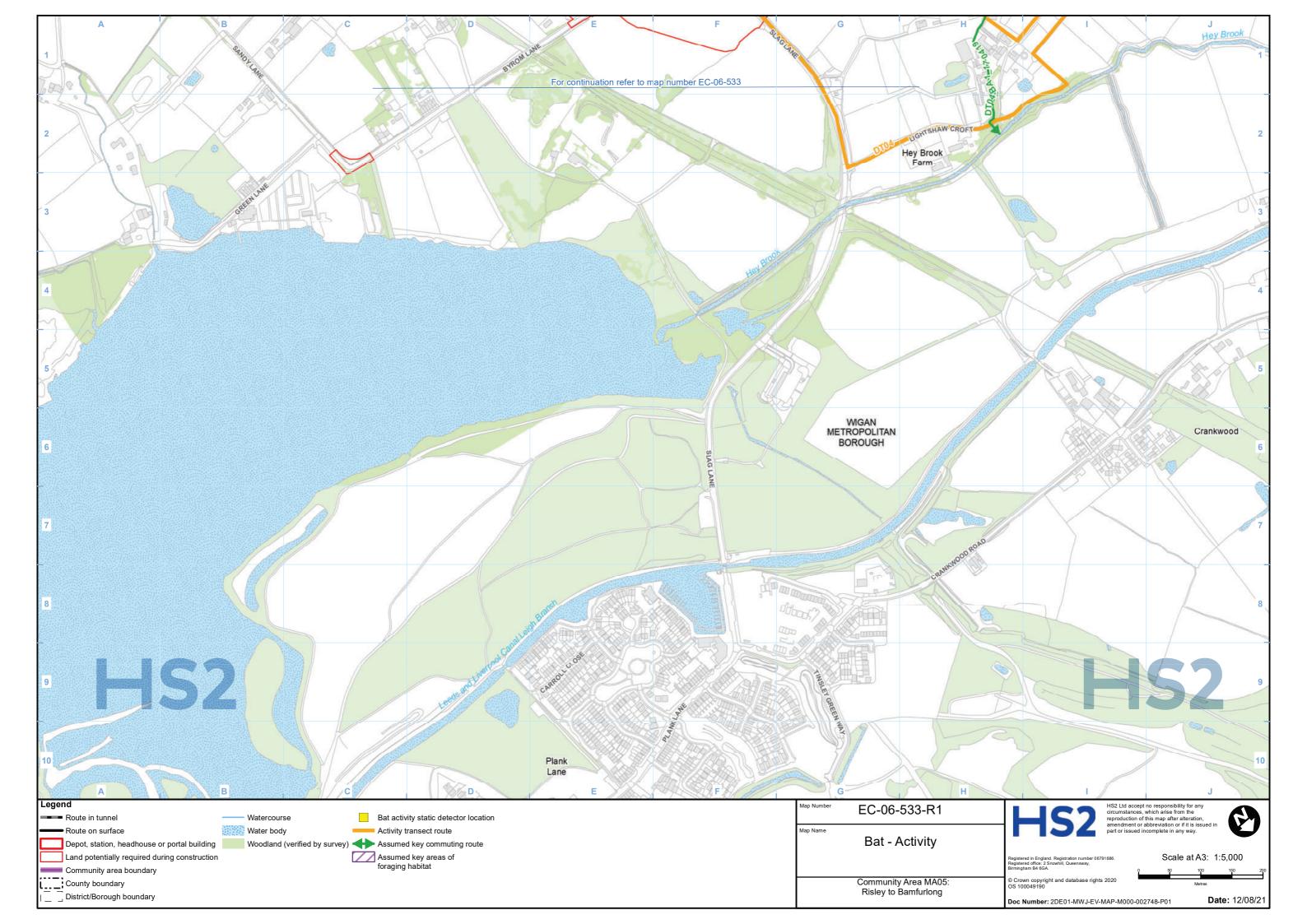


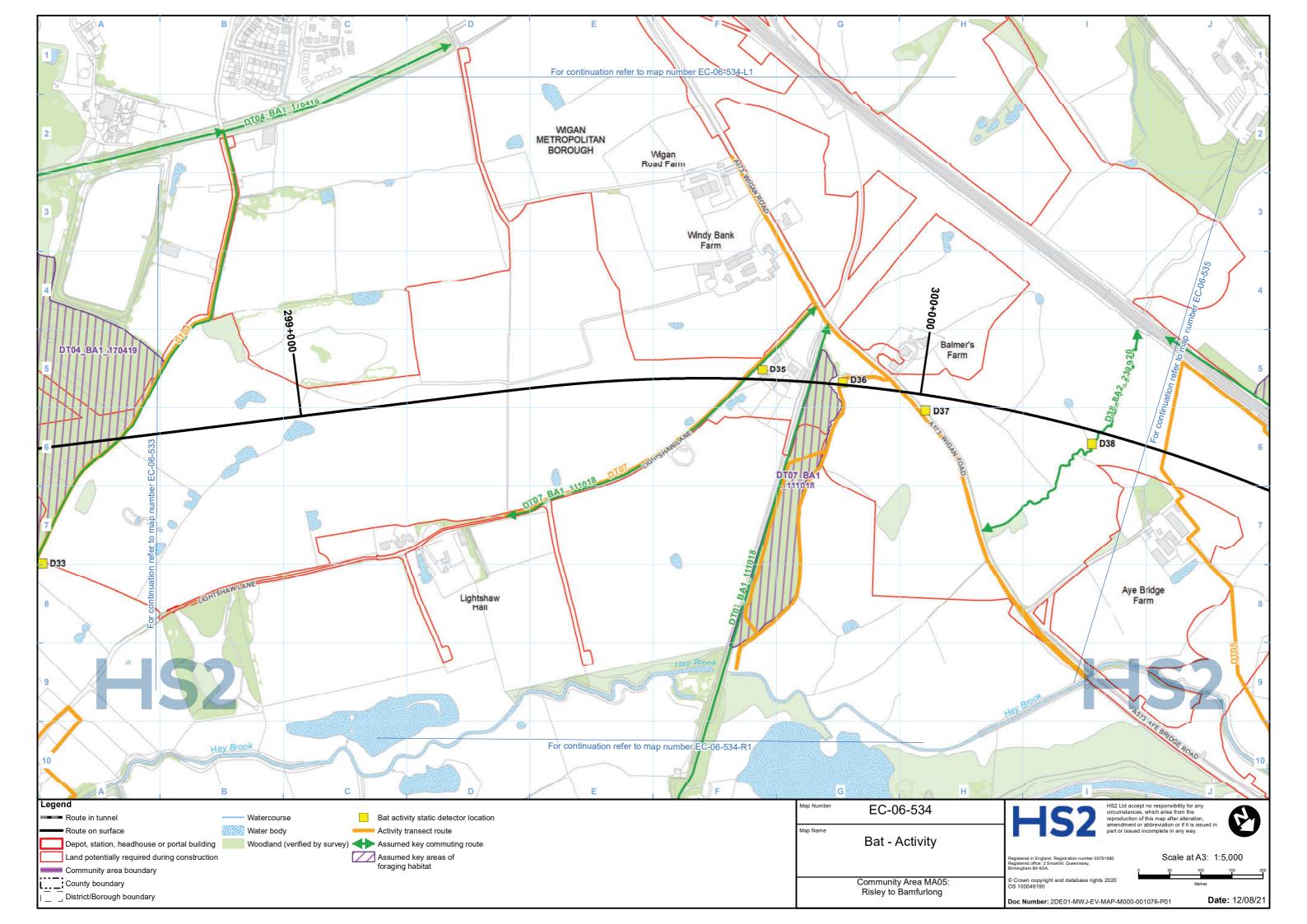


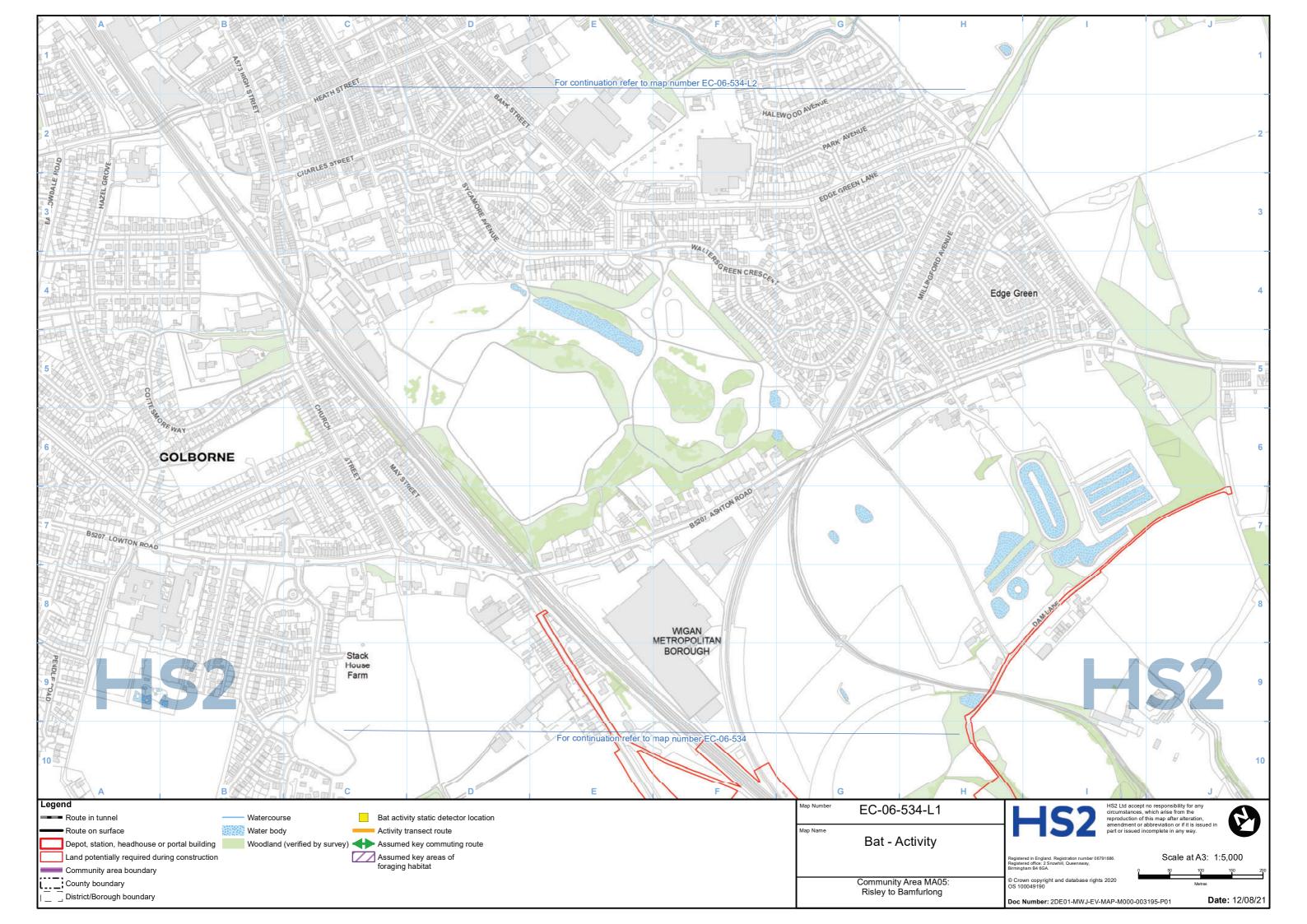


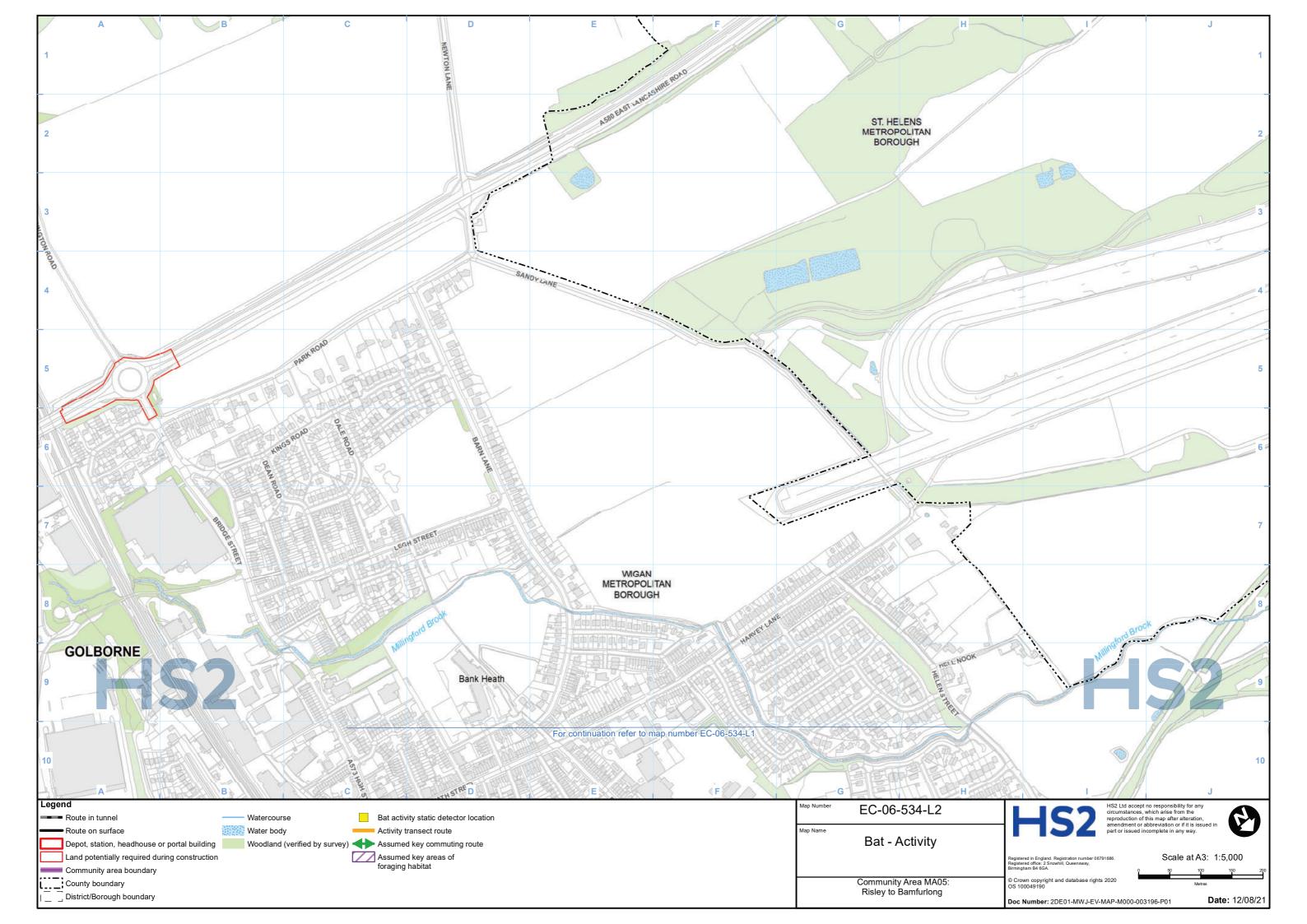


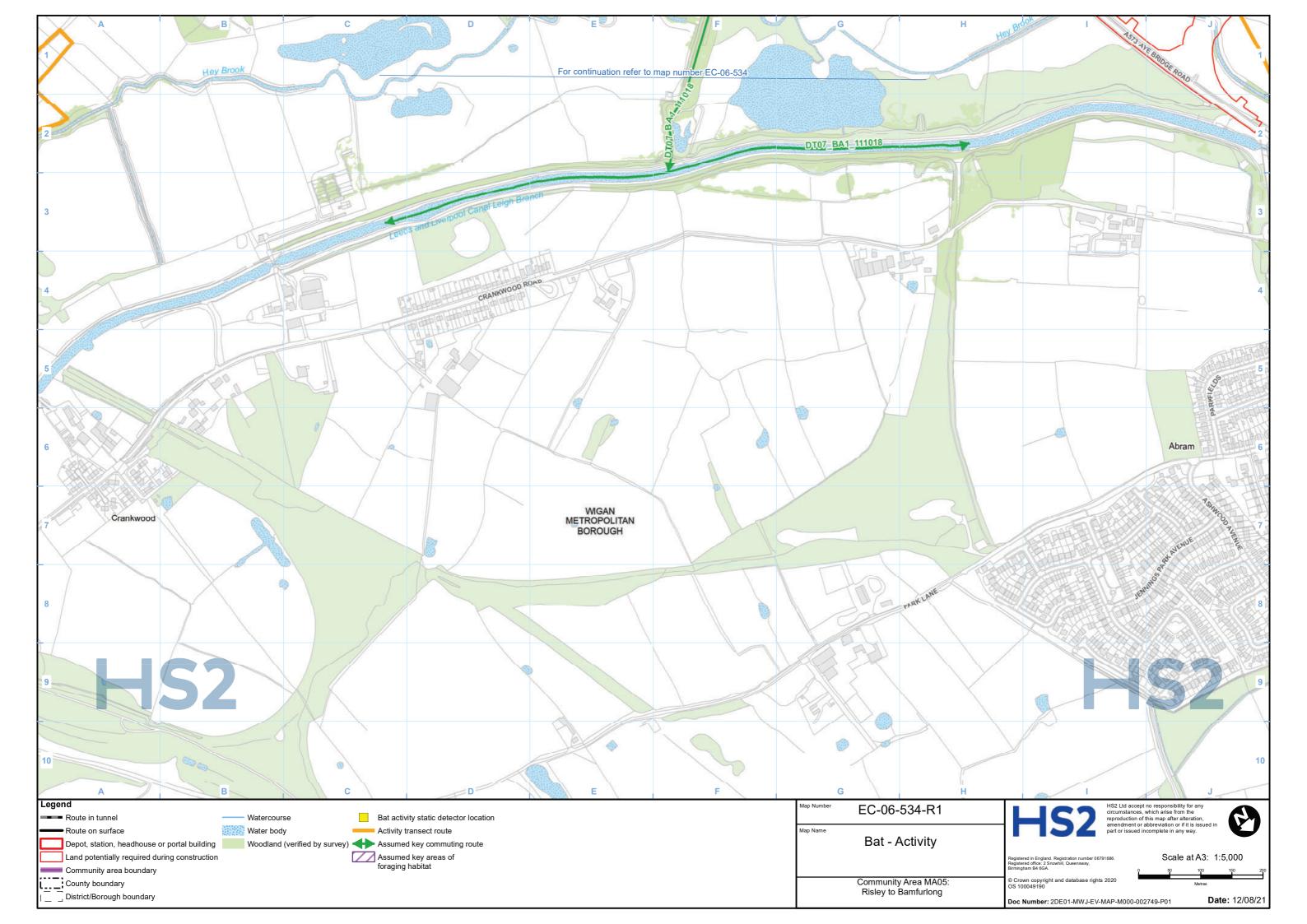


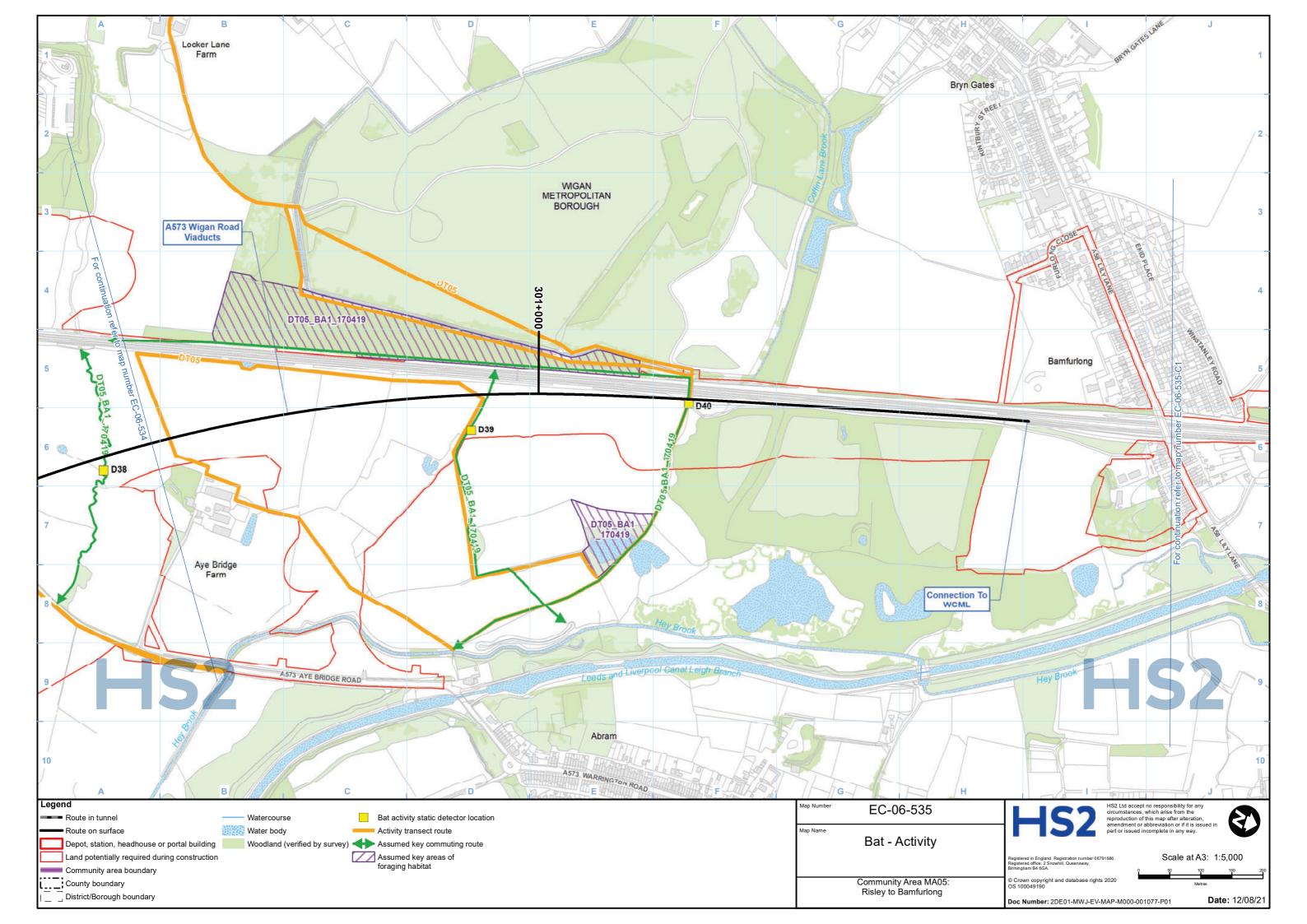


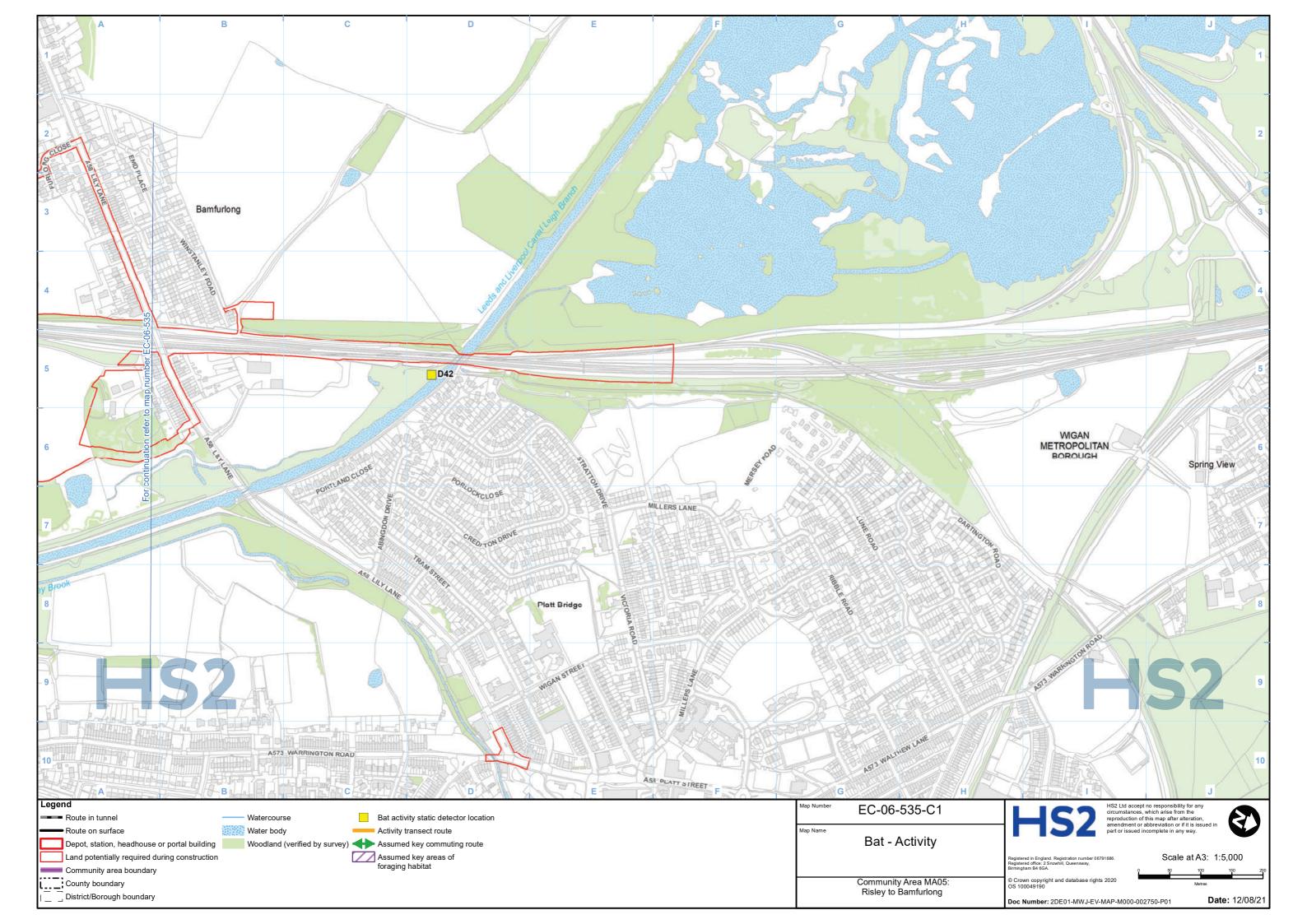






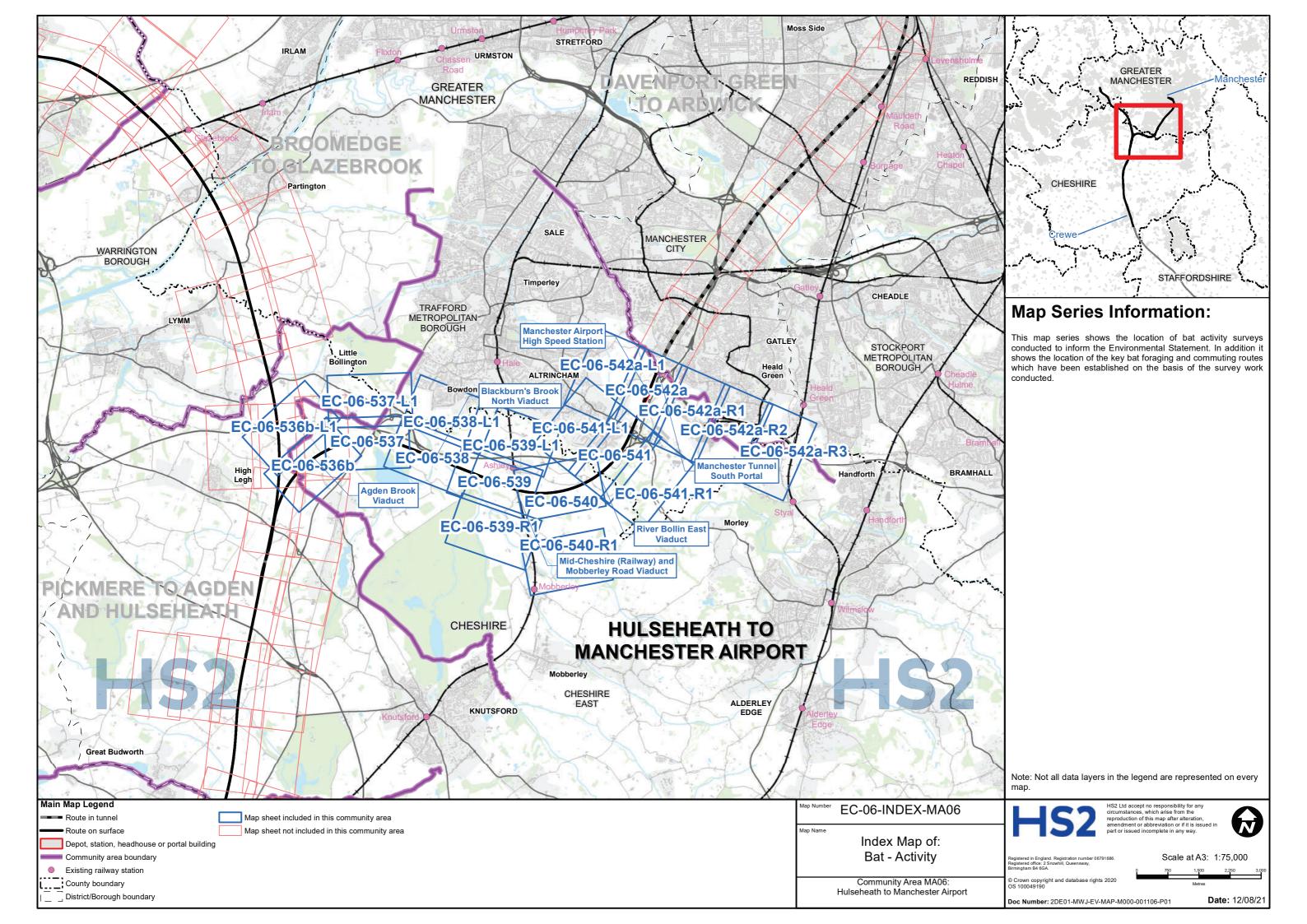


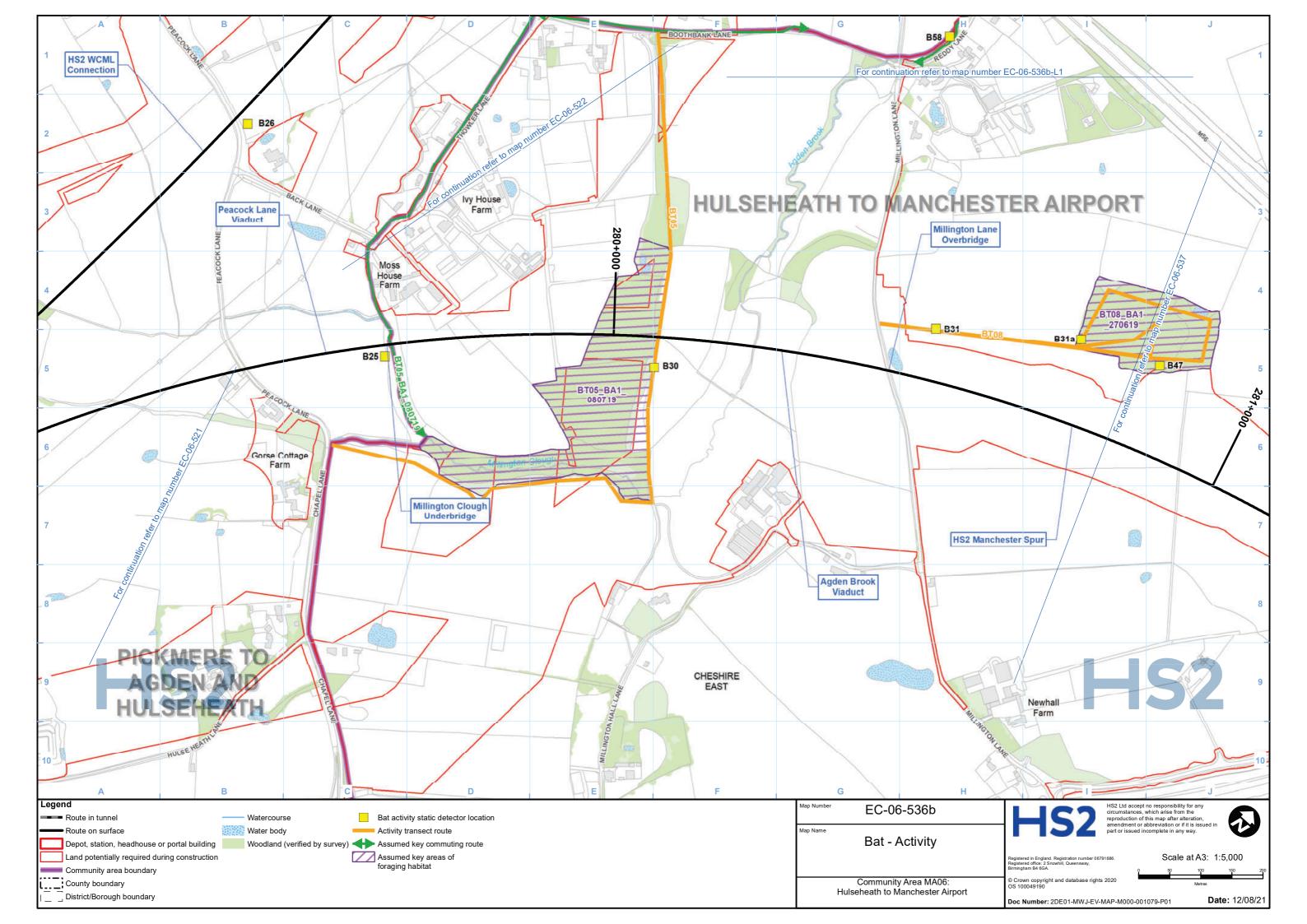


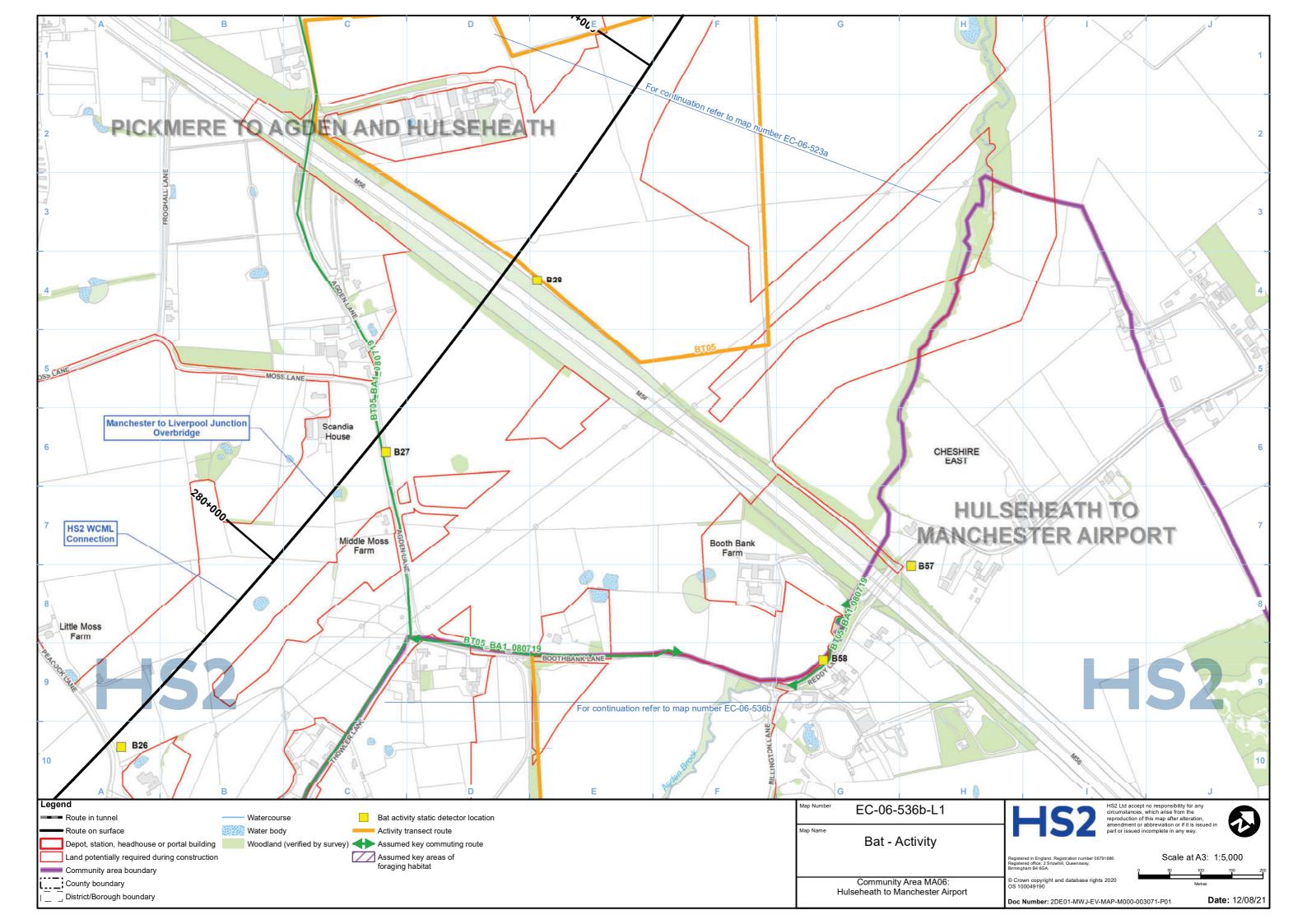


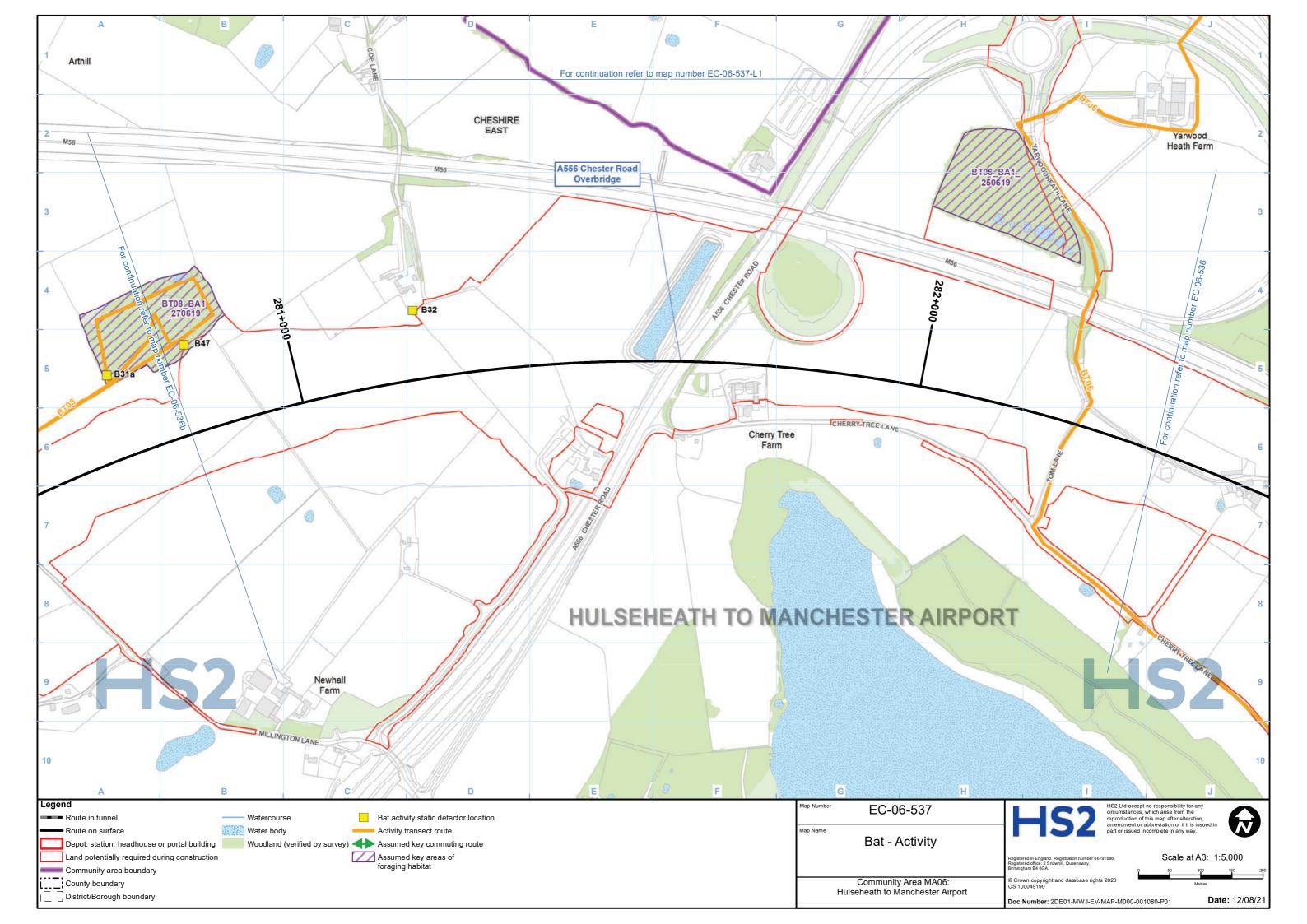
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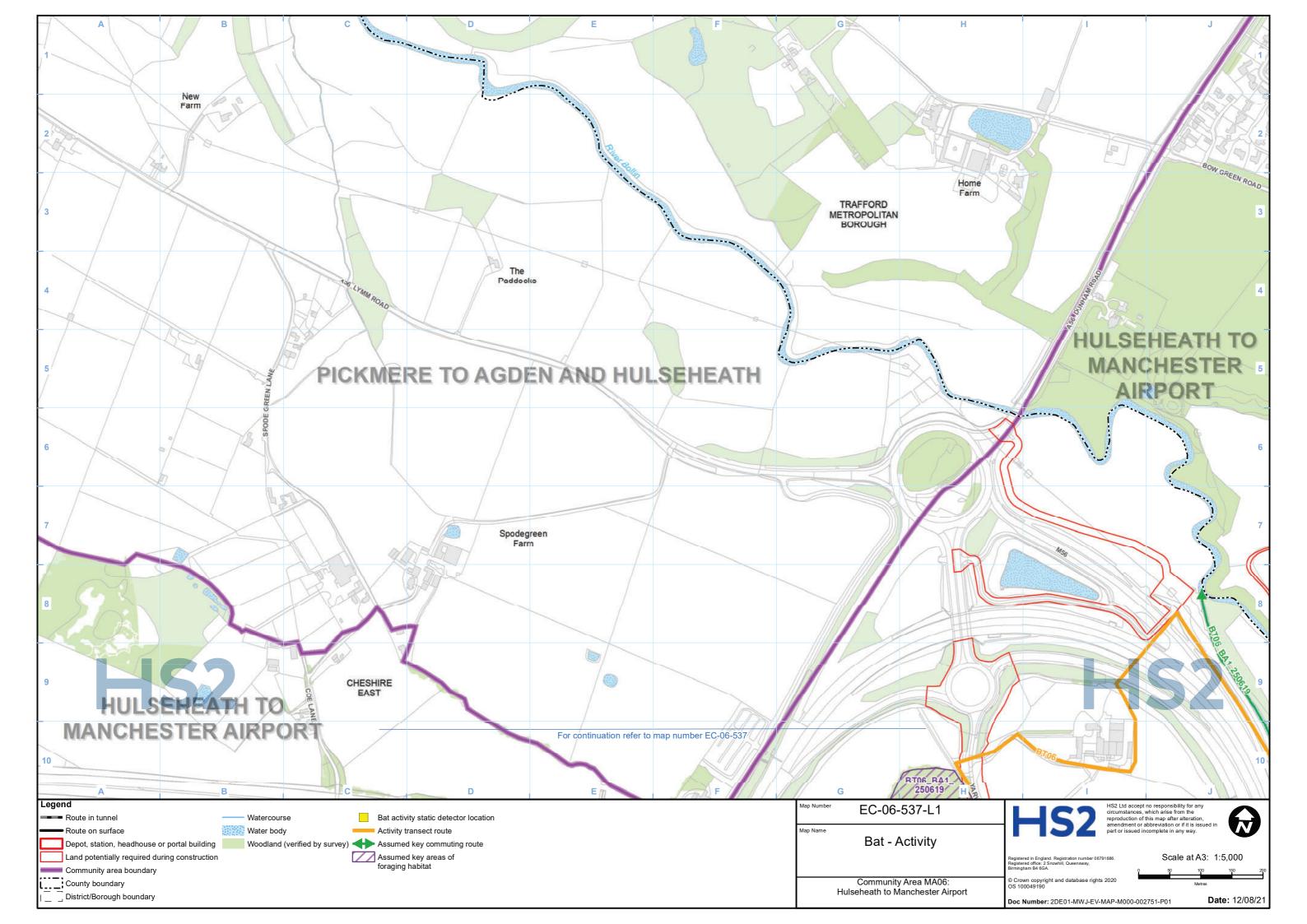
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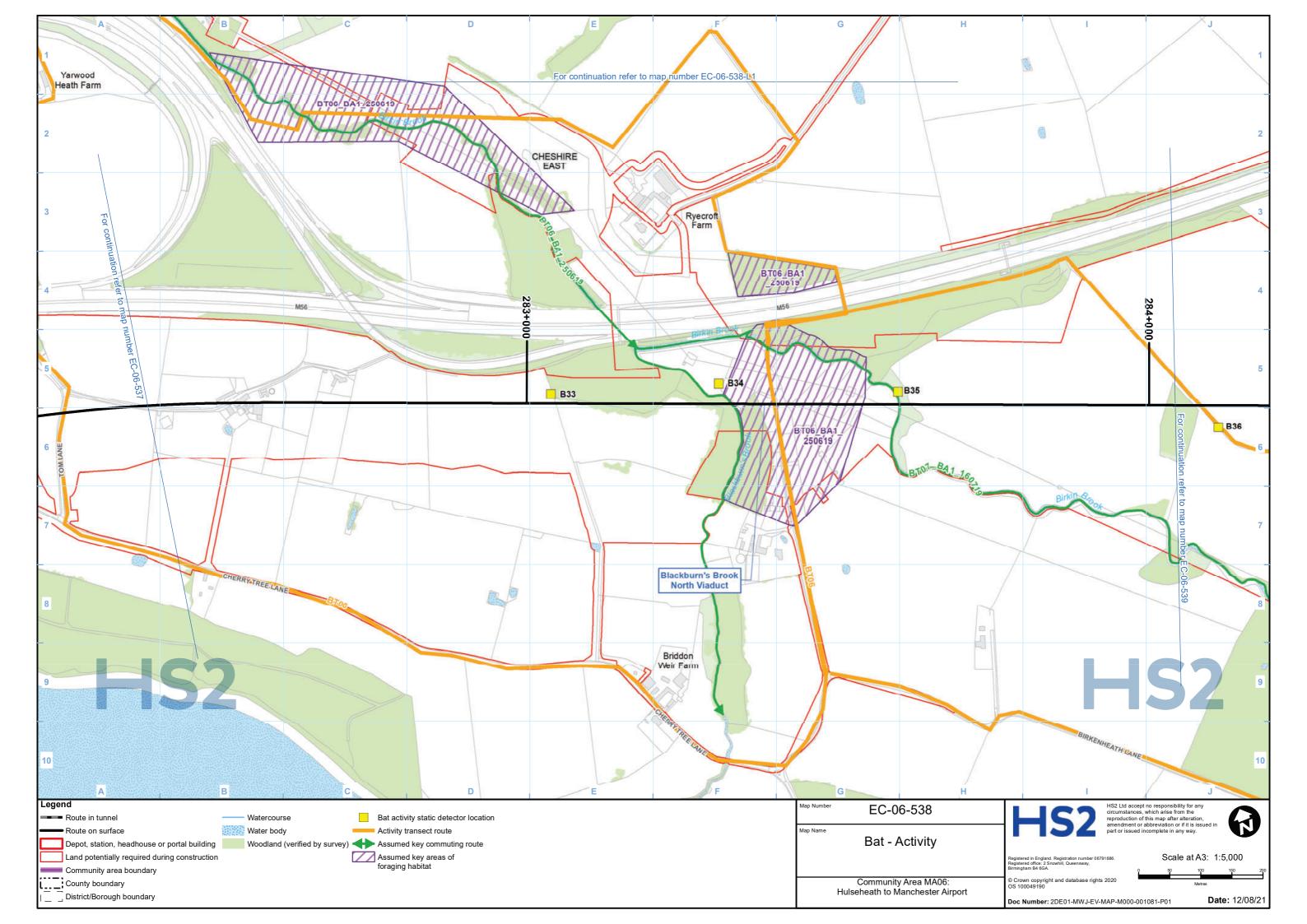


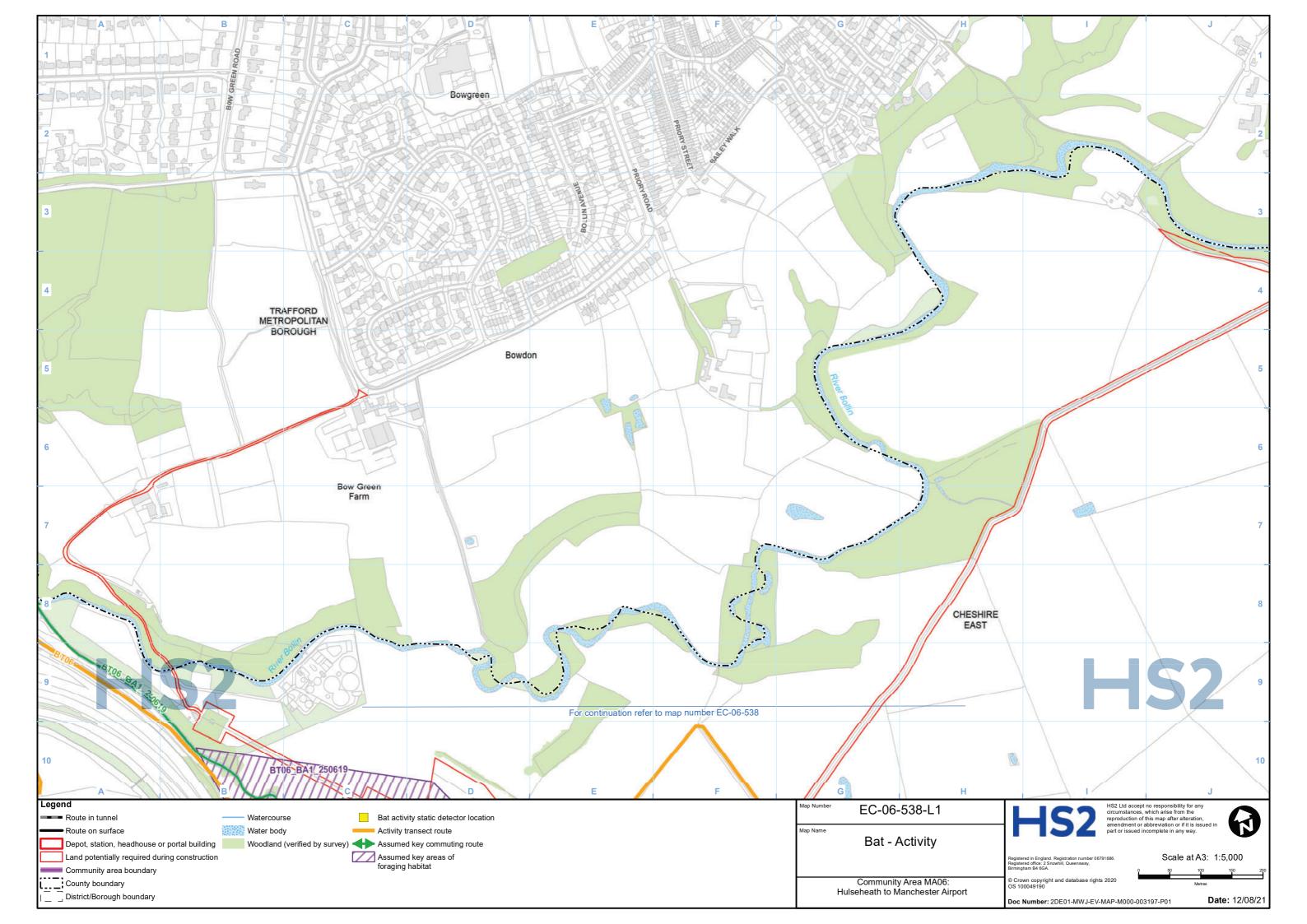


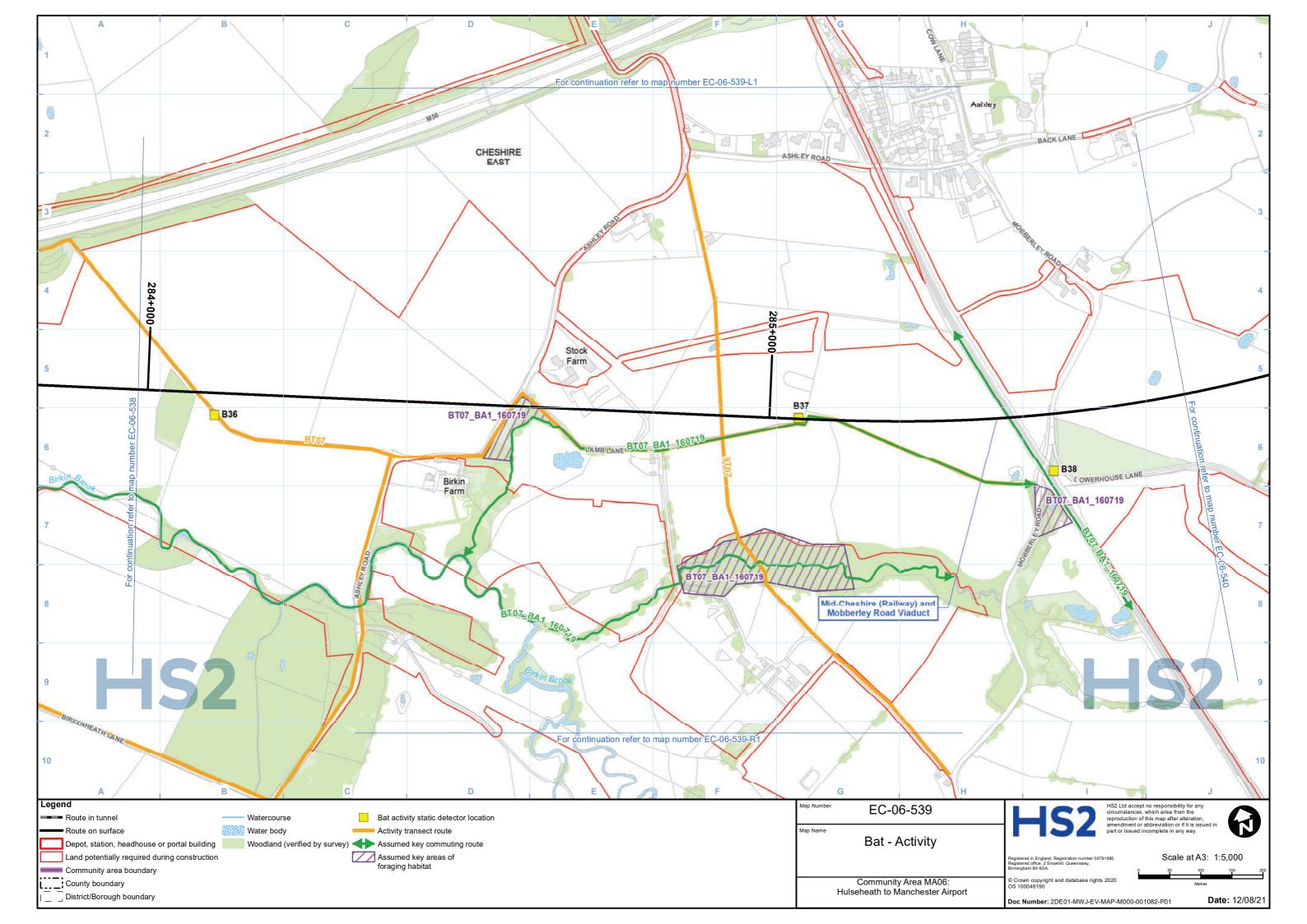


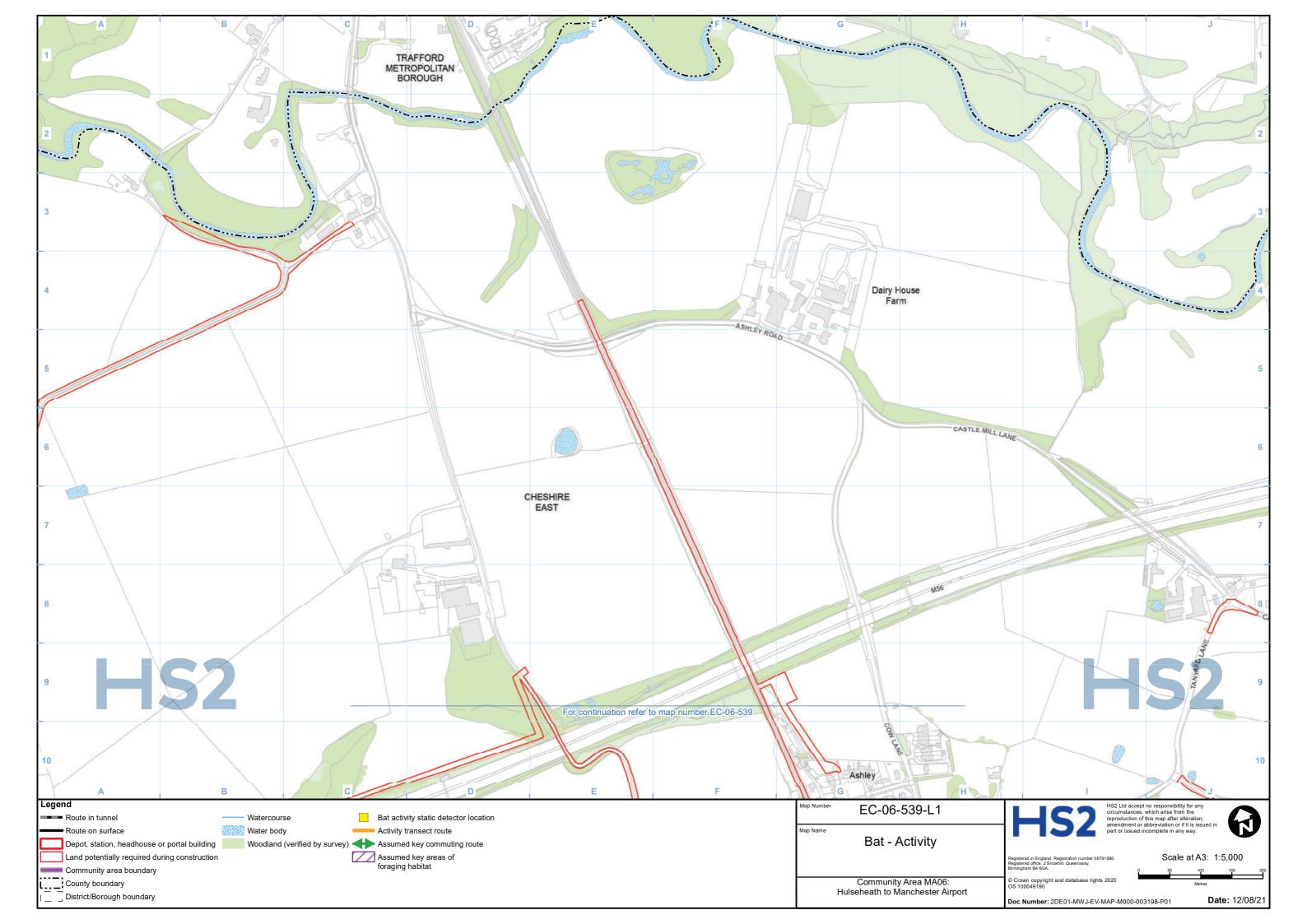


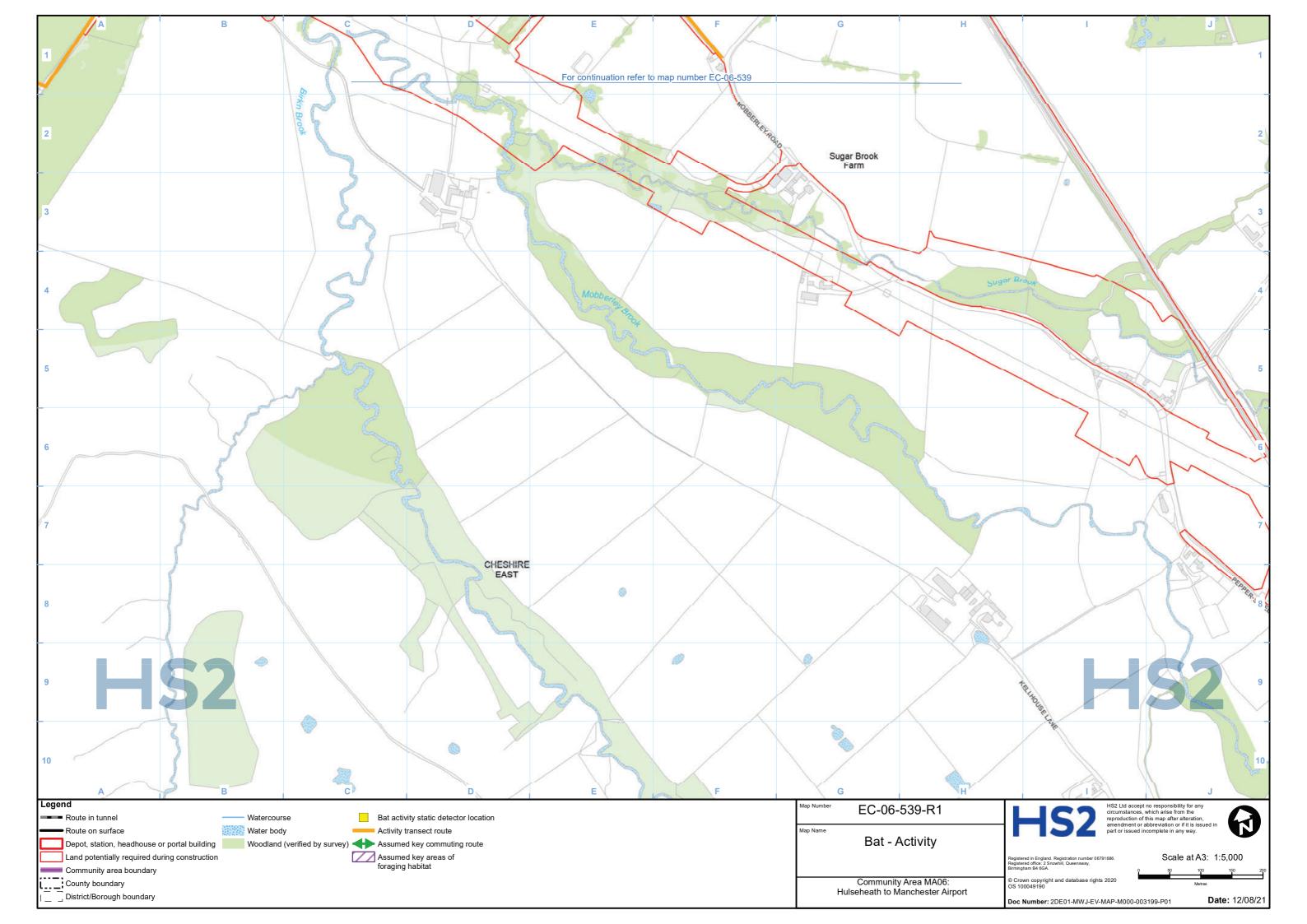


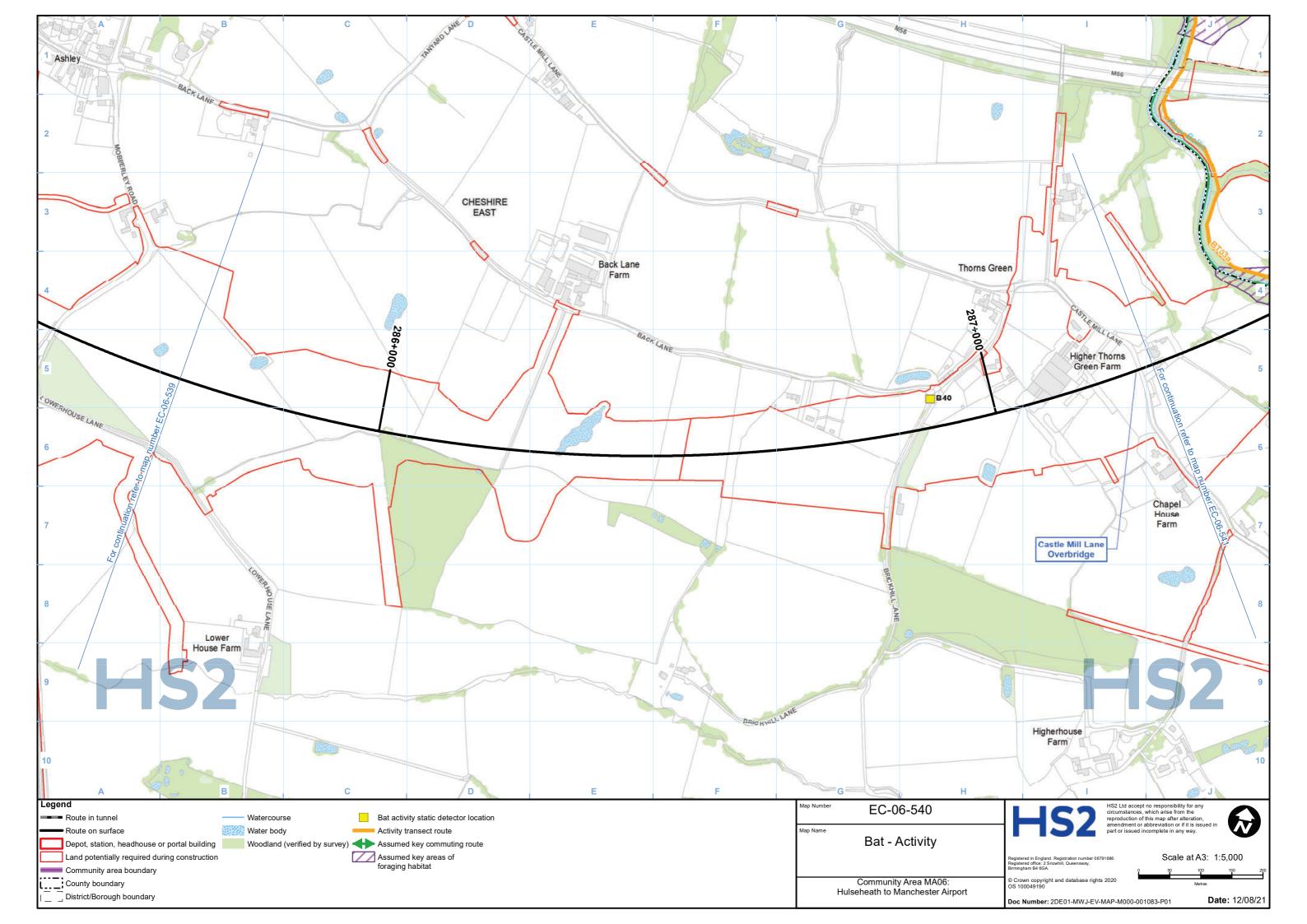


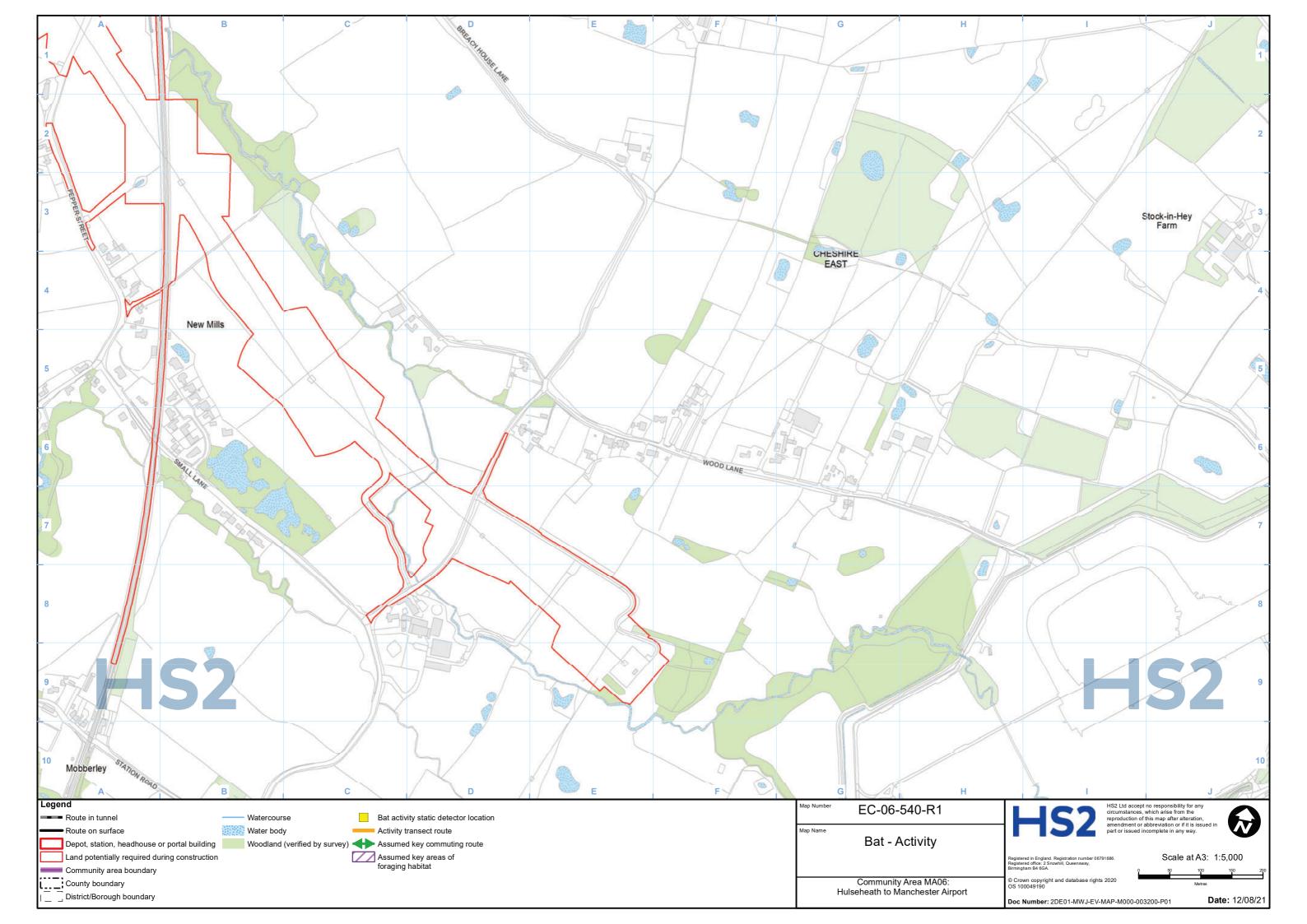


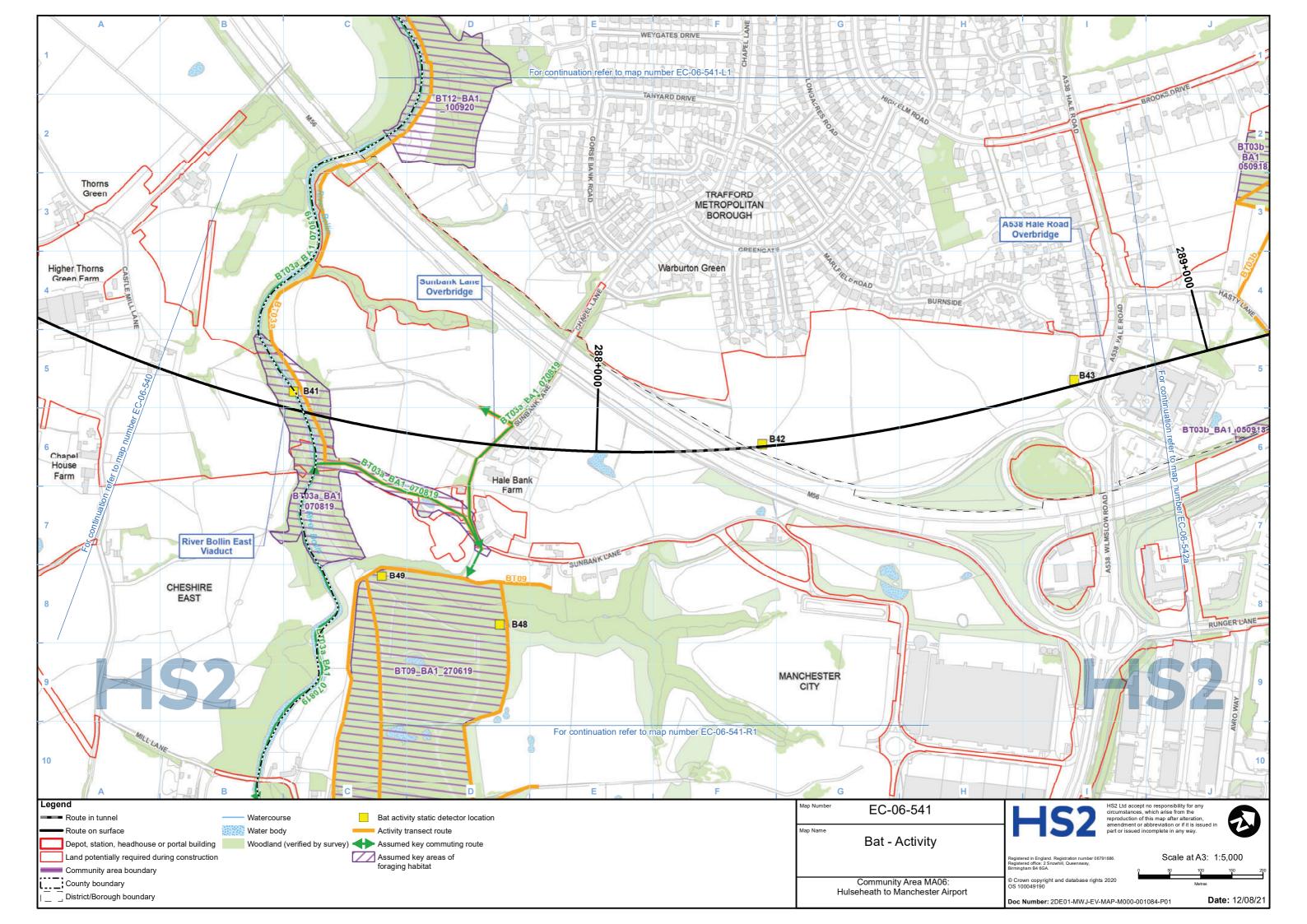


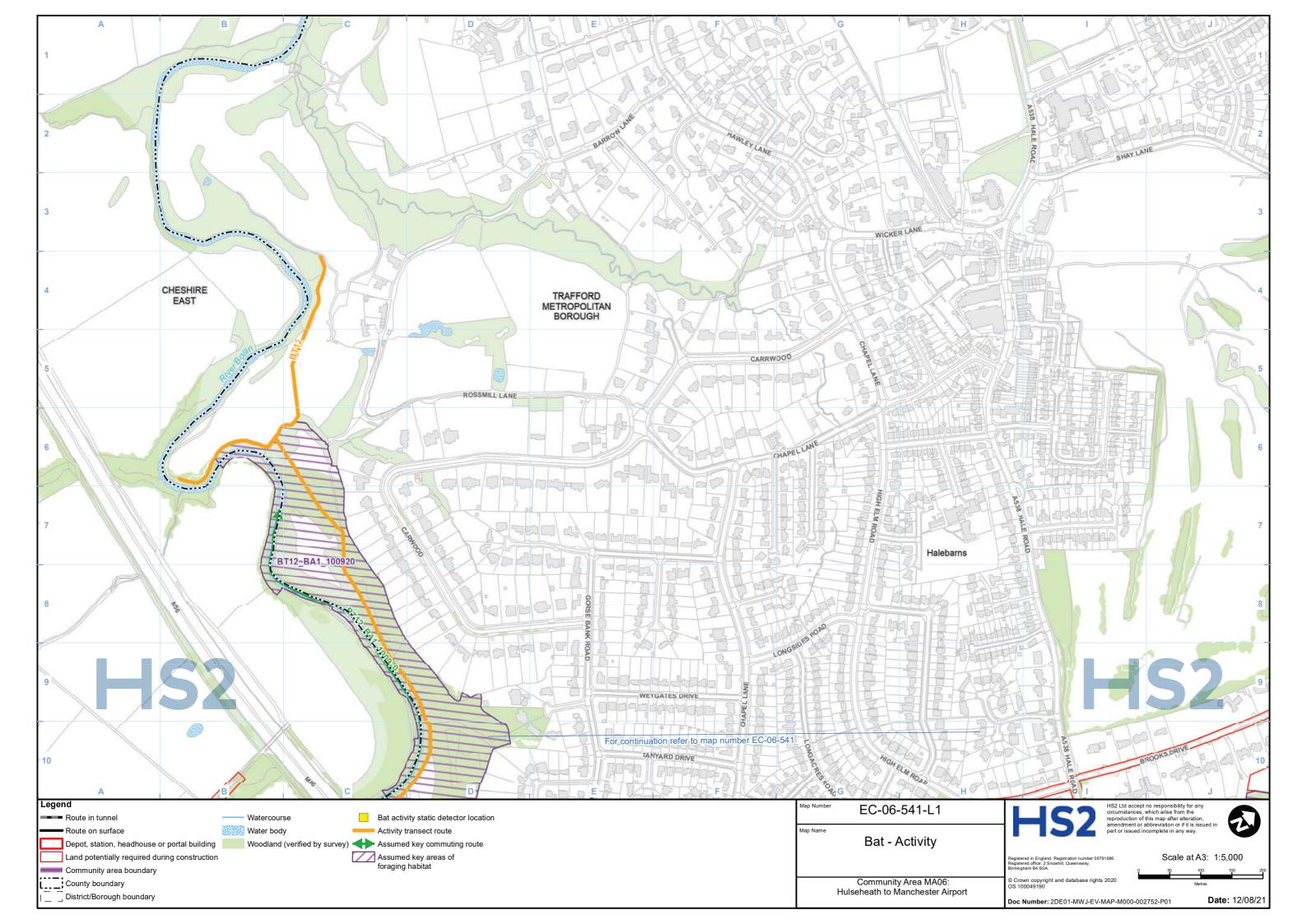


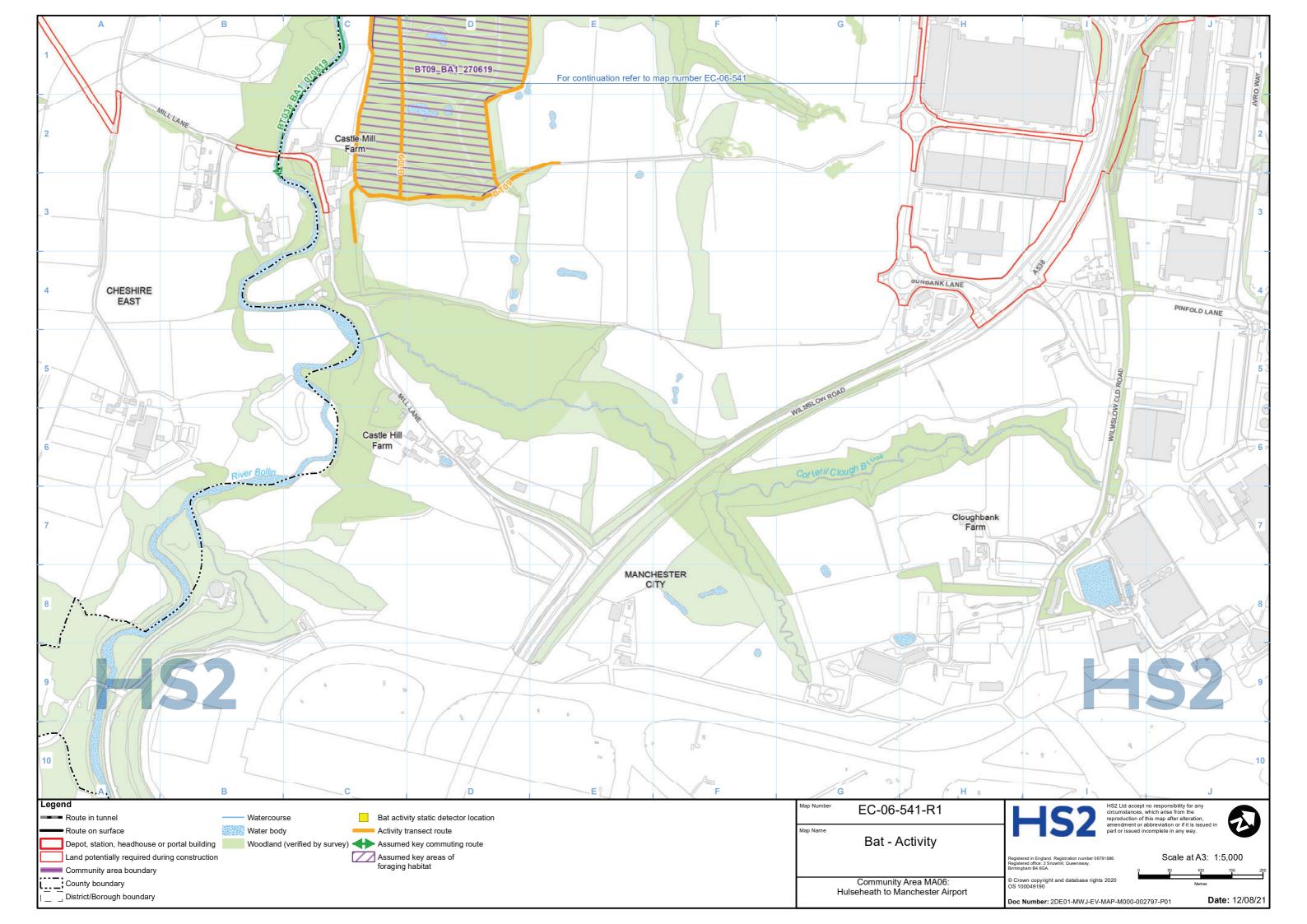


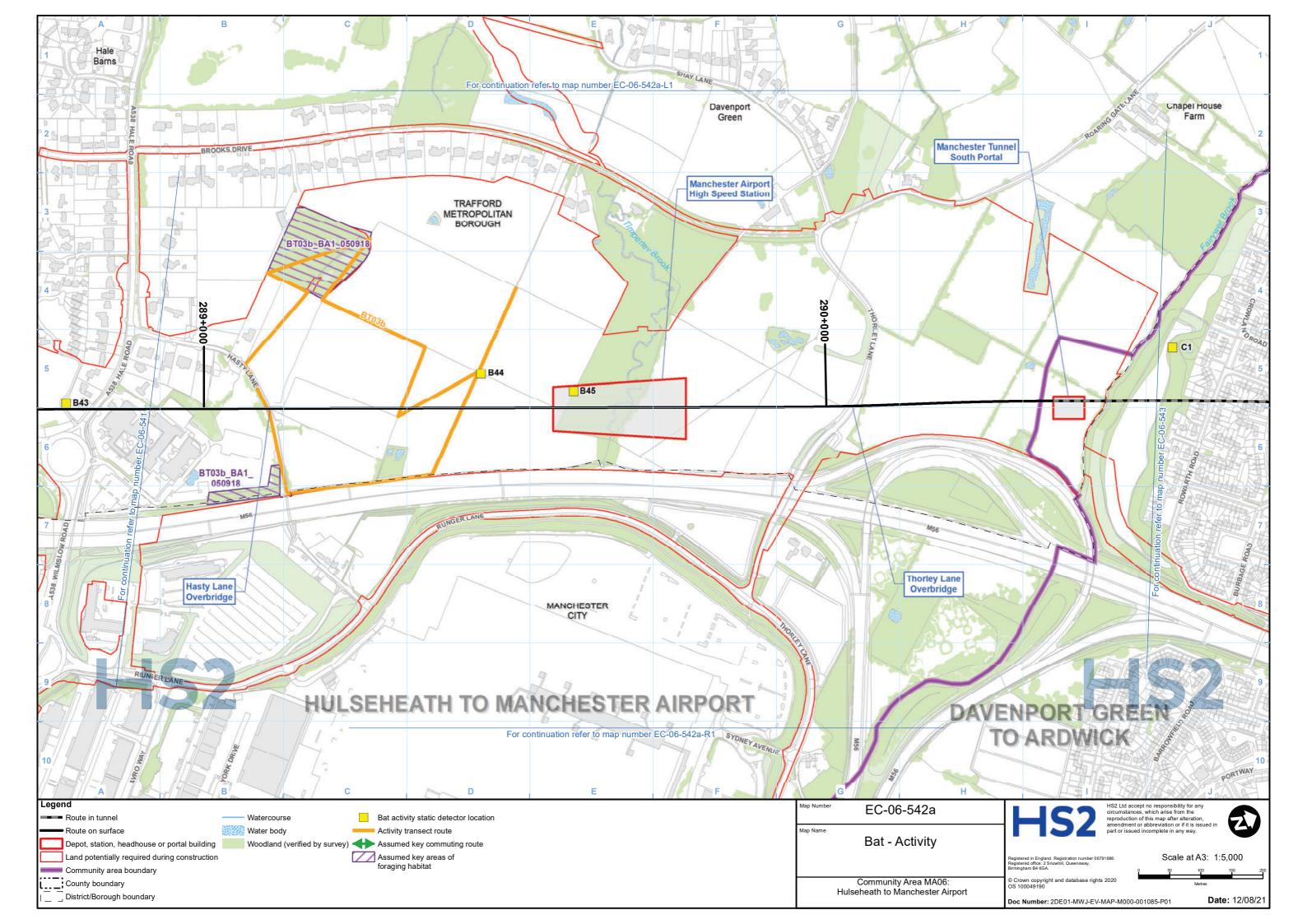


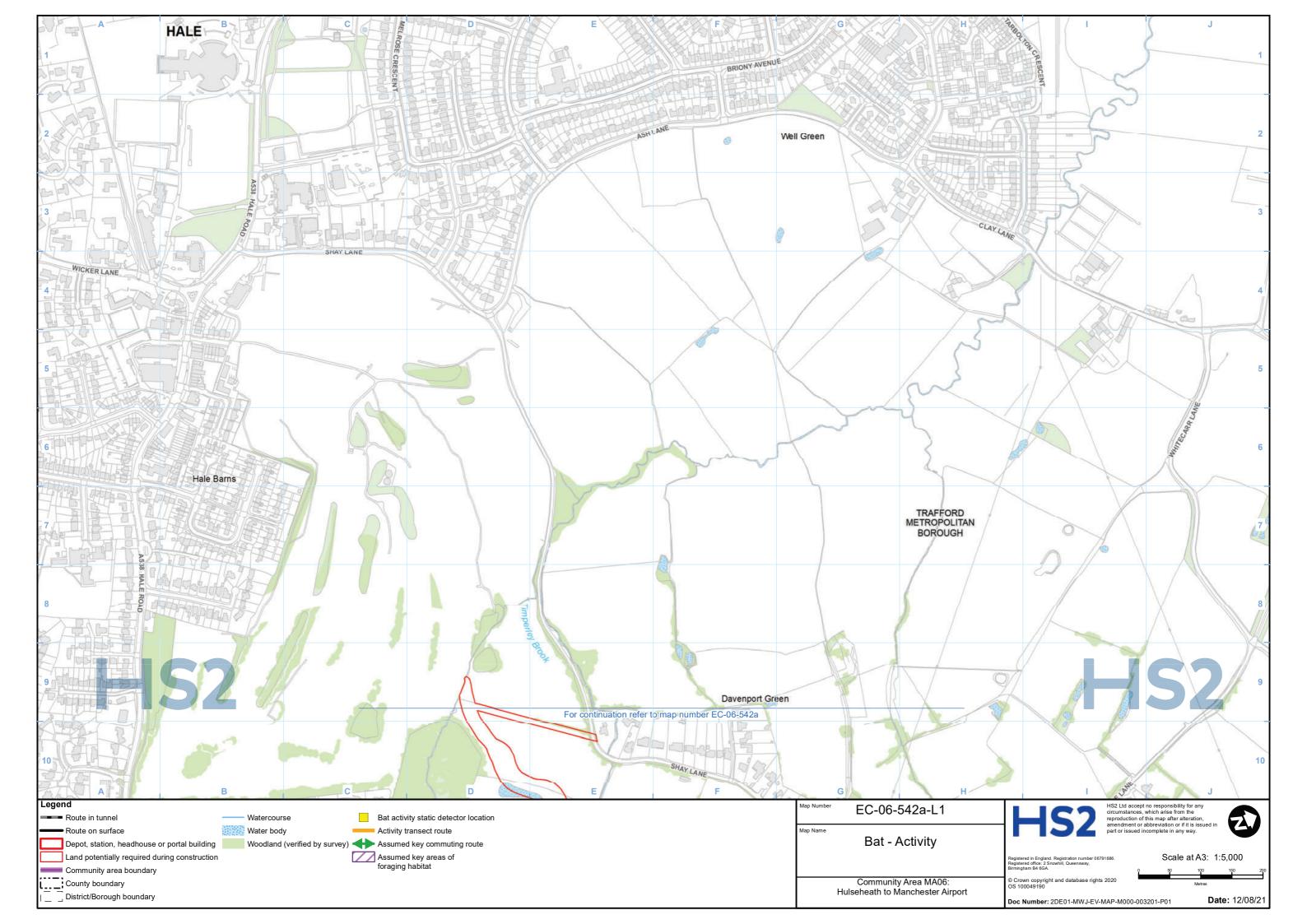


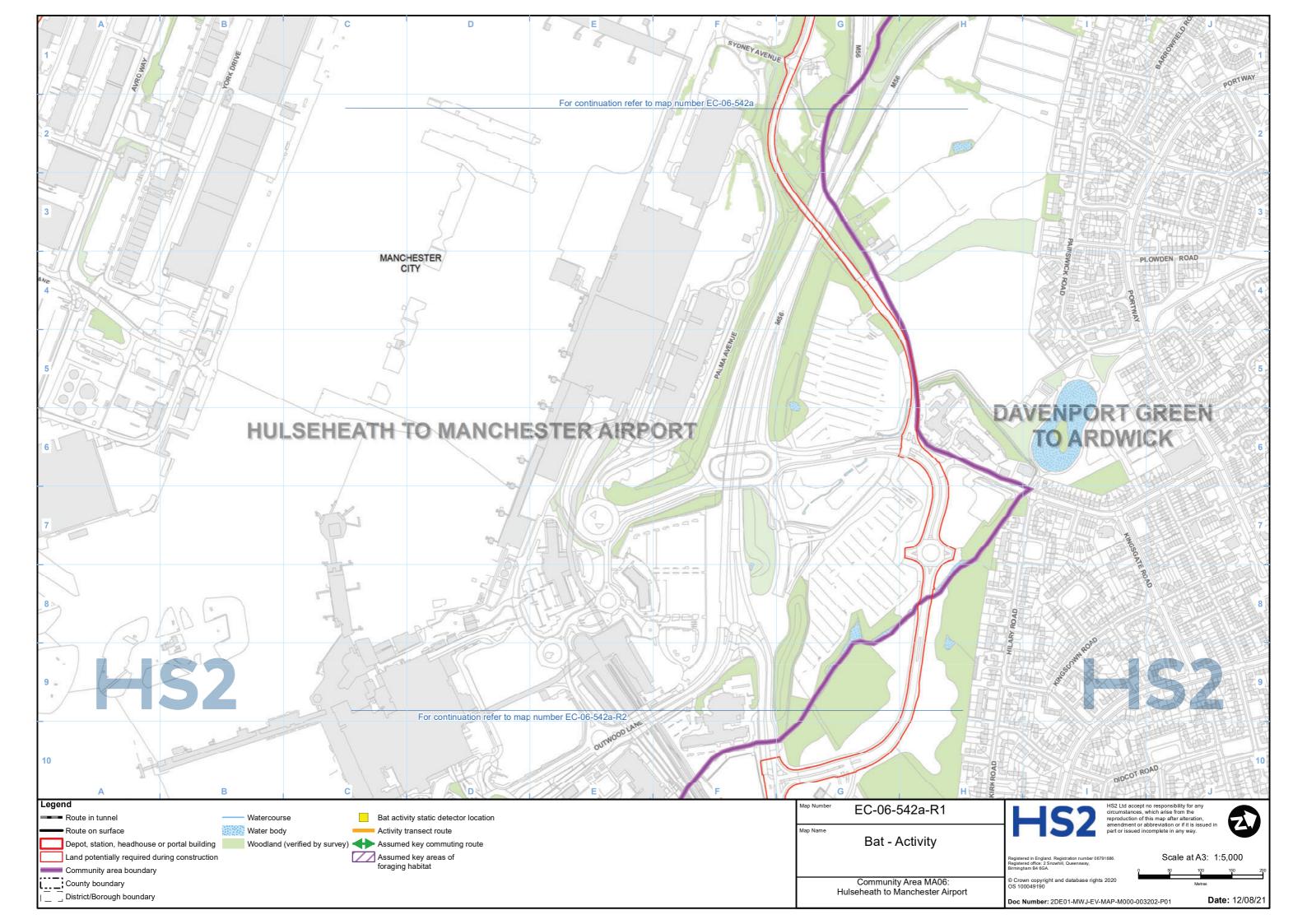


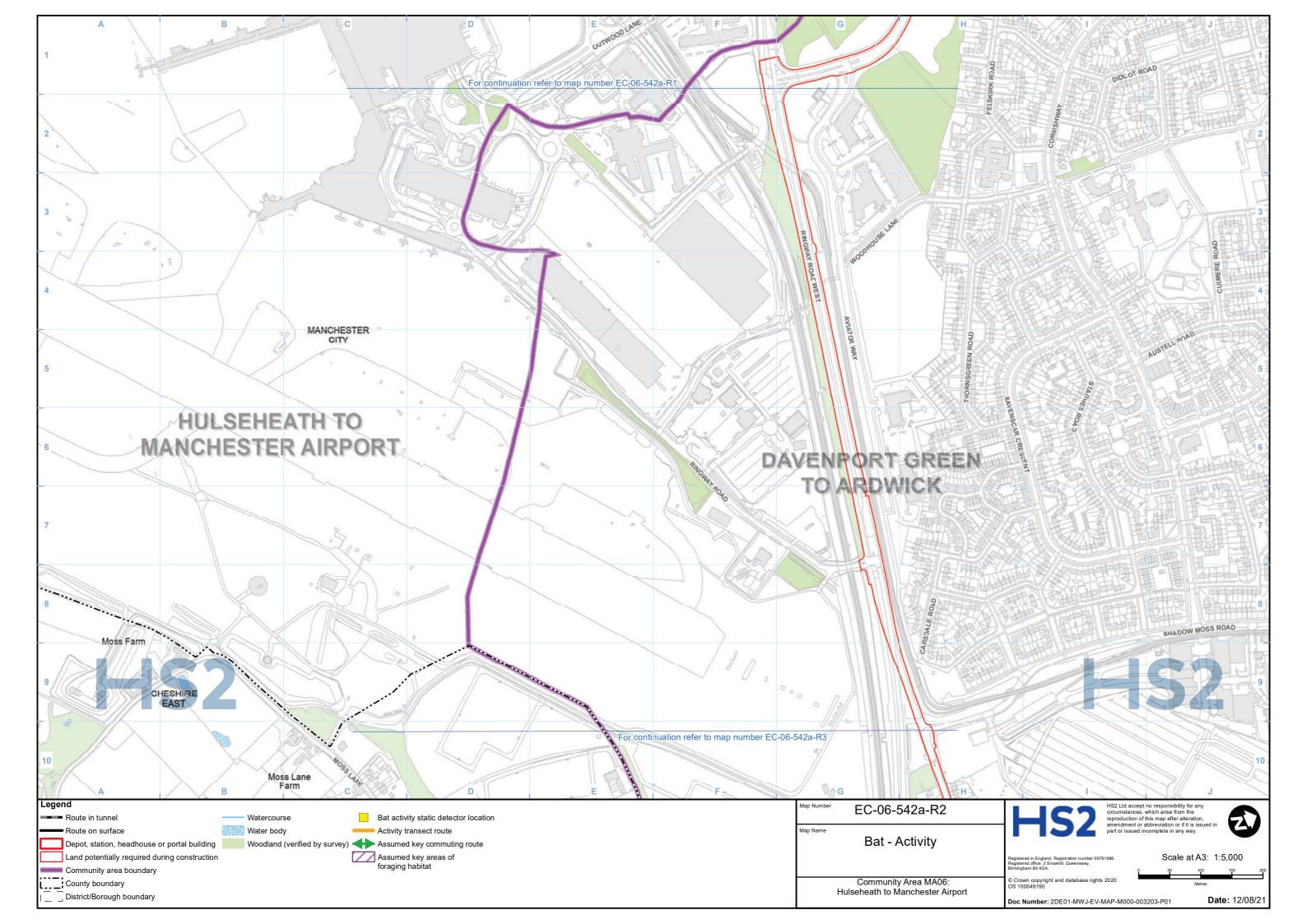


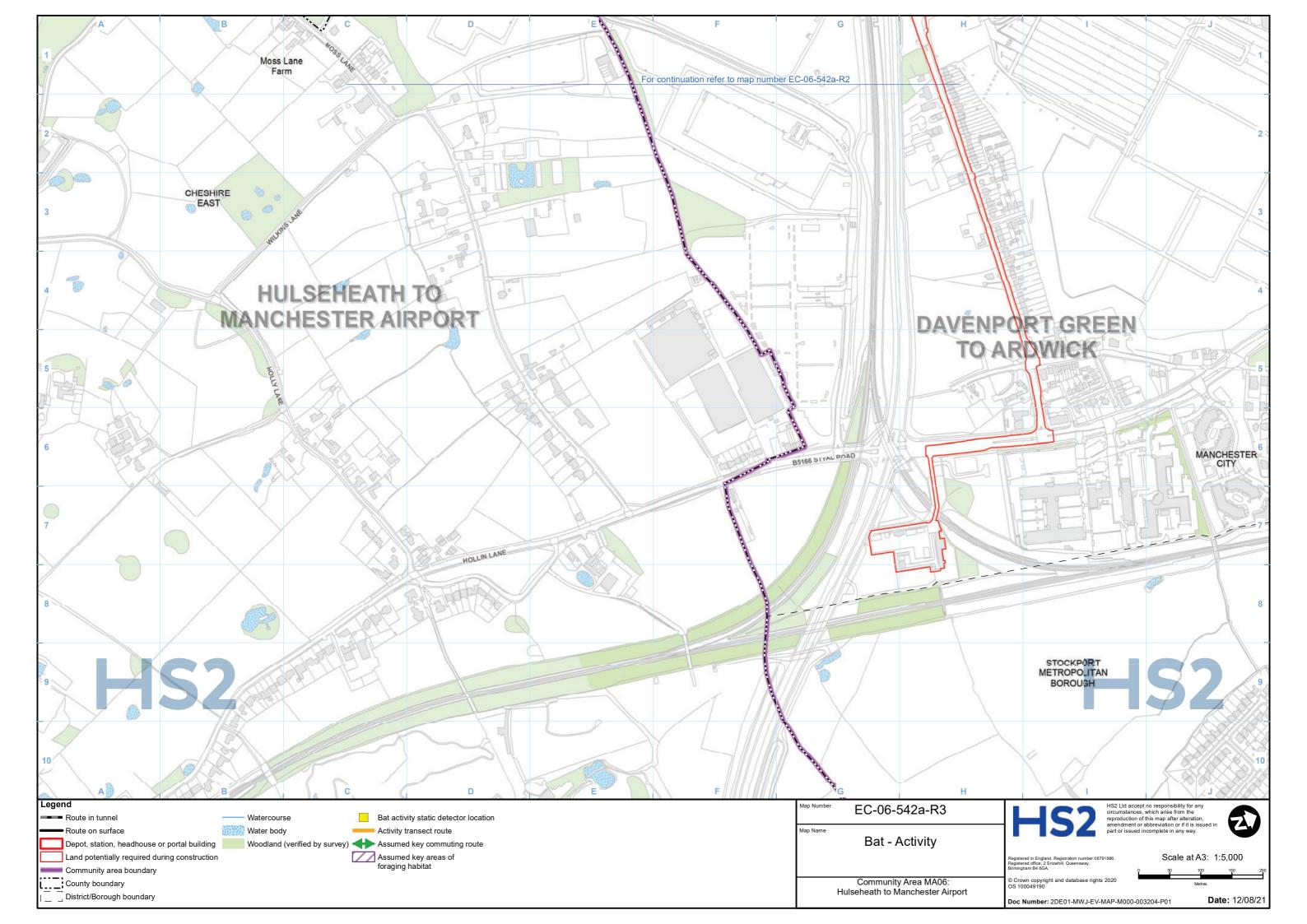


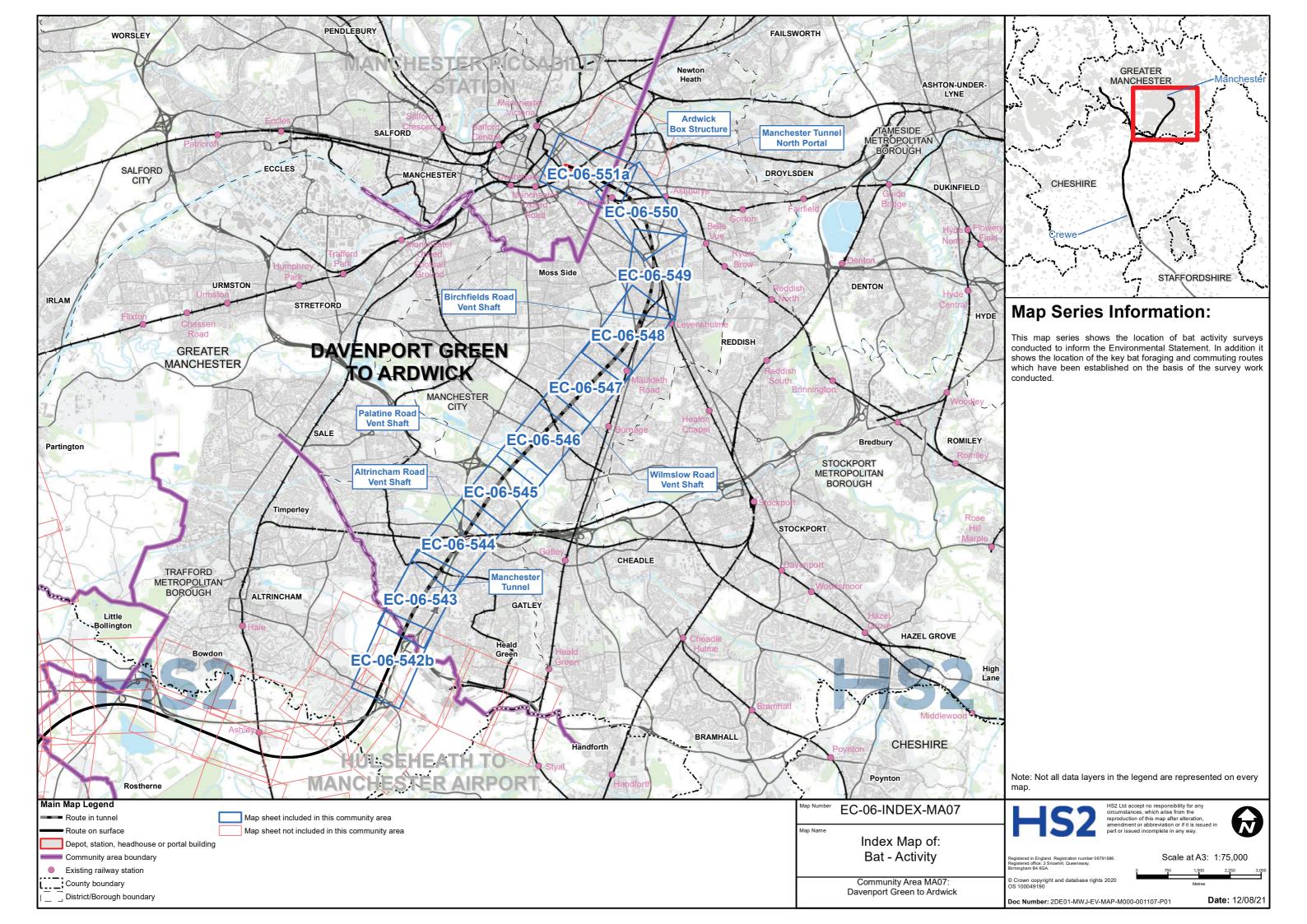


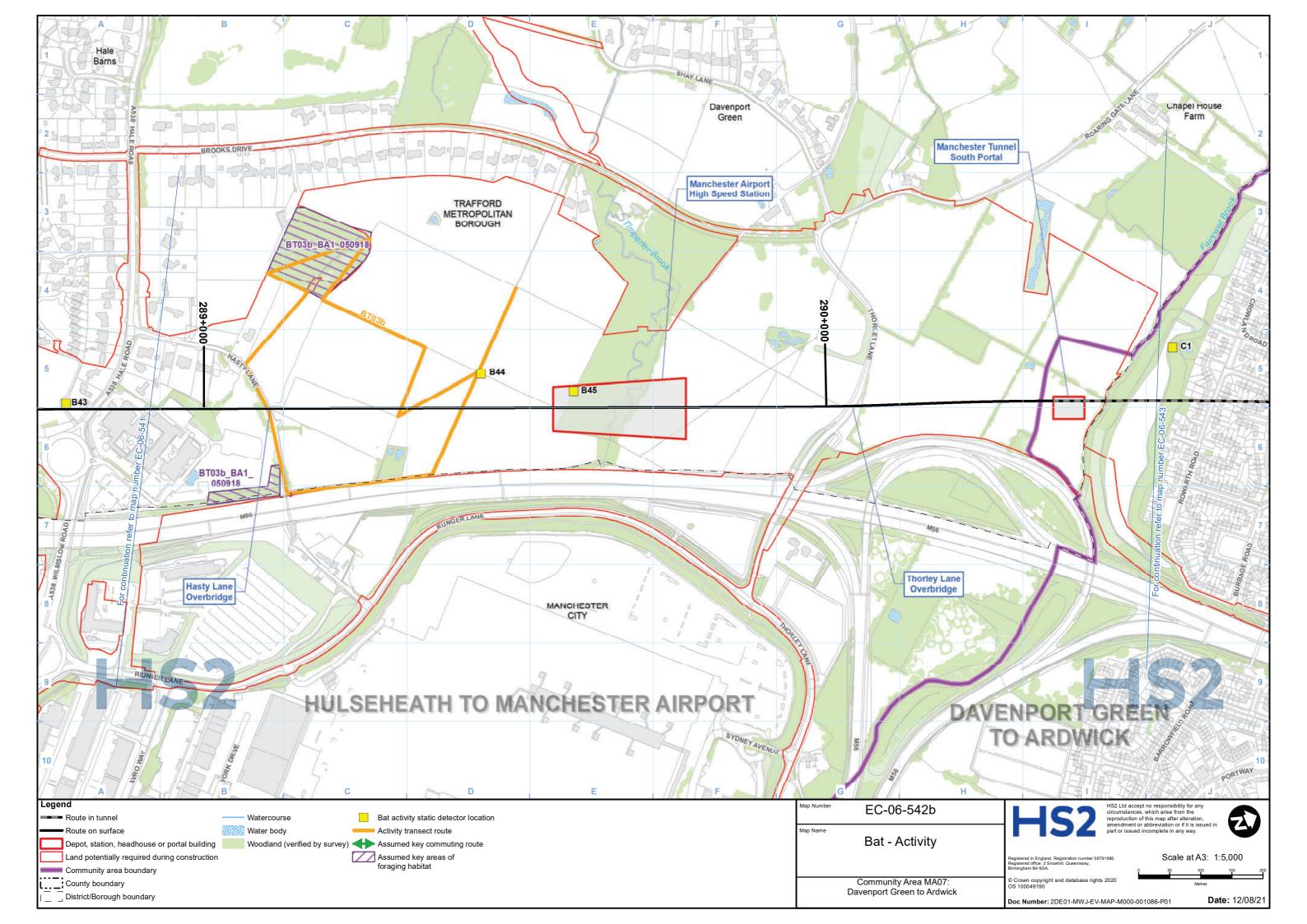


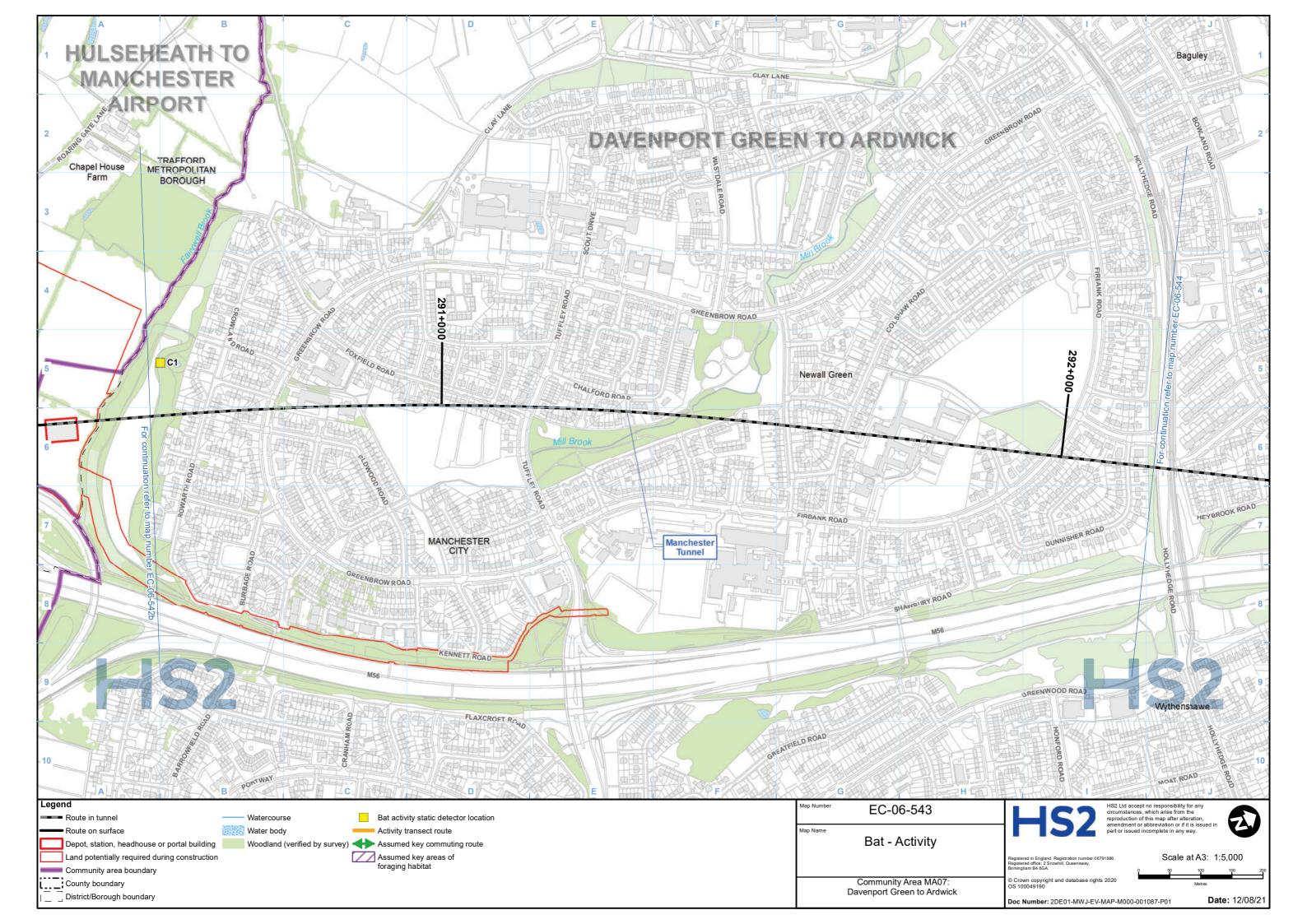


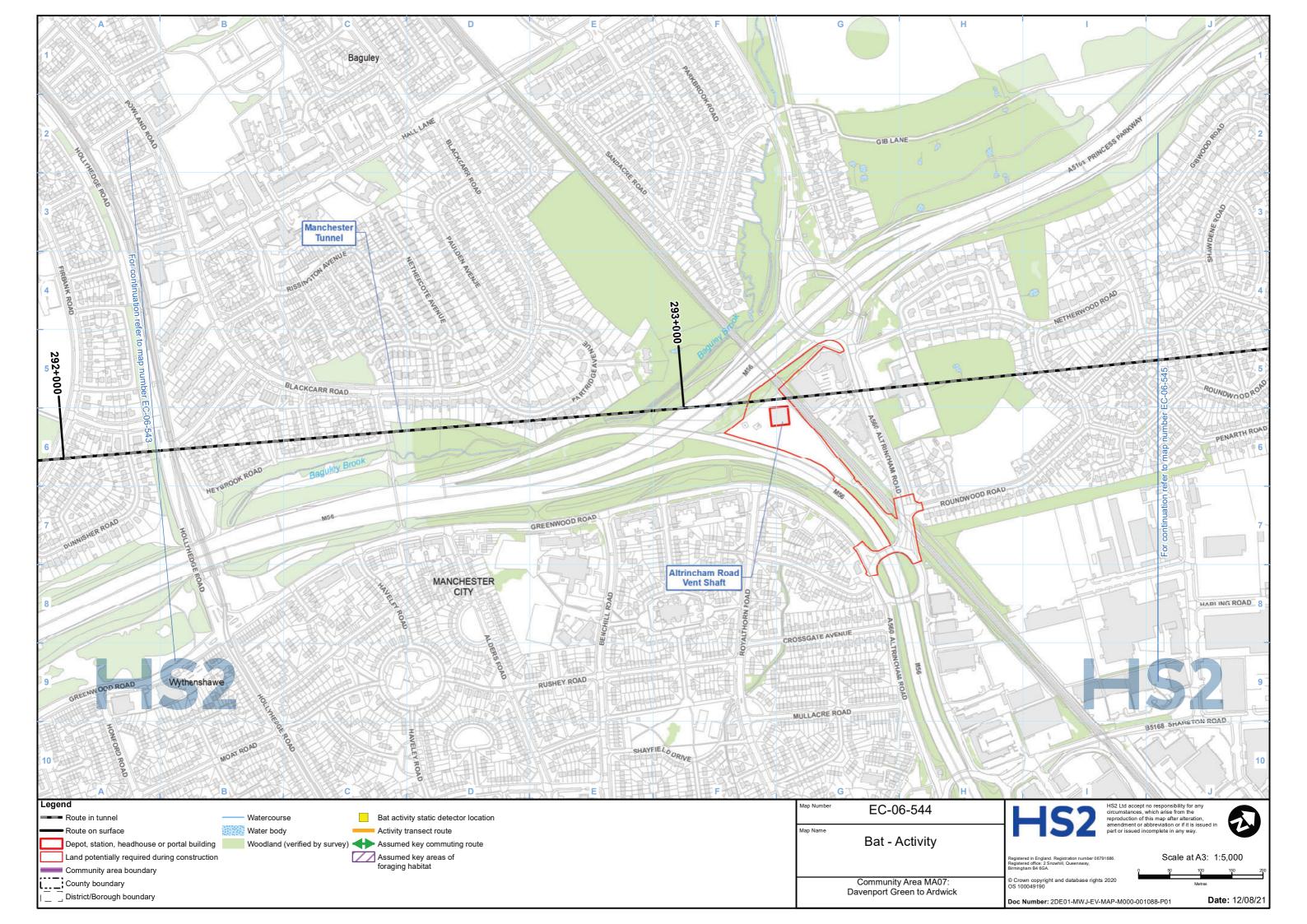


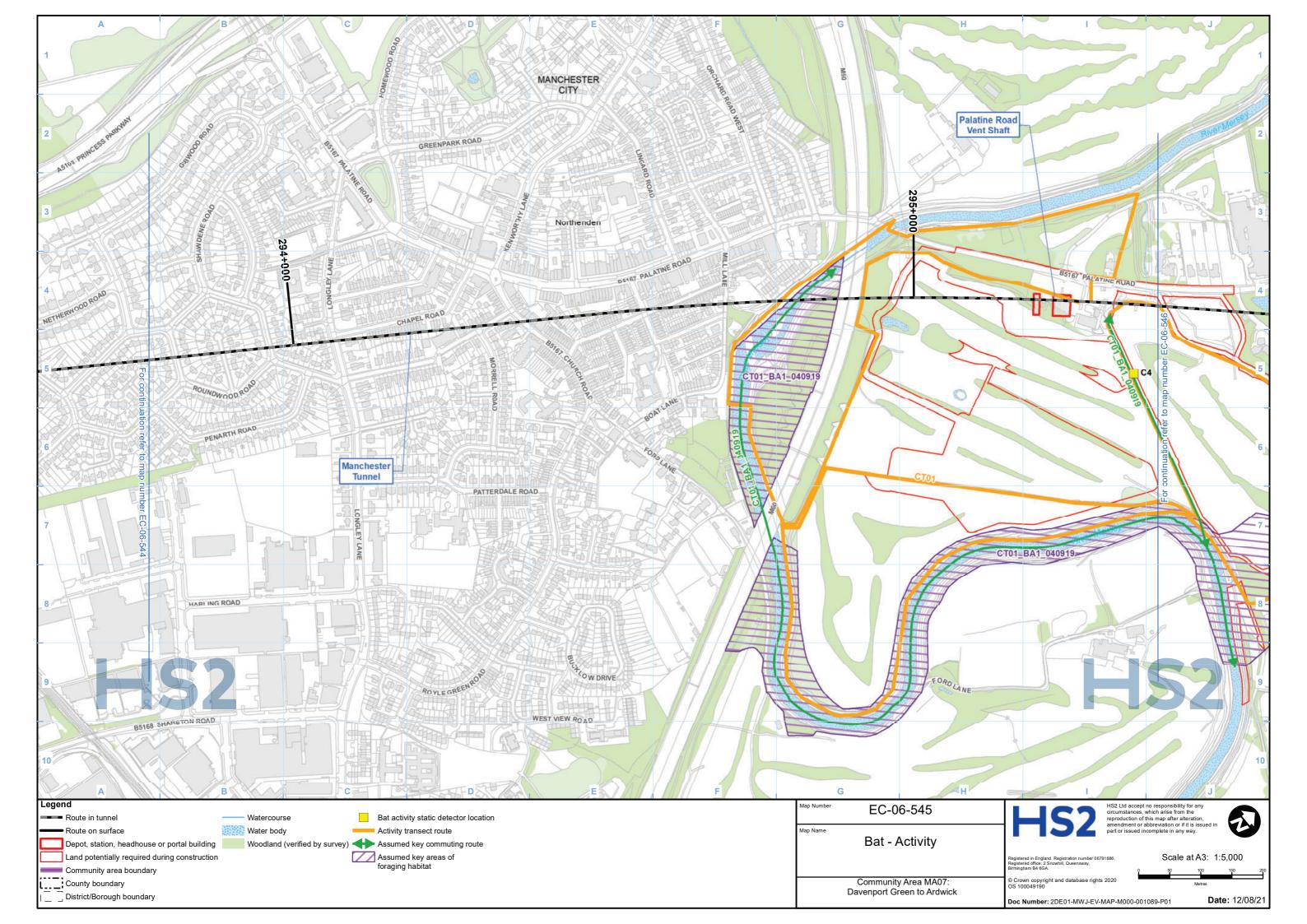


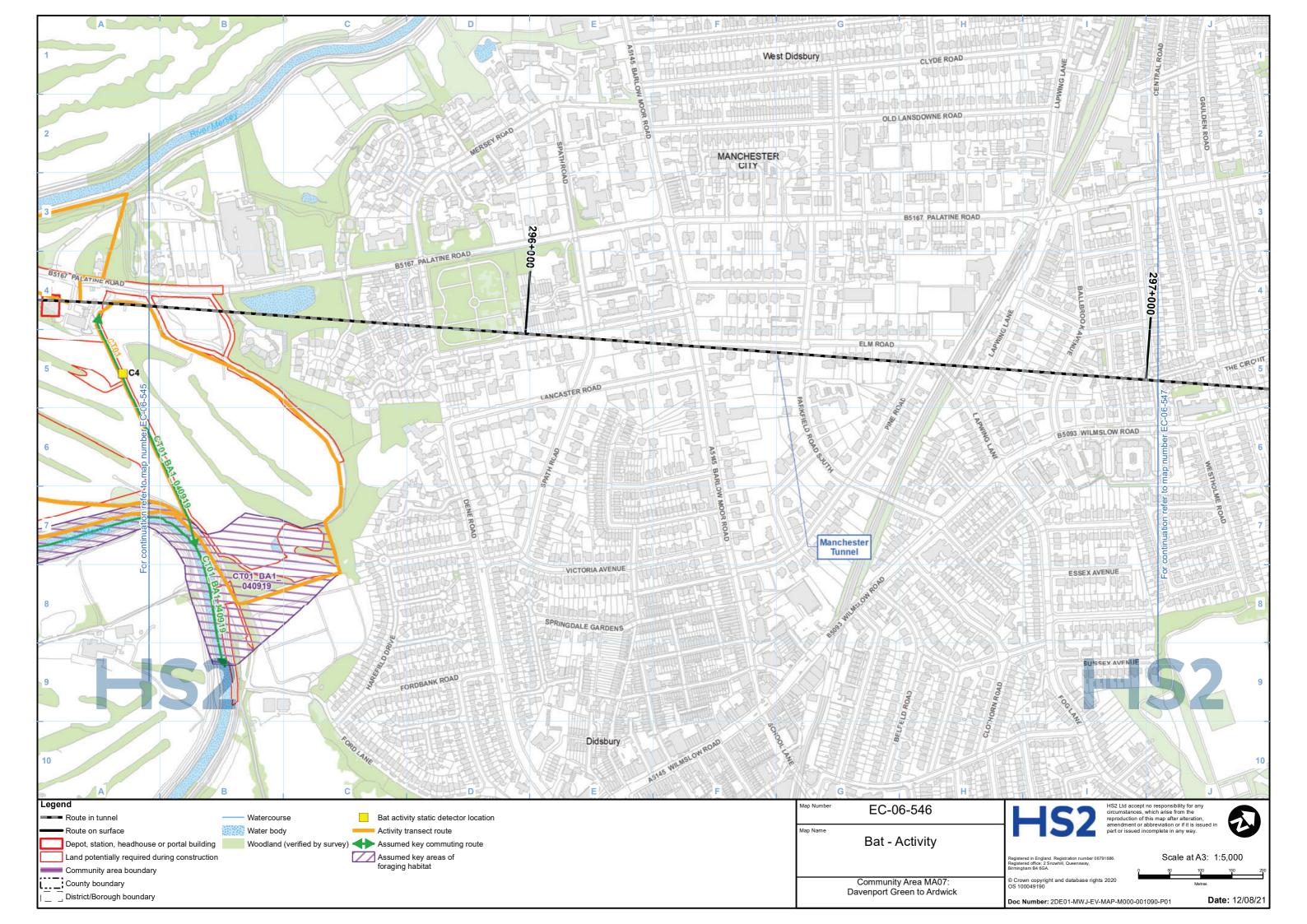


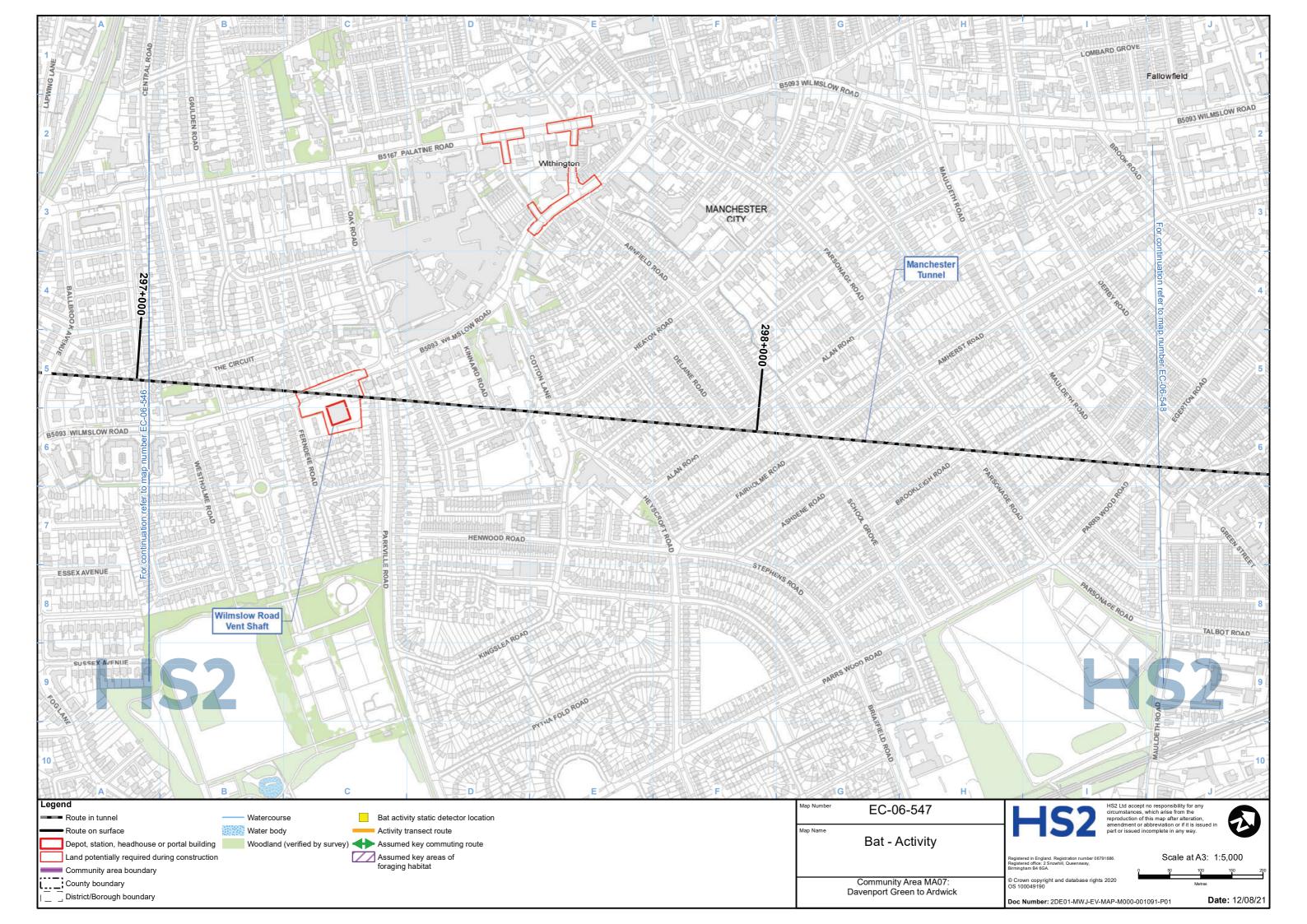


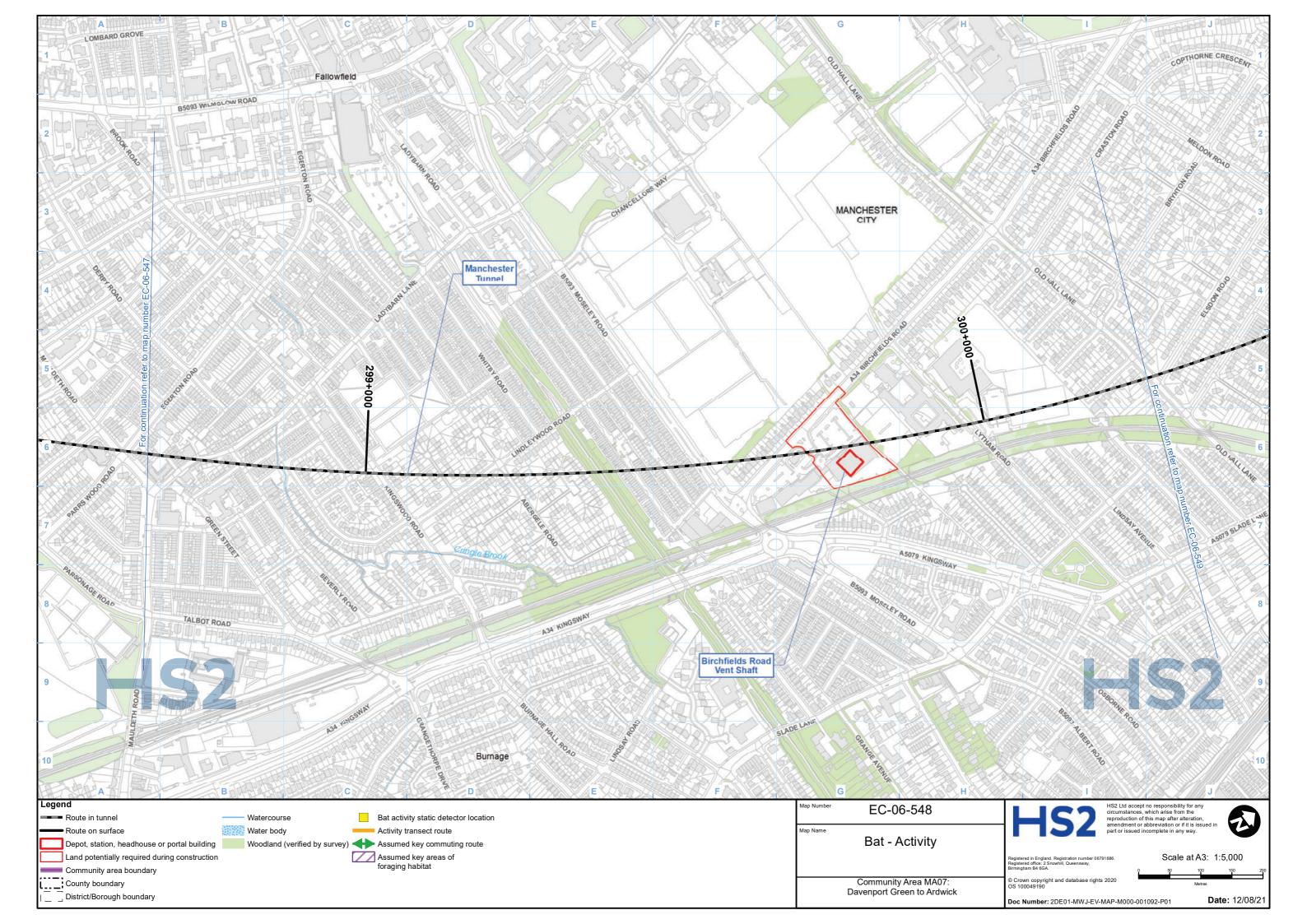


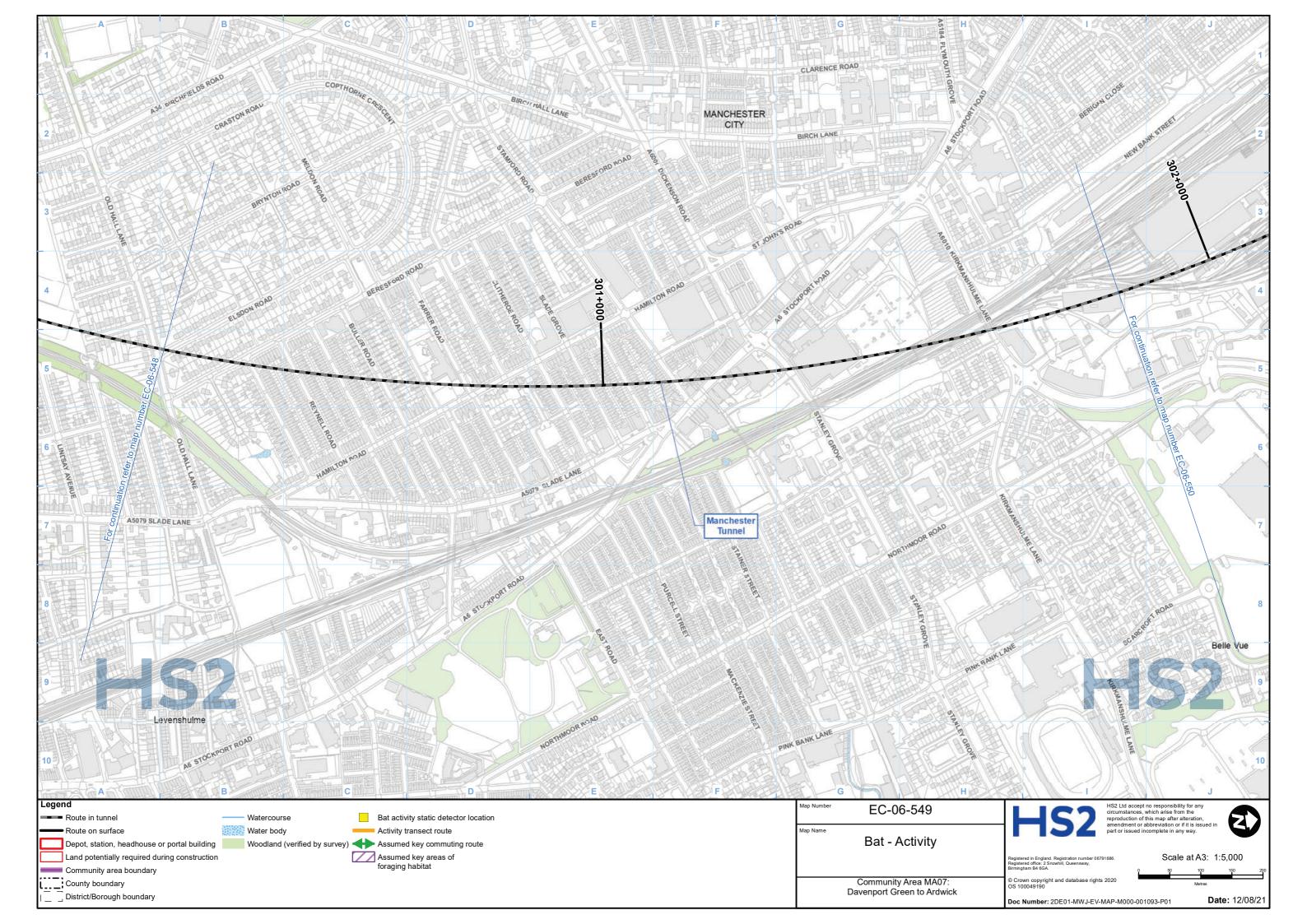


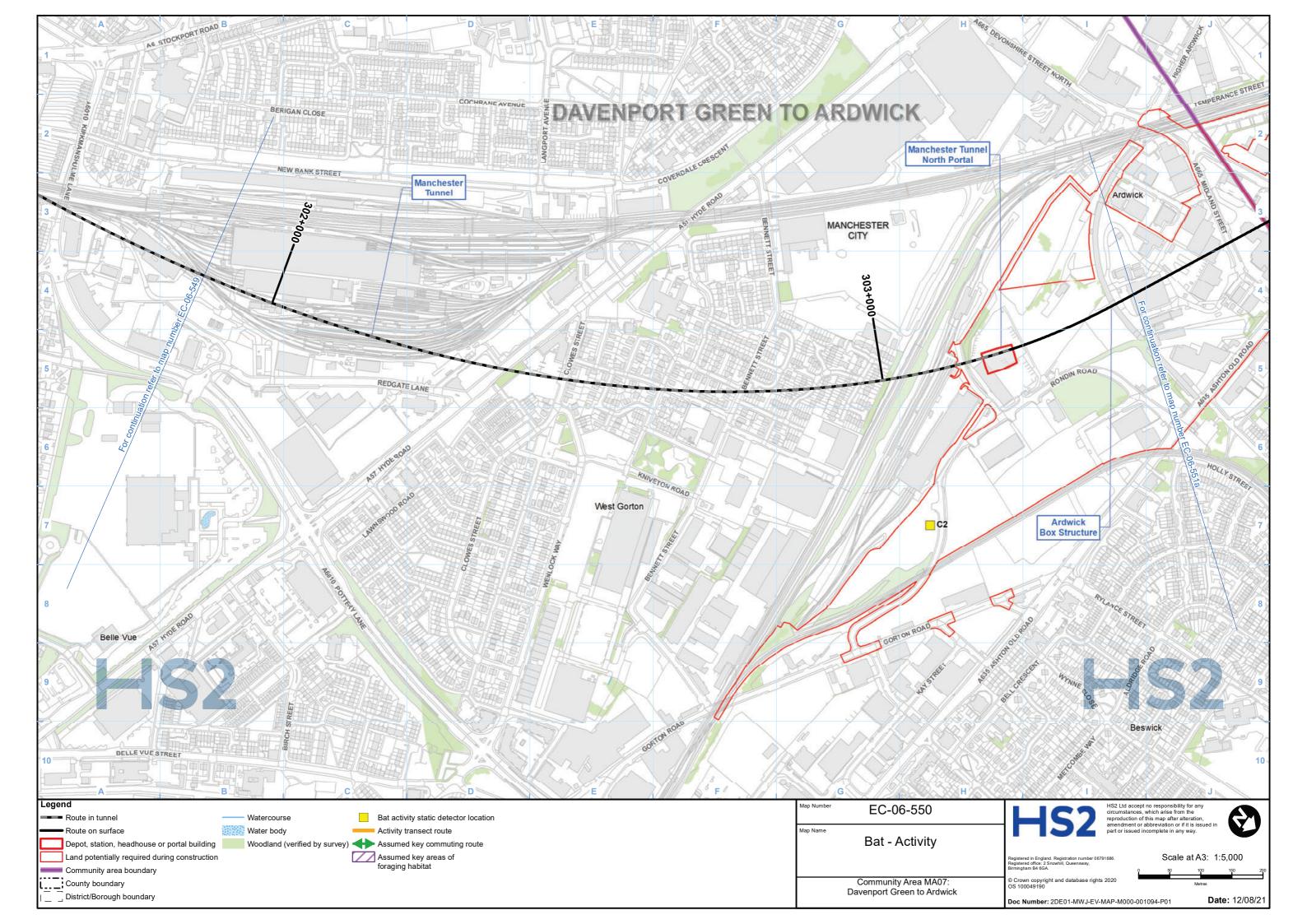


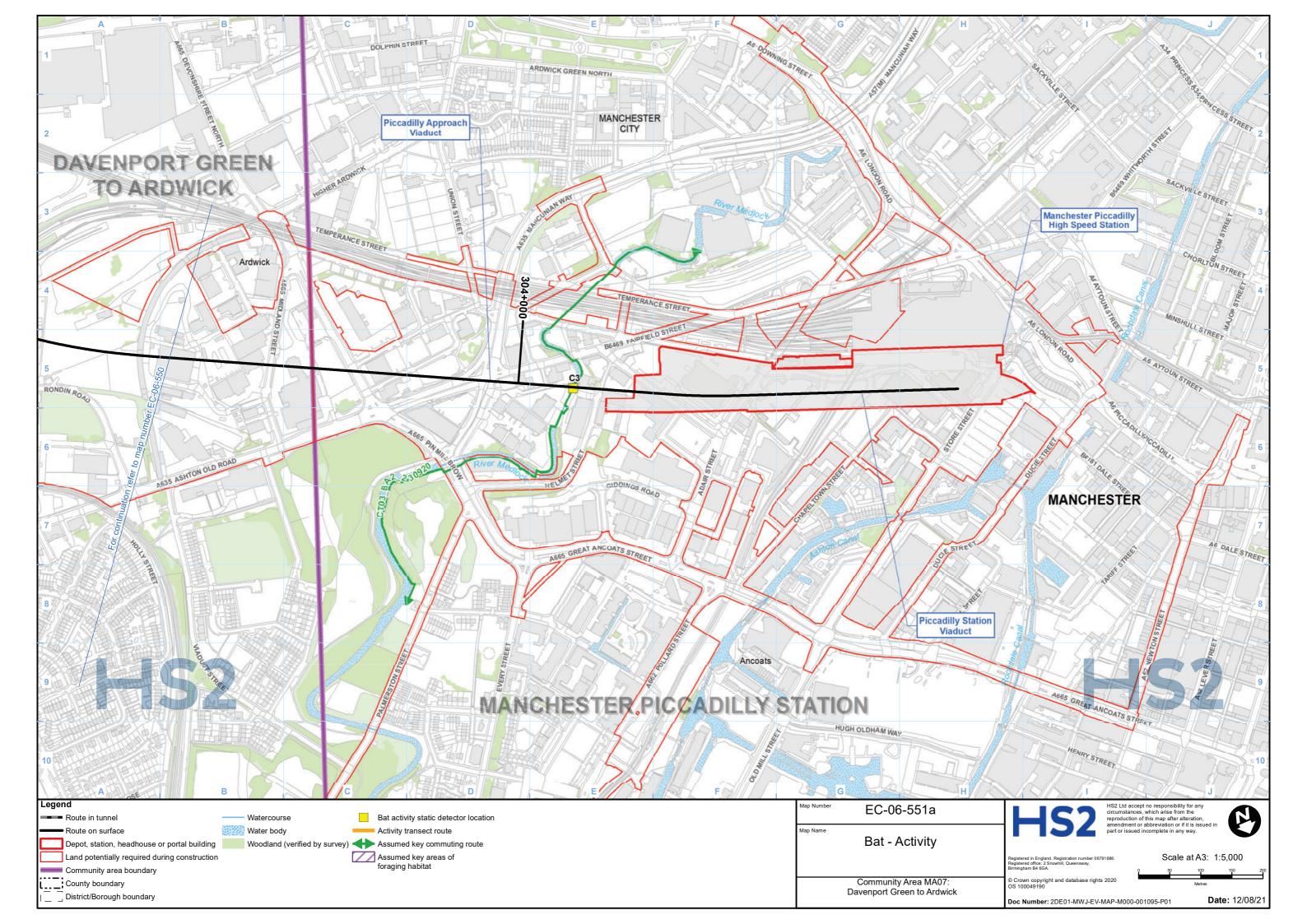












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