

# A303 Amesbury to Berwick Down TR010025

6.3 Environmental Statement Appendices

Appendix 7.3 Area of Search

APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

October 2018





## 7.3 Area of Search Introduction

- 7.3.1 This chapter sets out the area of search process for determining the extent of the study area for the LVIA.
- 7.3.2 The purpose of the study area is to identify the full extent of the landscape in which significant landscape and visual effects have the potential to occur. The study area therefore includes the area covered by the physical footprint of the Scheme and a varying extent of the wider landscape.
- 7.3.3 The process of determining the study area follows recommended best practice guidance contained within GLVIA 3<sup>11</sup>, and is informed by the judgement of the landscape professional undertaking the assessment.
- 7.3.4 The need for professional judgement is because the Scheme may be visible beyond the determined study area, but it is considered not to result in a significant effect.

#### **Desk-based Study**

- 7.3.5 The process for determining the extent of the study area began with a deskstudy to identify an area of search. This involved the preparation of Zones of Theoretical Visibility (ZTV) for both the construction and operational phases of the Scheme.
- 7.3.6 In line with the GLVIA 3 recommendations, the ZTV for the area of search were modelled on the existing landform; they did not take account of existing buildings or vegetation, and are therefore 'bare-earth' models. This is considered appropriate, as it presents a worst case scenario, and therefore a theoretical maximum extent of visibility, because the ZTV does not take account of screening by buildings and vegetation.
- 7.3.7 The ZTVs identified an area of search extending 9 kilometres to the north of the Scheme, covering elevated land between Tilshead, Enford Down and Durrington; 6km to the east of Countess Roundabout, covering elevated landform across Beacon Hill; 7km to the south of the Scheme covering elevated land within the Cranborne Chase and West Wilshire AONB and 5km to the west of Yarnbury Camp, covering elevated land to the north of Codford St. Mary.

### **Construction Phase ZTV Modelling**

#### **Approach and ZTVs**

7.3.8 The construction aspects of the Scheme, including details of proposed phasing and construction activity is set out in Environmental Statement Chapter 2.

<sup>&</sup>lt;sup>11</sup> Landscape Institute with the Institute of Environmental Management and Assessment, (2013). *Guidelines for Landscape and Visual Impact Assessment 3rd Edition*. Routledge: Abingdon.



7.3.9 The parts of the construction activity likely to be most visible were considered to be the construction compounds and the Slurry Treatment Plant (STP). Bare earth ZTVs were therefore produced for these structures as set out below.

#### Slurry Treatment Plant (STP)

- 7.3.10 The STP was modelled at 20m above ground level to represent this structure, as illustrated by Figure 7A.1.
- 7.3.11 Figure 7A.1 indicates that the STP could potentially be visible between Yarnbury Castle ridgeline and King Barrow Ridge, as well as more distant views from the Beacon Hill escarpment.
- 7.3.12 To the south of the STP there could be intermittent visibility from elevated ridgelines in the rolling landform, extending to the south side of the Wylye Valley.
- 7.3.13 To the north and north-west of the STP, there could be more extensive visibility from ridgelines north of Shrewton.

#### Main Construction Compound (MCC)

- 7.3.14 The MCC would include contractor offices and welfare facilities, construction plant and machinery and parking.
- 7.3.15 The MCC was modelled at a height of 10m above ground level to represent a 2 storey building/office and machinery, as illustrated by Figure 7A.2.
- 7.3.16 The ZTV is comparable to that of the STP and indicates that the MCC could be visible between Yarnbury Castle and King Barrow Ridge, with more distant views from elevated ground at Beacon Hill, east of Amesbury.
- 7.3.17 To the south of the MCC, there could be intermittent visibility from elevated ridgelines in the rolling landform, extending to the south side of the Wylye Valley.
- 7.3.18 To the north and north-west of the MCC, the ZTV suggests there could be more extensive visibility from along the ridgelines north of Shrewton.

#### Countess Compound

- 7.3.19 The Countess Compound would be located between the existing Countess Roundabout and Ratfyn and was assumed to include topsoil storage and temporary offices.
- 7.3.20 The Countess Compound was modelled at a height of 10m above ground level to represent a 2 storey building/office and machinery, as illustrated on Figure 7A.3.
- 7.3.21 The ZTV indicates that the Countess Compound could be visible between King Barrow Ridge and Beacon Hill. There could also be intermittent visibility from elevated locations along the Avon Valley to the south of the compound, and from elevated land north-east of Durrington.



### **Operational Phase ZTV Modelling**

#### Approach

- 7.3.22 The most prominent features of the operational part of the Scheme were considered to be the embankment west of the River Till valley and the River Till viaduct, along with large scale signage on these embankments, Longbarrow Green Bridge no.4 and Countess Flyover.
- 7.3.23 The junction upgrade at Rollestone Crossroads was not modelled, as in operation it is considered to reflect the existing landscape and visual context.
- 7.3.24 The large scale signs at the eastern end of the Scheme were not modelled as they would be situated at ground level, and their potential visibility could be ascertained from the field work.
- 7.3.25 The traffic lights on Longbarrow Junction Green Bridge were not specifically modelled, as their height equated to the same height as an HGV (4.5m), which was included in the ZTV.

#### Embankment west of the River Till valley including signage

- 7.3.26 The embankment is located between Parsonage Down and the B3083 to the west of the River Till valley. It is located within part of a dry shallow tributary valley to the River Till valley.
- 7.3.27 The ZTV was prepared for the embankment (18m) and an HGV (4.5m), to a total height of 22.5m above existing ground levels, due to being on embankment, as illustrated on Figure 7A.4.
- 7.3.28 The ZTV indicates that the embankment and signage could be visible from Parsonage Down National Nature Reserve, parts of the River Till valley to the east, elevated land east and south-east of Winterbourne Stoke, and the western edge of the WHS, including the Stonehenge Visitor Centre. The ZTV also indicated that the embankment and signage could be visible from around the northern edge of Larkhill.

#### River Till Viaduct and signage

- 7.3.29 The River Till viaduct is located within the River Till valley to the north of Winterbourne Stoke.
- 7.3.30 A bare-earth ZTV has been prepared for the River Till viaduct, modelled at 14.5m above existing ground level to represent the height of the viaduct (10m) as well as an HGV (4.5m), as illustrated on Figure 7A.5.
- 7.3.31 The ZTV indicates that the River Till viaduct and signage could be visible from within the River Till valley around Winterbourne Stoke and from elevated land to the north-east and south. Further afield, the ZTV indicates intermittent visibility potentially around Larkhill and from the south side of the Wylye Valley in the Cranborne Chase and West Wiltshire Downs Area of Outstanding Natural Beauty.



#### Longbarrow Junction Green Bridge

- 7.3.32 The Longbarrow Junction green bridge is the proposed over-bridge for the realigned A360 to cross the A303 which would be in cutting. The green bridge is located across the rolling landform between the River Till valley and the existing A360.
- 7.3.33 The ZTV for the Longbarrow Junction green bridge was modelled at a height of 3.5m above existing ground level to represent the height of vehicles on the green bridge and traffic lights, taking account of the structure being 1m below existing ground level, as illustrated on Figure 7A.6.
- 7.3.34 The ZTV indicates that the elevated landform to the south of the Longbarrow Bridge would limit views from much of the landscape to the south. The bridge could be visible in localised views and from the repeating elevated ridgelines to the north and west between the bridge and Shrewton, and beyond. Further afield, the ZTV indicates that the Longbarrow Bridge could be visible from around Larkhill and along the Beacon Hill escarpment.

#### Countess Flyover

- 7.3.35 The Countess Flyover is the proposed flyover of the A303 at the A303 / A345 junction in north-west Amesbury.
- 7.3.36 The ZTV for the Countess Flyover was modelled at a height of 11.5m above ground level to represent the height of the tallest part of the structure at 7m, and HGV vehicles (4.5m), as illustrated on Figure 7A.7.
- 7.3.37 The ZTV indicates the Countess Flyover could be visible from the River Avon valley and around Amesbury. The ZTV suggests there could be intermittent visibility from elevated locations within the River Avon valley to the south, and from elevated land north-east of Durrington.

#### Area of Search Field Work and Initial Assessment

- 7.3.38 Field work was then undertaken to verify the ZTVs and the influence of existing vegetation or buildings. To aid in the field work, a single ZTV was prepared by merging the ZTVs set out above for the construction and operational phases, to represent the area of search, as illustrated on Figure 7A.8. A number of photographs were also taken during this field work, which are referenced below.
- 7.3.39 The field work demonstrated that from across the elevated ridgelines to the north and west of Shrewton, the combination of distance, vegetation, and the availability of views, reduced the actual potential to have views of the Scheme. Where viewing locations were identified, these were from elevated ground, which enabled far-reaching panoramic views across the landscape in multiple directions (Appendix 7.3 View 1 and Appendix 7.3 View 2 on Figure 7A.9). In the context of these views, an initial assessment was undertaken, using the LVIA methodology. This concluded because of the distance, that only a very small part of the Scheme would be visible, such that it would be a barely noticeable feature, and the likely impact would be negligible. As a result, even with potential high sensitive receptors, the effect of the Scheme would not be significant.



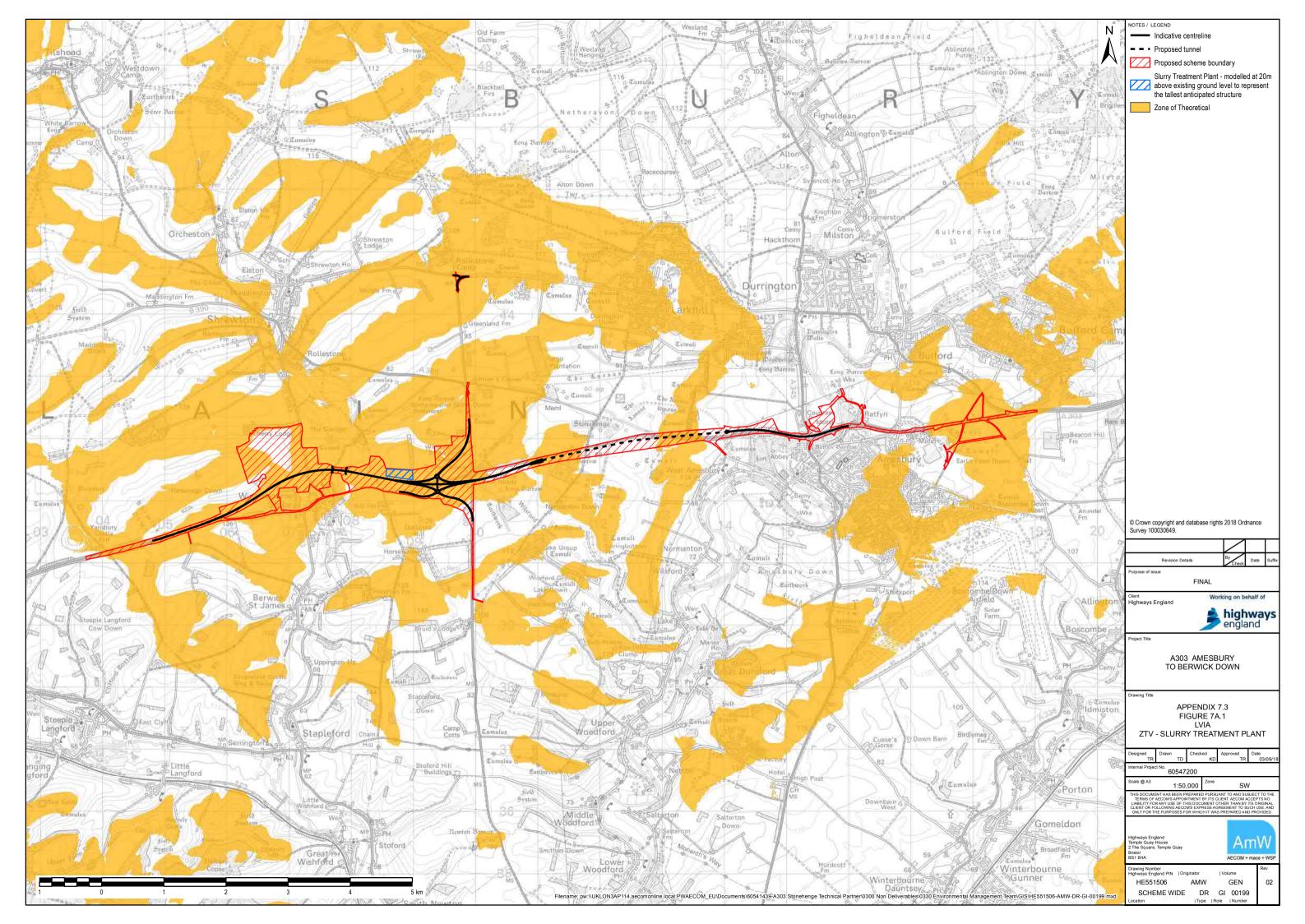
- 7.3.40 From within Larkhill and to the north of Larkhill, Durrington and Bulford the field work demonstrated that the built form and vegetation around the settlements prevented views towards the Scheme. From the more elevated ridgelines northeast of Durrington, the distance to the Scheme, as well as intervening vegetation, reduced the ability to distinguish the Scheme in the context of the panoramic, far-reaching views (Appendix 7.3 View 3 on Figure 7A.10). In the context of the distance of the views and the screening, the construction activity and operation of the Scheme were considered to form barely noticeable features or not actually discernible, such that the likely impact would be no change to negligible. As a result, even with potential high sensitive receptors, the effect of the Scheme would not be significant.
- 7.3.41 From the south side of the Wylye Valley (Appendix 7.3 View 4 on Figure 7A.10), the intervening vegetation and the distance from the Scheme was considered to result in the Scheme during construction and operation being a barely noticeable feature. As a result, even with potential high sensitive receptors, the effect of the Scheme would not be significant.
- 7.3.42 From across the Avon valley, and to the south of Amesbury and east of the A360, the field work demonstrated that the landscape is more vegetated in comparison to the generally open character within the Scheme boundary (Appendix 7.3 View 5 on Figure 7A.11). It was considered that this vegetation, in combination with the distance to the Scheme, reduced the ability to view the Scheme. The construction and operation of the Scheme would therefore either not be visible, or be a barely noticeable feature, such that the likely impact would be no change to negligible. As a result, even with potential high sensitive receptors, the effect of the Scheme would not be significant.
- 7.3.43 At Rollestone Crossroads, the field work demonstrated that the military camp north of the junction and woodland and scrub vegetation on the edge of the military training area prevented views towards the Scheme from further to the north. The likely impact was therefore considered to be no change and the effect of the Scheme would not be significant.

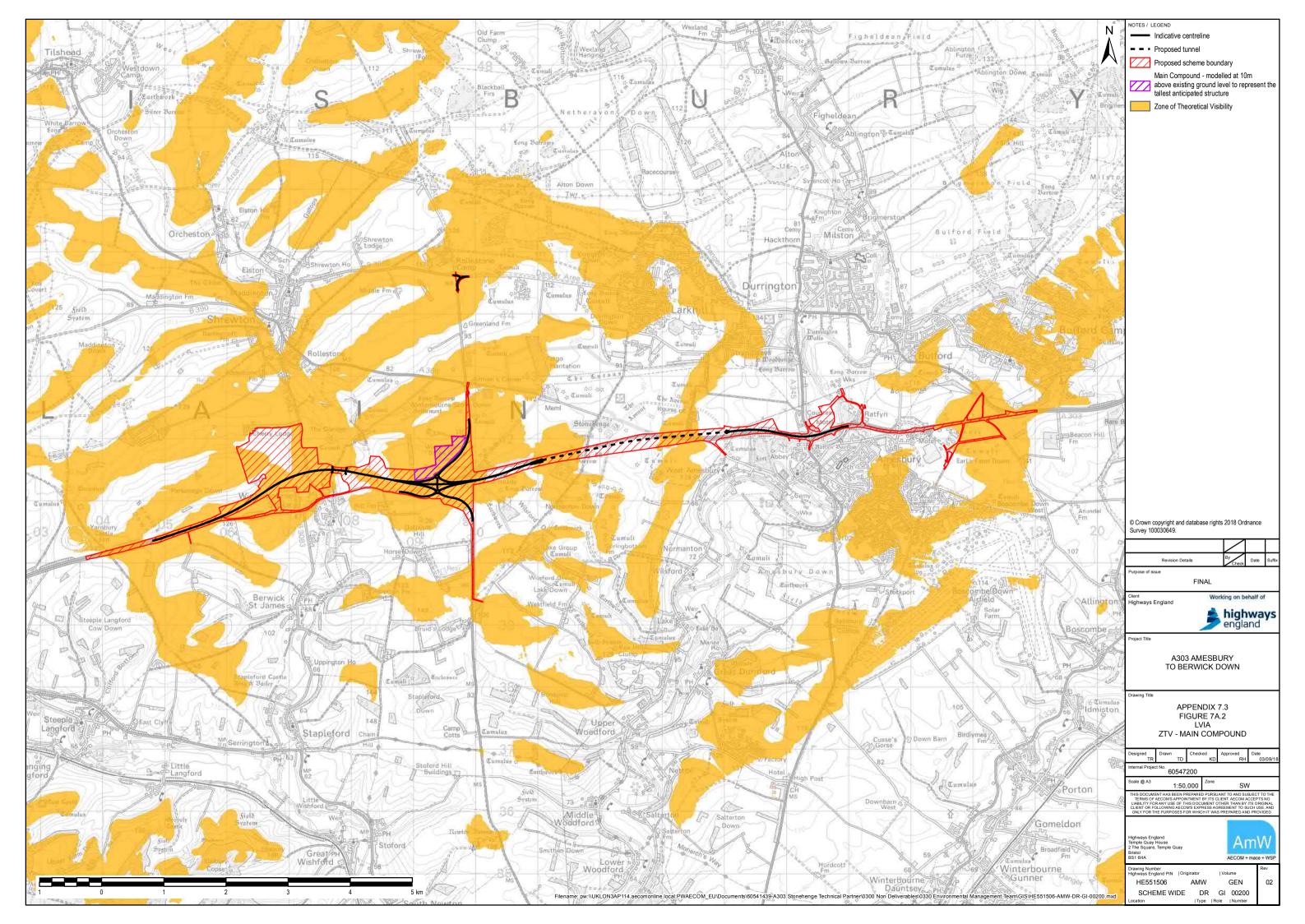
#### Conclusion

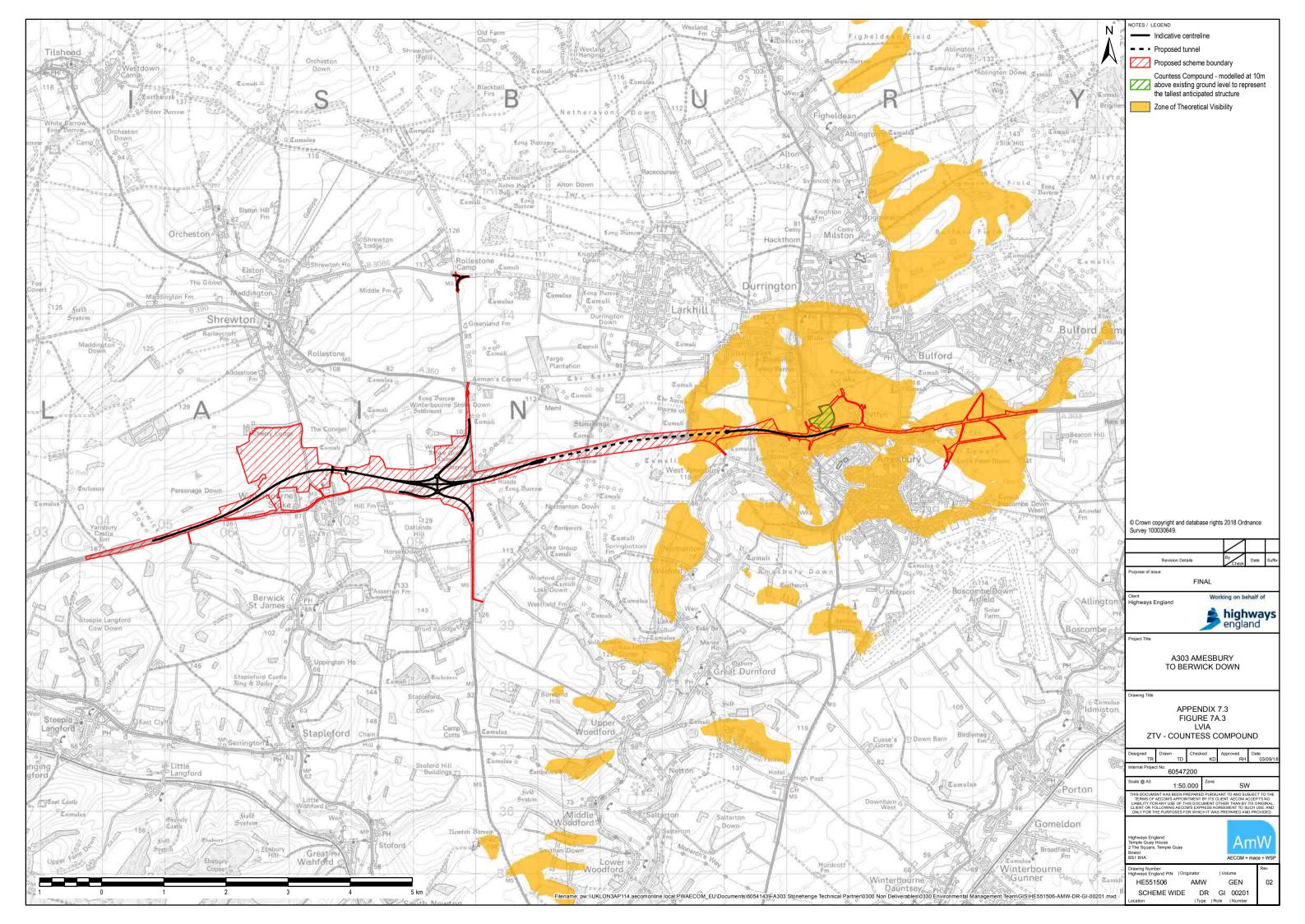
- 7.3.44 The bare earth ZTV modelling presented an area of search based upon construction and operation features of the Scheme. This area of search extended 9 kilometres to the north of the Scheme, covering elevated land between Tilshead, Enford Down and Durrington; 6km to the east of Countess Roundabout, covering elevated landform across Beacon Hill; 7km to the south of the Scheme covering elevated land within the Cranborne Chase and West Wilshire AONB and 5km to the west of Yarnbury Camp, covering elevated land to the north of Codford St. Mary.
- 7.3.45 The field work covered the area of search and concluded that many of the locations would not experience a significant effect during the construction or operation of the Scheme. This was due to the distance, resulting in the Scheme being barely noticeable or that the intervening landform, buildings and vegetation was screening views.

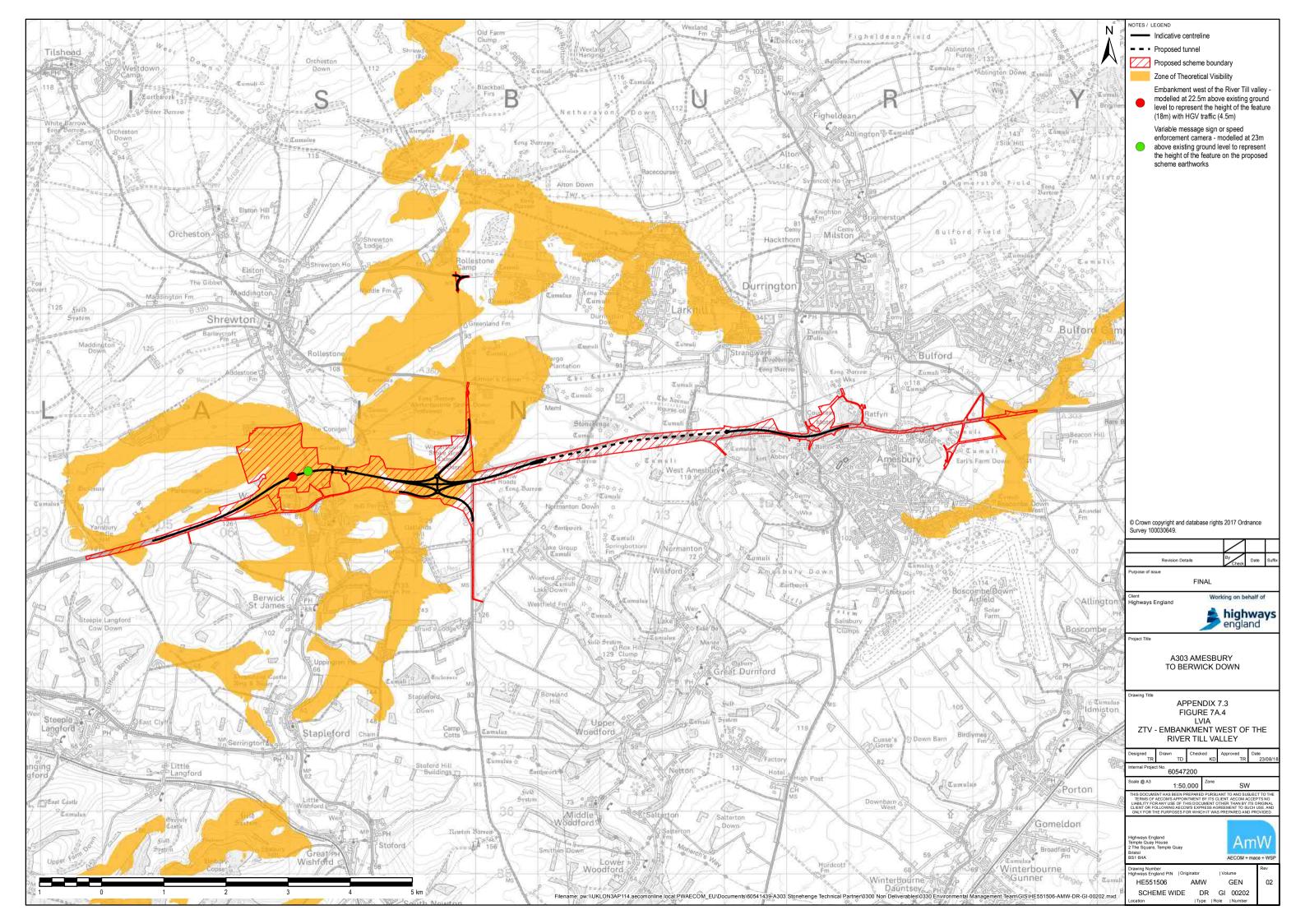


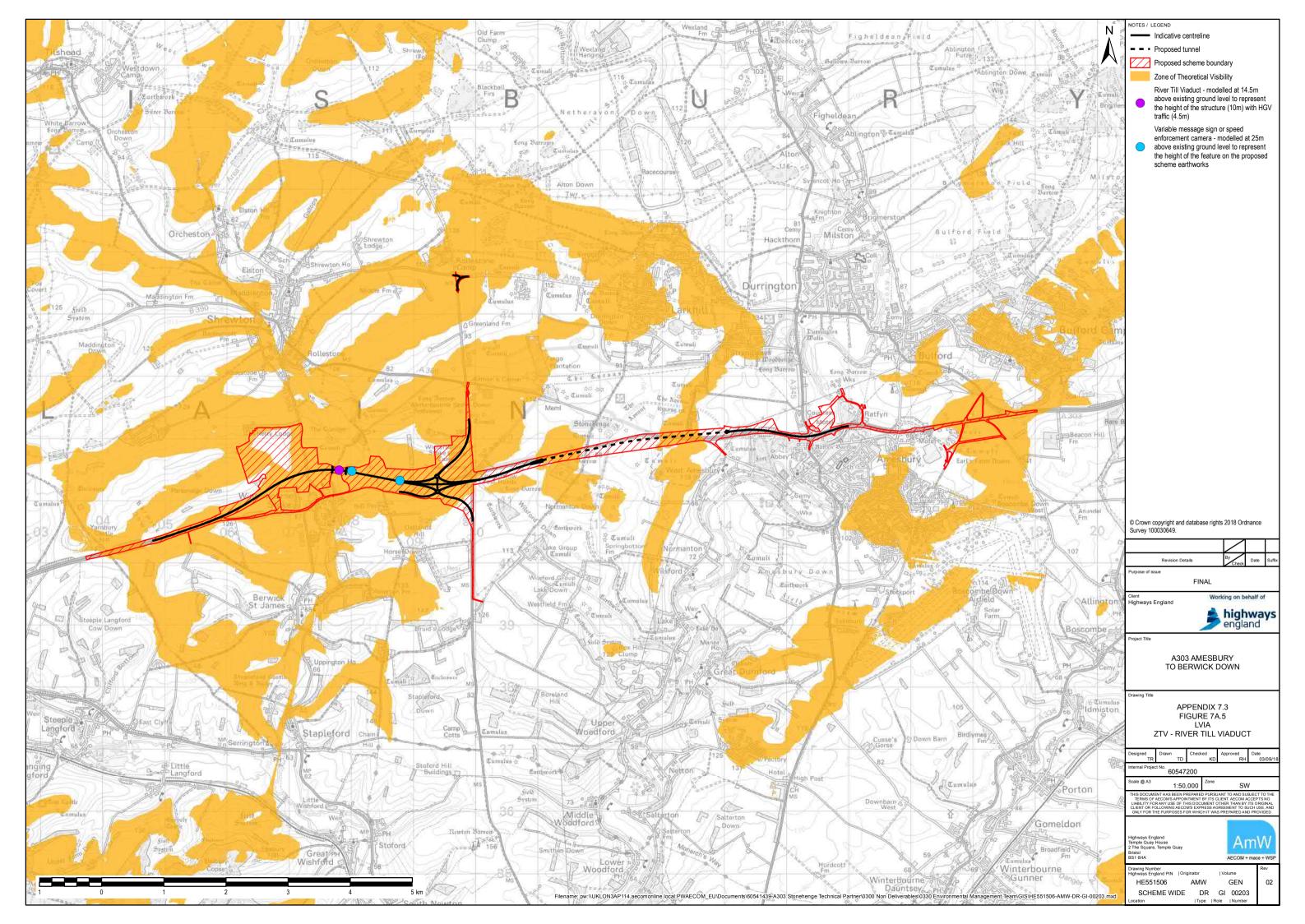
- 7.3.46 The field work therefore refined the study area to a range of 2km to 4.5km from the centre line of the Scheme as appropriate for identifying the likely significant landscape and visual effects.
- 7.3.47 This study area incorporates all aspects of the construction and operational activity, including the high load routes, as well as the areas of Amesbury, Ratfyn and Bulford.
- 7.3.48 The LVIA study area is presented on Figure 7A.12.

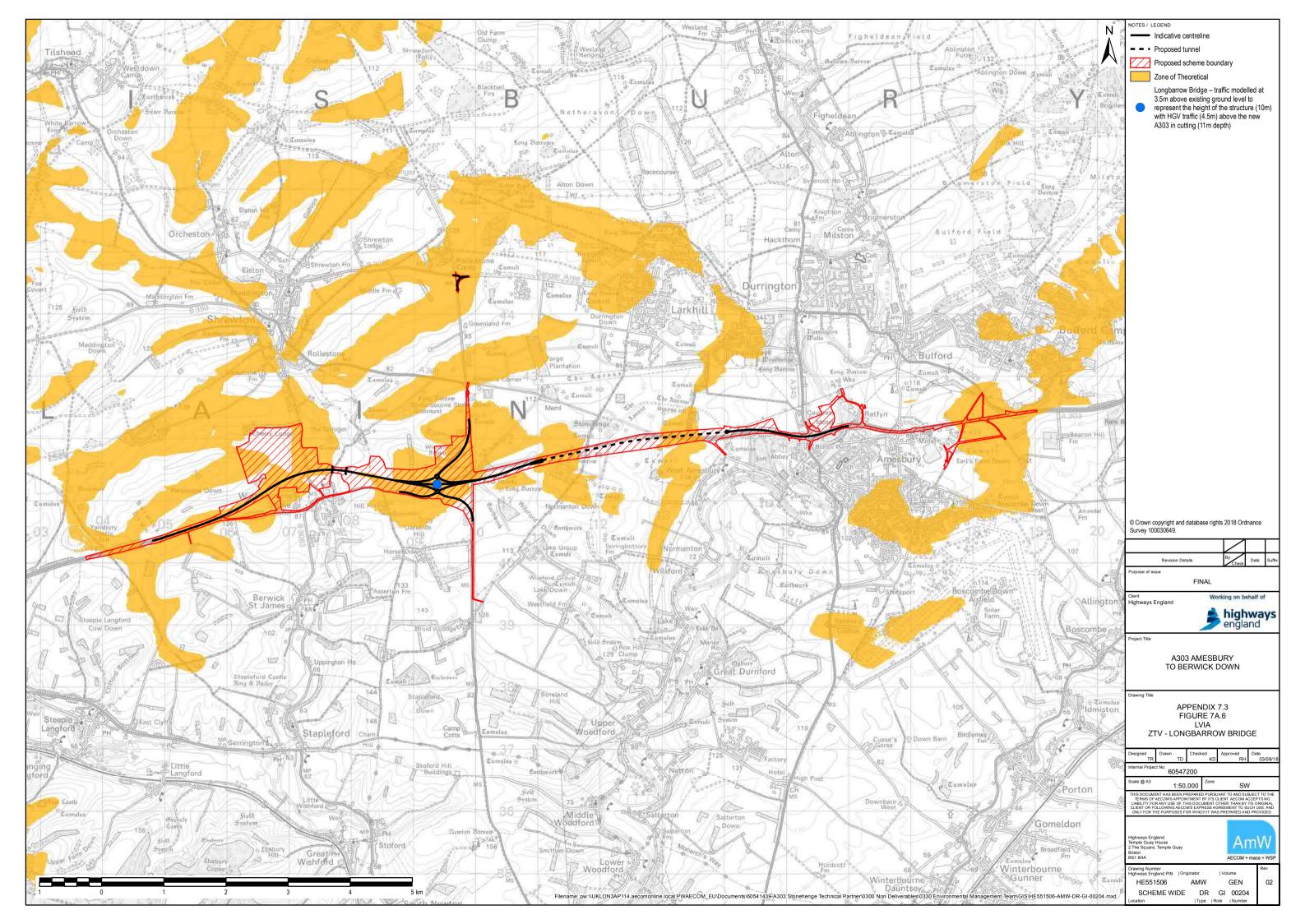


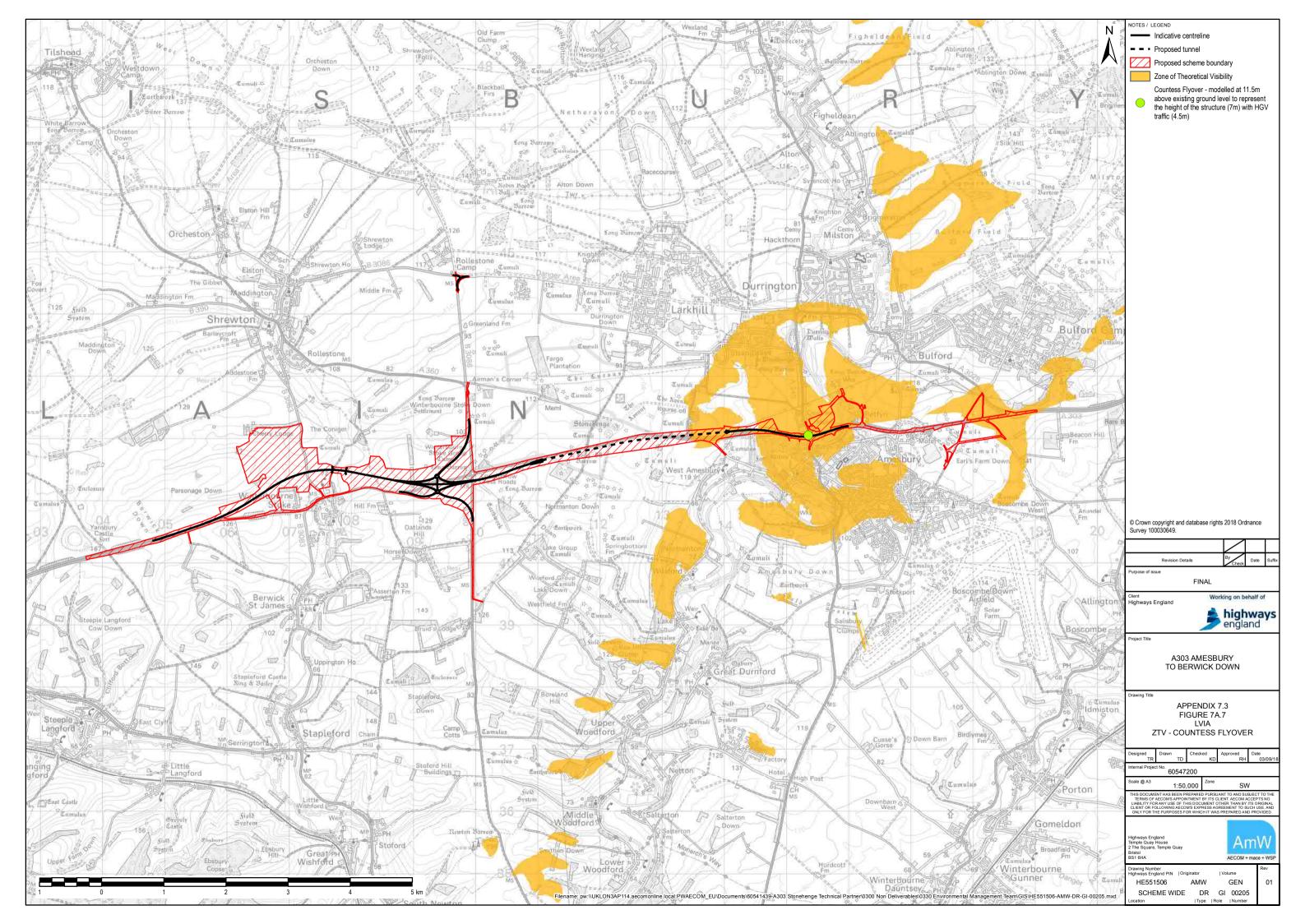


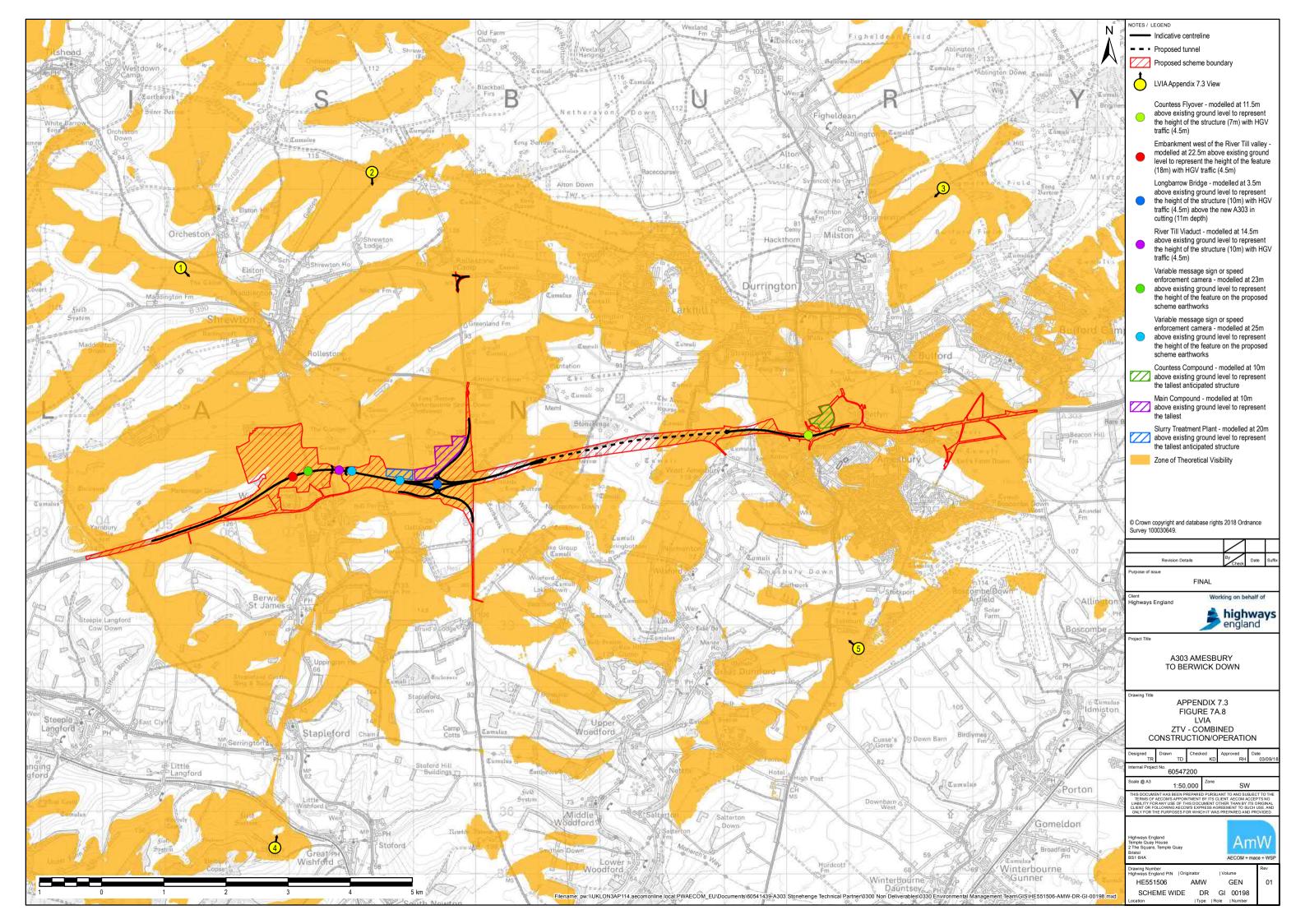














Appendix 7.3 View 1 - refer to Figure 7A.8 for location



Hill Farm Cottages

Appendix 7.3 View 2 - refer to Figure 7A.8 for location

CAMERA

Camera: Nikon D7000

WINTER

Date: 23/03/2018 Time: 15:45

LOCATION

Easting: 405201 Northing: 144724

APPENDIX 7.3 VIEW 2

CAMERA

Camera: Nikon D7000 Lens: 35mm

SUMMER

Date: 15/05/2018 Time: 14:22

LOCATION

**Easting:** 408341 Northing: 146274

FINAL

A303 AMESBURY TO BERWICK DOWN

LVIA

APPENDIX 7.3 FIGURE 7A.9 AREA OF SEARCH VIEWS 1 AND 2

72.	TR	TR	RH			22.08.2018	
	Internal Project No. 60547200			Suitability n/a			
-	Scale @ A1			Zone			
1000	n/a			n/a			
10	THIS DOCUMENT HAS BEEN PREPARED PURSUANT TO AND SUBJECT TO THE						



Volume - GEN -- AMW HE551506 - GN - LA - 709 Type | Role | Number SCHEME WIDE



Appendix 7.3 View 3 - refer to Figure 7A.8 for location



Appendix 7.3 View 4 - refer to Figure 7A.8 for location

LEGEND

#### APPENDIX 7.3 VIEW 3

#### CAMERA

Camera: Nikon D7000 Lens: 35mm

#### WINTER

Date: 23/03/2018 Time: 15:07

#### LOCATION

Easting: 417404 Northing: 145921

#### APPENDIX 7.3 VIEW 4

#### CAMERA

Camera: Nikon D7000 Lens: 35mm

Date: 19/04/2018 Time: 11:04

#### LOCATION

**Easting:** 406790 Northing: 135397



FINAL



A303 AMESBURY TO BERWICK DOWN

LVIA APPENDIX 7.3 FIGURE 7A.10 AREA OF SEARCH VIEWS 3 AND 4

Na.	TR	TR	R	Н	RH	22.08.201		
	Internal Project No 60547200	Internal Project No. 60547200			Suitability n/a			
	Scale @ A1 n/a				Zone n/a			
		THIS DOCUMENT HAS BEEN PREPARED PURSUANT TO AND SUBJECT TO THE						



Volume - GEN -HE551506 - AMW - GN - LA - 710 Type | Role | Number SCHEME WIDE



Appendix 7.3 View 5 - refer to Figure 7A.8 for location

LEGEND

#### APPENDIX 7.3 VIEW 5

#### CAMERA

Camera: Nikon D7000 Lens: 35mm

### SUMMER

Date: 15/05/2018 Time: 10:15

#### LOCATION

Easting: 416057 Northing: 138492

FINAL



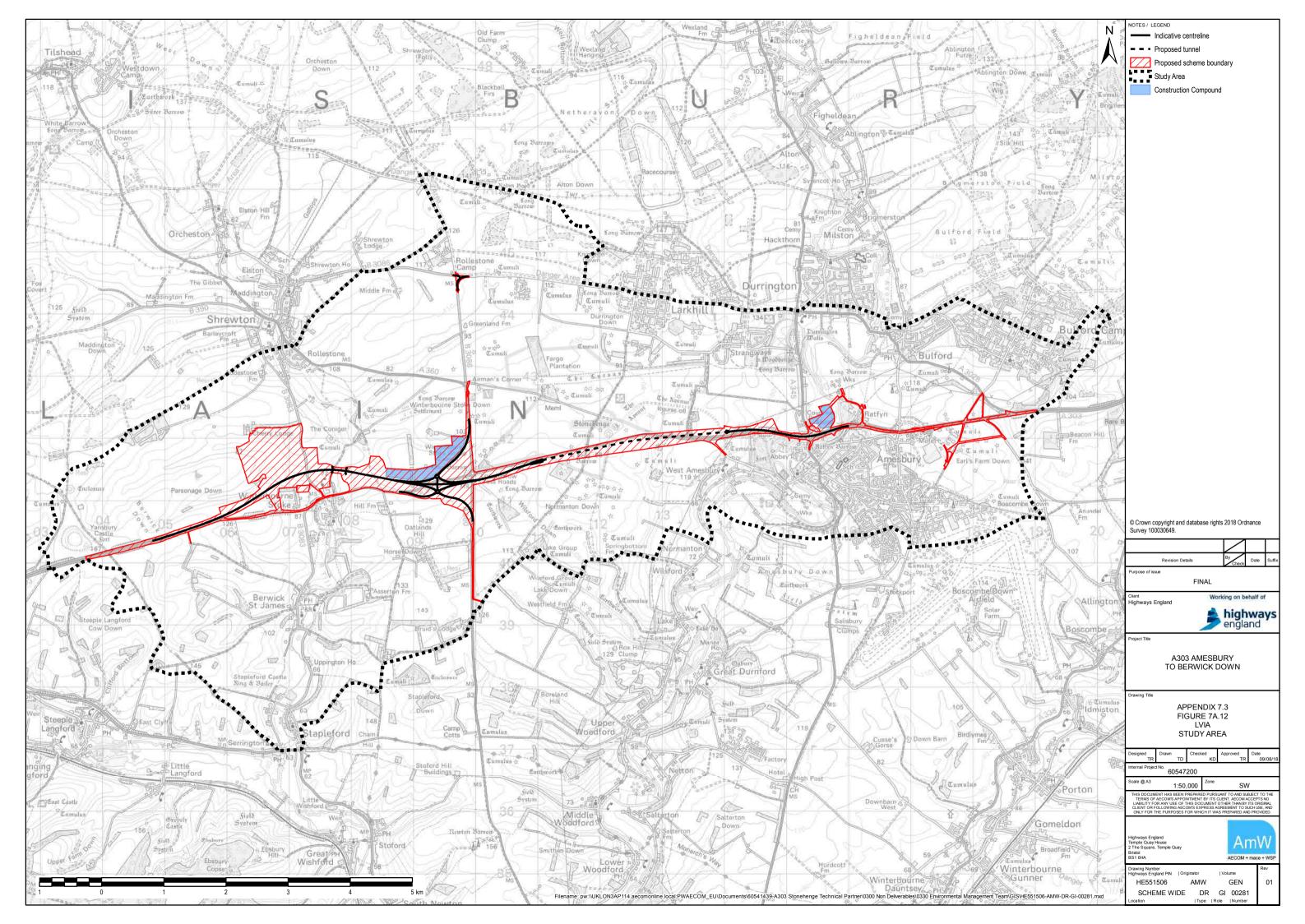
A303 AMESBURY TO BERWICK DOWN

LVIA APPENDIX 7.3 FIGURE 7A.11 AREA OF SEARCH VIEW 5

Designed TR	TR TR	Checker R			Date 22.08.2018	
Internal Project No. 60547200			Suitability n/a			
Scale @ A1			Zone			
n/a			n/a PURSUANT TO AND SUBJECT TO THE			
THE DOCUMENT THE DELIVER THE PURSUANT TO AND SUBJECT TO THE						



ghways England PIN I Originator I Volume
HE551506 - AMW - GEN -- GN - LA - 711 Type | Role | Number SCHEME WIDE



If you need help accessing this or any other Highways England information, please call **0300 123 5000** and we will help you.



© Crown copyright 2018.

You may re-use this information (not including logos) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence:

visit www.nationalarchives.gov.uk/doc/open-government-licence/ write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or email psi@nationalarchives.gsi.gov.uk.

This document is also available on our website at www.gov.uk/highways

If you have any enquiries about this document email  $\underline{info@a303stonehenge.co.uk}$  or call  $0300\ 123\ 5000^*.$ 

\*Calls to 03 numbers cost no more than a national rate call to an 01 or 02 number and must count towards any inclusive minutes in the same way as 01 and 02 calls.

These rules apply to calls from any type of line including mobile, BT, other fixed line or payphone. Calls may be recorded or monitored.

Registered office Bridge House, 1 Walnut Tree Close, Guildford GU1 4LZ Highways England Company Limited registered in England and Wales number 09346363