

# A303 Amesbury to Berwick Down

TR010025

**Deadline 7**

**8.48 – Western Cutting Zone of Theoretical Visibility**

APFP Regulation 5(2)(q)

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

August 2019



## Infrastructure Planning

### Planning Act 2008

### The Infrastructure Planning (Examination Procedure)

### Rules 2010

## A303 Amesbury to Berwick Down

### Development Consent Order 20[\*\*]

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### Western Cutting Zone of Theoretical Visibility

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<b>Regulation Number:</b>	Regulation 5(2)(q)
<b>Planning Inspectorate Scheme Reference</b>	TR010025
<b>Application Document Reference</b>	8.48
<b>Author:</b>	A303 Amesbury to Berwick Down Project Team, Highways England

<b>Version</b>	<b>Date</b>	<b>Status of Version</b>
Rev 0	09.08.2019	Deadline 7 Issue

## Western Cutting ZTV

The Zone of Theoretical Visibility (ZTV) plans are produced via a computer-generated process that uses elevation data to create a digital terrain model of the landscape. The process then calculates the inter-visibility between points along the Scheme to generate a plan showing the areas from which the Scheme may be theoretically visible in relation to a person who is 1.7 metres in height.

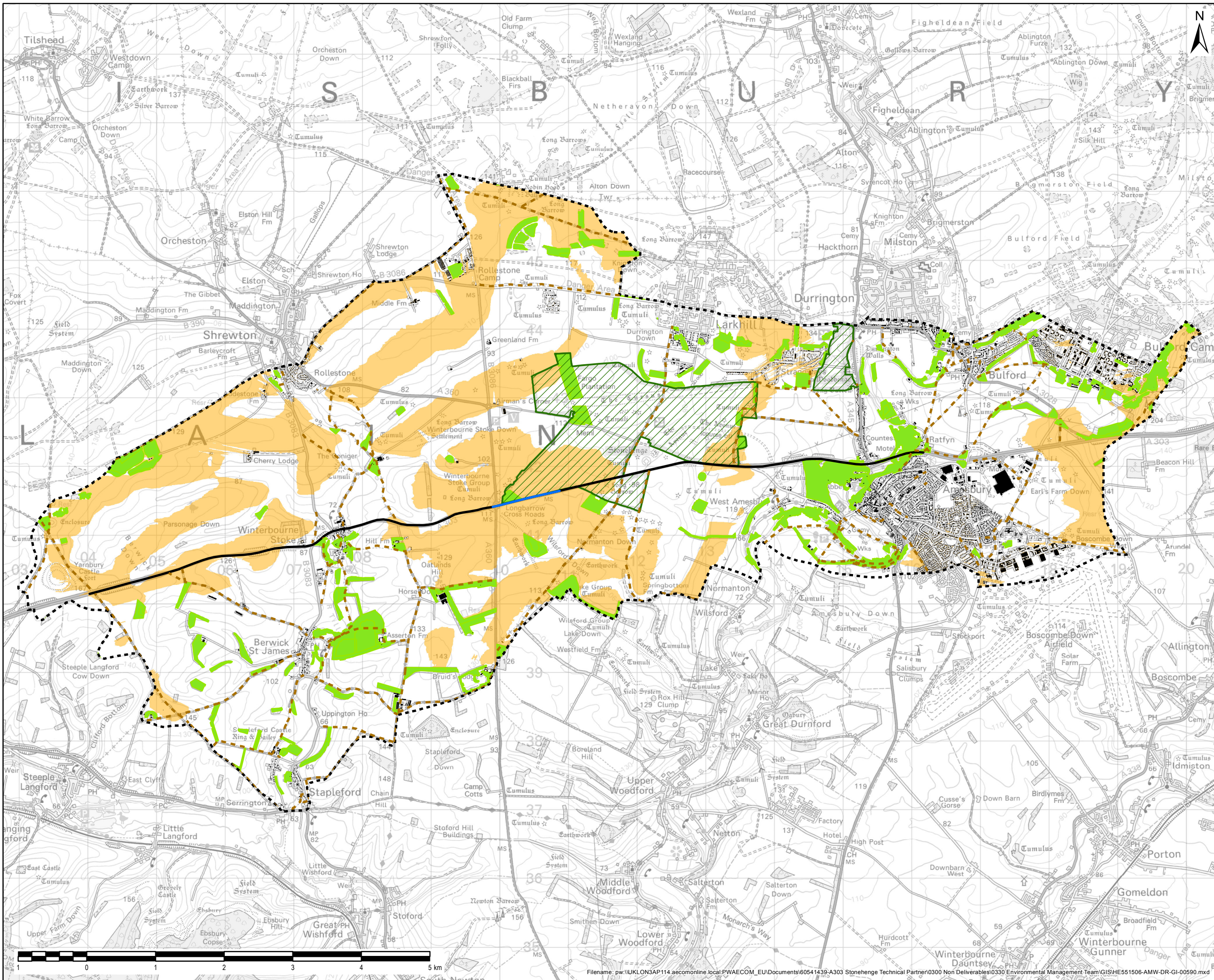
Figure 1 and Figure 2 illustrate the ZTV of (i) the existing A303 road surface only and (ii) a 4.5m high lorry respectively, so as to establish the 'baseline' and a measure of the potential change in theoretical visibility as a result of the Scheme. Figure 1 and Figure 2 model the existing road and lorries along the length of the existing A303. This is considered comparable to the length of the western approach cutting, as illustrated by the blue line on these figures.

Figures 1 and 2 illustrate that the theoretical visibility of the existing road and vehicles extends northwards for approximately 1 kilometre (km) before becoming more intermittent in relation to the rolling landform, such that the theoretical visibility is across elevated ridgelines. Within this 1km zone to the north of the existing A303, the zone of theoretical visibility covers land to the west and east of the A360, and part of the WHS, including the Winterbourne Stoke Barrow Groups and permissive open access land. To the south of the existing A303, the zone of theoretical visibility similarly covers both sides of the A360, extending to approximately 1.2km across Oatlands Hill and elevated parts of Normanton Down. Across the wider landscape, the existing road and vehicles are theoretically visible from elevated land at Berwick Down and New King Barrow Ridge in the central part of the WHS.

Figure 3 and Figure 4 model (i) lorries and (ii) the road surface respectively along the proposed western approach cutting, taking into account their depth below the existing ground levels as indicated on the Engineering Sections [APP-010 and APP-011].

The theoretical visibility for both vehicles and the road surface on the proposed Scheme alignment is significantly reduced in comparison to that illustrated on Figures 1 and 2, because overall it only extends to the area immediately adjacent to the western cutting, along with a small area to the east of the western portal. To the north, vehicles are not theoretically visible from land adjacent to the A360, including the Winterbourne Stoke Barrow Group and the permissive open access land, with the exception of an area of rising land to the east of the western portal. To the south of the western cutting, the theoretical visibility is similarly significantly reduced, and no longer covers the rising land across Oatlands Hill and Normanton Down in contrast to the extensive coverage illustrated by Figures 1 and 2. Across the wider landscape, the proposed road and vehicles are no longer theoretically visible from New King Barrow ridge or the elevated ridgelines to the north of the A360 and are visible only from very localised elevated parts of Berwick Down.

Figures 3 and 4 therefore demonstrate the significant beneficial reduction in views of vehicles and the road surface across the WHS and the surrounding landscape due to this part of the Scheme being in cutting.



- NOTES / LEGEND**
- Existing A303 centreline
  - Existing A303 centreline - Relative to the Western cutting section
  - - - Study Area
  - - - Public Right of Way
  - ▨ National Trust Permissive Open Access Land
  - Building (8m – Sourced from OS MasterMap)
  - Woodland (10m – Sourced from National Forest Inventory)
- Zone of Theoretical Visibility (ZTV) of traffic along the Existing A303 relative to the proposed alignment of the Western cutting section, modelled at a height of 4.5m above the proposed carriageway to represent heavy goods vehicles.

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Revision Details	By	Date	Suffix
	Check		

Purpose of issue: **FINAL**

Client: Highways England  
 Working on behalf of **highways england**

Project Title: **A303 AMESBURY TO BERWICK DOWN**

Drawing Title: **FIGURE 1 ZONE OF THEORETICAL VISIBILITY VEHICLES ON EXISTING A303**

Designed	Drawn	Checked	Approved	Date
TR	KD	KD	TR	29/07/19

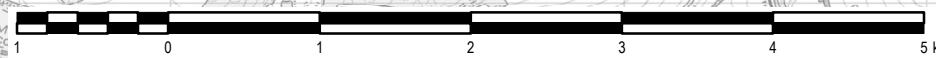
Internal Project No: **60547200**

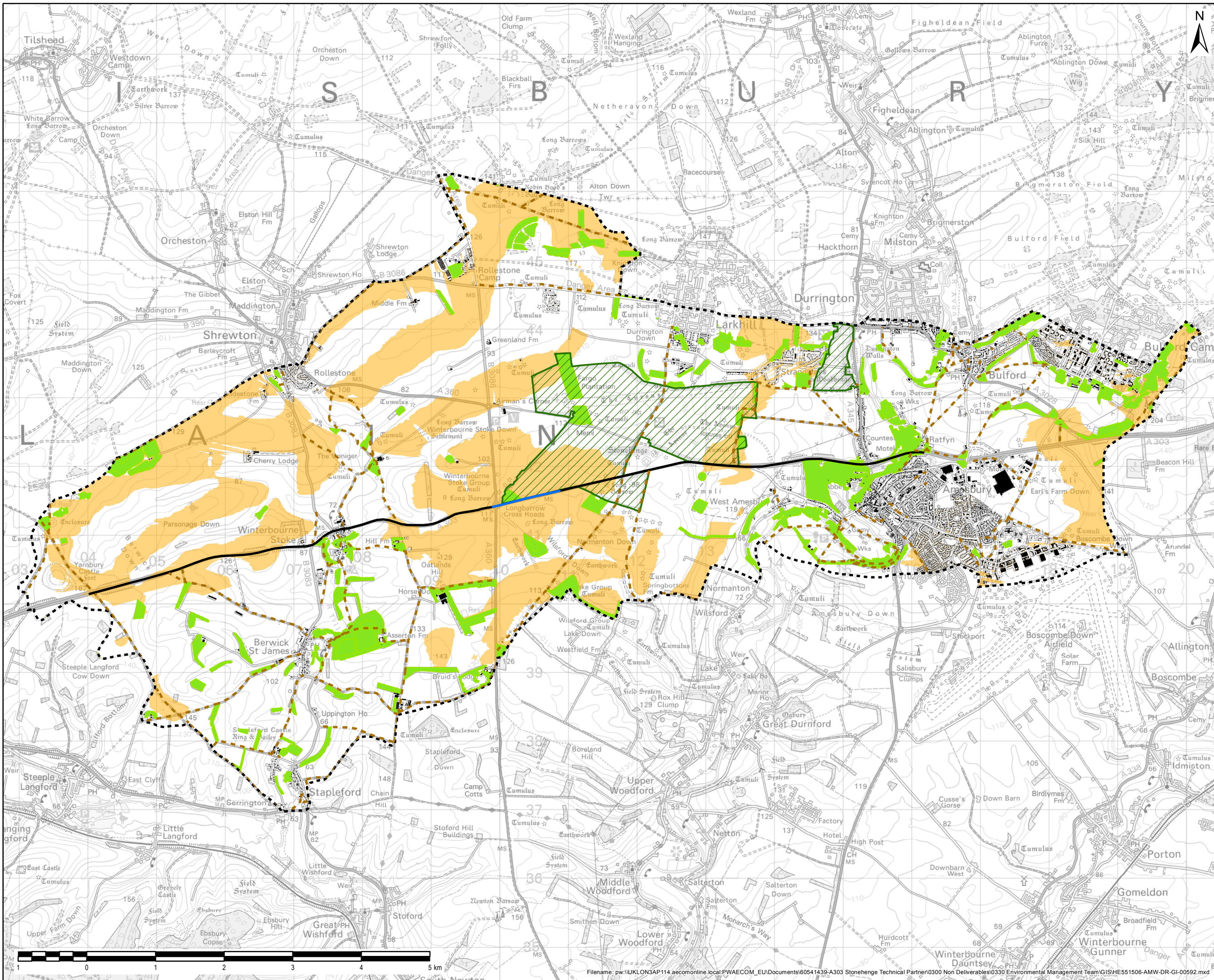
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 BS1 6HA

Drawing Number	Originator	Volume	Rev
HE551506	AMW	GEN	01
SCHEME WIDE	DR	GI	00590
Location	Type	Role	Number





- NOTES / LEGEND**
- Existing A303 centreline
  - Existing A303 centreline - Relative to the Western cutting section
  - Study Area
  - Public Right of Way
  - National Trust Permissive Open Access Land
  - Building (8m – Sourced from OS MasterMap)
  - Woodland (10m – Sourced from National Forest Inventory)
  - Zone of Theoretical Visibility (ZTV) of the Existing A303 Road Only, Relative to the proposed alignment of the Western Cutting Section.

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Purpose of issue: **FINAL**

Client: Highways England  
 Working on behalf of

Project Title: **A303 AMESBURY TO BERWICK DOWN**

Drawing Title: **FIGURE 2  
 ZONE OF THEORETICAL VISIBILITY  
 EXISTING A303 ROAD ONLY**

Designed	Drawn	Checked	Approved	Date
TR	KD	KD	TR	29/07/19

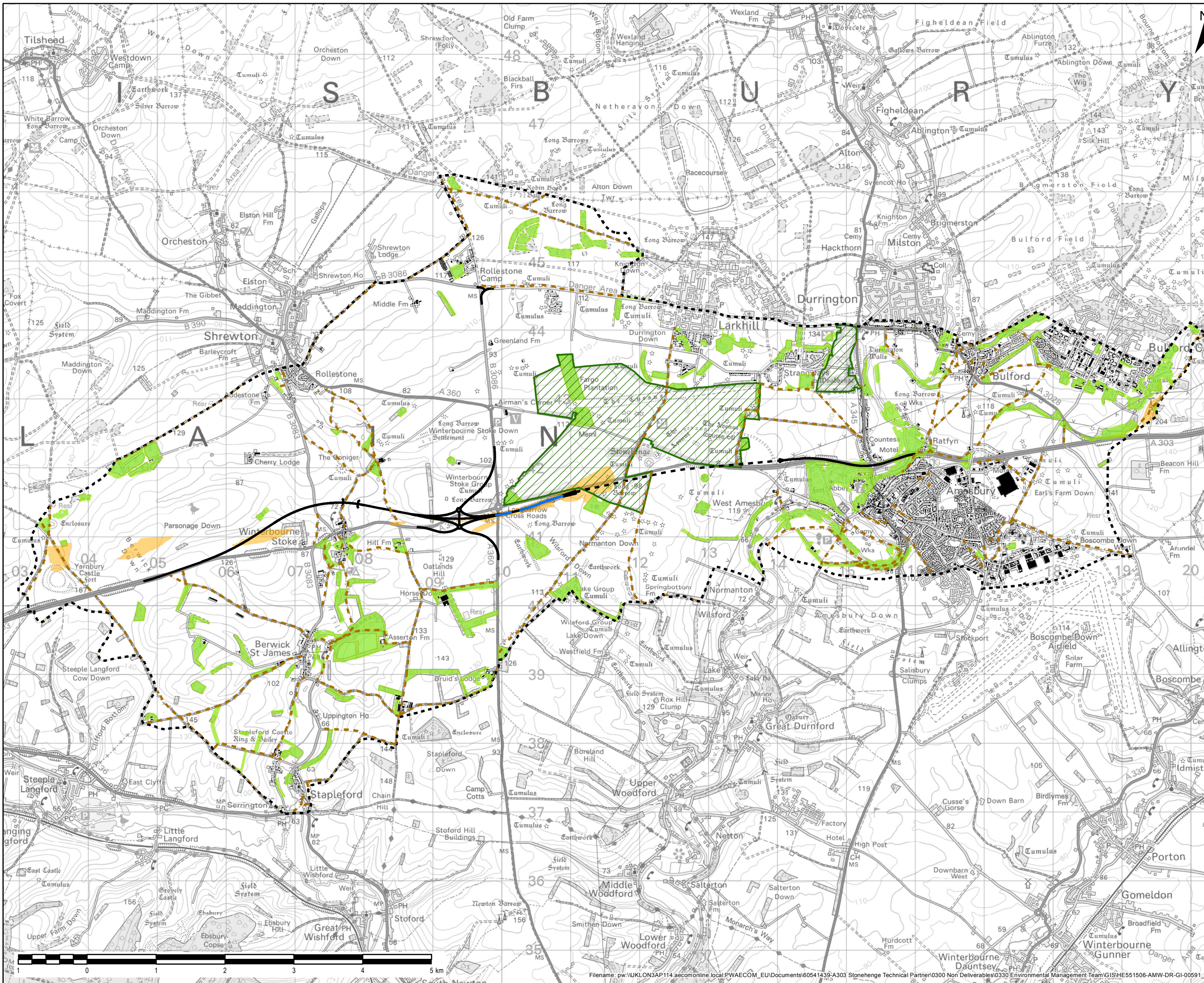
Internal Project No: **60547200**

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Drawing Number	Highways England PIN	Originator	Volume	Rev
HE551506	AMW	GEN	01	
SCHEME WIDE		DR	GI	00591
Location	Type	Role	Number	



- NOTES / LEGEND**
- Proposed route alignment
  - Proposed tunnel
  - Proposed route alignment Western cutting section
  - Study Area
  - Public Right of Way
  - National Trust Permissive Open Access Land
  - Building (8m – Sourced from OS MasterMap)
  - Woodland (10m – Sourced from National Forest Inventory)
- Zone of Theoretical Visibility (ZTV) of traffic along the Proposed A303 at the Western cutting section, modelled at a height of 4.5m above the proposed carriageway to represent heavy goods vehicles.

**NOTE:**  
 Zone of Theoretical Visibility (ZTV) has been generated using Highways England Geostore 5m digital terrain model which does not take account of the screening effects of vegetation, buildings or other structures. Buildings have been incorporated into the DTM from OS MasterMap with a consistent height of 8m. Woodland from National Forest Inventory has also been incorporated into the DTM with an assumed height of 10m. Ground levels from the proposed route alignment including sections of earthworks have also been incorporated into the DTM. ZTV is based upon points taken every 10m along the road channel at a height of 4.5m with an observer height of 1.7m. All heights mentioned are above ground level (AGL).  
 Road Scheme Channel taken from drawing HE551506-AMW-HML-Z2\_ML\_M00\_Z-M3-CH-0101 & HE551506-AMW-HML-Z3\_ML\_M00\_Z-M3-CH-0101

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Project Title

**A303 AMESBURY TO BERWICK DOWN**

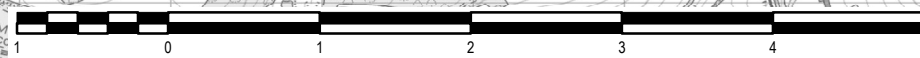
Drawing Title

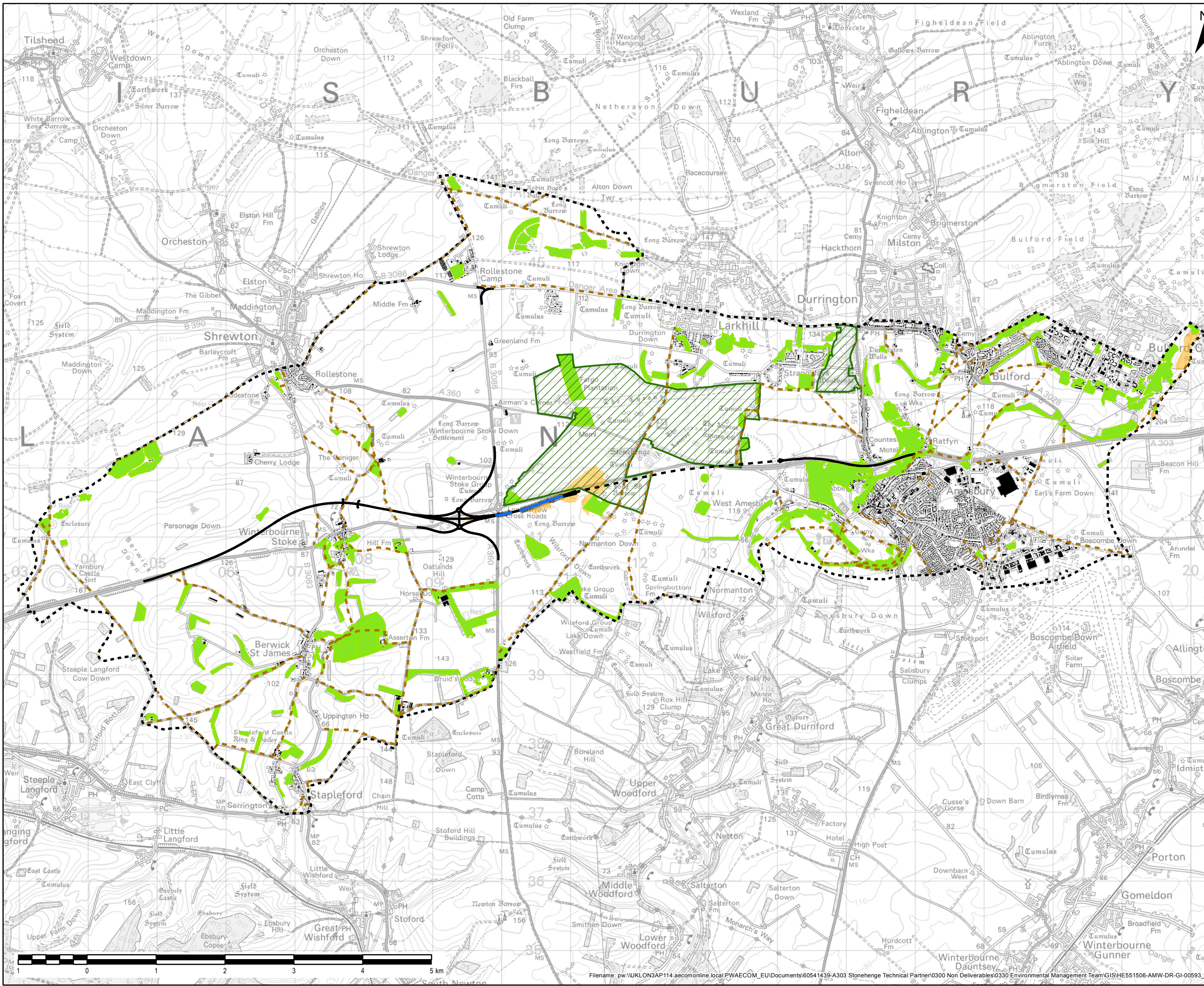
**FIGURE 3  
 ZONE OF THEORETICAL VISIBILITY  
 PROPOSED SCHEME WESTERN  
 CUTTING SECTION - VEHICLES**

Designed	Drawn	Checked	Approved	Date
TR	TD	LC	RH	29/07/19
Internal Project No.				
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Drawing Number	Originator	Volume	Rev	
HE551506	AMW	GEN	02	
Scheme Wide		DR	GI	00592
Location	Type	Role	Number	





- NOTES / LEGEND**
- Proposed route alignment
  - Proposed tunnel
  - Proposed route alignment Western Cutting section
  - Study Area
  - Public Right of Way
  - National Trust Permissive Open Access Land
  - Building (8m – Sourced from OS MasterMap)
  - Woodland (10m – Sourced from National Forest Inventory)
  - Zone of Theoretical Visibility (ZTV) of the Proposed A303 road only at the Western cutting section

**NOTE:**  
 Zone of Theoretical Visibility (ZTV) has been generated using Highways England Geostore 5m digital terrain model which does not take account of the screening effects of vegetation, buildings or other structures. Buildings have been incorporated into the DTM from OS MasterMap with a consistent height of 8m. Woodland from National Forest Inventory has also been incorporated into the DTM with an assumed height of 10m. Ground levels from the proposed route alignment including sections of earthworks have also been incorporated into the DTM. ZTV is based upon points taken every 10m along the road channel at a height of 0m with an observer height of 1.7m. All heights mentioned are above ground level (AGL).  
 Road Scheme Channel taken from drawing HE551506-AMW-HML-Z2\_ML\_M00\_Z-M3-CH-0101 & HE551506-AMW-HML-Z3\_ML\_M00\_Z-M3-CH-0101

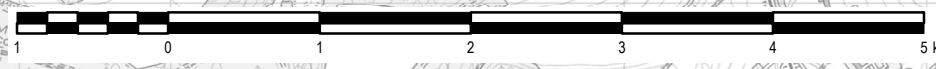
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Project Title				
A303 AMESBURY TO BERWICK DOWN				
Drawing Title				
FIGURE 4 ZONE OF THEORETICAL VISIBILITY PROPOSED SCHEME WESTERN CUTTING SECTION - ROAD ONLY				

Designed	Drawn	Checked	Approved	Date
TR	EB	KD	TR	29/07/19
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Location	Type	Role	Number	



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