

# A27 Arundel Bypass Environmental Assessment Report Errata

PCF Stage 2 Further Consultation

February 2020



Environmental Assessment Report Errata, February 2020 A27 Arundel Bypass PCF Stage 2 – Further Consultation

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# 1. INTRODUCTION

The purpose of this note is to summarise a set of corrections to the PCF Stage 2 Environmental Assessment Report (EAR) dated August 2019 which formed part of the package of material available at the 2019 Further Consultation for the A27 Arundel Bypass scheme.

In each case, this note sets out the existing text in the EAR requiring correction (labelled as 'Existing Text') and below it, the corrected text (labelled as 'Amended Text'). All changes required to be made in the Amended Text are shown in red text. Text that is to be removed from the Existing Text is struck-out.

The errata presented herein are intended to be read in conjunction with the published consultation documents provided on Highways England's A27 Arundel Bypass website (<u>https://highwaysengland.co.uk/projects/a27-arundel-improvement/</u>).

The corrections presented in this note do not affect the overall conclusions of the assessments undertaken for the purposes of the EAR as the vast majority are relatively minor technical corrections. There are some changes that make corrections to the level of significance of effect reported on a particular topic. In general, these corrections relate to specific element of an environmental topic, for a specific Scheme option. As such, it is unlikely that the validity of any comments made as part of the consultation would be materially impacted.

Four attachments are included in this note. These include:

- Attachment 1 A corrected version of the PCF Stage 2 EAR Chapter 6 Cultural Heritage, including corrected figures Figure 6-1 to Figure 6-17. Figure 6-18 is also attached for completeness. A revised chapter has been provided for ease of readability, rather than presenting the changes in errata table format. The corrections to this chapter are explained below.
- Attachment 2 Revised versions of Figures (Figure 11.3, Figure 11.12, Figure 11.21, Figure 11.30, Figure 11.39 and Figure 11-48) relating to the Noise and Vibration Chapter.
- Attachment 3 A revised version of Figure 12-2 is also provided and now includes community facility points for the Black Horse pub and St Mary's Church, Binsted, relating to the Population and Health chapter.
- Attachment 4 Revised versions of Figure 13-1, Figure 13-2 and 13-3 with corrected labels, relating to the Road Drainage and Water Environment chapter.

A separate errata document has been prepared for the Biodiversity Technical Appendices (Appendices 8-1 to 8-25) and is provided in the Environmental Assessment Report Errata (Biodiversity Technical Appendices) note.

# 2. CORRECTIONS

#### 2.1. Environmental Assessment Report Chapter 1: Introduction

No errata were present in Chapter 1: Introduction of the PCF Stage 2 EAR.

#### 2.2. Environmental Assessment Report Chapter 2: The Project

No errata were present in Chapter 2: The Project of the PCF Stage 2 EAR.

#### 2.3. Environmental Assessment Report Chapter 3: Assessment of Alternatives

No errata were present in Chapter 3: Assessment of Alternatives of the PCF Stage 2 EAR.

#### 2.4. Environmental Assessment Report Chapter 4: Environmental Assessment Methodology

No errata were present in Chapter 4: Environmental Assessment Methodology of the PCF Stage 2 EAR.

#### 2.5. Environmental Assessment Report Chapter 5: Air Quality

No errata were present in Chapter 5: Air Quality of the PCF Stage 2 EAR.



## 2.6. Environmental Assessment Report Chapter 6: Cultural heritage

Due to the number of corrections required to it, for ease of reference a corrected version of PCF Stage 2 EAR Chapter 6 – Cultural Heritage is appended as Attachment 1. All changes required to be made in are shown in red text. Text that is to be removed from the existing text is struck-out.

Generally speaking, the corrections set out in the revised PCF Stage 2 EAR Chapter 6 – Cultural Heritage reflect transcription errors from material that was available from the published consultation documents, such as the PCF Stage 2 EAR – Appendix 6-1 (Gazetteer) and accompanying figures (Figures 6-1 to 6-18). Fundamentally, the corrections are the result of a transcription error from a complex dataset.

Of particular note is that in relation to the historic town of Arundel and the numerous designated heritage assets within it, along with a group of designated assets primarily at the eastern end of all of the Scheme options, whilst included in the baseline material presented in the consultation documents (e.g. in the PCF Stage 2 EAR –Appendix 6-1 (Gazetteer)) the impact assessment of these assets was not presented for the offline options (3V1, 4/5AV1, 4/5AV2, 5BV1). This was due to an error in the compilation of the original version of PCF Stage 2 EAR Chapter 6 – Cultural Heritage.

As such, by way of a technical correction, the impact assessment of the offline options on these assets has now been included in the revised PCF Stage 2 EAR Chapter 6 – Cultural Heritage in Section 6.9. However, this corrected information does not affect the overall conclusions of the assessment of the relative performance of the options (both offline and online) in terms of cultural heritage impacts.

In addition to the above, other transcription errors identified and corrected in the revised PCF Stage 2 EAR Chapter 6 - Cultural Heritage include the removal of Archaeological Notification Areas ("ANAs") from the impact assessment, as these were incorrectly referenced. ANAs are not a heritage asset but are areas of archaeological potential (e.g. in relation to previously unrecorded remains) identified for development control purposes. The approach taken in the impact assessment was to treat the areas affected by all route options as having potential for possible, previously unrecorded remains, rather than by way of individual ANAs - as such, the reference to them required correction throughout. Similarly, reference to individual Historic Landscape areas has been removed as the route options cross numerous such areas (Figure 6-5: Historic Landscape Character Location Plan). Given this, the approach taken in the impact assessment instead was to consider the areas affected by all route options as a single non-designated heritage asset (in place of individual Historic Landscape areas), as is appropriate for an asset of this level of sensitivity at this stage of assessment and as such, this required correction. A more detailed assessment of individual landscapes would be considered in PCF Stage 3 (Preliminary Design) following selection of a preferred Option. This is proportionate bearing in mind the purpose of PCF Stage 2 assessments and the level of detail in relation to the scheme development. Other minor errors have also been corrected in the chapter. As with the explanation above, all of this corrected information does not affect the overall conclusions of the assessment of the relative performance of the options (both offline and online) in terms of cultural heritage impacts.

Another correction required was to add four Grade II listed buildings into the description of the baseline in Section 6.6 of the PCF Stage 2 EAR Chapter 6 – Cultural Heritage and Appendix 6-1 (Gazetteer). Whilst these assets were considered when undertaking the impact assessment reported in the chapter, they were not explicitly referenced in either document due to a transcription error from the National Heritage List (England) dataset. However, importantly these assets would not be affected by any of the route Options and as such, the conclusions of the cultural heritage impact assessment and the relative performance of the options are not affected by this correction.

In addition to the corrections identified above, it should be noted that PCF Stage 2 EAR – Chapter 6: Appendix 6-2– Settings Assessment was incorrectly provided in the original consultation materials. This appendix provides incomplete information regarding the setting of several heritage assets that are superfluous to the PCF Stage 2 assessment and this information was not taken into account in the impact assessments undertaken for each option and therefore the conclusions of the assessment presented. The information contained in this appendix is detailed information that would normally be contained in a PCF Stage 3 assessment and is not required to robustly undertake the assessments required for PCF Stage 2. As such, there was never an intention that this information would be taken into account by Highways England in its decision-making process at PCF Stage 2 as it would be misleading. However,



that being said, Highways England will of course conscientiously take into account all consultation responses, whether or not based on this superfluous information.

Where the corrections identified above impact on the summaries or other information presented in any other consultation documents (e.g. the Consultation Brochure, Interim Scheme Assessment Report and South Downs National Park Special Qualities Assessment), this has been corrected and presented in the relevant Erratum document that accompany this document.

## 2.7. Environmental Assessment Report Chapter 6: Cultural Heritage- Appendix 6.1

#### Erratum 1

For ease of readability, only the relevant rows have been included in the table below.						
Section Paragraph / Table			9		Location	
Appendix 6.1 Table 4 – Grade II* Option 1V5		* Listed Buildings within 1 kilometre of O		Option	1V5	
Existing Text						
NHLE Number	Name		Archaeological / Historical Period	Inside or Outsid	de	Sensitivity of
				Footprint		Heritage Asset

#### Amended Text

NHLE Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Asset
<del>1221996</del>	Tortington Priory Barn to the north of Priory Farm	Late Medieval	<del>Outside</del>	Medium

#### Explanation

This erratum is a correction that is the result of a transcription error from the National Heritage List (England) dataset. This asset was considered when undertaking the impact assessment reported in PCF Stage 2 EAR Chapter 6 – Cultural Heritage but was not explicitly referenced in the chapter or included in the PCF Stage 2 EAR – Appendix 6-1 (Gazetteer), nor shown on the accompanying figures (Figures 6-1 to 6-18). However, importantly this asset would not be affected by any of the route Options and as such, the conclusions of the cultural heritage impact assessment and the relative performance of the options are not affected by this correction. The correction identified above has been incorporated into the asset count presented in the corrected PCF Stage 2 EAR Chapter 6 – Cultural Heritage, Section 6.6 Baseline Conditions, along with the other consultation documents (e.g. the Consultation Brochure, Interim Scheme Assessment Report and South Downs National Park Special Qualities Assessment).



For ease of readability, only the relevant rows and the preceding row (where a new row is added), have been included in the table below.

Section	Paragraph / Table	Location
Appendix 6.1	Table 5 – Grade II Listed Buildings within 1 kilometre of Option 1V5	Option 1V5

## **Existing Text**

NHLE Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Asset
1248088	Wall of Tower House to north and east of garden and of No 14 Maltravers Street continuing to west of Tower House as far as Parsons Hill	Unknown	Outside	Medium

## Amended Text

NHLE Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Asset
1248088	Wall of Tower House to north and east of garden and of No 14 Maltravers Street continuing to west of Tower House as far as Parsons Hill	Unknown	Outside	Medium
1248085	Lodge to Arundel Park 100 yds east of London Road including railings	Industrial Period	Outside	Medium

#### Explanation

This erratum is a correction that is the result of a transcription error from the National Heritage List (England) dataset. This asset was considered when undertaking the impact assessment reported in PCF Stage 2 EAR Chapter 6 – Cultural Heritage but was not explicitly referenced in the chapter or included in the PCF Stage 2 EAR –Appendix 6-1 (Gazetteer), nor shown on the accompanying figures (Figures 6-1 to 6-18). However, importantly this asset would not be affected by any of the route Options and as such, the conclusions of the cultural heritage impact assessment and the relative performance of the options are not affected by this correction. The correction identified above has been incorporated into the asset count presented in the corrected PCF Stage 2 EAR Chapter 6 – Cultural Heritage, Section 6.6 Baseline Conditions, along with the other consultation documents (e.g. the Consultation Brochure, Interim Scheme Assessment Report and South Downs National Park Special Qualities Assessment).



Section	Paragraph / Table	Location
Appendix 6.1	Table 6 - Conservation Areas within 1 kilometre of Option 1V5	Option 1V5
Evicting Toxt		

# Existing Text

Reference	Name	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Asset
N/A	Arundel Conservation Area	Inside	High

## Amended Text

Reference	Name	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Asset
N/A	Arundel Conservation Area	Inside	High
N/A	Lyminster Conservation Area	Outside	High

#### Explanation

This erratum is a correction that is the result of a transcription error. This asset was considered when undertaking the impact assessment reported in PCF Stage 2 EAR Chapter 6 – Cultural Heritage. It is referenced in the chapter and is shown on the consultation material figures (e.g. Figure 6-6 Designated Heritage Asset Location Plan) but was not included in the PCF Stage 2 EAR –Appendix 6-1 (Gazetteer). Inclusion within this gazetteer does not affect the conclusions of the cultural heritage impact assessment and the relative performance of the options.

Section Appendix 6.1		Paragraph / Table	Location Option 1V5	
		Table 9 – Historic Landscape are		
Existing Tex	t			
HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity
HW24767	Brooks Innings	Unknown	Inside	Medium
HW24819	Stewards Copse an Tortington Commor		Inside	Medium

HER Number	Name	Hionacologicali	Inside or Outside the Scheme Footprint	Sensitivity
HW24767	Brooks Innings	<del>Unknown</del>	Inside	Medium



Section		Paragra	ph / Table		Location
Appendix 6.1		Table 9 – Historic Landscape areas within 200m of Option 1V5		Option 1V5	
HW24819	Stewards Copse a Tortington Comm		Unknown	Inside	Medium

#### Explanation

The errata described above are the result of a transcription error within a complex dataset. Reference to individual Historic Landscape areas has been removed as the route options cross numerous such areas (Figure 6-5: Historic Landscape Character Location Plan), and the gazetteer corrected. Given this, the approach taken in the impact assessment instead was to consider the areas affected by all route options as a single non-designated heritage asset (in place of individual Historic Landscape areas), as is appropriate for an asset of this level of sensitivity at this stage of assessment and as such, this required correction. A more detailed assessment of individual landscapes would be considered in PCF Stage 3 (Preliminary Design) following selection of a preferred Option. This is proportionate bearing in mind the purpose of PCF Stage 2 assessments and the level of detail in relation to the scheme development.

#### Erratum 5

For ease of readability, only the relevant rows and the preceding row (where a new row is added), have been included in the table below.

Section	Paragraph / Table	Location
Appendix 6.1	Table 14 – Grade II Listed Buildings within 1	Option 1V9
	kilometre of Option 1V9	

## **Existing Text**

NHLE Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
1222537	Woodford School House	Post-medieval Period	Outside	Medium
1027927	Pedestal near Hiorns Tower	Industrial Period	Outside	Medium
1248088	Wall of Tower House to north and east of garden and of No 14 Maltravers Street continuing to west of Tower House as far as Parsons Hill	Unknown	Outside	Medium

NHLE Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
<del>1222537</del>	Woodford School House	Post-medieval Period	Outside	Medium



For ease of readability, only the relevant rows and the preceding row (where a new row is added), have been included in the table below.

Section Paragraph / Ta		e		Location           Option 1V9	
Appendix 6.1 Table 14 – Grade kilometre of Option		e II Listed Buildings within 1 on 1V9			
<del>1027927</del>	Pedestal near Hior	ns Tower	Industrial Period	Outside	Medium
1248088	Wall of Tower House east of garden and Maltravers Street of of Tower House as	of No 14 ontinuing to west	Unknown	Outside	Medium
1248085	Lodge to Arundel I of London Road in	•	Industrial Period	Outside	Medium

# Explanation

The corrections to the designated heritage assets above reflect transcription errors from a complex dataset for material that was available from the published consultation documents, such as the PCF Stage 2 EAR –Appendix 6-1 (Gazetteer) and accompanying figures (Figures 6-1 to 6-18).

Regarding Asset 1248085, this is a correction that is the result of a transcription error from the National Heritage List (England) dataset. This asset was considered when undertaking the impact assessment reported in PCF Stage 2 EAR Chapter 6 – Cultural Heritage but was not explicitly referenced in the chapter or included in the PCF Stage 2 EAR –Appendix 6-1 (Gazetteer), nor shown on the accompanying figures (Figures 6-1 to 6-18). However, importantly this asset would not be affected by any of the route Options. Therefore, the conclusions of the cultural heritage impact assessment and the relative performance of the options are not affected by these corrections to this gazetteer. The corrections identified above have been incorporated into the asset count presented in the corrected PCF Stage 2 EAR Chapter 6 – Cultural Heritage, Section 6.6 Baseline Conditions, along with the other consultation documents (e.g. the Consultation Brochure, Interim Scheme Assessment Report and South Downs National Park Special Qualities Assessment).

Section	Paragraph / Table		Location			
Appendix 6-1	Table 15 – Conservation	Areas within 1 kilometre of Option 1V9	Option 1V9			
Existing Text						
Reference	Name	Inside of Outside the Scheme Footprint	Sensitivity of Heritage Assets			
N/A	Arundel Conservation Area	Outside	High			

Reference	Name	Inside <mark>of or</mark> Outside the Scheme Footprint	Sensitivity of Heritage Assets
N/A	Arundel Conservation Area	Outside	High
N/A	Lyminster Conservation Area	Outside	High



Section	Location				
Appendix 6-1	Appendix 6-1         Table 15 - Conservation Areas within 1 kilometre of Option 1V9         Option 1V9				
Explanation	Explanation				
Refer to Erratum	Refer to Erratum 3 explanation.				

Section	Section Paragraph / Table		Location	
Appendix 6-1 Table 16 – Archaeological Notification Areas within 200m of Option 1V9			Option 1V9	
Existing Text				
HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
DWS8482	Site of Pynham Augustinian Priory a Hospital, and Calcetto Priory Mediev Farmstead, Arundel		Outside	Medium
DWS8141	Archaeological features within Arunc including the Historic Core of Arunde Arundel Castle, the Church of St. Nic and the Roma Catholic Cathedral, A	el, cholas	Inside	Medium
DWS8132	Earthworks within Gobblestubbs Cop Dalesdown Wood, Rewell Wood, Re Fairmile Bottom Park Farm, Arundel Medieval Park and the 'War Dyke', A	well Hill,	Inside	Medium

HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
DWS8482	Site of Pynham Augustinian Priory and Hospital, and Calcetto Priory Medieval Farmstead, Arundel	Medieval	Outside	Medium
DWS8141	Archaeological features within Arundel Park, including the Historic Core of Arundel, Arundel Castle, the Church of St. Nicholas and the Roma Catholic Cathedral, Arundel	Multi-Period	Inside	Medium
DWS8132	Earthworks within Gobblestubbs Copse, Dalesdown Wood, Rewell Wood, Rewell Hill, Fairmile Bottom Park Farm, Arundel Medieval Park and the 'War Dyke', Arundel	Multi-Period	Inside	Medium
DWS8148	Napoleonic Barracks and possible burial ground, Crossbush	Industrial Period	Outside	Medium



Section	Paragraph / Table	Location				
Appendix 6-1	Table 16 – Archaeological Notification Areas within 200m of Option 1V9	Option 1V9				
Explanation	Explanation					
published consulta figures (Figures 6- performance of the incorporated into the Section 6.6 Baselin	eve reflects transcription errors from a complex dataset from material that was tion documents, such as the PCF Stage 2 EAR –Appendix 6-1 (Gazetteer) an 1 to 6-18). The conclusions of the cultural heritage impact assessment and the e options are not affected by this correction to the gazetteer. The correction has ne asset count presented in the corrected PCF Stage 2 EAR Chapter 6 – Cult ne Conditions, along with the other consultation documents (e.g. the Consulta assessment Report and South Downs National Park Special Qualities Assessment	id accompanying e relative is been ural Heritage, tion Brochure,				

For ease of readability, only the relevant rows and the preceding row (where a new row is added), have been included in the table below.

Section	Paragraph / Table	Location
Appendix 6-1	Table 17 – Non-designated Heritage Assets within 200m of Option 1V9	Option 1V9

#### **Existing Text**

HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
MWS13516	Scotland Barn Historic Farmstead, Arundel	Industrial Period	Outside	Medium

#### **Amended Text**

HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets			
MWS13516	Scotland Barn Historic Farmstead, Arundel	Industrial Period	Outside	Medium			
MWS7536	Auxiliary Unit Special Duties Outstation	Modern	Outside	Low			
Explanation	Explanation						

Refer to Erratum 7 explanation.



Section Paragraph / Table		Paragraph / Tal	ble		Location
Appendix 6-1 Table 18 – Historia		ric Landscape areas within	200m of Option 1V9	Option 1V9	
Existing Tex	t				
Table 18 – Hi	storic Lan	dscape areas with	nin 200m of Option 1V 5		
HER Number	Name		Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity
HW24767	Brooks	Innings	Unknown	Inside	Medium
HW24819		ds Copse and on Common	Unknown	Inside	Medium
Amended Te	xt				
Table 18 – Hi	storic Lan	dscape areas with	nin 200m of Option <del>1V 5</del> 1V	9	
	Name		Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity
HW24767	Brooks	Innings	<del>Unknown</del>	Inside	Medium
		<del>ls Copse and</del>	Unknown	Inside	Medium
HW24819		<del>on Common</del>			

Refer to Erratum 4 explanation.

	readability, only the releva the table below.	nt rows and the precedin	g row (where a new row is a	added), ha	ave been	
Section	Paragraph / Table	Paragraph / Table				
Appendix 6	-1 Table 21 - Grade II Lis	Table 21 - Grade II Listed Buildings within the 1 kilometre study area of Option 3V1				
Existing Te	ext					
NHLE Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensiti Heritag	vity of e Assets	
1222537	Woodford School House	Post-medieval Period	Outside	Medium	ו	
1222198	Church Farmhouse	Industrial Period	Outside	Medium		
Amended <sup>-</sup>	<b>Fext</b>					
NHLE Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensiti Heritag	vity of e Assets	
<del>1222537</del>	Woodford School House	Post-medieval Period	Outside	Medium	ł	
1222198	Church Farmhouse	Industrial Period	Outside	Medium	1	
1222465	Beam Ends	Post-medieval period	Outside	Medium	1	



 For ease of readability, only the relevant rows and the preceding row (where a new row is added), have been included in the table below.

 Section
 Paragraph / Table

	5.	
Appendix 6-1	Table 21 - Grade II Listed Buildings within the 1 kilometre study area of Option 3V1	Option 3V1

#### Explanation

The corrections to the designated heritage assets above reflect transcription errors from the National Heritage List (England) dataset to this section of the gazetteer. The information was presented elsewhere in the PCF Stage 2 EAR Chapter 6 – Cultural Heritage Section 6.6 Baseline Conditions and other sections of the gazetteer and accompanying figures (Figures 6-1 to 6-18). The conclusions of the cultural heritage impact assessment and the relative performance of the options are not affected by these corrections to this gazetteer. The corrections identified above have been incorporated into the asset count presented in the corrected PCF Stage 2 EAR Chapter 6 – Cultural Heritage, Section 6.6 Baseline Conditions, along with the other consultation documents (e.g. the Consultation Brochure, Interim Scheme Assessment Report and South Downs National Park Special Qualities Assessment).

#### Erratum 11

For ease of readability, only the relevant rows and the preceding row (where a new row is added), have been included in the table below.

Section		Paragraph / Table		Location	
Appendix 6-1 Table 24 - Non-Designated the 200m study area of Opti		•	Option 3V1		
Existing Text					
HER Number	Name		Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
MWS8596	Gobblestubbs Copse Madehurst Enclosure, Walberton		Prehistoric/Romano- British Period	Outside	Medium
MWS2285	Earthworks within Gobblestubbs Copse, Walberton		Prehistoric/Romano- British Period	Outside	Medium
MWS2286	Earthworks - Gobblestubbs Copse		Prehistoric/Romano- British Period	Inside	Medium
MWS4693	Brick Kiln at the junction of Binsted Lane and Arundel Road		Industrial Period	Inside	Medium
MWS4696	Brickyard on	North side of Chichester Road	Industrial Period	Inside	Medium
MWS4223	Lynchet, Broc	mhurst Farm	Post-medieval	Inside	Medium
MWS4224	Lynchets and	Path, Upper Broomhurst Farm	Late Medieval	Inside	Medium
MWS5681	Brickyard on	South side of Arundel Road	Post-medieval	Inside	Medium
MWS7536	Auxiliary Unit	Special Duties Outstation	Modern Period	Inside	Medium
MWS12754	Outfarm Histo	oric Outfarm, Arundel	Industrial Period	Inside	Medium
MWS13185		c Outfarm South West of y, Lyminster and Crossbush	Industrial Period	Inside	Medium
MWS13516	Scotland Barr	h Historic Farmstead, Arundel	Industrial Period	Inside	Medium



For ease of readability, only the relevant rows and the preceding row (where a new row is added), have been included in the table below.

Section Paragraph / Table		Paragraph / Table		Location	
Appendix 6-1		Table 24 - Non-Designated Her the 200m study area of Option 3	e 24 - Non-Designated Heritage Assets within 00m study area of Option 3V1		
HER Number	Name			Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
MWS8596	Gobblestubbs Copse Madehurst Enclosure, Walberton		Prehistoric/Romano- British Period	Outside Inside	Medium
MWS2285	Earthworks within Gobblestubbs Copse, Walberton		Prehistoric/Romano- British Period	Outside	Medium
MWS2286	Earthworks - Gobblestubbs Copse		Prehistoric/Romano- British Period	Inside Outside	Medium
MWS4693 MWS4692	Brick Kiln at the junction of Binsted Lane and Arundel Road		Industrial Period	Inside Outside	Medium
MWS4696	Brickyard on North side of Chichester Road		Industrial Period	Inside Outside	Medium
MWS4223	Lynchet, Broomh	urst Farm	Post-medieval	Inside Outside	Medium
MWS4224	Lynchets and Pat	h, Upper Broomhurst Farm	Late Medieval	Inside Outside	Medium
MWS5681	Brickyard on Sou	th side of Arundel Road	Post-medieval	Inside Outside	Medium
MWS7536	Auxiliary Unit Spe	cial Duties Outstation	Modern Period	Inside Outside	Medium
MWS12754	Outfarm Historic	Dutfarm, Arundel	Industrial Period	Inside	Medium
MWS13185	Site of Historic Ou Priory, Lyminster	utfarm South West of Calcetto and Crossbush	Industrial Period	Inside Outside	Medium
	Scotland Barn Historic Farmstead, Arundel		Industrial Period	Inside Outside	Medium

Section	Paragraph / Ta	Paragraph / Table				
Appendix 6-1	Table 25 – Hist	Table 25 – Historic Landscape areas within 200m of Option 3V1			Option 3V1	
Existing Text						
HER Number	name		Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity	
HW24767	Brooks Innings		Unknown	Inside	Medium	
HW24819	Stewards Copse and Common	Tortington	Unknown	Inside	Medium	
HW24801	Tortington Common		Unknown	Inside	Medium	
Amended Text						
HER I Number	name	Archae Period	ological / Historical	Inside or Outside the Scheme Footprint	Sensitivit	
HW24767	Brooks Innings	Unknow	<del>'''</del>	Inside	Medium	



Section		Paragraph / Tab	le	Locat		
Appendix	6-1	Table 25 – Histor	ic Landscape areas with	ndscape areas within 200m of Option 3V1 Option 3		
HW24819		a <del>rds Copse and</del> ogton Common	Unknown	Inside		Medium
HW24801	- Tortin	ngton Common	Unknown	Inside		Medium
Explanation						
Refer to E	Refer to Erratum 4 explanation.					

For ease of readability, only the relevant rows and the preceding row (where a new row is added), have been included in the table below.

Section	Paragraph / Table	Location
Appendix 6-1	Table 29 - Grade II Listed Buildings within the 1 kilometre study area of Option 4/5AV1	Option 4/5AV1

#### **Existing Text**

NHLE Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
1222537	Woodford School House	Post-medieval Period	Outside	Medium
1398407	Smugglers Steps	Post-medieval Period	Outside	Medium
1221995	Marsh Farmhouse	Industrial Period	Outside	Medium

#### **Amended Text**

NHLE Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
<del>1222537</del>	Woodford School House	Post-medieval Period	Outside	Medium
<del>1398407</del> 1237843	Smugglers Steps	Post-medieval Period	Outside	Medium
1221995	Marsh Farmhouse	Industrial Period	Outside	Medium
1222510	15-20 The Street	Industrial Period	Outside	Medium
1222533	Friars Oak and Little Box Cottage	Industrial Period	Outside	Medium

#### Explanation

The corrections to the designated heritage assets above reflect transcription errors from a complex dataset from material that was available from the published consultation documents, such as the PCF Stage 2 EAR –Appendix 6-1 (Gazetteer) and accompanying figures (Figures 6-1 to 6-18). Regarding Asset 1222510, this is a correction that is the result of a transcription error from the National Heritage List (England) dataset. This asset was considered when undertaking the impact assessment reported in PCF Stage 2 EAR –Appendix 6-1 (Gazetteer), nor shown on the accompanying figures (Figures 6-1 to 6-18). However, importantly this asset would not be affected by any of the route Options. Therefore, the conclusions of the cultural heritage impact assessment and the relative performance of the options are not affected by these corrections to this gazetteer. The corrections identified above have been incorporated into the asset count presented in the corrected PCF Stage 2 EAR Chapter 6 – Cultural Heritage, Section 6.6 Baseline Conditions, along with the other consultation documents (e.g. the Consultation Brochure, Interim Scheme Assessment Report and South Downs National Park Special Qualities Assessment).



For ease of readability, only the relevant rows and the preceding row (where a new row is added), have been included in the table below.

Section	Paragraph / Table	Location
Appendix 6-1	Table 31 – Archaeological Notification Areas within 200m	Option 4/5AV1
	of Option 4/5AV1	

# Existing Text

HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
DWS8132	Earthworks within Gobblestubbs Copse, Dalesdown Wood, Rewell Wood, Rewell Hill, Fairmile Bottom Park Farm, Arundel Medieval Park and the 'War Dyke', Arundel	Multi-Period	Outside	Medium

HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets		
DWS8132	Earthworks within Gobblestubbs Copse, Dalesdown Wood, Rewell Wood, Rewell Hill, Fairmile Bottom Park Farm, Arundel Medieval Park and the 'War Dyke', Arundel	Multi-Period	Outside	Medium		
DWS8148	Napoleonic Barracks and possible burial ground, Crossbush	Industrial Period	Outside	Medium		
Explanation						
Refer to Erra	tum 7 explanation.					



For ease of readability, only the relevant rows and the preceding row (where a new row is added), have been included in the table below.

Section	Paragraph / Table	Location
Appendix 6-1	Table 32 - Non-Designated Heritage Assets within the 200m study area of Option 4/5AV1	Option 4/5AV1

# Existing Text

HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
MWS9411	Binsted Farm Historic Farmstead, Walberton	Post-medieval	Inside	Medium
MWS9411	Binsted Farm Historic Farmstead, Walberton	Post-medieval	Inside	Medium
MWS13741	The Rookery Historic Farmstead, Arundel	Post-medieval	Outside	Medium

HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
MWS9411	Binsted Farm Historic Farmstead, Walberton	Post-medieval	Inside	Medium
MWS9411	Binsted Farm Historic Farmstead, Walberton	Post-medieval	Inside	Medium
MWS13741	The Rookery Historic Farmstead, Arundel	Post-medieval	Outside	Medium
MWS2313	Medieval Pottery – Church Farm	Late Medieval	Outside	Low
MWS4191	Boundary Bank, Spinningwheel Copse	Post-Medieval	Outside	Low
Explanation				
Refer to Erratu	im 7 explanation.			



Section	Paragr	aph / Table		Location
Appendix 6-1	Table 3	3 – Historic Landscape areas with	nin 200m of Option 4/5AV1	Option 4/5AV1
Existing Text	:			
HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity
HW24767	Brooks Inning	s Unknown	Inside	Medium
HER	xt Name	Archaeological / Historical	Inside or Outside the Scheme	Sensitivity
Amended Te HER Number HW24767		Period	Inside or Outside the Scheme Footprint Inside	Sensitivity Medium
HER Number	Name	Period	Footprint	

## Erratum 17

For ease of readability, only the relevant rows and the preceding row (where a new row is added), have been included in the table below.

Section	Paragraph / Table	Location
Appendix 6-1	Table 36 - Grade II Listed Buildings within the 1 kilometre	Option 4/5AV2
	study area of Option 4/5AV2	

# **Existing Text**

NHLE Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
1222537	Woodford School House	Post-medieval Period	Outside	Medium
1398407	Smugglers Steps	Post-medieval Period	Outside	Medium
1222198	Church Farmhouse	Industrial Period	Outside	Medium

NHLE Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
<del>1222537</del>	Woodford School House	Post-medieval Period	<del>Outside</del>	Medium
<del>1398407</del> 1237843	Smugglers Steps	Post-medieval Period	Outside	Medium
1222198	Church Farmhouse	Industrial Period	Outside	Medium
1221995	Marsh Farmhouse	Post-medieval Period	Outside	Medium



For ease of readability, only the relevant rows and the preceding row (where a new row is added), have been included in the table below.

Section		Paragraph	Paragraph / Table			Location
Appendix 6	-1		Table 36 - Grade II Listed Buildings within the 1 kilometrestudy area of Option 4/5AV2			Option 4/5AV2
1222506	Fernleigh	Po	st-medieval Period	Outside	Μ	edium
1222510	15-20 The Street		lustrial Period	Outside	M	edium

Refer to Erratum 13 explanation.

## Erratum 18

For ease of readability, only the relevant rows and the preceding row (where a new row is added), have been included in the table below.

Section	Paragraph / Table	Location
Appendix 6-1	Table 38 – Archaeological Notification Areas within 200m of option 4/5AV2	Option 4/5AV2

#### **Existing Text**

HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
DWS8132	Earthworks within Gobblestubbs Copse, Dalesdown Wood, Rewell Wood, Rewell Hill, Fairmile Bottom Park Farm, Arundel Medieval Park and the 'War Dyke', Arundel	Multi-Period	Outside	Medium

## Amended Text

HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
DWS8132	Earthworks within Gobblestubbs Copse, Dalesdown Wood, Rewell Wood, Rewell Hill, Fairmile Bottom Park Farm, Arundel Medieval Park and the 'War Dyke', Arundel	Multi-Period	Outside	Medium
DWS8148	Napoleonic Barracks and possible burial ground, Crossbush	Industrial Period	Outside	Medium
Explanation				

Refer to Erratum 7 explanation.



For ease of readability, only the relevant rows and the preceding row (where a new row is added), have been included in the table below.

Section	Paragraph / Table	Location
Appendix 6-1	Table 39 - Non-Designated Heritage Assets within the 200m study	Option 4/5AV2
	area of Option 4/5AV2	

# Existing Text

HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets			
MWS9411	Binsted Farm Historic Farmstead, Walberton	Post-medieval	Inside	Medium			
MWS2200	Roman cist burial - Avisford	Romano-British	Outside	Medium			
MWS13741	The Rookery Historic Farmstead, Arundel	Post-medieval	Inside	Medium			

## **Amended Text**

HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets		
MWS9411	Binsted Farm Historic Farmstead, Walberton	Post-medieval	Inside Outside	Medium		
MWS2200	Roman cist burial - Avisford	Romano-British	<del>Outside</del>	Medium		
MWS13741	The Rookery Historic Farmstead, Arundel	Post-medieval	Inside	Medium		
MWS2313	Medieval Pottery – Church Farm	Late Medieval	Outside	Low		
Explanation	Explanation					
Refer to Erratu	um 7 explanation.					

Section		Paragra	ph / Table			Location
Appendix 6-1		Table 40	ble 40 – Historic Landscape areas within 200m of Option 4/5AV2			Option 4/5AV2
Existing Text						ł
HER Number	Name		Archaeological / Historical Period	Inside or Outside the Scheme Footprint		sitivity of tage Assets
HW24767	24767 Brooks Innings		Unknown	Inside	Med	ium
Amended Te	xt					
HER Number	Name		Archaeological / Historical Period	Inside or Outside the Scheme Footprint		<del>sitivity of</del> t <del>age Assets</del>
			Linknown	Inside	Med	
HW24767	Brooks In	nings	Unknown		wea	<del>um</del>



For ease of readability, only the relevant rows and the preceding row (where a new row is added), have been included in the table below.

Section	Paragraph / Table	Location
Appendix 6-1	Table 44 - Grade II Listed Buildings within the 1	Option 5BV1
	kilometre study area of the option 5BV1	

## **Existing Text**

NHLE Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
1222537	Woodford School House	Post-medieval Period	Outside	Medium
1398407	Smugglers Steps	Post-medieval Period	Outside	Medium
1221915	Hope Cottage (South Range)	Unknown	Outside	Medium

#### Amended Text

NHLE Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
<del>1222537</del>	Woodford School House	Post-medieval Period	Outside	Medium
<del>1398407</del> 1237843	Smugglers Steps	Post-medieval Period	Outside	Medium
1221915	Hope Cottage (South Range)	Unknown	Outside	Medium
1222238	Goodacres	Industrial Period	Outside	Medium
1222510	15-20 The Street	Industrial Period	Outside	Medium
1222533	Friars Oak and Little Box Cottage	Industrial Period	Outside	Medium

#### Explanation

The corrections to the designated heritage assets above reflect transcription errors from a complex dataset from material that was available from the published consultation documents, such as the PCF Stage 2 EAR –Appendix 6-1 (Gazetteer) and accompanying figures (Figures 6-1 to 6-18). Regarding assets 1222238,1222510 and 1222533, this is a correction that is the result of a transcription error from the Nation Heritage List (England) dataset. These assets were considered when undertaking the impact assessment reported in PCF Stage 2 EAR Chapter 6 – Cultural Heritage but were not explicitly referenced in the chapter or included in the PCF Stage 2 EAR –Appendix 6-1 (Gazetteer), nor shown on the accompanying figures (Figures 6-1 to 6-18). However, importantly the assets would not be affected by any of the route Options. Therefore, the conclusions of the cultural heritage impact assessment and the relative performance of the options are not affected by these corrections to this gazetteer. The corrections identified above has been incorporated into the asset count presented in the corrected PCF Stage 2 EAR Chapter 6 – Cultural Heritage, Section 6.6 Baseline Conditions, along with the other consultation documents (e.g. the Consultation Brochure, Interim Scheme Assessment Report and South Downs National Park Special Qualities Assessment).



	<b>,</b> , ,		ve been included in th			
Section		Paragraph / Tab	le		Location	
Appendix 6-1		Table 47 - Non-D 200m study area	esignated Heritage Assets within the of Option 5BV1		Option 5BV1	
Existing Text				·		
HER Number	Name		Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets	
MWS14385	Section of the Chichester to Brighton Roman Road running through Binsted Wood		Romano-British	Outside	Medium	
MWS9411	Binsted Farm Historic Farmstead, Walberton		Post-medieval	Outside	Medium	
Amended Tex	ct					
HER Number	Name		Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets	
MWS14385	Section of the Brighton Roma through Binste	n Road running	Romano-British	<del>Outside</del> -Inside	Medium	
	Binsted Farm Historic Farmstead, Walberton		Post-medieval	Outside	Medium	
MWS9411	Farmstead, Wa	аренон				
MWS9411 Explanation	Farmstead, Wi					

#### Erratum 23

48 – Historic Landscape area	as within 200m of Option 5BV1	Option 5BV1
Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity
s Unknown	Inside	Medium
	Historical Period	Historical Period Footprint

Inside

## Explanation

HW24767

Refer to Erratum 4 explanation.

**Brooks Innings** 

Unknown

Medium



For ease of readability, only the relevant rows and the preceding row (where a new row is added), have been included in the table below.

Section	Paragraph / Table	Location
Appendix 6-1	Table 46 – Archaeological Notification Areas within 200m of Option 5BV1	Option 5BV1

# **Existing Text**

HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
DWS8482	Site of Pynham Augustinian Priory and Hospital, and Calcetto Priory Medieval Farmstead, Arundel	Medieval	Outside	Medium

## Amended Text

HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets
DWS8482	Site of Pynham Augustinian Priory and Hospital, and Calcetto Priory Medieval Farmstead, Arundel	Medieval	Outside	Medium
DWS8130	Roman Occupation Debris and Cist Burial, Slindon	Roman	Outside	Medium
Explanation				
Refer to Erratum 7	explanation.			

Section	Paragraph / Table	Location			
Appendix 6-1	Table 47 - Non-Designated Heritage Assets within the 200m study area of       0         Option 5BV1       0				
Existing Text					
HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets	
MWS9411	Binsted Farm Historic Farmstead, Walberton	Post-medieval	Outside	Medium	



For ease of reada	ability, only the relevant ro	ws have been include	ed in the table below.			
Section	Paragraph / Table	Location				
Appendix 6-1	Table 47 - Non-Designated Heritage Assets within the 200m study area of       Option 5BV1         Option 5BV1       Option 5BV1					
Amended Text						
HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity of Heritage Assets		
MWS9411	Binsted Farm Historic Farmstead, Walberton	Post-medieval	Outside	Medium		
Explanation						
Refer to Erratum						

Section	Paragrap	aragraph / Table			n	
Appendix 6-1	Table 48 -	Fable 48 – Historic Landscape areas within 200m of Option 5BV1         Option 5BV1				
Existing Text						
HER Number	Name	Archaeological / Historical Period	Inside or Outside the Sc Footprint	heme	Sensitivity	
HW24767	Brooks Innings	Unknown	Inside		Medium	

# **Amended Text**

HER Number	Name	Archaeological / Historical Period	Inside or Outside the Scheme Footprint	Sensitivity		
HW24767	Brooks Innings	Unknown	Inside	Medium		
Explanation						
Refer to Erratu	m 4 explanation.					

# 2.8. Environmental Assessment Report Chapter 7: Landscape and Visual

Section	Paragraph / Table	Location					
7.6.7	Paragraph 7.6.7.10 All Scheme options (Baseline cond						
Existing Text	Existing Text						
	ocations correlate with the following Park Authority (see Figures 7-9 an	viewpoints that were agreed in consultation with the d 7-10 for viewpoint locations):					
•	•	owns National Park Authority's Viewpoint 35 ns National Park Authority's Viewpoint 34					



	Paragraph / Table	Location	
7.6.7	Paragraph 7.6.7.10	All Scheme options (Baseline conditions)	
<ul> <li>Viewpoint 5 is located of</li> </ul>	on Yapton Lane near the South Do	wns National Park Authority's Viewpoint 33	
Viewpoint 14 is located	on Walberton footpath 350 near th	ne South Downs National Park Authority's Viewpoint 31	
<ul> <li>Viewpoint 16 is located</li> </ul>	l at the junction of footpath 341 with	n Binsted Lane, near the South Downs National Park	
Authority's Viewpoint 30			
<ul> <li>Viewpoint 19 is located</li> </ul>	on Binsted Lane, near the South [	Downs National Park Authority's Viewpoint 29	
<ul> <li>Viewpoint 28 is located</li> </ul>	l on Arundel footpath 3402, near th	e South Downs National Park Authority's Viewpoint 52	
<ul> <li>Viewpoint 33 is located</li> </ul>	l on Tortington Lane, near the Sout	h Downs National Park Authority's Viewpoint 53	
<ul> <li>Viewpoint 43 is located</li> </ul>	I near Arundel Castle from High Str	reet, close to the South Downs National Park Authority's	
Viewpoint 50			
<ul> <li>Viewpoint 45 is located</li> </ul>	I next to the River Arun on Monarch	h's Way near the South Downs National Park Authority's	
Viewpoint 19			
<ul> <li>Viewpoint 53 is located</li> </ul>	l at Highdown Hill, Monarch's Way	near the South Downs National Park Authority's	
Viewpoint 31			
<ul> <li>Viewpoint 58 is located</li> </ul>	l at Amberley Mount, close to the S	outh Downs National Park Authority's Viewpoint 32.	
Amended Text			
The SDNP viewshed loc	ations correlate with the following	viewpoints that were agreed in consultation with the	
	Park Authority (see Figures 7-9 and		
		· ,	
<ul> <li>Viewpoint 1 is located (</li> </ul>	on Copse Lane near the South Dov	wns National Park Authority's Viewpoint 35	
<ul> <li>Viewpoint 2 is located (</li> </ul>	on Tye Lane near the South Down	s National Park Authority's Viewpoint 34	
<ul> <li>Viewpoint 5 is located (</li> </ul>	on Yapton Lane near the South Do	wns National Park Authority's Viewpoint 33	
· · · · · · · · · · · · · · · · · · ·		he South Downs National Park Authority's Viewpoint 31	
<ul> <li>Viewpoint 16 is located</li> </ul>	Lat the lowestice of featureth, 0.44 with		
Authority's Viewpoint 30	1 at the junction of footpath 341 with	n Binsted Lane, near the South Downs National Park	
		n Binsted Lane, near the South Downs National Park	
Viewpoint 19 is located on Binsted Lane, near the South Downs National Park Authority's Viewpoint 29     Viewpoint 20 is located on Annualed fortmath 2400, near the South Downs National Park Authority's Viewpoint 29			
	I on Binsted Lane, near the South I	Downs National Park Authority's Viewpoint 29	
<ul> <li>Viewpoint 28 is located</li> </ul>	I on Binsted Lane, near the South I I on Arundel footpath 3402, near th	Downs National Park Authority's Viewpoint 29 e South Downs National Park Authority's Viewpoint 52	
<ul> <li>Viewpoint 28 is located</li> <li>Viewpoint 33 is located</li> </ul>	I on Binsted Lane, near the South I I on Arundel footpath 3402, near th I on Tortington Lane, near the Sout	Downs National Park Authority's Viewpoint 29 e South Downs National Park Authority's Viewpoint 52 th Downs National Park Authority's Viewpoint 53	
<ul> <li>Viewpoint 28 is located</li> <li>Viewpoint 33 is located</li> <li>Viewpoint 43 is located</li> </ul>	I on Binsted Lane, near the South I I on Arundel footpath 3402, near th I on Tortington Lane, near the Sout	Downs National Park Authority's Viewpoint 29 e South Downs National Park Authority's Viewpoint 52	
<ul> <li>Viewpoint 28 is located</li> <li>Viewpoint 33 is located</li> <li>Viewpoint 43 is located</li> <li>Viewpoint 50</li> </ul>	I on Binsted Lane, near the South I I on Arundel footpath 3402, near th I on Tortington Lane, near the Sout I near Arundel Castle from High Str	Downs National Park Authority's Viewpoint 29 e South Downs National Park Authority's Viewpoint 52 th Downs National Park Authority's Viewpoint 53 reet, close to the South Downs National Park Authority's	
<ul> <li>Viewpoint 28 is located</li> <li>Viewpoint 33 is located</li> <li>Viewpoint 43 is located</li> <li>Viewpoint 50</li> <li>Viewpoint 45 is located</li> </ul>	I on Binsted Lane, near the South I I on Arundel footpath 3402, near th I on Tortington Lane, near the Sout I near Arundel Castle from High Str	Downs National Park Authority's Viewpoint 29 e South Downs National Park Authority's Viewpoint 52 th Downs National Park Authority's Viewpoint 53	
<ul> <li>Viewpoint 28 is located</li> <li>Viewpoint 33 is located</li> <li>Viewpoint 43 is located</li> <li>Viewpoint 50</li> <li>Viewpoint 45 is located</li> <li>Viewpoint 19</li> </ul>	I on Binsted Lane, near the South I I on Arundel footpath 3402, near th I on Tortington Lane, near the Sout I near Arundel Castle from High Str I next to the River Arun on Monarch	Downs National Park Authority's Viewpoint 29 e South Downs National Park Authority's Viewpoint 52 th Downs National Park Authority's Viewpoint 53 reet, close to the South Downs National Park Authority's n's Way near the South Downs National Park Authority's	
<ul> <li>Viewpoint 28 is located</li> <li>Viewpoint 33 is located</li> <li>Viewpoint 43 is located</li> <li>Viewpoint 50</li> <li>Viewpoint 45 is located</li> <li>Viewpoint 19</li> <li>Viewpoint 53 is located</li> </ul>	I on Binsted Lane, near the South I I on Arundel footpath 3402, near th I on Tortington Lane, near the Sout I near Arundel Castle from High Str I next to the River Arun on Monarch	Downs National Park Authority's Viewpoint 29 e South Downs National Park Authority's Viewpoint 52 th Downs National Park Authority's Viewpoint 53 reet, close to the South Downs National Park Authority's	
<ul> <li>Viewpoint 28 is located</li> <li>Viewpoint 33 is located</li> <li>Viewpoint 43 is located</li> <li>Viewpoint 50</li> <li>Viewpoint 45 is located</li> <li>Viewpoint 19</li> <li>Viewpoint 53 is located</li> <li>Viewpoint 31</li> </ul>	I on Binsted Lane, near the South I I on Arundel footpath 3402, near the I on Tortington Lane, near the Sout I near Arundel Castle from High Str I next to the River Arun on Monarch I at Highdown Hill, Monarch's Way	Downs National Park Authority's Viewpoint 29 e South Downs National Park Authority's Viewpoint 52 th Downs National Park Authority's Viewpoint 53 reet, close to the South Downs National Park Authority's n's Way near the South Downs National Park Authority's near the South Downs National Park Authority's	
<ul> <li>Viewpoint 28 is located</li> <li>Viewpoint 33 is located</li> <li>Viewpoint 43 is located</li> <li>Viewpoint 50</li> <li>Viewpoint 45 is located</li> <li>Viewpoint 19</li> <li>Viewpoint 53 is located</li> <li>Viewpoint 31</li> <li>Viewpoint 58 is located</li> </ul>	I on Binsted Lane, near the South I I on Arundel footpath 3402, near the I on Tortington Lane, near the Sout I near Arundel Castle from High Str I next to the River Arun on Monarch I at Highdown Hill, Monarch's Way	Downs National Park Authority's Viewpoint 29 e South Downs National Park Authority's Viewpoint 52 th Downs National Park Authority's Viewpoint 53 reet, close to the South Downs National Park Authority's n's Way near the South Downs National Park Authority's	
<ul> <li>Viewpoint 28 is located</li> <li>Viewpoint 33 is located</li> <li>Viewpoint 43 is located</li> <li>Viewpoint 50</li> <li>Viewpoint 45 is located</li> <li>Viewpoint 19</li> <li>Viewpoint 53 is located</li> <li>Viewpoint 31</li> </ul>	I on Binsted Lane, near the South I I on Arundel footpath 3402, near the I on Tortington Lane, near the Sout I near Arundel Castle from High Str I next to the River Arun on Monarch I at Highdown Hill, Monarch's Way	Downs National Park Authority's Viewpoint 29 e South Downs National Park Authority's Viewpoint 52 th Downs National Park Authority's Viewpoint 53 reet, close to the South Downs National Park Authority's h's Way near the South Downs National Park Authority' near the South Downs National Park Authority's	
<ul> <li>Viewpoint 28 is located</li> <li>Viewpoint 33 is located</li> <li>Viewpoint 43 is located</li> <li>Viewpoint 50</li> <li>Viewpoint 45 is located</li> <li>Viewpoint 19</li> <li>Viewpoint 53 is located</li> <li>Viewpoint 31</li> <li>Viewpoint 58 is located</li> </ul>	I on Binsted Lane, near the South I I on Arundel footpath 3402, near the I on Tortington Lane, near the Sout I near Arundel Castle from High Str I next to the River Arun on Monarch I at Highdown Hill, Monarch's Way I at Amberley Mount, close to the S	Downs National Park Authority's Viewpoint 29 e South Downs National Park Authority's Viewpoint 52 th Downs National Park Authority's Viewpoint 53 reet, close to the South Downs National Park Authority's h's Way near the South Downs National Park Authority' near the South Downs National Park Authority's	
<ul> <li>Viewpoint 28 is located</li> <li>Viewpoint 33 is located</li> <li>Viewpoint 43 is located</li> <li>Viewpoint 50</li> <li>Viewpoint 45 is located</li> <li>Viewpoint 19</li> <li>Viewpoint 53 is located</li> <li>Viewpoint 31</li> <li>Viewpoint 58 is located</li> <li>Explanation</li> </ul>	Lon Binsted Lane, near the South I Lon Arundel footpath 3402, near the Lon Tortington Lane, near the Sout I near Arundel Castle from High Str I next to the River Arun on Monarch I at Highdown Hill, Monarch's Way I at Amberley Mount, close to the S set out in the existing text were incl	Downs National Park Authority's Viewpoint 29 e South Downs National Park Authority's Viewpoint 52 th Downs National Park Authority's Viewpoint 53 reet, close to the South Downs National Park Authority's n's Way near the South Downs National Park Authority' near the South Downs National Park Authority's South Downs National Park Authority's Viewpoint 32.	
<ul> <li>Viewpoint 28 is located</li> <li>Viewpoint 33 is located</li> <li>Viewpoint 43 is located</li> <li>Viewpoint 50</li> <li>Viewpoint 45 is located</li> <li>Viewpoint 19</li> <li>Viewpoint 53 is located</li> <li>Viewpoint 31</li> <li>Viewpoint 58 is located</li> <li>Explanation</li> </ul>	Lon Binsted Lane, near the South I Lon Arundel footpath 3402, near the Lon Tortington Lane, near the Sout I near Arundel Castle from High Str I next to the River Arun on Monarch I at Highdown Hill, Monarch's Way I at Amberley Mount, close to the S set out in the existing text were incl 7.6.7 and in Appendix 7-2), followi	Downs National Park Authority's Viewpoint 29 e South Downs National Park Authority's Viewpoint 52 th Downs National Park Authority's Viewpoint 53 reet, close to the South Downs National Park Authority' n's Way near the South Downs National Park Authority' near the South Downs National Park Authority's South Downs National Park Authority's Viewpoint 32.	

section: Route options 1 and 5A" [May 2017])

However, the corrections identified above are to correct the erroneous reference to Viewpoints 1, 2, 5, 15, 16, 19, 28, and 33 being Viewshed Locations, (i.e. as being identified within the "*View Characterisation and Analysis Study*") – they were not, and instead were derived from *Landscape and Visual Impact Appraisal and effects on the Public Right of Way network A27 Arundel section: Route options 1 and 5A*" (May 2017) and in discussion with the SDNP Authority.



Section	Paragraph / Table	Location
7.6.7         Paragraph 7.6.7.10         All Scheme options (Baseline condition		All Scheme options (Baseline conditions)
included in the assessme	iewpoints included within the assessment we ent reported in PCF Stage 2 EAR Chapter 7 a ndscape and visual impact assessment as re	and, as such, these corrections do not affect

Section	Paragraph / Table	Location
7.9.4	Paragraphs 7.9.4.37 - 38	Option 3V1

#### **Existing Text**

During construction there are likely to be large adverse effects from Option 3V1 for Viewpoints 22 - 27, 31, 32, 34, 35, 36, 37B, 43, and 46 – 49 (representing residents, visitors and users of public rights of way in the SDNP and in non-designated landscapes as well as locations with cultural associations).

During construction there are likely to be Moderate Adverse effects from Option 3V1 for Viewpoints 38, 39, 40, 41, 50 and 51 (representing residents, visitors and users of public rights of way in the SDNP and in non-designated landscapes as well as locations with cultural associations and users of the railway network and local lanes).

#### Amended Text

During construction there are likely to be large adverse effects from Option 3V1 for Viewpoints 22 - 27, 31, 32, 34, 35, 36, 37B, 43, and 46 – 49 and 50 (representing residents, visitors and users of public rights of way in the SDNP and in non-designated landscapes as well as locations with cultural associations).

During construction there are likely to be Moderate Adverse effects from Option 3V1 for Viewpoints 38, 39, 40, 41, 50 and 51 (representing residents, visitors and users of public rights of way in the SDNP and in non-designated landscapes as well as locations with cultural associations and users of the railway network and local lanes).

#### Explanation

This correction is as a result of the correction made to Table 7-19 in erratum 2A. The correction shown is due to a transcription error in summarising the viewpoint numbers. The effects, as outlined and assessed within Appendix 7-2, are correct, and inform the conclusions and summaries within PCF Stage 2 EAR Chapter 7. The correct significance of effect for this viewpoint is of higher significance than the incorrect reference but in any event, the effect remains within the 'significant' envelope so should not impact judgements previously given during the consultation, should the reader not have reviewed Appendix 7-2. The conclusion of significant effects is based on the correct significance of effect (as shown in Appendix 7-2) but was transcribed incorrectly into Chapter 7.



# Erratum 2A

For ease of	of readability, only the relevant rows	s of Table 7-19 hav	/e been included in the tab	ole below.	-
Section	Paragraph / Table		Location		
7.9.4	Table 7-19 – Construction phase Option 3V1	Option 3V1			
Existing 7	Table				
	pact of construction works on nenity of receptors at:	Sensitivity	Magnitude of Impact	Significa	ance of effect
Viewpoir	nt 50	Moderate	Moderate	Moderate	e Adverse
	Table         pact of construction works on         nenity of receptors at:	Sensitivity	Magnitude of Impact	Significa	ance of effect
Viewpoir	nt 50	Moderate	Moderate Major	Moderate	e Large Adverse
Explanati	on				
assessme	ction is the result of a transcription e nt of individual viewpoints and is cor 7-2 were summarised). There are no	rect) and the PCF	Stage 2 EAR Chapter 7 (in	which the	results of

#### Erratum 2B

Section	Paragraph / Table	Location
7.9.4	Paragraphs 7.9.4.54	Option 4/5AV1

#### **Existing Text**

During construction there are likely to be significant very large adverse effects from Option 4/5AV1 for Viewpoints 12 and 17 (representative of users of lanes and footpaths outside the SDNP) and significant large adverse effects for Viewpoints 4, 5A, 6, 8-11, 15, 16A, 19, 28 – 36, 37B, 43 and 46-50 (representing residents, visitors and users of public rights of way in the SDNP and in non-designated landscapes as well as locations with cultural associations and users of the railway network and local lanes).

## Amended Text

During construction there are likely to be significant very large adverse effects from Option 4/5AV1 for Viewpoints 10, 12 and 17 (representative of users of lanes and footpaths outside the SDNP) and significant large adverse effects for Viewpoints 4, 5A, 6, 8, 9, 11, 15, 16A, 19, 28 – 36, 37B, 43 and 46-50 (representing residents, visitors and users of public rights of way in the SDNP and in non-designated landscapes as well as locations with cultural associations and users of the railway network and local lanes).

#### Explanation

This correction is as a result of the correction made to Table 7-21 in erratum 2C. The correction shown is due to a transcription error in summarising the viewpoint numbers. The effects, as outlined and assessed within Appendix 7-



Section	Paragraph / Table	Location
7.9.4	Paragraphs 7.9.4.54	Option 4/5AV1
significance of effect for this viewpoint effect remains within the 'significant' e consultation, should the reader not ha	ons and summaries within PCF Stage 2 EA t is of higher significance than the incorrect nvelope so should not impact judgements p ve reviewed Appendix 7-2. The conclusion hown in Appendix 7-2) but was transcribed i	reference but in any event, the reviously given during the of significant effects is based on

## Erratum 2C

Section	Paragraph / Table	Paragraph / Table			Location		
7.9.4	Table 7-21 - Constr viewpoint receptors	•	Option 4/5AV1				
Existing Text							
Likely Impact of visual amenity of	f construction works on of receptors at:	Sensitivity	Magnitude of	Impact	Significance of effect		
Viewpoint 10		High	Major		Large Adverse		
Amended Text							
Likely Impact of visual amenity of	f construction works on of receptors at:	Sensitivity	Magnitude of	Impact	Significance of effect		
Viewpoint 10		High	Major		Very Large Adverse		
Explanation							

This correction is the result of a transcription error between PCF Stage 2 EAR Appendix 7-2 (which contains the main assessment of individual viewpoints and is correct) and the PCF Stage 2 EAR Chapter 7 (in which the results of Appendix 7-2 were summarised). There are no changes to the conclusions of the PCF Stage 2 EAR as a result of this correction. This correction has been carried through to the PCF Stage 2 Interim SAR in summarising the effects.

## Erratum 2D

Section	Paragraph / Table	Location			
7.9.4	Paragraphs 7.9.4.76	Option 4/5AV2			
Existing Text					
15, 20 and 21 (represent significant large adverse visitors and users of publ	e are likely to be significant very large adverse ing residents, visitors and users of public right effects for Viewpoints 7, 9-12, 16A, 28 – 36, 3 ic rights of way in the SDNP and in non-desig users of the railway network and local lanes).	ts of way in the SDNP at Binsted Park) and 37B, 43 and 46 – 50 (representing residents, mated landscapes as well as locations with			



Section F	Paragraph / Table	Location
7.9.4 F	Paragraphs 7.9.4.76	Option 4/5AV2

#### Amended Text

During construction, there are likely to be significant very large adverse effects from Option 4/5AV2 for Viewpoints 10, 15, 20 and 21 (representing residents, visitors and users of public rights of way in the SDNP at Binsted Park) and significant large adverse effects for Viewpoints 7, 9, 11, 12, 16A, 28 – 36, 37B, 43 and 46 – 50 (representing residents, visitors and users of public rights of way in the SDNP and in non-designated landscapes as well as locations with cultural associations and users of the railway network and local lanes).

#### Explanation

This correction is as a result of the correction made to Table 7-23 in erratum 2E. The correction shown is due to a transcription error in summarising the viewpoint numbers. The effects, as outlined and assessed within Appendix 7-2, are correct, and inform the conclusions and summaries within PCF Stage 2 EAR Chapter 7. The correct significance of effect for this viewpoint is of higher significance than the incorrect reference but in any event, the effect remains within the 'significant' envelope so should not impact judgements previously given during the consultation, should the reader not have reviewed Appendix 7-2. The conclusion of significant effects is based on the correct significance of effect (as shown in Appendix 7-2) but was transcribed incorrectly into Chapter 7.

#### Erratum 2E

For ease of read	ability, only the relevant rows	s of Table 7-23 ha	ve been included	l in the ta	ble below.
Section	Paragraph / Table	Paragraph / Table			
7.9.4		Table 7-23 - Construction phase likely effects on viewpoint receptors from Option 4/5AV2			
Existing Text					
	f construction works on of receptors at:	Sensitivity	Magnitude of	f Impact	Significance of effect
Viewpoint 10		High Major Large A			Large Adverse
Amended Text					
	f construction works on of receptors at:	Sensitivity	Magnitude of	f Impact	Significance of effect
Viewpoint 10		High	Major		Very Large Adverse
Explanation					
assessment of in Appendix 7-2 we	the result of a transcription e dividual viewpoints and is cor re summarised). There are no correction has been carried th	rect) and the PCF o changes to the c	Stage 2 EAR Ch onclusions of the	apter 7 (ir PCF Sta	n which the results of ge 2 EAR as a result of th



## Erratum 2F

Section	Paragraph / Table	Location
7.9.4	Paragraph 7.9.4.90	Option 5BV1

## Existing Text

During construction, there are likely to be significant very large adverse effects from Option 5BV1 for Viewpoints 3 and 13 (representing residents and users of public rights of way and lanes in non-designated landscapes) and significant large adverse effects for Viewpoints 2, 5B, 9, 10, 14, 16B, 17 – 19, 28 – 36, 37B, 43 and 46 – 50 (representing residents, visitors and users of public rights of way in the SDNP and in non-designated landscapes as well as locations with cultural associations and users of the railway network and local lanes).

#### Amended Text

During construction, there are likely to be significant very large adverse effects from Option 5BV1 for Viewpoints 3, and 13, and 17 (representing residents and users of public rights of way and lanes in non-designated landscapes) and significant large adverse effects for Viewpoints 2, 5B, 9, 10, 14, 16B, 18, 19, 28 – 36, 37B, 43 and 46 – 50 (representing residents, visitors and users of public rights of way in the SDNP and in non-designated landscapes as well as locations with cultural associations and users of the railway network and local lanes).

#### Explanation

This correction is as a result of the correction made to Table 7-25 in erratum 2G. The correction shown is due to a transcription error in summarising the viewpoint numbers. The effects, as outlined and assessed within Appendix 7-2, are correct, and inform the conclusions and summaries within PCF Stage 2 EAR Chapter 7. The correct significance of effect for this viewpoint is of higher significance than the incorrect reference but in any event, the effect remains within the 'significant' envelope so should not impact judgements previously given during the consultation, should the reader not have reviewed Appendix 7-2. The conclusion of significant effects is based on the correct significance of effect (as shown in Appendix 7-2) but was transcribed incorrectly into Chapter 7.

#### Erratum 2G

Viewpoint 17

Section	Paragraph / Table		Location	Location		
7.9.4	Table 7-25 - Construe viewpoint receptors f		Option 5	BV1		
Existing Text						
Likely Impact of visual amenity of	construction works on of receptors at:	Sensitivity	Magnitude	e of Impact	Significance of effect	
Viewpoint 17		High	Major		Large Adverse	
Amended Text						
	tional works on visual	Sensitivity		e of Impact	Significance of effect	

Major

Hiah

Very Large Adverse



For ease of readability, only the relevant rows of Table 7-25 have been included in the table below.

Section	Paragraph / Table	Location
7.9.4	Table 7-25 - Construction phase likely effects for	Option 5BV1
	viewpoint receptors from Option 5BV1	

## Explanation

This correction is the result of a transcription error between PCF Stage 2 EAR Appendix 7-2 (which contains the main assessment of individual viewpoints and is correct) and the PCF Stage 2 EAR Chapter 7 (in which the results of Appendix 7-2 were summarised). There are no changes to the conclusions of the PCF Stage 2 EAR as a result of this correction. This correction has been carried through to the PCF Stage 2 Interim SAR in summarising the effects.

#### Erratum 2H

Section	Paragraph / Table	Location
7.9.4	Paragraph 7.9.4.96	Option 5BV1

## Existing Text

At operation by Year 15 there are therefore likely to be significant very large adverse effects from Option 5BV1 for Viewpoint 13 and significant large adverse effects for Viewpoints 10, 14, 16B, 19, 29, 30. 33, 35, 36, 37B and 43. There are also likely to be significant moderate adverse effects for Viewpoints 2, 3, 5B, 9, 17, 18, 28, 31, 32, 34, 38 - 40 and 46 - 51.

#### **Amended Text**

At operation by Year 15 there are therefore likely to be significant very large adverse effects from Option 5BV1 for Viewpoint 13 and significant large adverse effects for Viewpoints  $\frac{10}{14}$ , 16B, 19, 29, 30, 33, 35, 36, 37B and 43. There are also likely to be significant moderate adverse effects for Viewpoints 2, 3, 5B, 9, 10, 17, 18, 28, 31, 32, 34, 38 – 40 and 46 – 51.

#### Explanation

This correction is as a result of the correction made to Table 7-26 in erratum 2I. The correction shown is due to a transcription error in summarising the viewpoint numbers. The effects, as outlined and assessed within Appendix 7-2, are correct, and inform the conclusions and summaries within PCF Stage 2 EAR Chapter 7. The correct significance of effect for this viewpoint is of higher significance than the incorrect reference but in any event, the effect remains within the 'significant' envelope so should not impact judgements previously given during the consultation, should the reader not have reviewed Appendix 7-2. The conclusion of significant effects is based on the correct significance of effect (as shown in Appendix 7-2) but was transcribed incorrectly into Chapter 7.



# Erratum 2I

Section	Parag	Paragraph / Table				Location	۱		
7.9.4		Table 7-26 - Operational phase likely effects on viewpoint receptors as a result of Option 5BV1				Option 5	BV1		
Existing Text									
Impact of operational works on visual amen receptors at:	ity of	Sensitivit	y Magnitude ( Impact Year		Significance effect Year 1		/lagnitude o mpact Year		Significance of effect Year 15
Viewpoint 10		High	Moderate		Large Advers	e N	Noderate		Large Adverse
Amended Text		·							
Impact of operational works on visual ameni of receptors at:			Magnitude of Impact Year 1		gnificance of fect Year 1		nitude of act Year 15	Sign Year	ificance of effect · 15
Viewpoint 10	Hi	gh I	Voderate	La	irge Adverse	Mod	erate	Larg	e Moderate Advers
Explanation				•		•		•	

assessment of individual viewpoints and is correct) and the PCF Stage 2 EAR Chapter 7 (in which the results of Appendix 7-2 were summarised). There are no changes to the conclusions of the PCF Stage 2 EAR as a result of this correction. This correction has been carried through to the PCF Stage 2 Interim SAR in summarising the effects.

Section Appendix 7-2		Paragraph / Tab	le	Location Option 1V5		
		Appendix 7-2				
Existing Table						
Viewpoint name, number and direction of view	Sensitivity	Magnitude of Impact (Year 1)	Significance of effect (Year 1)	Magnitude of Impact (Year 15)	Significance of effect (Year 15)	
Viewpoint 58 - Amberley Mount Looking south west	High	Negligible	Slight Adverse	Negligible	Neutral	
Amended Table	<u> </u>	<u>.</u>			·	
Viewpoint name,	Sensitivity	Magnitude of	Significance of	Magnitude of	Significance of	

Viewpoint name, number and direction of view					Significance of effect (Year 15)
Viewpoint 58 - Amberley Mount	High	Negligible	Slight Adverse	Negligible	<del>Neutral</del> -Slight adverse



For ease of readability, only the relevant rows and columns of Appendix 7-2 have been included in the table below.					
Section	Paragraph / Table	Location			
Appendix 7-2	Appendix 7-2	Option 1V5			
Looking south west					

## Explanation

This correction is the result of a typographical error in the PCF Stage 2 EAR Appendix 7-2. The PCF Stage 2 Chapter 7 assessments remain correct. The correct significance of effect assessed was of a higher significance than the incorrect reference, but the effect still remains within the 'not-significant' envelope so should not impact views previously given during the consultation. There are no changes to the conclusions of the PCF Stage 2 EAR as a result of this correction.

#### Erratum 4

For ease of readability, only the relevant rows and columns of Table 4-1 (in Appendix 7-3) have been included in the table below.

Section	Paragraph / Table	Location
Appendix 7-3: Arboriculture Report	Table 4-1– Summary of baseline	All Scheme options
Section 4	conditions by option for arboriculture	(Baseline conditions)

## **Existing Text**

Key Environmental Value	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV2	Option 4/5AV1	Option 5BV1
Individual Trees protected by a Tree Preservation Order	TPO trees located along western and central section of this Scheme option.	TPO trees located along western and central section of this Scheme option.	Not located on this Scheme option	Not located on this Scheme option	Cluster of TPO trees located at the western end of the Scheme option	Cluster of TPO trees located at western end of the option. TPO trees located towards the western end of this Scheme option, south of the footprint.

Key Environmental Value	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV2	Option 4/5AV1	Option 5BV1
Individual Trees protected by a Tree Preservation Order	TPO trees located along western eastern and central section of this Scheme option.	TPO trees located along western eastern and central section of this Scheme option.	Not located on this Scheme option	Not located on this Scheme option	Cluster of TPO trees located at the western end of the Scheme option	Cluster of TPO trees located at western end of the option. TPO trees located towards the western end of this Scheme option, south of the footprint.



For ease of readability, only the relevant rows and columns of Table 4-1 (in Appendix 7-3) have been included in the table below.

Section	Paragraph / Table	Location
Appendix 7-3: Arboriculture Report	Table 4-1– Summary of baseline	All Scheme options
Section 4	conditions by option for arboriculture	(Baseline conditions)

#### Explanation

A transcription error between Figure 3 (showing the correct data) and Table 4-1 resulted in the location of TPO trees being described as west (incorrect) rather than east (correct) in relation to Option 1V5 and Option 1V9. This error is confined to Table 4-1. However, the correct information (shown in Figure 3) fed into the baseline assessment and informed the conclusions drawn in the PCF Stage 2 EAR - Chapter 7 Landscape and Visual Quality, which are unchanged.

## 2.9. Environmental Assessment Report Chapter 8: Biodiversity

This section presents the errata for EAR Chapter 8 – Biodiversity. A separate errata document has been prepared for the Biodiversity Technical Appendices (Appendices 8-1 to 8-25) and is provided in a separate EAR Errata document.

Section	Paragraph / Table	Location					
Various	Table of Contents - List of Appendices         EAR Chapter						
Existing Tex	t						
The existing I	ist of Appendices is as follows:						
Appendix 8-1	- Habitats regulation screening assessment						
Appendix 8-2	<ul> <li>Aquatic ecology report</li> </ul>						
Appendix 8-3	- Badger report						
Appendix 8-4	- Barn owl report						
Appendix 8-5	- Bats - activity (DEFRA and BCT) report						
Appendix 8-6	- Bats - radiotracking report						
Appendix 8-7	- Bats - structures and emergence report						
Appendix 8-8	- Bats activity - DEFRA report						
Appendix 8-9	<ul> <li>Bats PRA and hibernation report</li> </ul>						
Appendix 8-1	0 - Birds - breeding report						
Appendix 8-1	1 - Birds - wintering report						
Appendix 8-1	2 - Birds - barn owl report						
Amended Te	xt						
The correct li	st of appendices is:						
Appendix 8-1	- Habitats regulation screening assessment						
	- Aquatic ecology report						
••	- Badger report						
Appendix 8-4	- Barn owl report						
Appendix 8-5	- Bats - activity (DEFRA and BCT) report						
Appendix 8-6	- Bats - radiotracking report						
Appendix 8-7	- Bats - structures and emergence report						
Annondiv 0.0	- Bats activity - DEFRA report						



For ease of re	eadability, only the relevant appendices of Chapter 8 h	ave been included in the table below.			
Section	Paragraph / Table	Location			
Various	Table of Contents - List of Appendices	EAR Chapter 8			
Appendix 8-9	- Bats PRA and hibernation report				
Appendix 8-1	0 - Birds - breeding report				
Appendix 8-1	1 - Birds - wintering report				
Appendix 8-1	2 - Birds – barn owl Ecological Mitigation Approach				
Explanation					
certain appen Appendices w	typographical error in the list of PCF Stage 2 EAR Cha ndices within the PCF Stage 2 EAR Chapter 8 were mis vere available for download from the Highways Englan es to Paragraphs 8.1.1.3, 8.8.3.3, 8.8.3.6, 8.8.3.9 and	s-labelled. All PCF Stage 2 EAR Chapter 8 d A27 Arundel Bypass consultation pages. This			
	nation, as provided in the technical appendices, fed int ity. The conclusions of Chapter 8, which are summarise	<b>.</b> .			



<b>Section</b> 8.6.2			Paragraph / Table			Location       Option 4/5AV2			
			Table 8-5 – Designated site with distance from         Scheme option						
Existing Table									
Site Level of Designation importance (sensitivity)	importance	mportance	Approximate distance (in kilometres) and orien Scheme options				ntation from the		Key habitat type and reasons for the
		1V5	1V9	3V1	4/5AV1	4/5AV2	5BV1	designations	
LWS	National	Binsted Wood Complex	N edge within Scheme	N edge within Scheme	Within scheme	S edge within Scheme	W edge within Scheme	0.1 N	Mixture of ancient woodland and recent woodland.
Amended Table							<u>.</u>	·	
Site Designation	Level of importance	Site Name	Approximate distance (in kilometres) and orientation from the Scheme options				Key habitat type and reasons for the		
	(sensitivity)		1V5	1V9	3V1	4/5AV1	4/5AV2	5BV1	designations
LWS	National	Binsted Wood Complex	N edge within Scheme	N edge within Scheme	Within scheme	S edge within Scheme	W and S edge within Scheme	0.1 N	Mixture of ancient woodland and recent woodland.

The location of the Scheme options with respect to the Binsted Wood Complex LWS is clearly presented in Figure 8-3 and so is clear to the reader of the documents. This erratum simply corrects a typographical error in the description for completeness. The correct baseline data, presented in Figure 8-3, fed into the PCF Stage 2 EAR Chapter 8 – Biodiversity, and the conclusions summarised in Section 8.9.3 of Chapter 8 are unaffected.



Section			Paragraph / Table			Loc	Location			
8.6.2			Table 8-5 – Designated site with distance from Scheme option			Opti	Options 1V5 and 1V9			
Existing Table										
Site Level of Site Name Designation importance		Site Name	Approximate distance (in kilometres) and orientation from the Scheme options				Key habitat type and reasons for the designations			
	(sensitivity)		1V5	1V9	3V1	4/5AV1	4/5AV2	5BV1		
Notable Road Verge Amended Tabl	County e	A27 Avisford 'site A' A27 Avisford 'site B' A27 Avisford 'site C'	0.5 E	0.5 E	E edge of Site C; Within Scheme option	W half of Site A; Within Scheme option	W tip of Site A; Within Scheme option	0.4 W	No citation information provided by Sussex Biodiversity Records Centre – assumed to be a species-rich neutral or calcareous grassland.	
Site Designation	Level of importance	Site Name		Approximate distance (in kilometres) and orientation from the Scheme options			ion from	Key habitat type and reasons for the designations		
	(sensitivity)		1V5	1V9	3V1	4/5AV1	4/5AV2	5BV1		
Notable Road Verge	County	A27 Avisford 'site A' A27 Avisford 'site B' A27 Avisford 'site C'	0.5 <del>⊑</del> W	0.5 <del>⊑</del> ₩	E edge of Site C; Within	W half of Site A; Within	W tip of Site A; Within	0.4 ₩ E	No citation information provided by Sussex Biodiversity Records Centre – assumed to be a	



Section	Paragraph / Table	Location
8.6.2	Table 8-5 – Designated site with distance from           Scheme option	Options 1V5 and 1V9
Explanation		
-	are located west of Options 1V5 and 1V9. Notable Road Verges A, B ar PCF Stage 2 EAR - Figure 8-3 and as such should have been clear to	•



Section	Paragraph / Table	Location
8.6.4	Paragraph 8.6.4.2	Options 1V5, 1V9, 3V1,4/5AV1, and 4/5AV2
	5 1	

# Existing Text

Option 3V1 passes through the centre of the LWS, and Option 1V5, Option 1V9 traverses the northern edge, whilst Option 4/5AV1 and Option 4/5AV2 pass through the western edges of the LWS. Option 5BV1 is the only option that does not lie within this LWS, situated 110 metres from the LWS.

### Amended text

Option 3V1 passes through the centre of the LWS, and Option 1V5, Option 1V9 traverses the northern edge, whilst Option 4/5AV1 and Option 4/5AV2 pass through or adjacent to the western and south edges of the LWS. Option 5BV1 is the only option that does not lie within this LWS, situated 110 metres from the LWS.

# Explanation

Option 4/5AV1 and Option 4/5AV2 both pass through or adjacent to the west and south of Binsted Wood Complex LWS. This descriptive text does not affect the underlying assessment or calculations. Binsted Wood Complex is correctly displayed in PCF Stage 2 EAR – Figure 8-3 and as such its location is clear to the reader of the documents. This correction addresses a typographical error in the description for completeness. Correct information as displayed in Figure 8-3 fed into the baseline of the PCF Stage 2 EAR as presented in Chapter 8 and the conclusions which are summarised in Section 8.9.3 are unaffected.

### Erratum 5

Section	Paragraph / Table	Location
8.6.4	Paragraph 8.6.4.118	All options
Existing Text		

Field surveys in 2017 and 2018 within 250 metres of Option 4/5AV2 confirmed badger presence. This was evidenced by field signs (e.g. hair, footprints, latrines, dung pits, scratching posts) and the presence of nine main setts, three annexe setts, thirteen subsidiary and fifteen outlier setts. Field surveys concluded that badger activity in this area is extensive with signs of foraging and sett creation and expansion evident throughout the Field Survey Area.

### Amended Text

Field surveys in 2017 and 2018 within 250 metres of Option 4/5AV2 confirmed badger presence in the field survey area (as defined in Technical Appendix 8-3). This was evidenced by field signs (e.g. hair, footprints, latrines, dung pits, scratching posts) and the presence of nine main setts, three annexe setts, thirteen subsidiary and fifteen outlier setts. Field surveys concluded that badger activity in this area is extensive with signs of foraging and sett creation and expansion evident throughout the Field Survey Area.

### Explanation

This erratum corrects the field survey area extent for badger for all Scheme options. The field survey area is correctly defined in Technical Appendix 8-3. Correct baseline information provided in Technical Appendix 8-3 fed into the PCF Stage 2 EAR Chapter 8 biodiversity and the conclusions reported in Section 8.9.3 are unaltered.



Section Paragra		aph / Table			Location		
8.6.4	Table 8-6 – Sun	Table 8-6 – Summary of habitat       types within Scheme options			Options 1V9, 4/5AV1 and 4/5AV2		
Existing Text							
Habitat	Geographical level of importance (sensitivity)	nce (sensitivity)   Present with  Present with  not within footprint  Not present			within 250m ally linked to Scheme option		
Ancient Woodland, Anci	ent and Veteran Trees and	HPIs					
Wood Pasture and Parkland HPI	National	~	+	+	~	+	+
Wet Woodland HPI	National (where also part of ancient woodland) County (where isolated, non-ancient woodland)	+	+	~	V	+	-
Traditional Orchard HPI	County	+	+	+	+	~	+
Coastal Saltmarsh HPI	Local	- / H	-	+	+	+	+
Amended text							
Habitat	Geographical level of importance (sensitivity)	✓ +	Prese ithin foo Not p	ent with ent with otprint) resent	hin Scheme hin 250m of ) within 250n Ily linked to 4/5AV1	Scheme or	
Ancient Woodland Anci	ent and Veteran Trees and					HORTZ	<b>UB</b> VI
Wood Pasture and Parkland HPI	National	✓	+ ✓	+	≁+	+ ✓	+
Wet Woodland HPI	National (where also part of ancient woodland) County (where isolated, non-ancient woodland)	+	+	~	≁ +	+ ✓	-
Traditional Orchard HPI	County	+	+	+	+ 🗸	≁ +	+
Coastal Saltmarsh HPI	Local	- / H	- / H	+	+	+	+



For ease of readability, only the relevant rows of Table 8-6 have been included in the table below.

Section	Paragraph / Table	Location
8.6.4	Table 8-6 – Summary of habitat	Options 1V9, 4/5AV1 and 4/5AV2
	types within Scheme options	
	•	

# Explanation

These changes correct the description of proximity of the Scheme options to the following Habitats of Principal Importance (HPI):

- Wood Pasture and Parkland HPI;
- Wet Woodland HPI;
- Traditional Orchard HPI;
- Coastal Saltmarsh HPI.

The biodiversity assessment was conducted based on the correct baseline information provided in Table 8-9 and Figure 8-5 and 8-6 (all provided in Chapter 8 of the PCF Stage 2 EAR) which provide clear information allowing the reader to see the proximity of these habitats to the scheme options. The corrections to Table 8-6 are the result of a transcription error between Figures 8-5, 8-6 and Table 8-9 (which contain the correct information). The correct baseline was fed into the assessment presented in the PCF Stage 2 EAR Chapter 8 – Biodiversity, and thus the conclusions which are summarised in Section 8.9.3 remain unchanged.

# Erratum 7

Section	Paragraph / Table	Location
8.6.4	Paragraph 8.6.4.37	Option 4/5AV1 and 4/5AV2

# **Existing Text**

Two areas of this habitat are present within 250 metres of the Scheme options. The first is at Binsted Park, inside the Binsted Wood Complex LWS. Binsted Park is directly traversed by Option 4/5AV1, and is approximately 100 metres from Options 4/5AV2 and 5BV1. It is more than 500 metres from the other Scheme options. The northern part of Binsted Park is also mapped as ancient woodland and lowland mixed deciduous woodland HPI as well as wood pasture and parkland HPI (the three habitat types overlap in this location).

### Amended Text

Two areas of this habitat are present within 250 metres of the Scheme options. The first is at Binsted Park, inside the Binsted Wood Complex LWS. Binsted Park is directly traversed by Option 4/5AV1 4/5AV2, and is approximately 100 metres from Options 4/5AV2 4/5AV1 and 5BV1. It is more than 500 metres from the other Scheme options. The northern part of Binsted Park is also mapped as ancient woodland and lowland mixed deciduous woodland HPI as well as wood pasture and parkland HPI (the three habitat types overlap in this location).

### Explanation

This correction is the result of a typographical error regarding the option names. Figure 8-6 in the PCF Stage 2 EAR correctly displays the location of wood pasture and parkland HPI and as such the proximity of the scheme options to the HPI are clear to the reader. Correct baseline information provided in Figure 8-6 and Table 8-9 fed into the assessment provided in the PCF Stage 2 EAR, and thus the conclusions which are summarised in Section 8.9.3 remain unchanged.



Section	Paragraph / Table	Location
8.6.4	Paragraph 8.6.4.40	Option 1V9

# Existing Text

The second area of wood pasture and parkland HPI identified by Natural England is due west of where Binsted Lane meets Tortington Lane and the A27 (at approximate National Grid reference TQ001071), and is located within the Binsted Wood Complex LWS. This area of habitat is traversed by Option 1V5, and is approximately 10 metres to the east of Option 3V1, and 25 meters to the south west of Option 1V9. It is over 1 kilometre from the other Scheme options.

### Amended Text

The second area of wood pasture and parkland HPI identified by Natural England is due west of where Binsted Lane meets Tortington Lane and the A27 (at approximate National Grid reference TQ001071), and is located within the Binsted Wood Complex LWS. This area of habitat is traversed by Option 1V5, and is approximately 100 metres to the east of Option 3V1<del>, and 25 meters to the south west of Option 1V9</del>. Option 1V9 overlaps the Wood Pasture and parkland HPI traversed by Option 1V5 by 0.01ha. It is over 1 kilometre from the other Scheme options.

#### Explanation

This correction is the result of a typographical error. Figure 8-6 and Table 8-9 in the PCF Stage 2 EAR correctly present the extent of wood pasture and parkland HPI in relation to the scheme options and as such the proximity of the Options to the HPI are clear to the reader. The correct baseline data was fed into the baseline of the PCF Stage 2 EAR Chapter 8 – Biodiversity, and thus the conclusions which are summarised in Section 8.9.3 remain unchanged.

### Erratum 9

Section	Paragraph / Table	Location
8.6.4	Paragraph 8.6.4.53	Option 4/5AV2

## **Existing Text**

National Vegetation Classification surveys undertaken by Highways England and the Mid-Arun Valley Environmental Survey information identified three locations where wet woodland HPI is present (Figure 8-5). These include a downy birch (*Betula pubescens*) and purple moor-grass (*Molinia caerulea*) wet woodland in Paine's Wood (at approximate NGR SU992071) 200 metre west of Option 3V1; a tan alder (*Alnus glutinosa*) and ash woodland associated with springs in an area called Hundredhouse Copse or Little Danes Wood (approximate National Grid reference SU976068), which would be crossed by Option 4/5AV1; and a willow woodland (including grey willow *Salix cinerea*) at Lake Copse and also in adjacent woodlands called The Shaw (at National Grid reference SU9897305950) and The Lag (at National Grid reference SU993059) the latter of which would be traversed by Option 4/5AV2 only.

#### Amended Text

National Vegetation Classification surveys undertaken by Highways England and the Mid-Arun Valley Environmental Survey information identified three locations where wet woodland HPI is present (Figure 8-5). These include a downy birch (*Betula pubescens*) and purple moor-grass (*Molinia caerulea*) wet woodland in Paine's Wood (at approximate NGR SU992071) 200 metre west of Option 3V1; an tan alder (*Alnus glutinosa*) and ash woodland



Section	Paragraph / Table	Location
8.6.4	Paragraph 8.6.4.53	Option 4/5AV2
reference SU976068), which woul grey willow <i>Salix cinerea</i> ) at Lake	called Hundredhouse Copse or Little Danes d be crossed by <del>Option 4/5AV1</del> Option 4/5A Copse and also in adjacent woodlands calle he Lag (at National Grid reference SU993059	V2; and a willow woodland (including d The Shaw (at National Grid

## Explanation

Correction to a species name and a typographical error regarding the option names. Correct information relating to wet woodland is provided in Table 8-9 and Figure 8-5 which is clear for the reader to see. Correct baseline data fed into the assessment presented in the PCF Stage 2 EAR Chapter 8 - Biodiversity, and thus the conclusions summarised in Section 8.9.3 are unchanged as a result of these corrections.

Section		Paragraph / Table	Location	
8.6.4	.4 Paragraphs 8.6.4.56 and 8.6.4.57 Option 4/5AV1		Option 4/5AV1	
Existing	Text			
8.6.4.56	One area of orchard is the other Scheme Opti	traversed by Option 4/5AV2 (see Figure 8-	5). No other orchards are traversed by	
8.6.4.57	likely to be a high quali	by Option 4/5AV2 was not surveyed. Desk ty example of this habitat, supporting old tre is and lichen species and is therefore consid	ees, rare fruit tree varieties and	
Amendeo	d Text			
8.6.4.56	One area of orchard is traversed by Option 4/5AV2 Option 4/5AV1 (see Figure 8-5). No other orchards are traversed by the other Scheme Options.			
8.6.4.57	The orchard traversed by Option 4/5AV2 Option 4/5AV1 was not surveyed. Desk study information shows that this is likely to be a high quality example of this habitat, supporting old trees, rare fruit tree varieties and deadwood invertebrates and lichen species and is therefore considered to be of county importance.			
Explanat	ion			
orchard is being rep	provided in Figure 8-5 a orted incorrectly in parag in the PCF Stage 2 EAR,	regarding the option names. Correct informand nd Table 8-9 and is clear for the reader to in raphs 8.6.4.56 and 8.6.4.57. Correct baselin and thus the conclusions reported in Section	nterpret. A transcription error led to it ne data fed into the assessments	



Section	Paragraph / Table	Location
8.6.4	8.6.4.75	Option 4/5AV2

# **Existing Text**

All Scheme options cross the River Arun. Option 4/5AV1, Option 4/5AV2 and Option 5BV1 also cross Binsted Rife and Tortington Rife. Options 4/5AV1 crosses the Sandy Hole Pond stream. Option 3V1 crosses a number of small, part dry watercourses in Binsted Wood Complex LWS, upstream of Tortington Rife.

### Amended Text

All Scheme options cross the River Arun. Option 4/5AV1, Option 4/5AV2 and Option 5BV1 also cross Binsted Rife and Tortington Rife. Options 4/5AV1 and 4/5AV2 crosses the Sandy Hole Pond stream. Option 3V1 crosses a number of small, part dry watercourses in Binsted Wood Complex LWS, upstream of Tortington Rife.

### Explanation

This correction is the result of a typographic error when listing the Options that cross the Sandy Hole Pond stream. Figure 5 of the Mid-Arun Valley Environmental Impact Report (cited in PCF Stage 2 EAR Chapter 8 - Biodiversity) defines the location of the Sandy Hole Pond stream. Correct baseline information fed into the assessments presented in the PCF Stage 2 EAR Chapter 8 - Biodiversity, and thus the conclusions summarised in Section 8.9.3 remain unchanged.

### Erratum 12

For ease of readability, only the relevant rows of Table 8-9 have been included in the table below.			
Section	Paragraph / Table	Location	
8.6.4	Table 8-9 - Construction phase potential impacts	Option 4/5AV2	
		-	

### **Existing Text**

Ecological feature	Importance	Impact	Description
Ancient Woodland	National (Part of Binsted Wood Complex LWS)	Habitat severance	Option 3V1 will sever two ancient woodlands known as Tortington Common and Pinewoods. Option 4/5AV2 will sever Barn's Copse which comprises ASNW. Options 1V5, 1V9, 4/5AV1 will not sever ancient woodland as they cross the edge of woodlands.
Amphibians	County or local	Habitat severance	Construction of Option 4/5AV1 would sever two common toad breeding ponds (Madonna Pond and a pond in Lake Copse) from core terrestrial habitat that may be used for foraging and hibernating. The Scheme options will create a barrier to toad dispersal and is likely to result in increased levels of toad mortality.
Badger	Local	Habitat severance	There are approximately 9 setts within the combined footprint of all Scheme options including two main setts, two subsidiary setts and five outlier setts. The setts that will be lost from each option are:



Section	Paragraph / Table	Location
8.6.4	Table 8-9 - Construction phase potential impacts	Option 4/5AV2
	<ul> <li>Option 4/5 outlier</li> <li>Option 4/5</li> <li>Option 4/5</li> <li>Option 5B</li> <li>All Options will also sever v foraging and sett construction</li> </ul>	

# **Amended Text**

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Ecological feature	Importance	Impact	Description
Ancient Woodland	National (Part of Binsted Wood Complex LWS)	Habitat severance	Option 3V1 will sever two ancient woodlands known as Tortington Common and Pinewoods. Option 4/5AV2 will sever Barn's Copse and the Shaw which comprises ASNW. Options 1V5, 1V9, 4/5AV1 will not sever ancient woodland as they cross the edge of woodlands.
Amphibians	County or local	Habitat severance	Construction of Option 4/5AV1 4/5AV2 would sever two common toad breeding ponds (Madonna Pond and a pond in Lake Copse south of the Lag) from core terrestrial habitat that may be used for foraging and hibernating. The Scheme options will create a barrier to toad dispersal and is likely to result in increased levels of toad mortality.
Badger	Local	Sett loss and habitat severance	There are approximately nine setts within the combined footprint of all Scheme options including two main setts, two subsidiary setts and five outlier setts. The setts that will be lost from each option are: Option 1V5: 0 Option 1V9: 0 Option 3V1: 1 main, 1 subsidiary and 2 outlier Option 4/5AV1: 1 main, 1 subsidiary, 1 outlier 1 outlier Option 4/5AV2: 1 outlier Option 5BV1: 1 outlier. All Options will also sever woodland habitat that may be used for foraging and sett construction. The Scheme options will create a barrier to badger dispersal and are likely to result in increased levels of badger mortality.



For ease of readability, only the relevant rows of Table 8-9 have been included in the table below.

Section	Paragraph / Table	Location
8.6.4	Table 8-9 - Construction phase potential impacts	Option 4/5AV2

# Explanation

These corrections resolve a typographical error regarding the name of a woodland block and correct a transcription error caused by the reversal of Option 4/5AV1 and 4/5AV2. The correct position of the Madonna Pond and the Lag/the Shaw in relation to the scheme options is shown in Figure 8-4 which is clear for the reader to see. Correct information on badger is provided in Technical Appendix 8-3. Correct baseline information fed into the assessment presented in the PCF Stage 2 EAR Chapter 8 – Biodiversity, and thus the conclusions which are summarised in Section 8.9.3 remain unchanged.

### Erratum 13

For ease of readability, only the relevant rows of Table 8-10 have been included in the table below.			
Section	Paragraph / Table	Location	
8.6.4	Table 8-10 Operational phase potential impacts	Option 3V1	
Existing Text			

Ecological feature	Impact	Justification for scoping in
Badger	Injury and mortality	Badger are susceptible to mortality associated with vehicle collision. Where a Scheme option severs a badger territory, potentially separating foraging areas from sett locations, an increased risk of death or injury from vehicle collisions is likely. Option 1V5 and Option 1V9 expand the existing A27 road which is a likely existing source of badger mortality and thus additional development is unlikely to markedly worsen this baseline. Option 4/5AV1, Option 4/5AV2 and Option 5BV1 are likely to have a greater impact as they affect more woodland, hedgerows and farmland habitat.
River HPI	Shading	Option 1V5 and Option 1V9 would cross the River Arun on a newly constructed bridge. The bridge is likely to result in the shading of HPI in this vicinity. New and expanded crossings of the River Arun will shade small sections of river. Option 4/5AV1, Option 4/5AV2 and Option 5BV1 would cross the valley of Tortington Rife. Option 5BV1 would cross the valley of Binsted Rife. Shading will also apply to these locations.

#### Amended Text

Ecological feature	Impact	Justification for scoping in
Badger	Injury and mortality	Badger are susceptible to mortality associated with vehicle collision. Where a Scheme option severs a badger territory, potentially separating foraging areas from sett locations, an increased risk of death or injury from vehicle collisions is likely. Option 1V5 and Option 1V9 expand the existing A27 road which is a likely existing source of badger mortality and thus additional development is unlikely to markedly worsen this baseline. Option 3V1, 4/5AV1, Option 4/5AV2 and Option 5BV1 are likely to have a greater impact as they affect more woodland, hedgerows and farmland habitat.



For ease of readability, only the relevant rows of Table 8-10 have been included in the table below.

Section		Paragraph / Table	Location
8.6.4		Table 8-10 Operational phase potential impacts     Option 3V1	
River HPI	Shading	Option 1V5 and Option 1V9 would cross the River bridge. The bridge is likely to result in the shading New and expanded crossings of the River Arun wi Option 3V1, 4/5AV1, Option 4/5AV2 and Option 5 Tortington Rife. Option 5BV1 would cross the valle apply to these locations.	of HPI in this vicinity. Il shade small sections of river. 3V1 would cross the valley of

#### Explanation

This correction is the result of a typographic error regarding the listing of Option names in the text. It is now corrected to show that Option 3V1 also has the potential to affect badger and river HPI. The correct location of the scheme options in relation to watercourses is shown in Figure 8-4 and the correct location of badger habitat is shown in Technical Appendix 8-3. Both sources are clear for the reader to see. The correct baseline information was fed into the assessments provided in the PCF Stage 2 EAR Chapter 8 – Biodiversity, and thus the conclusions reported in Section 8.9.3 are unchanged as a result of these corrections.

#### Erratum 14

Section	Paragraph / Table	Location
8.8.3	Paragraph 8.8.3.19	N/A

# **Existing Text**

It is likely that barn owl mortality will increase as a result of the operation of a new road in locations crossing suitable barn owl habitat where there was no main road previously (this applies to Option 4/5 V1, Option 4/5 V2 and Option 5BV1). The increased risk of barn owl mortality may be offset by provision of new barn owl nest boxes away from the Scheme to encourage the breeding success of barn owl in the wider landscape. This approach follows established mitigation strategies for this species<sup>112</sup>.

Footnote 112: Shawyer, C. R. (2011). Barn Owl Tyto alba Survey Methodology and Techniques for use in Ecological Assessment: Developing Best Practice in Survey and Reporting. IEEM, Winchester

### Amended Text

It is likely that barn owl mortality will increase as a result of the operation of a new road in locations crossing suitable barn owl habitat where there was no main road previously (this more applies to Option 4/5AV1, Option 4/5AV2 and Option 5BV1, relative to other Scheme options). The increased risk of barn owl mortality may be offset by provision of new barn owl nest boxes away from the Scheme to encourage the breeding success of barn owl in the wider landscape. This approach follows established mitigation strategies for this species<sup>112</sup>.

Footnote 112: Shawyer, C. R. (2011). Barn Owl Tyto alba Survey Methodology and Techniques for use in Ecological Assessment: Developing Best Practice in Survey and Reporting. IEEM, Winchester

#### Explanation

This correction is the result of a typographical error that relates to the relative risk of mortality posed to barn owl from the various Scheme options. Correct information was fed into the assessments presented in the PCF Stage 2 EAR Chapter 8 – Biodiversity, and thus the conclusions summarised in Section 8.9.3 remain unchanged.



Section	Paragraph / Table	Location
8.9.2	8.9.2.28	All Scheme options

# Existing Text

Barn owl is a low, slow-flying species and research has shown that where this species roosts or forages in close proximity to operating major roads it is likely that road traffic mortality will deplete local populations. Provision of artificial roost boxes for barn owl greater than one kilometre from the Scheme is likely to bolster populations of barn owl in the wider landscape, compensating for the impact of mortality at the population level. However, a Moderate Adverse effect will remain close to the operational Scheme.

### Amended Text

In the construction phase, measures to mitigate impacts on barn owl will be likely successful. However, the loss of foraging and roosting habitat is assessed to result in a Moderate Adverse significance effect for all Scheme options. Barn owl is a low, slow-flying species and research has shown that where this species roosts or forages in close proximity to operating major roads it is likely that road traffic mortality will deplete local populations. Provision of artificial roost boxes for barn owl greater than one kilometre from the Scheme is likely to bolster populations of barn owl in the wider landscape, compensating for the impact of mortality at the population level. However, a Moderate Slight Adverse effect will remain close to the operational Scheme- for Option 1V5 and Option 1V9 (as they expand an existing road, already a source of barn owl mortality); and Moderate Adverse effect for all other options as they cross new habitat where there is no major road at present.

#### Explanation

This correction relates to the adverse effects reported for barn owl. Although Table 8-13 of the PCF Stage 2 EAR describes adverse effects associated with the construction phase these were not transcribed into the descriptive text in paragraph 8.9.2.28, page 8-115 of the EAR Chapter 8 - Biodiversity. Additional operational adverse effects on Option 1V5, 1V9 and 3V1 are now listed in the text, however, these do not alter the overall conclusion of the EAR Chapter 8 – Biodiversity and would not be a differentiating factor between Options.

For ease of readability, only the relevant rows of Table 8-13 have been included in the table below.				
Section	Paragraph / Table Location			
8.9.3	Table 8-13 - Operational phase likely significant effects         Various			
Existing Text				

Ecological feature	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
Barn owl	Not Significant - Neutral	Not Significant - Neutral	Not Significant - Neutral	Significant – Moderate Adverse	Significant – Moderate Adverse	Significant – Moderate Adverse



For ease of readability, only the relevant rows of Table 8-13 have been included in the table below.

Section	Paragraph / Table	Location
8.9.3	Table 8-13 - Operational phase likely significant effects	Various

### **Amended Text**

Ecological feature	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
Barn owl	Net Significant – <del>Neutral</del> Slight Adverse	Net-Significant – <del>Neutral</del> Slight Adverse	Not Significant - Neutral Significant – Moderate Adverse	Significant – Moderate Adverse	Significant – Moderate Adverse	Significant – Moderate Adverse

# Explanation

This correction applies to the operational adverse effects relating to barn owls in Table 8-13. Additional operational adverse effects on Option 1V5, 1V9 and 3V1 are listed as a result of this erratum, however these do not alter the overall conclusion of the EAR Chapter 8 – Biodiversity and would not be a differentiating factor between Options.

#### Erratum 17

For ease of read	lability, only the relevant rows of Table 8-12 have been included in the table below.	
Section	Paragraph / Table	Location
8.9.2 and 8.9.3	Paragraph 8.9.2.3 and Table 8-12 - Construction phase likely significant effects	Various

## Existing Text

8.9.2.3 Construction of the Scheme is likely to have a beneficial effect on Fairmile Bottom and Arundel Park SSSI because:

- Redistribution of the traffic from the A29 onto the A27 will result in a decrease in traffic flow and a decrease in nitrogen oxide concentrations.
- Nitrogen oxide concentrations will not exceed the critical load level of 0.4 3g/m3 and significant effects are not anticipated.

### Table 8-12 – Construction phase likely significant effects

Ecological feature	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
Arundel Park SSSI	Significant – Slight Beneficial					
Fairmile Bottom SSSI	Significant – Slight Beneficial					



For ease of readability, only the relevant rows of Table 8-12 have been included in the table below.

Section	Paragraph / Table	Location
8.9.2 and 8.9.3	Paragraph 8.9.2.3 and Table 8-12 - Construction phase likely significant effects	Various

## Amended Text

- 8.9.2.3a Measures to prevent dust and other sources of air pollution will be effective in mitigating indirect impacts on all SSSIs in the Desk Study Area. No significant adverse effect is anticipated.
- 8.9.2.3 Construction Operation of the Scheme is likely to have a beneficial effect on Fairmile Bottom and Arundel Park SSSI because:
  - Redistribution of the traffic from the A29 onto the A27 will result in a decrease in traffic flow and a decrease in nitrogen oxide concentrations.
  - Nitrogen oxide concentrations will not exceed the critical load level of 0.4 3g/m3 and significant effects are not anticipated.

Table 8-12 – Construction phase likely significant effects

Ecological feature	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
Arundel Park SSSI	Significant – Slight Beneficial Not Significant - Neutral	Significant – Slight Beneficial Not Significant - Neutral	Significant – Slight Beneficial Not Significant - Neutral	Significant – Slight Beneficial Not Significant - Neutral	Significant – Slight Beneficial Not Significant - Neutral	Significant – Slight Beneficial Not Significant - Neutral
Fairmile Bottom SSSI	<del>Significant –</del> <del>Slight</del> <del>Beneficial</del> Not Significant - Neutral	Significant – Slight Beneficial Not Significant - Neutral	<del>Significant –</del> <del>Slight</del> <del>Beneficial</del> Not Significant - Neutral			

### Explanation

These corrections are the result of a transcription error between Chapter 5 Air Quality and Chapter 8 Biodiversity. Correct baseline information is provided in Chapter 5 Air Quality and this fed into the assessment of different scheme options presented in the PCF Stage 2 EAR. However, this erratum corrects information provided in Chapter 8 Biodiversity. Construction phase effects on Fairmile Bottom SSSI and Arundel Park SSSI are likely to be neutral (incorrectly reported as beneficial in paragraph 8.9.2.3 and resulting summary Table 8-12). This correction does not affect the underlying assessment or change the results of the assessment in the PCF Stage 2 EAR Chapter 8 -Biodiversity.



Section	Paragraph / Table	Location
8.6.4	8.6.4.142	All Scheme options (Baseline conditions)

# **Existing Text**

The desk study identified 488 hazel dormouse (*Muscardinus avellanarius*) records within the Desk Study Area. The most recent records were from 2014. The majority of records were from Binsted Wood Complex LWS and Rewell Wood Complex LWS which form large areas of ancient woodland towards the western extent of the Field Survey Area.

### Amended Text

The desk study provided by Sussex Biodiversity Records Centre identified 488 431 hazel dormouse (*Muscardinus avellanarius*) records within the Desk Study Area. The most recent records were from 2014. The majority of records were from Binsted Wood Complex LWS and Rewell Wood Complex LWS which form large areas of ancient woodland towards the western extent of the Field Survey Area.

#### Explanation

A transcription error led to an incorrect number of dormouse desk study records being reported in the EAR. These records are from Sussex Biodiversity Records Centre. Correct baseline information was presented in Technical Appendix 8-14 and this fed into the assessment presented in the PCF Stage 2 EAR Chapter 8 – Biodiversity and thus the conclusions which are summarised in in Section 8.9.3 remain unchanged.

#### Erratum 19

Section	Paragraph / Table	Location
8.6.4	Paragraph 8.6.4.161	All Scheme options (Baseline conditions)

# Existing Text

The desk study identified 87 reptile records within the Desk Study Area, comprising slow worm (*Anguis fragilis*), common lizard (*Zootoca vivipara*), grass snake (*Natrix natrix*) and adder (*Vipera berus*). The most recent records were from 2014.

### Amended Text

The desk study identified <del>87</del> 201 reptile records provided by Sussex Biodiversity Records Centre within the Desk Study Area, comprising slow worm (*Anguis fragilis*), common lizard (*Zootoca vivipara*), grass snake (*Natrix natrix*) and adder (*Vipera berus*). The most recent records were from 2014.

#### Explanation

A transcription error lead to an incorrect number of reptile desk study records being reported in the EAR. These records are from Sussex Biodiversity Records Centre. Correct baseline information was presented in Technical Appendix 8-21 and fed into the assessment presented in the PCF Stage 2 EAR Chapter 8 – Biodiversity and thus the conclusions which are summarised in in Section 8.9.3 remain unchanged.



Section	Paragraph / Table	Location
8.6.4	Paragraph 8.6.4.165	All Scheme options (Baseline conditions)

# Existing Text

Reptile surveys undertaken by Highways England in 2017 and 2018 confirmed the presence of presence of adder, common lizard, grass snake and slow worm in the Field Survey Area. Six sites recognised as Key Reptile Sites because they either supported three or more reptile species; two snake species; or an exceptional population of one species (>10 adults observed during one survey on a single day). These populations were in grassland to the west of Arundel Arboretum; in the vicinity of Manor Farm, Lake Copse, rights of way through Pinewoods; due north of the existing A27 in the Slindon Estate; and to the west of Ash Piece.

#### Amended Text

Reptile surveys undertaken by Highways England in 2017 and 2018 confirmed the presence of presence of adder, common lizard, grass snake and slow worm in the Field Survey Area. Seven Six sites recognised as Key Reptile Sites because they either supported three or more reptile species; two snake species; or an exceptional population of one species (>10 adults observed during one survey on a single day). These populations were in grassland to the west of Arundel Arboretum; in the vicinity of Manor Farm, Lake Copse, rights of way through Pinewoods; due north of the existing A27 in the Slindon Estate; and to the west of Ash Piece.

#### Explanation

A transcription error lead to an incorrect number of Key Reptile Sites being reported in the EAR. Correct baseline information was presented in Technical Appendix 8-1 and fed into the assessment presented in the PCF Stage 2 EAR Chapter 8 – Biodiversity and thus the conclusions which are summarised in in Section 8.9.3 remain unchanged.

### Erratum 21

Section	Paragraph / Table	Location
8.6.4	Paragraph 8.6.4.150	All Scheme options (Baseline conditions)

**Existing Text** 

Seventy-nine species records of invertebrate SPI were returned from within the Desk Study Area. These were all Coleoptera, Hymenoptera, Orthoptera or Diptera.

#### **Amended Text**

Seventy-nine species records of invertebrate SPI were returned from within the Desk Study Area. These were all Coleoptera, Hymenoptera, Lepidoptera, Orthoptera or Diptera.

#### Explanation

A transcription error lead to the omission of the Lepidoptera (butterflies and moths) from a summary sentence about desk study records reported in the EAR. Technical Appendix 8-22 provides correct information and fed into the assessment presented in the PCF Stage 2 EAR Chapter 8 – Biodiversity and thus the conclusions which are summarised in in Section 8.9.3 remain unchanged.



Section		Paragraph / Table	Location
8.5.2		Paragraph 8.5.2.1	All Scheme options (Baseline conditions)
Existing Text			
Desk Study Are	eas where distances	have been measured from th	e outer edge of the nearest Scheme option:
Advice	designated specific National statutory a Protected and nota designated sites on	cally for the protection of bats and non-statutory designated able species and habitats – 2 SSSIs within 200 metres of t	netres, extended to 30 kilometres for SACs sites –2 kilometres kilometres. Potential impacts on international he Affected Road Network (ARN) were also air quality assessment specification of the DMRB
Amended Tex	t		
Desk Study Are	eas where distances	have been measured from th	e outer edge of the nearest Scheme option:
Advice	designated specific possible hydrologic National statutory a Protected and nota study records for re designated sites on	cally for the protection of bats cal connection between the S and non-statutory designated able species and habitats – 2 casons explained in Technica SSSIs within 200 metres of t	hetres, extended to 30 kilometres for SACs and extended to any distance where there is a cheme and the designated site. sites –2 kilometres kilometres extended to 6 kilometres for bat desk I Appendix 8-5). Potential impacts on international he Affected Road Network (ARN) were also air quality assessment specification of the DMRB
Explanation			
distance where erratum is a typ	there are possible hoographic error and	hydrological connections betw	have stated that sites would be considered at any eeen a designated site and the Scheme. This and accompanying Figure 8-1. Figure 8-1 Area is not required.
and Technical does not alter t	Appendix 8-1 which	is a preliminary Habitat Regu n or conclusions which are su	brated in the assessment presented in Chapter 8 lations Screening Assessment. This correction Immarised in Section 8.9.3. The conclusion of the

Section	Paragraph / Table	Location	
8.6.1	Paragraph 8.6.1.1	All Scheme options (Baseline conditions)	
Existing Text			
_	escribed for biodiversity are derived fro	om the following sources:	
Ordnance	ly sources: Survey mapping arch provided by Sussex Biodiversity F	Records Centre in 2018	
•			



Section	Paragraph / Table Location		
8.6.1	Paragraph 8.6.1.1         All Scheme options (Baseline conditions)		
Amended Text			
The baseline conditions described for	or biodiversity are derived fr	om the following sources:	
<ul> <li>Desk Study sources</li> <li>Ordnance Survey n</li> <li>A data search provi</li> <li>Environment Agenc</li> <li></li> </ul>	napping ded by Sussex Biodiversity	Records Centre in 2018	
Explanation			
Stage 2 EAR. The Environment Age only applies to the method description baseline that inform the assessment	ency information was correct on. Environment Agency des t presented in Chapter 8 and	esk study information from Section 8.5.2 of the PCF Ily included in Technical Appendix 8-2. This error sk study data was fully incorporated into the I thus informed the conclusions which are not be altered as a result of this erratum.	

Section		Paragraph / Table	Location			
8.5.3		Paragraph 8.5.3.1 All Scheme options (Baseline condition				
Existing Text	Existing Text					
The following F Scheme option	•	ere used. Distances have b	een measured from the outer edge of the nearest			
	· ·	and aquatic) – 250 metres sh and aquatic invertebrates es	) – 250 metres			
Amended Tex	t					
The following F Scheme option	•	ere used. Distances have b	een measured from the outer edge of the nearest			
<ul> <li>Habitats (terrestrial and aquatic) – 250 metres</li> <li>Aquatic ecology (fish and aquatic invertebrates) – 250 metres</li> <li>Badger – 250 500 metres</li> </ul>						
Explanation						
incorrectly as 2 Appendix 8-3 in	50 metres in paragra nformed the assessm	aph 8.5.3.1 of this Chapter. nent presented in Chapter 8	n Technical Appendix 8-3 as 500 m but was stated All badger survey data reported in Technical and thus informed the conclusions which are not be altered as a result of this erratum.			



8.6.4		Paragraphs 8.6.4.126 -	All Scheme options (Baseline conditions)	
		Paragraphs 8.6.4.126 - All Scheme options (Baseline cond 8.6.4.127		
Existing Tex	ĸt			
	Roosts of common spec are of local importance.	ies such as soprano pipistrelle	e, common pipistrelle and brown long-eared bat	
	Given the wide spatial co	overage of field surveys it is ur	stern end of Option 4/5AV1 and Option 5BV1. nlikely that the overall importance of the bat different bat species have been underestimated.	
Amended Te	ext			
	Roosts of common spec are of local importance.	ies such as soprano pipistrelle	e, common pipistrelle and brown long-eared bat	
	Great horseshoe is an A not considered further in species have been ident number of sites in Susse Sussex ( <u>http://www.suss</u>	nnex II bat species (as are Be this assessment for the follow ified in the Field Survey Area; ex, not including the Field Surv exbatgroup.org.uk/batsinsuss nutomated bat detector surveys	n two years of automated bat detector surveys. chstein's bat and barbastelle). This species is <i>v</i> ing reasons: 1) no roosts belonging to this 2) great horseshoe is known to breed at a small rey Area and is considered to be very rare in <u>ex</u> ); and 3) only a single record of this species is s and thus it is not considered to rely on habitats	
	Given the wide spatial co	overage of field surveys it is ur	stern end of Option 4/5AV1 and Option 5BV1. hlikely that the overall importance of the bat different bat species have been underestimated.	
Explanation				

appendices. It is also referred in paragraph 8.6.4.124 of the PCF Stage 2 EAR Chapter 8 – Biodiversity. However, an explicit justification for the exclusion of great horseshoe bat as an Important Ecological Feature was omitted. For ease of reference this is now provided. Greater horseshoe is not an Important Ecological Feature for this assessment and, therefore, the conclusions provided in Section 8.9.3 remain unchanged.



# 2.10. Environmental Assessment Report Chapter 11: Noise and Vibration

### Erratum 1

Section	Paragraph / Table	Location
11.9.2	Table 11-12 - Noise barrier total length	Scheme options 1V5, 1V9,
	Rows 2, 3, 5 and 6	4/5AV1 and 4/5AV2.

# **Existing Text**

Option	Approximate length (km)
1V9	2.6
1V5	2.1
3V1	2.1
4/5AV1	3.4
4/5AV2	5.3
5BV1	4.7

# Amended Text

Option	Approximate length (km)
<del>1V9</del> 1V5	2.6
<del>1V5</del> 1V9	2.1
3V1	2.1
4/5AV1	<del>3.4</del> 5.3
4/5AV2	<del>5.3</del> 3.4
5BV1	4.7

#### Explanation

The results of the assessment have not changed because the corrections described above are the result of typographical errors. The noise assessments were based on the correct length of noise barrier for each option. There are no changes to the assessment and conclusions of the PCF Stage 2 EAR as a result of this correction.

Section		Paragraph / Table	Location
11.10.3		Paragraph 11.10.3.3, Bullet point 3	Option 1V5
Existing Text			
	419 properties would be subject to noise levels exceeding the SOAEL in the future year without Option 1V5 in operation (Do-minimum 2041). This number would reduce to 273 with the option in operation (Do-something 2041).		



Section	Paragraph / Table	Location
11.10.3	Paragraph 11.10.3.3, Bullet point 3	Option 1V5
Amended Text		
419 properties would be subject to noise levels exceeding the SOAEL in the future year without Option 1V5 in operation (Do-minimum 2041). This number would reduce to 273 255 with the option in operation (Do-something 2041).		
Explanation		
	a transcription error between the technical appendix (	

11-3 – Noise Model Results) and the PCF Stage 2 EAR Chapter 11 – Noise and Vibration. The noise assessment was based on the correct value (as reported in Appendix 11-3) and so there are no changes to the assessment and conclusions of the PCF Stage 2 EAR as a result of this correction.

This error also appears in the errata for the SAR and the Environmental Sensitivity Testing Technical Note.

## Erratum 3

For ease of readability, only the relevant rows of Table 11-15 have been included in the table below.			
Section	ction Paragraph / Table Location		
11.10.3	0.3 Table 11-15 - Potential for likely operational Option 1V5 significant environmental effects – Option 1V5		

# **Existing Text**

Receptor areas	Magnitude of impact	Significance of effect	Significance justification
Existing properties south of A27, west of Ford Road Roundabout (medium density population)	Properties will mainly experience a minor adverse impact in the short-term, however this impact would range from negligible to moderate adverse (see Figure 11-4). Generally negligible in the long-term (a limited number of properties will experience a minor and major adverse impact) (see Figure 11-7).	Not Significant	<ul> <li>No major adverse impacts.</li> <li>Properties with noise levels above SOAEL will experience a reduction in noise level such that they will no longer be above SOAEL (see Figure 11-10).</li> </ul>

# **Amended Text**

Receptor areas	Magnitude of impact	Significance of effect	Significance justification
Existing properties south of A27, west of Ford Road Roundabout (medium density population)	Properties will mainly experience a minor adverse impact in the short-term, however this impact would range from negligible to moderate major adverse (see	Not Significant	<ul> <li>No major adverse impacts in the long-term.</li> <li>Properties with noise levels above SOAEL will experience a reduction in noise level such that they will no longer be above SOAEL (see Figure 11-10).</li> </ul>



Section		Paragraph / Table	Location
		Table 11-15 - Potential for likely operationalsignificant environmental effects – Option 1V5	Option 1V5
Figure 11-4). Generally negligible in the long-term (a limited number of properties will experience a minor and major moderate adverse impact) (see Figure 11-7).		igible in the long-term (a ed number of properties experience a minor and er moderate adverse	

#### Explanation

These corrections rectify an error in describing the figures. However, the underlying assessment and the figures reporting the findings (Figures 11.4 and 11.7) are correct and the description of significance remains unchanged. There are no changes to the assessment and conclusions of the PCF Stage 2 EAR as a result of this correction.

#### Erratum 4

Section	Paragraph / Table	Location
11.10.5	Table 11-18 Option 3V1 Construction Assessment Locations	Option 3V1
Eviating Taxt		

#### **Existing Text**

Receptor area	Distance (m)	ABC Threshold (day)	ABC Threshold (night)
Existing properties east of Crossbush	100	А	С
Existing properties south of Crossbush	130	В	С
Existing properties on Ford Road	120	В	С
Existing properties in Tortington	120	С	С
Existing properties south of A27, west of Ford Road Roundabout	90	С	С
Existing properties in Binsted	190	С	С

# **Amended Text**

Receptor area	Distance (m)	ABC Threshold (day)	ABC Threshold (night)
Existing properties east of Crossbush	100	А	С
Existing properties south of Crossbush	130	В	С
Existing properties on Ford Road	120	₿A	<del>C</del> B
Existing properties in Tortington	120	<del>C</del> A	<del>C</del> A
Existing properties south of A27, west of Ford Road Roundabout	90	С	С
Existing properties in Binsted	190	<del>C</del> A	С



Section	Paragraph / Table	Location
11.10.5 Table 11-18 Option 3V1 Construction Assessment Locations		Option 3V1
Explanation		

These corrections are a result of typographical errors. The ABC thresholds identify, in a simple way, the level of existing ambient noise. Category A is the quietest, whilst Category C is the noisiest. This in turn is a pointer towards how vulnerable an area might be to construction noise. The information was included for context and to facilitate comparison between options. The results of the assessment have not changed, as the assessment is based on the correct information and modelling results. There are no changes to the assessment and conclusions of the PCF Stage 2 EAR as a result of these corrections.

### Erratum 5

Section	Paragraph / Table	Location		
11.10.5	Paragraph 11.10.5.3, Bullet point 5	Option 3V1		
Existing Text				
<ul> <li>379 properties would of which are classified</li> </ul>	experience a noise level increase classified as mo	oderate and major in the long-term. Nine		
Amended Text				
379 326 properties we Nine of which are class	ould experience a noise level increase classified a sified as major.	s moderate and major in the long-term.		
Explanation				
	t of a transcription error between the technical ap ts) and the PCF Stage 2 EAR Chapter 11 – Noise			
	s based on the correct value (as reported in Appendin clusions of the PCF Stage 2 EAR as a result of t			
This error also appears in the errata for the SAR and South Downs National Park Special Qualities Impact Assessment.				

### Erratum 6

Section	Paragraph / Table	Location
11.10.6	Paragraph 11.10.6.2	Option 4/5AV1
Existing Text		

The thresholds of significance have been determined and they are shown in Table 11-20. The nearest properties lie within assessment categories ranging from A to C with the closest property being in category C. Construction activities near existing properties in Tortington and Binsted will have to be carefully managed.

### Amended Text

The thresholds of significance have been determined and they are shown in Table 11-20. The nearest properties lie within assessment categories ranging from A to C with the closest property being in category  $\bigcirc$  A or B. Construction activities near existing properties in Tortington and Binsted will have to be carefully managed.



# Explanation

This correction is required to rectify a transcription error that resulted in an inconsistency between the text and Table 11-20 (see Erratum 7). The ABC thresholds identify, in a simple way, the level of existing ambient noise. Category A is the quietest, whilst Category C is the noisiest. This in turn is a pointer towards how vulnerable an area might be to construction noise. The information was included for context and to facilitate comparison between options. The results of the assessment have not changed as the assessment is based on the correct information and noise modelling results. There are no changes to the assessment and conclusions of the PCF Stage 2 EAR as a result of this correction.

# Erratum 7

Section	Paragraph / T	Paragraph / Table Location				
11.10.6	Table 11-20 O	Table 11-20 Option 4/5AV1 construction assessment locations         Option 4/5AV1				
Existing Text						
Receptor area Distance (m) ABC Threshold (day) ABC Threshold (ni				Threshold (night)		
Existing properties east of Crossbush		100	A	С		
Existing properties south of Crossbush		130	В	С		
Existing properties on Ford Road		300	A	В		
Existing properties in Tortington		30	A	А		
Existing properties in Bi	nsted	15	A	В		

250

С

С

### **Amended Text**

**Existing properties in Walberton** 

Receptor area	Distance (m)	ABC Threshold (day)	ABC Threshold (night)
Existing properties east of Crossbush	100	А	С
Existing properties south of Crossbush	130	В	С
Existing properties on Ford Road	300	A	В
Existing properties in Tortington	30	А	А
Existing properties in Binsted	15	A	В
Existing properties in Walberton	<del>250</del> 30	С	С

#### Explanation

This correction is the result of a typographical error. The information was included for context and to facilitate comparison between options. The results of the assessment have not changed, as the assessment is based on the correct information and noise modelling results. There are no changes to the assessment and conclusions of the PCF Stage 2 EAR as a result of this correction.



Section Paragraph / Table			Location
11.10.6       Table 11-21 Potential for likely o significant environmental effects		•	Option 4/5AV1 V1
Existing Text			
Receptor area	Magnitude of impact	Significance	Significance justification
Existing properties on Fitzalan Road (medium density population)	Properties will experience an impact in the short-term ranging from minor beneficial to major adverse (see Figure 11-32). Impacts are expected to be generally negligible in the long- term. A limited number of properties will experience either a minor or moderate adverse impact (see Figure 11-35).	Not Significant	<ul> <li>Limited number of properties experiencing a major adverse impact in the short-term in the southern area. Absolute noise levels are expected to be either below or just above LOAEL.</li> <li>Properties with noise levels above SOAEL will experience a reduction noise level such that they will no longer be above SOAEL (see Figure 11-37).</li> </ul>
Amended Text			
Receptor area	Magnitude of impact	Significance	Significance justification

Receptor area	Magnitude of Impact	Significance	Significance justification
Existing properties on Fitzalan Road (medium density population)	Properties will experience an impact in the short-term ranging from minor beneficial to major adverse (see Figure 11-32). Impacts are expected to be generally negligible in the long- term. A limited number of properties will experience either a minor or moderate adverse impact (see Figure 11-35).	Not Significant Adverse	<ul> <li>Limited number of properties experiencing a major adverse impact in the short-term in the southern area. Absolute noise levels are expected to be either below or just above LOAEL.</li> <li>Properties with noise levels above SOAEL will experience a reduction noise level such that they will no longer be above SOAEL (see Figure 11-37).</li> </ul>

## Explanation

This correction is the result of a typographical error.

Whilst the conclusion for Scheme option 4/5AV1 has changed for the existing properties on Fitzalan Road, all the modelling, prediction and assessment work underpinning the PCF Stage 2 EAR is correct. The revised conclusion for Scheme option 4/5AV1 at Fitzalan Road will be considered during the overall evaluation of the Scheme options.

This error also appears in the errata for the consultation document and the SAR.



Section	Paragraph / Table			Location		
11.10.8	Table 11-24 Option 5BV1 construction assessment locations			Option 5BV1		
Existing Text	Existing Text					
Receptor area		Distance (m)	ABC Threshold (day	/) ABC Threshold (night)		
Existing properties east of Crossbush		100	A	С		
Existing properties south of Crossbush		130	В	С		
Existing properties on Ford Road		230	A	В		
Existing properties in Tortington		30	A	А		
Existing properties in Binsted		115	A	A		
Existing properties in Walberton		25	С	C		

# Amended Text

Receptor area	Distance (m)	ABC Threshold (day)	ABC Threshold (night)
Existing properties east of Crossbush	100	А	С
Existing properties south of Crossbush	130	В	С
Existing properties on Ford Road	<del>230</del> 300	А	В
Existing properties in Tortington	30	А	А
Existing properties in Binsted	115	А	А
Existing properties in Walberton	25	С	С

# Explanation

This correction is the result of a typographical error. The information was included for context and to facilitate comparison between options. The results of the assessment have not changed, as the assessment is based on the correct information and noise modelling results. There are no changes to the assessment and conclusions of the PCF Stage 2 EAR as a result of this correction.

## Erratum 10

Number of properties with a moderate or major adverse noise impact in the short-term

Number of properties above SOAEL

Section	Paragraph / Table					L	ocation
11.10.9 Table 11-27 Noise and vibration key numerical indicators for operational effects Option			Option 1V5				
Existing T	Existing Text						
Key Indicator		Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1

987

281

554

249

402

231

375

228

1065

273

531

263



### Amended Text

Key Indicator	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
Number of properties with a moderate or major adverse noise impact in the short-term	1065	987	554	402	375	531
Number of properties above SOAEL	<del>273</del> 255	281	249	231	228	263

# Explanation

The correction is the result of a transcription error between the technical appendix (see Table 11-3-2 of Appendix 11-3 – Noise Model Results) and the PCF Stage 2 EAR Chapter 11 – Noise and Vibration. The noise assessment was based on the correct value (as reported in Appendix 11-3) and so there are no changes to the assessment and conclusions of the PCF Stage 2 EAR as a result of this correction.

This error also appears in the errata for the SAR and Environmental Sensitivity Testing Technical Note.

### Erratum 11

Section	Paragraph / Table	Location
11.10.9	Table 11-28 Potential for likely noise and vibration significant effects in relation to operational phase	Option 4/5AV1
Existing 1	l Text	

Recep	otor Area	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
Fitzala	an Road	Significant	Significant	Significant	Not Significant	Significant	Significant
		Adverse	Adverse	Adverse		Adverse	Adverse

### **Amended Text**

Receptor Area	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
Fitzalan Road	Significant	Significant	Significant	Not Significant	Significant	Significant
	Adverse	Adverse	Adverse	Adverse	Adverse	Adverse

#### Explanation

This correction is a transcription error from Table 11-21 of the PCF Stage 2 EAR, which carried through to Table 11-28. Whilst the conclusion for Scheme option 4/5AV1 has changed for the existing properties on Fitzalan Road, all the modelling, prediction and assessment work underpinning the PCF Stage 2 EAR is correct. The revised conclusion for Scheme option 4/5AV1 at Fitzalan Road will be considered during the overall evaluation of the Scheme options.

This error also appears in the errata for the consultation document and the SAR.



EAR Figures       Figure 11.3, Figure 11.12, Figure 11.21, Figure 11-30, Figure 11.39 and Figure 11-48       All Scheme options         Existing Text / Amended Text       Revised versions of these figures are provided in Attachment 2       Explanation of Amended Figures         This correction adjusts the symbology in various figures. The current figures (Figure 11.3, Figure 11.12, Figure 11.21, Figure 11.30, Figure 11.39 and Figure 11-48 of the PCF Stage 2 EAR) show an incorrect symbology related to the long-term noise benefits for all Scheme options. On these figures the areas of adverse impact are correctly presented. Also, overall, the areas of beneficial impact are correctly presented. However, the grade boundary between the moderate and major benefits has been incorrectly presented, which means that the major benefits have been overstated on the long-term noise change contour plots. This issue affects all Scheme options. The corrected figures show the amended symbology. The underlying modelling results are correct, and the results of the assessment have not changed as a result of this erratum. There are no changes to the assessment and conclusions reached regarding noise and vibration effects within the PCF Stage 2 EAR assessments.	Section	Paragraph / Table	Location
Revised versions of these figures are provided in Attachment 2 <b>Explanation of Amended Figures</b> This correction adjusts the symbology in various figures. The current figures (Figure 11.3, Figure 11.12, Figure 11.21, Figure 11-30, Figure 11.39 and Figure 11-48 of the PCF Stage 2 EAR) show an incorrect symbology related to the long-term noise benefits for all Scheme options. On these figures the areas of adverse impact are correctly presented. Also, overall, the areas of beneficial impact are correctly presented. However, the grade boundary between the moderate and major benefits has been incorrectly presented, which means that the major benefits have been overstated on the long-term noise change contour plots. This issue affects all Scheme options. The corrected figures show the amended symbology. The underlying modelling results are correct, and the results of the assessment have not changed as a result of this erratum. There are no changes to the assessment and	EAR Figures		All Scheme options
Explanation of Amended Figures This correction adjusts the symbology in various figures. The current figures (Figure 11.3, Figure 11.12, Figure 11.21, Figure 11.30, Figure 11.39 and Figure 11-48 of the PCF Stage 2 EAR) show an incorrect symbology related to the long-term noise benefits for all Scheme options. On these figures the areas of adverse impact are correctly presented. Also, overall, the areas of beneficial impact are correctly presented. However, the grade boundary between the moderate and major benefits has been incorrectly presented, which means that the major benefits have been overstated on the long-term noise change contour plots. This issue affects all Scheme options. The corrected figures show the amended symbology. The underlying modelling results are correct, and the results of the assessment have not changed as a result of this erratum. There are no changes to the assessment and	Existing Text	/ Amended Text	
This correction adjusts the symbology in various figures. The current figures (Figure 11.3, Figure 11.12, Figure 11.21, Figure 11-30, Figure 11.39 and Figure 11-48 of the PCF Stage 2 EAR) show an incorrect symbology related to the long-term noise benefits for all Scheme options. On these figures the areas of adverse impact are correctly presented. Also, overall, the areas of beneficial impact are correctly presented. However, the grade boundary between the moderate and major benefits has been incorrectly presented, which means that the major benefits have been overstated on the long-term noise change contour plots. This issue affects all Scheme options. The corrected figures show the amended symbology. The underlying modelling results are correct, and the results of the assessment have not changed as a result of this erratum. There are no changes to the assessment and	Revised versio	ns of these figures are provided in Attachment 2	
11.21, Figure 11-30, Figure 11.39 and Figure 11-48 of the PCF Stage 2 EAR) show an incorrect symbology related to the long-term noise benefits for all Scheme options. On these figures the areas of adverse impact are correctly presented. Also, overall, the areas of beneficial impact are correctly presented. However, the grade boundary between the moderate and major benefits has been incorrectly presented, which means that the major benefits have been overstated on the long-term noise change contour plots. This issue affects all Scheme options. The corrected figures show the amended symbology. The underlying modelling results are correct, and the results of the assessment have not changed as a result of this erratum. There are no changes to the assessment and	Explanation o	f Amended Figures	
	11.21, Figure 1 to the long-terr presented. Also between the m have been ove corrected figure assessment ha	1-30, Figure 11.39 and Figure 11-48 of the PCF Stage 2 EAR) show an in noise benefits for all Scheme options. On these figures the areas of a b, overall, the areas of beneficial impact are correctly presented. Howev oderate and major benefits has been incorrectly presented, which mean rstated on the long-term noise change contour plots. This issue affects a es show the amended symbology. The underlying modelling results are two not changed as a result of this erratum. There are no changes to the	incorrect symbology related dverse impact are correctly er, the grade boundary is that the major benefits all Scheme options. The correct, and the results of the assessment and

This error also appears in the errata for the South Downs National Park Special Qualities Impact Assessment.

# 2.11. Environmental Assessment Report Chapter 12: Population and Health

### Erratum 1

Section	Paragraph / Table	Location
12.10.5	Paragraph 12.10.5.2	Option 4/5AV1
Evicting Tout		

### Existing Text

Land take from 1 property is required for Option 4/5AV1. It is anticipated that depending on the amount of land taken, and the functionality of that remaining (for example as a garden as of medium sensitivity), the magnitude will range from minor to major and the level of effect could range from slight to moderate. This will be fully determined at PCF Stage 3 (Preliminary Design), but at this stage a worst case is assumed, resulting in a permanent significant moderate adverse effect.

### Amended Text

Land take from <u>1 property</u> 2 properties is required for Option 4/5AV1. It is anticipated that depending on the amount of land taken, and the functionality of that remaining (for example as a garden as of medium sensitivity), the magnitude will range from minor to major and the level of effect could range from slight to moderate. This will be fully determined at PCF Stage 3 (Preliminary Design), but at this stage a worst case is assumed, resulting in a permanent significant moderate adverse effect.

### Explanation

The land take figures were mis-stated in Paragraph 12.10.5.2 of the PCF Stage 2 EAR. The number of properties with land take required from Option 4/5AV1 has been correctly presented in paragraph 12.7.2.2. The overall



Section Paragraph / Table Location		Location		
12.10.5	Paragraph 12.10.5.2 Option 4/5AV1			
assessment of significance for the "Demolition of private property and associated land take" assessment of Option				
4/5AV1 remains correct in the PCF Stage 2 EAR – Chapter 12. There are no changes to the conclusions of the				
PCF Stage 2 EAR as a result of this amendment, as the level of effect remains unchanged, and is considered to be				
at a worst case for each p	roperty.			

Section	Paragraph / Table	Location	
12.10.6	Paragraph 12.10.6.3	Option 4/5AV2	
Existing Text			

Option 4/5AV2 will have a permanent adverse effect during construction on Billycan Camping as the Option runs through its location. Billycan Camping is of high sensitivity. The magnitude of potential impacts to Billycan Camping is expected to be at worse a major adverse impact, if the business is not able to continue to operate in its current location, resulting in a large effect. It is considered that where compensation is provided to affected parties, according to the criteria within Table 2.3 of DMRB Volume 11, Section 2, Part 5, this would be reduced to a grading of permanent not significant moderate adverse effect and would not be critical in the decision-making process at this scale of loss.

# Amended Text

Option 4/5AV2 will have a permanent adverse effect during construction on Billycan Camping as the Option runs through its location. Billycan Camping is of high sensitivity. The magnitude of potential impacts to Billycan Camping is expected to be at worse a major adverse impact, if the business is not able to continue to operate in its current location, resulting in a large effect. It is considered that where compensation is provided to affected parties, according to the criteria within Table 2.3 of DMRB Volume 11, Section 2, Part 5, this would be reduced to a grading of permanent net significant moderate adverse effect and would not be critical in the decision-making process at this scale of loss. Option 4/5AV2 will have a permanent adverse effect on Avisford Park Golf Club as the option encroaches on its northern boundary. Avisford Golf Club is of high sensitivity. The magnitude of potential impacts is expected to be, at worse, a negligible adverse impact due to the extent of the infringement with the boundary of the Avisford Golf Club which constitutes a very minor loss to the facility, resulting in a permanent not significant slight adverse effect.

### Explanation

There was a typographical error within the level of significance reported in paragraph 12.10.6.3 which currently states 'Not significant' level of effect, but should read 'Significant moderate adverse' level of effect for Billycan Camping. In any event, the level of significance for the permanent requirement of land from private assets for construction purposes for Option 4/5AV2 has been correctly stated in Table 12-41. Paragraph 12.3.3.3 also states that where an effect has been assessed as moderate significance or greater, it is considered to be a significant effect in Environmental Impact Assessment terms. Hence, the typographical error would be apparent to the reader given the context of the assessment.

Table 12-19 states that there is 0.01ha land take from Avisford Golf Club, and potential impacts on private assets are outlined within Table 12-21. Additional text has been added to correct the description of the effect in Section 12.10.

The underlying assessments that informed the PCF Stage 2 EAR – Chapter 12 are unchanged. The assessment of significance for other aspects within Section 12.10.6 remain unchanged.



For ease of readability, only the relevant rows of Table 12-38 have been included in the table below.				
Section	Paragraph / Table	Paragraph / Table Location		
12.10.7       Table 12-38 Potential permanent effect on farm holdings for Option 5BV1       5BV1				
Existing Text				
Farm holding Significance of effect				
Hooe Farm Slight Adverse (Significant Effect)				

Farm holding	Significance of effect
Hooe Farm	Slight Adverse (Not Significant Effect)

#### Explanation

This amendment is due to a typographic error. In any event, the permanent acquisition of agricultural land or land used to access agricultural land for Option 5BV1 has been correctly concluded in paragraph 12.10.7.11 and Table 12-41. Paragraph 12.3.3.3 also states that where an effect has been assessed as moderate significance or greater, it is considered to be a significant effect in Environmental Impact Assessment terms. Hence, the typographical error would be apparent to the reader given the context of the assessment.

There are no changes to the overall conclusions of the PCF Stage 2 EAR Chapter 12 – Population and Health as a result of this amendment.

# Erratum 4

For ease of	of readability, only the relevant rows of Table 12-42 have been included in the tab	le below.
Section	Paragraph / Table	Location
12.10.9	Table 12-42 Population and Health operation phase likely significant effects	All options
Existing 1	ext	

Impact	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
Permanent noise impact on health outcomes	Negative	Negative	Negative	Negative	Negative	Negative

## **Amended Text**

Impact	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
Permanent noise impact on health outcomes	Positive and negative					



For ease of readability, only the relevant rows of Table 12-42 have been included in the table below.

Section	Paragraph / Table	Location
12.10.9	Table 12-42 Population and Health operation phase likely significant effects	All options
Explanatio	n	

The amendments are due to a transcription error. There are some noise improvements as a result of the scheme as illustrated in paragraphs 12.10.1.36, 12.10.3.8, 12.10.4.34, 12.10.5.32, 12.10.6.35 and 12.10.7.32. The amendments do not change the overall conclusions in the PCF Stage 2 EAR.

# Erratum 5

Section	Paragraph / Table	Location
12.10	Paragraph 12.10.1.1	Option 1V5

# Existing Text

Where demolition of residential properties is required, the magnitude of the impact is considered to be major, resulting in a permanent large adverse effect (significant) during construction. It is considered that where compensation (through compulsory purchase or other agreement) is provided to affected parties, according to the criteria within Table 2.3 of DMRB Volume 11, Section 2, Part 5<sup>58</sup>, this permanent effect would be reduced to a grading of moderate adverse (significant) but would not be considered to be critical in the decision-making process at this scale of loss.

# Amended Text

There are five residential properties with high sensitivity located on A27 Chichester Road (near the junction leading to the Arundel Arboretum) and at the Ford Road roundabout, where demolition may be required to accommodate Option 1V5. Where demolition of residential properties is required, the magnitude of the impact is considered to be major, resulting in a permanent large adverse effect (significant) during construction. It is considered that where compensation (through compulsory purchase or other agreement) is provided to affected parties, according to the criteria within Table 2.3 of DMRB Volume 11, Section 2, Part 5<sup>58</sup>, this permanent effect would be reduced to a grading of moderate adverse (significant) but would not be considered to be critical in the decision-making process at this scale of loss.

### Explanation

The potential for permanent acquisition of the properties is outlined within paragraph 12.7.2.1 and Figure 12-3. This correction provides additional clarification relating to the number and location of potential demolition of properties within Section 12.10, as previously outlined within Section 12.7. There are no changes to the conclusions of the PCF Stage 2 EAR as a result of this amendment, as the assessment took this information into consideration.

Section	Paragraph / Table	Location
12.10	Paragraph 12.10.5.1	Option 4/5AV1
Existing Text		
accommodate Option 4/5/	high sensitivity located along Tortington Lane where AV1. Demolition is considered to be a major impact, r ed that where compensation is provided to affected p	esulting in a large adverse effect during



Section	Paragraph / Table	Location
12.10	Paragraph 12.10.5.1	Option 4/5AV1
	e 11, Section 2, Part 5 <sup>60</sup> , this effect would be reduced nd would not be critical in the decision-making proces	

## Amended Text

There is one property with high sensitivity located along the Tortington Lane B2132 Shellbridge Road where demolition may be required to accommodate Option 4/5AV1. Demolition is considered to be a major impact, resulting in a large adverse effect during construction. It is considered that where compensation is provided to affected parties, according to the criteria within Table 2.3 of DMRB Volume 11, Section 2, Part 5<sup>60</sup>, this effect would be reduced to a grading of permanent significant moderate adverse effect and would not be critical in the decision-making process at this scale of loss.

#### Explanation

Amendment to the location of potentially demolished properties. The information has been correctly presented in paragraph 12.7.2.1, and on Figure 12-3. There are no changes to the conclusions of the PCF Stage 2 EAR as a result of this amendment.

#### Erratum 7

Section	Paragraph / Table	Location
12.10.6	Paragraph 12.10.6.1	Option 4/5AV2

# **Existing Text**

One property, with high sensitivity, is located along the B2132 Shellbridge Road and may be required to be demolished to accommodate Option 4/5AV2. Demolition is considered to be a major impact, resulting in a large adverse effect during construction. It is considered that where compensation is provided to affected parties, according to the criteria within Table 2.3 of DMRB Volume 11, Section 2, Part 5<sup>61</sup>, this effect would be reduced to a grading of permanent significant moderate adverse and would not be critical in the decision-making process at this scale of loss.

### Amended Text

One property, with high sensitivity, is located along the B2132 Shellbridge Road Tortington Lane and may be required to be demolished to accommodate Option 4/5AV2. Demolition is considered to be a major impact, resulting in a large adverse effect during construction. It is considered that where compensation is provided to affected parties, according to the criteria within Table 2.3 of DMRB Volume 11, Section 2, Part 5<sup>61</sup>, this effect would be reduced to a grading of permanent significant moderate adverse and would not be critical in the decision-making process at this scale of loss.

#### Explanation

Amendment to the location of potentially demolished properties. The information has been correctly presented in paragraph 12.7.2.1 and Figure 12-3. There are no changes to the conclusions of the PCF Stage 2 EAR as a result of this amendment.



Paragraph / Tab	le				I	Location	
Table 12-41 – Population and Health construction phase likely significant effects						Option 4/5AV1	
Text							
	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1	
ent requirement nunity land or s (or accesses onstruction es.	Slight Adverse (Not Significant)	Moderate Adverse (Significant)	Moderate Adverse (Significant)	Neutral	Slight Adverse (Not Significa	Neutral	
-							
l Text	Option 1V5	Option 1V9	Option 3V1	Option	Option	Option	
l lext	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1	
ent requirement nunity land or (or accesses onstruction es.	Option 1V5 Slight Adverse (Not Significant)	Option 1V9 Moderate Adverse (Significant)	Option 3V1 Moderate Adverse (Significant)			5BV1 Neutral	
	Table 12-41 – Po <b>Fext</b> ent requirement hunity land or s (or accesses onstruction es.	Fext     Option 1V5       ent requirement nunity land or s (or accesses onstruction es.     Slight Adverse (Not Significant)	Table 12-41 – Population and Health construct         Text       Option 1V5       Option 1V9         ent requirement nunity land or s (or accesses onstruction       Slight Adverse (Not Significant)       Moderate Adverse (Significant)	Table 12-41 – Population and Health construction phase like         Text       Option 1V5       Option 1V9       Option 3V1         ent requirement nunity land or s (or accesses on struction       Slight Adverse (Significant)       Moderate Adverse (Significant)       Moderate (Significant)	Table 12-41 – Population and Health construction phase likely significant e         Text         Option 1V5       Option 1V9       Option 3V1       Option 4/5AV1         ent requirement nunity land or so (or accesses on struction       Slight Adverse (Not Significant)       Moderate Adverse (Significant)       Neutral	Table 12-41 – Population and Health construction phase likely significant effects         Text         Option 1V5       Option 1V9       Option 3V1       Option 4/5AV1       Option 4/5AV2         Int requirement of construction       Slight Adverse (Not Significant)       Moderate Adverse (Significant)       Moderate (Significant)       Neutral       Slight Adverse (Significant)	

## 2.12. Environmental Assessment Report Chapter 13: Road Drainage and Water Environment

### Erratum 1

amendment.

Section 13.6.2 and 13.6.3		Paragraph / Table	Location	
		Paragraphs 13.6.2.3, 13.6.2.4, and 13.6.3.4.	Baseline	
Existing	Text			
13.6.2.3	Area as Spinning river at L Tortingto	of the Environment Agency 'main river map' <sup>30</sup> confirms shown in Figure 13-3. Tortington Rife is designated a n wheel Copse at National Grid Reference 498950, 1059 title Danes Wood at National Grid Reference 497800, on Rife (498707,104563) as shown in Figure 13-3. Both t south of the Ship and Anchor Marina Campsite.	nain river at its channel through 990. Binsted Rife is designated a main 106500 before its confluence with the	



		Paragraph / Table	Location		
13.6.2 and	13.6.3	Paragraphs 13.6.2.3, 13.6.2.4, and 13.6.3.4.	Baseline		
13.6.2.4	Tortingtor	n Rife and Binsted Rife have not been assessed agair	nst the objectives of the Water		
	Framewo	rk Directive. Decisions on what constitutes a Water Fr	amework Directive Waterbody is		
	overseen	by the Environment Agency.			
13.6.3.4	The Envir	ronment Agency's Flood Map for Planning indicates th	at there is fluvial and tidal flood risk		
	associate	d with the River Arun, Tortington Rife and Binsted Rife	e.		
Footnote 30:	Environment	Agency, Main River Map, [online] available at:			
		pps/webappviewer/index.html?id=17cd53dfc524433980cc333726a5	56386 [last accessed April 2019]		
Amended	Text				
13.6.2.3	Area as s Spinningv at Little D Rife (Nation the River tributaries 106031 a downstrea	of the Environment Agency " <i>main river map</i> " <sup>30</sup> confirms hown in Figure 13-3. Tortington Rife is designated a ma wheel Copse at National Grid Reference 498950, 10599 anes Wood at National Grid Reference 497800, 10650 onal Grid Refence 498707,104563) as shown in Figure Arun just south of the Ship and Anchor Marina Campsi s of the Lidsey Rife (Figure 13-1) designated a main rive and 496458, 106090 (West Walberton Lane). The tributa am of the Study Area extent (to the of north of Nanny C n river) 2.8km downstream of their convergence, as par	ain river at its channel through 90. Binsted Rife is designated a main riv 0 before its confluence with the Tortingto e 13-3. Both watercourses discharge into te. The Study Area also has two er at National Grid References 496644, aries converge approximately 800m copse) before discharging into the Lidsey		
13.6.2.4	objectives Water Fra tributaries objectives Study Are	n Rife-and, Binsted Rife and the tributaries of Lidsey R s of the Water Framework Directive (within the Study / amework Directive Waterbody is overseen by the Envi s of the Lidsey Rife flow into the main channel of the L s of the Water Framework Directive at National Grid R ea). It is not designated as an artificial or heavily modif assessed to be 'moderate' and chemical quality assessed	Area). <del>Decisions on what constitutes a</del> <del>ronment Agency.</del> However, the idsey Rife which is assessed against th eference 494637, 103139 (outside of th fied waterbody, with its current ecologic		
40.0.0.4	The Environment Agency's Flood Map for Planning indicates that there is fluvial and tidal flood risk associated with the River Arun, Tortington Rife, Binsted Rife and tributaries of the Lidsey Rife.				
13.6.3.4		ed with the River Arun, Tortington Rife, Binsted Rife ar	nd tributaries of the Lidsey Rife.		
		ed with the River Arun, Tortington Rife, Binsted Rife ar Agency, Main River Map, [online] available at: ops/webappviewer/index.html?id=17cd53dfc524433980cc333726a5			

did not specifically identify that these tributaries are associated with an Environment Agency designated 'main river' known as the Lidsey Rife. The Study Area includes ordinary watercourses in culvert along the existing A27 alignment just west of Yapton lane feeding into minor tributaries of the Lidsey Rife (see revised version of PCF Stage 2 EAR Figure 13-1 – provided as Attachment 4 to this Errata document).

Option 5BV1 also crosses a ditch LID\_AQ116 associated with the tributaries of the Lidsey Rife. The baseline description is correct, but to specifically describe the 'main river', the text has been amended to reflect the two tributaries upstream of the Lidsey Rife. This additional information does not change the conclusions of the overall assessment and conclusions in the PCF Stage 2 EAR.



Section	Paragraph / Table	Location
13.9.7	Paragraph 13.9.7.7	Option 4/5AV1, Option 4/5AV2 and Option 5BV1
Existing	Text	
13.9.7.7	currently undeveloped land to the east of and clear span structures across the Bin associated with increased sedimentation embankments, as well as increased risk could result in some measurable change sediment loads entering smaller waterco normal processes. Construction related in quality within the watercourses would im by entrapment, dilution and natural proce and spillage from mechanical plant. The	on 5BV1 requires the construction of new carriageway within f Arundel as the Scheme options cross the Arun Valley Railway sted Rife and Tortington Rife. The most likely risks are n from exposed earth and construction of the earth of hydrocarbons associated with mechanical plant. The works in water quality in the receiving watercourses as increased burses may take longer to settle out or be dispersed through impacts are considered to be direct and temporary as water prove over time as sediments settle and pollutants are treated esses. The CEMP likely to adequately manage risks of pollution impact to the ordinary watercourses that drain between the o be minor adverse. Given the low importance of these features t is neutral (not significant).
Amendec	l Text	
1 <del>3.9.7.7</del>	currently undeveloped land to the east of and clear span structures across the Bin associated with increased sedimentation embankments, as well as increased risk could result in some measurable change sediment loads entering smaller waterco normal processes. Construction related in quality within the watercourses would im by entrapment, dilution and natural proce and spillage from mechanical plant. The	on 5BV1 requires the construction of new carriageway within f Arundel as the Scheme options cross the Arun Valley Railway sted Rife and Tortington Rife. The most likely risks are of from exposed earth and construction of the earth of hydrocarbons associated with mechanical plant. The works of hydrocarbons associated with mechanical plant. The works of in water quality in the receiving watercourses as increased purses may take longer to settle out or be dispersed through impacts are considered to be direct and temporary as water prove over time as sediments settle and pollutants are treated asses. The CEMP likely to adequately manage risks of pollutior impact to the ordinary watercourses that drain between the o be minor adverse. Given the low importance of these features t is neutral (not significant).
13.9.7.7	species. The work required to construct a vegetation, damage to existing substrate unlikely to pose significant impact to the and ordinary watercourses within the Stu affected environment is expected to retu years of construction. Therefore, impacts	ay will already provide a barrier to the movement of aquatic the Scheme can cause the temporary loss of riparian a and changes to flow dynamics. However, the works are hydro-morphological and ecological quality of the River Arun ady Area. The duration of this work is temporary and the rn to a condition similar to the baseline within an estimated two is are considered to be of insufficient magnitude to affect the use tects are likely to be negligible. The resulting overall temporary

This amendment is the result of a transcription error between Paragraph 13.9.3.8 and Paragraph 13.9.7.7 of the PCF Stage 2 EAR. The assessment of the significance of the effects remains unchanged and subsequently there are no changes to the conclusions of the PCF Stage 2 EAR as a result of this amendment.



Section	Paragraph / Table				Location	
13.6.3	Table 13-7				EAR Chapter 13	
Existing Text						
Table 13-7 Summary of baseline conditions by option for road drainage and water environment assessment						
Key Environmental Value	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5A V2	Option 5BV1
Secondary A Aquifer- River Terrace Deposit	This Scheme option crosses the River Arun floodplain underlain by River Terrace Deposits.	This Scheme option crosses the River Arun floodplain underlain by River Terrace Deposits.	River Terrace Deposits are not encountered by this option.	This Scheme option crosses the River Terrace Deposits near Church Farm to the east of Binsted and near New Barn at Tortington.	This Scheme option crosses the River Terrace Deposits to the west of Oakley Cottages and near New Barn at Tortington.	This Scheme option crosses the River Terrace Deposits to the north east of Walberton, west of Oakley Cottages and near New Barn at Tortington.
Amended Text	more of baseling con	ditions by option for r	and drainage and wat	er environment assess	mont	
Key	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5A V2	Option 5BV1
Environmental Value						
Secondary A Aquifer- River	This Scheme option crosses the River Arun floodplain	This Scheme option crosses the River Arun floodplain	River Terrace Deposits are not encountered by this option.	This Scheme option crosses the River Terrace Deposits near Church Farm to the	This Scheme option crosses the River Terrace Deposits to the west of Oakley	This Scheme option crosses the River Terrace Deposits to the north east of



For ease of readability, only the relevant rows and the preceding row (where a new row is added), have been included in the table below.

Section	Paragraph / Table	Paragraph / Table			Location	
13.6.3	3.6.3 Table 13-7 EAR Chapter 13					
Terrace Deposit	underlain by River Terrace Deposits.	underlain by River Terrace Deposits.		east of Binsted and near New Barn at Tortington.	Cottages and near New Barn at Tortington.	Walberton, west of Oakley Cottages and near New Barn at Tortington.
Aquifer- Raised Marine Deposits	Both options cross the Raised Marine Deposits in the vicinity of the River Arun. The Raised Marine Deposits extend from The Waterwood Road, Arundel to west of the railway line.	Raised Marine Deposits in the vicinity of the River Arun. The Raised Marine Deposits extend from the east of Tortington	Secondary A Aquifer- Raised Marine Deposits	Deposits in the vicinity of the River Arun. The Raised Marine Deposits extend from	Raised Marine Deposits in the vicinity of the River Arun. The Raised Marine Deposits extend from the east of Tortington	Secondary A Aquifer- Raised Marine Deposits

# Explanation

These amendments are the result of manual error occurring during the most recent document revision of Chapter 13 of the PCF Stage 2 EAR. The report and included groundwater assessments are correct, however, the data presented in Table 13-7 required update. There are no further changes to the report and no impacts to the conclusions of the PCF Stage 2 EAR are required as a result of these amendments.



# Erratum 4

For ease of re	For ease of readability, only the relevant rows of Table 13-12 have been included in the table below.				
Section Paragraph / Table Location					
13.10.1 Table 13-12 EAR		EAR Chapter 13			

# **Existing Text**

# Table 13-12 Road drainage and water environment operational phase likely significant effects

Impact		Option 1 V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
Groundwater	Lesser groundwater recharge due to new hardstanding (Local superficial aquifers)	Neutral (not significant)	Neutral (not significant)	Neutral (not significant)	Neutral (not significant)	Neutral (not significant)	Neutral (not significant)

#### **Amended Text**

# Table 13-12 Road drainage and water environment operational phase likely significant effects

Impact		Option 1 V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
Groundwater	Lesser groundwater recharge due to new hardstanding (Local superficial aquifers)	Neutral Slight Adverse (not significant)					

#### Explanation

These amendments are the result of transcription error between the summary section and the main body of Chapter 13 of the PCF Stage 2 EAR. The underlying data for the groundwater assessments was correct as provided in paragraph 13.9.8.27 of Chapter 13 of the PCF Stage 2 EAR. There are no changes to the conclusions of the PCF Stage 2 EAR as a result of this amendments.

#### Erratum 5

Section	Paragraph / Table	Location				
EAR Figures	AR Figures Figure 13-1, Figure 13-2 and Figure 13-3 EAR Chapter 13					
Explanation of	Explanation of Amended Figures					
A correction ha	A correction has been applied to Figure 13-1, Figure 13-2 and Figure 13-3 of the PCF Stage 2 EAR.					
A re	evised version of Figure 13-1 showing labels for main riv	vers in the study area				

A revised version of Figure 13-2 and 13-3 correcting the labelling for Tortington Rife and Binsted Rife

These revised figures are provided in Attachment 4. The underlying data for the water environment assessments was correct and are no changes to the conclusions of the PCF Stage 2 EAR as a result of this amendments.



# 2.13. Environmental Assessment Report Chapter 14: Climate – Greenhouse Gases

#### Erratum 1

Section	Paragraph / Table	Location
Various	Tables 14-8, 14-11, 14-12, 14-14, 14-15, 14-17, 14-20, 14-21, 14-23	Options 1V5, 1V9 and 4/5AV2

# Existing Text

# Table 14-8 – Option 1V5 construction emissions

Category	Material Emissions (tCO₂e)	Transport Emissions (tCO₂e)	Plant Emissions (tCO2e)	Total (tCO₂e)
Fencing	567	12	205	15,109
Earthworks	6,958	3,173		
Pavement	2,594	1,570		
Lighting	29	1		
Total	10,148	4,756	205	15,109

# Table 14-11 – Option 1V9 construction emissions

Category	Material Emissions (tCO2e)	Transport Emissions (tCO2e)	Plant Emissions (tCO2e)	Total (tCO2e)
Fencing	516	19	200	15,070
Earthworks	6,801	3,102		
Pavement	2,815	1,587		
Lighting	29	1		
Total	10,161	4,709	200	15,070

#### Table 14-12 – Option 1V9 operational emissions – maintenance and replacement

Category	Maintenance (tCO2e)	Replacement (tCO2e)	Total (tCO2e)
Fencing	2	2,677	7,533
Pavement		4,823	
Lighting		31	
Total	2	7,531	7,533



# Table 14-14 – Option 3V1 construction emissions

Category	Material Emissions (tCO2e)	Transport Emissions (tCO2e)	Plant Emissions (tCO2e)	Total (tCO2e)
Fencing	780	29	257	51,957
Earthworks	31,274	14,262		
Pavement	3,306	2,021		
Lighting	27	1		
Total	35,387	16,313	257	51,957

# Table 14-15 – Option 3V1 operational emissions – maintenance and repair

Category	Maintenance (tCO2e)	Replacement (tCO2e)	Total (tCO2e)
Fencing	2	4,042	9,645
Pavement		5,574	
Lighting		28	
Total	2	9,644	9,645

# Table 14-17 – Option 4/5AV1 construction emissions

Category	Material Emissions (tCO2e)	Transport Emissions (tCO2e)	Plant Emissions (tCO2e)	Total (tCO2e)
Fencing	815	31	266	52,851
Earthworks	31,258	14,255		
Pavement	3,826	2,372		
Lighting	27	1		
Total	35,926	16,659	266	52,851

#### Table 14-20 – Option 4/5AV2 construction emissions

Category	Material Emissions (tCO2e)	Transport Emissions (tCO2e)	Plant Emissions (tCO2e)	Total (tCO2e)
Fencing	794	31	293	52,712
Earthworks	31,559	14,392		
Pavement	3,465	2,150		
Lighting	27	1		
Total	35,845	16,574	293	52,712



Section	Parag	graph / Table	Location			
Various	Table	Tables 14-8, 14-11, 14-12, 14-14, 14-15, 14-17, 14-20, 14-21, 14-23 Options 1V5, 1V9 and 4/5A				
Table 14-2	Table 14-21 – Option 4/5AV2 operational emissions – maintenance and replacement					
Category	,	Maintenance (tCO2e)	Replacement (tCO2e)	Total (tCO2e)		
Fencing		2	4,234	10,709		
Pavemen	it		6,445			
Lighting			28			
Total		2	10,707	10,709		

#### Table 14-23 – Option 5BV1 construction emissions

Category	Material Emissions (tCO2e)	Transport Emissions (tCO2e)	Plant Emissions (tCO2e)	Total (tCO2e)
Fencing	956	37	305	52,852
Earthworks	30,946	14,113		
Pavement	3,983	2,484		
Lighting	27	1		
Total	35,912	16,635	305	52,852

#### Amended Text

# Table 14-8 – Option 1V5 construction emissions

Category	Material Emissions (tCO2e)	Transport Emissions (tCO2e)	Plant Emissions (tCO2e)	Total (tCO2e)
Fencing	567	<del>12-</del> 20	<del>205-</del> 2047	<del>15,109</del> 16,959
Earthworks	6,958	3,173		
Pavement	2,594	1,570		
Lighting	29	1		
Total	10,148	4 <del>,756</del> 4,764	<del>205</del> -2047	<del>15,109</del> 16,959

#### Table 14-11 – Option 1V9 construction emissions

Category	Material Emissions (tCO2e)	Transport Emissions (tCO2e)	Plant Emissions (tCO2e)	Total (tCO2e)
Fencing	516	19	<del>200</del> 1998	<del>15,070</del> 16,888
Earthworks	6,801	3,102		



Section	Paragra	Paragraph / Table			Locat	tion
Various	Tables 14-8, 14-11, 14-12, 14-14, 14-15, 14-17, 14-20, 14-21, 14-23				Optio	ns 1V5, 1V9 and 4/5AV2
Pavemen	t	2,815	<del>1,587</del> 1,592			
Lighting		<del>29</del> 43	42			
Total		<del>10,161</del> 10,175	<del>4,709</del> 4,715	<del>200</del> 1998		<del>15,070</del> 16,888

# Table 14-12 – Option 1V9 operational emissions – maintenance and replacement

Category	Maintenance (tCO2e)	Replacement (tCO2e)	Total (tCO2e)
Fencing	2	2,677	<del>7,533</del> 7,547
Pavement		4,823	
Lighting		<del>31</del> 45	
Total	2	<del>7,531</del> 7,545	<del>7,533</del> 7,547

# Table 14-14 – Option 3V1 construction emissions

Category	Material Emissions (tCO2e)	Transport Emissions (tCO2e)	Plant Emissions (tCO2e)	Total (tCO2e)
Fencing	<del>780</del> 964	<del>29</del> 37	<del>257</del> 2,574	<del>51,957</del> 54,466
Earthworks	31,274	14,262		
Pavement	3,306	2,021		
Lighting	27	1		
Total	<del>35,387</del> 35,571	<del>16,313</del> 16,321	<del>257</del> 2,574	<del>51,957</del> 54,466

#### Table 14-15 – Option 3V1 operational emissions – maintenance and repair

Category	Maintenance (tCO2e)	Replacement (tCO2e)	Total (tCO2e)
Fencing	2	<del>4,042</del> 5,005	<del>9,645</del> 10,244
Pavement		<del>5,57</del> 4 5,209	
Lighting		28	
Total	2	<del>9,6</del> 44 10,242	<del>9,645</del> 10,244

# Table 14-17– Option 4/5AV1 construction emissions

Category	Material Emissions (tCO2e)	Transport Emissions (tCO2e)	Plant Emissions (tCO2e)	Total (tCO2e)
Fencing	815	31	<del>266-</del> 2,663	<del>52,851</del> 55,248
Earthworks	31,258	14,255		



Section	Parag	Paragraph / Table			Locati	on	
Various	Tables 14-8, 14-11, 14-12, 14-14, 14-15, 14-17, 14-20, 14-21, 14-23			-21, 14-23	Option	s 1V5, 1V9 and 4/5AV2	2
Pavemen	t	3,826	2,372				
Lighting		27	1				
Total		35,926	16,659	<del>266-</del> 2,663		<del>52,851</del> 55,248	

# Table 14-20 – Option 4/5AV2 construction emissions

Category	Material Emissions (tCO2e)	Transport Emissions (tCO2e)	Plant Emissions (tCO2e)	Total (tCO2e)
Fencing	794	31	<del>293</del> 2,931	<del>52,712</del> 55,350
Earthworks	31,559	14,392		
Pavement	3,465	2,150		
Lighting	27	1		
Total	35,845	16,574	<del>293</del> 2,931	<del>52,712</del> 55,350

# Table 14-21 – Option 4/5AV2 operational emissions – maintenance and replacement

Category	Maintenance (tCO2e)	Replacement (tCO2e)	Total (tCO2e)
Fencing	2	4 <del>,23</del> 4 4,124	<del>10,709</del> 9,973
Pavement		<del>6,445</del> 5,819	
Lighting		28	
Total	2	<del>10,707</del> 9,971	<del>10,709</del> -9,973

#### Table 2-23 – Option 5BV1 construction emissions

Category	Material Emissions (tCO2e)	Transport Emissions (tCO2e)	Plant Emissions (tCO2e)	Total (tCO2e)
Fencing	956	37	<del>305</del> 3,049	<del>52,852</del> 55,596
Earthworks	30,946	14,113		
Pavement	3,983	2,484		
Lighting	27	1		
Total	35,912	16,635	<del>305</del> 3,049	<del>52,852</del> 55,596



Section	Paragraph / Table	Location	
Various	Tables 14-8, 14-11, 14-12, 14-14, 14-15, 14-17, 14-20, 14-21, 14-23	Options 1V5, 1V9 and 4/5AV2	
Explonatio	Evalenction		

#### Explanation

During the assessment process, due to the processing of a large quantity of data, some small errors were identified. These were all transcription errors. However, the data was sourced from appropriated sources and the appropriate assessment methods were used. Where the above errata has been referred to in text within the EAR (It is not referred to within other documents), this has not be updated. In addition, the errata were also summarised into some summary tables within the EAR, these have also not been updated.

The errata reported above fall within the level of uncertainty inherent in any assessment (for example due to the standard practice of using industry average emissions factors and traffic modelling assumptions), and given their scale, do not change the conclusions of the assessment in terms of the relative performance of the options, or the level of significance. As such, there are no changes to the conclusions of the PCF Stage 2 EAR as a result.

#### 2.14. Environmental Assessment Report Chapter 15: Climate – Vulnerability to climate change

Section	Paragraph / Table	Location	
15.6.2	Paragraphs 15.6.2.14, 15.6.2.15 and 15.6.2.16	All options	
Existing To	ext		
15.6.2.14	UKCP18 suggests that by the 2080s in the South-East region, mean winter precipitation is expected to increase by up to 30% (50th percentile) under RCP8.5.		
15.6.2.15	For the summer, by the 2080s in the South-East region, mean summer precipitation is expected to decrease by up 40% (50th percentile) under RCP8.5.		
15.6.2.16	The figures in Appendix 15-1 summarise:		
	<ul> <li>The changes in mean winter precipitation for the 2080s under the anomaly in South East England for 20160-2079 minus 1981-200</li> <li>The changes in mean summer precipitation for the 2080s under precipitation anomaly in South East England for 2060-2079 minus</li> </ul>	00") • the RCP8.5. ("Summer	
Amended	Text		
15.6.2.14	UKCP18 suggests that by the 2080s over the period 2080 - 2099 in winter precipitation is expected to increase by up to 30% 40% (50th	•	
15.6.2.15	For the summer, <del>by the 2080s</del> over the period 2080 – 2099 in the S summer precipitation is expected to decrease by up to 50% 40% (5	•	
15.6.2.16	The figures in Appendix 15-1 summarise:		
	<ul> <li>The changes in mean winter precipitation for the period 2080 – ("Winter precipitation anomaly in South East England for 20160 minus 1981-2000")</li> <li>The changes in mean summer precipitation for the 2080s period ("Summer precipitation anomaly in South East England for 2060 minus 1981-2000")</li> </ul>	<del>-2079</del> the period 2080 – 2099 d 2080 - 2099 under the RCP8.5.	



# Explanation

The climate projections originally presented in the EAR did not cover the full operational period of the scheme, based on a 60-year design life (in accordance with Highways England guidance) and an opening year of 2026. This error occurred when downloading climate projections from the UK Climate Projections 2018 (UKCP18) User Interface. As a result, the assessment of vulnerability did not consider the full operational period (up to 2086).

Climate projections for the period 2080 – 2099 are provided in these corrections. The assessment has been reviewed based on the correct projections. Resilience to projected change in precipitation is addressed through design and as such, the conclusions of the PCF Stage 2 EAR still stand. The errata does not affect any other text or assessments

Section	Paragraph / Table	Location		
15.6.2	Paragraphs 15.6.2.19, 15.6.2.20, 15.6.2.21 and 15.6.2.22	All options		
Existing Te	Existing Text			
15.6.2.19	UKCP18 suggests that by the 2080s, mean winter temperature in the region is expected to increase by between 2 and 3°C (50th percentile) under RCP8.5.			
15.6.2.20	For the summer, by the 2080s, mean summer temperature is expected to increase by between 3 and 4°C (50th percentile) under RCP8.5. The figure in Appendix 15-1 ("Summer mean temperature anomaly in South East England for 2060-2079 minus 1981-2000") summarise changes in mean summer temperature for the 2080s under RCP8.5.			
15.6.2.21	The figure in Appendix 15-1 ("Winter mean temperature anomaly in South East England for 2060-2079 minus 1981-2000") summarises changes in mean winter temperature for the 2080s under RCP8.5.			
15.6.2.22	In addition to changes in seasonal average temperatures, it is likely that there will be more extreme temperature events. By the 2080s, projections for daily maximum summer temperature for the South-East region suggest increases of between 2.0 (RCP 2.6) and 4.0°C, (RCP8.5) (central estimates). By the 2080s, projections for daily minimum summer temperature suggests an increase of between 1.0 and 2.0°C, depending on emissions scenario (central estimate).			
Amended -	<b>Fext</b>			
15.6.2.19	UKCP18 suggests that by in the 2080s period 2080 - 2099, mean winter temperature in the region is expected to increase by between 2 and 3°C 3 and 4°C (50th percentile) under RCP8.5.			
15.6.2.20	For the summer, by in the 2080s period 2080-2099, mean summer temperature is expected to increase by between 3 and 4°C 5 and 6°C (50th percentile) under RCP8.5. The figure in Appendix 15-1 ("Summer mean temperature anomaly in South East England for 2060-2079 2080 - 2099 minus 1981-2000") summarise changes in mean summer temperature for the 2080s period 2080 – 2099 under RCP8.5.			
15.6.2.21	The figure in Appendix 15-1 ("Winter mean temperature anomaly in South East England for <del>2060-2079</del> 2080 – 2099 minus 1981-2000") summarises changes in mean winter temperature for the <del>2080s</del> period 2080 - 2099 under RCP8.5.			
15.6.2.22	In addition to changes in seasonal average temperatures, it is likely that there will be more extreme temperature events. By the For the period 2080 – 2099 2080s, projections for daily maximum summer temperature for the South-East region suggest increases of between 2.0 (RCP 2.6) and 4.0°C 7.0°C, (RCP8.5) (central estimates). By the 2080s For the period 2080 - 2099, projections for daily minimum			



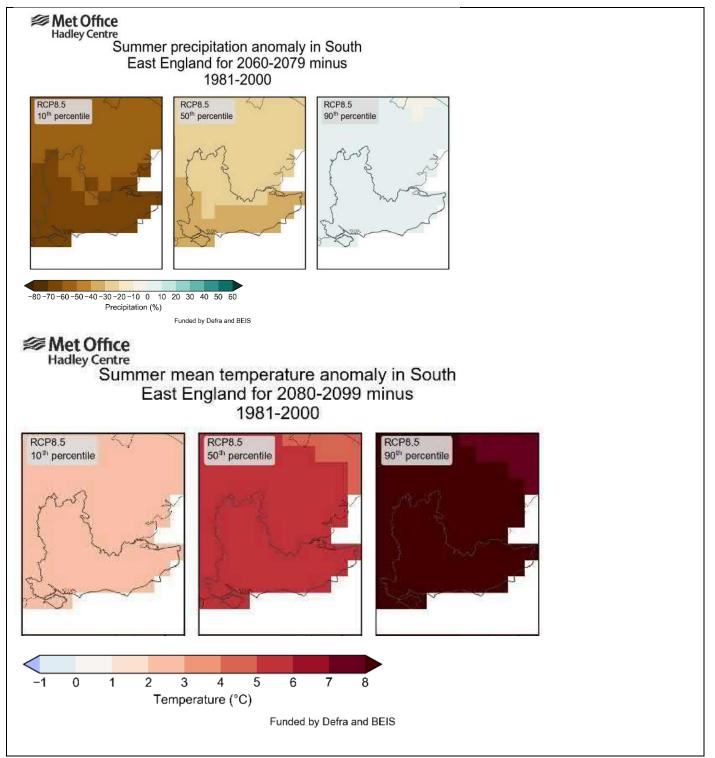
Section	Paragraph / Table	Location	
15.6.2	Paragraphs 15.6.2.19,15.6.2.20, 15.6.2.21 and 15.6.2.22	All options	
	summer temperature suggests an increase of between 1.0 and <del>2.0°C</del> 6.0°C, depending on emissions scenario (central estimate).		
Explanation			

The climate projections originally presented in the EAR did not cover the full operational period of the scheme, based on a 60-year design life (in accordance with Highways England guidance) and an opening year of 2026. This error occurred when downloading climate projections from the UK Climate Projections 2018 (UKCP18) User Interface. As a result, the assessment of vulnerability did not consider the full operational period (up to 2086).

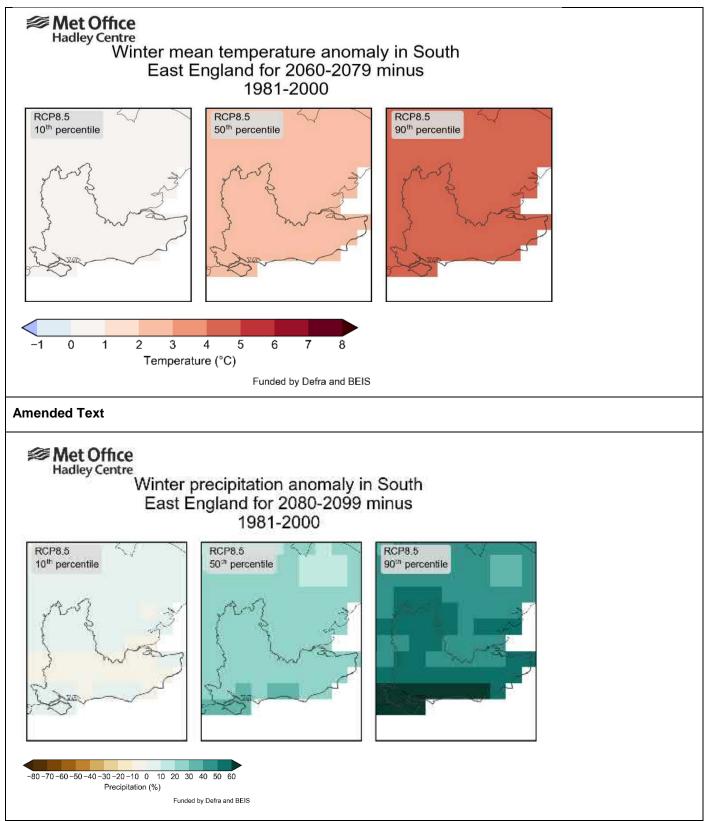
Climate projections for the period 2080 – 2099 are provided in these amendments. The assessment has been reviewed based on the correct projections. Resilience to projected change in precipitation is addressed through design and as such, the conclusions of the PCF Stage 2 EAR still stand. The errata does not affect any other text or assessments.

Section	Paragraph / Table	Location
Appendix 15-1		All options
Existing Text		
Met Office Hadley Centr	e Winter precipitation anomaly in South East England for 2060-2079 minus 1981-2000	
RCP8.5 10 <sup>th</sup> percentile	RCP8.5 50 <sup>m</sup> percentile 50 <sup>m</sup> percentile 50 <sup>m</sup> percentile	
	-20-10 0 10 20 30 40 50 60 ecipitation (%)	
	Funded by Defra and BEIS	

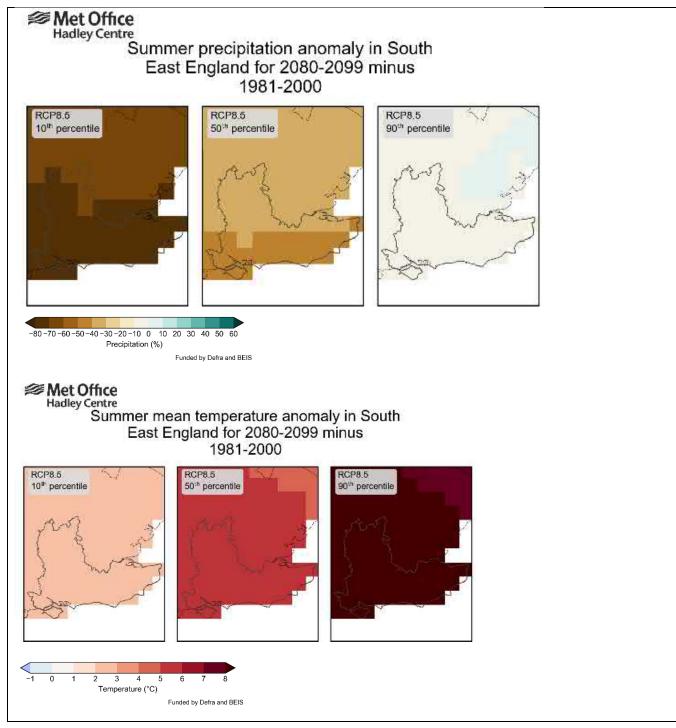




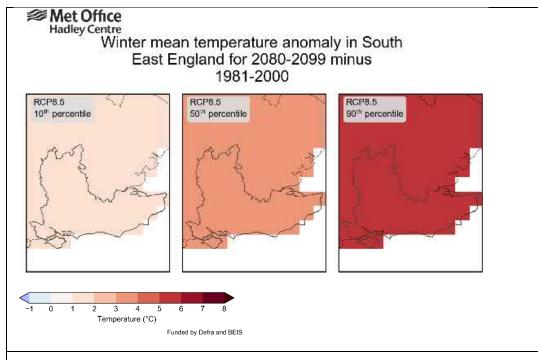












# Explanation

The climate projections originally presented in Appendix 15-1 did not cover the full operational period of the scheme, based on a 60-year design life (in accordance with Highways England guidance) and an opening year of 2026. This error occurred when downloading climate projections from the UK Climate Projections 2018 (UKCP18) User Interface (se Errata 1 and 2 above). As a result, the assessment of vulnerability did not consider the full operational period (up to 2086).

The associated figures depicting the climate projections for the period 2080 – 2099 are provided above. The assessment has been reviewed based on the correct projections. Resilience to projected change in precipitation is addressed through design and as such, the conclusions of the PCF Stage 2 EAR still stand. The errata does not affect any other text or assessments.



#### 2.15. Environmental Assessment Report Chapter 19: Summary

The errata within Chapter 19: Summary are a consequence of the errata in the preceding PCF Stage 2 EAR Chapters.

#### Erratum 1

Section	Paragraph / Table	Location
19.3.2	Paragraph 19.3.2.1	Option 1V5 and 1V9
Existing T	ext	I
heritage as	construction phase significant Moderate Adverse effects (signi- sets with the exception of the Lyminster Conservation Area (Ne are likely on the below ground archaeology of all heritage asse	eutral effect). Slight Adverse effects (not
Amended	Text	
During the assets with Arundel. wi	construction phase significant Moderate Adverse effects (signific in Arundel. Slight adverse effect (not significant) for 1 Grade II* a th the exception of The Lyminster Conservation Area (is Neutral are likely on the below ground archaeology of all heritage assets	and 10 Grade II listed buildings outside effect). Slight Adverse effects (not

Chapter 6 – Cultural Heritage reflect transcription errors from material that was available for the consultation documents, such as the PCF Stage 2 EAR –Appendix 6-1 (Gazetteer) and accompanying figures (Figures 6-1 to 6-18). The errata above are the result of a transcription error within a complex dataset. Whilst the erratum changes specific elements of this PCF Stage 2 (Options Selection) assessment, they do not affect overall scoring and the conclusions. The erratum applies to all the supporting documents, comprising the Consultation Brochure, Summary Assessment Report and South Downs National Park Special Qualities Assessment.

#### Erratum 2

Section	Paragraph / Table	Location
19.3.3	Paragraph 19.3.3.1	Option 3V1

#### **Existing Text**

Large Adverse effects (significant) are likely on the setting of Tortington Augustinian Priory and the adjacent Grade II\* listed Tortington Priory Barn. Neutral effects (not significant) are likely on the setting for all other identified heritage assets (Refer to EAR Chapter 6 - Table 6-9).

#### Amended Text

Large Adverse effects (significant) are likely on the setting of Tortington Augustinian Priory and the adjacent Grade II\* listed Tortington Priory Barn. Moderate adverse effects (significant) are likely on the setting of numerous assets within Arundel. Slight adverse effects (not significant) are likely on the setting of 1 Grade II\* and 9 Grade II listed buildings Neutral effects (not significant) are likely on the setting for all other identified heritage assets (Refer to EAR Chapter 6 - Table 6-911).



Section	Paragraph / Table	Location
19.3.3	Paragraph 19.3.3.1	Option 3V1

#### Explanation

The corrections to the number of designated heritage assets affected is set out in the revised PCF Stage 2 EAR Chapter 6 – Cultural Heritage reflect transcription errors from material that was available from the consultation documents, such as the PCF Stage 2 EAR –Appendix 6-1 (Gazetteer) and accompanying figures (Figures 6-1 to 6-18). The errata above are the result of a transcription error within a complex dataset.

The historic town of Arundel and the numerous designated heritage assets within it, along with a group of designated assets primarily at the eastern end of all of the Scheme options, was included in the baseline of the consultation documents but the impact assessment was not presented for offline options (3V1, 4/5AV1, 4/5AV2, 5BV1) as it lay just outside the Study Areas of these options. For technical correction, and to allow a more balanced comparison between the route options, this has now been included for the offline options. This does not affect the overall assessment but provides a more robust assessment.

Whilst the erratum changes specific elements of this PCF Stage 2 (Options Selection) assessment, they do not affect overall scoring and the conclusions. The erratum applies to all the supporting documents, comprising the Consultation Brochure, Summary Assessment Report and South Downs National Park Special Qualities Assessment.

#### Erratum 3

Section	Paragraph / Table	Location
19.3.3	Paragraph 19.3.3.2	Option 3V1

# **Existing Text**

Slight Adverse effects (not significant) are likely on the below ground archaeology of two Archaeology Notification Areas and a section of the Chichester to Brighton Roman Road.

#### Amended Text

Slight Adverse effects (not significant) are likely on the below ground archaeology-of two Archaeology Notification Areas and a section of the Chichester to Brighton Roman Road.

#### Explanation

The corrections set out in the revised PCF Stage 2 EAR Chapter 6 – Cultural Heritage reflect transcription errors from material that was available from the consultation documents, such as the PCF Stage 2 EAR –Appendix 6-1 (Gazetteer) and accompanying figures (Figures 6-1 to 6-18). The errata above are the result of a transcription error within a complex dataset. Archaeological Notification Areas have been removed from the impact assessment, as these are not a heritage asset but are areas of archaeological potential identified for development control purposes. The entire route has potential for possible, previously unrecorded remains.

Whilst the erratum changes specific elements of this PCF Stage 2 (Options Selection) assessment, they do not affect overall scoring and the conclusions. The erratum applies to all the supporting documents, comprising the Consultation Brochure, Summary Assessment Report and South Downs National Park Special Qualities Assessment.



#### Erratum 4

Section	Paragraph / Table	Location
19.3.4	Paragraph 19.3.4.1	Option 4/5AV1
Existing Te	ext	
Augustiniar	struction, Moderate Adverse effects (significant) are expe n Priory (Scheduled Monument) and Grade II* Tortington are likely on the setting for the remaining heritage assets	Priory Barn. Slight Adverse effects (not
Amended	Text	
Augustiniar (significant) buildings ou buildings ou	struction, Moderate Adverse effects (significant) are expen- periory (Scheduled Monument) and Grade II* Tortington are expected on the setting of numerous assets within A sutside Arundel. Slight adverse effect (not significant) are sutside Arundel. Slight Adverse effects (not significant) are fer to EAR Chapter 6 - Table 6-911).	Priory Barn. Moderate adverse effects Arundel and on the setting 8 Grade II listed expected on 1 Grade II* and 13 Grade II listed
Explanatio	n	
Refer to Err	ratum 2 (Section 2.15) explanation.	

#### Erratum 5

Section	Paragraph / Table	Location
19.3.5	Paragraph 19.3.5.1	Option 4/5AV2

#### Existing Text

During construction, Moderate Adverse effects (significant) are likely on the setting of Tortington Augustinian Priory and the Grade II\* Tortington Priory Barn and two Grade II listed buildings (Morley's Croft and the House at Meadow Lodge). Neutral effects (not significant) are likely on setting of the remaining heritage assets (Refer to EAR Chapter 6 - Table 6-9).

#### Amended Text

During construction, Moderate Adverse effects (significant) are likely on the setting of Tortington Augustinian Priory and the Grade II\* Tortington Priory Barn. Moderate adverse effect (significant) are likely on the setting of numerous assets within Arundel and on 1 Grade II listed building outside Arundel. Slight adverse effects (not significant) are likely on 1 Grade II\* and 19 Grade II listed buildings outside Arundel and two Grade II listed buildings (Morley's Croft and the House at Meadow Lodge). Neutral effects (not significant) are likely on setting of the remaining heritage assets (Refer to EAR Chapter 6 - Table 6-911).

#### Explanation

Refer to Erratum 2 (Section 2.15) explanation.



#### Erratum 6

Section	Paragraph / Table	Location
19.3.5	Paragraph 19.3.5.2	Option 4/5AV2
Existing Toxt		

#### Existing Text

Slight Adverse effects (not significant) on below ground archaeology are likely on four Archaeological Notification Areas (ANAs), and a Building in Binsted Wood (MWS2301). For the heritage asset 'Park – Binsted House (MWS2354)' further investigation would be necessary before any assessment can be determined, since the park may contain previously unrecorded archaeological features.

#### Amended Text

Slight Adverse effects (not significant) on below ground archaeology. are likely on four Archaeological Notification Areas (ANAs), and a Building in Binsted Wood (MWS2301). For the heritage asset 'Park – Binsted House (MWS2354)' further investigation would be necessary before any assessment can be determined, since the park may contain previously unrecorded archaeological features

#### Explanation

The corrections set out in the revised PCF Stage 2 EAR Chapter 6 – Cultural Heritage reflect transcription errors from material that was available from the consultation documents, such as the PCF Stage 2 EAR –Appendix 6-1 (Gazetteer) and accompanying figures (Figures 6-1 to 6-18). The errata above are the result of a transcription error within a complex dataset. Archaeological Notification Areas have been removed from the impact assessment, as these are not a heritage asset but are areas of archaeological potential identified for development control purposes. The entire route has potential for possible, previously unrecorded remains. Whilst the erratum changes specific elements of this PCF Stage 2 (Options Selection) assessment, it does not affect overall scoring and the conclusions. The erratum applies to all the supporting documents, comprising the Consultation Brochure, Summary Assessment Report and South Downs National Park Special Qualities Assessment.

#### Erratum 7

Section	Paragraph / Table	Location
19.3.6	Paragraph 19.3.6.1	Option 5BV1

#### **Existing Text**

Moderate Adverse effects (significant) are likely during the construction phase on the setting for Tortington Augustinian Priory and the Grade II\* Tortington Priory Barn. Moderate Adverse effects (significant) are likely on the setting for a further eight Grade II listed buildings around Binsted and Yapton Lane. Neutral effects (not significant) are likely on the setting of the remaining heritage assets (Refer to EAR Chapter 6 - Table 6-9).

#### Amended Text

Moderate Adverse effects (significant) are likely during the construction phase on the setting for Tortington Augustinian Priory and the Grade II\* Tortington Priory Barn. Moderate Adverse effects (significant) are likely on the setting of numerous assets within Arundel and for a further eight seven Grade II listed buildings around Binsted and Yapton Lane outside Arundel. Slight adverse effect on 1 Grade II\* and 15 Grade II listed buildings outside Arundel.



Neutral effects (not significant) are likely on the setting of the remaining heritage assets (Refer to EAR Chapter 6 - Table 6-911).

#### Explanation

Refer to Erratum 2 (Section 2.15) explanation.

#### Erratum 8

Section Par	aragraph / Table	Location
19.3.6 Par	aragraph 19.3.6.3	Option 5BV1

# Existing Text

Moderate Adverse effects (significant) are likely on the below ground archaeology of all heritage assets (Refer to EAR Chapter 6 - Table 6-9).

#### **Amended Text**

Moderate Slight Adverse effects (not significant) are likely on the below ground archaeology of all heritage assets (Refer to EAR Chapter 6 - Table 6-9).

#### Explanation

The corrections set out in the revised PCF Stage 2 EAR Chapter 6 – Cultural Heritage reflect transcription errors from material that was available from the consultation documents, such as the PCF Stage 2 EAR –Appendix 6-1 (Gazetteer) and accompanying figures (Figures 6-1 to 6-18). The errata above are the result of a transcription error within a complex dataset and provides the correct level of environmental effect for below ground archaeological remains. Whilst the erratum changes specific elements of this PCF Stage 2 (Options Selection) assessment, it does not affect overall scoring and the conclusions. The erratum applies to all the supporting documents, comprising the Consultation Brochure, Summary Assessment Report and South Downs National Park Special Qualities Assessment.

#### Erratum 9

Section	Paragraph / Table	Location
19.3.9	Paragraph 19.3.9.1	Option 1V5 and 1V9

# **Existing Text**

During the operational phase, Option 1V5 and 1V9 are likely to have Slight Adverse effects (not significant) on the setting for all heritage assets ((Refer to EAR Chapter 6 - Table 6-10)).

#### Amended Text

During the operational phase, Option 1V5 and 1V9 are likely to have Slight Adverse effects (not significant) would have the same effects on the setting for all heritage assets as the construction phase, although the effects would be permanent ((Refer to EAR Chapter 6 - Table 6-1012)).

#### Explanation

The erratum is a simplification of the description of the significance of effects. It is also a correction in the assessment of effects following a correction in the asset count, an error that is a result of transcription errors from a



Section	Paragraph / Table	Location
19.3.9	Paragraph 19.3.9.1	Option 1V5 and 1V9
Stage 2 EAR bearing on th change to spe and the concl	19.3.9 Paragraph 19.3.9.1 Option 1V5 and 1V9 complete dataset and contained material that was available from the consultation documents, such as the PCF Stage 2 EAR –Appendix 6-1 (Gazetteer) and accompanying figures (Figures 6-1 to 6-18). However, this has no bearing on the results of the study, which is focussed on specific impacts of particular assets. Whilst there is change to specific elements of this PCF Stage 2 (Options Selection) assessment, they do not affect overall scoring and the conclusions. The erratum applies to all the supporting documents, comprising the Consultation Brochure, Summary Assessment Report and South Downs National Park Special Qualities Assessment.	

# Erratum 10

Section	Paragraph / Table	Location	
19.3.10	Paragraph 19.3.10.1 (2 paras)	Option 3V1	
Existing Tex	rt		
II* listed Tort	se effects (significant) are likely on the setting of Tortingtor ington Priory Barn. Neutral effects (not significant) are like ets (Refer to EAR Chapter 6 - Table 6-10).	с , ,	
0	Slight Adverse effects (not significant) are likely on the below ground archaeology of two Archaeology Notification Areas and a section of the Chichester to Brighton Roman Road.		
Amended T	ext		
•	se effects (significant) are likely on the setting of Tortingtor ington Priory Barn. Neutral effects (not significant) are like ets	· · · ·	
•	e effects (not significant) are likely on the below ground a section of the Chichester to Brighton Roman Road	rchaeology of two Archaeology Notification	
Effects on se 6-10).	tting would be as per the construction phase but would be	e permanent (Refer to EAR Chapter 6 - Table	
Explanation			
Refer to Erratum 9 (Section 2.15) explanation.			

#### Erratum 11

Section	Paragraph / Table	Location
19.3.11	Paragraph 19.3.11.1	Option 4/5AV1
Existing Text		
Option 4/5AV1 was considered to have a Moderate Adverse effect (significant) on Tortington Augustinian Priory and		

Option 4/5AV1 was considered to have a Moderate Adverse effect (significant) on Tortington Augustinian Priory and Grade II\* Tortington Priory Barn. Slight Adverse effects (not significant) are likely on the setting for the remaining heritage assets (Refer to EAR Chapter 6 - Table 6-10).



Section	Paragraph / Table	Location	
19.3.11	Paragraph 19.3.11.1	Option 4/5AV1	
Amended 1	Amended Text		
Option 4/5AV1 was considered to have a Moderate Adverse effect (significant) on Tortington Augustinian Priory and Grade II* Tortington Priory Barn. Slight Adverse effects (not significant) are likely on the setting for the remaining heritage assets Effects on setting would be as per the construction phase but would be permanent (Refer to EAR Chapter 6 - Table 6-10).			
Explanation			
Refer to Erratum 9 (Section 2.15) explanation.			

# Erratum 12

Section	Paragraph / Table	Location
19.3.12	Paragraph 19.3.12.1	Option 4/5AV2

# **Existing Text**

Option 4/5AV2 was considered to have a Moderate Adverse effect (significant) on Tortington Augustinian Priory and Grade II\* Tortington Priory Barn, and two Grade II buildings (Morley's Croft and the House at Meadow Lodge). Neutral effects (not significant) are likely on the setting of the remaining heritage assets (Refer to EAR Chapter 6 - Table 6-10).

# Amended Text

Option 4/5AV2 was considered to have a Moderate Adverse effect (significant) on Tortington Augustinian Priory and Grade II\* Tortington Priory Barn, and two Grade II buildings (Morley's Croft and the House at Meadow Lodge). Neutral effects (not significant) are likely on the setting of the remaining heritage assets Effects on setting would be as per the construction phase but would be permanent (Refer to EAR Chapter 6 - Table 6-10).

#### Explanation

Refer to Erratum 9 (Section 2.15) explanation.

#### Erratum 13

Section	Paragraph / Table	Location
19.3.13	Paragraph 19.3.13.1	Option 5BV1

# Existing Text

Option 5BV1 was considered to have a Moderate Adverse effect (significant) on Tortington Augustinian Priory and Grade II\* Tortington Priory Barn and a further eight Grade II buildings (Morley's Croft; House at Meadow Lodge; Glebe House; Church Farmhouse, Binsted; Avisford Park Hotel; House at Beam Ends; Swiss Cottage; and St Mary's Church, Binsted). Neutral effects (not significant) are likely on the setting for the remaining heritage assets (Refer to EAR Chapter 6 - Table 6-10).



Section	Paragraph / Table	Location
19.3.13	Paragraph 19.3.13.1	Option 5BV1
Amended Text		
Option 5BV1 was considered to have a Moderate Adverse offect (significant) on Tortington Augustinian Priory and Grade II* Tortington Priory Barn and a further eight Grade II buildings (Morley's Croft; House at Meadow Lodge; Glebe House; Church Farmhouse, Binsted; Avisford Park Hotel; House at Beam Ends; Swiss Cottage; and St Mary's Church, Binsted). Neutral effects (not significant) are likely on the setting for the remaining heritage assets Effects on setting would be as per the construction phase but would be permanent (Refer to EAR Chapter 6 - Table 6-1012).		
Explanation		

Refer to Erratum 9 (Section 2.15) explanation.

#### Erratum 14

Section	Paragraph / Table	Location
19.5.2	Paragraph 19.5.2.2	Option 1V5 and V9
Existing Text		
During construction, Moderate Adverse effects (significant) are likely on bats, barn owls, hazel dormouse, terrestrial		

invertebrates and protected or notable plants. Slight Adverse effects (significant) are likely on breeding birds (woodland).

# Amended Text

During construction, Moderate Adverse effects (significant) are likely on bats, barn owls, hazel dormouse, terrestrial invertebrates and protected or notable plants. Slight Adverse effects (significant) are likely on breeding birds (woodland) and barn owls.

#### Explanation

This correction updates the PCF Stage 2 EAR Summary Chapter following the erratum regarding the barn owl operational effect significance levels for all options in Section 2.9 (Erratum 15).

Section	Paragraph / Table	Location
19.5.8	Paragraph 19.5.8.1	Option 1V5 and 1V9
Existing Text		
During the operational phase, a Moderate Adverse effect (significant) on bats is likely. Neutral effects (not significant) are likely on other identified ecological features referenced in Chapter 8.		
Amended Text		



Section	Paragraph / Table	Location
19.5.8	Paragraph 19.5.8.1	Option 1V5 and 1V9
During the operational phase, a Moderate Adverse effect (significant) on bats is likely. A Slight Adverse effect (significant) on barn owls is likely. Neutral effects (not significant) are likely on other identified ecological features		

referenced in Chapter 8.

#### Explanation

This correction updates the PCF Stage 2 EAR Summary Chapter following the erratum regarding the barn owl operational effect significance levels for all options in Section 2.9 (Erratum 15).

#### Erratum 16

Section	Paragraph / Table	Location
19.5.9 Paragraph 19.5.9.1 C		Option 3V1
Existing T	ext	
During the operational phase, a Large Adverse effect (significant) on Binsted Woods Complex LWS and a Very Large Adverse effect (significant) on bats is likely. Neutral effects (not significant) are likely on other identified ecological features referenced in Chapter 8.		
Amended Text		
Amended	Text	
During the Large Adve	Text operational phase, a Large Adverse effect (significant erse effect (significant) on bats is likely. A Moderate A ects (not significant) are likely on other identified ecolo	dverse effect (significant) on barn owls is likely.

This correction updates the PCF Stage 2 EAR Summary Chapter following the erratum regarding the barn owl operational effect significance levels for all options in Section 2.9 (Erratum 15).

#### Erratum 17

Section	Paragraph / Table	Location
19.8.11	Paragraph 19.8.11.2	Option 3V1
Existing Text		
During operation, an estimated 379 properties would experience a noise level increase classified as moderate (370 properties) or major (9 properties) in the long-term.		
Amended Text		

During operation, an estimated <del>379</del> 326 properties would experience a noise level increase classified as moderate (<del>370</del> 317 properties) or major (9 properties) in the long-term.



Section	Paragraph / Table	Location
19.8.11	Paragraph 19.8.11.2	Option 3V1
Explanation		

The correction is the result of a transcription error between the technical appendix (see Table 11-3-16 of Appendix 11-3 – Noise Model Results) and the PCF Stage 2 EAR Chapter 11 – Noise and Vibration.

This correction updates the PCF Stage 2 EAR Summary Chapter following the erratum regarding the corrected property numbers in Section 2.10 (Erratum 5).

#### Erratum 18

Section	Paragraph / Table	Location
19.8.12	Paragraph 19.8.12.1	Option 4/5AV1

#### **Existing Text**

During the operational phase, Significant Adverse effects are likely at existing properties east and south of Crossbush, in Tortington and Binsted. Significant Adverse effects are also likely at properties south of A27, west of Ford Road Roundabout.

#### Amended Text

During the operational phase, Significant Adverse effects are likely at existing properties east and south of Crossbush, in Tortington, and Binsted. Significant Adverse effects are also likely at properties south of A27, west of Ford Road Roundabout and Fitzalan Road.

#### Explanation

This correction is the result of a typographical error. Whilst the conclusion for Scheme option 4/5AV1 has changed for the existing properties on Fitzalan Road, all the modelling, prediction and assessment work underpinning the PCF Stage 2 EAR is correct.

This correction updates the PCF Stage 2 EAR Summary Chapter following the errata regarding the significance of effect on Fitzalan Road in Section 2.10 (Erratum 8 and Erratum 11).

#### Erratum 19

Section	Paragraph / Table	Location
19.10.6	Paragraph 19.10.6.1 – 19.10.6.2	All options
Existing Text		
During the encodience where the figure (not circuiting the figure the following encoder whether the		

During the operational phase, Neutral effects (not significant) are likely on the following aspects: water quality in the River Arun and other watercourses, flood risk and flood flow, and the recharge rate of groundwater assets assuming that appropriate mitigation is in place.

All Scheme options are likely to result in Slight Adverse effects (not significant) on Secondary A aquifers due to pond dewatering during the operational phase.



Section Paragraph / Table	Location	
19.10.6 Paragraph 19.10.6.1 – 19.10.6.2	All options	

# Amended Text

During the operational phase, Neutral effects (not significant) are likely on the following aspects: water quality in the River Arun and other watercourses, and flood risk and flood flow<del>, and the recharge rate of groundwater assets</del> assuming that appropriate mitigation is in place.

All Scheme options are likely to result in Slight Adverse effects (not significant) on the recharge rate of groundwater assets Secondary A aquifers due to pond dewatering during the operational phase.

#### Explanation

These amendments are the result of transcription error between the summary section and the main body of Chapter 13 of the PCF Stage 2 EAR. The groundwater assessment was conducted based on the correct assessments provided in paragraph 13.9.8.27 of Chapter 13, PCF Stage 2 EAR. There are no changes to the conclusions of the PCF Stage 2 EAR as a result of these amendments.

This correction updates the PCF Stage 2 EAR Summary Chapter following the erratum regarding the groundwater recharge rate in Section 2.12 (Erratum 4).



# A27 Arundel Bypass Environmental Assessment Report Errata-Attachment 1: Corrected Cultural Heritage Chapter and Figures

PCF Stage 2 Further Consultation

February 2020



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Figure 6-3 - Designated heritage asset location plan, Arundel detail insert map 2 (Updated – P02)

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Figure 6-5 - Historic Landscape Character location plan (Updated – P02) Figure 6-6 - Designated heritage asset location plan Option 1V5 (Updated – P02) Figure 6-7 - Non-designated heritage asset location plan Option 1V9 (Updated – P02) Figure 6-8 - Designated heritage asset location plan Option 1V9 (Updated – P02) Figure 6-9 - Non-designated heritage asset location plan Option 1V9 (Updated – P02) Figure 6-10 - Designated heritage asset location plan Option 3V1 (Updated – P02) Figure 6-11 - Non-designated heritage asset location plan Option 3V1 (Updated – P02) Figure 6-12 - Designated heritage asset location plan Option 4/5AV1 (Updated – P02) Figure 6-13 - Non-designated heritage asset location plan Option 4/5AV1 (Updated – P02) Figure 6-14 - Designated heritage asset location plan Option 4/5AV2 (Updated – P02) Figure 6-15 - Non-designated heritage asset location plan Option 4/5AV2 (Updated – P02) Figure 6-16 - Designated heritage asset location plan Option 4/5AV2 (Updated – P02) Figure 6-16 - Designated heritage asset location plan Option 5BV1 (Updated – P02) Figure 6-17 - Non-designated heritage asset location plan Option 5BV1 (Updated – P02) Figure 6-18 - Cropmarks in the vicinity of St Mary's, Binsted (LB1274877) and Church Farm, Binsted (LB1222198)

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# Acronyms

ACRONYMS	DEFINITION
ANA	Archaeological Notification Area
BGS	British Geological Survey
СА	Conservation Area
DMRB	Design Manual for Roads and Bridges
EIA	Environmental Impact Assessment
HER	Historic Environment Record
LB	Listed Building
NHLE	National Heritage Listing Entry
PCF	Project Control Framework
SDNP	South Downs National Park
SDP	Strategy Development Plan
SM	Scheduled Monument



# Glossary

TERM	DEFINITION
Archaeological Notification Area (ANA)	Archaeological Notification Areas are areas that indicate the existence, or probable existence, of archaeological heritage assets. They have been created from the information held on the West Sussex Historic Environment Record.
Conservation Area	Conservation areas exist to manage and protect the special architectural, historic interest and uniqueness of a place.
Cropmarks	Sub-surface archaeological, natural and recent features visible from the air.
Historic Environment Record (HER)	The Historic Environment Record contains a summary of known historic assets in West Sussex.
Listed Building	Listing buildings are those that possess special architectural and historic interest. Buildings that are Listed are under the consideration of the planning system, so that they can be protected for future generations.
Scheduled Monument	Scheduling is the selection of nationally important archaeological sites and is the oldest form of heritage protection. Beginning in 1913, but originating from the 1882 Ancient Monuments Protection Act, when a 'Schedule' (hence the term 'scheduling') of monuments deserving of state protection was first compiled.



# 6 Cultural Heritage

# 6.1 Introduction

- 6.1.1.1 This chapter provides the baseline and assessment of the potential impacts associated with Cultural Heritage arising from the Scheme. This chapter has been completed in accordance with DMRB Volume 11, Section 3, Part 2<sup>1</sup>. The potential impacts considered in this chapter are:
  - Construction Phase:
    - Impacts on the setting of heritage assets which include constructionrelated traffic noise and vibration; landscaping, earth mounding and spoil disposal; dust; the installation of structures, bridges, signage, road alignment and planting; and the installation of lighting
    - Impacts on below-ground archaeology which include topsoil removal, landscaping, earth mounding and spoil disposal; excavations for demolition, drainage, shallow foundations, borrow pits and piling; the installation of structures, bridges, signage and planting; and
    - Disturbance associated with construction sites and compounds
  - Operational Phase:
    - Impacts on the setting of heritage assets which include lighting, noise, dust, traffic movement and noise expansion; the obstruction of views by structures, bridges, signage and new road
- 6.1.1.2 This chapter should be read in conjunction with the Environmental Assessment Report (EAR) as a whole and in particular with:
  - Chapter 7: Landscape
  - Chapter 10: Noise and Vibration.

# 6.2 Legislative and policy framework

6.2.1.1 The broad legislative and policy framework relevant to environmental assessment of the Scheme is set out in Chapter 1: Introduction of this EAR.
 Table 6-1 summarises the legislation, policy and guidance applicable to the Cultural Heritage assessment.

<sup>&</sup>lt;sup>1</sup> Highways Agency, Cultural Heritage, Design Manual for Roads and Bridges HA208/07, Volume 11, Section 3, Part 2 (August 2007)



# Table 6-1 - Cultural Heritage legislation, policy and guidance

Name	Summary
Legislation	
Ancient Monuments and Archaeological Areas Act 1979	The Ancient Monuments and Archaeological Areas Act 1979 relates to Scheduled Monuments. Section 61 of the Act defines 'ancient monuments' as a) any scheduled monument; and (b) any other monument which in the opinion of the Secretary of State is of public interest by reason of the historic, architectural, traditional, artistic or archaeological interest attaching to it. Scheduled Monument are defined by reference to Section 1 of the Act. Section 2 of the Act states that any works affecting Scheduled Monuments require consent from the Secretary of State.
Planning (Listed Buildings and Conservation Areas) Act 1990	Sections 16 and 66 of the Planning (Listed Buildings and Conservation Areas) Act 1990 apply to all decisions concerning Listed Buildings. These sections relate to decisions on Listed Building consent applications or any decision on a planning application for development that affects a Listed Building or its setting. The decision maker must have special regard to preserving the building or its setting or any features of special architectural or historic interest.
Hedgerows Regulations 1997	<ul> <li>The Hedgerows Regulations 1997 do not apply to works undertaken on behalf of the Secretary of State for Transport. However, the Regulations are useful for determining which hedgerow elements of the Historic Landscape are important. The criteria for determining historically important hedgerows include (Part II, Criteria):</li> <li>The hedgerow marks the boundary, or part of the boundary, of at least one historic parish or township (for this purpose "historic" means existing before 1850).</li> <li>The hedgerow incorporates an archaeological feature which is: a) defined under the Ancient Monuments and Archaeological Areas Act 1979; b) recorded at the relevant date in a Sites and Monuments Record</li> </ul>



Name	Summary
	<ul> <li>The hedgerow is situated wholly or partly within an archaeological site or on land adjacent to and associated with such a site; and is associated with any monument or feature on that site.</li> <li>The hedgerow marks the boundary of a pre-1600 AD estate or manor recorded at the relevant date in a Sites and Monuments Record or in a document held at that date at a Record Office; or is visibly related to any building or other feature of such an estate or manor.</li> <li>The hedgerow is recorded in a document held at the relevant date at a Record Office as an integral part of a field system pre-dating the Inclosure Acts; or is part of, or visibly related to, any building or other feature associated with such a system, and that system is substantially complete; or is of a pattern which is recorded in a document prepared before the relevant date by a local planning authority, within the meaning of the Planning (Listed Buildings and Conservation Areas) Act 1990, for the purposes of development control within the authority's area, as a key landscape characteristic.</li> </ul>
National Policy	
National Policy Statement for National Networks <sup>2</sup>	As set out in <b>Chapter 1: Introduction</b> the National Policy Statement for National Networks (NN NPS) sets out the Government's policies to deliver the development of Nationally Significant Infrastructure Projects (NSIPs) on the national road and rail networks in England, as defined by the Planning Act 2008 (PA2008). The PA2008 requires the Secretary of State to determine the application in accordance with the NN NPS. Paragraphs 5.120 to 5.142 to consider the historic environment. Relevant sections are listed below:

<sup>&</sup>lt;sup>2</sup> Department for Transport, *National Policy Statement for National Networks* (December 2014)





Name	Summary
	<ul> <li>this and future generations. This understanding should be used to avoid or minimise conflict between their conservation and any aspect of the proposal."</li> <li>NN NPS Paragraph 5.130 states that "The Secretary of State should take into account the desirability of sustaining and, where appropriate, enhancing the significance of heritage assets, the contribution of their settings and the positive contribution that their conservation can make to sustainable communities – including their economic vitality. The Secretary of State should also take into account the desirability of new development making a positive contribution to the character and local distinctiveness of the historic environment. The consideration of design should include scale, height, massing, alignment, materials, use and landscaping (for example, screen planting)."</li> <li>NN NPS paragraph 5.131 states that "When considering the impact of a proposed development on the significance of a designated heritage asset, the Secretary of State should give great weight to the asset's conservation. The more important the asset, the greater the weight should be. Once lost, heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset should require clear and convincing justification."</li> </ul>



Name	Summary
National Planning Policy Framework 2019	The National Planning Policy Framework (NPPF) highlights the importance of good design in the built environment. It states that good design is a key aspect of sustainable development, is indivisible from good planning, and should contribute positively to making places better for people. <sup>3</sup>
	NPPF paragraph 185 states that "Plans should set out a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. This strategy should take into account: a) the desirability of sustaining and enhancing the significance of heritage assets, and putting them to viable uses consistent with their conservation; b) the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring; c) the desirability of new development making a positive contribution to local character and distinctiveness; and d) opportunities to draw on the contribution made by the historic environment to the character of a place."
	NPPF paragraph 189 states that "In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an

<sup>&</sup>lt;sup>3</sup> Ministry of Housing, Communities and Local Government, National Planning Policy Framework, Section 16: Conserving and enhancing the historic environment (February 2019)



Name	Summary
	appropriate desk-based assessment and, where necessary, a field evaluation."
	Paragraph 193 states that when "considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance."
	Paragraph 194 states that "Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification.' Substantial harm to or loss of:
	a) grade II Listed Buildings, or grade II registered parks or gardens, should be exceptional;
	b) assets of the highest significance, notably scheduled monuments. grade I and II* Listed Buildings, grade I and II* registered parks and gardens, should be wholly exceptional."
Planning Practice Guidance 2014: Conserving and	Conserving and enhancing the historic environment April 2014, updated July 2019.
enhancing the historic	The guidance includes: <ul> <li>Overview: historic environment</li> </ul>
environment (last updated 2019)	<ul> <li>Plan making: historic environment</li> <li>Decision-taking: historic environment</li> <li>Designated heritage assets</li> <li>Non-designated heritage assets</li> <li>Heritage consent processes</li> <li>Consultation and notification requirements for heritage related applications</li> <li>Further information on heritage and planning issues.</li> </ul>



Name	Summary		
	Protecting and enhancing the historic environment is an important component of the NPPF's drive to achieve sustainable development (as defined in paragraphs 7-10). The appropriate conservation of heritage assets forms one of the 'Core Planning Principles' (paragraph 8 bullet 10) that underpin the planning system. This is expanded upon principally in paragraphs 126-141 but policies giving effect to this objective appear elsewhere in the NPPF.		
Local Policy			
Arun District Local Plan 2011-2031⁴	<ul> <li>The Arun District Local Plan 2011 – 31 replaced the 2003 Arun District Local Plan. The relevant Local Plan policies include:</li> <li>Policy Historic Environment Record (HER) SP1 The Historic Environment</li> <li>Policy HER DM1 Listed Buildings</li> <li>Policy HER DM2 Locally Listed Buildings or Structures of Character</li> <li>Policy HER DM3 Conservation Areas</li> <li>Policy HER DM4 Areas of Character</li> <li>Policy HER DM6 Archaeological Interest.</li> </ul>		
South Downs Local Plan Adopted 2 July 2019 (2014 – 33) <sup>5</sup>	<ul> <li>The South Downs National Park Authority submitted its Local Plan in April 2018. The final Inspectors Report has been received and concluded that the Local Plan is sound, subject to a number of main modifications. The National Park Authority considered and adopted the Local Plan together with the Inspector's recommended main modifications on 2 July 2019. The adopted Local Plan replaces all existing planning policies across the National Park. Relevant policies include:</li> <li>Strategic Policy SD4: Landscape Character</li> <li>Strategic Policy SD12: Historic Environment</li> </ul>		

<sup>4</sup> Arun District Council, Arun District Council Local Plan 2011-2031 (2018)

https://www.arun.gov.uk/download.cfm?doc=docm93jijm4n12549.pdf&ver=12567 [Accessed July 2018]

<sup>&</sup>lt;sup>5</sup> South Downs National Park Authority, South Downs Local Plan: Adopted 2 July 2019 (2014 – 33) <u>https://www.southdowns.gov.uk/planning/south-downs-local-plan\_2019/local-plan/</u> [Accessed July 2019]



Name	Summary		
	<ul> <li>Development Management Policy SD13: Listed Buildings</li> <li>Development Management Policy SD14: Climate Change Mitigation and Adaptation of Historic Buildings</li> <li>Development Management Policy SD15: Conservation Areas</li> <li>Development Management Policy SD16: Archaeology.</li> </ul>		
South Downs National Park Authority (SDNPA) Position Statement on A27 route corridor <sup>6</sup>	The Position Statement sets out the Authority's position in the case of any future transport infrastructure projects. In considering proposals the SDNPA will be <i>"mindful that the current state of congestion on the A27 can create secondary impacts within the National Park"</i> (paragraph 6 of the Position Statement). Where feasible, the primary impacts of any new schemes must be objectively assessed alongside potential secondary impacts. In assessing the specific impacts of any detailed options, the SDNPA (paragraph 7 of the Position Statement) will ask Highways England to use the framework of the seven Special Qualities (SQ) of the National Park.		
Guidance			
Design Manual for Road and Bridges: Cultural Heritage <sup>7</sup>	This Design Manual for Road and Bridge provides guidance on the assessment of the impacts that road projects may have on the cultural heritage resource.		
General Principles of Environmental Assessment, Design Manual for Road and Bridges 2008 <sup>8</sup>	The General Principles of Environmental Assessment, Design Manual for Road and Bridge sets the context for Environmental Assessment on road projects. It provides the general principles and guidance for undertaking environmental impact assessments.		

<sup>6</sup> South Downs National Park Authority 2019. South Downs National Park Authority Position Statement on A27 corridor. Available at: <u>https://www.southdowns.gov.uk/national-park-authority/our-work/position-statements/</u> [Accessed July 2019]

<sup>7</sup> Highways Agency, Cultural Heritage, Design Manual for Roads and Bridges, (2007) - Volume 11, Section 3, Part 2 (HA 208/07)

<sup>8</sup> Highways Agency, General Principles of Environmental Assessment, Design Manual for Roads and Bridges (2008) – Volume II; Section 2, Part 1 (HA 201/08)



## 6.3 Assessment methodology

#### 6.3.1 Overview of assessment methodology

- 6.3.1.1 The cultural heritage assessment has been prepared with reference to the legislation and guidance in **Section 6.2.** The methodology used to assess the difference to the baseline conditions 'do-something (with the Scheme)' in comparison to 'do-minimum (without the Scheme)' is set out in **Section 6.3.2**. The presence, degree of preservation, extent and significance of archaeological remains cannot be determined prior to investigation, which is programmed for PFC Stage 3 (Preliminary Design).
- 6.3.1.2 A simple assessment has been undertaken, as defined by DMRB guidance (Volume 11, Section 3, Part 2 HA 208/07). A simple assessment is appropriate for PCF Stage 2 (Option Selection) given the early design stage and that this level of assessment provides an appropriate understanding of the effects of the Scheme options. The simple assessment comprises<sup>9</sup>:
  - 'Method Statement contains a summary of the assessment sources, and methods adopted for data gathering, fieldwork, evaluation, assessment of impacts, and mitigation.
  - Regulatory and Research Framework, including the relevant legislation, policy and codes of practice, and the results of relevant consultations, together with a statement of the cultural heritage Scheme Objectives.
  - Baseline conditions: the identification and characterisation of cultural heritage assets, to an appropriate level of detail, including the results of any surveys carried out.
  - Evaluation of the cultural heritage assets.
  - Assessment of the magnitude of the impact of the scheme, taking into account agreed mitigation measures or strategies, including the likely effectiveness of the mitigation and a description and discussion of potential alternatives.
  - Significance of effects, which includes the assessment of the significance of the effects on the cultural heritage resource, based on the evaluation and the assessment of the magnitude of the impacts, taking agreed mitigation into account. There should also be a statement identifying any remaining risks or uncertainties.

<sup>&</sup>lt;sup>9</sup> Highways Agency, Cultural Heritage, Design Manual for Roads and Bridges HA208/07, Volume 11, Section 3, Part 2, Chapter 6, (August 2007)



- A summary comprising a short description of the significance of the effects on cultural heritage.'
- 6.3.1.3 The report will be illustrated to show the locations of the relevant assets on an OS based key plan showing Scheduled Monuments, Listed Buildings, Conservation Areas, Registered Historic Landscapes, Historic Parks and Gardens, Historic Battlefields, Historic Landscape character mapping and other relevant designated and undesignated assets.
- 6.3.1.4 This chapter presents an assessment of the effects of the Scheme options on the cultural heritage resource. This includes all known statutory designated and non-designated assets such as Scheduled Monuments (SM), Grade I, II\*, II Listed Buildings (LB), Registered Parks and Gardens, Conservation Areas (CA), Historic Landscapes and non-designated assets such as archaeological remains and their settings. The impact assessment is presented only for those assets within the Study Areas that are potentially affected; there are assets in the Study Areas of each Scheme option for which the Scheme option would have no impact.

#### 6.3.2 Future Baseline Prediction Methods

- 6.3.2.1 Operational and construction effects have been assessed against the current cultural heritage baseline. This is because the future baseline is not expected to differ significantly from the current baseline, and so the operational effects within this chapter have been assessed against the current baseline.
- 6.3.2.2 The do-minimum option (no Scheme) would be unlikely to result in any significant change to the future baseline condition for cultural heritage. It is assumed that any developments identified within **Chapter 17: Assessment of Cumulative Effects** within the Study Area (defined in **Section 6.5**) will have an appropriate level of impact mitigation measures implemented.

## 6.3.3 Significance criteria

6.3.3.1 The value (sensitivity) of receptors identified in the Study Areas will be assigned as shown in **Table 6-2**.



#### Table 6-2 - Environmental value (sensitivity)<sup>10</sup>

Value (Sensitivity)	Typical Descriptors	
Very High	Structures and assets of acknowledged international importance such as World Heritage sites and sites of acknowledged international importance.	
High	Assets such as Scheduled Monuments or of schedulable quality, Grade I and Grade II* Listed Buildings. Conservation Areas containing very mportant buildings and designated Historic Landscapes of outstanding interest.	
Medium	Designated or undesignated assets that contribute to regional research objectives scale, such as Archaeological Notification Areas (ANAs). For built heritage assets this includes Grade II Listed Buildings, Conservation Areas containing buildings that contribute significantly to its historic character, and Historic Townscape or built-up areas with important historic integrity in their buildings and designated special Historic Landscapes.	
Low	Low or medium importance and rarity, designated and undesignated assets of local importance, or assets compromised by poor preservation and/or poor survival, and robust undesignated Historic Landscapes.	
Negligible	Assets with very little or no surviving archaeological interest, or buildings of no architectural or historical note and landscapes with little or no significant historical interest.	

#### 6.3.3.2 The magnitude of impact will be assigned as described in **Table 6-3**.

#### Table 6-3 - Magnitude of impact and typical descriptors<sup>11</sup>

Magnitude of Impact	Typical Criteria Descriptors
Major Beneficial	Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality.
Moderate Beneficial	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.

<sup>&</sup>lt;sup>10</sup> Highways Agency, Assessment and Management of Environmental Effects HA 205/08, Design Manual for Roads and Bridges Volume 11, Section 2, Part 5 (August 2008)

<sup>11</sup> ibid



Magnitude of Impact	Typical Criteria Descriptors
Minor Beneficial	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring.
Negligible Beneficial	Very minor benefit to or positive addition of one or more characteristics, features or elements.
No change	No loss or alteration of characteristics, features or elements; no observable impact in either direction.
Negligible Adverse	Very minor loss or detrimental alteration to one or more characteristics, features or elements.
Minor Adverse	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.
Moderate Adverse	Loss of resource, but not adversely affecting the integrity; partial loss of, or damage, to key characteristics, features or elements.
Major Adverse	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements.

## 6.3.3.3 The significance of effect is described as detailed in **Table 6-4**.

#### Table 6-4 - Significance of effect<sup>12</sup>

Significance category	Typical Descriptors
Very Large	Only adverse effects are normally assigned this level of significance. They represent key criteria in the decision- making process. The effects are generally, but not exclusively, associated with sites or features of international, national or regional importance that are likely to suffer the most damaging impact and loss of resource integrity. However, a major change in a site or feature of local importance may also enter this category.
Large	These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the decision-making process.
Moderate	These beneficial or adverse effects may be important, but are not likely to be key decision-making factors. The cumulative effects of such factors may influence decision-

<sup>&</sup>lt;sup>12</sup> Highways Agency, Assessment and Management of Environmental Effects HA 205/08, Design Manual for Roads and Bridges Volume 11, Section 2, Part 5 (August 2008)



Significance category	Typical Descriptors
	making if they lead to an increase in the overall adverse effect on a particular resource or receptor.
Slight	These beneficial or adverse effects may be raised as local factors. They are unlikely to be critical in the decision-making process, but are important in enhancing the subsequent design of the project.
Neutral	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

6.3.3.4

The significance of effect will be determined by combining the magnitude of impact with the sensitivity of the receptor as presented in **Table 6-5**. At this PCF Stage 2 (Option Selection), all levels from Moderate to Very Large are considered to be a significant effect.

		Magnitude of impact (Degree of change)				
		No change	Negligible	Minor	Moderate	Major
	Very High	Neutral	Slight	Moderate or Large	Large or Very Large	Very Large
ivity	High	Neutral	Slight	Slight or Moderate	Moderate or Large	Large or Very Large
Sensitivity	Medium	Neutral	Neutral or Slight	Slight	Moderate	Moderate or Large
	Low	Neutral	Neutral or Slight	Neutral or Slight	Slight	Slight or Moderate
	Negligible	Neutral	Neutral	Neutral or Slight	Neutral or Slight	Slight

Table 6-5 - Significance of effect categories (pre-mitigation)<sup>13</sup>

<sup>&</sup>lt;sup>13</sup> Highways Agency, Assessment and Management of Environmental Effects HA 205/08, Design Manual for Roads and Bridges Volume 11, Section 2, Part 5 (August 2008)



## 6.4 Assessment assumptions and limitations

- 6.4.1.1 The assumptions and limitations which apply to this assessment are outlined in **Table 6-6**. For each assumption or limitation an explanation of the possible effect of the assumption has been provided and a description of any actions that have been taken to minimise any limitations.
- 6.4.1.2 The potential for impacts on below-ground archaeology is likely to require further assessment as the physical extent of the Scheme is developed. In PCF Stage 3 (Preliminary Design) the assessments will be refined further through a scheme of investigative survey followed by mitigation measures for the preferred option.

Assumption or Limitation	Effect of Assumption or Limitation	Correction for Assumption or Limitation
Desk Study		
This simple level assessment is suitable for PCF Stage 2 (Option Selection). The presence and impact to designated and non- designated heritage assets (both below and above ground remains) within the Scheme, including the inner 200m and wider 1km Study Areas, has been assessed in accordance with existing Historic Environment Record data. Where no data has been recorded in the option footprint it cannot be assumed that these are blank areas (see Figures 6-1 and 6- 2).	There may be gaps in the data however the assessment does include all known designated and non-designated heritage assets within the footprint of the Scheme options, and the Inner and Wider Study Areas.	Further investigation is required to establish the presence or absence of unknown above and below ground archaeological remains will be undertaken in PCF Stage 3 (Preliminary Design).
The curtilage features of designated heritage assets and their extent remains unknown at this PCF Stage 2 (Option Selection).	The Scheme largely affects non- designated heritage assets, however consultation with Historic England would be required in relation to	Although, responses will be added at a later date, professional judgement can be used to make assumptions regarding the

#### Table 6-6 - Assessment assumptions and limitations for Cultural Heritage



Assumption or Limitation	Effect of Assumption or Limitation	Correction for Assumption or Limitation
	potential impacts on designated heritage assets. There are a number of instances where the Scheme options may impact Listed Buildings, the curtilages of which are not known. Option 4/5AV1 passes close to three Grade II Listed Buildings that lie within or on the SDNP boundary. Discussion with Historic England has not established these boundaries. The clarification of these boundaries may lie in discussions with the local authority conservation officer.	curtilage of designated heritage assets.
Field Survey		
A walkover survey was undertaken in January 2019 to assess the setting of designated assets affected by the Scheme options. The survey was limited to public rights of way. No archaeological intrusive investigations (trial trenching) have been undertaken during PCF Stage 2 (Option Selection).	The significance of the settings of a number of heritage assets remains unknown at this PCF Stage 2 (Option Selection). The significance of potential archaeological remains is unknown.	The lack of access during the walkover survey is not expected to significantly affect the cultural heritage assessment, since it is anticipated that the overall conclusions will remain the same. A full setting assessment will be carried out in PCF



Assumption or Limitation	Effect of Assumption or Limitation	Correction for Assumption or Limitation
		Stage 3 (Preliminary Design). Archaeological intrusive investigations to be carried out in PCF Stage 3 (Preliminary Design).
Geophysical surveys were completed for Option 5AV3 following the announcement of a preferred route in 2018 (as per PCF Stage 3 (Preliminary Design)). Consultation with the West Sussex County Council County Archaeologist was undertaken to confirm the scope of the survey works. The approach to the current assessment has been to include information relating to the geophysical survey even though an equivalent level of detail is not available for all Scheme options.	Although equivalent information is not available for the other Scheme options all Scheme options will be treated equally and it will not be a differentiating factor. Refer to <b>Appendix 6-3</b> for further information.	The inclusion of the geophysical survey data for the reason outlined above. However, once the preferred route is selected for PCF Stage 3 (Preliminary Design), geophysical surveys would be conducted in PCF Stage 3 (Preliminary Design) to provide additional data regarding the potential for below ground archaeology.

## 6.5 Study Area

6.5.1.1 The Study Areas for cultural heritage has been developed in accordance with the guidance discussed in **Section 6.2** and in particular the cultural heritage section of DMRB<sup>14</sup>.

<sup>&</sup>lt;sup>14</sup> Highways Agency, *Cultural Heritage, Design Manual for Roads and Bridges*, (2007) - Volume 11, Section 3, Part 2 (HA 208/07), Para 5.4.1, 6.4.1



- 6.5.1.2 For cultural heritage each Scheme option has two Study Areas (see Figures 6-6 to 6-17), which are appropriate to the Scheme option, according to the sensitivity of the environment, the potential impacts of the Scheme option and according to DMRB guidance<sup>15</sup>. The Inner Study Area comprises the footprint of the Scheme option, any new land-take, plus an area extending 200m either side of them. The Inner Study Area considers all types of heritage assets, including standing structures, earthworks, below-ground heritage assets, Archaeological Notification Areas (ANAs) (areas which define presently known and recorded areas of heritage sensitivity) and Historic Landscapes.
- 6.5.1.3 In addition to the Inner Study Area, the Wider Study Area comprised the footprint of the Scheme option, any new land-take, plus an area extending one kilometre either side of them. The Wider Study Area was applied for statutory designated assets and their settings. These assets included Scheduled Monuments, Grade I, Grade II\* and Grade II Listed Buildings, Registered Parks and Gardens, Conservation Areas and Historic Landscapes. The Wider Study Area takes into consideration the visual or aural envelope of monuments and more distant aspects of the asset's surroundings<sup>16</sup>.

#### 6.6 Baseline conditions

- 6.6.1.1 The baseline conditions described for cultural heritage are derived from the following sources:
  - Desk-based sources:
    - The Historic Environment Record (HER) held by West Sussex County Council
    - National Heritage List for England (NHLE) as maintained by Historic England<sup>17</sup>
    - National Library of Scotland Map images<sup>18</sup>
    - BGS Geological Mapping<sup>19</sup>

<sup>&</sup>lt;sup>15</sup> Highways Agency, *Cultural Heritage, Design Manual for Roads and Bridges*, (2007) - Volume 11, Section 3, Part 2 (HA 208/07), A5/3, Para 5.4.1

<sup>&</sup>lt;sup>16</sup> Highways Agency, Cultural Heritage, Design Manual for Roads and Bridges, (2007) - Volume 11, Section 3, Part 2 (HA 208/07), A5/3, Para 6.4.1

<sup>&</sup>lt;sup>17</sup> National Heritage List for England available at: https://historicengland.org.uk/listing/

<sup>&</sup>lt;sup>18</sup> National Library of Scotland Map images available at: https://maps.nls.uk/os/

<sup>&</sup>lt;sup>19</sup> BGS Geological Mapping available at: https://www.bgs.ac.uk/data/mapViewers/home.html



- Mark B. Roberts and Matthew I. Pope, 2009 The archaeological and sedimentary records from Boxgrove and Slindon in R M Briant, R T Hosfield and F Wenban-Smith (eds), The Quaternary of the Solent Basin and the Sussex Raised Beaches, Quaternary Research Association Field Guide, London.
- Field Survey Sources: Setting Assessment undertaken between 9 and 10 January 2019.

#### 6.6.2 Summary of baseline conditions for the Scheme

- 6.6.2.1 A total of 387 heritage assets were identified as being present within the Inner and Wider Study Areas of the Scheme. Of these, 325 are statutory designated: 6 Scheduled Monuments, 9 Grade I, 10 Grade II\* and 300 Grade II Listed Buildings, 1 Registered Park and Garden, 5 Conservation Areas. Within the Wider Study Area for all Options there are 279 statutory designated heritage assets: 6 Scheduled Monuments, 5 Grade I Listed Buildings, 8 Grade II\* Listed Buildings, 254 Grade II Listed Buildings, 1 Registered Park and Garden and 5 Conservation Areas
- 6.6.2.2 A total of 8-7 Archaeological Notification Areas, 3 Historic Landscapes and 51 non-designated assets lie within the Study Areas. A list of assets that lie within the Inner and Wider Study Areas of the Scheme is presented in Appendix 6-1, whilst the locations of the assets are presented on Figures 6-1 to 6-17.
- 6.6.2.3 This section provides an overview of the baseline conditions for the Scheme and a summary of the archaeological and historical background of the general area to place the scheme into a wider context. This is presented by period as shown in **Table 6-7** below.

Period	Date Range
Prehistoric Period Palaeolithic Mesolithic Neolithic Bronze Age Iron Age	500,000 – 10,000 BC 10,000 – 3,500 BC 3,500 – 2,200 BC 2,200 – 700 BC 700 BC – AD 43
Romano-British	AD 43 – AD 410
Early Medieval (Anglo-Saxon and Viking Periods)	AD 410 – AD 1066
Late Medieval	AD 1066 – AD 1540

Table 6-7 - Summary of British archaeological and historical periods and date ranges



Period	Date Range
Post-medieval	AD 1540 – circa 1750
Industrial Period	circa AD1750 - 1914
Modern	Post-1914

Prehistoric period (500,000 BC – AD 43)

- 6.6.2.4 Within the Wider Study Areas, Palaeolithic raised storm beach deposits, river terrace and alluvial deposits (Archaeological Notification Area (ANA) DWS8141) have been discovered in Arundel. Boxgrove, located 4.5 kilometres west of the Scheme, contains Britain's oldest human remains including crafted axes and wild animal remains, demonstrating the abundance of Prehistoric settlements in West Sussex<sup>20</sup>. There are ancient field systems located in the west end of Arundel parish, and Prehistoric earthworks at the site of Arundel Castle (SM1012500).
- 6.6.2.5 A Mesolithic site is known within the grounds of Avisford Park located approximately 100m north of Option 5BV1, whilst a Mesolithic tranchet axe was recovered in Arundel east of Priory Lane within the Inner Study Area. Within Arundel Park (in the Wider Study Area) further prehistoric remains have been recovered, including Bronze Age pottery, 4 Bronze Age bowl barrows, an Iron Age-Romano-British settlement located above Box Copse, and an Iron Age-Romano-British 'circus' or theatre area within ANA DWS8141. Ancient woodland at Binsted Park (ANA DWS8481) has the potential to contain earthworks and below-ground archaeology associated with stock management from this period. Also located within the Wider Study Area, Gobblestubbs Copse Earthworks (SM1005895), is a nationally significant example of Iron Age-Romano-British enclosures due to their original function and rarity in form<sup>21</sup>. At Hundredhouse Copse, there is another set of earthworks (MWS14423) of unknown date.

<sup>&</sup>lt;sup>20</sup> Brandon, P, 1998 *The South Downs*, London; Shindler, K, (2014) Colonising Britain, Current Archaeology, 288. Available at: https://www.archaeology.co.uk/articles/specials/timeline/boxgrove.htm. (accessed: 6 March 2019)

<sup>&</sup>lt;sup>21</sup> Historic England, 2017 Secrets of the High Woods NMP



## Romano-British period (AD 43 – AD 410)

- 6.6.2.6 In c.100 AD, the West Sussex landscape comprised of intermixed villages and isolated farms which facilitated an economy based on agriculture, forestry, metalwork and trade<sup>22</sup>. Roman cultivation increased efficiency in field ploughing with many crop, soil marks and bulldozed lynchets visible from aerial photography<sup>23</sup>. Corn-drying ovens recovered at Thundersbarrow and West Blatchington (outside the Wider Study Area), illustrate advancements in food production. Within the Wider Study Area significant quantities of Romano-British pottery have been unearthed in Arundel at Broomhurst Farm (ANA DWS8481) and Crossbush<sup>24</sup>.
- 6.6.2.7 A Romano-British Villa (ANA DWS8141) has been identified at Maltravers Street, Arundel with features of the same period identified at Tarrant Street, in the Wider Study Area. An Iron Age-Romano-British field system and Roman occupation sites at Duke's Plantation (ANA DWS8141) have been identified north of the Wider Study Area. Also within the Wider Study Area, Roman remains have been uncovered in a field to the south of Option 5BV1 and north of Walberton at Chainage 1500<sup>25</sup>. The Roman road from Chichester to Brighton passed through the south end of Walberton parish and a second Roman road has been identified by Historic England LiDAR survey showing a projected line from Chichester to Arundel in the Inner Study Area<sup>26</sup>. This has been interpreted as the course of the old Arundel Road, a significant earthwork agger with side ditches and cropmarks<sup>27</sup>. Traces of possible quarry pits associated with the construction, maintenance and re-working of road material were also identified<sup>28</sup>. The road followed the course of Stane Street out of Chichester before branching east at Westhampnett, keeping an approximately straight course to within a couple miles of Arundel<sup>29</sup>.

<sup>&</sup>lt;sup>22</sup> Brandon, P, 1998 The South Downs, London

<sup>&</sup>lt;sup>23</sup> ibid

<sup>&</sup>lt;sup>24</sup> ibid

<sup>&</sup>lt;sup>25</sup> Pers comm, Katy Mayhew

<sup>&</sup>lt;sup>26</sup> Baggs A.P., Warne, H.M., ed. William Page 1973, Houses of Augustinian canons: Priory of Tortington, in A History of the County of Sussex: Volume 2, British History Online, London. Available at: http://www.british-history.ac.uk/vch/sussex/vol2/pp82-83; Historic England 2017 (Accessed: 28 February 2019); Historic England, 2017 Secrets of the High Woods NMP

<sup>&</sup>lt;sup>27</sup> Historic England, 2017 Secrets of the High Woods NMP

<sup>28</sup> ibid

<sup>&</sup>lt;sup>29</sup> ibid



## Early Medieval (AD 410 – AD 1066)

6.6.2.8 In the early medieval period, Arundel lay on the main road between Chichester and Lewes as part of the Great Route between Southampton and Canterbury<sup>30</sup>. The section between Chichester and Arundel was especially important while the counties of Arundel and Chichester were still undivided<sup>31</sup>. By the 5th century, hill country was progressively abandoned and farms were re-established in early-medieval villages<sup>32</sup>. Peasant farmers continued to reside in nucleated villages, while Anglo-Saxon settlements, known as 'bruhs', were located in Burpham and Arundel under the reign of King Athelred II<sup>33</sup>. In the Wider Study Areas, floodplains in front of Arundel Castle were utilised from this period for stock grazing and features associated with water management and land boundaries such as wet hedges.

#### Late Medieval (AD 1066 – AD 1540)

6.6.2.9 In the late medieval period, farming communities continued to flourish across West Sussex in the form of sheep-and-corn subsistence farming and arable land owned by church estates<sup>34</sup>. In the late 11th century, Arundel as a town contained burgesses under the rule of the local lords and maintained close economic, religious and feudal links with Chichester<sup>35</sup>. Arundel was the third largest Sussex town subsidized outside the Cinque Ports<sup>36</sup>.

<sup>&</sup>lt;sup>30</sup> Baggs A.P., Warne, H.M., ed. T P Hudson, 1997 Arundel, in A History of the County of Sussex: Volume 5, Part 1, Arundel Rape: South-Western Part, Including Arundel, British History Online, London http://www.british-history.ac.uk/vch/sussex/vol5/pt1/pp10-101 (accessed: 28 February 2019)

<sup>&</sup>lt;sup>31</sup> ibid

<sup>&</sup>lt;sup>32</sup> ibid

<sup>&</sup>lt;sup>33</sup> ibid

<sup>&</sup>lt;sup>34</sup> ibid

<sup>&</sup>lt;sup>35</sup> Baggs A.P., Warne, H.M., ed. William Page 1973, Houses of Augustinian canons: Priory of Tortington, in A History of the County of Sussex: Volume 2, British History Online, London http://www.british-history.ac.uk/vch/sussex/vol2/pp82-83 (accessed: 28 February 2019)

<sup>&</sup>lt;sup>36</sup> ibid



- 6.6.2.10 The Peasant's Revolt of 1381 and the plot against Richard II in 1397 took place at Arundel, in addition to royal visits from William II, Henry I, Stephen, Henry II, Richard I, and John and Edward I<sup>37</sup>. In the early 13th century, the town was a passenger seaport for Normandy with William II and Queen Maud disembarking at Arundel in the late 11th and early 12th century<sup>38</sup>. From the mid-13th century, the port developed into a coastal trading port increasing economic activity through the transfer of people, and the import and export of building materials and goods.
- 6.6.2.11 Prominent archaeological finds include medieval Rouen pottery, likely to have been imported into Arundel, and Caen stone, particularly common at other Sussex ports<sup>39</sup>. Medieval fortifications in Arundel include the Ringwork of Batworthpark House (SM1012177) and early Norman earthworks, dating after the Conquest and before the foundation of Arundel Castle (SM1012500) in c.1070<sup>40</sup> both located within the Wider Study Areas. Fortifications are likely to have existed at the castle site before 1066, as demonstrated by surviving medieval features. The castle was used as a prison between 1232-3 and 1306<sup>41</sup>.
- 6.6.2.12 The Domesday Book mentions seven medieval religious houses in the town of Arundel; 5 with the patronage of successive lords, in addition to Pyram Priory (DWS8482) and Tortington Priory (SM1021459)<sup>42</sup>, both within the Inner Study Areas.
- 6.6.2.13 Priory Farm House (LB1034405) c.1151 is located in the Wider Study Areas. The asset was later renamed Calcetto or 'causeway' priory and had royal links to Queen Adelisa and William de Albini, Earl of Arundel<sup>43</sup>. Maison Dieu (SM1005865), formerly the Dominican Priory, located in the Wider Study Area, lacks dating evidence except for a possible 14th-century doorway discovered during a partial excavation of the site. Maison Dieu owned lands from 1395 onwards<sup>44</sup>.

42 ibid

<sup>&</sup>lt;sup>37</sup> Baggs A.P., Warne, H.M., ed. T P Hudson, 1997 Arundel, in A History of the County of Sussex: Volume 5, Part 1, Arundel Rape: South-Western Part, Including Arundel, British History Online, London http://www.british-history.ac.uk/vch/sussex/vol5/pt1/pp10-101 (accessed: 28 February 2019)

<sup>&</sup>lt;sup>38</sup> ibid

<sup>&</sup>lt;sup>39</sup> ibid

<sup>40</sup> ibid

<sup>41</sup> ibid

<sup>&</sup>lt;sup>43</sup> Historic England, 1984 Priory Farmhouse, National Heritage List for England. Available at: https://historicengland.org.uk/listing/the-list/list-entry/1034405. (Accessed: 28 February 2019)

<sup>&</sup>lt;sup>44</sup> Baggs A.P., Warne, H.M., ed. T P Hudson, 1997 Arundel, in A History of the County of Sussex:



- 6.6.2.14 The mid-12th century church of St Mary's, Tortington (LB1222209) within the Wider Study Areas, had religious ties to the French abbey of Séez, and is believed to have been located close to The Great Park<sup>45</sup> of Arundel Castle. Formerly a hide of Tortington in the late 11th century, deer sightings were recorded in the late 13th century and Henry VIII hunted there in the mid-16th century<sup>46</sup>. In the Inner Study Area, Tortington Priory (LSM1021459) c.1180 had religious links with Chichester Cathedral, owning lands between the 13th and 15th century. Evidence for the church, chapel and cloistral buildings have been identified through excavation and aerial photography<sup>47</sup>. Also in the Inner Study Area, Tortington Priory Barn (LB1221996) stands on the site of the Tortington Priory Church, incorporating elements of the church, Binsted (LB1274877) is a prime example of a medieval, Norman church with iconic wall-paintings dated c.1180<sup>49</sup>.
- 6.6.2.15 Originating from late 14th century, St. Wilfred's Priory (LB1027913), the Church of St Nicholas (LB1027914) and the Fitzalan Chapel (LB1263812) are all located north of the Wider Study Area. The Church of St Nicolas was constructed of Sussex marble and designed by an architect of Canterbury Cathedral. It contains original medieval building features in the nave, aisles and transept, including a unique canopied, stone pulpit<sup>50</sup>. The Fitzalan chapel is the private burial place of the Dukes of Norfolk<sup>51</sup>.

Volume 5, Part 1, Arundel Rape: South-Western Part, Including Arundel, British History Online, London http://www.british-history.ac.uk/vch/sussex/vol5/pt1/pp10-101 (Accessed: 28 February 2019)

<sup>&</sup>lt;sup>45</sup> Baggs A.P., Warne, H.M., ed. T P Hudson, 1997 Arundel, in A History of the County of Sussex: Volume 5, Part 1, Arundel Rape: South-Western Part, Including Arundel, British History Online, London http://www.british-history.ac.uk/vch/sussex/vol5/pt1/pp10-101 (Accessed: 28 February 2019)

<sup>&</sup>lt;sup>46</sup> ibid

<sup>47</sup> ibid

<sup>&</sup>lt;sup>48</sup> Historic England, 1984 Priory Farmhouse, National Heritage List for England. Available at: https://historicengland.org.uk/listing/the-list/list-entry/1034405. (Accessed: 28 February 2019)

<sup>&</sup>lt;sup>49</sup> Historic England, 1958 Church of St. Mary, Binsted, National Heritage List for England. Available at: https://historicengland.org.uk/listing/the-list/list-entry/1274877. (Accessed: 28 February 2019)

<sup>&</sup>lt;sup>50</sup> National Churches Trust, 2017 St Mary Magdalene, Available at: <u>https://www.nationalchurchestrust.org/explore-churches/st-mary-magdalene-11</u>. (Accessed: 28 February 2019)

<sup>51</sup> ibid



## Post-medieval (AD c. 1540 – c. 1750)

6.6.2.16 During the 16th century, Arundel advanced in commerce and shipping trade and was ordered to contribute to shipping costs to fight the Spanish Armada, subsequently acting as a port of embarkation for soldiers assisting Henri IV of France<sup>52</sup>. In the 17th century, the deer park known as 'Great Park' continued to house herds of deer with 500 killed during the English Civil War. The park contained a deer house used for hanging venison or housing animals in winter<sup>53</sup>. In the mid-17th and mid-18th centuries, Arundel imports and exports further developed alongside advancements in the shipping and coal trade with Newcastle, London, Southampton and Portsmouth<sup>54</sup>. Archaeological features from the period include a post-medieval lynchet (MWS4223), near Broomhurst Farm, east of Crossbush, and located within the Inner Study Areas.

#### Industrial period (AD c.1750 – 1914)

6.6.2.17 By the Industrial Period, agricultural interests stagnated with wheat and barley as the most important crops in West Sussex<sup>55</sup>. From the early 18th century, most farming land in Arundel belonged to the castle estate with the Dukes of Norfolk residing at the castle<sup>56</sup>. In the early 19th century, Arundel Castle (SM1012500) hosted a fête held to mark the 600th anniversary of the signing of Magna Carta, followed by royal visits from Queen Victoria in the mid-19th century<sup>57</sup>. Industry and commerce continued in Arundel combined with an increase in tourism, with visitors praising the view of Arundel from Lyminster and Burpham<sup>58</sup>. During the later 18th and early 19th centuries, Arundel's boom in trade was significantly impacted when Littlehampton replaced Arundel as the chief port on the River Arun<sup>59</sup>. Turnpike roads were present in Arundel by 1757. A Napoleonic era barracks and associated burial

- <sup>57</sup> ibid
- <sup>58</sup> ibid
- <sup>59</sup> ibid

<sup>&</sup>lt;sup>52</sup> Baggs A.P., Warne, H.M., ed. T P Hudson, 1997 Arundel, in A History of the County of Sussex: Volume 5, Part 1, Arundel Rape: South-Western Part, Including Arundel, British History Online, London http://www.british-history.ac.uk/vch/sussex/vol5/pt1/pp10-101 (Accessed: 28 February 2019)

<sup>&</sup>lt;sup>53</sup> Baggs A.P., Warne, H.M., ed. T P Hudson, 1997 Arundel, in A History of the County of Sussex: Volume 5, Part 1, Arundel Rape: South-Western Part, Including Arundel, British History Online, London http://www.british-history.ac.uk/vch/sussex/vol5/pt1/pp10-101 (Accessed: 28 February 2019)

<sup>&</sup>lt;sup>54</sup> ibid

<sup>55</sup> ibid

<sup>&</sup>lt;sup>56</sup> ibid



ground (ANA DWS8148) was constructed in the early 19th century at Crossbush, (in the Inner Study Areas)<sup>60</sup>.

#### Modern period (Post-1914)

- 6.6.2.18 In the early 20th century, the shipping trade in Arundel stagnated drastically and by the First World War, the port of Arundel ceased to exist<sup>61</sup>. The new swing bridge at Littlehampton and fixed railway bridge at Ford further impacted Arundel trade which shifted to intensive arable farming across the Downs in the late 1940s<sup>62</sup>. During the Second World War, lands outside the Wider Study Area were utilised as military training grounds, and in particular Littlehampton and Eastbourne<sup>63</sup>. Archaeological features from this period include an Auxiliary Unit Special Duties Outstation (MWS7536) located in the Inner Study Areas, with Second World War rifle and infantry posts (ANA DWS8141), located within the Wider Study Areas. Royal visits to Arundel continued into the mid-20th century, with Queen Elizabeth II residing at Arundel Castle for the Goodwood races<sup>64</sup>.
- 6.6.2.19 By the mid-1980s, a number of small local businesses flourished in Arundel such as coal merchants, engineering and stone masons, and construction service industries. A high number of jobs were provided by the Arundel castle estate<sup>65</sup>. In the late 1980s, communications and transport developed in the town through road improvements, most notably the A27.
- 6.6.2.20 The area of Binsted, which lies partly in the SDNP, has significant social and spiritual value to local communities. The ancient woodland at Binsted is currently used for Wiccan practices (Pagan Witches). As a Neo-pagan spiritual religion, Wicca has origins dating to the early 20th century with the founding of 'Modern Wicca' in the 1950s. Wiccan beliefs, traditions and rituals relate to the natural world and devotion to individual deities.

<sup>&</sup>lt;sup>60</sup> Sussex Industrial History Journal online; Baggs A.P., Warne, H.M., ed. T P Hudson, 1997 Arundel, in A History of the County of Sussex: Volume 5, Part 1, Arundel Rape: South-Western Part, Including Arundel, British History Online, London http://www.britishhistory.ac.uk/vch/sussex/vol5/pt1/pp10-101 (Accessed: 28 February 2019)

<sup>&</sup>lt;sup>61</sup> Baggs A.P., Warne, H.M., ed. T P Hudson, 1997 Arundel, in A History of the County of Sussex: Volume 5, Part 1, Arundel Rape: South-Western Part, Including Arundel, British History Online, London http://www.british-history.ac.uk/vch/sussex/vol5/pt1/pp10-101 (Accessed: 28 February 2019)

<sup>&</sup>lt;sup>62</sup> Brandon, P, 1998 The South Downs, London

<sup>&</sup>lt;sup>63</sup> ibid

<sup>&</sup>lt;sup>64</sup> Baggs A.P., Warne, H.M., ed. T P Hudson, 1997 Arundel, in A History of the County of Sussex: Volume 5, Part 1, Arundel Rape: South-Western Part, Including Arundel, British History Online, London http://www.british-history.ac.uk/vch/sussex/vol5/pt1/pp10-101 (Accessed: 28 February 2019)

<sup>&</sup>lt;sup>65</sup>ibid



## Baseline conditions by Scheme options

6.6.2.21 **Table 6-8** summarises the baseline conditions for each Scheme option. Additional information is provided in **Appendix 6-1**.

#### **Option 1V5**

6.6.2.22 Approximately 254Over 250 heritage assets were identified as being present within the Inner and Wider Study Areas of Option 1V5 (Refer to Figures 6-5, 6-6 and 6-7 and Appendix 6-1: Tables 1 to 9).

#### Inner Study Area:

- Between Crossbush Junction to East of the River Arun there are 2 ANAs, 1 Historic Landscape area (HWS24767) and 10 9 other nondesignated assets.
- Within Arundel itself, there is one ANA, within which there are 8-7 nondesignated assets, including the Historic Town of Arundel (MWS2689).
- Between the Ford Road Roundabout and the western tie-in there is 1 ANA (DWS8132). One Historic Landscape area (Stewards Copse HWS24819) is present. There are 9 8 non-designated assets: WWII Loopholed Wall (MWS7583), 3 2 brickyards (MWS6506, MWS5681 and MWS4696), 3 historic farm buildings, a section of the Chichester to Brighton Roman Road (MWS14385) and an Iron Age - Romano British Field System (MWS2312).

#### Wider Study Area:

- Within the Wider Study Area there are 5 Scheduled Monuments, 4 Grade I Listed Buildings, 6 Grade II\* Listed Buildings, 206 Grade II Listed Buildings, 1 Grade II\* Registered Park and Garden and two Conservation Areas.
- Between-From the area around the Crossbush Junction and to the Arun Valley railway line there is 1 Scheduled Monument (Ringwork House; SM1012177), 7 4 Grade II Listed Buildings and one Grade II\* Listed Building (LB1034405).
- Between the Arun Valley railway line and the River Arun there are 7 Grade II Listed Buildings, 6 of which are contained within the Arundel Conservation Area.
- Within the Arundel Conservation Area west of the River Arun lie 2 Scheduled Monuments: Arundel Castle (SM1012500) and former hospital of the Holy Trinity (SM1005865). There are 4 Grade I Listed Buildings including the Church of St Nicholas (LB1027914) and the



Cathedral of St Philip Neri (LB1248090); <u>4</u> 5 Grade II\* buildings and over 180 187 Grade II buildings and 1 Grade II\* Registered Park and Garden (LB1000170).

 West of Arundel and the River Arun to the western tie-in, there are 2 Scheduled Monuments (SM1005895 Gobblestubbs Copse Earthworks and SM1021459 Tortington Augustinian Priory) and 5 Grade II Listed Buildings.

## **Option 1V9**

6.6.2.23 Approximately 253-Over 250 heritage assets were identified as being present within the Inner and Wider Study Areas of Option 1V9 (see Figures 6-5, 6-8 and 6-9 and Appendix 6-1: Tables 10 to 18.). The designated and non-designated assets are identical to those described under Option 1V5 above, apart from one less Grade II Listed Building (LB1027927), 1km to the north of Arundel.

## Inner Study Area:

- Between Crossbush Junction and the River Arun there is 1 ANA (DWS8482, Site of Pynham Augustinian Priory), 1 Historic Landscape area (Brooks Innings HWS24767) and 9 non-designated assets.
- Within the Historic Town of Arundel (MWS2689), there is 1 ANA (DWS8141 Archaeological Features within Arundel Park) and 6 other non-designated assets.
- Three further assets (MWS6506 Brickyard near the Gas Works on Ford Road MWS7583 Loopholed Wall WWII and MWS13127 Arundel work house) are located to the west of the Historic Town of Arundel (MWS2689).
- West of the town and up to the western tie-in, Option 1V9 lies on the border of a Historic Landscape area (Stewards Copse HWS24819). There are 7 non-designated assets along this part of this Scheme option. Including a section of the Chichester to Brighton Roman Road (MWS14385).
- At the western tie-in Option 1V9 lies within ANA DWS 8132.

## Wider Study Area:

 Between Crossbush Junction and the Arun Valley railway line there is 1 Scheduled Monument (SD1012177), 1 Grade II\* Listed Building and 11 Grade II buildings.



- Between the railway line and the River Arun there are 7 Grade II Listed Buildings, 6 of which are contained within the Arundel Conservation Area.
- Within the Arundel Conservation Area west of the River Arun lie 2 Scheduled Monuments: Arundel Castle (SM1012500) and former hospital of the Holy Trinity (SM1005865). There are 4 Grade I Listed Buildings including the Church of St Nicholas (LB1027914) and the Cathedral of St Philip Neri (LB1248090); 6 Grade II\* Listed Buildings; 203 Grade II Listed Buildings and 1 Grade II\* Registered Park and Garden (LB1000170) within the Wider Study Area.
- West of Arundel and the River Arun to the western tie-ins there are 2
   Scheduled Monuments (SM1005895 Gobblestubbs Copse Earthworks and SM1021459 Tortington Augustinian Priory) and 5 Grade II Listed Buildings.

## **Option 3V1**

6.6.2.24 Approximately 50 58 heritage assets were identified as being present within the Inner and Wider Study Areas of Option 3V1 (refer to Figures 6-5, 6-10 and 6-11 and Appendix 6-1: Tables 19 to 25).

### Inner Study Area:

- Between-From the area of the Crossbush Junction and to the River Arun there are 2 ANAs (DWS8148 and DWS8482), 1 Historic Landscape Areas (HWS24767) and 4 other non-designated assets. These are grouped at the eastern end of Option 3V1 in the vicinity of Crossbush junction.
- West of Ford Road to Binsted Lane (East) there is 1 ANA (DWS8481 Tortington Augustinian Priory), 2 Historic Landscape Areas (Stewards Copse HWS24819 and Tortington Common HWS24801) and 1 other non-designated asset.
- North of Binsted Lane (East), within Binsted Woods there is a section of the Chichester to Brighton Roman Road (MWS14385) and four other non-designated assets.
- At the western tie-in, Option 3V1 crosses through ANA DWS8482, and a Brick Kiln on Arundel Road (MWS4693). Three Four other nondesignated assets are also located at this end of Option 3V1.



## Wider Study Area:

- Within the Wider Study Area there are four Scheduled Monuments, two Grade II\* Listed Buildings, 27 Grade II Listed Buildings and two Conservation Areas.
- Between-From the area of the Crossbush Junction and to the River Arun there is 1 Scheduled Monument (SM1012177 Ringwork), 1 Grade II\* Listed Building and 12-11 Grade II Listed Buildings. The Lyminster Conservation Area lies adjacent to the boundary of the Wider Study Area.
- Within that part of Arundel Conservation Area that extends across the River Arun comprising the north-west end of Queen Street there are 5 Grade II Listed Buildings.
- West of Ford Road to the boundary of the SDNP there is 1 Scheduled Monument (SM1021459 Tortington Augustinian Priory), within which lies a Grade II\* Listed Building.
- To the south and south-west of Tortington Augustinian Priory there are 4 Grade II Listed Buildings.
- 6.6.2.25 Between the boundary of the SDNP to the western tie-in there are 2 Scheduled Monuments (SM1003736 Madehurst Wood Earthworks and SM1005895 Gobblestubbs Copse Earthworks), and 6–7 Grade II Listed Buildings.

## Option 4/5AV1

6.6.2.26 Approximately <del>92</del>–90 heritage assets were identified within the Inner and Wider Areas of Option 4/5AV1 (refer to **Figures 6-5, 6-12 and 6-13,** and **Appendix 6-1: Tables 26 to 33**).

#### Inner Study area:

- Between From the area of the Crossbush Junction and to the River Arun there is are 2 4 ANAs (DWS8481 and DWS8148), 1 Historic Landscape Area (Brooks Innings HWS24767) and 4 other non-designated assets.
- West of Ford Road to the boundary of the SDNP Option 4/5AV1 impacts upon 1 ANA (DWS8481), whilst 4 other non-designated heritage assets lie within the ANA.
- From the boundary of the SDNP to the western tie-in there are two ANAs (DWS8130 and DWS8131) and 1 ANA (DWS8132) that-which lies adjacent to Option 4/5AV1. 7-Thirteen non-designated assets lie within the Inner Study Area, including the location of Park – Binsted House (MWS2354) where there is potential that below ground remains



associated with landscaping (for example remnants of tree lines) survive below ground, however such remains are likely to be disturbed by subsequent ploughing.

## Wider Study Area:

- Within the Wider Study Area there are 4 Scheduled Monuments, 1 Grade I Listed Building, 3 Grade II\* Listed Buildings, 55 Grade II Listed Buildings and 4 Conservation Areas.
- Between Crossbush Junction to Tortington Lane (including the Arundel Conservation Area), the Wider Study Area is identical to that of Option 4/5AV1 but includes the Lyminster Conservation Area.
- From the area of the Crossbush Junction to Tortington Lane there are 2 Scheduled Monuments, 2 Grade II\* Listed Building, and 18 Grade II Listed Buildings.
- From Tortington Lane to the western tie-in with the existing A27, there are 2 Scheduled Monuments, <u>4 Grade II Listed Buildings</u> and 2 Conservation Areas (Walberton Village and Walberton Green).
   Walberton Village Conservation Area contains 1 Grade I Listed Building and 1 Grade II\* Listed Building, plus 18 <del>17</del> Grade II Listed Buildings. There are 19 other Grade II Listed Buildings west of Tortington Lane. Thirteen other Grade II Listed Buildings lie within the Wider Study Area.

## Option 4/5AV2

6.6.2.27 Approximately <del>92</del>-90 heritage assets were identified as being present within the Inner and Wider Study Areas of Option 4/5AV2 (refer to **Figures 6-5, 6-14 and 6-15,** and **Appendix 6-1: Tables 34 to 40**).

#### Inner Study area:

- Between From the area around Crossbush Junction and to the River Arun there are is 2 4 ANAs (DWS8481 and DWS8148), 1 Historic Landscape Area (Brooks Innings HWS24767) and 4 other nondesignated assets.
- West of Ford Road to the boundary of the SDNP there is 1 ANA (DWS8481), which contains and 6 other non-designated assets.
- From the boundary of the SDNP to the western tie-in with the existing A27 there are 3 2 ANAs (DWS8131 and DWS8130, DWS8131 and DWS8132), and 2-14 non-designated assets (MWS2354 and MWS2301).



## Wider Study Area:

- Within the Wider Study Area there are 4 Scheduled Monuments, 2 Grade II\* Listed Buildings, 54 Grade II Listed Buildings and 4 Conservation Areas.
- Between-From the area around the Crossbush Junction and to the River Arun there is 1 Scheduled Monument, 1 Grade II\* Listed Building, and 12 Grade II Listed Buildings.
- Within that part of Arundel Conservation Area that extends across the River Arun comprising the north-west end of Queen Street there are 5 Grade II Listed Buildings.
- Between the River Arun and the SDNP boundary there is 1 Scheduled Monument, 1 Grade II\* Listed Building, and 6 Grade II Listed Buildings.
- From the SDNP boundary to the western tie-in with the existing A27 there are 2 Scheduled Monuments (SM1003736 and SM1005895), 2 4 Conservation Areas (Walberton Village and Walberton Green)., which contains 1 Grade I Listed Building, 1 Grade II\* Listed Building and 18 Grade II Listed Buildings. 11 other Grade II Listed Buildings lie within the Wider Study Area. There are 31 Grade II Listed Buildings.

### **Option 5BV1**

6.6.2.28 Approximately 91–90 heritage assets were identified as being present within the Inner and Wider Study Areas of Option 5BV1 (refer to Figures 6-5, 6-16 and 6-17, Appendix 6-1: Tables 41 to 48). The eastern end of Option 5BV1 lies adjacent to the SDNP boundary.

#### Inner Study area:

- Between-From the area around the Crossbush Junction and to the River Arun there is 1 are 2 ANAs (DWS84821 and DWS8148), 1 Historic Landscape Area (Brooks Innings HWS24767) and 4 other nondesignated assets.
- From the River Arun to the western tie-in with the existing A27, the footprint of Option 5BV1 passes through 1–2 ANAs (DWS8481 and DWS8478), a section of the Chichester to Brighton Roman Road (MWS14385), the site of a Historic farmstead (MWS14031) and 8 2 other non-designated assets.

## Wider Study Area:

 Within the Wider Study Area there are 2 Scheduled Monuments, 1 Grade I Listed Building, 3 Grade II\* Listed Buildings, 63 Grade II Listed Buildings and 5 Conservation Areas.



- Between From the area around Crossbush Junction and to the River Arun there is 1 Scheduled Monument, 1 Grade II\* Listed Building, and 12-11 Grade II Listed Buildings.
- Within that part of Arundel Conservation Area that extends across the River Arun comprising the north-west end of Queen Street there are 5 Grade II Listed Buildings.
- From Tortington Lane-the River Arun to the western tie-in with the existing A27 there is 1 Scheduled Monument and the 2 Conservation Areas of-(Walberton Green and Walberton Village) are within the Study Area. These Conservation Areas contain 1 Grade I Listed Building (LB1274629, The Parish Church of St Mary), 1 Grade II\* Listed Building 18-20 Grade II Listed Buildings.
- One Grade II\* Listed Building and Twenty-four other 21 Grade II Listed Buildings are included within this section of the Wider Study Area.
- To the north-west (and within the Wider Study Area) the Slindon Conservation Area contains 6 Grade II Listed Buildings.



Key Environmental Value	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
Scheduled Monuments (High)	Five Scheduled Monuments widely distributed along the Scheme option ( <b>See</b> <b>Appendix 6-</b> <b>1, Table 1</b> )	Five Scheduled Monuments widely distributed along the Scheme option ( <b>See Appendix</b> <b>6-1, Table 10</b> )	Four Scheduled Monuments widely distributed along the Scheme option west of River Arun (See Appendix 6-1, Table 19)	Four Scheduled Monuments widely distributed along the Scheme option ( <b>see Appendix</b> <b>6-1, Table 26</b> )	Four Scheduled Monuments widely distributed along the Scheme option (see Appendix 6-1, Table 34)	Two Scheduled Monuments located in the east half of the central area of the Scheme option ( <b>see</b> <b>Appendix 6-1,</b> <b>Table 41)</b>
Grade 1 Listed Buildings (High)	Four Grade I Listed Buildings all within Historic Arundel ( <b>See</b> <b>Appendix 6-</b> <b>1, Table 2</b> )	Four Grade I Listed Buildings all within Historic Arundel (See <b>Appendix</b> <b>6-1, Table 11</b> )	Not located in this Scheme option	One Grade I Listed Building is located in Walberton Village Conservation Area (see Appendix 6-1, Table 27)	Not located in this Scheme option	One Grade I Listed Building is located in Walberton Village Conservation Area (see Appendix 6-1, Table 42)
Grade II* Listed Buildings (High)	Seven-Six Grade II* Listed Buildings located within	Six Grade II* Listed Buildings located within Arundel and to the east of the	Two Grade II* Listed Buildings located at the east end and centrally west	Three Grade II* Listed Buildings widely distributed along the	Two Grade II* Listed Buildings located at the east end and centrally west	Three Grade II* Listed Buildings widely distributed along the

Table 6-8 - Summary of baseline conditions by Scheme option study area for Cultural Heritage (see Appendix 6-1 for full list of all assets)



Key Environmental Value	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
	Arundel, and west of Ford Road (see <b>Appendix 6-</b> <b>1, Table 4</b> )	railway line (see <b>Appendix</b> <b>6-1, Table 13</b> )	of Ford Road ( <b>See Appendix</b> 6-1, Table 20)	Scheme option ( <b>see Appendix</b> 6-1, Table 28)	of Ford Road ( <b>see Appendix</b> 6-1, Table 35)	Scheme option ( <b>see Appendix</b> 6-1, Table 43)
Grade II Listed Buildings (Medium)	205-206 Grade II Listed Buildings (see <b>Appendix 6-</b> <b>1, Table 5</b> ) The majority are contained within the Historic Town of Arundel, with a second group distributed between Crossbush junction and River Arun, and a third	206-205 Grade II Listed Buildings (see <b>Appendix 6-1,</b> <b>Table 14</b> ). The majority are contained within the Historic Town of Arundel, with a second group distributed between Crossbush junction and River Arun, and a third group west of Arundel.	27 Grade II Listed Buildings widely distributed along the Scheme option ( <b>See Appendix</b> 6-1, Table 21)	54-55 Grade II Listed Buildings are clustered at the east end of the option, widely distributed along the option east of Ford Road with a further cluster at the west end of the Scheme option (see Appendix 6-1, Table 29)	52-54 Grade II Listed Buildings widely distributed along the Scheme option (see Appendix 6-1, Table 36)	61-63 Grade II Listed Buildings are clustered at the east end of the Scheme option, widely distributed along the option east of Ford Road with a further cluster at the west end of the Scheme option (see Appendix 6-1, Table 44)



Key Environmental Value	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
	group west of Arundel.					
Grade II* Registered Parks and Gardens (Medium)	One Grade II* Registered Park and Garden located within Arundel (see <b>Appendix 6-</b> <b>1, Table 3</b> )	One Grade II* Registered Park and Garden located within Arundel (see <b>Appendix</b> <b>6-1, Table 12</b> )	Not located in this Scheme option	Not located in this Scheme option	Not located in this Scheme option	Not located in this Scheme option
Conservation Areas (Medium)	One-Two Conservation Areas: Arundel and Lyminster (see Appendix 6- 1, Table 6)	One-Two Conservation Areas: Arundel and Lyminster (see Appendix 6-1, Table 15)	Two Conservation Areas (Arundel and Lyminster) located at the east end of the Scheme option (see <b>Appendix</b> <b>6-1, Table 22</b> ).	Four Conservation Areas widely distributed along the Scheme option: Lyminster Arundel Walberton Village Walberton Green ( <b>see</b> <b>Appendix 6-1,</b> <b>Table 30</b> )	Four Conservation Areas widely distributed along the Scheme option: Lyminster Arundel Walberton Village Walberton Green ( <b>see</b> <b>Appendix 6-1,</b> <b>Table 37</b> )	Five Conservation Areas widely distributed along the Scheme option: Lyminster Arundel Walberton Village Walberton Green Slindon Conservation Area ( <b>see</b>



Key Environmental Value	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
						Appendix 6-1, Table 45)
Archaeological Notification Areas <del>(Medium)</del>	Four ANAs widely distributed along the Scheme option (see <b>Appendix 6-</b> <b>1, Table 7</b> )	Three-Four ANAs widely located at the east and west end of the Scheme option (see Appendix 6-1, Table 16)	Four ANAs widely distributed along the Scheme option ( <b>See Appendix</b> <b>6-1, Table 23</b> )	Five-Six ANAs widely distributed along the Scheme option (see Appendix 6-1, Table 31)	Five ANAs widely distributed along the Scheme option ( <b>see Appendix</b> <b>6-1, Table 38</b> )	Four Five ANAs are located at the east, centrally and toward the west end of the Scheme option (see Appendix 6-1, Table 46)
Non-designated Assets (Low- Medium)	25-26 non- designated assets widely distributed along the Scheme option (see Appendix 6- 1, Table 8)	25-26 non- designated assets widely distributed along the Scheme option (see Appendix 6-1, Table 17)	16-14 non- designated assets located at the east and west ends of the option, and absent within the flood plain west to Ford Road (See Appendix 6-1, Table 24)	20-21 non- designated assets distributed in clusters at the east end, centrally and at the west end of the Scheme option (see Appendix 6-1, Table 32)	24 non- designated assets located at east end of option and regularly clustered from Ford Road to west end of Scheme option (see Appendix 6-1, Table 39)	14-13 non- designated assets distributed in clusters at the east end, centrally and at the west end of the Scheme option (see Appendix 6-1, Table 47)



Key Environmental Value	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
Historic Landscape Areas (Medium)	The option passes through a number of Historic Landscape Areas Two Historic Landscape Areas located centrally within the ancient woodland along the Scheme option (see Appendix 6- 1, Table 9)	The option passes through a number of Historic Landscape Areas Two Historic Landscape Areas located within the River Arun flood plain and within the woodland along the Scheme option (Appendix 6-1, Table 18)	The option passes through a number of Historic Landscape Areas Three Historic Landscape Areas are located within the River Arun flood plain and within the woodland along the Scheme option (see Appendix 6-1, Table 25)	The option passes through a number of Historic Landscape Areas One Historic Landscape Area is located within the River Arun flood plain (see Appendix 6-1, Table 33)	The option passes through a number of Historic Landscape Areas One Historic Landscape Area is located within the River Arun flood plain (see Appendix 6-1, Table 40)	The option passes through a number of Historic Landscape Areas One Historic Landscape Area is located within the River Arun flood plain (see Appendix 6-1, Table 48)



### 6.6.3 Identified receptors

6.6.3.1 The receptors identified in the baseline within the Inner and Wider Study Areas are listed in **Appendix 6-1** with an assessment of their sensitivity. The sensitivity of receptors has been determined following the guidance outlined in **Table 6-2.** 

#### 6.7 Potential impacts

#### 6.7.1 Construction phase

6.7.1.1 The impacts considered during the construction phase are outlined in **Table** 6-9.

# Table 6-9 - Construction phase potential impacts for cultural heritage within the Study Areas

Potential Impact	Description
Option 1V5	
Potential impacts on setting include construction-related traffic noise; landscaping, earth mounding and spoil disposal; the installation of structures, bridges, signage, road alignment and planting, and the installation of lighting	<ul> <li>There will be potential adverse impacts on the setting of the following heritage assets, such as loss of tranquillity, interruption of important views:</li> <li>Two-Five Scheduled Monuments of Arundel Castle (SM1012500)-and, the remains of Maison Dieu (SM1005865), Ringwork 400m NNW of Batworthpark House (SM1012177), Tortington Augustinian Priory (SM1021459) and Goblestubbs Copse earthworks (SM1005895)</li> <li>Four Grade I Listed Buildings</li> <li>SixFour-Grade II* Listed Buildings</li> <li>One Grade II* Registered Park and Garden</li> <li>206186 Grade II Listed Buildings</li> <li>Arundel Conservation Area and Lyminster Conservation Area</li> <li>These impacts are presented in the Setting Assessment in Appendix 6-2.</li> </ul>



Potential Impact	Description
Potential impacts on below ground archaeology include topsoil removal, landscaping, excavations for demolition, drainage, shallow foundations borrow pits and piling; installation of structures, bridges, signage and planting; siting of construction sites and compounds	There will be potential adverse impacts on the following non-designated heritage assets which will comprise loss or partial loss of the archaeological asset through disturbance: (MWS7583; MWS5681; MWS4696 MWS2312; MWS12763; MWS12762 and MWS6506); ANAs (DWS8132; DWS8141 and DWS8148) and Historic Landscapes (HWS24767 and HWS24819) and Historic Landscape Areas.
Option 1V9	
Potential impacts on setting include construction-related traffic noise; landscaping, earth mounding and spoil disposal; the installation of structures, bridges, signage, road alignment and planting; and the installation of lighting	<ul> <li>There will be potential adverse impacts on the setting of the following heritage assets, such as loss of tranquillity, interruption of important views:</li> <li>Two-Five Scheduled Monuments of Arundel Castle (SM1012500)-and, the remains of Maison Dieu (SM1005865) Ringwork 400m NNW of Batworthpark House (SM1012177), Tortington Augustinian Priory (SM1021459) and Goblestubbs Copse earthworks (SM1005895).</li> <li>Four Grade I Listed Buildings</li> <li>Four-Six Grade II* Listed Buildings</li> <li>One Grade II* Registered Park and Garden</li> <li>186-205 Grade II Listed Buildings</li> <li>Arundel Conservation Area and Lyminster Conservation Area</li> </ul>
Potential impacts on below ground archaeology include topsoil removal, landscaping, earth mounding and spoil	There will be potential adverse impacts on the following non-designated heritage assets which will comprise loss or partial loss of the



Potential Impact	Description
disposal; excavations for demolition, drainage, shallow foundations borrow pits and piling; installation of structures, bridges, signage and planting siting of construction sites and compounds	archaeological asset through disturbance: (MWS7583; MWS5681; MWS4696 MWS2312; MWS12763 <del>;</del> and MWS12762 and MWS6506) <del>; ANAs</del> (DWS8132; DWS8141 and DWS8148) and Historic Landscapes (HWS24767 and HWS24819). and Historic Landscape Areas.
Option 3V1	
Potential impacts on setting include construction-related traffic noise; landscaping, earth mounding and spoil disposal; the installation of structures, bridges, signage, road alignment and planting; and the installation of lighting	<ul> <li>There will be potential adverse impacts on the setting of the following heritage assets, such as loss of on tranquillity, interruption of important views:</li> <li>One-Four Scheduled Monuments at Tortington Augustinian Priory (SM1021459), Ringwork 400m NNW of Batworthpark House (SM1012177), Goblestubbs Copse earthworks (SM1005895) and Madehurst Wood earthworks (SM1003736)</li> <li>One-Two Grade II* Listed Buildings - Tortington Priory Barn (LB1221996)</li> <li>Six-27 Grade II Listed Buildings</li> <li>Arundel Conservation Area and Lyminster Conservation Area</li> <li>Numerous heritage assets within the town of Arundel, including the castle and Maison Dieu Scheduled Monuments, and a number of Grade I, II*, II, Listed Buildings.</li> <li>These impacts are presented in the Setting Assessment in Appendix 6-2.</li> </ul>
Potential impacts on below	There will be potential adverse impacts
ground archaeology include topsoil removal, landscaping, earth mounding and spoil	on the following non-designated heritage assets which will comprise loss or partial loss of the



Potential Impact	Description
disposal; excavations for demolition, drainage, shallow foundations borrow pits and piling; installation of structures, bridges, signage and planting siting of construction sites and compounds	archaeological asset through disturbance: (MWS14385 and MWS8596); ANAs (DWS8141 and DWS8132) and Historic Landscapes (HWS24819 and HW24801). and Historic Landscape Areas.
Option 4/5AV1	
Potential impacts on setting include construction-related traffic noise; landscaping, earth mounding and spoil disposal; the installation of structures, bridges, signage, road alignment and planting; and the installation of lighting	<ul> <li>There will be potential adverse impacts on the settings of:</li> <li>One-Four Scheduled Monuments at Tortington Augustinian Priory (SM1021459), Ringwork 400m NNW of Batworthpark House (SM1012177), Goblestubbs Copse earthworks (SM1005895) and Madehurst Wood earthworks (SM1003736).</li> <li>One Grade I Listed Building</li> <li>One Grade I Listed Building</li> <li>One Three Grade II* Listed Buildings-Tortington Priory Barn (LB1221996)</li> <li>1655 Grade II Listed Buildings</li> <li>Arundel Conservation Area, Lyminster Conservation Area, Walberton Village Conservation Area.</li> <li>Numerous heritage assets within the town of Arundel, including the castle and Maison Dieu Scheduled Monuments, and a number of Grade I, II*, II, Listed Buildings</li> <li>These impacts are presented in the Setting Assessment in Appendix 6-2.</li> </ul>
Potential impacts on below ground archaeology include	There will be potential adverse impacts on the following non-designated



Potential Impact	Description
topsoil removal, landscaping, earth mounding and spoil disposal; excavations for demolition, drainage, shallow foundations borrow pits and piling; installation of structures, bridges, signage and planting siting of construction sites and compounds	heritage assets which will comprise loss or partial loss of the archaeological asset through disturbance: (MWS2991, MWS2338, MWS2313, <u>MWS9411, MWS12754, MWS13741,</u> MWS14420, MWS14421 and MWS9411); <u>ANAs (DWS8130,</u> <u>DWS8131 and DWS8141 and one</u> Historic Landscape Areas). (HWS24819).
Option 4/5AV2	
Potential impacts on setting include construction-related traffic noise; landscaping, earth mounding and spoil disposal; the installation of structures, bridges, signage, road alignment and planting; and the installation of lighting	<ul> <li>There will be potential adverse impacts on the setting of the following heritage assets, such as loss of on tranquillity, interruption of important views:</li> <li>One-Four Scheduled Monuments at Tortington Augustinian Priory (SM1021459), Ringwork 400m NNW of Batworthpark House (SM1012177), Goblestubbs Copse earthworks (SM1005895) and Madehurst Wood earthworks (SM1003736).</li> <li>One-Two Grade II* Listed Buildings - Tortington Priory Barn (LB1221996)</li> <li>23-54 Grade II Listed Buildings</li> <li>Arundel Conservation Area, Lyminster Conservation Area, Walberton Village Conservation Area and Walberton Village Conservation Area.</li> <li>Numerous heritage assets within the town of Arundel, including the castle and Maison Dieu Scheduled Monuments, and a number of Grade I, II*, II, Listed Buildings.</li> </ul>



Potential Impact	Description
	These impacts are presented in the Setting Assessment in Appendix 6-2.
Potential impacts on below ground archaeology include topsoil removal, landscaping, earth mounding and spoil disposal; excavations for demolition, drainage, shallow foundations borrow pits and piling; installation of structures, bridges, signage and planting siting of construction sites and compounds	There will be potential adverse impacts on the following non-designated heritage assets which will comprise loss or partial loss of the archaeological asset through disturbance: (MWS2301, MWS2354, MWS2991, MWS14420, and MWS14421-and MWS13741); ANAs (DWS8130, DWS8131, DWS8132 and DWS8481) and one Historic Landscape (HWS24819). and Historic Landscape Areas).
Option 5BV1	
Potential impacts on setting include construction-related traffic noise; landscaping, earth mounding and spoil disposal; the installation of structures, bridges, signage, road alignment and planting; and the installation of lighting	<ul> <li>There will be potential adverse impacts on the setting of the following heritage assets, such as loss of on tranquillity, interruption of important views:</li> <li>One-Two Scheduled Monuments at Tortington Augustinian Priory (SM1021459) and Ringwork 400m NNW of Batworthpark House (SM1012177)</li> <li>One Grade I Listed Building</li> <li>One-Three Grade II* Listed Buildings-Tortington Priory Barn (LB1221996)</li> <li>63 20 Grade II Listed Buildings</li> <li>Arundel Conservation Area, Lyminster Conservation Area, Walberton Village Conservation Area, Walberton Village Conservation Area, Numerous heritage assets within the town of Arundel, including the castle and Maison Dieu Scheduled</li> </ul>



Potential Impact	Description
	Monuments, and a number of Grade I, II*, II, Listed Buildings.
	These impacts are presented in the Setting Assessment in Appendix 6-2.
Potential impacts on below ground archaeology include topsoil removal, landscaping, earth mounding and spoil disposal; excavations for demolition, drainage, shallow foundations borrow pits and piling; installation of structures, bridges, signage and planting siting of construction sites and compounds	There will be potential adverse impacts on the following non-designated heritage assets which will comprise loss or partial loss of the archaeological asset through disturbance: (MWS14031, MWS13741, MWS8118, MWS2991, MWS12754, MWS2352 and MWS14385); ANAs (DWS8478 and DWS8481) and one Historic Landscape (HWS24819). and Historic Landscape Areas).

#### 6.7.2 Operational phase

6.7.2.1 The impacts considered during the operational phase are outlined in **Table 6-10**. Further potential impacts are anticipated to below-ground archaeology (non-designated heritage assets and ANAs) during the operational phase due to maintenance works. The sources of these potential negative impacts derive from maintenance, environmental mitigation measures such as ecological pond creation and landscaping. Mitigation measures as deemed necessary will follow a programme of non-intrusive and intrusive investigation where such activities will take place (see **Section 6.8**).

Table 6-10 - Operational phase potential impacts for cultural heritage within theStudy Areas

Potential Impact	Description	Justification for Scoping Out
Option 1V5		
Potential impact on setting which includes lighting, traffic movement and noise expansion	<ul> <li>There will be potential impacts on the settings of:</li> <li>Two-Five Scheduled Monuments of (Arundel Castle (SM1012500), and the remains of Maison Dieu</li> </ul>	Not applicable.



Potential Impact	Description	Justification for Scoping Out
Potential impact: effects on below ground archaeology during operational	<ul> <li>(SM1005865), Ringwork 400m NNW of Batworthpark House (SM1012177), Tortington Augustinian Priory (SM1021459) and Goblestubbs Copse earthworks (SM1005895)</li> <li>Four Grade I Listed Buildings</li> <li>Four-Six Grade II* Listed Buildings</li> <li>186-206 Grade II Listed Buildings</li> <li>Arundel Conservation Area and Lyminster Conservation Area</li> <li>These impacts are presented in the Setting Assessment in Appendix 6-2.</li> <li>Scoped in. There will be potential impacts on known and unknown below ground assets.</li> </ul>	Not applicable.
phase caused by maintenance and environmental mitigation measures.		
Option 1V9		
Potential impact on setting which includes lighting, traffic movement and noise expansion	There will be potential impacts on the settings of: Two-Five Scheduled Monuments of (Arundel Castle (SM1012500),-and the remains of Maison Dieu (SM1005865), Ringwork 400m NNW of Batworthpark House (SM1012177),	Not applicable.



Potential Impact	Description	Justification for Scoping Out
	<ul> <li>Tortington Augustinian Priory (SM1021459) and Goblestubbs Copse earthworks (SM1005895)</li> <li>Four Grade I Listed Buildings</li> <li>Four-Six Grade II* Listed Buildings</li> <li>186-205 Grade II Listed Buildings</li> <li>Arundel Conservation Area and Lyminster Conservation Area</li> </ul>	
	the Setting Assessment in Appendix 6-2.	
Potential impact: effects on below ground archaeology during operational phase caused by maintenance and environmental mitigation measures.	Scoped in. There will be potential impacts on known and unknown below ground assets.	Not applicable.
Option 3V1		
Potential impact on setting which includes lighting, traffic movement and noise expansion	<ul> <li>There will be potential impacts on the settings of:</li> <li>One-Four Scheduled Monuments at Tortington Augustinian Priory (SM1021459), Ringwork 400m NNW of Batworthpark House (SM1012177), Goblestubbs Copse earthworks (SM1005895) and Madehurst Wood earthworks (SM1003736)</li> </ul>	Not applicable.



Potential Impact	Description	Justification for Scoping Out
Potential impact: effects on below ground archaeology during operational phase caused by maintenance and environmental mitigation measures.	<ul> <li>One Two Grade II* Listed BuildingsTortington Priory Barn (LB1221996)</li> <li>Six-27 Grade II Listed Buildings</li> <li>Arundel Conservation Area and Lyminster Conservation Area</li> <li>Numerous heritage assets within the town of Arundel, including the castle and Maison Dieu Scheduled Monuments, and a number of Grade I, II*, II, Listed Buildings.</li> <li>These impacts are presented in the Setting Assessment in Appendix 6-2.</li> <li>Scoped in. There will be potential impacts on known and unknown below ground assets.</li> </ul>	Not applicable.
Option 4/5AV1		
Potential impact on setting which includes lighting, traffic movement and noise expansion	There will be potential impacts on the settings of: • One-Four Scheduled Monuments at Tortington Augustinian Priory (SM1021459), Ringwork 400m NNW of Batworthpark House (SM1012177),	Not applicable.



Potential Impact	Description	Justification for Scoping Out
	Goblestubbs Copse earthworks (SM1005895) and Madehurst Wood earthworks (SM1003736) One Grade I Listed Building One-Three Grade II* Listed Building-Tortington Priory Barn (LB1221996) 16-55 Grade II Listed Buildings Arundel Conservation Area, Lyminster Conservation Area, Walberton Village Conservation Area and Walberton Village Conservation Area. These impacts are presented in the Setting Assessment in Appendix 6-2.	
Potential impact: effects on below ground archaeology during operational phase caused by maintenance and environmental mitigation measures.	Scoped in. There will be potential impacts on known and unknown below ground assets	Not applicable.
Option 4/5AV <mark>42</mark>		
Potential impact on setting which includes lighting, traffic movement and noise expansion	<ul> <li>There will be potential impacts on the settings of:</li> <li>One Four Scheduled Monuments at Tortington Augustinian Priory (SM1021459)</li> </ul>	Not applicable.



Potential Impact	Description	Justification for Scoping Out
	<ul> <li>One-Two Grade II* Listed BuildingsTortington Priory Barn (LB1221996)</li> <li>14-63 Grade II Listed Buildings</li> <li>Arundel Conservation Area, Lyminster Conservation Area, Walberton Village Conservation Area and Walberton Village Conservation Area.</li> <li>Numerous heritage assets within the town of Arundel, including the castle and Maison Dieu Scheduled Monuments, and a number of Grade I, II*, II, Listed Buildings.</li> <li>These impacts are presented in the Setting Assessment in Appendix 6-2.</li> </ul>	
Potential impact: effects on below ground archaeology during operational phase caused by maintenance and environmental mitigation measures.	Scoped in. There will be potential impacts on known and unknown below ground assets	Not applicable.
Option 5BV1	1 	· 
Potential impact on setting which includes lighting, traffic movement and noise expansion; the obstruction of views from the installation of	<ul> <li>There will be potential impacts on the settings of:</li> <li>One Two Scheduled Monuments at Tortington Augustinian Priory</li> </ul>	Not applicable.



Potential Impact	Description	Justification for Scoping Out
structures, bridges, signage and road alignment	<ul> <li>(SM1021459) and Ringwork 400m NNW of Batworthpark House (SM1012177)</li> <li>One Grade I Listed Building</li> <li>One-Three Grade II* Listed Buildings - Tortington Priory Barn (LB1221996)</li> <li>Seven-63 Grade II Listed Buildings</li> <li>Numerous heritage assets within the town of Arundel, including the castle and Maison Dieu Scheduled Monuments, and a number of Grade I, II*, II, Listed Buildings</li> <li>These impacts are presented in the Setting Assessment in Appendix 6-2.</li> </ul>	
Potential impact: effects on below ground archaeology during operational phase caused by maintenance and environmental mitigation measures.	Scoped in. There will be potential impacts on known and unknown below ground assets	Not applicable.

#### 6.8 Design, mitigation and enhancement measures

#### 6.8.1 Embedded in current design

- 6.8.1.1 The simple assessment has identified the need for a detailed assessment in PCF Stage 3 (Preliminary Design). At this PCF Stage 2 (Option Selection) of the Scheme, the design has been adjusted to reduce harm to the curtilage features of the following designated heritage assets by the simple expedient of moving the Scheme away from the following assets:
  - Tortington Augustinian Priory (SM 1021459)



- Arundel town Conservation Area which contains Scheduled Monuments, Grade I, Grade II\* and numerous Grade II Listed Buildings
- The Grade II Listed Buildings of Firgrove House (LB1274881 LB 1277881); The Royal Oak Inn (LB 1274588); The lodge of Avisford Park Hotel (LB 1274555); Church Farmhouse, Binsted (LB 1222198); Morley's Crift-Croft (LB 1222201); Meadow Lodge (LB 1274878).
- 6.8.1.2 However, further consultation is required with West Sussex County Council and Arun District Council to further clarify the extent of the curtilage areas for the above assets as outlined in the meeting between Historic England and Highways England.<sup>66</sup>
- 6.8.1.3 For the Tortington Augustinian Priory Scheduled Monument (SM 1021459), however, Historic England<sup>67</sup> have requested photomontages to better understand the impacts.
- 6.8.1.4 Once the Scheme for PCF Stage 3 (Preliminary Design) is selected, further opportunities for mitigation will be embedded into the design as set out below. These opportunities will be discussed with Historic England, the SDNP Authority, Arundel District Council and West Sussex County Council.

#### 6.8.2 Construction phase mitigation measures

- 6.8.2.1 A Construction Environmental Management Plan (CEMP) will be prepared prior to and implemented during construction. The CEMP will include measures for when unknown archaeological assets are found during construction, measures to screen construction activities, and best practice measures.
- 6.8.2.2 The following construction phase mitigation measures are those which are standard best practice and are applicable to all Scheme options<sup>68</sup>. These comprise mitigation measures for impacts on setting and below-ground archaeological remains.

<sup>&</sup>lt;sup>66</sup> Meeting between Highways England and Historic England to discuss an update A27 Arundel Bypass Scheme and selected curtilage features, Meeting Minutes (16/05/2019), HE551523-WSP-EGN-SWI-MI-LE-0033RH

<sup>67</sup> ibid

<sup>&</sup>lt;sup>68</sup> Highways Agency, Cultural Heritage, Design Manual for Roads and Bridges HA208/07, Volume 11, Section 3, Part 2 (August 2007)



- 6.8.2.3 For below-ground remains DMRB Volume 11, Section 3, Part 2 recommends that prevention of potential impacts can be achieved by design, via realignment of the Scheme options<sup>69</sup>. If it has not been possible to avoid the asset then the option of archaeological excavation should be adopted. In the first instance this will be an assessment comprising a range of intrusive and non-intrusive ground investigation techniques. These have been outlined below (see **Paragraph 6.8.2.5**). Mitigation will comprise investigation, recording, analysis, interpretation and the appropriate dissemination of the results<sup>70</sup>.
- 6.8.2.4 It is proposed that, where possible, preliminary archaeological investigations are undertaken within the Scheme selected in PCF Stage 3 (Preliminary Design) to establish the nature, extent and survival of hitherto unknown below-ground archaeological remains. This is likely to comprise a geophysical survey followed by an appropriate form of intrusive investigation such as trial trenching or strip, map and sample. The results of this investigation can be used to devise a suitable programme of mitigation where applicable. An archaeological watching brief should be maintained during any geotechnical ground investigations.
- 6.8.2.5 The following construction phase mitigation measures have been devised in consultation with the County Archaeologist for West Sussex County Council<sup>71</sup>. Proposed construction phase mitigation measures include:
  - Construction phase setting mitigation:
    - Re-establishing lost historic setting.
    - Screening of intrusive elements.
    - Improved lighting scheme systems to impact less on night time scene.
  - Construction phase below ground archaeological remains mitigation:
    - Geophysical survey of the entire footprint of the Scheme in PCF Stage 3 (Preliminary Design).
    - 5%<sup>72</sup> archaeological trial trench investigation of the entire footprint of the Scheme in PCF Stage 3 (Preliminary Design).
    - Archaeological trial trenching of the edge of flood plain during PCF Stage 3 (Preliminary Design).

<sup>&</sup>lt;sup>69</sup> Highways Agency, Cultural Heritage, Design Manual for Roads and Bridges, Volume 11, Section 3, Part 2 (August 2007), A5/8

<sup>70</sup> Ibid

<sup>&</sup>lt;sup>71</sup> Mills, J (2019) A27 Arundel buried archaeological remains, pers comm

<sup>&</sup>lt;sup>72</sup> As per email communication with West Sussex County Archaeologist, 8<sup>th</sup> February 2019



- Geophysical survey in the flood plain using electrical resistivity tomography survey complemented by LiDAR and existing aerial photography during PCF Stage 3 (Preliminary Design).
- Monitoring by a geo-archaeologist of geotechnical ground investigations during PCF Stage 3 (Preliminary Design).
- Archaeological Notification Area investigation utilising a range of intrusive and non-intrusive investigation. This would be followed by further mitigation if necessary which could require analysis, interpretation and appropriate dissemination of the results during PCF Stage 3 (Preliminary Design).
- Archaeological surveys of any areas of ancient woodland (LiDAR complemented by walk-over survey) during PCF Stage 3 (Preliminary Design).
- Archaeological surveys of any areas of pasture, and River Arun Flood plain (LiDAR, aerial photography complemented by walk-over survey) during PCF Stage 3 (Preliminary Design).

### 6.8.3 Operational phase design and mitigation measures

- 6.8.3.1 The following design elements and operational phase mitigation measures are those which are standard best practice that have been included in the pre-mitigation assessment of effects. These measures are applicable to all Scheme options.
- 6.8.3.2 Historic England guidelines for the mitigation of the Scheme impacts on the setting of a heritage asset suggest that if the impacts cannot be mitigated either by relocation of the Scheme or changes to its design, then good design, through best practice, may reduce the harm<sup>73</sup> or provide opportunities for enhancement. High quality design will be particularly important for the junction options that may have an adverse effect on the settings of heritage assets.

<sup>&</sup>lt;sup>73</sup> Historic England (2017), The Setting of Heritage Assets Historic Environment Good Practice Advice in Planning Note 3 (Second Edition)



- 6.8.3.3 For some developments affecting settings, the design of a development may not be capable of sufficient adjustment to avoid or significantly reduce the harm<sup>73</sup>. This may be the case where impacts are caused by issues such as the proximity, location, scale, prominence or noisiness of a development. In some instances, the scale, location, positioning and design of the road across an Historic landscape will not accommodate suitable mitigation and the adverse effect will remain unchanged. The opportunity to enhance the affected assets should be explored, such as the addition of interpretation panels at suitable locations and the opening up of lost key views from affected assets.
- 6.8.3.4 The following design elements and operational phase mitigation measures have been identified for the Scheme:
  - Noise reduction screening;
  - Planted screening;
  - Re-establishment of historic settings; and
  - Sympathetic screening of intrusive elements.

#### 6.8.4 Opportunities for enhancement

- 6.8.4.1 Scheme options provide varying opportunities for enhancement to be considered in PCF Stage 3 (Preliminary Design). Although they have not been included in the assessment of effects, the following opportunities for enhancement could be considered:
  - Provision for pedestrians, equestrians and a cycle track across the flood plain providing opportunities to introduce new views of historical features which can be augmented by interpretive signage.
  - Improve access to SDNP through enhanced pedestrian, equestrian and cycling access, plus the potential for parking, new access points and amenities for enhanced use of the national park.
  - Interpretative panels for Tortington Augustinian Priory.

### 6.9 Assessment of likely significant effects

#### 6.9.1 Introduction

6.9.1.1 Potential adverse impacts upon the settings of designated assets are likely to include: harm to the relationship between the asset and its setting so that the relationship is no longer readily appreciable; the interpretability of the significance of the asset is significantly reduced; and a loss or reduction of rural tranquility or where noise and air pollutants are likely to increase.



- 6.9.1.2 Works that have the potential to substantially harm known and hitherto unknown above and below-ground heritage assets include (but are not limited to):
  - Excavation associated with geotechnical trial pitting, boreholes, topsoil stripping
  - Excavation of foundations
  - Landscaping
  - The provision of services
  - The creation of roads both temporary and permanent
  - The creation of compound areas and any other ground levelling.
- 6.9.1.3 Historic England's guidance to the assessment of setting<sup>74</sup> describes how setting contributes not only to the significance of heritage assets, but also how the significance can be appreciated. For example, in the case of Arundel there is a 'visual harmony'<sup>74</sup> in the materials used for construction of its buildings characterised by the use of locally produced bricks and flint.<sup>75</sup>
- 6.9.1.4 The guidance states that setting is the surroundings in which an asset, in this case Arundel town, is experienced, and this may extend beyond its curtilage<sup>76</sup>. Arundel, can therefore be appreciated both within the confines of the town and in the wider or extended landscape<sup>77</sup>. Arundel comprises a concentrated core of significant historic assets and is considered to be a location of historical significance. There are likely to be significant effects on the setting of Arundel and therefore the significance of the assets within their setting.

<sup>&</sup>lt;sup>74</sup> Historic England 2017, The Setting of Heritage Assets Historic Environment Good Practice Advice in Planning Note 3 (Second Edition)

<sup>&</sup>lt;sup>75</sup> Harris, R (2009) Arundel Historic Character Assessment Report, Sussex Extensive Urban Survey (EUS), 41

<sup>&</sup>lt;sup>76</sup> Historic England 2017, The Setting of Heritage Assets Historic Environment Good Practice Advice in Planning Note 3 (Second Edition) 2

<sup>&</sup>lt;sup>77</sup> Historic England 2017, The Setting of Heritage Assets Historic Environment Good Practice Advice in Planning Note 3 (Second Edition) 3 and 6



6.9.1.5 Ground excavation, including piling across the River Arun flood plain in advance of construction of either an embankment or viaduct may also result in the loss of hitherto unknown below-ground archaeological assets. These include Palaeolithic raised storm beach deposits, river terrace and alluvial deposits (all noted within ANA DWS8141). There is a high potential for similar archaeological remains to be present where the Scheme crosses the flood plain. However, the impact cannot be assessed until the footprint of the preferred Scheme option has been investigated further (this will take place in PCF Stage 3 (Preliminary Design)).

#### 6.9.2 Future Baseline/Do Minimum Scenario

6.9.2.1 The do-minimum option (no scheme) pursued for all Scheme options would be unlikely to result in any significant change to the future baseline condition for cultural heritage. If any developments are to take place in the vicinity of the Scheme, it is assumed that appropriate mitigation measures will be implemented.

#### 6.9.3 Option 1V5

#### Assessment of effects on settings (construction phase)

- 6.9.3.1 The historic core of the town is covered by a number of designations, comprising a Conservation Area, and 2 Scheduled Monuments: Arundel Castle and the remains of Maison Dieu (former hospital of the Holy Trinity; Figure 6-3). The Arundel Conservation Area contains 4 Grade I Listed Buildings, including the parish church and the Cathedral of St Philip Neri, and 4–5 Grade II\* Listed Buildings and 205–206 Grade II Listed Buildings (see Appendix 6-1: Table 1 to 5).
- 6.9.3.2 In the southern extent, the Arundel Conservation Area experiences traffic noise, movement and light spill, which is likely to increase during the construction phase. These impacts are outlined in **Table 6-9**.



- 6.9.3.3 The value (sensitivity) of site of the town of Arundel, including the castle and Maison Dieu Scheduled Monuments, and Grade I, II\*, II, Listed Buildings is high. The magnitude of impact is considered to be moderate adverse. Following the implementation of mitigation for the designated assets (**Section 6.8**), such as sympathetic screening and good design, the significance of effect would be Moderate Adverse (significant). These works have the potential to cause adverse impacts on the appreciation of the historical significance of Lyminster Conservation Area. The value (sensitivity) of Lyminster Conservation Area is high and the magnitude of impact is considered to be negligible. Following the implementation of mitigation measures (see **Section 6.8**), there is likely to be a neutral significance of effect.
- 6.9.3.3a The value of the Grade II\* listed building Priory Farmhouse (LB1034405) is High. The predicted magnitude of impact for Priory Farmhouse will be moderate adverse. Following the implementation of mitigation (Section 6.8), such as hoarding, an appropriate lighting scheme and limits to night-working and noise management schemes, the significance of the residual effect would be a Slight Adverse (not significant).
- 6.9.3.3b There are several Grade II listed buildings within the wider study area between Crossbush Junction and the western tie-in which would also be affected. These include: Park Farmhouse (LB1353713), Series of Barns at No.14 (LB1247969), Horse Gin at No.14 (LB1027936), Windmill (LB1353714), The premises of Arundel Builders Merchants (LB1027603), Bushacre (LB1027597), Calcetto Cottage (LB1027598), The Camellia Hotel (LB1027602), Calceto (LB 1027606) and Brook Lawn (LB1234219). The value of the assets is Medium. It is predicted that the magnitude of impact will be temporary moderate adverse. Following the implementation of mitigation (Section 6.8), such as hoarding, an appropriate lighting scheme and limits to night-working and noise management schemes, the significance of the residual effect would be temporary Slight Adverse (not significant).



# Assessment of effects on below-ground archaeology (construction phase)

- 6.9.3.4 The construction of Option 1V5 is likely to disturb below-ground archaeology including remains associated with 2-ANAs widely distributed along the option (DWS8132 and DWS8141, see Figure 6-7). Two-Historic Landscape areas will be impacted (HWS24767 and HWS24819). Impacts to these assets is likely to be caused by ground moving works such as top soil stripping and ground levelling. There will also be impacts on 6-7 non-designated assets: WWII Loopholed Wall (MWS7583); 2-3 brickyards (MWS6506, MWS5681 and MWS4696); Iron Age Romano-British Field System (MWS2312); Sites of Historic Outfarm, Arundel (MWS12763 and MWS12762). These impacts are outlined in Table 6-9.
- 6.9.3.5 The value (sensitivity) of site of the 2 ANAs (DWS8141 and DWS8132) and 2-the Historic Landscape areas (MWS24767 and MWS24819) is medium and the magnitude of impact is considered to be moderate adverse, that is there will be changes to many key archaeological materials, such as the resource is clearly modified.
- 6.9.3.6 The value (sensitivity) of site of the two-three brickyards (MWS6506, MWS5681 and MWS4696), the site of Historic Outfarm (MWS12763 and MWS12762) WWII Loopholed Wall (MWS7583) is low and The value (sensitivity) of site of the Iron Age – Romano-British Field System (MWS2312) is medium low and t. The magnitude of impact is considered to be major moderate adverse change to most or all key archaeological materials, such that the resource is totally altered.
- 6.9.3.7 The implementation of mitigation measures presented in **Section 6.8**, include intrusive and non-intrusive investigation, and if necessary, followed by excavation, analysis, interpretation and appropriate dissemination of the results. Therefore, the significance of effect would be Slight Adverse (not significant) for these assets.

### Assessment of effects on setting (operational phase)

6.9.3.8 Potential impacts on setting during the operational phase are outlined in **Table 6-10**. The value (sensitivity) of the town of Arundel, including the castle and Maison Dieu Scheduled Monuments, Grade I, II\* and II Listed Buildings is high. The magnitude of impact is considered to be minor moderate adverse.



- 6.9.3.9 The implementation of the mitigation measures presented in **Section 6.8**, includes sympathetic screening of designated assets, or the screening of intrusive elements where the option crosses the River Arun flood plain. Therefore, the adverse significance of effect would be slight Moderate Adverse (significant). However, in some instances, the scale, location, positioning and design of the road across the landscape will not accommodate suitable mitigation and the adverse effect will remain unchanged. A particular instance of this would be a grade separated viaduct through the town of Arundel.
- 6.9.3.9a Lyminster Conservation Area is located to the south of the scheme. The value (sensitivity) of Lyminster Conservation Area is Medium and the magnitude of impact is negligible. The scheme would result in a Neutral Effect (not significant).
- 6.9.3.9b The value of the Grade II\* listed building Priory Farmhouse (LB1034405) is High. The predicted magnitude of impact for Priory Farmhouse will be moderate adverse. Following the implementation of mitigation (Section 6.8), such as screening, the significance of the residual effect would be Slight Adverse (not significant).
- 6.9.3.9c There are several Grade II listed buildings within the wider study area between Crossbush Junction and the western tie-in which would also be affected. These include: Park Farmhouse (LB1353713), Series of Barns at No.14 (LB1247969), Horse Gin at No.14 (LB1027936), Windmill (LB1353714), The premises of Arundel Builders Merchants (LB1027603), Bushacre (LB1027597), Calcetto Cottage (LB1027598), The Camellia Hotel (LB1027602), Calceto (LB 1027606) and Brook Lawn (LB1234219). The value of the assets is Medium. It is predicted that the magnitude of impact will be moderate adverse. Following the implementation of mitigation (Section 6.8), the significance of the residual effect would be Slight Adverse (not significant).

## Assessment of effects on below-ground archaeology (operational phase)

6.9.3.10 There will be no post-mitigation effects on below ground archaeology during the operational phase.



#### 6.9.4 Option 1V9

#### Assessment of effects on settings (construction phase)

- 6.9.4.1 Although there are differences in the design of Ford Road junction within Arundel the impacts on heritage assets are the same as Option 1V5. The changes and impacts to the settings of the town of Arundel have been assessed in **Section 6.9.3** (**Figure 6-3**).
- 6.9.4.2 In the southern extent, the Arundel Conservation Area experiences traffic noise, movement and light spill, which are likely to increase during the construction phase. These impacts are outlined in **Table 6-9**.
- 6.9.4.3 The value (sensitivity) of site of the town of Arundel, including the castle and Maison Dieu Scheduled Monuments, Grade I, II\*, II, Listed Buildings is high. The magnitude of impact is considered to be moderate adverse.
- 6.9.4.4 Following the implementation of mitigation for the designated assets (Section 6.8), such as sympathetic screening and good design, the significance of effect would be Moderate Adverse (significant). These works have the potential to cause adverse impacts on the appreciation of the historical significance of Lyminster Conservation Area. The value (sensitivity) of Lyminster Conservation Area is high and the magnitude of impact is considered to be negligible. Following the implementation of mitigation measures (see Section 6.8), there is likely to be a Neutral significance of effect.
- 6.9.4.4a The value of the Grade II\* listed building Priory Farmhouse (LB1034405) is High. The predicted magnitude of impact for Priory Farmhouse will be moderate adverse. Following the implementation of mitigation (Section 6.8), such as hoarding, an appropriate lighting scheme and limits to night-working and noise management schemes, the significance of the residual effect would be a Slight Adverse (not significant).



6.9.4.4b There are several Grade II listed buildings within the wider study area between Crossbush Junction and the western tie-in which would also be affected. These include: Park Farmhouse (LB1353713), Series of Barns at No.14 (LB1247969), Horse Gin at No.14 (LB1027936), Windmill (LB1353714), The premises of Arundel Builders Merchants (LB1027603), Bushacre (LB1027597), Calcetto Cottage (LB1027598), The Camellia Hotel (LB1027602), Calceto (LB 1027606) and Brook Lawn (LB1234219). The value of the assets is Medium. It is predicted that the magnitude of impact will be moderate adverse. Following the implementation of mitigation (Section 6.8), such as hoarding, an appropriate lighting scheme and limits to night-working and noise management schemes, the significance of the residual effect would be Slight Adverse (not significant).

## Assessment of effects on below-ground archaeology (construction phase)

- 6.9.4.5 The impacts on the below ground archaeology by Option 1V9 are expected to be the same as Option 1V5. The construction of Option 1V9 is likely to disturb below-ground archaeology including remains associated with 2 Archaeology Notification Areas widely distributed along the option (DWS8132 and DWS8141; Figure 6-9). Two-Historic Landscape areas will be impacted (HWS24767 and HWS24819). Impacts to these assets is likely to be caused by ground moving works such as top soil stripping and ground levelling. There will also be impacts on 6-7 non-designated assets: WWII Loopholed Wall (MWS7583); two-three brickyards (MWS6506, MWS5681 and MWS4696); Iron Age Romano- British Field System (MWS2312); Sites of Historic Outfarm, Arundel (MWS12763 and MWS12762). These impacts are outlined in Table 6-9.
- 6.9.4.6 The value (sensitivity) of site of the 2 ANAs (DWS8141 and DWS8132) and 2-the Historic Landscape areas (HWS24767 and HWS24819) is medium and the magnitude of impact is considered to be moderate adverse.
- 6.9.4.7 The value (sensitivity) of site of the 2–3 brickyards (MWS5681 and MWS4696), the site of Historic Outfarm (MWS12763 and MWS12762) WWII Loopholed Wall (MWS7583) and Iron Age Romano-British Field System (MWS2312) is low and the magnitude of impact is considered to be major adverse, as this is a change to most or all key archaeological materials, such that the resource is totally altered.
- 6.9.4.8 The implementation of mitigation measures presented in **Section 6.8**, include intrusive and non-intrusive investigation, and if necessary, followed by excavation, analysis, interpretation and appropriate dissemination of the results. Therefore, the significance of effect for the assets would be Slight Adverse (not significant).



#### Assessment of effects on setting (operational phase)

- 6.9.4.9 Potential impacts on setting during the operational phase are outlined in **Table 6-10**. The value (sensitivity) of the town of Arundel, including the castle and Maison Dieu Scheduled Monuments, Grade I, II\* and II Listed Buildings is high. The magnitude of impact is considered to be minor-moderate adverse.
- 6.9.4.10 The implementation of the mitigation measures presented in Section 6.8, includes sympathetic screening of designated assets, or the screening of intrusive elements where the option crosses the River Arun flood plain. Therefore, the significance of effect would be slight Moderate Adverse.
- 6.9.4.11 However, in some instances, the scale, location, positioning and design of the road across the landscape will not accommodate suitable mitigation and the adverse effect will remain unchanged. A particular instance of this would be a grade separated viaduct through the town of Arundel.
- 6.9.4.11a Lyminster Conservation Area is located to the south of the scheme. The value (sensitivity) of Lyminster Conservation Area is medium and the magnitude of impact is negligible. The scheme would result in a Neutral Effect (not significant).
- 6.9.4.11b The value of the Grade II\* listed building Priory Farmhouse (LB1034405) is High. The predicted magnitude of impact for Priory Farmhouse will be moderate adverse. Following the implementation of mitigation (Section 6.8), such as screening, the significance of the residual effect would be Slight Adverse (not significant).
- 6.9.4.11c There are several Grade II listed buildings within the wider study area between Crossbush Junction and the western tie-in which would also be affected. These include: Park Farmhouse (LB1353713), Series of Barns at No.14 (LB1247969), Horse Gin at No.14 (LB1027936), Windmill (LB1353714), The premises of Arundel Builders Merchants (LB1027603), Bushacre (LB1027597), Calcetto Cottage (LB1027598), The Camellia Hotel (LB1027602), Calceto (LB 1027606) and Brook Lawn (LB1234219). The value of the assets is medium. It is predicted that the magnitude of impact will be moderate adverse. Following the implementation of mitigation (Section 6.8), the significance of the residual effect would be Slight Adverse (not significant).

## Assessment of effects on below-ground archaeology (operational phase)

6.9.4.12 There will be no post-mitigation effects on below ground archaeology during the operational phase.



#### 6.9.5 Option 3V1

#### Assessment of effects on settings (construction phase)

- 6.9.5.1 There will be both temporary changes and impacts on the settings of heritage assets due to related noise, lighting and vibration, including construction-related traffic, as outlined in **Table 6-9** (see **Appendix 6-2** for setting assessment). These works have the potential to cause adverse impacts on the appreciation of the historical significance of the following assets. This includes the Scheduled Monument of Tortington Augustinian Priory (SM1021459) and Grade II\* Tortington Priory Barn (LB1221996) contained within the curtilage of the scheduled area, Grade II listed Parish Church of St Mary Magdalene, Tortington (LB122209), Grade II listed Manor Farmhouse in the village of Tortington (LB1274879), Grade II listed assets of the Hermitage and Camellia Hotel (LB1027599; 1027602), Grade II listed assets of Calcetto Cottage and House at Bushacre (LB1027598; 1027597) and Lyminster Conservation Area (Figure 6-10).
- 6.9.5.2 The value (sensitivity) of the Scheduled Monument of Tortington Augustinian Priory (SM1021459) and Grade II\* Tortington Priory Barn (LB1221996), is High and the magnitude of impact is considered to be major adverse, that is, a comprehensive change to the setting of the asset.
- 6.9.5.3 The value (sensitivity) of the Grade II listed Parish Church of St Mary Magdalene and Grade II listed Manor Farmhouse, Tortington (LB1222209 and LB1274879), Grade II listed Firgrove House (LB1274881), Windmill (LB1353714), The premises of Arundel Builders Merchants (LB1027603), Bushacre (LB1027597), Brook Lawn (LB1234219), Grade II listed assets of the Hermitage and Camellia Hotel (LB1027599; 1027602), Grade II listed assets of Calcetto Cottage and House at Bushacre (LB1027598 and 1027597) are considered to be medium and the magnitude of impact is considered to be minor adverse. Following the implementation of mitigation measures (see Section 6.8), the significance of effect is likely to be neutral Slight Adverse and therefore is not significant.
- 6.9.5.4 The value (sensitivity) of Lyminster Conservation Area is high and the magnitude of impact is considered to be negligible. Following the implementation of mitigation measures (see **Section 6.8)**, there is likely to be a Neutral significance of effect (not significant).
- 6.9.5.5 There will be significant impacts on the setting of Tortington Augustinian Priory and Grade II\* Tortington Priory Barn. The preferred measure for the mitigation of effects on settings (see **Section 6.8**) is enhancement or measures such as sympathetic screening, the significance of effect would be Large Adverse (significant).



- 6.9.5.6 Where the design of the Scheme may not be capable of sufficient adjustment to avoid or significantly reduce the harm, the design enhancements could assist in improving the balance of benefits to harm.
- 6.9.5.6a The value of the Grade II\* listed building Priory Farmhouse (LB1034405) is High. The predicted magnitude of impact for Priory Farmhouse will be moderate adverse. Following the implementation of mitigation (Section 6.8), such as hoarding, an appropriate lighting scheme and limits to night-working and noise management schemes, the significance of the residual effect would be a Slight Adverse (not significant).
- 6.9.5.6b The value (sensitivity) of site of the town of Arundel, including the castle and Maison Dieu Scheduled Monuments, and Grade I, II\*, II, Listed Buildings is High. The magnitude of impact is considered to be temporary moderate adverse. Following the implementation of mitigation for the designated assets (Section 6.8), such as sympathetic screening and good design, the significance of effect would be Moderate Adverse (significant).

## Assessment of effects on below-ground archaeology (construction phase)

- 6.9.5.7 The construction of Option 3V1 (**Figure 6-11**) is likely to disturb below-ground archaeology including remains associated with 2–ANAs widely distributed along the option (DWS8481 and DWS8132). Two-Historic Landscape areas will—would be impacted (Stewards Copse and Tortington Common HWS24819 and Tortington Common HWS24801) and. There will also be impacts on two non-designated assets: a section of the Chichester to Brighton Roman Road running through Binsted Wood (MWS14385) and Gobblestubbs Copse Madehurst Enclosure (MWS8596).
- 6.9.5.8 Option 3V1 will physically impact on areas of ancient woodland, notably the 2 Historic Landscape areas of Stewards Copse and Tortington Common (HWS24819) and Tortington Common (HWS24801). It is also noted above that a section of the Chichester to Brighton Roman Road is located within the same woodland highlighting the propensity of such environments to harbour archaeological remains often in the form of earthworks, pits and platforms<sup>78</sup>. These impacts are outlined in **Table 6-9**.

<sup>&</sup>lt;sup>78</sup> Council for British Archaeology, Campaign for ancient woodlands. Available at http://new.archaeologyuk.org/campaign-for-ancient-woodlands (Accessed: 26 February 2019).



- 6.9.5.9 Ground excavation, including piling across the River Arun flood plain in advance of construction of either an embankment or viaduct could result in the loss of hitherto unknown below-ground archaeological assets within footprint of Option 3V1. Palaeolithic raised storm beach deposits, river terrace and alluvial deposits are noted within ANA DWS8481 through which the along the option passes route. There is high potential for similar archaeological remains to be present where the option crosses the flood plain. However, the impact cannot be assessed until the footprint of the Scheme option has been investigated further. This will take place in PCF Stage 3 (Preliminary Design). Where something of great significance is discovered that warrants scheduling Historic England have advised that the only option for this would be preservation in situ.<sup>79</sup>
- 6.9.5.10 The value (sensitivity) of the two Archaeology Notification Areas (DWS8481 and DWS8132) is medium and the magnitude of impact is considered to be moderate adverse. The value (sensitivity) of the Historic Landscape area is medium and the magnitude of impact is considered to be moderate adverse. The value (sensitivity) of the section of the Chichester to Brighton Roman Road running through Binsted Wood (MWS14385) and Gobblestubbs Copse Madehurst Enclosure (MWS8596) is medium and the magnitude of impact is considered to be moderate adverse. Following the implementation of mitigation measures (see Section 6.8), the significance of effect would be Slight Adverse (not significant) for these assets.

#### Assessment of effects on setting (operational phase)

6.9.5.11 The sensitivity, magnitude of impact and the significance of effect on the settings of heritage assets will remain the same as during the construction phase.

# Assessment of effects on below-ground archaeology (operational phase)

6.9.5.12 There will be no post-mitigation effects on below ground archaeology during the operational phase.

<sup>&</sup>lt;sup>79</sup> Meeting between Highways England and Historic England to discuss an update A27 Arundel Bypass Scheme and selected curtilage features, Meeting Minutes (16/05/2019), HE551523-WSP-EGN-SWI-MI-LE-0033RH



#### 6.9.6 Option 4/5AV1

#### Assessment of effects on setting (construction phase)

- 6.9.6.1 There will be both temporary changes and impacts on the settings of heritage assets due to construction-related noise, lighting and vibration, including construction-related traffic, as outlined in **Table 6-9** (See **Appendix 6-2** for setting assessment; **Figure 6-12**). Such construction-related works have the potential to cause adverse impacts on the appreciation of the historical significance of the following assets.
- 6.9.6.2 The value/sensitivity of the Scheduled Monument of Tortington Augustinian Priory (SM1021459) and Grade II\* Tortington Priory Barn (LB1221996), is high and the magnitude of impact is considered to be moderate. Following the implementation of mitigation measures (see **Section 6.8**), the significance of effect would be Moderate Adverse (significant).
- Several Grade II listed buildings would experience minor changes to their 6.9.6.3 setting, comprising Bushacre (LB1027597), Calcetto Cottage (LB1027598), The Camellia Hotel (LB1027602), Calceto (LB 1027606), Brook Lawn (LB1234219), The Premises of Arundel Builders Merchants (LB1027603), Windmill (LB1353714), The Parish Church of St Mary Magdalene (LB1222209), The Thatched Cottage (LB1274880), The Avisford Park Hotel (1222534), Manor Farmhouse (LB1274879), Church of St Mary (LB1274877) and The Glebe House (LB1221993). The value of these assets is medium and the magnitude of impact is minor. Following the implementation of mitigation measures, the significance of effect is likely to be Slight Adverse (not significant). The following Grade II listed assets will also be impacted upon: The Royal Oak Inn (LB122253), Glebe House and Church Farmhouse, Binsted (LB1221993 and 1222198), St Mary's Church, Binsted (LB1274877); Avisford Park Hotel; the lodge of Avisford Park Hotel; House at Beam Ends; Swiss Cottage (1274555; 1222465; 1274588 and 1222535); House at Morley's Croft; House at Meadow Lodge (LB1222201 and LB1274878) located on Binsted Lane (west). At the east end of the Scheme option are Grade II listed assets of Calcetto Cottage, House at Bushacre, The Plough and Sail Inn and Old Well House (LBs 1027598; 1027597; 1027600 and <del>1027601).</del>



- 6.9.6.4 Several Grade II listed buildings would experience considerable changes in their setting due to their proximity to the scheme, comprising Morley's Croft (LB1222201), Meadow Lodge (LB1274878), Church Farmhouse (LB1222198), Beam Ends (LB1222465), Swiss Cottage (LB1222535), Avisford Park Hotel (LB1222534) and Firgrove (LB1274881). The value of the assets is medium. It is predicted that the magnitude of impact will be moderate adverse. Following the implementation of mitigation (Section 6.8), such as hoarding, an appropriate lighting scheme and limits to night-working and noise management schemes, the significance of the residual effect would be Moderate Adverse (significant). The value (sensitivity) of the above Grade II Listed Buildings is medium and the magnitude of impact is considered to be minor adverse. Following the implementation of mitigation measures (see Section 6.8), the significance of effect would be slight adverse.
- 6.9.6.4a The Lodge to Avisford Park Hotel (LB1274555) and the Royal Oak Inn (LB1274588), would experience a large magnitude of impact. Following the implementation of mitigation measures (see Section 6.8), the significance of effect would be temporary Moderate Adverse (significant).
- 6.9.6.4b The value of the Grade II\* listed building Priory Farmhouse (LB1034405) is High. The predicted magnitude of impact for Priory Farmhouse will be moderate adverse. Following the implementation of mitigation (Section 6.8), such as hoarding, an appropriate lighting scheme and limits to night-working and noise management schemes, the significance of the residual effect would be a Slight Adverse (not significant).
- 6.9.6.4c The value (sensitivity) of site of the town of Arundel, including the castle and Maison Dieu Scheduled Monuments, and Grade I, II\*, II, Listed Buildings is High. The magnitude of impact is considered to be moderate adverse. Following the implementation of mitigation for the designated assets (Section 6.8), such as sympathetic screening and good design, the significance of effect would be Moderate Adverse (significant).



# Assessment of effects on below-ground archaeology (construction phase)

- The construction of Option 4/5AV1 (Figure 6-13) may disturb below-ground 6.9.6.5 archaeology associated with 4-Archaeology Notification Areas distributed along western half of the Option (DWS8130, DWS8131, DWS8132 and DWS8481). A single Historic Landscape areas will be impacted (see Table 6-9) (Brooks innings type landscape HWS24819). Beside the 4 Archaeology Notification Areas the option will also impact on the sites of other nondesignated assets clustered around the ANA DWS8131 and Binsted Lane (west) at the west end of Option 4/5AV1, whilst a second cluster is situated within ANA DWS8481. Those within ANA DWS8481 comprise the site of the medieval park at Tortington (MWS2991), the sites of two historic farms (MWS12754 and MWS13741). There will also be impacts on six nondesignated heritage assets: an Iron Age - Romano British Field System (MWS2313), the site of a medieval deer park at Tortington (MWS2991), Binsted Farm Historic Farmstead, (MWS9411), Possible house platforms near to the Black Horse Public House, Binsted (MWS2338), Earthworks of a Linear Boundary Bank and Ditch, Hundredhouse Copse and Barn's Cope (MWS14420), and Fragmented Rectilinear Enclosures, North of Church Farm (MWS14421). These impacts are outlined in **Table 6-9**.
- 6.9.6.6 An ANA DWS8131, covering the site of medieval tile and pottery kilns, is associated with the site of an historical farm (MWS9411), Church Farmhouse, Binsted (Grade II Listed Building LB1222198) and House platforms (MWS2338). Such activity may indicate not only the presence of below-ground archaeological remains, but also surviving earthwork remains such as house platforms. All of which are likely to be impacted upon by Option 4/5AV1. The value (sensitivity) of the ANAs and Historic Landscape Areas is medium, and the magnitude of impact is considered to be moderate adverse. The value (sensitivity) of the medieval deer park at Tortington and the earthworks at Hundredhouse Copse and Barn's Cope is medium. The value (sensitivity) of the two historic farmsteads is low. The magnitude of impact would be moderate adverse. Following the implementation of mitigation measures, the significance of effect would be Slight Adverse (not significant). These impacts are outlined in Table 6-9.



- 6.9.6.7 Option 4/5AV1 would affect 6 Grade II Listed Buildings, comprising the lodge of Avisford Park Hotel (LB1274555) and Church Farm, Binsted (LB1222198), Firgrove House (LB1274881), Morley's Croft; House at Meadow Lodge (LB1222201 and LB1274878) and The Royal Oak Inn (LB1274588). The value (sensitivity) of the Grade II Listed Buildings is medium. Until the curtilage boundaries have been defined, the magnitude of impact and significant effect is unclear. However, if Option 4/5AV1 is found to directly impact on any curtilage features, then the magnitude of impact would be major adverse, that is, a change to most or all key archaeological materials, such that the resource is totally altered. Following the implementation of mitigation measures, the significance of effect would be Moderate Adverse. These impacts are outlined in **Table 6-9**.
- 6.9.6.8 Satellite imagery from Google Earth shows cropmarks common to Options 4/5AV1, 4/5AV2 and 5BV1 (Figure 6-18). This supports the assessment of the potential archaeological sensitivity of the area.

#### Assessment of effects on settings (operational phase)

- 6.9.6.9 Potential impacts on settings during the operational phase is outlined in Table 6-10. The value (sensitivity) for the Scheduled Monument of Tortington Augustinian Priory (SM1021459) and Grade II\* Tortington Priory Barn (LB1221996) is high and the magnitude of impact is considered to be moderate adverse. Following the implementation of mitigation measures (see Section 6.8), such as sympathetic screening and good design, this would result in an adverse-significance of effect of Moderate (significant). The value (sensitivity) of the Grade II Listed Buildings is medium and the magnitude of impact is considered to be moderate adverse.
- 6.9.6.10 Several Grade II listed buildings would experience minor changes to their setting, including Bushacre (LB1027597), Calcetto Cottage (LB1027598), The Camellia Hotel (LB1027602), Calceto (LB 1027606), Brook Lawn (LB1234219), The Premises of Arundel Builders Merchants (LB1027603), Windmill (LB1353714), The Parish Church of St Mary Magdalene (LB122209), Manor Farmhouse (LB1274879), Church of St Mary (LB1274877), The Glebe House (LB1221993), The Thatched Cottage (LB1274880), and The Avisford Park Hotel (1222534). The value of these assets is medium and the magnitude of impact is minor adverse. Following the implementation of mitigation measures, the significance of effect is likely to be Slight Adverse (not significant). Following the implementation of mitigation for the remainder of the Grade II Listed Buildings (Section 6.8), such as sympathetic screening, and good design, the significance of effect would be slight adverse.



- 6.9.6.10a Several Grade II listed buildings would experience considerable changes in their setting due to their proximity to the scheme, including Church Farmhouse (LB1222198), Beam Ends (LB1222465), Swiss Cottage (LB1222535), Morley's Croft (LB1222201), Meadow Lodge (LB1274878) and Firgrove (LB1274881). The value of the assets is Medium. It is predicted that the magnitude of impact will be moderate adverse. Following the implementation of mitigation (Section 6.8) the significance of the residual effect would be Moderate Adverse (significant).
- 6.9.6.10b The Lodge to Avisford Park Hotel (LB1274555) and the Royal Oak Inn (LB1274588), would experience a large magnitude of impact. Following the implementation of mitigation measures (see Section 6.8), the significance of effect would be Moderate Adverse (significant).
- 6.9.6.10c The value of the Grade II\* listed building Priory Farmhouse (LB1034405) is High. The predicted magnitude of impact for Priory Farmhouse will be moderate adverse. Following the implementation of mitigation (Section 6.8), such as hoarding, an appropriate lighting scheme and limits to night-working and noise management schemes, the significance of the residual effect would be a Slight Adverse (not significant).
- 6.9.6.10d The value (sensitivity) of site of the town of Arundel, including the castle and Maison Dieu Scheduled Monuments, and Grade I, II\*, II, Listed Buildings is High. The magnitude of impact is moderate adverse. Following the implementation of mitigation for the designated assets (Section 6.8), the significance of effect would be Moderate Adverse (significant).

## Assessment of effects on below-ground archaeology (operational phase)

6.9.6.11 There will be no post-mitigation effects on below ground archaeology during the operational phase.

#### 6.9.7 Option 4/5AV2

#### Assessment of effects on setting (construction phase)

6.9.7.1 There will be both temporary changes and impacts on the settings of heritage assets due to related noise, lighting and vibration, including construction-related traffic, as outlined in **Table 6-9**. (See **Appendix 6-2** for setting assessment;-**Figures 6-5, 6-14 and 6-15**). Such works will have the potential to cause adverse impacts on the appreciation of the historical significance of the assets.



- 6.9.7.2 The value/sensitivity of the Scheduled Monument of Tortington Augustinian Priory (SM1021459) and Grade II\* Tortington Priory Barn (LB1221996), is high and the magnitude of impact is considered to be major adverse, that is, a comprehensive change to the setting of the asset. Following the implementation of mitigation measures (see **Section 6.8**), the significance of effect would be Moderate Adverse (significant).
- 6.9.7.3 There will be impacts on Grade II listed Firgrove House (LB1274881), Grade II listed Glebe House and Church Farmhouse, Binsted (LB1221993 and 1222198), Grade II listed assets of Avisford Park Hotel; the lodge of Avisford Park Hotel; House at Beam Ends; The Royal Oak Inn; Swiss Cottage (LB5122253; 1274555;1222465;1274588 and 1222535), located at the west end of Option 4/5AV2. There would also be impacts on Grade II listed assets of House at Morley's Croft; House at Meadow Lodge (LB122201 and LB1274878) located on Binsted Lane (West). At the east end of the Scheme option are Grade II listed assets of Calcetto Cottage, House at Bushacre, The Plough and Sail Inn and Old Well House (LBs 1027598; 1027597; 1027600 and 1027601). The value (sensitivity) of the Grade II Listed Buildings described above is medium.
- 6.9.7.4 Several Grade II listed buildings will experience minor changes to their setting, including Bushacre (LB1027597), Calcetto Cottage (LB1027598), The Camellia Hotel (LB1027602), Calceto (LB 1027606), Brook Lawn (LB1234219), The Premises of Arundel Builders Merchants (LB1027603), Windmill (LB1353714), The Parish Church of St Mary Magdalene (LB1222209) and Manor Farmhouse (LB1274879), Church of St Mary (LB1274877), The Glebe House (LB1221993), Beam Ends (LB1222465), Swiss Cottage (LB1222535), Avisford Park Hotel (LB1222534), The Lodge to Avisford Park Hotel (LB1274555), Church Farmhouse (LB1222198), Morley's Croft (LB1222201), Meadow Lodge (LB1274878) and Firgrove (LB1274881). The value of these assets is medium and the magnitude of impact is considered to be moderate adverse. Following the implementation of mitigation measures, the significance of effect is likely to be Slight Adverse (not significant). The magnitude of impact to Morley's Croft; House at Meadow Lodge (LB1222201 and LB1274878) is considered to be major adverse, that is comprehensive change to the setting of the asset. Following the implementation measures (see Section 6.8), the significance of effect would be moderate adverse for Morley's Croft.



- 6.9.7.5 One Grade II listed building, The Royal Oak Inn (LB1274588), would experience considerable change in setting due to their proximity to the scheme. The value of the asset is medium and the magnitude of impact is moderate adverse. Following the implementation of mitigation measures, the significance of effect is likely to be Moderate Adverse (significant). The magnitude of impact of the remainder of the Grade II Listed Buildings is considered to be minor adverse. The implementation of mitigation measures (see Section 6.8), such as sympathetic screening, would reduce the significance of effect to neutral and therefore is not significant. Where appropriate, this screening should complement the local landscape character, seasonal and diurnal changes.
- 6.9.7.5a The value of the Grade II\* listed building Priory Farmhouse (LB1034405) is High. It is predicted that the magnitude of impact for Priory Farmhouse will be temporary moderate adverse. Following the implementation of mitigation (Section 6.8), the significance of the residual effect would be a temporary Slight Adverse (not significant).
- 6.9.7.5b The value (sensitivity) of site of the town of Arundel, including the castle and Maison Dieu Scheduled Monuments, and Grade I, II\*, II, Listed Buildings is high. The magnitude of impact is temporary moderate adverse. Following the implementation of mitigation for the designated assets (Section 6.8), the significance of effect would be temporary Moderate Adverse (significant).

# Assessment of effects on below-ground archaeology (construction phase)

- 6.9.7.6 The construction of Option 4/5AV2 (**Figure 6-15**) is likely to disturb belowground archaeology associated with 4-ANAs distributed along western half of Option 4/5AV2 (DWS8130, DWS8131, DWS81312 and DWS8481). A single Historic Landscape area will be impacted (Brooks innings type landscape HWS24819). Beside the 4 ANAs the option also impacts on the site of a There will also be impacts on five non-designated heritage assets: Building in Binsted Woods (MWS2301), -and-Park - Binsted House (MWS2354), Earthworks of a Linear Boundary Bank and Ditch, Hundredhouse Copse and Barn's Cope, Walberton (MWS14420), Fragmented Rectilinear Enclosures North of Church Farm, Walberton (MWS14421) and the site of a medieval deer park at Tortington (MWS2991). Historic Landscape areas will be impacted. These impacts are outlined in **Table 6-9**.
- 6.9.7.6a The value (sensitivity) of a building in Binsted Wood (MWS2301) is low and the magnitude of impact is considered to be major adverse, that is comprehensive change to the setting of the asset. For Park – Binsted House (MWS2354) further investigation would be necessary before any assessment can be determined, since the park may contain previously unrecorded



archaeological features. This will take place in PCF Stage 3 (preliminary Design). The value (sensitivity) of the Earthworks of a Linear Boundary Bank and Ditch, Hundredhouse Copse and Barn's Cope, Walberton), Fragmented Rectilinear Enclosures North of Church Farm, Walberton and the site of a medieval deer park at Tortington is medium and the magnitude of impact would be moderate adverse.

- 6.9.7.7 The value (sensitivity) of the <u>3 ANAs (DWS8130, DWS8131, DWS8132 and DWS8481) and the</u> Historic Landscape areas (Brooks innings type landscape HWS24819) are medium and the magnitude of impact is considered to be moderate.
- 6.9.7.8 The value (sensitivity) of a building in Binsted Wood (MWS2301) is low and the magnitude of impact is considered to be major adverse, that is comprehensive change to the setting of the asset. For Park Binsted House (MWS2354) further investigation would be necessary before any assessment can be determined, since the park may contain previously unrecorded archaeological features. This will take place in PCF Stage 3 (preliminary Design). The value (sensitivity) of the Earthworks of a Linear Boundary Bank and Ditch, Hundredhouse Copse and Barn's Cope, Walberton), Fragmented Rectilinear Enclosures North of Church Farm, Walberton and the site of a medieval deer park at Tortington is medium and the magnitude of impact would be moderate adverse.
- 6.9.7.9 The implementation of mitigation measures presented in **Section 6.8**, include intrusive and non-intrusive investigation, and if necessary, followed by excavation, analysis, interpretation and appropriate dissemination of the results. Therefore, the significance of effect would be Slight Adverse (not significant) for the ANAs, and-Historic Landscape area, the Building in Binsted Woods, (MWS2301) the Earthworks of a Linear Boundary Bank and Ditch, Hundredhouse Copse and Barn's Cope, Walberton), Fragmented Rectilinear Enclosures North of Church Farm, Walberton and the site of a medieval deer park at Tortington.

#### Assessment of effects on setting (operational phase)

6.9.7.10 There will be both temporary changes and impacts on the settings of heritage assets due to related noise, lighting and vibration, including construction-related traffic, as outlined in Table 6-9. (See Appendix 6-2 for setting assessment; Figures 6-5, and 6-15). Such works will have the potential to cause adverse impacts on the appreciation of the historical significance of the assets.



- 6.9.7.11 The value/sensitivity of the Scheduled Monument of Tortington Augustinian Priory (SM1021459) and Grade II\* Tortington Priory Barn (LB1221996), is high and the magnitude of impact is considered to be major adverse, that is comprehensive change to the setting of the asset. Following the implementation of mitigation measures (see **Section 6.8**), the significance of effect would be Moderate Adverse (significant).
- 6.9.7.12 There will be impacts on Grade II listed Firgrove House (LB1274881), Grade II listed Glebe House and Church Farmhouse, Binsted (LB1221993 and 1222198), Grade II listed assets of Avisford Park Hotel; the lodge of Avisford Park Hotel; House at Beam Ends; The Royal Oak Inn; Swiss Cottage (LBs122253; 1274555;1222465;1274588 and 1222535), located at the west end of Option 4/5AV2. There would also be impacts on Grade II listed assets of House at Morley's Croft; House at Meadow Lodge (LB1222201 and LB1274878) located on Binsted Lane (West). At the east end of Option 4/5AV2 are Grade II listed assets of Calcetto Cottage, House at Bushacre, The Plough and Sail Inn and Old Well House (LBs 1027598; 1027597; 1027600 and 1027601). The value (sensitivity) of the Grade II Listed Buildings described above is medium.



- 6.9.7.13 The magnitude of impact to Morley's Croft; House at Meadow Lodge (LB1222201 and LB1274878) is considered to be major adverse, that is, a comprehensive change to the setting of the asset. Following the implementation measures (see Section 6.8), the significance of effect would be moderate adverse for Morley's Croft and House at Meadow Lodge Several Grade II listed buildings will experience minor changes to their setting, including Bushacre (LB1027597), Calcetto Cottage (LB1027598), The Camellia Hotel (LB1027602), Calceto (LB 1027606), Brook Lawn (LB1234219), The Premises of Arundel Builders Merchants (LB1027603), Windmill (LB1353714), The Parish Church of St Mary Magdalene (LB1222209) and Manor Farmhouse (LB1274879), The Thatched Cottage (LB1274880), Church of St Mary (LB1274877), The Glebe House (LB1221993), Beam Ends (LB1222465), Swiss Cottage (LB1222535), Avisford Park Hotel (LB1222534), The Lodge to Avisford Park Hotel (LB1274555), Church Farmhouse (LB1222198), Morley's Croft (LB1222201), Meadow Lodge (LB1274878) and Firgrove (LB1274881). The value of these assets is Medium and the magnitude of impact is considered to be moderate adverse. Following the implementation of mitigation measures, the significance of effect is likely to be Slight Adverse (not significant).
- 6.9.7.14 The magnitude of impact of the remainder of the Grade II Listed Buildings is considered to be minor adverse. Following the implementation of mitigation measures (see **Section 6.8**), such as sympathetic screening, there would be a significance of effect of neutral and therefore is not significant. Where appropriate, this screening should complement the local landscape character, seasonal and diurnal changes. One Grade II listed building, The Royal Oak Inn (LB1274588), would experience considerable change in setting due to their proximity to the scheme. The value of the asset is medium and the magnitude of impact is moderate adverse. Following the implementation of mitigation measures, the significance of effect is likely to be Moderate Adverse (significant).
- 6.9.7.14a The value of the Grade II\* listed building Priory Farmhouse (LB1034405) is High. It is predicted that the magnitude of impact for Priory Farmhouse will be moderate adverse. Following the implementation of mitigation (Section 6.8), the significance of the residual effect would be a Slight Adverse (not significant).



6.9.7.14b The value (sensitivity) of site of the town of Arundel, including the castle and Maison Dieu Scheduled Monuments, and Grade I, II\*, II, Listed Buildings is High. The magnitude of impact is moderate adverse. Following the implementation of mitigation for the designated assets (Section 6.8), such as sympathetic screening and good design, the significance of effect would be Moderate Adverse (significant).

## Assessment of effects on below-ground archaeology (operational phase)

6.9.7.15 There will be no post-mitigation effects on below ground archaeology during the operational phase.

#### 6.9.8 Option 5BV1

#### Assessment of effects on settings (construction phase)

- 6.9.8.1 There will be both temporary changes and impacts on the settings of heritage assets due to related noise, lighting and vibration, including construction-related traffic for Option 5BV1 (See Appendix 6-2 for setting assessment; Figure 6-16). Such works will have the potential to cause adverse impacts on the appreciation of the historical significance of the assets. The sensitivity and magnitude of these assets remains the same. These impacts are outlined in Table 6-9.
- 6.9.8.2 The value/sensitivity of Tortington Augustinian Priory Scheduled Monument (SM1021459) and Grade II\* Listed Tortington Priory Barn (LB1221996), is high and the magnitude of impact, prior to mitigation, is considered to be major adverse, that is, a comprehensive change to the setting of the asset. Following the implementation of mitigation measures (see **Section 6.8**), the significance of effect would be Moderate Adverse (significant).
- 6.9.8.3 The value (sensitivity) of Walberton Village and Walberton Green is high and the magnitude of impact is considered to be minor adverse. Following the implementation of mitigation measures (see **Section 6.8**), the significance of effect would be Slight Adverse (not significant).
- 6.9.8.4 The value (sensitivity) of Morley's Croft; House at Meadow Lodge (LB1222201 and LB1274878) and Glebe House and Church Farmhouse, Binsted (LB1221993 and 1222198), Avisford Park Hotel; House at Beam Ends; Swiss Cottage (LBs1222534; 1222465 and 1222535), and Firgrove (LB1274881) prior to mitigation, is considered to be medium and the magnitude of impact is considered to be moderate adverse. Following the implementation of mitigation measures (see Section 6.8), the significance of effect would be Moderate Adverse (significant).



- 6.9.8.5 The value (sensitivity) of St Mary's Church, Binsted (LB1274877) is medium and the magnitude of impact is considered to be major adverse. Following the implementation of mitigation measures (see **Section 6.8**), the significance of effect would be Moderate Adverse (significant).
- 6.9.8.6 The value (sensitivity) of the following Grade II Listed Buildings is medium. These comprise the Grade II listed assets of the lodge of Avisford Park Hotel; The Royal Oak Inn; (LB1274555 and 1274588); Calcetto Cottage, House at Bushacre, The Plough and Sail Inn and Old Well House (LBs 1027598; 1027597; 1027600 and 1027601) Bushacre (LB1027597), Calcetto Cottage, (LB 1027598). The Camellia Hotel (LB1027602), Calceto (LB 1027606), Brook Lawn (LB1234219), The Premises of Arundel Builders Merchants (LB1027603), Windmill (LB1353714), The Avisford Park Hotel (LB1222534), and-Manor Farmhouse (LB1274879), The Thatched Cottage (LB1274880), Marsh Farmhouse (LB1221995) and Church Farmhouse (LB1222198). The magnitude of impact is considered to be minor adverse. Following the implementation of mitigation measures (see **Section 6.8**), the significance of effect would be neutral-Slight Adverse and therefore is not significant.
- 6.9.8.6a The value of the Grade II\* listed building Priory Farmhouse (LB1034405) is high. It is predicted that the magnitude of impact for Priory Farmhouse will be temporary moderate adverse. Following the implementation of mitigation, such as hoarding, an appropriate lighting scheme and limits to night-working and noise management schemes, the significance of the residual effect would be temporary Slight Adverse (not significant).
- 6.9.8.6b The value (sensitivity) of site of the town of Arundel, including the castle and Maison Dieu Scheduled Monuments, and Grade I, II\*, II, Listed Buildings is High. The magnitude of impact is temporary moderate adverse. Following the implementation of mitigation for the designated assets (Section 6.8), the significance of effect would be temporary Moderate Adverse.



### Assessment of effects on below-ground archaeology (Construction Phase)

- 6.9.8.7 The construction of Option 5BV1 (Figures 6-5, 6-16 and 6-17) has the potential to directly impact on 2 Grade II Listed Buildings (Morley's Croft, LB1222201 and House at Meadow Lodge, LB1274878) located on Binsted Lane (East). It will also potentially disturb below-ground archaeology associated with 2–ANAs located centrally and toward the western end of Option 5BV1 (DWS8478 and DWS8481). There will also be an impact on an Historic Landscape areas (Brooks innings type landscape HWS24819). Option 5BV1 may also impact on six other non-designated assets. These are the Site of Woodlands Historic Farmstead, Slindon (MWS14031) at the western tie-in, Avisford Park (MWS2352), Chichester to Brighton Roman Road running through Binsted Wood (MWS14385), The Rookery Historic Farmstead, Arundel (MWS13741), Air raid shelter, Tortington (MWS12754), all contained within ANA DWS8481. These impacts are outlined in Table 6-9.
- 6.9.8.8 The value/sensitivity of the Grade II Listed Buildings is medium and the magnitude of impact is considered to be major adverse, that is, a change to most or all key archaeological materials, such that the resource is totally altered. Following the implementation of mitigation measures (see Section 6.8), the significance of effect would be Moderate Adverse. The value (sensitivity) of remaining non-designated assets is low, however, until they are subject to further investigation an assessment of the magnitude of impact remains unclear. The value (sensitivity) of the Medieval park, Tortington is medium and the magnitude of impact would be major adverse. The value (sensitivity) of the remaining non-designated assets is all of low significance and the magnitude of impact would be major adverse.
- 6.9.8.9 The implementation of mitigation measures presented in **Section 6.8**, include intrusive and non-intrusive investigation, and if necessary, followed by excavation, analysis, interpretation and appropriate dissemination of the results. The significance of effect would be Moderate Adverse (significant).

#### Assessment of effects on settings (operational phase)

6.9.8.10 Potential impacts on settings during the operational phase are outlined in **Table 6-10**. The preferred option for the mitigation of effects on settings (see **Section 6.8**) is enhancement. However, although mitigation measures have the potential to lessen the impact, in some instances, the scale, location, positioning and design of the road across the landscape will not accommodate suitable mitigation and the adverse effect will remain unchanged.



- 6.9.8.11 The value/sensitivity of Tortington Augustinian Priory Scheduled Monument (SM1021459) and Grade II\* Listed Tortington Priory Barn (LB1221996), is high and the magnitude of impact, prior to mitigation, is considered to be major adverse, that is comprehensive change to the setting of the asset. Following the implementation of mitigation measures (see **Section 8**), the significance of effect would be Moderate Adverse (significant).
- 6.9.8.12 The value (sensitivity) of Walberton Village and Walberton Green is high and the magnitude of impact is considered to be minor adverse. Following the implementation of mitigation measures (see **Section 6.8**), the significance of effect would be Slight Adverse (not significant).
- 6.9.8.13 The value (sensitivity) of Morley's Croft; House at Meadow Lodge (LB1222201 and LB1274878) and Glebe House and Church Farmhouse, Binsted (LB1221993 and 1222198), Avisford Park Hotel; House at Beam Ends; Swiss Cottage (LBs1222534; LBs1222465 and 1222535), and Firgrove (LB1274881) prior to mitigation, is considered to be medium and the magnitude of impact is considered to be moderate adverse. Following the implementation of mitigation measures (see Section 6.8), the significance of effect would be Moderate Adverse (significant).
- 6.9.8.14 The value (sensitivity) of St Mary's Church, Binsted (LB1274877) is medium and the magnitude of impact is considered to be major adverse, that is comprehensive change to the setting of the asset. Following the implementation of mitigation measures (see **Section 6.8**), the significance of effect would be Moderate Adverse (significant).
- 6.9.8.15 The value (sensitivity) of the following Grade II Listed Buildings is medium. These comprise the Grade II listed assets of the lodge of Avisford Park Hotel; The Royal Oak Inn; (LB1274555 and 1274588); The Avisford Park Hotel (LB1222534), Calcetto Cottage, House at Bushacre, The Plough and Sail Inn and Old Well House (LBs 1027598; 1027597; 1027600 and 1027601-) Bushacre (LB1027597), Calcetto Cottage (LB 1027598). The Camellia Hotel (LB1027602), Calceto (LB 1027606), Brook Lawn (LB1234219), The Premises of Arundel Builders Merchants (LB1027603), Windmill (LB1353714), The Parish Church of St Mary Magdalene (LB1222209) and Manor Farmhouse (LB1274879), The Thatched Cottage (LB1274880), Marsh Farmhouse (LB1221995) and Church Farmhouse (LB1222198). The magnitude of impact is considered to be minor adverse. Following the implementation of mitigation measures (see Section 6.8), the significance of effect would be neutral and therefore is not significant be Slight Adverse (not significant).



- 6.9.8.15a The value of the Grade II\* listed building Priory Farmhouse (LB1034405) is High. It is predicted that the magnitude of impact for Priory Farmhouse will be moderate adverse. Following the implementation of mitigation the significance of the residual effect would be Slight Adverse (not significant).
- 6.9.8.15b The value (sensitivity) of site of the town of Arundel, including the castle and Maison Dieu Scheduled Monuments, and Grade I, II\*, II, Listed Buildings is High. The magnitude of impact is moderate adverse. Following the implementation of mitigation for the designated assets (Section 6.8), such as sympathetic screening and good design, the significance of effect would be Moderate Adverse (significant).

### Assessment of effects on below-ground archaeology (operational phase)

6.9.8.16 There will be no post-mitigation effects on below ground archaeology during the operational phase.

#### 6.9.9 Summary

#### **Construction phase**

6.9.9.1 The likely significance of effect of each construction phase potential impact for each of the Scheme options is outlined in **Table 6-11**.

#### **Operation phase**

6.9.9.2 The likely significance of effect of each operational phase potential impact for each of the Scheme options is outlined in **Table 6-12**.



Table 6-11 - Cultural Heritage construction phase likely significant effects (post-mitigation)

Impact	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
Impact: effects on setting	Moderate adverse significance of effect for <del>all</del> numerous heritage assets within Arundel. Slight adverse effect for 1 Grade II* and 10 Grade II listed buildings outside Arundel exception of Lyminster Conservation	Moderate adverse significance of effect for <del>all</del> numerous heritage assets within Arundel. Slight adverse effect for 1 Grade II* and 10 Grade II listed buildings outside Arundel exception of Lyminster Conservation	Large adverse significance of effect for Tortington Augustinian Priory Scheduled monument (SM1021459) and Grade II* Listed Building Tortington Priory Barn (LB1221996).	Moderate adverse significance of effect for Tortington Augustinian Priory Scheduled monument (SM1021459) and Grade II* Listed Building Tortington Priory Barn (LB1221996).	Moderate adverse significance of effect for Tortington Augustinian Priory Scheduled monument (SM1021459) and Grade II* Listed Building Tortington Priory Barn (LB1221996).	Moderate adverse significance of effect for Tortington Augustinian Priory Scheduled monument (SM1021459) and Grade II* Listed Building Tortington Priory Barn (LB1221996).
	Area (listed in Appendix 6-1). Neutral significance of effect for Lyminster Conservation Area.	Area (listed in Appendix 6-1). Neutral significance of effect for Lyminster Conservation Area.	adverse effect on numerous assets within Arundel. Slight adverse effects on the setting of 1 Grade II* and 9 Grade II listed buildings Neutral for the	Moderate adverse effect on numerous assets within Arundel and on 8 Grade II listed buildings outside Arundel. Slight adverse for the-1 Grade	Moderate adverse effect on numerous assets within Arundel and on 1 Grade II listed building outside Arundel. Slight adverse effect on 1 Grade II*	Moderate adverse effect on numerous assets within Arundel and on 7 Grade II listed buildings outside Arundel. Slight adverse effect on 1



Impact	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
	The post- mitigation significance of effect has been applied using professional judgement and in accordance with DMRB (sections 5.37 and 5.38 of HA 208/07)	The post- mitigation significance of effect has been applied using professional judgement and in accordance with DMRB (sections 5.37 and 5.38 of HA 208/07)	remainder of the assets. The post- mitigation significance of effect has been applied using professional judgement and in accordance with DMRB (sections 5.37 and 5.38 of HA 208/07)	II* and 13 following-Grade II Listed Buildings: The Royal Oak Inn (LB122253), Glebe House and Church Farmhouse, Binsted (LB1221993 and 1222198), St Mary's Church, Binsted (LB1274877); Avisford Park Hotel; the lodge of Avisford Park Hotel; the lodge of Avisford Park Hotel; House at Beam Ends; Swiss Cottage (1274555; 1222465; 1274588 and 1222535); House at Morley's Croft; House at Morley's Croft;	and 19 Grade II listed buildings outside Arundel and Grade II Listed Buildings Morley's Croft and House at Meadow Lodge (LB1222201 and LB1274878). Neutral significance of effect for all the remainder of the Grade II Listed Buildings. The post- mitigation significance of effect has been applied using professional judgement and in accordance with DMRB (sections 5.37	Grade II* and 15 Grade II listed buildings and two conservation areas outside Arundel and Grade II Listed Buildings Morley's Croft and House at Meadow Lodge (LB122201 and LB122201 and LB1224878), Glebe House and Church Farmhouse, Binsted (LB1221993 and 1222198), Avisford Park Hotel; House at Beam Ends; Swiss Cottage (LBs1222534; 1222465 and 1222535) and St Mary's



Option 4/5AV1	Option 4/5AV2	Option 5BV1
(LB1222201 and LB1274878), Calcetto Cottage, House at Bushacre, The Plough and Sail Inn and Old Well House (LBs 1027598; 1027597; 1027600 and 1027601). The post- mitigation significance of effect has been applied using professional judgement and in accordance with DMRB (sections 5.37 and 5.38 of HA 208/07)	and 5.38 of HA 208/07)	Option 5BV1Church, Binsted (LB1274877).Slight adverse for significance of effect for Walberton Village and Walberton Green Conservation Areas and Calcetto Cottage, House at Bushacre, The Plough and Sail Inn and Old Well House (LBs 1027598, 1027600 and 1027601).The post- mitigation significance of effect has been applied using



Impact	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
						judgement and in accordance with DMRB (sections 5.37 and 5.38 of HA 208/07)
Impact: effects on below- ground archaeology	Slight adverse significance of effect for all heritage assets including possible, previously unrecorded remains and historic landscapes. The post- mitigation significance of effect has been applied using professional judgement and	Slight adverse significance of effect for all heritage assets including possible, previously unrecorded remains and historic landscapes. The post- mitigation significance of effect has been applied using professional judgement and in accordance	Slight adverse significance of effect for all heritage assets including possible, previously unrecorded remains and historic landscapes. 2 ANAs (DWS8481 and DWS8132), two Historic Landscape areas (HWS24819 and	Moderate adverse significance of effect on the curtilages of 6 Grade II Listed Buildings: the lodge of Avisford Park Hotel (LB1274555) Church Farm, Binsted (LB1222198), Firgrove House (LB1274881), Morley's Croft; House at Meadow Lodge (LB1222201	Slight adverse significance of effect on all heritage assets including possible, previously unrecorded remains and historic landscapes. -4 ANAs (DWS8130, DWS8131, DWS81312 and DWS81312 and DWS8481), one Historic Landscape (HWS24819)	Moderate-Slight adverse significance of effect on all heritage assets including possible, previously unrecorded remains and historic landscapes. 2 ANAs (DWS8478 and DWS8481), one Historic Landscape area (HWS24819) and 5 non-
	in accordance with DMRB	with DMRB (sections 5.37	HWS24801) and a section of	and LB1274878)	and two non- designated	designated assets



Impact	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
	(sections 5.37 and 5.38 of HA 208/07)	and 5.38 of HA 208/07)	the Chichester to Brighton Roman Road running through Binsted Wood (MWS14385). The post- mitigation significance of effect has been applied using professional judgement and in accordance with DMRB (sections 5.37 and 5.38 of HA 208/07)	and The Royal Oak Inn (LB1274588). Slight adverse significance of effect for all heritage assets including possible, previously unrecorded remains and historic landscapes -4 Archaeological Notification Areas (DWS8130, DWS8131, DWS8132 and DWS8132 and DWS8132 and DWS8132 and DWS8131, DWS8132 and DWS8132 and DWS8131, DWS8132 and	assets (MWS2301-and MWS2354), The post- mitigation significance of effect has been applied using professional judgement and in accordance with DMRB (sections 5.37 and 5.38 of HA 208/07)	(MWS14031, (MWS13741, MWS8118, MWS2991 and MWS12754). The magnitude of impact on Grade II Listed Buildings (Morley's Croft, LB1222201 and House at Meadow Lodge, LB1274878) remains unclear until they are subject to further investigation. The post- mitigation significance of effect has been applied using professional judgement and in accordance



Impact	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
impact				MWS12754 and MWS13741).The post- mitigation significance of effect has been applied using		with DMRB (sections 5.37 and 5.38 of HA 208/07)
				professional judgement and in accordance with DMRB (sections 5.37 and 5.38 of HA 208/07)		



#### Table 6-12 - Cultural Heritage operational phase likely significant effects (post-mitigation)

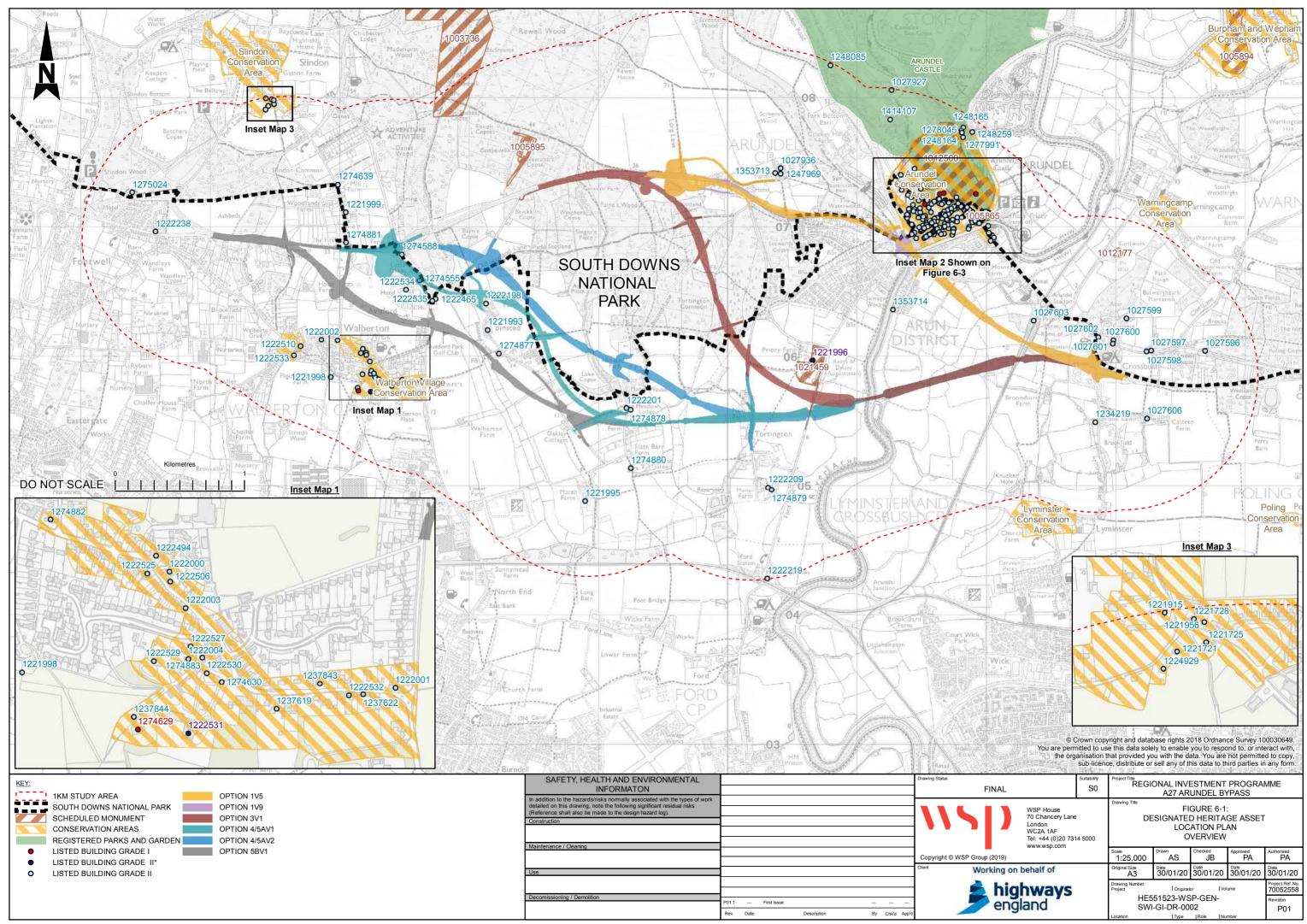
Impact	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
Impact:	Effects would	Effects would	Effects would	Effects would	Effects would	Effects would be as
effects on	be as	be as	be as	be as	be as	construction phase
setting	construction	construction	construction	construction	construction	but would be
	phase but	phase but	phase but	phase but	phase but	permanent
	would be	would be	would be	would be	would be	
	permanent.	permanent	permanent.	permanent	permanent	Moderate adverse for
					adverse	Tortington
	Slight	Slight adverse	Large adverse	Moderate	significance of	Augustinian Priory
	adverse	significance of	significance of	adverse	effect for	Scheduled
	significance	effect for all	effect for	significance of	<b>Tortington</b>	Monument
	of effect for	heritage assets	<b>Tortington</b>	effect for	Augustinian	(SM1021459) and
	all heritage		Augustinian	<b>Tortington</b>	Priory	Grade II* Tortington
	<del>assets</del>	The post-	Priory	Augustinian	Scheduled	Priory Barn
		mitigation	Scheduled	Priory	Monument	(LB1221996) and
	The post-	significance of	Monument	Scheduled	<del>(SM1021459)</del>	Grade II Listed
	mitigation	effect has been	<del>(SM1021459)</del>	Monument	and Grade II*	Buildings of Morley's
	significance	applied using	and Grade II*	<del>(SM1021459)</del>	<b>Tortington</b>	Croft; House at
	of effect has	professional	<b>Tortington</b>	and Grade II*	Priory Barn	Meadow Lodge
	been applied	judgement and	Priory Barn	<b>Tortington</b>	<del>(LB1221996)</del>	(LB1222201 and
	using	in accordance	<del>(LB1221996).</del>	Priory Barn	and Grade II	LB1274878) and
	professional	with DMRB		<del>(LB1221996).</del>	Listed Buildings	Glebe House and
	judgement	(sections 5.37	Neutral for the		Morley's Croft	Church Farmhouse,
	and in	and 5.38 of HA	remainder of	Slight adverse	and House at	Binsted (LB1221993
	accordance	208/07)	the assets.	significance of	Meadow Lodge	and 1222198),
	with DMRB			effect for the	<del>(LB1222201</del>	Avisford Park Hotel;
	(sections		The post-	remainder of	and	House at Beam
	5.37 and 5.38		mitigation	the Grade II	<del>LB1274878).</del>	Ends; Swiss Cottage
	of HA 208/07)		significance of			<del>(LBs1222534;</del>



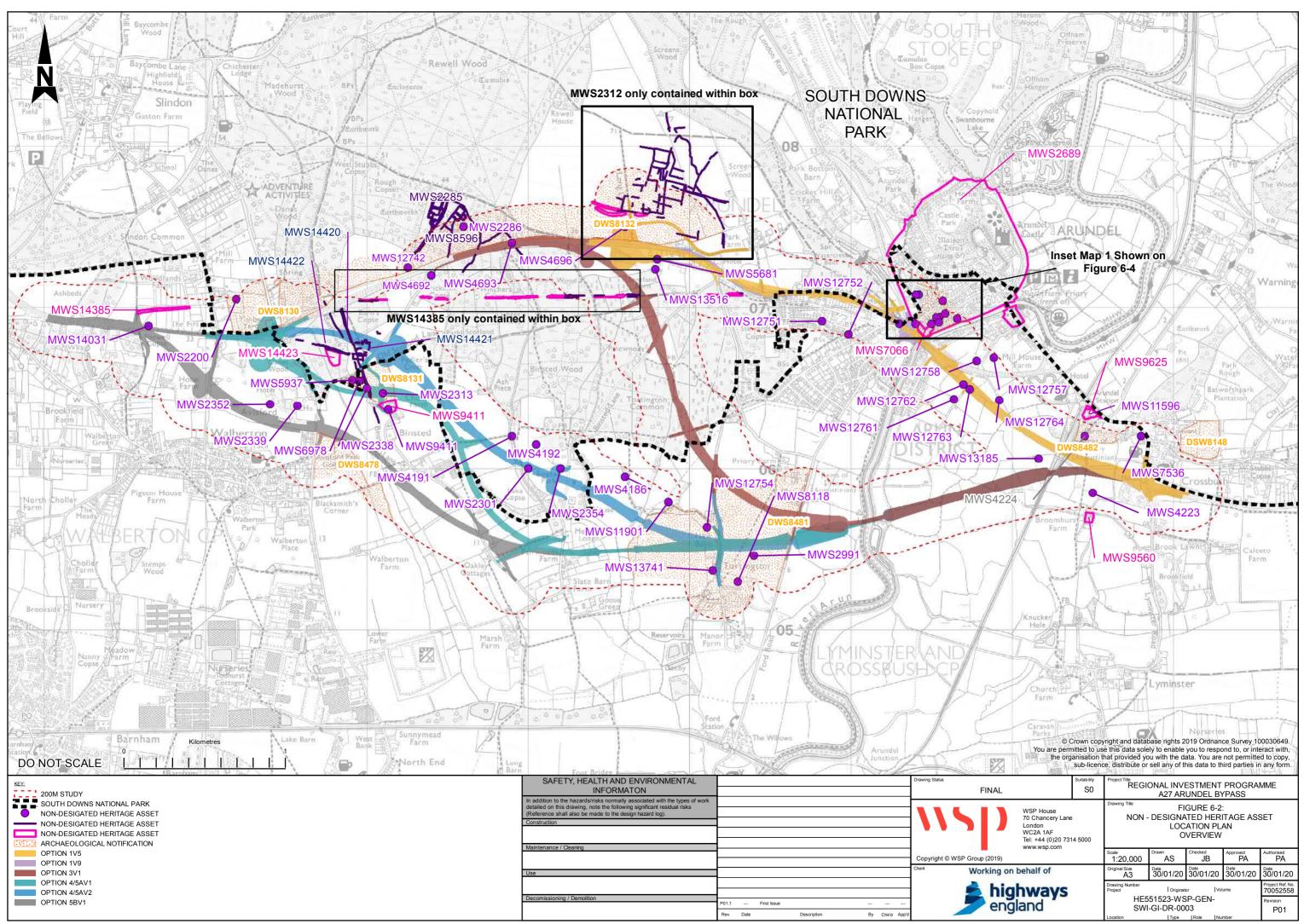
Impact	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
			effect has been applied using professional judgement and in accordance with DMRB (sections 5.37 and 5.38 of HA 208/07)	Listed Buildings. The post- mitigation significance of effect has been applied using professional judgement and in accordance with DMRB (sections 5.37 and 5.38 of HA 208/07).	Neutral significance of effect for the remainder of the Grade II Listed Buildings. The post- mitigation significance of effect has been applied using professional judgement and in accordance with DMRB (sections 5.37 and 5.38 of HA 208/07).	1222465 and 1222535) and St Mary's Church, Binsted (LB1274877). Slight adverse significance of effect for Walberton Village and Walberton Green Conservation Areas. Neutral significance of effect for Grade II listed assets of the lodge of Avisford Park Hotel; The Royal Oak Inn; (LB1274555 and 1274588); Calcetto Cottage, House at Bushacre, The Plough and Sail Inn and Old Well House (LBs 1027598; 1027597; 1027600 and 1027601).



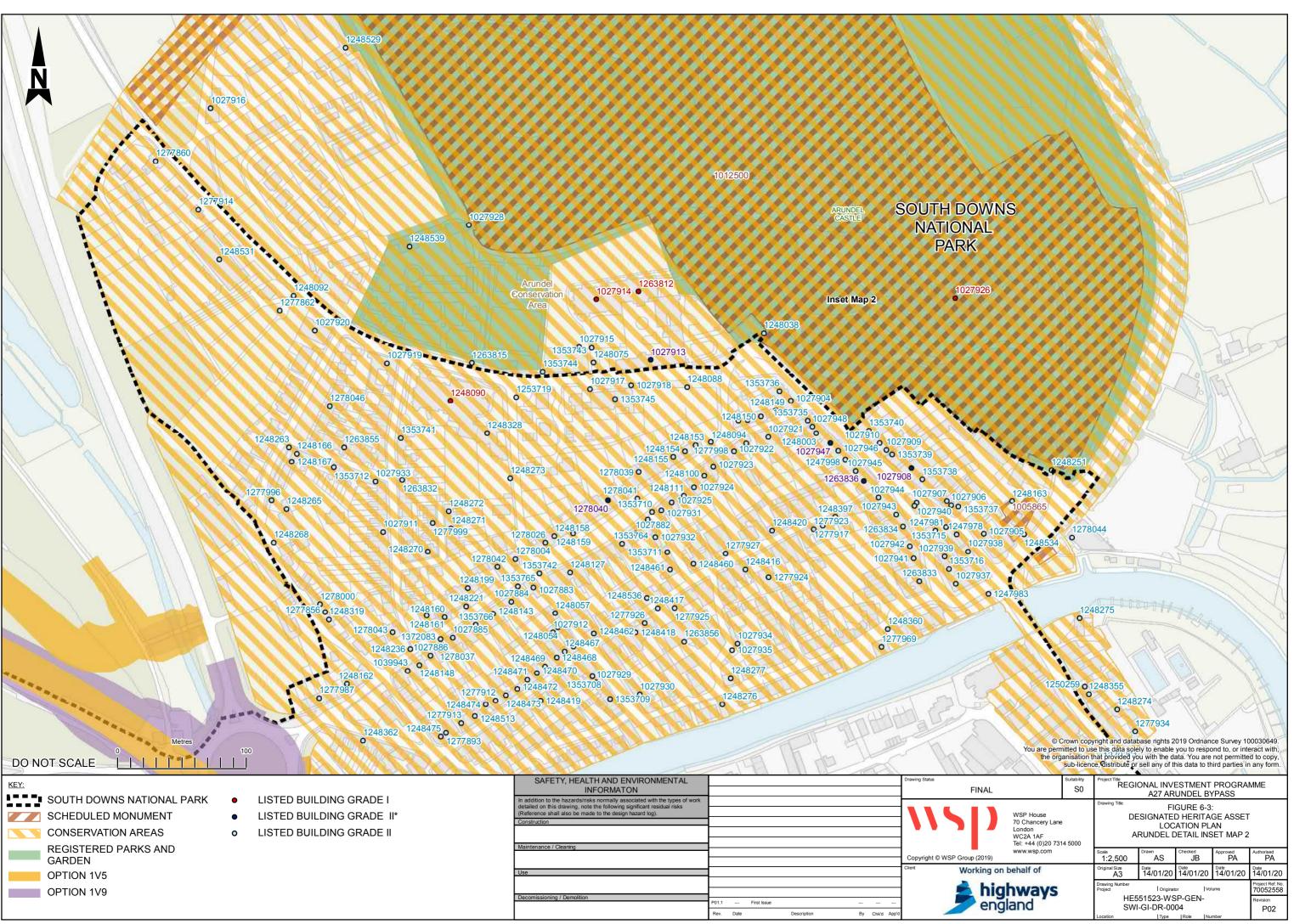
Impact	Option 1V5	Option 1V9	Option 3V1	Option 4/5AV1	Option 4/5AV2	Option 5BV1
						The post-mitigation significance of effect has been applied using professional judgement and in accordance with DMRB (sections 5.37 and 5.38 of HA 208/07).
Impact: effects on below- ground archaeolog y	No post mitigation effects	No post mitigation effects				



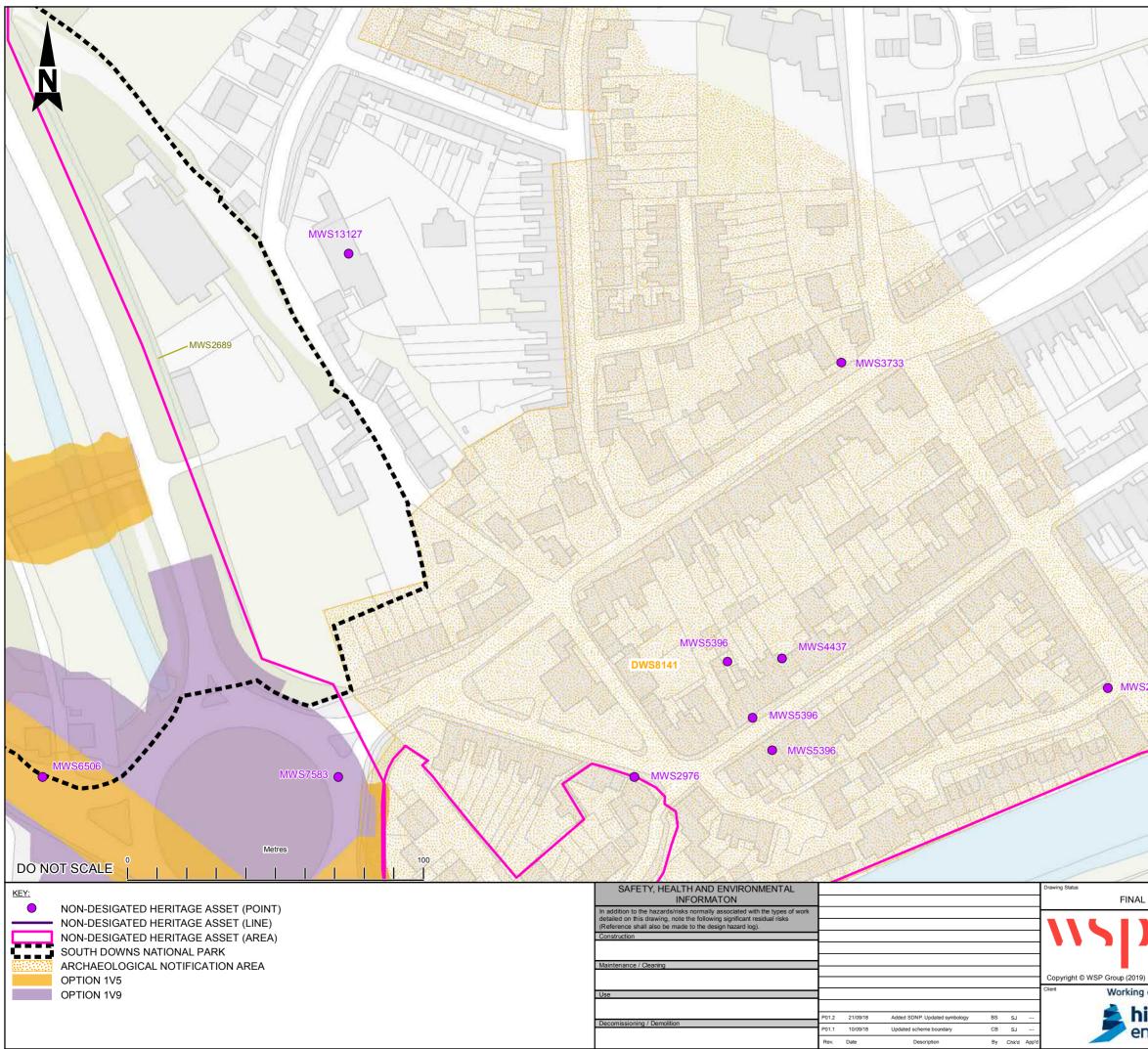
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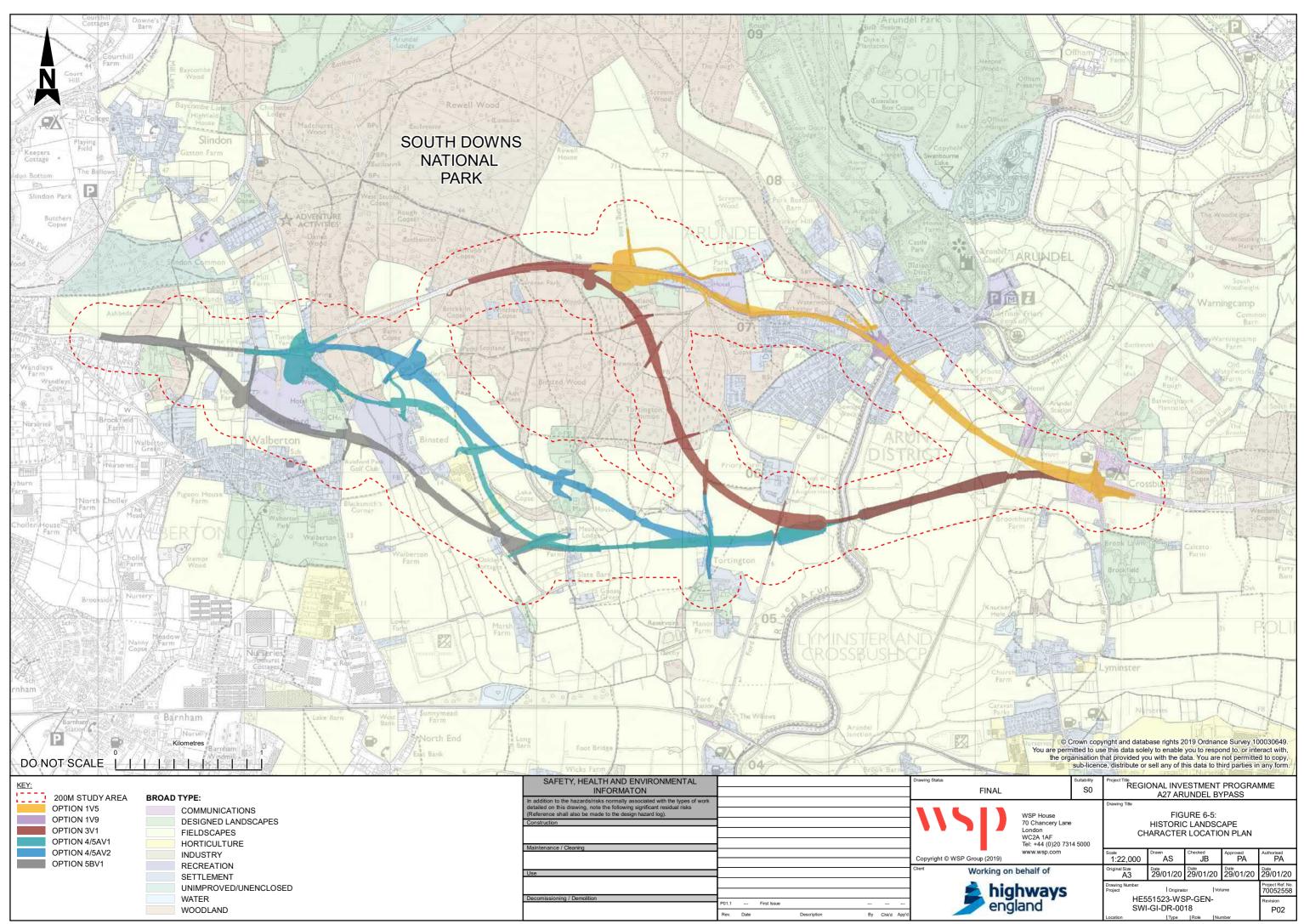


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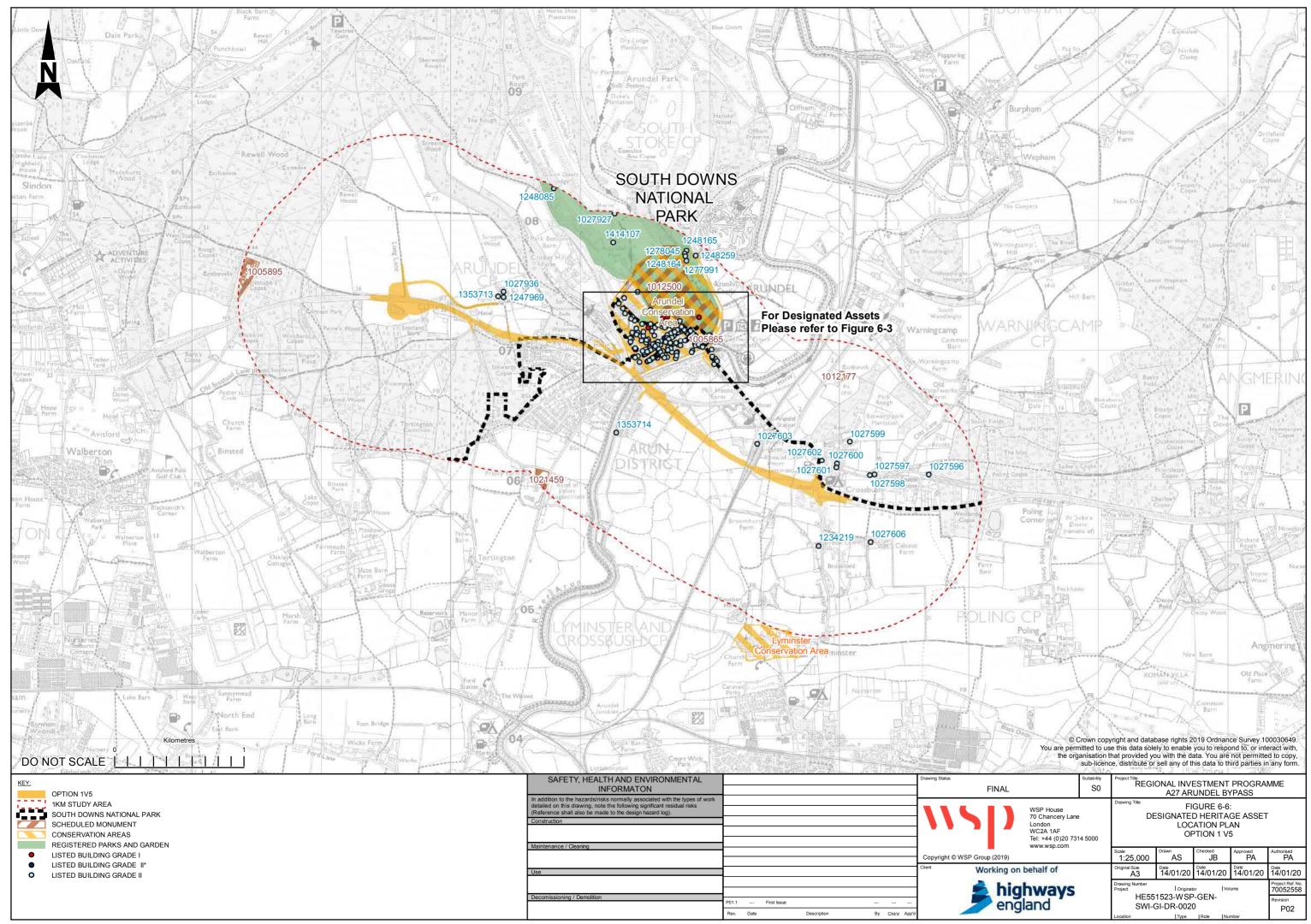


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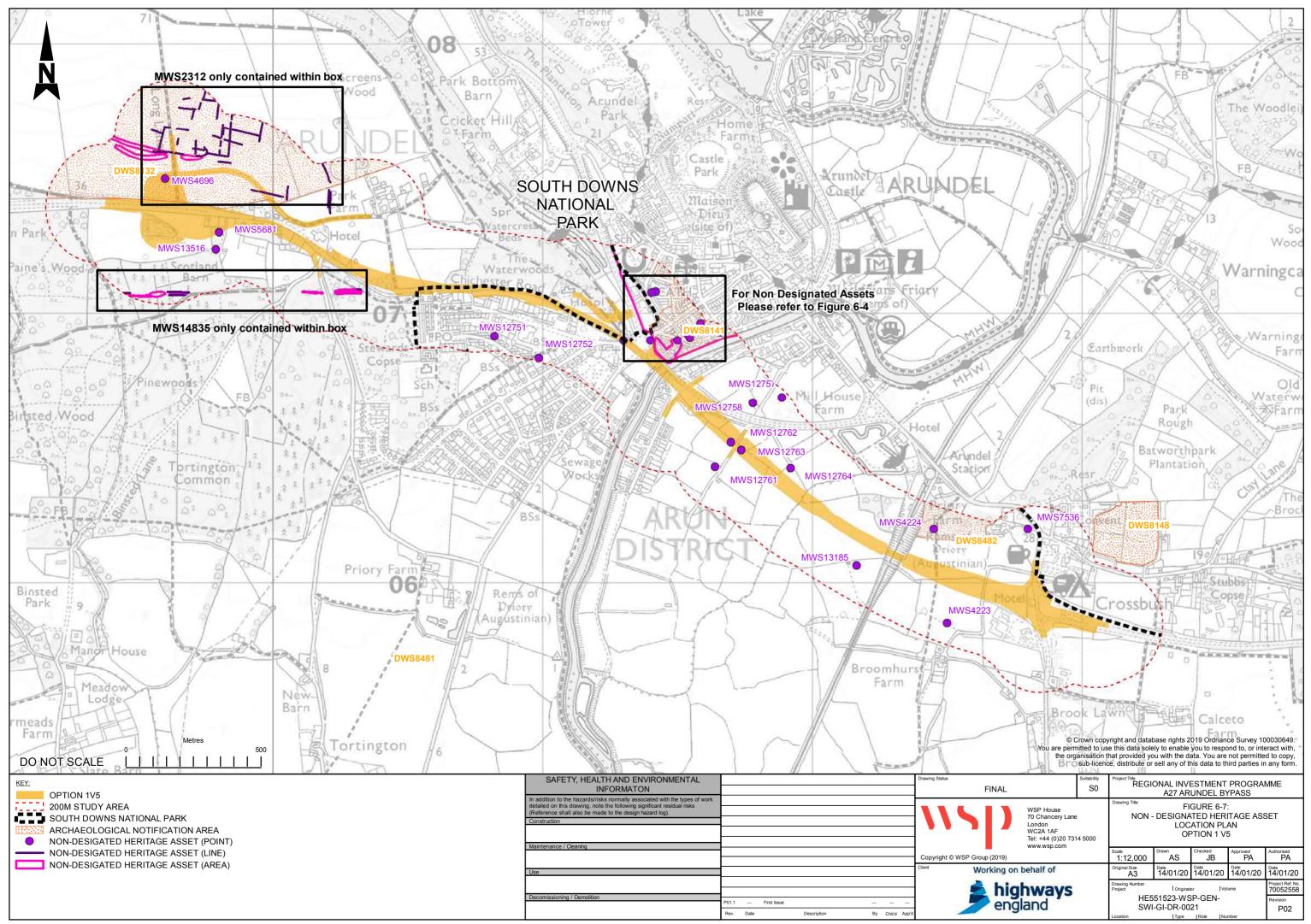
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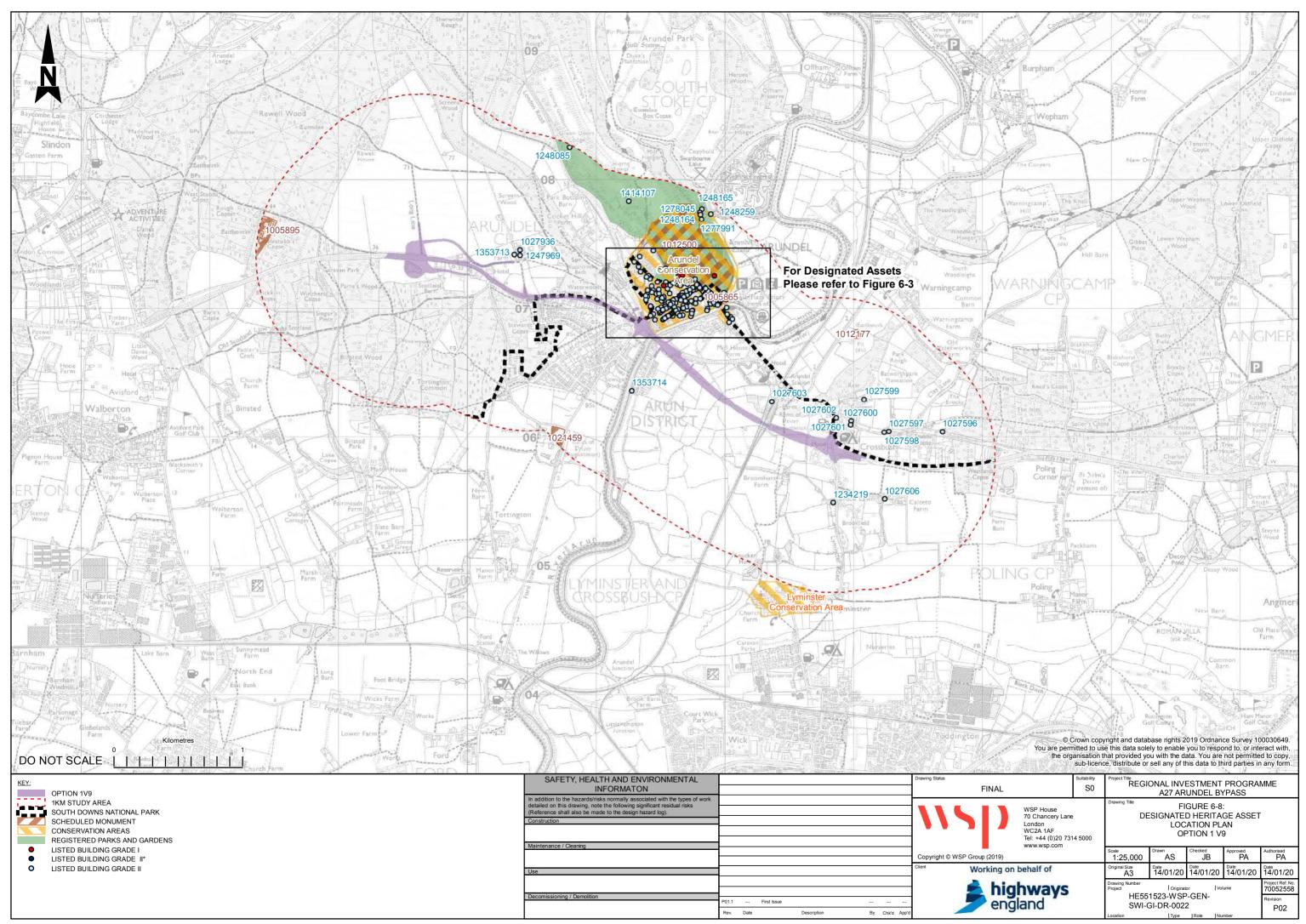
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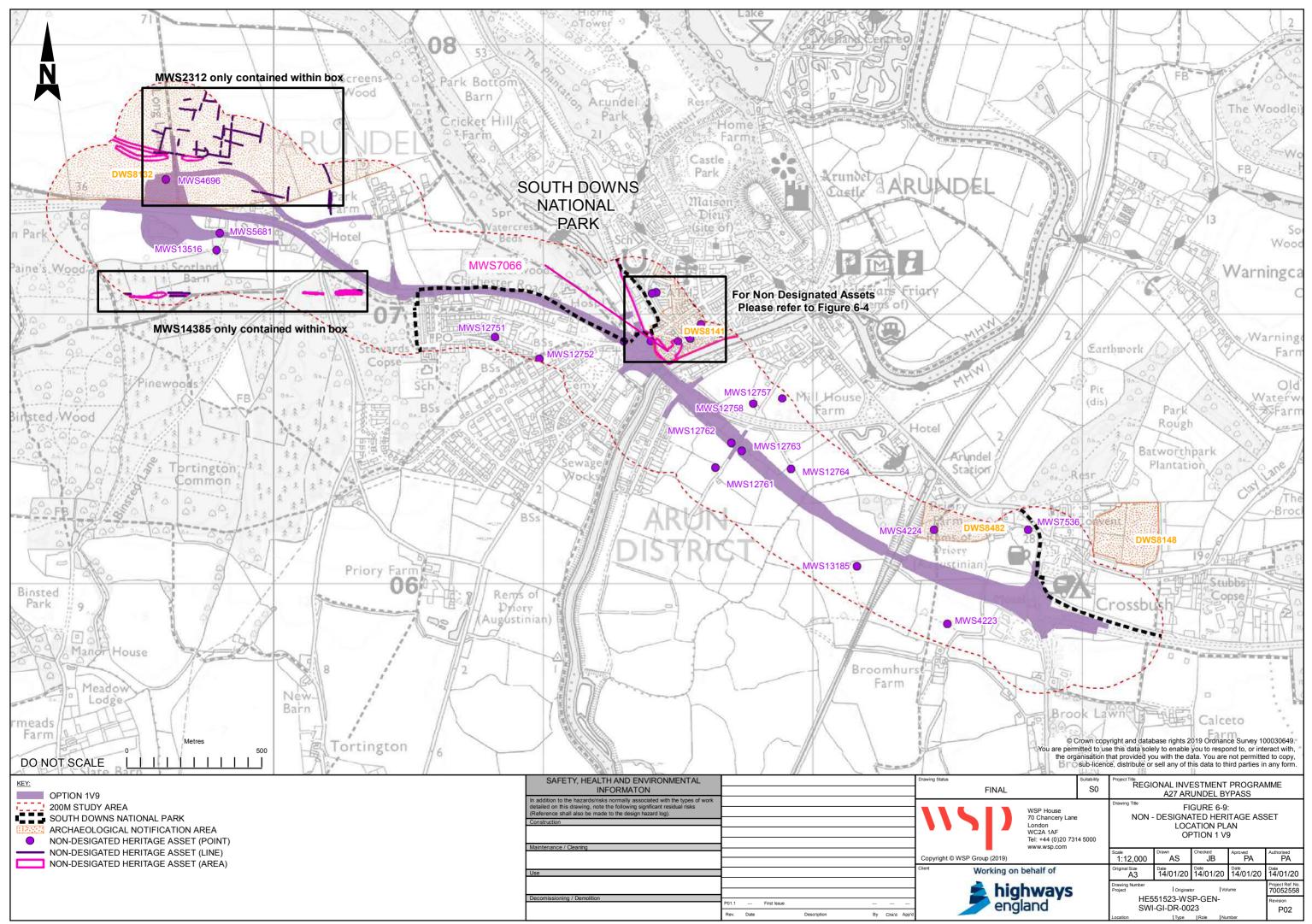
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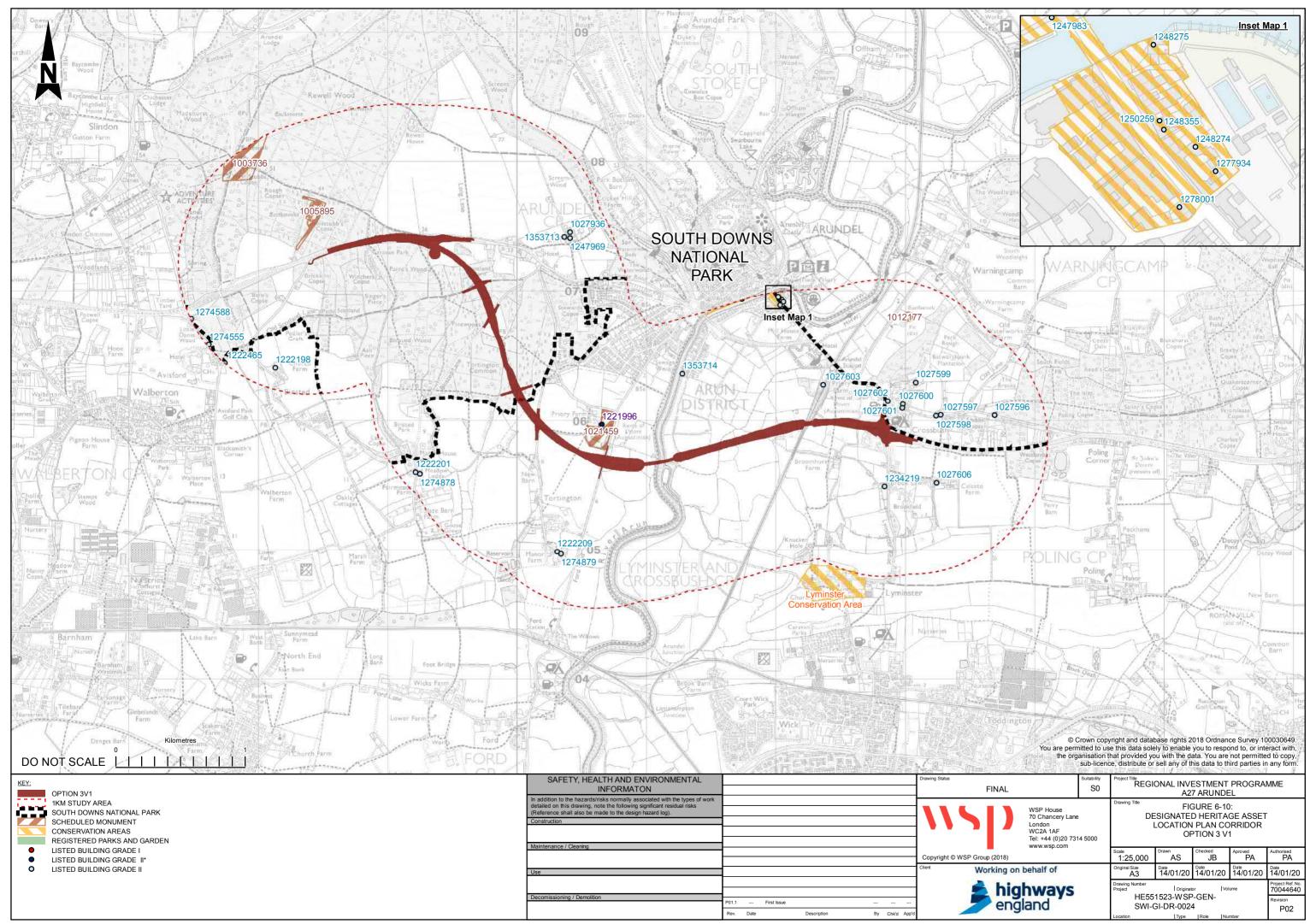
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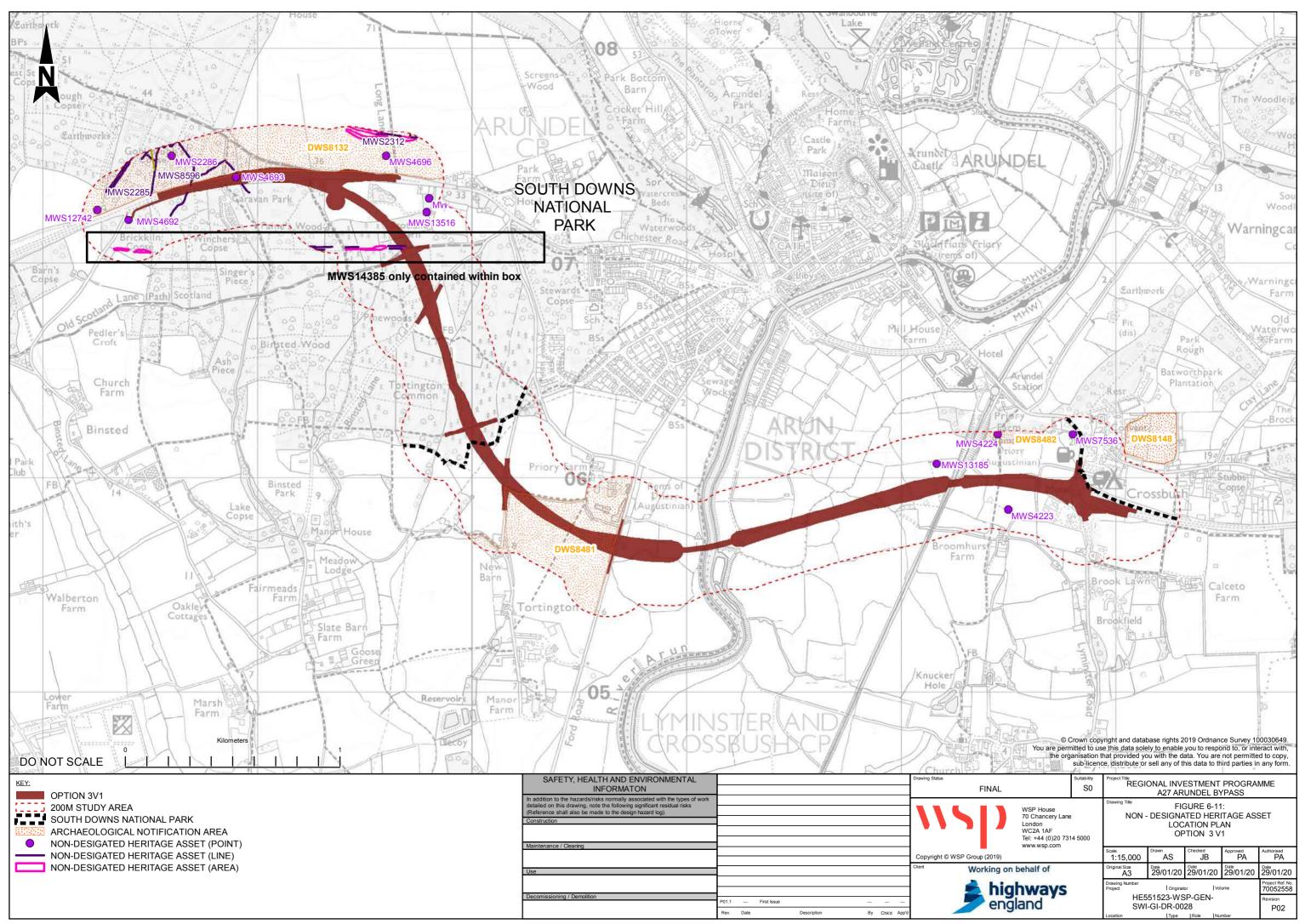
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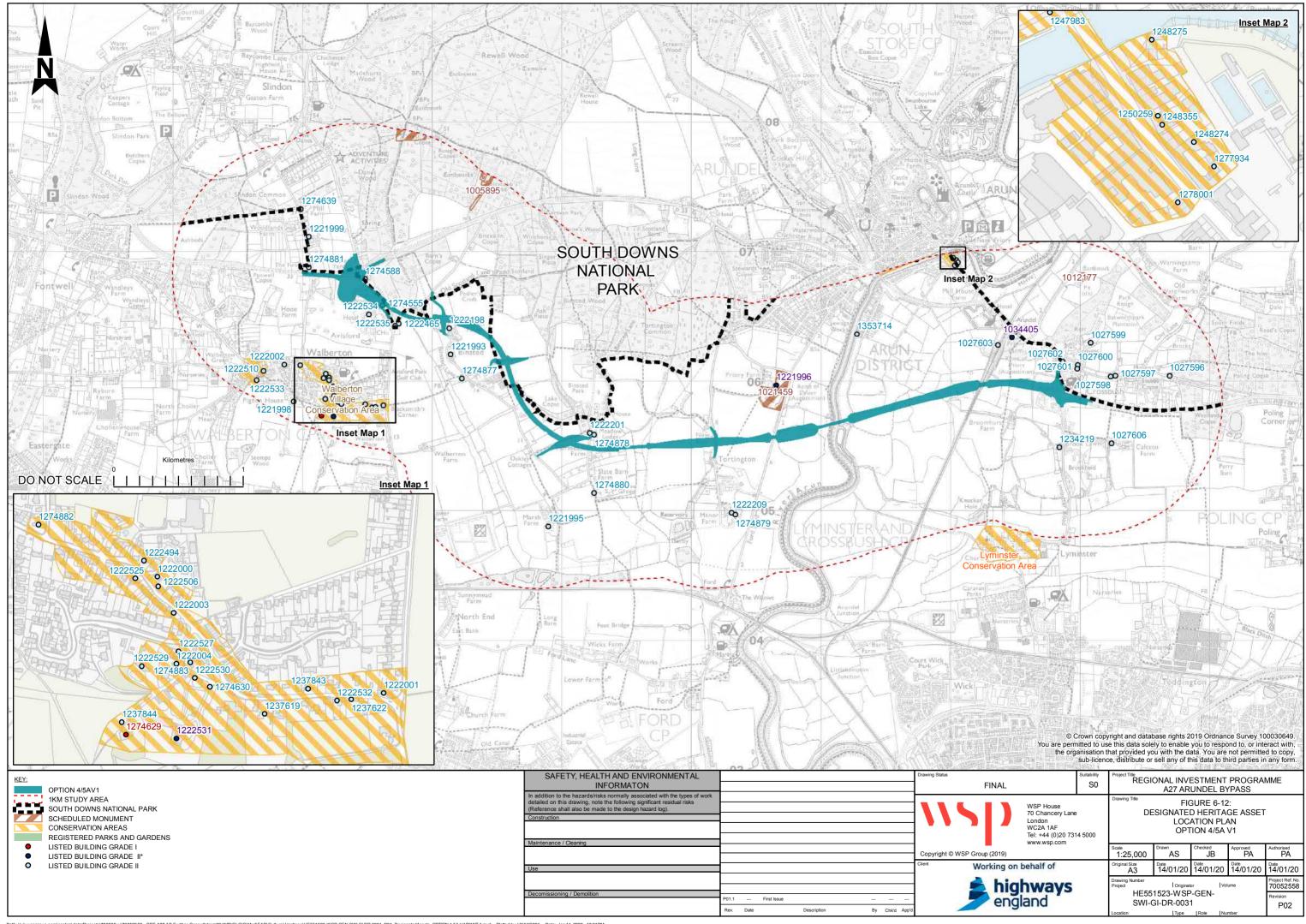
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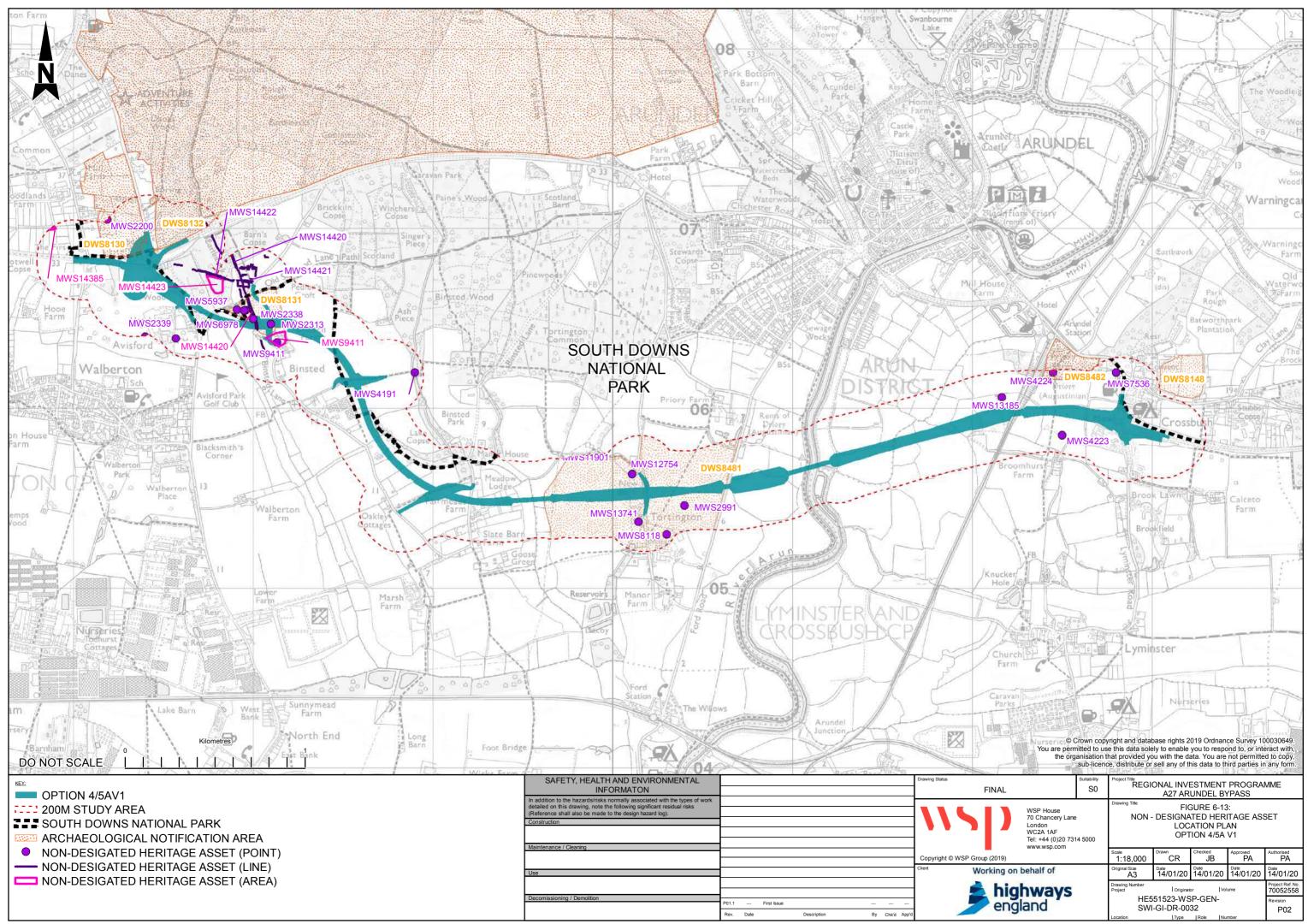
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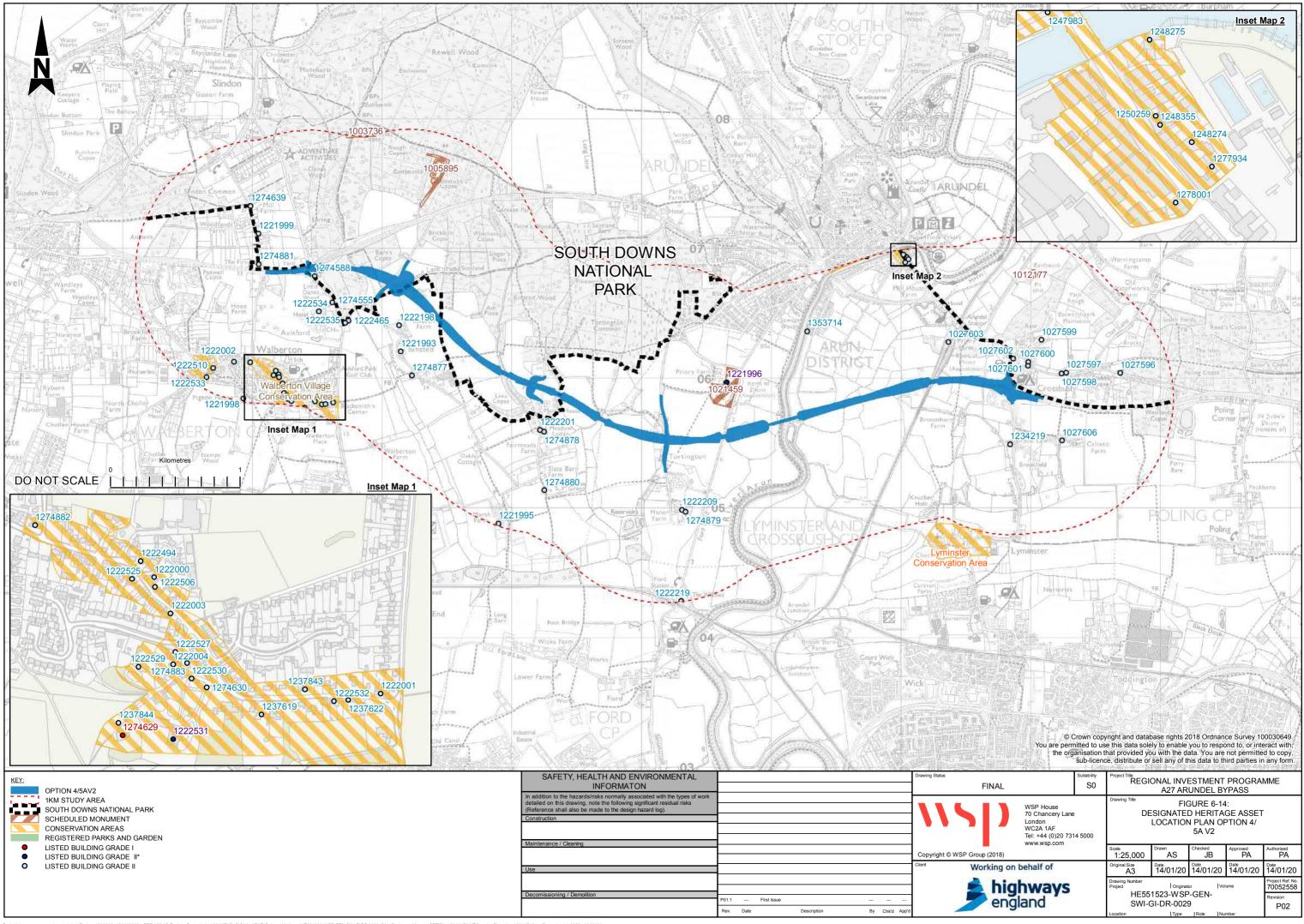
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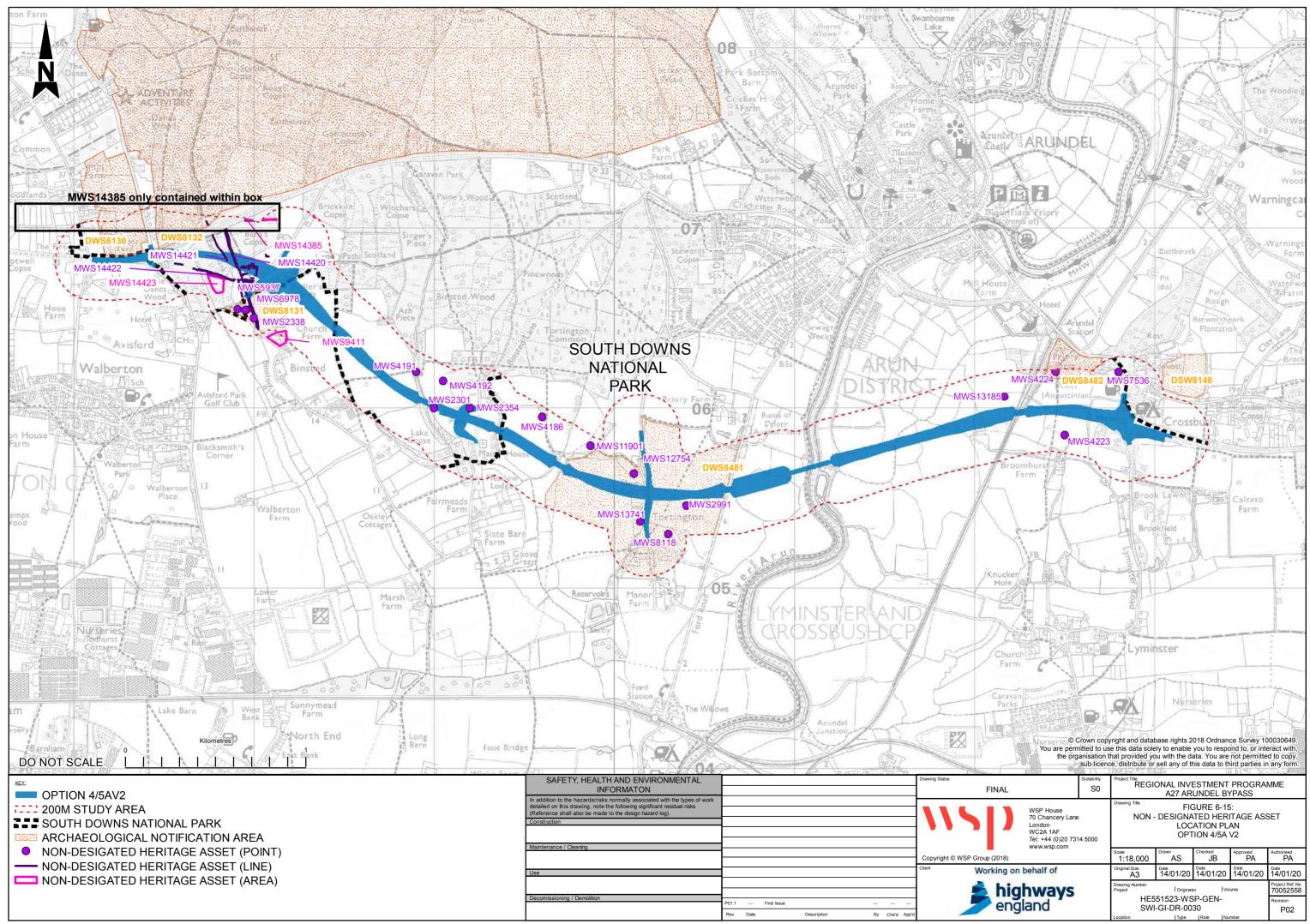
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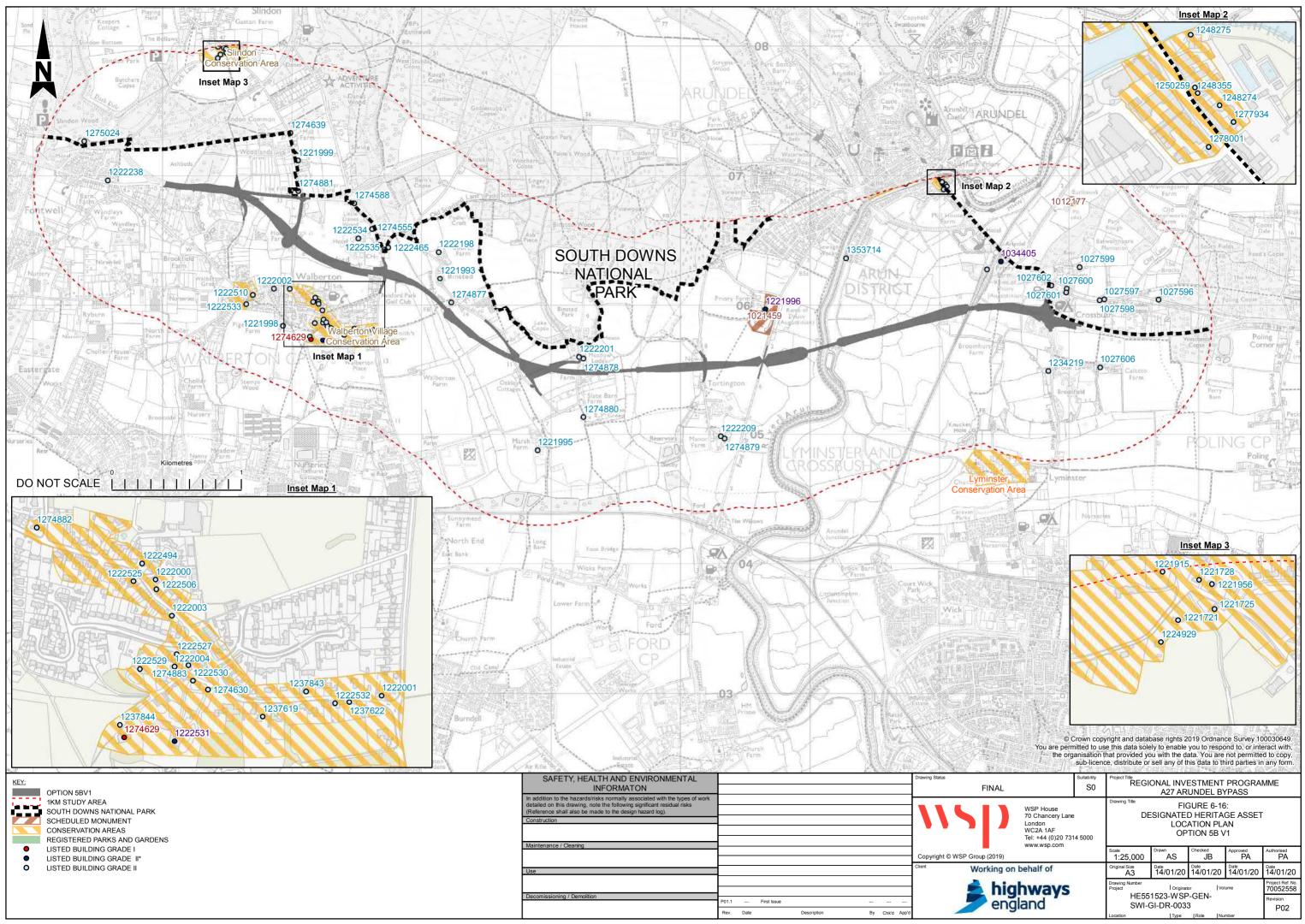
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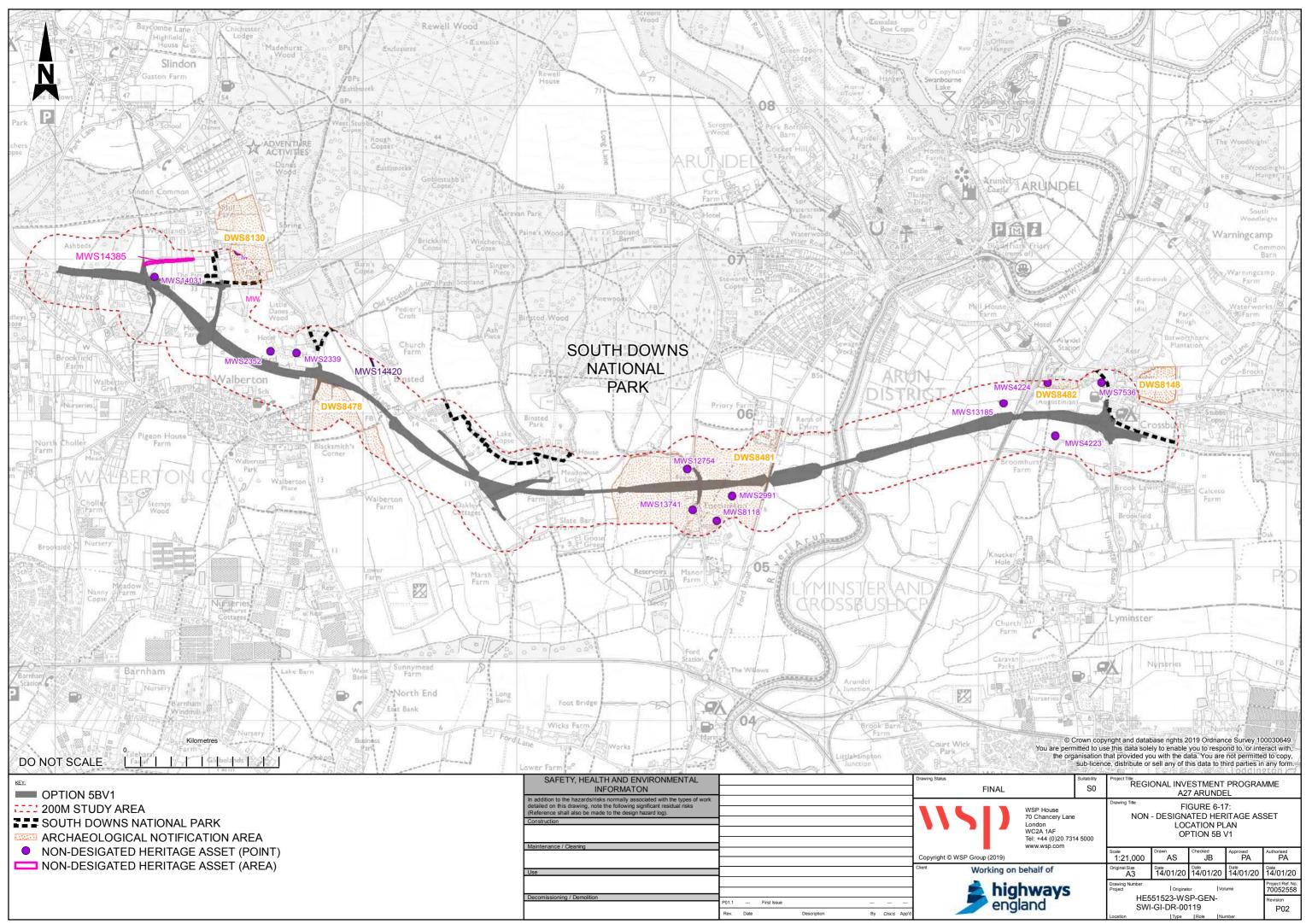
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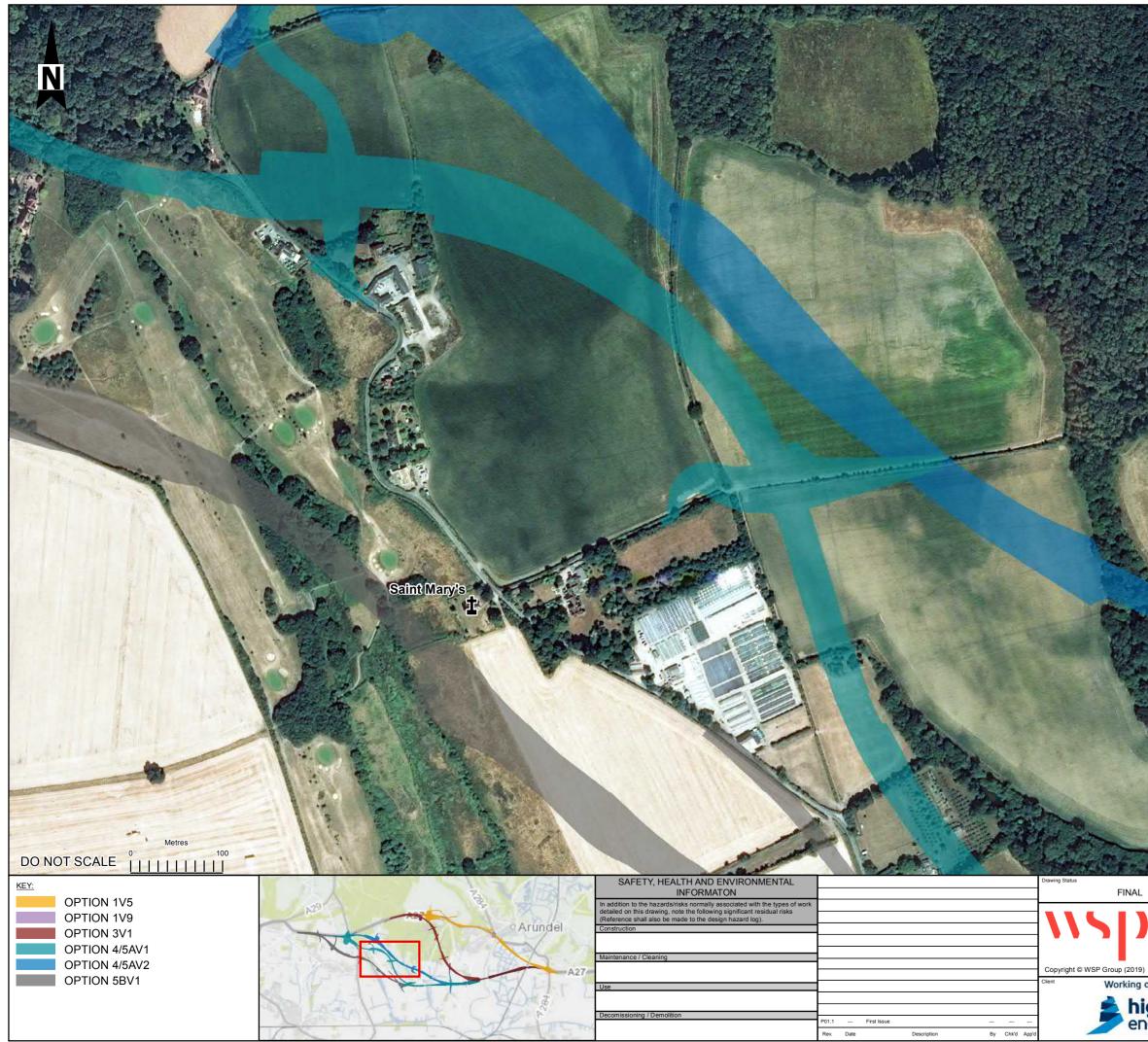
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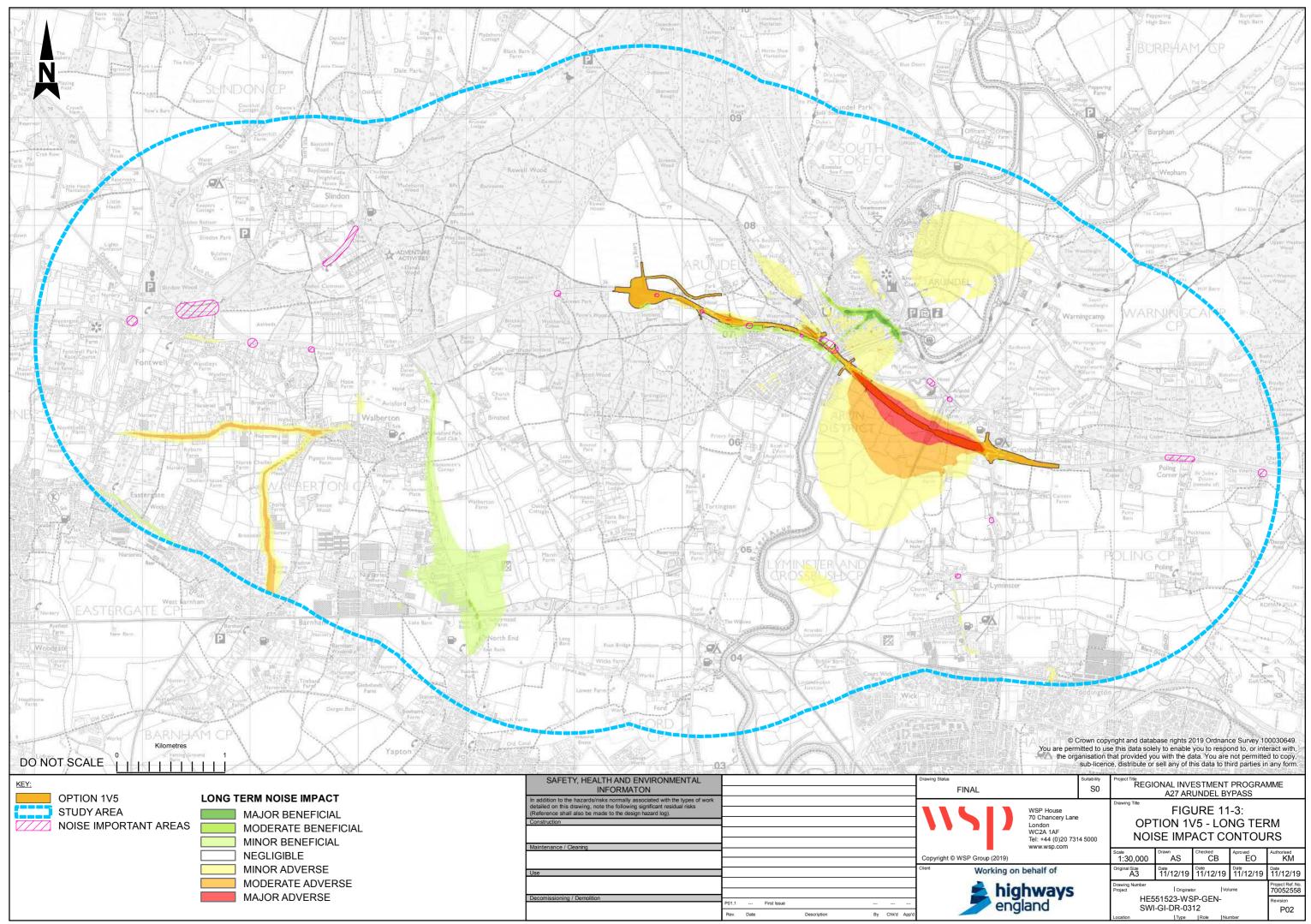
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L Suitability S0 WSP House 70 Chancery Lane London WC2A 1AF Tel: +44 (0)20 7314 5000	Project Title REGIONAL INVESTMENT PROGRAMME A27 ARUNDEL BYPASS Drawing Title FIGURE 6-18: CROPMARKS IN THE VICINITY OF SAINT MARY'S, BINSTED (LB1274877) AND CHURCH FARM, BISNTED (LB1222198)
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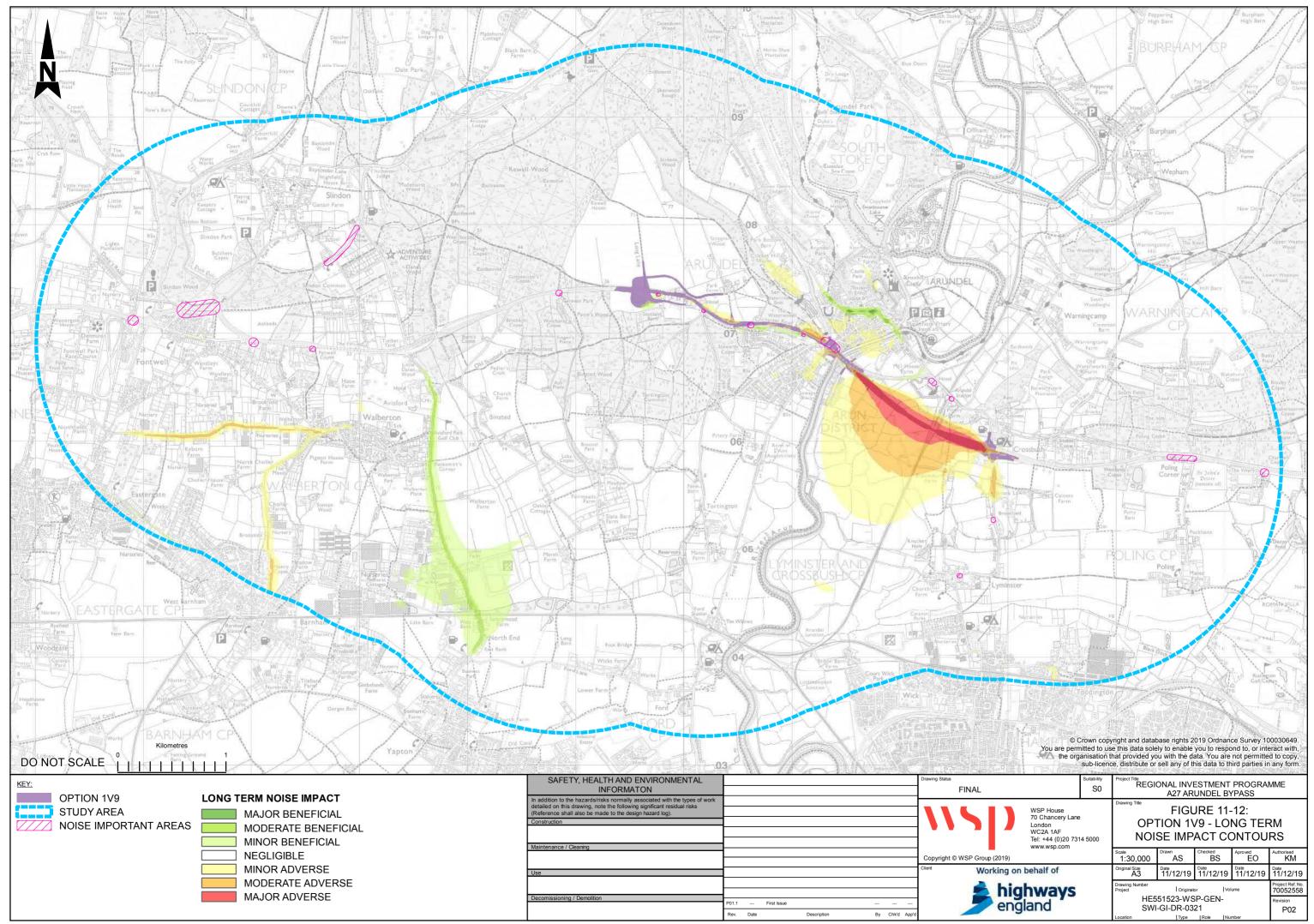
## A27 Arundel Bypass Environmental Assessment Report Errata-Attachment 2: Noise and Vibration Figures

PCF Stage 2 Further Consultation

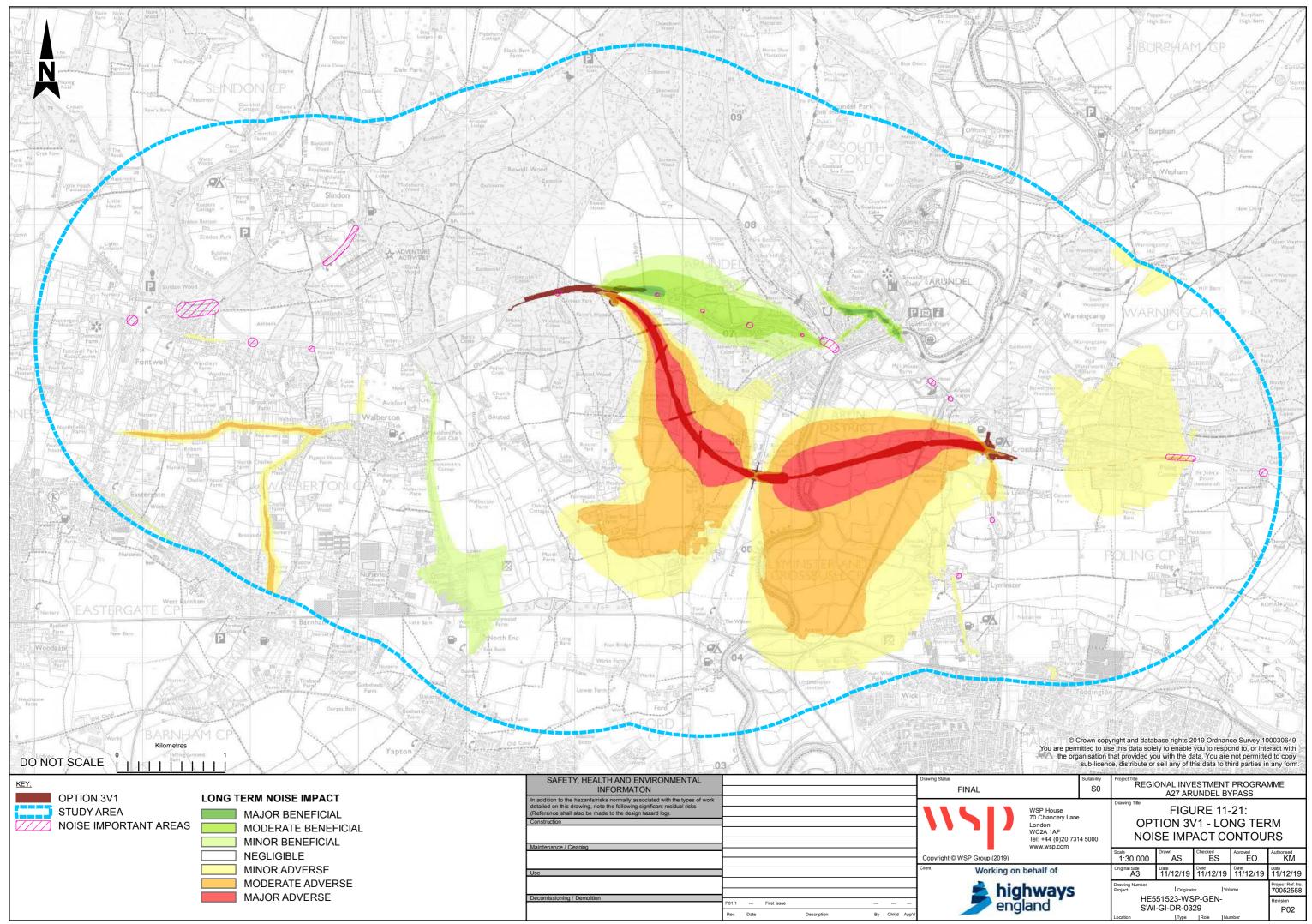
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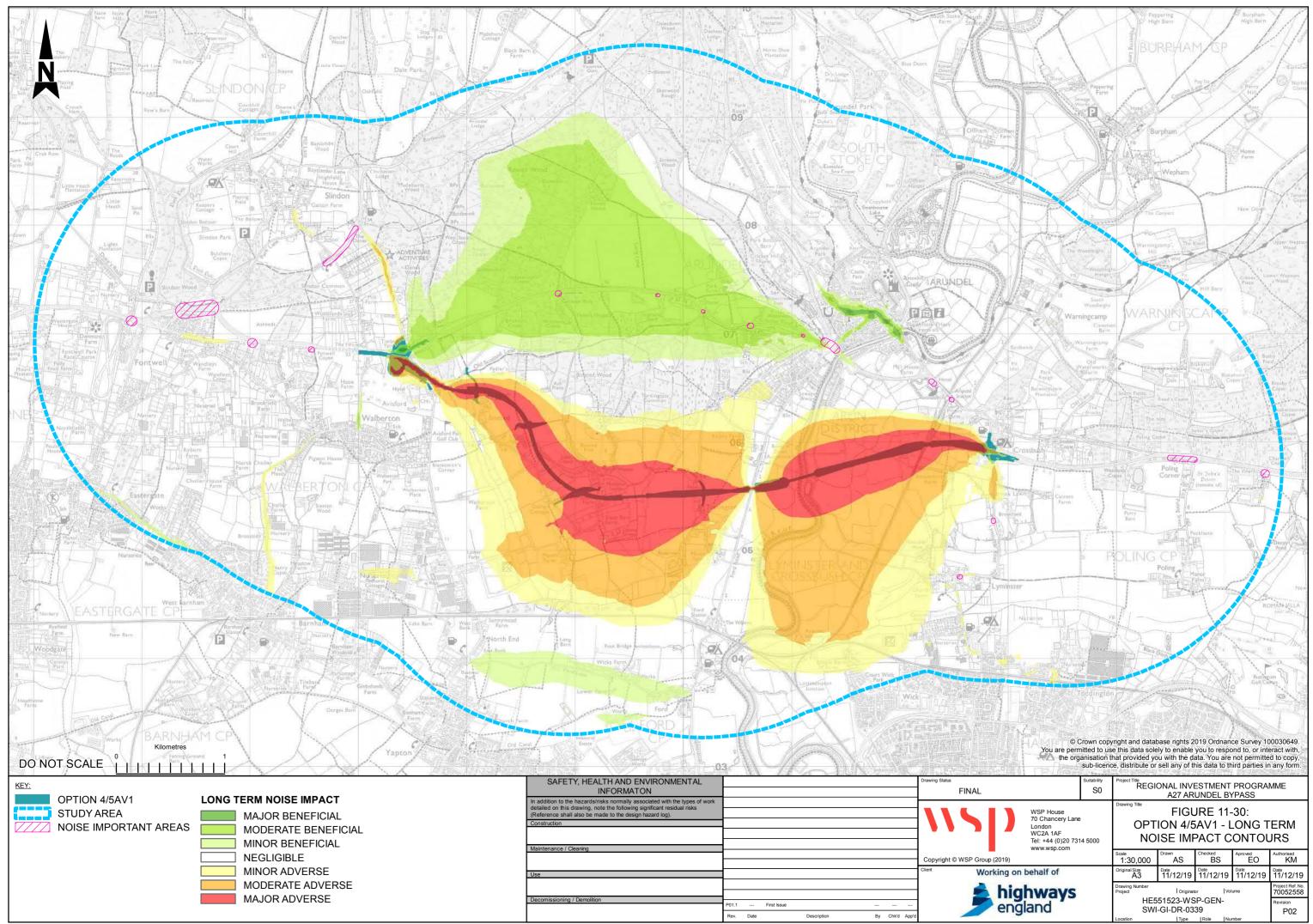
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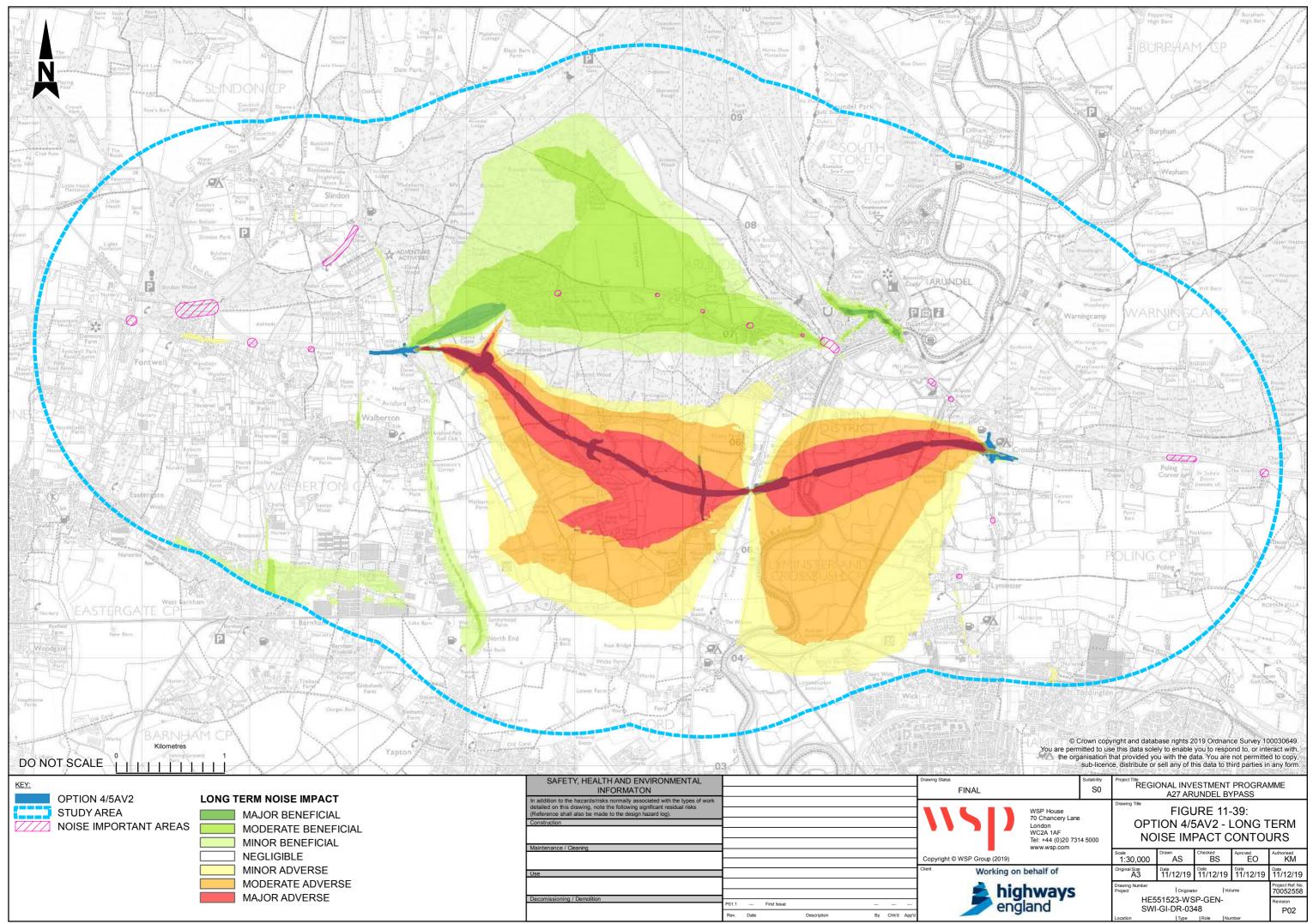
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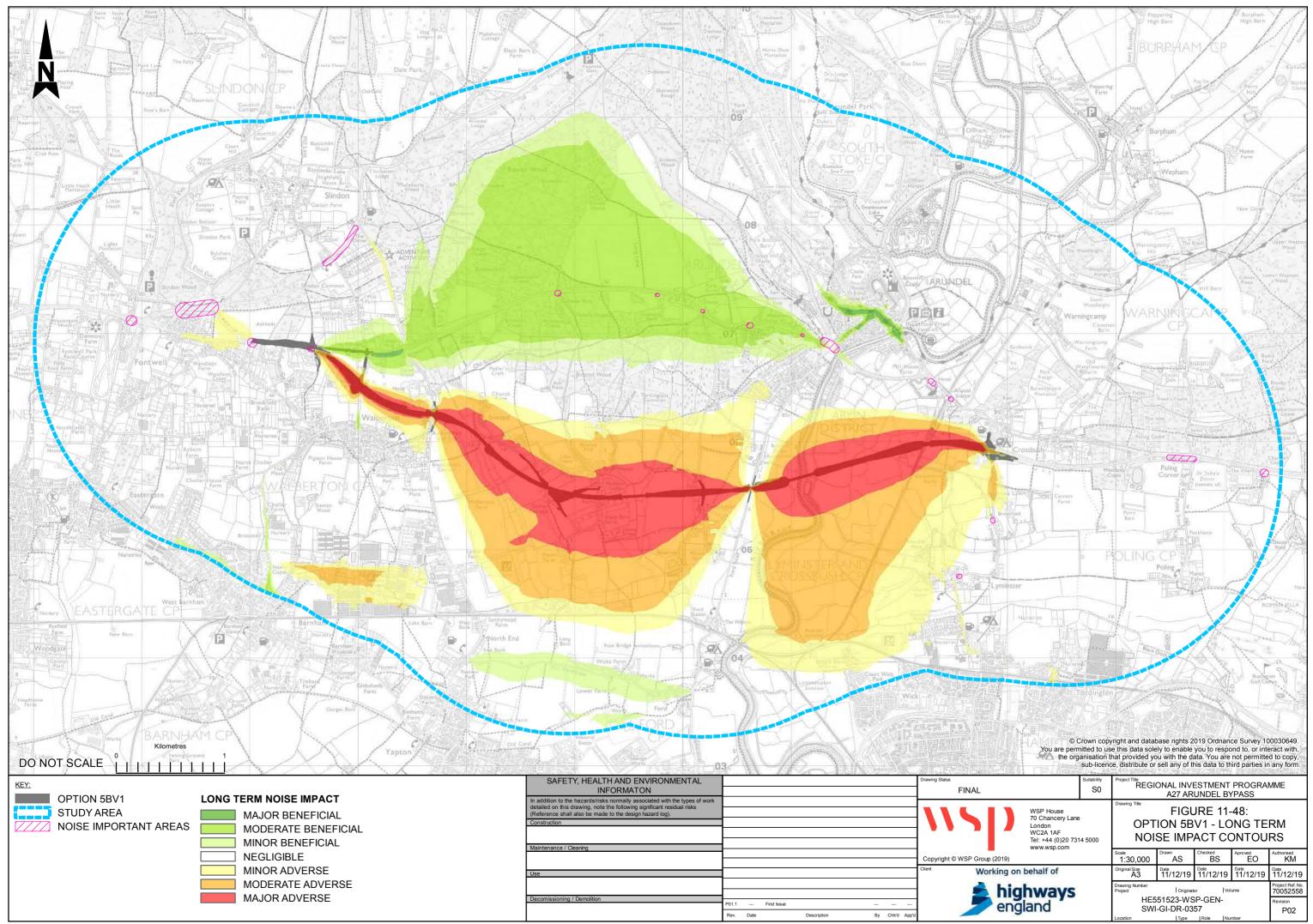
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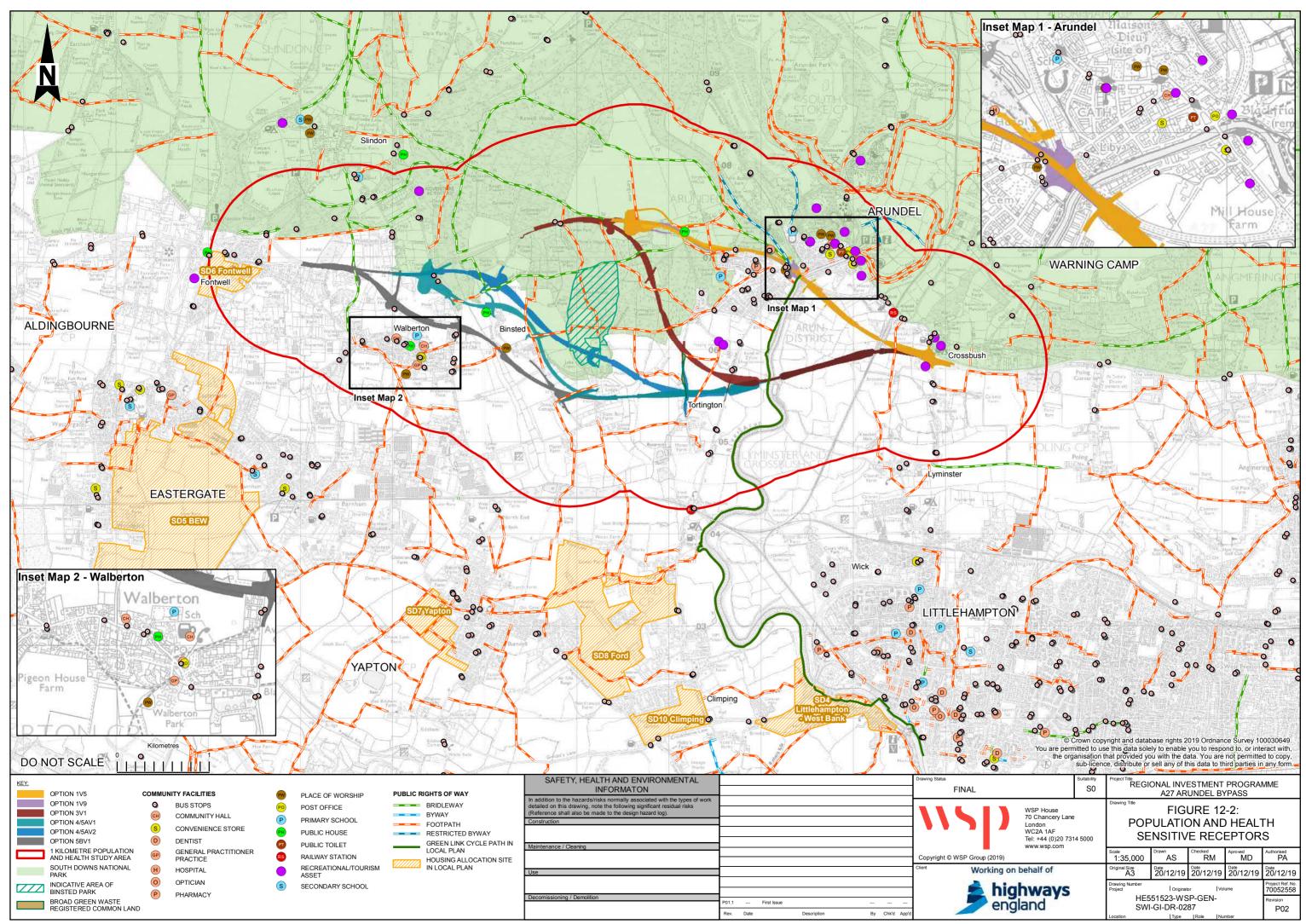
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# A27 Arundel Bypass Environmental Assessment Report Errata-Attachment 3: Population and Health Figures

PCF Stage 2 Further Consultation

February 2020

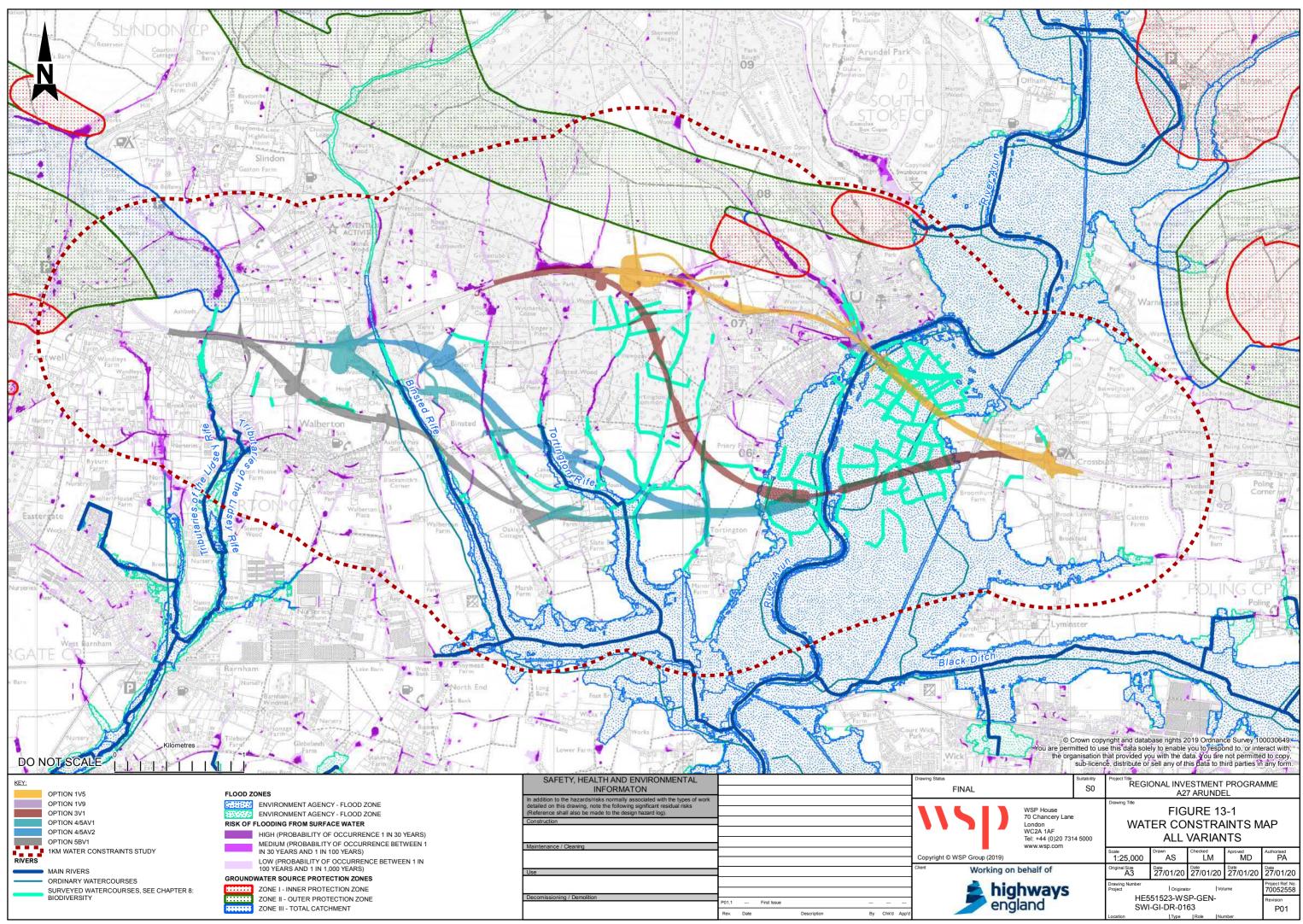


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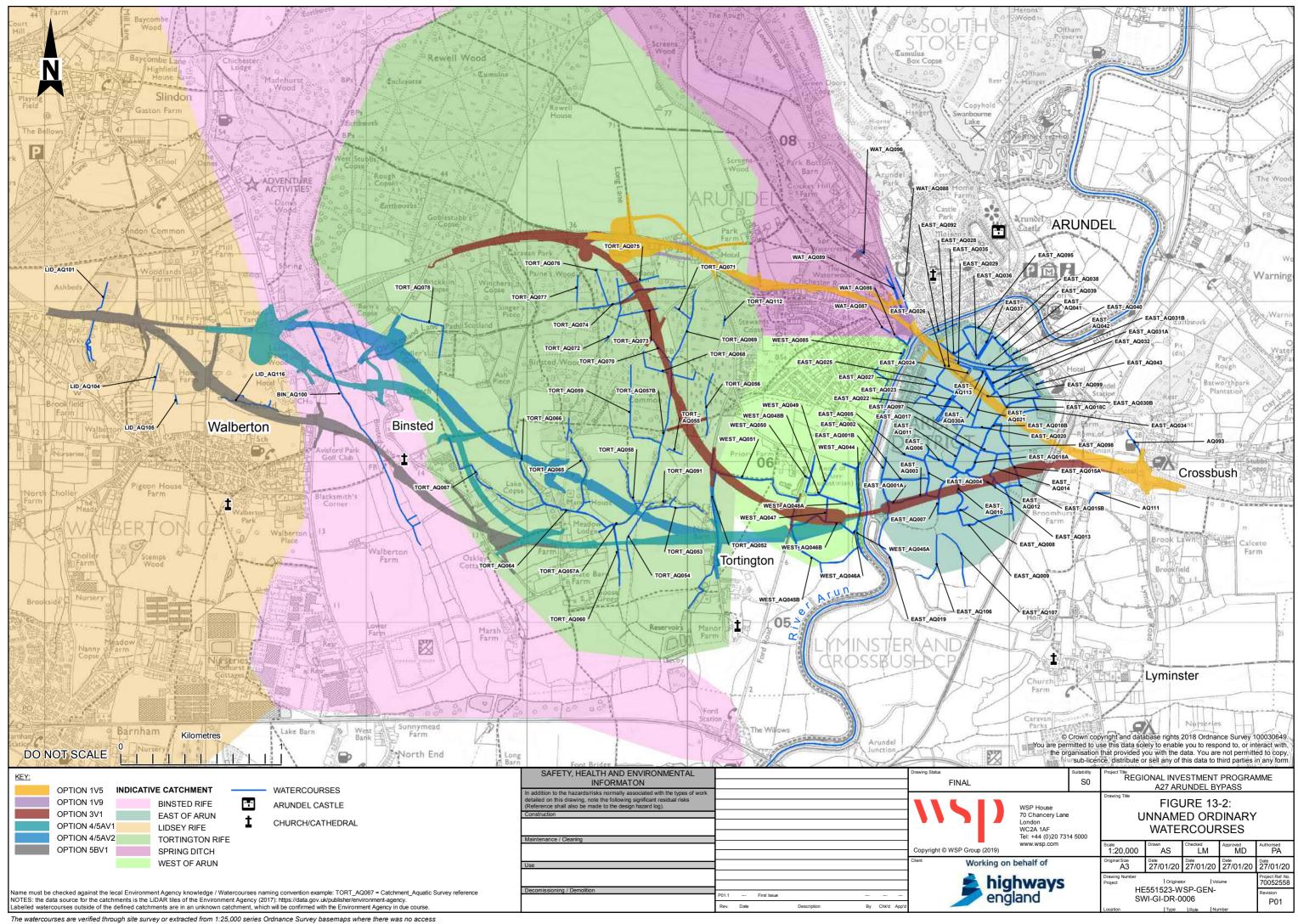


## A27 Arundel Bypass Environmental Assessment Report Errata – Attachment 4: Road Drainage and Water Environment Figures

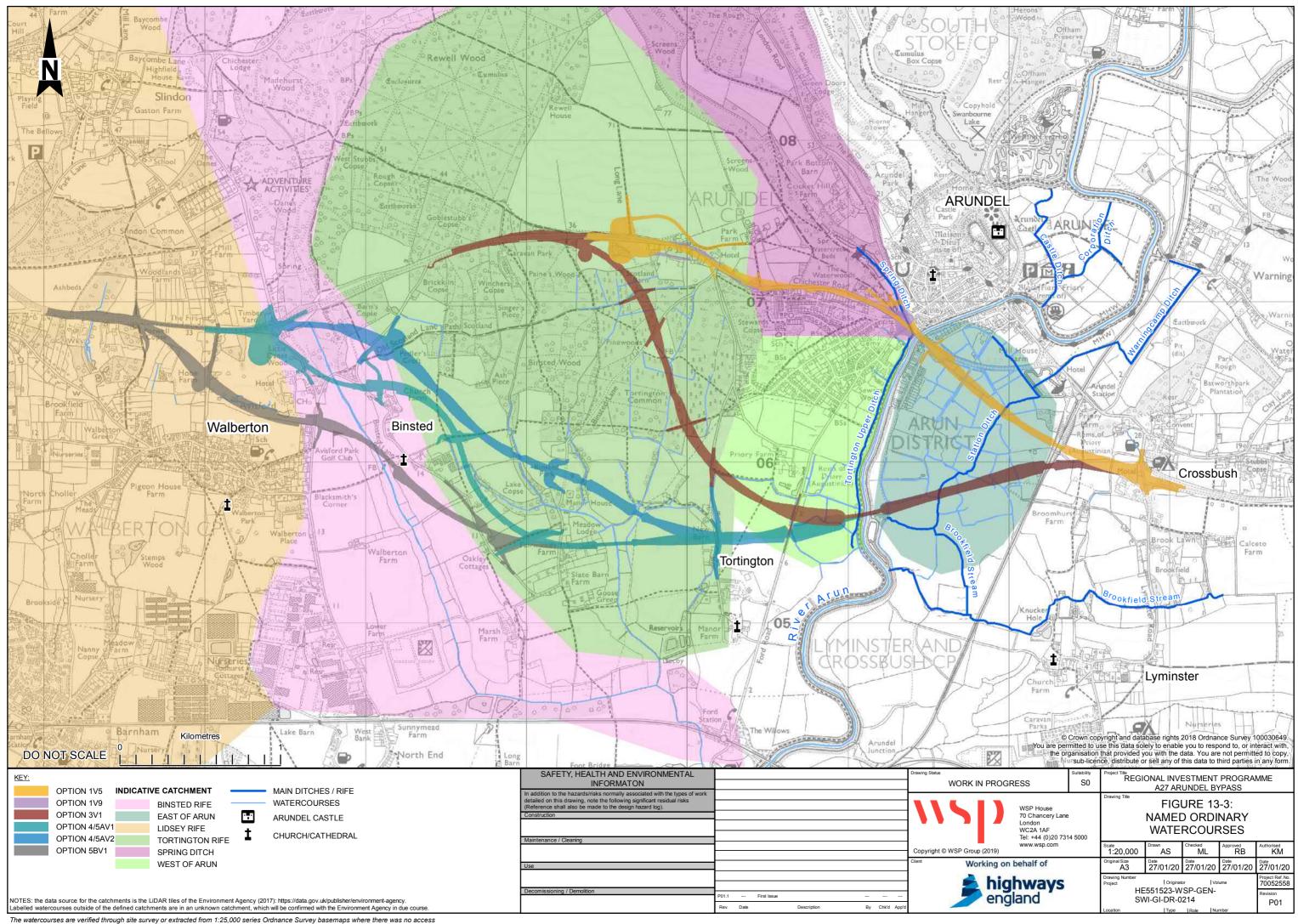
PCF Stage 2 Further Consultation



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