



# **Regional Investment Programme**

## **A27 East of Lewes Improvements**

### **PCF Stage 3 – Environmental Assessment Report**

### **Addendum**

March 2020

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The Project Manager is responsible for production of this document, based on the contributions made by his/her team existing at each Stage.

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**A27 EAST OF LEWES  
IMPROVEMENTS**  
**PCF STAGE 3**  
**ENVIRONMENTAL ASSESSMENT  
REPORT ADDENDUM**

**Highways England**

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HE PIN 552988 East of Lewes Improvements

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## A P P E N D I C E S

APPENDIX 6.1 BIODIVERSITY NET GAIN (SEPARATE DOCUMENT)  
(HE552988-WSP-EBD-SWI-RE-LA-00087-P04)

# 1 INTRODUCTION

## 1.1 PURPOSE OF THE REPORT

- 1.1.1 This Environmental Assessment Report (EAR) addendum forms part of Project Control Framework (PCF) Stage 3: Preliminary Design deliverables. This report supplements the EAR produced in March 2019 (the 'PCF Stage 3 EAR') and should be read alongside it.
- 1.1.2 The EAR and EAR Addendum have been prepared to provide an overview of the potential environmental effects which may occur as a result of the construction and operation of the A27 East of Lewes Improvement Works (hereafter referred to as 'the scheme').
- 1.1.3 The EAR and EAR Addendum identifies potential environmental effects and sets out mitigation measures which will reduce, avoid or offset significant adverse effects. It will also set out measures to ensure that the benefits of the scheme are fully realised.

## 1.2 REASON FOR THE ADDENDUM

- 1.2.1 Following the completion of the PCF Stage 3 EAR based on Design Fix 3, there have been further changes to the scheme following consultation with land interests.
- 1.2.2 The changes will reduce the need to purchase third party land, by making more use of land already owned by Highways England.
- 1.2.3 The changes are primarily to the landscape design and the extent and location of land to be used for ecological mitigation. They are described in Section 2 of this addendum.
- 1.2.4 This EAR Addendum has been drafted to ensure that these changes are accounted for in the environmental assessment, and still provide appropriate mitigation for the scheme.

# 2 CHANGES TO THE SCHEME

- 2.1.1 The following changes have occurred since the preparation of the PCF Stage 3 EAR and Design Fix 3.

## 2.2 PLANTING OF HIGHWAYS ENGLAND OWNED LAND NEAR CUCKMERE RIVER

- 2.2.1 Highways England owns land close to the scheme and so it can be planted to enable the scheme to achieve a net gain to biodiversity.
- 2.2.2 The land occupies the eastern bank of the River Cuckmere, to the north of the A27, and includes agricultural fields. The land totals approximately 5.9ha. The fields are used for pasture and are not Best and Most Versatile agricultural land (based on pre- 1988 mapping), likely due to the topography and position in the floodplain.
- 2.2.3 The land is shown in Figure 2.1.

## **2.3 LAND TAKE AT WEST FIRLE**

- 2.3.1 Following landowner discussions, the project team were requested to reduce the impact of the shared use path on the private property (dwelling/ business and landscaping) between Wick Street and the A27.
- 2.3.2 The shared use path was redesigned in this location and now uses existing infrastructure instead of passing through this property.
- 2.3.3 As shown in Figure 2.1, pedestrians will remain on the existing path on the north of the A27 between the junctions of A27/Firle Borstal and A27/Wick Street. They will then cross the A27 at an uncontrolled crossing to join the new shared use path.
- 2.3.4 Cyclists will cross the A27 using a new toucan crossing near the A27/Firle Borstal junction and use the minor roads Firle Borstal and Wick Street to then join the new shared use path.

## **2.4 REDUCED WOODLAND PLANTING AT BERWICK (DRUSILLAS) JUNCTION**

- 2.4.1 In response to an objection from the tenant farmer to the compulsory purchase of agricultural land that they farm, the extent of woodland planting proposed for land to the south-west of Drusillas Roundabout was reduced by approximately 2.8ha.
- 2.4.2 The woodland planting was part of the landscape design and intended to screen the junction and its lighting scheme from the South Downs National Park (SDNP). It was also intended as habitat replacement for Great Crested Newts (GCN) and to assist with the scheme achieving a net gain to biodiversity (BNG).
- 2.4.3 As biodiversity mitigation planting is not location specific, this is now being achieved by planting nearby land already owned by Highways England (see Section 2.1). This allows the extent of planting at Berwick to be reduced.
- 2.4.4 A strip of new woodland planting would remain at Berwick Junction, adjacent to the new Shared Use Path. This remains sufficient to screen the improved junction and its lighting from the national park, and to replace habitat suitable for GCN, which would be lost to the improvements (see Figure 2.2).

## **2.5 INCLUSION OF REPLACEMENT COMMON LAND AT WILMINGTON**

- 2.5.1 Highways England intend to purchase a small field to the north east of Wilmington junction. Part of this field (approx. 0.12Ha) will be used to replace a section of designated common land lost because of the improved junction, including the Shared Use Path.

## **2.6 REDUCTION OF WOODLAND PLANTING NEAR FOLKINGTON ROAD AT POLEGATE**

- 2.6.1 At request of the land owner, planting proposed on land between Folkington Road and Hyperion Avenue has been reduced.
- 2.6.2 A strip of woodland planting is still proposed as part of the landscape design and to replace habitat lost to the junction improvements and shared use path. The woodland planting has reduced by approximately 5.8ha.
- 2.6.3 Biodiversity net gain can still be achieved by instead planting nearby land already owned by Highways England (Section 2.1, Figure 2.1).

## 2.7 SUMMARY OF CHANGES IN PLANTING

2.7.1 In summary, the previous proposals for planting (as assessed in the PCF Stage 3 EAR) comprised (approximate areas):

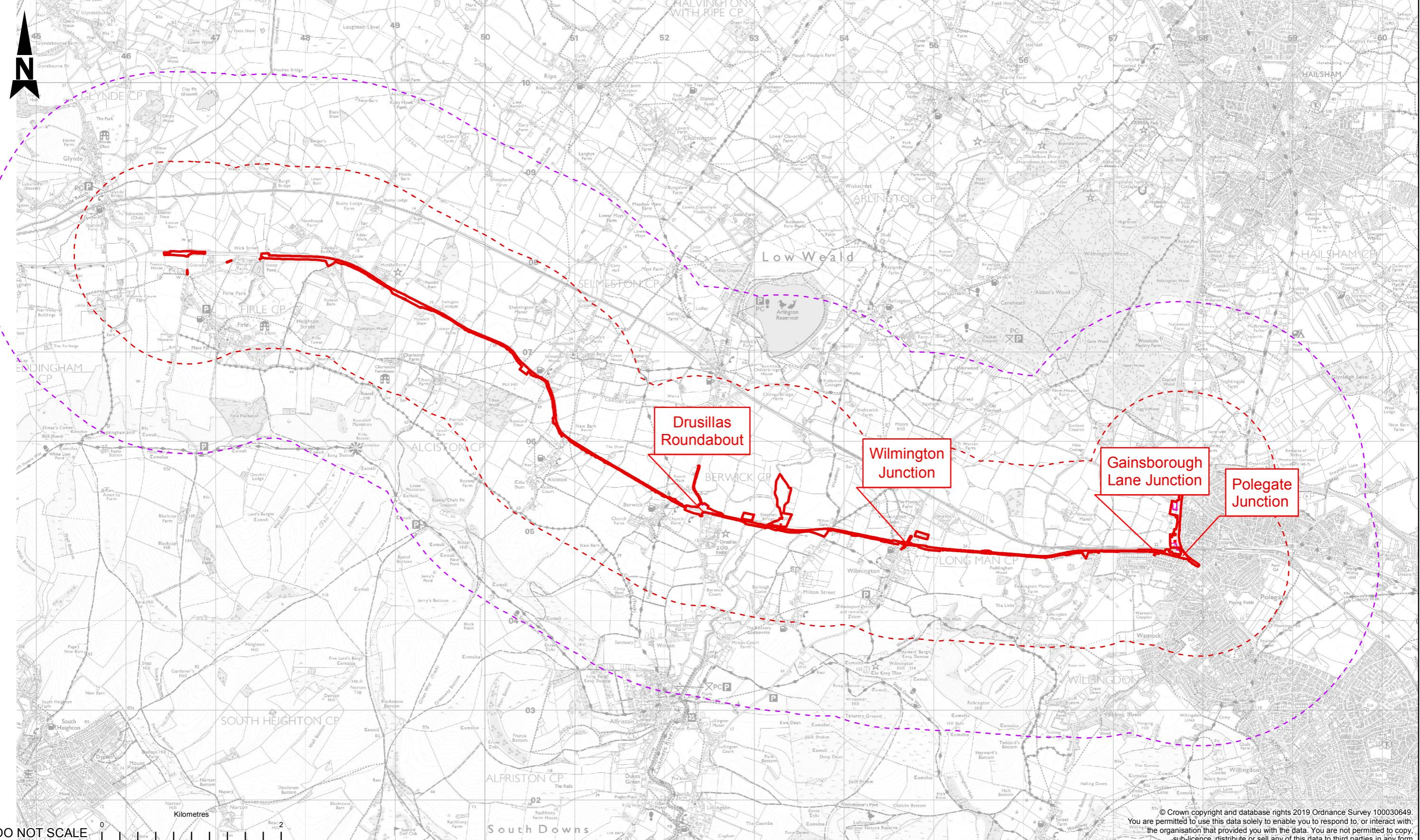
- 16.1ha of woodland
- 9.0ha of grassland and scrub
- Over 7km of hedgerows

2.7.2 Blocks of woodland planting for BNG purposes have been removed from the following locations (including approximate areas):

- Land east and west of Molehill Shaw ~1.4ha
- West of Pound Land ~ 1.3ha
- Land west of Drusillas Roundabout ~ 2.8ha
- Land west of Wilmington Junction ~0.8ha
- Land east of Folkington Road ~ 0.75ha

2.7.3 The revised proposals for planting, including the additional Highways England land include (approximate areas):

- 10.9ha of woodland
- 10.3ha of grassland and scrub
- Over 8km of hedgerow



KEY:

- MAXIMUM EXTENT BOUNDARY
- MAXIMUM EXTENT BOUNDARY 1KM STUDY AREA
- FLOOD MITIGATION AREAS
- TEMPORARY COMPOUNDS
- MAXIMUM EXTENT BOUNDARY 2KM STUDY AREA

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

Construction

Maintenance / Cleaning

Use

Decommissioning / Demolition

Drawing Status  
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Suitability  
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Project Title  
A27  
EAST OF LEWES



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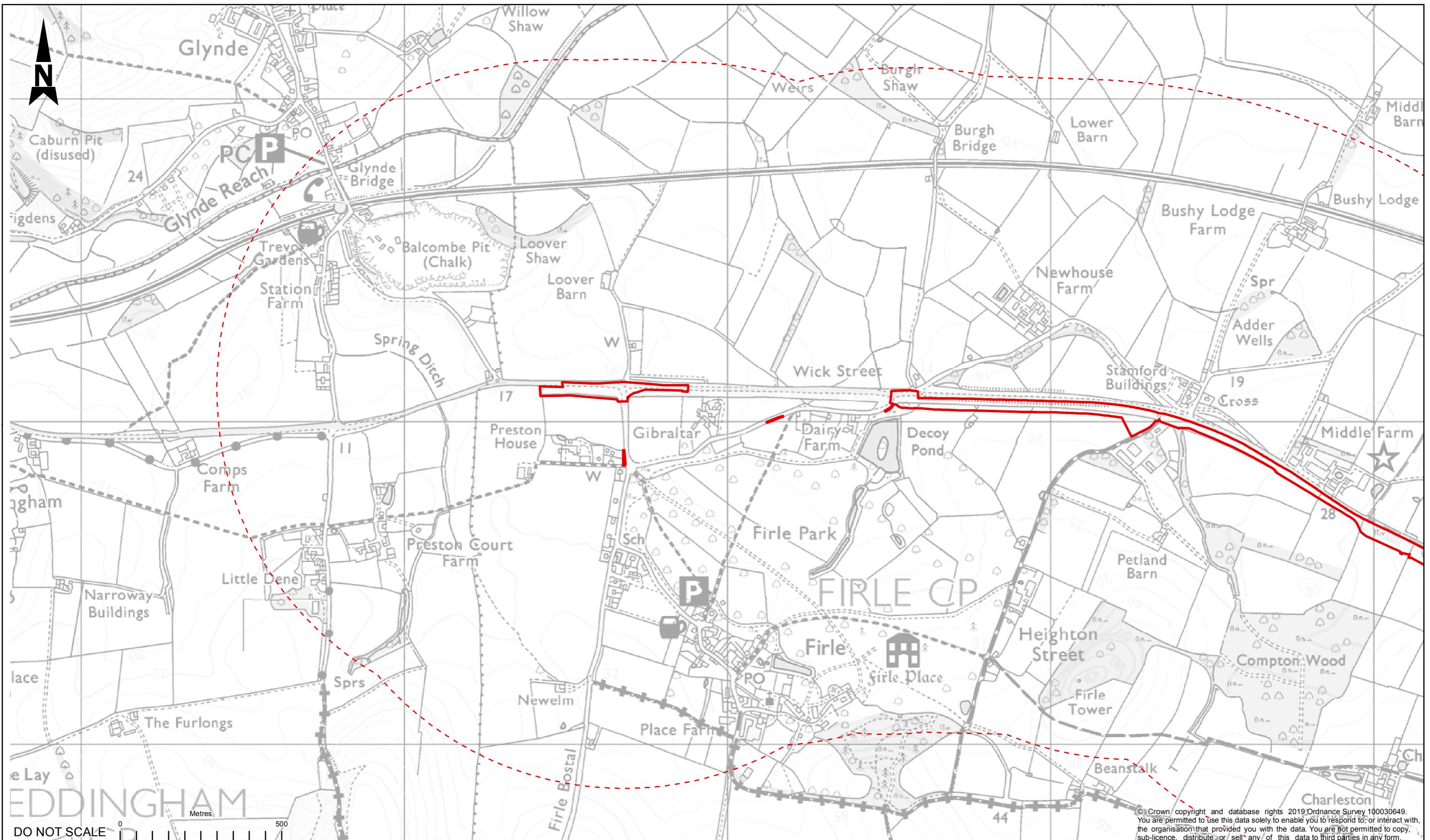
FIGURE 2.1:  
SCHEME LOCATION OVERVIEW

Scale 1:40,000 Drawn AS Checked CR Approved GK Authorised MS

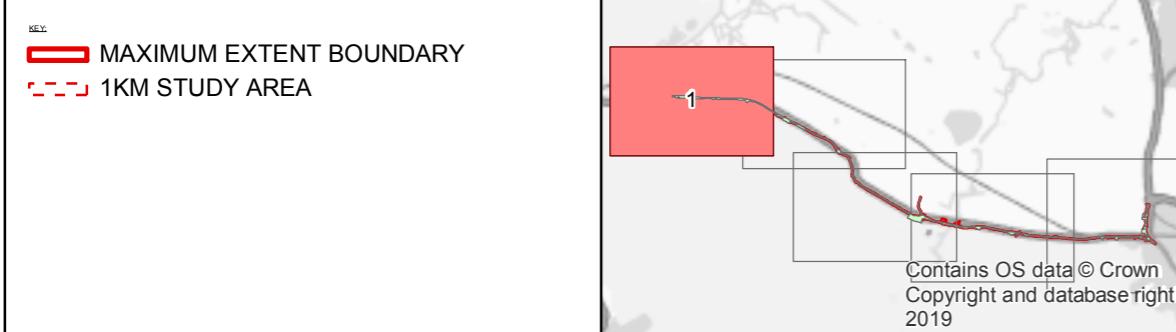
Original Size A3 Date 12/09/19 Date 12/09/19 Date 12/09/19 Date 12/09/19

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Revision P01



KEY  
— MAXIMUM EXTENT BOUNDARY  
— 1KM STUDY AREA



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EAST OF LEWES

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FIGURE 2.1:

SCHEME LOCATION

PAGE 1 OF 5

Scale

1:11,000

Drawn

AS

Checked

CR

Approved

GK

Authorised

MS

Date

12/09/19

Original Size

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Date

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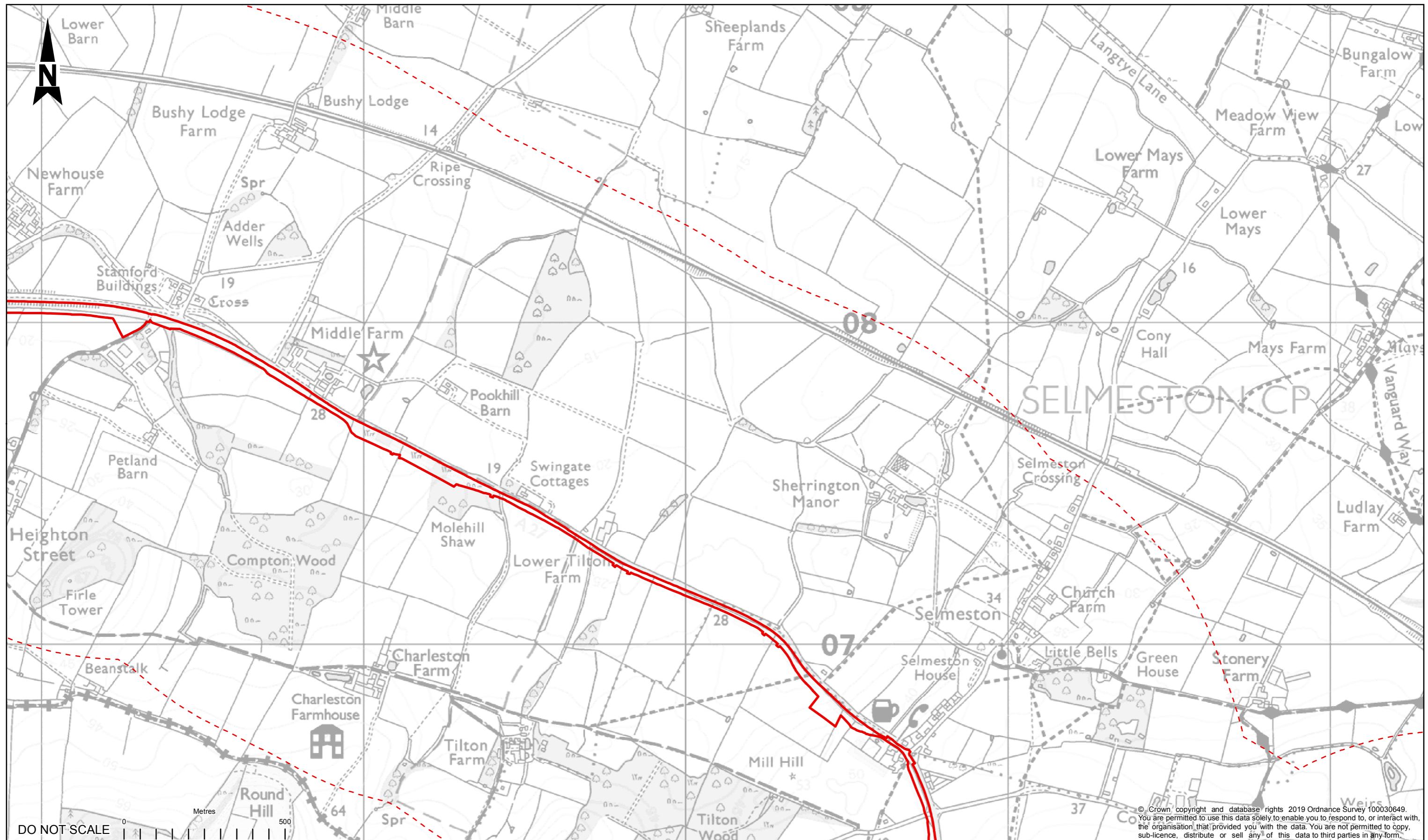
P01

Location

Type

Role

Number



DO NOT SCALE

KEY  
— MAXIMUM EXTENT BOUNDARY  
- - - 1KM STUDY AREA

A map showing a red line with a red box labeled '2' and a green dot. A text box at the bottom right says 'Contains OS data © Cro'.

SAFETY, HEALTH AND ENVIRONMENT  
INFORMATION

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Construction

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## Maintenance / Cleaning

11. *Leucosia* (Leucosia) *leucostoma* (Fabricius) (Fig. 11)

Use

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10 of 10 pages

## Decommissioning / Demolition

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0 A27  
EAST OF LEWES  
Drawing Title  
FIGURE 2.1:  
SCHEME LOCATION

Table 1. Summary of the main characteristics of the four groups of patients.

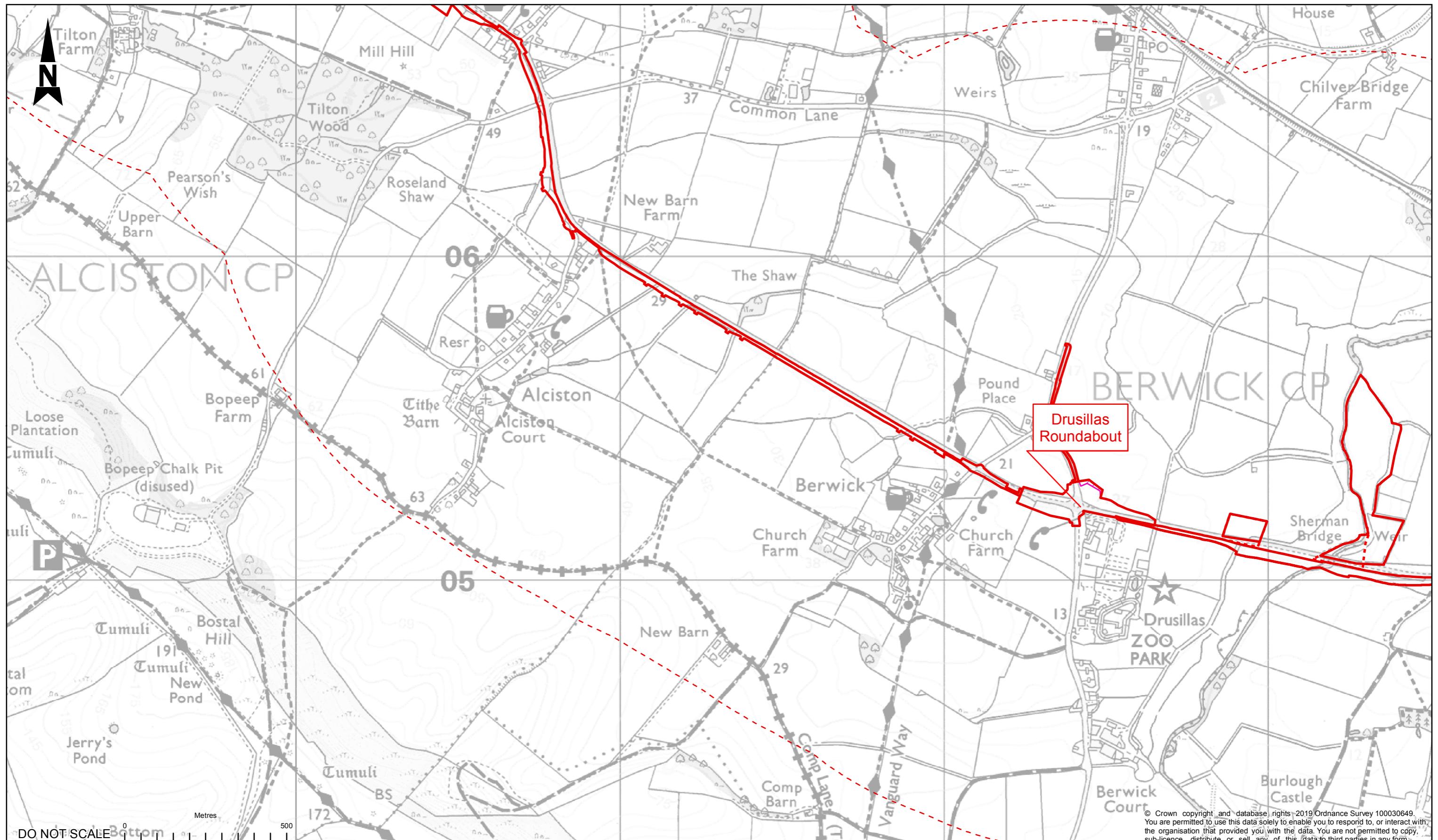
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P01



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SP House 10 Chancery Lane London EC2A 1AF	Drawing Title	<b>FIGURE 2.1: SCHEME LOCATION PAGE 2 OF 5</b>

: +44 (0)20 7314 5000 www.wspgroup.co.uk www.pbworld.com		PAGE 3 OF 5				
<b>half of</b>  <b>ways</b> <b>nd</b>	Scale <b>1:11,000</b>	Drawn <b>AS</b>	Checked <b>CR</b>	Aproved <b>GK</b>	Authorised <b>MS</b>	
	Original Size <b>A3</b>	Date <b>12/09/19</b>	Date <b>12/09/19</b>	Date <b>12/09/19</b>	Date <b>12/09/19</b>	
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KEY  
- - - FLOOD MITIGATION AREAS  
— MAXIMUM EXTENT BOUNDARY  
- - - 1KM STUDY AREA  
- - - TEMPORARY COMPOUNDS

2019

The map displays a coastal area with several key features highlighted:

- FLOOD MITIGATION AREAS** (represented by a red dashed line).
- MAXIMUM EXTENT BOUNDARY** (represented by a thick red line).
- 1KM STUDY AREA** (represented by a thin red line).
- TEMPORARY COMPOUNDS** (represented by a pink hatched area).

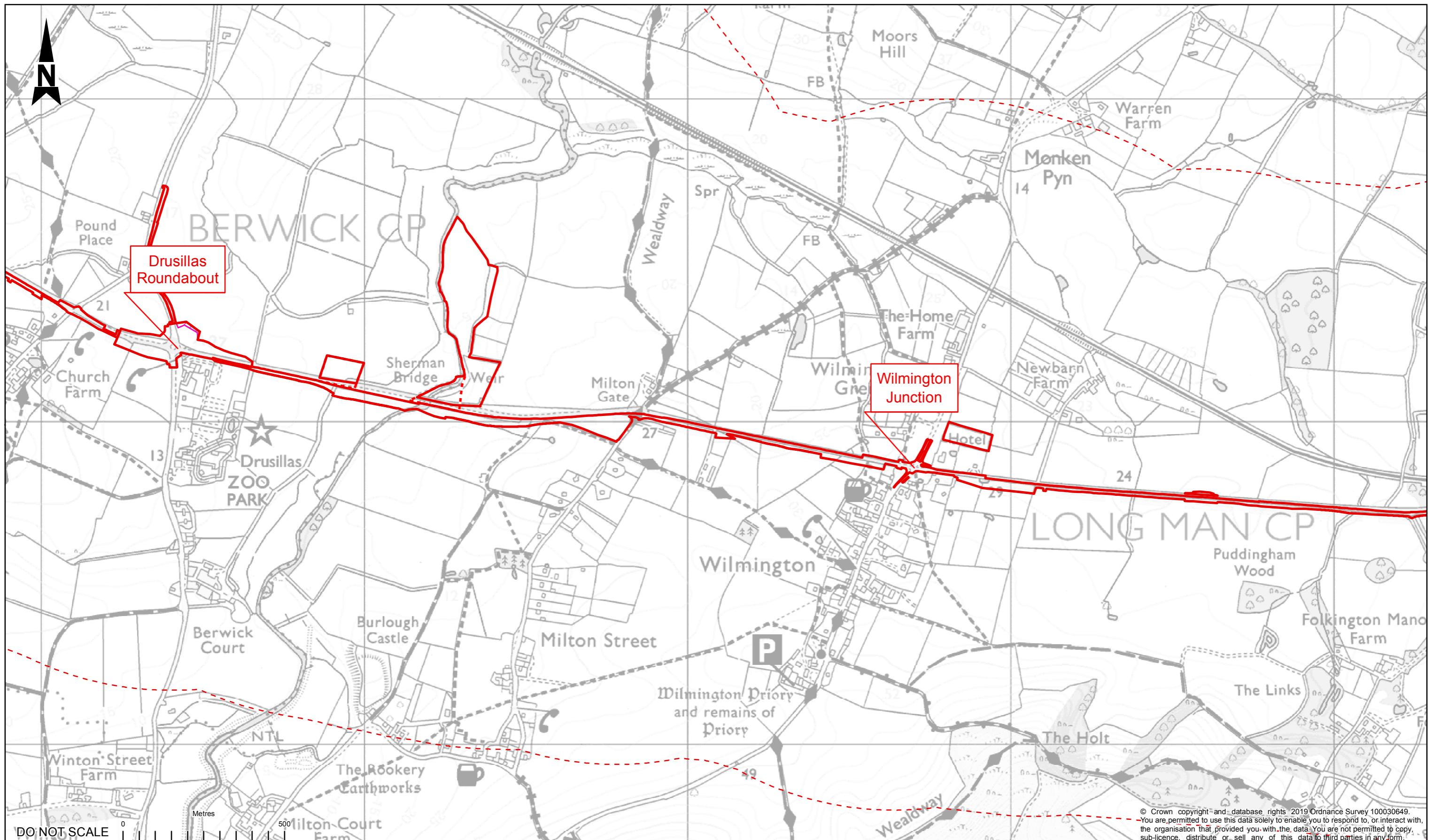
A callout box labeled '3' points to a specific location within the study area. The map also includes a north arrow and a scale bar.

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with this area, note the following:

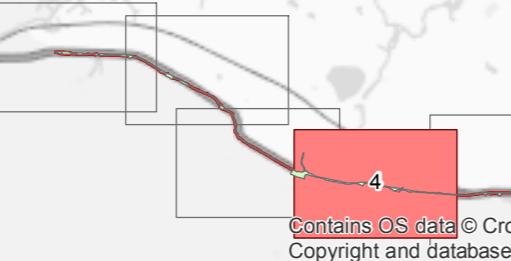
- (Reference shall also be made to the design and construction of the area)
- Maintenance / Cleaning
- Use
- Decommissioning / Demolition

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**KEY:**

- Dashed Red Line:** FLOOD MITIGATION AREAS
- Solid Red Line:** MAXIMUM EXTENT BOUNDARY
- Dashed Red Line:** 1KM STUDY AREA
- Pink Line:** TEMPORARY COMPOUNDS



**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

**Construction**

**Maintenance / Cleaning**

**Use**

**Decommissioning / Demolition**

P01.1 --- First Issue --- ---

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FINAL

Suitability

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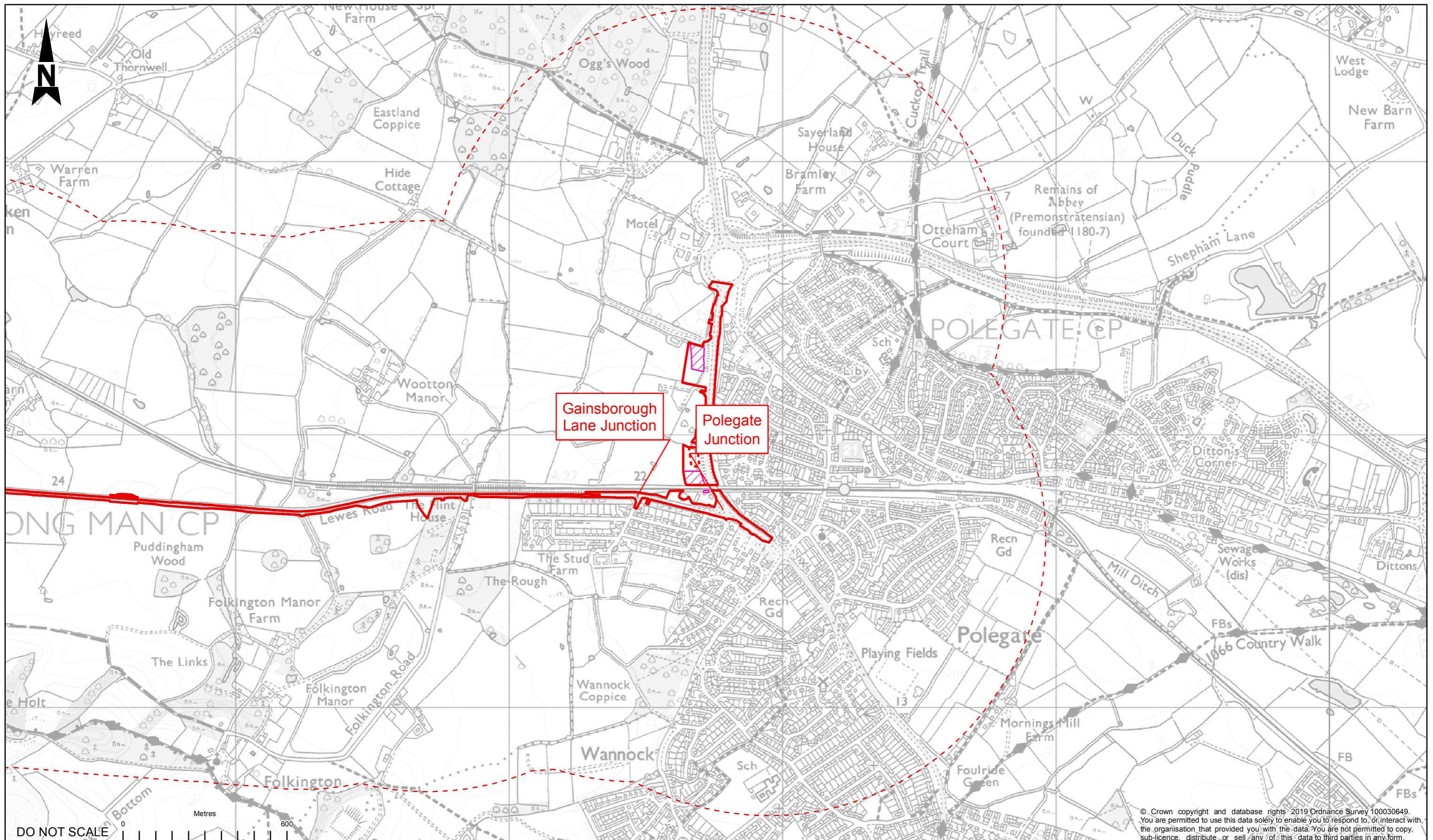
Volume

Project Ref. No.

70035418

Revision

P01



# 3 ENVIRONMENT ASSESSMENT METHODOLOGY

## 3.1 STRUCTURE OF THE EAR ADDENDUM

3.1.1 The structure of the rest of this EAR Addendum is as follows:

3. Environmental Assessment Methodology
4. Cultural Heritage
5. Landscape
6. Biodiversity
7. Summary

3.1.2 Each technical chapter is structured as follows:

- Baseline conditions
- Potential impacts
- Design, mitigation and enhancement measures
- Assessment of likely significant effects

## 3.2 SCOPING OF THE EAR ADDENDUM

TABLE 3.1 SUMMARY OF SENSITIVE RECEPTORS		
Topic	Scoped In/ Out	Reasoning
Air Quality	Out	The changes to the scheme are not likely to affect the air quality impacts associated with the construction and operation of the scheme. The mitigation measures outlined in the PCF Stage 3 EAR are still applicable and the residual effects are still anticipated to not be significant.
Cultural Heritage	In	The changes to the scheme have brought areas into the scheme boundary that are within were not previously assessed. The reduction in woodland planting has reduced the amount of impact on the locally designated Archaeological Notification Areas but an additional ANA has now been affected. Changes to the mitigation outlined in the PCF Stage 3 EAR may be required.
Landscape Effects	In	The scheme changes have altered the level of planting across the scheme. The use of the Highways England owned land has created a new woodland to the north of the A27 which could have landscape effects.

TABLE 3.1 SUMMARY OF SENSITIVE RECEPTORS		
Biodiversity	In	The changes in mitigation planting has the potential to reduce the level of replacement habitat and the BNG calculations.
Geology and Soils	Out	<p>The changes to the scheme are not considered likely to affect the geology and soils impacts associated with the construction and operation of the scheme. The mitigation outlined in the PCF Stage 3 EAR are still considered applicable and the residual effects are still anticipated to not be significant.</p> <p>The scheme changes have removed approximately 17ha of arable farm land from the scheme and replaced it with approximately 5.9ha of pasture.</p>
Materials	Out	The changes to the scheme are not likely to significantly affect the levels of materials used or the amount of waste produced during the construction and operation of the scheme. The mitigation measures outlined in the PCF Stage 3 EAR are still applicable and the residual effects are still anticipated to not be significant.
Noise and Vibration	Out	The changes to the scheme are not likely to affect the levels of noise and vibration during the construction and operation of the scheme. The mitigation measures outlined in the PCF Stage 3 EAR are still applicable and the residual effects are still anticipated to not be significant.
Population and Health	Out	Although the boundary of the scheme has reduced and less private land will be impacted, the PCF Stage 3 assessment remains valid and the mitigation outlined should still be applied during the construction and operational phases.
Road Drainage and the Water Environment	Out	The changes to the scheme are not likely to affect the water environment during either the construction or operational of the scheme. The mitigation measures outlined in the PCF Stage 3 EAR are still applicable and the residual effects are still anticipated to not be significant.
Climate	Out	The changes to the scheme will not have a material impact on the greenhouse gas calculations or the climate change resilience assessments outlined in the PCF Stage 3 EAR.

### 3.3 BASELINE UPDATES AND SURVEYS

3.3.1 The following updates have been made to the baseline collected for the PCF Stage 3 EAR.

#### ECOLOGY WALKOVER

3.3.2 A site visit was carried out on 9 August, to verify habitat types and the existing habitat value of the agricultural fields owned by Highways England, now being brought into the scheme as a habitat replacement area.

3.3.3 This is to ensure that the BNG calculations are accurate.

## 4 CULTURAL HERITAGE

### 4.1 BASELINE CONDITIONS

4.1.1 Due to additional land on eastern bank of the River Cuckmere additional potential impacts have been identified for the heritage assets presented in Table 4.1 and shown in **Figure 4.1** and **4.2**.

TABLE 4.1 – SENSITIVITY OF HERITAGE ASSETS AND NATURE OF PREDICTED IMPACTS

Asset	Sensitivity	Nature of Potential Impact
<b>Non-designated assets</b>		
Milton Gate Archaeological Notification Area DES12785	Medium	Physical impacts on below ground and earth work Archaeological remains

### 4.2 POTENTIAL IMPACTS

#### CONSTRUCTION PHASE

4.2.1 Additional impacts associated with the construction phase are likely to include, but are not limited to; noise, lighting and vibration from construction works and construction related traffic and works associated with landscaping and habitat creation.

TABLE 4.2 – CONSTRUCTION IMPACTS ON DESIGNATED AND NON-DESIGNATED HERITAGE ASSETS

ASSET	HOW IT WILL BE IMPACTED
<b>Non-designated Heritage Assets</b>	
Milton Gate Archaeological Notification Area DES12785	Physical impacts on below ground and earth work archaeological remains associated with the construction and operation of landscaping and habitat creation.

## OPERATION PHASE

### 4.2.2

Additional impacts associated with the operational phase are likely to include, but are not limited to, impacts on setting where the planting of trees and other types of habitat creation on agricultural fields will impact on key views from, towards, through and across assets. There may be possible impacts on below ground and earth work archaeological remains associated with the maintenance of any landscaping and habitat creation.

**TABLE 4.3 – OPERATIONAL IMPACTS ON DESIGNATED AND NON-DESIGNATED HERITAGE ASSETS**

ASSET	HOW IT WILL BE IMPACTED
<b>Non-designated Heritage Assets</b>	
Milton Gate Archaeological Notification Area - potential Romano-British site DES12785	Possible physical impacts on below ground and earth work archaeological remains associated with the maintenance of any landscaping and habitat creation, during the operational phase.

### 4.3

## DESIGN, MITIGATION AND ENHANCEMENTS MEASURES

### 4.3.1

Table 4.4 outlines mitigation required to mitigate the impacts outlined in Section 4.4. There are no new mitigation measures required, just amendments to the mitigation already outlined in the PCF Stage 3 EAR.

**TABLE 4.4 - DESIGN, MITIGATION AND ENHANCEMENT MEASURES**

ASSET	MEASURES	DESCRIPTION	MECHANISM/ TIMING	RESPONSIBILITY
Milton Gate Archaeological Notification Area – potential Romano-British site DES12785	<ul style="list-style-type: none"> <li>→ Consultation</li> <li>→ A programme of archaeological investigations</li> <li>→ Review of planting design.</li> </ul>	<p>East Sussex County Council Archaeology</p> <p>If required, preliminary archaeological investigations are undertaken within the preferred scheme area to establish the nature, extent and survival of hitherto unknown below-ground archaeological remains.</p> <p>This is likely to comprise a geophysical survey and could be followed by an intrusive investigation.</p>	As part of detailed design.	<p>Detailed design team</p> <p>Further works will be undertaken by a heritage specialist in the design team.</p> <p>Investigation and subsequent mitigation measures will be devised in consultation with East Sussex County Council and Historic England as relevant.</p>

**TABLE 4.4 - DESIGN, MITIGATION AND ENHANCEMENT MEASURES**

		<p>The results of this investigation can be used to devise a suitable programme of mitigation where applicable.</p> <p>The results of the investigations will inform the design of the planting areas.</p>		
--	--	--	--	--

#### 4.4

#### ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

##### 4.4.1

Following the application of the mitigation measures outlined in Section 4.3, the effects on Cultural Heritage as a result of the scheme are expected to be as follows:

**TABLE 4.5 – ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS**

Asset	Impact	Sensitivity	Mitigation Measures	Magnitude of Impact	Long term/Temporary	Adverse/ Beneficial	Significance of effects
<b>Construction</b>							
Non-designated heritage assets							
Milton Gate Archaeological Notification Area - potential Romano-British site DES12785	Partial loss and disturbance to non-designated asset (Romano-British site (DES12785)) and potential loss to hitherto unknown buried assets	Medium	<p>Programme of archaeological investigations.</p> <p>Review of habitat creation areas following investigation and either reduce areas or ensure sensitive location of planting.</p>	Minor	Permanent	Adverse	Slight
<b>Operation</b>							
Non-designated Heritage Assets							

**TABLE 4.5 – ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS**

Milton Gate Archaeological Notification Area - potential Romano-British site DES12785	Disturbance to non-designated asset and potential loss to hitherto unknown buried assets during maintenance works.	Medium	No further measures beyond those outlined for construction phase.	Minor	Permanent	Adverse	Slight
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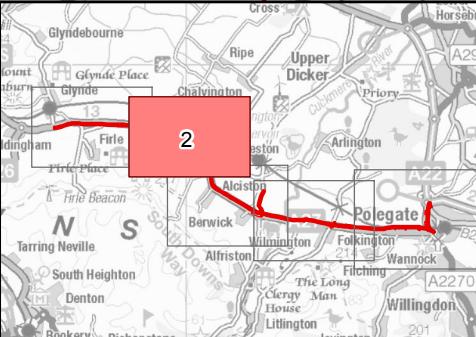
■ MAXIMUM EXTENT BOUNDARY  
□ MAXIMUM EXTENT BOUNDARY 1KM BUFFER  
LISTED BUILDINGS:

- GRADE I
- GRADE II\*
- GRADE II

 REGISTERED PARKS AND GARDEN

 CONSERVATION AREA

 SCHEDULED MONUMENT

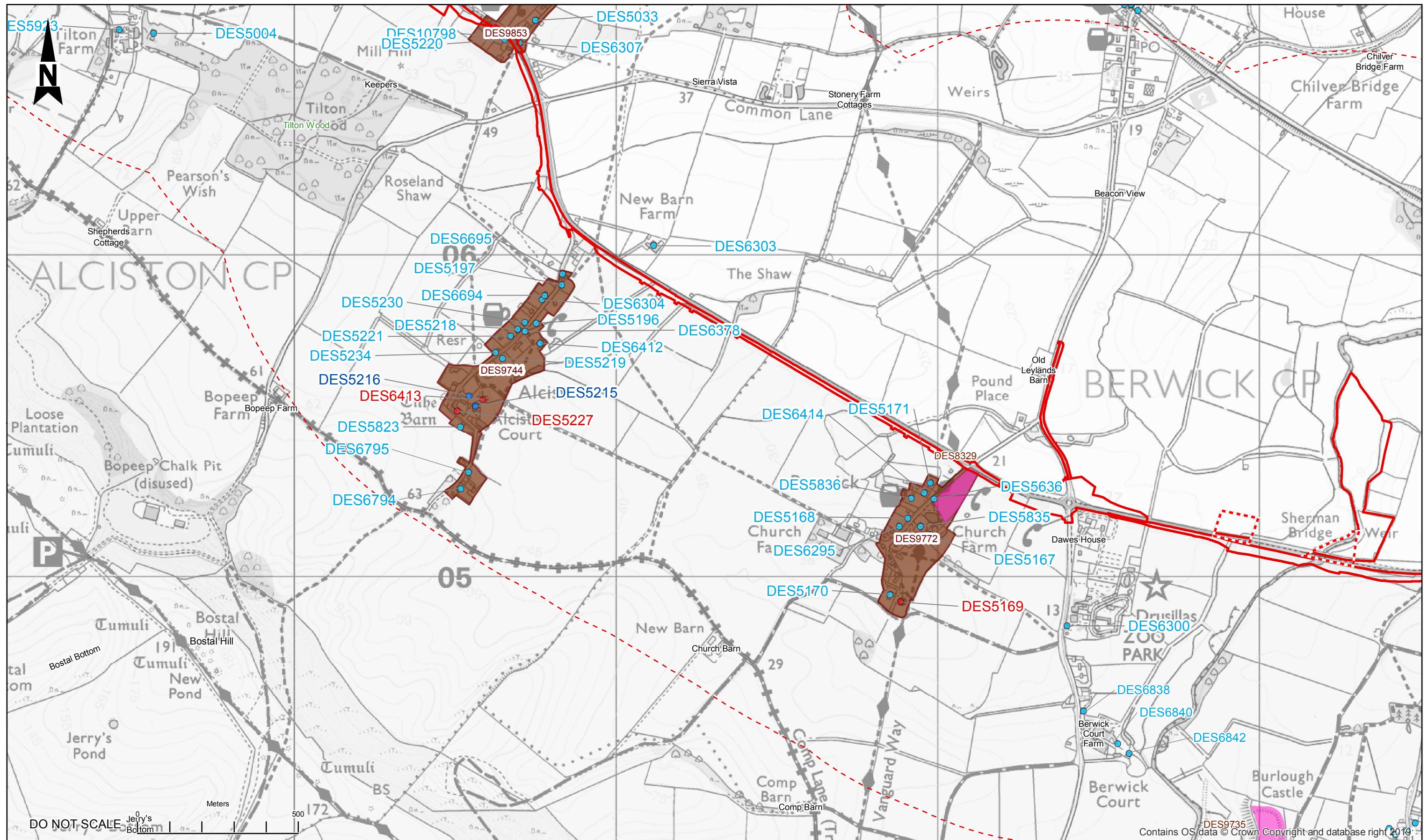


<b>SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION</b>	
In addition to the hazards/risks normally associated with the types of detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).	
Construction	
Maintenance / Cleaning	
Use	
Decommissioning / Demolition	

The logo for WSP consists of a large, stylized red 'W' and 'S' stacked vertically, with a red 'P' to the right. Below the letters, the word 'WSP' is written in a smaller, black, sans-serif font.

AL	Suitability SO
 <p>Group (2018)</p> <p>Working on behalf of</p>  <p><b>highways</b> england</p>	<p>WSP House 70 Chancery Lane London WC2A 1AF</p> <p>Tel: +44 (0)20 7314 5000  <a href="http://www.wspgroup.co.uk">www.wspgroup.co.uk</a>  <a href="http://www.pbworld.com">www.pbworld.com</a></p>

Project Title	A27 EAST OF LEWES			
Drawing Title	<b>FIGURE 4.1:</b> <b>DESIGNATED ASSETS</b> <b>1KM STUDY AREA</b> <b>PAGE 2 OF 5</b>			
Scale 1:11,000	Drawn AS	Checked CR	Approved GK	Authorised MS
Original Size A3	Date 12/09/19	Date 12/09/19	Date 12/09/19	Date 12/09/19
Drawing Number Project	Originator		Volume	
HE552988	WSP		Project Ref. No. 70035418	
Location	Type	Role	Number	Revision P01



DO NOT SCALE Jerry's Bottom

Meters

500

172

BS

191

Bostal Hill

Tumuli

New Pond

Jerry's Pond

191

Bostal Bottom

Tumuli

BS

172

DO NOT SCALE Jerry's Bottom

Meters

500

172

BS

191

Bostal Hill

Tumuli

New Pond

Jerry's Pond

191

Bostal Bottom

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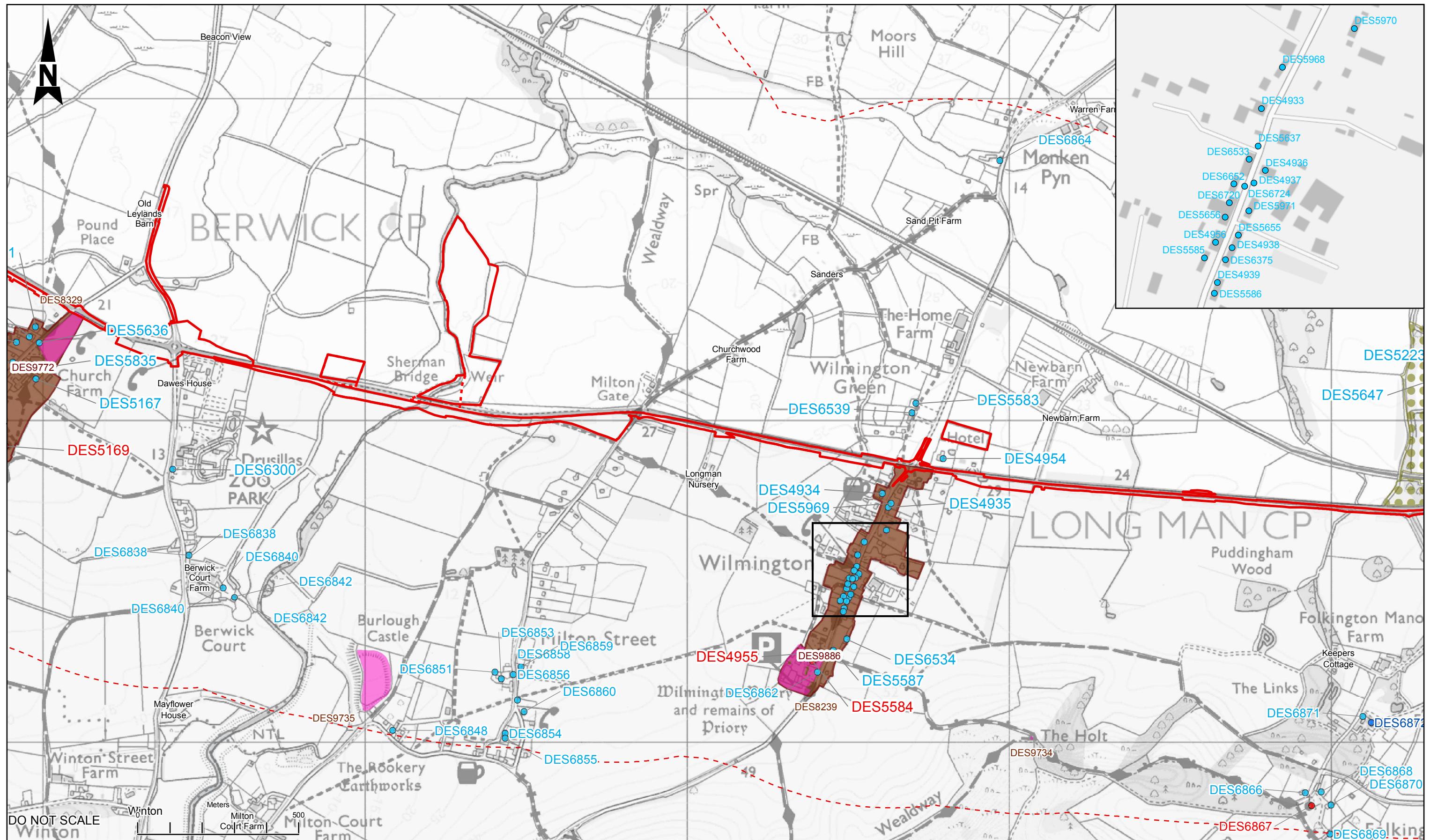
191

Bostal Hill

Tumuli

New Pond

Jerry's Pond



KEY:  
■ Maximum Extent Boundary  
■ Maximum Extent Boundary 1km Buffer  
LICENCED BUILDINGS

## LISTED BUILDINGS:

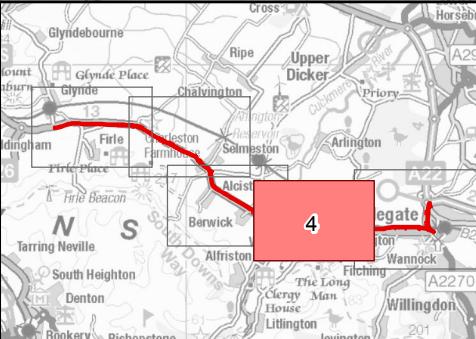
- GRADE I
- GRADE II\*
- GRADE II

 REGISTERED PARKS AND GARDENS

 CONSERVATION AREA

 SCHEDULED MONUMENT

 FLOOD MITIGATION AREAS



SAFETY, HEALTH AND ENVIRONMENT  
INFORMATION

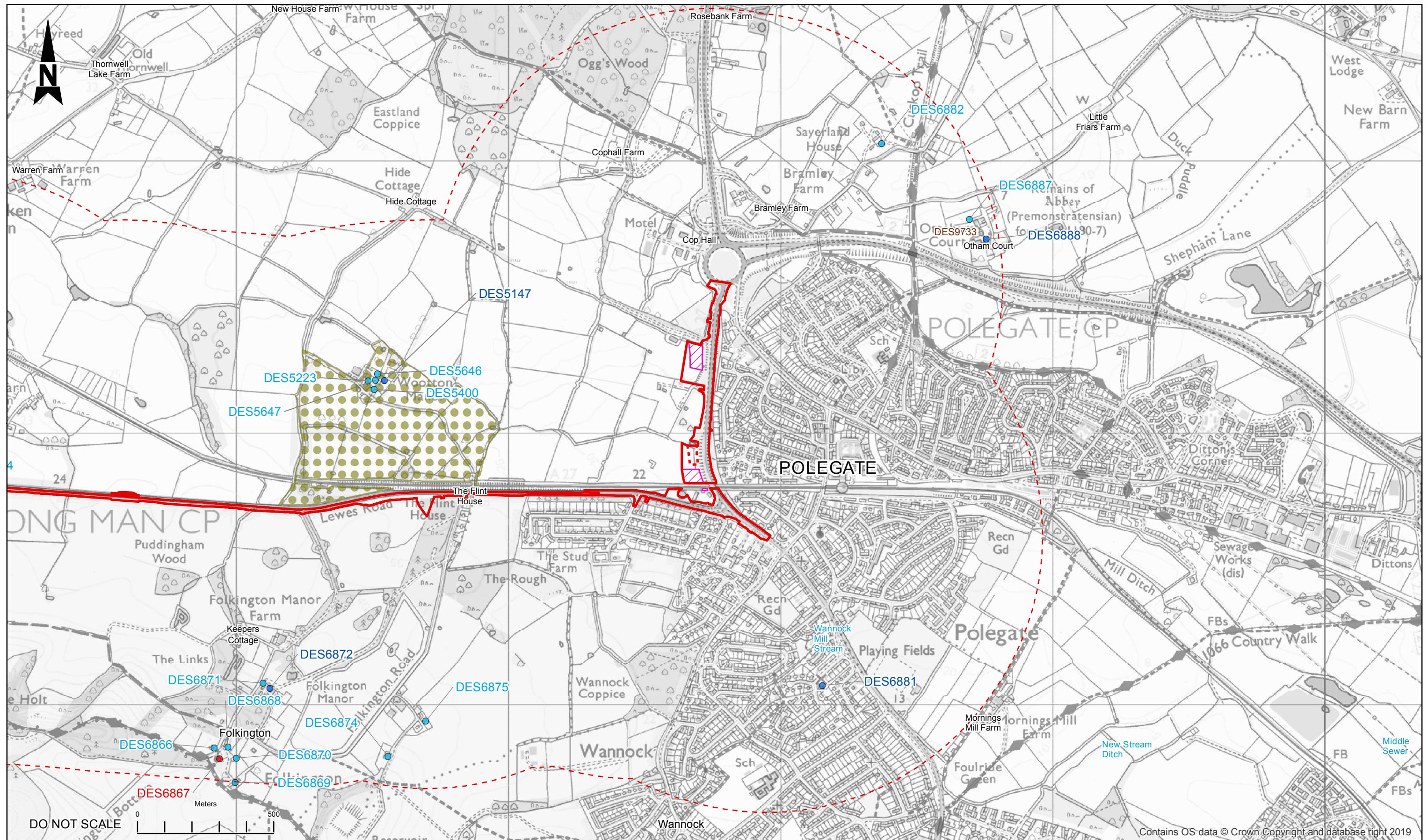
In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

- Construction
- Maintenance / Cleaning
- Use
- Decommissioning / Demolition

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Project Title	A27 EAST OF LEWES			
Drawing Title	<b>FIGURE 4.1:</b> <b>DESIGNATED ASSETS</b> <b>1KM STUDY AREA</b> <b>PAGE 4 OF 5</b>			
Scale 1:11,000	Drawn AS	Checked CR	Approved GK	Authorised MS
Original Size A3	Date 12/09/19	Date 12/09/19	Date 12/09/19	Date 12/09/19
Drawing Number Project	Originator		Volume	
HE552988	WSP		Project Ref. No. 70035418	
Location	Type	Role	Revision P01	



DO NOT SCALE

KEY

- MAXIMUM EXTENT BOUNDARY
- MAXIMUM EXTENT BOUNDARY 1KM BUFFER

LISTED BUILDINGS:

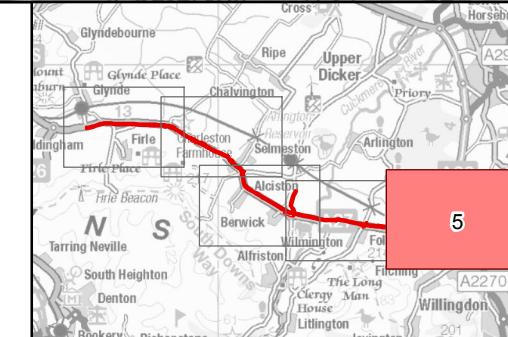
- GRADE I
- GRADE II\*
- GRADE II

REGISTERED PARKS AND GARDENS

SCHEDULED MONUMENT

FLOOD MITIGATION AREAS

TEMPORARY COMPOUNDS



#### SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

Construction
Maintenance / Cleaning
Use
Decommissioning / Demolition

Drawing Status



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Project Title  
A27  
EAST OF LEWES

Drawing Title  
FIGURE 4.1:  
DESIGNATED ASSETS  
1KM STUDY AREA  
PAGE 5 OF 5

Scale 1:13,000 Drawn AS Checked CR Approved GK Authorised MS

Original Ref. No. 70035418 Date 12/09/19 Date 12/09/19 Date 12/09/19 Date 12/09/19

Drawing Number HE552988 Project Originator Volume

Project Ref. No. 70035418 Date 12/09/19 Revision P01