



Angus Energy Ltd

# Habitat Regulations Assessment and No Significant Effects Report

Lower Stumble Exploration Site, Balcombe

2480670

MAY 2020

## RSK GENERAL NOTES

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**Project No.:** 2480670

**Title:** Lower Stumble Exploration Site, Balcombe – Habitat Regulations Assessment and No Significant Effects Report

**Client:** Angus Energy Ltd

**Date:** May 2020

**Office:** Tonbridge

**Status:** Final

This report has been prepared by a professional ecologist and reviewed by a Director. Both are members of the Chartered Institute of Ecology and Environmental Management (CIEEM). Names have been omitted from this report for confidentiality reasons but can be provided on request.

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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK Biocensus Ltd.

## SUMMARY TABLE

<b>1. Is the proposed work necessary to or directly connected with management of the European sites</b>
<p>No. This assessment was required as the site is within 10 km of Ashdown Forest Special Area of Conservation (SAC) and Special Protection Area (SPA). The purpose of the proposed works is to test the existing Balcombe-2Z exploration borehole by pumping out previously drilled fluids to ascertain if there is any oil flow. However, the work is not necessary to or directly connected with management of the European sites.</p>
<b>2. Site description</b>
<p>The site extends to 0.73 ha and comprises a flat rectangular area of hard-standing (previously used as a drilling platform) with an associated access road. The area immediately surrounding the works footprint comprises planted broadleaved and coniferous trees, scrub, grassland and hedgerows.</p>
<b>3. Proposed work</b>
<p>Angus Energy are seeking new planning permission to reopen the existing Balcombe 2Z borehole to continue exploration well testing and operations. Works will include:</p> <ul style="list-style-type: none"> <li>• Phase 1: Removal of Wellbore Fluids in pumping operations involving a simplified set of equipment over an estimated maximum period of 4 weeks.</li> <li>• Phase 2: Assuming phase 1 is successful, a site wide impermeable membrane will be installed over an estimated 8-week period.</li> <li>• Phase 3: Extended well test for approximately 12 months should oil be seen to flow during phase 1.</li> <li>• Phase 4: Angus will either shut the well in and move to phase 4 or submit a new production planning application to WSCC dependent on Phase 3 results.</li> </ul>
<b>4. Affected European sites and their designation features</b>
<p><b>The Ashdown Forest SPA/SAC</b> (c. 8.9km from the site).</p> <p>Qualifying features of the Ashdown Forest SAC include:  Annex I habitats types. Northern Atlantic wet heaths with <i>Erica tetralix</i> (Cross-leaved Heath) and European dry heaths. These are primary reasons for its designation.  Annex II species. Great Crested Newts (<i>Triturus cristatus</i>). Although this species is a qualifying factor it is not a primary reason for selection.</p> <p>Qualifying features of the Ashdown Forest SPA include:  Breeding populations of <i>Annex I</i> species (under <i>Article 4.1</i> of the <i>EU Birds Directive</i>). Dartford Warbler (<i>Sylvia undata</i>) and Nightjar (<i>Caprimulgus europaeus</i>)</p>
<b>5. Is there a Likely Significant Effect (LSE)</b>
<p>Works are taking place c.8.9 km from the designated site(s) and will not directly affect the sites. In addition, there are no habitats present within, or close to, the works footprint which could support qualifying features of the SAC/SPA or contribute to the integrity of the sites. None of the habitats or species listed as primary qualifying features will be affected by the proposals. Generic construction measures will be followed to prevent pollution and run-off. Therefore, it has been assessed that the project will not results in any likely significant effects on the Natura 2000 site.</p>

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# 1 INTRODUCTION

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## 1.1 Purpose of this report

This report has been prepared on behalf of Angus Energy Weald Basin No.3 Ltd (hereafter 'Angus Energy') for the proposed removal of drilling fluids and Extended Well Test (EWT) on land at Lower Stumble Wood, Hydrocarbon Exploration Site, London Road, Balcombe, Haywards Heath, RH17 6JH (hereafter 'the site').

This document is a screening report and has been produced following a Habitat Regulations Assessment (HRA) Screening Assessment in relation to the proposed Lower Stumble Exploration Site (*Figure 1*).

This assessment was required as the site is within 10 km of Ashdown Forest Special Area of Conservation (SAC) and Special Protection Area (SPA) and considers potential effects of the proposals on this internationally important site.

West Sussex County Council were previously consulted by RSK in May 2017. The local planning authority requested that the development proposal undergo an appropriate assessment, in accordance with the Habitats Regulations. RSK were then commissioned by Heaton Planning Ltd to undertake the initial stages of the HRA process. The results of this can then lead to the production of a "No Significant Effects" Report or identify the need for a "Statement to Inform the Appropriate Assessment" (following consultation with Natural England).

A desk study has been undertaken, together with a preliminary ecological appraisal, to determine any potential impacts of the proposals on the habitats and species listed as 'primary reasons' or 'qualifying features' for the SAC/SPA designation.

This report has been produced following European Commission guidance: *Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6 (3) and (4) of the Habitats Directive 92/43/EEC*.

## 1.2 Scheme Background

The site has an established planning history, having been first used for exploratory drilling from 1986-1987 with the pad subsequently retained for use by Balcombe Estate (the current landowners) for forestry product storage.

The Balcombe 2Z Hydrocarbon Borehole was established in 2013 for gas and oil exploration, and the site has since been subject to several planning applications.

More recently, Angus Energy submitted an application for planning permission (planning ref. WSCC/071/19) in September 2019 for a two-stage activity, firstly to remove previously used drilling fluids from the wellbore, followed by an EWT to be carried out over a period of three years. This application was subsequently withdrawn.

### 1.3 Application Details

The proposed work on the Balcombe 2Z Well will take place in four distinct phases, with planning and regulatory approvals at each phase. These are as follows:

- **Phase 1 – Removal of Wellbore Fluids:** phase 1 of the works has been designed to remove wellbore fluids which are currently preventing the natural formation fluids from entering the well. This phase would effectively clean up the well in preparation for undertaking an EWT.
- **Phase 2 – Pad Membrane:** For the site to meet established onshore oil and gas standards, a site-wide impermeable membrane will be installed by a civil engineering contractor.
- **Phase 3 – Extended Well Test:** The objective of the EWT is to enhance subsurface data so Angus Energy can start estimating potential production reserves, assess the commerciality of the well and obtain empirical data e.g. water cut data, flow rates and hydrocarbon composition. The EWT is a continuation of the exploration phase to prove that a hydrocarbon resource exists.
- **Phase 4 – Plug and Site Restoration:** Phase 4 involves removing all of the surface plant and equipment from the site as well as plugging the wellbore to the prevailing HSE standards. Upon completion the site will be restored, with 50% of the pad to become deciduous woodland in accordance with the High Weald AONB Management Plan 2019-2024.

In order to demonstrate exceptional circumstances and ensure that the development does not compromise the landscape qualities of the High Weald AONB, the proposal has been modified to decrease impact to visual amenity, and a habitat restoration plan will be implemented during Phase 4 of the operation. Please refer to the Landscape and Visual Appraisal and associated plans and drawings for further details.

### 1.4 Ecological context

The site lies to the south of Balcombe; a village in West Sussex. The site extends to 0.73 ha and comprises a flat rectangular area of hard-standing (previously used as a drilling platform) with an associated access road (hereon referred to as the “works footprint”). The area immediately surrounding the works footprint comprises planted broadleaved and coniferous trees, scrub, grassland and hedgerows and was surveyed as part of this assessment. There are patches of ancient woodland (which form part of Lower Stumble Wood and Lower Beanham Wood) to the north and south of the survey area, a railway line to the east, and London Road the B0236 to the west.

Although the works footprint solely comprises hard-standing with some encroaching ruderal vegetation, it is surrounded by habitat which is suitable for a number of protected species including bats, birds and badgers.

## 2 DESIGNATED SITE AND DESCRIPTION

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There is one statutory designated site of nature conservation importance within 10 km of the proposed site – Ashdown Forest.

Ashdown Forest is located in the High Weald of East Sussex in south-east England, where valley mires, heath and damp woodland have developed on soils derived from Hastings Sands (Lower Cretaceous). Once a royal hunting forest, reduced grazing has resulted in the accelerated development of woodland and encroachment of *Pteridium aquilinum* (Bracken) over former heath. Nevertheless, some fine examples of heathland habitats remain, with humid or wet heath predominating, dominated by *Calluna vulgaris* (Heather), *Erica cinerea* (Bell Heather) and *Erica tetralix* (Cross-leaved Heath) in the dampest conditions.

Where drier heaths occur they are dominated by *Calluna vulgaris* (Heather) in association with *Ulex europaeus* (Gorse) and *Ulex minor* (Dwarf Gorse). Stream sides and mires add further variety, with *Sphagnum* mosses, *Eriophorum* sp. (Cottongrass species), *Narthecium ossifragum* (Bog Asphodel) and *Drosera rotundifolia* (Round-leaved Sundew) all characteristic plants. The woodlands are also varied, with *Betula* sp. (Birch species) typically establishing first over heath, followed by *Quercus robur* (Pedunculate Oak), *Salix* sp. (Willow species) and *Pinus* sp. (Pine species) in places, eventually forming dense and shaded areas with sparse ground flora. Breeding birds of heath, scrub and woodland are associated with the varied mosaic of their respective habitats, distributed over the higher slopes and valleys of the High Weald.

Together with the nearby Wealden Heaths SPA and Thames Basin Heath SPA, Ashdown Forest forms part of a complex of heathlands in southern England that support breeding bird populations of European importance.

### 2.1 Ashdown Forest SAC

Ashdown Forest is designated as an SAC because it supports occurrences of habitat types and species listed in *Annexes I and II* of the *Habitats Directive* that are considered important in a European context and meet the criteria in *Annex III* of the *Directive*. The qualifying features of Ashdown Forest SAC are listed in *Table 1*.

**Table 1. Qualifying features of the Ashdown Forest SAC**

Qualifying Habitats and Species <sup>1</sup>	Primary Reason for Site Selection?	EU Code <sup>2</sup>
Annex I habitat types		
Northern Atlantic wet heaths with <i>Erica tetralix</i> (Cross-leaved Heath)	Y	4010
European dry heaths	Y	4030
Annex II species		
Great Crested Newt	N	1166

## 2.2 Ashdown Forest SPA

The Ashdown Forest is designated as a SPA. The SPA forms part of a complex of heathlands in southern England that support breeding bird populations of European importance. It was classified in 2006 and covers 3,200 ha comprising lowland heathland and woodland. It has a different boundary to the SAC, but the two designations overlap. The qualifying features are listed in *Table 2*.

**Table 2. Qualifying features of the Ashdown Forest SPA**

Species	Notes
Breeding populations of <i>Annex I</i> species (under <i>Article 4.1</i> of the <i>EU Birds Directive</i> )	
Dartford Warbler ( <i>Sylvia undata</i> )	29 pairs representing at least 1.8% of the breeding population in Great Britain (Count as at 1994).
Nightjar ( <i>Caprimulgus europaeus</i> )	35 pairs representing at least 1.0% of the breeding population in Great Britain (Two year mean, 1991 & 1992).

## 2.3 Threats, pressures and activities with impacts on the site

The Joint Nature Conservation Committee (JNCC) lists the most important impacts and activities with a high effect on the site. These are provided in *Table 3* below.

<sup>1</sup> Taken from Joint Nature Conservation Committee website <http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030080>

<sup>2</sup> European Commission (2007) Interpretation Manual of EU Habitats EUR27 July 2007, and Natura 200-Standard Data Form Explanatory Notes, Appendix C.



**Table 3. Threats and pressures on the Ashdown Forest SAC/SPA (JNCC, 2015)**

Ranking	Threats and pressures (code)	Description	Inside / outside / both
Negative impacts			
High	H04	Air-pollution, air-borne pollutants	Both
High	J02	Human induced changes in hydraulic conditions	Both
High	A02	Modification of cultivation practices	Inside
High	G01	Outdoor sports and leisure activities, recreational activities	Inside
Positive impacts			
High	A02	Modification of cultivation practices	Inside

## 3 POTENTIAL IMPACTS ON THE PROTECTED SITE

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### 3.1 Methodology

#### 3.1.1 Desktop review and field survey

For the purposes of this report, a desk-based assessment was undertaken in August 2019 covering 2 km from the proposed site. Information was collated from the organisations and websites listed below:

- Multi-Agency Geographic Information on the Countryside (MAGIC) website ([www.magic.gov.uk](http://www.magic.gov.uk));
- Local records centre (Sussex Biodiversity Records Centre), and;
- The Joint Nature Conservation Committee (JNCC) website ([www.jncc.gov.uk](http://www.jncc.gov.uk)).

A preliminary ecological appraisal (PEA) was undertaken by RSK in August 2019 followed by bat activity survey in August 2019. These surveys give sufficient information on habitats and species present at the site to make an informed judgement about the potential impacts of the proposed development on the qualifying features of the Ashdown Forest SAC/SPA.

### 3.2 Direct Impacts

A screening matrix for the proposed development is presented in *Appendix 1* of this report.

The Ashdown Forest SAC/SPA is primarily designated for its internationally important heathland habitats and breeding populations of rare birds and amphibians. The proposed site is not within the boundaries of the Ashdown Forest; it is > 8.5 km from the designated site boundary. Therefore, no direct impacts on the qualifying features of the SAC/SPA will arise during operation of the site.

Great Crested Newts are an *Annex II* species and found within the SAC/SPA. Although the PEA found records of Great Crested Newts from within 2 km of the site and the terrestrial habitats surrounding the site are suitable for GCN, the works footprint will be restricted to unsuitable habitat (hard-standing) and there are no ponds (which could be suitable for Great Crested Newts) ecologically connected to the site (RSK, September 2019). Therefore, this species is considered to be likely absent and will not be affected by the proposals.

The PEA did not record any habitat suitable for Nightjar or Dartford Warbler within the works footprint or immediate surrounding habitat (RSK, September 2019). There are also no records of these species anywhere within 2 km of the site. Therefore, the site cannot support the *Annex I* species that are listed as a primary reason for site selection of the SPA and these species will not be affected by the proposals.

### 3.3 Indirect Impacts

The works are localised, temporary and over 8 km from the designated site (separated from it by a reservoir, roads, railways fields and the village of Ardingly). As such, there will be no indirect impacts on the integrity of the site.

Generic best-practise construction techniques have been, and will continue to be, employed at the site to minimise general ecological impacts. However, these are not intended as specific measures to minimise impacts on the SAC/SPA:

Trees were previously planted around the works footprint to act as a shield; these are now well established and provide a visual buffer.

Noise (construction and operational) has rapid distance decay and the Ashdown forest will not be effected by noise disturbance.

Works will be undertaken during standard working hours (*i.e.* 07:00 to 19:00 Monday to Sunday). The removal of wellbore fluids operations (maximum of 14 days) and extended well test (maximum of 12 months) will be undertaken over 24 hours but will not require any vehicle movements or long-term lighting.

All operational areas of the site will be lit with task-based lighting *e.g.* SMC TL90, lighting towers, which will be inward facing to avoid disturbance to sensitive receptors *e.g.* neighbouring properties and bats that use the surrounding vegetation to commute and forage. Measures to reduce light spill on adjacent habitats are provided in more detail in the bat report (RSK, September 2017). However, even without measures to avoid light spill, lighting would not impact the SPA/SAC given the distance of the site from the nearest part of the forest.

There are streams within adjacent woodland which, although are a significant distance from the SAC/SPA, flow into larger waterbodies which are connected to the SAC/SPA. However, the part of the site that accommodates the borehole and any fuels/chemicals is already underlain by an impermeable membrane, which will collect all surface water. This will then be directed to a drainage ditch where it will be stored pending transportation by tanker to a waste water treatment facility. Therefore, the streams within adjacent woodland, which flow out into the wider landscape, will be unaffected and there is no potential for contaminated water to reach the SAC/SPA.

## **4 MITIGATION**

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### **4.1 Mitigation within the proposed site**

As discussed in *Section 3.2* above, there will be no direct impacts on the SAC/SPA or on the qualifying features during operation. Therefore, specific mitigation or compensation within the proposed site is not required to protect the SAC/SPA.

## **5 CONCLUSION**

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### **5.1 General**

There are no habitats present within or close to the works footprint which could support qualifying features of the SAC/SPA. As none of the habitats or species listed as primary qualifying features will be affected by the proposals and general construction measures have been, and will continue to be, implemented to prevent pollution and general ecological impacts, it has been assessed that the project will not result in any likely significant effects on the Natura 2000 site.

### **5.2 Cumulative**

The site will not result in any likely significant effects on the Natura 2000 site. In addition, no cumulative effects are anticipated.

## 6 REFERENCES

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European Commission (2001) *Assessment of plans and projects significantly affecting Natura 2000 sites – methodological guidance on the provisions of Artical 6 (3) of the Habitats Directive 92/43/EEC*

Joint Nature Conservation Committee (JNCC) (2015) Natura 2000 – Standard Data Form – Site UK0030080 Ashdown Forest

RSK (September 2019) 858544 – Lower Stumble Exploration Site, Balcombe – PEA report

RSK (September 2019) 858544 – Lower Stumble Exploration Site, Balcombe – Bat report

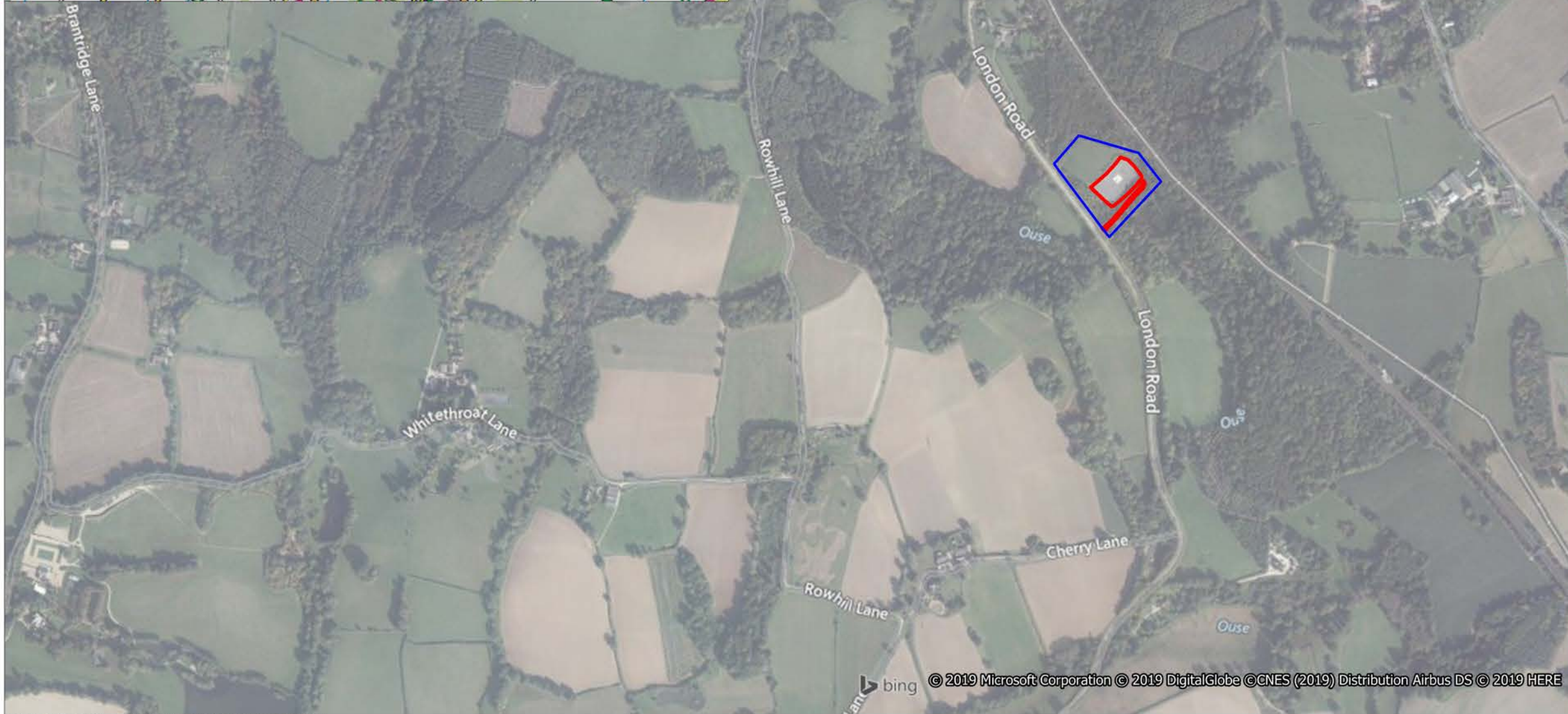
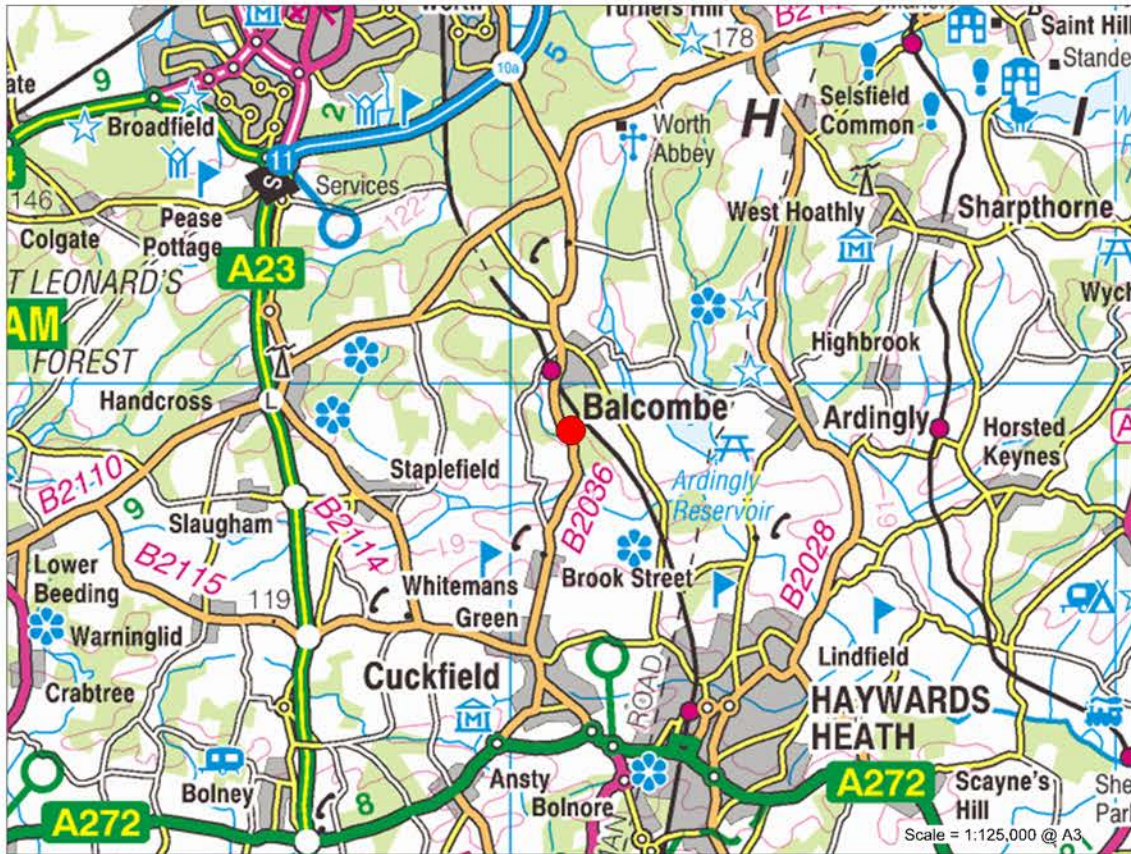
## **7 FIGURES**

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Figure 1 – Site Boundary and Location

Figure 2 – Phase 1 Habitat Plan

Figure 3 – Proximity to Natura 2000 site

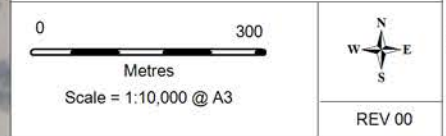


- Site boundary
- Survey Area

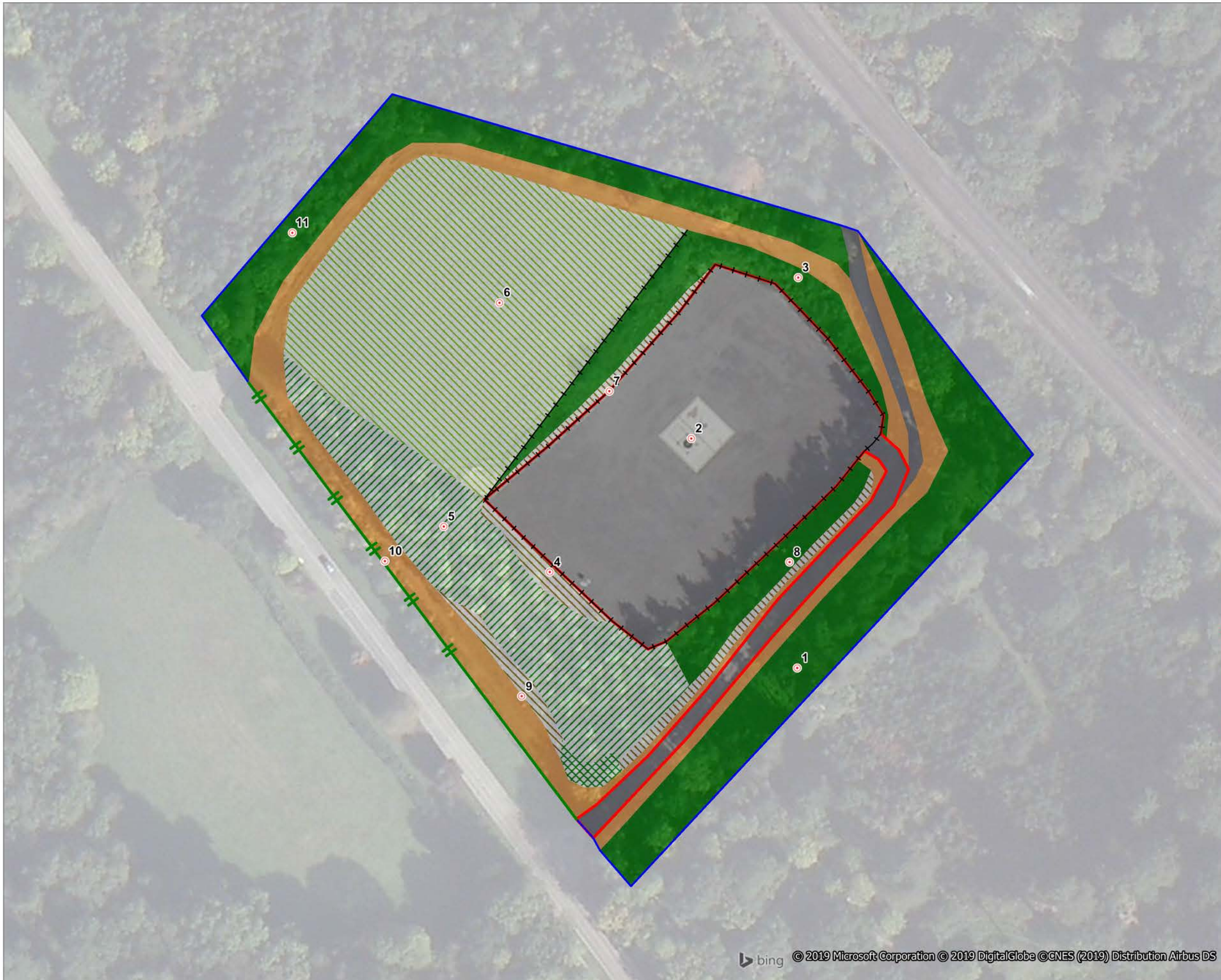


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**Balcombe**  
Figure 1  
Site Location Plan







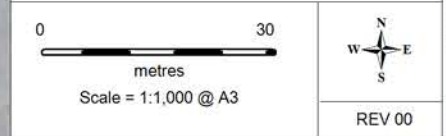
- Site boundary
- Survey area
- Broad-leaved semi-natural woodland
- Broad-leaved plantation woodland
- Coniferous plantation woodland
- Dense / continuous scrub
- Rough grassland
- Tall ruderal
- Hedge
- Hedge with trees
- Fence
- Hardstanding
- Target note



Rev	Date	Description
00	11.09.19	858544

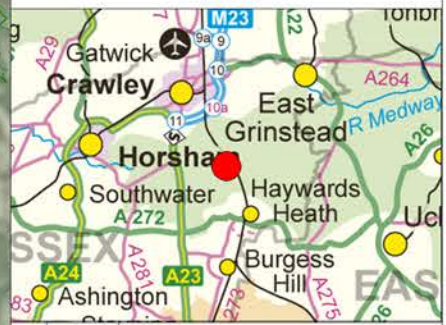
**Balcombe**

Figure 2  
Phase 1 Habitat Survey





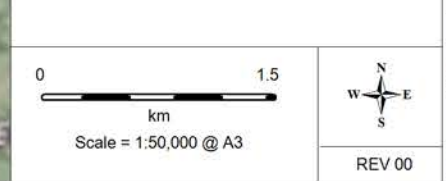
- Site boundary
- Survey area
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)



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**Balcombe**

Figure 3  
Proximity to natura 2000 Site



# APPENDIX 1

## SCREENING MATRIX

<b>Project Name</b>	Lower Stumble Exploration Site, Balcombe
<b>Natura 2000 Site under Consideration</b>	The Ashdown Forest SAC/SPA
<i>Brief description of the project or plan</i>	Temporary permission is being sought for exploration and appraisal comprising the flow testing and monitoring of the existing hydrocarbon lateral borehole along with site security fencing, the provision of enclosed testing flare and site restoration.
<i>Brief description of the Natura 2000 site</i>	The Ashdown Forest SAC/SPA is primarily designated for its internationally important heathland habitats and breeding populations of rare birds and amphibians.
<b>Assessment Criteria</b>	
<b>Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 site by virtue of:</b>	
<i>Size and scale:</i>	Works are restricted to an existing area of hard-standing approximately 0.73 ha.
<i>Land-take:</i>	None. Works are restricted to an existing area of hard-standing which was subject to the same works in 2013.
<i>Distance from the Natura 2000 site or key features of the site</i>	The site is c. 9 km from the Ashdown Forest SAC/SPA.
<i>Resource requirements (water abstraction etc.)</i>	No water abstraction is required.
<i>Emissions (disposal to land, water or air)</i>	<p>During operation, emissions anticipated are not expected to have a significant impact on air quality of the SAC/SPA due to the distance from the site.</p> <p>There will be no additional discharges to the forest; it is too far away from the development site to be directly impacted.</p>

<i>Excavation requirements</i>	None. Works are restricted to an existing borehole which extends approximately 820 m vertically and 520 m laterally.
<i>Transportation requirements</i>	Entry into the site will be from the existing access to Lower Stumble Wood and the Balcombe Estate's forestry and farming activities from the B2036. As this access has previously been used for hydrocarbon exploration and given the temporary nature of the development proposed, it is not considered necessary at this stage to improve the access further.
<i>Duration of construction, operation, decommissioning, etc</i>	No more than six months.
<i>Other</i>	-
<b>Describe any likely changes to the site arising as a result of:</b>	
<i>Reduction of habitat area:</i>	None
<i>Disturbance to key species</i>	None
<i>Habitat or species fragmentation</i>	None
<i>Reduction in species density</i>	None
<i>Changes in key indicators of conservation value (water quality etc.)</i>	None
<i>Climate change</i>	None
<b>Describe any likely impacts on the Natura 2000 site as a whole in terms of:</b>	
<i>interference with the key relationships that define the structure of the site</i>	The SAC/SPA comprises a complex of heathland in southern England. There are no heathland habitats within or adjacent to the works footprint and the site is 8.9 km away. Therefore no interference with key relationships that define the structure of the site is anticipated.

<p><i>interference with key relationships that define the function of the site</i></p>	<p>The function of the SAC/SPA is the provision of habitat for breeding birds, as well as amphibians. There will be no interference with habitats or species during operation as works are restricted to an existing area of hard-standing which is unsuitable for protected species.</p>
<p><b>Provide indicators of significance as a result of the identification of effects set out above in terms of:</b></p>	
<p><i>Loss</i></p>	<p>No effects anticipated.</p>
<p><i>Fragmentation</i></p>	<p>No effects anticipated.</p>
<p><i>Disruption</i></p>	<p>No effects anticipated.</p>
<p><i>Disturbance</i></p>	<p>No effects anticipated.</p>
<p><i>Change to key elements of the site (e.g. water quality etc.).</i></p>	<p>No effects anticipated.</p>
<p><i>Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.</i></p>	<p>No effects are anticipated as pollution and run-off will be controlled and all works will be restricted to an existing area of hard-standing which was previously used for the same purpose in 2013.</p>