-Environmental Permitting Regulations 2016

Risk Assessment

Prepared on Behalf of

GREENACRE RECYCLING
waste disposal

Site Name: Dan Tree Farm,

Address: London Road,

Bolney

RH17 5QD

Environmental Permit Application EPR/JB3603FT/A00

DOCUMENT CONTROL SHEET

Client:	**Greenacre Recycling Ltd**
Project:	**Bespoke Permit Application**
Job No:	**Dan Tree/EPR001**
Title	**Environmental Risk Assessment**

Author	**Alan Potter**
	CEnv, MCIWM, UKLA, IEMA qualified auditor
Signed	
Date	
Issued to	
Authorised	
Signed to confirm acceptance	
To be reviewed	Annually or as necessary

Beyond Waste for Greenacre Recycling Ltd

Introduction

Beyond Waste has been appointed by Greenacre Recycling Ltd (the applicant) to prepare an application for a bespoke Environmental Permit to authorise a deposit for recovery operation at Dan Tree Farm, London Road, Bolney West Sussex. The deposit for recovery operation involves the importation and use of c18,000m3 of inert waste for the construction of an acoustic bund. The proposal would be eligible for a Standard Rules permit save for its proximity to the environmental features identified by the Environment Agency (the Agency) in pre application advice dated 17.08.2020. Therefore, the application relates to a bespoke permit and requires a site-specific environmental risk assessment to be submitted. This document represents that assessment.

The pre application advice did not specify that an environmental setting and site design (ESSD) report is required as part of this application. However, this risk assessment has incorporated elements from the ESSD report guidance 17 October 2016 to ensure all potential threats this operation may cause to the environment are considered.

Environment Agency guidance on risk assessments for environmental permits[1] states that "*If you're applying for a bespoke permit but most of your activities are covered by standard rules, you only need to do a risk assessment for the activities or risks that are not covered by the generic risk assessment for those standard rules.*" That is to say, only the activities or risks not covered by the applicable generic risk assessment need to be separately addressed in site-specific environmental risk assessment.

Given that the nature of the proposed waste operation corresponds to that of *SR2015 No 39: use of waste in a deposit for recovery operations* it is considered appropriate to rely on the SR2015 No 39 generic risk assessment as the basis of the site-specific risk assessment supporting the bespoke permit application. All of the parameters identified within the scope of the generic risk assessment are met aside from parameter 4, as shown in the parameter alignment checklist in Table 1.

Reference Documents

The following documents produced to support the planning application for erection of the acoustic bund have been used as sources of background information to inform production of this site-specific risk assessment.

- *Preliminary Ecological Appraisal Report Urban Edge March 2018*
- *Arboricultural Implications Assessment for Proposed Acoustic Screening Bund and Replacement Residential Dwelling, June, 2020 (the Tree Report)*
- *Landscape & Ecology Management Plan (LEMP) Proposed Acoustic Bund at Dan Tree Farm, Bolney, Seamless Design Studio October 2020*

[1] Risk assessment for your environmental permit, 01.02.2016

Table 1 Standard Rules SR2015 N039 Risk Assessment Parameter Checklist

Parameter Number	Parameter	Met (Y/N)	Comment
1	Permitted activities - The storage and recovery of waste (R5, R10, R13)	Y	
2	Permitted wastes - Inert wastes and specified non-hazardous wastes as listed in the table of wastes	Y	
3	Maximum quantity of waste shall be limited to 60,000 cubic metres or less	Y	
4	The activities shall not be carried out within 500m of a European Site (candidate or Special Area of Conservation, proposed or Special Protection Area or Ramsar site) or a Site of Special Scientific Interest (SSSI); 50 metres of a site that has species or habitats protected under the Biodiversity Action Plan that the Environment Agency considers at risk to this activity, 250m of the presence of the great crested newts where it is linked to the breeding ponds of the newts by good habitat or 50 metres of a National Nature Reserve (NNR), Local Nature Reserves (LNR), Local Wildlife Site (LWS), Ancient woodland or Scheduled Ancient Monument.	N	The following features were identified in Pre-Application Nature and Heritage Screening provided by the Agency (Appendix 1) • Local Wildlife Sites (LWS) – The Hanger – the application site is within the LWS. • Ancient Woodland – Seven Acre Hanger Bolneypark Farm – within 50m • Deciduous Wood/ Wet Woodland – within 50m
5	The activities must not be carried out within groundwater Source Protection Zones 1 and 2 or if a source protection zone has not been defined then not within 250 metres of any well, spring or borehole used for the supply of water for human consumption. This includes private water supplies.	Y	
6	No point source discharges to controlled waters or groundwater	Y	
7	The activities must not be carried out within 10 metres of any watercourse	Y	
8	No waste may be deposited into a water body or sub-water table	Y	
9	The activities shall not be carried out on historic, closed or operational landfills	Y	
10	Activities must not be carried out in an air quality management area for PM10	Y	

Environmental Setting

The application site is shown in Figure 1 below. The site's grid reference is TQ 26615 24679.

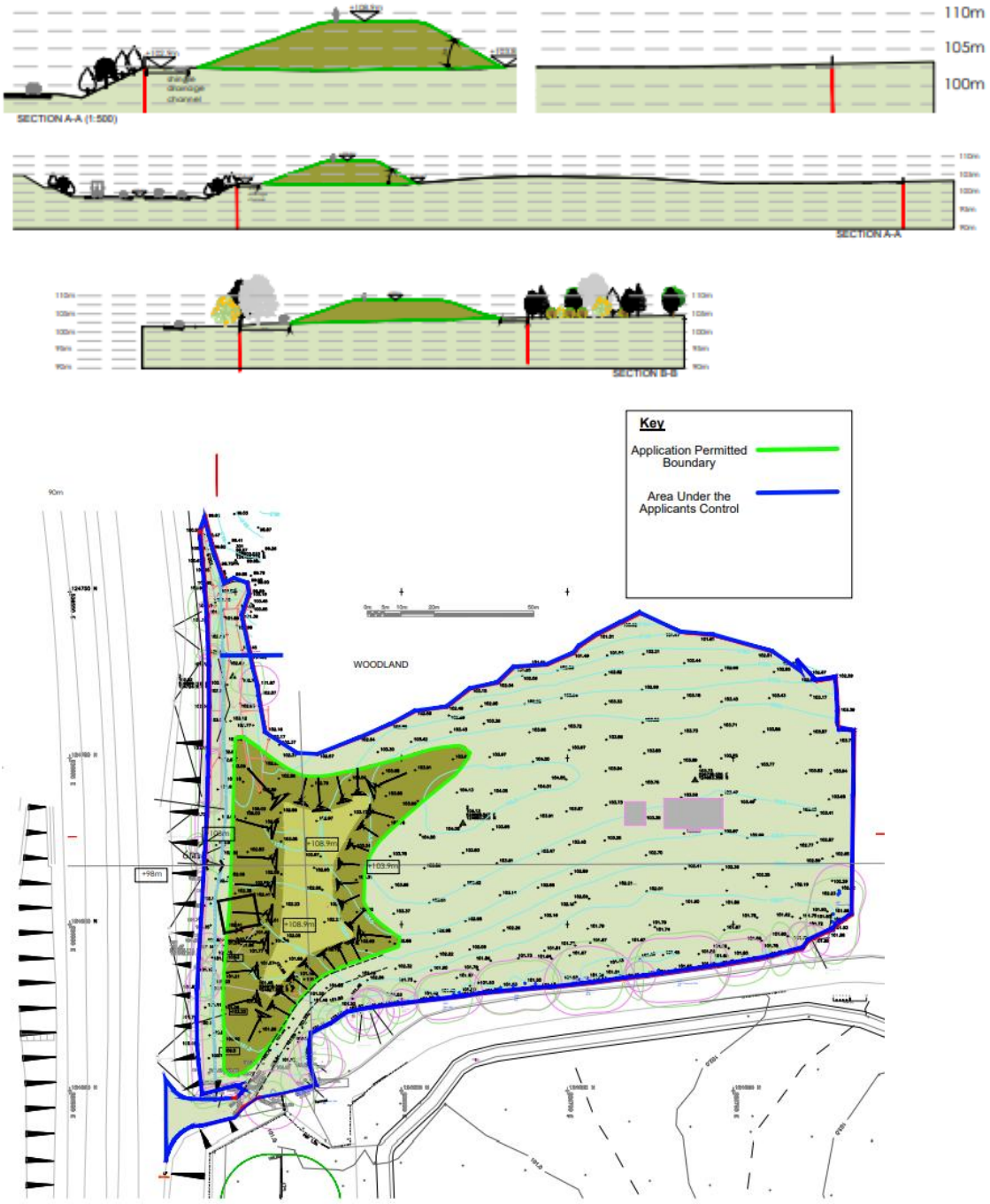


Figure 1 Site plan

The land forms part of a field and is bounded by the A23 to the west, woodland to the north, and a landfilling site to the south. A contractor's yard is located to the east. The site is located within the High Weald AONB but is not readily visible.

Local Topography

The site is a relatively flat piece of land with a slight increase in height above from the south of the site to the north from 101m to 104m. The receptors identified in the pre-application heritage and nature conservation screening lie to the north of the site.

Receptors

Nature and Heritage conservation site – Local Wildlife Sites (LWS) - The Hanger

It can be seen in Appendix 1 that while the application site overlaps with the LWS at its north eastern corner, the application site boundary falls short of the protected woodland of the LWS.

The *Preliminary Ecological Appraisal Report* produced to support the planning application, identified that there are no "*…internationally or nationally recognised important wildlife sites within 1km desk study zone, but there is one non-statutory LWS which is partially within the survey area.*" Even though the site boundary partially encroaches into the LWS, the Ecological Appraisal found that the features sought to be protected by the LWS designation are not present within the site boundary[2]. The area of the LWS that actually falls within the application area is predominately bare ground and poor semi-improved grassland as shown in Figure 2, Image 1 overleaf illustrates this further.

It should be also be noted that the Officers Report supporting West Sussex county Councils decision to grant planning permission for the development found that :

> "*The development would be sufficiently separated from ancient woodland to the north, and subject to securing tree protection measures during construction, there would be no unacceptable impact upon retained trees. Subject to conditions to secure the implementation of the site wide Landscape and Ecological Management Plan, and management of construction activities (e.g. dust suppression, minimisation of noise), it is not considered there would be any unacceptable impact upon ancient woodland, the SNCI, or biodiversity more generally*." (emphasis added)

[2] It should be noted in connection with the LWS that the LEMP states the following in connection with preservation of the Hangar "*The Hanger which forms the northern boundary of the site is a substantial area of mature ash woodland. Ash dieback is prevalent in the area and there are indications that the ash trees in the adjacent woodland and hedgerows have been affected*." (page 6)

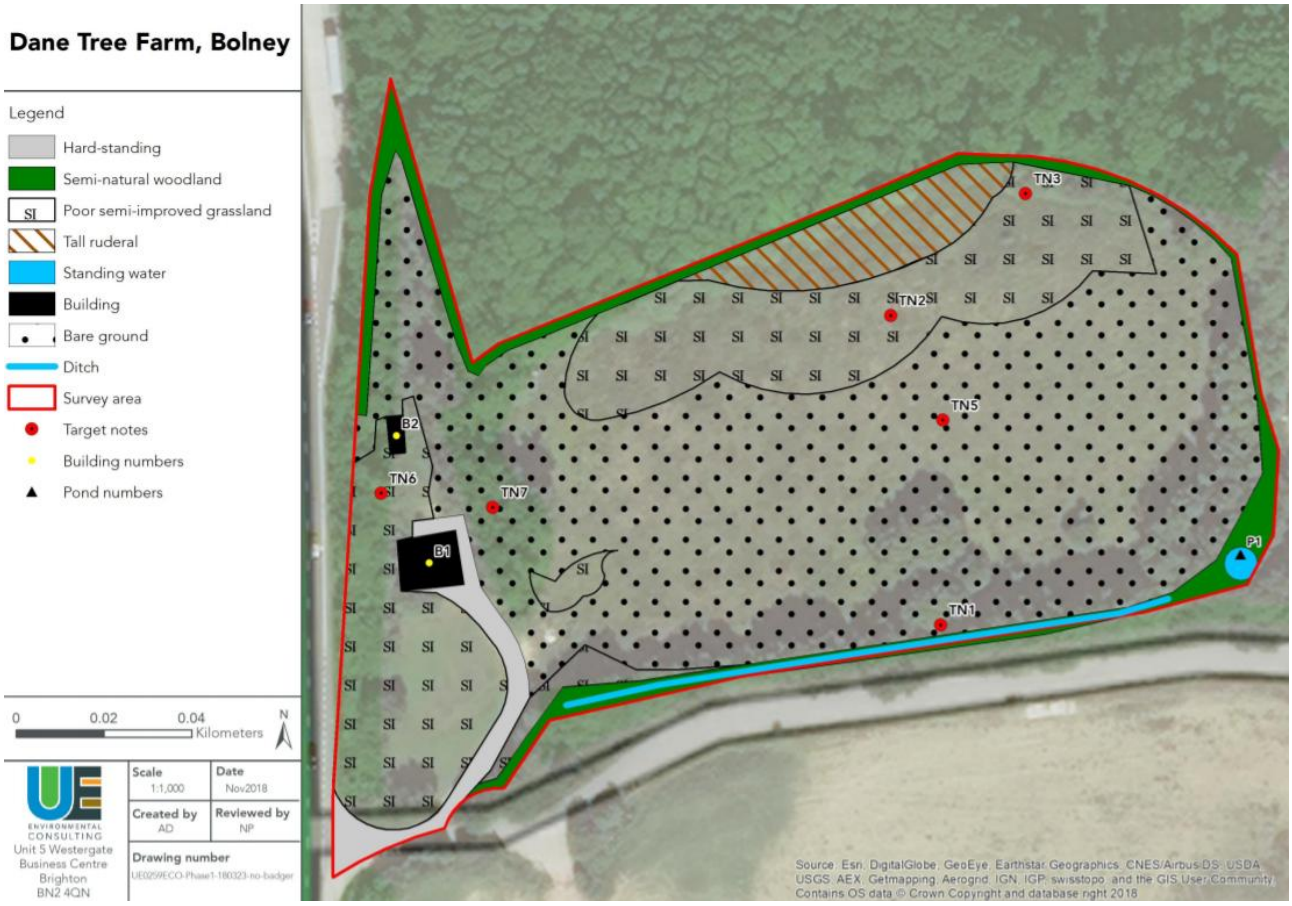


Figure 2 Plan showing the ground conditions at the site.

Image 1 showing that the majority of the site is made up of bare ground and poor semi-improved grassland

As shown in the bottom left image within Image 1 there is evidence of vehicle tracking. One of the main potential risks of the waste recovery operation is the creation of dust and carriage of mud by vehicles. However, due to the scheme of working starting at the north of the bund working southward, the previously constructed sections of the bund will act as a barrier to transport of any dust generated. This coupled with the short period of operation at each portion of the bund, further reduces the risk of dust impacting receptors.

Nature and heritage conservation sites – Ancient Woodland -Seven Acre Hanger Bolneypark Farm

Ancient woodland is a designation applied to any areas of land currently wooded that has not be developed since 1600 (Guidance, Ancient woodland, ancient trees and veteran trees: protecting them from development, 2014). Ancient woodland is protected in the National Planning Policy Framework. The designation itself does not necessarily denote that the woodland on the land has particular ecological value. Moreover, only a small section of ancient woodland falls within 10m to the north of the proposed acoustic bund. The distances between the northern edge of the acoustic bund and the ancient woodland are shown in Figure 3 below.

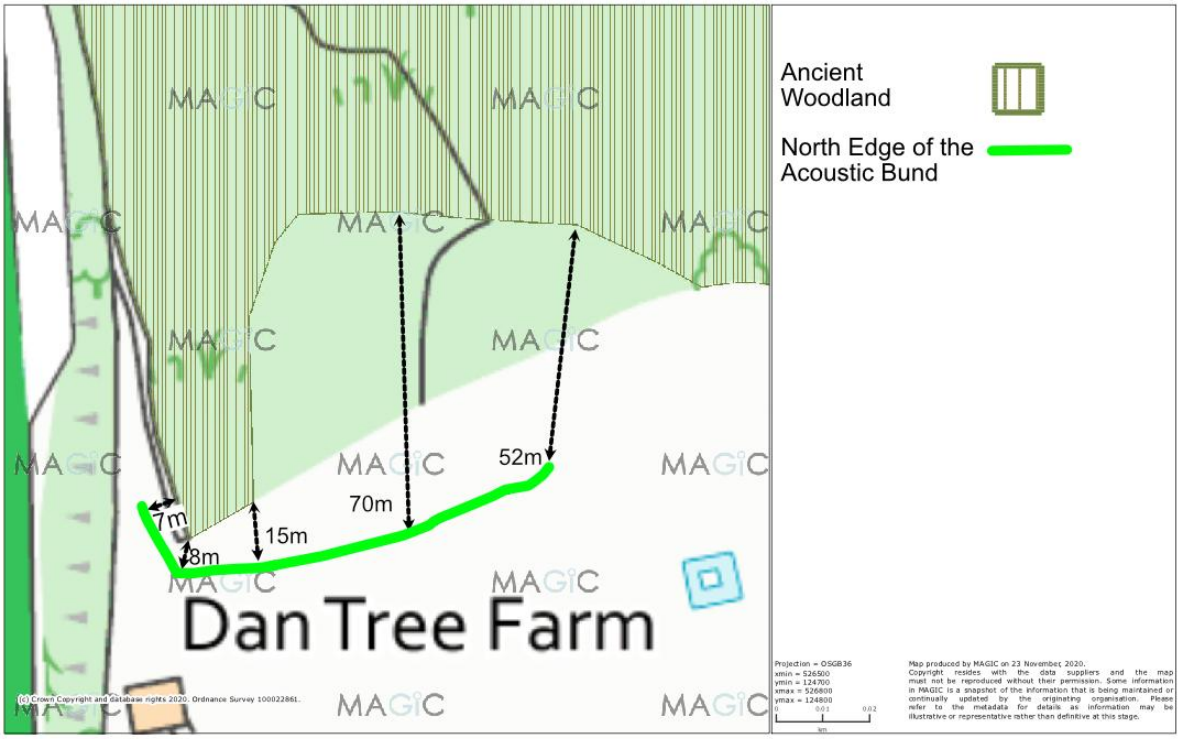


Figure 3 Distances Between the Northern Edge of the Acoustic Bund & the Ancient Woodland

Protected Habitats – Deciduous Woodland/ Wet Woodland

Deciduous Woodland/ Wet Woodland is a UK Biodiversity Action Plan Priority Habitat.

Table 1 overleaf shows the Hazard, Receptor, Pathway which identifies how the proposed waste recovery operation might impact the identified receptors which for all intents and purposes is a single receptor as they represent protected characteristics of essentially the same landscape feature- The Hanger.

Surface water features

Surface water features in proximity to the site consist of a small established pond 180m to the south east of the site and a ditch feature 70m to the south. 200m to the west across the A23 is a pond and 270m to the north is a stream within Seven Acre Hanger. These are shown in Figure 4.

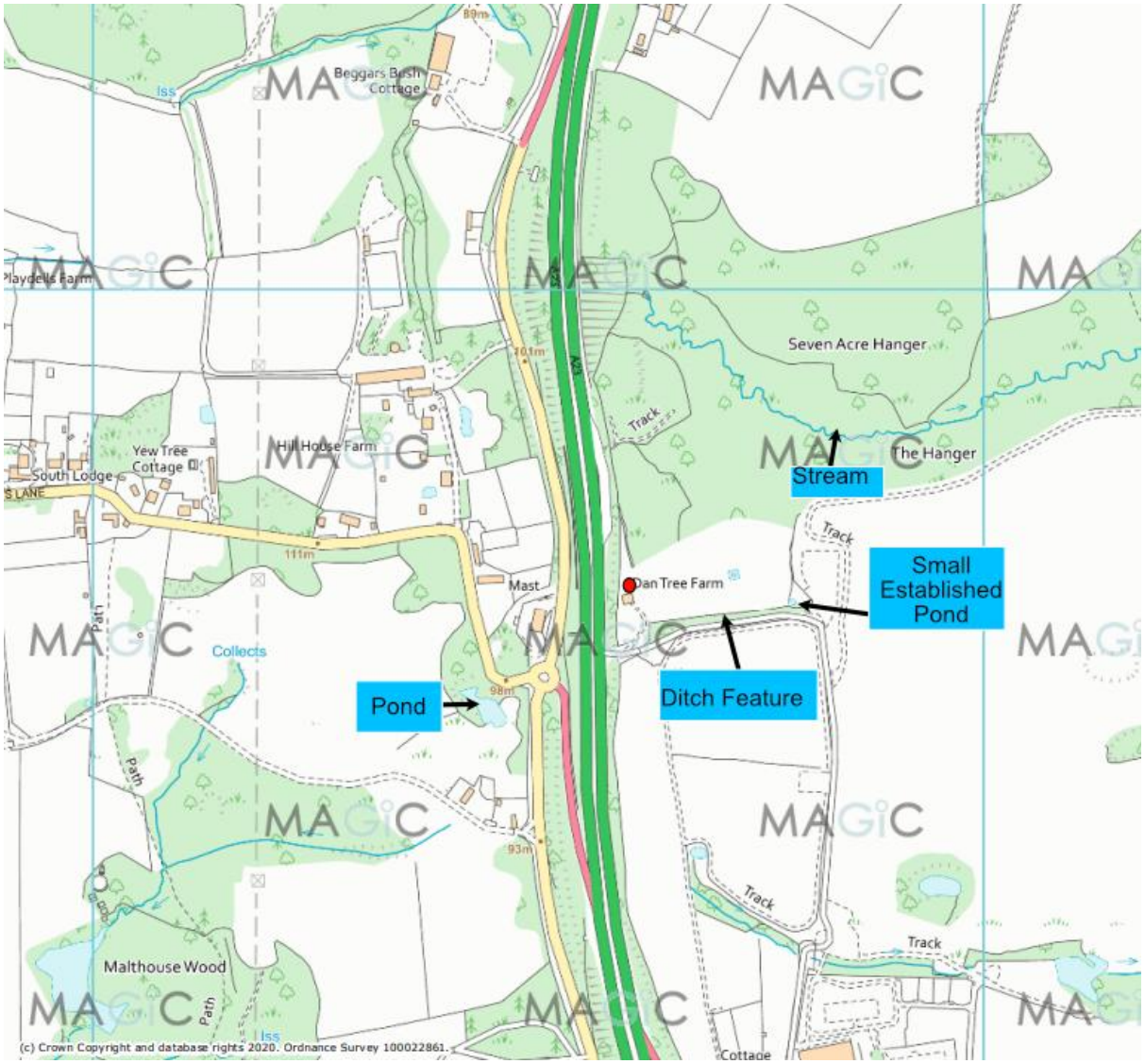


Figure 4 Surface water features in proximity to the site

Residential Recreational and Agricultural Uses.

Figure 5 shows the setting of the application site and the presence of residential, recreational and agricultural uses within 500m.

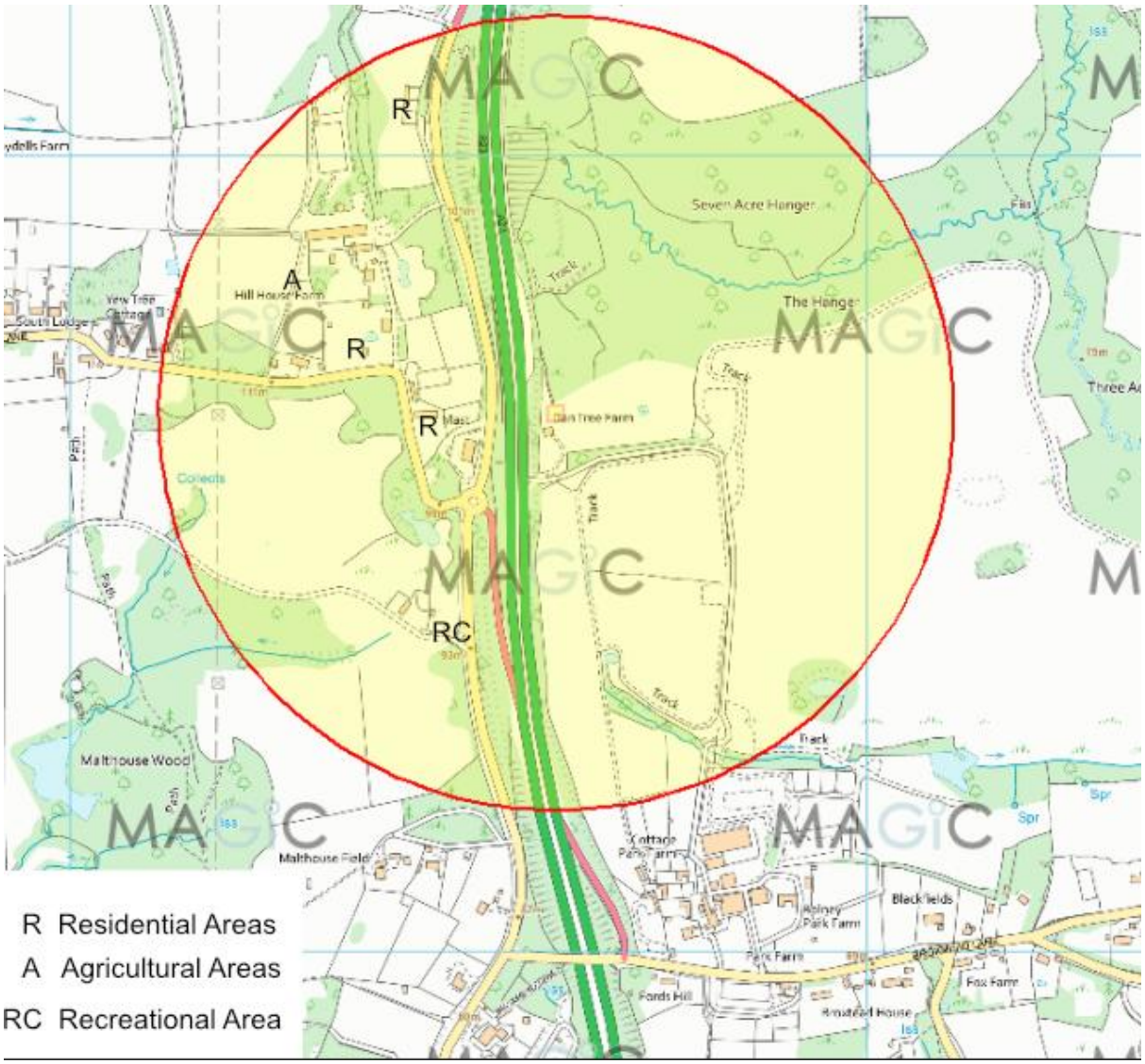


Figure 5 The location of residential, agricultural and recreational areas in close proximity to the site.

Geology

The site is underlain by Grinstead Clay as shown in Figure 6.

Figure 6 Geology at the site

Flood Risk

Figure 7 shows that the site falls within Flood Zone 1 which means that this location is in an area with a low probability of flooding.

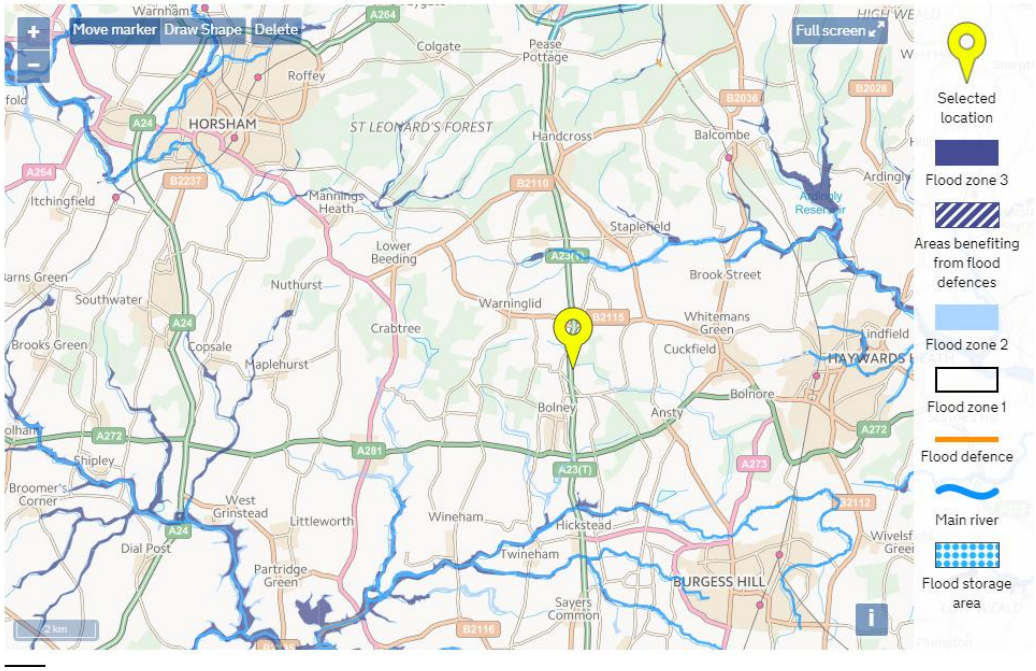


Figure 7 Flood risk at the site

Figure 8 shows that the extent of surface water flood risk at the site is very low.

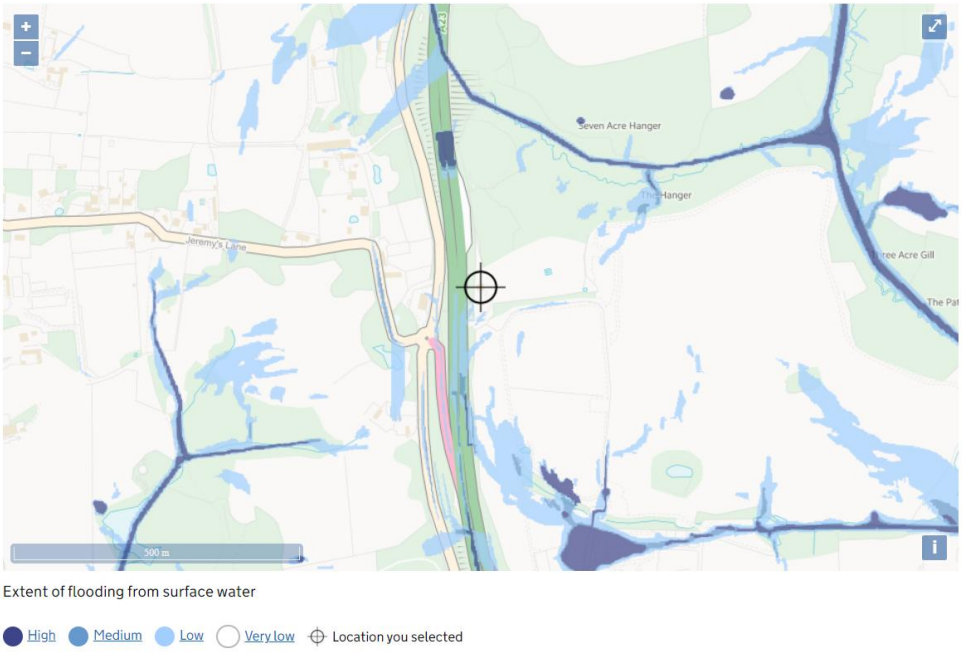


Figure 8 Surface water flood risk

It should be ntoed that in gratning planning pemrmission for the devleopment West Sussex County Council concluded that:

> *... The site in an area at a low risk of flooding, and overall flood risk is low. On this basis, it is considered, that drainage matters could be adequately addressed by planning condition." (WSCC Officers Report 17.12.2020)*

Local Wildlife Site, Ancient Woodland and a Deciduous Woodland/ Wet Woodland.

Parameter 4 of the SR2015 No39 permit risks assessment states that "*activities shall not be carried out within 500m of a European Site (candidate or Special Area of Conservation, proposed or Special Protection Area or Ramsar site) or a Site of Special Scientific Interest (SSSI); 50 metres of a site that has species or habitats protected under the Biodiversity Action Plan that the Environment Agency considers at risk to this activity, 250m of the presence of the great crested newts where it is linked to the breeding ponds of the newts by good habitat or 50 metres of a National Nature Reserve (NNR), Local Nature Reserves(LNR), Local Wildlife Site (LWS), Ancient woodland or Scheduled Ancient Monument.*"

The pre-application screening for Nature and Conservation assets found that some of the application site is within:

- 50m of a site that has species or habitats protected under the Biodiversity Action Plan - Deciduous Wood/ Wet Woodland
- 50m of a local Wildlife Site - The Hanger
- 50m of an ancient woodland – Seven Acre Hanger Bolneypark Farm

As a result, it was deemed that the application would not be eligible for the Standard Rules Permit, and a bespoke permit must be sought instead.

The assessment shows that the primary risk identified as being posed by the waste recovery operation would be dust emissions that may have an adverse effect on the protected sites and the woodland were it to travel and deposit on vegetation at the receptor. The risk of an adverse impact from dust has been assessed as Low/ Medium due to the proximity of the sensitive receptor. A Dust Assessment & Management Plan (version 1.2 Revised 12.06.2020) has also been produce and submitted as part of the sites planning application.

However due to:

- The temporary nature of the possible effects; and
- Risk management measures outlined in Table 2 to be employed

It can be concluded that the actual risk to this receptor presented by the proposed operation is Low.

Hazard Pathway Receptor

Table 2 below shows the Hazard Pathway Receptor model applied to the site. It is site specific and identifies the potential hazards generated by the operation, the receptors that may be affected by the hazard and the possible pathway from sources of the risk to the receptors. It assesses the risks relevant to the site-specific activity's, if these are acceptable, can be screened out and what risk management techniques can be used to achieve this. It them identifies the overall risk.

Table 2 Hazard Pathway receptor Model

Hazard	Receptor	Pathway	Risk Management techniques	Probability of exposure	Consequence	Overall risk
Emissions to air: Dust from the operation.	The Hanger (LWS) Ancient Woodland – Seven Acre Hanger Deciduous Woodland	Wind-blown	Visual dust monitoring. Dampening down of the site if required. Site speed limits Time limited operation and activities taking place in limited to a 3-month period of overall operation. The northern section of the bund is closest to identified receptors, however, construction of this section of the bund is only expected to take place in quarter 2 & 3 as per the scheme of working.	Dust could potentially reach the receptors when the wind is strong and blows in the direction of the receptors.	Dust covering of trees/ shrubs inhibiting normal functioning.	**Low** when management techniques are utilised.
Physical Damage from Vehicles and Plant	The Hanger (LWS) Ancient Woodland – Seven Acre Hanger Deciduous Woodland	Physical Contact	Buffer zone of at least 7m 5m between operational area and any woodland. Standard site procedures employed British Standard BS 5837:2012 and/ National Joint Utilities Group Guideline (NJUG, 1995) followed during construction when working in close proximity to trees or shrubs. Tree protection to be in place	Trees/ shrubs may be damaged by contact when plant/ equipment at the site during the construction of the acoustic bund.	Damage to trees/shrubs	**Low** when management techniques are utilised.
Pollution from hazardous materials	The Hanger (LWS) Ancient Woodland – Seven Acre Hanger Deciduous Woodland	Runoff across the site surface	Potentially hazardous materials such as fuels, oils, chemicals and cement stored at least 20m from any tree/stem, or in a bunded storage vessel.	Leaks or spillages may cause the release of potentially harmful hazardous materials into the ground adversely affecting identified receptors.	Pollution to trees/shrubs roots	**Low** when management techniques are used

Mitigation

The Preliminary Ecological Appraisal Report determined that "no impacts are predicted for the LWS, priority habitats or areas of ancient woodland as a result of the proposed works provided that standard site construction procedures are adopted for the protection of adjacent trees."

All of the protected receptors within the environmental assets identified through the screening process are located in a similar position (north/ north east of the site) and potentially threatened by the same hazards. As such the same mitigation specified within this section applies to protection all of the receptors.

The Preliminary Ecological Appraisal Report made the following recommendation to avoid or mitigate ecological impacts on the LWS, Ancient Woodland and Deciduous Woodland.

Standard site procedures to prevent impacts on trees to be adhered to during construction. These standard procedures and recommended precautionary measures are shown below.

- British Standard BS 5837;2012 and/or National Joint Utilities Group Guideline (NJUG, 1995) will be followed at all times during construction when working in close proximity to trees or shrubs which are to be retained.
- NJUG Guideline in the root protection zone or precautionary area is 4x the circumference of the trunk.

During construction the use of British Standard BS 5837:2012 and/or National Joint Utilities Group Guidelines (NJUG, 1995) will be followed at all times when working in close proximity to trees or shrubs to be retained. According to NJUG Guidelines the root protection zone or precautionary area is 4x the circumference of the trunk (circumference is measured around the trunk at a height of 1.5m above ground level). The distance is measured from the centre of the trunk to the nearest part of any excavation or other work. A tree survey has been carried out for the proposed development and works will be undertaken in accordance with the recommendations therein.

British Standard 5837:2012 provides recommendations relating to tree care, with a view to achieving a harmonious and sustainable relationship between new construction and surrounding trees.

Tree Protection Fencing

The Tree Report states that "Robust tree fencing will be required to avoid conflicts between the heavy machinery required to form the bund and to avoid creep of the base towards protected areas." This fencing will also contain the operation within the applicants controlled area offering additional protection to the LWS and ancient woodland.

The protective fencing is to be constructed of scaffold uprights driven into the ground to a minimum depth of 0.6m and at no greater than 3m spacing. Uprights to be braced with angled scaffold poles and anchors. Upright weldmesh panels such as "Heras" or a similar product will be securely mounted with all-weather notices attached to every 5th panel reading "Keep Out – Protected Area". The fencing will form enclosed areas to which no access will be allowed. This design of fencing is considered appropriate to the site and scale of development proposed. The proposed location of the protective fencing is shown in Figure 9.

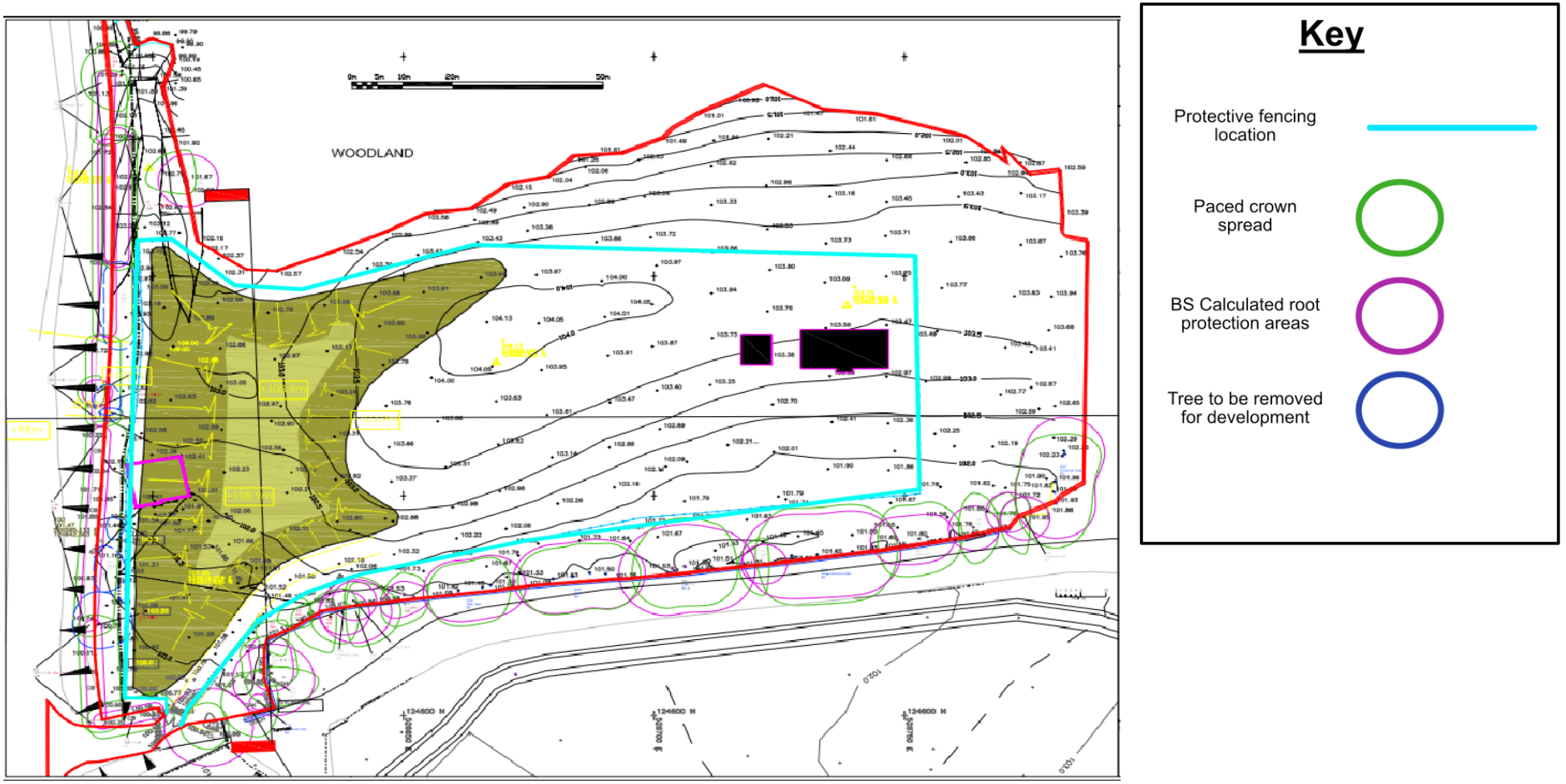


Figure 9 The location of protective fencing and other tree protection measures

Additional Precautions

The Tree Report also states the following additional precautions. *"Potentially injurious materials such as fuels, oils, chemicals and cement will be stored at least 20m from any stem, or in a bunded storage vessel. The drip line of a tree is a factionary line on the ground at the furthest edge of a trees canopy. No level changes will occur, either raising or lowering within the protected areas. A list of these additional precautions is included on the Tree Protection Plan."*

Groundwater Risk Assessment

The activities must not be carried out within groundwater source protection zones 1 and 2 or if a source protection zone has not been defined then not within 250 metres of any well, spring or borehole used for the supply of water for human consumption. This includes private water supplies.

Figure 10 below shows that the site does not overly a groundwater source protection zone 1 or 2.

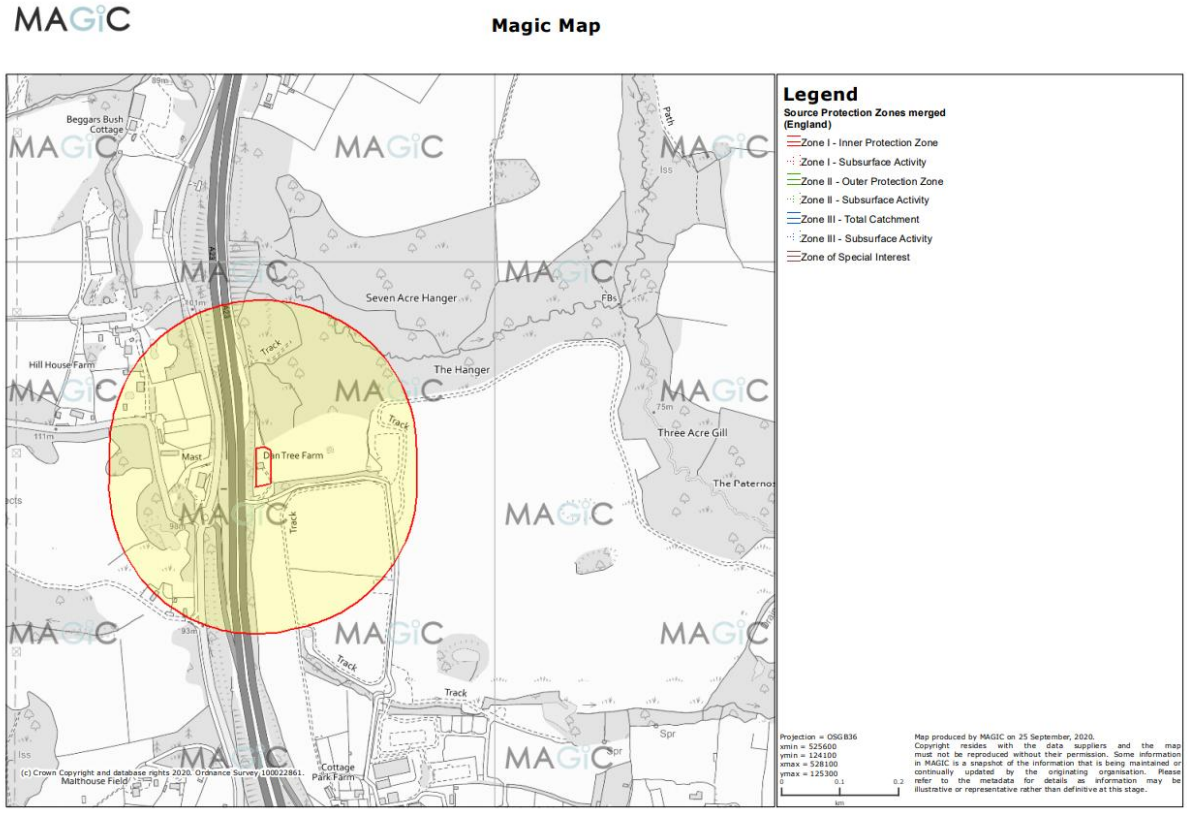


Figure 10 Source Protection Zone Screening (blank indicates absence of groundwater source protection zone).

Figure 11 shows that the site is not within an area of high groundwater vulnerability being in an area classed as unproductive groundwater.

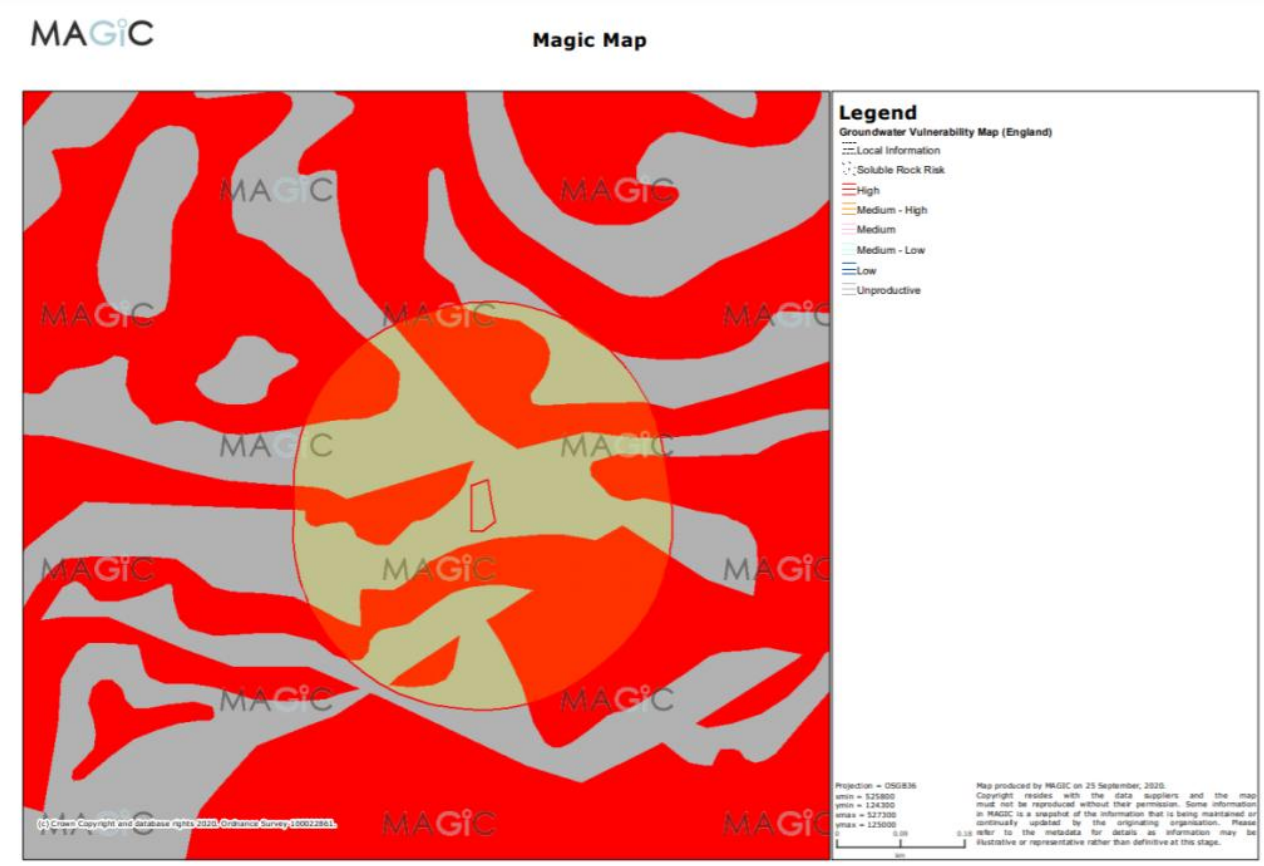


Figure 11 Groundwater vulnerability map showing that the site falls outside any areas of vulnerability and is in an unproductive area.

As the site is not in a source protection zone or an area of groundwater vulnerability or even productivity, combined with the limitation of input material to clean inert matter (as controlled by the site EMS) the risk to groundwater posed by the proposed recovery to land operation is considered to be **Low**. As such, a further hydrogeological risk assessment is not considered necessary.

Noise Risk Assessment

The purpose for the construction of the acoustic bund is to reduce the noise levels experienced at the new residential property. A Noise Assessment[3] has been undertaken at the site to measure noise levels affecting the development and to demonstrate the performance of the acoustic bund as a mitigation measure. The Noise Assessment found that the source of the noise affecting the proposed development was the "steady rumble of road traffic on A23 road". Therefore, it was determined that the acoustic bund

[3] Noise Assessment (Replacement Dwelling House & New Bund to A23 Frontage), 19.06.2020

is needed to reduce noise levels experienced at the residential boundary to below World Health Organisation limits. In addition, noise arises from the operation of the contractor's yard to the west of the site. This shows that noise levels at the site itself are already high and the time limited construction activities at the site will not cause them to be unacceptable

Figure 12 shows that the all receptors within proximity are to the west of the site and across the A23cutting, with the closest receptor being approximately 140m away. Any noise produced from the construction activities will likely be masked by the A23.

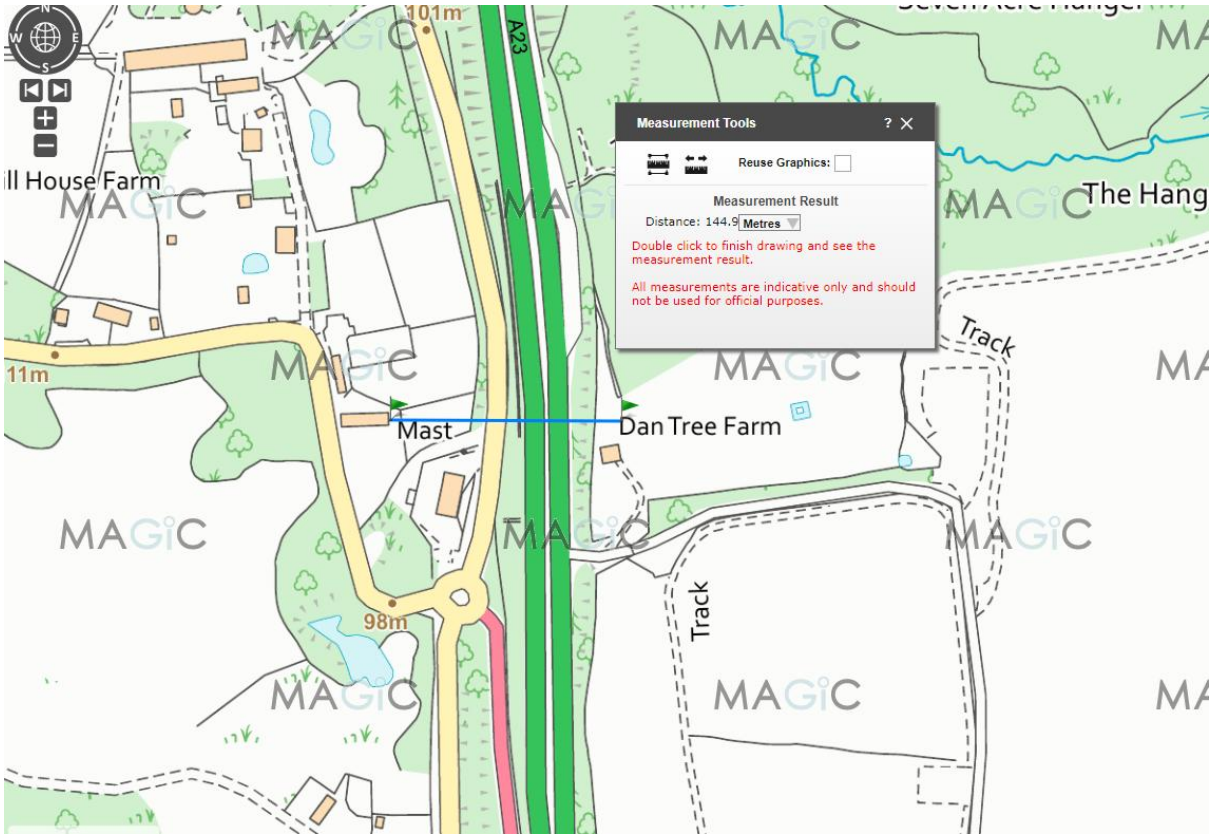
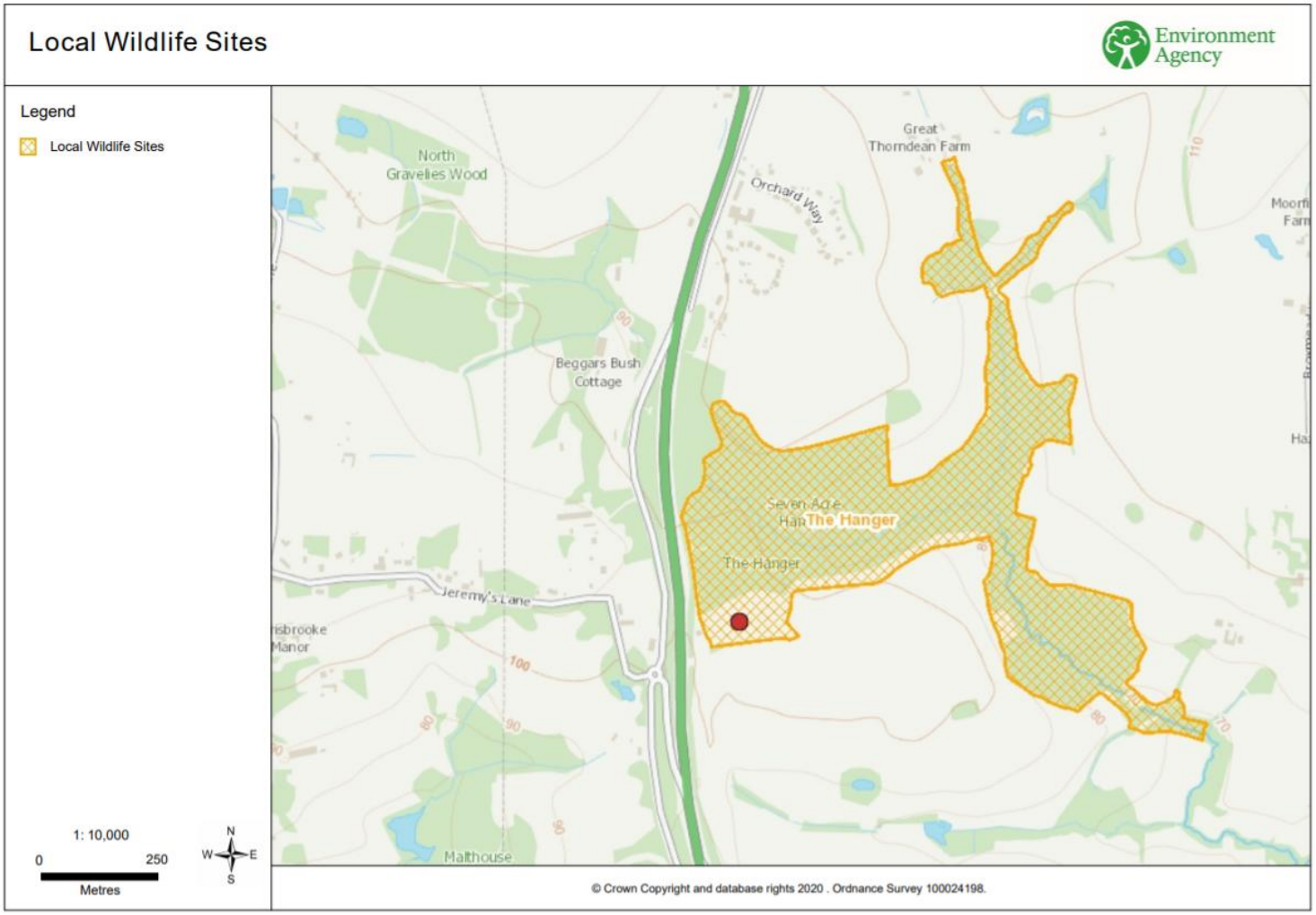
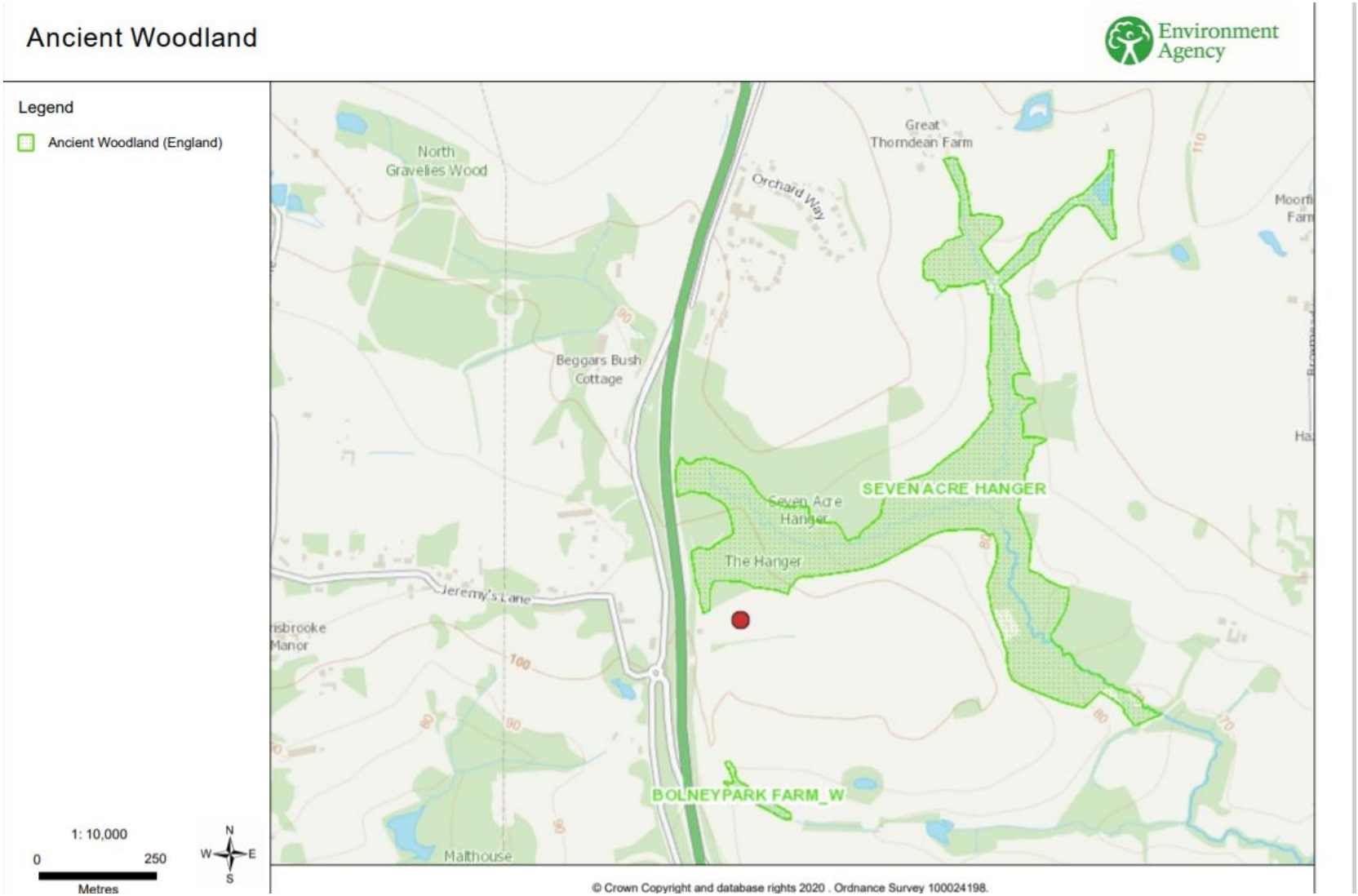


Figure 12 Closest possible noise receptor from the site

Due to the above considerations it has been determined that a further Noise Risk Assessment is not required.

Appendix 1 Pre-Application Nature and Heritage Screening Maps




Ancient Woodland
Environment Agency
Legend
Ancient Woodland (England)
North Gravelies Wood
Great Thorndean Farm
Orchard Way
Beggars Bush Cottage
SEVEN ACRE HANGER
Seven Acre Hanger
The Hanger
Jeremy's Lane
BOLNEYPARK FARM_W
Malthouse
1: 10,000
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250
Metres
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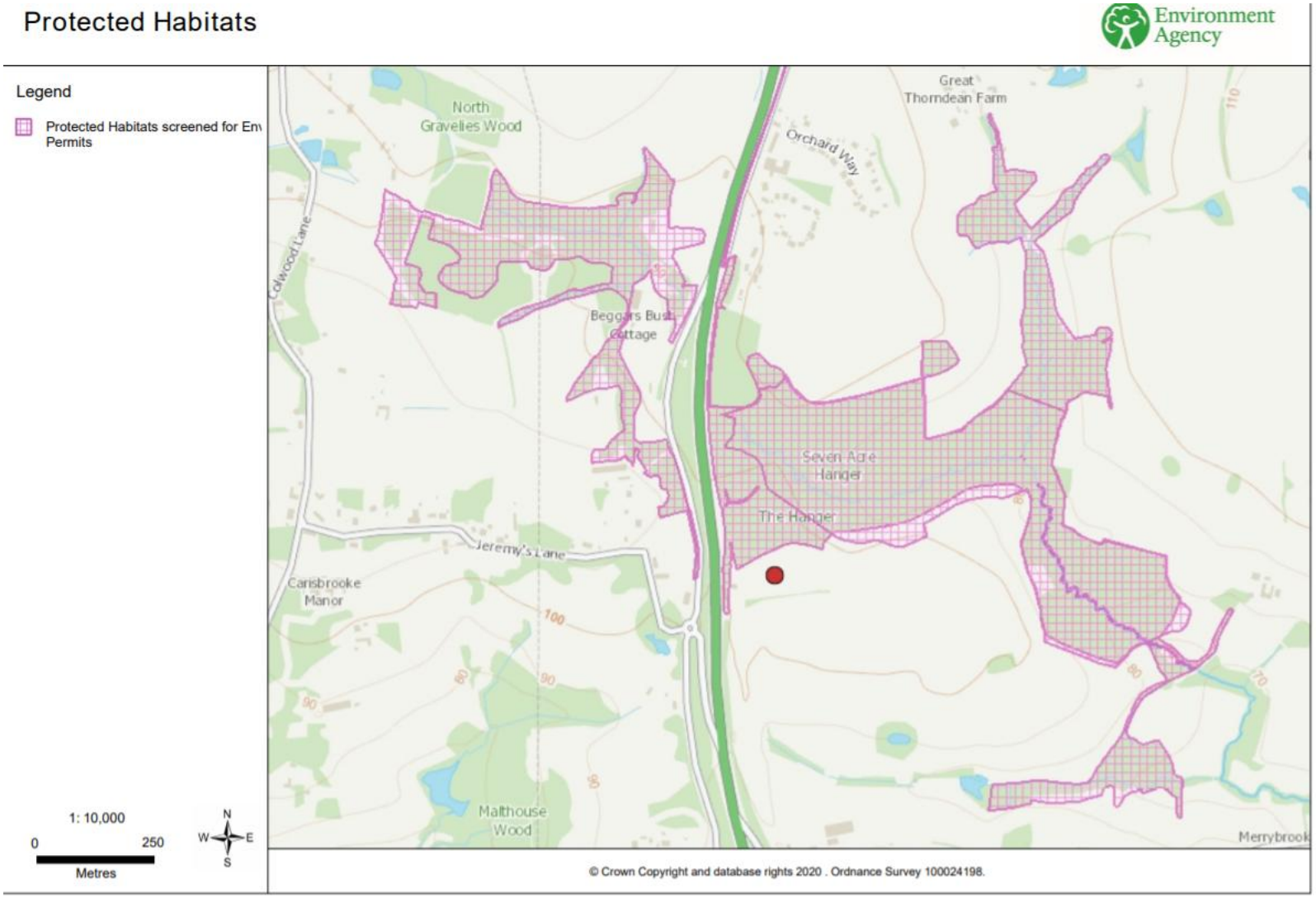
Protected Habitats
Environment Agency
Legend
Protected Habitats screened for Env Permits
North Gravelles Wood
Great Thorndean Farm
Orchard Way
Beggars Bush Cottage
Seven Acre Hanger
The Hanger
Jeremy's Lane
Carisbrooke Manor
Malthouse Wood
Merrybrook
1: 10,000
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