

Dix Pit Landfill Site

Environmental Risk Assessment

FCC Environment

Report No. 16-K3804-BLP-ENV-R-00002

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Disclaimer: Please note that this report is based on specific information, instructions and information from our Client and should not be relied upon by third parties.

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1 Introduction

1.1 Report Objectives

Waste Recycling Group (Central) Ltd, a wholly owned subsidiary of FCC Environment (UK) Ltd (FCC), operates Dix Pit Landfill at Linch Hill, Stanton Harcourt, Oxfordshire. The site operates under permit number EPR/BV7214IR.

This Environmental Risk Assessment (ERA) has been prepared in support of a permit variation to enable construction and infilling of Phase 5 utilising inert waste. This ERA has been undertaken using Environment Agency (Agency) web-based guidance¹ to assess the potential risks associated with the proposed activity. The guidance referenced identifies the following step process to risk assessments which can be summarised as:

- Identify risks;
- Identify receptors;
- Identify possible pathways;
- Assess relevant risks; and
- Control risks.

The guidance indicates that the following parameters require assessing:

- Any discharge;
- Accidents;
- Odour;
- Noise and vibration;
- Fugitive emissions (such as dusts, litter, and pests);
- Visible emissions; and
- Release of bioaerosols.

The guidance requires that receptors are considered with regard to the proximity of the site. Table 1 in Section 2.4 of this report identifies the most likely sensitive receptors adjacent to site and has been compiled using information available through internet-based searches.

Phases 1-3 have been infilled and restored with non-hazardous waste. Phase 4 is currently being infilled and restored with inert waste and a separate ERA (referenced: 10142-R09) was submitted

¹ [Risk assessments for your environmental permit - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit)

with the previous permit variation application (permit referenced EPR/BV7214IR/V014). This report expands on the previously submitted ERA and focuses on Phase 5.

1.2 Assessment of Environmental Risk

The Agency guidance requires that everyone applying for a new landfill environmental permit (other than a standard permit) or variation to an existing permit should present information in the form of risk assessment tables, one table for each actual or possible hazard identified. Identification of accident scenarios and their prevention through operational management should also be detailed. Each table should identify the hazard, the process that causes the hazard, the potential receptors and the pathway from the hazard to those receptors. In addition, the tables should also include the preventative risk management practices to be employed along with an assessment of the mitigated risk.

2 Scope of the Assessment

2.1 Proposed Operations

This permit variation application proposes to deposit inert wastes into Phase 5 of the landfill. The operations will ultimately result in the restoration of the former clay and gravel excavation. Access to the site will be via the entrance on the B449 minor road and then via the 1.8 km internal access road to the Site.

2.2 Potential Hazards

2.2.1 Discharges

A Surface Water Management Plan (SWMP) for Phase 5 is attached to the Environmental Setting and Installation (ESID) (referenced: 16-K3804-BLP-ENV-R-00003). The design of the SWMP is based where possible on utilising the existing surface water features that have been constructed during the lifetime of the site and complementing these with additional features. The scheme shall control the surface water run off generated from the flanks by collecting this within perimeter surface water ditches which subsequently discharge at an additional location (SW2) to the west of the site. The ditches will be fitted with straw bales to filter out any suspended solids during the period when vegetation is becoming established. Monitoring will continue at SW1 and at the new location SW2 in accordance with the extant environmental permit.

Phase 5 will only accept inert waste. Inert wastes have an inherently low pollution potential and will arise from excavated soils from either construction and demolition sites or garden and park wastes. They do not contain substances at concentrations that may present a risk to surface water or groundwater. After its deposit and subsequent profiling, the already low permeability of this material is further reduced. This further restricting the leachability of any potential soluble components and mobilisation of solids from its compacted surface. Further details regarding surface water and groundwater have been provided in the Hydrogeological Risk Assessment (HRA) (referenced: 16-K3804-BLP-ENV-R-00004) submitted with this application and will not be considered further in this ERA.

2.2.2 Odour

The wastes to be brought for disposal at Phase 5 are very unlikely to be a significant source of odour. Experience from similarly permitted installations, including Phase 4 of the current installation, has shown that the negligible organic content results in negligible landfill gas generation and no production of leachate or odours.

The operation of Phase 5 is not considered to present an odour hazard however as it is part of the wider Dix Pit landfill it would fall under the wider site permit conditions and site management systems relating to odour.

Odour is not considered to be a hazard associated with the operation of the inert landfill in Phase 5 and will not be considered further by this assessment.

2.2.3 Noise and Vibration

The risk of excessive noise and vibration associated with the proposed activity will be restricted primarily to movement and operation of site plant. Phase 5 is located within Dix Pit Landfill and benefits from existing perimeter bunds and vegetation screening. The initial construction of Phase 5 will be below ground level offering additional screening to the surrounding area. Phase 5 will also be below Phases 1-4 which offers further screening to the north of the Site.

The nearest residential receptors are Linch Hill Cottages located <10m to the East and Stanton Harcourt Village located <10m to the North of the Installation boundary. However, Linch Hill Cottage is approximately 300m and Stanton Harcourt Village is approximately 670m of Phase 5, both are well screened from the site by established hedgerow and boundary vegetation screening. All other receptors are at greater distances and are also screened from the site by boundary vegetation.

The site is already a consented and operational landfill site with planning and permit in place and the proposed landfilling operations for Phase 5 (i.e. waste deposit and other engineering activities) are no different, from a noise generating perspective, to the activities which have previously been permitted at the site. The same waste types and quantity of waste will be accepted at Phase 5 as is already accepted at Phase 4, therefore it is not expected that vehicle movements will change onsite. Nevertheless, onsite procedures are already in place to minimise noise and vibration including onsite speed limits, maintenance of internal site roads and site plant and tipping not being made from height. No other sources of noise emissions are considered relevant. The risks associated with noise emission and appropriate control measures are detailed in Table 2.

2.2.4 Dust

Particulate emissions can arise from the deposit of potentially dry or dusty wastes, uncovered dusty waste deposits, un-vegetated areas (e.g. preparatory engineering works), vehicle movements on unpaved or dusty roads and settlement of surface water run-off laden with suspended solids.

The Site already operates an inert waste filling operation in Phase 4 and the proposed Phase 5 operations will be considered as similar with likely dust emissions and appropriate control measures. The weighbridge operator will enforce strict waste acceptance protocols to manage the deposit of potentially dusty wastes. All site haul roads will be maintained and cleaned as necessary to minimise the accumulation of mud or dusty materials. Site roads and surface will be dampened down using a water bowser if necessary. All vehicles leaving site will pass through a wheel wash to remove excess mud, and in addition to this, all vehicles on site shall not exceed the onsite speed limit within the site boundary. The risk associated with fugitive dust emissions are detailed in Table 3.

2.2.5 Mud

Mud can be trailed onto the highway by vehicles leaving the site after picking up mud from unpaved roads or from the point of deposit. Access to the site will be via the existing well maintained site access road which is approximately 1.8km long and joins the B4449 minor road to the northwest of the site. A combination of the distance travelled on the internal haul/access roads and the wheel wash will ensure any accumulated mud will be removed prior to the vehicle leaving site. If a vehicle is observed to be particularly muddy, the driver will be redirected through the wheelwash.

The wheel wash will be maintained to ensure efficient operation and the haul roads will be maintained by road sweeper. The primary receptor to entrained mud will be the B4449 to the north west of the site where the long access road joins the public highway. The risks associated with entrained mud are considered in Table 4.

2.2.6 Litter

Waste Acceptance Protocols will restrict the waste types to be brought to site (inert wastes). These are very unlikely to contain materials which could present a risk of wind-blown litter and will not be considered further by this assessment.

2.2.7 Pests and Vermin

The deposit of putrescible waste in landfills may attract pests and scavengers and also provide a habitat for the breeding or loafing of pests and vermin. As the materials to be accepted for disposal (i.e. inert soils) are unlikely to contain anything to attract pests or vermin, the risk associated with the site is considered to be negligible and will not be considered further by this assessment.

2.2.8 Global Warming

Inert wastes are not expected to generate landfill gas. This was demonstrated by the Landfill Gas Risk Assessment (LFGRA) (referenced: 10142-R12) which was submitted with the Phase 4 permit variation application which is also an inert cell. The LFGRA is also considered appropriate for this application for a Phase 5 inert cell. Phases 1-3 have been filled with non-hazardous wastes and are connected to a gas extraction and utilisation system and are operating in accordance with the sites Environmental Permit. As there are no changes proposed to the operation of Phases 1-3 they are not considered further in this assessment and the proposed infilling of Phase 5 with inert wastes is not considered to increase the risk in terms of global warming potential and will not be considered further in this assessment.

2.3 Hazard Pathway

When identifying the receptors, the closest and the most sensitive (if different from the closest) have been considered in each direction from the hazard. Account has been taken of the

mechanism of transport to the sensitive receptor e.g. proximity to receptor and wind direction for airborne dust. Recent wind direction information has been obtained for Stanton Harcourt Wind Forecast weather station² approximately 745 metres northeast of the site and used to establish hazard pathways adjacent to the site.

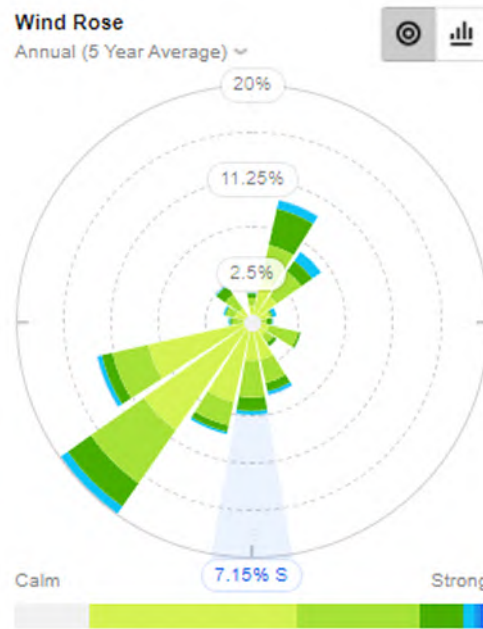


Figure 2.1 – Wind Road for Stanton Harcourt

2.4 Probability of Exposure

Probability of exposure is determined by the distance of the receptor to the site and the likelihood of the hazard reaching the receptor i.e. frequency of prevailing wind in that direction. The probability of exposure is irrespective of the type of hazard presented. Where the extent of a receptor extends to encompass more than one of 16 compass points (for example a stretch of woodland positioned east to south east relative to the site) and the distance of this single entity from the site varies, the assessment will be based on the closest distance and the greatest downwind frequency for conservatism. The extent of the receptor over one or more compass points will always be described in a clockwise direction.

2.5 Hazard Receptors

A review of the sensitive receptors in proximity to the site has been undertaken to identify potential sensitive receptors. A list of sensitive receptors listed in Table 1 below. The Sensitive Receptor Location Plan referenced 3804/1/001) is attached in Appendix A and should be referenced in conjunction with this ERA.

² [Stanton Harcourt Wind Forecast, Oxfordshire OX8 1 - WillyWeather](#)

Table 1 – Potential Receptors

ID	Description	Type	Distance from Installation Boundary (m)	Direction from Site	Frequency Downwind (%)
1	Linch Hill Cottages	Residential	<10	E	1.8
2	Stanton Harcourt Village	Residential	<10	N	7.2
3	Lakeside Industrial Estate	Commercial/Industrial	60	NNW	5.8
4	Industrial Estate	Commercial/Industrial	30	SW	6.5
5	Sutton Village	Residential	960	NNE	8.8
6	West End and nearby farms	Residential	720	E	1.8
7	Northmoor village and nearby farms	Residential	1250	SE	3.4
8	Standlake	Residential	1370	SW	6.5
9	Beardmill Farm	Residential	1500	W	1.6
10	Vicarage Pit Nature Reserve	Ecological	990	W	1.6
11	Stoneacres Lake and adjoining ponds	Recreational/ecological	310	E	1.8
12	Hardwick Leisure Park and Lakes	Recreational/ecological	500	W	1.6
13	Thames Path and connected footpaths	Footpath/recreational	760	NE	17.9
14	Dix Pit Lake and the Devils Quoits	Surface water and LWS	<10	W	1.6
15	River Windrush	Surface water	400	W	1.6
16	River Thames	Surface water	1660	E	1.8
17	Caravan Park (adjacent to the Thames)	Residential / Recreational	1500	E	1.8
18	B4449 Minor Road	Public Highway	640	NNW	5.8
19	Stanton Harcourt	SSSI	<10	E	1.8
20	Main Road	Public Highway	<10	E	1.8
21	Properties off Downs Road	Residential	1,430	W	1.6
22	Tar Wood	LWS	2,000	NW	2.3

2.6 Conservation and Heritage Screen

A Nature and Heritage Conservation Screen (referenced: EPR/BV7214IR/V016) was requested from the Agency and received on 27 January 2022. It identified two Special Areas of Conservation (SAC), Oxford Meadows and Cothill Fen within 10km of the Site. It also identified a Site of Special Scientific Interest (SSSI), Stanton Harcourt, within 2 km. Two Local Wildlife Sites (LWS) were also identified, Dix Pit and Tar wood. Protected habitats included Ancient Woodland, Tar Wood and Whitley Copse, and protected species including Great Crested Newts. No other European Sites, National Nature Reserves and Local Nature Reserves were identified. The screen is attached as Appendix B.

As Phase 5 is classified as an ‘other landfill’ (i.e. does not attract gulls/crows) the Agency screening distance is 2km. As such Oxford Meadows (3,700m), Cothill Fen (6,010m) and Whitley Copse (2,080m) have not been included in Table 1. All other sites have been included in Table 1.

3 Risk Assessments and Accident Management Plans

3.1 Risk Assessments

The specific risk assessments completed for noise and vibration, fugitive dust emissions and mud on the road are detailed in Tables 2 to 4 below. In many cases there is an inter-relationship between these specific risk assessments and meteorological conditions and where relevant this has been identified. The pathway is determined by the location of the receptor relative to the site, the distance from the site boundary (m) and the frequency (likelihood) the prevailing wind will blow in the direction of the receptor (%) as determined by windrose data.

3.2 Mitigated Risk

The Mitigated Risk is the residual risk presented by the identified hazard after control measures have been instigated.

3.3 Environmental Accidents

The Agency guidance requires the completion of an Accidents Risk Assessment and Management Plan. This should assess potential hazards associated with the proposed activity not described in the sections above.

The Agency web-based guidance document 'Landfill operators: environmental permits'³ do however describe typical accident scenarios associated with landfills. These are assessed in Table 5 below. Detailed operational procedures for the management of the site will be listed in the associated Environmental Management System (EMS).

³ [Landfill operators: environmental permits - Guidance - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/landfill-operators-environmental-permits)

Table 2 – Noise and Vibration Risk Assessment and Management Plan

Hazard / Pathway	Receptor				Probability of exposure	Unmitigated Consequence	Initial Risk	Risk Management	Residual Risk
	ID No	Distance (m)	Direction	Freq. Downwind (%)					
Noise through air and Vibration through ground from: Movement and use of plant and machinery associated with the delivering and handling of waste onsite	1	<10	E	1.8	High – close proximity to Site	High – noise annoyance to residents	High	Site activities will be behind perimeter bunds, boundary vegetation or below ground level during early stages of operations. Landfilling activities are unlikely to generate noise in excess of the consented mineral extraction and landfilling activities. On site speed limits will be enforced and internal site roads will be maintained to minimise noise / vibration. Where practicable, engines to be switched off when not in use. Site plant and equipment will be properly maintained and fitted with Manufacturer’s exhaust silencers. Should it prove necessary alternatives to reversing beepers on site vehicles will also be considered. Tipping will not be made from height to reduce noise / vibration	Low
	2	<10	N	7.2	High – close proximity to Site	High – noise annoyance to residents	High		
	3	60	NNW	5.8	High – close proximity to Site	Medium – noise annoyance to staff	Medium		
	4	30	SW	6.5	High – close proximity to Site	Medium – noise annoyance to staff	Medium		
	5	960	NNE	8.8	Low – distance from Site	High – noise annoyance to residents	Medium		
	6	720	E	1.8	Medium – proximity to Site	High – noise annoyance to residents	Medium		
	7	1250	SE	3.4	Low – distance from Site	High – noise annoyance to residents	Medium		
	8	1370	SW	6.5	Low – distance from Site	High – noise annoyance to residents	Medium		
	9	1500	W	1.6	Low – distance from Site	High – noise annoyance to residents	Medium		
	10	990	W	1.6	Low – distance from Site	Medium – potential noise disturbance to wildlife	Medium		
	11	310	E	1.8	High – close proximity to Site	Medium – potential noise disturbance to wildlife	Medium		
	12	500	W	1.6	High – close proximity to Site	Medium – potential noise disturbance to wildlife	Medium		
	13	760	NE	17.9	Medium – proximity to Site	Medium - transient noise annoyance	Medium		
	14	<10	W	1.6	High – close proximity to Site	Low – not sensitive to noise (surface water)	Low		
	15	400	W	1.6	High – close proximity to Site	Low – not sensitive to noise (surface water)	Low		
	16	1660	E	1.8	Low – distance from Site	Low – not sensitive to noise (surface water)	Low		
	17	1500	E	1.8	Low – distance from Site	High – noise annoyance to residents / guests	Medium		
	18	640	NNW	5.8	Medium – proximity to Site	Low - transient noise annoyance	Medium		
	19	<10	E	1.8	High – close proximity to Site	Medium – potential noise disturbance to wildlife	Medium		
	20	<10	E	1.8	High – close proximity to Site	Low - transient noise annoyance	Medium		
	21	1,430	W	1.6	Low – distance from Site	High – noise annoyance to residents	Medium		
	22	2,000	NW	2.3	Low – distance from Site	Medium – potential noise disturbance to wildlife	Medium		

Table 3 – Fugitive Dust Emissions Risk Assessment and Management Plan

Hazard / Pathway	Receptor				Probability of exposure	Unmitigated Consequence	Initial Risk	Risk Management	Residual Risk
	ID No	Distance (m)	Direction	Freq. Downwind (%)					
Fugitive dust emissions generated by: Vehicle movements and handling of waste on site	1	<10	E	1.8	High – close proximity to Site, occasionally downwind	High – dust annoyance to residents	High	<p>No wastes solely of dust or consisting of powders to be accepted at the site.</p> <p>On site vehicle speed limit enforced to ensure that vehicle movements do not generate excessive dust.</p> <p>Dampening of site roads/surfaces as necessary using a water bowser during dry periods.</p> <p>Weighbridge will conduct assessment of waste inputs and impose controls and restriction on potentially dusty waste (e.g. rapid cover following placement, refusal to tip).</p> <p>Daily visual inspection by appropriate site staff at suitable locations taking account of the prevailing wind direction.</p> <p>All vehicles will use wheel wash to prevent mud dust being trailed onto adjacent roads and creating a potential source of dust nuisance.</p>	Low
	2	<10	N	7.2	High – close proximity to Site, infrequently downwind	High – dust annoyance to residents	High		
	3	60	NNW	5.8	High – close proximity to Site, occasionally downwind	Medium – dust annoyance to residents	Medium		
	4	30	SW	6.5	High – close proximity to Site, infrequently downwind	Medium – dust annoyance to residents	Medium		
	5	960	NNE	8.8	Medium – proximity to Site, infrequently downwind	High – dust annoyance to residents	Medium		
	6	720	E	1.8	Medium – proximity to Site, occasionally downwind	High – dust annoyance to residents	Medium		
	7	1250	SE	3.4	Low – distance from Site , occasionally downwind	High – dust annoyance to residents	Medium		
	8	1370	SW	6.5	Low – distance from Site, infrequently downwind	High – dust annoyance to residents	Medium		
	9	1500	W	1.6	Low – distance from Site, occasionally downwind	High – dust annoyance to residents	Medium		
	10	990	W	1.6	Medium – proximity to Site, occasionally downwind	Medium – potential deposition on sensitive vegetation	Medium		
	11	310	E	1.8	Medium – close proximity to Site, occasionally downwind	Medium – potential deposition on sensitive vegetation	Medium		
	12	500	W	1.6	High – close proximity to Site, occasionally downwind	Medium – potential deposition on sensitive vegetation	Medium		
	13	760	NE	17.9	Medium – proximity to Site, frequently downwind	Medium– transient dust nuisance	Medium		
	14	<10	W	1.6	High – close proximity to Site, occasionally downwind	Medium – potential accumulation in surface water	Medium		
	15	400	W	1.6	High – close proximity to Site, occasionally downwind	Medium – potential accumulation in surface water	Medium		
	16	1660	E	1.8	Low – distance from Site, occasionally downwind	Medium – potential accumulation in surface water	Medium		
	17	1500	E	1.8	Low – distance from Site, occasionally downwind	High – dust annoyance to residents / guests	Medium		
	18	640	NNW	5.8	Medium – proximity to Site, occasionally downwind	Low – transient dust nuisance	Medium		

Hazard / Pathway	Receptor				Probability of exposure	Unmitigated Consequence	Initial Risk	Risk Management	Residual Risk
	ID No	Distance (m)	Direction	Freq. Downwind (%)					
	19	<10	E	1.8	High – close proximity to Site, occasionally downwind	Medium – potential deposition on sensitive vegetation	Medium	As above	Low
	20	<10	E	1.8	High – close proximity to Site, occasionally downwind	High – high quantities of dust could potentially obscure visibility on road	High		
	21	1,430	W	1.6	Low – distance from Site, occasionally downwind	High – dust annoyance to residents	Medium		
	22	2,000	NW	2.3	Low – distance from Site, occasionally downwind	Medium – potential deposition on sensitive vegetation	Medium		

Table 4 – Fugitive Mud Emission Risk Assessment and Management Plan

Hazard / Pathway	Receptor				Probability of exposure	Unmitigated Consequence	Initial Risk	Risk Management	Residual Risk
	ID No	Distance (m)	Direction	Freq. Downwind (%)					
Fugitive mud emissions generated by: Vehicle movements and handling of waste on site	1	1,150*	E	1.8	Low – significant distance by road from site entrance to receptor	High - potentially hazardous road conditions.	Low	<p>All vehicles will use wheel wash to prevent mud / dust being trailed onto adjacent roads and creating a hazard / nuisance.</p> <p>The site access road from the B4449 public highway is circa 1.8km in length which will provide sufficient distance for any residual mud to fall from vehicle wheels before they access the public highway.</p> <p>A mechanical road sweeper will regularly clean the site access road and public highway as necessary.</p> <p>Site staff at the weighbridge will be vigilant to excessive mud tracked from the site and any vehicles with excess mud on their tyres will be directed back through the wheel wash.</p> <p>Monitoring of the cleanliness of the access road and appropriate maintenance are part of the EMS for the site.</p>	Low
	2	2,060*	N	7.2	Low – significant distance by road from site entrance to receptor	High - potentially hazardous road conditions.	Low		
	3	1,570*	NNW	5.8	Low – significant distance by road from site entrance to receptor	High - potentially hazardous road conditions.	Low		
	4	240*	SW	6.5	High – using same access road to join the B4449 and close to site entrance	High - potentially hazardous road conditions.	High		
	5	960	NNE	8.8	Low – no physical connection	Low – no impact	Low		
	6	720	E	1.8	Low – no physical connection	Low – no impact	Low		
	7	1250	SE	3.4	Low – no physical connection	Low – no impact	Low		
	8	1370	SW	6.5	Low – no physical connection	Low – no impact	Low		
	9	1500	W	1.6	Low – no physical connection	Low – no impact	Low		
	10	990	W	1.6	Low – no physical connection	Low – no impact	Low		
	11	310	E	1.8	Low – no physical connection	Low – no impact	Low		
	12	500	W	1.6	Low – no physical connection	Low – no impact	Low		
	13	760	NE	17.9	Low – no physical connection	Low – no impact	Low		
	14	40*	W	1.6	High – using same access road to join the B4449 and carpark close to site entrance	High - potentially hazardous road conditions.	High		
	15	400	W	1.6	Low – no physical connection	Low – no impact	Low		
	16	1660	E	1.8	Low – no physical connection	Low – no impact	Low		
	17	1500	E	1.8	Low – no physical connection	Low – no impact	Low		
	18	1,750*	NNW	5.8	Low – significant distance by road from site entrance to receptor	High - potentially hazardous road conditions.	Medium		
	19	<10	E	1.8	Low – no physical connection	Low – no impact	Low		
	20	550*	E	1.8	Medium – not used to access Site but road near main site entrance	High - potentially hazardous road conditions.	Medium		
	21	1,430	W	1.6	Low – no physical connection	Low – no impact	Low		
	22	2,000	NW	2.3	Low – no physical connection	Low – no impact	Low		

Notes: * distance by road

Table 5 – Accident Management Plan

Hazard	Receptor	Pathway	Probability	Consequence	Overall Risk	Risk Management	Mitigated Risk
Fuel / engine oil Leak or damage to portable fuel bowser, static fuel storage tank or site vehicles	Groundwater	Lateral movement via overlying terrace gravels	Low	High – pollution of groundwater	Medium	Fuel and engine oils stored with appropriate secondary containment and spillage contingencies. Spillages which occur within the landfill will be within engineered contained area. Site vehicles will not be refuelled within installation area. Site vehicles and plant subject to regular preventative maintenance in accordance with EMS procedures.	Low
Fire Uncontrolled burning of wastes, landfill gas or site vehicles.	Groundwater	Lateral movement via overlying terrace gravels	Low	High - pollution of groundwater through firewater run-off or leaks from damaged equipment	Medium	Wastes within Phases 1-3 are capped and under gas extraction. Wastes for Phase 4 and 5 are inert and are inherently non-combustible in nature and will not generate landfill gas. Site vehicles and plant subject to regular preventative maintenance in line with site EMS procedures. Fire control equipment will be on hand, with major incidents to be dealt with by the Fire Brigade in accordance with site EMS Procedures. No smoking except in designated areas.	Low
	Receptors listed in Table 1	Airborne	Low	Medium – smoke / odour annoyance	Medium		
Explosion Compressed gas cylinders, combustion of landfill gas or fuel storage tank	Site Staff	Airborne	Low	High – danger of serious injury	Medium	Fuel is stored with appropriate controls to prevent fire or explosion (i.e. no smoking except in designated areas). Compressed gases not required or present for operation of installation. Phases 1-3 are under positive gas extraction and the gas field is subject to the Dangerous Substances and Explosive Atmospheres (DSEAR) Regulations 2002 and is zoned accordingly. Phase 4 and 5 wastes are inert and will not generate landfill gas.	Low
	Groundwater	Lateral movement via overlying terrace gravels	Low	High – pollution of groundwater through leaks from damaged equipment	Medium		
Wastes deposited Chemical reaction of incompatible wastes	Receptors listed in Table 1	Airborne	Low	Medium – odour annoyance or smoke from oxidising agents	Medium	Waste acceptance protocols will exclude the deposit of chemically reactive wastes. Those accepted will be of an inert low biodegradable nature and therefore, will not generate noxious gases or contaminating leachate.	Low
Vandalism Damage to site vehicles, fuel bowzers, gas or leachate extraction pipework	Groundwater	Lateral movement via overlying terrace gravels	Low	High - pollution of groundwater through leaks from damaged equipment	Medium	Site location is fairly remote with limited access. Existing site security will prevent access by unauthorised persons. Vehicles will be kept overnight in a secure area with appropriate security measures.	Low
	Receptors listed in Table 1	Airborne	Low	Medium – odour annoyance	Medium		
Leachate Accidental damage to leachate monitoring chamber	Groundwater	Lateral movement via overlying terrace gravels	Low	High – pollution of groundwater through leaks from damaged well	Medium	Leachate wells in Phases 1-3 are within restored areas with limited plant movements so likelihood of accidental damage to wells is low. Phase 4 and 5 waste types are not expected to generate a polluting leachate.	Low

4 Conclusions

The risk assessments detailed in Tables 2 to 5 within this ERA indicates that the addition of Phase 5 (inert cell) to the current permitted installation is unlikely to cause an increase to the emissions from the Site.

Residential and commercial properties in the vicinity of the site are most sensitive to proposed site operations; however the mitigation measures employed at the site ensure these premises are unlikely to be affected by the activity.

Accidents such as fire, explosion or leakages are considered unlikely due to the current and proposed operations on site. Nevertheless, safe site working practices, effective control measures and strict waste acceptance criteria further reduce the potential for such accidents to occur

Appendix A – Drawings



Notes

- Site Permit Boundry
- Buffer Zone
- 1 Receptor Marker

TerraConsult

Dugard House, Peartree Road,
Colchester, Essex, CO3 0UL

Client
**Waste Recycling Group
(Central) Limited**

Site
Dix Pit Landfill

Title
Sensitive Receptors

Scale	NTS	
Drawing No.	3804-1-001	
Rev	Date	Description
File	3804-1-001 Sensitive Receptors.dwg	
Date	03/22	Engineer MN
Drawn	JM	Checked MN

Appendix B – Nature and Heritage Conservation Screen

Nature and Heritage Conservation

Screening Report: Bespoke Installation

Reference	EPR/BV7214IR/V016
NGR	SP 41277 04696
Buffer (m)	625
Date report produced	27/01/2022
Number of maps enclosed	4

The nature conservation sites identified in the table below must be considered in your application.

Nature and heritage conservation sites	Screening distance (km)	Further information
Special Areas of Conservation (cSAC or SAC) Oxford Meadows (SAC) Cothill Fen (SAC)	10	Joint Nature Conservation Committee
Sites of Special Scientific Interest (SSSI) Stanton Harcourt (SSSI)	2	Natural England
Local Wildlife Sites (LWS) Dix Pit Tar Wood	2	Appropriate Local Record Centre (LRC)
Ancient Woodland Tar Wood Whitley Copse	2	Woodland Trust Forestry Commission Natural England

Protected Species Screening distance (m) Further Information

Code 2

up to 500m

[Natural England](#)

Water Vole

[Appropriate Local Record Centre \(LRC\)](#)

[National Biological Network \(NBN\)](#)

Unfortunately we cannot provide you with the details of all protected species. This is because we either have not been given permission by the owner of the species data, or they have asked us not to identify the species as they are vulnerable. In these instances you must contact the relevant organisation listed above. A small administration charge may be incurred for this service.

Where protected species are present, a licence may be required from Natural England or the Welsh Government to handle the species or undertake the proposed works.

The relevant Local Records Centre must be contacted for information on the features within local wildlife sites. A small administration charge may also be incurred for this service.

Please note we have screened this application for protected and priority sites, habitats and species for which we have information. It is however your responsibility to comply with all environmental and planning legislation, this information does not imply that no other checks or permissions will be required.

Please note the nature and heritage screening we have conducted as part of this report is subject to change as it is based on data we hold at the time it is generated. We cannot guarantee there will be no changes to our screening data between the date of this report and the submission of the permit application, which could result in the return of an application or requesting further information.

customer service line
03708 506 506

incident hotline
0800 80 70 60


floodline
0845 988 1188

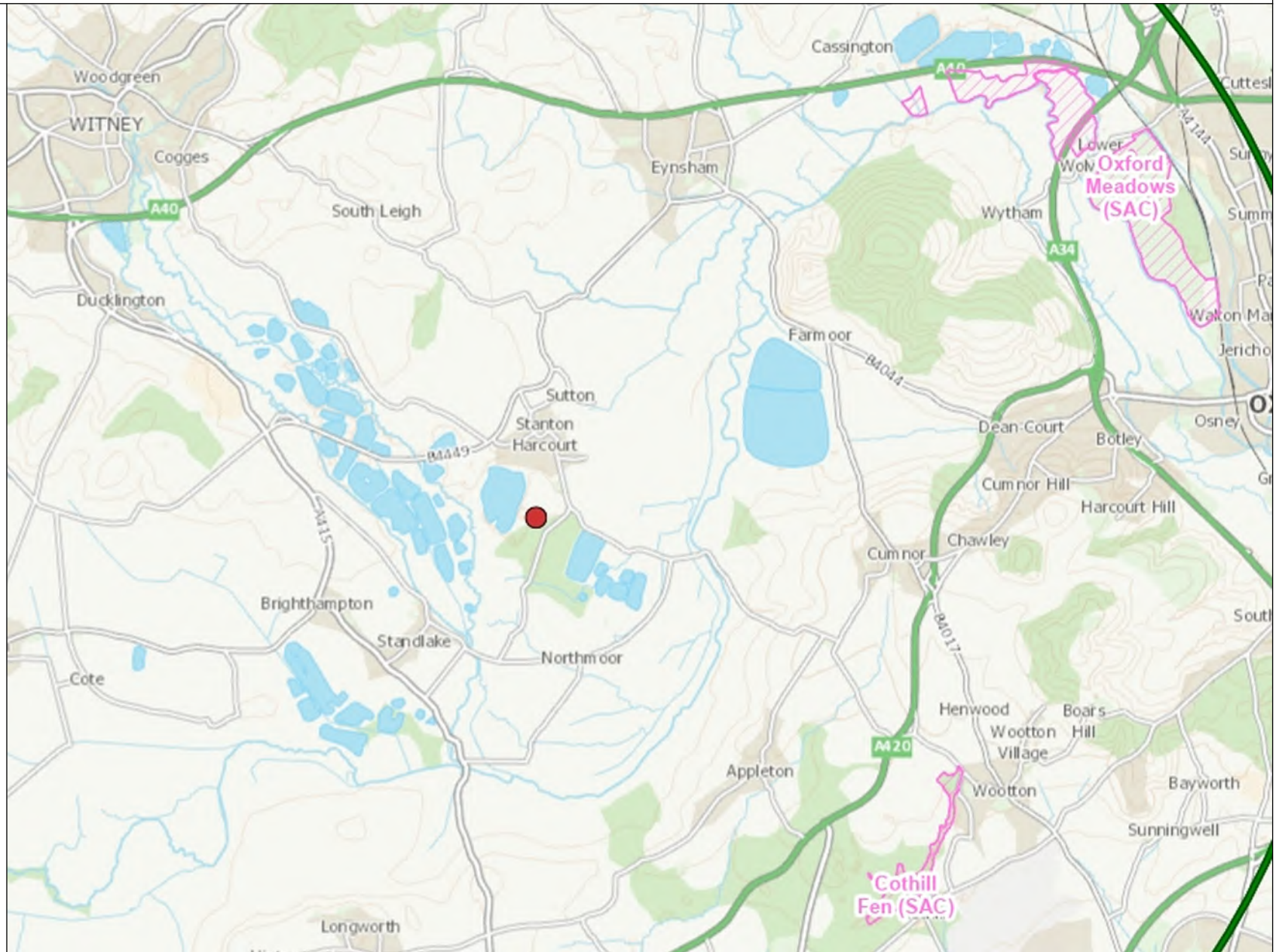
www.environment-agency.gov.uk

Special Areas of Conservation




Legend

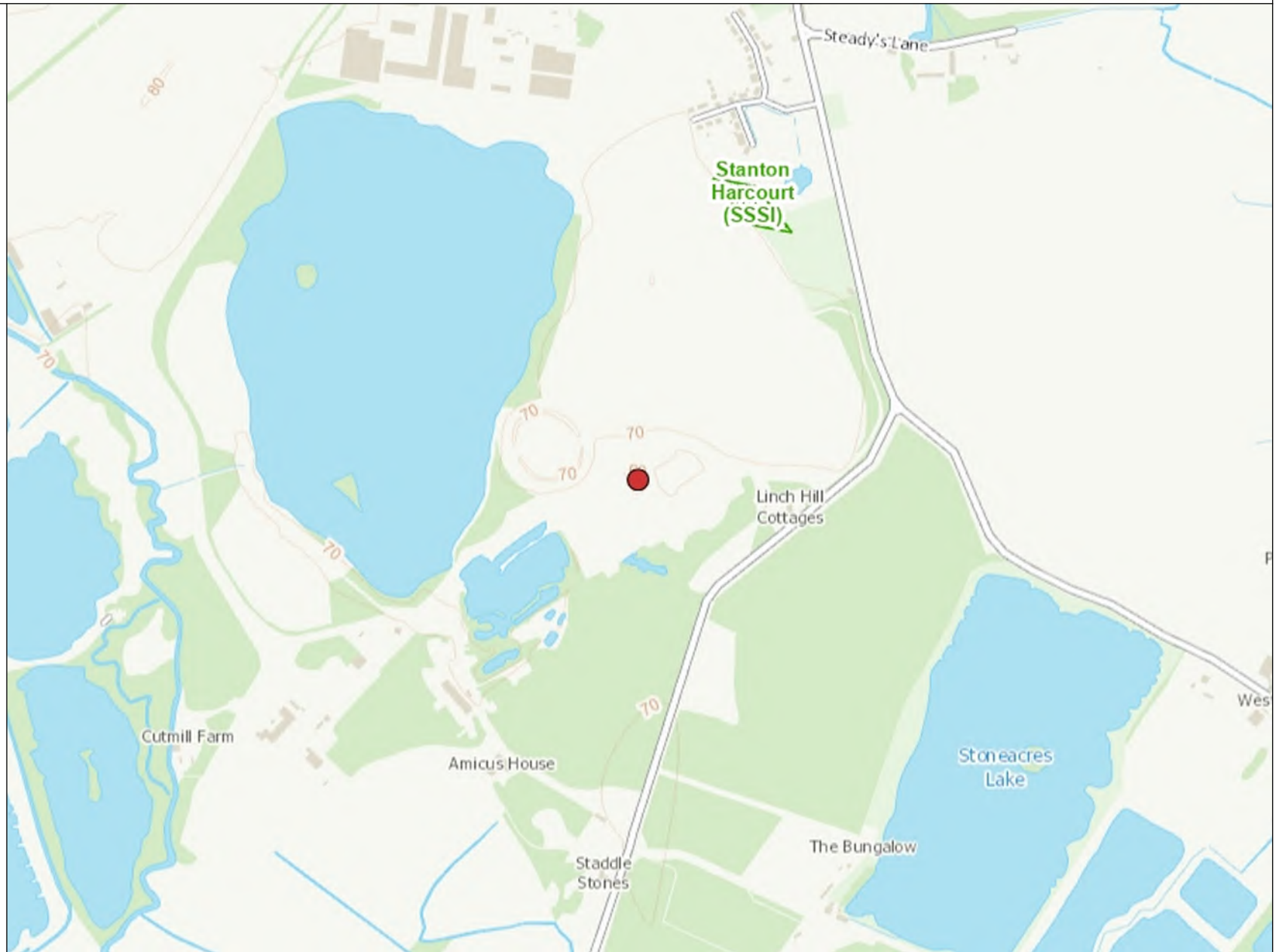
 SAC (England)



Sites of Special Scientific Interest

Legend

 SSSI (England)



1: 10,000

0 250

Metres

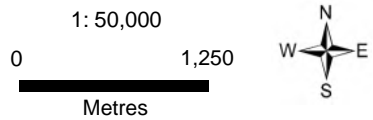
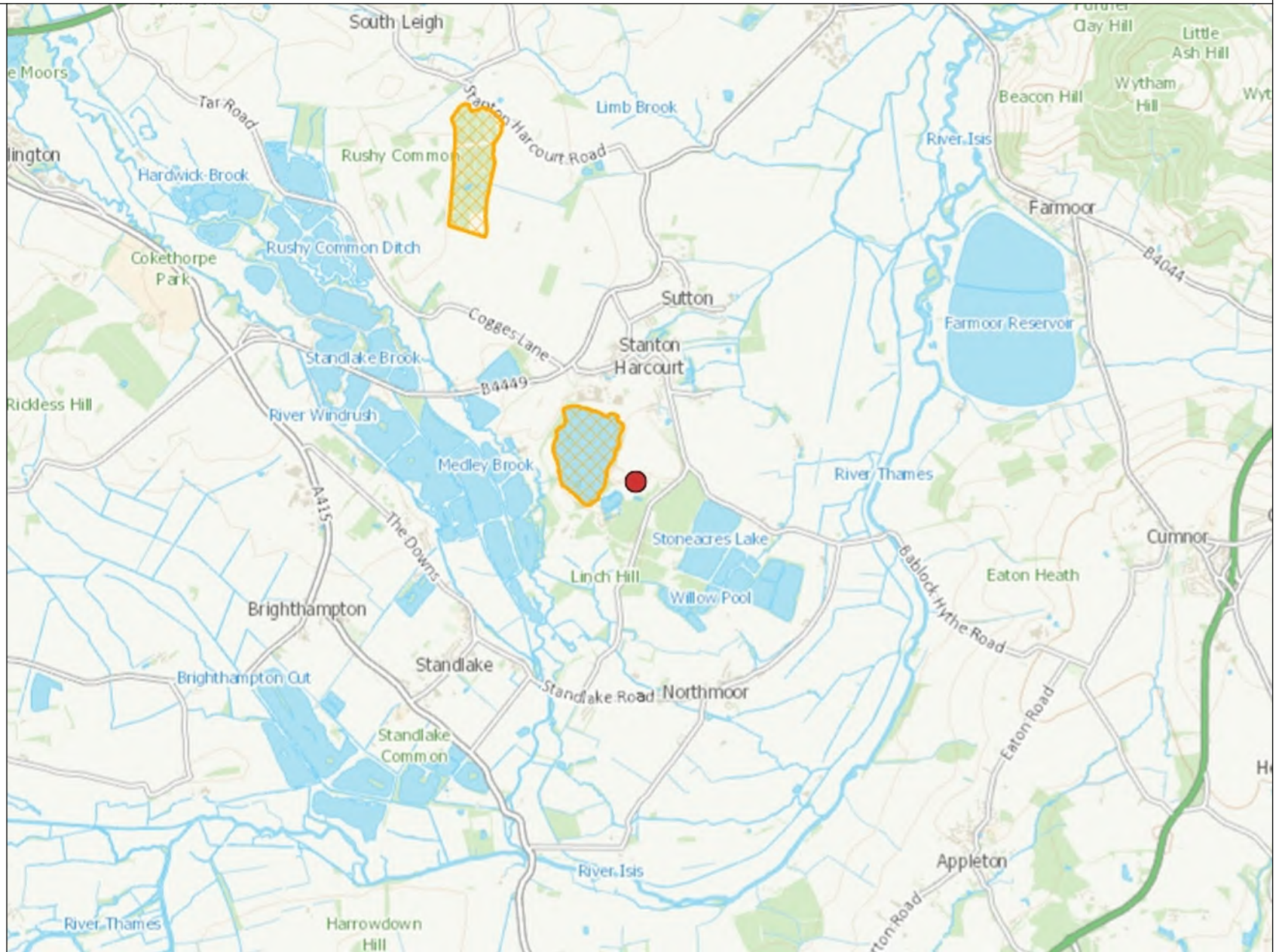


Local Wildlife Sites




Legend

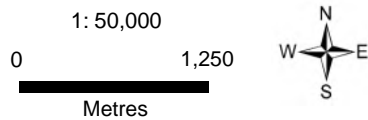
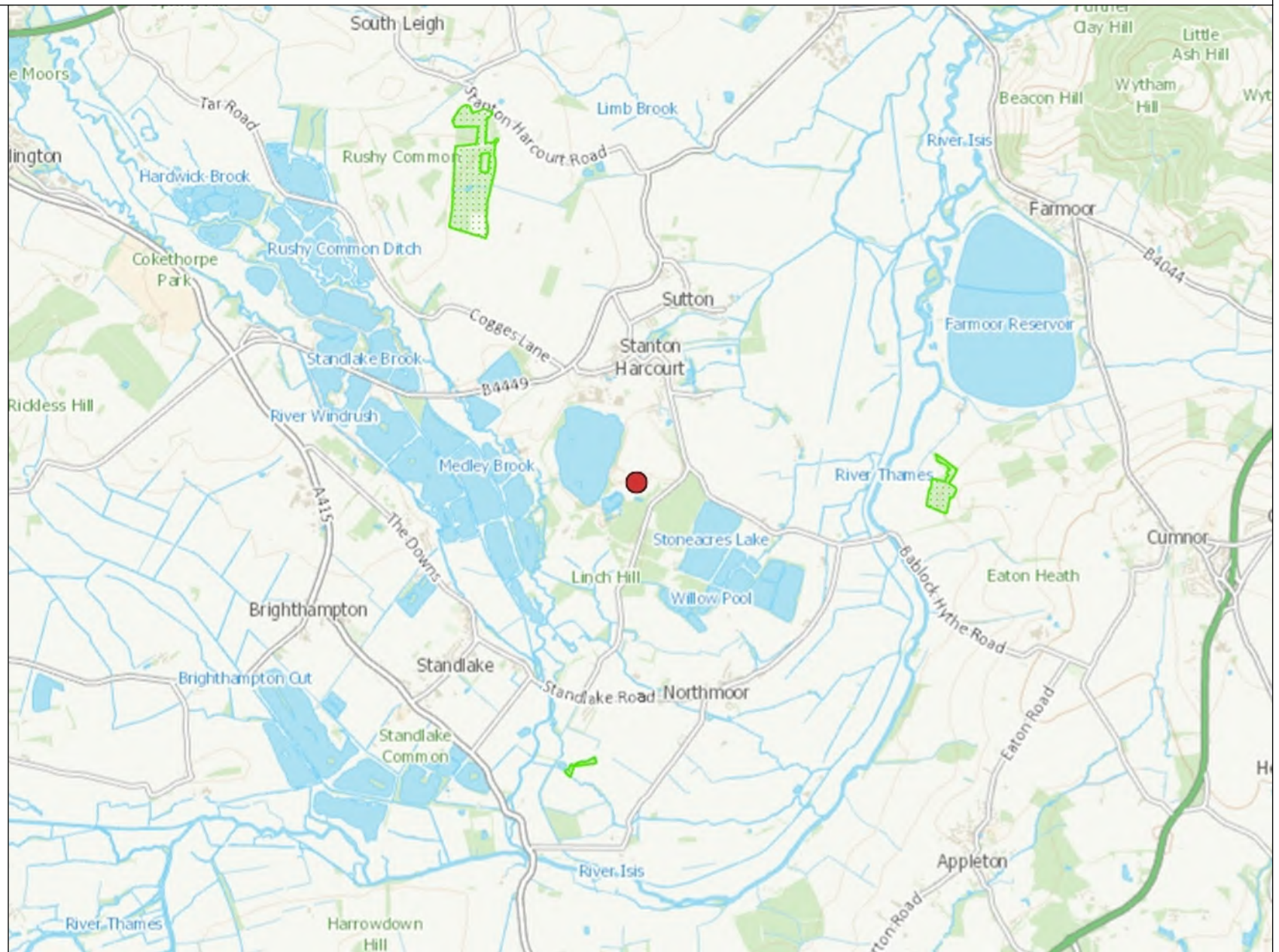
 Local Wildlife Sites



Ancient Woodland

Legend

 Ancient Woodland (England)





IRELAND | UK | UAE | BAHRAIN | KSA

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www.byrneology.com

Email: info@byrneology.com