Crown Transfer Station 2

Environmental Risk Assessment

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Contents

1 Introduction

1.1 Report Objectives

This Environmental Risk Assessment (ERA) supports a bespoke permit application by Crown Waste Management Limited (the Operator) at Crown Waste Transfer 2, Pool Road Industrial Estate, Pool Road, Nuneaton, CV10 9AE (the Site).

This ERA has been undertaken using current Environment Agency (Agency) guidance[1]. The guidance referenced identifies the following step process to risk assessments which can be summarised as:

- Identify and consider risks at the Site, and the sources of the risks;
- Identify the receptors (people, animals, property and anything else that could be affected by the hazard) at risk from the Site;
- Identify the possible pathways from the sources of the risks to the receptors;
- Assess risks relevant to the specific activity and check they are acceptable and can be screened out; and
- State what will be done to control risks if they are too high.

A copy of this ERA will be included in the Site's Environmental Management System (EMS) held at the Site Office and all members of staff will have access to this document.

The guidance indicates that the following parameters require assessing:

- any discharge, for example sewage or trade effluent to surface or groundwater;
- accidents;
- odour;
- noise and vibration;
- uncontrolled or unintended ('fugitive') emissions, for which risks include dust, litter, pests and pollutants that should not be in the discharge;
- visible emissions, for example smoke or visible plumes; and
- release of bioaerosols, for example from shredding, screening and turning, or from stack or open point source release such as a biofilter.

The guidance requires that receptors are considered with regard to the proximity of the Site. Table 1, in Section 2.6 of this report identifies the most likely sensitive receptors adjacent to the Site and has been compiled using information available through internet-based searches.

[1] Risk assessments for your environmental permit - GOV.UK (www.gov.uk)

1.2 Assessment of Risk

The Agency guidance requires that everyone applying for a new 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.

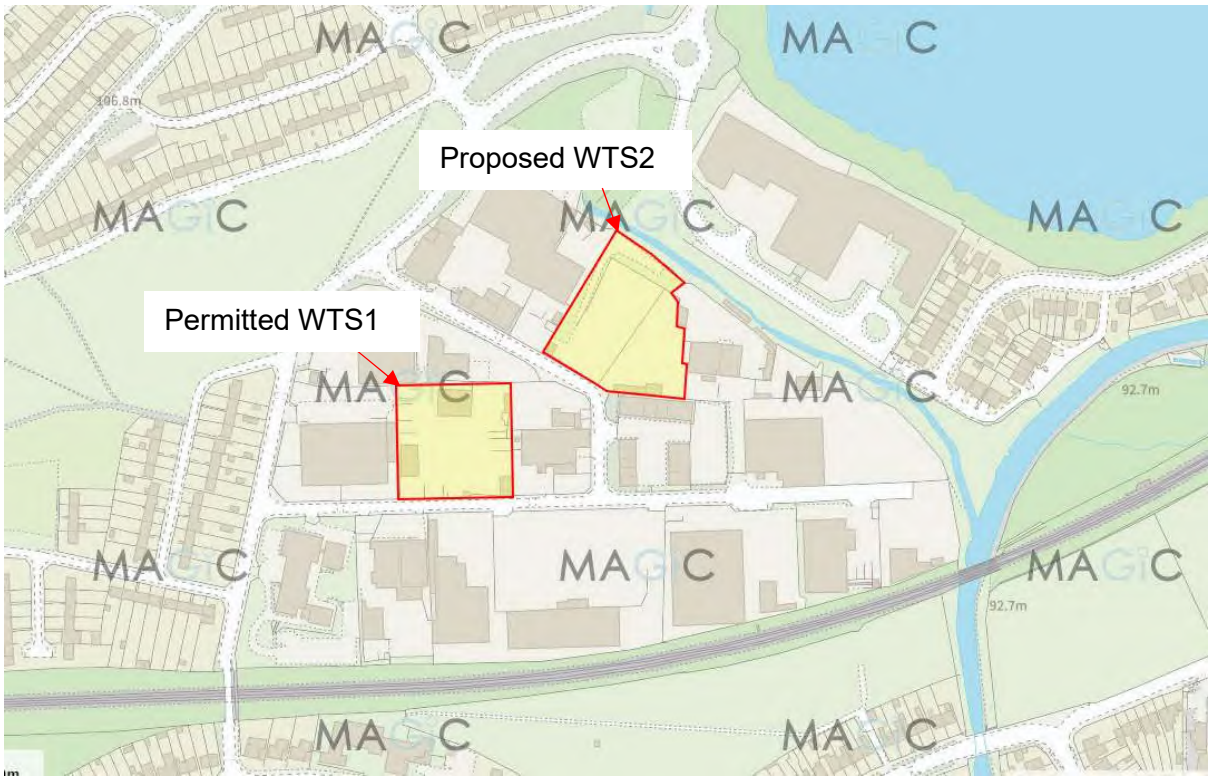
2 Scope of the Assessment

2.1 Site Location and Access

The Site is located 1.5km west of Nuneaton and is centred on an approximate National Grid Reference of SP 34686 92296 and is located within Pool Road Industrial Estate which comprises predominantly industrial businesses.

The Site occupies 0.3 hectares of land, with the main concreted yard area where waste materials are stored and processed covering around 0.2 hectares. The site operates as a satellite of the permitted Waste Transfer Station (WTS1) operated within Pool Road Industrial Estate by the same Operator under existing permit referenced EPR/EP3192FU. The permitted WTS1 and proposed Site (WTS2) are shown in Image 1. Both sites will be separately permitted.

Image 1. Approximate Permit Boundaries (Source Magic Maps)



The proposed satellite site accessed via Pool Road currently operates under existing waste exemptions. Approximately 10 m from the northern site boundary and 20 m from the eastern site boundary is a contained area for the waste treatment and storage activities. The U shape containment area is constructed of 3.2 m high concrete lego block walls and 3 m of steel sheet cladding upon the wall. The internal fencing between the two previous separate yards has been removed. A notice board will be provided at the site gate with the permit details and the Agency's contact details.

No new buildings will be constructed onsite and waste will be weighed in and sorted at the permitted WTS prior to storage at the Site.

Surface water runs from north to south and is directed to a drain towards an interceptor and silt trap before existing via foul sewer.

2.2 Proposed Operations

The Operator is applying for an environmental permit to use the Site to store baled plastic, cardboard, wood, soils & stones, general mixed waste, green waste and metal for bulking prior to further recovery and/or disposal. The Site also provides skip and vehicle storage. The proposed treatment activities will be limited to sorting; and, treatment of construction and demolition wastes to produce a saleable aggregate via a hopper / screener and picking station.

The Site layout is shown on drawing reference 4554/4/003. The Site surface is covered by impermeable concrete with drainage that directs surface water flow, via an interceptor, to foul sewer on Pool Road. Kerbs will be installed around the perimeter. The system contains shut off valves that can prevent discharge from Site should a spillage occur, or to prevent the escape of firewater.

The picking station is located in a portacabin located above the storage bays in the northwest corner of Site. The hopper / screener is also located in the northwest corner and bounded with Lego Concrete Blocks with corrugated fencing. The screener is capable of treating 80 to 100 tonnes of material per hour. Therefore, physical treatment of non-hazardous waste will be limited to manual and mechanical sorting/separation and screening of waste soils and aggregate.

Waste will be weighed in, registered and checked at the existing permitted WTS1. Incoming waste from the permitted WTS1 will be delivered through the entrance gate and deposited in the appropriate storage area in the site (WTS2). Two metre high concrete storage bays within the concrete yard area will be used to store waste. An 8-yard skip will be used for plasterboard and a 14-yard skip for quarantined waste. Vehicles will leave the Site through the exit gateway. Operatives will be onsite when deposits are made or collected.

The site would handle up to 75,000 tonnes per annum of non-hazardous waste aggregated across all activities.

2.3 Potential Hazards

2.3.1 Discharges / Contaminated Water

The potential for the Site to cause water pollution has been associated with the following activities:

- Storage of non-hazardous waste;
- Accumulation of soil or sediment on Site surfaces; and,

- Use of vehicle / plant fuels, lubricants or engineering liquids.

The non-hazardous waste is unlikely to have a significant moisture content or contain free liquid which could directly impact water quality. Rain falling on exposed stockpiles of non-hazardous waste may percolate through the material and leach out soluble compounds generating a potentially polluting liquid. Rogue loads containing elements of, or consisting wholly of material non-compliant with the permit waste types may be susceptible to leaching of contaminants.

Soluble contaminants may be directly toxic to aquatic flora and fauna should water run-off from the Site enter a sensitive water course. Soluble nutrients may have an indirect effect by causing eutrophication of a water body and starving the water column of oxygen. If suspended solids mobilised from aggregates enter a water course, they could form a silt layer and smother sensitive habitats. Mobilised fine silt can also accumulate in ponded hollows on the Site surfacing. If this dries it can cause a dust nuisance if disturbed by strong winds or passing vehicles.

Fugitive litter, organic material and solids can also accumulate in drainage channels. In addition to preventing them from draining effectively, the liquid can stagnate forming a pool of potentially odorous and contaminating liquid were it to be released from the Site.

The Site surface is covered by impermeable concrete with drainage that directs surface water flow via an interceptor to foul sewer on Pool Road. Kerbs will be installed around the perimeter. The system contains shut off valves that can prevent discharge from Site should a spillage occur, or to prevent the escape of firewater.

Procedures for dealing with any leaks and spillages are within the Operator's EMS. The Site has two spill kits on Site which are kept in the site office. The spill kits comprise an RS PRO 120 litre chemical spill kit and an RS PRO 35 litre oil spill kit. Both kits comprise disposal bags, goggles, marking tape, pads, pillows, socks and wheel bin.

A variety of industrial vehicles and static plant are used and stored at Site. A fuel tank will also be stored onsite.

Fuel will be stored in a 5,000 ltr self-bunded storage tank in accordance with the Control of Pollution (Oil Storage) (England) Regulations 2001 (as amended). The bunded storage tank is positioned on a sealed concrete surface which drains to foul sewer via an interceptor. The bunded storage tank and drainage system are regularly monitored and maintained. The drains are also cleaned on a 6-monthly basis. Any Site vehicles and plant will be inspected daily. Any vehicles or plant found leaking fuel or oil will be repaired.

The Site will remain locked and secure when not in use and will not at any time be open to the public. The Site has a full CCTV system which can be viewed remotely, and a security guard works 6pm to 6am. This will prevent vandalism to the site, vehicles, plant and machinery and thus minimise leaks and spillages onsite .

A risk assessment summary for contaminated water is presented in Table 2.

2.3.2 Odour

Odours may be generated from the storage of waste (prior to transfer) and from waste during loading and unloading. Control of incoming wastes will be managed according to the Operator's waste acceptance procedures. The waste acceptance protocols aim to identify non-permitted waste and malodourous waste which will be rejected and redirected to the customer, to an appropriate permitted disposal facility or temporarily stored in a closed and lockable 14-yard quarantine skip. All non-permitted waste and / or malodorous waste will be transported offsite at the end of the working day. The Agency shall be informed of such incidents.

All wastes will be stored outside within bays on concrete hard standing with sealed drainage systems.

The Site has a dust and odour suppression system known as a Quattro 4-in-1 Effective Defence to minimise dust and odour. A data sheet is attached as Appendix B to the Odour Management Plan (OMP). A pacific nozzle line system is fixed around the green waste storage bay to allow localised dust and odour suppression while the numerous other attachments allow for direct application to other areas of Site.

A detailed OMP (referenced: K4554-BLP-R-ENV-00012) has been submitted with this application and highlights odour control mechanisms to be employed on the Site in order to minimise the contribution of the Site to nuisance odours in the area. The risk associated with odour emissions are summarised in Table 3.

2.3.3 Noise and Vibration

Noise and vibration can potentially arise from the following Site activities:

- Transport of waste to and from Site;
- Deposit of waste in designated storage bays;
- Transit of waste between treatment plant and designated storage bays;
- Deposit of waste into the screener / picking station;
- Transport of waste on conveyors;
- Screening of waste; and,
- Loading of material for removal from Site.

The Site will mainly be used as a waste storage facility which is unlikely to cause any noise which is abnormal to the surrounding industrial estate. It is not anticipated that the storage of waste will produce any vibration implications. Any noise or vibration will be generated primarily by the movement and operation of Site plant and machinery, and by the loading and unloading of waste during operational hours.

The Site will operate a hopper / screener and picking stations in the northwest corner of the Site. This plant and equipment has the potential to generate noise and vibration, as such the below controls have been put in place.

The Site will be operated in accordance with planning, 07:00 to 18:00 Monday to Friday and 07:00 to 17:00 on Saturdays. No operations will take place on Sundays, Bank and public holidays.

All vehicles, plant and machinery will be chosen according to its suitability for the task, maintained according to the manufacturer's recommendations and fitted with silencing equipment were appropriate. Vehicles will be appropriately maintained so as to ensure that the operation of the Site does not give rise to unacceptable levels of noise or vibration.

Approximately 10 m from the northern site boundary and 20 m from the eastern site boundary is a contained area for the waste treatment and storage activities. The containment area is constructed of 3.2 m high concrete lego block walls and 3 m of steel sheet cladding upon the wall. This will reduce noise and vibration emissions from onsite vehicles, plant and machinery.

The screener will only be operated periodically during operational hours dependent on available material. The maximum daily treatment capacity of soil, brick and concrete wastes is 80 to 100 tonnes. The daily tonnage varies depending on accepted contracts. It will be operated in accordance with manufacturers recommendations. Particular care is taken not to drop from excessive height when loading / unloading to containers or stockpiles to minimise noise and vibration.

The screened material is then fed into the picking station where Site operatives pick any contaminants from the waste which are deposited in skips. For safety and noise reduction purposed the picking station is located in a portacabin away from site traffic.

Soil, brick and concrete will also be processed through a separator. The HAAS wind sifter AIRWOLF proposed to be used onsite will complete the recycling process downstream of the mobile screener. The materials are separated by a process consisting of three components: the acceleration belt, the air nozzle and the separation drum. Light and heavy materials are precisely separated. Both fractions, light and heavy, are discharged over 2 integrated and hydraulically foldable outfeed belts into the adjacent concrete bays.

Product advantages that minimise dust emissions include:

- Very low dust emission due to a sophisticated airflow system
- Comfortable dropping heights of light and heavy outfeed belts
- Low infeed height of 2.760 m – flexible use in combination with other mobile machines
- Removable dust covers over vibratory feeder
- On board compressor for cleaning purposes

A complaints procedure is in place on Site. Any complaints received directly or via the regulatory bodies including the Agency will be recorded in the Site Diary. The complaint will instigate additional monitoring and mitigation measures and if necessary, at the location of the complaint to determine the extent of the issue. Where possible, as much information and detail about the complaint will be recorded and this information used to assist in the investigation to resolve the issue.

A risk assessment summary for noise and vibration is presented in Table 4.

2.3.4 Fugitive Emissions

2.3.4.1 Dust and Litter

The proposed wastes have a potential to generate dust and litter. Fugitive emissions can potentially arise from the following Site activities:

- Transport of waste to Site;
- Deposit of waste in designated storage bays;
- Transit of waste between treatment plant and designated storage bays;
- Storage of waste in bays;
- Deposit of waste into the screener / picking station;
- Transport of waste on conveyors;
- Screening of waste and ejection of fines / material;
- Wind-blown dust accumulated on Site surfaces;
- Vehicle movements on dusty roads;
- Loading of material for removal from Site;
- Transport of waste from Site; and
- Potentially dusty wastes accepted onsite include soils and aggregate.

Fugitive dust may present a dust nuisance to surrounding human receptors or cause an adverse impact if excessive deposits settle on sensitive habitats and smother sensitive plant life or surface water receptors as accumulated sediment. Litter is also a nuisance to surrounding human receptors.

A detailed Dust and Emission Management Plan (DEMP) (referenced: K4554-BLP-R-ENV-00013) has been submitted with this application and highlights dust control mechanisms employed on the Site in order to minimise the contribution of the Site to nuisance dust in the area. A risk assessment summary for fugitive emissions is presented in Table 5.

2.3.4.2 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 is via Pool Road. The access road and Site are paved. All internal hardstandings, site exit and entry shall be maintained in a clean condition at all times so no mud or debris is carried onto the public highway. In the unlikely event that mud and/or debris is tracked off Site by vehicles entering/leaving a road sweeper will be deployed to clean the any contaminated roads. The risk of mud is considered negligible and will not be considered further in this assessment.

2.3.4.3 Pests and Vermin

Pests may be attracted to the Putrescible Organic Fraction (POF) found at the Site. Therefore, wherever the POF is exposed, infestations are possible. Species known to be attracted to wastes found on Site include foxes, badgers, rats, rabbits, gulls and insects, in particular common house flies and blow flies. Pests are an annoyance / nuisance to residents and workplaces, can transmit diseases and can cause physical damage.

Strict operational procedures will be in place that minimise the potential impact from pests. The Site will be monitored daily by the Site Manager for evidence of pests and scavengers. Onsite inspections will also be undertaken by an appropriate pest control contractor on a monthly basis and records retained in the Site Office. This will likely be Envirochoice Pest Control who are utilised in the permitted WTS but may be subject to change. General mitigation measures will include:

- Rapid turnaround/processing times of incoming putrescible waste;
- Minimisation of storage times for putrescible waste;
- Sheeting of vehicles arriving and leaving Site;
- Site inspections by suitable trained staff; and
- Adequate house-keeping such as scraping and brushing of emptied waste storage bays.

Any sightings of pests and scavengers requiring action will results in the pest contractor being summoned immediately, appropriate actions put in place and the sighting recorded in the Site diary.

A complaints procedure is in place on Site and any complaints received will be documented, investigated and remedial measures put in place in accordance with the Site's EMS.

A risk assessment summary for pests and vermin is presented in Table 6.

2.3.4.4 Visible Emissions

No routine activities carried out within the Site will result in visible plume. The most likely source of a visible plume would be as a result of a fire occurring at the Site. A Fire Prevention and Mitigation Plan (FPMP) (ref: K4554-BLP-R-ENV-00010) has been submitted with this application and will not be considered further in this ERA.

2.3.5 Offsite Emissions

The site is neighboured by two other open yards and a number of commercial / industrial buildings. These activities have potential to generate their own emissions.

2.4 Hazard Pathways

When choosing 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 highway access and wind direction for airborne dust.

There may be an interrelationship between these risks and meteorological conditions. 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. Meteorological data from Nuneaton[2] is expected to provide representative meteorological data for the area. The windrose reproduced as Figure 1 indicates a wind direction from the prevailing south-south-east.

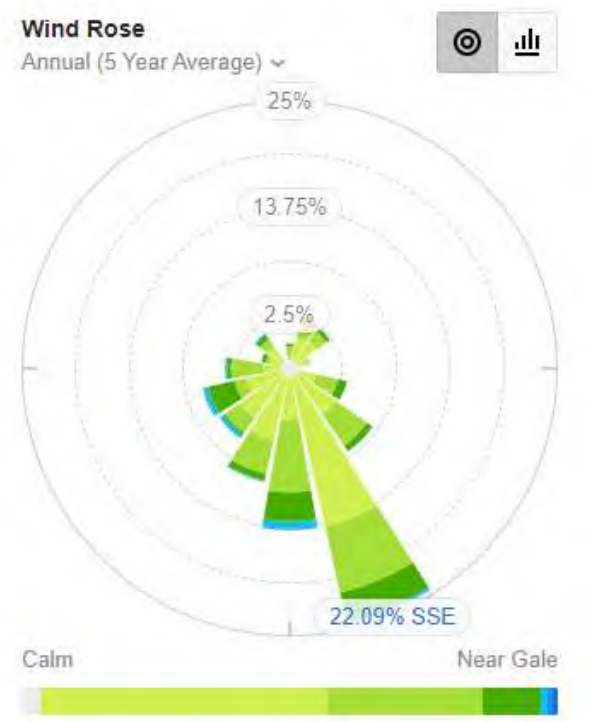


Image 2. Windrose Nuneaton

The Operator has considered the potential cumulative airborne issue from both the sites (WTS1 and WTS2) in terms of emissions. This could potentially occur when the wind is blowing from the northeast or the southwest (i.e. when the two sites are aligned).

[2] Nuneaton Wind Forecast, Warwickshire CV11 4 - WillyWeather

WTS1 is already permitted under environmental permit reference EPR/EP3192FU and operates in accordance with the following approved plans: Odour Management Plan (4554/R/003), Fire Management Plan (4554/R/004), and Dust Management Plan (4554/R/006).

For WTS2, the Operator will implement the appropriate mitigation measures detailed in this report and the Fire Prevention Plan (K4554-BLP-R-ENV-00010), Dust and Emissions Management Plan (K4554-BLP-R-ENV-00013), and Odour Management Plan (K4554-BLP-R-ENV-00012).

The risk of an increase cumulative impact is considered low as appropriate mitigation measures are and will be in place.

2.5 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 (e.g. frequency of prevailing wind in that direction). This stage of the assessment that exposure has resulted from an uncontrolled emission i.e. without mitigation.

2.6 Sensitive Receptors

The nearest sensitive receptors to the Site are identified in drawing reference 4554/4/001A attached as Appendix A. The distance of these receptors to the Site boundary, their direction relative to the Site and the frequency the wind blows in the direction of the receptor is detailed in Table 1. Distance has been measured from the Site boundary.

Number	Receptor	Description	Distance from Site	Direction from Site	Freq. of Prevailing Wind
1	Bar Pool Brook	Watercourse	<10	N	13.6
2	Ennell Road / Arrow Road	Road	96	N	13.6
3	Properties off Willow Road	Residential	140	N	13.6
4	Holly Stitches Dell	Local Wildlife Site	151	N	13.6
5	Coastal and Floodplain Grazing Marsh	Protected Habitats	<10	NNW to NE	22.1 to 7.2
6	Arleigh Internation / Midland Chandlers Head Office	Commercial	51	NNE	9.8
7	Unamed Pond	Waterbody	132	NNE	9.8
8	Tuttle Hill	Road	362	NNE	9.8
9	Residential Properties off Corrib Road	Residential	128	E	5.5
10	Coventry Canal	Watercourse	195	ESE	2.5
11	Pool Road Industrial Estate	Commercial / Industrial	<10	E to W	5.5 to 0.7

Number	Receptor	Description	Distance from Site	Direction from Site	Freq. of Prevailing Wind
12	Railway Line	Railway	187	SE	3.6
13	Playing Fields	Recreational	248	SE	3.6
14	MacIntyre's Discovery Academy	School	355	SE	3.6
15	Allotment Gardens	Recreational	168	S	2.1
16	Properties off Vernons Lane / Black - A - Tree Road	Residential	227	S	2.1
17	Pool Road	Road	<10	S	2.1
18	Hilary Road	Road	155	WSW	1.8
19	Properties off Hilary Road / Mapel Road	Residential	166	WSW	1.8
20	Whittleford Park and Barpool Valley	Local Wildlife Site	110	NW	8.6
21	Judkins Quarry Complex – HWRC & Bio-Waste Facility	Industrial	485	NE	7.2

Table 1. Sensitive Receptors within 500m

The Nature and Heritage Conservation Screen (EPR/KB3703LA/A001) identified two Local Wildlife Sites (LWS), Holly Stiches Dell and Whittleford Park and Barpool Valley within 200m of the Site and these have been included in Table 1 (receptor 4 and 20). It also identified the protected habitat coastal and floodplain grazing marsh within 50m which has been included in Table 1 (receptor 5). No European Site, Ramsar Site or Site of Special Scientific Interest (SSSI) were identified. The Screen is attached as Appendix B.

A review of Magic Maps[3] showed other priority habitats within 500m including Deciduous Woodland and Woodland. These habitats are features of the two LWS and will be considered as part of the LWS in this ERA.

Two waterbodies comprising a pond and a canal were identified within 500m of the site.

The proposed WTS is not located within and Air Quality Management Area according to DEFRA[4]

[3] Magic Map Application (defra.gov.uk)
[4] https://uk-air.defra.gov.uk/aqma/maps/

3 Risk Assessment and Accident Management Plans

3.1 Risk Assessments

The specific risk assessments completed for liquid, odour, noise and vibration, dust and fugitive emissions, pests and vermin are in Tables 2 to 6 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.

The Mitigated Risk is the residual risk presented by the Hazard after control measures have been instigated. 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. Accidents Risk Assessment and Management Plan is in Table 7.

Table 2. Liquid Pollution Risk Assessment and Action Plan

Hazard / Pathway	Receptor				Probability of Exposure	Unmitigated Consequence	Initial Risk	Risk Management	Mitigated Risk
	No.	Dist.	Direc.	Freq.					
Liquid Pollutant: through / over ground from waste leachate, spillages, leaks and fire water	1	<10	N	13.6	Low – no hydraulic link	High – potential contamination event	Low	Fuel is stored in one 5,000ltr self-bunded storage tank. The bunded storage tank is positioned on a sealed concrete surface which drains to sewer via an interceptor. The bunded storage tank and drainage system are regularly monitored and maintained. The drains are also cleaned on a 6-monthly basis. Any Site vehicles and plant will be inspected daily. Any vehicles or plant found leaking fuel or oil will be repaired. Procedures for dealing with any leaks and spillages are within the EMS & FPMP. The Site has two spill kits on Site which are kept in the warehouse. The spill kits comprise an RS PRO 120 litre chemical spill kit and an RS PRO 35 litre oil spill kit. Both kits comprise disposal bags, goggles, marking tape, pads, pillows, socks and wheel bin.	Low
	2	96	N	13.6	Low – no hydraulic link	Low – receptor not sensitive to emission	Low		
	3	140	N	13.6	Low – no hydraulic link	Low – receptor not sensitive to emission	Low		
	4	151	N	13.6	Low – no hydraulic link	High – potential contamination event	Low		
	5	<10	NNW - NE	22.1 - 7.2	Low – no hydraulic link	High – potential contamination event	Low		
	6	51	NNE	9.8	Low – no hydraulic link	Low – receptor not sensitive to emission	Low		
	7	132	NNE	9.8	Low – no hydraulic link	High – potential contamination event	Low		
	8	362	NNE	9.8	Low – no hydraulic link	Low – receptor not sensitive to emission	Low		
	9	128	E	5.5	Low – no hydraulic link	Low – receptor not sensitive to emission	Low		
	10	195	ESE	2.5	Low – no hydraulic link	High – potential contamination event	Low		
	11	<10	E - W	5.5 - 0.7	Low – no hydraulic link	Low – receptor not sensitive to emission	Low		
	12	187	SE	3.6	Low – no hydraulic link	Low – receptor not sensitive to emission	Low		
	13	248	SE	3.6	Low – no hydraulic link	Low – receptor not sensitive to emission	Low		
	14	355	SE	3.6	Low – no hydraulic link	Low – receptor not sensitive to emission	Low		
	15	168	S	2.1	Low – no hydraulic link	High – potential contamination event	Low		
	16	227	S	2.1	Low – no hydraulic link	Low – receptor not sensitive to emission	Low		
	17	<10	S	2.1	Low – no hydraulic link	Low – receptor not sensitive to emission	Low		
	18	155	WSW	1.8	Low – no hydraulic link	Low – receptor not sensitive to emission	Low		
	19	166	WSW	1.8	Low – no hydraulic link	Low – receptor not sensitive to emission	Low		
	20	110	NW	8.6	Low – no hydraulic link	High – potential contamination event	Low		
	21	485	NE	7.2	Low – no hydraulic link	Low – receptor not sensitive to emission	Low		

Table 3. Odour Risk Assessment and Action Plan

Hazard / Pathway	Receptor				Probability of Exposure	Unmitigated Consequence	Initial Risk	Risk Management	Mitigated Risk
	No.	Dist.	Direc.	Freq.					
Odour through the air: from wastes received and Site operations	1	<10	N	13.6	High – close to Site, frequently downwind	Low – watercourses not sensitive to odour	Low	The waste acceptance protocols aim to identify non-permitted waste and malodourous waste which will be rejected and redirected to the customer, to an appropriate permitted disposal facility or temporarily stored in a closed and lockable 14-yard quarantine skip. All wastes are stored outside within bays on concrete hard standing with sealed drainage systems. Routine cleansing of the Site is undertaken as required. In addition, staff will be instructed to ensure that all external areas of the Site are clear of any litter or other wastes. Regular olfactory monitoring will be conducted. The Site has onsite odour suppression system which can be utilised to reduce evaporative odour generation within the storage bays if required. Drainage infrastructure is inspected, maintained and repaired as necessary. All events or complaints received associated with odour will be documented in accordance with the Sites Complaint Procedure.	Low
	2	96	N	13.6	High – close to Site, frequently downwind	Low – road transient nuisance	Medium		
	3	140	N	13.6	High – close to Site, frequently downwind	High – nuisance to residents	High		
	4	151	N	13.6	Medium – proximity to Site, frequently downwind	Low – not a nuisance to habitats	Low		
	5	<10	NNW - NE	22.1 - 7.2	High – close to Site, frequently downwind	Low – not a nuisance to habitats	Low		
	6	51	NNE	9.8	Medium – close to Site, infrequently downwind	High – nuisance to workers	Medium		
	7	132	NNE	9.8	Medium – close to Site, infrequently downwind	Low – not a nuisance to waterbody	Low		
	8	362	NNE	9.8	Low – distant to Site, infrequently downwind	Low – road transient nuisance	Low		
	9	128	E	5.5	Medium – close to Site, occasionally downwind	High – nuisance to residents	Medium		
	10	195	ESE	2.5	Medium – proximity to Site, occasionally downwind	Low – watercourses not sensitive to odour	Low		
	11	<10	E - W	5.5 - 0.7	Medium – close to Site, occasionally downwind	High – nuisance to workers	Medium		
	12	187	SE	3.6	Medium – proximity to Site, occasionally downwind	Low – railway transient nuisance	Low		
	13	248	SE	3.6	Medium – proximity to Site, occasionally downwind	Medium – open space nuisance to users	Medium		
	14	355	SE	3.6	Low – distant to Site, occasionally downwind	High – nuisance to students	Medium		
	15	168	S	2.1	Medium – proximity to Site, occasionally downwind	Medium – open space nuisance to users	Medium		
	16	227	S	2.1	Medium – proximity to Site, occasionally downwind	High – nuisance to residents	Medium		
	17	<10	S	2.1	Medium – close to Site, occasionally downwind	Low – road transient nuisance	Low		
	18	155	WSW	1.8	Medium – proximity to Site, occasionally downwind	Low – road transient nuisance	Low		
	19	166	WSW	1.8	Medium – proximity to Site, occasionally downwind	High – nuisance to residents	Medium		
	20	110	NW	8.6	Medium - proximity to Site, infrequently downwind	Low – not a nuisance to habitats	Low		
	21	485	NE	7.2	Low – distant to Site, infrequently downwind	High – nuisance to workers	Medium		

Table 4. Noise & Vibration Risk Assessment and Action Plan

Hazard / Pathway	Receptor				Probability of Exposure	Unmitigated Consequence	Initial Risk	Risk Management	Mitigated Risk
	No.	Dist.	Direc.	Freq.					
Noise & Vibration (through the air/ground): from Vehicle movements associated with the delivering and handling of waste on Site. Site plant.	1	<10	N	13.6	High – close to Site	Low – not a nuisance to watercourses	Low	All vehicles, plant and machinery will be chosen according to its suitability for the task, maintained according to the manufacturer's recommendations and fitted with silencing equipment were appropriate. Where practicable, engines to be switched off when not in use. Three metre high solid profiled sheeting screen fence are installed onsite. The Site will remain locked and secure when not in use and will not at any time be open to the public. This will prevent vandalism to the site, vehicles, plant and machinery. Onsite screener and picking station only operated during working hours and in accordance with manufacturer's recommendations. Both are surrounded by Lego Concrete Blocks with sheet cladding to minimise noise and vibration. All events or complaints received associated with noise will be documented in accordance with the Sites Complaint Procedure.	Low
	2	96	N	13.6	High – close to Site	Low – road transient nuisance	Medium		
	3	140	N	13.6	High – close to Site	High – nuisance to residents	High		
	4	151	N	13.6	Medium – proximity to Site	Medium – disturb local wildlife	Medium		
	5	<10	NNW - NE	22.1 - 7.2	High – close to Site	Medium – disturb local wildlife	Medium		
	6	51	NNE	9.8	High – close to Site	High – nuisance to workers	High		
	7	132	NNE	9.8	High – close to Site	Low – not a nuisance to waterbody	Low		
	8	362	NNE	9.8	Low – distant to Site	Low – road transient nuisance	Low		
	9	128	E	5.5	High – close to Site	High – nuisance to residents	High		
	10	195	ESE	2.5	Medium – proximity to Site	Low – not a nuisance to watercourses	Low		
	11	<10	E to W	5.5 to 0.7	High – close to Site	High – nuisance to workers	High		
	12	187	SE	3.6	Medium – proximity to Site	Low – railway transient nuisance	Medium		
	13	248	SE	3.6	Medium – proximity to Site	Medium – open space nuisance to users	Medium		
	14	355	SE	3.6	Low – distant to Site	High – nuisance to students	Medium		
	15	168	S	2.1	Medium – proximity to Site	Medium – open space nuisance to users	Medium		
	16	227	S	2.1	Medium – proximity to Site	High – nuisance to residents	Medium		
	17	<10	S	2.1	High – close to Site	Low – road transient nuisance	Medium		
	18	155	WSW	1.8	Medium – proximity to Site	Low – road transient nuisance	Medium		
	19	166	WSW	1.8	Medium – proximity to Site	High – nuisance to residents	Medium		
	20	110	NW	8.6	Medium - proximity to Site	Medium – disturb local wildlife	Medium		
	21	485	NE	7.2	Low – distant to Site	High – nuisance to workers	Medium		

Table 5. Fugitive Emissions (Dust & Litter) Risk Assessment and Action Plan

Hazard / Pathway	Receptor				Probability of Exposure	Unmitigated Consequence	Initial Risk	Risk Management	Mitigated Risk
	No.	Dist.	Direc.	Freq.					
Dust & Litter: from wastes received and Site operations	1	<10	N	13.6	High – close to Site, frequently downwind	High – potential to accumulate in watercourses	High	Strict waste acceptance procedures are in place to ensure excessively dusty wastes are not accepted onto Site. Stockpiles do not exceed 3 metres in height. All loads delivered to or removed from Site will be sheeted or netted. All vehicles and exterior surfaces will be maintained and cleaned as necessary to minimise the accumulation of mud or dusty materials. If required a mechanical sweeper will be deployed to clean the Site and/or any contaminated roads off Site. The Site is bounded along the north western corner were the picking station / screener are located with Lego Concrete Blocks with sheet cladding. Any dusty waste materials may be dampened down via the Dust Suppression System. Litter picking is undertaken regularly. Routine monitoring is undertaken. All events or complaints received associated with noise will be	Low
	2	96	N	13.6	High – close to Site, frequently downwind	Medium – road transient nuisance	Medium		
	3	140	N	13.6	High – close to Site, frequently downwind	High – nuisance to residents	High		
	4	151	N	13.6	Medium – proximity to Site, frequently downwind	High – potential to smother vegetation	Medium		
	5	<10	NNW - NE	22.1 - 7.2	High – close to Site, frequently downwind	High – potential to smother vegetation	High		
	6	51	NNE	9.8	Medium – close to Site, infrequently downwind	High – odour nuisance to workers	Medium		
	7	132	NNE	9.8	Medium – close to Site, infrequently downwind	High – potential to accumulate in waterbody	Medium		
	8	362	NNE	9.8	Low – distant to Site, infrequently downwind	Medium – road transient nuisance	Medium		
	9	128	E	5.5	Medium – close to Site, occasionally downwind	High – nuisance to residents	Medium		
	10	195	ESE	2.5	Medium – proximity to Site, occasionally downwind	High – potential to accumulate in watercourses	Medium		
	11	<10	E - W	5.5 - 0.7	Medium – close to Site, occasionally downwind	High – nuisance to workers	Medium		
	12	187	SE	3.6	Medium – proximity to Site, occasionally downwind	Medium – railway transient nuisance	Medium		
	13	248	SE	3.6	Medium – proximity to Site, occasionally downwind	Medium – open space nuisance to users	Medium		
	14	355	SE	3.6	Low – distant to Site, occasionally downwind	High – nuisance to students	Medium		
	15	168	S	2.1	Medium – proximity to Site, occasionally downwind	Medium – open space nuisance to users	Medium		
	16	227	S	2.1	Medium – proximity to Site, occasionally downwind	High – nuisance to residents	Medium		

Hazard / Pathway	Receptor				Probability of Exposure	Unmitigated Consequence	Initial Risk	Risk Management	Mitigated Risk
	No.	Dist.	Direc.	Freq.					
	17	<10	S	2.1	Medium – close to Site, occasionally downwind	Medium – road transient nuisance	Medium	documented in accordance with the Sites Complaint Procedure.	
	18	155	WSW	1.8	Medium – proximity to Site, occasionally downwind	Medium – road transient nuisance	Medium		
	19	166	WSW	1.8	Medium – proximity to Site, occasionally downwind	High – nuisance to residents	Medium		
	20	110	NW	8.6	Medium - proximity to Site, infrequently downwind	High – potential to smother vegetation	Medium		
	21	485	NE	7.2	Low- distant from site, infrequently downwind	High – nuisance to workers	Medium		

Table 6. Fugitive Emissions (Pests & Vermin) Risk Assessment and Action Plan

Hazard / Pathway	Receptor				Probability of Exposure	Unmitigated Consequence	Initial Risk	Risk Management	Mitigated Risk
	No.	Dist.	Direc.	Freq.					
Pests and Vermin: over land / through the air	1	<10	N	13.6	High – close to Site	Low – not sensitive to pests & vermin	Low	Strict operational procedures are in place that minimise the potential impact from pests including: • Rapid turnaround/processing times of incoming putrescible waste; • Minimisation of storage times for putrescible waste; • Sheeting of vehicles arriving and leaving Site; • Site inspections by suitable trained staff; • Adequate house-keeping such as scraping and brushing of emptied waste storage bays. Daily on-Site monitoring and monthly monitoring conducted by a pest contractor. Any sightings of pests and scavengers requiring action will result in the pest contractor being summoned immediately and remedial actions implemented. All events or complaints received associated with pests and vermin will be documented in accordance with the Sites Complaint Procedure.	Low
	2	96	N	13.6	High – close to Site	Medium – nuisance impact	Medium		
	3	140	N	13.6	High – close to Site	High - nuisance / potential health impact	High		
	4	151	N	13.6	Medium – proximity to Site	Medium – disturb local wildlife	Medium		
	5	<10	NNW -NE	22.1 - 7.2	High – close to Site	Medium – disturb local wildlife	Medium		
	6	51	NNE	9.8	High – close to Site	High - nuisance / potential health impact	High		
	7	132	NNE	9.8	High – close to Site	Low – not sensitive to pests & vermin	Low		
	8	362	NNE	9.8	Low – distant to Site	Medium – nuisance impact	Medium		
	9	128	E	5.5	High – close to Site	High - nuisance / potential health impact	High		
	10	195	ESE	2.5	Medium – proximity to Site	Low – not sensitive to pests & vermin	Low		
	11	<10	E to W	5.5 to 0.7	High – close to Site	High - nuisance / potential health impact	High		
	12	187	SE	3.6	Medium – proximity to Site	Medium – nuisance impact	Medium		
	13	248	SE	3.6	Medium – proximity to Site	High - nuisance / potential health impact	Medium		
	14	355	SE	3.6	Low – distant to Site	High - nuisance / potential health impact	Medium		
	15	168	S	2.1	Medium – proximity to Site	High - nuisance / potential health impact	Medium		
	16	227	S	2.1	Medium – proximity to Site	High - nuisance / potential health impact	Medium		
	17	<10	S	2.1	High – close to Site	Medium – nuisance impact	Medium		
	18	155	WSW	1.8	Medium – proximity to Site	Medium – nuisance impact	Medium		
	19	166	WSW	1.8	Medium – proximity to Site	High - nuisance / potential health impact	Medium		
	20	110	NW	8.6	Medium - proximity to Site	Medium – disturb local wildlife	Medium		
	21	485	NE	7.2	Low – distant to Site	High - nuisance / potential health impact	Medium		

Table 7. Accident Management Plan

Hazard	Receptor	Pathway	Probability	Consequence	Overall Risk	Risk Management	Mitigated Risk
Liquid Pollutant Leak or damage to portable static fuel storage tank or Site vehicles.	Groundwater	Through ground	Low	High - pollution of groundwater	Medium	Fuels are stored in bunded areas with 110% capacity. Site vehicles and plant will be subject to regular maintenance to ensure the risk of leaks of potentially harmful liquids are minimised; Waste management activities at the Site are carried out on an impermeable surface with sealed drainage with discharge to on-Site foul water drainage system; Spill kits are located within the Site Office and picking station. In the event of the spillage of polluting materials, immediate action will be taken to contain the spillage; The Site surface, covered buildings, roofed areas, fixed / temporary bays and containers are visually inspected at least weekly to ensure continuing integrity and fitness for purpose. The inspection and any necessary maintenance required will be recorded.	Low
	Surface Water	Lateral	Low	High - pollution of surface water	Medium		
Fire Uncontrolled burning of residual wastes or Site vehicles.	Groundwater	Through ground	Low	High - pollution of groundwater through firewater run-off or leaks from damaged equipment	Medium	Wastes to be accepted at Site has the potential to be considered combustible, therefore the size of combustible waste stockpiles are managed; Security measures are in place to prevent unauthorised access including perimeter fencing, gates, CCTV and security guard(s); Strict no-smoking policy; All electronics are inspected and certified by a qualified electrician; Site vehicles and plant subject to regular preventative maintenance in line with Site FMS; Fire control equipment will be on hand, with major incidents to be dealt with by the Fire Brigade in accordance with Site FPMP.	Low
	Receptors listed in Table 1 above	Airborne	Low	Medium - smoke / odour annoyance	Medium		
Explosion Compressed gas cylinders, combustion of fuel storage tank	Site staff	Airborne	Low	High - danger of serious injury	Medium	Fuel is stored in bunded areas with appropriate controls to prevent fire or explosion (i.e. no smoking on Site);	Low
	Groundwater	Through ground	Low	High - pollution of groundwater through leaks from damaged equipment	Medium		
Wastes storage Chemical reaction of incompatible wastes	Receptors listed in Table 1 above	Airborne	Low	Medium - odour annoyance or smoke from oxidising agents	Medium	Any potentially polluting substances will be appropriately stored. All waste will be stored in designated bays on impermeable pavements with sealed drainage systems. Waste storage will be in accordance with the Site FPMP / Technical Standards	Low
Vandalism Damage to Site vehicles, fuel bowsers, air extraction system	Groundwater	Through ground	Low	High - pollution of groundwater through leaks from damaged equipment	Medium	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 above	Airborne	Low	Medium - odour annoyance	Medium		

4 Conclusions

The risk assessments detailed in Tables 2 to 7 within this document indicate that the proposed activities are unlikely to cause a significant emission from the Site.

The Site will be operated in accordance with the management plans to control emissions:

- Dust and Emissions Management Plan (K4554-BLA-R-ENV-00013)
- Fire Prevention and Mitigation Plan (K4554-BLA-R-ENV-00010)
- Odour Management Plan (K4554-BLA-R-ENV-00012)

The Site is located within Pool Industrial Estate with industrial premises surrounding the Site. Residential and commercial properties in the vicinity of the Site are most sensitive to proposed Site operations, however given the mitigation measures to be employed at the Site, these premises are unlikely to be affected by the activity.

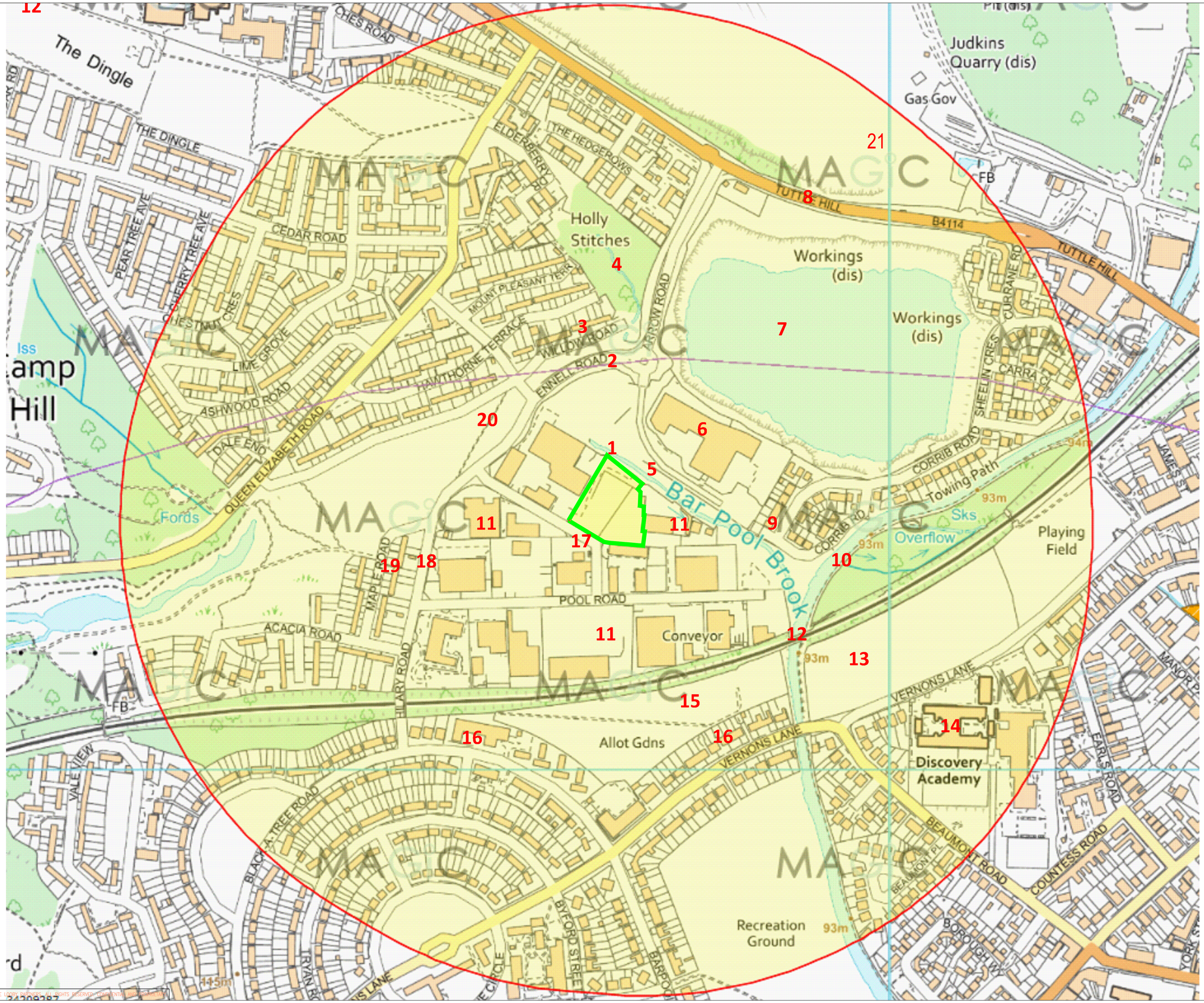
Accidents such as fire, explosion or leakages are considered unlikely due to the proposed operations onsite. Nevertheless, safe Site working practices, effective control measures and strict waste acceptance criteria further reduce the potential for such accidents to occur.

The Site design provides an impermeable surface to mitigate the contamination of surface water and ground water.

It has been concluded that with the use of appropriate mitigating controls where necessary, the transfer and treatment of construction and demolition waste will not present a significant risk to surrounding receptors.

Appendix A – Drawings

A1



GENERAL NOTES

NOTES:

1. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES ABOVE ORDNANCE DATUM.

2. DO NOT SCALE FROM THIS DRAWING.

3. ANY ANOMALIES IDENTIFIED WITH THE DETAILS SHOWN ON THIS DRAWING ARE TO BE BROUGHT TO THE ATTENTION OF BYRNE LOOBY PRIOR TO CONSTRUCTION WORKS COMMENCING.

LEGEND:

- **Permit Boundary**
- **500m Buffer Zone**
- (1) **Receptor Marker**

No.	Date	Description	By	Chk	App.

BYRNELOOBY

WWW.BYRNELOOBY.COM

IRELAND | UK | UAE | BAHRAIN | KSA

CLIENT

PROJECT: Crown Transfer Station 2

DRAWING TITLE: Receptor Plan

STATUS: FOR CONSTRUCTION

Date: 21/04/22	Scale: N/A	Drawn: JM	Chk: MR	Appr: JB
Project No.: 4554	Drg. No.: 4554.4.001			Rev.: 00

Appendix B – Nature and Heritage Conservation Screen

Nature and Heritage Conservation

Screening Report: Bespoke Waste

Reference	**EPR/KB3703LA/A001**
NGR	**SP 34682 92296**
Buffer (m)	**35**
Date report produced	**08/01/2024**
Number of maps enclosed	**2**

The nature and heritage conservation sites and/or protected species and habitats identified in the table below must be considered in your application.

Nature and heritage conservation sites	Screening distance (m)	Further Information
Local Wildlife Sites (LWS)	200	Appropriate Local Record Centre (LRC)
Holly Stitches Dell		
Whittleford Park and Barpool Valley		

Protected Habitats	Screening distance (m)	Further Information
Coastal and Floodplain Grazing Marsh	up to 50m	Natural England

Where protected species are present, a licence may be required from Natural England 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.

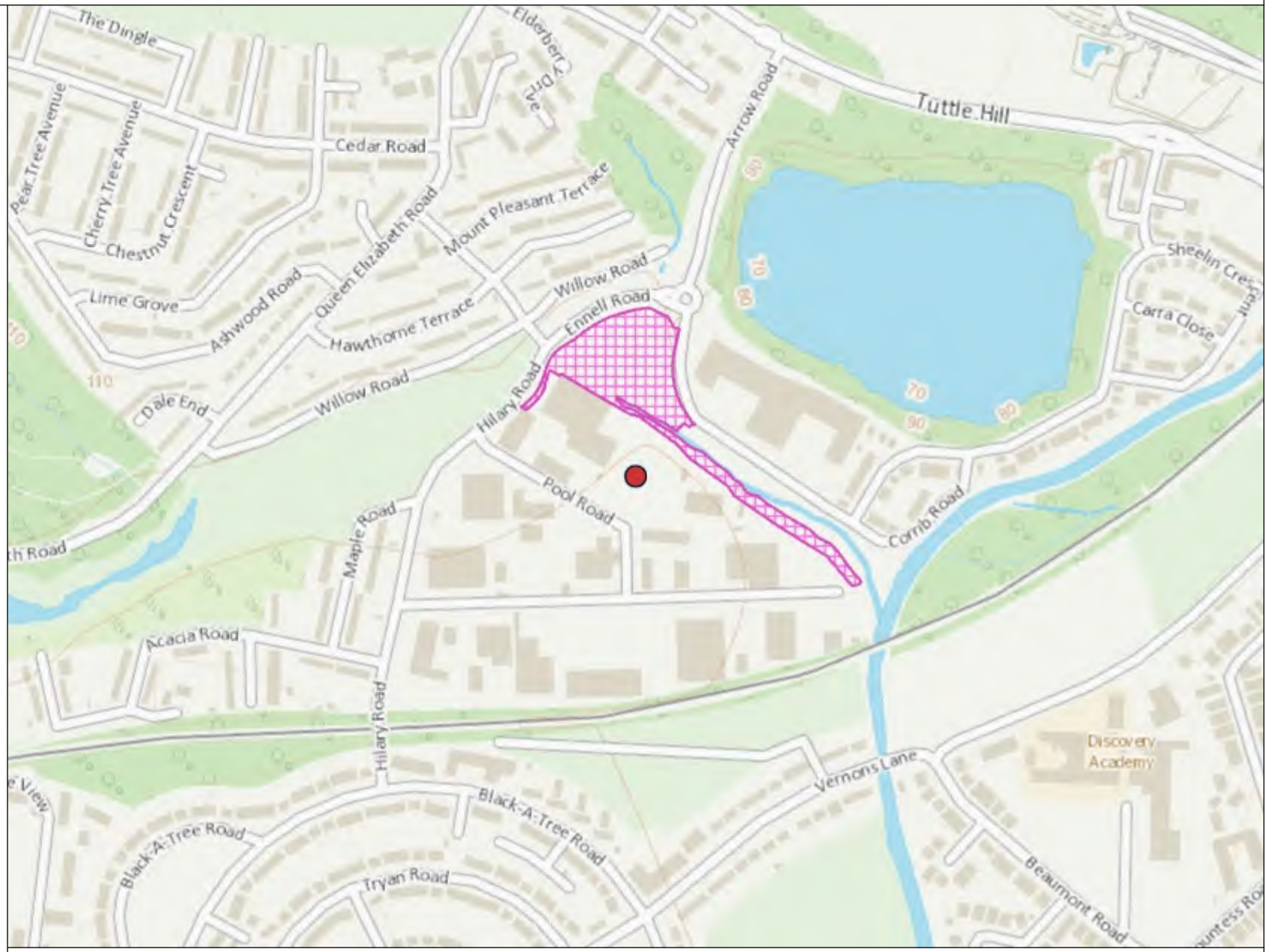
Please note the nature and heritage screening we have conducted as part of this report is subject to change as it is based on data we hold at the time it is generated. We cannot guarantee there will be no changes to our screening data between the date of this report and the submission of the permit application,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

Protected Habitats

Environment Agency

Legend

Protected Habitats screened for Env Permits



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Metres

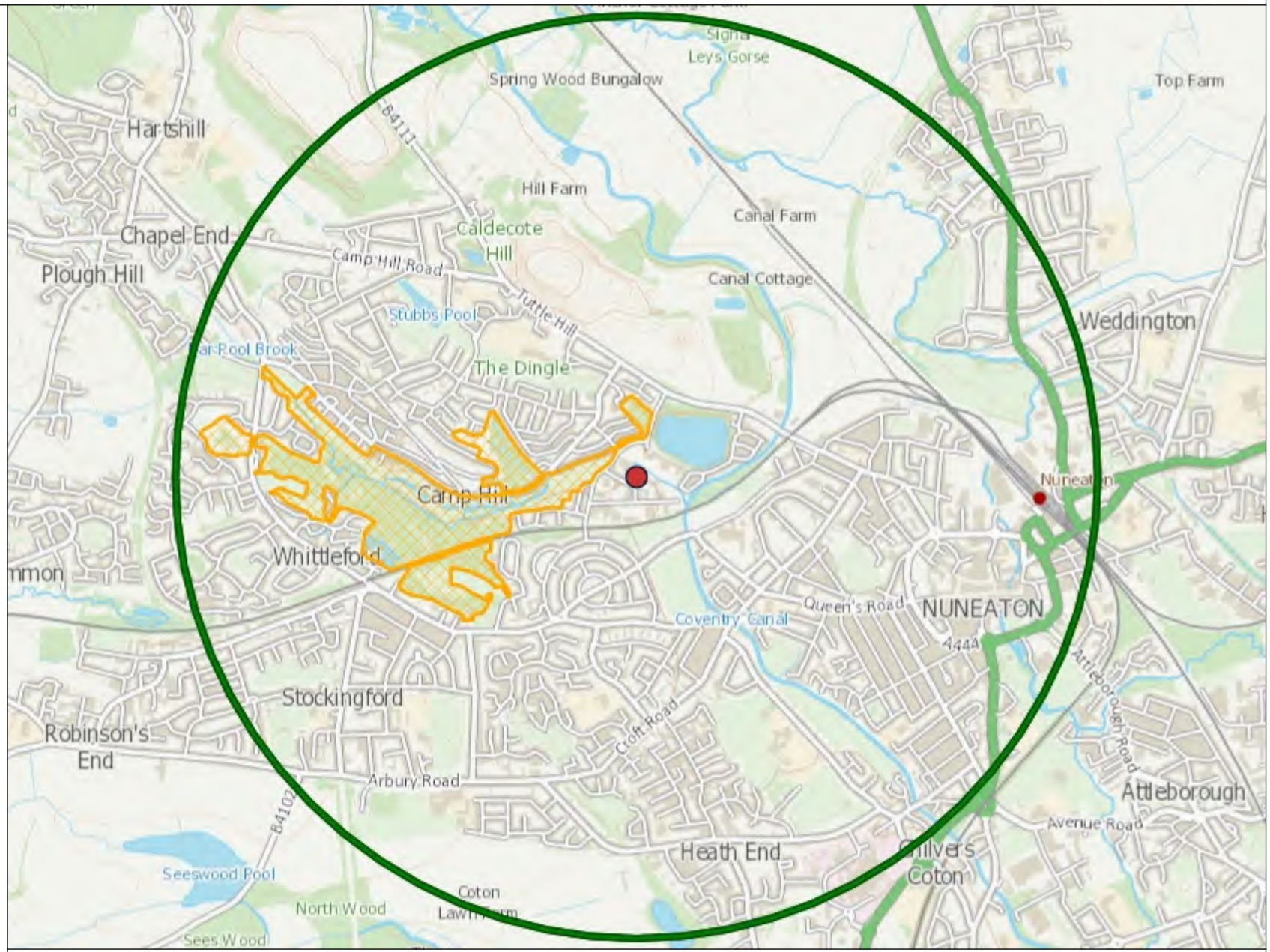
N W E S

Local Wildlife Sites

Environment Agency

Legend

Local Wildlife Sites



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Metres

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