OLD OIL WELL PAD SITE

ENVIRONMENTAL RISK ASSESSMENT

T.G. PORTER

JUNE 2020

IVY HOUSE environmental

SUMMARY TABLE	
SITE:	Old Oil Well Pad Site – Environmental Risk Assessment
CLIENT:	T.G. Porter
DATE:	June 2020
REFERENCE	IV.176.20
DEVELOPMENT PROPOSAL:	Operation of a Non-Hazardous Waste Wood Storage Facility.

Written By:		Amanda McCabe *Associate*
Authorised:		Richard Sutton MRICS *Director*
Date:	June 2020	
Version:	1.0	

IVY HOUSE environmental
Scotland Farm, Ockbrook, Derby, DE72 3RX
rps@ivyhouseenv.co.uk • www.ivyhouseenv.co.uk • 01332 820 488

CONTENTS

APPENDICES & FIGURES

1.0 Introduction

1.1 Report Context

This section of the Environmental Permit Application responds to Part C2 of the Environmental Permit application form, and specifically details the Environmental Risk Assessment and associated mitigation management procedures for the activities undertaken on site.

This document has been prepared by Ivy House Environmental Limited (Ivy) on behalf of Mike Thompson Partnership Limited. It is part of the management for the proposed T.G.Porter (the operator) Waste Wood Fuel Storage Facility at New Farm, Hampshire.

The operator proposes to undertake the storage of pre-prepared waste wood fuel which will be utilised in a combined heat and power facility. The waste wood is brought to and removed from the site in HGV delivery vehicles. The waste material will be discharged in a designated reception area, so it may be physically inspected before being removed to the relevant stockpile.

It is proposed that there will be a total annual throughput of 75,000 tonnes per annum for the facility, with a daily waste acceptance limit of 600 tonnes. Maximum storage will be 5,000 tonnes.

This document forms part of the site's Environmental Management System (EMS) and will be reviewed on an annual basis and in the event of any incidents.

2.0 SITE SETTING

2.1 Methodology

This report has been prepared in accordance with the Environment Agency's Risk Assessment guidance. It specifically relates to the potential risk associated with the following risk types:

- Odour;
- Noise and vibration;
- Fugitive Emissions; and
- Accidents and incidents.

This risk assessment addresses the above, and is based on the following methodology:

- Identification of potential sources of risk;
- Identification of all potential receptors to risk; and
- Risk assessment of each risk type.

The ERA is a tool used to identify the pollutant linkage i.e. source-pathway-receptor. For most risks, the atmosphere is the main pathway and will always exist. Therefore, the ERA deals primarily with the sources and receptors. The ERA provided in Appendix A is summarised below.

2.2 Sources

The potential sources of risks have been considered for each risk type, as shown in Appendix A. The sources of risk for this application have been identified as:

Noise

- Plant and machinery;
- Vehicle movements to/from the site;
- Vehicle movements within the site; and
- Engineering works.

Fugitive emissions

- Odour;
- Particulate matter; (dust)
- Mud and litter; and
- Scavenging birds, pests and vermin.

Accidents

- Leaks/spillages;
- Fire or failure to contain firewater;
- Flooding; and
- Vandalism.

2.3 Pathways

The pathways have been identified for each risk type as shown below in Table 1:

Table 1: Potential Pathways

Risk Type	Pathway
Odour	Atmosphere
Noise	Atmosphere
Fugitive Emissions	Atmosphere
Accidents	Atmosphere
	Surface water run-off
	Infiltration
	Percolation

2.4 Receptors

Receptors within 1km of the proposed application boundary have been considered in the preparation of the Sensitive Receptors List as outlined within Table 2 below.

Table 2: Sensitive Receptors Located within close proximity of the Proposed Facility

Receptor	Direction from Operational Area	Minimum Distance from proposed permit boundary (approx..) (m)
Designated ecological habitats e.g. Ramsars, SAC, SPA, SSSI		
n/a		
Other Designations e.g. National Parks, ANOB, World Heritage Sites		
n/a		
Historic buildings / listed buildings / archaeological sites		
n/a		
Domestic Dwellings		
Pickaxe Lane	S SE	669
Pickaxe Lane	N NE	551
Schools, Shops, Commercial and Industrial		
Mid Hants	N	530
ABC Global Solutions Ltd	N	612
Asset Business Supplies	S SW	540
Farm Land		
Open Fields	N, S, E, W	0
Local Wildlife Sites		
n/a		
Protected Species		
n/a		
Protected Habitats		
n/a		
Surface Water		
River Wey	S	5.2
Groundwater (sensitivity)		
In accordance with the MAGIC website, the site is within a Ground Water Protection Zone III.		

2.5 Risk Assessment

The ERA (Appendix A) looks at each specific hazard identified and assesses the likelihood of those hazards impacting on receptors. This is achieved by fulfilling the following objectives:

- Identify the location and nature of each hazard;
- Identify the specific receptors potentially at risk and assess the sensitivity of each receptor;
- Provide a qualitative assessment of the risk posed to each sensitive receptor;
- Identify management and monitoring techniques; and
- Provide recommendations for more detailed assessments where necessary.

2.6 Summary of ERA

The ERA (Appendix A) indicates that the proposed operation will have no significant impacts in terms of odour, noise and vibration, vermin and fugitive emissions, and the likelihood of accidents is minimal.

Appendix A - Table A: Odour Risk Assessment and Management Plan

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	**Receptor**	**Pathway**	**Risk Assessment**	**Probability of Exposure**	**Consequence**	**What is the overall risk?**
What has the potential to cause harm?	**What is at risk? What do I wish to protect**	**How could it get to the receptor?**	**What measures will you take to reduce the risk? If it occurs – who is responsible for what?**	**How likely is this contact?**	**What is the harm that can be caused?**	**What is the risk that still remains? The balance of probability and consequence.**
Receiving material onsite. General Site Operations. Failure of plant and equipment.	Occupiers of domestic dwellings in Table 2. Commercial and Industrial premises in Table 2.	Atmosphere.	The waste types are inherently non odorous being non putrescible and so are not expected to produce odour. There are no sensitive receptors within 500m of the site and the site is bounded on all sides by a thick block of trees which will keep any odour localised to the site. Good house keeping practices will be adopted to ensure that the site is kept clean and tidy. As the site stores wood for back up fuel purposes and to provide some buffer against market variability, it is estimated that the site will be completely cleared down to concrete every three months. Site workers will alert the Site Manager if odour is apparent on site and the Site Manager will investigate. Remediation actions may be taken if deemed necessary which may consist of the following: • Removal of the waste; and • Use of cover material to encase the waste.	Unlikely due to control measures that will be put in place.	Odour annoyance.	Not significant due to the nature of the waste types and the management techniques employed.

Table B: Noise Risk Assessment and Management Plan

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	**Receptor**	**Pathway**	**Risk Assessment**	**Probability of Exposure**	**Consequence**	**What is the overall risk?**
What has the potential to cause harm?	**What is at risk? What do I wish to protect**	**How could it get to the receptor?**	**What measures will you take to reduce the risk? If it occurs – who is responsible for what?**	**How likely is this contact?**	**What is the harm that can be caused?**	**What is the risk that still remains? The balance of probability and consequence.**
Receiving material onsite. General Site Operations. Failure of plant and equipment.	Occupiers of domestic dwellings in Table 2. Commercial and Industrial premises in Table 2. Habitats in Table 2.	Atmosphere.	The site is bunded on all sides by a thick block of trees which will act as a noise barrier. The site will operate in accordance with the hours approved by the planning permission. Activities will not be undertaken on Sundays and Public Holidays, with the exception of emergency works. The site will operate a no idling policy and vehicles will be switch off when not in use. Low level reversing alarms may be used on site vehicles and exhaust silencers will be fitted as standard. The access road and site infrastructure will be inspected on a weekly basis and maintained to ensure they are fit for purpose. Good housekeeping practices will be adopted to ensure that the site is kept clean and tidy at all times. Drop heights shall be minimised to prevent 'dropping' wastes when unloading in the waste reception area or moving waste to the relevant storage areas.	Unlikely due to control measures that will be put in place.	Noise annoyance.	Not significant due to the nature of the waste types and the management techniques employed.

Table C: Fugitive Emissions Risk Assessment and Management Plan

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	**Receptor**	**Pathway**	**Risk Assessment**	**Probability of Exposure**	**Consequence**	**What is the overall risk?**
What has the potential to cause harm?	**What is at risk? What do I wish to protect**	**How could it get to the receptor?**	**What measures will you take to reduce the risk? If it occurs – who is responsible for what?**	**How likely is this contact?**	**What is the harm that can be caused?**	**What is the risk that still remains? The balance of probability and consequence.**
To Air						
Receiving material onsite. General Site Operations. Failure of plant and equipment.	Occupiers of domestic dwellings in Table 2. Commercial and Industrial premises in Table 2. Habitats in Table 2.	Atmosphere.	Please see the sites dedicated Dust Management Plan – OT 4. In summary the site will utilise the following measures to protect receptors against dust from site operations: • Good housekeeping (keeping equipment clean); • Routine cleaning of site roads; • Routine maintenance of plant and equipment in accordance with the manufacturers instructions; • Use of site water to dampen stockpiles or haul roads as required; and • Minimising drop heights when moving or loading materials.	Unlikely due to control measures that will be put in place.	Noise annoyance.	Not significant due to the nature of the waste types and the management techniques employed.

To Water						
Runoff from storage areas.	Groundwater Surface water Habitats in Table 2	Direct surface water runoff from site Infiltration Percolation;	The site will undertake the following to minimise the impacts from activities on surface water, groundwater and habitats: • All activities will be undertaken on an impermeable surface with sealed drainage; • The site will undergo regular housekeeping; and • Site infrastructure will undergo regular inspections and maintenance. • The site will be bunded to ensure that water cannot escape off site.	Unlikely due to control measures that will be put in place.	Contamination of surface water and groundwater bodies. Enrichment of surface water and groundwater bodies. Flooding of local habitats.	Not significant due to the nature of the waste types and the management techniques employed.

Pests/ Scavenging birds						
Birds and Pests	Commercial and Industrial premises listed in Table 2. Habitats listed in Table 2.	Air. Ground.	The waste types are not putrescible and therefore will not attract pests or scavenging birds. As such it is considered that there is no increased risk of pests or scavenging birds as a result of this application. Strict waste acceptance procedures will be in place to minimise the risk of non-compliant wastes being accepted in accordance with the permit application. The Site Manager or Site Foreman will undertake regular reviews of pests and scavenging birds at the site. All site operatives will be vigilant and report any problems to the site manager.	Unlikely due to control measures that will be put in place.	Nuisance to local businesses. Disruption to the Manchester Shipping Canal. Predation of habitats.	Not significant due to the nature of the waste types and the management techniques employed.
Mud						
Mud on local highways and roads	Users of local highways and roads	Tracked on vehicle wheels	All incoming and outgoing vehicles will be sheeted or covered to prevent any load loss. Mud on local roads will be visually monitored. All site operatives will be required to be vigilant and report any mud on the roads to the Site Manager. If required, a road sweeper will be contracted to clean the site access road and to clear the local roads.	Unlikely due to control measures that will be put in place.	Local nuisance. Mud on roads is unsightly and can increase the likelihood of road traffic accidents.	Not significant due to the nature of the waste types and the management techniques employed.

Litter						
Wind blown litter.	Commercial and Industrial premises listed in Table 2. Habitats listed in Table 2.	Air then deposition.	The types of waste to be accepted on site are limited to pre-prepared wood fuel and as such should not contain litter materials. Strict waste acceptance procedures will be in place to minimise the risk of non-compliant wastes being accepted in accordance with the permit application Site operatives will be vigilant and report any litter problems to the Site Manager. In the event that litter is generated by site activities, the Site Manager will implement a litter collection as necessary.	Unlikely due to control measures that will be put in place.	Local nuisance.	Not significant due to the nature of the waste types and the management techniques employed.

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	**Receptor**	**Pathway**	**Risk Assessment**	**Probability of Exposure**	**Consequence**	**What is the overall risk?**
What has the potential to cause harm?	**What is at risk? What do I wish to protect**	**How could it get to the receptor?**	**What measures will you take to reduce the risk? If it occurs – who is responsible for what?**	**How likely is this contact?**	**What is the harm that can be caused?**	**What is the risk that still remains? The balance of probability and consequence.**
Fire or failure to contain firewater.	Occupiers of domestic dwellings listed in Table 2. Industrial and Commercial premises listed in Table 2.	Atmosphere. Surface water run-off.	Please see the sites dedicated Fire Prevention Plan – EMS OT 1. In summary the following measures will be undertaken to prevent fires on the site: • Waste will be stored for no longer than 3 months; • Stockpile heights will be no more than 4m in height; • No more than 5,000 tonnes of material will be stored on the site at any one time; • Stockpiles will be inspected daily using a handheld laser probe; • Provision of 380m^3 tanked water storage, a 500m^3 sealed recirculation sump and 11m^3/hr mains supply; • Provision of firefighting equipment; • Hot works will not be undertaken within stockpiling areas; • Provision of a quarantine area; and • Fire safety awareness and training for all staff.	Unlikely due to control measures that will be put in place.	Local nuisance from smoke. Contamination of local groundwater and surface water. Damage to infrastructure.	Not significant due to the nature of the waste types and the management techniques employed.

			Site staff will remain vigilant and in the event of any fires, will adhere to the Fire Prevention Plan.			
Plant failure and breakdown	Occupiers of domestic dwellings listed in Table 2. Habitats listed in Table 2. Surface water features listed in Table 2.	Atmosphere. Percolation. Surface water run-off.	All plant will be checked on a daily basis. Any issues with plant will be reported immediately to the Site Manager. A programme of planned preventative maintenance will be put in place and all plant used at the site will be subject to regular maintenance in accordance with the manufacturer's guidance. The site may keep backups of important plant so that minimal disruption will be experienced in the event of plant failure or breakdown. In the event of a prolonged plant failure that could lead to environmental pollution, the Site Manager will hire in an alternative loading shovel or may decide to divert incoming wastes if there is not enough storage tonnage available on site. In addition to the above, the Site Manger may determine that the site should temporarily shut down and all waste on site should be diverted to another facility or onwards recovery or disposal. If this decision is implemented, the Environment Agency would be consulted and records kept of where wastes have been sent. All vehicles and plant will be turned off when not in use.	Unlikely due to management practices to be put	Pollution of air. Contamination of local groundwater and surface water.	Not significant due to the management techniques employed.

Leaks and Spillages	Groundwater. Surface water identified in Table 2.	Percolation	Regular maintenance will be undertaken on all plant and equipment in accordance with the manufacture's guidance. Daily vehicle / plant checks will be undertaken to ensure that any oil/fuel leaks etc. are repaired as soon as possible. Spill kits will be provided and staff will be fully trained on how to use spill kits. In the event of a spill or leak that could compromise the sites infrastructure or cause risk to the environment, the Site Manager shall be informed. If necessary, works shall cease while measures are put in place to remediate the leak or spill and the Environment Agency will be informed.	Unlikely due to management practices to be put	Pollution of local groundwater and surface water features including the Birmingham Canal.	Not significant due to the management techniques employed.
Flooding	Groundwater. Surface water identified in Table 2 Surrounding commercial and industrial premises.	Percolation.	The site is not situated within a flood zone in accordance with the Environment Agency's website. The site has a large sealed sump which will be utilised in the event of localised flooding. In the highly unlikely event that significant flooding occurs, site operations may temporarily cease and any incoming vehicles will be diverted. Existing waste which is stored may be diverted to another facility if this waste could cause pollution in the event of a flood – this will be at the discretion of the Site Manager.	Unlikely due to management practices to be put	Pollution of local groundwater and surface water features including the Birmingham Canal.	Not significant due to the management techniques employed.