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CONSULTING

## Dust Management Plan

**Site name:** New Hall Farm Paper Drying Facility  
**Site address:** New Hall Farm, Sunnyslack, Broughton Moor, Maryport, CA15 7RL  
**Operator name:** Robert Skelton Contractors Limited  
**Permit reference:** EPR/EP3922SL  
**Document ref:** SKE-OD-03, V1.0, May 2024

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## 1. Introduction

This Dust Management Plan (DMP) has been written to support a new bespoke waste operation permit application namely the drying of paper sludge to produce animal bedding at New Hall Farm Paper Drying Plant, New Hall Farm, Sunnyslack, Broughton Moor, Maryport, CA15 7RL herein termed 'the Site'.

This DMP has been prepared by Shann Pitts Consulting Limited on behalf of Robert Skelton Contractors Limited herein termed 'the Operator'. The Operator has provided the information for this DMP and the Operator has been consulted to ensure it reflects site activities accurately. It is a live document that will be reviewed and amended as necessary.

The waste treatment activity constitutes the drying of wet paper sludge waste (absolute non-hazardous waste) from paper mills on 4 No. drying floors utilising waste heat from 4 No. biomass boilers (which are operated under a Part B permit from Allerdale Borough Council, ref: PPC/ABC/B/26) on site. The dried paper may be blended with sawdust (produced on site) to produce a material suitable for animal bedding or alternatively sold as a pure dried paper product. In addition to the main waste treatment activity, there is associated waste storage prior to and after the waste treatment (drying).

In accordance with the current Environment Agency guidance<sup>1</sup>, a DMP is required for any regulated facility receiving, processing or producing fine or dusty materials if there are sensitive receptors within 500m. The site is in a rural area however there are residential receptors in Harker Marsh conurbation approximately 215m from the site.

The main control measure for dust is that all waste is stored and treated within the building or covered yard.

Planning permission for the development was granted by Allerdale Borough Council; planning permission references are FUL/2020/0032 and FUL/2020/0094.

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<sup>1</sup> <https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit#dust-mud-and-litter> Accessed 8 May 2024

## 2. Sensitive Receptors

Human receptors within 1km of the site are shown in Table 1 below and on the Human Receptor (1km) Plan (Appendix A)

Table 1: Human Receptors (1km)

Receptor ID	Receptor name	Receptor type	Distance to site boundary (m)	Direction from site
H1	Harker Marsh houses	Residential	215	North west west
H2	Harker Marsh houses	Residential	225	North north west
H3	Florence House Adult Daycare Centre	Amenity / Workplace	545	North east
H4	Craika Road houses	Residential	515	North
H5	Shepherd Hall	Residential	560	South east
H6	North east of Broughton Moor	Residential	935	South west west
H7	Crooklands Farm	Residential	920	North west
H8	Fox House	Residential	960	South south east
H9	Moorside Farm	Residential	955	North north west
H10	Houses on Seaton Road	Residential	925	South west

In response to a request for pre-application heritage and nature conservation screening (Ref: EPR/EP3922SL/P001 / Date:15/01/24), the Environment Agency confirmed that no habitats and/or protected species were identified that needed to be considered in the permit application.<sup>2</sup>

The site is outside any Air Quality Management Areas.<sup>3</sup>

<sup>2</sup> Heritage and Nature Conservation Screening Report, EPR/EP3922SL/P001, Environment Agency, 15/01/24

<sup>3</sup> <https://uk-air.defra.gov.uk/aqma/maps/> Accessed 19 March 2024

A wind rose showing the average wind direction and strength for Harker Marsh is Appendix B. The prevailing wind is south westerly.

There are no other potential sources of dust in proximity to the site.

### **3. Operations**

#### **3.1 Overview**

Refer to Appendix A - Whole Site Layout Plan & Paper Drying Layout Plan

Refer to Waste Acceptance & Rejection Procedure (**SKE-SOP-01**) & Waste Handling & Management Procedure (**SKE-SOP-02**).

#### **3.2 Waste Reception**

'Wet' paper sludge is transported from the site of production (paper mills) to the Site in a covered eight wheeler or articulated lorry.

The waste broker has agreed that all drivers delivering 'wet' paper sludge will report to a Site Manager or Site Foreman on arrival to the site.

The load is checked the as it is discharged on to the concrete storage area inside the building.

The 'wet' paper sludge is tipped onto the concrete into a pile of no more than 12 metres by 4 metres by 2 metres high.

#### **3.3 Waste Rejection Procedure**

Due to the waste being of only one possible waste code all received through one waste broker, it is unlikely that unsuitable waste will be delivered to Site. In the unlikely event of an unsuitable waste load being identified, such as sludge that is so wet that it is non-stackable or malodorous waste then:

1. The Site Manager or Site Foreman overseeing the discharge of the load will instruct the driver that it is unsuitable and will oversee the reloading of the delivery vehicle.
2. The material will either be returned to waste producer or sent for waste disposal as appropriate.
3. The incident will be recorded in the Daily Checks (**SKE-MP-01**).
4. A Technically Competent Manager will contact the waste producer in order to agree a procedure to ensure that future loads are suitable for acceptance at the Site.

#### **3.4 Wet Paper Storage**

The maximum storage volume of 'wet' paper sludge will be 96 m<sup>3</sup> or 96 tonnes based on a conversion factor of 1,000 kg/m<sup>3</sup>.

Under normal operating conditions, 'wet' paper sludge will be stored on the concrete pad for between 1-4 days. The maximum storage time will be 7 days.

#### **3.5 Drying**

A telehandler is used to scoop up the 'wet' paper sludge off the concrete slab and onto one of the 4 No. drying floors. A first in- first out procedure is employed.

Drying takes approximately 2 days. Drying floors 2 & 3 operate at approximately 32 degrees C. Drying floors 1 & 4 utilise heat at 85-95 degrees C. Despite the higher temperature the drying still takes approximately 2 days due to the lower fan speed from heat exchanger.

One load of 'wet' paper sludge weighs in the region of 28 tonnes and has a dry matter content of approximately 62%. A dried load weighs in the region of 19 tonnes and has a dry matter content of approximately 95%.

### **3.6 Dry Paper Storage**

Once the paper is dry it is removed from the drying floor into the one of the two storage bays using the telehandler. The date is noted on a board at the end of the bay.

In the winter months, demand for dried paper is higher and dried paper leaves the site quickly due to high demand.

In the summer months, demand for bedding materials is generally lower and dried paper material may be stored for up to 1 month (maximum 250 tonnes). Dried paper may be stored for up to 1 month.

### **3.7 Dried Paper Dispatch**

A first in- first out procedure is employed by loading from the bay holding the oldest material and ensuring that the bay is emptied completely before refilling.

Using a telehandler the dry paper sludge is loaded using into covered trailers or covered lorries inside the shed thus minimising dust.

The loaded covered vehicle then leaves the Site and goes to dairy farms where it is used as an absorbent animal bedding under the appropriate waste exemption.

Blending of dried paper sludge with sawdust to customer requirement may be carried out. This is carried out in a building. Ratios vary based on customer requirements. Blended products are made to order and are not stored.

### **3.8 Overview of Dust Controls**

All loads of paper sludge coming in and out of the Site are in sealed or covered vehicles. All vehicle movements including access to the Site from the highway is on hardstanding or concrete. The access road and site are swept as necessary which acts to minimise dust being raised from vehicle movements.

Dust is controlled during the waste treatment process as the drying floors are inside the building.

Dried paper sludge is stored, blended and loaded in a building thus reducing the risk of windblown dust arising from waste storage and handling.

## **4. Dust Management**

### **4.1 Responsibility for Implementation of the DMP**

The Site Manager is responsible for the implementation of the DMP. The Site Manager may delegate responsibilities to the Site Foreman.

Training will be provided to operational staff by the Technically Competent Manager or a nominated deputy for all new starters and the training will be refreshed via an annual tool box talk.

### **4.2 Sources and Control of Fugitive Dust/Particulate Emissions**

The potential sources of fugitive dust emissions are listed below:

1. Vehicles entering and/or leaving the site with mud on wheels, and tracking dust on to or off the site.
2. Debris falling off lorries which arrive uncovered.
3. Vehicles and plant moving around the site kicking up dust
4. Road vehicles tipping waste
5. Drying floors
6. Site surfaces
7. Loading waste materials back on to vehicles.
8. Particulate emissions from the exhaust of vehicles/plant/machinery on site.
9. Generators, plant and other non-road going mobile machinery.

Pathways and control measures are detailed in Table 2 and Table 3 below.



Table 2: Source-Pathway-Receptor Routes

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Mud	Mud falling off vehicle wheels when dry. Raised by vehicle movements and atmospheric dispersion	All	Visual soiling, also consequent resuspension as airborne particulates	There is the potential for mud to be tracked into the Site by vehicles although this is a low risk as all vehicle movements including access to the Site from the highway is on concrete or hardstanding. The hard standing track for HGV access is approximately 900m long and regularly maintained. The yard is checked daily and swept if required. In the unlikely event that there is mud on the road a yard sweeper belonging to the farm will be used.
Debris	Falling off lorries	All	Visual soiling, also consequent resuspension as airborne particulates	This is low risk as any vehicle containing waste is covered.
Vehicles and plant moving around the site kicking up dust	Vehicle movements kicking up dust	All	Visual soiling, also consequent resuspension as airborne particulates	This is a low risk as all vehicle movements within the site are on concrete. The yard is checked daily and swept if required. In the unlikely event that there is dust raising, the yard will be hosed down.
Tipping of waste	Escape from buildings and subsequent atmospheric dispersion	All	Visual soiling and airborne particulates	This is very low risk due to the nature of the waste being tipped (wet paper sludge) and the fact that this is carried out in a covered yard where there is no through wind.
Storage of wastes	Escape from buildings and subsequent atmospheric dispersion	All	Visual soiling and airborne particulates	There is a very low risk of dust from storage of wet paper sludge. All dry material is stored in bays which are inside the building and protected on three sides by concrete walls.
Treatment of waste on drying floors	Escape from buildings and subsequent atmospheric dispersion	All	Visual soiling and airborne particulates	There is a low risk of dust from the drying floors. The waste is dried on drying floors which are inside the building and protected on three sides by concrete walls. In addition the drying floors have doors which can be shut if required.
Vehicle exhaust emissions	Atmospheric dispersion	All	Airborne particulates	Planned preventative inspection and maintenance programme for all fleet vehicles.

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Non road going machinery exhaust emissions	Atmospheric dispersion	All	Airborne particulates	Planned preventative inspection and maintenance programme for all mobile plant.

Table 3: Measures that will be used on site to control dust/particulates (PM10) and other emissions

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
<b>Preventative Measures</b>			
Enclosure within a building	All waste treatment activities are carried out within the building.	However, the building is open sided therefore while the building will reduce the potential for dust emissions, they will not be eliminated.  The site is not in a particularly sensitive area. The closest residential receptor is approximately 215m away from the site.	All waste storage and treatment is carried out in the building.
Site / process layout in relation to receptors	During prevailing wind conditions (south westerly) will take any dust emissions arising from the facility away from the closest residential receptors in Harker Marsh and towards receptors H3 and H4. However, these receptors are over 500m away from the permitted boundary and therefore it is not deemed likely that they will be impacted.  The openings to the building and covered yard are not such that through winds will cause dust to be blown out of the building.	This reduces the likelihood of dust from the operations causing a nuisance to others. However, the aim will be to reduce dust at source and not to allow dust to leave the site boundary.	Wind direction cannot be relied upon as a preventative measure.
Site speed limit, 'no idling' policy and minimisation of vehicle movements on site	Site speed limit is 5 miles per hour. Enforcement of a speed limit may reduce re-suspension of particulates by vehicle wheels.  There is no potential to reduce vehicle movements; in the region of 5 heavy goods vehicles per day.	Easy to implement as part of good practice. Speed limit is identified clearly in the site management system and implemented as appropriate measures.	Site speed limit is enforced at all times, primarily for health and safety reasons.
Good housekeeping	A regular housekeeping regime is in place including daily checks and biannual cleaning of the drying floors.	This measure is easy to implement as part of housekeeping / site tidiness measures. The Site Manager is responsible for ensuring that these tasks are carried out.	Housekeeping checks and activities are carried out as routine.
Sheeting of vehicles	Prevents the escape of debris, dust and particulates from vehicles as they travel.	All waste vehicles are enclosed or sheeted.	This measure is implemented as standard.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Easy to clean concrete impermeable surfaces	The whole site benefits from a concrete surface. This will reduce the amount of dust and particulate generated at ground level by vehicles and site activities.	Concrete surfacing is checked on a daily basis and repair arranged as required. Cleaning of concrete is carried out as part of routine housekeeping activities (see above).	Housekeeping checks and activities are carried out as routine.
Minimisation of waste storage heights and volumes on site	Reducing storage volumes should reduce the surface area over which particulates can be mobilised.	Maximum waste storage volumes and heights for combustible materials are limited in accordance with the Fire Prevention Plan <b>(SKE-OD-02)</b> . This abatement measure is not likely to have a significant impact on dust emission levels.	Waste storage volumes and heights are checked as part of the Daily Checks <b>(SKE-MP-01)</b> .
Reduction in operations (waste throughput, vehicle size, operational hours)	Reducing the amount of activity on site during windy weather as well as associated traffic movements should result in reduced emissions and re-suspension of dust and particulates from a site.	Unlikely to be necessary but remains within the DMP as a last resort option. Weather conditions are checked daily. If high winds are forecast planned operations can be reviewed.	Unlikely to be necessary but remains within the DMP as a last resort option.
Remedial Measures			
On-site sweeping	Sweeping could be effective in managing larger debris, dust and particulates but may also cause the mobilisation of smaller particles.	Easy to apply but less effective than other measures.	A road sweeper will be hired in and used as required if preventative measures have not been effective.
Water suppression with hoses.	Damping down of site areas using hoses can reduce dust and particulate re-suspension and may assist in the cleaning of the site if combined with sweeping. There are hoses within the building that can be used for dust suppression if required.	Quite water intensive. Water suppression will only be used in open yard and roadway areas as purpose of the waste treatment activity is to dry the waste for use as an animal bedding.	Dust observed leaving site during Daily Checks <b>(SKE-MP-01)</b> .

### **4.3 Water Availability / Drainage**

There are 2 No. 7,000 litre water tanks on site, their location is shown on the Whole Site Layout Plan (Appendix A). There is 500m of hose that will connect to the tank(s). In addition there is a clay lined lagoon on site (25m wide by 66m long and 2m deep) which has the capacity of 3,300m<sup>3</sup>. There are 2 submersible pumps and 200m of hose on site at all times which can be used to draw water out of the clay lined lagoon for additional water supplies. There is also a vacuum tanker. The lagoon is adjacent to the waste storage and treatment areas.

### **4.5 Visual Dust Monitoring**

Dust will be checked daily downwind of the building and the external waste storage bays. This will be recorded on the Daily Checks **(SKE-MP-01)**. If dust is visible in the air then:

- Dust mitigation measures will be employed.
- Another check will be carried out an hour later and if dust raising is visible then the operation causing the issue will be stopped until appropriate mitigation can be put in place.
- These further checks and actions will be recorded in the Site Diary.

If dust is found to be leaving the site and all measures within the DMP have been employed then this document will be reviewed and further appropriate measures employed as required.

## **5. Reporting and Complaints Response**

All complaints will be dealt with in accordance with the Complaint Policy & Procedure, Section 7.7 of the EMS Manual **(SKE-OD-01)** and recorded on the Complaints Record Form **(SKE-FT-02)**. The completed forms will be held in the Site Office.

## **Appendix A – Site Plans**

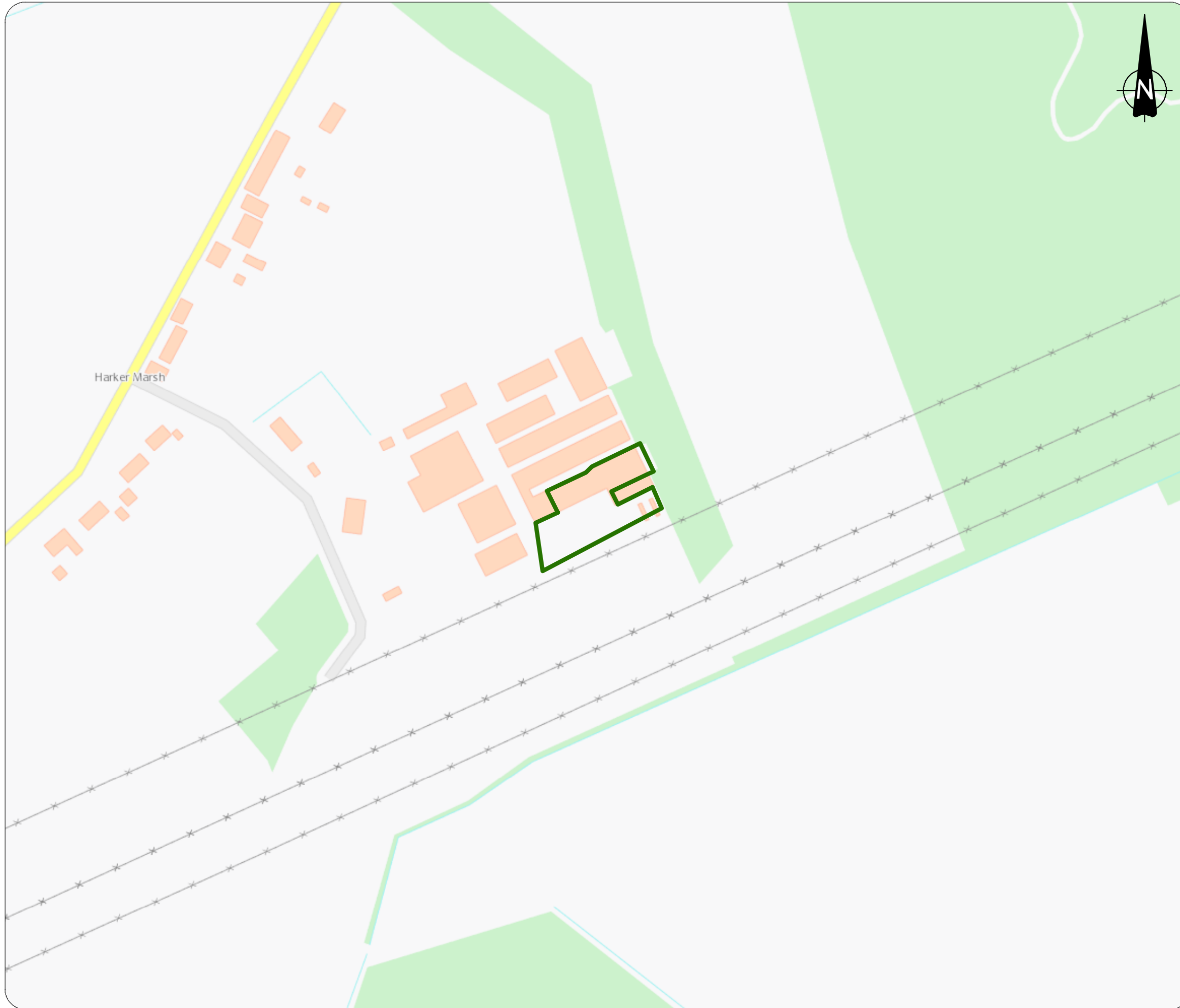
Site Location Plan (SPC0130/LocationPlan/Rev A)

Permitted Boundary Plan (SPC0130/BoundaryPlan/Rev A)

Human Receptor (1km) Plan (SPC0130/HumanReceptor(1km)/Rev A)


Paper Drying Layout Plan V1.0, May 2024

Whole Site Layout Plan V1.0, May 2024



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP
A	11/05 2024	First Issue	JJ	ESP	ESP

**LEGEND**

 Permit Boundary

0 50 100 m  
Scale at A3: 1:2,500

Client Robert Skelton Contractors Limited
Project New Hall Farm Paper Drying Plant Permit Application
Title Site Location Plan



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Drawn JS	Checked ESP	Approved ESP	Revision A
Date May 2024	Scale 1:2,500	Sheet Size A3	
Drawing Number SPC0130/LocationPlan/Rev A		File Reference SPC130.mxd	



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP
A	11/05 2024	First Issue	JJ	ESP	ESP

**LEGEND**

 Permit Boundary

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Scale at A3: 1:500

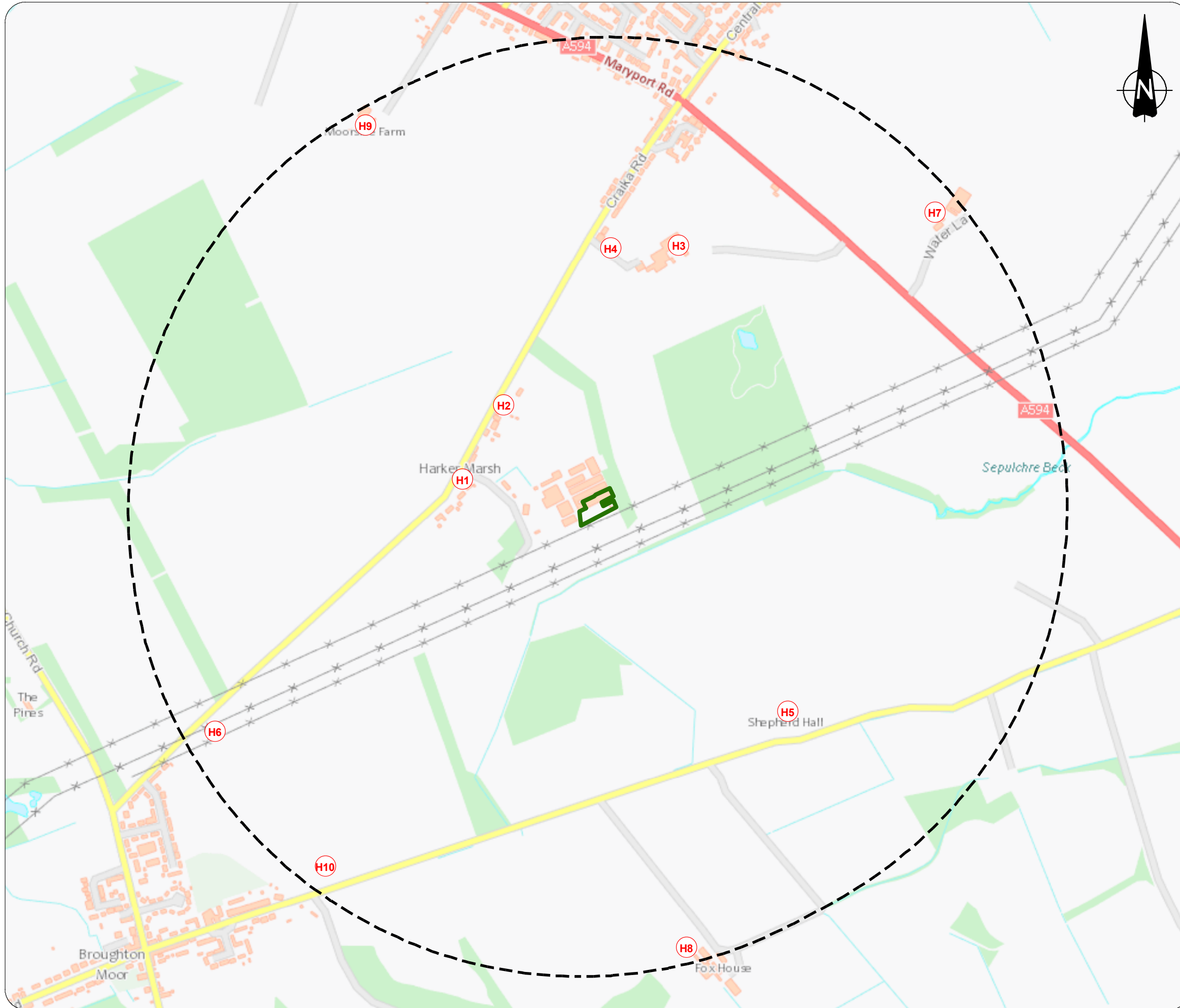
Client Robert Skelton Contractors Limited
Project New Hall Farm Paper Drying Plant Permit Application
Title Permitted Boundary Plan


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Drawn JS	Checked ESP	Approved ESP	Revision A
Date May 2024	Scale 1:500	Sheet Size A3	
Drawing Number SPC0130/BoundaryPlan/Rev A			File Reference SPC130.mxd





REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP
A	11/05 2024	First Issue	JJ	ESP	ESP

**LEGEND**

- Permit Boundary
- Permit Boundary 1km Buffer
- Human Receptor

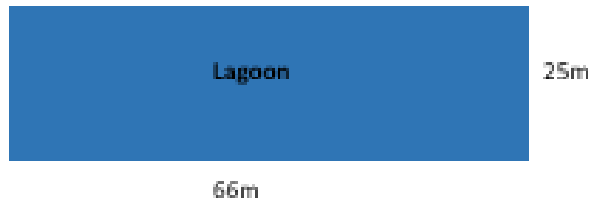
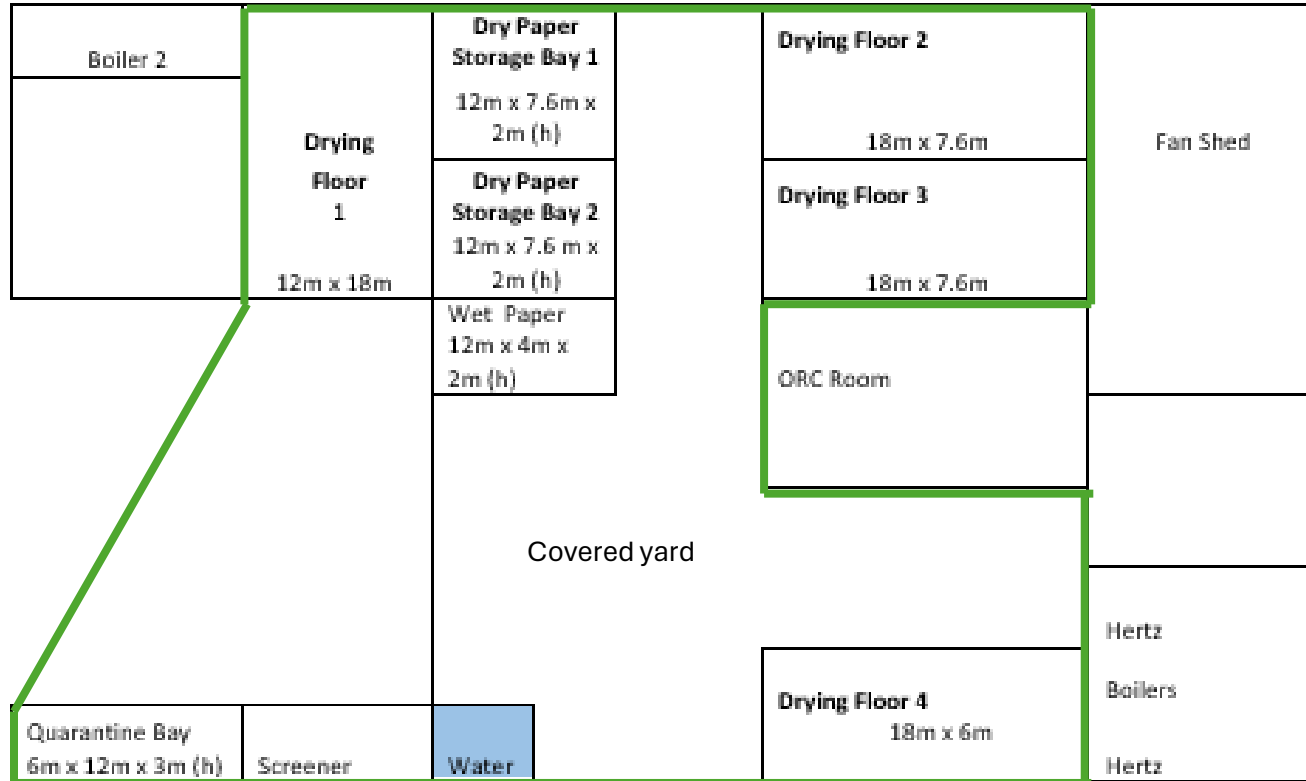
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Scale at A3: 1:8,500

Client Robert Skelton Contractors Limited
Project New Hall Farm Paper Drying Plant Permit Application
Title Human Receptors Plan

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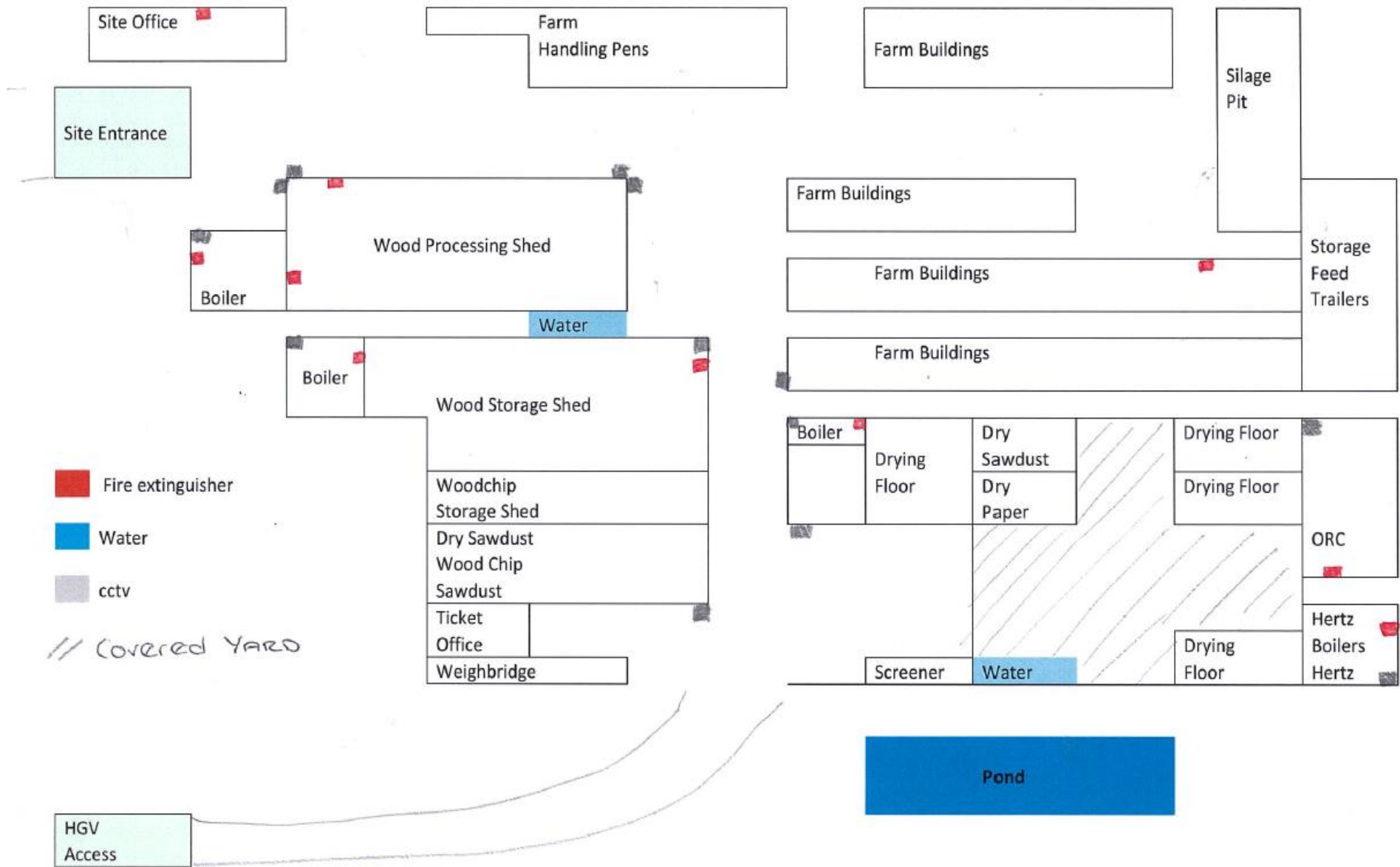
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Drawing Number SPC0130HumanReceptor(1km)Rev A			File Reference SPC130.mxd

# New Hall Farm Paper Drying Plant - Paper Layout Plan, V1.0, May 2024



 Permitted area

# New Hall Farm Paper Drying Plant – Whole Site Layout Plan, V1.0, May 2024



## Appendix B – Wind rose showing the Average Wind Direction & Strength for Harker Marsh

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