DUST MANAGEMENT PLAN

FOR JM Envirofuels Barry Limited

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1.0 INTRODUCTION

The site currently receives inert wastes for recycling and is permitted to take in up to 85,000 tonnes per annum of source segregated civic amenity and commercial wastes for the production of biomass fuel for power stations. Also, taking wastes for the production of recycled products.

The waste recovery facility includes the following:

- **Recovery of Materials:** Stockpiling, Screening and bulking up processes
- **Wood Recovery**: Recovery of wood for recovery as a biomass fuel/sell to end markets, through stockpiling, Shredding and Screening Processes.

All site roads and processing areas are concreted. See Appendix B for the site layout

1.1 Site Description

JM Envirofuels Barry facility situated off Wimborne Road, just north of the Docks at Berth 31 is a working wood recovery facility and JM Envirofuels Barry Limited's site is a permitted wood facility for the handling of wood waste. The site location is shown on Figure 1, in an industrial setting adjacent to the Dock.

Wood waste grade A, B and C and oversize material will be processed through shredding and screening to provide a suitable reprocessed material for use as a fuel. This product is then stockpiled.

It is anticipated that the total amount of wood waste grade A, B and C and oversize material to be processed will not exceed 85,000 tonnes per annum. The storage requirements for this material will be 20,000 tonnes to provide sufficient buffer during the winter periods when the demand for supply is expected to increase.

Inert wastes (metal, glass, ash, plasterboard) will be accepted on site to be stored in bays for bulking up prior to removal off site for recovery.

The site boundary is made up in part with a Soil bund wall (3m high). Where there is no soil bund wall, the boundary has palisade fencing. Air movement across the site is restricted by the boundary walls, as well as concrete block walls.

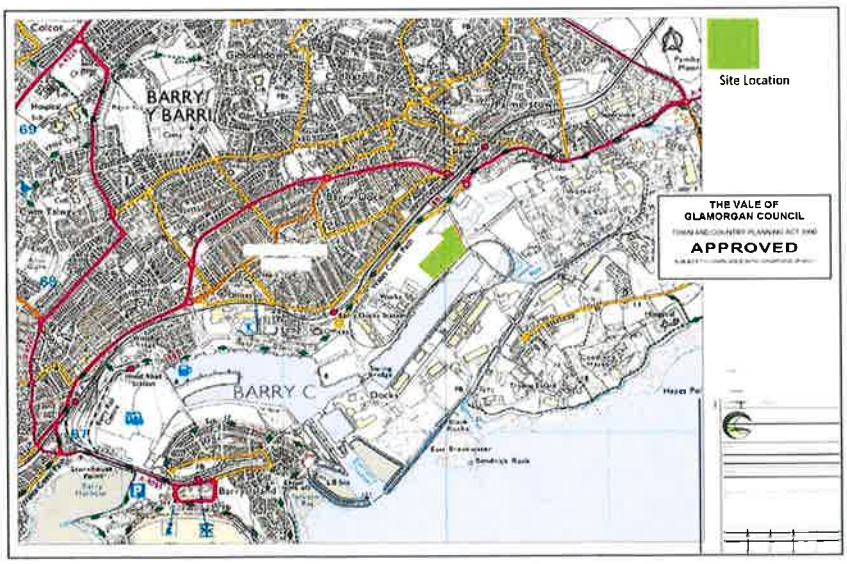


Figure 1. Location map for JM Envirofuels Barry

Table 1. Potential receptors at JM Envirofuels Barry Facility

Ref	Name	Direction	Distance (m)
1	Harris Pye Marine	South West	166
2	Container Storage	East South East	320
3	Industrial	South East	371
4	Residential	North West	330

1.2 Aims

The aim of the Dust Management Plan is to:

a) Minimise dust generation and migration from the site;
b) Ensure nuisance caused to nearby receptors from dust is kept to a minimum;
c) To develop a dust minimisation strategy that shall be implemented by the site management; and
d) Ensure that operations at the site have consideration for potential dust generation.
e) Inform continuing improvements to dust/ particulate control and site management at the site and update the Dust Management Plan detailing such improvements.

This plan is integral to the Company EMS and Safe Operation Procedures.

2.0 DUST CONTROL MEASURES

The following section outlines the control measures that will be undertaken on site to mitigate dust emissions from the identified sources of generation.

2.1 Dust Generating Activities

Potential dust emissions (not exhaustive) from the site may be generated from activities associated with:

- Vehicle movements in / around /out of the site. Tyres and exhausts may cause dust – keep vehicle speeds down, keep roads clear of mud (hand sweeping, mechanical road sweeping), keep roads damp during dusty conditions (applying water site bowser, water hoses);
- Loading and tipping operations – During this process dust may be given off through impact, therefore it is encouraged for tipping heights to be kept to a minimum. Mobile fan driven apps (Supplied by Air Pollution Products & Systems) may be used to also suppress dust generation alongside these operations;
- Processing (Shredding, Screening) of wood. Material may be dampened before going through the process (with water hoses or water bowser), mobile fan driven apps may also be used to suppress any dust. Discharge belts to be kept at minimum height where practicable to do so (nose bags to be used for fine product at end of conveyor);
- Handling and movement of stockpiles. Vehicles moving stockpiles will not over fill buckets / body of dumper, tipping heights will be kept low when emptying bucket;
- Wind blowing across stockpiled materials (wood). In some conditions it may be necessary to cover the stockpile with plastic sheeting should the material be required to be stored for a long period of time.
- Road sweeping may generate dust though the exhaust and brushes, this can be controlled by sufficient water being deployed from the spray bars.

In addition to the above, dust generation may be significant during periods of strong winds and dry weather.

Dust generation can also be attributed to other external influences;

- Road vehicles
- Scrap yard
- Loading / unloading in the Dock

2.2 Means of Prevention

In order to minimise potential generation of dust from the site, the following preventative control measures using best practicable means, shall be implemented by the site manager for the separately identified potential dust generating activities.

2.2.1 Vehicle Movements In/Out of Site

A) All haul and access roads within the site and at the site entrance shall be kept free from mud and debris at all times by manual clearing (Brooms, spades) and road sweeping. Mud and debris on access and haul roads shall be monitored daily by the site manager and cleaned when required. If this proves to be insufficient, a road sweeper will need to be provided. The public highway is also monitored for debris leaving the site.

B) The site management shall ensure adequate measures are used throughout the site to dampen surfaces (application of water through hoses / bowser / mobile fan driven apps) during periods of dry weather.

C) All vehicles and plant will be checked by the driver / operator to ensure that debris is not carried outside the site (signs of this will be visible on-site roads). Should debris become an issue then the installation of a wheel wash will be considered.

D) A site speed limit of 10mph will be enforced for all vehicles to minimise the potential entrainment of dust into the atmosphere. All site roads are concrete.

2.2.2 Loading and Tipping Operations

E) All wastes handled on site shall be done so in a controlled manner, with consideration given to the potential for dust generation at all times.

F) Loading and tipping heights will be minimised to avoid uncontrolled dust emissions.

G) All vehicles will be sheeted when entering and leaving the site.

2.2.3 Handling and Movement of Stockpiles

H) The site managers will consider weather conditions at the site on a daily basis and shall have regard for high wind speeds. Wind speed and direction shall be measured on the site. Site Managers will maintain a visual assessment of dust generated on site and take appropriate steps to control any untoward emissions. Unusual or extreme weather conditions are noted in the site diary.

I) Where wind speeds are measured which are considered excessive (or where visible dust clouds can be seen moving to the perimeter of the site), the site manager shall ensure that the movement of materials on site is controlled (reduced vehicle speeds / stop production / addition suppression applied) until wind speeds reduce significantly. This information will be recorded in the site diary.

J) The site management shall ensure appropriate measures are used throughout the site to dampen surfaces (application of water through hoses / bowser / mobile apps) during periods of dry weather. Such surfaces shall include stockpiles where appropriate.

2.2.4 Wind Blowing Across Stockpiles

K) Where necessary and during periods of dry conditions, water will be deployed to dampen material (use of binders will also be considered, along with sheeting) during stockpiling and made available as per J).

L) Disturbance of the surface of the stockpiles will be minimised. Some stockpiles are in concrete block bays which act as windbreaks, stockpile heights are governed by the height of the walls.

2.2.5 Shredding and Screening of Wastes

M) All wood handling/loading/shredding operations on site shall be monitored by the site management, and if necessary appropriate measures shall be implemented to prevent dust generation.

N) Where dust suppression systems are incorporated into plant/machinery, they should be used to minimise dust generation where appropriate, and maintained in workable condition at all times.

O) Operations around the operational machinery will be carried out in a controlled manner to prevent fall out of dust (Sprays around hoppers, nose bags on end of conveyor).

P) Shredding and screening operations will take place within the designated area and materials wetted prior to activities that could lead to dust generation where necessary.

2.2.6 Site Management

Q) The site manager shall ensure that a visual inspection of the activities is carried out at regular intervals during operational hours to assess the extent of dust being generated. In circumstances where visual dust inspection identifies a significant dust source, the site manager shall adopt appropriate dust suppression measures to prevent or minimise the dust being generated.

R) Dust suppression systems (perimeter sprays, mobile apps, plant suppression, dampening roads) and equipment used on site shall be maintained in good working order at all times.

S) Maintenance or repairs of dust suppression equipment and road / yard surfaces shall be carried out as soon as reasonably practicable and recorded within the relevant maintenance log.

T) Site operating personnel, including plant operators, will be supplied with dust masks, whenever necessary, and all plant cabs shall be maintained such that as far as reasonably practical the ingress of dust is minimised.

3.0 MANAGEMENT AND REVIEW PROCEDURE

The site manager shall be responsible for the control and management of dust at the site. Site management shall ensure that all personnel operating on site are adequately trained to implement the dust control measures.

If the control measures stated are implemented at the site then dust generation should be kept to a minimum.

In the event that dust nuisance is caused to a nearby sensitive receptor, and a complaint is received by the site management, the 'Dust Action Plan' will be implemented.

4.0 DUST ACTION PLAN

If an activity at the site results in unacceptable levels of dust being generated, then that activity shall be closely monitored until sufficient measures using best practicable means are adopted which prevent or minimises the dust nuisance. The implementation of such measures will be the responsibility of the site manager. Conditions which may require the use of dust suppression at the site include the following:

- Dry surfaces where mud or debris is present;
- Any part of the site where movement of vehicles generate dust;
- Any part of the site where dust may be generated by wind;
- Stockpiles without cover;
- Shredding and screening activities – in the hopper, end of conveyors;
- Material handling operations; and
- Any other site activity which results in dust generation.

The site manager will be responsible for monitoring dust levels associated with the conditions and activities identified above. The site manager shall implement adequate dust suppression measures to control dust from any activity which causes dust nuisance.

4.1 Dust Monitoring

Upon receipt of a dust complaint the site manager shall be immediately notified. The site manager will record the details of the complaint on a Dust Complaints Form (see Annex A). This will trigger a levelled response;

- Level 1 - instigate investigation and possible monitoring dependent upon findings
- Level 2 - improvement plan, include but not limited to improving working methods, mitigation measures, equipment and dust suppression methods
- Level 3 – Re-Evaluate if the improvement plan has worked, including effects of weather conditions and infrastructure
- Level 4 – Compliance confirmed.

4.1 Review of Techniques

In circumstances where the complaint is related to a previous period of working, the site manager shall meet with the Senior Manager, Health Safety and Environment Manager and site staff to establish the activities carried out during the previous working period. The activity identified as the potential dust source will then be monitored by the site manager. The manager will ensure that a review of dust suppression measures is carried out for any activity suspected of causing a dust complaint. Dust suppression measures will be adopted for any activity suspected as the cause of a dust complaint.

Where the site walkover by the site manager is able to identify the dust nuisance which caused complaint, appropriate dust suppression measures are to be adopted. The details of the dust source and the control measures adopted shall be recorded on the Dust Complaints Form.

4.2 Monitoring Points

If the dust source that led to a complaint cannot be established the site manager will arrange for dust monitoring to be undertaken (making reference to Environment Agency TGN (monitoring) M17 V2 July 2013).

The dust monitoring point will be monitored for a full working day period (or longer, if required) and will comprise of a suitable monitoring system. The dust monitoring procedure for the monitoring system shall be followed in accordance with the manufacturer and best practice guidelines.

The dust monitoring sample will be collected after the monitoring period and sent for independent analysis. The dust monitoring results and findings shall be reported to the senior manager.

Details of dust control and mitigation measures will be reported by the senior manager to NRW. The nature of the complaint, the findings of any investigation, and mitigation measures adopted, will be recoded on the Dust Complaint Form, and then signed by the site manager. If the location of the complaint is known, we may wish to inform them of our findings and explain what we are doing on site. In the past the Company has engaged with the parish council and residents, however this has not been requested to continue but we will re- instigate if the need arises.

5.0 CONCLUSION

The waste processing on site should be a minimal issue with regards to dust as control measures will be used. The site is well screened and is set in a remote area.

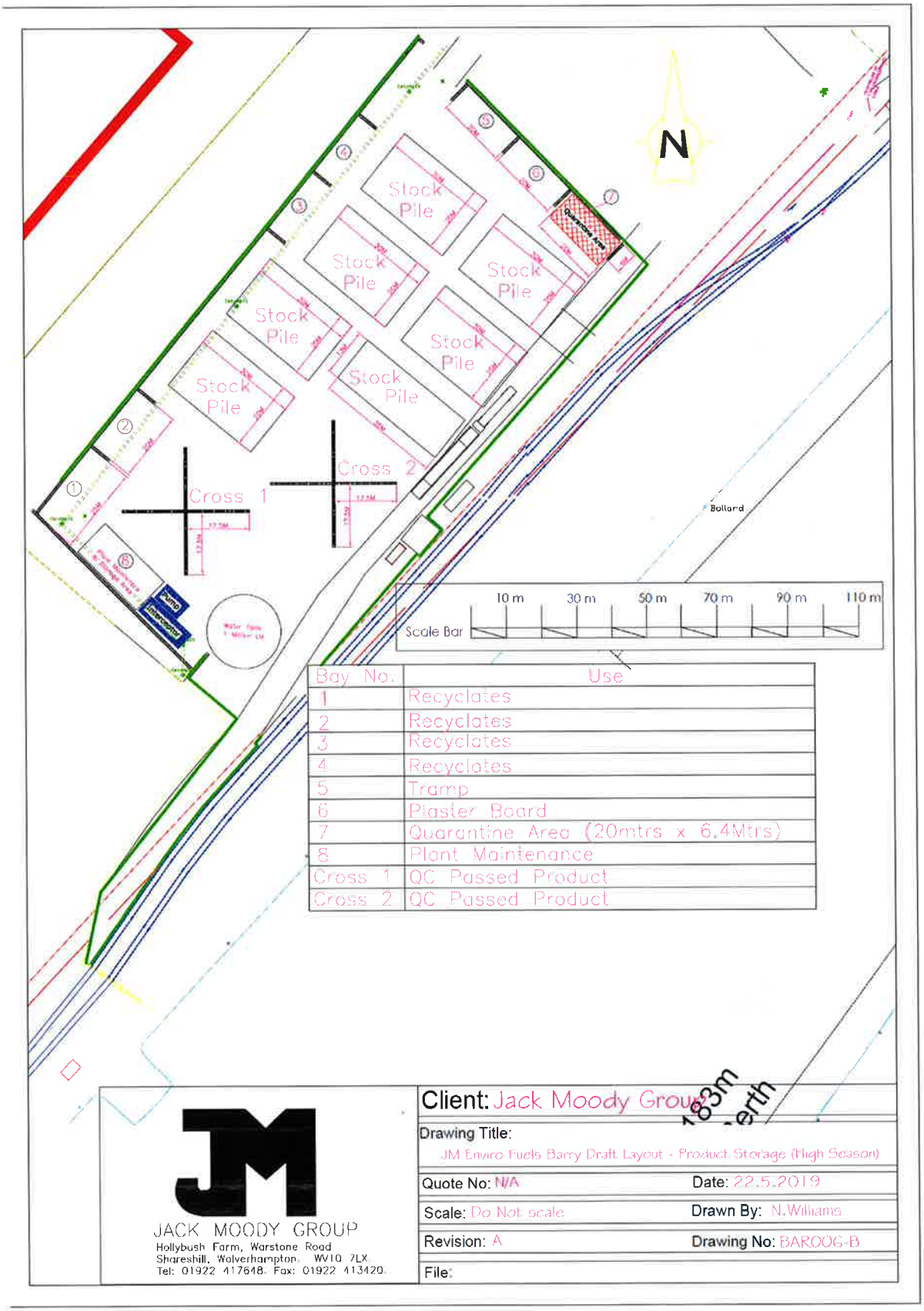
If the control measures stated are implemented at the site, it is considered that dust generation should be kept to a minimum and that nuisance to nearby receptors should be avoided in normal circumstances.

In the event that dust nuisance is caused to a nearby sensitive receptor, and a complaint is received regarding dust migrating from the site, the dust action plan shall be implemented. This may require a period of monitoring to be implemented to inform operations and establish dust emissions levels with targets for improvements.

APPENDIX A - DUST COMPLAINTS FORM

DUST COMPLAINTS FORM		
Complaint Received From:	**Date of Event**	
	Time of Event	
	Direction from Site	
Investigation		
Wind Direction During Event	**Complaint Substantiated**	
	YES	NO
Activities at Time of Event	**Excessive Dust Emissions Identified**	
	YES	NO
Actions/Mitigation Measures		
Measures Implemented Date		
Feedback to EA (Date)		
Investigation Complete (Date)		
Review		
Signed Off (Site Manager)		

APPENDIX B – SITE PLAN



APPENDIX C – Process Flow Diagram

Wood Processing