STACEY
PROCESSING LTD

DUST EMISSIONS MANAGEMENT PLAN

RYDER POINT WORKS
WIRKSWORTH
MATLOCK
DERBYSHIRE
DE4 4HE

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DUST EMISSIONS MANAGEMENT PLAN
RYDER POINT WORKS, WIRKSWORTH, MATLOCK, DERBYSHIRE, DE4 4HE

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1.0 INTRODUCTION

1.1 Scope & Background

1.1.1 This Dust Emissions Management Plan (DEMP) has been prepared by Sirius Environmental Limited (Sirius) on behalf of Stacey Processing Limited ('Stacey') in support of the waste treatment activities undertaken at Ryder Point Works, Wirksworth, Matlock, Derbyshire, DE4 4HE, in line with the requirements of the Environmental Permitting (England and Wales) Regulations 2016. This DEMP has been prepared to support the initial application for a new Environmental Permit to operate the facility.

1.1.2 'Stacey's are applying for a bespoke Environmental Permit for an existing glass recycling activity and a Construction, Demolition and Excavation Waste Treatment Facility located near Wirksworth, Derbyshire. The site will accept glass waste and construction, demolition and excavation waste. Treatment of the waste at the site will consist of sorting, separation, screening, washing, grinding, crushing and blending of waste for recovery

1.1.3 The DEMP considers the potential for the generation of fugitive dust emissions from the waste storage and processing operations carried out at the site. This DEMP outlines the site conditions, operational processes, controls to be applied and the monitoring to be undertaken to avoid potential nuisance and environmental harm from occurring.

1.1.4 This DEMP has been prepared with cognisance to the materials being processed and therefore considers appropriate measures for the control of potential emissions from the facility. A copy of this document will be kept on site in the office for staff and personnel to refer to when needed. This is a live document which will be updated where necessary.

1.2 Site Location and Layout Description

1.2.1 This DEMP relates to the operation of a Waste Treatment Facility at Ryder Point Works, Wirksworth, Matlock, Derbyshire, DE4 4HE. The National Grid Reference (NGR) for the site is SK 26042 54727. The site is within the local authority of Derbyshire Dales Council. The site location has been depicted in Drawing No. SPL1000/08/01.

1.2.2 The site itself currently comprises seven buildings. The associated external areas comprise the lined surface water pond, staff car parking and Heavy Goods Vehicle (HGV) parking areas, equipment storage areas, staff welfare facilities, storage areas for the sorted wastes awaiting transfer and storage areas for the processed glass. Entrance and egress to and from the site for heavy good vehicles is via a junction off Hopton Via Gellia that also provides access to the adjacent quarry. Hopton junctions with Manystones Lane to the southeast of the site. The site entrances are gated and will be locked outside of operational hours.

1.2.3 **Drawing No.: SPL1000/08/02** depicts the proposed Environmental Permit Boundary. The indicative site operational layout is shown in **Drawing No.: SPL1000/08/03**.

Operational Hours

1.2.4 The site will operate during the following days and times:-

- Monday to Friday 0700hrs to 1800hrs
- Saturdays 0700hrs to 1300hrs
- Sundays & Bank Holidays Closed

2.0 SENSITIVE RECEPTORS

2.1 Receptor Identification

2.1.1 The town of Wirksworth is located approximately 2.7km to the east-southeast of the site, the village of Brassington lies ~2.9km to the west of the site, and the hamlet of Carsington and Hopton lies ~1.6km to the south. Matlock is located ~6.5km to the northeast and the junction of Hopton Via Gellia and Manystones Lane is ~130m from the site entrance. The A5012 is ~1.7km north of the site. The site lies within an area subject to extensive limestone quarrying, together with agricultural land.

2.1.2 A full list of potential sensitive receptors to dust and other emissions (such as nitrogen dioxide from combustion sources including generators, road vehicles and mobile plant) within 1km of the facility are listed in **Table 1**. Their locations are illustrated in **Drawing No.: SPL1000/08/04.**

Table 1: Identified potential sensitive receptors to dust and other emissions (e.g. Nitrogen Dioxide) within 1km of the proposed facility

Receptor Name	Receptor Type	Approximate distance from the site boundary (m)	Direction from the facility	Potentially Sensitive Receptor to Potential Dust Emissions? (Y/N)
Principal Bedrock aquifer – BEE LOW LIMESTONE FORMATION Secondary Undifferentiated Superficial aquifer - TILL, MID PLEISTOCENE - DIAMICTON	Groundwater	0m	Underlies the site and surrounding areas	N
Industrial Premises and quarry	Commercial / Industrial	Adjacent - 1km	W, SW	N
Local infrastructure e.g. Hopton Via Gellia, Manystones Lane	Public Highways	Adjacent -1km	NE, E, SE, S	Y
Rural	Agricultural, woodland, fields	Adjacent – 1km	All directions	Y
Surface water features, Ryder Point slurry ponds	Ponds, streams, drains	200m	NW	Y
Ryder Point Barn	Commercial Property (Holiday Let)	285m	NNE	Y
Arm Lees Farm	Residential and Commercial Property	390m	NNE	Y
Eniscloud Meadow Farm	Commercial Property Residential Property	400m 500m	SW	Y
Denewood Farm	Commercial Property Residential Property	475m 590m	S	Y
Moor Farm	Commercial Property	630m	E	Y
Site of Special Scientific Interest (SSSI) - Via Gellia Woodlands	Habitat	700m – 1km	NE	Y

Receptor Name	Receptor Type	Approximate distance from the site boundary (m)	Direction from the facility	Potentially Sensitive Receptor to Potential Dust Emissions? (Y/N)
Protected Habitat (Ancient Woodland) – (Stone Dene Ancient and Semi-Natural Woodland) (Ball Eye Wood Plantation on Ancient Woodland)	Habitat	630m – 1km	N, S	Y
Pearsons Farm	Residential and Commercial Property	750m	N	Y
Special Area of Conservation (SAC) - Peak District Dales	Habitat	950m	NE	Y

2.1.3 The site lies entirely within a Source Protection Zone I (Inner Protection Zone) (SPZ).

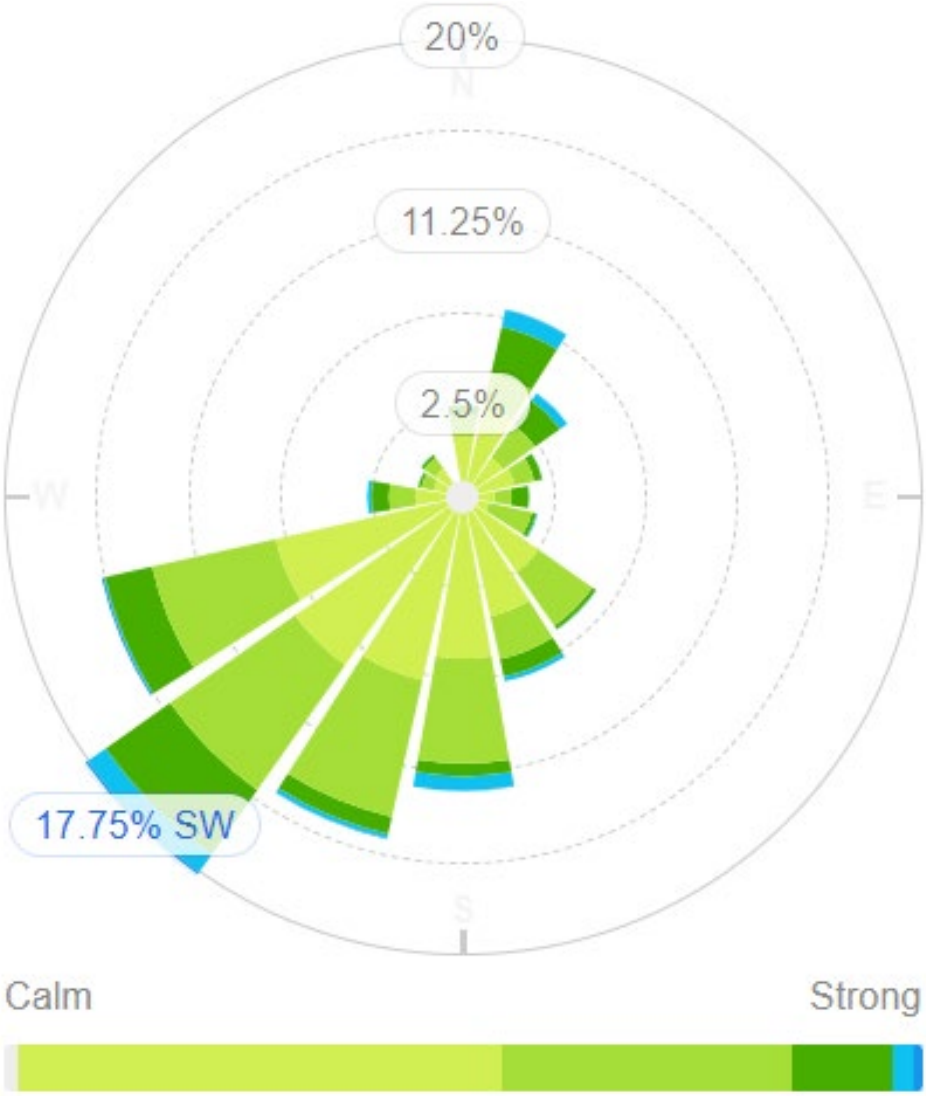
2.2 Meteorological Setting

2.2.1 The fugitive emissions of dust from the site could be affected by local weather conditions, in particular wind direction and rainfall.

2.2.2 The local wind speed and direction data has been obtained from the meteorological station located at Watnall, which lies approximately 25.8km south-east of the site. The National Grid Reference NGR for Watnall Observation Station is SK 50329 45623. This weather station is deemed the most appropriate for use in order to characterise the site due to its proximity to the site. Wind patterns at the Watnall Station are likely to be similar to those experienced at the site.

2.2.3 The wind rose, as shown by **Figure DEMP1** shows the percentage of wind vector that could be generated in each of the 16 points of a compass. The wind rose indicates that the predominant wind directions are from the south-western quadrant with 17.75% from the south-west.

Figure 1: Average Wind Rose for Watnall Meteorological Recording station for the last 5 years (Source: www.willyweather.co.uk)



2.3 Additional Sources of Dust and / or Other Emissions

2.3.1 **Table 2** lists the other potential sources of dust and emissions such as Nitrogen Dioxide located within 1km of facility. The locations of these are shown in relation to the site in **Drawing No.: SPL1000/08/05.**

Table 2: Additional Potential Sources of Dust and/or Other Emissions within 1km of the site

Source No.	Source Name	Address	Type of Business	Distance from the site (m)	Direction from the site
1	Linston Processing Plant	Ryder Point Works	Industrial Waste Processor	0	SW
2	Hopton Via Gellia	-	Public Highway	15	E
3	Unknown	Hopton Via Gellia	Unknown	35	NE
4	Manystones Lane	-	Public Highway	50	S

Source No.	Source Name	Address	Type of Business	Distance from the site (m)	Direction from the site
5	Longcliffe Ryder Point Quarry	Longcliffe, Ryder Point, Manystones Ln, Matlock DE4 4ES	Quarry	70	W
6	Eniscloud Meadow Farm	Enniscloud Meadow Farm, Manystones Lane, Wirksworth, Matlock, DE4 4NY	Farm	385	SW
7	A & R Slater Ltd	Armlees Farm, Ryder Point Road, Wirksworth, Matlock DE4 4HE	Groundworks and Construction Contractors	425	N
8	Denewood Farm	Denewood Farm, Hopton Via Gellia	Farm	475	S
9	Moor Farm	Moor Farm	Farm	603	E
10	Pearson's farm	Pearsons Farm, Ryder Point Road Matlock, Derbyshire, DE4 4HE	Farm	739	N
11	Sibelco Toll Processing	Sibelco Toll Processing, Manystones Lane, Brassington, Derbyshire, DE4 4ES	Mineral Processing	962	W

3.0 WASTE OPERATIONS

3.1 Site Activities

3.1.1 The permitted waste operations consist of the receipt, storage, treatment (via sorting, separation, screening, washing, grinding, crushing and blending of waste for recovery) and off-site transfer. The waste facility will operate under the effective system of management procedures which the operator currently has in place. Technical competence for the site will be provided via the WAMITAB Certification Scheme. A Technically Competent Manager (TCM) will be selected to oversee the site. The TCM will be responsible for ensuring the DEMP is enforced and followed at the site.

3.1.2 All Standard Operating Procedures are regularly reviewed and updated (where required) to ensure Best Operational Practice. Copies of all Standard Operating Procedure documents are maintained by the company at the operational site.

3.1.3 An overview of how the Standard Operating Procedures control dust emissions is presented below.

Waste Deliveries

3.1.4 All materials are received, inspected, accepted or rejected and recorded in accordance with the site's Working (Management) Plan. All operatives on site will have knowledge of the Environmental Permit and on the types and forms of waste accepted and prohibited at the facility.

3.1.5 Records of waste deliveries will be kept and stored in the site office. These records will include the waste delivery dates, waste type and origin, the member of staff on duty and details on the checks completed on the waste prior to acceptance or otherwise.

3.1.6 As with current waste pre-acceptance requirements, the operator will obtain information from the waste producer before delivery to the site which fully characterises and describes the wastes in accordance with WM3 guidelines, including a description of the process producing the waste, its composition and hazardous characteristics. This will allow the operator to assess conformance (or otherwise) with the list of permitted wastes. The operator will also ensure compatibility of each waste stream for bulking/mixing purposes prior to acceptance on site. This will ensure that the recovery of the wastes will not be hindered.

3.1.7 With the stringent procedures to be carried out at the site, it is unlikely that a form of particularly dusty waste would be delivered or accepted at the site.

3.1.8 Following Pre-Acceptance checks, all waste deliveries will access the site via a junction off Hopton Via Gellia that also provides access to the adjacent quarry. Waste delivery vehicles entering the site will be directed over a weighbridge where transfer and consignment notes are deposited, and the vehicle is weighed. A visual inspection is carried out by the Weighbridge Operative prior to the load being directed to appropriate tipping area within the site premises for unloading.

3.1.9 All materials are received, inspected, accepted or rejected and recorded in accordance with the site's Management Plan. All operatives on site will have knowledge of the Environmental Permit and on the types and forms of waste accepted and prohibited at the facility.

3.1.10 During the waste acceptance procedures, records will be kept at the site office of the following:

- Date and time of waste deliveries
- Waste quantities
- Waste type being delivered to the site
- The origin of the waste being delivered
- The name of the company and their representations (if applicable) delivering each load of waste and vehicle registration number.

3.1.11 Waste acceptance checks seek to ensure the waste arriving at the site is expected and conforms to the pre-acceptance characterisation. This will be achieved during the visual inspections, where an appropriately trained staff member will determine the basic characteristics of the waste to ensure it accords with the pre-acceptance paperwork, as well as the permitted waste types and quantities on site.

3.1.12 Following the successful completion of the waste-acceptance checks, incoming non-hazardous waste will be directed to the appropriate storage areas located across the site, as shown in **Drawing No. SPL1000/08/03**.

3.1.13 Once the load has been deposited in the appropriate storage area, a further inspection will be made by the Site Operations Manager, Technically Competent Manager (TCM) or a nominated deputy. If accepted, the delivery vehicle will re-enter the weighbridge to be weighed before leaving the site.

3.1.14 In the event that the waste is deemed unacceptable or legally non-compliant on inspection, the driver will be instructed to leave the site with the load. Vehicle details will be recorded in the site diary and the EA will be informed during the next site inspection.

3.1.15 Delivery vehicle drivers will be informed to adhere to a 10mph speed limit to reduce the risk of dust or debris on the road or site surfaces becoming airborne due the wheels of the vehicle and the low pressure generated by a passing vehicle. Due to the engineered hardstanding nature of the site surfaces and access roads it is not expected that vehicles would pick up large quantities of mud / debris from on-site movements. The operator owns a mechanical sweeper which is utilised daily on all road surfaces to prevent the build-up of potentially dusty material.

Waste Storage

3.1.16 Following the successful completion of the waste-acceptance checks, incoming wastes will be directed to the appropriate storage areas located across the site, as shown in **Drawing No. SPL1000/08/03**. The glass wastes will be stored in the northwestern section of the site. The C, D & E waste will be directed to the external stocking areas located in the northern section of the permit site.

3.1.17 Dried and segregated/screened <8m glass will be transfer for storage in sheltered engineered bays pending grinding/crushing to produce shot blast.

3.1.18 Dried and sorted/segregated >8mm glass will be stored in enclosed silos/hoppers whilst all residual fractions will be transferred for storage in 50m^3 capacity sheltered engineered/bays, pending off-site transfer.

3.1.19 C, D & E wastes will be stored externally in open stockpiles pending treatment through the wash plant of crushers and screeners. Treated materials with sub-3mm fractions will be stored in sheltered engineered bays pending use on-site

or off-site transfer. Recycled aggregates with limited fines content will be stored in externally in open stockpiles or in sheltered, engineered bays.

Glass Treatment

3.1.20 The glass waste will be moved by loading shovel into the dryer. The dryer comprises an electrically driven rotary flow dryer, with heat generated by a gas oil fuelled Sacke burner in which the hot exhaust gases flow through the dryer drum and come into direct contact with the waste materials.

3.1.21 The dried glass waste is then screened into fractions above and below 8mm.

3.1.22 The <8mm fraction is transferred to temporary covered storage pending crushing/grinding to produce various grades of shot-blast. The shot-blast product is then bagged (various sizes) and stored onsite awaiting transportation to customers.

3.1.23 The >8mm fraction will then the screened via a sequence of gravity screeners to separate the glass and any residual fractions. The residual fractions will be temporarily stored in 50m³ capacity engineer bays pending transfer offsite for disposal/recovery. The glass fractions will be conveyed to the glass sorting building where the glass will be sorted by colour (brown and green/clear) via one of two optical sorting lines. The sorted glass from each line is subsequently conveyed to 3 No. 50 tonne capacity storage silos/hoppers pending transfer off-site to glass re-processors.

Construction, Demolition and Excavation Waste Treatment

3.1.24 C, D & E waste with a mixed particle sizes will be treated through an electrically driven mechanical wash plant. The wash plant will utilise water pumped from the on-site lagoon to separate the mixture of particle sizes to produce various grades of sand, washed gravel and silt, whilst removing any potential organic and non-inert fractions. The process waters are subsequently discharged back into the lagoon to remove any remaining sediment for reuse.

3.1.25 Waste with a lower fines content will be processed using diesel powered mechanical crusher and screener units.

3.1.26 The treated materials are subsequently transferred by a loader to sheltered engineered bays or external open storage (>3mm particle sizes only) pending use in onsite activities (e.g. roadstone coating) or sold on as secondary aggregates to external customers.

3.1.27 The maximum capacity of each of the storage bays as well as the maximum storage durations are summarised in **Table 3**.

Table 3: Maximum Storage Bay Capacities and Storage Duration Periods

Waste Description	Maximum Storage Capacity (m^3)	Maximum Storage Capacity (tonnes)	Maximum Storage Period
Glass Waste	1,900	3,000	6 months
C, D, & E Waste	8,500	15,000	3 Years
Residual waste	150	150	1 month

3.1.28 The waste storage and treatment areas and are shown in **Drawing No.: SPL1000/08/03**.

3.1.29 Visual assessments will be undertaken as part of the Daily Site Inspections. If airborne dust/particulates are visually identified as being generated, then appropriate source investigation and remediation arrangements will be made.

Waste Dispatch

3.1.30 Following processing and storage, the bulked waste will be loaded onto a transfer vehicle for dispatch to a customer or an appropriate facility. A fraction of the processed waste or non-waste material is transferred in bags via internal bagging plant lines, therefore eliminating the dust created from tipping or pouring. Another fraction is loaded into hoppers which discharge directly into the trucks, mitigating the dust from tipping.

3.2 Potential Sources of Dust

3.2.1 **Table DEMP 4** lists the proposed wastes to be permitted at the site with the potential to produce dust and their storage and processing method.

3.3 Mobile Plant & Equipment

3.3.1 The site will implement the use of the following mobile plant:

- Waste Handler
- Loading Shovel
- Forklift Truck

3.3.2 The mobile plant and equipment to be used at the site will have Euro 3 emission standard engines. Consideration will be taken to procure Euro 5 standard plant as and when they require replacement.

3.3.3 Site infrastructure and plant will be inspected daily for damage and wear by site personnel as part of daily operation and management inspections. Any defects noted during these daily inspections will be logged and reported to the maintenance team, so repairs can be scheduled.

3.3.4 Records of inspections will be maintained in a site log. All plant items and equipment will be serviced and maintained according to manufacturer's schedules and recommendations to minimise the risk of breakdown. All maintenance on the plant is programmed into the company's Planned Preventative Maintenance (PPM) system which generates work orders for the up-coming maintenance and logs when maintenance has been completed.

3.3.5 Trained maintenance staff will carry out plant repairs quickly where required. Mobile plant repairs will be undertaken as soon as practicable, dependant on the availability of spares.

3.4 Other Considerations

Water Usage and Availability

3.4.1 Surface waters will be harvested and stored in a lined surface water lagoon used to provide water for the wash plant. This can store a significant amount of water and can also be used for dust suppression purposes. The site will also have a mains water supply provided on site which will support welfare facilities (i.e. the site offices).

In the Event of a Drought

3.4.2 Owing to the lined nature of the surface water lagoon, it is unlikely that the facility will be adversely affected by a drought. Mechanical sweeping using a local contractor can replace wet cleaning processes in the unlikely event that the external areas become dusty. Vacuum and manual sweeping processes can also be used for internal cleaning requirements.

Table 4: List of proposed wastes to be permitted at the site with the potential to produce dust and their storage / processing method

Potentially Dusty Waste types	Example EWC Code / Description	Max Throughput (tonnes)	Storage Area	Process
Glass	All permitted	Up to 75,000 tonnes per annum.	The glass wastes will be stored in the externally in the western area fo the site All treated waste will be stored in sheltered bays or enclosed hoppers/silos.	Storage and treatment (sorting, separation, screening, grinding, crushing)
Construction and demolition wastes (including excavated soil from contaminated sites)	All permitted	Up to 50,000 tonnes per annum.	The C, D & E waste will be directed to the external stocking areas located in the northern section of the permit site. Processed wastes containing a high sub-3mm fraction will be stored in sheltered bays.	Storage and treatment (sorting, separation, screening, washing, crushing and blending)

4.0 DUST AND PARTICULATE (PM_{10}) MANAGEMENT

4.1 Site Management & Responsibility for Implementation of the DEMP

4.1.1 There will be a trained and responsible manager, with the appropriate technical competence qualification to manage the facility. The relevant qualified person will be on site for an appropriate duration of time during working hours to maintain the site logbook and carry out regular daily visual and olfactory inspections of fugitive emissions from the facility. The Technically Competent Manager (TCM) will be responsible for the implementation of the DEMP at the site.

4.1.2 The Site Operations Manager will ensure that this Dust Emissions Management Plan is enforced on site, and its contents are communicated to all employees, visitors and contractors working at the site as part of the induction process.

4.1.3 Should an off-site fugitive dust emissions complaint be received, it will be the Site Manager's responsibility to investigate the cause and take corrective action where necessary. In summary, these individuals will:

- Assume responsibility for the management of the site;
- Ensure personnel and operatives are advised of their roles to minimise the generation of dust;
- Conduct visual monitoring at the downwind site boundary daily or immediately following a complaint (this may be carried out by an appointed person);
- Deploy suitable dust mitigation measures based on visual observation and unfavourable weather conditions (e.g. dry weather with high winds which may aid in dispersion);
- Review the performance of the operatives and efficiency of dust emissions reduction measures;
- Ensure that records are maintained; and
- Ensure that equipment is maintained.

4.1.4 A written programme of maintenance in the form of an Operation and Maintenance Daily Check Sheet (see **Appendix DEMP2**) will be implemented for all aspects of site operations. Maintenance will include:

- Routine scheduled inspections;
- Preventative maintenance activities;
- Reactive maintenance activities in the event of any plant breakdown – this will be minimised at all times.

3.3.4 As stipulated in **Section 3.3.4** records of inspections will be maintained in a site log. All maintenance on the plant is programmed into the company's Planned Preventative Maintenance (PPM) system which generates work orders for the up-coming maintenance and logs when maintenance has been completed.

4.1.5 A summary of dust control techniques is provided in **Section 4.3** and **Tables DEMP 4** and **DEMP 5**.

4.2 Sources of Fugitive Dust and Other Emissions

4.2.1 The operations at Ryder Point capable of producing dust and particulate emissions include the following:

- Vehicles and plant moving around the site kicking up dust;

- Waste being unloaded from and loaded onto transfer vehicles;
- Site surfaces (not exclusively the ground around plant and equipment);
- Drying of the glass waste
- Screening, sorting, crushing, and grinding of the wastes.
- waste loading for dispatch or internal transfers
- Wind whipping of the stored wastes.
- Particulate emissions from the diesel crusher and screener
- Particulate emissions from the exhaust of road vehicles.

4.2.2 The pathway for the majority of these releases is atmospheric dispersion; either primary from the dust / particulate source (e.g. 'wind whipping' of waste on site) or after tracking onto the public highway on the wheels of vehicles. The Source-Pathway-Receptor routes are detailed in **Table DEMP 4.**

4.3 Control of Fugitive Dust and Other Emissions

4.3.1 An assessment of the potential risks and impacts from fugitive dust emissions and the corresponding mitigation measures are presented in **Table DEMP 4**. The preventative and remedial measures to control dust and other emissions at the site are also summarised in **Table DEMP 5**.

4.3.2 It is considered that the potential risks of adverse health and nuisance impacts range from **very low** - **low** owing to the control / mitigation measures that will be employed at the site. The justification for this assessment is:

- Dust suppression methods will be used to reduce the amount of dust that is emitted to the atmosphere.
- The waste operations will be overseen by a Technically Competent Manager (TCM) and all site operatives will be thoroughly trained in the use of any plant and equipment at the site.
- Site staff will be trained to carry out frequent inspections of the site for evidence of dust emissions or dusty surfaces. The Site Operations Manager (or nominated deputy) will also undertake daily operational and maintenance site inspections. Furthermore, all site staff will receive appropriate training in order to ensure that employees are conversant with the dust control strategy.
- The dryer is fitted with a bag filter to achieve an emission limit value of 50mg/m^3;
- In the unlikely event that fugitive dust emissions are emitted from the site, owing to the nature of the proposed wastes, they would likely be a coarse fraction range and would, therefore, tend to fall rapidly from the atmosphere (i.e. high dispersion rates). Hence, airborne dust concentrations would be expected to decrease appreciably with distance from the source due to dilution within the atmosphere and deposition onto the ground near the source (i.e. <500m). Resultantly, any potential receptors at a considerable intervening distance from the site would be unlikely to be affected.
- The site surfaces and access roads are metalled and hard surfaced which will enable thorough cleaning via mechanical sweeping. The operator owns a mechanical sweeper which is utilised daily on all road surfaces to prevent the build-up of potentially dusty material.

- Visual dust monitoring will be conducted daily and during unfavourable weather conditions (such as dry weather with high winds) monitoring will be increased to twice daily. Should the staff member conducting the monitoring identify any dust on site, the area will be manually or mechanically swept to prevent the build-up of dust and potential suspension via 'wind whipping'. The frequency of the visual monitoring is deemed adequate due to the high level of containment on site and the resulting low risk of dust emissions.
- A consistent housekeeping regime will be maintained at the site to ensure regular checks are carried out and that any issues that may arise are identified quickly. Staff will specifically target areas where dust and debris are most likely to gather. The build-up of particulates will be prevented by the frequency cleaning (dry of wet methods) and therefore reduce the risk of fugitive dust emissions.
- During activities such as waste unloading, materials will not be dropped from excessive heights into the appropriate internal storage bays to avoid the generation of dust plumes.
- A site speed limit of 10mph will be enforced at all times to reduce the risk of dust suspension by vehicle's wheels and ground effect.

4.4 Dust Action Plan

4.4.1 In the unlikely event that an unacceptable dust impact is caused at a nearby sensitive receptor, and / or a complaint is received by the Site Operations Manager, the actions detailed in this section will be implemented. Sensitive Receptors within 1km of the site are identified in **Drawing No: SPL1000/08/04.**

4.4.2 It is the responsibility of all site personnel to maintain a visual awareness of fugitive dust emissions during the working day as part of continual proactive environmental monitoring. Any significant dust emissions observed with the potential to travel beyond the site boundary will be reported to the Site Operations Manager who will be responsible for investigating the cause and taking immediate action, i.e. the implementation of the Dust action Plan to minimise further emissions.

4.4.3 If an activity at the site results in the generation of unacceptable levels of dust, then that activity shall cease until sufficient measures have been adopted which prevent or minimise the dust emission. Unacceptable levels of dust are classified as visible plumes of dust which have the potential to leave the site boundary. Unacceptable dust impacts off site include evidence of settled dust on surfaces of the nearest sensitive receptors that are directly attributable to operations associated with this Management Plan.

4.4.4 The Site Operations Manager will also be responsible for the weekly recording of monitored dust levels and conditions that could lead to the potential for fugitive emissions of dust to occur. However, general daily visual checks / observations will be carried out by all operational staff as part of their normal operational procedures which will consider the potential for fugitive emissions in a proactive manner, this will be in relation to:

- Dry surfaces where mud or debris is present
- Any part of the site where movement of vehicles can generate dust
- Any part of the site where dust can be generated by wind

4.4.5 The Site Manager shall ensure that the primary method of dust suppression is adequate to control dust from any site activity with generation potential.

4.4.6 If routine visual monitoring, continual proactive monitoring or monitoring in response to a complaint identified the generation of significant visible volumes of dust, including dust on site and airborne dust either migrating off site or having the potential to cross the site boundary and impact identified receptors, then the following actions will be taken:

- Take immediate steps to establish the cause of the abnormal emissions.
- Upon identification of the emission cause, the offending operation shall be suspended (if an active source, such as waste handling) or isolated (if a passive source e.g. dust residue in a storage area) and corrective actions will be undertaken.
- Implement corrective action, such as mechanical sweeping for the cleaning of site surfaces.
- Suspend or isolate the offending emission source until corrective actions have been completed.
- Once corrective actions have been completed, activities at the offending emission source will recommence under supervision from the TCM or nominated deputy for 30 minutes.
- If no further dust emissions are observed, then activities can continue without TCM (or nominated deputy) supervision.
- In the event that further emissions are observed, activities will be suspended again and the relevant corrective actions / supervision will be repeated until no longer required.
- All actions and explanations will be recorded within the site logbook / diary.

4.4.7 In the event that control methods cease to adequately deal with an emission of dust, appropriate arrangements will be made by the TCM to suspend operations until the situation that gave arise to the emission has been resolved. The Environment Agency will be informed at the earliest appropriate opportunity.

Table 5: Dust/Particulates Risk Screening and Control Measures

Source	Pathway	Receptor	Type of Impact	Dust Control Measures
Mud	Tracking of mud and dust on wheels and vehicles which may drop off when the wheels / vehicle is dry.	See list of potential sensitive receptors in **Table DEMP1**	Visual soiling, also consequent resuspension as airborne particles once dry.	All waste will be delivered to site in fully enclosed or sheeted vehicles to prevent 'wind whipping' and mud/debris falling vehicles. Delivery vehicles present a low risk of tracking significant quantities of mud or debris onto site. A maximum vehicle speed limit of 10mph will be enforced at the site and will be communicated via signage and staff training. This will reduce the risk of wheels kicking up mud and / or dust on site surfaces which may become airborne. Maintenance of the site's hardstanding surfaces will be carried out to ensure ease of cleaning and prevention of dust / mud build up. If required, a mechanical sweeper will be used to clean site surfaces, this will either be located on site or will be provided via a local contractor. Daily visual dust monitoring will be conducted to identify any mud or dust on site surfaces as soon as possible to allow for remediation (such as manual or mechanical sweeping).
Waste deliveries and off-site transfers	Dust and debris falling off transport vehicles, particularly for waste deliveries and dispatches of potentially dusty wastes that are not enclosed or sheeted.	See list of potential sensitive receptors in **Table DEMP1**	Visual soiling, also consequent resuspension as airborne particles once dry.	All waste will be delivered to site in fully enclosed or sheeted vehicles to provide containment.
Unloading, manual and plant assisted sorting, storage/bulking and transfer	Escape from storage areas and subsequent atmospheric dispersion.	See list of potential sensitive receptors in **Table DEMP1**	Visual soiling, also consequent resuspension as airborne particles once dry.	Waste will be unloaded, stored, and handled carefully as to not emit more dust than necessary for the operation. A water bowser and sprayer for dust suppression is available to wet any stockpiles or storage areas to prevent dust emissions. Maintenance of the site's engineered concrete surfaces will be carried out to ensure ease of cleaning and prevention of dust / mud build up. If required, a mechanical sweeper will be used to clean site surfaces, this will either be located on site or will be provided via a local contractor.

Source	Pathway	Receptor	Type of Impact	Dust Control Measures
				Daily visual dust monitoring will be conducted to identify any mud or dust on site surfaces as soon as possible to allow for remediation (such as manual or mechanical sweeping).
Crushing, grinding, bagging of glass wastes	Escape from processing buildings and subsequent atmospheric dispersion.	See list of potential sensitive receptors in **Table DEMP1**	Visual soiling, also consequent resuspension as airborne particles once dry.	The crushing, grinding and bagging operations occur within the processing buildings, preventing wind and weather from transporting the dust and particles externally. The dust suppression systems in place can mitigate the majority of the airborne dust, ensuring that fugitive emissions will not leave the site boundary if they should leave the building. Good housekeeping will be conducted within the site buildings to ensure that the build-up of potentially dusty material which may be disturbed and scattered.
Vehicle exhaust emissions	Atmospheric dispersion.	See list of potential sensitive receptors in **Table DEMP1**	Airborne particulates.	All delivery vehicles servicing the site will be either Euro 5 or Euro 6 emission classified engines. The operator plans to replace all Euro 5 vehicles with those rated Euro 6 in the near future. Drivers will be advised by site operatives to not leave vehicles idle when engine power is not required.
Non-road going machinery exhaust emissions	Atmospheric dispersion.	See list of potential sensitive receptors in **Table DEMP1**	Airborne particulates.	All site plant (i.e. waste handler and loading shovel) will have either Euro 5 or Euro 6 emissions classified engines. Future consideration will be given to the use of electrically powered plant.
Drier exhaust emissions	Atmospheric dispersion.	See list of potential sensitive receptors in **Table DEMP1**	Airborne particulates.	Bag filter installed on dryer exhaust stack to achieve an ELV of 50mg/m^3. Dryer will be inspected daily for excessive visible exhaust flows. Annual emissions testing carried out on dryer exhaust stack.

Table 6: Preventative and remedial measures to be used on site to control dust and other emissions

Abatement Measure	Description / Effect	Overall Consideration and Implementation	Trigger for Implementation
Preventative Measures			
Enclosure within a building	This provides a solid barrier between the source of dust and particulates and receptors and is considered to be the most effective method of control. Furthermore, this allows the operations to continue even during unfavourable weather conditions such as high winds.	This method is highly effective and is now a 'standard design feature' by the Office of the Deputy Prime Minister (ODPM) guidance. Management protocols are in place at the site to ensure the building integrity remains high.	Treatment processes that may produce dust are conducted internally. Potentially dusty materials are stored in enclosed storage bays to prevent wind whipping
Site speed limit, 'no idling' policy and minimisation of vehicle movements on site	The site will have a maximum speed limit of 10mph in order to limit the amount of dust suspension by vehicles' wheels. There are two access points to the WTS building to enable a one-way system and limit vehicles movements. A 'no idling' policy will be employed at the site to reduce unnecessary emission from vehicles on site.	These measures are employed as good practice.	These measures will be utilised for the duration of the site's operational period.
Minimising drop heights for waste into storage bays	During waste unloading, manual sorting and bulking, and waste storage, drop heights will be minimised to prevent significant dust plumes being generated.	These measures are employed as good practice.	These measures will be utilised for the duration of the site's operational period.

Abatement Measure	Description / Effect	Overall Consideration and Implementation	Trigger for Implementation
Good housekeeping	A consistent, regular housekeeping regime will be employed at the site to ensure regular checks are carried out and that any issues that may arise are identified and dealt with as soon as possible. This also prevents dust and particulate build up.	This abatement measure is easy to implement and ensures staff vigilance with regards to potential emissions from the site. Staff particularly target areas where dust and particulates may gather. Site personnel will complete daily visual checks on the condition of the operational areas and cleaning will occur several times per week, or more frequently if deemed necessary.	This abatement measure will be implemented for the duration of the site's operational period. This abatement measure will be carried out in conjunction with other cleaning as necessary such as hosing down engineered site surfaces.
Full enclosure or sheeting of vehicles	This prevents the escape of debris, dust and particles from vehicles in transit.	This abatement measure is implemented as appropriate measures.	This will be implemented for the duration of the site's operational period. There are not considered to be any limitations to this abatement measure.
Water bowser and sprayer	Use of water to dampen and wash off residual materials from site surfaces that could result in dust emissions. Wetting of stockpiles or stored materials can reduce dust emission. In the unlikely event that vehicles entering the site are heavily soiled with mud or debris, they can be cleaned.	This abatement measure is implemented as appropriate measures. Hosing of surfaces have proven results.	This will be implemented for the duration of the site's operational period. There are not considered to be any limitations of this abatement measure. Site staff will inspect vehicles entering and exiting the site and advise drivers if the vehicle needs to be cleaned in any capacity. Due to the fact that the access roads and site surfaces comprise hardstanding (tarmac / concrete) and the level of containment of the wastes, it is considered that vehicle cleaning will not be required frequently.
Impermeable surfaces which are easy to clean	The site surfaces comprise hardstanding which is easy to clean and impermeable. This reduces the amount of dust and particulates that are generated at ground level by vehicles and site activities.	The site's hardstanding surfaces are cleaned and maintained as good practice.	This will be implemented for the duration of the site's operational period. There are not considered to be any limitations to this abatement measure.
Remedial Measures			

Abatement Measure	Description / Effect	Overall Consideration and Implementation	Trigger for Implementation
Enclosure of building	Treatment processes that may produce dust are conducted internally.	Internalisation of operations is a well-established approach and reduces the encroachment of wind into the building as well as trapping emissions inside the building. The doors will be maintained, and should any damage occur they will be repaired / replaced as soon as possible.	This will be implemented for the duration of the site's operational period. This method is considered to be highly effective.
Cleaning of site surfaces where required via a water bowser and sprayer	The cleaning of site surfaces will ensure that any dust or debris that has settled is dampened down and washed into the surface water lagoon to ensure that suspension and airborne dispersion does not occur.	This method is highly effective at reducing the risk of dust emissions and preventing the build-up of particulates on site surfaces.	This will be implemented for the duration of the site's operational period and will be undertaken when appreciable dust or debris is observed on site surfaces.
Manual or mechanical sweeping of site surfaces	Manual or mechanical sweeping may be used when dust is observed on site surfaces to prevent the build-up of materials and potential suspension. Where mechanical sweeping is required, this will either be done with a mechanical sweeper located on site or via a local contractor.	This method is highly effective at reducing the risk of dust emissions and preventing the build-up of particulates on site surfaces. Due to the level of containment at the site, it is unlikely that sweeping will need to be undertaken frequently.	This will be implemented for the duration of the site's operational period and will be undertaken when appreciable dust or debris is observed on site surfaces.

4.5 Visual Dust Monitoring

4.5.1 Routine visual monitoring for dust will be carried out daily within the operational hours of the site by the Site Operations Manager or nominated deputy. Inspections will generally look out for the presence of dry, dusty external surfaces and for any dust being whipped by wind. Monitoring will also be carried out for any visual signs of dust emanating from the building entrance point.

4.5.2 Whilst carrying out their roles on site, site staff will observe the ground, surfaces, equipment and immediate environment to check whether dust is being emitted from the part of the site.

4.5.3 The results of the daily visual dust monitoring will be recorded on a check sheet for the site, included as **Appendix DEMP1.** These records will be kept on site in the office.

4.5.4 The Site Operations Manager will review the feedback from the visual monitoring by reviewing the check sheet and conducting spot checks themselves. These reports will be provided to senior management for review.

4.5.5 In the event that dust is detected, additional visual dust monitoring will be carried out. Should complaints from neighbouring receptors be received, additional visual monitoring will be carried out to identify the source and remedial action implemented.

4.6 Particulate Matter Monitoring

4.6.1 The site does not require Particulate Matter Monitoring as it is not within an AQMA and owing to the waste types and emission sources at the site, there are limited sources of fine exhaust emissions.

5.0 REPORTING AND COMPLAINTS RESPONSE

5.1 Engagement with the Community

5.1.1 An open communication channel with the local community and receptors who may be affected by the Site's operations will be maintained. The Site Operations Manager will liaise with neighbouring residential properties every quarter for the first year of operation, and annually thereafter to determine if the Site is resulting in any level of annoyance. Appropriate contact information (e.g. telephone number and e-mail) will also be displayed at the site.

5.1.2 The Site will be a reliable source of information to the community and readily available to answer any questions or queries. Active participation in the community will ensure that communication channels such as emails and phone calls are welcomed, and an appropriate response is formed by the Site/ Operations Manager.

5.1.3 The Site also operates a comprehensive complaint reporting and resolution procedure which can be utilised by members of the public and neighbours.

5.2 Means of Contact

5.2.1 The facility will be readily contactable to outside organisations and to members of the public. The site signage board (placed in a visible location) will contain the necessary details for both the site operations and the Environment Agency, including contact details and the site's Environmental Permit Reference number.

5.2.2 Contact details will also be made available through the local community liaison groups. Therefore, should an off-site issue arise, the complainant has a means of getting in touch with the operator.

5.2.3 As part of the facility operation and development, a community engagement plan will be developed if found to be necessary, the purpose of which would be to identify all sensitive receptors and formulate a communications plan. The community engagement plan will detail the complaints management and reporting procedures, this will include, but will not be limited to:

- Information provided to the local neighbours (via the Environment agency) regarding the point and method of contact for the Facility in the event dust emissions has been detected or they want to discuss any activities etc at the Facility;
- Advice provided to the neighbours that any complaints / concerns will be addressed immediately following identification / notification and contingency action implemented; and
- The neighbours will be informed of any corrective action and a follow up call will be carried out if necessary.

5.3 Reporting of Complaints

5.3.1 Any complaints received directly to site will be notified to the Environment Agency as soon as is practicably possible.

5.3.2 Further observational monitoring will be instigated at the location of the complaint and on site in order to determine the extent and location of the fugitive emission, and the materials and / or process at the source. In order to assist in the investigation and determine the source of the emission, as much information and detail about the complaint as possible will be recorded.

5.3.3 Should a complaint be received, a 'Complaint Form' will be completed which includes the following information:

- Complainant name, address and telephone number.
- The time and date of the complaint, dust, weather conditions, temperature and wind strength and direction.
- Results of the latest visual dust monitoring and the Operation and Maintenance Daily Inspection carried out by facility personnel.
- Complainant's description of dust.
- Other complaint comments regarding dust emissions.
- Any other previous known complaints relating to the installation (all aspects, not just dust).
- Any other relevant information.
- Operation conditions at the time of the offending dust emission (e.g. waste loading / unloading, noting any abnormal conditions that may have contributed to the complaint.
- A summary of the actions taken and the final outcome.
- Confirmation of who filled in the form and who approved it (complete with the date and signatures)

5.3.4 Records of complaints received will be kept in the appropriate file in the site office for inspection and review by both internal and external personnel.

5.4 Complaint Screening

5.4.1 As part of each fugitive emission complaint received, these will be objectively addressed against the wider environment to ensure that the source of the emission is traced back to the correct source. Due to the proximity of adjacent operations with the potential to generate dust pollution, it is essential that the source is correctly identified in order that mitigating measures can be applied effectively and correctly. If necessary, the complaint will also be assessed against previous records to place the nature of the complaint into context.

5.5 Complaint Investigation

5.5.1 In the event that fugitive emissions are found to be causing a problem at or around the facility, as determined and confirmed by investigation into off site complaints or during routine monitoring; measures will be taken to determine the source, and the following courses of action as detailed below shall be taken within one full (working) day of complaint receipt:

- Additional dust monitoring as detailed above to identify the extent of the plume and potential cause for the dust i.e. waste material and / or process activity;
- Examination of the operational activities at the Facility at the time of the dust complaint or dust identification;
- Examination of the meteorological conditions at the time of the complaint or dust identification;
- Carry out a review of the operational procedure and process controls and instigate any control measures immediately following identification of the problem;
- Further dust monitoring will be carried out to ensure the issued has been addressed and to monitor the effectiveness of any control measures undertaken.

5.5.2 The complainant will be kept informed (via telephone or email) on how their concerns were dealt with and of the final outcome to ensure they are satisfied.

5.5.3 Records of complaints received will be kept in the appropriate file in the site office for inspection and review by both internal and external personnel.

5.6 Management Responsibilities

5.6.1 The complaints will be handled by the Site Operations Manager who will investigate it as soon as possible (within 1 working day). Upon filling out the 'Complaint Form', the Site Manager will review the site conditions and come to a conclusion on how best to tackle the issues raised by the complainant. Once an action is in place, the Site Manager will ensure that the complainant is informed, and the final outcome will be recorded on the 'Complaint Form'.

6.0 ACTIONS, CONTINGENCIES & RESPONSIBILITIES DURING PROBLEM EVENTS

6.1 Default Procedures

6.1.1 In the event that an emission of dust is identified during the normal course of operations, either through daily routine monitoring, or in response to off-site complaints, the default procedure will be to investigate the emission in line with **Section 5.5** above which is an appropriate response to both off site complaints as well as on site investigations following on from routine inspections.

6.1.2 It is the responsibility of the site management team (Site Operations Manager/TCM and associated supervisors) to ensure procedures as set out in the DEMP are put into action.

6.2 Emergency Procedure

6.2.1 Monitoring for dust emissions will be undertaken during a time in which extreme release of dust is experienced e.g. delivery of material to site, processing of dusty waste.

6.2.2 Consideration will also be made as to the suspension of receipt of dusty/powdery wastes and / or the removal of waste from the site that is held in storage areas (if necessary).

6.3 Event Reporting

6.3.1 In the event of any significant environmental emergency / incident, a representative of 'Stacey's will notify the Environment Agency by telephone immediately, but first having due regard for the incident at hand and any remediation actions required to ensure the safety of site personnel and the immediate environment.

6.3.2 Details of any environmental incident will be confirmed to the Environment Agency in writing by the next working day after identification of the incident. This confirmation will include the time and duration of the incident, the receiving environmental medium or media where there have been any emissions as a result of the incident, an initial estimate of the quantity and composition of any emission, the measures taken to prevent or minimise any further emission and a preliminary assessment of the cause of the incident.

6.3.3 Any incident notified to the Environment Agency will be investigated, and a report of the investigation sent to the EA. The report will detail (as a minimum):-

- the circumstances of the incident;
- an assessment of any harm to the environment; and
- the steps taken to bring the incident to an end.

6.4 Problem Resolution

6.4.1 Once the identified problem has been rectified, a report will be prepared assessing the nature of the incident and the actions taken to resolve the issue. Additionally, the report will detail the changes that could be made to the operational practises which would ensure, wherever possible, that the issue would have less of a chance of arising again in the future.

6.4.2 This Dust Emissions Management Plan and the dust/particulate related assessments of risks presented in the Environment and Accidents Risk

Assessment (*Document Reference: BF5066/07.R0*) will also be reviewed if management practices require updating.

6.4.3 This information will be provided to the Environment Agency in accordance with the Event Report procedures discussed in **Section 6.3** above. Any improvements or amendments to operational practices will be discussed with the EA prior to their implementation.

7.0 REPORT CLOSURE

7.1.1 This document will be subject to on-going review and revision where necessary. This review will be undertaken in response to events which may occur on site, and also to ensure that it accords with the latest regulations and associated guidance documents. The review of the DEMP for the site will occur at least once per annum.

7.1.2 All revisions to the document will be recorded and details of said revisions will be described as part of the required record relating to document review. This is a requirement in any event as part of Stacey's Quality and Environmental Management Systems and procedures.

APPENDIX 1
Visual Dust Monitoring Check Sheet

STACEY PROCESSING Ltd

Environmental Log Book - Daily Visual and Olfactory Assessment

Area							Week Commencing							
Item	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday	
Time of Assessment														
Observer's Position														
Airborne Dust	Nil Slight Intermed Heavy		Nil Slight Intermed Heavy		Nil Slight Intermed Heavy		Nil Slight Intermed Heavy		Nil Slight Intermed Heavy		Nil Slight Intermed Heavy		Nil Slight Intermed Heavy	
Odour	Nil Slight Strong		Nil Slight Strong		Nil Slight Strong		Nil Slight Strong		Nil Slight Strong		Nil Slight Strong		Nil Slight Strong	
Haul Roads	Satisfactory Unsatisfactory		Satisfactory Unsatisfactory		Satisfactory Unsatisfactory		Satisfactory Unsatisfactory		Satisfactory Unsatisfactory		Satisfactory Unsatisfactory		Satisfactory Unsatisfactory	
Dust Suppression	Satisfactory Unsatisfactory		Satisfactory Unsatisfactory		Satisfactory Unsatisfactory		Satisfactory Unsatisfactory		Satisfactory Unsatisfactory		Satisfactory Unsatisfactory		Satisfactory Unsatisfactory	
Weather	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
Dry/Damp/Wet/Rain/ Storm/Snow/Frost														
Wind Direction N, NW, W, SW etc														
Wind: Nil, Slight Mod. Strong Gale														
Comments														
Checked By														
Date														
Signed Manager					Print						Date			