



AC
ENVIRONMENTAL
CONSULTING

Dust & Emissions Management Plan



Equestrian Surfaces Limited

Phoenix Works, Phoenix Way,
Burnley BB11 5SX

May 2021

Equestrian Surfaces Limited

Ref: ES.PT.DEMP.2005

AC Environmental Consulting Ltd,
Environment House,
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ST2 9AF

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1. INTRODUCTION

AC Environmental Consulting Ltd, on behalf of Equestrian Surfaces Limited, have prepared a Dust & Emissions Management Plan (DEMP) for the Equestrian Surfaces Limited site located at Phoenix Works, Phoenix Way, Burnley BB11 5SX.

1.1 Site Location

The site is located to the west of the town centre of Burnley and to the south of the M65. The surrounding area of the site is characterised by a mix of uses including industrial and commercial properties to the immediate south, residential properties, the M56 to the north and a railway line to the north.

The nearest residential properties are located to the north of the site over the M56 and to the south of the site. There are additional commercial and industrial properties within the immediate vicinity of the site, including a vehicle repair shop and car dealer. The M56 and a railway line are located to the north of the site, and Rose Grove train station is situated to the west of the site.

Reference to the DEFRA Air Quality Management Area (AQMA) interactive map indicates that the site is not within an AQMA.

1.2 Existing Use

Equestrian Surfaces Limited is a well-established facility for the recycling of waste and manufacture of equestrian surfaces. The site will accept up to 16,000 tonnes of carpet waste per annum, which equates to 51 tonnes per day. The carpet waste includes carpet underlay material. From a post-consumer and post-industrial perspective, the carpet waste is separated into the waste streams of carpet underlay, synthetic-based carpet, and wool-based carpet.

The site layout is designed to ensure freedom of movement. The permitted area consists of an external yard, three buildings and is entirely surfaces with impermeable concrete. The external yard contains the quarantine area to the south west, a weighbridge along the southern boundary, four covered areas and four 40 ft ISO containers. The covered areas are used for the storage of unsorted carpet bales, reject (waste), and product as shown on the Drawing Ref: 210331ES101. The 40 ft ISO containers are primarily used for the structural support of the roof of the covered areas but are also used for the storage of non-waste equipment.

The permitted area deals with carpet waste only. The carpet waste is waste includes carpet underlay material. From a post-consumer and post-industrial perspective, the carpet waste is separated into the waste streams of carpet underlay, synthetic-based carpet, and wool-based carpet. The carpet

waste is brought onto site using Equestrian Surfaces' own transport and pre-booked deliveries using external contractor vehicles and customer's own transport and is delivered through the roller shutter doors on the building in the central area of the site to the sorting area. The waste is then segregated by hand with the assistance of mobile plant into the appropriate waste streams and transferred to one of the concrete walled bays within the building prior to processing. Processing includes the shredding and baling of carpet waste which occurs within the building located to the east of the site. The locations for the processing and storage of the waste and product are shown on Drawing Ref: 210331ES101.

1.3 Proposed Site Use

This DEMP has been prepared to accompany a bespoke environmental permit application to allow for a household, commercial and industrial waste transfer station with treatment relating to the recycling of carpet waste into equestrian surfaces. The applicant is seeking to obtain a bespoke environmental permit for the current site use which will not change.

1.4 Potential for Emissions

Due to the type of waste accepted on site, there is the potential for dust to arise. Further information on the potential sources of dust can be found in Section 3.2. All areas where vehicles and plant are operated are on a concrete surface. Operating vehicles and plant on the concrete surface will prevent the potential for mud and therefore reduce the risk of material from being transferred onto the public highway by vehicles exiting the site. Any accumulation of dust on site will be removed by hand through sweeping or by using a mechanical sweeper.

There are no other expected emissions to be produced on site.

1.5 Emissions Prevention

The operations will be governed by the conditions attached to the Environmental Permit that may be granted in due course. Abatement measures include hiring a mobile mister, manual and mechanical sweeping and the covering of stockpiles with tarpaulin. As part of a management procedure, daily inspections shall take place, and where visible accumulations of dust are present, road sweepers shall be employed to sweep the highway.

A major benefit of the site infrastructure is that the permitted area is entirely concreted through to the highway, making it easy to clean regularly in accordance with the cleaning schedule provided in Appendix B using a manual or mechanical sweeper if any accumulation of dust becomes visible. The easily maintained concrete surface prevents the build-up of potential dust, mud, and debris, therefore reducing the risk of material being transferred to the public highway by vehicles exiting the site. The

means of prevention discussed are based on existing site management procedures and the planning permission guidance. Further details on emission control and maintenance can be found in Table 3.1 and 3.2.

1.6 Purpose of the DEMP

The purpose of this document is to meet the requirements of and reassure the Environment Agency that the potential for dust produced from the proposed operations mitigated and controlled in every possible way.

The DEMP has been prepared to accompany the planning application for the retrospective development of the concrete walls and installation of the picking line.

The audience of this document is the planning authority of Lancashire County Council and Environment Agency for approval, and the operational staff on site. The document will be made available to the onsite operational staff, Environment Agency, and Lancashire County Council officers by being stored in the site office and online. Also, staff will be trained in the requirements of the DEMP via toolbox talks.

1.7 Sensitive Receptors

The site has various sensitive receptors nearby that may be vulnerable to dust emissions. They are referred to as sensitive receptors due to them being in areas where the occupants are more susceptible to the adverse effects of exposure to high levels of dust and particulates. These receptors include residential, commercial, and industrial premises. Mitigation measures in place include the mobile mister and on site hoses. During any incident, receptors will be notified via phone call or by operatives knocking on doors and informing them of incident and reassuring them that every dust mitigation measure possible is being undertaken. Their distances to the working area and their sensitivity to dust emissions is shown in Table 1.1.

The nearest residential housing is located 140m to the south of the site on Accrington Road. The site has several schools nearby, the closest being Taywood Nursery School which is located approximately 555m to the east of the site. There are several care homes also within 1km of the site, the closest being the Grove Care Home which is situated approximately 650m to the north west of the site. There are also several medical centres near the site, the closest being Life Line Screening which is located approximately 315m to the north east of the site. There are no additional sensitive receptors within 1km of the site.

Due to the nature of the operations on site, the greatest proportion of dust emitted is largely deposited within 100m of the dust source. As stated by The Guidance on the Assessment of Mineral

Dust Impacts for Planning 2016, it is acknowledged that the greatest impacts will be within 100m of the source, referring to both small and large dust particles. This indicates that the receptors lying beyond 100m from the site will not be greatly impacted by any potential dust producing operations on the site. The less dense dust material only reaches a maximum of 100m, meaning the receptors beyond 500m of the site are at very low risk of being impacted by fine dust. As stated above, all sensitive receptors, excluding the residential housing and the Life Line Screening Medical Centre, are at a further distance than 500m from the site. The map displaying the locations of the sensitive receptors is shown in Figure 1.1. There are also dust producing operations occurring close to the residential housing, including a scrap metal dealer, a car dealer, and a truck repair shop.

Additional receptors not considered sensitive within the 1000m radius includes the Moorhouse Brewery located approximately 180m to the south east, the NWF Fuels oil field situated approximately 170m to the south and numerous pubs/bars in the surrounding area. These receptors are not considered to be sensitive as they are not residential properties, schools, medical centres, or care homes. The site is predominantly surrounded by additional industrial and commercial businesses.

There are no other expected emissions to be produced on site besides dust. The operations on site will not cause the receptors positioned further away from the site to be given greater consideration in terms of dust impacts. There are no factors that would cause a receptor close to the site not to be considered a receptor. There are however other sources of dust close to some of the receptors, including a scrap metal dealer, a car dealer, and a truck repair shop. Detail on the other potential local sources of dust is given in Table 1.2.

A wind rose from the weather station in Burnley, shown in Figure 1.2, indicates that the prevailing winds blow from the north west. This suggests that the receptors situated to the north west of the site will be the most impacted by potential dust.

Figure 1.1 Nearby Sensitive Receptors

Care Homes

- A. Voyage care
- B. The Grove Care Home

Medical

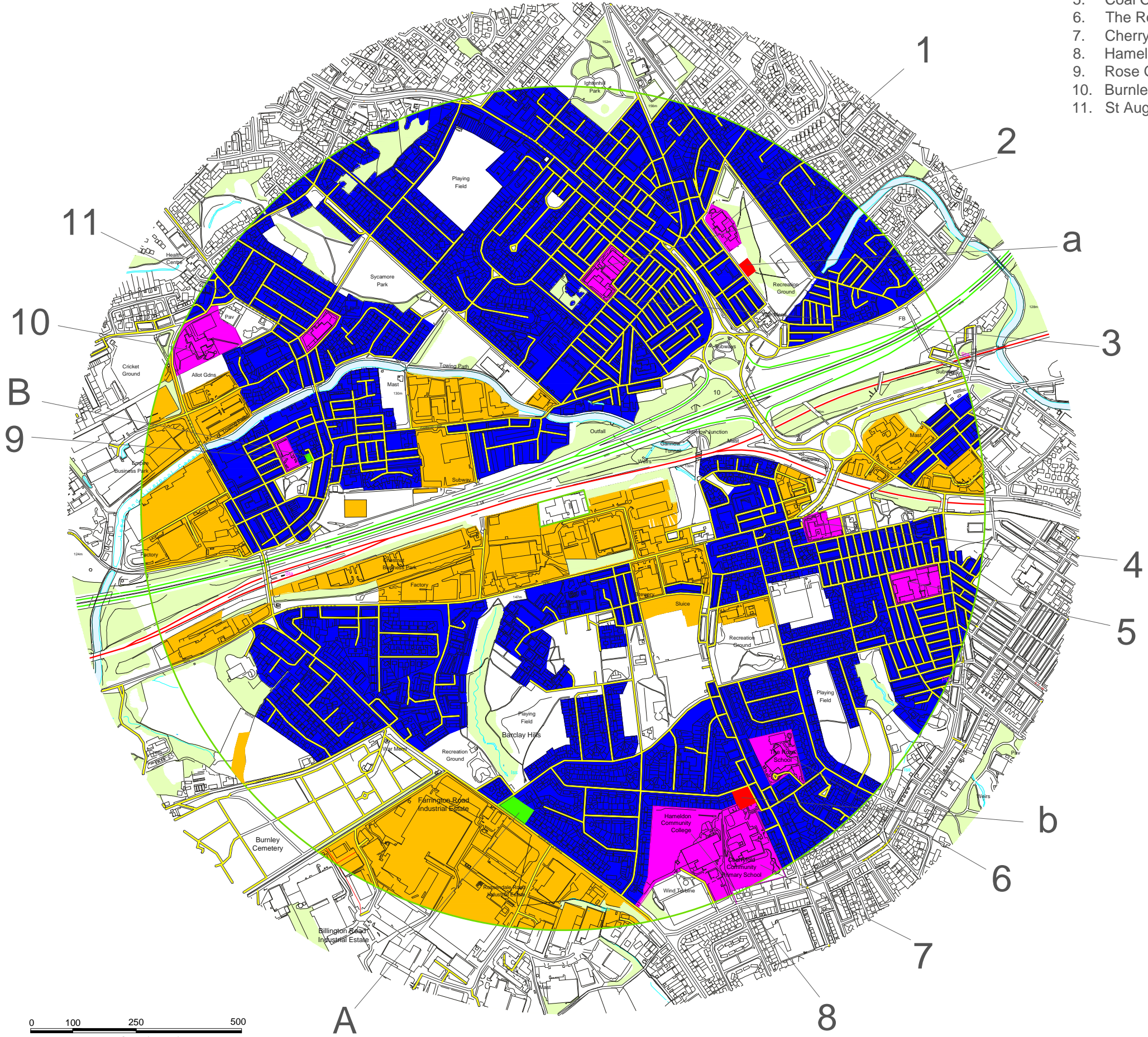
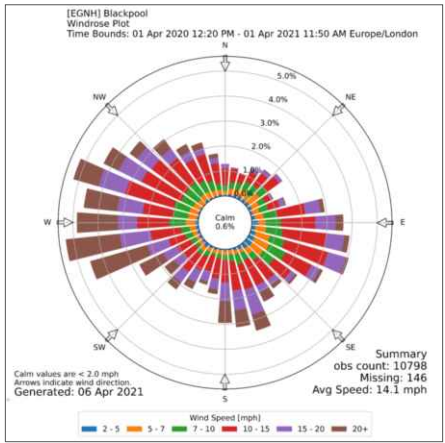
- a. Ightenhill Medical Center
- b. The Fold

Educational

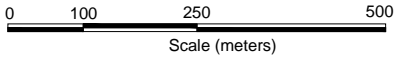
1. Whittlefield Primary School
2. Ightenhill Primary school
3. Ightenhill Nursery School
4. Taywood Nursery School
5. Coal Clough Academy
6. The Roase School
7. CherryFold Community Primary School
8. Hameldon Community College
9. Rose Grove Infant School
10. Burnley Lower House Junior School
11. St Augustine Canterbury RC Primary School



Environment House
Werrington Road
Stoke-on-Trent
ST2 9AF



- Residential
- Educational
- Medical
- Care homes
- Road
- Rail
- Motorway



CLIENT
EQUESTRIAN SURFACES

SITE
Phoenix Works,
Phoenix Way,
Burnley BB11 5SX

PROJECT
PERMIT APPLICATION

TITLE
KEY RECEPTOR

SCALE @A3	DATE	DRAWN BY	CHECKED BY
1:10000	April 2021	T Kearns	D Alcock
	DRAWING NO.		REVISION
	210331ES103		

REV	DATE	DETAIL

Figure 1.2 Wind Rose showing the average wind direction and strength at Equestrian Surfaces Limited

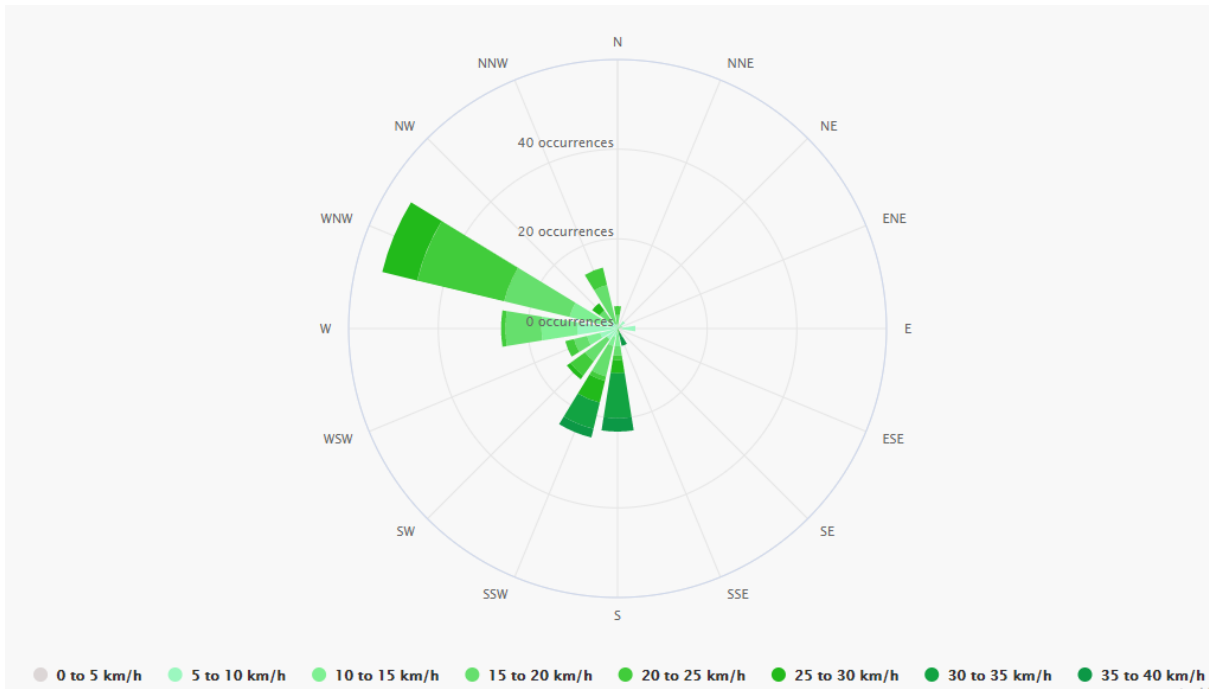


Table 1.1 Distances to Selected, Representative Sensitive Locations

Boundary	Closest Property	Approximate distance to Equestrian Surfaces Limited (m)
South	Residential properties on Accrington Road.	140
All	Residential properties	140 – 1,000
East	Taywood Nursery School	555
Southeast	Coal Clough Academy	815
Southeast	The Rose School	807
Southeast	Cherry Fold Community Primary School	865
Northeast	Ightenhill Nursery School	515
Northeast	Ightenhill Primary School	595
Northeast	Whittlefield Primary School	755
Northwest	Rosegrove Primary School	725
Northwest	St Augustine of Canterbury RC Primary School	760
Northwest	Rosegrove Infant School	700
Northwest	Burnley Lowerhouse Junior School	980
Northwest	Grove Care Home	650
North	Ashmeade	870
North	Brook House Residential Home	920
Northeast	Ightenhill Medical Centre	690
Northwest	Kiddrow Medical Practice	1,000
North	Lifeline Screening	312

Table 1.2 Sources of Dust and/or other Emissions

Company	Address	Type of Business	Distance from Equestrian Surfaces (m)
Tufflite	Unit 2 Smallshaw Industrial Estate, Phoenix Way, Burnley BB11 5SX	Civil Engineering	50
Eyre & Elliston	Unit 3, Smallshaw Industrial Estate, Accrington Rd, Burnley BB11 5SX	Electrical Wholesaler	75
AVS Vehicle Services	Smallshaw Industrial Estate, 11 Phoenix Way, Burnley BB11 5SX	Vehicle Repair Shop	200
Tempest Motors Ltd	Unit 4, Phoenix Way, Smallshaw Ind Est, Burnley BB11 5SX	Car Dealer	90
CK Motors	21, Smallshaw Industrial Estate, Phoenix Way, Burnley BB11 5SX	MOT Centre	140
EFS Global Warehousing	Phoenix Way, Burnley BB11 5SN	Warehouse	70
EFS GLOBAL Express Freight Solutions	EFS HOUSE, Phoenix Way, Burnley BB11 5SX	Logistics Service	125
E.F.S Commercials	Phoenix Way Off, Smallshaw Ln, Burnley BB11 5SX	Truck Repair Shop	150
NWF Fuels	304 Accrington Rd, Burnley BB11 5EU	Oil field	165

Auctio4Cars Burnley	Smallshaw Ln, Burnley BB12 6JJ	Car Dealer	290
Railway Line	N/A	Railway Line	55
M65	N/A	Public Highway	95
Perry's Burnley Vauxhall	Accrington Rd, Burnley BB11 5EX	Car Dealer	210
Linco Stainless Steel Stockholder	Unit 2/A, Hargher Clough Mills, Bruce St, Burnley BB11 4BL	Steel Stockholder and Supplier	605
Carpet Market	Unit 28 Accrington Rd, Burnley BB11 5EF	Carpet Retailer	380
A2z Canopies	Victoria House, Accrington Rd, Burnley BB11 5EF	Plastic Fabrication Company	360
In2 Plastics	Unit 6, Chestnut Business Park, Smallshaw La, Burnley BB11 5SQ	Plastic Fabrication Company	575
Solar 21 (UK) Ltd	508 Accrington Rd, Burnley BB11 5DP	Solar Energy Equipment Supplier	635
Assured Materials Handling	27 Rossendale Rd, Burnley BB11 5DQ	Forklift Dealer	700
Wrong Fuel Burnley	14 Drammen Ave, Burnley BB11 5EA	Vehicle Repair Shop	540
Futaba-Tenneco	50 Liverpool Rd, Burnley BB12 6HQ	Car Factory	925
Seward Precision Fabrications Ltd	Gannow Business Park/Gannow La, Burnley BB12 6JJ	Sheet Metal Contractor	400
Wards Of Burnley Ltd - Vehicle Recovery	15 Gannow Ln, Burnley BB12 6HY	Towing Service	435
A M R (Burnley) Ltd	Unit 3, Gannow Business Park,	Laser Cutting Service	480

	Gannow Lane, Burnley BB12 6JJ		
Burnley Hire Centre	149 Accrington Rd, Burnley BB11 5AL	Tool Rental Service	500

2. OPERATIONS AT EQUESTRIAN SURFACES LIMITED

2.1 Waste Deliveries to Equestrian Surfaces Limited

Wastes are brought to the site by the site's own articulated and rigid lorries, pre-booked deliveries using external contractor vehicles and customer's own transport; therefore, checks are undertaken by staff to ensure the suitability of the wastes accepted and can begin at the client's site prior to pick up. The types of vehicles used consist of articulated lorries and rigid vehicles (mixture of 40cyd skip lorries and curtain sided lorries) which will be Tier 4 emissions rated and keep the waste loads fully enclosed within the trailers. Further detail on the waste accepted on site, the onsite processes and their destinations within the facility are shown in Table 2.1 and Figure 2.1. The site will accept deliveries of waste between the hours of 06:00 – 18:00 Monday to Friday and 06:00 – 12:00 on Saturdays. On occasion the site will need to operate 24/7.

Drivers are required to inspect loads prior to uplift and the checks include load security, potentially dangerous wastes, and hot loads. If a load is deemed to present a risk, then the driver reports this to site management who will advise the customer that the load cannot be collected and the reasons for that.

Loads are also inspected at the site by site staff prior to unloading. Loads being unloaded are also supervised so that any issues which were hidden and not identified prior to unloading can be seen. The aim of this is to ensure that a problematic load is not unloaded and allowed to stand for a period of time, potentially allowing dust and emissions to accumulate. Prior to unloading an accepted load, the load will be dampened down with a hired mister or onsite hose to reduce the risk of dust becoming airborne and exceeding the height of the boundary walls and being carried on the breeze. Loads are inspected to ensure the following criteria is met:

- i) EWC Code on the waste transfer note conforms to the waste inside the container.
- ii) Permit waste acceptance criteria – waste meets with the criteria of the environmental permit and the planning permission for example, waste accepted would be within the permissible tonnage and waste type acceptance criteria.
- iii) The waste is not odorous – waste is likely to be odorous if it has elements of putrescible waste and food residue.

If an issue is identified at the site with non-conforming waste, the load shall be transferred to the quarantine area and site management alerted. Action taken may be to segregate and remove the problematic waste to a secure area or to sort the load, removing acceptable waste to recycling and to invite suitable qualified contractors to collect the problematic waste.

A driver induction will be conducted, and this briefing includes information on dust mitigation. Waste will only be accepted on site where the waste has been pre-booked with the office staff. Waste accepted onto the site from 3rd parties will be visually inspected upon reception to the site in order to ensure that the waste is compliant with the site's permitted waste types and EWC Code description given by the produce/holder as listed on the waste transfer description.

Any wastes that do not comply with the site's permitted waste types shall be reloaded, rejected, and recorded in the rejection log.

There is a weighbridge on site where all vehicles will be weighed on arrival prior to unloading and on exit. All weights will be recorded and kept within the office. Further detail on this procedure can be found in the Site Management Plan.

In terms of records, Duty of Care notes, Waste Transfer notes are all kept. Additionally, input records consisting of EWC Codes as well as the source and quantity of the waste received will also be kept.

2.2 Overview of Waste Processing, Dust and Other Emission Controls

All site operations occur indoors. The waste unloading and sorting activities occur within the sorting building in the central area of the site. The sorting building also contains several concrete walled bays for the storage of waste prior to processing. All waste processing, which includes the shredding and baling of carpet waste, is undertaken within the processing building which is located along the eastern boundary of the site. Once processed, the product is stored in one of the two assigned covered areas for product in the external yard. The enclosure of all waste processing and waste and product storage within a building or a covered area will significantly reduce the risk of the spread of dust to surrounding properties. The site is fully enclosed by a perimeter consisting of a concrete block and panel wall along the northern boundary, and 2.1m high palisade fencing along the remaining boundaries. The permitted area is entirely surfaced with impermeable concrete which is easy to clean. The concrete surface will be cleaned consistently in accordance with the cleaning schedule provided in Appendix B using either manual or mechanical sweepers when there is the visible accumulation of dust or immediately following an incident. The site access roads are constructed of tarmac which allows easy and efficient removal of potential dust accumulations.

Table 2.1 Typical waste types brought to Equestrian Surfaces Limited

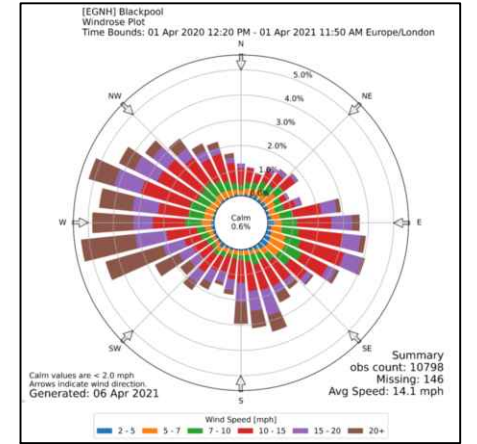
General waste type	Process	Destination within the facility
Carpet	Once accepted onto site, carpet waste is unloaded and segregated into appropriate	One of the two assigned covered areas in the external yard.

	<p>waste streams within the sorting building and transferred to the assigned concrete walled storage bay prior to processing. Processing includes shredding and baling and will occur within the processing building along the eastern boundary of the site.</p>	
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Figure 2.1 Site Layout Plan showing the destinations of the onsite processes.

1. Storage of unsorted carpet bales - 10 x 10 x 2 = 200m³
2. Synthetic Carpet - 15 x 5 x 3 = 225m³
3. Wool Carpet - 15 x 5 x 3 = 225m³
4. Unsorted Carpet - 5 x 5 x 3 = 75m³
5. Underlay - 10 x 5 x 3 = 150m³
6. Unsorted - 5 x 5 x 3 = 75m³
7. Reject (Waste) - 12 x 8 x 2 = 192m³
8. Product - 12 x 8 x 2 = 192m²
9. Product - 4 x 7 x 2 = 56m³

- A. Magnetic Separator
- B. Conveyor
- C. Shredder
- D. Chiller Unit
- E. Vertical Baler
- F. Fuel Bowser, Bunded
- G. Dust Extractor



- Concrete Surface
- Covered Building
- Covered area
- PPE Storage
- Spill Kit
- Hydrosnake storage
- Hydrosnake deployment
- Site Drainage
- Fire wall
- Fire Extinguisher
- Automatic Fire Extinguisher

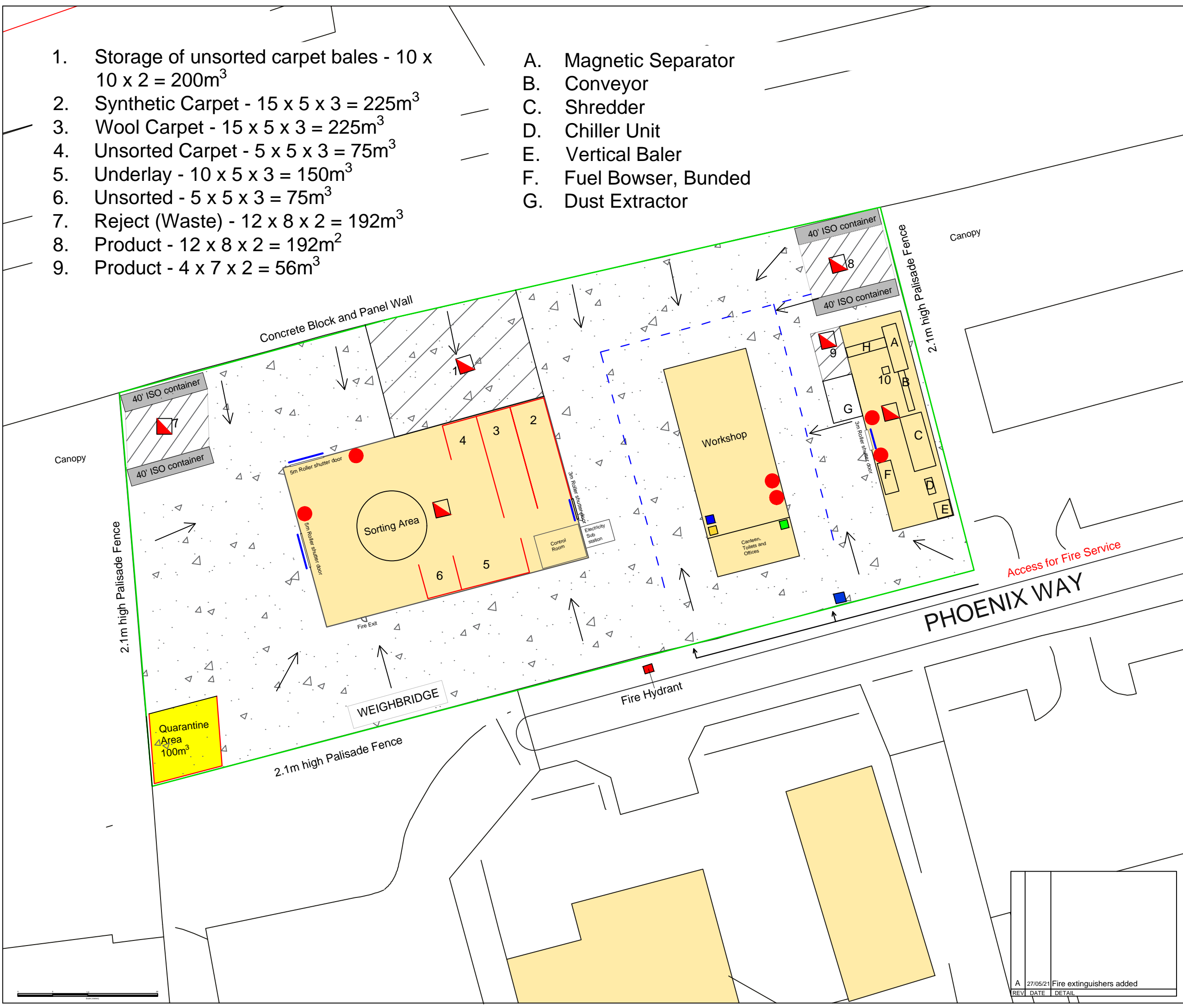
CLIENT
Equestrian Surfaces

SITE
 Phoenix Works,
 Phoenix Way,
 Burnley BB11 5SX

PROJECT
Permit Application

TITLE
Fire Prevention Plan

SCALE @A3	DATE	DRAWN BY	CHECKED BY
1:500	Apr 2021	T Kearns	D Alcock
DRAWING NO	REVISION		
210331ES101	A		



REV	DATE	DETAIL
A	27/05/21	Fire extinguishers added

The applicant wishes to obtain a bespoke environmental permit that will allow for a household, commercial and industrial waste transfer station with treatment relating to the recycling of carpet waste into equestrian surfaces. The site will accept up to 16,000 tonnes of carpet waste per annum, which equates to 51 tonnes per day. The carpet waste includes carpet underlay material. From a post-consumer and post-industrial perspective, the carpet waste is separated into the waste streams of carpet underlay, synthetic-based carpet, and wool-based carpet.

The site layout is designed to ensure freedom of movement. The permitted area consists of an external yard, three buildings and is entirely surfaces with impermeable concrete. The external yard contains the quarantine area to the south west, a weighbridge along the southern boundary, four covered areas and four 40 ft ISO containers. The covered areas are used for the storage of unsorted carpet bales, reject (waste), and product as shown on the Drawing Ref: 210331ES101. The 40 ft ISO containers are primarily used for the structural support of the roof of the covered areas but are also used for the storage of non-waste equipment.

The permitted area deals with carpet waste only. The carpet waste is waste includes carpet underlay material. From a post-consumer and post-industrial perspective, the carpet waste is separated into the waste streams of carpet underlay, synthetic-based carpet, and wool-based carpet. The carpet waste is brought onto site using Equestrian Surfaces' own transport and pre-booked deliveries using external contractor vehicles and customer's own transport and is delivered through the roller shutter doors on the building in the central area of the site to the sorting area. The waste is then segregated by hand with the assistance of mobile plant into the appropriate waste streams and transferred to one of the concrete walled bays within the building prior to processing. Processing includes the shredding and baling of carpet waste which occurs within the building located to the east of the site. The locations for the processing and storage of the waste and product are shown on Drawing Ref: 210331ES101.

2.3 Mobile Plant and Equipment

Nitrogen Dioxide gas is a by-product of internal combustion engines and the site uses several items of plant with internal combustion engines. The following table lists the type of and emission ratings for the mobile plant and equipment used on site:

Description	Make	Emission Rating
JCB Loadall Shovel x 3	JCB 532.70, JCB 536.70	Tier 4

Plant machinery will be maintained by the supplier and will be serviced in accordance with the manufacturer's specifications and recommendations with a LOLER being performed annually. Plant will be cleaned down at the end of the working week. Defect checks will be performed daily by the user of the plant machinery and any defects noted will be recorded on the defect form and the repair will be arranged with the supplier.

In the event of a breakdown, either of vehicles, plant or machinery, a contingency process is followed which involves options such as fixing the item internally, covering the broken down item with a replacement, hiring a supplier to fix the item and renting additional equipment. If not of these options are suitable, operations may have to cease on site and the relevant affected parties will be contacted immediately with a date of when operations can continue.

If replaced, the item will be replaced with the lowest emissions standard possible at the time of purchase. Both ultra-low and low sulphur fuels are used. Breakdowns will be recorded, and the Environment Agency will be contacted with the nature of the problem and when it is expected for the site to return to normal operations.

Staff are trained on induction and are given refresher training at least annually via toolbox talks. Visitor driver inductions are given to inform them of all dust mitigation measures they can undertake. Control measures in place to reduce emissions include the strong enforcement of a ban on idling site vehicles and plant.

3. DUST AND PARTICULATE (PM₁₀) MANAGEMENT PLAN

3.1 Responsibility for Implementation of the DEMP

The Site Manager will exercise day-to-day control of the site, either personally or by delegation to suitably trained and responsible staff. The Site Manager will be responsible for the satisfactory working of the site and for ensuring compliance with the DEMP.

Daily records will be kept at the start of operations and again in the middle of the working day. The records will be kept on site for a minimum of two years and will be made available on request for inspection by the relevant authorities including the Environment Agency and Lancashire County Council.

Staff at all levels will receive the necessary training and instruction in their duties relating to all operations and the potential sources of dust emissions. Particular emphasis will be given to plant and equipment malfunctions and abnormal conditions Staff are trained on induction and given training at least annually via toolbox talks.

The Site Manager will ensure that external hauliers and other visitors are aware of the need to comply with the provisions of this plan so far as they are relevant to their activities on site.

Any member of staff who fails to comply with the provisions of the DEMP will be re-trained as necessary. External hauliers and other visitors failing to observe the requirement of the plan will be asked to leave the site.

The DEMP will be reviewed annually or in response to an incident.

3.2 Sources and Control of Fugitive Dust/Particulate Emissions

3.2.1 Sources of Potential Emissions

The principal dust sources anticipated would be from waste processing, loading, and offloading operations, and site transport, which may also raise visible dust.

The main site operations with the highest risk of producing dusts is the use of machinery for the processes including the shredding and baling of carpet waste. However, it is crucial to note that all processing occurs indoors within the processing building along the eastern boundary of the site and mitigation measures, such as the use of a hired mobile mister and onsite hoses to dampen down stockpiles, will be in place consistently. Undertaking all operations indoors significantly reduces the risk of potential accumulations of dust being blown off site to neighbouring properties. The storage of all waste and product on site is also enclosed indoors or within one of the covered areas in the external yard.

As shown in Figure 1.2, the prevailing winds blow from the northwest. This shows that the wind blows towards the residential area across the railway line and to the commercial and industrial properties beyond.

Below, Table 3.1 details the potential sources of dust from operations being undertaken on site and their pathways, receptors, and suitable mitigation measures.

Table 3.1 Source-Pathway-Receptor routes for dust producing operations on site.

Source	Pathway	Receptor	Mitigation
Vehicles entering and/or leaving the site with mud on wheels and	Tracking of mud and dust onto public highway and subsequent atmospheric dispersion.	All	Hosing down of vehicles with site hose if accumulation of debris is visible. Site based or 3 rd party sweepers used to clean the highway when accumulation of mud and dust is visible. The site has a fully

tracking dust on to or off the site.			concreted surface, making it easy to clean, therefore preventing potential material from being transferred to the public highway by vehicles.
Debris falling off vehicles that arrive uncovered.	Tracking of debris on to the site from external vehicles and subsequent atmospheric dispersion.	All	Routine check of vehicles as they enter the site and use an onsite hose to clean the vehicles. Consistent sweeping of the site surface when accumulation of debris is visible. The site has a fully concreted surface, making it easy to clean, therefore preventing potential material from being transferred to the public highway by vehicles.
Vehicles and plant moving around the site kicking up dust.	Atmospheric dispersion from the movement of vehicles around the site.	All	All vehicles and plant only operate on the concrete surface. Site speed limit is strictly set to 5mph and vehicle idling is prohibited. An onsite hose will be used to dampen the concrete surfaces. Consistent sweeping and cleaning of concrete surface in accordance with a strict cleaning schedule. Operations will cease in windy weather where airborne dust is visible. The site has a fully concreted surface, making it easy to clean, therefore preventing potential material from being transferred to the public highway by vehicles.
Road vehicles unloading waste.	Atmospheric dispersion	All	Prior to tipping of the waste, loads will be dampened down using the hired mister or onsite hose. Onsite hose used to dampen concrete surfaces. Consistent sweeping as part

			<p>of a cleaning schedule and when accumulation of dust is visible. Operations will cease in windy weather where airborne dust is visible. The site has a fully concreted surface, making it easy to clean, therefore preventing potential material from being transferred to the public highway by vehicles.</p>
Windblown dust from exposed stockpiles	Atmospheric dispersion	All	<p>All stockpiles are stored indoors or within one of the covered areas which significantly reduces the risk of the spread of dust through wind whipping. Stockpiles will be dampened with onsite hose. In windy weather stockpiles will be hosed prior to loading materials.</p>
JCB Loadalls	Atmospheric dispersion	All	<p>All plant is operated on the concrete surface. Onsite hose used to dampen concrete surfaces as well as consistent sweeping and cleaning to keep surface free from dust/mud. Operations will cease in windy weather where airborne dust is visible.</p>
Site surfaces	Wind-whipping of surface dust and subsequent atmospheric dispersion	All	<p>Site speed limit is strictly set to 5mph limiting wind-whipping from vehicles. Onsite hose used to dampen concrete surfaces. Concrete surfaces make them easy to consistently sweep during cleaning schedule when accumulation of dust is visible. The site has a fully concreted surface, making it easy to clean, therefore</p>

			preventing potential material from being transferred to the public highway by vehicles.
Loading waste back onto vehicles	Atmospheric dispersion	All	Hosing down vehicles before they exit the site if there is visible accumulation of debris. Operations will cease in windy weather where airborne dust is visible.
Particulate emissions from the exhaust of vehicles/plant/Machinery on site	Atmospheric dispersion	All	Site speed limit is strictly set to 5mph and vehicle idling is prohibited. The use of low sulphur fuels and downward facing exhausts/blow off valves.
Generators, plant, and other non-road going mobile machinery	Atmospheric dispersion	All	Site speed limit is strictly set to 5mph and vehicle idling is prohibited. Consistent sweeping as part of a cleaning schedule when accumulation of dust is visible.

3.2.2 Controls

The operations will be governed by the bespoke environmental permit which may be granted. The following means of prevention are based on existing site management procedures and the planning permission guidance.

Relevant parts of current best practice for minerals can also be taken to apply to waste management and processing operations and will be referred to as appropriate. The essence of guidance for the minerals industry is that dust impacts can be controlled by effective site management.

Weather Conditions

As an over-riding requirement, if during windy conditions any operations are identified as causing or likely to cause visible emissions across the site boundaries, or if abnormal emissions are observed within the site, the Site Manager will immediately modify, reduce, or suspend those operations until

either effective remedial actions can be taken or the weather conditions giving rise to the emissions have moderated.

A propriety windstock will be obtained and installed. This will provide a ready indication of the approximate wind strength and will show the direction in which any airborne dust is likely to be carried.

A trigger system will be adopted to identify those weather conditions when there is an increased or high risk of windblown dust. The trigger levels are detailed in the following matrix.

Table 3.2 Wind-blown dust risk matrix

Wind Speed			Rainfall		
Beaufort	ms-1	mph	Dry	Light showers	Heavy rain
5 +	8 +	18 +	Red	Red	Amber
3 – 4	3 – 8	8 – 17	Red	Amber	Green
1 - 2	0 - 3	1 - 7	Amber	Green	Green

The trigger levels will be interpreted as follows:

- Green: Wind-blown dust not normally likely to occur in significant quantities – normal dust suppression measures to be employed;
- Amber: Increased risk of wind-blown dust – additional checks on downwind boundary for visible dust – stockpiles will be inspected and treated as necessary in accordance with management relating to wind-blown dust across stockpiles; and
- Red: High risk of wind-blown dust – no dusty activities to take place if winds blow from the south west or south east – stockpiles will be inspected and treated as necessary in accordance with management relating to wind-blown dust across stockpiles.

When “red” conditions occur, and the wind blows from the south west or south east, all outdoor, dust generating operations will be immediately suspended.

Loading and Unloading

Prior to unloading, loads will be dampened down using the onsite mister or hose to reduce the risk of potential dust becoming airborne and exceeding the height of the boundary walls, being carried by the breeze, and reaching the residential neighbours. It is crucial to note that all waste is unloaded indoors within the sorting building. Drop heights will be controlled during all loading and unloading

operations to reduce the entrainment of dust into the atmosphere. Routine hosing of stockpiles will take place to dampen the material and reduce dust emissions when the material slumps.

Site Traffic

All site traffic will keep to designated routes. The designated routes will be dampened using the onsite hose and will be swept where accumulations of dust are visible to dampen and remove any loose materials.

Standard good practice will be adopted for site traffic, including:

- Avoiding abrupt changes in alignment;
- Regular clearing, wetting and maintenance of yard surfaces;
- Setting site speed limit strictly to 5mph;
- Fitting site plant with upswept exhausts and radiator fan shields;
- Evenly loading vehicles to avoid spillages; and
- Regular application of water in dry conditions

Road Transport

All vehicles carrying material into or out of the site will be securely sheeted. The wheels, chassis, and under-bodies of departing vehicles will be cleaned and further inspected by the driver before proceeding towards the site entrance. A drained hard-standing equipped with a hose and brush will be provided for this purpose.

All site surfaces will be dampened in particular conditions such as dry, hot, or windy weather or when accumulations of dust are visible through the use of an onsite hose. Yard surfaces will be cleaned at least weekly using a road sweeper and swept as necessary to remove loose materials. The concrete surfaces will be cleaned consistently during operational hours in accordance with the cleaning schedule provided in Appendix B. A speed limit of 5mph will be set on site.

The site entrance will be inspected daily to ensure that track-out is not carried out onto the public highway. A road sweeper will be deployed when accumulations of dust are visible to remove any muddy or loose deposits.

Wind-blown across stockpiles and loose materials

Material stockpile areas will be clearly designated. Loose materials both inside and outside these designated areas will be swept to minimise generation of wind-blown dust.

Other Matters

General matters and the management of the site can affect the likelihood of significant dust emissions.

These include:

- High standards of housekeeping to minimise track-out and wind-blown dust;
- The use of clean water for dust suppression, to avoid re-circulating fine material; and
- Effective staff training in respect of the causes and prevention of unacceptable emissions of dust.

The water supply to the dust suppression installations will be protected against frost to ensure availability at all times.

3.2.3 Maintenance

Effective control of dust emissions requires the maintenance and proper operation of all plant and equipment, including fixed and mobile dust suppression equipment. A programme of planned maintenance will be carried out on all plant and equipment in accordance with the manufacturer's recommendations to ensure that it operates at optimum efficiency.

Stocks of essential spares and consumable items will be held at the site of kept readily available for use at short notice.

Any malfunction or breakdown leading to abnormal emissions will be dealt with promptly and operations will be modified or suspended until normal working can be restored. All such malfunctions, and the actions taken, will be recorded in the site logbook. If control measures fail operations will cease and the regulator will be informed.

Table 3.3 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
Preventative Measures			
Site / process layout in relation to receptors	The location chosen for the development of the operation is as far as is reasonably practical from local sensitive	Easy to implement as part of good practice. Site activities are strategically positioned to lower the	This measure will be used the entire time that the site is operational.

	receptors as can be designed.	risk of adverse impact on surrounding receptors.	
Site speed limit, 'no idling' policy and minimisation of vehicle movement on site	The speed limit on site is 5 mph. Reducing vehicle movements and idling should reduce emissions from vehicles. Procurement policy to only purchase clean burn road vehicles and non-road going mobile machinery. Enforcement of speed limit reduces re-suspension by vehicle wheels.	Easy to implement as part of good practice. Drivers are inducted onto site and speed limits are strictly enforced by site management.	Speed limit are in place at all times. Failure to comply with speed limits shall be a disciplinary matter for Staff and cause other drivers to be banned from the site.
Minimising drop heights for waste	Minimising the height at which waste is handled should reduce the distance over which debris, dust and particulates could be blown and dispersed by winds.	Easy to implement as part of good practice.	Site staff are trained in the various dust mitigation measures required on site. This is done at induction and reinforced through annual toolbox talks. Any changes to the DEMP are also introduced to staff via toolbox talks.
Good house-keeping	Having a consistent, regular housekeeping schedule that is supported by management, will ensure site is regularly checked and issues remedied to prevent	Easy to implement and requires minimal equipment. Encourages a sense of pride and satisfaction amongst the staff which promotes vigilance and a positive culture. Staff should	This measure will be used the entire time that the site is operational.

	and remove dust and particulate build up. A cleaning schedule is in place to ensure that any accumulations of dust that do occur are removed weekly. A copy of the cleaning schedule can be found in Appendix B.	target the areas not caught by the road sweeper and other cleaning apparatus. Site management are responsible for ensuring that inspections take place and cleaning is undertaken in compliance with the schedule.	
Hosing of vehicles on exit	Effectively remove dirt, dust, and particulates from the lower parts of vehicles, although likely to be less effective than a more powerful wheel wash.	This is included in the emissions prevention measures and will be undertaken when visible staining of internal road occurs.	This will be undertaken when vehicles are exiting the site and when visible staining of site roads occurs to prevent mud being taken out onto the public highway.
Ceasing operation during high winds and/or prevailing wind direction	Mobilisation of dust and particulates is likely to be greater during periods of strong winds and hence ceasing operation at these times may reduce peak pollution events.	Likely to reduce dust and particulate emissions, however, not a long-term solution.	This measure will be used the entire time the site is operational.
Mechanical sweeper to remove any material spread by vehicle wheels.	A mechanical sweeper will be used to clear any visible deposits made by vehicle wheels from the concrete surface of the site roads.	Easy to implement as part of good practice.	This measure will be implemented in response to observations of accumulations of dust or mud on site roads. In the event that a sweeper cannot be deployed, site management shall consider

			<p>the potential for dusts to be raised from vehicles travelling on site roads, the potential for dust/mud to be taken off-site onto the public highway or for dusts to be created by vehicles operating on site roads and in the event that any of these situations occur, shall suspend inputs to the site until mitigation measures and normal conditions can be restored.</p>
<p>Easy to clean concrete impermeable surfaces</p>	<p>Creating an easy to clean impermeable surface, using materials such as concrete as opposed to unmade (rocky or muddy) ground within the site and on site haul roads. This should reduce the amount of dust and particulates generated at ground level by vehicles and site activities.</p>	<p>Considered good overall based on dust and particulate reduction but potentially costly and disruptive to retrofit. There are maintenance and cleaning procedures in place for the concrete surfaces.</p>	<p>This measure will be used the entire time that the site is operational. Cleaning will be undertaken in accordance with the cleaning schedule.</p>
<p>Minimisation of waste storage heights and volumes on site</p>	<p>Minimising the height at which waste is handled should reduce the distance over which debris, dust and particulates could be</p>	<p>Likely minimal return on potentially costly layout changes. The amount of waste that can be managed on site without causing dust and</p>	<p>This measure will be used the entire time that the site is operational.</p>

	blown and dispersed by winds. Reducing storage volumes should reduce the surface area over which particulates can be mobilised.	particulate pollution should be identified in the management system.	
Remedial Measures			
On site sweeping	Road sweeping vehicles dampen down dust and particulates whilst brushing and collecting dust and particulates from the road surface, particularly at the kerbside. Sweepers shall be hired in as required.	A mechanical sweeper will be used to clear visible accumulations of dust and mud. Manual sweeping and cleaning within the building is a daily activity carried out in accordance with a schedule.	This measure will be used when there is the visual build-up of dust during inspection and in compliance with the cleaning schedule.
Water suppression with hose	Dampening down of site areas using a hose can reduce dust and particulate re-suspension and may assist in the cleaning of the site if combined with sweeping.	Quite water intensive. Routine spraying of stockpiles covered in the site management system and maintenance plans.	This measure will be used when observations by staff indicate that stockpiles are dry and weather conditions could give rise to windborne dusts, to ensure stockpiles and the concrete surface are dampened down. It is crucial to note however, that all stockpiles are stored indoors or in a covered area in the external yard.
Water suppression with hired	Dampening down of site areas and the air using a hired mobile mister can reduce dust	Effective at controlling the spread of dust emissions and	This measure will be used when observations by staff indicate that stockpiles are dry and weather conditions

mobile mister.	and particulate re-suspension and may assist in the cleaning of the site if combined with sweeping.	particulates beyond the site boundary.	could give rise to windborne dusts, to ensure stockpiles and the concrete surface are dampened down. It is crucial to note however, that all stockpiles are stored indoors or in a covered area in the external yard.
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3.3 Other Considerations

Water usage / availability:

There may be the occasional use of a mains water hose that will only produce a maximum volume possible of a single tap. If this is insufficient in mitigating onsite dust, then the site will cease operations. There will also be the mobile mister which will be obtained when there is the visible accumulation of dust. This spreads a fine mist across all surfaces reducing the wastage of water via runoff.

In the event of a drought:

As mentioned above, in event of a drought, a mains water hose will be used to dampen stockpiles and site surfaces in order to reduce the spread of dust.

3.4 Enclosure of Waste Processing & Storage Areas

Wastes are enclosed appropriately given the size and nature of the operations on site. Following sorting within the sorting building, the carpet waste is assigned to concrete walled bays according to waste stream for storage within the building prior to processing. The external yard contains four covered areas and four 40 ft ISO containers. The covered areas are used for the storage of unsorted carpet bales, reject (waste), and product as shown on the Drawing Ref: 210331ES101. The 40 ft ISO containers are primarily used for the structural support of the roof of the covered areas but are also used for the storage of non-waste equipment. Therefore, all waste and product storage is enclosed within the sorting building or in the covered areas in the external yard.

The processing building, located along the eastern boundary of the site, contains the machinery for all waste processing. The carpet waste will undergo shredding and baling within the building. It is crucial

to note that all waste processing occurs within the building, and product is stored in one of the covered areas as mentioned above.

3.5 Visual Dust Monitoring

Activities that have the potential to cause dust emissions, as detailed in Section 3.2, will be monitored at the start-up of operations and again during the working day. This will include a visual assessment of any impacts beyond the downwind site boundary. Regular site inspections will also be undertaken by a COTC holder.

All observations and findings, including wind and other weather conditions, will be noted in the daily records.

Should visible dust be generated, the Site Manager will act promptly to identify the sources of dust and take the necessary corrective action. Each event, its cause and the action taken will be noted in the daily records. Formal reporting of dust incidents will be recorded in the site incident log, and any offsite notifications of dust shall be considered as complaints.

If necessary, to avoid potential nuisance, the Site Manager will instruct the reduction or suspension of any operation or process causing visible dust emissions across the site boundary towards any sensitive receptor until the emissions can be controlled.

All site personnel will be instructed to inform the Site Manager whenever visible dust emissions are observed, or appear likely to occur, as a result of any operation or process.

4. PARTICULATE MATTER MONITORING

Reference to the AQMA interactive map from DEFRA indicates that the site is not within an Air Quality Management Area.

5. ACTIONS WHEN AND INCIDENT OF DUST IS REPORTED

The following actions are taken:

1. The Site Manager assesses yard activities and the nature of waste handling and deliveries immediately prior to the incident being reported, to work out the cause.
2. If the source cannot be ascertained with 100% confidence, the Site Foreman on duty suspends the likely dust/particulate generating activities.
3. If the source is within the site's control, the Site Foreman on duty takes appropriate action in terms of dust/particulate abatement, to ensure that the alarm is not re-activated. This may take the form of the following;
 - a) Investigating the source of the dust/particulates to prevent a re-occurrence.
 - b) Suspending operations which are not being conducted using best-practice controls as set out in Table 3.1.
 - c) Additional use of the dust abatement measures.
 - d) Logging findings of a – c in the site diary, and also in the reporting template within the relevant appendix of the Environmental Permit.

If an effective abatement technique cannot be identified and implemented, and dust levels remain visible at the site boundary, then operations should be suspended. In addition, the site will commit to the suspension of operations on site if numerous complaints are received to allow for remedial measures to be implemented.

Site management will contact neighbouring businesses by email or telephone and local councillors (as representatives of residents) in the event that an incident of dust is reported which may result in complaints or a change in site practice to mitigate any issues raised.

In all cases, any new "lessons learnt" from the Site Manager's investigations are considered by the company directors and implemented into dust & particulate emission management plan (if not already included), to prevent a re-occurrence of the incident.

6. REPORTING AND COMPLAINTS RESPONSE

In line with the Site Management Plan and the ISO9001 quality system, a complaints form will be completed for every complaint received about Equestrian Surfaces Limited. All complaints will be recorded in a complaint register, a copy of which is attached in Appendix A. These records will be stored on file for a period of 6 years. In the event of a dust complaint, the complaint will be investigated with immediate effect and the Environment Agency will be informed to assist within the investigation. The site will respond to a complaint within 2 working days. A record of all copies of correspondence and telephone file notes will be made in the complaints register.

To avoid the event of a complaint, site management will contact neighbouring businesses by email or telephone and local councillors (as representatives of residents) in the event that an incident of dust is reported which may result in complaints or a change in site practice to mitigate any issues raised.

Relevant authorities e.g. the Environment Agency and Lancashire County Council will be notified by e-mail or phone call on the day that the complaint is made, and will be informed on the identity/location of the complaint, the description of the dust complaint and the details of the findings of Equestrian Surfaces Limited management investigations as regards to the source of the dust and what corrective action has been taken.

6.1 Reporting Complaints

The site operates a complaints procedure as part of its ISO9001 quality system.

6.2 Management Responsibilities

Site management will alter Company Directors of any complaints in accordance with the equality system. Complaints registered will be discussed at monthly management meetings and any trends will be analysed. The monthly management meetings will instigate further remedial measures including reviews of the DEMP in response to any issues arising. Also, the site will commit to the suspension of operations on site if numerous complaints are received to allow for remedial measures to be implemented.

7. SUMMARY

This DEMP has been produced on behalf Equestrian Surfaces Limited in order for the site to meet the requirements of and reassure the Environment Agency that the potential for dust produced from the site's operations is mitigated and controlled in every possible way. This DEMP accompanies a bespoke environmental permit application with the aim to obtain an environmental permit for the Equestrian Surfaces Limited site to operate as a household, commercial and industrial waste transfer station with treatment relating to the recycling of carpet waste into equestrian surfaces.

The DEMP aims to control any potential sources of dust to prevent dust emission impacts on the surrounding receptors, including several that are sensitive. All possible source-pathway-receptor routes have been identified and suitable abatement measures have been assigned to each one to minimise the potential dust caused from onsite operations.

The DEMP will be reviewed annually to ensure it is up to date or following a dust incident by the ineffectiveness of the plan.

APPENDIX A – DUST COMPLAINT FORM

Customer Details	
Customer Name -	
Address -	
Postcode -	
Customer Contact Details -	
Tel -	
Email -	
Date -	
Complaint Ref Number -	
Complaint Details -	
Investigation Details	
Investigation carried out by -	
Position -	
Date & time investigation carried out -	
Weather conditions -	
Wind direction and speed -	
Investigation findings -	
Feedback given to Environment Agency and/or local authority -	
Date feedback given -	
Feedback given to public -	
Date feedback given -	
Review and Improve	
Improvements needed to prevent a reoccurrence -	
Proposed date for completion of the improvements -	
Actual date for completion -	
If different insert reason for delay -	
Does the dust management plan need to be updated -	
Date that the dust management plan was updated -	
Closure	
Site manager review date	
Site manager signature to confirm no further action required	

APPENDIX B – CLEANING SCHEDULE

Area	Equestrian Surfaces Limited						
	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
Site Surfaces							
Access Roads							
Mobile Plant							

APPENDIX C – VISUAL MONITORING CHECK SHEET

Name:	Date:	Time:
Weather	Wind strength / direction	
	Conditions e.g. dry, showers	

Location of visible accumulation of dust	Time	Visible Dust	Dust Mitigation Action
Access road surface			
Yard surface			
Internal surface of buildings			
Airborne			
Stockpiles			

APPENDIX D – RECORD OF ACTIONS

Name:	Date:	Time:
Location of visible accumulation of dust	Dust control measure used	✓ or x
Access Road Surface	Mechanical sweepers	
	Hosing down of vehicles and surface to dampen	
	Mobile mister unit to dampen surface	
Yard Surface	Mechanical sweeper	
	Manual sweeper	
	Hosing down of vehicles and surface to dampen	
	Mobile mister unit to dampen surface	
Internal surface of buildings	Manual sweeper	
	Hosing down of surface to dampen	
Airborne	Mobile mister unit to dampen air	
	Mister sprays on building doors activated to dampen air	
	Extreme circumstances: cease operations immediately	
Stockpiles	Mobile mister unit to dampen stockpiles	
	Hosing down of stockpiles to dampen	