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Air Quality and Dust Management Plan

Including Air Quality and Dust Risk
Assessment.

Project Campus
Rev A

May 2017
W.O 2346

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1.0 Introduction

1.1 Background

Emissions of dust to air can occur during the preparation of the land (e.g. demolition, land clearing and earth moving), and during construction. Emissions can vary substantially from day to day, depending on the level of activity, the specific operations being undertaken, and the weather conditions. A large proportion of the emissions result from the site plant and road vehicles moving over temporary roads and open ground. If mud is allowed to get onto local roads, dust emissions can occur at some distance from the originating site. The scale of these impacts depends on the dust suppression and other mitigation measures applied.

As one of the planning submission requirements an Air Quality and Dust Management Plan was specified as being required, to mitigate the adverse impact of construction activities on air quality.

To ensure that this document remains relevant, adequate and effective as the works progress, the Air Quality and Dust Management Plan will be reviewed and updated as necessary:-

- Every 6 months (minimum)
- As instructed by the Project Manager
- Following any changes to the scope of the works that have had an impact on environmental requirements.

2.0 Description of Site & The Project

The Construction Site is within the boundaries of Ipsen Biologics Campus on the Wrexham Industrial Estate.

The site location is at National Grid Reference SJ 37516 50349 and sits on the eastern side of Abenbury Way.

The site comprises of an area of approximately 3680 m². An existing single storey warehouse structure (Building 55) approximately 930m² and with a volume of 6545m³ will be demolished in the first instance.

The Building is a portal steel clad structure with a small office mezzanine built on a simple pad of foundations.

A new Building will be all constructed of about 1537m² with a volume of approximately 21518 m³. It will be three floors high with packaging and warehousing on the ground floor and offices and amenities on the first and second floor.

The area of construction is some 15m from the site boundary bordering Ash Road North. Other Buildings outside of the campus but on the Industrial Estate are some 60-65m away. The nearest residential premises are 340m to the North West and 460m to the South West of the site.

3.0 Requirements

3.1 UK Legislation

The Austin Company of UK Ltd environmental management team maintain an up to date register of environmental legislation that is referenced in the aspects and impacts register. Below is a summary that is relevant to air quality that is current at the time of writing this plan.

- The Air Quality Standards Regulations 2010
- The Air Quality Limit Values Regulations 2003
- Environmental Protection Act 1990 as amended
- Common Law Nuisance
- Clean Air Act 1993
- Control of Asbestos regulations 2006
- Control of Substances Hazardous to health regulations 2002
- Environment Act 1995
- Environmental permitting (England and Wales) Regulations 2010 as amended
- Pollution Prevention and Control Act 1999
- Pollution Prevention and Control (England and Wales) Regulations 2011
- Climate Change Act 2008
- Volatile Organic Compounds in Paints, Varnishes and Vehicle Refinishing Products Regulations 2005
- Policy 7.14 The London Plan

3.2 Guidance

The Austin Company of UK Ltd has taken the following guidance into consideration when writing this plan:

- IAQM: Institute of Air Quality Management – Version 1.1 1st June 2016.
- DEFRA: Air Quality Strategy for England, Scotland, Wales and Northern Ireland – July 2007
- BRE: Controlling particles, vapour and noise pollution from construction sites, parts 1-5 – 2003

4.0 Aspects and Impacts

There are numerous activities on construction projects that if unmitigated can give rise to elevated levels of dust:

- Construction plant and vehicles
- Transportation and storage of materials
- Use of haul routes
- Demolition activities
- Excavations and earthworks construction
- Operation of the construction site or undertaking construction activities which result in odours being generated from, for example, smoke, fumes or gases.

The effect of emissions escaping the work area may cause nuisance through, for example, surface soiling, loss of visibility due to deposition and effects on flora and fauna. Since it is difficult to suppress dust once it is airborne it is preferable, where possible, to prevent dust from being generated in the first place.

In addition to this the additional vehicular movements associated with the construction project can also increase particulate emissions such as Carbon Dioxide and Nitrogen Oxide, which can reduce the air quality in the surrounding area.

The potential receptors include:

- Local residents
- Site workers
- Local factory workers
- Street going public
- Water courses
- Ecological receptors

5.0 Responsibility of Control

5.1 Site Management

Ipsen will appoint an identified contact who will be responsible for ensuring along with the Principal Contractors representative, that liaising with the community for the development as a whole is carried out.

The principle contractor's role will be:-

- Recording and responding to enquiries or complaints from the local community, including local businesses and the general public;
- Communicating to the local community, including local businesses, the nature of the construction work that will be carried out;
- Communicating the programme of works to the local community, including local businesses, specifically highlighting any works that may result in complaints (e.g. dusty activities);
- Updating the local community, including local businesses, of any changes to the nature of works or programme of works, as necessary; and
- Establishing and maintaining good relationships with local stakeholder groups.

6.0 General Dust & Air Pollution Mitigation Measures

Referring to visible dust, it is imperative to prevent statutory nuisance arising from the demolition, construction works or dusty activities. Therefore a philosophy of the prevention of dust formation in the first place shall be adopted. Dealing with dust should be in the following fashion: 1. Prevention 2. Suppression 3. Containment.

6.1 Site Management

Ensure relevant requirements of the Area Management Plan are adhered to, including limiting the potential for dust and air pollution impacts to the following construction activities;

- Smoke/burning
- Waste
- Fencing and hoardings
- Site accesses
- Clearance of the site

Ensure the site is laid out such that machinery and dust-causing activities will be located away from sensitive receptors, where reasonably practicable.

Ensure hoardings and other barriers have been erected along the site boundary, to mitigate the spread of dust to any sensitive buildings or other environmental receptors.

Ensure choice of methodology / technique for dusty operations is considered in order to reduce or eliminate dust;

Ensure all employees are provided with an appropriate induction and on-going briefings and tool box talks regarding management of environmental issues (i.e. dust mitigation measures required from the works they are carrying out);

6.2 Emissions from Construction Vehicles and Plant

- Construction plant is operated in accordance with the manufacturer's written recommendations and all vehicles and plant will be switched off when not in use.
- Vehicle and construction plant exhausts will be directed away from the ground where possible and be positioned at a height to facilitate appropriate dispersal of exhaust emissions.
- Enclosing, shielding and provision of filters on plant likely to generate excessive quantities of dust beyond the site boundaries have been employed. Item such as dust extractors, filters and collectors on drilling rigs and silos will be used.

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- The movement of construction traffic around the site will be kept to a minimum reasonable for the effective and efficient operation of the site and construction of the Project.
- Construction plant is located away from site boundaries which are close to sensitive receptors where reasonable and practical.
- Access points will be designed to avoid queuing traffic adjacent to access points. Access/ Exit points will be inspected regularly and cleaned with appropriate methodology as necessary.
- We will avoid use of diesel or petrol powered generators by using mains electricity or battery powered equipment where reasonable and practicable.
- All non-road mobile machinery will use ultra-low sulphur tax-exempt diesel where available. Machinery with power outputs of over 37kW will be fitted with appropriate exhaust after treatment from approved Energy Saving Trust list (achieving filtration efficiency of over 85%).
- We will keep vehicle, plant and equipment maintenance records on site and these are made available to the Employer's Representative upon request.
- Roads and accesses will be kept clean throughout the duration of the works.

6.3 Transportation and Storage of Materials

- Deliveries and storage of materials are coordinated by the Site Management Team.
- Delivery engines are turned off while waiting to be unloaded.
- Deliveries or loads entering and leaving the site will have a fixed cover, suitable for the purposes of preventing materials and dust spillage. This will apply to the transport of materials by road, rail or waterway.
- Vehicles transporting material within or outside the construction site will not to be overloaded.
- Where appropriate stockpiles and mounds are kept away from the site boundary, sensitive receptors, watercourses and surface drawings are sited to take into account the predominant wind direction.
- Stockpiles and mounds will be at a suitable angle of repose and avoid sharp changes in shape to prevent material slippage.
- Materials stockpiles will be enclosed or securely sheeted or kept watered.

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- Long-term stockpiles, which give rise to a risk of dust air pollution, will be covered with appropriate sheeting or the surfaces of the stockpiles will be stabilised.
- Where reasonably practicable, and where appropriate storage in line with requirements for covering materials set out above is not implemented, fine dry material (under 3mm particle size) will be stored inside buildings or enclosures.
- The number of handling operations for materials will be kept to the minimum practicable.
- Materials handling areas will be maintained to constrain dust emissions. Watering facilities will be utilised to reduce or prevent escape of dust from the site.

6.4 Use of Haul Roads

- Haul routes will be agreed with the Employer's Representative prior to their construction and use and we will advise the Employer's Representative of the intended level of trafficking for haul routes.
- Hard surface routes are swept regularly to remove mud and aggregate materials from their surface. The frequency of cleaning will be suitable for the purposes of suppressing dust emissions from the site boundaries.
- Un-surfaced roads will only be utilised by site traffic and on this project will be minimal with goods haul standing around the perimeters of the demolished and newly erected building.
- Any routes within the site with the potential to give rise dust are watered as appropriate.
- Haul routes are regularly inspected and promptly repaired if required.
- Vehicle speeds are restricted to 5mph to prevent high levels of dust being released.

6.5 Demolition Activities

- The building to be demolished is predominantly steel and cladding
- Any buildings or substructure to be demolished will be sprayed with water as necessary, prior and during demolition.
- Appropriate screening of buildings or structures to be demolished will be.
- Skips will be covered and secured
- Prolonged storage of waste materials on site is avoided.

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- Waste removal will be as per the requirements of the waste management plan.

6.6 Excavations and Earthwork Activities

- Topsoil is being stripped as close as reasonably practicable to the period of excavation or other earthworks activities to avoid risks associated with run-off or dust generation.
- Drop heights from excavators to vehicles involved in the transport of excavated material will be kept to the minimum practicable to control dust generation associated with the fall of materials.
- Water misting sprays are used as required if particularly dusty works activities shall be necessary during dry or windy periods.
- Deposited materials will be compacted as soon as possible after deposition, with the exception of topsoil.
- Soiling, seeding, planting or sealing of completed earthworks will be undertaken as soon as reasonably practicable following completion of the earthworks.

7.0 Project Site (Risk of Dust Impact)

7.1 Dust Emissions Magnitude

Worksites are classified into one of three tiers according to dust risk and are assessed on the basis of site activities and the sensitivity of nearby receptors. The Dust Emission Magnitude (DEM) is based on the scale of the anticipated works and the site will be classified as Small, Medium or Large, as defined by the Institute of Air Quality Management (IAQM).

Assessment of this scheme is required.

7.1.1 Demolition Phase

The scale of the potential dust emissions from this phase is determined using the following criteria:

SMALL

- The total volume of the building to be demolished is < 20,000m³ (**Volume of the building is actually 6545m³**)
- Demolition activities less than 10m above ground;
- Single storey steel and cladding construction low potential to give off dust

7.1.2 Earthworks Phase

Earthworks primarily cover excavation, haulage, tipping and stockpiling of soil type material. This includes levelling the site and landscaping.

The scale of the potential dust emissions for the site from this phase will be determined using the following criteria:

SMALL

- Our actual site area is 3680m² but we consider our criteria is much less due to the factors below, and do not warrant the medium assessment criteria apply. Total site area < 2,500 m² (footprint of Building demolished is 930m²)
- Soil type with large grain
- < 5 heavy earth moving vehicles active at any one time;
- Formation of stockpile enclosure, 4 metres in height , or total material moved ,10,000 tonnes (where known)
- The potential for emissions and dust will have an infrequent impact on sensitive receptors.

7.1.3 Construction Phase

The key issues when determining the potential scale of dust emissions during the construction phase include the size of the building (s), the method of construction, the construction materials to be used and the duration of the build.

The scale of the potential dust emissions for the site from this phase will be determined using the following criteria:

SMALL

- Total building Volume <25,000m³ (volume of the new Building is 21,518m³)
- Light foundations, predominantly steelwork and cladding.

7.1.4 Trackout Phase

Factors that will determine the risk of dust emissions from trackout are; vehicle size, vehicle speed, geology and duration. Only receptors within 50 metres of the route(s) used by vehicles on the public highway and up to 500 metres from the site entrance(s) are considered to be at risk from the effects of dust trackout.

SMALL

- <10 HGV (>3.5t) trips in any one day. These are the number of vehicles that leave the site after moving on unpaved ground, where they accumulate mud and dirt that can be tracked out onto the public highway.
- Surface material with low potential dust release.
- Unpaved road length <50m
- The site is to be located on already paved areas, so reducing unpaved slanting and running areas.

7.1.5 Dust Emission Magnitude

Activity	Dust Emission Magnitude
Demolition	SMALL
Earthworks	SMALL
Construction	SMALL
Trackout	SMALL

7.2 Define the Sensitivity of the Area

The sensitivity of the area takes into account a number of factors:

- The specific sensitivities of receptors in the area;
- The proximity and number of those receptors;
- In the case of PM10, the local background concentration
- Site specific factors.

7.2.1 Dust Soiling

MEDIUM

See table in Appendix 2:

- Users would expect to enjoy a reasonable level of amenity, but would not expect to enjoy the same level of amenity as in their home;
- The appearance, aesthetic value of their property could be diminished by soiling;
- The people or property would not reasonably be expected to be present here continuously, or regularly, for extended periods (e.g. place of work).
- The nearest residential property is 340m away.

7.2.2 Health

MEDIUM

See table in Appendix 3:

Locations where the people exposed are workers and exposure is over a time period relevant to the air quality objective for PM10. In the case of 24 hour objectives, a relevant location would be one where individuals may be exposed for 8 hours or more in a day (e.g. office and shop workers).

7.2.3 Ecological Effects

See table in Appendix 4:

Dust can have two types of effects on vegetation: Physical and Chemical. Direct physical effects include reduced photosynthesis, respiration and

transpiration through smothering. Chemical changes to watercourses or soils may lead to loss of plants or animals via changes in acidity. Indirect effects can include susceptibility to stressors such as pathogens and air pollution. These changes are likely to occur only as a result of long-term demolition and construction works adjacent to a sensitive habitat. Often impacts will be reversed when the works are completed and dust emissions cease.

LOW

- Locations with a local designation where features may be affected by dust deposition.

7.2.4 Other Factors

The following additional factors should also be considered when determining the sensitivity of the area.

- Any history of dust generating activities in the area;
- The likelihood of concurrent dust generating activities on nearby sites;
- The season during which the work will take place;
- Duration of the potential impact, as a receptor, may become more sensitive over time;

8.0 Dust and Air Pollution Monitoring and Control

Following on from Mitigation (6.0), we apply strong Management and Control against the 3 principles of Prevention, Suppression and Containment.

These three principles are well established and are central to the control strategies to control dust. They follow a hierarchy to control the emissions.

The tables attached in Appendices represent the Air Quality and Dust Risk Assessment (AQDRA).

The main reasons for this assessment level are the size of the site (small) and relatively low activity levels, e.g. minimal plant usage on site, minimal vehicle movements to and from site and distance from most sensitive receptors.

Regardless of the risk level, AUK Ltd will ensure that employees working on site and all sub-contractors follow best practice at all times to control and limit emissions of gaseous and particulate pollutants into the atmosphere from the construction and demolition activities, including vehicles and plant.

The checklist below is indicative of management check procedures, which extend beyond those required for a negligible dusty site, but will be implemented on site in order to minimize dust nuisance from dusty operations. Included are correct storage of raw materials, high standards of housekeeping and site management, minimization of drop heights and consideration of the prevailing wind.

Suppression techniques will be through the use of water via hoses and dampening down of localised areas during dusty activities during the demolition / construction phases. We will ensure that we have an adequate supply of water on site that has adequate frost protection.

Regardless of regular inspections and procedures, should any airborne dust be seen to be leaving the site boundary the source of the emission will be immediately identified and corrective action will be taken without delay.

Air Quality and Dust Management Plan

8.1 Checklist of mitigation measures relevant to this site which will be implemented:

Mitigation Measure to be implemented	Responsible Person	Frequency of checking
Site management		
Display name and contact details of person responsible for air quality issues on the site hoarding notice board	Site manager	Weekly
Display the head of regional office contact information	Site manager	Weekly
Record and respond to all dust and air quality pollutant emissions complaints (see Complaints Procedure in Supporting Information)	Site manager	Ad hoc
Make the complaints log available to the local authority when asked	Site manager	Ad hoc
Carry out regular site inspections to monitor compliance with air quality and dust control procedures, record inspection results and make the inspection log available to the local authority when asked	Site manager	Weekly
Increase the frequency of inspections when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions	Site manager	Daily / Hourly
Record any exceptional incidents that cause dust and air quality pollutant emissions, either on or off site and record any action taken to resolve the situation in the log book	Site manager	Ad hoc
Preparing and maintaining the site		
Plan the site layout: locate machinery and dust causing activities away from receptors	Site manager	Weekly / Daily
Erect solid screens or barriers around dust activities or the site boundary that are at least as high as any stockpiles on site	Site manager	Weekly
Fully enclose site or specific operations where there is a potential for dust production and the site is active for an extensive period	Site manager	Weekly
Ensure scaffolding will be enclosed	Site Manager	Ad hoc

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Avoid site runoff of water or mud	Site Manager	Daily
Keep site fencing, barriers and scaffolding clean using wet methods	Site manager	Weekly
Remove materials from site as soon as possible	Site Manager	Daily
Operating vehicle / machinery and sustainable travel		
Ensure all non-road mobile machinery (NRMM) comply with the standards set out within this guidance	Site Manager	Ad hoc
Ensure all vehicles switch off engines when stationary – no idling vehicles	Site Manager	Ad hoc
Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where possible	Site Manager	Ad hoc
Impose and signpost a maximum site speed limit of 10 mph	Site Manager	Weekly
Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking and car-sharing)	Site Manager	Weekly
Operations		
Only use cutting, grinding and sawing equipment fitted, or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems	Site Manager	Ad hoc
Ensure an adequate water supply is available on site for effective dust / particulate matter mitigation (using recycled water where possible)	Site Manager	Daily
Use enclosed chutes, conveyors and covered skips	Site Manager	Daily
Minimise drop heights from conveyors, loading shovels, hoppers and other loading and handling equipment and use fine water sprays on such equipment wherever appropriate	Site Manager	Daily
Waste management		

Reuse and recycle waste to reduce dust from waste materials	Site Manager	Weekly
Avoid bonfires and burning of waste materials	Site Manager	Weekly
Measures specific to demolition		
Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust)	Site Manager	Weekly
Ensure water suppression is used during demolition operations	Site Manager	Daily
Avoid explosive blasting, using appropriate manual or mechanical alternatives	Site Manager	Daily
Bag and remove any biological debris or damp down such material before demolition	Site Manager	Daily
Measures specific to Construction		
Avoid scabbling (roughening of concrete surfaces) if possible	Site Manager	Ad hoc
Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless required for a particular process, in which case ensure that appropriate additional control measures are in place	Site Manager	Daily
Measures specific to Trackout (no on-road vehicles will be entering the site)		
Regularly use a water-assisted dust sweeper on the access and local roads, as necessary, to remove any material tracked out of the site	Site Manager	Daily
Avoid dry sweeping of large areas	Site Manager	Daily
Ensure vehicles visiting and leaving site are securely covered to prevent escape of materials during transport	Site Manager	Ad hoc

We understand the importance of management techniques for effective control of emissions, our techniques include; proper management, supervision and training for process operations; proper use of equipment; effective preventative maintenance on all plant and equipment concerned with the control of emissions to air; and we will ensure that spares and consumables are available at short notice in order to rectify breakdowns rapidly.

In addition to the above, effective preventative maintenance will be employed on all aspects of the construction / demolition works including all plant, vehicles, buildings and the equipment concerned with the control of emissions to air.

9.0 Incident Response

The following actions will be taken in the event of an exceedance of the agreed thresholds, obvious visual impacts and / or complaints.

- Onsite activities will be immediately inspected to identify likely sources;
- If onsite sources are identified as being responsible for exceeding the agreed threshold, the relevant activities will be halted until remedial activities can be implemented (e.g. wetting down, road sweeping, sheeting up).
- The activity will then be monitored to ensure that the mitigation measures are working and there is no repeat incident.
- Should a complaint be received the complainant will be contacted by the nominated Project Manager (Ipsen) to follow up.

10.0 Training

- All site personnel will be made aware of the air quality issues covered in this plan during site induction.
- Regular Toolbox talks will be given to remind all site personnel of the requirements of dust management.
- All training is recorded
- Method statements and risk assessments will also be written (and briefed to all site personnel) before any works that may impact air quality are carried out on site.
- Integrated into these documents will be the specific control and risk mitigation methods relating to the air quality issues detailed in this document.

11.0 Complaints and Incident Procedures

The Principle Contractors will keep records of the results of the regular monitoring undertaken. Additionally, a record of all environmental incidents that result in air pollution and remedial action taken will be recorded in an environmental incident log book. Complaints received will be recorded and investigated by the Principle Contractor and Ipsen.

11.1 Actions to Be Taken

- Time, date, identity and contact details of complainant are to be taken;
- The wind direction, strength and weather conditions are to be noted;
- A note is to be taken if the complaint has been referred by the local authority;
- Ask the complainant to describe the dust emission -is it constant or intermittent, how long has it been occurring for and is it worse at any particular time of the day? Does it come from an identifiable source?
- As soon as possible after receipt of the complaint, a site inspection is to be undertaken, by the site manager and all dust producing activities noted. Note all dust mitigation methods that are being employed;
- If the complaint is related to an activity in the recent past, note any dust producing activities that were underway at the time. If possible, implement any remedial action possible;
- Visit the area from which the complaint originated and ascertain if there is still a problem;
- After initial investigations have been completed, contact the complainant and explain any problems and remedial actions taken;
- Notify the Project Manager, the Company Safety Environmental Manager and the Local Authority that a complaint has been received, the findings of the investigation and the remedial measure(s) that were taken.

APPENDICES: AIR QUALITY AND DUST RISK ASSESSMENTS (AQDRA)

Appendix 1 – Dust Emission Magnitude

Appendix 2 – Dust Soiling

Appendix 3 – Human Health

Appendix 4 – ECO Systems

Appendix 5 – Outcome

Appendix 6 – Risk of Dust Impacts

Appendix 7 - Summary

Appendix 1 – Dust Emission Magnitude

	Dust Emission Magnitude		
Demolition	SMALL	Volume Height	circa 20,000 m ³ < 10m
Earthworks	SMALL	Material moved Earth Moving Vehicle < 5	Material moved < 20k tonnes 2,500m ²
Construction	SMALL	Volume	<100,000 m ³
Trackout	SMALL	Vehicles (. 3.5 t per day)	<10

Appendix 2 – Dust Soiling

		Demolition			
Receptor Sensitivity	Number of Receptors	Distance from source (m)			
		<20	<50	<100	<350
High	>100				
	10-100			<25 Low	
	1 to 10				
Medium	>1		<10 Low		
Low	>1		Low		
		Earthworks			
High	>100				
	10-100			Low	
	1 to 10				
Medium	>1		Low		
Low	>1		Low		
		Construction			
High	>100				
	10-100			Low	
	1 to 10				
Medium	>1		Low		
Low	>1		Low		
		Trackout			
High	>100				
	10-100			Low	
	1 to 10				
Medium	>1			Negligible	
Low	>1			Negligible	

Appendix 3 – Human Health

	Annual Mean PM ₁₀ Concentration	No. of Receptors		Distance from source (m)			
			<20	<50	<100	<200	<350
Demolition							
High	24 -28	10-100			12 Low	Low	Low
Medium	24 -28	10-100			8 Low	Low	Low
Low	24 -28	<10		1 Low	Low	Low	Low
Earthworks							
High	24 -28	10-100			12 Low	Low	Low
Medium	24 -28	10-100			8 Low	Low	Low
Low	24 -28	<10		1 Low	Low	Low	Low
Construction							
High	24 -28	10-100			12 Low	Low	Low
Medium	24 -28	10-100			8 Low	Low	Low
Low	24 -28	<10		1 Low	Low	Low	Low
Trackout							
High	24 -28	10-100			12 Low	Low	Low
Medium	24 -28	10-100			8 Low	Low	Low
Low	24 -28	<10		1 Low	Low	Low	Low

Appendix 4 – Eco Systems Impact

	Receptor Sensitivity	Distance from source
	<20	<50
Demolition		
High		
Medium		
Low	Low	Low
Earthworks		
High		
Medium		
Low	Low	Low
Construction		
High		
Medium		
Low	Low	Low
Trackout		
High		
Medium		
Low	Low	Low

Appendix 5 – Outcome

	Sensitivity of the Surrounding Area			
	Demolition	Earthworks	Construction	Trackout
4.2 Dust Soiling	Low	Low	Low	Low
4.3 Human Health	Low	Low	Low	Low
4.4 Ecological	Low	Low	Low	Low

Appendix 6 – Risk of Dust Impacts

	Dust Emission Magnitude
	Small Site
Demolition Low	Negligible
Earthworks Low	Negligible
Construction Low	Negligible
Trackout Low	Negligible

Appendix 7 – Summary (Site specific, small site)

		Risk			
		Demolition	Earthworks	Construction	Trackout
Dust Soiling		Negligible	Negligible	Negligible	Negligible
Human Health		Negligible	Negligible	Negligible	Negligible
Ecological		Negligible	Negligible	Negligible	Negligible

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