

AIR QUALITY & DUST MANAGEMENT PLAN



NB: To be attached and therefore read alongside the main Method Statement and Risk Assessments.

Project Name	London Borough of Camden – 2 Chester Road		Project Number	G2829	
Project Address	Prepared By		Michelle Miles	Reviewed By	Spencer Nichol
Chester Road Hostel 2 Chester Road Camden London N19 5BP	Position		Operations Coordinator	Position	Operations Manager
	Date of Preparation		02.11.2021	Date of Review	03.11.2021
	Revision Number		1	Revision Number	1

Document Revision Record

Issue No	Name	Date	Details of Revisions
First Issue	Spencer Nichol	03.11.2021	-

Summary

The purpose of this Dust Emission Management Plan (DEMP) is to identify potential dust emission sources and sensitive receptors associated with the demolition works for proposed hostel development at Camden at Chester Road Hostel, 2 Chester Road, Camden, London, N19 5BP

This document further establishes appropriate mitigation techniques in order to minimise these emissions and define management and contingency measures to ensure offsite impacts do not result in significant or unacceptable levels of pollution.

This DEMP will be part of Goody Demolition's management system for the entirety of the demolition and it will ensure that:

- The risks that the activities pose to the environment are identified;
- The measures that are required to minimise the risks are identified;
- The activities are managed in accordance with the management system; and
- Performance against the management system is audited at regular intervals

2 Chester Road Site



1. Introduction

The Air Quality Dust Management Plan is in place to ensure that minimal emissions are made during the duration of the project. This plan covers the risk assessment and mitigation measures required for the phase of Demolition Works Only (see above site layout plan) the aim of this DEMP is to ensure the generation and transportation of dust, mud and debris is controlled, removed and mitigated. The DEMP is intended to cover the entirety of the demolition and construction site and all dust-generating activities. The DEMP considers day-to-day activities and all foreseeable circumstances which may worsen dust conditions at the site. The DEMP will remain active and enforced throughout the demolition and construction (if any) period

The DEMP includes:

- Identification of dust-generating activities, identification of sensitive receptors and dust generation risk;
- Specification of site, management, roles and responsibilities, and activity specific mitigation measures; and
- Mitigations measures

The DEMP has been prepared from in-house knowledge and expertise by authors (Miller Goodall) who are registered members of the Institute of Air Quality Management (IAQM), and selection of mitigation by potential risk from the GLA

2014 Guidance document, "The Control of Dust and Emissions during Construction and Demolition Supplementary Planning Guidance".

2. Scope of Works

In addition to identifying potential dust emission sources and sensitive receptors associated with the proposed demolition works, this DMEP establishes appropriate mitigation techniques in order to minimise these emissions and define management and contingency measures to ensure offsite impacts do not result in significant or unacceptable levels of pollution

Goody Demolition will safely carry out the demolition and associated works on this project which will include, but are not limited, to the following:

- Produce all relevant site documentation and agree with Client.
- Arrange for Asbestos Survey to be carried out.
- Set up exclusion zones, barriers and signage.
- Skips are to be set up within close proximity to the works in a safe and convenient area.
- Organise the disconnections of designated utilities / services on site.
- Tree Protection and Tree Surgery / Removal.
- Asbestos Removal to be carried out by licensed asbestos removal contractor.
- Internal soft strip.
- Demolish 2 Chester Road.
- Removal of slab and foundations.
- Clearance of unwanted debris from site.
- Clean site and leave safe and tidy for the client's inspection

3. Description of Project

The site is located in the Chester Road and is currently occupied by a two storey brick / block flat roofed structure acting as a Hostel for the Camden Council which were constructed in the 1960's. There are currently two communal gardens and parking on site. The project comprises of soft strip and the demolition of the redundant Hostel including removal of slab and foundations and clearance.

Redevelopment of the existing council owned hostel will be consist of a conversion from a 26 bed hostel to provide 50 bedroom temporary accommodation for families.

Goody Demolition Ltd have be contracted to execute the demolition and associated works to facilitate with the redevelopment of the Hostel.

4. Location Details

The site is currently occupied by an existing 26- bedroom Hostel in a heavily urbanised area located on the junction of Chester Road and Dartmouth Park Hill. The site is bounded to the East by Dartmouth Park Hill, a primary road with bus routes to central London and Chester Road to the West, a one – way residential street largely comprising of terraced housing to the south.

To the north is a public pedestrian route that provides access to a small infill housing building.

(Please see figure 1 below).

Archway Underground Station is located approximately 800m north of the site

With the site being located close to the public Goody Demolition Ltd. recognise that in order to manage the impact of the works on the local community, communication and liaison with the London Borough of Camden and local residents is paramount to achieving a good working relationship to ensure a harmonious working environment with the residents of the neighbouring properties and businesses.



Figure 1

5. Schedule Dust and Emission Generating Activities

Emissions will be recorded via dust, monitoring using static monitoring positions, this will allow us to see what is being emitted from site. We will tackle the emissions via suppression. The use of suppression will include dampening down and ensuring that in dry weather the works are dampened to ensure there is no dust emitted from site.

Demolition

Demolition is the removal of buildings and structures using either destructive or deconstructive means.

Deconstructive demolition will be undertaken at the site to remove the existing buildings. This is the removal of the structure in parts, retaining and recycling the demolished material where possible.

Trackout

Trackout is the transport of dust, dirt or mud by vehicles travelling from the construction site and onto the public road network. This may occur by vehicles travelling over muddy or dusty road surfaces and then travelling out of the site with dirt and mud attached to the wheels or vehicle bodies. This dust and dirt may then be deposited onto road surfaces beyond the site, and then re-suspended by other vehicles on the road network.

6. Key activities for dust suppression

- Demolition works of the Building will have the highest risk of emitting dust, there are various control measures that will be in place to ensure we prevent any dust from leaving site. The building will have dust suppression which will then be used on the project to prevent any more dust leaving the site, and all stock piles will be dampened down whilst waiting to leave the site.
- Plant Movement of loads leaving the site can cause dust and leave trails of mud from the site, but a wash will be used to clean the wheels of vehicles before they leave site to ensure that no dust or mud leaves site with the Lorries.
- Exhaust fumes from Vehicles: Vehicles on site can cause exhaust fumes, vehicle movement on site is restricted to prevent any additional exhaust fumes along with a well-planned traffic management plan to prevent unnecessary movement of vehicles as they leave the site
- Wind can move dust out of the site and to prevent this all piles and during the demolition phase all potential dusty works will be dampened down to prevent emissions
- All stock piles will be dampened down using hoses to prevent any dust leaving site. Stock piling will be kept to a minimum as we try to get the materials taken from the building off site as quickly as possible

7. Dust Risk Assessment

The following risk assessment assumes no mitigation measures are applied, except those required in legislation. The level of risk is based on the scale and nature of the works and the sensitivity of the area. Based on this risk assessment this in turn will determine the minimum requirements for mitigation and control measures to be applied.

Step 1: Dust Assessment

Dust Assessment Required

The site works meet the following criteria which determines that a full detailed assessment is required for the project.

- Human Receptor's within 50m of the Boundary
- Human Receptor's within 50m of the 500m Track out Route

Ecological Assessment: Not Required

It is not considered that there is a requirement for a detailed assessment of the effects on 'ecological receptors' as there are no notable 'ecological receptors' within the area of influence as defined following:

- Within 50m of the Boundary
- Within 50m of the 500m Track out Route

For General Dust Mitigation please see our environmental risk assessment control measures pages 17 - 19

Sensitive Receptors

The Wind rose for London Heathrow Airport for 2018 is most was used within the air quality assessment report as it is representative of site conditions. The extract is provided in figure 2 below. The extract shows that the prevailing winds are westerly, south – westerly, as well as north- easterly directions: therefore; residential dwellings to the east, north – east, and south west are most likely to be affected by downwind conditions from the site.

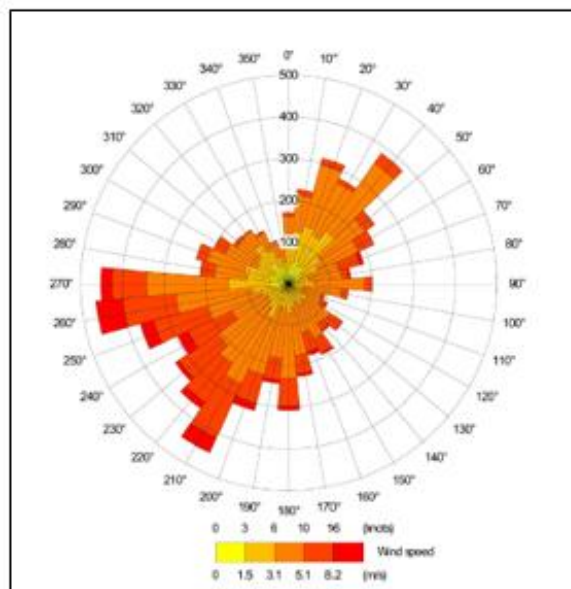
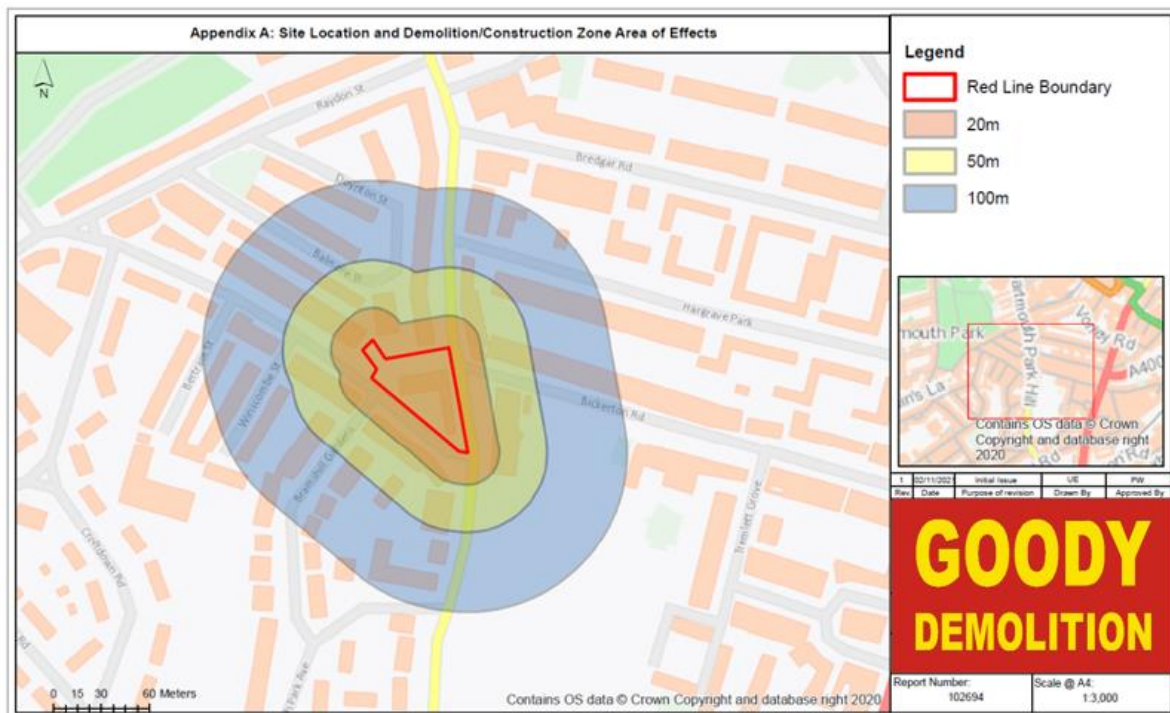


Figure 2 Wind Rose for Heathrow Airport 2018

The nearest sensitive receptors are located to the north of the site boundary. In addition, there are residences along Chester Road and across the road on Dartmouth Park Hill Road. There are several residential uses within 0 – 350 m of the site. The IAQM Construction Guidance indicates that there is little risk of dust depositing from an airflow in significant volumes to cause amenity loss beyond 350m from the source. The majority of dust in an airflow deposits within 100 m of the source.

The site location and the 0 – 20 m, 20 – 50 m and 50 – 100 m construction zone area of effects are shown in Appendix A. Reference to the 20 m zone of effect is advised for this DEMP as the closest receptors are within 20 m and the receptors beyond will, therefore also be mitigated from dust suppression.



Appendix A

Step 2: Demolition Phase Assessment

Dust Emission Magnitude Classification

Activity	Dust Emission Magnitude		
	Large	Medium	Small
Demolition	Total building volume of >50,000 m ³ , potentially dusty construction material, on-site crushing and screening, demolition activities >20 m above ground	Total building volume of 20,000 – 50,000 m ³ , potentially dusty construction material, demolition activities 10 – 20 m above ground level	Total building volume of <20,000 m ³ , construction material with low potential for dust release, demolition activities <10 m above ground, demolition during wetter months
Earthworks	Total site area of >10,000 m ² , potentially dusty soil type, >10 heavy earth moving vehicles active at any one time, formation of bunds >8 m in height, total material moved >100,000 tonnes	Total site area of 2,500 - 10,000 m ² , moderately dusty soil type, 5 - 10 heavy earth moving vehicles active at any one time, formation of bunds 4 - 8 m in height, total material moved 20,000 - 100,000 tonnes	Total site area of <2,500 m ² , soil type with large grain size, <5 heavy earth moving vehicles active at any one time, formation of bunds <4 m in height, total material moved <20,000 tonnes. Earthworks during wetter months
Construction	Total building volume >100,000 m ² , on-site concrete batching, sandblasting	Total building volume 25,000 - 100,000 m ² , potentially dusty construction material, on-site concrete batching	Total building volume <25,000 m ² , construction material with low potential for dust release
Track out	>50 HDV outwards movements in any one day, potentially dusty surface material, unpaved road length >100 m	10 - 50 HDV outwards movements in any one day, moderately dusty surface material, unpaved road length 50 - 100 m	<10 HDV outwards movements in any one day, surface material with low potential for dust release, unpaved road length <50 m

Dust Emission Magnitude: **SMALL**

Total Building Volume <20,000m³: SMALL

Potentially Dusty Construction Material (Concrete/Hard core): MEDIUM

Demolition Activities <10m above ground level: SMALL



Sensitivity of Area Map (Demolition) – 2 Chester Road – **HIGH**



Dust Soiling Effects (Demolition)

Sensitivity of an Area to Dust Soiling Effects: HIGH

Receptor Sensitivity	Number of Receptors	Distance from Source (m)			
		<20	<50	<100	<350
High	>100	High	High	Medium	Low
	10 – 100	High	Medium	Low	Low
	1 – 10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

The air pollutants of concern during the demolition period are emissions of dust and fine particle matter (PM¹⁰) associated with on - site demolition activities and off site track.

The main air pollutants concern during the operational period are NO₂, PM¹⁰ and PM^{2.5} emissions associated with existing road traffic.

Health Effects of PM₁₀ (Demolition)

Health Effects of PM₁₀: LOW

DEFRA Air Quality MAP PM₁₀ Annual Mean (2017) for Site Area = 16.8 (µg m-3)

Receptor Sensitivity	Annual Mean PM10 Concentration -C	Number of Receptors-D	Distance from the Source (m)E				
			<20	<50	<100	<200	<350
High	>32 µg/m3	>100	High	High	High	Medium	Low
		10-100	High	High	Medium	Low	Low
		1-10	High	Medium	Low	Low	Low
	28-32 µg/m3	>100	High	High	Medium	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	High	Medium	Low	Low	Low
	24-28 µg/m3	>100	High	Medium	Low	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
	<24 µg/m3	>100	Medium	Low	Low	Low	Low
		10-100	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
Medium		>10	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
Low	-	1-10	Low	Low	Low	Low	Low

Ecological Effects (Demolition)

Ecological Effects: **NEGLIBLE**

- It is not considered that there are any notable ecological receptors within the area of influence of the site

Receptor Sensitivity	Distance from the Source (m) ^C	
	<20	<50
High	High	Medium
Medium	Medium	Low
Low	Low	Low

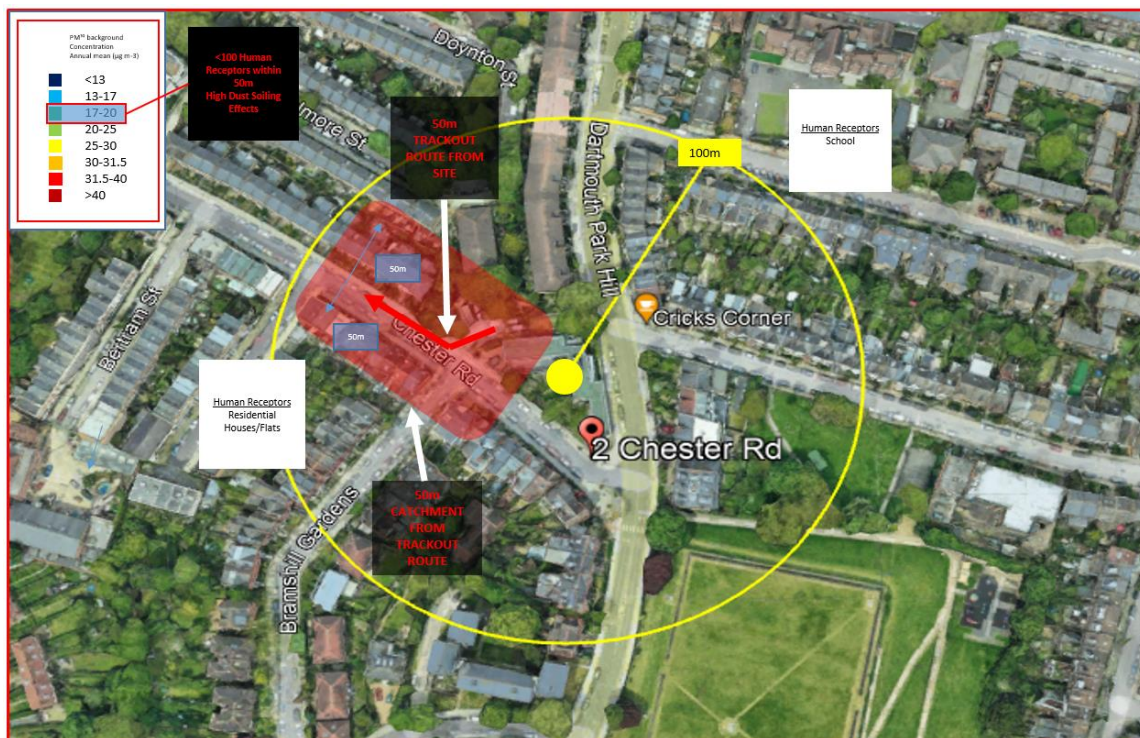
Track Out (During Demolition Phase) Assessment

Potential Dust Emission Magnitude (Track out)

Dust Emission Magnitude: **SMALL**

- <10 HDV (>3.5t) in any one day: **SMALL**
- Surface Material with low potential for dust release: **SMALL**
- Unpaved Road length <50m: **SMALL**

Chester Road - Sensitivity of Area Map (Track out)



Dust Soiling Effects (Track out)

Site determined as **SMALL** therefore area of influence for Track out = 50m along site traffic exit route.

The major routes within 50m of the site are Chester Road and Dartmouth Park Road

Dust Soiling Effects: **HIGH**

Receptor Sensitivity	Number of Receptors	Distance from Source (m)			
		<20	<50	<100	<350
High	>100	High	High	Medium	Low
	10 – 100	High	Medium	Low	Low
	1 – 10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

Health Effects of PM₁₀ (Track out)

Health Effects of PM₁₀: **LOW**

Receptor Sensitivity	Annual Mean PM ₁₀ Concentration -C	Number of Receptors-D	Distance from the Source (m)E				
			<20	<50	<100	<200	<350
High	>32 µg/m ³	>100	High	High	High	Medium	Low
		10-100	High	High	Medium	Low	Low
		1-10	High	Medium	Low	Low	Low
	28-32 µg/m ³	>100	High	High	Medium	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	High	Medium	Low	Low	Low
	24-28 µg/m ³	>100	High	Medium	Low	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
	<24 µg/m ³	>100	Medium	Low	Low	Low	Low
		10-100	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
Medium	-	>10	High	Medium	Low	Low	Low
	-	1-10	Medium	Low	Low	Low	Low
Low	-	1-10	Low	Low	Low	Low	Low

Ecological Effects (Track out)

Ecological Effects: **NEGLIBLE**

- It is not considered that there are any notable ecological receptors within the area of influence of the site

Receptor Sensitivity	Distance from the Source (m) ^C	
	<20	<50
High	High	Medium
Medium	Medium	Low
Low	Low	Low

Step 2C: Risk of Impact without Mitigation

Potential Impact	Risk			
	Demolition	Earthworks	Construction	Track out
Dust Soiling	MEDIUM	LOW	LOW	LOW
Human Health	Negligible	Negligible	Negligible	Negligible
Risk	MEDIUM	LOW	LOW	LOW

As summarised in Table above the predicted Dust Impact Risk is classified as medium for Demolition and low for Earthworks, Construction and Track out. The general site measures described as 'highly recommended' for low risks are listed below. The highly recommended measures for medium risk demolition sites are also listed. There are no 'highly recommended' measures for low risk earthworks, construction or track out. An air quality assessment was produced by RPS Group in January 2020 and contained a Dust Risk Assessment following *The Mayor of London's Control of Dust and Emissions during Construction and Demolition* SPG.

Annual Mean Monitoring Results 2014 - 2018

Monitor Name	Pollutant	Annual Mean Concentration (µg/m ³)				
		2014	2015	2016	2017	2018
LB - London Bloomsbury	No ₂	45	48	42	38	36
	PM ₁₀	20	22	20	19	17
	PM _{2.5}	-	11	12	13	10
Arsenal	No ₂	-	29	33	31	-
	PM ₁₀	20	19	18	18	-

NO₂ Annual Mean Monitoring Results 2013 – 2017

Monitoring Site	Annual Mean NO ₂ (µg/m ³)				
	2013	2014	2015	2016	2017
BIS005/13	41	46	46	46	42
IS005/01DT1	51	58	55	55	41
IS2	54	55	61	60	49
BIS005/11	57	61	65	57	50
CA16	-	-	63.55	58.72	74.92

Control of Dust and Emissions during Demolition

Dust monitoring method

Continuous site monitoring is an important way for developers to manage the generation of dust including PM10, PM2.5 and NOx emissions during demolition/construction. In London construction and demolition activities could result in even poorer air quality within an existing Air Quality Management Area (AQMA) or could result in local air quality being degraded to the extent that an AQMA needs to be declared by the local authority.

Dust monitoring can vary from visual assessments for low-risk sites to the installation of real time automatic monitors for PM10 for high-risk sites. Monitoring of dust deposition will be undertaken to monitor the performance of the dust mitigation measures applied at the Site.

Dust, Noise and Vibration monitors will be used throughout the project. The results will be logged and analysed on a monthly basis. The trigger levels will be issued to current British Standards with automatic confirmation to the site team if there is a breach as all monitoring will be done in real time. 3 No monitors will be installed with their locations noted in the drawing below. Should a breach be triggered works within that area will stop and we will ascertain a proactive solution to move forward with to ensure works can commence but the disruption is minimised.

The baseline dust monitors which were installed prior to Demolition Works commencing to the fences on Chester Road and Dartmouth Park Hill have the baseline levels as per the London Borough of Camden's agreed Requirement.

Details of the monitoring equipment for each phase are provided as below:

Monitoring Location



Two dust monitors are installed at the site. These are Aeroqual Dust Sentries, which are MCERTS certified, as required by the London Borough of Camden. Both monitors were installed at locations in which a safe, secure and reliable power supply could be ensured in order to maximise data capture rates.

The dust monitors were installed on 16th July 2021, to allow for the 3-month baseline monitoring period before the commencement of works on site.

Monthly reports have been and will continue to be sent to the London Borough of Camden's Air Quality and Sustainability teams.

Trigger levels to be used include the following (in-line with other accepted monitoring schemes within Camden):

The results of the monitoring would be compared against the proposed trigger level (to be updated once monitoring methodology is finalised) to determine whether exceedances of the level occurred over the relevant monitoring period. An exceedance of the proposed trigger level would initiate further investigation into causes for the elevated monitoring result and initiation of additional controls

Operation of Monitoring Equipment

The monitoring will be undertaken by a designated member of the on-site workforce in accordance with the procedures provided by the laboratory undertaking the analysis of the samples. The training will include correct sample handling, deployment, changeover and preservation/packaging for transport to the laboratory.

QA/QC and Record Keeping

All samples will be clearly identified and recorded, together with all necessary associated data, and will follow a documented chain of custody. Each sample will be assigned a sample reference number based on the sampling location, with date and time recorded at the point of deployment and collection.

Equipment and Data Management

The Client is responsible for the monitoring equipment and they will be trained as per the requirement to collect the data and maintain the equipment as required. They will be assisted by the Company's Compliance Officer to solve any problems or get any support.

Actions due to the exceedances

Exceedances of the monitoring trigger level would initiate further investigations by the Client into the potential causes of the elevated deposition rate. This would cover:

- Review of the results of the other monitoring location to determine if a further exceedance / elevated result had occurred;
- Review of the activities that occurred during the relevant monitoring period (potential source), including location and nature; and
- Review of weather conditions during the relevant monitoring period (potential pathway), including wind speeds and directions.

This will provide an indication of the likelihood of dust emissions arising at the Site and whether they may have caused the exceedances of the trigger level. All findings of the investigation would be documented, as well as any remedial measures or changes to operational practices recommended or implemented, if operations at the Site were found to be the likely cause of the exceedance(s).

If operations at the Site were found to be the likely cause of the exceedance(s) then further or additional dust control measures or procedures will be implemented, based on the findings of the investigation, to ensure the exceedances do not occur again as a result of the activities identified as the cause of the excessive emissions. Following the implementation of these measures, further checks (i.e. visual monitoring in the short-term and quantitative monitoring in the medium-term) will be undertaken to establish the ongoing effectiveness of the additional measures implemented. If the additional measures implemented are found to be inadequate then further mitigation (including consideration of temporarily suspending Site activities) will be implemented, followed by further checks.

The DEMP will be updated by Goody Demolition Ltd. with all additional mitigation measures or procedures employed to prevent the recurrence of excessive dust emissions from the source or activities identified by the investigation.

Engagement with the Community

On receipt of a complaint relating to dust, details of the complaint will be recorded in the environmental logbook and potential sources, or occurrences will be investigated by the Contractor or appointed employee(s). Records of all complaints and the mitigation remedial action taken will be recorded in the environmental logbook.

Complaints will be promptly investigated, and further mitigation taken at site, as necessary, to remedy the situation. Details of the action taken and to determine whether the complaint has been resolved will be communicated back to the complainant within one working day of receipt of the complaint; unless it is an anonymous complaint, or the complainant has requested not to be contacted.

The results of the complaint investigation and the mitigation undertaken will be recorded in the environmental logbook and made available to the Regulator upon request.

An example complaint form is provided in **Appendix B**. The Contractor may operate to a relevant complaint policy procedure stipulated by their company, which should be followed.

Steps will be taken by Site Manager to maintain good communication between the operators and surrounding communities in order to help alleviate any anxieties in local communities. This shall include setting up regular, accessible liaison arrangements and providing information as freely as possible.

A physical copy of the DEMP will be retained on site for the duration of the demolition works. A digital copy will be held at the Contractor head office.

Storage of Fuel / Possible Contamination

Goody Demolition Ltd recognise that uncontrolled spills that have the potential to cause environmental damage both locally (internally / externally) and to the further site / environment and as such we will ensure that fuel for plant use shall be located within a designated refuelling area which shall be sited away from any potential source of ignition. The storage unit provided will be double bunded and have a trigger nozzle fitted in order to minimise the potential for spillages, there will be a suitable spill kit located within the storage area and a drip tray/plant nappy will be utilised whilst refuelling is undertaken.

In the event of a spillage we will take immediate action to contain the spill by employing our emergency spill control procedure:

- Source of spill / leak will be isolated

- Plant / refuelling will be stopped and isolated
 - Sources of ignition will be isolated / removed
 - Local spill kits will be used to contain / absorb any immediate spills, containers / absorbent materials will be used to collect / contain liquids
 - Due care will be paid to ensure any local drains etc. are protected with absorbent materials / matting to prevent ingress of contaminants
 - Any remaining contents will be removed from damaged containers prior to their removal for disposal / repair
 - Persons NOT involved in the clean-up will leave the area
 - Gas monitoring will be undertaken during all clean up works (where required)
 - Once contained the absorbent materials will be collected and removed as contaminated waste to the appropriate waste bin
 - As part of the clean up the contaminated spill kits will be disposed of as hazardous waste, any contaminated hardstanding / soil will also be removed and disposed of in the correct manner
- Local interceptors will be checked where any spills are of a size that could affect drainage

Activity	Hazard/Source of Impact	Impact	Pre-Control Risk			Control Measures	Residual Risk			Receptor Risk / Number of Receptors			
			Consequence	Likelihood	Risk Rating		CONSEQUENCE	Likelihood	Risk Rating	< 20	< 50	< 100	< 350
Air Quality													
Soft strip Operations	Respirable dust particles	Potential nuisance dust deposits	4 Major	4 Probable	16 High	Soft strip Operations will be carried out in enclosed structures with all operatives wearing the appropriate face fitted RPE	4 Major	1 Improbable	4 Low				
	Airborne Man Made Mineral Fibres (MMMF)	Potential impact on workforce from Respirable dust and MMMF				Waste will be placed within roll on/off skips or in enclosed chutes with water suppression on dusty materials. Once filled all bins will be taken away in enclosed containers / sheeted lorries							
		Potential impact on local residents from Respirable dust particles and MMMF				All plant and vehicles shall be maintained as per the manufacturers maintenance schedule and will have daily checks completed to ensure that they are in good working order							
	Exhaust emissions from plant and vehicles	Impact on local community from plant and vehicle exhaust gasses				Engines and exhaust systems shall be regularly serviced as per the manufacturers recommendations and subsequently maintained to meet statutory limits and opacity tests							
	Fuel spills from plant and vehicles	Impact on local fauna from plant and vehicle exhaust gases				All Non-Road Mobile Machinery (NRMM) shall be compliant with EU Engine Emissions Stage 3a and 3b emissions standards							
	Oil spills from plant and vehicles	Contamination from fuel spills				All plant, so far as is reasonably practicable shall be located away from the site boundary							
		Contamination from oil spills				A suitable number of spill kits shall be placed at locations proportionate to the level of inherent spill risk							
Asbestos Removal Operations	Respirable asbestos particles	Potential asbestos fibre release	4 Major	4 Probable	16 High	Carry out fully intrusive Demolition / Refurbishment Asbestos Survey	4 Major	1 Improbable	4 Low				
	Asbestos Debris	Potential impact on workforce from Asbestos Fibres				Asbestos to be removed by Licensed Asbestos Removal Contractor; Notify HSE; Carry out removal as the Plan of Works as CAR 2012; Areas sealed off in enclosures							
		Potential impact on local residents from Respirable Asbestos Fibres				Areas of removal will be under negative pressure via HEPPA Filtration System; Asbestos waste to be double bagged and sealed; Use designated waste routes and collection areas; Trained competent asbestos removal operatives							
	Exhaust emissions from plant and vehicles	Impact on local community from plant and vehicle exhaust gasses				Waste to be collected by a Licensed Operator; Hazardous Waste Consignment Notes to be completed; Waste to be deposited at a Licensed Land Fill Site.							
	Fuel spills from plant and vehicles	Impact on local fauna from plant and vehicle exhaust gases				All Non-Road Mobile Machinery (NRMM) shall be compliant with EU Engine Emissions Stage 3a and 3b emissions standards; Engines and exhaust systems shall be regularly serviced as per the manufacturers recommendations and subsequently maintained to meet statutory limits and opacity tests							
						All plant and vehicles shall be maintained as per the manufacturers maintenance schedule and will have daily checks completed to ensure that they are in good working order							

	Oil spills from plant and vehicles Mud deposited outside the site boundary	Contamination from fuel spills Contamination from oil spills Contamination to the public highway deposits				A suitable number of spill kits shall be placed at locations proportionate to the level of inherent spill risk Where required a jet wash shall be provided for wheel washing Regular spill drills shall be undertaken and recorded						
Mechanical Demolition Works	Respirable dust particles Airborne Man Made Mineral Fibres (MMMF) Exhaust emissions from plant and vehicles Fuel spills from plant and vehicles Oil spills from plant and vehicles Mud deposited outside the site boundary	Potential nuisance dust deposits Potential impact on Fauna from Respirable dust and MMMF Potential impact on local residents from Respirable dust particles and MMMF Impact on local community from plant and vehicle exhaust gasses Impact on local fauna from plant and vehicle exhaust gases Contamination from fuel spills Contamination from oil spills Contamination to the public highway Reduced water quality in local waterways from dust deposits	4 Major	4 Probable	16 High	Carry out and agree Demolition Method Statement & Risk Assessments; Monitor dust emissions; Carry out inspections; erection of solid panel hoarding; Monitor weather conditions (high winds / dry days); Monitor wind direction Suitable and sufficient dust suppression shall be provided which shall be proportionate to the works being undertaken Plant or vehicles shall not be left idling unnecessarily; All plant and vehicles shall be maintained as per the manufacturers maintenance schedule and will have daily checks completed to ensure that they are in good working order Engines and exhaust systems shall be regularly serviced as per the manufacturers recommendations and subsequently maintained to meet statutory limits and opacity tests All Non-Road Mobile Machinery (NRM) shall be compliant with EU Engine Emissions Stage 3a and 3b emissions standards All plant, so far as is reasonably practicable shall be located away from the site boundary A suitable number of spill kits shall be placed at locations proportionate to the level of inherent spill risk Where required a jet wash shall be provided for wheel washing Regular spill drills shall be undertaken and recorded	4 Major	1 Improbable	4 Low			
Processing, Crushing and screening	Respirable dust particles Exhaust emissions from plant and vehicles Fuel spills from plant and vehicles Oil spills from plant and vehicles Mud deposited outside the site boundary	Potential nuisance dust deposits Potential impact on Fauna from Respirable dust Impact on local community from plant and vehicle exhaust gasses Impact on local fauna from plant and vehicle exhaust gases Contamination from fuel spills Contamination from oil spills Contamination to the public highway deposits	4 Major	4 Probable	16 High	Suitable and sufficient dust suppression shall be provided which shall be proportionate to the works being undertaken Plant or vehicles shall not be left idling unnecessarily All plant and vehicles shall be maintained as per the manufacturers maintenance schedule and will have daily checks completed to ensure that they are in good working order Engines and exhaust systems shall be regularly serviced as per the manufacturers recommendations and subsequently maintained to meet statutory limits and opacity tests All Non-Road Mobile Machinery (NRM) shall be compliant with EU Engine Emissions Stage 3a and 3b emissions standards All plant, so far as is reasonably practicable shall be located away from the site boundary A suitable number of spill kits shall be placed at locations proportionate to the level of inherent spill risk Where required a jet wash shall be provided for wheel washing Regular spill drills shall be undertaken and recorded	4 Major	1 Improbable	4 Low			
	Respirable dust particles	Potential nuisance dust deposits Potential impact on Fauna from Respirable dust				Suitable and sufficient dust suppression shall be provided which shall be proportionate to the works being undertaken Plant or vehicles shall not be left idling unnecessarily						

Stockpiling, material loading and haulage	Exhaust emissions from plant and vehicles	Impact on local community from plant and vehicle exhaust	4 Major	4 Probable	16 High	All plant and vehicles shall be maintained as per the manufacturers maintenance schedule and will have daily checks completed to ensure that they are in good working order Engines and exhaust systems shall be regularly serviced as per the manufacturers recommendations and subsequently maintained to meet statutory limits and opacity tests All Non-Road Mobile Machinery (NRM) shall be compliant with EU Engine Emissions Stage 3a and 3b emissions standards All plant, so far as is reasonably practicable shall be located away from the site boundary A suitable number of spill kits shall be placed at locations proportionate to the level of inherent spill risk Where required a jet wash shall be provided for wheel washing Regular spill drills shall be undertaken and recorded All road going vehicles shall have a current MOT certificate All haulage vehicles shall be compliant with the FORS bronze standard as a minimum	4 major	1 Improbable	4 Low		
		Impact on local fauna from plant and vehicle exhaust gases									
	Fuel spills from plant and vehicles	Contamination from fuel spills									
	Oil spills from plant and vehicles	Contamination from oil spills									
	Mud deposited outside the site boundary	Contamination to the public highway Reduced water quality in local waterways from dust deposits									

Control of Dust and Emissions during Demolition

MEASURES RELEVANT FOR DEMOLITION AND TRACK- OUT ONLY

MITIGATION MEASURE	LOW RISK	MEDIUM RISK	HIGH RISK	Comments
Site management				
Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.		XX	XX	As countryside Properties site management & Planning conditions
Develop a Dust Management Plan		XX	XX	This document
Display the name and contact details of person(s) accountable for air quality pollutant emissions and dust issues on the site boundary.				On commencement at site set up stage
Display the head or regional office contact information.	XX	XX	XX	On commencement at site set up stage
Record and respond to all dust and air quality pollutant emissions complaints	XX	XX	XX	Throughout Project
Make a complaints log available to the local authority when asked.	XX	XX	XX	Log shown within this document
Carry out regular site inspections to monitor compliance with air quality and dust control procedures, record inspection results, and make an inspection log available to the local authority when asked.	XX	XX	XX	As part of daily monitoring & logged by Site Manager
Increase the frequency of site inspections by those accountable for dust and air quality pollutant emissions issues when activities with a high potential to produce dust and emissions and dust are being carried out, and during prolonged dry or windy conditions.	XX	XX	XX	As part of daily monitoring and increased at these activities
Record any exceptional incidents that cause dust and air quality pollutant emissions, either on or off the site, and the action taken to resolve the situation is recorded in the log book.	XX	XX	XX	Within the log in this document
Hold regular liaison meetings with other high risk construction sites within 500m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised.	XX	XX	XX	In collaboration with Countryside

MITIGATION MEASURE	LOW RISK	MEDIUM RISK	HIGH RISK	Comments
Preparing and maintaining the site				
Plan site layout: machinery and dust causing activities should be located away from receptors.	XX	XX	XX	As part of Method Statement
Erect solid screens or barriers around dust activities or the site boundary that are, at least, as high as any stockpiles on site.	XX	XX	XX	Erected by client
Fully enclosure site or specific operations where there is a high potential for dust production and the site is active for an extensive period.	X	XX	XX	** Water Suppression
Install green walls, screens or other green infrastructure to minimise the impact of dust and pollution		X	X	N/A
Avoid site runoff of water or mud.	XX	XX	XX	As part of Method Statement
Keep site fencing, barriers and scaffolding clean using wet methods				Part of Daily Inspections
Remove materials from site as soon as possible	X	XX	XX	Agreed
Cover, seed or fence stockpiles to prevent wind whipping.		XX	XX	N/A
Carry out regular dust soiling checks of buildings within		X	XX	Part of Daily Inspections
Provide showers and ensure a change of shoes and clothes are required before going off-site to reduce transport of dust.			X	N/A
Agree monitoring locations with the Local Authority		XX	XX	Planning Conditions
Where possible, commence baseline monitoring at least three months before phase begins.		XX	XX	As Air Quality Stantec Document March 2021
Put in place real-time dust and air quality pollutant monitors across the site and ensure they are checked regularly.		XX	XX	Confirmed
Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone.	XX	XX	XX	Confirmed
Ensure all non-road mobile machinery (NRMM) comply with the standards set within this guidance.	XX	XX	XX	Confirmed

MITIGATION MEASURE	LOW RISK	MEDIUM RISK	HIGH RISK	Comments
Ensure all vehicles switch off engines when stationary – no idling vehicles.	XX	XX	XX	Confirmed
Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where possible.	XX	XX	XX	Where Applicable
Impose and signpost a maximum-speed-limit of 10mph on surfaced haul routes and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the Local authority, where appropriate).	X	X	XX	Confirmed See Traffic Management Plan
Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.		XX	XX	Confirmed See Traffic Management Plan
Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).	XX	XX	XX	Single Van use Local Labour
Operations				
Only use cutting, grinding or 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	XX	XX	XX	Confirmed
Use enclosed chutes, conveyors and covered skips.	XX	XX	XX	Confirmed
Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate	XX	XX	XX	Confirmed
Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.		XX	XX	Confirmed As Method Statement
Waste Management				
Reuse and recycle waste to reduce dust from waste materials	XX	XX	XX	As Waste Management Plan
Avoid bonfires and burning of waste materials	XX	XX	XX	No burning of materials allowed on site

MEASURES SPECIFIC TO DEMOLITION

MITIGATION MEASURE	LOW RISK	MEDIUM RISK	HIGH RISK	Comments
Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust).	X	X	XX	Agreed and as Method Statement
Ensure water suppression is used during demolition operations.	XX	XX	XX	Dust Control techniques used throughout works as Method Statement
Avoid explosive blasting, using appropriate manual or mechanical alternatives.	XX	XX	XX	No explosive demolition
Bag and remove any biological debris or damp down such material before demolition.	XX	XX	XX	Agreed

MEASURES SPECIFIC TO TRACKOUT

MITIGATION MEASURE	LOW RISK	MEDIUM RISK	HIGH RISK	Comments
Regularly use a water-assisted dust sweeper on the access and local roads, as necessary, to remove any material tracked out of the site.	X	XX	XX	As and when required on inspection
Avoid dry sweeping of large areas.	X	XX	XX	Agreed
Ensure vehicles entering and leaving sites are securely covered to prevent escape of materials during transport	X	XX	XX	All skip lorries have provisions for sheeting
Record all inspections of haul routes and any subsequent action in a site log book.		XX	XX	Agreed as daily
Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems and regularly cleaned.		XX	XX	All vehicles to run on paved area internally within the site
Inspect haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable;		XX	XX	Agreed
Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).	X	XX	XX	Wheel washing facilities will be implemented
Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits		XX	XX	Car park area and road areas
Access gates to be located at least 10m from receptors where possible.		XX	XX	Site gates 20m from receptors
Apply dust suppressants to locations where a large volume of vehicles enter and exit the construction site		X	XX	HDV will be classed as low so N/A



SAMPLE SITE LOG BOOK - DAILY DIARY

<u>Site Address:</u>	<u>Date:</u> <u>Job number:</u>
<u>Site Supervisor:</u>	<u>Weather:</u>

Site Issues and Problems Including Down Time:

Has an instruction / Site Order been supplied by the client for any extra works or down time?

Description of Checks	Initial & Time of Check	Description of Checks	Initial & Time of Check
Welfare set up, Exclusion zone & warning signs in place		Inspect skips/bins and check if need exchanging	
Check that the RAMs, Asbestos Survey & Section 81/F10 are on display		Check that all personnel are wearing correct PPE	
Fire / Waste Routes clear of stored items and prominently marked		Check id all operations are being conducted in accordance to the method statement	
Daily Plant & equipment inspection sheets completed		All waste cleared from area at end of each shift	
Daily Site inspection sheets completed		General inspection of working environment at end of each shift	
Tool Box talk conducted (if required)		Site securely locked & plant immobilised at end of shift	


Works Carried Out including Daily Goals and Targets Met:

Defective Plant:



TOOL BOX TAL REGISTER

Air Quality and Dust Management trained out to Key Staff

	<p>TOOLBOX TALKS</p>
---	-----------------------------

CONTRACT NAME:**CONTRACT NUMBER:**

Agent / Foreman

Site Location:

SCOPE OF WORK

Air Quality and Dust Management trained out to Key Staff

AGENT / FOREMAN / LABOUR SIGN UP

[illegible]

Example Dust Complaint Form

Time & Date	Notes
Contact details and address of complainant	
Date and time dust complaint was raised	
<p>Description of complaint and dust observed (e.g. visible mud deposits on road, falling on car, airborne dust)</p> <p>Details should be appended to this Form as necessary</p> <p>(e.g. photos of dust deposition)</p>	
<p>Weather conditions at time of complaint (wind speed, wind direction, temperature, atmosphere conditions).</p> <p>The complaint reporting time may sometimes differ</p>	
<p>Identification of potential dust sources (e.g. stockpile near complainant, removal of top soil of day of complaint)</p>	
<p>Details of investigation and action taken (including administration details)</p>	

Appendix B