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BARNES HOMES LTD

DUST, NOISE & VIBRATION MANAGEMENT PLAN

LAND ADJACENT TO 916 HALIFAX ROAD, HARTSHEAD MOOR, CLECKHEATON, BD19 6LR

Client: Barnes Homes Ltd

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1 INTRODUCTION

1.1 Introduction to the Dust, Noise and Vibration Plan

1.1.1 By instruction from Barnes Homes Ltd, NoiseAir Limited have been commissioned to undertake a Dust, Noise and Vibration Plan for a residential development at land adjacent to 916 Halifax Road, Hartshead Moor, Cleckheaton, BD19 6LR.

1.1.2 It is understood that planning consent for the Proposed Development requires a Construction Environmental Management Plan (CEMP), as per Kirklees Council (KC) pre-application advice (document reference: 2023/21041), which states:

> *"Because of the scale of the development and the proximity of residential properties to part of the site boundary, there is a significant potential for loss of amenity to the occupiers of nearby properties from noise, vibration, dust and artificial light during the construction phase of the development. The council would therefore expect a Construction Environmental Management Plan (CEMP) to be submitted with a future application. A suitable plan would describe in detail the actions that would be taken to minimise adverse impacts on occupiers of nearby properties by using best practice and effectively controlling:*
>
> *Noise and vibration arising from all construction related activities. This should also include suitable restrictions on the hours of working on the site including times of deliveries which should not be outside the hours of:*
>
> *07.30 to 18.30 hours Mondays to Fridays*
>
> *08.00 to 13.00 hours, Saturdays*
>
> *With no noisy activities on Sundays or Public Holidays*
>
> *Dust arising from all construction related activities. The Institute of Air Quality Management document "Guidance on the assessment of dust from demolition and construction" Version 1.1 2014 provides detailed information regarding dust control.*
>
> *Artificial lighting used in connection with all construction related activities and security of the construction site.*
>
> *A communications plan detailing the responsible person, their contact details and how this will be communicated to residents and the Local Authority must be included."*

1.1.3 In order to satisfy this requirement, a Dust Management Plan (DMP), and a Noise and Vibration Plan (NVP) have been prepared to feed into the wider CEMP.

1.1.4 Report limitations are presented in **Appendix A**.

1.2 Site Location and Context

1.2.1 The Site is located at Land Adjacent to 916 Halifax Road, Hartshead Moor, Cleckheaton, BD19 6LR, at approximate National Grid Reference (NGR): 417144, 424727.

1.2.2 **Figure 1** details the location of the Site.

Figure 1: Site Location

1.2.3 It is understood that the Proposed Development comprises the construction of 11 residential dwellings and associated infrastructure. The Site currently forms part of the gardens associated with a neighbouring dwelling.

2 DUST MANAGEMENT PLAN

2.1 Introduction

2.1.1 There is the potential for fugitive dust emissions to occur as a result of construction phase activities, therefore, a dust management plan (DMP) has been prepared to mitigate against any adverse impacts resulting from construction phase activities associated with the Proposed Development.

2.2 Methodology

2.2.1 The construction phase assessment has been carried out in accordance with the methodology outlined within the latest version of the Institute of Air Quality Management (IAQM) document, 'Guidance on the Assessment of Dust from Demolition and Construction V2.2'[1].

2.2.2 Activities on the proposed construction site have been divided into four types to reflect their potential impacts. These are:

- Demolition;
- Earthworks;
- Construction; and
- Trackout.

2.2.3 The potential for dust emissions was assessed for each activity that is likely to take place as part of the construction phase works and considered three separate dust effects:

- Annoyance due to dust soiling;
- Harm to ecological receptors; and,
- The risk of health effects due to a significant increase in exposure to particulate matter with an aerodynamic diameter of less than 10µm (PM_{10}).

2.2.4 The assessment steps are detailed below.

Step 1

2.2.5 Step 1 screens the requirement for a more detailed assessment. Should human receptors be identified within 250m of the boundary or 50m from the construction vehicle route up to 250m from the site entrance, then the assessment proceeds to Step 2. Additionally, should

[1] Institute of Air Quality Management (2024) Guidance on the Assessment of Dust from Demolition and Construction Version 2.2 (January 2024).

ecological receptors be identified within 50m of the site or the construction vehicle route up to 250m from the site entrance, then the assessment also proceeds to Step 2.

2.2.6 Should sensitive receptors not be present within the relevant distances then **negligible** impacts

Step 2

2.2.7 Step 2 assesses the risk of potential dust impacts. A site is allocated a risk category based on two factors:

- The scale and nature of the works, which determines the magnitude of dust arising as: small, medium or large (Step 2A); and,
- The sensitivity of the area to dust impacts, which can be defined as low, medium or high sensitivity (Step 2B).

2.2.8 The two factors are combined in Step 2C to determine the risk of dust impacts without mitigation applied.

2.2.9 Step 2A defines the potential magnitude of dust emission throughout the construction phase. The relevant criteria are summarised in **Table 1**.

Table 1: Construction Dust - Magnitude of Emission

Magnitude	Activity	Criteria
Large	Demolition	• Total volume of building to be demolished greater than 75,000m^3 • Potentially dusty material (e.g. concrete) • On-site crushing and screening • Demolition activities more than 12m above ground level
	Earthworks	• Total site area greater than 110,000m^2 • Potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size) • More than 10 heavy earth moving vehicles active at any one time • Formation of bunds greater than 6m in height
	Construction	• Total building volume greater than 75,000m^3 • On site concrete batching • Sandblasting
	Trackout	• More than 50 Heavy Duty Vehicle (HDV) trips per day • Potentially dusty surface material (e.g. high clay content) • Unpaved road length greater than 100m
Medium	Demolition	• Total volume of building to be demolished between 12,000m^3 and 75,000m^3 • Potentially dusty construction material • Demolition activities 6m to 12m above ground level
	Earthworks	• Total site area 18,000m^2 to 110,000m^2

Table 1: Construction Dust - Magnitude of Emission		
Magnitude	**Activity**	**Criteria**
		• Moderately dusty soil type (e.g. silt) • 5 to 10 heavy earth moving vehicles active at any one time • Formation of bunds 3m to 6m in height
	Construction	• Total building volume 12,000m^3 to 75,000m^3 • Potentially dusty construction material (e.g. concrete) • On site concrete batching
	Trackout	• 20 to 50 HDV trips per day • Moderately dusty surface material (e.g. high clay content) • Unpaved road length 50m to 100m
Small	Demolition	• Total volume of building to be demolished less than 12,000m^3 • Construction material with low potential for dust release (e.g. metal cladding or timber) • Demolition activities less than 6m above ground and during wetter months
	Earthworks	• Total site area less than 18,000m^2 • Soil type with large grain size (e.g. sand) • Less than 5 heavy earth moving vehicles active at any one time • Formation of bunds less than 3m in height
	Construction	• Total building volume less than 12,000m^3 • Construction material with low potential for dust release (e.g. metal cladding or timber)
	Trackout	• Less than 20 HDV trips per day • Surface material with low potential for dust release • Unpaved road length less than 50m

2.2.10 Step 2B defines the sensitivity of the area around the development to potential dust impacts. The influencing factors are shown in **Table 2**.

Table 2: Examples of Factors Defining Sensitivity of an Area		
Receptor Sensitivity	**Examples**	
	Human Receptors	**Ecological Receptors**
High	• Users expect high levels of amenity • High aesthetic or value property • People expected to be present continuously for extended periods of time • Locations where members of the public are exposed over a time period relevant to the Air Quality Objective (AQO) for PM_{10}. e.g. residential properties, hospitals, schools and residential care homes	Internationally or nationally designated site e.g. Special Area of Conservation *and* the designated features may be affected by dust soiling

Table 2: Examples of Factors Defining Sensitivity of an Area		
Receptor Sensitivity	**Examples**	
	Human Receptors	**Ecological Receptors**
Medium	• Users would expect to enjoy a reasonable level of amenity • Aesthetics or value of their property could be diminished by soiling • People or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land e.g. parks and places of work	Nationally designated site e.g. Sites of Special Scientific Interest
Low	• Enjoyment of amenity would not reasonably be expected • Property would not be expected to be diminished in appearance • Transient exposure, where people would only be expected to be present for limited periods. e.g. public footpaths, shopping streets, playing fields, farmland, short term car parks and roads	Locally designated site e.g. Local Nature Reserve

2.2.11 The guidance also provides the following factors to consider when determining the sensitivity of an area to potential dust impacts:

- Any history of dust generating activities in the area;
- The likelihood of concurrent dust generating activities on nearby sites;
- Any pre-existing screening between the source and receptors;
- Any conclusions drawn from analysing local meteorological data which accurately represent the area; and if relevant the season during which works will take place;
- Any conclusions drawn from local topography;
- Duration of the potential impact, as a receptor may become more sensitive over time; and,
- Any known specific receptor sensitivities which go beyond the classifications given in the document.

2.2.12 These factors were considered in the undertaking of this assessment.

2.2.13 The criteria for determining the sensitivity of the area to dust soiling effects on people and property is summarised in Table 3.

Table 3: Construction Dust - Sensitivity of the Area to Dust Soiling Effects on People and Property

Receptor Sensitivity	Number of Receptors	Distance from the Source (m)			
		<20	<50	<100	<250
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

2.2.14 **Table 4** outlines the criteria for determining the sensitivity of the area to human health impacts.

Table 4: Construction Dust - Sensitivity of the Area to Human Health Effects

Receptor Sensitivity	Background Annual Mean PM_{10} Conc.	Number of Receptors	Distance from the Source (m)			
			<20	<50	<100	<250
High	>32µg/m^3	>100	High	High	High	Medium
		10 - 100	High	High	Medium	Low
		1 - 10	High	Medium	Low	Low
	28 - 32µg/m^3	>100	High	High	Medium	Low
		10 - 100	High	Medium	Low	Low
		1 - 10	High	Medium	Low	Low
	24 - 28µg/m^3	>100	High	Medium	Low	Low
		10 - 100	High	Medium	Low	Low
		1 - 10	Medium	Low	Low	Low
	<24µg/m^3	>100	Medium	Low	Low	Low
		10 - 100	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
Medium	>32µg/m^3	>100	High	Medium	Low	Low
		10 - 100	Medium	Low	Low	Low
		1 - 10	Medium	Low	Low	Low
	28 - 32µg/m^3	>100	Low	Low	Low	Low
		10 - 100	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
	24 - 28µg/m^3	>100	Low	Low	Low	Low
		10 - 100	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
	<24µg/m^3	>100	Low	Low	Low	Low
		10 - 100	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
Low	-	≥1	Low	Low	Low	Low

2.2.15 **Table 5** outlines the criteria for determining the sensitivity of the area to ecological impacts.

Table 5: Construction Dust - Sensitivity of the Area to Ecological Impacts		
Receptor Sensitivity	**Distance from the Source (m)**	
	<20	**<50**
High	High	Medium
Medium	Medium	Low
Low	Low	Low

2.2.16 Step 2C combines the dust emission magnitude with the sensitivity of the area to determine the risk of unmitigated impacts.

2.2.17 **Table 6** outlines the risk category from demolition activities.

Table 6: Dust Risk Category from Demolition Activities			
Receptor Sensitivity	**Dust Emission Magnitude**		
	Large	**Medium**	**Small**
High	High	Medium	Medium
Medium	High	Medium	Low
Low	Medium	Low	Negligible

2.2.18 **Table 7** outlines the risk category from earthworks and construction activities.

Table 7: Dust Risk Category from Earthworks and Construction Activities			
Receptor Sensitivity	**Dust Emission Magnitude**		
	Large	**Medium**	**Small**
High	High	Medium	Low
Medium	Medium	Medium	Low
Low	Low	Low	Negligible

2.2.19 **Table 8** outlines the risk category from trackout activities.

Table 8: Dust Risk Category from Trackout Activities			
Receptor Sensitivity	**Dust Emission Magnitude**		
	Large	**Medium**	**Small**
High	High	Medium	Low
Medium	Medium	Medium	Low
Low	Low	Low	Negligible

Step 3

2.2.20 Step 3 requires the identification of site specific mitigation measures within the IAQM guidance to reduce potential dust impacts based upon the relevant risk categories identified in Step 2. For sites with **negligible** risk, mitigation measures beyond those required by

legislation are not required. However, additional controls may be applied as part of good practice.

Step 4

2.2.21 Once the risk of dust impacts has been determined and the appropriate mitigation measures identified, the final step is to determine the significance of any residual impacts. For almost all construction activity, the aim should be to control effects through the use of effective mitigation. Experience shows that this is normally possible. Hence the residual impact will normally be **not significant**.

2.3 Risk Assessment

Screening and Receptor Identification

2.3.1 The undertaking of activities such as demolition, earthworks, construction and storage of materials has the potential to results in fugitive dust emissions throughout the construction phase. Vehicle movements both on-site and on the local road network also have the potential to result in the re-suspension of dust from haul roads and highway surfaces.

2.3.2 At present, the Site forms part of the gardens associated with a neighbouring property, and it is anticipated that no buildings or structures will be demolished as part of the construction phase. On this basis, demolition works have been scoped out of the risk assessment.

2.3.3 The potential for impacts at sensitive locations depends significantly on local meteorology during the undertaking of dust generating activities, with the most significant effects likely to occur during dry and windy conditions.

Receptor Identification

2.3.4 There are no ecological designations within 250m of the Site boundary, or 50m from the Site access route up to 250m from the boundary. The closest ecological receptor to the Site is the Fusden Wood Ancient Woodland, located approximately 2.7 km northwest of the Site. As such, potential ecological impacts have not been considered further in this assessment.

2.3.5 Receptors sensitive to potential dust impacts during earthworks and construction were identified from a desk-top study of the area up to 250m from the Site boundary. These are summarised in Error! Reference source not found..

Table 9: Earthworks and Construction Dust Sensitive Receptors	
Distance from Site Boundary (m)	**Approximate Number of Human Receptors**
Up to 20	1-10
Up to 50	1-10
Up to 100	10-100

Table 9: Earthworks and Construction Dust Sensitive Receptors	
Distance from Site Boundary (m)	**Approximate Number of Human Receptors**
Up to 250	>100

2.3.6 Human receptors within 250m of the Site are largely associated with residential properties neighbouring the east and southeast of the Site, with the exception of one neighbouring dwellings to the west. The nearest dwellings are located immediately to the west, east and southeast of the Site boundary on Halifax Road.

2.3.7 Traffic generated during the construction phase will enter/exit the Site via Halifax Road. Receptors sensitive to potential dust impacts from trackout were identified from a desk-top study of the area up to 50m from the road network within 250m of the site access. These are summarised in Error! Reference source not found..

Table 10: Trackout Dust Sensitive Receptors	
Distance from Site Access Route (m)	**Approximate Number of Human Receptors**
Up to 20	10 - 100
Up to 50	10 - 100

Background Pollutant Concentrations

2.3.8 Predictions of background pollutant concentrations on a 1km by 1km grid basis have been produced by the Department for Environment, Food and Rural Affairs (DEFRA) for the entire UK to assist Local Authorities in their review and assessment of air quality. The Site is located in grid square NGR: 417500, 424500. Data for this location was downloaded from the DEFRA website[2] for the purpose of this assessment and is summarised in Error! Reference source not found..

Table 11: Background Pollutant Concentration Prediction	
Pollutant	**Predicted 2024 Background Concentration (µg/m^3)**
PM_{10}	12.48

Overall Sensitivity of the Area

2.3.9 The human receptors identified in Error! Reference source not found. and Error! Reference source not found. are predominantly residential properties. These are considered to be of **high** sensitivity.

Sensitivity to Specific Dust Impacts

2.3.10 The sensitivity of the surrounding environment to specific potential dust impacts, based on the criteria shown in **Table 3** and **Table 4**, is shown in Error! Reference source not found..

[2] Department for Environment, Food and Rural Affairs (Defra) (2024) Background Concentrations [Online] Available at https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2018 [Accessed on 06/08/2024].

For the purpose of determining the sensitivity to human health impacts, the annual mean PM_{10} concentration was assumed to be below 24µg/m^3 based on the data obtained from DEFRA, as shown in Error! Reference source not found..

Table 12: Sensitivity of the Surrounding Area to Potential Dust Impacts				
Potential Impact	**Sensitivity of the Surrounding Area**			
	Demolition	**Earthworks**	**Construction**	**Trackout**
Dust Soiling	-	Medium	Medium	High
Human Health	-	Low	Low	Low

Assessment of Risk

2.3.11 The desk-study undertaken to inform the baseline identified a number of sensitive receptors within 250m of the Site boundary. As such, a detailed assessment of potential dust impacts during the construction phase was required.

Earthworks

2.3.12 Earthworks will primarily involve excavating material, site levelling and landscaping. The Proposed Development Site covers an area less than 18,000m^2. In accordance with the criteria outlined in **Table 1**, the magnitude of potential dust emissions from earthworks is therefore **small**.

2.3.13 Error! Reference source not found. indicates the sensitivity of the area to dust soiling effects on people and property is **medium**. In accordance with the criteria outlined in **Table 7**, the Proposed Development is considered to be a **low risk** site for dust soiling as a result of earthworks.

2.3.14 Error! Reference source not found. indicates the sensitivity of the area to human health impacts is **low**. In accordance with the criteria outline in **Table 7**, the Proposed Development is considered to be a **negligible risk** site for human health impacts as a result of earthworks.

Construction

2.3.15 Due to the scale of the development, the total construction volume is predicted to be less than 12,000m^3. In accordance with the criteria outlined in **Table 1**, the magnitude of potential dust emissions from construction is therefore **small**.

2.3.16 Error! Reference source not found. indicates the sensitivity of the area to dust soiling effects on people and property is **medium**. In accordance with the criteria outlined in **Table 7**, the development is considered to be a **low risk** site for dust soiling as a result of construction activities.

2.3.17 Error! Reference source not found. indicates the sensitivity of the area to human health impacts is **low**. In accordance with the criteria outlined in **Table 7**, the Proposed Development is considered to be a **negligible risk** site for human health impacts as a result of construction activities.

Trackout

2.3.18 It has been assumed that given the size of the development area there are unlikely to be more than 20 HDV outward movements in any one day. In accordance with the criteria outlined in **Table 1**, the magnitude of potential dust emissions from trackout is therefore **small.**

2.3.19 Error! Reference source not found. indicates the sensitivity of the area to dust soiling effects on people and property is **high**. In accordance with the criteria outlined in **Table 8**, the Proposed Development is considered to be a **low risk** site for dust soiling as a result of trackout activities.

2.3.20 Error! Reference source not found. indicates the sensitivity of the area to human health impacts is **low**. In accordance with the criteria outlined in **Table 8**, the development is considered to be a **negligible risk** site for human health impacts as a result of trackout activities.

Summary of the Risk of Dust Effects

2.3.21 A summary of the risk from each dust generating activity is provided in Error! Reference source not found..

Table 13: Unmitigated Dust Risk During Construction

Potential Impact	Risk of Dust Effects			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	-	Low Risk	Low Risk	Low Risk
Human Health	-	Negligible	Negligible	Negligible

2.3.22 As indicated in Error! Reference source not found., the potential risk of dust soiling is **low** for earthworks, construction and trackout. The potential risk of human health effects is **negligible** for earthworks, construction and trackout. There will be no impacts from demolition activities during the construction phase.

2.3.23 Based on the assessment results, appropriate control measures have been identified from the IAQM guidance. These are outlined below, in Section 2.5.

2.3.24 It should be noted that the potential for impacts depends significantly on the distance between the dust generating activity and receptor location. Risk was predicted based on a

worst-case scenario of works being undertaken at the site boundary closest to each sensitive area. Therefore, actual risk is likely to be lower than that predicted during the majority of the construction phase.

2.4 Mitigation Measures

2.4.1 Based on the assessment results showing the Site poses a maximum of **low risk** for potential dust emissions, mitigation will be required. Mitigation measures recommended by the IAQM guidance for **low risk** sites and Site specific measures are presented below and will be incorporated into the works.

Communications

- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.
- Display the head or regional office contact information.

Site Management

- Record and respond to all dust and air quality pollutant emissions complaints (as can be found in **Appendix B**), identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
- Make the complaints log available to the local authority when asked.
- Record any exceptional incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation in the log book.

Monitoring

- Carry out regular site inspections to monitor compliance with the DMP, record inspection results (as can be found in **Appendix B**), and make an inspection log available to the local authority when asked.
- Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.

Preparing and maintaining the site

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
- Erect solid screens or barriers around dust activities or the site boundary that are, at least, as high as any stockpiles on site.
- Fully enclose site or specific operations where there is a high potential for dust production and the site is actives for an extensive period.
- Avoid site runoff of water or mud.

- Keep site fencing, barriers and scaffolding clean using wet methods.
- Remove materials from site as soon as possible.
- Cover, seed or fence stockpiles to prevent wind whipping.

Operating vehicle/machinery and sustainable travel

- Ensure all vehicles switch off engines when stationary – no idling vehicles.
- Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where possible.

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.
- Ensure an adequate water supply on the site for effective dust/particulate matter mitigation (using recycled water where possible).
- Use enclosed chutes, conveyors and covered skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- 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.

Waste Management

- Avoid bonfires and burning of waste materials.

Measures Specific to Construction

- Avoid scabbling (roughening of concrete surfaces) if possible.
- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.

Measures Specific to Trackout

- Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.
- Avoid dry sweeping of large areas.
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
- Record all inspections of haul routes and any subsequent action in a site log book.

- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).

2.5 Procedures

2.5.1 The IAQM guidance states that the undertaking of regular site inspections and production of a complaints log is required as part of a DMP. Relevant procedures for these activities have been summarised below.

Monitoring

2.5.2 Daily visual inspection of all areas of the site will be undertaken by site personnel to assess potential dust releases. In the event that significant dust emissions are observed at the boundaries of the operational areas, action will be taken to suppress the dust. This would include dampening down or cessation of certain activities if practicable.

2.5.3 The form included at **Appendix B** of this DMP provides a procedure for reporting findings of visual inspection and will be kept in the site diary.

Dust Complaints

2.5.4 Complaints concerning dust emissions from the Site can be made through a direct telephone number or via email. The relevant details will be provided on the Site boundary.

2.5.5 Any received dust complaints will be dealt with by the Site Manager in the first instance and escalated to the Construction Manager if required. The complaints procedure will be followed and the incident investigated to determine the nature of the complaint. Where such an investigation identifies a dust issue, remedial action will promptly be implemented. The exact measures will be determined based on the dust source and likelihood of incident reoccurrence.

2.5.6 If a complaint is received, the form included at **Appendix B** of this DMP will be completed and this will be made available for inspection by the contractor upon request.

2.5.7 Information will normally be collected through discussions with the complainant following receipt of a phone call or email. After details of the complaint have been compiled, the cause(s) will be investigated, with reference to:

- The activities taking place on site during the incident;
- The timing of the complaint and whether weekday, weekend etc;
- The prevailing meteorological conditions;
- Likely reasons for the complaint will be added to the form and the complainant will be contacted as appropriate; and,

- The feasibility of making changes to the activities responsible for the complaint will be considered.

2.6 Residual Impacts

2.6.1 Assuming the relevant mitigation measures outlined above are implemented, and the relevant monitoring and dust complaint procedures outlined above are followed, the residual impact from all dust generating activities is predicted to be **not significant**, in accordance with the IAQM guidance.

3 NOISE AND VIBRATION MANAGEMENT PLAN

3.1 Introduction

3.1.1 It is considered that in order to ensure the level of noise breakout from construction related activities is maintained at a minimum, best practicable means (BPM) should be employed at the construction site. This noise and vibration management plan (NVMP) sets out criteria and recommendations for consideration to ensure acceptable noise and vibration breakout is maintained throughout the duration of works.

3.1.2 While it is noted that BPM will be employed at the site as part of the works, it is also noted that the operations and activities to be undertaken at the site are inherently noisy.

3.1.3 At the time of writing, the type of plant and machinery likely to be used onsite include:

- 10 ton excavator;
- JCB 3CX;
- 6 ton swivel dumper; and,
- Larger cement mixer.

3.2 Working Hours

3.2.1 The core working hours will be limited to:

- 07:00 – 18:30, Mondays to Fridays.
- 08:00 – 13:00, Saturdays; and,
- No noise generating activities, Sundays and Public Holidays.

3.2.2 These above stated hours hours will be strictly adhered to unless:

- An emergency demands continuation of works on the grounds of safety; or,
- Completion of an operation that would otherwise cause greater interference with the environment / public if left unfinished.

3.2.3 Prior to the commencement of works, the contractor shall conduct a letter drop amongst local residents who are considered to be potentially affected by construction related activities.

3.3 Potentially Affected Receptors

3.3.1 Noise sensitive receptors (NSRs) are located at varying distances from the site in the western and southern direction. NSR's that are considered to be at the highest risk of adverse noise and vibration impacts are those located immediately to the south-east and south-west site boundary.

3.4 Best Practicable Means (BPM) – Preventing, Reducing and Minimising Noise

3.4.1 Best Practicable Means (BPM) of preventing, reducing and minimising noise will be adopted. Such measures which are considered applicable to construction related activities are outlined below:

- Good practice procedures will be followed in order to mitigate noise and vibration pollution effects. Measures shall include:
    - Compliance with the requirements of the Control of Pollution Act 1974, with particular reference being made to Part III, the Environmental Protection Act 1990, The Control of Noise at Work Regulations 2005 and the Health and Safety at Work etc. Act 1974;
    - Leaflets giving an overview of works and providing dates and durations of the key activities will be distributed to dwellings within at least 50 m of the site boundary;
    - Noticeboards will be erected displaying clearly the name of the Principle Contactor and 24 hour contact details;
    - All plant and equipment to be used for the works will be properly maintained, silenced where appropriate, and operated to prevent excessive noise and switched off when not in use and where practicable; and,
    - Hydraulic demolition and construction will be used in preference to percussive techniques where practical.
- Where possible the contractor will adopt the use of acoustic screens to minimise noise breakout from the site, including localised activities. A cost-effective option for acoustic screens to be considered onsite are acoustic blankets fastened (typically via tie wraps) to Heras type fencing which can be moved around the site as appropriate. Such options can typically create a moveable barrier of c. 1.8 - 2.0 m in height. Well positioned mobile acoustic screens or barriers can have a significant impact on noise breakout by potentially reducing noise level breakout by approximately 5-10 dB(A) where the noise source is located in close proximity to the barrier and fully behind/ creating an acoustic shadow zone;
- Consideration should also be given to the use of mobile acoustic screens along the side of slow moving plant at the development site;
- Plant will be certified to meet relevant current legislation;
- All trade contractors will be made familiar with current noise legislation and the guidance in BS 5228:2009 (Parts 1 and 2), which will form a prerequisite of their appointment;
- Ad-hoc noise monitoring will be undertaken as required;

- Loading and unloading of vehicles, dismantling of equipment or moving equipment or materials around the site will be conducted in such a manner as to minimise noise generation;
- Vehicles located at the site will not be left idling unless absolutely necessary.
- Deviation from approved method statements will be permitted only with prior approval from the Principal Contractor and other relevant parties. This will be facilitated by formal review before any deviation is undertaken;
- All staff and operators at the site during the construction periods will be appropriately trained and inducted, any induction will outline the expectations with respect to minimising noise breakout; and,
- Complaints received by the Contractor will be investigated immediately in and timely proactive manner.

3.5 Complaints Procedure

3.5.1 As outlined above, it is considered probable that elevated noise levels from construction related activities the proposed will be incident on the front facades of the existing residential properties located in proximity of the site.

3.5.2 A full and detailed complaints procedure is therefore considered essential to ensure that, where complaints are received from local residents, they are investigated and, where appropriate, action is taken to minimise the effects of any unacceptable noise breakout.

3.5.3 The following procedure shall be followed for all noise complaints received:

- All noise complaints should be immediately directed to the Site Manager;
- As soon as the complaint is received it will be recorded;
- When a complaint is received and is under investigation, contractors and/or site operatives shall not enter into a debate or argue with the complainant;
- An initial response will be made and recorded. Depending on the nature of the complaint the initial response could be to immediately cease the activity pending investigation. Contact details for the Local Authority will be retained on site in case consultation with the Environmental Health Department is necessary.
- Where the initial response does not address the complaint, further investigation, corrective action and follow-up monitoring shall be undertaken as appropriate. The complainant and Local Authority will be informed of actions taken; and,
- Ad-hoc noise and vibration monitoring will be undertaken as required.

3.6 Documentation

3.6.1 A construction noise management file will be established. This document will be updated to identify who manages it and location of the physical file and any copies. The construction noise management file will contain:

- Site survey summary sheet;
- Survey reports;
- Specialist contact details;
- This Construction Noise Management Plan and any revisions;
- Noise and vibration survey results; and,
- Complaint Investigation Information.

3.7 Construction Noise Induction

3.7.1 To ensure that good communication with site operatives is maintained and ensure that contractors and/or site operatives are appropriately trained and aware of the potential effect of elevated noise breakout from the proposed works at the site, the below noise management induction points are to be incorporated into any overarching site induction that may be undertaken. A record shall be maintained regarding all contractors and site operatives who have been provided with the below information.

- There are several residential properties in close proximity to the site. To ensure there is minimised adverse impact, all staff will be responsible for good noise management.
- When arriving at work, please drive slowly on site and keep revs to a minimum. Keep stereos off and do not slam doors.
- No shouting or swearing on site. Either walk over and talk to somebody or use a radio/phone.
- Be careful with tools and equipment. Place them down and do not drop them. Reduce “drop heights” to a minimum.
- Do not drag materials on the ground. Place them down when you arrive at the work area.
- Equipment and vehicles should not be left running when not in use.
- When loading trucks try not to drop material from a height. Load softer material at the bottom.
- Locate mobile equipment away from residents where possible.
- All equipment is to be well maintained.
- No noisy works shall be conducted outside the permitted hours.

- If you see anything/anyone making unnecessary noise, immediately report it to the site manager.
- It is essential that good relationships are maintained with the local community. Any queries from members of the public should be responded to politely and referred to the site manager. Contractors and/or site operatives shall assist the public to make contact with this person.
- No potentially noisy work is to be conducted until all personnel involved in the task have read or been provided with a suitable induction, covering the information in this plan.

4 CONCLUSION

4.1.1 By instruction from Barnes Homes Ltd, NoiseAir Limited was commissioned to undertake a DMP and NVP for a proposed residential development at land adjacent to 916 Halifax Road, Hartshead Moor, Cleckheaton, BD19 6LR.

4.2 DUST MANAGEMENT PLAN

4.2.1 Earthworks, construction and trackout activities associated with the construction phase have the potential to generate fugitive dust emissions. As such, a DMP has been prepared to evaluate potential impacts and identify suitable control measures.

4.2.2 A Risk Assessment was undertaken in accordance with IAQM guidance to consider potential impacts associated with dust emissions from the Site during the construction phase. This indicated the unmitigated risk of dust soiling is **low** for earthworks, demolition and trackout. The potential risk of human health effects is **negligible** for earthworks, construction and trackout.

4.2.3 Based on the results of the Risk Assessment, mitigation measures were identified for inclusion in the DMP. These were based on the recommendations outlined in the IAQM guidance. Following the implementation of the recommended mitigation measures, the residual risk of dust soiling will be **negligible**.

4.2.4 An assessment of the residual significance of potential air quality impacts from dust generated by earthworks, construction and trackout activities was undertaken. This indicated that following implementation of this DMP, residual effects were predicted to be **not significant**.

4.3 NOISE AND VIBRATION MANAGEMENT PLAN

4.3.1 To ensure noise breakout from construction related activities is maintained at a minimum, best practicable means (BPM) should be employed at the site.

4.3.2 This noise and vibration management plan (NVP) outlines recommendations to noise and vibration breakout emissions are minimised and are discussed is maintained throughout the duration of works, are discussed in detail within section 3.

APPENDIX A – REPORT LIMITATIONS

This Report is presented to Barnes Homes Ltd and may not be used or relied on by any other person or by the client in relation to any other matters not covered specifically by the scope of this report.

Notwithstanding anything to the contrary contained in the report, NoiseAir Limited is obliged to exercise reasonable skill, care and diligence in the performance of the services required by Barnes Homes Ltd and NoiseAir shall not be liable except to the extent that it has failed to exercise reasonable skill, care and diligence, and this report shall be read and construed accordingly.

This report has been prepared by NoiseAir Limited. No individual is personally liable in connection with the preparation of this report. By receiving this report and acting on it, the client or any other person accepts that no individual is personally liable whether in contract, tort, for breach of statutory duty or otherwise.

The conclusions and recommendations contained in this report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from who it has been requested and that such information is accurate. Information obtained by NoiseAir Limited has not been independently verified by NoiseAir Limited unless otherwise stated in the report and should be treated accordingly.

Where assessments of works or costs identified in this report are made, such assessments are based upon the information available at the time and where appropriate are subject to further investigations or information which may become available.

Where / if estimates and projects are made within this report, are made based on reasonable assumptions as of the date of this report, such statements however by their very nature involve risks and uncertainties that could cause actual results to differ materially from the results predicted. NoiseAir Limited specifically does not guarantee or warrant any estimates or projects contained in this report.

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APPENDIX B – REPORTING FORMS FOR DUST MANAGEMENT

NoiseAir
ACOUSTICS & AIR QUALITY

Reporting Form 1: Visual Dust Inspection

NOTE: This form should be used for recording results from visual site inspection. All fields should be completed in full.

Reporting of dust on (date):

Location	Time of Inspection	Meteorological Conditions	Current Site Activities	Dust Conditions

Monitoring undertaken by: ……

Any additional observations of note:……..

……

Details of any required amendments to site operation as a consequence of findings: ……...

……

Signed:…… Date: ……...

NoiseAir
ACOUSTICS & AIR QUALITY

Reporting Form 2: Complaint Reporting Form

NOTE: This form should be used for recording details of any dust complaints. All fields should be completed in full.

Reporting of dust complaint on (date): ……

Name, telephone number and address of complainant: ……...
……

Details of complaint: ……...

Date, time and duration of dust impact: ……..

Description of dust impact: ……...

Meteorological conditions during incident: ……

Potential sources or activities that could give rise to dust during incident: ……...
……

Operating conditions at time of incident: ……

Date and time of complaint follow up call: ……..

Action taken: ……

Details of any required amendments to DMS or Site: ……...
……

Signed:…… Date: ……...

NoiseAir Limited

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