Construction Noise and Vibration Management Plan

Site Details

Site Name: Plane Street, Huddersfield

Site Address: Plane Street, Huddersfield, HD

Contractors Details: Jack Lunn Ltd

Planning Permission: 2020/92067

Who is the plan for:

This plan is for Residents, Site Staff, Visitors, Contractors, and Environment Agency

The Plan will be made available on site and will be part of the (EMS) Environmental Management System at the site.

Document Owner

Document author: Andrew Lunn

Version number: One

Date: 30th June 2024

List of revisions

Revision number	Revision authorised by	Revision owner

Contents

Objective

This management plan defines the measures to control and limit noise emissions and vibrations levels, at residential properties and other sensitive receptors in the vicinity of the new development.

The main contractor will be submitting this document for Kirklees Council Planning to ensure compliance with both Planning Permissions and Environmental controls, in particular Section 61 of Control of Pollution Act 1974.

Site Description

The site is on a former school, which was demolished several years back, the site runs parallel to Plane Street and at the head of Malvern Rise, Huddersfield.

Private dwellings are located along the northern and western elevation of the development, with dense woodland bordering the south and eastern elevations which then open up into fields.

Site Working Hours

The site will open at 7.30am Monday to Friday

The site will close at 18.30hrs Monday to Friday

Weekend work will only be on Saturdays between the hours of 8.00am until 13.00hrs

No work will take place on a Sunday or Public Holidays.

Generally, no construction work will commence until 7,30am, furthermore, all deliveries will be scheduled within working hours, ideally after rush hour traffic and school runs.

Maintenance and review of the CNVMP

- The site manager is responsible for the CNVMP and ensuring people are trained.
- This plan will be located on site in the site office.
- The plan will be reviewed at period times during the build and /or changes in operations.
- The plan will be discussed during on site inductions.
- The site manager will maintain records of complaints and associated investigations due to noise on site.
- The site manager is responsible for carrying out ongoing noise monitoring and acting on the results of this monitoring.

Receptors

The main receptors identified are residents living along Plane Street and those located along Malvern Rise, along the rear of the site and down the eastern elevation is dense shrubbery and woodland acting a sound screen towards open fields.

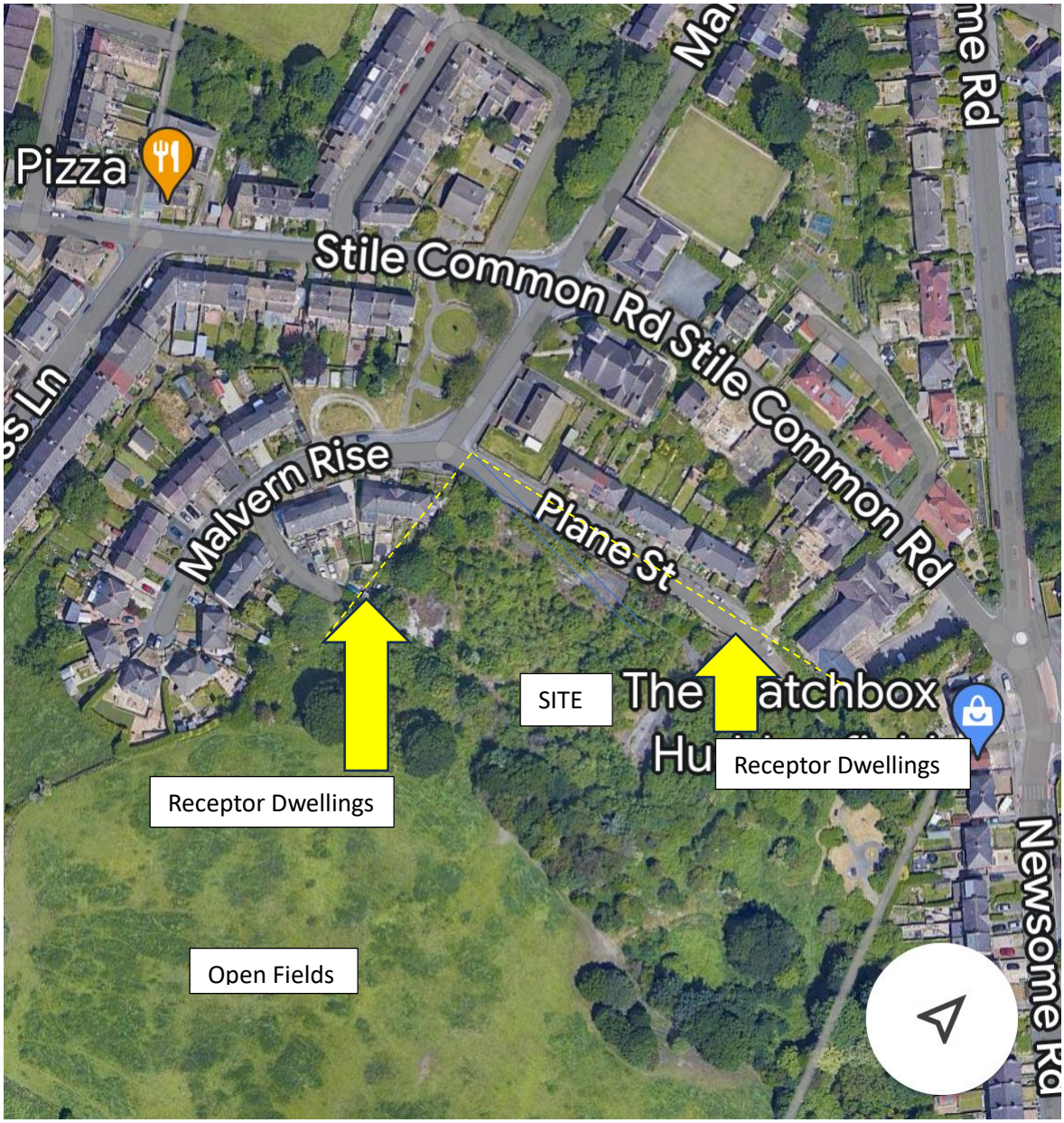

Figure One

The dotted yellow line identifies which residential properties are most likely to be affected by noise and to a lesser degree vibration.

Noise Sources and Processes

Most of the site noise and vibration will come from plant and specific site operations, the earliest being the reduce level dig operation whereby wagons and heavy plant, complete with reversing bleepers can during continual use become a nuisance.

Following on, any specialist foundations such piling or drilling will create noise and vibrations.

As the operations continue, we reach the general groundworks, whereby track machines traversing the site cause vibrations, wagons bringing on materials cause noise when stone is been tipped, safety audible devices for reversing become a nuisance, and occasionally men shouting over noise so they can be heard.

As the heavy groundworks fade out, the site becomes somewhat quieter with only the bricklayers and telehandlers manoeuvring around site.

Once the masonry is up, the noise soon becomes more domestic, hammers knocking in nails, portable cordless power tools such as circular saws, plasterers whisk, and often radios.

Towards the later stages of the project, groundworks return for completing final drainage, services, hard landscaping, and garden preparation.

Noise and Vibration Control Measures

- The main contractor shall comply with the recommendations set out in BS5228-2009 and with the following requirements.
- Vehicles and mechanical plant will be maintained in a good and effective working order and operated in a manner to minimise noise emissions. The contractor will ensure that all plant complies with the relevant statutory requirements.
- HGV and site vehicles will be equipped with broadband, non-tonal reversing alarms.
- Compressors, generators, and engine compartment doors will be kept closed and plant turned off when not in use.
- All pneumatic tools will be fitted with silencers/mufflers.
- Care would be taken when unloading vehicles to avoid un-necessary noise.
- The use of particularly noisy plant will be limited, for example avoiding use of noisy plant in the morning.
- Restrict the number of plant items in use at any one time.
- Plant maintenance operations will be undertaken at distance from noise sensitive receptors.
- Reduce the speed of vehicle movements.
- Ensure that operations are designed to be undertaken with any directional noise emissions pointing away from noise sensitive receptors.
- When replacing older plant, ensure that the quietest plant available is considered.
- Drop heights will be maintained when loading vehicles with rubble.
- Vehicles should be prohibited from waiting within the site with their engines running or alternatively, located in waiting areas away from sensitive receptors.
- Local hoarding, screens or barriers should be erected to shield particularly noisy activities.
- Piling will be carried out with a method that minimises both noise and the transmission of vibration to sensitive receptors.
- Temporary noise screens will be used to reduce noise from particularly noisy activities and, the height of perimeter hoarding will be extended where this would assist in reducing noise disturbance at sensitive receptors.
- Hours of operation should be strictly enforced and any deviations other than those previously identified will be with the consent of the local authority.

Common Culprits v Quieter Alternatives

Diesel Engine Mixer

Electric Silos

Petrol Saw

Battery Saw

Old, dated telehandler

Modern compliant telehandler

Noise Monitoring

During working hours, noise levels can be measured at each of the 4 locations illustrated below, the general limit for Construction is between 80db to 85db, using a noise monitoring device or phone app 2m above ground level and taking a reading.

Since the construction processes change at varying stages, noise level readings will take during each operation type to ensure work is within permissible levels, and when normal and general operations take place, monitoring will be less regular.

The recording will be inserted on the below table:

Measurement Location & Date	Frequency of measurement	Minimum measurement duration	Measurement period	Operating conditions on site	Expected specific sound level

For Information purposes, please see the HSE ready reckoner for daily exposure

Noise exposure ready-reckoner (Daily exposure)

Sound pressure level, L_{Aeq} (dB(A))	Duration of exposure									
	2 min	5 min	15 min	30 min	1 h	2 h	4 h	8 h	10 h	12 h
120	1300									
110	130	330	1000	2000						
105	42	105	315	625	1250					
100	13	34	100	200	395	790	1600			
98	8	22	60	125	250	500	1000	2000		
97	7	17	50	100	200	395	790	1600	2000	
95	4	10	32	65	125	250	500	1000	1250	1500
94		8	26	50	100	200	395	790	1000	1200
93		7	20	40	80	160	315	630	790	950
92		5	16	32	65	125	250	500	625	750
91		4	12	26	50	100	200	400	500	595
90			10	20	40	80	160	315	395	475
89			8	16	32	65	125	250	315	375
88			6	12	26	50	100	200	250	300
87			5	10	20	40	80	160	200	240
86			4	8	16	32	65	125	155	190
85				6	13	26	50	100	125	150
84				5	10	20	40	80	100	120
83				4	8	16	32	65	80	95
82					6	13	26	50	65	75
81					5	10	20	40	50	60
80					4	8	16	32	40	48
79						6	13	26	32	38
78						5	10	20	26	30
75							5	10	13	15

Total exposure points (sum of points from individual exposure components)	Daily noise exposure $L_{EP,d}$ (dB(A))
320000	120
32000	110
10000	105
3200	100
2000	98
1600	97
1000	95
790	94
630	93
500	92
400	91
315	90
250	89
200	88
160	87
125	86
100	85
80	84
65	83
50	82
40	81
32	80
26	79
20	78
10	75

	Above upper exposure action value ($L_{EP,d}$ 85 dB(A))
	Above lower exposure action value ($L_{EP,d}$ 80 dB(A))
	Below lower exposure action value ($L_{EP,d}$ 80 dB(A))

Instructions:

- For each task or period of noise exposure in the working day look up in the table on the left the exposure points corresponding to the sound pressure level and duration (e.g. exposure to 93 dB for 1 hour gives 80 exposure points);
- Add up the points for each task or period to give total exposure points for the day;
- Look up in the table on the right the total exposure points to find the corresponding daily noise exposure (e.g. a total exposure points for the day of 280 points gives a daily noise exposure of between 89 and 90 dB).

Complaints Reporting

Should there be a complaint, public can contact the site office/staff direct, or the contractors head office, all contact details are available on site.

Alternatively, public can report to the local authority to lodge their complaint.

Items to be recorded:

- Date, time, and location of complaint
- Noise level reading recorded at the time and place
- Details (name, address contact details) of the complainant
- Length of time the incident went on for
- Re-appraise Risk Assessment
- What action took place during and after, to prevent further occurrences
- Notify the EA/LA