RENAKER

# CONSTRUCTION ENVIRONMENT MANAGEMENT PLAN

**Trinity Islands, Plot C**

PLANNING CONDITIONS 14 AND 61

Planning application number: 141017/JO/2024

Revision B – March 2026

# Construction Environmental Management Plan – **Planning Conditions 14 and 61**

## 1.0 Introduction

This document describes the proposed management strategy for construction and the programme duration for key activities to be carried out on the site at Trinity Islands, **Plot C**. The main aim throughout the build is to minimise impact on the surrounding residential properties and businesses and on the local highway and public space around the development.

The following narrative explains in detail this strategy and timescales envisaged at the time of planning prior to more detailed liaisons with specialist subcontractors as and when they are procured. This detailed proposal will describe our approach to Project Management, Health and Safety, Human Impact, Environmental management, security, site waste management, logistics and traffic management.

## 2.0 Community consultation strategy

During the construction of the development Renaker will ensure that signs are located on the site hoarding and on the main gates, displaying an emergency 24 hr a day telephone number. This number is **0345 850 9676.** Details of the call will be handled by our trained and briefed customer care call centre, and the appropriate Renaker Build Ltd member of staff will be notified, a response to the complainant will be provided within 12 hours. All calls are recorded and logged by the care centre and on our internal incident reporting system, these complaints are reviewed by Senior Management who then agree the appropriate action, an important part of this process is the constant engagement with the complainant to ensure all parties are satisfied with the actions taken and that the complaint is resolved. Items raised on this system are reviewed at our monthly Directors Project Meeting to act as a lessons learnt and to enable sharing across our Projects.

Local residents will be engaged firstly through a mail drop, explaining the development, initial works, impending logistics around the site, and advising our intent to setup a neighbour's forum. The neighbours forum will be created at the start of the Project and will include the following as a minimum :- Wilburn Basin, Big Yellow Self Storage, Potato Wharf, Vista River Gardens. Regular correspondence will be held throughout the duration of the Project and updates for the scheme will be provided via forums and regular newsletters.

## 3.0 Working Hours

The site will be operational over the following hours :-

Monday – Friday :- 7.30am to 6.00pm

Saturday – 8.30am to 2.00pm

Sunday and Bank Holidays – No work

No work will occur outside of these hours without prior written consent from MCC.

## 4.0 Location, removal and recycling of waste

Renaker will develop a scheme for the recycling and disposal (reduced quantities) of construction waste. This will commence at the design stage, with workshops being held to identify means for waste minimisation and material selection which may suit recycling. Renaker will then engage with sub-contractors and suppliers to identify both waste minimisation actions and/or on or offsite re-use or recycling actions. RBL will estimate the volume of waste that a typical trade would produce, e.g. plasterboard and brickwork, we will then put a tracker in place to monitor planned vs actual.

Skips will be kept on site and collected on a daily basis by a reputable waste company to be segregated at their transfer station. We will receive monthly reports showing waste diverted from landfill and percentage recycled.

## 5.0 Construction Phase Dust Mitigation Plan

Good practice measures will be adopted at Trinity Islands Plot C to control the generation and dispersion of dust such that significant impacts on all permanent and transient stakeholders is minimised.

The hierarchy for mitigation will be:

- Prevention
- Suppression
- Containment

The following table provides detail on the management and monitoring of dust during the undertaking of construction works on site :-

| Guidance | Comment |
|---|---|
| Communications | • Display the contact details to allow complaints for air quality and dust issues to be raised.<br>• Develop and implement a stakeholder communications plan that includes community engagement<br>• Display the head or regional office contact information.<br>• Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions. |
| Site Management | • Record all dusty and air quality complaints.<br>• Record any exceptional incidents that cause dust/or air emissions, and the action taken to resolve the situation.<br>• Hold regular liaison meetings with other high-risk construction sites that are within 500m of the site boundary. Ensuring plans are co-ordinated and dust and particulate matter emission are minimised.<br>• Make complaints log available to LA when asked |
| Monitoring | • Carry out regular site inspections to monitor compliance with the DMP |

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| | • Increase frequency of site inspections when activities with a high potential to produce dust are being carried out. |
| Preparing and Maintaining the Site | • Plan site layout so that machinery and dust causing activities are located away from receptors.<br>• Erect solid screens or barriers around dust activities or the site boundary that are at least as high as any stockpiles on site.<br>• Fully enclose site or specific operations where there is a high potential for dust production and the site as actives for an extensive period<br>• Avoid site runoff of water or mud<br>• Use water as dust suppressant where applicable<br>• Keep site fencing, barriers and scaffolding clean using wet methods<br>• Remove materials that have a potential to produce dust from site as soon as possible<br>• Cover or fence stockpiles to prevent wind whipping |
| Operating Vehicle/ Machinery and Sustainable Travel | • Covers will be used on the road vehicles to stop the migration of dust.<br>• All vehicles to switch off engines - no idling vehicles<br>• Avoid the use of diesel or petrol-powered generators where practicable<br>• Impose a signpost a maximum-speed limit of max. 15mph on surfaced and 10mph on un-surfaced haul roads and work areas<br>• Produce a Construction Logistics Plan to manage sustainable deliveries |
| Operations | • Cutting equipment to use water as dust suppressant or suitable local extract ventilation<br>• Ensure adequate water supply on the site for effective dust/particulate matter suppression/mitigation<br>• Use enclosed chutes, conveyors and covered skips where possible.<br>• Skip dust suppression will be in place.<br>• Minimise drop heights<br>• Ensure equipment is readily available on site to clean any spillages |
| Waste Management | • No bonfires or burning of waste materials |
| Earthworks | • During excavation works drop heights will be minimised to control the fall of materials thus reducing dust escape.<br>• Temporary cover may be provided for earthworks if necessary, completed excavation and exposed areas will be covered with permanent materials in order to stabilise surfaces as soon as practical.<br>• Ensure that stockpiles exist for the shortest possible time.<br>• Material stockpiles will be low mounds where possible based on available space.<br>• Wherever necessary and possible stockpiles will be sheeted. |

| | |
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| | • Material stockpiles will be located away from the site boundaries<br>• Only remove the cover in small areas during work and not all at once |
| Construction | • Avoid scabbling<br>• Ensure sand and other aggregates are stored and not able to dry out, unless it is required for a specific process<br>• Ensure bulk cement and other fine powder materials are delivered and stored to prevent escape<br>• For smaller supplies of fine powder ensure bags are sealed after use and stored appropriately to prevent dust<br>• The construction of the superstructure will be carried out from behind screens. |
| Trackout | • Jet washing / wheel wash – dependant on space and advice from the Specialist contractors, we will utilise either an automatic wheel wash or operatives with high pressure jet washes to clean the wheels at final exit point.<br>• Use water-assisted dust sweeper on the access and local roads<br>• Avoid dry sweeping of large areas<br>• Ensure vehicles entering and leaving sites are covered to prevent escape of materials<br>• Inspect on-site haul routes for integrity, instigate necessary repairs and record in site log book<br>• Record all inspections of haul route and any subsequent action in a site log book<br>• Install hard surfaced haul routes which are regularly damped down with fixed or mobile sprinkler systems, or mobile bowsers and regularly cleaned<br>• Implement a wheel washing system at a suitable location near site exit<br>• 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<br>• Access gates to be located at least 10m from receptors, where possible |

All construction activities will be subject to the production of a detailed method statement and risk assessment by specialist subcontractors, these will include the measures being proposed for eliminating, reducing or controlling dust and any proposals for monitoring where deemed necessary.

These method statements are subject to approval by the Renaker Build Management Team and our Safety Advisor and agreement will need to be reached prior to any work being carried out.

## 6.0 Noise and Vibration

Consideration will be given to noise and vibration at the pre-construction stage for all the various activities involved with delivering the buildings, we will take specialist contractor advice to ensure we

minimise excessive noise and vibration, and as such we have identified the noisiest activities and their durations and these are as follows:-

- Contiguous Flight Auger Piling - April 2026 to May 2026
  March 2027 to May 2027
- Bulk Excavation - May 2026 to September 2026
  April 2027 to July 2027
- Concrete Structure - October 2026 to April 2028
  August 2027 to May 2029
- External Works - May 2028 to April 2029
  June 2029 to May 2030

In order to minimise the affect these activities will have on our adjacent neighbours and the general public, we will undertake a series of mitigation procedures coupled with a suite of extensive real time monitoring.

## What noise and vibration mitigation will be undertaken on site?

The following steps will be carried out to minimise noise on site within Best Practicable Means (BPM), as defined in Section 72 of the Control of Pollution Act 1974 and Section 10 of BS 5228 part 1):

- We will use methods and machinery and equipment that will have a lower vibration level impact.
- We deploy machine and equipment that has been recently serviced and will be routinely serviced during the project to minimise the amount of noise and vibration from those machines and equipment.
- We will look at methods on site to mitigate the amount of vibration transfer through the ground by digging trenches on site where practical and safe to do so.
- Attitude of operatives to the making of noise to be addressed, to have an understanding that work activities have an effect on those around not just operatives but residents and the public. This will be achieved though toolbox talks and daily activity briefings.
- Hours of operation and activity- consideration to the time of day for particularly noisy activities will be made. E.g. Carry out these activities in the afternoon rather than first thing in the morning.
- Use cast in halfen brackets for the cladding in lieu of post drilling into concrete.
- Screens surrounding the concrete slabs and proprietary formwork wrapping the stair and lift core to minimise noise break out from concreting activities.
- Acoustic screens used to shield metal pipe cutting or concrete cutting activities on site.
- Proprietary acoustic cutting stations for cutting metal wall studs.
- Gas fork lifts and electric pallet trucks in lieu of diesel forklifts.
- All site operatives will be inducted on the potential impact on the surrounding community of site activities. This should cover principles of BPM pertaining to all site activities, highlight any particularly sensitive or high impact activities and precautions to be taken.
- No shouting.
- Stereos will not be permitted on site.
- All contractors/sub-contractors will demonstrate and undertake best working practices to avoid exceeding noise or vibration limits which have been agreed with Manchester City Council control limits.
- Sub-contractors shall highlight in their method statement and/or risk assessment any activities that will create significant noise and vibration levels. Sub-contractors will demonstrate how they will mitigate/ manage the emissions.

- All plant and equipment will be switched off when not in use, or where this is not practicable, throttled down to a minimum.
- Wherever practicable, all plant and equipment should be powered by mains electricity in preference to locally powered sources such as diesel generators.
- All compressors and generators shall be models fitted with properly lined and sealed acoustic covers or enclosures which remain closed when in use.
- Noisy plant or equipment should be sited as far away as possible from noise sensitive buildings. Wherever practicable, the use of barriers in the form of acoustic barriers or enclosures will be employed.
- All vehicles, plant and machinery used during operations shall be fitted with effective exhaust silencers and all parts of the machinery, plants and vehicles will be maintained in good working order and repair in accordance with the manufacturer's recommendations.
- White noise alarms shall be used where possible. Crane, plant and vehicle alarms and sirens shall be disabled where possible following a risk assessment. A traffic marshal will always supervise vehicles reversing in the public domain.
- Screening from existing features will be maximised or the use of full or partial enclosures will be employed for fixed plant. Fixed or semi-static plant will be located and orientated away from noise sensitive receptors where feasible to do so.
- Identification and use of low noise and vibration techniques. Where construction plant which is known to generate significant levels of noise and vibration then it will be used with consideration, and the construction process closely monitored to minimise noise and vibration impacts on and off the site.
- Vibratory compaction equipment will be used in a mode which minimises the incident vibration at nearby residential and other sensitive properties. Consideration will be given to engaging concentric weights only when running at speed to avoid run up, run down resonances, the use of smaller equipment, or turning off the mechanical vibration on vibratory rollers and undertaking more passes for areas where there is a particular risk that disruption may occur at neighbouring properties.
- Noisy works will be controlled utilising the hierarchy of risk control and measured using noise monitoring equipment to ensure safe levels are not compromised and noisy work hours are not breached. In all noisy work cases works substitution of equipment for machines or processes which reduce the noise levels to acceptable levels and therefore minimise the impact on both site personnel and the general public. Where this is not possible engineering controls will be employed utilising such control measures as baffles and 'noise screens.

### How will we monitor and control noise and vibration?

Noise and vibration levels will be monitored onsite throughout the risk related activities via a live monitoring system. The monitoring proposal from the equipment supplier Campbell Associates Limited has been included. Campbell Associates are recognised for supplying remote, automated monitoring equipment and calibration services and will be engaged to install the monitoring equipment for the project duration

The monitor will transfer data via cellular connection to a dedicated, secure website showing real-time historic data and in addition real-time alarms will be sent via email and/or SMS to the project manager and construction manager.

Locations of monitoring equipment will be stationed where there is a suitable power supply, accessible mounting point and where the equipment can be maintained and be safe and secure for the project duration.

*Noise trigger levels Noise trigger levels will be set at the following (based on the guidance in BS5228-1, E.3.2 at the site boundary close to nearest dwelling:
• 80 dB(A) Leq (10 h) Monday to Friday working day (08:00-18:00)
• 80 dB(A) Leq (5 h) Saturday working day (08:00 – 13:00)

Noise triggers maybe adjusted according to the mounting locations as it may not be practical or reasonably possible to mount the noise monitor on to the receptor's façade. If noise measurements are to be taken at the site boundary, the noise limits will be recalculated according to account for the noise reduction over distance to the receptor's façade from the site boundary. This will be calculated in noise prediction software CadnaA. We can confirm that suitable mounting locations can be achieved at the site boundary.

The monitors will have trigger level set for working 1 hour periods, above which an alert will be sent by text and email to the allocated site contacts.

The 1-hour alert is intended to inform the construction management of potential issues onsite. The intent is that measures can be taken to reduce the noise activities such that working period average is not breached.

Following receipt of an alert, the response procedure will be followed as soon as is reasonably practical.

The Project Manager / Frame Project Manager will be informed of the breach and the following action will be taken;

We will review the monitoring results to:
- Cease all works likely to be causing any potential noise or vibration.
- Determine the activities / plant that is responsible for the exceedances.
- Ascertain if there are any practicable means of reducing the measured levels including alternative working techniques
- Determine whether this reduction can be practically employed and if so, the measures will be implemented.

Monitoring records will be regularly reviewed by the site team to review the effectiveness of the noise management activities onsite.

Class 1 sound level meters will be used in compliance with relevant British Standards (Noise and Vibration).

Vibration will monitor by real-time, cellular connected vibration monitors and will measure and conform to the standard BS5228-2 which provide guidance on monitoring vibration on construction and open sites.

Limits in the document are based on measuring vibration at the receptor, at the base of the building on the outer wall.

Vibration affecting occupied buildings shall not exceed levels that are likely to give
rise to damage to the building or discomfort to the occupants of the building. It will normally be appropriate to set limits in terms of Peak Particle Velocity (PPV), in accordance with BS 5228-2.

Vibration monitoring will be carried out during earthworks, demolition, piling, excavation, or any other ground/sub-structure works. Vibration monitors will upload data every 24 hours or at the point of exceedance, where the data will be available to print and download from the cloud service. Waveform & frequency data can be collected by the monitor where required.

If works are being undertaken in proximity of sensitive receptors and humans, such as residential buildings and offices, limits will be followed as details in Table B.1 of the of the standard BS5228-2. For protection of structures, buildings, and underground services the standard documents limits in Table B.2 of the standard BS5228-2.

To cover both scenarios, we will apply three limits for transient vibration to the cloud system as default which can be amended at any time.

- For humans, a limit of 0.8 mm/s PPV in any direction will be implement as an AMBER alert.
- For humans, a limit of 1.0 mm/s PPV in any direction will be implement as a Red Alert.
- For structures and buildings an AMBER alert limit of 0.75 mm/s PPV in any direction will be implement for transient vibration.
- For structures and buildings a RED alert limit of 1 mm/s PPV in any direction will be implement for transient vibration.

For continuous vibration, the BS5228-2 standard and guideline recommend limits are reduced by up to 50%, which will be done accordingly.

The limits would be adjusted to:

- For structures and buildings an AMBER alert limit of 0.75 mm/s PPV in any direction will be implement for continuous vibration.
- For structures and buildings a RED alert limit of 1 mm/s PPV in any direction will be implement for continuous vibration.

Note for human response to vibration the guidance tells us that it is likely that vibration exceeding 1 mm/s of this level in residential environments will cause complaint but can be tolerated if warning and explanation has been given to residents.

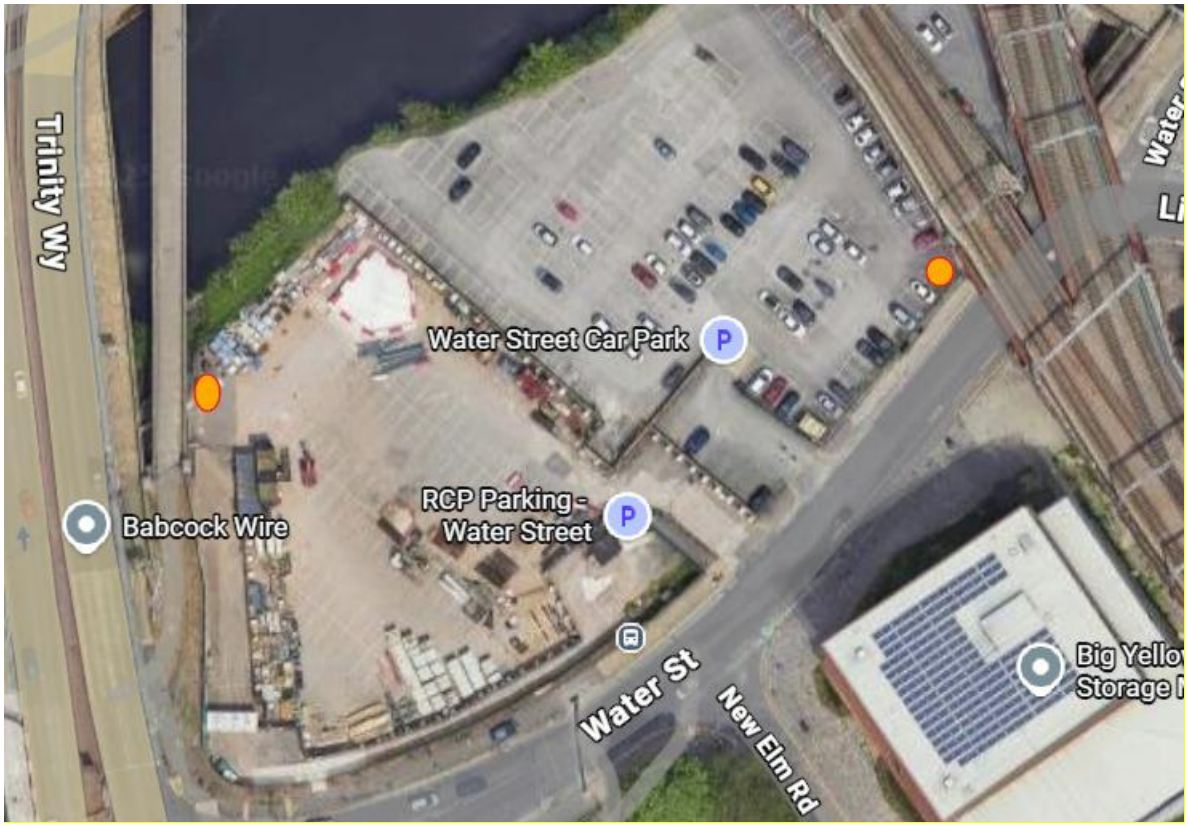
Therefore, we will let residents know they may experience some low level vibration which will be monitored to minimise any alarm from the local residents which should in turn reduce complaints.

Please see Section 2 for details of our complaints procedure

### Who do we believe are our at-risk noise and vibration receptors?

We have identified that we have a series of neighbours that may be potentially impacted by our works on site. We have addressed this in part by making contact with these parties and included them in the first of our quarterly updates that includes information about our works, our contact details for the site team and our out of hours contact customer service centre.

As part of this review, we have determined that our closest (and thus at most risk) receptors are the residents of Wilburn Basin, Liverpool Road. As such, we are proposing the following receptor locations (Noise and Vibration at Wilburn Basin and Noise at Liverpool Rd). These have been positioned as the two nearest locations in relation to where we believe our noise generation locations will occur.




### 7.0 Parking of construction vehicles and staff

We have identified that there is a need to alleviate where possible the parking burden on Manchester City centre, during the Plot C phase of the work. Site personnel who are not allocated a parking space will be encouraged to utilise the extensive array of public transport options available to them, failing this there is currently a variety of grade car parking facilities and pay and display street parking surrounding the site.

### 8.0 Loading and Unloading of plant and materials

All loading and unloading is planned to be undertaken within site boundary, pavement closures at sections of Water Street will aid with the safe loading and unloading of materials. Materials will be unloaded at designated unloading/loading bays by tower crane or forklifts. There will be no requirement to lift materials outside of the boundary, materials lifted by forklifts can be transported to various storage areas and hoists without leaving the site boundary.

### 9.0 Storage of plant and materials

Material storage for the development will be generally contained in our site demise, within a hoarded and secure area on site. To ensure operative and public/vehicle safety, we intend to close the Water Street pavement. This will also be used for unloading of concrete and materials via the tower cranes. At the stage that the concrete frame reaches podium level, small low height fork lift trucks will be employed to store materials both within the lower ground and basement car parking provision and the basement parking provision for the façade construction and fit out elements of the works. A large

percentage of materials will be brought on a just in time basis and store directly on the floor they are designated.

The site will have 24hr security and plant will be returned close to the security hut at night and will be locked with keys removed and cab guards in place.

## 10.0 Security Hoarding

Protecting the public from risks to their health and safety arising from the construction work is a high priority. Every care will be exercised to prevent risk to members of the public and appropriate action, including the erection of perimeter fencing to a specified standard, will be taken.

Vandalism and theft of plant, equipment, materials and fuel is possible throughout the duration of the development. Renaker Build will take appropriate action, as described in previous sections, to ensure the site is secure at all times from unauthorised access. As described previously, the site will have metal turnstile access system controlled by an individual fingerprint or facial recognition system.

We will be utilising the provision of CCTV to cover the perimeter of the site and compound areas to assist in the prevention of unauthorised activities.

The hoarding to the perimeter of site along Water Street will interface with vehicle traffic, therefore we have selected water filled red and white crash barriers with corrugated steel panels. The panels will be fixed to posts inserted into sockets in the red and white crash barriers, this will create a minimum 2.4m hoarding, this will be agreed with MCC highways department and a hoarding permit is in place.

Renaker have a monthly monitoring system which all qualified staff undertake, a hoarding inspection is a weekly check, it is also a temporary works item which is subject to a statutory 7 day inspection. Any findings arising from these inspections are dealt with immediately.

## 11.0 Routing Strategy

The site access will be predominantly via the proposed pavement closure on Water Street.




Pavement Closure

Access & Egress into Site

Both the access and egress will be manned gates to prohibit unauthorised access to the site.

There are no issues with the swept path of vehicles and road widths and clearances are sufficient to cater for any delivery.

Liaisons are in progress with MCC highways regarding the above.