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Title: Construction Environmental Management Plan (CEMP) – Vibro Ground Improvement Works

Project: Huyton 220, 35 Wilson Road, Huyton, L36 6AE

1. Introduction

This submission has been prepared on behalf of the applicant to discharge the requirements of the pre-commencement planning condition relating to the Construction Environmental Management Plan (CEMP), specifically in relation to vibro ground improvement works.

The purpose of this document is to demonstrate that the proposed vibro-compaction operations will be undertaken in a controlled, environmentally responsible manner and in full accordance with the approved site investigation data and geotechnical recommendations.

2. Scope of Vibro-Compaction Works

The vibro ground improvement works form part of the foundation solution for the approved development and are required to densify underlying granular strata to achieve the necessary bearing capacity.

The works will:

- Be limited strictly to the footprint of the approved building
 - Be carried out using vibro-compaction techniques appropriate to the verified ground conditions
 - Be undertaken in accordance with all applicable environmental and planning controls
 - Be undertaken by a specialist contractor
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3. Defined Working Area

The extent of the vibro-compaction works is clearly defined and controlled as follows:

- The works shall be strictly confined to the building footprint as shown on the approved drawing [HWR-KMA-01-ZZ-DR-A-1004 P1 Proposed Site Plan.pdf](#)
- No vibro treatment is currently planned to take place outside of the building footprint
- The working extent will be physically set out on site prior to commencement to ensure compliance

This restriction ensures that ground improvement activities are targeted only where required and do not impact surrounding areas unnecessarily.

4. Compliance with Ground Investigations (E3P)

All vibro-compaction works shall be undertaken in full accordance with the findings and recommendations of the E3P Geoenvironmental Site Assessments, including:

- The Phase I Geoenvironmental Site Assessment 18-824-R1-1 - Phase I GSA - Wilson Road - May 2026.pdf
- The Phase II Geoenvironmental Site Assessment [18-824-R2-1 - Phase II GSA, Wilson Road, Huyton - May 2026.pdf](#)



The design and execution of the works shall:

- Reflect the verified ground conditions encountered during investigation
- Be consistent with the recommended ground improvement strategy
- Incorporate any geotechnical constraints identified within the reports

Where any variation in ground conditions is encountered during the works, operations will be paused and a suitable revised methodology agreed with the project engineer prior to continuation.

5. Environmental Management and Controls

The vibro-compaction works will be implemented in accordance with the overarching CEMP for the site, with specific measures including:

5.1 Noise Control

- Use of modern, well-maintained plant fitted with appropriate silencers
- Limitation of works to agreed construction hours
- Avoidance of unnecessary idling of equipment

5.2 Vibration Control

- Vibro-compaction works will be undertaken using a controlled methodology and in accordance with the specialist contractor's approved design parameters.
- Continuous vibration monitoring shall be undertaken throughout the duration of all vibro-compaction operations.
- Monitoring equipment shall be positioned at the site boundary nearest to the most sensitive receptor, or at such alternative location agreed with Knowsley Metropolitan Borough Council.
- Real-time monitoring equipment incorporating an alarm notification system shall be utilised to provide advance warning where vibration levels approach predetermined trigger thresholds.
- The monitoring system shall be reviewed continuously by the site management team and specialist contractor.

A two-stage trigger system shall be adopted:

Alert Level

- Automatic notification issued to site management.
- Working methods reviewed.
- Plant operation checked.
- Monitoring frequency increased where necessary.

Action Level

- Vibro-compaction activities immediately suspended.
- Cause of elevated vibration investigated.
- Revised working methodology agreed prior to recommencement.
- Final trigger values and suspension limits shall be agreed with the specialist vibro contractor prior to commencement and detailed within the final approved RAMS

5.3 Dust and Air Quality

- Use of water suppression where necessary
- Maintenance of clean working surfaces and access routes
- Control of vehicle movements to minimise dust generation

5.4 Pollution Prevention

- All fuels and oils stored in bunded areas
- Spill kits available on site at all times



- No uncontrolled discharge of water or contaminants

6. Construction Methodology Overview

The vibro-compaction process will be undertaken in accordance with recognised industry procedures and will typically include:

- Setting out of treatment grid within the approved footprint
- Mobilisation of vibro rigs and support plant
- Penetration of vibroflot to design depth
- Controlled densification of soils through vibration
- Withdrawal of equipment and completion of each treatment point
- Recording of operational data for verification purposes

All works will be supervised by suitably qualified personnel and carried out in accordance with approved Risk Assessments and Method Statements (RAMS).

1. Monitoring and Verification

To ensure compliance with the CEMP and planning requirements:

- Installation records will be maintained for all treatment points
- Any required validation testing will be undertaken in line with the geotechnical design
- Records will be made available to the Local Planning Authority upon request
- Continuous vibration monitoring records shall be maintained throughout the vibro-compaction works.
- Monitoring data shall be retained for a minimum period of 28 days following completion of the works and shall be made available to officers of Knowsley Metropolitan Borough Council upon request.
- Installation records for all treatment points shall also be maintained and retained within the project quality records.

2. Contingency Measures

In the event of unforeseen circumstances:

- Works will be halted immediately
- The Project Engineer will be notified
- A revised method or mitigation strategy will be agreed prior to recommencement

This includes circumstances such as:

- Unexpected ground conditions
- Excessive vibration or noise levels
- Environmental incidents

3. Compliance Statement

The proposed vibro-compaction works:

- Are **strictly limited to the approved building footprint**
- Are **fully aligned with the E3P ground investigations and recommendations**
- Will be implemented in accordance with the approved CEMP and best practice construction procedures

Accordingly, it is considered that the information submitted satisfies the requirements of the relevant pre-commencement planning condition, and the Local Planning Authority is respectfully requested to approve the discharge of this condition.

