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Construction Environmental Management Plan

May 2025

Q230156

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1 Introduction

Purpose of this Document

- 1.1 This Construction Environmental Management Plan ('CEMP') supports pending application ref. 23/02782/FUL which seeks partial demolition, reconfiguration and refurbishment of existing employment floorspace and erection of a retail unit at the former Halewood Distillery at Sovereign Industrial Estate, Wilson Road, Huyton ('the Site').
- 1.2 This CEMP takes into account and expands on the Phase 1 Demolition / Construction Management Plan, approved application ref. 22/00109/DISCON on 12th April 2024 which concerns the neighbouring site.
- 1.3 The Principal Contractor, and any sub-contractors working on the Site, will comply with all relevant legislative controls, construction health, safety and environmental standards and other relevant best practice methodologies.
- 1.4 The CEMP demonstrates the commitment of DAVOS Property Developments Limited ('the Client') to undertake the construction works in such a way as to avoid or minimise environmental effects and disruption to neighbours (commercial and residential) and provides a mechanism for the implementation of recommended mitigation measures and monitoring throughout the works.

Structure of this Document

- 1.5 This CEMP consists of four key sections, as listed below, to demonstrate the methodology to be followed during the site preparation and construction works and the supporting management structure put in place with regard to Health, Safety, Environment and Quality to ensure compliance with all their responsibilities as the Applicant.
- 1.6 This CEMP includes the following sections:
 - Site Information
 - Enabling Works Information
 - Environmental Management and Control Measures
 - Monitoring

Basis of this CEMP

- 1.7 This CEMP is based on the following documents, legislation, Government and industry standards, and construction industry codes of practice and good practice standards:
 - Environment Agency Guidance for Pollution Prevention (GPP) notes (i.e. GPP13: Vehicle Washing and Cleaning and GPP22: Dealing with Spills and others);
 - Construction Industry Research and Information Association (CIRIA) – Control of Pollution from Construction Activities and other documents such as the SuDS Manual;

- Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites, 2009;
- UK Forestry Standard and UK Woodland Assurance Standard; and
- Relevant British Standards including:
 - BS 5228-1:2009, BS 5228-2:2009 'Code of practice for noise and vibration control on construction and open sites';
 - BS 42020: 2013 'Biodiversity: Code of Practice for Development';
 - BS5837: 2012 'Trees in relation to design, demolition and construction. Recommendations';
 - BS 3882: 2015 'Specification for topsoil and requirements for use';
 - BS 3998:2010 'Tree work. Recommendations';
 - BS 3936:2010 'Nursery stock – Specification for trees and shrubs'; and
 - BS 6031:2009 'Code of Practice for Earthworks'.

2 Site Description and Description of Works

Site Description

- 2.1 The Site is located at the former Halewood Distillery at Sovereign Industrial Estate in Huyton, Knowsley, L36 6AD and extends to 6.54 hectares. It comprises a large industrial warehouse unit which was formerly occupied by Halewood International Limited.
- 2.2 The Site is within Huyton Business Park. The Site is bounded by Wilson Road to the north and Cronton Road to the east. This is the second phase of the proposed wider redevelopment of the Sovereign Distillery.
- 2.3 The Site is located and accessed off Wilson Road, and forms part of the wider and well-established Huyton Business Park. It is bordered by Cronton Road (A5080) to the south, industrial and commercial uses to the west and residential housing and industrial units to the north. The Site is well connected to the wider strategic road network, located adjacent to the Junction 6 of the M62 and Junction 1 of the M57.
- 2.4 The Site is accessible by variety of modes of transport, with bus stops located within 400 metres along Cronton Road (A5080), which provide frequent services from Liverpool to Warrington. Huyton Railway Station and Whiston Railway Station are both located within a 10-minute drive of the Site.
- 2.5 The Site is also accessible by foot and bicycle with footways provided adjacent to both sides of Wilson Road and Cronton Road.
- 2.6 The Site is located within a Development High Risk Area which sits within a Coal Mining Reporting Area. The Site is located within Flood Zone 1 and does not fall within an AQMA. The site does not sit within a Conservation Area nor are there any Listed Buildings within 100 metres of the site. There is a Tree Preservation Order (ref. 2-2001) which covers a number of trees around the southwest boundary of the Application Site.

Description of Works

2.7 The Client intends to bring forward the following development:

“Erection of 1no. retail unit (use class e(a) with external display area and car parking and servicing arrangements. partial demolition, reconfiguration and refurbishment of existing employment building to create 2no. industrial/ warehouse buildings with ancillary offices (use classes e(g)(iii), b2 and b8) with servicing and car parking ; retention and amendment of existing site accesses along with internal estate roads; 2no. substations; landscaping; and associated works.”

2.8 This CEMP has been produced to cover works pertaining to foundations, structures, refurbishment, fit out and external works/landscaping. This CEMP therefore is in support of the application referenced above.

2.9 Sensitive Receptors

2.10 The following sensitive receptors have been identified that may be impacted by construction works and have formed a key consideration in developing this CEMP:

- Strategic Road Network (M57/M62), some 175 metres and 200 metres from the Site.
- Premier Inn (Liverpool Tarbock) Hotel to the east of the Site;
- Local workers along the industrial and commercial properties along Wilson Road;
- Phase 1 works to the north of the Site; and
- The landscaping buffer along the southern and western boundary of the Site.

3 Roles and Responsibilities

Roles and Responsibilities

- 3.1 The Construction (Design and Management) Regulations 2015 (CDM Regulations) came into force on 6th April 2015, replacing CDM 2007. As per the requirements of the CDM Regulations, the Client will appoint a Principal Designer and Principal Contractor prior to the commencement of works on-site. Should the Client fail to appoint either a Principal Designer or Principal Contractor, the Client must carry out their duties in respect of the CDM Regulations.
- 3.2 The roles and responsibilities of the Client, Principal Designer and Principal Contractor, as required by the CDM Regulations, are not outlined within this CEMP and will be confirmed in writing upon the appointment of the Principal Designer and Principal Contractor by the Client.

Management Structure

- 3.3 Responsibility for all environmental issues relating to the redevelopment of the Site rests with the Client, the Principal Designer and Principal Contractor appointed for the construction; individual responsibilities will be delegated throughout the management team relating to the co-ordination of inspection, monitoring or reporting. This will include, as a minimum, a Construction Manager.
- 3.4 The Principal Contractor will have the central role in managing Safety, Health, Environment and Quality (SHEQ) issues during enabling and construction activities. The Principal Contractor and all sub-contractors will be required to implement the environmental management and control measures set out within this CEMP.
- 3.5 All works are to be carried out in compliance with the Construction (Design and Management) Regulations 2015, current legislation and guidance, and Client requirements.
- 3.6 A full contact list containing names, job titles and contact numbers of the project team members, shall be produced and maintained. This will include the Client's Environmental Representatives.

Individual Requirements

- 3.7 The duties of the Principal Designer, Project Manager, Construction Manager, Works Manager, and other personnel are detailed below.

Principal Designer (can be the Client /or nominated party)

- Assign appropriate resources to construction activities; and
- Undertake regular site inspections which will include compliance with environmental requirements. See Section 6 of the CEMP for further details on monitoring and reporting.

Project Manager (can also be Principal Designer)

- Allocate appropriate project resources to deal with environmental issues;
- Ensure that the CEMP is effectively established and implemented throughout the project;
- Review and approve environmental action plans; and
- Designate representative responsible for environmental issues.
- Works Manager (part of Principal Contractor team)

- Understand the major environmental constraints and implications for the project;
- Ensure that the need for compliance with environmental issues is communicated to the rest of the project team and sub-contractors;
- Act on findings of internal and external audits;
- Ensure complaints are being addressed and responded to;
- Ensure appropriate pollution response provision is made;
- Report to Senior Management (Principal Designer/Project Manager) on any environmental breaches; and,
- Implement and maintain the operation of the CEMP.

On-Site Environmental Manager/Representative/Ecological Clerk of Works (ECoW) (part of Principal Contractor team)

- Implement and maintain the CEMP;
- Understand the environmental issues associated with the project;
- Maintain and review the environmental risk register;
- Co-ordinate and maintain consultation with DMBC, local residents/businesses, and other interested parties on environmental issues including complaints process;
- Maintain the complaints log;
- Comply with the CEMP;
- Report on environmental incidents to Senior Management and Environmental Regulators as required;
- Co-ordinate with the Project Manager, regular reviews of the CEMP during the project to ensure its continued effectiveness throughout construction activities (See Section 6 for further details);
- Co-ordinate environmental awareness and ensure relevant responsibilities are included within site induction;

Health and Safety Advisor (note: could be same as Environmental Manager/Representative)

- Undertake regular site inspections (See Section 6 for further details);
- Carry out audits at regular intervals defined within the CEMP (See Section 6 for further details); and
- Provide advice and support to Project Management Team.

Environmental Specialists

- Relevant specialists will be employed if necessary during the project to undertake specialist monitoring, undertake surveys and advise the construction staff.

Collective Responsibilities

Project Management Team (Outlined above, including Works Manager, Sub-Agents, Quantity Surveyors, Site Engineers, Section Foremen) and Sub-contractors

- Comply with the CEMP;
- Maintain CEMP document control system;
- Implement the requirements of the CEMP and its supporting documents on-site;
- Report immediately to Environmental Representative/Manager on any environmental incidents;

- Ensure Site personnel are aware of their environmental obligations and have undergone Site environmental awareness training;
- Implement the action necessary to resolve non-compliance issues; and
- All subcontractors should comply with the CEMP, its operational control and procedures while on site.

All Personnel – to be communicated during induction training

- Comply with all operational controls and working procedures implemented by this CEMP;
- Undergo environmental awareness training;
- Report to supervisor immediately on any environmental incidents; and
- Suggest potential modifications and improvements to CEMP.

4 Training and Site Rules

- 4.1 Contractual agreements require that the Principal Contractor and all sub-contractors provide suitability qualified staff to manage and execute works for which they are responsible. The Principal Contractor and all sub-contractors will require that all employees demonstrate an appropriate awareness of local sensitivities (e.g. location of residents/ businesses), expected code of conduct, working knowledge of the legislation, codes of practice, and guidance relevant to the activities in which they are engaged.

Site Induction

- 4.2 The Principal Contractor will operate an induction scheme for all personnel to ensure that they are aware of their individual responsibility to comply with this CEMP. Inductions will outline the key Site issues, personnel activities, hazards and controls and rules and regulations. The Principal Contractor will be responsible for identifying the training needs of his/her personnel and will ensure that appropriate training is provided. Training will include information on local considerations and the Client's expectations of Site behaviour, "toolbox talks" for Site operatives to maintain an appropriate level of awareness on safety, health and environmental topics and to advise employees of changing circumstances as work progresses. Records will be kept of attendance.
- 4.3 General Site induction shall be developed to introduce all Site personnel to the environmental issues connected with the Development, the sensitive receptors and important environmental controls associated with the day to day operation e.g., boundary control, housekeeping, waste management and the emergency procedures colour. A full register of induction attendance shall be maintained on-site.

Toolbox Talks and Method Statement Briefings

- 4.4 Toolbox talks and method statement briefings will be given weekly as the work proceeds and will cover the environmental management and control measures related to specific activities undertaken during the works, for example refueling, hazardous waste removal, spill response etc. A full register of toolbox talks and method statement briefing attendance shall be maintained on-site.
- **Responsibility:** Environmental Manager/Representative:
 - **Action:** Develop general Site induction to include environmental issues and ensure induction records are maintained.

Training Records

- 4.5 All training records will be maintained and filled on-site. The records shall include the content of the courses (all induction and toolbox training), record of attendance and schedule of review.
- **Responsibility:** Environmental Manager/Representative
 - **Action:** Regularly assess Site activities and ensure relevant training requirements are met. Develop and deliver specialised toolbox talks as required to ensure Site activities are carried out in accordance with CEMP

Emergency Procedures and Incident Reports

- 4.6 Procedures will be implemented to respond to any emergency incidents which may occur on-site in order to ensure that compliance with the requirements of the relevant legislation and to avoid or mitigate against any significant environmental impacts. As a minimum the 'Emergency Procedures' outlined within Section 7.5 of this CEMP are to be implemented. However, it is expected that as part of the Principal Contractor's SHEQ system a detailed Emergency Preparedness Plan (EPP) will be developed for the project.
- 4.7 All staff will be trained and made aware of the Emergency Procedures within this CEMP and the EPP. In the event of any incident, the Principal Contractor's Environmental Health and Safety Team will be notified as well as the Client. Additionally, the Environmental Health Officer (EHO) from Knowsley Council and any other interested bodies will be notified.

General Site Arrangements

- 4.8 The Principal Contractor and all sub-contractors shall ensure that the Site layout and appearance is designed according to the following principles:

- All personnel visiting or working on-site must be briefed prior to accessing the Site;
- All plant/ equipment used during the construction activities must be compliant with the Provision and Use of Work Equipment Regulations 1998 (PUWER), maintained and relevant certificates must be retained on-site;
- All substances to be used or handled on-site must have the Control of Substances Hazardous to Health (COSHH) assessment available on-site for staff members to consult;
- At the end of each working day all means of access, e.g. steps, ladders left in position must be secured/removed to prevent unauthorised persons and hazardous areas;
- Smoking is prohibited on-site, except in designated areas, and the possession or use of alcohol or drugs is prohibited;
- Staff members must maintain the Site welfare facilities for the duration of the works;
- A qualified First Aider/Emergency First Aider to be present on-site at all times;
- Standard Personnel Protective Equipment (PPE) is required on-site at all times, as well as additional Protective Equipment as required for specific works;
- Use of audio equipment is not permitted on-site, except in designated areas;
- All staff members must work to their safety method statements and abide by all safety signs at all times;
- The Principal Contractor and all Sub-contractors on-site must co-operate in the interest of health and safety;
- The Principal Contractor and all Sub-contractor staff members will conduct themselves and perform their duties on-site in a safe manner;
- All work areas must have clear, maintained signage;
- Appropriate firefighting equipment must be maintained on-site;
- No fires are permitted on-site;
- All waste materials must be collected and removed from Site at regular intervals; and
- Acts of threat or violence will not be tolerated, and any offender will be removed and permanently excluded from the Site.

- Communication and Community Engagement

Statutory Authorities and Interested Parties

- 4.9 The Construction Manager in conjunction with the Client and with the support of the Environment Manager or any appointed specialists will be responsible for the liaison on important environmental matters with statutory and non-statutory authorities.
- 4.10 Consultation will be established and maintained with a number of regulatory bodies with regard to the important environmental aspects of the Site, as required. These will include: the Knowsley Council EHO, the Environment Agency, Natural England, the Health and Safety Executive and emergency services, as required.
- **Responsibility:** Construction Manager / Environmental Manager/Representative
 - **Action:** Establish and maintain consultation with Knowsley Council and other interested parties about the status of the project, potential impacts, mitigation measures, predicted time scales of activities etc.

Local Community Engagement

- 4.11 The Principal Contractor should commit to providing community relations personnel, who will be the first line of response to resolve issues of concern or complaints. Reasonable steps will be taken to engage with local residents during the works if required. Occupiers of neighbouring properties will be informed in advance of works taking place.
- 4.12 Site boards outlining information on the project and forthcoming works will be erected at the entrance to the Site and at other key locations around the Site. Site contact numbers and e-mail addresses will be displayed as appropriate, along with the complaint's procedure.
- **Responsibility:** Environmental Manager/Representative
 - **Action:** Establish and maintain consultation with local residents, and other interested parties about the status of the project, potential impacts, mitigation measures and predicted time scales of activities.

Complaint Management

- 4.13 A formal complaints procedure will be developed. The Principal Contractor will be responsible for receiving, recording and responding to external complaints.
- 4.14 It is possible that complaints may be raised concerning construction activities, the Principal Contractor shall display contact details and information concerning construction at the site entrance and provided to local residents, the Site Managers will be available to meet and explore issues with concerned parties directly via appointment.
- 4.15 Any complaints received will be taken seriously and addressed as soon as possible by the construction team. All complaints that are received will be reviewed in regular site meetings to ensure that any required actions are communicated to all employees, as appropriate.
- 4.16 Records of complaints are recorded within our Management System as well as through Considerate Constructors Scheme where the Principal Contractor is a member, and the schemes has been registered with.

5 Monitoring and Reporting

Monitoring

- 5.1 Scheduled monitoring of environmental performance and for all compliance auditing will be conducted throughout the works undertaken on-site. This will enable the overall effectiveness of established environmental measures and compliance procedures to be assessed and allow areas of underperformance to be identified so corrective actions can be taken to strengthen environmental safeguards or improve outcomes.
- 5.2 Regular inspections will be carried out on all activities and work areas in order check compliance with this CEMP and regulatory conditions. Inspections are expected to be undertaken by the appointed member of the project team as follows:
- The Works Manager will conduct an inspection on general good order and security on a daily basis;
 - The Works Manager will conduct an inspection of all environmental controls on a fortnightly basis, this will be alternated with the external inspection described below;
 - External Consultants will conduct an inspection of all environmental controls on a fortnightly basis, if required;
 - The Project Manager will conduct an inspection of environmental controls on a monthly basis.
- 5.3 In addition to the above, event based checks will be conducted following any significant event such as rainfall of sufficient quantity to generate run off, high winds, the receipt of an environmental complaint, issue of non-compliance report or any exceedance in monitoring results. Event based checks will be recorded on separate inspection forms detailing the reasons, observations, findings and outcomes of the inspection which should be recorded, and actions closed out.

Performance

Progress Meetings

- 5.4 Performance against the objectives and targets outlined in this CEMP will be reviewed at regular progress meetings. Progress meetings can include internal Principal Contractor meetings and Project Team meetings with Client and Client representatives. Performance against 'rolling' targets can be reviewed and corrective actions agreed, as required. These actions should be monitored to demonstrate continuous review and improvement.
- **Responsibility:** Project Manager/Principal Designer
 - **Action:** Environmental issues to be added to the agenda of all internal progress meetings and external progress meetings (Client /Principal Contractor/Principal Designer).

CEMP Review

- 5.5 The Client, Principal Designer and Principal Contractor will ensure that controls outlined in this CEMP are properly implemented and regularly monitored to ensure their effectiveness. This CEMP will be revised and refined to ensure it remains consistent with environmental regulatory requirements.

6 General Construction Management Measures

Hours of Work

6.1 The standard working and delivery hours for all activities will be:

- 07:30am – 18:00pm hours weekdays;
- 08:00am – 14:00pm hours Saturday; and
- No working or deliveries on Sundays or Bank Holidays without the prior written permission of Knowsley Council.

6.2 These hours will be strictly adhered to unless or in the event of:

- An emergency demands continuation of works on the grounds of safety;
- Minor internal works are being carried out within the confines of the building envelope; and
- Completion of an operation that would otherwise cause greater interference with the environment /general public if left unfinished.

6.3 The following enabling activities are likely to take place between the hours of 07:00am - 7:30am and 18:00pm – 19:00pm on weekdays, and the equivalent times on Saturdays:

- Arrival and departure of workforce on Site;
- Deliveries and unloading;
- Check and examinations of plant and machinery (including test running) and the carrying out of essential repairs / maintenance to plant and machinery;
- Site inspections and safety checks; and
- Site clean-up.

Welfare Facilities, Construction Compound and Material Storage

6.4 Welfare facilities will be provided for all employees. Welfare facilities will be equipped with heating, tables, chairs, a means of heating food and boiling water, wash basins, drying, toilets facilities and hand sanitiser equipment. Welfare facilities will be located with good access, lighting and ventilation and will be maintained and cleared on a regular basis.

Construction Compound and Material Storage

6.5 The construction compound will include the following:

- Parking areas for use by site operatives and visitors;
- Loading and unloading areas;
- Plant and machinery storage areas;
- Material storage areas; and
- Site Office and Welfare facilities

Security On-site

6.6 All deliveries will be scheduled through the Site management team, with the Gateman being made aware prior to the arrival of deliveries. This is to ensure that a banksman is available to control the access and egress from the on-site temporary haul roads.

- 6.7 Banksmen will aid HGVs in entering and exiting the Site and help with opening and closing the gates.
- 6.8 Only authorised personnel will be permitted on Site. All visitors will be required to enter through the main entrance gate to the Site and report to the Construction Manager/Site Manager. All visitors will be required to sign in and out to ensure that Site management are aware of the number of people on-site in the event of an emergency.
- 6.9 Visitors will be required to undergo induction training, wear necessary PPE i.e. safety helmet, hi-visibility attire, safety footwear and will be accompanied by representative on-site at all times.
- 6.10 The hoarding and all storage areas will be checked on a daily basis to ensure that it is maintained in good condition and remains secure. All entrance and exit gates into the Site will be secure at all times.
- 6.11 All mobile plant/equipment will be parked safely and locked within a designated area to prevent tampering and keys to all plant/equipment will be kept in a secured location.
- 6.12 The hoardings will be lit with energy efficient LED lighting sited so to minimise visual intrusion and light spillage/ pollution at the nearby properties but will comply with regulations to ensure safe passage around the perimeter.

Fire Prevention

- 6.13 The Principal Contractor and all sub-contractors will ensure that construction work is carried out in compliance with the Regulatory Reform (Fire safety) Order 2005. All necessary measures will be taken to minimise the risk of fire and the Principal Contractor and all sub- contractors will comply with the requirements of the local fire authority and the Health and Safety Regulations.
- 6.14 To reduce the risk of fire occurring within the Site:
 - All designated work areas will be non-smoking;
 - A specific area within the Site Offices will be designated as a smoking area and will be equipped with containers for smoking waste. This will not be located at the boundary adjacent to neighbouring land (i.e. the woodland areas); and,
 - Open fires will be prohibited on-site at all times.
- 6.15 Fire prevention facilities must be present and easily accessible at all storage facilities. Firefighting equipment is to be present on-site at all times as per the Health and Safety regulations.

Access and Haulage Routes

- 6.16 The route will be from Wilson Road, the site entrance will then be on the left or right handside. Most vehicles entering and leaving the Site will be HGVs but there will also be vans and cars.
- 6.17 All construction traffic entering and leaving the site will be closely controlled and during delivery times, banksmen will be positioned at the site gatehouse to control and record entry and exit movements.
- 6.18 There will be no operatives or visitor parking on the surrounding road network. Access gates to the construction site will be kept locked outside of normal working hours. Contact numbers for access will be displayed at the Site entrance.
- 6.19 For security purposes, a member of staff will record the vehicle details and direct deliveries to report to the reception office where appropriate personnel will direct the driver to deliver the material in a specific area of the Site.

- 6.20 During the construction programme, all traffic associated with the Site will be advised of the appropriate transport routes that must be used, with all regular visitors provided with written notification of the agreed access and routing strategy.
- 6.21 Where feasible, any required changes to the routing strategy due to significant roadworks or events taking place on the proposed construction vehicle route will be agreed and communicated with sub-contractors and suppliers.

Lighting

- 6.22 Lighting on construction sites whether natural or artificial is essential to health and safety. Poor lighting can represent significant risks to staff members which can result in accident and injury, the quicker and easier it is to see a hazard the better the likelihood of avoiding it.
- 6.23 As outlined within section 35 of the CDM Regulations (2015), the Site must be provided with suitable and sufficient lighting, which must be, so far as is reasonably practicable, by natural light. This relates to both the construction site as well as the approach and traffic route to the development site.
- 6.24 Site lighting provided will comply with the Institution of Lighting Engineers' guidance notes for the reduction of light pollution and the provisions of BS 5489, Code of Practice for the Design of Road Lighting, where applicable.
- 6.25 In determining any temporary construction lighting arrangements for the Site, due consideration will be given by the Principal Contractor to residents and other sensitive receptors that may experience a nuisance by the light.
- 6.26 General control measures for the use of lighting on site are outlined below:
- Temporary Site lighting when used adjacent to residential areas must be fixed with a noise screen to keep noise levels to a minimum;
 - As far as is practical, lighting must be directed away from residential and ecological sensitive areas;
 - Lighting should always be positioned to prevent glare, the use of LED that significantly reduce upward glare;
 - Luminaires used around the perimeter of the construction Site compound will be mounted within the Site compound boundary, so that the main photometric distribution of the luminaire is inwards, thereby keeping all light within the boundary and preventing artificial light spill;
 - LED Lamps should be warm white spectrum (<2700k)
 - Wherever possible consideration will be given to minimise the need for lighting in areas with soft or natural landscaping;;
 - Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats;
 - Wherever possible and subject to landscape design, natural and solid screen perimeters will be included to reduce obtrusive light to adjacent sensitive areas and light will be extinguished when not in use;
 - Wherever possible, all artificial lighting used during the construction phase will be directed below the horizontal to prevent unwanted upward light;
 - When not in use all artificial lighting used for construction will be extinguished;
 - Modern, high efficiency lamps and luminaires will be employed to ensure energy efficient; and
 - Illuminance levels will be designed in accordance with BS EN 12464-2: 2014 and CIE 129.

7 Environmental Control Measures by Topic

Introduction

- 7.1 The following section of the CEMP describes the general mitigation control measures to be implemented throughout Development, on a topic by topic basis, to ensure the protection of the environment from potential adverse and negative effects from the Development.

Traffic and Transportation

Wheel Washing

- 7.2 On-site measures will be implemented, if required, to minimise any mud and detritus being deposited on the roads around the Site. If needed, these would be placed at the Site egress or egress of the construction compounds.
- 7.3 Wheel washing facilities could include, but not limited to, drive-over dry ramp system, drive through bath system, and high pressure spray wash systems. Drive-over dry ramp system works on the vibration effect created by the vehicle tyres driving over inverted steel bars on a raised platform, the vibrations and motion flexes open the tyre treads enabling dirt and debris to fall to the ground.

Mitigation Measures

- 7.4 Measures to be adopted to reduce traffic and transportation effects include:
- The sheeting of loads will ensure that any material which is removed from Site is secure;
 - Fire and emergency access routes will be kept free from obstruction at all times;
 - Agreed access and egress routes on the Site will be observed at all times;
 - Footpaths and roads will always be kept clear of obstructions, including parked cars;
 - Footpaths and roads will be protected and maintained in a condition suitable for vehicular and pedestrian traffic;
 - Materials will not be stored on or near roadways, paths or other areas where they may constitute a hazard;
 - Should it be required, banksmen will be employed to assist in traffic movements on and off the Site;
 - In the event of an emergency, a nominated person will meet the emergency services at the entrance to the Site and guide them to the emergency;
 - Wherever possible, traffic will enter the Site in forward gear and, after unloading/loading, drive round and leave the Site without the need to reverse;
 - Vehicles not fitted with an audible reversing alarm/flashing beacon will have a banksmen present when reversing or carrying out difficult manoeuvres on Site;
 - Banksmen will always wear high visibility clothing;
 - A designated parking area to accommodate staff and visitors within the Site boundary;
 - Delivery vehicle movements will be controlled on Site and will follow the Site rules;
 - Safety signs will be clearly posted to make personnel on site aware of traffic hazards;
 - The use of mobile phones whilst driving or operating plant is prohibited;
 - Drivers must obey the on-site speed restrictions;
 - Pedestrian accesses which leads onto any traffic route will be sufficiently separated to enable pedestrians to see approaching plant and vehicles;

Adequate separation between vehicles and pedestrians will be established to ensure safety or, where not reasonably practicable, other means of protecting pedestrians and effective arrangements for warning; and

- Every traffic route, where necessary for reasons of health or safety, will be clearly indicated by suitable signs regularly checked and properly maintained.

Noise and Vibration

7.5 All works must comply with BS 5228: Noise and Vibration Control and the construction and Open Sites Part 1: Noise and Part 2: Vibration. The Principal contractor will ensure that appropriate noise and vibration mitigation measures are implemented.

Mitigation Measures

7.6 Best practicable means (BPM) will be applied during construction works at all times to minimise noise (including vibration) at neighbouring residential properties and other sensitive receptors. BPM are defined in Section 72 of the Control of Pollution Act 1974 and Section 79 of the Environmental Protection Act 1990 as those measures which are “reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to financial implications”.

7.7 The following measures will be adopted to reduce noise and vibration during the works:

- All plant brought on to Site will comply with the relevant EC/UK noise limits applicable to that equipment or will be no noisier than would be expected based on the noise levels quoted in B2 5228-1. Each plant item will be well maintained and operated in accordance with manufacturers’ recommendations and in such a manner as to minimise noise emissions;
- Plant which is known to emit noise strongly in one direction will be orientated in such a way that noise is directed away from sensitive areas wherever possible;
- Engine covers will be kept closed when machines are in use and idling;
- Compressors will be silenced or sound reduced models fitted with acoustic enclosures, and will be silenced or screened as appropriate (e.g. when in use close to sensitive receptors);
- Pneumatic tools will be fitted with silencers or mufflers when in use close to sensitive receptors;
- Care will be taken when erecting or striking scaffolds to avoid impact noise from banging steel;
- 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/vibration generation;
- Shouting and raised voices shall be kept to a minimum;
- Heras fencing will be erected around the construction Site compound, where feasibly and practicable, and will continue to be maintained throughout the works. Daily inspections will be undertaken to ensure the security of the site welfare and enable the control of operatives entering and leaving the construction area.
- Toolbox talks will instruct workers on noise and vibration issues;
- Electrically powered plant will be preferred, where practicable, to mechanically powered alternatives;
- Deliveries to Site will be programmed and routed to minimise disturbance to local residents;
- Items of plant operating intermittently will be shut down in the periods between use;
- Where feasible, all stationary plant will be located so that the noise effect at receptors is minimised and, if practicable, every item of static plant, when in operation, will be noise attenuated using methods based on the guidance and advice given in BS 5228;

- There will be a considerate and neighbourly approach to relations with local residents;
- Vehicles will not wait or queue up with engines running on the Site or on the public highway;
- Where it is logistically practicable to do so, noisy works will be programmed to take place during normal daytime hours; and
- A Site inspection will be undertaken daily to identify and rectify any issues which may increase noise and/or vibration.

8 Site Waste Management Plan

Overview

- 8.1 This SWMP has been developed to enable the control of waste throughout the construction phases of the Development. The document has been prepared in accordance with the Site Waste Management Plan Regulations (2008), however, the Regulations were repealed on the 1st of December 2013 by The Environmental Noise, Site Waste Management Plans and Spreadable Fats etc. (Revocations and Amendments) Regulations 2013.
- 8.2 The SWMP Regulations' (2008) aim was to make the construction industry more sustainable by ensuring that those responsible for development projects are aware of the waste being produced so that it can be reduced. Although no longer required by legislation, it is recognised that an SWMP would support the identification of actions to minimise construction waste from the Development being sent to landfills. Accordingly, the SWMP will be implemented by the Principal Contractor, once appointed, as an internal waste management and monitoring tool, and as a means of implementing best practice.
- 8.3 This SWMP uses the legal definition of waste as defined in the 2008 Waste Framework Directive (2008/98/EC);

“Any substance or object which the producer discards or intends or is required to discard”.

- 8.4 This definition of waste also covers substances and objects that fall outside of the commercial cycle, in particular, items that are sold or taken off-Site for recycling are wastes, as they require treatment before they can be resold or reused. Therefore, waste includes, but not limited to, surplus spoil, scrap, recovered spills, unwanted surplus materials, packaging, office waste, wastewater, broken, worn-out, contaminated or otherwise spoiled plant, equipment and materials, and general waste.

Waste Management Procedures

General

- 8.5 Waste produced during all construction activities on Site will be subject to the 'Duty of Care' under the Environmental Protection Act (2021). It is the joint responsibility between the Principal Contractor and the Client to ensure that waste produced on-site is disposed of in accordance with legislation.
- 8.6 The transportation of waste from Site will comply with the 'Duty of Care' requirements. This includes ensuring waste is transported by registered waste carriers to appropriately licensed sites for processing or disposal. It also involves ensuring legally compliant waste transfer note documentation has been completed for each removal of waste from Site, which is kept for a threat least 7 years this includes any potential investigation by HMRC.
- 8.7 The Principal Contractor will manage waste and develop the SWMP in accordance with the waste hierarchy. Specifically, the amount of waste produced will be minimised by consideration in development of the design and, where produced, will be reused before recycling / disposal options are considered.
- 8.8 The Principal Contractor will verify waste carriers and disposal facilities using EA Public Register and maintain documentary evidence that these requirements are being met. A register of waste

carriers, disposal sites (including transfer stations) and relevant licensing details will be produced and maintained on Site.

- 8.9 Materials that can be beneficially used in the future development of the Site will be segregated directly on Site.
- 8.10 Re-use of site won materials, where suitable soils / sub-soils will be retained for reuse on site, to ensure sustainable construction methods are implemented by reducing material removed from site, this will depending on:
- Cut and fill balance
 - Contamination
 - Geo-technical suitability
 - Certainty of Use
- 8.11 Where made ground or contaminated soils are present a Materials Management Plan under CL:Aire DoWCOP can be used to plan, monitor and report on the re-use of excavated soils on site to ensure that legal obligations are fully complied with.
- 8.12 Clean natural occurring materials are exempt under Article 2 of the Waste framework Directive and is not designated a waste until it is intended to be discarded, records of the re-use of natural materials should be maintained as part of the MMP.
- 8.13 All excess soils will be removed from site to an appropriately licenced disposal site for re- use off site.

Storage at Construction Site Compounds

- 8.14 The construction Site compound will incorporate a designated Waste Storage Area (WSA). This will be surfaced with an impermeable barrier, such as hardstanding/tarmac or using impermeable membranes, and the location of any existing drainage will be noted.
- 8.15 At the WSA, waste will be segregated into the following as a minimum:
- Recyclable Materials – Wood, Metals, Paper/Cardboard, Glass, Plastic;
 - Plasterboard;
 - Batteries;
 - Aerosols;
 - General Waste;
 - Hazardous Solid Wastes; and
 - Hazardous Liquid Wastes.
- 8.16 The following waste management procedures will be implemented:
- Lockable storage will be provided for all hazardous waste;
 - All waste containers will be sited at least 20m away from watercourses, ditches and other areas of environmental sensitivity;
 - Liquid wastes will be stored in containers and stored within a suitable bunded area, or otherwise provided with secondary containment;
 - Separate containers will be provided for each type of hazardous waste; and
 - Portable toilet facilities on Site (Portaloos etc) will be emptied by the facility provider as

per their service agreement.

Non-Hazardous Waste Management

8.17 Non-hazardous waste will be removed and placed into open waste bins located within WSA. Non-hazardous wastes will consist of, but not limited to:

- Fixtures and fittings;
- Ferrous and non-ferrous materials;
- Plaster board;
- Waste electronic and electrical equipment;
- Glass;
- Wood;
- Paper;
- Plastic; and
- Food waste.

8.18 All generated waste will be sorted for reuse, recycling or disposal, and placed into their respective storage areas. All non-hazardous waste that is not suitable for reuse on Site will be loaded out onto waste trucks from the registered waste contractor, and once full, transported to a licensed recycling centre or nominated landfill site.

Hazardous Waste Management

8.19 Where any hazardous waste is to be handled for disposal this shall be carried out in accordance with developed risk assessments, and where a potential hazardous waste cannot be identified then a waste management company or consultant will be employed to determine what the substance is, the required control measures for handling it, means of transportation and method of disposal.

8.20 All identified hazardous waste will be removed and placed into separate secure and sealed waste bins/skips which will be located within their own designated area within the WSA, which is restricted from public access.

8.21 A maximum of 80 cubic meters of hazardous waste shall be permitted to be stored on Site at any given time.

Waste Carriers

8.22 All waste generated on the project shall be dealt with in accordance with legal requirements. Each waste carriers licence details for each waste stream will be recorded by the Principal Contractor's Waste Champion (WC) and appended to the Site Waste Management File (SWMF).

Fly-Tipping

8.23 Fly-tipping of waste on or adjacent to ongoing construction projects is prohibited. Any waste carrier found to be fly-tipping will have their contract terminated immediately and reported to the appropriate authorities.

8.24 Should waste be fly-tipped onto the Site, the Principal Contractor has a 'Duty of Care' to ensure it is dealt with safely and disposed of correctly even though not the producer of the waste.

Burning of Waste

8.25 No burning of any waste will be permitted on Site or at the Site compound/storage areas.

Waste Documentation

8.26 All waste documentation will be retained at the main Site compound, and following completion of the project at the Principal Contractor's head office. This includes:

- SWMP (2 years after end of construction);
- Waste transfer documentation (2 years for WTNs and 3 years for hazardous waste consignment notes);
- Copies of any exemptions or permits; and
- Copies of waste carrier and disposal site licences.

9 Air Quality and Dust Management Plan (AQDMP)

Overview

- 9.1 The main source of potential adverse dust impacts associated with the development of the Site are due to particulate emissions which are deposited as dust particles and PM₁₀ and PM_{2.5} arising from construction activities.
- 9.2 Therefore, a Site wide scheme for monitoring of dust levels is proposed, the measures for dust control are set out within this AQDMP with general provisions and specific mitigation measures to reduce potential impacts on local air quality and dust from activities. It also provides information on the monitoring to be undertaken during development to ensure that mitigation measures are suitable and effective.
- 9.3 With appropriate mitigation in place, air quality effects will not be significant. This section of the CEMP outlines the relevant mitigation measures that will need to be implemented.
- 9.4 Particulates are referred to within this document as follows:
- Dust – Defined as all particulates up to 75 µm in diameter (according to BS6069) and comprising both suspended and deposited dust;
 - PM₁₀ – Comprising coarse particles (2.5 -10 µm in diameter) which are primarily from non-combustion sources;
 - PM_{2.5} – Fine particles (<2.5 µm) from both non-combustion and combustion sources; and
 - PM₁ – Ultrafine particles (<1 µm) primarily from combustion processes.
- 9.5 This AQDMP provides a mechanism to judge the effectiveness of any in-use dust control techniques and therefore it should be reviewed regularly. The AQDMP will outline the following components:
- Potential air quality impacts;
 - Mitigation measures; and
 - Management, reporting and review.

Potential Air Quality Impacts

- 9.6 Upfill and earth moving activities that have the potential to generate and/or re-suspend dust and particulate matter include:
- Site clearance and preparation;
 - Preparation of temporary access/egress to the Site and haulage routes;
 - Earthworks;
 - Materials handling, storage, stockpiling, spillage and disposal; and
 - Movement of vehicles and construction traffic to, from and within the application Site confines including excavators and dumper trucks).

9.7 The main potential air quality effects that may arise from those activities are:

- Dust deposition, resulting in the soiling of surfaces; and
- Dust plumes, affecting visibility and amenity.

9.8 Dust generation is site-specific. It must be noted that the level and distribution of construction dust emissions will vary according to factors such as the type of dust, duration and location of dust-generating activity, weather conditions and the effectiveness of suppression measures. Dust nuisance is normally experienced as a result of dust deposition upon clean surfaces such as windows, car, laundry and environmental receptors.

Construction Risk Assessment

9.9 This CEMP identifies the following possible air quality effects from the Development:

Earthworks

9.10 Soil-stripping, ground-levelling and excavation can all potentially generate dust. The movement of vehicles and plant around the Site which are involved in earthworks can lead to dust emissions and re-suspension of dust during movements.

Construction Activities

9.11 Construction activities required will vary from each activity undertaken during works. However, numerous construction works can potentially generate dust, examples include; vehicle and plant movement, and stockpiling activities.

Track-out

9.12 Construction vehicles moving to and from the Site over unpaved ground can transport and deposit dust and dirt onto the public road network. Once deposited on the public road network it can then be re-suspended by other vehicles using the network and transferred further afield.

Mitigation Measures

9.13 All works will be undertaken in accordance with IAQM guidance. A number of mitigation methods will be implemented to minimise the nuisance and impact arising from dust and maintain air quality levels, which are outline below.

General Measures

Site management

- Contractors will be instructed to use all reasonable means available to keep dust to a minimum;
- Avoid dry sweeping of large areas;
- All staff will receive appropriate training on dust control;
- Wind speed and direction must be taken into account when organising on Site operations;
- The use of damping down equipment must be employed where dust may be generated to control dust at source. Water runoff from dust suppression activities will be controlled;

- Materials with the potential to produce dust will be stored away from the Site boundaries;
- Undertake daily on-site visual inspection to monitor dust;
- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner and record the measures taken;
- Make the complaints log and/or daily logs available to the local authority, when asked;
- Take appropriate remedial action in a timely manner with a record kept of actions taken;
- Dust Site inspections must be increased in particularly hot and windy conditions; and
- Record any exceptional incidents that cause dust and/or air emissions, both on- or off-site and action taken to resolve the situation in the log book.

Site maintenance

- As far as possible, plan Site layout so that machinery and dust causing activities are located away from sensitive receptors;
- Where practicable, erect solid screens or barriers around dusty 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 active for an extensive period;
- Install green walls, screens or other green infrastructure to minimise the impact of dust and pollution;
- Avoid Site runoff of water or mud;
- Burning of any material is prohibited anywhere on-site;
- Remove materials that have a potential to produce dust from Site as soon as possible, unless being re-used on Site; and
- Cover, seed or fence stockpiles to prevent wind erosion of materials.

Site Logistics

- Select suitable haul routes away from sensitive areas, if possible;
- Reduce the width of haul roads (while still allowing two-way traffic) to minimise surface area from which dust may be produced;
- All vehicles will switch off engines when stationary and not involved in construction activities;
- Material deliveries and vehicle access to the Site will be timed to avoid the need to queue outside the Site prior to opening or whilst other deliveries are completed;
- Vehicles on Site will use hard standing areas for deliveries and removal of material(s) from Site. These surfaces will be kept clean to avoid the build up of dust and regularly damped down;
- All vehicles carrying loose or potentially dusty materials to and from the Site will be covered;
- All vehicles and plant will be well maintained and serviced with accurate records available for inspection;
- All vehicles must comply with current emission standards; and
- Impose and signpost a maximum speed limit of 15mph on surfaced and 10mph on un-surfaced haul roads and work areas within the Site. (if long haul routes are required these speeds may be increased with suitable control measures provided, subject to the

approval of the nominated undertaker with the agreement of the local authority, where appropriate).

Construction

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques, such as water sprays or local extraction;
- An adequate water supply should be provided on Site for effective dust suppression, using non-potable water where possible and appropriate;
- Before concrete pours, vacuum dirt in form work rather than blowing it out;
- Use enclosed chutes and conveyors and covered skips; and
- Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable.

Specific Measures

Earthworks

- Minimise drop heights when unloading and loading material into vehicles;
- Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable;
- Use hessian or mulches where it is not possible to re-vegetate or cover topsoil as soon as practicable;
- Locate stockpiles of fine grained material out of the wind (or provide wind breaks) to minimise the potential for dust generation;
- Stockpiles and mounds must be at an angle no greater than the natural angle of repose of the material, and stockpiles/mounds must not have sharp changes in shape;
- Prevention of wind-borne dust from stockpiles/mounds should be achieved through suitable and sufficient use of water sprays, wind barriers, and protective fences of a similar size and height to the stockpile/mound;
- Short-term storage of stockpiles/mounds should be enclosed or kept under sheeting; and
- Smaller supplies of fine power materials should be sealed after use and store appropriately to prevent dust.

Plant and Machinery

- Ensure all vehicles switch off engines when stationary – no idling vehicles.
- All Site plant should have upward facing exhaust and radiator cowls to reduce the generation of dust;
- Minimise on-site transportation distances;
- Install hard surfaced haul routes, where practicable;
- Water sprays to moisten unpaved and water-assisted dust sweepers on paved on-site haulage routes to be implemented;
- Low emission vehicles will be used where possible, with plant fitted with catalysts filters or similar devices;
- The discharge from screens onto conveyors or into other equipment should be enclosed as far as is practicable;
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or

handling equipment and use the fine water sprays on such equipment wherever appropriate; and

- Deposits of dust on external parts of the plant should be cleaned off at the end of each working day in order to minimise the potential for wind entrainment.

Management, Reporting & Review

- 9.14 This AQDMP is intended to be used by construction staff and contractors on a day-to-day basis. The nominated person, normally the Works Manager, in conjunction with the Environmental Manager/Representative will be responsible for the management, control and implementation of the AQDMP on site. The full list of roles and responsibilities for all members involved during the redevelopment of the Site are outlined within Section 3 of this CEMP.
- 9.15 Scheduled monitoring of environmental performance and formal compliance auditing will be conducted throughout construction activities. The frequency of Site inspections should be increased when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions. The monitoring programme for the redevelopment of the Site is outlined in Section 6 of the CEMP which includes daily, event and monthly based inspection

References

- ⁱ APABE/Historic England, 2017. Guidance for Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England. Second Edition. February 2017.
- ⁱⁱ Historic England, 2018 The Role of the Human Osteologist in an Archaeological Fieldwork Project. Swindon. Historic England. September 2018.
- ⁱⁱⁱ HMSO, 1996. Treasure Act 1996.
- ^{iv} Institute of Air Quality Management (IAQM) (2016) Guidance on the Assessment of Dust from Demolition and Construction, Version 1.1 [Online] Accessed via <http://iaqm.co.uk/text/guidance/construction-dust-2014.pdf>
- ^v Defra, (2009); 'Construction Code of Practice for the Sustainable Use of Soils on Construction Sites'. Accessed on 14/05/2018. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/707134/pb13298-code-of-practice-090910.pdf