



Former St Josephs Convent
Preparatory School 46 Old Road East
Gravesend Kent
DA12 1NR
CEMP

Mar 2026

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1. Introduction

This Construction Environmental Management Plan (CEMP) has been prepared by Galliard Construction Limited on behalf of Galliard (Gravesend) Ltd.

This is a working document and will be developed as the project progresses.

The updating will typically be carried out through the development of project specific risk assessment and method statement (RAM's) managed by the Principal Contractor.

The various method statements, logistics plans, site notices/administrative documentation etc. will be available for inspection on site they will include but not be limited to the following activities: -

- Details of site management, including contact details (phone, postal address e mail).
- Location of site facilities
- Working Hours
- Security fencing/hoardings, depicting a readily visible 24-hour contact number for queries or emergencies.
- Measures to be adopted to ensure that pedestrian access past the site on the public footway is safe during construction works.
- Control of offsite parking for operatives and visitors' vehicles
- Dust Management controls, which will include wheel washing.
- Cleaning of highway and footway adjoining the site
- Predicted noise and vibration levels during construction.
- Measures for monitoring noise and vibration levels using methodologies for both monitoring and mitigating as agreed with the Local Authority
- Measures of minimising the impact of noise and if appropriate, vibration arising from construction activities
- Location of vehicle and construction machinery access points during the period of site works
- Restrictions on the size of construction vehicles and machinery accessing the site, required to ensure that no damage occurs to adjacent streets throughout the construction period.
- Methods of protecting services such as pipes and water mains within the highway or footway
- Measures to be adopted to maintain the site in a tidy condition in terms of storage/disposal of waste, storage and unloading of building materials and similar construction activities.
- Development of Traffic Management
- Procedures for controlling sediment runoff, dust and noise along with the removal of soil, debris and demolition and waste construction materials from site.
- Interface with third parties and adjacent stakeholders

The aim of this Management Plan is to help deliver this project with minimum disruption to the local environment. Throughout the preparation of this plan and throughout the project reference will be made to all available standards and best practice guidance, but in particular the following documents: -

- Control of pollution and noise from demolition and construction sites – Good Practice Guide
- The Control of dust and emissions from Construction and demolition (July 2014)
- ICE Demolition Protocol – 2008
- BS 5228 parts 1 and 2 – Code of practice for noise and vibration control on construction and open sites
- BS 6187:2011 – Code of practice for full and partial demolition
- Implementation of procedures for best practice pollution prevention and procedures in accordance with document PPG 6 – Pollution Prevention Guidelines, Working at construction and Demolition sites
- Standard for construction logistics – Managing work related road risk (WRRR)

The details of this management plan will be subject to monthly review and audit and be referred to in all monthly site meetings. Including the monitoring and recording of water (m³) arising from the use of construction plant, equipment (mobile and fixed) and site accommodation.

All staff will be required to read and acknowledge the content of the plan and where appropriate specific training will be given with regard to any duties required.

2. The Development

The site is located at Gravesend, Kent and its postal address is:

Former St Josephs Convent Preparatory School

46 Old Road East Gravesend Kent

DA12 1NR

The development has planning consent (24-0013-FUL) awarded by Gravesham Borough Council for the:

“Conversion of existing Victorian building into 6 flats. Demolition of existing outbuildings. Erection of a 3 storey medical centre. Erection of a building containing 7no flats. Erection of 41no houses. Associated works to include; access, public open space and landscaping.”

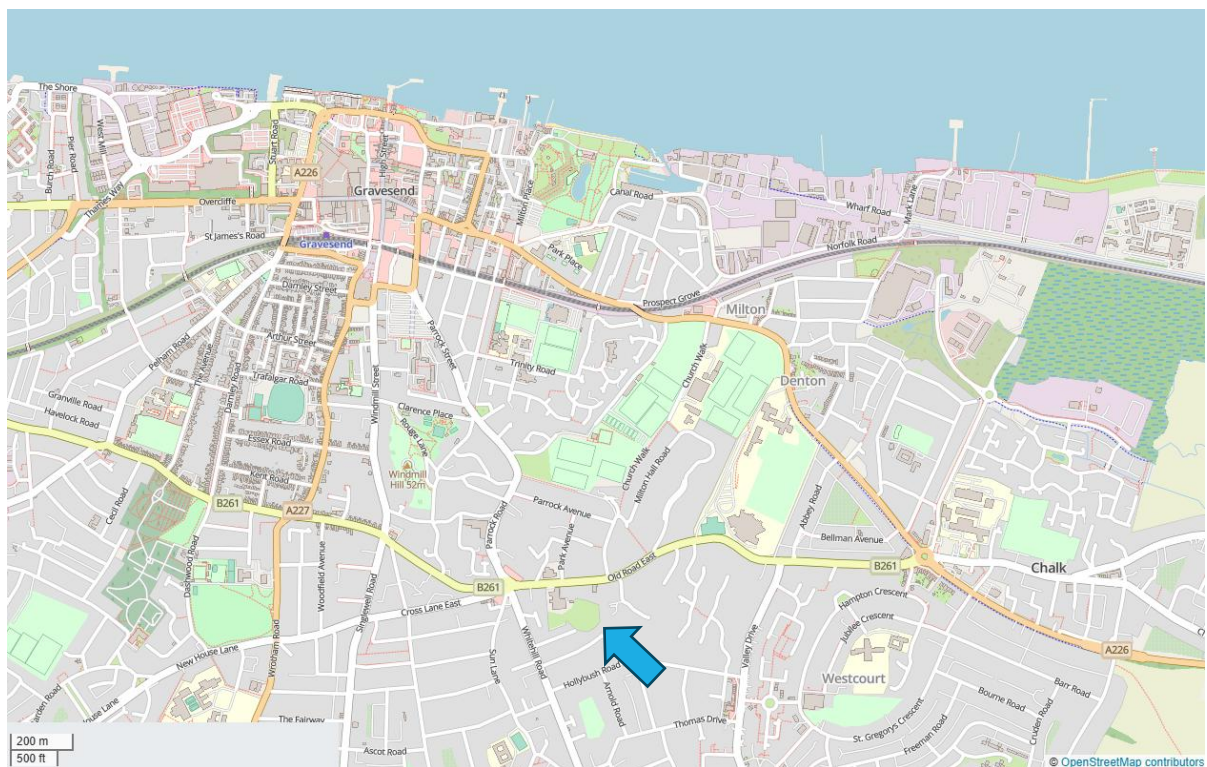


Figure 1 Site Location Plan

3. Construction Key Roles

The roles and key responsibilities of the entities involved in the development are identified in the following tables.

Role	Key Responsibilities
Galliard (Gravesend) Ltd	Responsibility for appointment / allocation of the Principal Designer, Employers Agent and Principal Contractor.
Principal Designer	Appointed by the client the Principal Designer will be manage all the pre-construction Health and Safety aspects of the project. Responsibilities include: plan, manage, monitor and coordinate health and safety in the pre-construction phase. In doing so they must take account of relevant information (such as an existing health and safety file) that might affect design work carried out both before and after the construction phase has started help and advise the client in bringing together pre-construction information, and provide the information designers and contractors need to carry out their duties work with any other designers on the project to eliminate foreseeable health and safety risks to anyone affected by the work and, where that is not possible, take steps to reduce or control those risks ensure that everyone involved in the pre-construction phase communicates and cooperates, coordinating their work wherever required liaise with the principal contractor, keeping them informed of any risks that need to be controlled during the construction phase
Principal Demolition Contractor	Responsibility for the enabling and construction activities and holds overall responsibility for the activities on site and implementation of the CEMP. Responsibilities include:
And Principal Construction Contractor	ensuring that the works are carried out in accordance with the Updated CEMP and contract documentation, including the implementation of mitigation and management measures, environmental monitoring, environmental auditing, and other matters covered in this CEMP; ensuring the appointed contractors / subcontractors are appropriately qualified and competent; ensure environmental awareness training for all workers, including an induction for all site workers / contractors which includes environmental elements pertaining to the implementation of the CEMP; monitor the performance of contractors / sub-contractors and provide direction as necessary; liaise regularly with the Environmental Manager;

complete a monthly audit of the CEMP and report findings, with follow up on identified actions as required; and

undertaking corrective actions in the event of breaches of the CEMP or applicable environmental legislation;

ensuring that resources are appropriately allocated to allow for the inclusion of the actions included in the CEMP for the duration of the project;

responsible for the actions of management of contractors / sub-contractors associated with the enabling and construction works and ensuring that they appropriately comply with the requirements of the CEMP and applicable environmental legislation.

undertake environmental monitoring and reporting as specified in the CEMP;

undertaking environmental audits in conjunction with the Principal Contractor Team as specified in the CEMP. Reporting of audit findings is to occur on a monthly basis;

regularly review the CEMP to ensure it accurately reflects the enabling and construction works occurring on site, at a frequency of no less than six months (unless significant changes to the enabling and construction methodology occurs);

ensure that all relevant environmental consents, licences, permits etc. are in place prior to the commencement of the relevant works. Ensure the requirements of these permits are included in the CEMP and are adhered to;

act as the first point of contact for environmental issues associated with the Proposed Development;

undertake environmental training (including toolbox talks) as required, to ensure that enabling and construction staff are aware of the environmental requirements;

ensure that the objectives of the CEMP are being achieved and are not contrary to any relevant legal requirements;

Contractor(s) / Sub- Contractor(s)	work to agreed plans, methods and procedures to minimise environmental impacts; commit to undertaking works associated with the Project in accordance with the CEMP; undertake the site induction training (which is to include an environmental management element); report all environmental incidents immediately to their line manager; and monitor the workplace for potential environmental risks and alert their line manager if any are observed.
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Table 1– Summary of Anticipated Key Roles and Responsibilities relating to the Implementation of the CEMP.

Role	Name	Contact Details
Galliard (Gravesend) Ltd	TBC	TBC
Principal Designer	TBC	TBC
Principal Demolition Contractor	TBC	TBC
Principal Construction Contractor	TBC	TBC
Structural Engineer	TBC	TBC
Project Manager	TBC	TBC
Site Manager	TBC	TBC
Health and Safety Officer	TBC	TBC
Community Liaison Manager	TBC	TBC

Table 2 – Key Project Contacts.

4. General Framework and Administration

Public Liaison

Contractors should provide Gravesham Borough Council Environmental Management Team with a full programme of key activities for the development before it starts.

The specific measures to be implemented by the Demolition and Construction Contractor will include:

- the Contractor will liaise with Gravesham Borough Council Environmental Management Team on a regular basis, agreeing routine arrangements for each site's activities and ensuring compliance;
- the Contractor will be responsible for establishing and maintaining contact with and local residents; keeping them informed of construction matters likely to affect them;
- this liaison will include the regular and frequent distribution of Newsletters and attendance at meetings at the request of Gravesham Borough Council with representatives of local businesses and residents' groups. (See under community relations below);
- the Contractor will provide an information and reporting telephone 'Hot Line' staffed throughout working hours. Information on this facility shall be prominently displayed on site hoardings. The Contractor's nominated persons will attend monthly reviews with Gravesham Borough Council and Gravesham Borough Council Environmental Management Team, or otherwise as requested;
- the Contractor will facilitate Gravesham Borough Council Environmental Management Team to undertake regular planned inspections of the site to check compliance and associated records;
- the Contractor will provide Gravesham Borough Council with full programmes, providing details on the nature and timing of the main site activities. The contents of these programmes are specified in the following section.

Community Liaison

Contact with neighbours and the general public throughout the demolition and construction programme will be pro-actively maintained, with regular update meetings and the issuing of a brief news sheet on progress. Update sheets will be maintained on site hoardings. Contact information will be clearly displayed on site hoarding.

The Contractor will nominate a community relations personnel, who will be focussed on engaging with the local community. The Contractor will ensure that occupiers of nearby properties and residents are informed in advance of works taking place, including the estimated duration. The Contractor will inform local businesses and residents likely to be affected by such activities at least 14 days prior to undertaking the works, as well as applying for the appropriate permits and licences, e.g. vehicle crossovers or parking bay suspension.

Neighbour and Public Relations Strategy

To successfully develop and implement a 'Neighbour and Public Relations Strategy', the following actions will be undertaken:

- initial Contact: Once full planning permission has been obtained, Demolition and Construction contractors have been appointed, formal contact will be established with the nearest neighbours and those who could potentially be affected by the demolition and construction works; and
- Contact during Works Period: A single point of contact for neighbour and public relations will be established, with a senior member of the project staff nominated for the role. Contact details for this single point of contact will be displayed on the site hoarding. Outside normal working hours, site security will act as the main point of contact via a dedicated phone number. Security will alert the staff contact if necessary (available 24 hours). Should there be any complaints, these will be logged, fully investigated and reported to the relevant department within Gravesham Borough Council as soon as possible. The complainant will be informed as to what action has been taken.

Emergency Incident Communication

In the case of work required in response to an emergency, Gravesham Borough Council and all neighbours will be advised as soon as reasonably practicable that emergency work is taking place. Potentially affected occupiers will also be notified of the 'hotline' number, which will operate during working hours.

Construction Staff and Training

All site construction staff to be made aware of the requirements of the CEMP and will be made responsible for its implementation. Regular training is to be implemented where deemed appropriate, and in response to non-compliance incidents.

Health and Safety

The Principal Contractor will prepare and implement a project Specific Health and Safety Plan. This Plan is to be provided to and agreed with Gravesham Borough Council and other relevant parties as required.

Working hours

Working Hours will be as directed by the Planning Consent and are expected to be:

08.00 to 18.00 Monday to Friday

09.00 to 13.00 Saturday

No working on Sundays, Bank or Public Holidays

No vehicle connected with the works to arrive on site before 7.30am or leave after 7pm (except in the case of emergency).

Considerate Constructors Scheme

The site will be registered with the 'Considerate Constructors Scheme'. This scheme ensures that contractors carry out their operations in a safe and considerate manner with due regard to neighbours, passing pedestrians and road users.



5. Demolition And Construction Overview

Works Description

Conversion of existing Victorian building into 6 flats. Demolition of existing outbuildings. Erection of a 3-storey medical centre. Erection of a building containing 7no flats. Erection of 41no houses. Associated works to include access, public open space and landscaping.

Both Demolition and Construction Contractors will update the CEMP for all the works covering the following key activities:

1. Pre-construction Planning
2. Site establishment
3. Demolition of existing buildings
4. Construction of new buildings
5. Associated hard and soft landscaping.

Pre-construction Planning

Prior to commencement of works on site a period of pre-construction planning and activities are required to ensure works can commence.

The CEMP will be updated to include the following activities:

- neighbour liaison before the commencement on site to explain the nature of works;
- liaison with the project teams of potentially ongoing local developments to agree shared and combined logistics issues;
- further site investigations to inform the design;
- condition survey of boundary fences;
- condition survey of perimeter roads and footpaths;
- existing statutory services surveys;
- ecological surveys to facilitate site clearance;
- unexploded ordnance checks;
- ground condition surveys for potential contamination;
- formulation of project Construction Phase Plan and risk assessments;
- formulation of detailed Site Waste Management Plans and environmental plans as per the current DEFRA guidelines;
- development of project specific works method statements;
- production of detailed works programmes and sequencing;
- notices for works on the highway in accordance with the Highways Act 1980 and Road Traffic Act 1998;
- hoarding and scaffold licences for works on the perimeter boundary, where applicable;
- construction notices;
- connections to existing statutory services and main sewers;

- licence for discharge of water from the site into the public sewer;
- party wall act notices and agreements where required;
- baseline movement & environmental monitoring establishment;
- section 80 demolition (notification to Local Authority) approval in place;
- submission of section 61 Prior Consent;
- register the project under the Considerate Constructors Scheme;
- mobilisation of selected plant and operators.

Site Establishment

The construction site office and associated welfare facilities for the workforce will be established inside the site boundaries at the location indicated in the sketch of Appendix 1.

Secure access points with wheel cleaning facilities will be established at the site access and egress gate. A pedestrian access point with separate gate and footpath will be provided.

Specific Site Establishment activities will include:

- Hoarding to site frontage fencing will be 2.4m high, with clear pedestrian warning signs and the required notices of Contractors Contact details. Lighting to be provided in accordance with the Gravesham Borough Council licence;
- vehicle and pedestrian access to the works will be via separate entrances controlled by fully trained gatemen and traffic marshals;
- installation of site temporary electrics, lighting, water and fire alarms. Where possible the site will operate from connections to the permanent utility supplies rather than generators;
- establishment of site security provisions to ensure that the site is protected against unauthorised or unlawful entry and potential theft from site;
- Mobile wheel cleaning facilities will be established at the site access and egress gates;
- establish construction site office and associated welfare facilities for the workforce in temporary cabins located inside the construction boundary hoardings;
- establish safe means of access around the site perimeter for pedestrian using the footpaths;

Demolition of Existing Buildings

Upon completion of site establishment demolition will commence. Prior to any demolition works commencing, hoarding will be erected over the full length of the project's boundary (Appendix 1).

The existing buildings will be surveyed for asbestos and due notifications made. After stripping out and removal of asbestos, the demolition will commence. Fine water spray will be employed when

breaking masonry and concrete. All the demolition materials that can be reused will be stored on site, any remain materials will be loaded to lorries and removed from site for recycling.

Potential Land Contamination

Prior to any contraction works a detailed ground investigation will commence to determine the presence of soil pollutants remaining from the previous uses of the site area. Ground investigation results will determine the need and extend of land remediation works.

Site Infrastructure

When all the demolition works are complete the excavation of trenches and installation of the infrastructure pipe and cable networks followed by the construction of the road network.

This will allow ease of transport around the site and minimise any mud etc. being taken into the highway.

Construction of Houses

Subject to design, Houses will be constructed by traditional methods of construction with strip foundations, beam and block ground floor, brick and block cavity walls and trussed roof system.

No tower cranes are expected to be used for the construction of Houses.

Construction of Seven Flats Building

Similarly to the houses the seven apartments building will be constructed by traditional methods of construction with strip foundations, beam and block ground floor, brick and block cavity walls and trussed roof system.

No tower cranes are expected to be used for the construction of Houses.

Conversion of existing Victorian building into Six flats

Subject to consultant's design and the instructions of the structural engineer the existing Victorian building will be converted to six apartments. Details of the methods and construction techniques will be employed will be updated in CEMP prior the commencement of the works.

Construction of The Medical Centre

The works of the medical centre will be undertaken by a third party. This section of the CEPMP will be updated prior of the commencement of the works.

Associated hard and soft landscaping

Hard and soft landscaping will be programmed to commence once the scaffold removed and works to external envelope are complete. On completion of this stage the hoarding and any temporary arrangements will be lifted.

6. Traffic Management

The location and the size of the site require to implement a Just In Time (JIT) delivery system to reduce traffic congestion in the streets around the project. A one-way system of approach will be implemented to prevent reversing and limiting manoeuvring of the vehicles servicing the project.

To minimise the likelihood of congestion during the construction period, strict monitoring and control of vehicles entering and egressing the sites will be implemented. Construction deliveries will be carefully planned with delivery times agreed with each sub-contractor and supplier using a booking system. Delivery schedules will be produced to look at the profiles of up-and-coming deliveries, and to regulate deliveries and eliminate bottle necks.

Access Routes

The Contractors will use designated construction traffic route for deliveries to the site and removal of waste etc.

Vehicles will reach the site from A2 through Wrotham Road (A227) for approximately 1.1 mi entering Old Road West (B261) following to Old Road East for approximately 0.7 mi turning right to enter the site at 46 Old Road East DA12 1NR.

Vehicles leaving the site will follow the above route in reverse to reach A2.

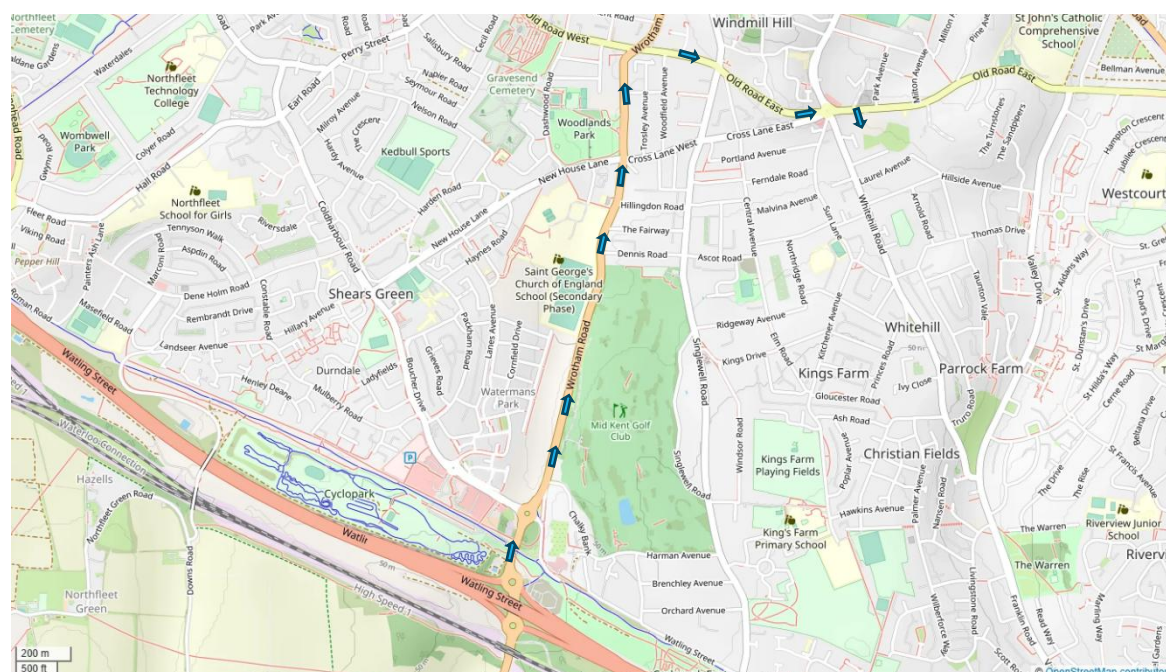


Figure 2 Proposed Vehicle Route

Parking

The location and the size of the development allows for workers and visitors to park their vehicles inside the site boundaries. The anticipated on-site parking spaces are twenty-five (25), twenty (20) for site personnel and five (5) for visitors.

Cycling to Site

The site is located within 10 minutes of cycling from Gravesend train station. Although there are no dedicated cycling lanes and cycle paths cycling to work will be encouraged. This will be communicated to sub-contractors during procurement and throughout the site inductions. Cycle parking of 20 spaces will be provided, in a location by the site accommodation cabins in a secure, safe, and well-lit location.

Bus Routes

The site is accessible from Gravesend train station by bus through route number:

- 482 Kings Farm to Gravesend. The nearest bus stop (Echo Square) is located 150 m from site

Bus services running every 20 minutes.

7. Site Waste Management

The Contractor will use working methods that minimise waste. Any waste arising from the site will be properly categorised and dealt with in accordance with appropriate legislation.

Opportunities for re-using or recycling construction or demolition waste should be explored and implemented.

The Contractor will carry out the works in such a way that, as far as is reasonably practicable, the amount of spoil and waste (including groundwater, production water and run-off) to be disposed of is minimised.

The disposal of all waste or other materials removed from the Site will be in accordance with the requirements of the Environment Agency, Control of Pollution Act (COPA), 1974, Environment Act 1995, Special Waste Regulations 1996, Duty of Care Regulations 1991 and the Waste Management Regulations 2011.

In general, and in accordance with the principles of the UK Government's 'Waste Strategy 2010', a principal aim during demolition and construction will be to reduce the amount of waste generated and exported from the Development site.

This approach complies with the waste hierarchy whereby the intention is first to minimise, then to treat at source or compact and, finally, to dispose of off-site as necessary. All relevant Contractors will be required to investigate opportunities to minimise and reduce waste generation, such as:

- agreements with material suppliers to reduce the amount of packaging or to participate in a packaging take-back scheme;
- implementation of a 'just-in-time' material delivery system to avoid materials being stockpiled, which increases the risk of their damage and disposal as waste;
- attention to material quantity requirements to avoid over-ordering and generation of waste materials;

re-use of materials wherever feasible (e.g. re-use of crushed concrete from hard standings for the piling platform; re-use of excavated soil for landscaping);

- the Government has set broad targets of the use of reclaimed aggregate, and in keeping with best practice, Contractors will be required to maximise the proportion of materials recycled;
- segregation of waste at source;
- Re-use and recycling of materials off-site where re-use on-site is not practical (e.g. through use of an off-site waste segregation facility and re-sale for direct re-use or re-processing). Our expectations in this regard are shown in the table below.

Material	Target	Probable Location
Architectural salvage	100% recycled	Several architectural salvage companies in London
Metals	100% recycled	Every effort will be made to recycle these materials on site with any surplus being taken to waste transfer station.
Hardcore (brick / block / concrete, etc.)	100% recycled	Taken off-site to be crushed and reused
Excavated material / clay, etc	100% recycled	Clay – 100% processed for re-use as fill on other, appropriate sites (subject to analysis)
Timber	Up to 85% used. The amount re-used will depend on the material	Any re-useable timber for hoardings, battening, shuttering, etc., to be salvaged for possible use on site with the balance being retained by the Contractor
Mixed Waste	The amount recycled will depend on the material	An absolute minimum will remain for transport to landfill
Asbestos	100% landfill	Taken to a licensed site

Table 3 – Waste Management

8. Noise And Vibration

The Contractor will discuss and agree with Gravesham Borough Council whether to seek their formal consent in accordance with Section 61 of Control of Pollution Act 1974 to their proposed methods of work and to the steps they propose to minimise noise.

Notwithstanding this, the Contractor will discuss in detail and agree the proposed noise and vibration control measures with the Local Authority.

Best Practicable Means

Best Practicable Means (BPM) of noise control will be applied during construction works to minimise noise (including vibration) at neighbouring residential properties and other sensitive receptors arising from construction activities.

The general principles of noise management are given below: Control at source:

- equipment – noise emissions limits for equipment brought to site;
- equipment – method of directly controlling noise e.g. by retrofitting controls to plant and machinery;
- equipment - indirect method of controlling noise e.g. acoustic screens;
- equipment - indirect method of controlling noise e.g. benefits and practicality of using alternative construction methodology to achieve the objective as opposed to more conventional but noisier techniques; selection of quieter tools/machines; application of quieter processes.

Control across site by:

- administrative and legislative control;
- control of working hours;
- control of delivery areas and times;
- careful choice of compound location;
- physically screening site;
- control of noise via Contract specification of limits;
- noise Monitoring, to check compliance with noise level limits, cessation of works until alternative method is found;
- many of the activities which generate noise can be mitigated to some degree by careful operation of machinery and use of tools. This may best be addressed by toolbox talks and site inductions.

Noise control

The Contractor's environmental team will undertake a noise assessment as part of the Construction Noise and Vibration Report, to predict noise levels at adjoining properties. This noise assessment will be carried out in accordance with BS5228-1: 2009+A1: 2014 'Code of Practice for noise and vibration on construction and open sites'.

This assessment allows the Contractor to select the most appropriate tools, methodology and controls to minimise disruptions of buildings at proximity of the adjacent structures (sensitive receptors).

Noise levels will be monitored by the Contractor during the works. Gravesham Borough Council shall be given access to all noise readings, if required, as soon as they become available.

Noise Levels

Although the noise levels are to be included in a formal agreement between the Contractor and Gravesham Borough Council; at sensitive locations the Contractor will be requested to achieve, where practicable, noise levels lower than the specified limits as shown below:

- 70 dB(A) Leq (10h) Monday to Friday working day (08:00-18:00)
- 70 dB(A) Leq (5h) Saturday working day (08:00 – 13:00)
- 75 dB(A) Leq (15min) at any time.

Should any of these trigger points be noted, works will cease, and the works assessed to bring within compliance.

Subject to any agreed Section 61 Notice, any excessively noisy works will be carried out on a 2 hours on/off basis for example 08:00 or 10:00, 12:00 to 14:00 and 16:00 to 18:00.

Noise Control Measures

The Contractor shall comply with the recommendations set out in BS5228:2009 and in particular with the following requirements:

- Vehicles and mechanical plant will be maintained in a good and effective working order and operated in a manner to minimise noise emissions. The contractor will ensure that all plant complies with the relevant statutory requirements;
- HGV and site vehicles will be equipped with broadband, non-tonal reversing alarms;
- compressor, generator and engine compartment doors will be kept closed and plant turned off when not in use;
- all pneumatic tools will be fitted with silencers/mufflers;
- care would be taken when unloading vehicles to avoid unnecessary noise;
- the use of particularly noisy plant will be limited, i.e. avoiding use of particularly noisy plant early in the morning;
- restrict the number of plant items in use at any one time;
- plant maintenance operations will be undertaken at distance from noise-sensitive receptors;
- reduce the speed of vehicle movements;
- ensure that operations are designed to be undertaken with any directional noise emissions pointing away from noise-sensitive receptors;
- when replacing older plant, ensure that the quietest plant available is considered;
- drop heights will be minimised when loading vehicles with rubble;
- vehicles should be prohibited from waiting within the site with their engines running or alternatively, located in waiting areas away from sensitive receptors;
- local hoarding, screens or barriers should be erected to shield particularly noisy activities;
- temporary noise screens will be used to reduce noise from particularly noisy activities and the height of perimeter hoarding will be extended where this would assist in reducing noise disturbance at sensitive receptors;
- hours of operation should be strictly enforced and any deviations other than those previously identified will be with the consent of the local authority;
- limiting of high impact activities (including piling works) to specific times of the day. For example, this may include 1 hour on – 1 hour off, or the restriction of such activities between 09:00-12:00 and 14:00-17:00;

- piling will be carried out with the method that minimises both noise and the transmission of vibration to sensitive receptors;
- vehicles, plant and equipment will undergo regular servicing and maintenance to prevent irregular noise levels;
- the location of stationary plant in areas which will have a minimized impact on occupied residential and commercial properties, where feasible;
- static plant, when in operation, is to be sound attenuated using methods based on the guidance and advice in the BS 5228, where practical;
- implementation of Best Practice Means (as defined in Section 72 of the COPA) by trade contractors at all times, and are to carry out all work in such a manner as to reduce disturbances from noise and vibration;
- preference for electrically powered plant, to mechanically powered alternatives, where practical.

Construction Traffic

The Contractor will incorporate the following measures into the scheme to avoid noise related impacts from construction traffic:

- vehicles will not wait or queue up with engines running on the site or the public highway;
- vehicles will be properly maintained to comply with noise emissions standards;
- deliveries will be restricted to be within working hours of the site; and
- design and routing of access routes will minimise vehicle noise and the need to perform reversing manoeuvres.

Vibration control

Vibration is a particular risk during the piling and excavation stages. The measures taken to reduce the acoustics of these two operations will also assist in mitigating the effects of vibration on neighbours and their property.

A digital seismograph measuring device will be used to measure the amount of vibration produced during the works. Where elevated levels are recorded the source will be investigated and, where possible, alternative techniques employed to reduce the levels.

The Contractor shall also normally limit vibration levels arising from site activities at any residential building between 0800- and 1800-hours weekdays, 0900 to 1400 hours Saturdays.

Vibration levels will be monitored at:-

- 1mm/sPPV for occupied residential and educational buildings
- 3mm/sPPV for occupied commercial premises where work is not of an especially vibration sensitive nature or for potentially vulnerable unoccupied buildings
- 5mm/sPPV for other unoccupied buildings

Should any of these trigger points be noted, works will cease, and the works assessed to bring within compliance.

In planning work operations the following will be considered to mitigate the effect of vibration:-

- Review of working methods to ensure that appropriate plant and methodology is being used to minimize vibration.

- Plan works so that sufficient breaks are allowed for, i.e. two hours on and two hours off.
- Ensure all plant and equipment is well maintained and located, as far as reasonably possible, away for sensitive receptors.

The Contractor will comply with the vibration levels established by agreement with Gravesham Borough Council which will consider BS 5228-2:2009+A1:2014

9. Control of Dust and Airbourne Pollution

All available techniques (best practicable means) shall be used to minimise, as far as is necessary, the level of dust generation to which neighbouring residential estates will be exposed.

As part of onsite training employees and contractors will be advised on the following:

- a) The proper use and maintenance of tools and equipment;
- b) The importance of regular inspection;
- c) Avoidance of unnecessary dust generation when carrying out operations, particularly with regard to vehicle speeds and use of plant and equipment;
- d) Awareness of dry and / windy conditions; and,
- e) Managers and supervisors recognising the need for employees to make proper use of measures to minimise dust.

The following measures shall be undertaken to mitigate any potential pollution of dust on site. Proposed methods and frequency of monitoring of these effects are included.

Haul Road and Access

Access to the site will be directly off the gate at 46 Old Road Eats. It is noted that any temporary construction access is to be laid out and constructed by prior arrangement with and to the requirements and specifications of the local Highway Authority, all details will be agreed with the Development Management Team at Gravesham Borough Council before the commencement of works and before the haul road/ access points are first used.

Wheel Washing and Road Sweeping

As and when required (notably during wet conditions) the road will be kept free of debris and mud by means of road sweeping/wheel washing.

A speedy hire jet washer/bowser facility will be provided at the site entrances.

Arrangements will be made so there shall be no discharge of surface water onto the Public Highway.

Damping Down

During dry and / or windy conditions or as otherwise required the hard finished areas onsite shall be damped down to prevent dust arising. This will be carried out using a 110lt mobile water bowser.

Vehicles

Any vehicles removing and delivering to the site will ensure all loads / materials are covered over where required.

Construction deliveries will be overseen by a nominated competent person (banksman) to ensure safe access and egress arrangements from the site can be maintained at all times and to ensure in the unlikely event that overloading, loading and dropping materials from height will be prevented where practicable. The banksmen will also make the final checks on site.

Excavation and Earthworks

Dusty activities on site will be damped down as detailed above and where practicable the areas following cutting and excavation operations will be covered over.

These operations will be carried out in small areas where practicable to minimise the production of dust.

Cutting, Grinding and Sawing

Where possible materials will be brought to site pre-cut.

All plant used for cutting will be fitted where possible with water suppression systems. This will apply notably to the cutting of concrete pipes and rings when required.

Monitoring

Dust levels will be monitored at:

- An internal “amber” alert of $150 \mu\text{g}/\text{m}^3$ set as a 15-minute mean for concentrations of PM₁₀
- A “red” alert of at $250 \mu\text{g}/\text{m}^3$ set as a 15 minute mean for concentrations of PM₁₀

The work site shall have automatic alerts direct to the site manager/appropriate person(s) so that when dust levels breach the acceptable limits action can be taken swiftly and effectively. When two amber alerts are consecutively triggered the appropriate person(s) shall review the activities to identify any potential dust or particulate sources. If the cause of the amber alert relates to site activity, mitigation shall be put in place to avoid a red alert. When a red alert is triggered the site manager or appropriate person(s) shall receive an alert via email and/or text message. If a red alert is received Southwark Environmental Protection Team shall be notified.

Dust monitoring must take place for the duration of the construction.

During activities that are likely to create dust a number of measures will be used to control the escape of dust. These will include but not be limited to:-

- Develop and implement a Dust Management Plan (DMP), which will include measures to control emissions. The DMP will include monitoring of dust deposition, dust flux, real-time PM₁₀ continuous monitoring and/or visual inspections.
- Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the Local Authority when asked. This should include regular dust soiling check of surfaces such as street furniture, cars, window sills within 100m of the site boundary, with cleaning to be provided if necessary.
- Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the Local Authority when asked.
- Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
- Agree dust deposition, dust flux, or real time PM₁₀ continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it is a large site, before work on a phase commences. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction.
- Review of working methods to ensure that appropriate plant and methodology is being used to minimize the creation of dust.

- Scaffold and monaflex screens at the boundary of the site.
- Damping down
- Covering stockpiles and vehicles.

10. Air Pollution

Air pollution will be controlled through regular maintenance of plant and additional servicing when required. All plant will be switched off when not in use. All machinery with a net power output between 37kW and 560kW will comply with the Non-Road Mobile Machinery (NRMM) Directive stage III B. Furthermore, from 2025, NRMM needs to comply with Stage IV as minimum.

All major development sites in Greater London and all sites within the Central Activity Zone shall keep an inventory on site and on the online register at: <https://nrmm.london/> of all NRMM between 37kW and 560kW.

Substances emitting strong odours will be investigated for an alternative equivalent product. There is a presumption of water-based paints both internal and external. As mentioned in previous sections we will employ the following measures to prevent any pollution onto surrounding roads.

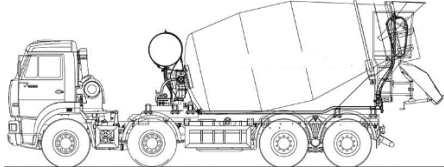
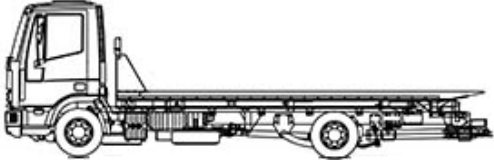
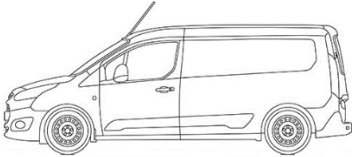
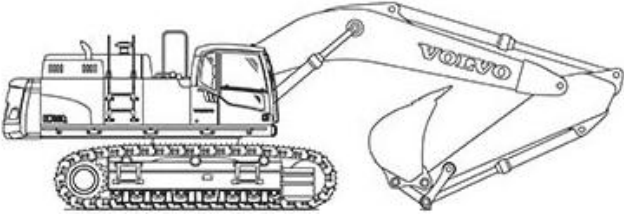
A policy of no burning on site will apply for all materials, including wood, debris, or plant matter.

- Road sweeping will be provided and shall be used on all public roads used by site traffic within 500m of the site entrances. Wheel washing during wet conditions will be used to prevent mud being taken onto the public highway. In addition a road sweeper will be in operations during large excavation movements and at other times called in as required depending of the wheel washing efficiency. Roads outside of this will be monitored and inspected and road sweeping will be undertaken where required.
- Powered jet washes will be provided for wheel washing of all vehicles leaving the site to reduce the impact on the surrounding road network
- Regulate water runs-offs and put in place the appropriate Thames water Discharge license
- Where possible hard standing will be created on site for vehicles during the works
- We will continue to water quench areas prior to demolition to reduce dust
- We will continually apply water to quench any resultant dust from vehicles entering onto site and during the concreting works
- Protected zones will be created on the unloading areas during the concreting works to prevent any splashes on to passing pedestrian and vehicles
- Appropriate protective material will be applied to the road surface during these works to accommodate any spillages.
- A fully sheeted scaffold will be erected to prevent any debris from the construction works
- All loose loads will be covered to prevent any spillage
- Protective debris screens will be erected to the "live floors" during concrete frame works
- Where works are adjacent to pedestrian routes, protective scaffolds are to be erected and sheeted with monoflex and full debris netting to prevent any site debris accidentally falling from the

scaffolds. These scaffolds will be monitored and inspected in accordance with the relevant regulations

Vehicles, Plant and Equipment

The anticipated types of vehicles and plant expected to be used during the construction phase of the project are shown in the table below:

Type	
Tipper Approximately: 9.80m long 3.00m wide	 A line drawing of a tipper truck, viewed from the side. It has a cab at the front, followed by a long chassis with multiple axles, and a large, angled tipping body at the rear.
Concrete Mixer Approximately: 8.25m long 2.45m wide	 A line drawing of a concrete mixer truck, viewed from the side. It features a cab, a long chassis, and a large, rotating drum in the center for mixing concrete.
Articulated Lorry Dimensions Varies depending on load	 A line drawing of an articulated lorry, viewed from the side. It consists of a cab and a long, flat trailer connected by a pivot point, with multiple axles.
Flat Bed Lorry Approximately: 8.50m long 2.45m wide	 A line drawing of a flat bed lorry, viewed from the side. It has a cab and a long, flat chassis with multiple axles, designed for carrying heavy loads.
Van Approximately: 5.50m long 2.10m wide	 A line drawing of a van, viewed from the side. It is a boxy vehicle with a large cargo area and a smaller cab area.
Excavator	 A line drawing of a Volvo excavator, viewed from the side. It is a tracked vehicle with a large hydraulic arm and a bucket, with the Volvo logo visible on the arm.

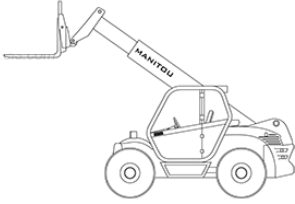
Telescopic Forklift	
Piling Rig	

Table 3 Vehicles, Plant and Equipment

11. Water

No substance will ever be discharged to a surface water drain; foul water drains may be used to dispose of some silty or foul water if the consent of the sewerage undertaker has been sought. Management of activities through method statements, toolbox talks and inductions will ensure the workforce are aware of the need to retain water quality. Activities like concrete pours and washing out the chutes must be managed effectively.

Potentially polluting substances will be stored in suitably bunded areas to reduce the potential for ground contamination and, therefore, groundwater contamination. If polluting substances penetrate the ground, the ground will be dug up and removed and replaced with a suitable replacement material. The polluted excavated material will be disposed of according to legislative requirements. This is to prevent redress under the Contaminated Land Regulations 2000 and remove any potential expensive clean-up claims. Absorbent material containing oil digesters will be stored on site for use on minor spillages. If a pollutant can be soaked up before it penetrates the ground, it should be. If a spill does occur a monitoring regime of the canals and rivers will be implemented to ensure the pollution does not reach the water courses and if it does it will be promptly and efficiently managed. The statutory bodies and client will be notified, and a clean-up operation begun as per the company procedures.

12. Diesel

All diesels should be stored in double skinned mobile bowzers or double skinned diesel tanks. A designated re-fuelling (hard standing) area will be made available for plant that is 10 metres plus from any drains. All diesel, hydrocarbons and potentially harmful substances not stored within a double skinned bowser will be stored in a bunded area. The bund will comply with Environment Agency recommendations and UK legislative requirements. When there are a number of drums stored within the bund the bund will be capable of holding not less than 150% of one of the drums. All drums and their bunds should be covered with something like a tarpaulin to prevent collection of rainwater, an expensive commodity to remove as hazardous waste. Any diesel in a single skinned

tank will be placed within a bund that will be impermeable and be capable of holding 110% of the contents stored within it.

13. Monitoring Equipment

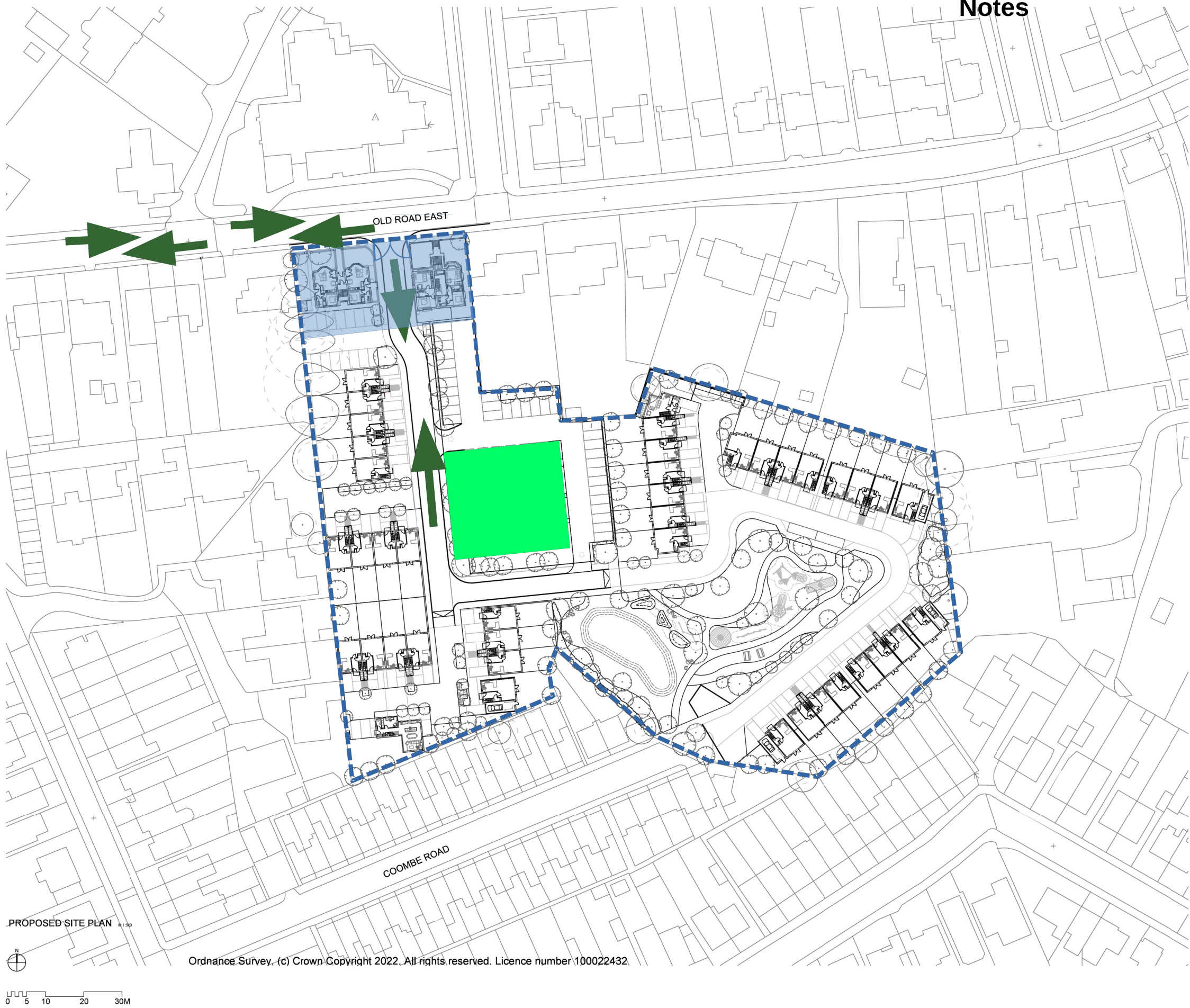
Subject to the engineer's assessment the following monitoring equipment will be used:

- Digital Seismograph
- PM1.0, PM2.5, and PM10 monitoring station
- Noise monitoring equipment

The final location of the monitoring equipment will be agreed with the Gravesham Borough Council Environmental Team.

14. Appendix

1. Site Set Up



Notes

Key to Symbols

- Hoarding
- Site Welfare and Accommodation
- Loading Area
- Lorry Movement Towards/Away from Site



Job Title
Gravesend

Drawing Title
Site Set Up

Sheet Number