

Reference: 20210757
Site Address: Custom House, The Terrace, Gravesend, Kent DA12 2BW
Date: May 2024
Rev: A

Construction Environmental Management Plan

1 INTRODUCTION

This document has been created in response to Condition 3 of Planning Application 20210757.

Condition 3 states:

No development shall commence on site until a Construction Environmental Management (CEMP) covering all environmental impacts of this development has been submitted to and approved in writing by the Local Planning Authority. The CEMP shall include the following:

- a) Construction Logistics Plan (CLP).*
- b) Routing of construction and delivery vehicles to and from site.*
- c) Parking and turning areas for construction and delivery vehicles and site personnel.*
- d) Timing of deliveries.*
- e) Provision of wheel washing facilities.*
- f) Temporary traffic management/signage.*
- g) Storage of plant and materials.*
- h) Dust management controls;*
- i) Location and height of cranes and scaffolding;*
- j) Measures of minimising the impact of noise and, if appropriate, vibration arising from construction activities;*
- k) Predicted noise and, if appropriate, vibration levels for construction using methodologies and at locations agreed with the Local Planning Authority;*
- l) Scheme for monitoring noise and if appropriate, vibration levels using methodologies and at points agreed with the Local Planning Authority;*
- m) Scheme for location and appearance security fencing/hoardings, depicting a readily visible 24-hour contact number for queries or emergencies;*
- n) Details of disposal of waste arising from the construction programme, including final disposal points (the burning of waste on the site at any time is specifically precluded);*
- o) Hours of construction;*
- p) Smoke management controls;*
- q) Odour controls; and*
- r) Any other matters relevant to this particular site.*
- s) Details of ecological mitigation measures including integrated bat roosting features and precautionary mitigation measures for other species.*

The construction of the development shall adhere at all times and be carried out in full accordance with the relevant approved document or any subsequent variations that may be approved in writing by the Local Planning Authority.

Prior to commencement of works, this construction environmental management plan will be developed into a full construction phase development plan specifically to address the safety, health, environmental and quality requirements for the contract and will include all necessary measures required to minimize the effect of the construction works on the surrounding buildings, roads, environment, and the public.

As not all information relating to the project is currently available to develop the plan fully before construction works commence, any amendments to the plan will be implemented within the appropriate section of the management plan as subsequently recorded within the index of amendments.

The enclosed method statement of the works provides an outline summary of the proposed working systems and sequences. They have been prepared to ensure that all common objectives of safety, quality and timely completion are achieved. The site management team will prepare further detailed statements and programmes at the commencement of the works and as the works progress.

2 PRE-START INVESTIGATION

Prior to commencement of works on the site, a detail CAT survey will be carried out to confirm the extent of any existing services in conjunction with the information contained within the tender documentation. These will be plotted on a drawing which will be maintained as a record throughout the contract. Any services of particular concern will be physically identified on the site by means of visible marker posts or spray paint.

Notification of commencement will be issued to the Local Authority and to all Statutory Authorities advising them of the new construction works. Measures will also be undertaken to make early contact with all adjoining homes owners (if applicable) to establish good relationships and a commencement notice will be delivered prior to works commencing on site.

3 SITE SET-UP

A Construction Logistics Plan (Appendix A) has been provided by Yes Engineering to support the Construction Environmental Management Plan document which includes information regarding:

- Site set up,
- Routing of construction and delivery vehicles to and from site,
- Parking and turning areas for construction and delivery vehicles and site personnel,
- Timing of deliveries,
- Wheel washing facilities,
- Temporary traffic management/signage,
- Storage of plant and materials,
- Hours of construction.

Appendix B provides a construction site layout including the following information which should be read in conjunction with the subsequent text;

- Security
- Signage
- Scaffolding
- Cranes

Temporary Accommodation

The temporary accommodation will include a site office, welfare facilities and W.C facilities. They will be located within the existing Workshop building that will eventually be demolished. The position of the temporary accommodation may be moved on site as the progress of the works commences.

Existing service connections on site will be used where practical. All live temporary feeds will be suitably protected throughout the works and stripped out prior to handover.

Security

A 2.4m hoarding will be erected across the access points of the site, with controlled access and egress points clearly defined. The rest of the site will make use of the existing boundary masonry walls. Further security will be considered at the latter stages of the contract if deemed necessary. All hoarding will remain intact until such time as the building itself can be secured.

Signage

Prominent signage will be used on the site to inform and advise both operatives and the general public of hazards, access routes, construction works, parking areas etc.

The site offices and the welfare facilities/area will prominently display the main site health and safety sign which will advise all operatives and visitors of the general site safety rules that are applicable to the site. Further signage will be displayed outside the site for other road users, including by the main entrances so as to warn/advise operatives and the general public of more specific dangers such as construction traffic movement.

Site signage will be provided as necessary to advise visitors and deliveries of the safety requirements within the confines of the site. Such signage will include:

- Danger Construction site
- Overhead/underground services
- Personal Protective Equipment requirements
- Noise etc. All information relating to health and safety, including the F10 form and the site rules, will be displayed on a notice board situated within the site welfare facilities.

Material Storage

Bulk/ large materials will be delivered to site and off loaded to the designated delivery zone as per the construction logistics plan. Lockable storage containers will be used by subcontractors within the building for the storage of small items of material, equipment, and small plant. The storage containers will be kept locked at all times with a designated person holding the official key. No hazardous materials should be kept within these unless relevant specialist precautions are taken.

At no time shall materials be stored outside of the site boundary.

Waste Disposal

All sub-contractors will deposit waste materials in skips located within the secure site, which will be serviced as required. These skips will be within the site and thus prevent unauthorised access by the general public. All skips will be removed to registered tips as necessary with the required waste management measures instigated.

No burning of waste on site will take place at any time.

Wheel Washing Facilities

The system to be installed will be of a temporary nature and will consist of, as a minimum:

- A washing platform: Solid tarmac surface with adequate drainage
- Wheel sprays, manually operated jet wash system
- Optional mains water/electrical connection

The wheel wash location will be situated directly before the exit/entry at the front of the site as per drawing CLP figure 4.1 site plan.

The facility will be a hand wash system and will be fully operational prior to the start of material imports. Vehicles will be directed to use the wheel wash during times of wet weather, when site conditions dictate its use and/or when the site management consider the use of the wheel wash will safeguard the conditions of the highway outside the site. Any Heavy Goods Vehicle (HGV) drivers that fail to use the wheel wash when instructed to do so will be barred from delivering to the site in the future.

The wheel wash will be set up as per the manufacturers' instruction (for the jet wash) and will be inspected each and every working day to ensure it remains in an operational condition and being used correctly. Any defects will be recorded, and actions taken to repair immediately. In the event of the wheel wash remaining out of use, due to mechanical failure, for more than 24 hours, import to site will cease and a road sweeper will be employed to maintain the highway.

4 SEQUENCE AND METHOD OF WORK

To help minimise disruption and to keep adjacent properties and businesses informed, the Project Manager will instigate monthly newsletters providing a 'snap shot' of progress for the project. These newsletters will be displayed on the site hoarding. The name and contact details of the site Project Manager will be displayed in a prominent position on site and on the site hoarding.

Particular nuisances such as noise and vibration will be considered in deciding construction methods and timing.

Site Set Up

On taking possession of the site, the first activity to be carried out will be to set up the onsite offices and welfare facilities. Following on from this a 2.4m high hoarding will be erected at access points to the site as per the Construction Site Layout. This will ensure that the site is fully secure prior to commencing the construction works.

Scaffolding

Independent scaffold will be erected to available external elevations. Materials will be loaded out onto loading platforms purposely designed and located to suit the works. Physical ties to the building will be utilised where and when required through window and door openings or onto adjacent structural frames.

The independent scaffold to the external elevations will be fully netted to prevent the risk of materials falling from height. The timber hoarding and netted scaffold will also act as a dust prevention barrier to avoid dust nuisance to the surrounding properties.

Scaffold inspection and installations will be supervised very closely with handover certificates issued and received prior to any access.

In locations where scaffold is likely to be erected on third party land the relevant notices and permits will be required. All relevant notices and permits to be obtained prior to erection of scaffold in these locations. Scaffold erection along the western boundary, on or outside the site boundary will be dealt with through a party wall notice with the client and adjacent landowner. Scaffold erection on any public highway will be dealt with through obtaining a licensing permit from the local authority and KCC.

Under no circumstances will anybody be permitted to alter or adapt scaffold unless trained to do so. If this should occur the person or persons will be instantly dismissed from site.

No cranes envisaged to be used on site however in the case a mobile crane is required to facilitate the flood defence improvements this would be positioned in a suitable area as shown on the Construction Site Layout. This crane would be of an approximate height up to 10m if required.

Groundworks

Following site preparation works the site will be regraded in the upper portion of the site, grading down more uniformly from South to North.

In the location of the new build element of the site, ground excavation will take place prior to a piled raft construction.

Existing building substructure conditions will be investigated, any additional foundation work required will be design by the structural engineer and will be supervised and checked in line with the structural design during the construction phase.

It is the intention that all concrete will be provided via ready mixed sources.

The Site Engineer will continually monitor all concrete pours to ensure no movement occurs and that shutters and formwork are not displaced. The Engineer will also ensure that all necessary cubes and slump tests are taken and the position of each is noted within the pour records.

Frame and Envelope

During the construction of the proposed building, the working area will be kept clean and tidy. Noise and dust will be controlled and minimised so as to avoid discomfort to neighbouring properties and the general public. The site engineer will be responsible for overseeing the erection of all timber frame work, steelwork and the taking of cubes and slump tests.

New and existing windows will be installed/ repaired off the standing scaffold. A specialist contractor who has been approved by the door manufacturer will install new doors and will provide all necessary protection until handover is achieved.

Roof

Access to the roof to facilitate any installation works will be via the external scaffolding. Lifting of materials on to the roof will be via a goods hoist where required. The specialist sub-contractor's method statement will be checked and agreed before any works commence on site.

Internal Fit Out

Once the building is weather tight, internal timber stud partitions will begin to be installed. Activities to follow will include mechanical and electrical installations, 1st and 2nd fix carpentry, wall finishes and floor finishes.

All rubbish arising from the internal works will be taken off site by a licensed waste contractor. Care will be taken at all times to reduce noise during the internal works.

Mechanical and Electrical Services

The mechanical and electrical services for the building shall all be designed and installed by a specialist subcontractor. Their works will take into account current legislation, Codes of Practice and sustainability statements for the development.

External activities will be carried out off the scaffolding, with internal activities accessed using podium steps or similar. All working access platforms will be risk assessed prior to use.

Main services installation will also be coordinated from site, and scheduled to suit installation dates, commissioning programmes and external works constraints.

External Works

Any making good works to the footpaths around the buildings will be carried out towards the end of the project. The developer will liaise with the Local Planning Authority prior to any such works being carried out and all necessary approvals will be obtained. A safe working zone will be clearly marked out using suitable barriers and a safe pedestrian route will be maintained at all times.

During the external works phase, the working area will be kept clean and tidy. Noise and dust will be controlled and minimised so as to avoid discomfort to neighbouring properties and the general public.

5 SITE PROCEDURE

Internal Site Meetings

Bi-weekly meetings will be held to discuss:

- Progress on site, update the current position related to the contract programme and to discuss and record ways and means of overcoming any current problems relating to the processing of the works.
- Methods of carrying out forthcoming construction works to allow for planning periods or particular on-site operations to avoid any confusion or possible delays and abortive work.
- Internal procedures and to adjust/update the programme should it be felt necessary, especially to make the running of the site more efficient.

- All aspects of safety on site especially requirements of forthcoming site operations.

Reporting Procedures

The following will be tabled for discussion at each internal site meeting.

- The status and progress recorded against the contract programme.
- Current short-term programmes and stages recorded against contract programmes with, if necessary, actions for bringing works into line with the contract programme.
- Weekly labour and plant returns.
- A rolling schedule of approvals of all materials yet to be approved. This schedule will be updated on a weekly basis.
- A schedule of materials and projects manufactured off site with status of percentage manufactured and anticipated delivery dates.

Client Meetings

These meetings held on site with the site team will review all matters prevailing to the works. Emergency/out of hour's telephone numbers will be made available for all the site team.

Weekly Sub-Contractors Meetings

At weekly intervals a meeting with sub-contractors will be held to highlight and coordinate any problems. This will ensure the smooth running of the site operations, especially concerning safety.

Accident Statistics

All accidents and incidents, including damage to property belonging to the Developer or others, are reported to site management and the appointed Health & Safety Advisor who shall instigate an initial investigation as soon as is practicable as to the cause of the incident. The site management team shall introduce where appropriate immediate corrective actions to avoid recurrence of the incident.

Work Hours

Working hours to be agreed with Gravesham Council. The typical site working hours proposed are as follows:

08.00 – 18.00 Monday to Friday

08.30 – 13.00 Saturday

No work on Sundays or Bank Holidays.

Safety, Health, Environment & Quality

It is the primary aim of the Developer to constantly maintain the Health & Safety of all operatives on site and the public, where and when they encounter the operated site.

During the construction stage a Site Manager shall be appointed, amongst whose duties will include the co-ordination of health and safety issues between the various sub-contractors. This will be achieved by a strict site induction; regular toolbox talks and regular meetings between sub-contractors' nominated representatives chaired by the Site Manager.

All activities will be pre-planned and considered in advance; Safety specific planning meetings will consider in advance the safety implications of the tasks themselves and the interaction of trades with other concurrent activities. Each operation will be assessed for risk prior to commencement and will only be allowed to continue when the developer is satisfied that the methods to be adopted are safe, the method statements have been approved, and the workforce themselves understand the protective constraints that they are to work under.

The site will be audited regularly by independent safety advisors. Copies of these audits will be filed on site. Issues arising will be dealt with in the next tool box talk. These toolbox talks will happen immediately if the issue requires.

The developers are committed to promoting a positive safety culture within all the organisations involved in the planning, design, and construction of the project.

All sub-contractors, per appointment, will first be required to demonstrate a satisfactory safety record and safety management system, and commit to the concept of continual improvement.

The potential environmental impact of operations will similarly be assessed in advance; and specific considerations shall be applied to matters such as waste generation, energy use, and air and water pollution threat.

Noise, Dust & Vibration

(To be read in conjunction with Appendix A - Yes Engineering Construction Logistics Plan - Section 8. Environmental Modelling)

During the construction works, there will be various demolition, alteration and construction activities undertaken, all of which have the potential to generate noise, dust and vibration. Guidance should always be taken from both BS5228-1 and BS5228-2, Noise and Vibration British standards throughout the construction process.

Adherence to the construction working hours that are detailed in the CLP will ensure that any noise and vibration emanating from the works will be limited to specific times during the week. No noisy works where noise from construction activities is audible at the site boundary will take place outside of these hours unless of an emergency. The stated site hours apply to all contractors and sub-contractors including the erection and dis-mantling of scaffolding.

The site management team are sensitive to the needs of the adjacent residential properties. Good public relations and communication are important. Where reasonably practicable, quiet working methods will be employed, including use of the most suitable plant, reasonable hours of working for noisy operations, and economy and speed of operations. Noise will be controlled at source and the spread of noise will be limited.

Noise generated from construction, maintenance, or demolition of a building or other structure should not exceed the predicted 95db, based on information provided in Tables C1 – C11 BS5228-1. This data relates to the noise of construction activity at 10m distance. A method of noise measurement with suitable locations will be agreed prior to commencement of site works. Proximity to neighbouring buildings will be considered in this process. Please refer to Yes Engineering Construction Logistics Plan Appendix A for specific guidance on monitoring.

Practicable noise and vibration reduction measures will be undertaken based on the risk assessment process, including specific plant, tools and equipment rated with minimal noise output and where particular noisy works are required to be undertaken, the time they are undertaken will be chosen carefully and noise enclosures will be erected and utilised.

With regard to construction activities, reference will be made to construction regulations for guidance on the control of noise & vibration from demolition and construction activities. It is proposed that various practices be adopted during construction, including:

- Limiting the hours during which site activities likely to create high levels of noise or vibration are permitted.
- Establishing channels of communication between the contractor/developer, Local Authority and neighbours.
- Only plant that conforms to the relevant noise emission standards will be used during the construction of the proposed development.
- All plant items brought to site will be properly maintained, provided with effective silencers, and operated in a manner as to avoid causing any excessive noise, vibration, or exhaust emission.
- All items of plant operating on the site in intermittent use will be shut down in the intervening periods between use.
- All stationary plant will be located as far as reasonably possible from occupied dwellings.
- All stationary trucks shall turn off their engines when possible.
- Selection of plant with low inherent potential for generation of noise.
- Erection of barriers as necessary around items such as generators or high duty compressors.
- Locating of noisy plant as far away from sensitive properties as permitted by site constraints and the use of vibration isolated support structures where necessary.

Dust, Odour and Smoke Control

Nuisance dust emissions from construction and other civil engineering activities are a common and well-recognised problem. Fine particles (less than 10 mm in diameter, known as PM10) from these sources are now recognised as significant causes of pollution. Owing to their small size, they can be carried from sites even in light winds and may therefore have an adverse effect on the local environment and on the health of local residents, as well as on those working on the site.

Measures are required to be employed to control the build-up of dust and odour nuisance generated by the site activities, during the times of the heaviest construction activities. Constant vigilance will be applied by the Site Manager in order to ensure levels are kept to an absolute minimum and where required suitable mitigation measures will be provided.

Contractors tools and equipment are expected to be dust protected, either by localised extraction, wetting down techniques or manufacturer approved dust suppression measures. The external scaffolding will be fully sheeted to reduce dust emissions to the environment during these times.

Earthworks, excavation and digging activities will be kept damp and, if possible, be avoided during exceptionally dry weather periods. Surfaces will be re-vegetated as soon as possible following completion. No stockpiles are to be kept on the site.

Sub-contractors will be instructed to clean their work area on a daily basis to the skips supplied. Additionally, a site wide general clean will be undertaken each week or as deemed necessary. This will involve each sub-contractor supplying operatives to work under the instruction of the Site Manager to clean up the site and maintain it in good condition.

The site will be enclosed by the existing walls, hoarding and netted scaffold surrounding the buildings during construction, which will act as a barrier to prevent dust spreading outside the site. Water suppression devices will be used on dust producing equipment such as concrete saws.

Method statements and procedures for the storage and handling of fine, powdery, and dry materials, selection of dust suppression equipment and methods of demolitions will be established and agreed at the planning stage and will describe where required within each contractor's method statements and risk assessments.

Exhaust emissions should not discharge straight at the ground. Construction plant and vehicles should be well maintained and regularly serviced ensuring MOT emissions standards for vehicles are always met. Visible smoke from plant should be avoided and any defective plant should not be used. Engines should be switched off when vehicles are not in use. Skips and removal vehicles shall be covered when leaving the site to prevent dust being deposited in the neighbourhood.

Burning of any waste or other materials on site will not be permitted for any reasons.

All necessary precautions to prevent the occurrence of smoke emissions or fumes from site plant or stored fuel oils for safety reasons and to prevent such emissions or fumes drifting into residential areas or areas of public open space. Plant shall be well maintained, regularly inspected and measures shall be taken to ensure that it is not left running for long periods of time when not directly in use.

Ecological Mitigation

The preliminary ecological assessment (PEA) and Ecological Enhancement and Management Plan prepared by Native Ecology are to be read in conjunction with this section of the CEMP. See appendix for associated documents. Each document references in detail the current findings of the site with a full evaluation of what ecological mitigation measures will be undertaken.

Works should be carried out in consultation with the Environment Agency.

At least one site worker and/or ecologist should provide the roles of Ecological Clerk of Works (ECoW) and will work with the site manager and contractors to ensure that all precautionary avoidance measures are adhered to during works. All site contractors should be briefed by ECoWs at the start of works as to the importance of avoidance measures to be undertaken during construction works.

In the event of any unexpected discoveries of protected or invasive species that could be impacted by site activities, works must cease, and the discovery must be reported to the ECoW. Specialist advice from a suitably qualified ecologist may be required.

All contractors shall be advised through toolbox talks about the potential of any protected species within the site and to be vigilant when carrying out works. If any protected species are encountered during works the activity shall be halted and a licenced ecologist and Natural England contacted for advice.

A spill management plan should be in place throughout works.

Mitigation to reduce any effects of artificial lighting should be implemented, as far as possible and where applicable, in accordance with guidance from the Bat Conservation Trust and Institute of Lighting Professionals.

Key habitat enhancement and mitigation measures as set out in the Ecological Enhancement Plan (Appendix C);

- Native tree species to be planted within the site where specified, to increase nesting habitats for birds and foraging habitat for bird and bat species.
- Existing shrubs to be retained and managed appropriately. Any supplementary planting will include native shrubs. This area will support species groups including invertebrates, small mammals, and birds.
- Additional native hedgerows are to be incorporated into the site along eastern and western boundaries. The creation of hedgerows will provide additional bat commuting corridors within the site.
- 4no. bird boxes will be incorporated onto suitable buildings across the site to encourage house sparrows.
- 2no. bird boxes will be incorporated onto retained trees to encourage nesting species.
- 2no. bat boxes will be installed onto suitable buildings.

Appendix A – Construction Logistics Plan



Construction Logistics Plan

Custom House, The Terrace, Gravesend, Kent, DA12 2DE

Prepared for Mile Property Group Limited

By YES Engineering Group Limited

August 2024



Revision History

Revision N°	Prepared By	Description	Date
01	P Willis	Updated to include additional information requested by Gravesham Council and KCC Highways	20/08/2024

Document Acceptance

Action	Name	Signed	Date
Prepared by	K. Backhouse		August 2024
Reviewed by	J. Willis		August 2024
Approved by	P. Willis		August 2024
on behalf of	YES Engineering Group Ltd		

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(unless YES Engineering has expressly agreed otherwise with the Client in writing)

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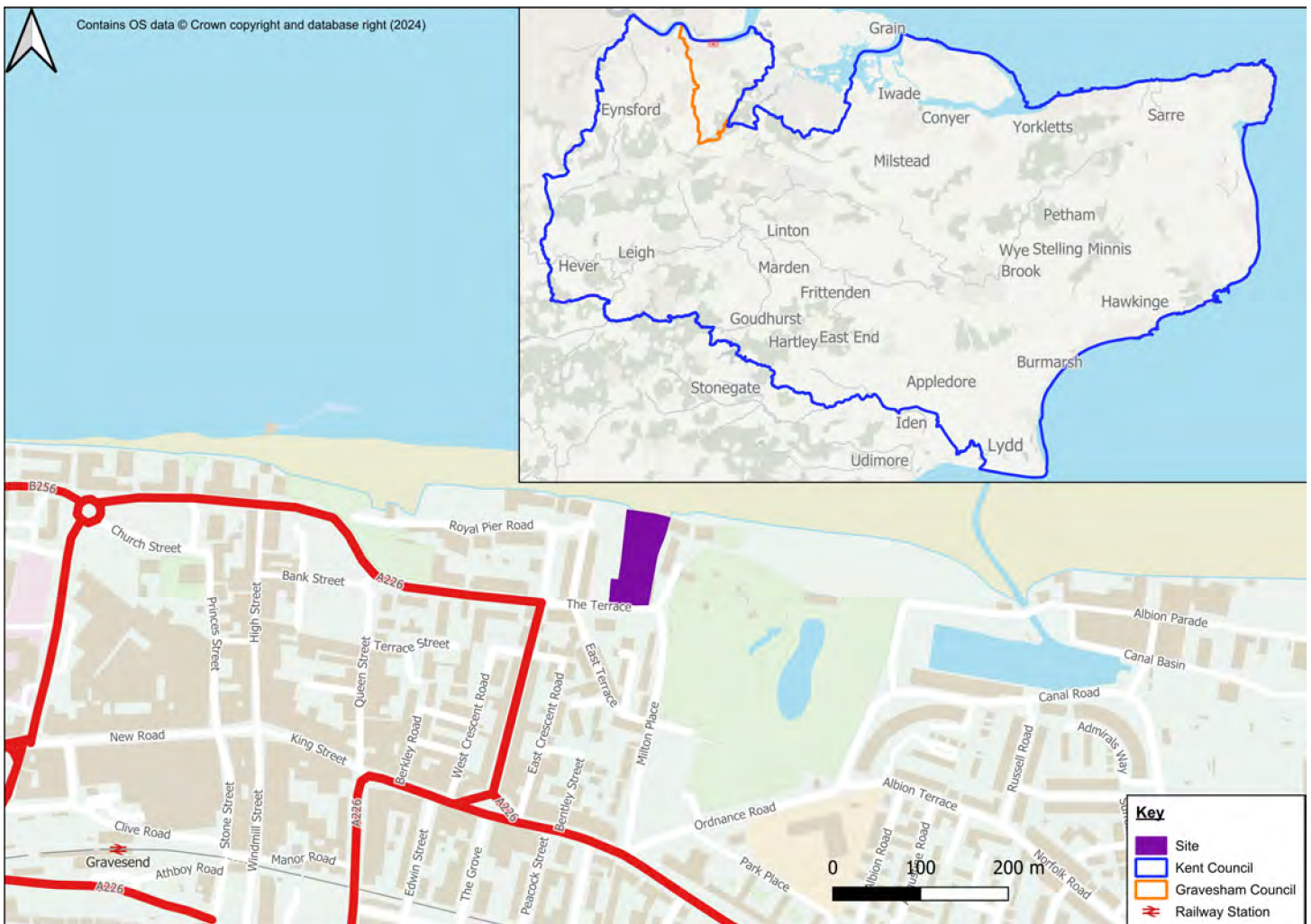
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1 Introduction

YES Engineering Group Ltd was appointed by Mile Property Group Limited to produce a Construction Logistics Plan (CLP) to accompany the Construction Environmental Management Plan associates with the consented planning application (reference 20210725) for the redevelopment of the site at Custom House, The Terrace, Gravesend, Kent, DA12 2DE (the 'site').

As shown in **Figure 1.1**, vehicular access to the site is from the northern side of The Terrace.

Figure 1.1 – Location Plan



The aim of this document is to maximise safety of the workforce and the travelling public during the course of construction. Every attempt is also made to ensure that traffic is kept flowing as freely as possible on the public highway in the vicinity of the operations. This CLP also addresses environmental impacts of construction in the interest of residential amenity.

The Highway Authority will be consulted on issues relating to temporary closures, and works affecting the public highway.

Policy

There are no national, county or local council policies that are specific to the construction of the development.

Scope of the CLP

This document has been prepared to support the Construction Environmental Management Plan being provided to discharge planning Condition 3 associated with the planning consent (Ref: 20210725) for redevelopment of the site including demolition of the southern part of the workshop building and existing corridor link at first floor level between Custom House and the outbuildings and conversion of Custom House, the coachhouse and outbuildings to include extensions, the Old Boathouse and the Boathouse with external alterations and erection of a new three storey building to provide 27 residential units (6 x 1 bed, 15 x 2 bed and 6 x 3 bed) with associated landscaping and parking.

A Construction Environmental Management Plan is required under Condition 3 as a pre commencement planning Condition. The CLP covers items a to g and o of Condition 3 and also provides some additional environmental monitoring details pertaining to noise and vibration as requested by Gravesham council. Condition 3 reads as follows:

"3 No development shall commence on site until a Construction Environmental Management (CEMP) covering all environmental impacts of this development has been submitted to and approved in writing by the Local Planning Authority. The CEMP shall include the following:

- a) Construction Logistics Plan (CLP)*
- b) Routing of construction and delivery vehicles to and from site*
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- m) Scheme for location and appearance security fencing/hoardings, depicting a readily visible 24-hour contact number for queries or emergencies;*

n) Details of disposal of waste arising from the construction programme, including final disposal points (the burning of waste on the site at any time is specifically precluded);

o) Hours of construction;

p) Smoke management controls;

q) Odour controls; and

r) Any other matters relevant to this particular site.

s) Details of ecological mitigation measures including integrated bat roosting features and precautionary mitigation measures for other species.

The construction of the development shall adhere at all times and be carried out in full accordance with the relevant approved document or any subsequent variations that may be approved in writing by the Local Planning Authority.

Reason: To ensure that construction of the development does not result in avoidable congestion on the local highway network, to protect the amenity of local residents and businesses, protected species and to mitigate the risks to groundwater in accordance with Policies CS11, CS12 and CS19 of the Gravesham Local Plan Core Strategy (September 2014)."

Following this introduction, the report is structured in accordance with the following manner:

Section 2.0, Site Location and Highway Network; a brief description of the site, local highway network, and key junctions and corridors leading to the site.

Section 3.0, Construction Details; sets out the various phases during the course of construction, and considers lorry routing to and from the site.

Section 4.0, Traffic and Environmental Management; sets out the temporary traffic and environmental management measures that will be put in place during the course of construction.

Section 5.0, Developing and using Policies; looks at the policies put in place to management the CLP efficiently.

Section 6.0, Monitoring, Compliance, Reporting and Review and using Policies; a brief description of how the CLP will operate and be monitored.

Section 7.0, CLP Management; sets management measures that will be put in place during the course of construction.

Section 8.0, Environmental Monitoring; sets additional environmental monitoring information as requested by Gravesham council.

2 Site Location and Highway Network

This section provides an overview of the location of the proposed site and characteristics of the surrounding area.

2.1 Local Highway Network

The carriageway of The Terrace is 7.73m in width with footways on both sides. The road connects to the A226 becoming known as Crooked Lane at the western end and becomes known as Milton Place connecting to Milton Road at the southern end. The Terrace is a one-way street access from Milton Road and only a left turn is permitted onto the A226.

2.2 Existing Access and Servicing Provision

The main vehicular access into the site is at the southern end of the site frontage. This access is around 5.5m in width.

The site is within a Controlled Parking Zone A operating between Monday to Sunday, 6.30 to 8am Permit holders only, 8am to 6.30pm 1-hour no return within 2-hours, permit holders are exempt.

2.3 Public Transport

Bus stops are located on the A226 just 290m south-west of the site providing access to bus routes 190, 416, 417, 480A, 489, M1 and VIG01. There are further bus stops located along the A226 just 550m providing access to bus routes 483 and G1 and along Milton Road south of the site providing access to bus routes 481, 490A and NAG1.

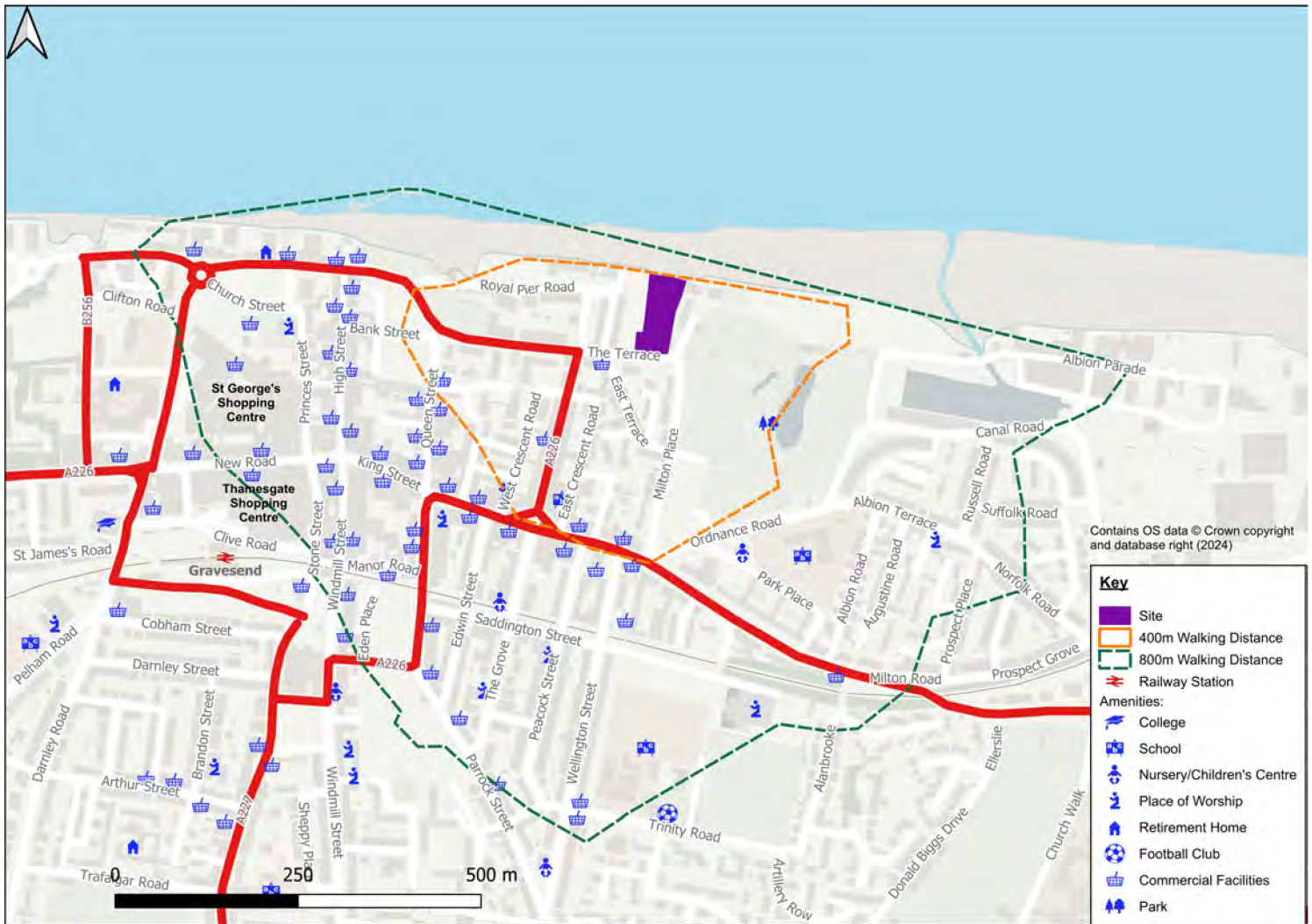
The nearest railway station is Gravesend, which is located 900m to the south-west of the site.

Bus and rail services are discussed in more detail in Section 5.4 of the CLP.

2.4 Sensitive Receptors

An amenities plan is shown at **Figure 2.1** overleaf.

Figure 2.1 – Amenities Plan



Residential development is located to the west and south of the site and Riverside Leisure Area is located to the east of the site, which needs to be considered during the construction phase.

All these residential properties and park use needs to be considered during the construction phase of development and impacts on amenity reduced as far as possible.

3 Construction Details

The consented development is for the redevelopment of the site including demolition of the southern part of the workshop building and existing corridor link at first floor level between Custom House and the outbuildings and conversion of Custom House, the coachhouse and outbuildings to include extensions, the Old Boathouse and the Boathouse with external alterations and erection of a new three storey building to provide 27 residential units (6 x 1 bed, 15 x 2 bed and 6 x 3 bed) with associated landscaping and parking.

A brief outline of the construction phases is listed below:

3.1 Hours of Construction

Working hours will be agreed with the Gravesham Council, but are expected to be in accordance with the Control of Pollution and Noise from Demolition & Construction Sites (May 2008) Code of practice

- Monday – Friday 08:00 – 18:00.
- Saturday 08:30 – 13:00.
- Sundays and Bank Holidays the site would be closed.

However, consideration of quiet periods would be made in consultation with neighbours. Construction vehicles would only travel to and from site outside peak school periods so there is no conflict between pupils arriving and departing. The hours of traffic arriving and departing would be relaxed during school holidays.

Notwithstanding this, there may be certain occasions when work outside these hours may be necessary. In the event of this, work would only be carried out following consultation and agreement with Gravesham Council.

The site will be manned during the working hours set out above.

3.2 Construction Routes and Deliveries

The construction routes will be established once it is known where the materials are going to be sourced. However, construction vehicle drivers will be encouraged to arrive from the south using Milton Place and depart to the west using The Terrace to minimise impact on local roads to reach the site where possible.

As shown in **Figure 3.1**, it is proposed that construction vehicles up to 10m in length will travel along Milton Place. Vehicles will approach the site from the south to access the site vehicular entrance under the supervision of the Traffic Marshalls and Banksman. Construction vehicle drivers are expected to telephone ahead to confirm their delivery slot so Banksman will be ready to oversee the vehicle movement to the site. Milton Place is a one way street (northbound) between Milton Road and East Terrace.

To egress the site, construction vehicles will turn on site to exit in a forward gear then travel west along The Terrace in forward gear under the supervision of Traffic Marshalls and Banksmen. Only left hand turn is permitted onto Harmer Street, A226.

The construction vehicles arriving at the site will continue within the site to the dedicated loading/unloading area as shown on **Figure 4.1 (discussed in the next section of this CLP)**. This will ensure the adjacent carriageway of The Terrace will remain unaffected.

3.3 Materials Storage and Security

All plant and materials will be stored on-site when not in immediate use and will be secure against vandalism and theft. Where this is not possible alternative arrangements off-site will be made to ensure they do not affect any of the adjacent footways/carriageways.

On-site tool storage will be provided to reduce the number of vehicle journeys to the site. If possible, the storage location will be insured for contractors' tools as well as supplied tools, to help reduce potential vehicle journeys to the site.

4 Traffic and Environmental Management

Residential development is located to the west and south of the site, so it is therefore recommended that the following measures are introduced during construction:

- Construction vehicles (heavy goods vehicles) of up to 10m in length will use the existing vehicular access from The Terrace and through the site for deliveries/supplies. There is sufficient space to accommodate a 10m long vehicle (as demonstrated in **Figure 4.1** attached) turning within the site to ensure vehicles can enter and leave in a forward gear;
- Deliveries do not take place before 8am and after 6pm Monday to Friday, during school drop off and pick up times (taking into consideration the different finish times over the week), and to avoid Saturday deliveries where possible;
- Areas will be identified within the site for the storage of plant and materials throughout the course of construction;
- Materials will be covered in order to reduce the likelihood of dust being transported to the neighbouring properties during construction;
- Wheel wash facilities are provided within the site adjacent to where the construction vehicles are turning to ensure that mud and dust is not transported onto the public highway; and
- A route for heavy goods vehicles associated with the construction phase will be identified and a route map produced to provide to the drivers.
- Appropriate signage will be erected to advise pedestrians of the arrangements at all times during deliveries or loading. A qualified CSAS trained Traffic Marshall will be present at the site access to direct pedestrians/cyclists when delivery vehicles access the site/delivery area. A Banksman will also be present to ensure safe movement of the vehicles to and from site.

4.1 Deliveries

This site will operate a material delivery scheduling and booking system to ensure that congestion is avoided on the surrounding highway. Each delivery will be allocated a delivery time period and an allotted area from which to load or unload. Clear instructions will be issued to all direct suppliers and subcontractors detailing access routes. Only one delivery will be permitted to visit the site at any one time.

Delivery vehicles will be controlled using a Banksman to ensure that unloading only takes place within designated times and in the correct location. All subcontractors will be required to produce a procurement schedule for their materials which will be monitored, and they will be required to book a delivery slot with the CLP Coordinator (Site Manager or person allocated by the Site Manager who reports directly to them). Use of white noise and/or volume reduced warning alarms on site plant and delivery vehicles will be specified by the contractor.

“Just in Time” scheduling of deliveries will be used where possible will minimize storage capacity required. Where “Just in Time” deliveries are not economic or practical, site storage of materials and plant will be very carefully controlled by restricted allocation of zones.

Where possible the Local Authorities/Police will be notified in advance should abnormal loads need to access the site. All deliveries to site will be scheduled by the Site Manager.

The vehicular access to the site and construction vehicles turning area within the site will be overseen by Banksman and Traffic Marshals whilst deliveries or loading takes place to ensure that this area is always free for use and the movement of other users within the site and on the public highway are not compromised. When deliveries are due, the suppliers will be expected to phone through prior to delivery to ensure they can park in the loading area, avoiding any problems within the site.

Any damage made to the carriageway or kerbs during the course of construction will be repaired prior to occupation.

4.2 Measures to Avoid Disruption on the Public Highway

As previously stated, all deliveries to the site will be pre-booked and Banksman available for ensuring safety is maintained and disruption to the free-flow of traffic kept to a minimum. During the movement of material to the construction area, Banksman will be used to oversee the pedestrian flow within the site.

4.3 Vulnerable Highway Users

Construction will take place some distance from the public highway so there will be no impact on vulnerable users on The Terrace.

Details of the number and size of vehicles anticipated to visit the site during the construction will be confirmed by the Contractor once appointed.

Other vulnerable highway users such as wheel-chair users, the elderly, people with walking difficulties, parents with young children or prams, blind and partially sighted, etc on the footway of The Terrace in the vicinity of the site accesses will also be considered during the construction period. The construction site area will be secure (boarded/locked) and free from obstacles at all times to protect vulnerable users from harm.

As mentioned in Section 4.1 above, Banksman and Traffic Marshals will be used when construction vehicles are accessing/leaving the site and loading/unloading within the site to ensure deliveries are handled in a safe manner and forewarn people a delivery is in progress. The footway will also receive regular sweeping to make certain any debris is cleared from the adjacent pavement. Signage will be erected to warn any users of any potential hazards in advance of the construction site.

5 Developing and using Policies

This section provides an overview of policies and procedures to be in place during the construction.

5.1 Deliveries

This site will operate a material delivery scheduling and booking policy to ensure that congestion is avoided on the surrounding highway. A CLP Coordinator will be installed to ensure there is a point of contact. Each delivery will be allocated a delivery time period and an allotted area from which to load or unload. Clear instructions will be issued to all direct suppliers and subcontractors detailing access routes.

“Just in Time” scheduling of deliveries will be used where possible will minimize storage capacity required. Where “Just in Time” deliveries are not economic or practical, site storage of materials and plant will be very carefully controlled by restricted allocation of zones.

Deliveries will not take place before 8am and after 6pm Monday to Friday. Saturday deliveries will be avoided where possible.

5.2 Use of Alternative Modes of Transport

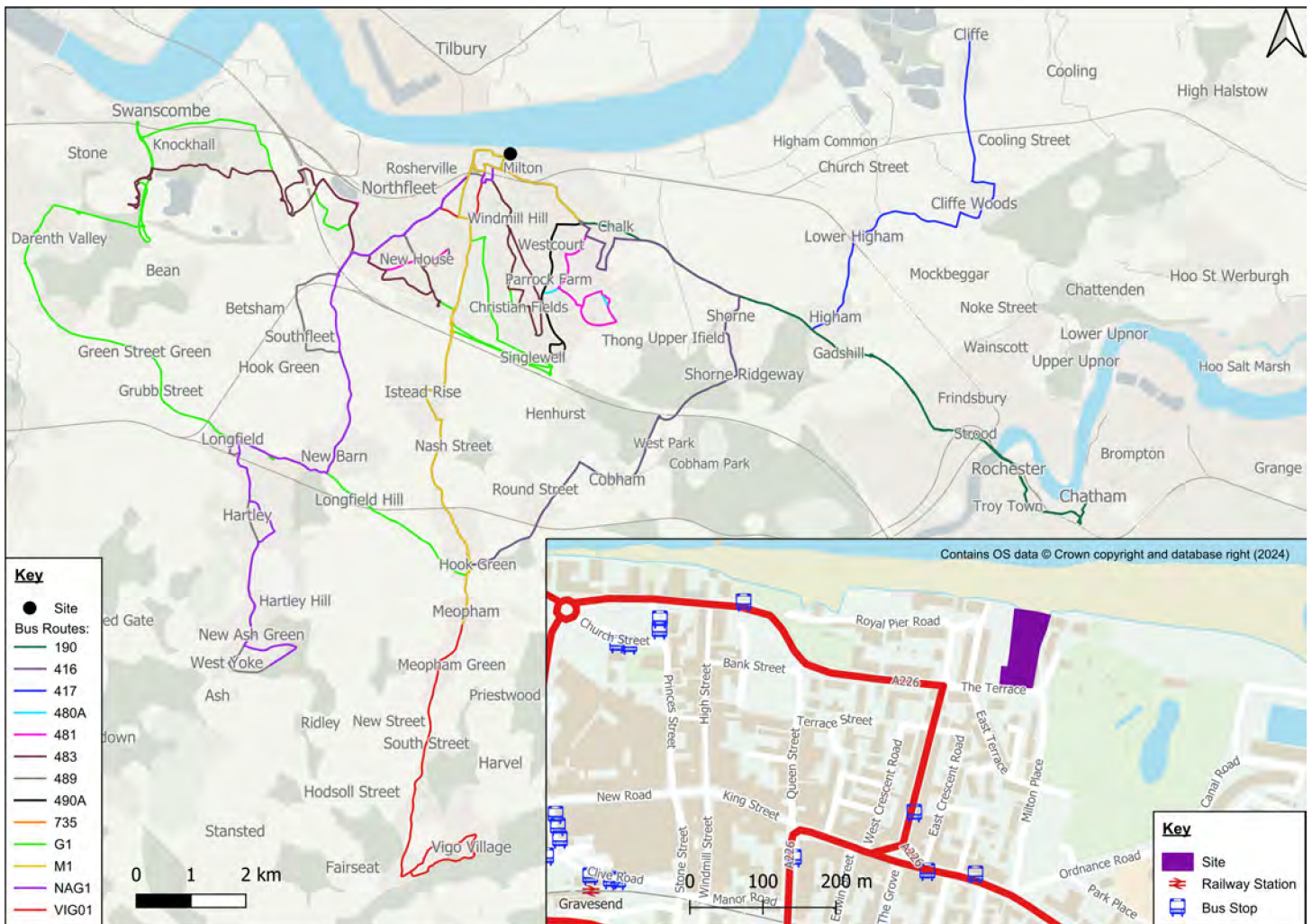
Given the location the site, there is little alternative other than to use the road network to deliver material to and from site.

Staff/contractor's and visitors will not be encouraged to travel by car to the site and will be expected to make their own travel arrangements. The application site is accessible by modes of transport other than the private car.

Bus stops are located on the A226 just 290m south-west of the site providing access to bus routes 190, 416, 417, 480A, 489, M1 and VIG01. There are further bus stops located along the A226 just 550m providing access to bus routes 483 and G1 and along Milton Road south of the site providing access to bus routes 481, 490A and NAG1.

A bus map is set out in **Figure 5.1** overleaf.

Figure 5.1 – Bus Map



The nearest railway station is Gravesend, which is located 900m to the south-west of the site so there would be few contractors travelling by this mode.

Gravesend Station provides access to Southeastern and Thameslink services to St Pancras International, Rainham, Charing Cross via Sidcup, Maidstone West, West Hampstead Thameslink, Margate and Cannon Street via Woolwich and Lewisham.

A railway map is set out in **Figure 5.2** overleaf.

Figure 5.2 – Railway Map



5.3 Collaboration

The Site Manager/CLP Coordinator will keep in contact with organisations that have an interest in the site and how the development is progressing. These bodies, groups and individuals include planning and highways authorities, local residents, businesses and community groups. Such communication will occur through liaison with the local authority on whom should be contacted (e.g. nearby stakeholders, businesses, and neighbours) and frequency of meetings, and contact details of the contractor being clearly displayed on site.

In addition to the above, the contractor on-site will be expected to register with the Considerate Contractor Scheme.

6 Monitoring, Compliance, Reporting and Review and using Policies

6.1 CLP Coordinator

The CLP will be managed by the CLP Coordinator (CLPC), who will be appointed by the developer on site occupation. The CLPC will be given sufficient time as necessary to manage the CLP to ensure the measures are carried out.

The CLP coordinator takes responsibility for the day-to-day management of the CLP and is the first point of contact for site issues. They help the development run smoothly by making sure each construction phase complies with the CLP. It is also the coordinator's job to oversee the effectiveness of the CLP, and prepare regular updates to the planning authority when asked.

The coordinator's name will be supplied to the Planning Authority once the CLP is finalised and the developer will inform the planning authority, if, and when the coordinator is replaced. The CLP coordinator will respond to any questions or queries about the development and put in place any mitigation measures needed to resolve traffic issues connected with the construction work. For example, a coordinator will:

- Remind contractors and subcontractors about designated routes to and from the site.
- Check vehicles arriving at site to make sure they meet the developer's safety requirements.
- Manage the delivery booking and scheduling tool that records deliveries.
- Ensure that the policies set out in Section 5 are adhered to.

6.2 Publicising the CLP

Explaining and marketing the CLP to the supply chain, local community, residents and businesses will be undertaken by the CLPC to raise awareness and show the developer's commitment to using safe and efficient construction vehicle practices. This commitment will need to be communicated to all parts of the supply chain involved in the development.

6.3 Keeping other Organisations and Local People Informed

The CLP will also explain how the Contractor will keep in contact with organisations that have an interest in the site and how the development is progressing. These bodies, groups and individuals include planning and highways authorities, local residents, businesses and community groups.

7 CLP Management

The CLPC will take responsibility for the day-to-day management of the CLP and is the first point of contact for site issues. They help the development run smoothly by making sure each construction phase complies with the CLP measures and policies set out above.

The coordinator's will prepare regular updates to the planning authority when asked and also keep other interested parties informed.

The CLP will be updated once the full construction method is confirmed.

8 Environmental Monitoring

Additional information regarding environmental monitoring was requested by Gravesham Council pursuant to the point 'I' of planning condition 3: *'Scheme for monitoring of noise and if appropriate, vibration levels using methodologies and at points agreed with the Local Planning Authority.'*

Details of Noise and Vibration monitoring are provided below:

Whenever it is anticipated that noise and vibration levels resulting from work activities will be excessive (not anticipated), notification to the council's Environmental Health Officers and an application for Section 61 Consent will be submitted.

The Contractor shall comply with the recommendations and guidance set out in BS5228:2009+A1:2014 at all times.

The Best Practicable Means (BPM), as defined in Section 72 of the Control of Pollution Act 1974, shall be employed at all times to reduce noise (including vibration) to a minimum, with reference to the general principles contained in British Standard BS5228: 2009 'Noise and Vibration Control on Construction and Open Sites'.

For both Noise and Vibration it is proposed that the following trigger and action levels are set:

Noise

o Trigger: 70dB LAeq 10hr

o Action: 75dB LAeq 10hr

Vibration

o Trigger: 3mm/s

o Action: 5mm/s

On-site, good practice procedures will be followed in order to mitigate noise and vibration impacts. Control measures to be adopted will be reviewed and carried out depending on the activities on site. Such measures include, but are not limited to:

- Where using machinery which create noise and vibration, contractor's staff will be trained on Noise and Control on Construction Site and Open Sites as detailed in BS 5228.
- As the HSE advises, damping is one method used to 'dampen' noise being created by industrial equipment. There are essentially two basic damping techniques. One is to attach a layer of bitumastic – or similar – high damping material onto the surface. The second is to place a constrained layer of damping where a laminate is constructed.
- The HSE also advises using fan installations to decrease the amount of noise caused by power tools and other industrial equipment. According to HSE, maximum fan efficiency coincides precisely with minimum noise. "Any fan installation feature that tends to reduce fan efficiency is therefore likely to increase noise. Two of the most common examples are bends close to the fan and dampers," writes HSE.

- Another tried and tested method to reduce the amount of noise being collectively, created by the likes of Juboflex couplings, Kumera clutches and Sferax linear bearings, is to use vibration isolation pads. As the HSE highlights:
- “Mounting motors, pumps, gearboxes and other items of plant on rubber bonded cork (or similar) pads can be a very effective way of reducing transmission of vibration and therefore noise radiated by the rest of the structure.”
- Pulleys can be a source of excess noise. As many tools have pulleys which are cast from a soft metal they are not always perfectly balanced, which creates movement and ultimately lead to excessive noise being created. Replacing these pulleys with ones that are turned from solid pieces of steel will help with noise reduction.
- Where possible, only one power tool will be used on-site at any one time.
- Noise control will primarily be dealt with at source.
- Mechanical plant and equipment will be selected and specified taking its noise profile into consideration.
- All plant will be of modern design and manufacture to benefit from up to date developments in technology for noise reduction.
- The Contractor will select and utilise methods of working and items of plant so that the maximum measured ground vibrations do not exceed a peak particle velocity of 1mm per second at any occupied property in any direction.
- Where possible, electrically driven plant will be used.
- If however, petrol or diesel powered plant is required, then this plant will be properly maintained and checked regularly.
- Appropriate acoustic baffles will be fitted to air intake and exhaust systems. Stationary equipment, such as compressors will be fitted with shields to mitigate noise outbreak.
- Excavators, dumpers etc will have exhaust suppressors and will be properly serviced and maintained. No equipment will be left running when not in use.
- All site operatives will be properly trained in loading, unloading, excavation and handling techniques to prevent improper use of equipment which can generate unnecessary noise.
- The construction of the building envelope will be carried out in a short programme as possible. This means that the enclosure of the building occurs early in the overall programme and any noise generating activities will be carried out internally, shielded from the external environment.
- Mortar will be supplied via an electric silo avoiding the use of diesel-powered mixers.
- If the Site Manager has concerns over the levels of vibration, they can request an acoustic engineer to carry out a monitoring exercise.
- Where possible, building elements or components will be assembled off site in factory conditions which will reduce noisy activities on site.

- In terms of liaising with the community that live and work close to the site, our Site Manager will carry out a regular letter drop informing people of any upcoming activities that may generate noise. We will also operate an “open door” policy at our site offices to encourage our neighbours to communicate directly with us.
- The Contractor will ensure the site has meters supplied to monitor noise levels.

Noise and Vibration Monitoring

Specific locations of monitoring points will be agreed with the council prior to installation if deemed necessary. The location will also be subject to all installation requirements (provision of power (battery operated or 110V/240V), mounting, safe and secure access to location). The selected monitoring locations should reflect the most impact of noise and vibration from the construction/demolition activities on the potential closest sensitive receiver. The exact location will be provided in agreement with Environmental Sensors and involved parties.

All equipment will be calibrated before the monitoring to ensure accuracy and compliance with British Standards. Periodical calibration of equipment will be undertaken during site visits.

The preliminary proposed monitoring locations are presented in **Figure 8.1** below:

Figure 8.1 – Proposed Monitoring Locations



All Noise Monitoring stations will be compliant with Class 1: IEC 61672-1:2002 and calibrated with acoustic calibration compliant with Class 1 requirements. The calibration

certificates will be available in electronic version. The meter will be set to measure and store samples of various acoustic parameters such as LAeq, LA90, LAmx based on the client's requirements.

Vibration monitoring will be undertaken during the demolition/construction period, measuring Peak Particle Velocity [PPV] in three axis continuously, unless different parameters are required.

Noise and vibration threshold levels will be specified and agreed in order to set up the alert system. Alerts will be generated by email and/or SMS to designated people. It is anticipated that the following levels will be set:

Noise Threshold Levels:

Period	Trigger Level (Amber Alert) dB LAeq, 15min	Action Level (Red Alert) dB LAeq, 15min
Monday – Friday 08:00 – 18:00	75	80
Saturday 08:00 – 13:00	75	80

Period	Trigger Level (Amber Alert) dB LAeq, 10hour	Action Level (Red Alert) dB LAeq, 10hour
Monday – Friday 08:00 – 18:00	70	75
Saturday 08:00 – 13:00	70 LAeq, 5 hours	75 LAeq, 5 hours

Vibration Threshold Levels

	Threshold level
AMBER	3 mm/s PPV
RED	5 mm/s PPV

Reporting and assessment

All data collected during monitoring will be downloaded from the meters via 3G or WLAN uplink to a cloud server. All monitoring stations will be monitored remotely. Should any technical issue be identified a site engineer will attend the site to resolve the problem and to ensure data integrity and to minimise disturbance to data. Weekly or monthly summary report will be issued to relevant parties in the form of electronic report via email.

Figures

Figure 3.1 – Vehicle Routeing, Local Context

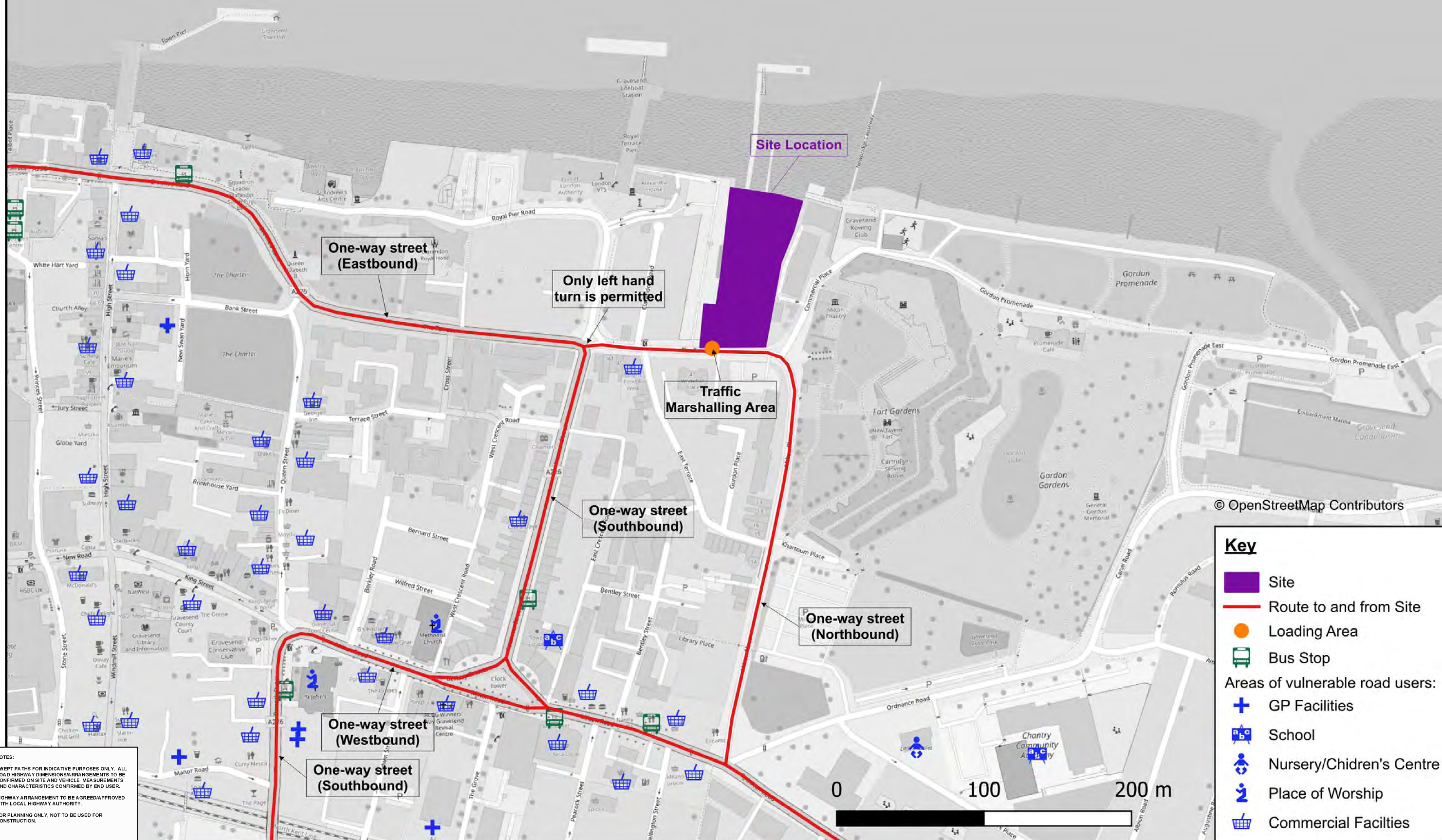


Figure 4.1 – AutoTrack Swept Paths of Construction Vehicles

KEY

- Site
- Temporary Delivery Area
- Storage Area
- Temporary Site Personnel Parking
- Canteen, WC
- Banksman
- Traffic Marshall
- Wheel Washing Facilities

North

Warning signs to be placed on footway.

Concertina barriers to be used to protect / divert pedestrians if necessary during loading / unloading.

FOOTPATH
CLOSED

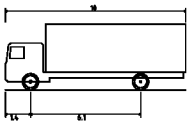


Traffic Marshalls to prevent pedestrians from passing the site. 'Stop works sign' be used when vehicles are required to stop to enable plant and construction vehicles entering/exiting the site.



Banksman will safely guide the construction vehicles in and out of the site. Traffic Marshalls may temporarily stop traffic to allow vehicles to enter/exit the site (when necessary) and protect pedestrians.

NOTES:
SWEEP PATHS FOR INDICATIVE PURPOSES ONLY. ALL ROAD HIGHWAY DIMENSIONS/ARRANGEMENTS TO BE CONFIRMED ON SITE AND VEHICLE MEASUREMENTS AND CHARACTERISTICS CONFIRMED BY END USER.
HIGHWAY ARRANGEMENT TO BE A GREED/APPROVED WITH LOCAL HIGHWAY AUTHORITY.
FOR PLANNING ONLY. NOT TO BE USED FOR CONSTRUCTION.

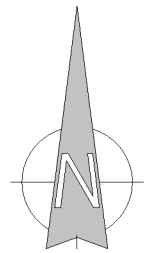


FTA Design 13/18 Tonne Rigid Vehicle (2016)
Overall Length 10.000m
Overall Width 2.550m
Overall Body Height 3.645m
Min Body Ground Clearance 0.440m
Track Width 2.470m
Lock to lock time 3.00s
Kerb to Kerb Turning Radius 11.000m

Appendix B – Construction Site Layout – Hoarding, Scaffolding & Signage



DO NOT SCALE FROM THIS DRAWING
ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE



Key

- Scaffolding Location
(provided up to height of roof of existing buildings and up to 3 storeys for the new build).
- Site Hoarding
(2.4m high, constructed of ply sheets painted grey. Access gates as shown.)
- Location of existing workshop.
(Temporary site office, wc, canteen, internal storage location until demolition.)
- Mobile crane location.
(provisional location if crane required to facilitate flood defence improvement works at approx height up to 10m.)
- Site Signage Location.
(location of signage displaying 24hr contact number for queries and emergencies.)
- Scaffold outside site boundary

REV	DESCRIPTION	DATE	BY	CHKD
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**TURNER
JACKSON+DAY**
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client details
Custom House (Gravesend) Limited

project details
Custom House
The Terrace, Gravesend, DA12 2DE

drawing title
Construction Site Layout

date
May'24
scale
1:200@A1
drawn by
NS
checked by

project no.	drawing no.	revision
1735	S1	

Appendix C – Ecological Enhancement Plan



Native hedgerows will be planted throughout the site. This will provide shelter, nesting and foraging habitat for birds, small mammals and invertebrates.



2no. bird boxes (such as the Schwegler 1B Nest Box or similar) will be installed on mature trees within the site. This will increase nesting opportunities for birds in the locality.



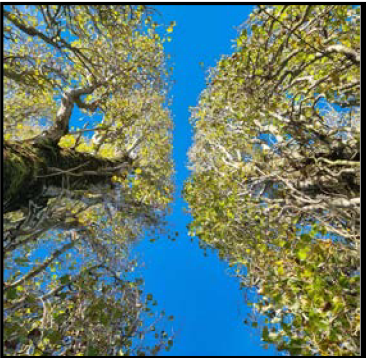
2no. exterior bat boxes (Schwegler 2FE bat box, or similar) will be installed on buildings within the site. This will increase roosting opportunities for bats in the locality.



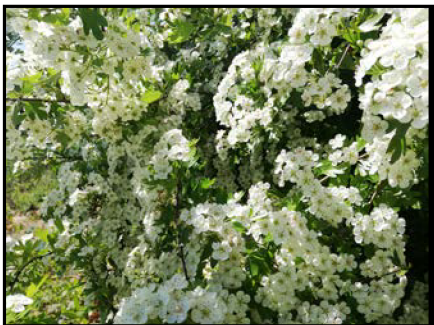
Native coastal plants will be planted along the northern boundary on the vegetated shingle beach. This will enhance the area for birds, small mammals and invertebrates.



2no. exterior bat boxes (woodcrete exterior terrace boxes, or similar) will be installed on buildings within the site. This will increase nesting opportunities for birds in the locality.



Native trees will be planted throughout the site. This will provide shelter, nesting and foraging habitat for birds, bats and invertebrates.



Native shrubs will be planted throughout the site. This will provide shelter and nesting habitat for birds and invertebrates.

Legend

- ◆ Bird Box - Building Mounted (Woodcrete exterior terrace, or similar)
- ◆ Bird Box - Tree Mounted (Schwegler 1B, or similar)
- ◆ Bat Box - Building Mounted (Schwegler 2FE, or similar)
- Native Trees
- Native and/or Nectar Rich Shrubs
- Native Hedgerows
- Native Coastal Plants



Ecological Enhancement Plan

Custom House
Gravesend, Kent
DA12 2BL

Drawing ref:	1149_DR05
Revision:	-
Date:	15/02/2024
Scale:	DNS
Paper size:	A3