



Discharge of Planning Condition 3 – Construction Environmental Management Plan (CEMP)

A41 Pioneer Road Roundabout

July 2021

Waterman Infrastructure & Environment Ltd

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This document has been prepared and checked in accordance with Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

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1. Introduction

A planning application has been submitted to Cherwell District Council for the construction of a new roundabout on the A41 at the Pioneer Road junction.

1.1 Purpose and scope

The purpose of this Construction Environmental Management Plan (CEMP) is to avoid, minimise or mitigate any construction effects on the environment and the surrounding community and:

- Ensure compliance with all applicable legislation & statutory controls this includes planning conditions (repeated below in 1.2), Section agreements and landowner/client's environmental requirements; and
- Deliver best practicable environmental performance this means preventing pollution, minimising
 adverse environmental impacts and securing the potential benefits associated with higher standards of
 environmental performance.

1.2 Planning Condition

Planning Condition 3 of Planning Application 20/01830/F States:

"No development shall take place (including demolition, ground works, vegetation clearance) until a Construction Environmental Management Plan (CEMP: Biodiversity) has been submitted to and approved in writing by the Local Planning Authority. The CEMP: Biodiversity shall include as a minimum:

- a) Risk assessment of potentially damaging construction activities;
- b) Identification of 'Biodiversity Protection Zones';
- c) Practical measures (both physical and sensitive working practices) to avoid or reduce impacts during construction (may be provided as a set of method statements);
- d) The location and timing of sensitive works to avoid harm to biodiversity features;
- e) The times during construction when specialist ecologists need to be present on site to oversee works;
- f) Responsible persons and lines of communication;
- g) The role and responsibilities on site of an ecological clerk of works (ECoW) or similarly competent person;
- h) Use of protective fences, exclusion barriers and warning signs

The approved CEMP: Biodiversity shall be adhered to and implemented throughout the construction period strictly in accordance with the approved details, unless otherwise agreed in writing by the Local Planning Authority."



2. Roles and Responsibilities

2.1 Roles

The project Team is detailed as follows:

Graven Hill Village Development Company Limited:

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Waterman Infrastructure & Environment Limited (Designer):

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Waterman Infrastructure & Environment Limited (Ecologist):

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2.2 Responsibilities

Descriptions of individual environmental management responsibilities are described as follows:

Operations Director Graven Hill Village Development Company - Adrian Unit

- Review and approve Construction Phase Plans;
- Monitor and control the management of the plans to ensure effective implementation;
- Set Safety, Health & Environmental (SHE) objectives and review performance against them;
- Determine strategy for achieving SHE objectives and improvements;
- Ensure that works are carried in a safe manner and that adequate resources are provided to carry out all operations with due regard to SHE and welfare;
- Assist in any regulatory, external or internal audit as required;
- Report any SHE initiatives that they consider could lead to improvement.

Contracts Manager Graven Hill Village Development Company- Craig Knight

- Ensure that workplaces under their control are adequate with respect to health, safety, welfare and the
 environment;
- Ensure, so far as reasonably practicable that a suitable project specific Construction Phase Plan is prepared and implemented;
- Make appointments where necessary, e.g. Site Health & Safety Supervisor, Project Environmental Coordinator, Fire Wardens etc;
- Ensure, so far as reasonably practicable, employees and contractors are competent;
- Recommend training needs to suit individual and workplace requirements;
- Ensure that a mechanism is in place for effective consultation with employees and contractors;
- Hold regular meetings with the project team to review SHE issues;
- Review project management systems at regular intervals to ensure continued suitability and effectiveness;
- · Report on SHE matters as required;
- Provide regular reports on the effectiveness of the Construction Phase Plan to the Operations Director;
- Assist in any regulatory, external or internal audit as required;
- Report any SHE initiatives that they consider could lead to improvement.

Construction Manager Careys- Jonathan Cox

- Organise and implement the provision and maintenance of a working environment and systems of work that are, as far as is reasonably practicable, safe and without risk to human health or the environment;
- Ensure that adequate monitoring and supervision arrangements are maintained and clearly defined areas of responsibility for contractors are established and implemented;
- Approval of method statements and risk assessments;
- Ensure SHE notice boards display up-to-date information;
- Assist in any regulatory, external or internal audit as required; Report any SHE initiatives that they consider could lead to improvement.



SHE Manager/ Environmental advisor Graven Hill Village Development Company – Peter Nickerson

- Maintain effective communications with Graven Hill Village Development Head of Safety, Health & Environment to ensure adequate flow of SHE information;
- Provide advice to the Directors to enable them to set appropriate performance objectives and improvements;
- Report on the levels of performance to enable Directors to review the effectiveness of current SHE arrangements;
- Advise managers on measures to ensure the effective operation of Graven Hill Village Development Health, Safety and Environment Management System and the promotion of a SHE culture;
- Give advice and guidance, to any person who may require it, to promote the understanding and operation of SHE best practice;
- Carry out regular inspections and audits, provide reports, and give guidance and advice to managers, contractors, Health and Safety Supervisors and Environmental Co-ordinators;
- Liaise with Waterman's Project Environmental Co-ordinators as required;
- To assist in any regulatory, external or internal audit as required
- Report any SHE initiatives that they consider could lead to improvement.

Project team - All

- Be familiar with the Construction Phase Plan and co-operate in its implementation
- Identify significant safety, health and environmental risks connected with their work package / activity;
- Observe all environmental requirements and be respectful to the environment;
- · Report any SHE initiatives that they consider could lead to improvement;
- Conduct regular SHE inspections;
- Report all potential / actual SHE risks to their supervisor as soon as possible
- Assist in any regulatory, external or internal audit as required
- Report any SHE initiatives that they consider could lead to improvement.

Contractor teams - Careys

- Be familiar with this Construction Phase Plan and co-operate in its implementation;
- Report any SHE initiatives that they consider could lead to improvement;
- Manage all SHE risks associated with their work activity / package in accordance with Graven Hill Village Development procedures;
- Provide completed environmental reports to the Graven Hill Village Development Project Environmental Co-ordinator as required;
- Provide environmental toolbox talks to site staff;
- Report all potential / actual SHE risks to their supervisor and Graven Hill Village Development Project Environmental Co-ordinator as soon as possible;
- Assist in any regulatory, external or internal audit as required;
- Report any SHE initiatives that they consider could lead to improvement.



3. Construction Activities

3.1 Overview

The development comprises the construction of a new roundabout at the A41 / Pioneer Road junction.

The works are inclusive of:

- · Tree felling and pruning;
- Construction of a new adoptable roads, footways, cycleway and crossings;
- · New adoptable drainage systems; and
- New utility services including street lighting.

The site compound would be located circa 150m northwest of the A41/Pioneer Road junction and would be accessible via Pioneer Road. The compound (identified as Compound 1) would include the following facilities:

- Offices and stores:
- Fire assembly point and briefing area;
- · Parking Area;
- · Loading Area;
- Storage of:
 - Fencing and small items
 - Kerbs, edging and road items
 - Drainage and MH items
 - Service mains and ductwork
 - Aggregates

A separate area (located to the south of Pioneer Road) would also be provided for refuelling, storage and as a washout zone.

A plan illustrating the proposed site compound areas for the A41/Pioneer Road roundabout works is included as **Appendix A**. All areas are on existing Tarmac hardstanding areas and have one or more access roads to each location making the proposal highly feasible for construction logistic purposes.

Note: It is the intention of Careys to use the same compound plus some additional areas (identified on Sheet 2 of 2) when undertaken the Employment Access Road (EAR) works.

All construction activities shall be carried out in compliance with this Construction Environmental Plan a copy of which shall be kept within the site office along with the Construction Health and Safety plan for the lifetime of the development. Typical construction activities include:

Site establishment

- Installation of site security fencing and tree protection barriers;
- Permitted felling/ pruning of existing trees and hedges;
- · Site strip and removal of arising from site; and
- Installation of site accommodation, welfare and contractor onsite parking.



Ground works

Excavations for new drainage;

Construction of new roads, footways and cycleway;

Excavations for installation and connection of new utility services.

Typical construction traffic:

Cars, vans, trucks, lorries, excavators, dumpers, piling rig, tele handlers, mobile cranes, road sweepers.

The construction workforce peak is anticipated to be 25 people with a management team of 10 people.

3.2 Register of Environmental Impacts

A register of environmental impacts shall be produced and maintained for the life of the project. This Register will be used to inform the environmental procedures and provide a tool for construction teams when preparing construction method statements or field briefings.

Risks will be identified under the following general headings:

- Air Quality & Emissions;
- Noise & Vibration;
- Use of hazardous materials;
- · Waste management;
- Wildlife/ biodiversity;
- Ground conditions/ contamination;
- · Disposal/discharge of water;
- Archaeology / Cultural Heritage;
- Protection of the public.

3.3 Risk Assessment & Method Statements

All known SHE hazards and risks will be reviewed at each pre-order subcontractor meeting. Risk assessments, method statements and safe working practices are to be prepared 7 days in advance of commencement of the operation on site. All risk assessments are to include reference to known environmental issues. Risk assessments and method statements will be recorded and retained on site. Where information is insufficient the contractor shall be contacted and a joint review carried out to establish a suitable safe system of work.

3.4 Environmental Aspects and Impacts

Work activity / package Aspects & Impacts Registers will be developed and provided to the contractor and all subcontractors. The contractor / subcontractor must manage all risks associated with their work activity / package in accordance with this document. Careys would normally sub-contract the following elements:

- · Tarmac placing;
- · White lining;
- Any Barriers/Railings;
- External Signage like ADS Signs etc;
- Commissioning and setting up the traffic lights inc cabinets etc;



- Streel lighting column erection and cable jointing;
- · All site testing CBRs and Spoils etc;
- Drainage CCTV Surveying; and
- Pond Lining and soft landscaping like Grass turfing and planting.

The surrounding habitat has the potential to support species protected under the Conservation of Habitats and Species Regulations 2010 and/or the Wildlife and Countryside Act 1981(as amended). Contractors shall be advised through tool box talks of this fact 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 (0300 060 6000) contacted for advice.

The habitat features are of ecological importance, all existing trees and hedgerows to be retained shall be protected from damage for the duration of the works on site, by the erection of protective fencing in accordance with British Standards 5837:2005.

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

In the event that contamination is found at any time when carrying out the works that has not previously been identified it shall be reported immediately in writing to the local planning authority. An investigation and risk assessment shall be undertaken. Where remediation is necessary it shall be agreed with the local authority and a verification report submitted to the LPA upon completion.

Where no heritage assets are known or suspected, they may still be present on site. Any find should be immediately reported to Careys staff who should:

- Ensure no further works are carried out within the location of the asset discovery until authorised to do so by the relevant authorities;
- Report the find to the HCA and local planning authority
- Segregate the area of the site from other activities
- Ensure that work restrictions in the area are communicated to all relevant site staff and, if necessary that the area is highlighted with clear signage.

Careys staff should report finds to the SHE Manager/ Environmental advisor.

A competent archaeologist should be engaged to provide recommendations on significance and future working practices. In the event that archaeological finds are discovered the landowner (HCA) and the local planning authority shall be notified immediately.

3.4.1 Bats

All species of bat and their breeding sites or resting places (roosts) are protected by the Conservation of Habitats and Species Regulations 2019 (as amended) and by the Wildlife Countryside Act 1981 (as amended). It is an offence for anyone intentionally or recklessly to kill, injure or handle a bat, to possess a bat (whether live or dead), disturb a roosting bat, or sell or offer a bat for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by bats for shelter, whether they are present or not. Waterman have carried out emergence and re-entry surveys in 2019/2020 on trees and buildings assessed to have potential for roosting bats and advised accordingly. If additional bat roosts are found, then a European Protected Species (EPS) Bat Licence will be required before such trees or buildings are removed.



Bat boxes erected as part of mitigation for the bat EPS Licences (2015-18333-EPS-MIT and 2020-49111-EPS-MIT-2) shall be left in situ and undisturbed. These bat boxes are marked on Figure WIB13983-102_GR_BL_03A which is available on request. No action in which could damage the bat boxes or prevent bats from using the bat boxes (such as night light spillage or clearing surrounding suitable vegetation) should be carried out.

3.4.2 Great Crested Newts

Great crested newts (GCN) are protected under the Wildlife Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2019 (as amended). Taken together it is an offence to deliberately or recklessly kill, injure or take a great crested newt; deliberately disturb any such animal while it is occupying a structure or place which it uses for shelter or protection; deliberately obstruct access to any structure or place which any such animal uses for shelter or protection; and deliberately disturb; or deliberately damage or destroy a breeding site or resting place of such an animal.

Great crested newts were recorded throughout the Site during the 2014 great crested newt surveys. GCN will be trapped out of the proposed working area in summer/autumn 2021 under EPS licence (2020-49113-EPS-MIT-1). The area within the GCN perimeter fencing (comprising Temporary Exclusion amphibian fencing and drift fencing) shown on Waterman Figure WIE11386-135-78-102 will be GCN free by the end of the trapping period (scheduled for around 20th July 2021). All works should be confined to within this trapped out area.

Any GCN fencing erected as part of the EPS Licence should be left in situ until approval to remove it can be gained by the appropriate ecologist. Fencing should never be damaged/removed without the licenced ecologist or his representative present.

If works or vegetation clearance is to be undertaken to enable works outside of the GCN fencing in areas considered to be suitable for GCN or to have hibernation potential for amphibians, supervision will be required by a suitably qualified ecologist. In addition, prior to any vegetation clearance, a toolbox talk maybe required.

3.4.3 Nesting Birds

All breeding birds (with some exceptions for pest species) are protected under current UK legislation through the Wildlife and Countryside Act 1981 (as amended). No rare breeding birds afforded special protection under Schedule 1 of the WCA (1981, as amended) have been recorded as breeding within the Site. Should any demolition, vegetation clearance (if required) or construction works be undertaken within the nesting bird season (March – August inclusive), a pre-commencement check by a suitably qualified ecologist to confirm the absence of any nesting birds should be carried out.

3.4.4 Reptiles

All native reptiles (snakes and lizards) are protected under the Wildlife and Countryside Act 1981 (as amended). It is illegal to intentionally kill or injure common lizard, slow worm, adder and grass snake.

Small numbers of reptiles were recorded on Site during the surveys undertaken by Waterman in 2019 (low populations of common lizard and grass snake). Reptiles found within the GCN fencing will have been moved outside of the fencing in summer/autumn 2021. Should vegetation clearance or ground penetration be required to enable the works in habitats considered to have potential for reptiles outside of the GCN fencing, including habitats suitable for hibernation, a method statement should be agreed with the local authority inclusive of a toolbox talk.



3.4.5 Badgers

Badgers and their setts are protected under the Protection of Badgers Act 1992, which makes it illegal to kill, injure or take badgers or to interfere with a badger sett.

Badger surveys were undertaken by Waterman in 2014 and updated in 2019, evidence of badgers was recorded throughout the Site. A 30+ hole main badger sett was recorded within the woodland located at central grid reference SP5908 2064. Should works which may affect active setts (including but not exclusive to vegetation clearance or excavation works) be required, a pre- commencement check should be made to confirm that the sett has not moved and works are unlikely to destroy or damage the sett. No works involving large machinery should take place within 30m of ta badger sett and no works which could damage/destroy the sett should take place.

The use of fires or chemicals should not take place within 20m of a sett entrance, felling of trees should be planned so that trees fall away from sett locations. Felled trees should be removed from badger pathways. Avoid loud noises and vibrations near active setts, over and above what the badgers would be used to.

Should an active badger sett need to be destroyed you must be certain that all badgers have been excluded. This work must be done under licence. Licences to exclude badgers and to close down or destroy a sett are only issued between 1st July and 30th November. Current locations of active badger setts can be found on Figure WIE11386-135_GR_BS_8B which is available upon request.



4. Project Environmental Requirements

4.1 Site Working Hours

The site working hours are likely to be as follows:

- 8:00am to 6:00pm Monday to Friday;
- 8:00am to 2:00pm on Saturday; and
- No works would take place on Sundays or Bank Holidays.

No plant, machinery or equipment associated with such works shall be started up or operational on the development site outside of these permitted hours.

Bank and Public holidays for this purpose shall be: Christmas Day; Boxing Day; New Year's Day; Good Friday; Easter Monday; May Day; spring Bank Holiday Monday and August Bank Holiday Monday.

All sub-contractors including suppliers shall be made aware of the permitted working hours as the restrictions also apply to deliveries.

4.2 Site Access and Egress / Site Traffic & Pedestrian Routes

Access route to site cabins

An area has been identified where offices and cabins will be located during the works. A temporary cabin set up will be installed whilst the works are ongoing.

Deliveries and unloading areas:

Site-specific requirements for access and egress including delivery times shall be notified to all delivery drivers prior to their arrival on site as well as all site operatives during induction.

Deliveries will be to the main compound area, located to the north of Pioneer Road. Vehicle reversing may be required, traffic routes will be determined and maintained.

Vehicle Routing:

The site is located to the south east of Bicester with access to the site from both the east and west taken from the A41.

All heavy site traffic will approach from the A41 and would not route through Graven Hill itself, unless otherwise agreed with the Local Planning Authority.

All heavy site traffic will exit by using the A41, leading to either Bicester or Oxford to the west and south and Aylesbury to the east.

The strategy in respect to vehicular access to / from the site can be seen on the extracts prepared by the contractor, Careys Civil Engineering in **Appendix B**.

Pedestrian routes that require alteration:

Pedestrian routes will mainly follow the roundabout.

Additional lighting required: Street lighting will be installed, security lighting will be installed to the site compound and material storage areas.



Reversing by any vehicle is to be reduced to the minimum possible on this site, where reversing has to be carried out then this will be under the control of a trained banks man where the vehicle has not been fitted with 360-degree vision aids. With the exception of delivery type vehicles all site construction plant shall be provided with 360-degree vision.

Where pedestrians must cross traffic routes, the crossing point shall be chosen to ensure maximum visibility for both pedestrians and drivers and shall be clearly marked.

Blind spots created and controls:

No blind spots are identified.

4.3 Site Parking

Contractor's parking will be provided within the site compound. There will be no parking elsewhere on site unless with express permission of the Site Manager. If vehicles are parked in construction areas, for unloading materials and the like the vehicle must be returned to the designated parking area as soon as possible.

All Contractors and visitors vehicles are to be parked on site in the designated area adjacent to the site compound. The parking of construction vehicles and private vehicles on highways outside of the construction area is not permitted.

4.4 Construction Vehicles / Vehicle Movements

Only trained / qualified personnel are to drive and operate construction vehicles, evidence of accredited certificates of competency will be required.

All vehicles are to be inspected and serviced at regular intervals. Onsite inspections will be reported to the Site Manager and recorded in the relevant book, held within the SHE system on site.

All plant to be fitted with roll over protection and warning beacons.

Cabbed vehicles to be fitted with 360o Mirrors / Cameras/Audible Reversing Warning.

When a vehicle is left unattended, for whatever reason, both during and outside normal working hours, it must be switched off and keys removed to prevent unauthorised use.

When not in use machinery is to be returned to designated parking area(s).

Vehicle operators must be familiar with and use the designated-on site traffic system. Changes to the traffic system must be clearly communicated, evidenced to all site personnel.

Where specific hazards may produce additional risks to vehicular and pedestrian movement, they must be protected whenever possible by a physical barrier and high visibility plastic netting and warning signs. i.e. Excavations close to vehicle and pedestrian routes which could cause restricted sight lines.

No materials are to be loaded in such a way as to cause restricted vision of the driver of the vehicle. All materials to be transported are to be suitably loaded and fully secure.



4.5 Material Delivery & Storage

Loading and unloading of plant and materials shall take place only within the boundaries of the construction site. Loading and storage areas will be created on site allowing sufficient area for the requirements of the project. Lorry movements will be fully considered, ensuring safe reversing / manoeuvring, access and egress. When materials are delivered to the work area they shall be positioned so as not to obstruct vehicular or pedestrian routes or reduce visibility of site traffic and pedestrians. Materials shall be positioned outside of the root protection area of existing trees.

4.6 Highway Cleanliness

The existing highways leading to the site (namely the A41) shall be kept free from mud, dirt, debris and other deleterious matter. Road sweeping shall be implemented as required to prevent build-up of mud / dust on site roads and to ensure it is not deposited on adjoining public roads. A high-pressure hose shall be available for the cleansing of vehicles should this be necessary to avoid the deposit of mud on the public highway.

4.7 Site Security

Prior to commencement on site all site boundaries shall be made secure and tree protective fencing installed. The site will be enclosed with 2m high Heras fencing which shall be maintained in position and good repair. Lockable gated access points will be installed at which pedestrian and vehicular access to the site can be controlled.

4.8 Welfare Facilities

This site compound will have the following welfare facilities. The principal point of access/ egress to this area will be from Pioneer Road:

- Adequate Toilets for anticipated numbers on site;
- Area for the preparation and consumption of food;
- Changing Room
- Site Managers Office & Meeting Room.

The following will be provided and maintained throughout the project:

- Segregated and delineated pedestrian / visitor entrance
- Visitors Book
- · Heated, lit and ventilated accommodation for shelter and the taking of food and drink
- Facility for the changing, storing and/or drying of soiled or wet clothing
- Wholesome drinking water and suitable cups
- · Means of boiling water
- Means of heating food
- Male and female lit toilets
- Toilet paper and paper towels or equipment for drying
- Skincare dispenser, (DEB board)

Smoking is prohibited in ALL offices / rooms and similar enclosed spaces and will only be permitted in the designated (appropriately signed) non enclosed area.



4.9 Protective Equipment

Contractors and visitors wishing to access the site work environment must wear the following PPE: - Safety helmets, hi visibility clothing, gloves, safety footwear & Glasses.

Contractor's task specific risk assessment shall be carried out and protective equipment identified in that assessment shall be worn.

4.10 Waste Management

The appointed site manager will manage waste generated by the development which shall be monitored by a bespoke version of the Building Research Establishment (BRE) SMARTWaste Plan. The project team will use this plan to identify waste streams, forecast waste volumes and identify suitable methods to eliminate, or where this is not practicable, reduce waste generated by the project.

When considering management options for identified waste streams, Careys and supply chain members will adhere to the principles outlined in the waste hierarchy below.



Careys and supply chain members will ensure waste is stored away from drains, boreholes, wells, controlled waters and root protection areas of existing trees. Containers shall be in good condition and, where required, covered to prevent dust and litter being blown out. If there is any likelihood of stored waste contaminating the surrounding environs, all necessary steps will be taken to ensure no contamination occurs. This may include the use of containment bunds with rain shelters and the use of sealed containers, i.e. clip-top drums and fluorescent tube coffins.



Before waste is treated and / or removed from the development all subcontractors / waste contractors must provide the project team with legible copies of the following documentation:

- Environmental permits (mobile plant licences) and exemption certificates authorising on-site crushing and screening activities;
- Waste Carriers Registration Certificates;
- Environmental Permits, (Waste Management Licences and PPC Permits);
- Notification certificate of exemption from environmental permitting.

The project team and, where applicable, subcontractors will ensure that the removal of all inert / non-hazardous waste is recorded on Waste Transfer Notes. These documents must be kept for a minimum of two years. These documents will be stored on site and made available on request.

The project team and, where applicable, subcontractors will ensure the removal of all hazardous waste is recorded on Hazardous Waste Consignment Notes. These documents must be kept for a minimum of three years. These documents will be stored on site and made available on request. Legible copies of all Waste Transfer and Consignments Notes, recording the removal of waste from the development must be issued to Careys. This includes waste generated on site by subcontractors). When removing hazardous waste from the development the following Environment Agency Premises Code must be used on all Hazardous Waste Consignment Notes: (Code a waited from EA). The burning of materials or waste on site shall not be permitted.

4.11 Particulate Matter (Dust), Noise & Vibration

With regard to noise, the methodology in which work activities are undertaken must apply Best Practicable Means (BPM) in order to minimise negative impact on local sensitive receptors. However, if measures to reduce excessive dust and noise are unsuccessful, work must stop and an alternative method devised before work can resume.

The following measures shall be used where necessary in order to prevent noise, dust and vibration:

- control noise, vibration and dust at source;
- selecting quiet and low vibration emitting equipment;
- locate plant within the Site,;
- work within operational hours;
- enclose equipment by suitable and effecting means;
- screening either by site perimeter, site welfare offices or specific hoarding or enclosures.
- staggering of noisy activities in time and space where feasible;
- use of modern, well maintained plant and equipment that complies with the noise limits quoted in the relevant European Commission Directive 2000/14/EC/United Kingdom Statutory Instrument (SI) 2001/1701 and in the mode and a manner that minimises noise and vibration;
- Use sheeted lorries and sealed / covered skips:
- Use dust extraction equipment when drilling and cutting;
- Damp down roads and stockpiled materials in dry or windy weather;
- Sweep access roads regularly;
- Fires and burning on Site are NOT permitted.
- Grass over topsoil which is being stockpiled for landscaping or off-site re-use;



- Locate plant and equipment away from sensitive receptors;
- Use screens, including earth bunds to act as acoustic barriers;
- Isolate plant and equipment when not in use;
- Fit white noise systems on vehicles to reduce noise nuisance when reversing;
- Keep engine compartment doors closed;
- No machine shall be permitted which uses a system of dropping a heavy weight for breaking up paving or foundation; all such equipment shall be hydraulically operated.
- Limit vehicle movements on-site, i.e. use of one-way system.

If required, dust, noise and air quality monitoring shall be undertaken by the Contractor during periods of work that have the potential to result in excessive / unacceptable dust, noise and air quality being released from the Site boundaries. If required monitoring shall, as a minimum, comprise the continuous monitoring of particulates (PM10 and Total Suspended Particulates (TSP)).

The Contractor shall allow for and deal with any complaints from third parties caused by noise, vibration and dust. The Contractor shall temporarily suspend operations if required to do so. If required, the number and specific siting of monitoring locations for the nearby sensitive receptor shall be agreed by the Contractor with the Employer and the Local Authority.

Work shall be carried out in accordance with the requirements of:

- BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites - Part 1: Noise;
- BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration;
- · Control of Pollution Act 1974;
- Environmental Protection Act 1990;
- Environment Act 1995;
- Public Health Act, 1961;
- · Control of Noise at Work Regulations 2005.

If vibration is likely to be a problem or becomes a problem during the contract, reference shall be made to:

- BS 7385-2:1993 Evaluation and measurement for vibration in buildings Part 2: Guide to damage levels from ground borne vibration;
- BS 6472-1:2008 Guide to evaluation of human exposure to vibration in buildings Part 1: Vibration sources other than blasting.

4.12 Lighting

The following strategies are considered to minimise the impacts of artificial lighting:

- Use temporary close-boarded fencing until vegetation has matured to shield sensitive areas from lighting;
- Lighting should avoid areas known to be key for wildlife such as ponds or green corridors;
- Only using lighting where and when necessary;



- Reducing the operating time of lighting and levels of illuminance provided via:
 - Variable lighting dimming the lighting of roads during periods of reduced usage e.g. between midnight and 06:00;
 - Trimming reducing the time the lighting systems are switched on by using high quality accurate electric control system or the usage of movement sensors;
 - Part-night operation turning off lights between certain hours e.g. midnight and 06:00.
- Installing lighting systems that deliver no greater than a 3 lux average illuminance, with a maximum horizontal illuminance of 0.6 uniformity (subject to appropriate maintenance factors)
- Avoiding light spill via:
 - The use of directional lighting by using luminaires with an upwards lighting ratio of zero; and
 - Consideration to the height and spacing between lighting columns where practicable. Examples include stud LED or footpath lighting¹.

4.12.1 Light Type

Use lamps that minimise UV emissions or use UV filters to reduce the attractiveness of the lamp to invertebrates.

Use high-pressure sodium or LED lamps, ideally warm white as this has a low relative attractiveness of invertebrates².

² Eisenbeis, G. (2006) Artificial night lighting and insects: attraction of insects to streetlamps in a rural setting in Germany. In Ecological consequences of artificial night lighting (eds Rich, C. & Longcore, T.), pp. 281-304. Island Press, Washington.

4.13 Visual Amenity

Measures to minimise and avoid creating visual impacts during construction.

- unnecessary vegetation removal will be avoided;
- materials and machinery will be stored tidily during the works in order to minimise impacts on views;
- lighting of compounds and working areas will be restricted to agreed working hours and those which are necessary for security;
- public roads providing access to the construction site will be maintained free of dust and mud;
- keep clear and clean all working areas and accesses as work proceeds and when no longer required for the works;
- on completion of the project, remove all structures, equipment, surplus soil and materials, waste, notice boards and temporary fences used during the construction.

4.14 Pollution Prevention

All works on site will comply with the current pollution prevention guidelines 1, 2, 3, 5, 6 and 7 from the Environment agency (available at https://www.gov.uk/government/collections/pollution-prevention-guidance-ppg). These guidelines cover construction and maintenance works in, near or liable to affect surface waters and ground waters.

¹ Stone, E.L. (2013) Bats and lighting: Overview of current evidence and mitigation



4.15 Previously Unidentified Matters

If one or more of the following is discovered, work in that location must stop immediately and the Project Environmental Co-ordinator (PEC) informed:

- · Contaminated soils;
- Archaeological remains or features;
- Suspicious objects;
- Underground storage tanks;
- Invasive species, i.e. Japanese Knotweed;
- Protected species, i.e. badgers, bats, amphibians, reptiles and plant life.

4.16 Emergency & Incident Preparedness

It is possible, although unlikely, that environmental incidents could occur. Such incidents could include:

- · Hydrocarbon spillages into surface or groundwater;
- Silty contaminated runoff into surface or groundwater;
- · Fires; and / or
- Extreme dust events.

In order to minimise the risk of a pollution incident, the contractor must ensure all operatives understand the environmental risks associated with their work activity and what control measures are in place to eliminate or reduce negative environmental impact. Should an environmental incident occur, follow the Graven Hill Village Development Company Limited SHE Accident / Incident Management & Investigation Process Flowchart and Management of Accidents and Incidents Procedure contained within the Construction Health and Safety file.

4.17 Communication with the Public

The Project Team will communicate proactively with any local residents / businesses and other members of the public that may be affected by construction activities. Careys staff are encouraged to build and maintain a positive relationship with the local community to avoid the need for nuisance related complaints.

All subcontractors are expected to minimise the impact of their works on the local community.

Careys will identify potential nuisance issues at the pre-start meeting and ensure that they are included in site inductions, but these should also be covered in the subcontractor's conditions.

All complaints received will be investigated and a response (even if pending further investigation) is to be given to the complainant as soon as reasonably practicable. Incidents relating to nuisance (e.g. complaints relating to noise, dust, vibration, mud on roads etc. made by the public, clients or Environmental Health Officers) shall be reported internally in accordance with the Careys Incident and Near Miss Reporting Standard (SHEMS-STD-GR-011).

Contact details shall be displayed outside the site.

Contacts shall be reviewed and updated in relation to annual leave or other absence of site staff.

Suitable out-of-hours contact arrangements shall be in place in the event that an incident occurs outside of normal working hours (e.g. an alarm sounds, or a break-in is reported).



4.18 Monitoring and Control

It shall be the responsibility of the Site and visiting Managers to monitor and control the CEMP and ensure its implementation. Updating of both this written Plan, together with a Traffic Management Plan displayed in the site office, will be the responsibility of the Site Manager. Contractors must ensure that they are familiar with and observe this plan.

Communication methods will include inductions, toolbox talks, briefings, Letters/memos and review meetings.

The relevance of CEMP elements will be routinely reviewed by the Site and visiting Managers. This review will focus on the need for the type and level of monitoring and the appropriateness of management measures, monitoring methods and reporting systems.



5. Conclusion

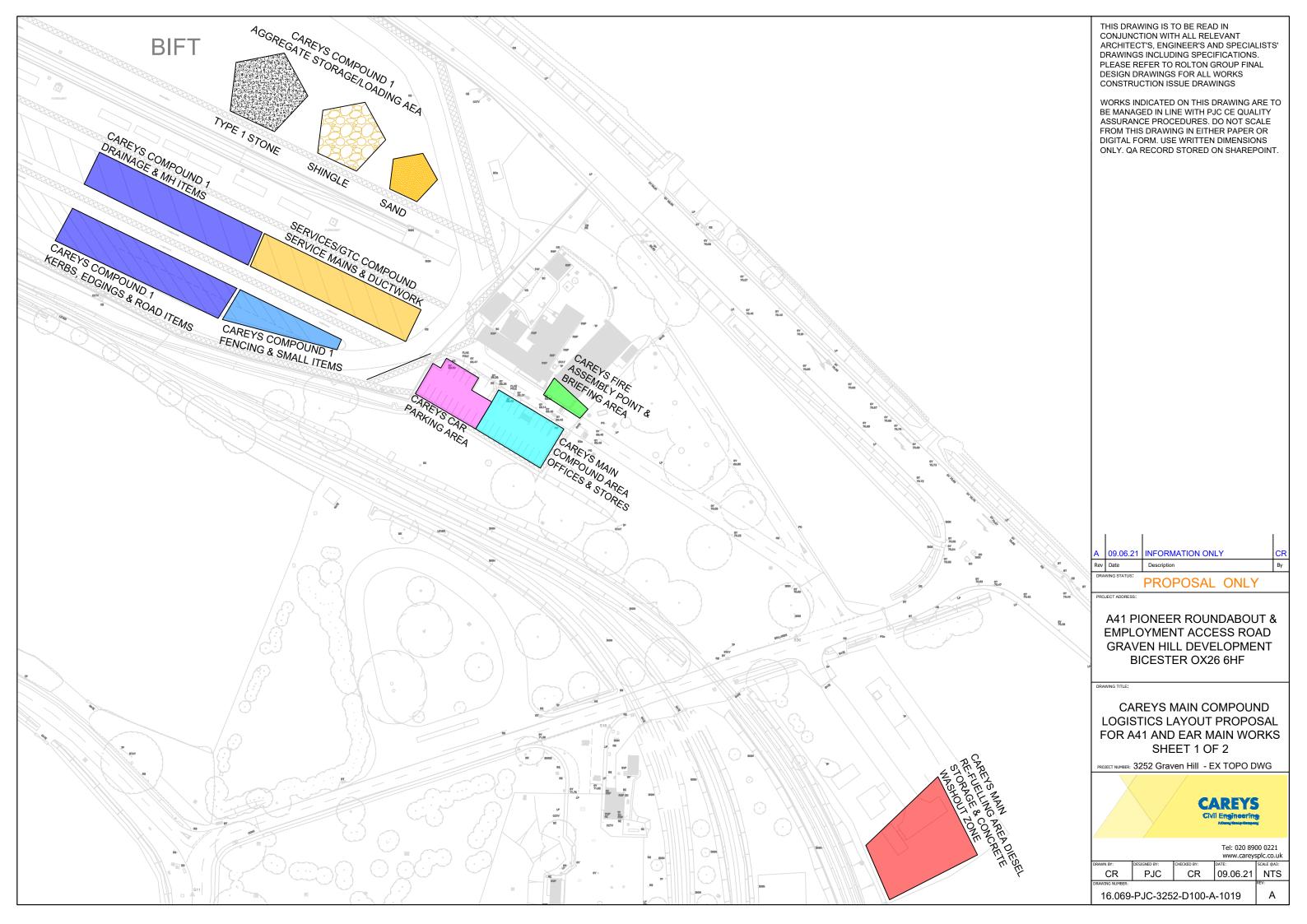
The approved CEMP shall be adhered to and implemented throughout the construction period strictly in accordance with the approved details, unless otherwise agreed in writing by the Local Planning Authority.

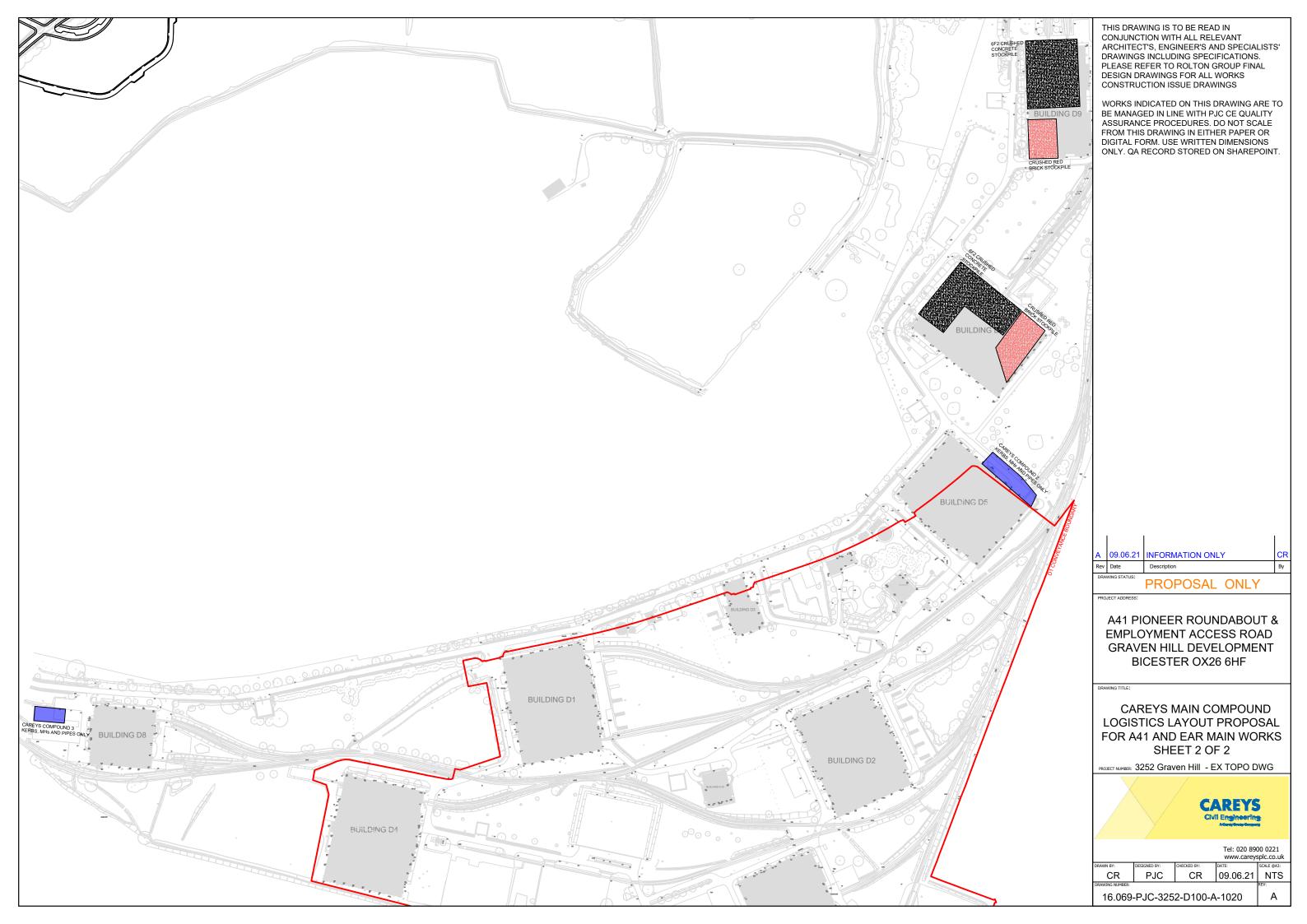


APPENDICES



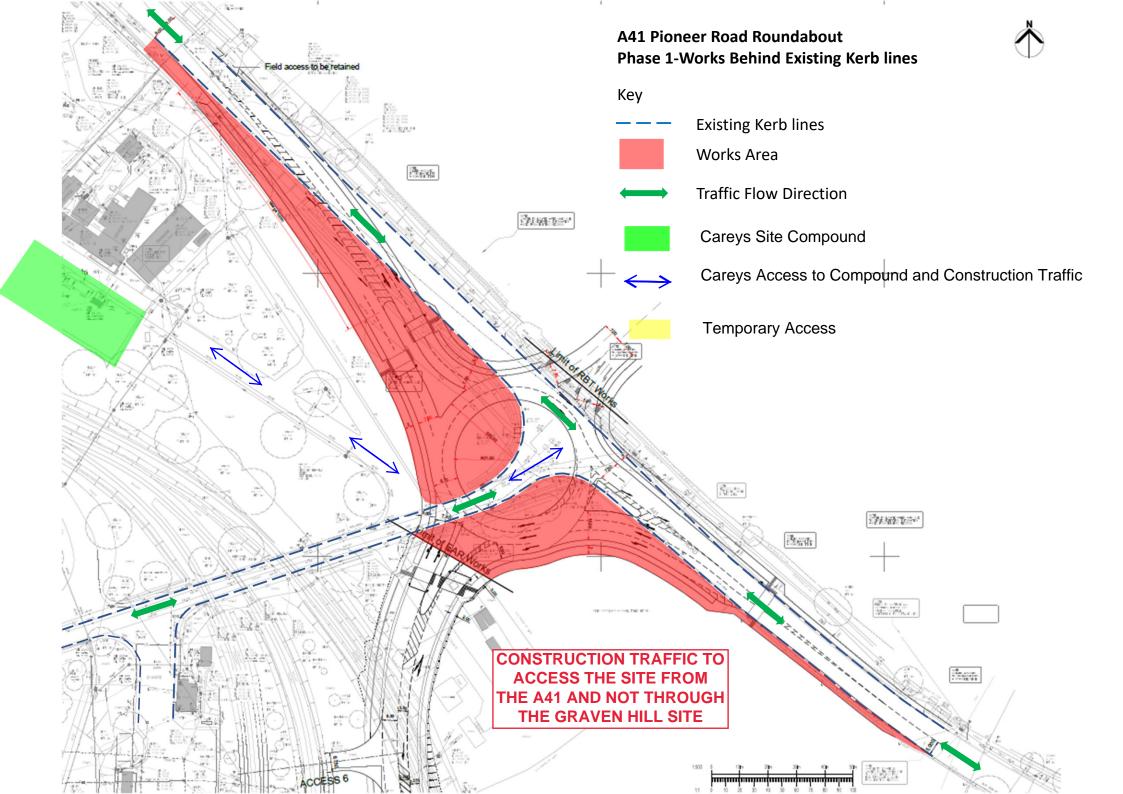
A. Site Compound Plan

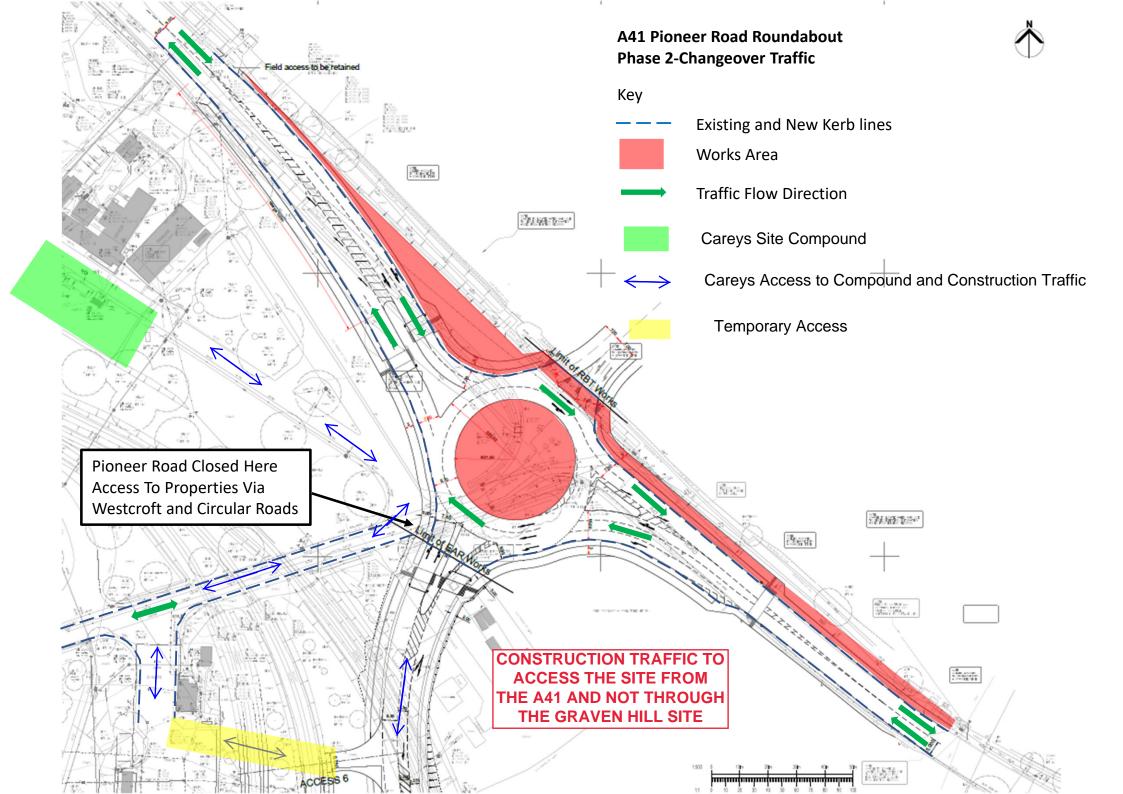


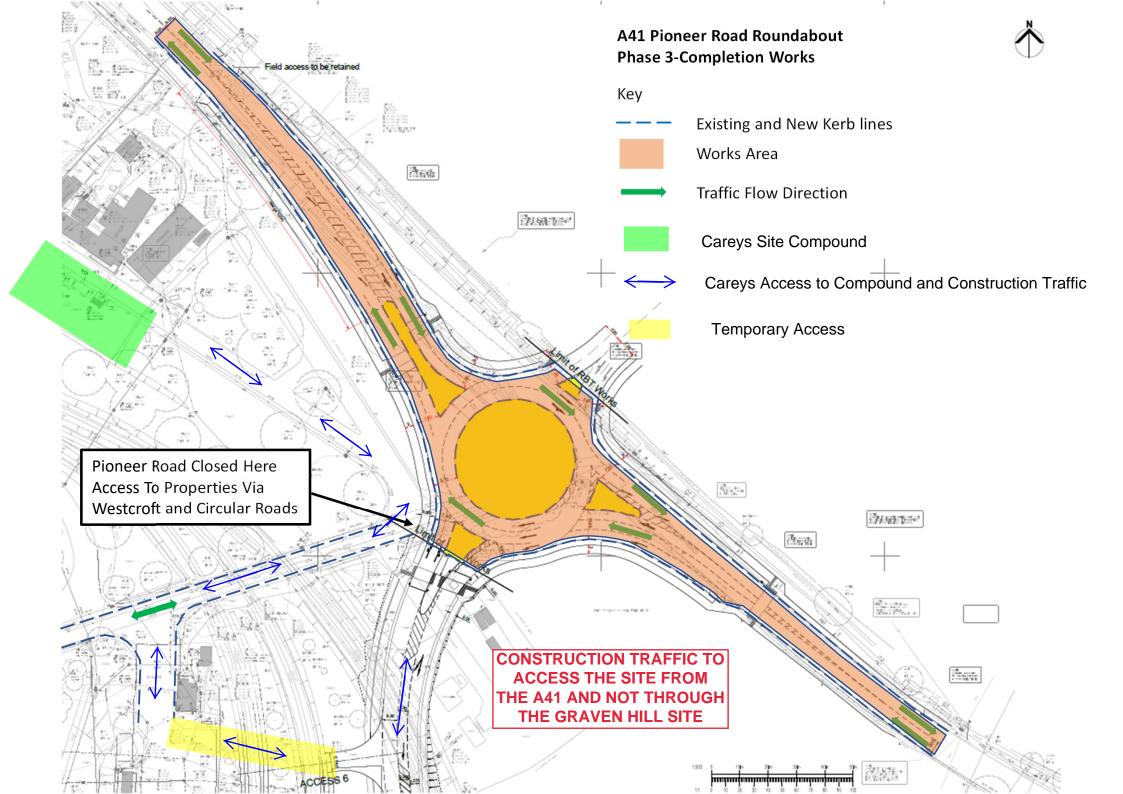




B. Phase of Works & Vehicle Routing Plan









UK and Ireland Office Locations

