Lyminster Bypass (South section) and Fitzalan Link Road

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

(CEMP) Rev C

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Construction Environmental Management Plan (CEMP)

Document Control

1. Project Details

1.1 The Secretary of State granted planning permission for the southern section of Lyminster Bypass development on Land North of Toddington, Littlehampton application reference:

1.2 Outline planning conditions 22, 23 and 25 require the developer to submit and have approved by the District Council a Construction Method Statement, details of the construction compound and wheel cleaning proposals. This document provides the above information and is to be read in conjunction with approved plans.

1.3 All contractors and sub-contractors working on site are required to comply with the measures specified in this Management Plan.

1.4 Prior to commencement of any works a recorded condition survey will take place with the WSCC highways inspector. This will cover all current highway works areas and adjacent roads, footpaths and verges. The recorded condition survey will be recorded and distributed.

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2. Description of the Project and outline Methodology

A. The works are the construction of Lyminster Bypass (south section) and Fitzalan Link Road, including highways and associated structures in two sections.
B. The works include, but are not limited to the complete construction of the following under an Overbridge Agreement and/or, Section 38/278/59 agreements:
C. Section 1: Lyminster Bypass
D. Southern Bypass. A 7.3m wide single carriageway road with 1m hard strips, with a 3.5m wide footway / cycleway on the eastern side.
E. Toddington Lane overbridge. The proposed road bridge will carry the southern section of the Lyminster Bypass over Toddington Lane road. The structure is proposed to be a semi-integral bridge with a single clear square span of 17.0m. The bridge superstructure will comprise of precast prestressed concrete Ubeams with an in-situ reinforced concrete deck slab. The substructure will comprise of reinforced concrete abutments.
F. Rail overbridge. The proposed rail overbridge will carry the southern section of the Lyminster Bypass over the Brighton to Littlehampton Line (ELR: BLI1). The structure is proposed to be a semi-integral bridge with a single clear span of 29.8m. The bridge superstructure will comprise of precast prestressed concrete U-beams with an in-situ reinforced concrete deck slab. The substructure will comprise of reinforced concrete abutments
G. Allotment culvert. The proposed structure will carry the southern section of the Lyminster Bypass and will provide pedestrian access to the new allotments at the east of the bypass. The structure will comprise an 18m long buried precast reinforced concrete box culvert with precast reinforced concrete headwalls and tapered wing walls at the west end. The proposed structure will have a clear width of 2.3m and a clear height of 2.3m to allow pedestrian access only.
H. Northern roundabout. 4-arm roundabout junction providing connectivity with the North Littlehampton Development Site on the eastern arm, access to the Lyminster Bypass (Southern Section) on the southern arm, access to future commercial and waste recycling sites on the western arm and a stub for future access to the Lyminster Bypass (Northern Section) on the northern arm.
I. A259 roundabout and associated retaining structures. 4-arm roundabout junction providing access to/from the A259 from the proposed Lyminster Bypass (Southern Section) on the northern arm and the proposed Fitzalan Link Road on the southern arm.
J. Section 2: Fitzalan Link Road
K. Highway construction. A 7.3m wide single carriageway road with 1m hard strips, with a 3.5m wide footway / cycleway on the eastern side.
L. Academy roundabout. 3-arm roundabout junction.
M. Landscaping the entire scheme

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Appendix D for programme and Appendix E Phasing drawings (attached)

3. Introduction

a. Purpose of CEMP

The CEMP is required under the contract for the construction of the Lyminster Bypass (south section) and Fitzalan Link Road that the main contractor produces the Construction and Environmental Management Plan (CEMP). The purpose of the CEMP is to set out how the construction methods adopted within the construction will interface with Environmental issues and to address any areas where a conflict, risk or incident may occur. It addresses construction procedures to be carried out for routine areas of the scheme together with remedial actions in the event of an ecological incident.

This document aims to provide information on methodology and principles relating to environmental control and protection across the site wide scheme.

b. Legal Compliance

The CEMP is a requirement of the planning consent relating to the outline planning application for the Proposed Development LU/47/11. Condition 10 sets out a number of elements that are required to be provided within a CEMP prior to the commencement of any reserved matters approval.

4. Conditions

Prior to the commencement of any reserved matters approval the following coditions will be satisfied and shall be submitted to the Local Planning Authority for its written approval ;

Outline Permission, Conditions 22 (Construction Method Statement), 23 (Compound) , 25 (Wheel Washing) and 26 (Construction Programme)

The details will be implemented and maintained throughout the construction period. The CEMP shall also include:

Plant and material storage
Construction deliveries
Dust, piling, vibration and noise
Site security
Construction traffic including construction parking

Lorry routeing
Temporary lighting
Surface water runoff

5. Ecology

All ecology has been cleared on site and all works carried out shall be planned to ensure no detriment existing ecology within the site and surrounding locations.

An ecological induction will be included as part of the main site induction for all site personnel. Bats survey/control measures

A. During the construction process of the Lyminster Bypass considerations will be given to the subject of light pollution. Security lighting will be positioned so as not to directly illuminate the woodland areas of the site.

   There will be no light throughout the woodland or within the 15m ecological buffer of grassland. The first light column along the by-pass will be 15m to the south of the woodland and it will be directed away from it.

   Where illumination is unavoidable, the following measures will be incorporated within the lighting constraints assessment:

   i. Careful aiming, placement and mounting of luminaires
   ii. Minimising column heights and mounting multiple luminaires on single columns in order to reduce column numbers
   iii. Use of shields and baffles
   iv. No UV lighting
   v. Post installation light monitoring

B. Badgers survey/control measures

Considerations/actions will be taken in account regarding the population of badgers:

i. Consideration to be given to the placement of any topsoil storage, or piles of materials that may create mounds suitable for sett creation. Any such piles are to be placed well away from identified badger activity, and checked on a daily basis by construction staff to ensure that no badger activity has taken place. If the mounds are to be in place for a significant period of time, the earth will be temporarily fenced to ensure that badgers cannot access the fresh soil.

ii. There will be no night working to avoid disturbance to badgers. There will be no lighting along the boundaries of the site to avoid any light spill.

iii. Excavations left overnight will have an earth or timber ramp (eg. scaffold board) installed to allow animals to escape should they become trapped.

iv. Daily checks of the excavations will be made by construction staff prior to commencing work to ensure that no badgers or other animals have become trapped in the excavations. Should a trapped badger be found within the works, the site ecologist or Natural England will be immediately contacted for advice.

v. Any pipes that need to be left over night on site will be capped to avoid animals becoming trapped.

C. Reptiles survey/control measures

Reptiles have been cleared from site prior to works commencing

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D. Tree protection measures

Trees will be removed, protected and or maintained in accordance with Barrel document 16267-AA-Southern Lyminster Bypass-260717-JB (26/072017)

All trees that are to be retained are to be protected in accordance with British Standard guidelines contained in BS5837:2005 Trees in Relation to Construction –Recommendations.

Root Protection Areas (RPA) are to be erected around individual trees and groups of trees which will exclude construction activities through the installation of protective fencing and/or ground protection around the full perimeter of any RPA.

The RPAs are to be calculated in accordance with BS5837:2005 (calculated using the diameter of the trunk at 1.5m above ground level and multiplying by 12).
Protective fencing will consist of 2 m high Heras panels wired to uprights and horizontals off well-braced scaffolding framework, or equivalent, in accordance with
BS5837:2005. All fencing will be impact resistant and securely fixed to prevent the easy removal of all or individual fence sections by site contractors.

The installation of fencing and/or ground protection will be undertaken before the commencement of construction activities and supervised by a suitably qualified arboriculturalist and will remain in place throughout the construction works.

No fencing will be removed without the authorisation of a suitably qualified Arboriculturalist.

Should any tree or hedge require removing for permanent works to be installed, Council/Barrel ecologist will be consulted before any action is taken.

There will be no storage of materials, trenches and drains underneath or within crown spread of trees.

6. Construction Programme

Works are currently planned to commence Jan 6th 2020 and finish February 2021.

Please see attached appendix C and Appendix

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7. Littlehampton academy

Works will be carried out to ensure the safe management of visitors, staff and student which will interface the works at Fitzalan road.

Where possible, deliveries during drop off and pick up times will be avoided to risk the of deliveries. Traffic cones restricting unauthorised parking along the double yellow lines will be placed at the site access point to ensure visibility splays are maintained for vehicles entering and leaving site. There will be a traffic Marshall monitoring these movements during peak periods.

Access will be maintained to ensure no delivery vehicles stack on the existing carriageway

A meeting with Littlehampton academy will be arranged prior to works starting on site to dicuss the following points.

- Parking, access and traffic management
- Health and safety matters
- Works on the main carriageway (school holidays where possible)
-

8. Site Waste Management Plan

A site waste management plan detailing proposals for dealing with waste arising from the construction of the project will be in place prior to works commencing and be available in the Breheny site office. This will include details of planning and implement best practises such as:

a. Storing and reusing earthwork materials and general arisings to negate the export or import of inert materials.
b. Reduction of site generated waste through waste minimisation, segregation and recycling initiatives
c. Identification, storage and management of potentially contaminated materials
d. Appropriate methods of waste disposal linked to a robust waste disposal audit trail
e. All topsoil and subsoil would be handled and stored carefully to minimise the potential for damage to the soil structure. A detailed method statement would be produced clearly identifying correct stripping, soil handling, storage, and placement and programming requirements to avoid compaction and moving the material in unsuitable weather conditions.
f. Where possible, construction arising's would be reused within the site as structural or non-structural fill

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g. Where practicable, all concrete and redundant road pavements would be transported to a dedicated crushing and recycling facility for re-use on the project or within the local area
h. Detailed procedures and guidance would be developed and implemented through the construction process to minimise the import of non-sustainable raw materials and for identifying opportunities for re-using or recycling waste
i. Site office wastes would be collected in separate containers to maximise the opportunities for recycling, this would include can, bottle and paper banks

9. Traffic Management

The traffic management will be by Paul Budgen, Balfour Beatty Living Places Traffic Management TSCO. All traffic management plans and road space dates are to be agreed with WSCC street works. Where possible these durations will be reduced to minimise disruption. *(See appendix E – Phase TM layout)*

10. Materials Management

A materials management plan including an earthworks strategy will be in place prior to works commencing.

a. Removal of Contaminated Ground

No contaminated ground was identified during the geotechnical investigations. Should small pockets of contamination be encountered during the works, the material would either be capped and left in-situ (where soil porosity is low enough not to present a risk of migration of contaminants) or disposed of to a licensed waste facility under strict controls to be agreed with the Environment Agency and the local authority.

11. Health & Safety Plan

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This is a separate document available in Breheny site offices. This document contains; site specific health and safety, and environmental arrangements.

Prior to commencement of any work activities the Health and Safety Plan will be prepared in accordance with Breheny company procedures and that the requirements of the plan are understood and complied with throughout the duration of the contract. The site will be set up in accordance with the Health and Safety Plan.

12. Site Inductions

a) All site personnel we will be required to attend a Breheny site Induction before entering site. No personnel, including Subcontractors shall start work on site unless they have received appropriate induction training. These must be carried out in a manner that ensures the site organisation and arrangements are communicated to all site personnel. The induction will include an environmental briefing which summarises actions within this CEMP document.

13. Toolbox Talks

All personnel employed on site receive regular Tool Box Talks at least once every two weeks. Toolbox talks will be delivered on particular issues as and when required to personnel involved in particular aspects of construction where there are environmental protection issues to be taken into account.

14. Environmental Incidents

a. Water Pollution Prevention

i. All plant equipment operating in the vicinity of the nearby watercourses will be fitted with plant nappies and static plant stood on drip trays. All surface water will be discharged through sediment tanks. During works close to water bodies, plant and materials will only be allowed within the vicinity if they are in operation.
ii. No plant will be permitted to be parked near to or next streams and brooks.
iii. Any works to divert watercourses will need to be approved in advance by the Environment Agency and method statements completed to reduce the risk of any pollution.

b. Emergency Procedures

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i. An environmental emergency plan will be displayed on site in both compounds, in site offices and fuel storage areas. This will detail what actions are required by whom in the event of an environmental accident. This plan also contains a list of emergency contacts.
ii. Prior to works commencing on site contact with the local EA inspectors will be made aware that works are to begin
iii. A stock of materials including booms, absorbent sheets, straw bales etc. for the containment of spillages of hazardous and polluting liquids will be keep in the main compound and also close to large scale operations adjacent to watercourses or drains. There will be sufficient stock available to contain all the potential harmful liquid involved in the event of the full discharge of the largest liquid containing tank on the site.
iv. All Environmental Emergency Incidents will be reported immediately to both the Project Manager and General Foreman.
v. They in turn will report the situation to the appropriate authorities.

c. Training + Competence of Personnel

The raising of environmental awareness is key to minimising the environmental impact of the project:

i. All members of staff will be trained in company procedures by our SHEQ department in environmental incidents and how these incidents should be conducted should they occur.
ii. Operatives will be given environmental training through site inductions and toolbox talks.

d. Emergency Equipment

i. A stock of materials will be kept on site for the containment of spillages. These will include Oil booms, straw bales and oil absorbent mats. These materials will also encompass sediment suppression and include sedi-mats and settlement tanks.

e. Emergency Contacts

i. Environment Agency 0845 988 1188

15. Construction Works Access

a. Traffic Management

i. Site Accesses:- For the bulk of fill material deliveries access will be via the Main compound at Richardson way off Toddington Lane. Site vehicles and small deliveries will enter the compound shown in

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appendix C and be directed to a delivery point by the gateman. Bulk deliveries will enter using the same point and distributed within the site using all terrain dumpers. Access to this point will be from the A27 (north) or A259 (south) , onto the A284 and accessing Toddington lane via mill lane. No deliveries via the residential area east of main compound

ii. Secondary delivery points at A259 roundabout and for southern deliveries for Fitzalan Road. Where possible, deliveries during drop off and pick up times will be avoided to reduce risk to passing traffic. Traffic cones restricting unauthorised parking along the double yellow lines will be placed at the site access point to ensure visibility splays are maintained for vehicles entering and leaving site. There will be a traffic Marshall monitoring these movements during peak periods

iii. All 3 delivery points will be signposted with 'Breheny' Temp signage

iv. Site Routes:- Dedicated `Works Accesses` in accordance with Chapter 8 of The Traffic Signs Manual will be incorporated into the Traffic Management layout to permit delivery vehicles to enter and egress the works.

v. Site Rules for Drivers: - All drivers will be restricted to 10mph. All reversing vehicle are to be `banked` with a trained banksman. All vehicles onsite must display an amber flashing top light

b. Enforcement- All site personnel, visitors, sub-contractors and suppliers will be expected to abide by this construction traffic management plan. Where the drivers will be regularly coming to the site they will be issued with copies of this plan either as paper copies or in electronic form. The plan will also be posted at the entrance to the site and to the compound, at the site offices reception notice board, and on the notice board at the welfare facilities. It will be included in the site induction.

16. Site Compounds

a. The main site compound (including parking) will be positioned at Richardson way off Toddington Lane. Please see appendix A
b. This access will utilise an existing main entrance created for future estate roads
c. Secondary satellite welfare and gated access will be from Fitzalan Road. This will be securely fenced with a gateman at the entrance to avoid risk to the Littlehampton Academy students and visitors.
d. Special consideration will be taken to avoid any disruption to the adjacent neighbours

17. Site Welfare Facilities

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Welfare facilities on site are to include:

- Site office with desk and chairs
- Toilets (with separate provision for male and female use where necessary).
- Facilities to wash hands, including provision of running hot water.
- Mess facilities including a means of heating water and food.
- Drying facilities and room for storage of clothing.
- Adequate heat and light.

18. Site Working Hours

a. To minimise the disturbance to local residents and in accordance with the provisions of outline planning permission condition No.22 all construction activities will take place between:

b. Monday to Fridays 0800hrs and 1800hrs Saturday 0800hrs and 1300hrs and shall not be carried out at any time on Sundays or Public Holidays

c. There will be no continuous 24 hour activities except in an emergency or on any Sunday or Bank Holiday working, unless agreed in advance with Arun District Council.

d. The starting and warming up of engines/equipment outside the working hours (as detailed in point 2.1) will not be allowed.

19. Material Deliveries

a. Site Accesses:- For the bulk of fill material deliveries access will be via the Main compound at Richardson way off Toddington Lane. Access to this point will be from the A27 (north) or A259 (south) , onto the A284 and accessing Toddington lane via mill lane. No deliveries via the residential area east of main compound
b. Secondary delivery point at A259 roundabout. This will be accessed east/west of the A259 or via the A284 (from north with deliveries adhering to the restricted right turns as per the submitted TTRO.
c. For southern deliveries for Fitzalan Road these deliveries will enter the area via the East Street/ Fitzalan roundabout.
d. All 3 delivery points will be signposted with ‘Breheny’ Temp signage
e. All suppliers will be communicated the chosen delivery routes prior to the start of works and regular checks will be carried out to ensure compliance.
f. Please refer to item 22 for wheel washing details
g. Full access to site will be maintained and deliveries will be scheduled to ensure that delivery vehicles will not park on neighbouring roads.

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20. Materials Storage Areas

Materials for use in the works will be stockpiled adjacent to the main compound at Richardson Way

Material storage areas shall be suitably demarcated and segregation shall be maintained at all stages to ensure minimal contamination and/or waste.

No material shall be stored underneath the crown spread of any trees.

Stockpiles of granular and clay materials will be no higher than 3m

21. Construction Lighting

The installation of floodlighting for safe working and security in connection with the construction process will be identified on plans to be approved by the local planning authority.

Consideration will be given to the subject of light pollution during the construction process with construction of the Lyminster Bypass.

Although it is essential to maintain a safe standard of lighting for operational and security purposes, the effects of the lighting should be given consideration when positioning lighting, in order to avoid light pollution to local residents and sensitive receptors:

- Badgers
- Bat corridors

The following criteria should be followed when erecting safety and/or security lighting. Initially it should be review if the lighting is necessary for example could infrared CCTV be used as an alternative. It should also take into consideration

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whether the light will affect others and if so whether the lights need to remain on at all times.

22.Wheel wash Facilities/ Road Cleanliness

A There is potential during certain phases of the construction for vehicle washing and road sweeping to be required. Breheny will therefore enforce strict measures, to avoid the environmental nuisance of mud on roads.

B These measures will include, but are not limited to:

- Use of an approved mechanical road sweeper to clean the site of any mud or debris deposited by site vehicles within the vicinity of the site. The road sweeper is to be available whenever needed and will be properly used and maintained.
- Provision of wheel washing facilities will be rumble grates where a member of staff will spray all wheels prior to exiting site and going over the grate. Spraying of wheels using a jet wash will take place at the main compound and at the A259 when required
- The effluent should be contained for proper treatment or disposal.
- The possible installation of line connections to existing drainage will need to be passed by the environmental agency.
- Catch pits could also be installed with aggregate and concrete base to catch any silt from the wheel wash process and then the water can drain away naturally from the pit.
- Adequate sheeting of vehicles carrying waste materials.
- Measures will be taken to ensure that mud and detritus is not swept into gullies.
- If any mud or debris carries onto surrounding roads, this will also be cleaned by the site sweeper. An agreed route to cover surrounding roads will be agreed by the supervisor at the start of each shift.

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23. Parking for Construction Vehicles

a. All personnel transportation vehicles will be required to park within the site compound areas, where adequate car parking will be provided. Only construction plant will be permitted overnight onsite parking.
b. Contractor parking (40 spaces) is located in the main compound off Richardson Way shown In appendix C.

24. Utilities

There are a number of service diversions that need to be organised at the A259 roundabout

Our preparatory works will include Trial holes and ground penetrating radar to verify ground conditions and also to confirm utility locations. These works will be carried out between Jan 06th 2020 and Feb 05th 2020

Current known diversions to be carried out prior to works commencing include the 11kv and fibre optic cables, which cross the proposed by-pass at the A259

Other known works include;

- BT diversions/lowering in and around A259.
- UKPN LV cable diversion around the proposed roundabout at A259
- Southern Gas Networks, diversions at A259
- Southern Water diversions anticipated at A259 Roundabout.

All works will be verified post trial hole/ radar survey and meetings will be held with all relevant statutory providers to determine the extent of works required

25. Communication Strategy

a. Ongoing liaison will be maintained Arun District Council during the construction period.
b. For the construction works an organogram has been produced detailing clearly the members of staff to be deployed to the site. A fortnightly `team meeting` will be held at which all construction issues will be discussed, in particular Environmental, Ecological and Archaeological issues. Attendees at this meeting will distribute information to the labour/ subcontractors in their sections. Should there remain any issues outside the skills set of those attending the meeting the above detailed Ecologists will be contacted.
c. Any non-conformances will be highlighted at the team meetings and a remedial strategy put in place.

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d. The site will be audited on a 4 weekly basis by BCE`s in house SHEQ team to ensure compliance with CEMP requirements and company procedures.
e. Communication from the general public will be through a control contact number displayed on site notices.
f. Communication to the local residents and commerce about the works will be through a letter in the mailbox before commencing the works.
g. Notice boards will be displayed and maintained at either end of the bypass to commute work progression and key milestones to the local stakeholders.
h. Updates will be provided to the local parish and town council news letters on a monthly basis to maintain a consistent line of communication to the public.

26. Air Quality/Dust Suppression

a. The control of dust generated from the development will be generally in accordance with BRE Report 456 – Control of Dust from Construction and Demolition sites
b. It is envisaged that the bulk of the fill material to embankments will be placed during the recognised earthworks season ie April to September. During this time it is likely that the soil being place will require moisture conditioning and the dust suppression measure will need to be undertaken. These will be in the form of towed spray bowsers.
c. Damping Down During dry spells of weather the haul roads will be continuously kept damp by spraying using a tanker and suitable spray attachment. Note that this operation will be in accordance with the requirements for temporary drainage –.

27. Noise and Vibration Control

The following general advice is based on the guidance provided in BS 5228 which will be applied to minimise the noise breakout from the construction activities affecting noise sensitive receptors. The following issues will be considered when planning or implementing all works:

a. Ensuring the use of quiet working methods, the most suitable plant and Reasonable hours of working for noisy operations, where reasonably Practicable;
b. Locating noisy plant and equipment as far away from houses as reasonably possible, and where practical, carry out loading and unloading in these areas;

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c. Screening plant to reduce noise which cannot be reduced by increasing the distance between the source and the receiver (i.e. by installing noisy plant and equipment behind large site buildings);
d. Shutting down any machines that work intermittently or throttling them back to a minimum;
e. Orientating plant that is known to emit noise strongly in one direction so that the noise is directed away from houses, where possible; Closing acoustic covers to engines when they are in use or idling;
f. Lowering materials slowly, whenever practicable, and not dropping them;
g. Selecting items of plant that emit low levels of noise and vibration wherever possible and undertaking acoustic attenuation on noisier plant where practicable.

28. Surface Water Drainage Discharge during construction

The construction phasing and operational areas of the site will be carefully planned To reduce the risk of water pollution into the nearby watercourse. Construction works which disturb the original ground surface are envisaged and during these processes (i.e. topsoil stripping) the risk of mobilisation of silt laden runoff is greatest. Silt laden runoff from the site, if not managed, could have a detrimental impact on water quality within the receiving water courses.

To ensure no detriment to water quality in the receiving catchment suspended solids and other pollutants in surface water runoff generated from the construction site will be managed at the site by incorporating a construction phase sediment control plan. This plan will utilise a range of methods to limit and remove suspended soils and other pollutants from runoff. Such measures include the use of temporary settlement ponds, filter strips, swales and cut-off ditches.

Surface water runoff from the active construction areas of the site will be conveyed to the settlement ponds via a combination of cut-off ditches, swales and pumping where gravity flow to the ponds is not achievable. Pre-treatment of flows prior to arrival at the ponds will be undertaken where practical through use of grassed / vegetated buffer strips and the presence of simple check dams (formed using straw bales, small clay based impoundments, timber ‘stop log’ obstructions or similar) within the conveyance ditches to encourage pre-settlement of suspended solids.

29. Fuel Storage + Dieseling Areas

Fuel storage will be centralised. Compound fuel storage locations are indicated on the site construction layout map.

Fuel will be stored in tanks or drums in accordance with the Environment Agency Pollution Prevention Guidelines, PPG6.

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All refuelling will be carried out at least 50 metres from watercourses. Where this buffer distance cannot be achieved a minimum distance will be agreed with the site agent. A map will be provided by the Client identifying those areas where refuelling will not be permitted.

Irrespective of the buffer distance and location of refuelling, interceptor drip trays will be available in accordance with standard best practice across the construction industry. Spill kits will be available within each plant vehicle on site and at sensitive locations (watercourse crossings, fuel storage areas etc).

Areas of waste oil/fuel/chemical storage and permanent refuelling will be located 50m away from watercourses or drainage paths. Where this is not possible, a minimum distance will be agreed with the environment agency. Such storage areas will be appropriately sited to prevent the downward separation of contaminants to natural soils and groundwater.
Fuel, oils and chemicals will be stored on an impervious base within a bund able to contain at least 110% of the volume stored. Rainwater will not be allowed to accumulate within the bund and in any way compromise the required 110% volume capacity.

30. Control of Hazardous Materials

The site management will carry out assessments on any work liable to expose employees and the environment under the control of the company to substances hazardous to their health.

There are a number of products currently in use within the company which, when handled, stored, or used can give rise to potential health hazards.

Generic COSHH assessments are included in the Health and Safety Plan at the start of a contract. In addition to this, the Contracts Manager and Site Management shall constantly monitor all materials and substances being used on site to ensure that COSHH Assessments are available for each product. When new products are identified or required, the Site Management shall obtain a Product Data Sheet for the substance and produce a COSHH Assessment. Copies of COSHH Assessments are to be retained on site in ‘hard-copy’ format for reference by the workforce.

Attention is to be given to the ‘Workplace Exposure Limits’ (WEL’s) that are stated in the COSHH Assessments. These set out the maximum concentrations of a substance that is allowed in the air before control measures are put in place. At no times should the concentrations be exceeded without a specific COSHH assessment being carried out.

31. Topsoil Stripping + Storage

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Before commencing works on site all areas of work to be disturbed by construction activities will be stripped of topsoil. All topsoil stripping will be carried out by a tracked excavator and loaded into dump trucks, before being hauled to designated stock piles. These stock piles will be sealed for weathering and each one will be recorded and marked ready for reuse on finishing works.

Topsoil stripping and storage shall only be carried out in suitable whether conditions only and avoided during heavy rain. The haul routes and storage locations shall be predetermined and marked up on drawing.

Consideration to be given to the placement of any topsoil storage, or piles of materials that may create mounds suitable for sett creation. Any such piles are to be placed well away from identified badger activity, and checked on a daily basis by construction staff to ensure that no badger activity has taken place. If the mounds are to be in place for a significant period of time, the earth will be temporarily fenced to ensure that badgers cannot access the fresh soil.

32. Method Statements/ Risk Assessments

a. All Method Statements and Risk Assessments must be communicated to the workforce before the tasks are commenced. All relevant personnel (including subcontractors) must sign to confirm that they have been informed and understand the contents of the Method Statement and Risk Assessment. Printed copies of Method Statements are to be retained on site for reference by the workforce. On long term projects, the workforce should be given regular 'refresher' instruction on the Method Statements and Risk Assessments which should also recorded.

The Method Statement will detail the sequence of works, the manner in which the works will be undertaken, who will be doing the work and identify the control measures to where necessary ensure specific tasks are carried out in a safe manner.

Risk assessments and method statements will be produced taking in account the recommendations of the Ecological Protection Mitigation Plan (EPMP).

b. Subcontractor Method Statements

All Method Statements received from subcontractors must be reviewed and accepted by the Contract Manager or Site Management before they are permitted to commence work on site. Any subcontractor Method Statements that are not considered acceptable must be rejected and will need to be resubmitted in writing before their work commences.

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33. Bridge Construction

a. Road

A separate method statement and risk assessment will be carried out for these works. These will be agreed and communicated before any works take place. Roads will be laid out in accordance with approved details.

b. Pedestrians

A separate method statement and risk assessment will be carried out for these works. These will be agreed and communicated before any works take place.

Footways will be laid out in accordance with approved details.

34. Waste Disposal/Housekeeping

Site management are responsible for ensuring that the work, storage and welfare areas of the sites and offices are tidy, and excess materials and waste are not allowed to accumulate.
All site employees are required to assist in keeping sites and offices safe and tidy by adopting good housekeeping practices. Materials must be stacked properly, waste and surplus materials disposed of carefully in the appropriate receptacles and plant and tools used kept tidy.

All waste is to be stored and removed according to the Environmental Code of Practice and relevant legislation, including entering the relevant information in the Site Waste Management Plan where necessary.

No throwing out of food scraps or feeding of birds/animals is permitted on sites as this encourages vermin.

Separate skips for timber, inert and general waste will be available on both the east and west compound.

35. Inspection Plans

a. Materials Testing

I full material testing regime, agreed by WSCC and the consultant engineers will be in place prior to works commencing

b. Environmental Monitoring

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The CEMP will be kept under continuous review by the Construction Environmental Manager who will ensure that the following tasks are undertaken on a regular basis:

i. Monitoring how the plan is being carried out – programme, timetable.
ii. Reporting and recording progress against programme and timetable.
iii. Reporting problems, changes, extensions etc.
iv. Recording problems and solutions, changes and extensions. Regular Meetings of the environmental management team - minutes will be
v. Taken and included within the working CEMP on site.
vi. Up-dating / revising the CEMP Audits will be carried out on a monthly basis by our in house SHEQ team.
vii. Team meetings will identify any noncompliance with the CEMP requirements. For ecologically and environmentally sensitive works, meetings will be held with contacts as detailed above.

36. Emergency Incidents

a. Arrangements With Emergency Services

i. Traffic Routes Onsite

This will be displayed at both main site compounds and be updated through the duration of works.

ii. Traffic Routes Offsite

To be agreed with HCC streetworks when agreeing road closures and diversion routes

37. Emergency Contact Details

i.	Police non Emergencies	0845 6070 999
ii.	Wotrthing A&E	01903 205111
iii.	NHS Direct	0845 4647
iv.	HSE (fatality or major incident)	0845 300 9923
v.	WSCC (Emergencies and out of hours)	033 022 26664
vi.	WSCC (roads and transport)	01243 642105
vii.	Water Leak Line	0800 820 999
viii.	Gas Emergencies	0800 111 999

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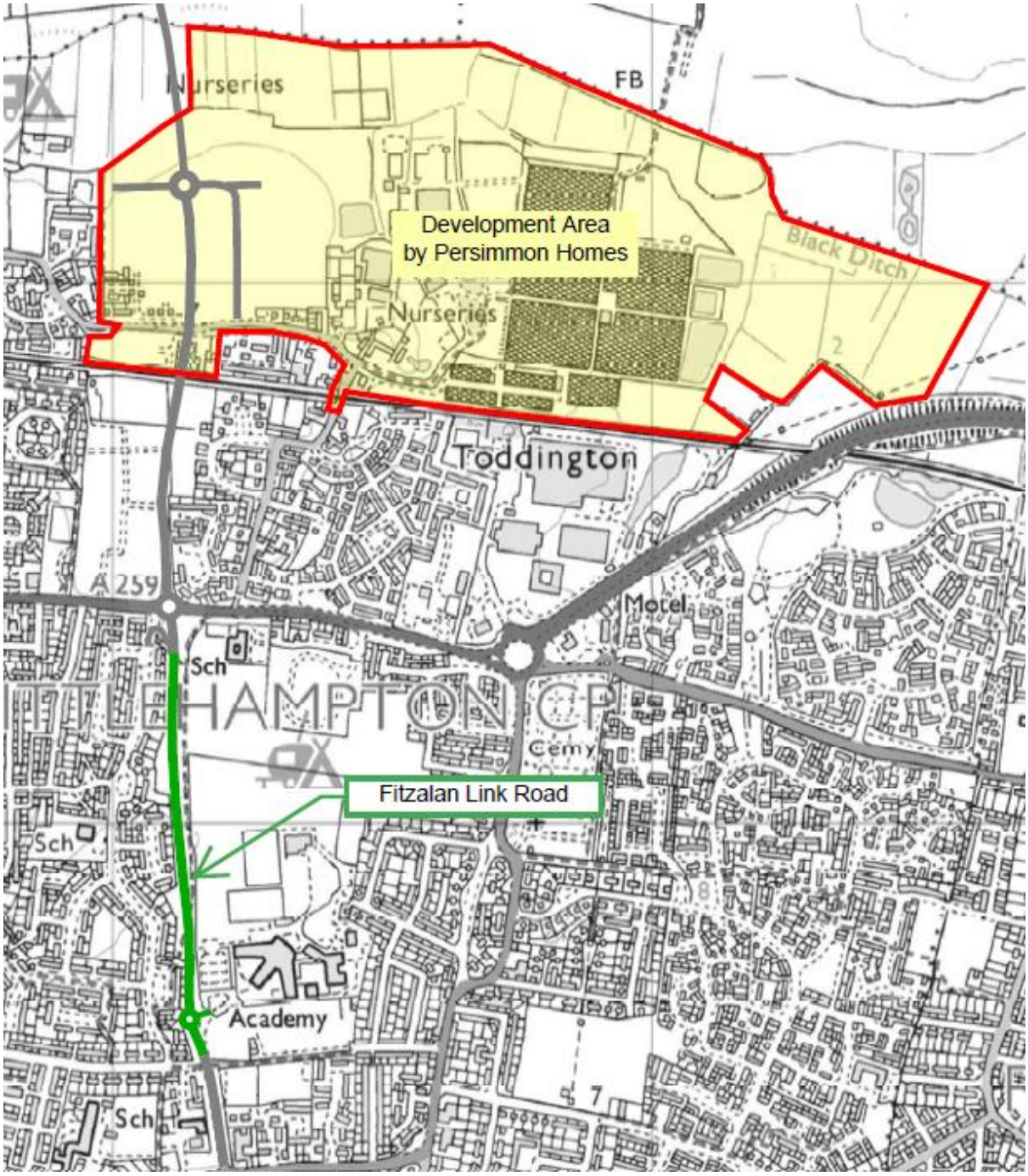
Appendix .A Location Map



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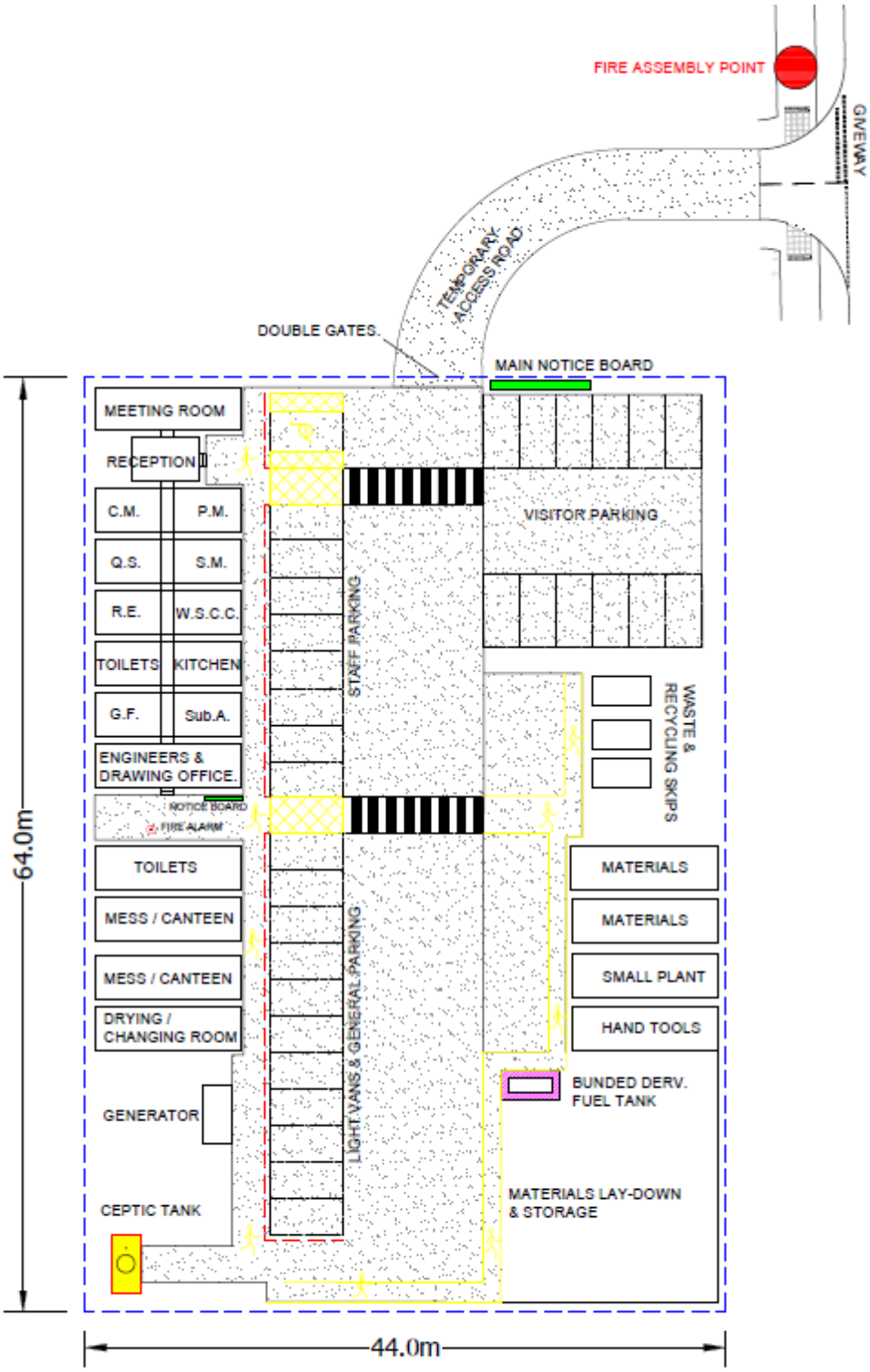
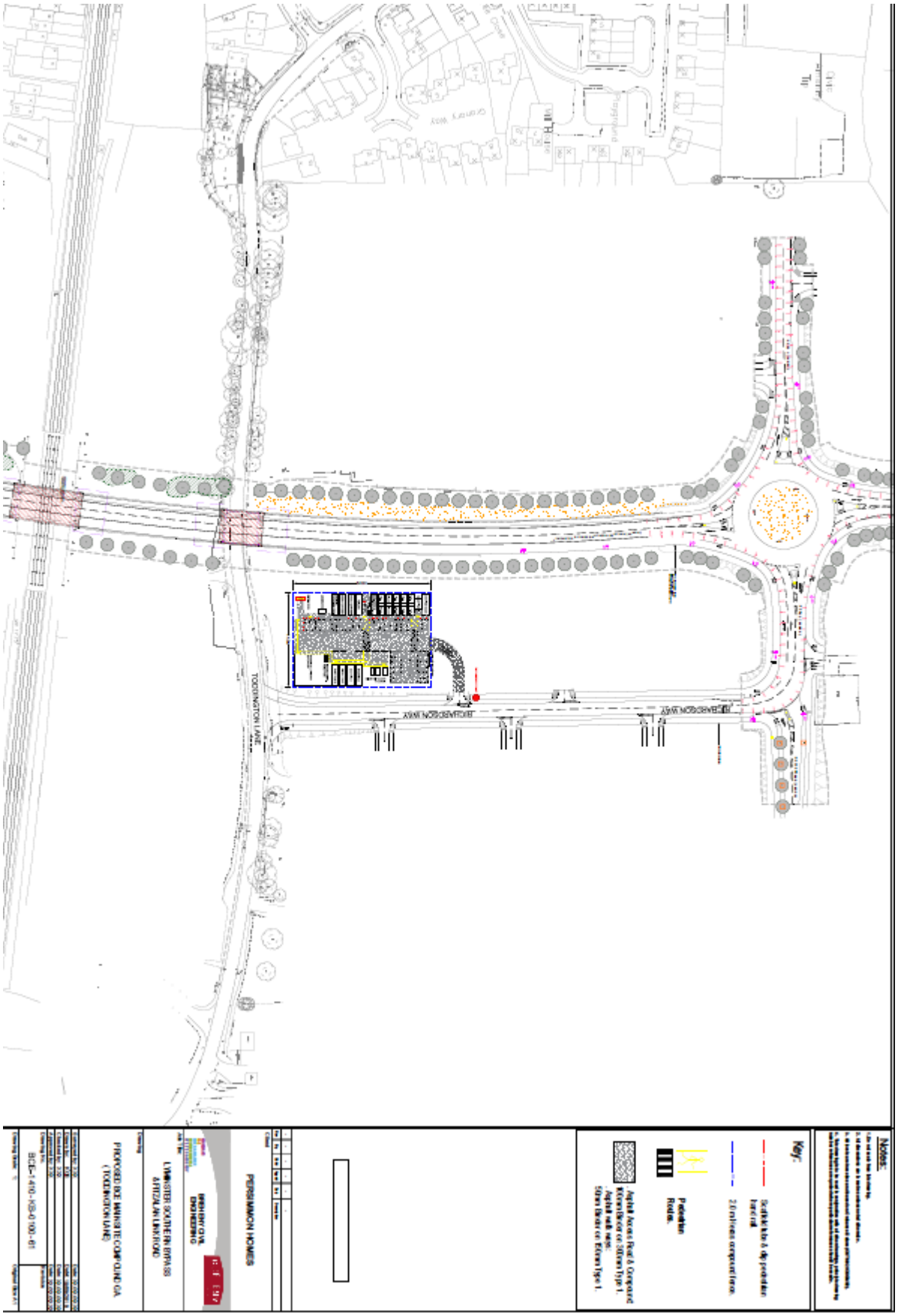
Appendix B – Welfare Facilities

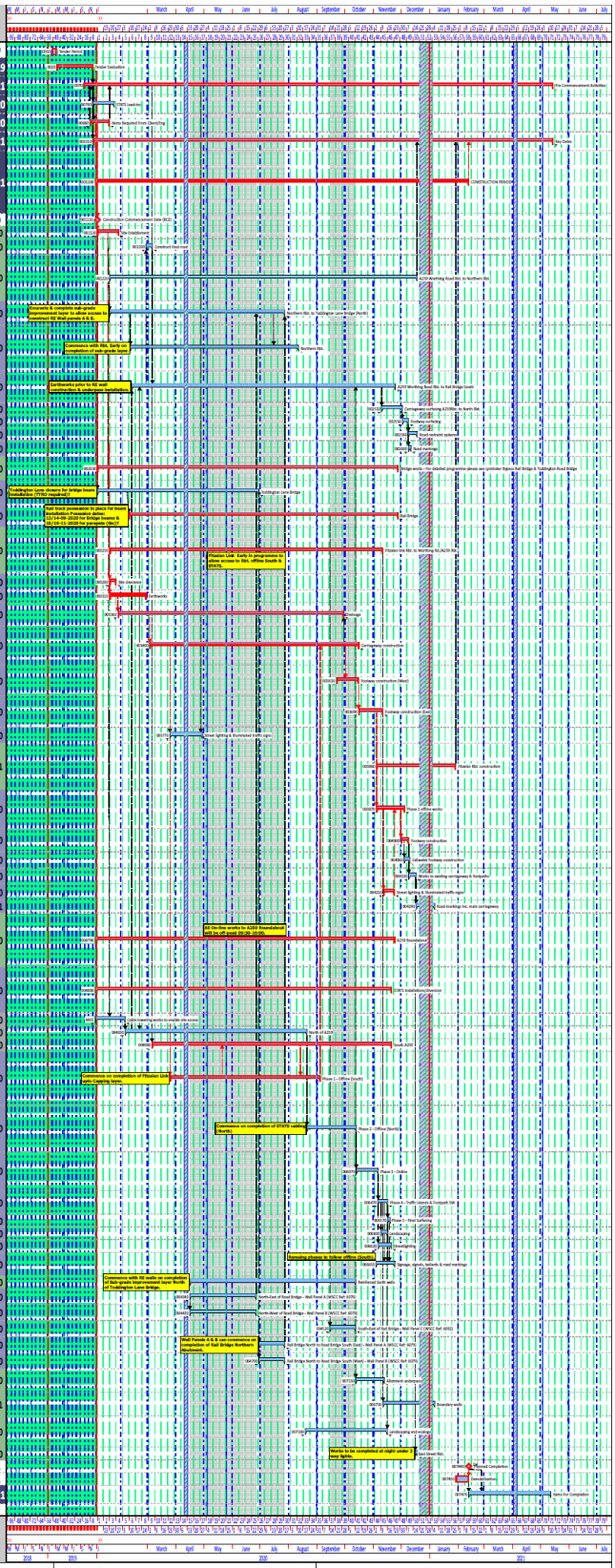


Appendix C – Phase 1 site compound and access



Appendix D – Construction Programme

Line	Unique Task ID	Name	Start	Duration	Finish
1	0010	Tender Period	30/01/2019	5w 2d	07/03/2019
2	0020	Tender Evaluation	08/03/2019	37w 1d	02/12/2019
3	0070	Pre Commencement Activities	26/09/2019	79w 4d	14/05/2021
4	00780	STATS Lead-Ins	02/12/2019	6w	24/01/2020
5	00860	Items Required From Client/Eng	11/11/2019	8w	20/01/2020
6	001010	Key Dates	02/12/2019	70w 2d	14/05/2021
7	001100	CONSTRUCTION PERIOD	19/12/2019	55w 1.5d	12/02/2021
8	001110	Construction Commencement Date (BCE)	06/01/2020		06/01/2020
9	001120	Site Establisment	06/01/2020	3w 3d	29/01/2020
10	001190	Construct Haul road	28/02/2020	1w	06/03/2020
11	001220	A259 Worthing Road Rbt. to Northern Rbt.	20/01/2020	46w 4.5d	18/12/2020
12	001230	Northern Rbt. to Toddington Lane Bridge (North)	20/01/2020	26w 2d	27/07/2020
13	001470	Northern Rbt.	11/Feb/20	25w 1.5d	11/08/2020
14	002150	A259 Worthing Road Rbt. to Rail Bridge South	13/02/2020	39w 4d	24/11/2020
15	002510	Carriageway surfacing A259Rbt. to North Rbt.	10/11/2020	3w 1.5d	02/12/2020
16	002550	Footway surfacing	02/12/2020	4d 4h	08/12/2020
17	002580	Road restraint systems	09/12/2020	1w 2.5d	18/12/2020
18	002600	Road markings	09/12/2020	3d	11/12/2020
19	002630	Bridge works - For detailed programme please see Lyminster Bypass Rail Bridge & Toddington Road Bridge	06/01/2020	46w	27/11/2020
20	002640	Toddington Lane Bridge	06/01/2020	24w 2d	29/06/2020
21	002930	Rail Bridge	10/02/2020	41w	27/11/2020
22	003250	Fitzalan link Rbt. to Worthing Rd./A259 Rbt.	20/01/2020	41w 2.5d	11/11/2020
23	003260	Site clearance	20/01/2020	1w 2h	27/01/2020
24	003310	Earthworks	20/01/2020	6w	28/02/2020
25	003360	Drainage	29/01/2020	34w	29/09/2020
26	003490	Carriageway construction	03/03/2020	31w 3d	16/10/2020
27	003610	Footway construction (West)	22/09/2020	3w 3d	15/10/2020
28	003690	Footway construction (East)	16/10/2020	3w 3.5d	11/11/2020
29	003770	Street lighting & illuminated traffic signs	25/03/2020	4w 3d	29/04/2020
30	003860	Fitzalan Rbt. construction	04/11/2020	10w 2d	29/01/2021
31	003870	Phase 1 offline works	04/11/2020	4w 2.5d	04/12/2020
32	004000	Footway construction	01/12/2020	1w 1.5d	09/12/2020
33	004060	Cellwebb Footway construction	04/12/2020	4d	10/12/2020
34	004130	Works to existing carriageway & footpaths	09/12/2020	1w 1d	17/12/2020
35	004210	Street lighting & illuminated traffic signs	12/11/2020	1w 3d	23/11/2020
36	004290	Road markings Inc. main carriageway	17/12/2020	4d	06/01/2021
37	004790	A259 Roundabout	19/Dec/19	45w 3.5d	24/11/2020
38	004800	STATS Installations/diversion	19/12/2019	45w 2d	20/11/2020
39	4801	Cable lowering works to enable site access	19/12/2019	5w	05/02/2020
40	004830	North of A259	06/02/2020	27w 2d	20/08/2020
41	004980	South A259	06/03/2020	36w 1d	20/11/2020
42	005090	Phase 1 - Offline (South)	25/Mar/20	22w 2d	04/09/2020
43	005610	Phase 2 - Offline (North)	21/Aug/20	7w 1.5d	13/10/2020
44	006070	Phase 3 - Online	13/Oct/20	3w 2.75d	06/11/2020
45	006470	Phase 4 - Traffic Islands & Footpath SW	06/Nov/20	1w 1.5d	16/11/2020
46	006570	Phase 5 - Final Surfacing	16/Nov/20	2d	18/11/2020
47	006600	Landscaping	09/Nov/20	1w	16/11/2020
48	006620	Streetlighting	06/Nov/20	2w 4h	20/11/2020
49	006650	Signage, signals, bollards & road markings	04/11/2020	2w 4.5d	24/11/2020
50	004330	Reinforced Earth walls	16/04/2020	25w	12/10/2020
51	004340	North-East of Road Bridge - Wall Panel A (WSCC Ref: 6078)	16/04/2020	10w	26/06/2020
52	004430	North-West of Road Bridge - Wall Panel B (WSCC Ref: 6078)	16/04/2020	10w	26/06/2020
53	004520	South-East of Rail Bridge - Wall Panel C (WSCC Ref: 6092)	15/09/2020	4w	12/10/2020
54	004610	Rail Bridge North to Road Bridge South (East) - Wall Panel A (WSCC Ref: 6079)	30/06/2020	4w	27/07/2020
55	004700	Rail Bridge North to Road Bridge South (West) - Wall Panel B (WSCC Ref: 6079)	30/06/2020	4w	27/07/2020
56	007130	Allotment underpass	13/10/2020	4w 3d	12/11/2020
57	006750	Boundary walls	11/11/2020	6w	06/01/2021
58	007330	Landscaping and ecology	19/08/2020	12w 2d	16/11/2020
59	007410	East Street Rbt.	16/12/2020	1d	17/12/2020
60	007440	Planned Completion	12/02/2021		12/02/2021
61	007450	Demobilisation	29/01/2021	2w	12/02/2021
62	007470	Items For Completion	12/02/2021	12w	12/05/2021



BREHENY CIVIL ENGINEERING

HIGHWAYS & BRIDGES
RAIL
RIVER & MARINE
ENVIRONMENTAL
UTILITIES & ENERGY

Client: Persimmon Homes Ltd.

Consultant: Faithful & Gould Ltd.

Programme Title: Lyminster Bypass & Fitzalan Link Road (DRAFT)

Page No. 1 of 1

Programme No. : 01410-STG-T01
Programme Rev : D_Jan 2020 Start

Contract/Tender No:	01410	Status:	Tender
Drawn By:	STG	CM:	NS
Checked By:	DG	SA:	-
Drawn Date:	30/10/2019	QS:	-

Appendix E – 01410_A259 Lyminster Phasing (attached)

Appendix F_ Delivery Points

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