19th December 2019

Lyminster Bypass (Southern section) and Fitzalan Link Road (Northern Section)

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

(CEMP)

Relating to:

LU/47/11 Condition 22, 23 and 25

LU/63/11 Condition 4 and 5

Revision G

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Construction Environmental Management Plan (CEMP)

Document Control

1. Project Details

The Scheme has three parts

The Lyminster Bypass forms part of a new strategic north-south road corridor, beginning just south of the A276 into Littlehampton. The overall scheme will alleviate traffic along the existing A2384 Lyminster Road and the Lyminster level crossing, bringing traffic through a new route into the town.

There are three distinct sections forming the new bypass:

The Fitzalan Link Road – Northern Section

Approximately ½ miles of highway – between a new roundabout on the A259 Worthing Road at Highdown Drive, connecting to an existing link road alongside the Littlehampton Academy.

The Lyminster Bypass Southern Section

Approximately ½ mile of new highway, to link the new roundabout on the A259 with the new Hampton Park development this includes a new bridge over the railway line and Toddington Lane.

The Lyminster Bypass Northern Section

Approximately ¾ mils of new highway – to link the new roundabout in Hampton Park Toddington to tie in with the A284, Lyminster Road, 600m south of the A27 Crossbush junction.

When complete the proposed Lyminster Bypass will improve north-south access into/out of Littlehampton, helping the flow of traffic and assisting economic growth in the area.

Planning Requirements

Outline Planning permission for the southern section of Lyminster Bypass development was granted on the 23rd January 2013 (Application reference LU/47/11) and outline permission for the Fitzalan Link was granted on the 6th June 2012, (Application reference LU/63/11).

Outline planning Conditions 22, 23 and 25 (LU/47/11) and Conditions 4 and 5 of LC/63/11 require the developer to submit and have approved by the District Council a Construction Method Statement, including details of the construction compound and

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wheel cleaning proposals. This document provides the above information and is to be read in conjunction with approved plans.

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

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.

An F10 was submitted to the HSE on the 16th December 2019.

2. Description of the Project and Outline Methodology

The works comprise the construction of Lyminster Bypass (southern section) and Fitzalan Link Road, including highways and associated structures in two sections.

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:

Section 1: Lyminster Bypass

- A 7.3m wide single carriageway road with 1m hard strips, with a 3.5m wide footway / cycleway on the eastern side.
- Toddington Lane Vverbridge. 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 precast pre-stressed concrete U-beams with an in-situ reinforced concrete deck slab. The substructure will comprise of reinforced concrete abutments.
- 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 precast and pre-stressed concrete U-beams with an in-situ reinforced concrete deck slab. The substructure will comprise of reinforced concrete abutments.
- 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.
- 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.

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- 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.

Section 2: Fitzalan Link Road

- Highway construction: A 7.3m wide single carriageway road with 1m hard strips, with a 3.5m wide footway / cycleway on the eastern side.
- Academy roundabout: 3-arm roundabout junction.
- Landscaping the entire scheme.

Appendix D sets out the programme and Appendix E highlights the Phasing drawings.

3. Introduction

Purpose of CEMP

The CEMP is required for the construction of the Lyminster Bypass (southern section) and Fitzalan Link Road and has been prepared by the main contractor. The purpose of the CEMP is to set out how construction methods will interface with environmental issues and will 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 scheme.

Legal Compliance

The CEMP is a requirement of the outline planning permission for the proposed development (LU/47/11 and LU/63/11). Condition 10 of LU/47/11 sets out a number of elements that are required within the CEMP prior to the commencement.

4. Planning Conditions

Prior to commencement, approval is required for the following conditions:

Outline Permission attached to LU/47/11, Conditions 22 (Construction Method Statement), 23 (Compound), 25 (Wheel Washing) and 26 (Construction Programme); and Condition 4 and 5 attached to LU/63/11.

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

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Plant and material storage
Construction deliveries
Dust, piling, vibration and noise
Site security and fencing
Construction traffic including construction parking
Lorry routing
Temporary lighting
Surface water runoff

5. Ecology

All ecology has been cleared and all works carried out shall be planned to ensure no impact to habitats within and surrounding the site. An ecological induction will be included as part of the main site induction for all personnel.

- **Bats survey/control measures**

  During the construction process consideration will be given to light pollution and security lighting will be positioned so as not to illuminate retained trees.

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

  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.

- **Badgers survey/control measures**

  During the surveys, no evidence of badgers were recorded although the site does potentially provide suitable habitat for foraging. Therefore, the following mitigation will be observed:

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(i) Consideration given to the placement of any topsoil storage / piles of materials that may create mounds suitable for sett creation. Piles are to be placed 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 light spill.

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

(iv) Excavations will be checked daily by construction staff prior to commencing work to ensure that no badgers or other animals are trapped. If a badger is found, the site ecologist will be immediately contacted for advice.

(v) Any pipes that need to be left over night will be capped to avoid animals climbing inside.

- **Reptiles survey/control measures**

Reptiles have been cleared from site.

- **Tree protection measures**

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

All retained trees 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 to exclude construction activities; protective fencing and/or ground protection will be used 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

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arboricultural consultant and will remain in place throughout the construction works.

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

Should any tree or hedge require removing for permanent works to be installed, the Council / 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 or root protection areas.

6. Construction Programme

Works are currently planned to commence 6th January 2020 and will take between 12-14 months to complete, finishing February 2021.

The programme is set out in Appendix C

7. Littlehampton Academy

Works will be carried out to ensure the safe management of visitors, staff and students along the Fitzalan Road. Where possible, deliveries during drop off and pick up times will be limited.

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 will stack on the existing carriageway.

A meeting with Littlehampton Academy will be arranged prior to works starting on site to discuss the following points:

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

And agreed actions from the meeting will be implemented.

8. Site Waste Management Plan

A site waste management plan dealing with waste arising from the construction will be in place prior to works commencing and be available in the Breheny site office. This will include details of planning and will implement best practices, including:

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- Storing and reusing earthwork materials and general arising's to negate the export or import of inert materials.
- Reduction of site generated waste through waste minimisation, segregation and recycling initiatives.
- Identification, storage and management of potentially contaminated materials.
- Appropriate methods of waste disposal linked to a robust waste disposal audit trail.
- The topsoil and subsoil will be segregated, 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, placement, and programming requirements to avoid compaction and moving the material in unsuitable weather conditions.
- Where possible, construction arising's would be reused within the site as structural or non-structural fill.
- 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.
- Detailed procedures and guidance will 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.
- Site office wastes will be collected in separate containers to maximise the opportunities for recycling in 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.

- **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.

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11. Health & Safety Plan

This is a separate document available in the 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.

The plan will detail the temporary security fencing along the bypass length as per Condition 22 (iv) or LU/47/11. This will comprise timber hoarding to a height of 2.4 meters.

12. Site Inductions

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

- **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, or diversions of, ordinary watercourses will need the approval of the Local Lead Flood Authority (contact Paul Cann, Arun District Council [agents to WSCC]), and method statements completed to reduce the risk of any pollution.

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(iv) Sediment laden waters should not be pumped or allowed to flow into watercourses untreated.

- **Emergency Procedures**

(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, contact will be made with Arun District Council's Engineers and the local Environment Agency Inspectors to confirm the site start (6th January 2020).
(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 immediately to the appropriate authorities.

- **Training and 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.

- **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.

- **Emergency Contacts**

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- Environment Agency 0845 988 1188
- Roger Spencer 01903 737812

15. Construction Works Access

- **Traffic Management**

(i) Access for the majority of fill material delivery will be via the Main compound at Richardson Way off Toddington Lane. Site vehicles and small deliveries will enter the compound shown in 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.

(vi) 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

- The main site compound (including parking) will be positioned at Richardson Way off Toddington Lane. Please see appendix C.
- This access will utilise an existing main entrance created for future estate roads.

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- 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 Littlehampon Academy particularly during pick up and drop off times. Moreover, stacking will be avoided on the carriageway outside Littlehampton Academy to minimise disruption.
- Special consideration will be taken to avoid any disruption to the adjacent neighbours.

17. Site Welfare Facilities

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

To minimise the disturbance to local residents and in accordance with the provisions of outline planning permission Condition 22 all construction activities will take place between:

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

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.

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

- **Site Access:** The majority of fill material deliveries 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
- **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).

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- The deliveries for the Fitzalan Road will enter via the East Street/ Fitzalan roundabout (see appendix F).
- All 3 delivery points will be signposted with 'Breheny' Temporary signage.
- All suppliers will be informed to use the chosen delivery routes prior to the start of works and regular checks will be carried out to ensure compliance.
- Please refer to item 22 for wheel washing details.
- Full access to site will be maintained and deliveries will be scheduled to ensure that delivery vehicles will not park on neighbouring roads.

20. Materials Storage Areas

Materials for use in the works will be stockpiled adjacent to the main compound at Richardson Way (see Appendix C).

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. And stockpiles will have reduced angle side-slopes to reduce the risk of slippage slumping and / or false stability in icy conditions.

21. Construction Lighting

The installation of floodlighting for safe working and security in connection with the construction process will be identified on plans.

Consideration will be given to 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 position of lighting and its effects will be considered in order to avoid light pollution to local residents and sensitive receptors, including:

- Badgers
- Bat corridors

An assessment will be made including whether lighting is necessary and alternatives considered such as infrared CCTV; and whether the lights need to remain on at all times.

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22. Wheel wash Facilities/ Road Cleanliness

There is potential during certain phases of the construction process for vehicle washing and road sweeping. Breheny will therefore enforce strict measures are in place to minimise mud on roads. These measures will include:

- An approved mechanical road sweeper to clean the site of mud / debris deposited by 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 on rumble grates where a member of staff will spray all wheels and vehicle chassis prior to exiting or going over the grate. Spraying of wheels using a jet wash will take place at the main compound and at the A259.
- 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 Arun District Council and the Environment Agency.
- Catch pits may be installed with an aggregate and concrete base to catch silt from the wheel wash process; thus water can drain naturally from the pit. Discharge rates to be agreed with Arun District Council and the Environment Agency.
- Adequate sheeting of vehicles carrying waste materials.
- Measures will be taken to ensure that mud and detritus material is not swept into gullies.
- If any mud or debris carries onto surrounding roads and / or gullies, 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.

The location of wheel wash facilities are shown on the plan in Appendix C and Appendix F

23. Parking for Construction Vehicles

All personnel transportation vehicles will be required to park within the dedicated compound areas, where adequate car parking will be provided. Only construction plant will be permitted overnight.

Contractor parking (40 spaces) is located in the main compound off Richardson Way shown (see Appendix C).

24. Utilities

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

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

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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

The domain name for the project website is: www.lyminsterbypass.co.uk . The website will be the main source of information for interested parties, regularly updated with details of the works. It will have maps of the works, contact details, latest news, FAQs and a sign up form for updates. The contact details will include the project email address: info@LyminsterBypass.co.uk . A free-phone number, 0800 148 8911, will be manned during office hours and will provide general information about the project. In addition, the key elements of the communication strategy are as follows:

- Ongoing liaison will be maintained with West Sussex County Council and Arun District Council during the construction period and both authorities will be notified of key dates.
- For the construction works an organogram has been produced detailing clearly the members of staff to be deployed to site. A fortnightly `team meeting` will be held at where all construction issues will be discussed including environmental, ecological and archaeological issues. Attendees at this meeting will distribute information to the labour / subcontractors in their teams if necessary the appropriate consultant contacted to address relevant issues.
- Any non-conformance issues will be highlighted at team meetings and a remedial strategy put in place.
- The site will be audited every 4 weeks by BCE`s in house SHEQ team to ensure compliance with CEMP requirements and company procedures.
- Communication from the general public will be through a contact number displayed on site notices.
- Communication to the local residents on key dates will be via a newsletter and email (the website is now live).
- Notice boards will be displayed and maintained at either end of the bypass highlighting progress and key milestones to the local stakeholders.
- Updates will be provided to the local parish and town council via newsletters on a monthly basis to maintain a consistent line of communication to the public.

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26. Air Quality/Dust Suppression

Air quality and dust suppressions will be managed as follows:

- 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.
- It is envisaged that the bulk of the fill material for the embankments will be placed during the recognised earthworks season between April and September. During this time, it is likely that the soil will require moisture conditioning and dust suppression; and towed spray bowsers will be used.
- Damping Down: During dry spells of weather, the haul roads will be 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:

- Ensuring the use of quiet working methods; the most suitable plant and
- specified hours of working for noisy operations.
- Locating noisy plant and equipment as far away from houses as reasonably possible, and where practical, carry out loading and unloading in these areas;
- Screening plant to reduce noise by increasing the distance between the source and the receiver (i.e. by installing noisy plant and equipment behind large site buildings).
- Shutting down any machines that work intermittently / keeping throttling to a minimum.
- Orientating noisy plant in a direction away from houses where possible; and closing acoustic covers to engines when they are in use or idling;
- Lowering materials slowly, whenever practicable, and not dropping them;
- 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 surface water pollution onto the nearby watercourse and storm sewers. Where construction works disturb the original ground surface (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.

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To ensure no detriment to water quality in the receiving catchment; suspended solids and other pollutants in surface water runoff (from site) will be managed 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 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 and 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.

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 and at sensitive locations (watercourse crossings, fuel storage areas).

Areas of waste oil / fuel / chemical storage and permanent refuelling will be located 50m away from watercourses or drainage paths. Where appropriate, a minimum distance will be agreed with the Environment Agency and Arun District Council. 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 and covered (which will prevent rainwater egress) within a bund to contain at least 110% of the

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volume stored. Rainwater will not be allowed to accumulate within the bund nor compromise the required 110% volume capacity.

30. Control of Hazardous Materials

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, the Contracts Manager and Site Management will monitor all materials and substances being used 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

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 weather conditions and avoided during heavy rain. The haul routes and storage locations shall be predetermined and marked on plans.

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

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- **Method Statements**
  All Method Statements and Risk Assessments must be communicated to the workforce before the tasks are commenced. All relevant personnel (including subcontractors) must sign the assessments 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 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).

- **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 will need to be resubmitted in writing before work commences.

33. Bridge Construction

- **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.

- **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

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allowed to accumulate. A waste transfer log will be maintained to monitor waste and materials.

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 site which encourages vermin.

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

35. Inspection Plans

- **Materials Testing**
  A full material testing regime, agreed by WSCC and the consultant engineers will be in place prior to works commencing.

- **Environmental Monitoring**
  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 including the programme / timetable.
  (ii) Reporting and recording progress against programme and timetable.
  (iii) Reporting problems, changes and extensions.
  (iv) Recording problems and solutions, changes and extensions. Regular meetings of the environmental management team where minutes will be taken and included within the working CEMP.
  (v) Up-dating / revising the CEMP Audits on a monthly basis by our in house SHEQ team.
  (vi) 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

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- **Arrangements with Emergency Services**

  Traffic Routes Onsite

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

  Traffic Routes Off-site

  To be agreed with WSCC streetworks for road closures and diversion routes

37. Emergency Contact Details

(i)	Police / Non Emergencies	0845 6070 999
(ii)	Worthing A&E	01903 205111
(iii)	NHS Direct	0845 4647
(iv)	HSE (fatality or major incident)	0845 300 9923
(v)	WSCC (roads and transport/out of hours)	01243 642105
(vi)	Water Leak Line	0800 820 999
(vii)	Gas Emergencies	0800 111 999
(viii)	Environment Agency	0845 988 1188
(ix)	Roger Spencer (Arun DC)	01903 737812

APPENDICES

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