Stonebond.

Construction Environmental Management Plan & Method Statement V2

Bartons Road, Havant

REVISION RECORD

Rev	Date	Changes	Initial	
			SCM/SM	CD
1	31-07-2026	Initial Issue		RJ
2	16-10-2026	Addition of appendix 7 – site environmental RA		FW

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1. Introduction

The aim of the Construction Environmental Management Plan (CEMP) and Method Statement is to set out the responsibilities with regards to compliance with legislation and to implement any mitigation measures.

This document details management measures to minimise environmental impact from the construction phase of the development.

Further, it provides a framework within which, the measures will be implemented throughout the project.

The CEMP and Method Statement provides project-specific management measures and is a dynamic document which will be reviewed if activities or conditions onsite change that may influence management measures.

This document has been developed to avoid, minimise and mitigate against any construction effects on the environment and surrounding community.

All construction and enabling works at the development will be carried out in accordance with the this document once approved in writing by the Local Planning Authority. It focuses on our approach in the following three key areas:

1) Measures for controlling the effects of construction and enabling works associated with the development.

2) Addressing construction logistics issues including the phasing of the works, hours of work, noise and vibration, air quality, waste management, site remediation, plant and equipment, site transportation and traffic management including routing, signage, permitted hours for construction traffic and construction materials deliveries.

3) Ensuring appropriate communication with and the distribution of information to, the local community and the Local Planning Authority relating to relevant aspects of construction. Appropriate arrangement will be made for monitoring and responding to complaints relating to construction.

2. Site Detail, Location and Project Description

PROJECT			
Name	Bartons Road, Havant		
Address	Former Electricity Board Site, Bartons Road, Havant, Hampshire		
Senior Construction Manager	Ben Dearlove		
Estimated Start Date	September 2026	**Estimated Completion Date**	2028
PROJECT DESCRIPTION			
Location:	The site is located on Bartons Road, Havant, adjacent to Havant and Waterlooville Football Club and close to the crossroads junction with Petersfield Road. The site comprises brownfield land formerly used as a Travis Perkins yard and is currently predominantly hard tarmac standing. The development will provide 90 plots, made up of 60 traditional two-storey houses and one four-storey apartment block containing 30 plots. The apartment block will be traditional construction, with the fourth floor formed using a Metsec-type construction.		
Access:	The site will be accessed from the existing former Travis Perkins entrance off Bartons Road, immediately before the crossroads junction with Petersfield Road. The existing access will be used for initial site establishment and construction access. A 24-hour access route through the entrance must be maintained for SSE to access the rear of their yard; Stonebond will engage with SSE to agree and manage this requirement throughout the works.		
Geology	The BGS Geological Sheet for this area shows the site to be underlain by: • Alluvium (clay, silt and sand) in the extreme southeastern corner. • River Terrace Deposits (sand and gravel) across the southern half of the site. River Terrace Deposits are anticipated beneath the locally occurring Alluvium. No superficial deposits are recorded across the northern half of the site. • Solid geology of Bagshot Formation (sand locally clayey) (anticipated) beneath the topsoil in the north and concealed beneath the River Terrace Deposits, and locally occurring Alluvium, in the south.		
Contaminated Land	The site is a brownfield former builders' merchant yard and is currently mainly hardstanding. Any ground contamination risks associated with the former commercial use will be reviewed through the project's ground investigation and managed in accordance with the remediation strategy and relevant approvals.		
Groundwater	Groundwater levels for the wider Bartons Road development have previously been recorded at approximately 0.75m to 3.0m below ground level, with River Terrace Deposits overlying sands, silts and clay and low permeability infiltration conditions. The site is also identified within Portsmouth Water Source Protection Zone 1c for subsurface activity, meaning deep drainage solutions, piling or other penetrative foundation methods could pose a groundwater quality risk if not controlled. Any piling, deep excavations, fuel storage, contamination discovery or dewatering will therefore be managed through appropriate method statements, pollution prevention measures and consultation/approval where required.		

Watercourses & Flood Risk	Published flood risk information for the Bartons Road development identifies the site as Flood Zone 1, with a low probability of flooding from rivers and the sea. The previous flood risk and drainage strategy for the wider Bartons Road land identified fluvial, tidal, reservoir, artificial and sewer-related flood risk as not a significant risk to the development, with minor surface water risk capable of mitigation through the drainage strategy. Surface water will be managed using the approved drainage strategy, including permeable construction/filter drainage where applicable, attenuation and controlled discharge to the local watercourse network at an agreed restricted rate. During construction, temporary surface water controls will be maintained to prevent silt, fuel, concrete washout or other pollutants entering drains, sewers, groundwater or watercourses, particularly given the site's former commercial use and groundwater sensitivity.
Ecology	Whilst there is limited ecological features on the site the following is recommended as detailed within the Preliminary Ecological Appraisal (John Wenman, July 2025), relevant to construction works: - Habitat protection measures; - Precautionary avoidance measures for amphibians and reptiles; - Precautionary timings for nesting birds.
Trees	The site is predominantly hardstanding following its former yard use. Existing trees and vegetation are mainly located around the site boundaries and adjacent land. A tree survey/arboricultural assessment and tree protection plan will be used to confirm any trees to be retained, removed or protected. Tree protection fencing will be installed before works start where required, and no storage of materials, parking, excavation, level changes, fuel storage or disposal of liquids will be permitted within agreed root protection areas. Any pruning or removal will be undertaken in accordance with the approved arboricultural information and ecological controls.
Invasive Species	No invasive species have been identified within the site parameters based on the information currently available. The site team will remain vigilant during clearance and groundworks for invasive non-native species such as Japanese knotweed, Himalayan balsam, giant hogweed or buddleia where relevant. If any suspected invasive species are encountered, works in the affected area will stop and specialist advice will be obtained before removal, treatment or disposal.
Archaeology	No archaeological works are required for this phase based on the current project information. If previously unidentified archaeological remains, artefacts or features are encountered during excavation or groundworks, works in the immediate area will stop and the Site Manager will notify the project team so that appropriate archaeological advice can be obtained before works recommence.

3. Construction Proposals

Outline Methodology – our outline methodology for carrying out the development works will be as follows:

- Enabling works – secure the site with the installation of new heras fencing and timber hoarding to the perimeter of the scheme. Tree protection fencing will also be erected to a design on any areas which are covered within the tree protection plan. Metal site gates will be installed as soon as is reasonably practicable, further securing the site from unauthorized access. Leading on from this will be any ecology and archaeological works. Off-site and on-site mains services diversions will commence once the main access is constructed.
- 1st Phase external works – a temporary site access will be established via the use of a haul road to allow for access between HWFC car park and our site. Following this the site compound/welfare area will be constructed at the Northen end of the site allowing an area for the enabling team to place their welfare cabins. Mains drainage and roads will follow. At this stage we endeavor to have s278 sign off allowing us to construct the main site entrance and bring existing services on to site and lay as per the agreed service design. Before superstructure works proceed, we aim to have all oversites completed, allowing a clean, safe, and practical environment before adding further sub-contractors to the development.
- Site establishment works – site infrastructure; install permanent site accommodation and welfare once the roads are constructed on site. The following dimensions will apply canteen, meting room, toilets, site office (24ft length 9ft width) site stores (20ft length 8ft width) All purple in appearance to match Stonebond company colours (please see attached example in appendix).
- Loading and unloading of plant and materials - predominantly the use of a site forklift will be utilised for the loading and unloading of materials. Appendix 1 shows the area in which we have allocated for said materials. In some cases, hi-abs will be used to unload where transport has this use. At no point will any loading unloading be taking place on the main road off the site boundary.
- The erection of security fencing will be put in as per the agreed specification in line with company health and safety policies. This will be checked on a weekly basis as per the temporary works registers all of which will be stored on site. Hording and decorative displays fall under the same temporary works checks. If any defective areas are found it will be dealt with by the site team and may need the involvement of the wider team such as sales and marketing department. All fencing and gates will have signage attached such as site entrance signs, tree protection signage, danger notices, and mandatory site rules such as use of P.P.E. speed limits for plant and deliveries and directions to entrance/exit points and site offices.
- Wheel washing facilities - this will be via the use of a bowser and heavy duty jetwash it will be placed at the main entrance point of the site initially, as the site progresses and occupations begin the site gates will progressively move back within the development and the wheel washing will move back along with the site gates (please see handover schedule within appendix).
- The site will be part of the considerate contractor's scheme providing a considered approach to sensitive working practices. Other than the items within this CEMP other practical measures to reduce construction impacts will be set out in the CPHSP and sub-contractor RAMS.
- A schedule of works will be produced in the form of a master programme along with an enabling infrastructure programme used to report against and track progress this will be discussed and reviewed regularly in internal and external meetings. This will be produced prior to any works starting.

Construction Logistics – our construction logistics proposals for access, site establishment, materials storage and parking etc. are shown in the appendices.

Construction access will be taken from the existing former Travis Perkins entrance off Bartons Road, immediately before the crossroads junction with Petersfield Road. This access will act as the primary construction entrance from site start through to completion. Access arrangements will be managed to ensure safe vehicle movements and to maintain the required 24-hour access for SSE to the rear of their yard.

There are no Public Rights of Way across the site. The site boundary and access arrangements will be

maintained to prevent unauthorised access while retaining agreed operational access for SSE as required.

Good construction practice dictates that vehicles arriving at or leaving the site will be planned to avoid rush hour and school drop off and pick up times. Careful consideration will therefore be given to preventing blockages to or causing an unnecessary build-up of traffic in the vicinity of the site.

Road cleaning facilities will be provided at the site vehicle entrance within the confines of the construction site, with wastewater managed accordingly and to reduce the volume of mud and debris being transported onto the main highway

Construction offices and associated welfare will be set up to the eastern end of site and will be installed early in the enabling process of the building programme.

All works that are required to take place on the highways or footpaths, including any reinstatement of the carriageway and footpaths, will have the relevant permits and licenses applied for and granted by the local authority highways department prior to any work commencing. All reinstatements of the highway or footpaths will be carried out in accordance with the local authority's highways specification and requirements.

All highway works will be coordinated as far as possible to avoid unnecessary disruption to public highways, footpaths and local residents.

A photographic condition survey of the highways will be carried out prior to the commencement of works and a copy issued to Wokingham Borough Council highways. Upon completion of the project a review will be carried out in accordance with Wokingham Borough Council highways.

Construction traffic entering and leaving site while the enabling, site establishment and substructure works are carried out will be carefully managed and controlled by our gateman/traffic marshals.

Deliveries will be carefully managed, and the materials will be offloaded directly within the storage areas as close to the point of use as practicably possible to minimize mechanical double handling. No storage of materials or machinery, parking of vehicles, deposit or excavation of soil or rubble, or disposal of liquids shall take place within an area of tree protection fencing / fenced off.

Unloading will be carried out by hi-ab or forklift and within the site boundaries.

Number of on-site construction workers

The following is a summary of daily average trades, workers and personal vehicles. This data has been produced using experience from similar construction projects. All personnel and vehicle numbers have been rounded up to the nearest 5.

Construction Phase	Anticipated Dates	Anticipated no. of trades average per day	Anticipated no. of workers average per day	Anticipated max no. of workers vehicles average per day
Enabling Works	Sept 26	1	15	10
Roads and drainage	Sept – Nov 26	1	20	15
Substructure	Nov – April 27	2	30	15
Superstructure	Dec 26 - Aug 27	5	45	25
Fit-out, test, commission and PC	May – July 28	12	60	40

Phasing Plan – Refer to Appendix 1

4. Traffic Management

All delivery vehicles will leave the construction site in a forward direction; they will not be allowed to perform U-turns on the road.

Construction traffic will access the site from Bartons Road using the existing former Travis Perkins entrance. The access is located immediately before the crossroads junction with Petersfield Road and will be managed by the site team to avoid obstruction to the highway, the football club, neighbouring premises and SSE's required access.

There will also be signage displayed at the site exit to make sure all drivers are aware of the preferred route back and be included within the drivers' rules that all vehicle drivers have to read and sign before they are allowed to unload their vehicle on site. The preferred route is indicated within the appendices.

We will request all scheduled deliveries to be notified by the supplier by the Site Team at least 48 hours in advance of delivery time so that the deliveries can be prepared for and managed accordingly with minimal impact upon the surrounding area. If deliveries arrive unannounced or earlier than previously advised, then they will be accommodated on site. If this space is unavailable, the lorries may be turned away. However, given the volume of materials that are required on the project, we feel that turning away vehicles will be unnecessary.

All vehicles will be inspected by the gateman/traffic marshal before leaving site to ensure no materials or debris is transported from site onto the public highway or footpaths. The site roads will be constructed up to base course early within the project's program thus minimising any vehicles accessing across unmade ground. Wheel washing facilities (powered jet washer within a contained area to prevent possible contamination into sewers) will be available adjacent to the site exit and enforced by the gateman.

The access from Bartons Road will require wheel washing facilities from the start of the project through to completion, with controls adapted as the site layout develops.

A swept path analysis will be used to confirm access and turning arrangements for construction vehicles using the existing Bartons Road entrance. During the initial stage, the rear car park of Havant and Waterlooville Football Club will be used for workforce parking by agreement, and a small on-site car park will be provided when required as the works progress.

The site entrance will be regularly inspected by the gateman and Site Management to ensure they are clean and clear of debris arising from vehicles entering or exiting the site. If any debris is found during these inspections the gateman is to raise this to the Site Manager who will action getting this cleaned and cleared as a matter of urgency. Mechanical road sweeping will be carried out on a regular basis and as required during the project's duration.

Site Parking

Initial workforce parking will be provided within the rear car park of Havant and Waterlooville Football Club by prior agreement and will remain available through to completion. As the development progresses, a small on-site car park will be provided where required to support site operations. Parking arrangements will be managed to prevent obstruction of Bartons Road, the football club access, and the required 24-hour SSE access route.

Public Transport

The site benefits from established local transport links within Havant. Havant railway station and Havant bus station are located within the town centre and provide links to Portsmouth, Chichester, Petersfield, Waterlooville and the wider south coast rail and bus networks. Local bus services operating in the Havant area include routes serving Portsmouth, Leigh Park, Waterlooville, Petersfield, Hayling Island and Chichester, with regular services from Havant bus station and nearby stops. Construction operatives and visitors will be encouraged to use public transport where practicable, with journey planning and live service information available through local operator and council travel information.

Cycle Routes

Havant Borough Council provides an interactive cycle map covering the wider borough, including Havant, Bedhampton, Emsworth, Leigh Park, Purbrook and Waterlooville. The map identifies traffic-

free routes, on-carriageway cycle facilities, cycle parking, crossings and links to the National Cycle Network. Cycle access to the site will be considered via Bartons Road and the surrounding local highway network, with operatives encouraged to use suitable cycle routes where practicable. Any cyclists attending site will be directed to use the designated site entrance controls and site rules. Cycle parking may be provided within the site compound where demand requires it, positioned so that it does not obstruct vehicle movements, pedestrian routes, the football club access or the maintained SSE access route.

Pedestrian Routes

Bartons Road provides pedestrian access in the surrounding area, with the site entrance located close to the Petersfield Road crossroads junction. There are no Public Rights of Way crossing the site. Pedestrian movements associated with the works will be managed through the site entrance controls, signage and traffic marshal arrangements as required.

Vehicular Access Route – Refer to Appendix 2

5. Environmental Impacts During Construction

The main environmental impacts can be classified as:

- NOISE
- DUST & AIR QUALITY
- NUISANCE
- EMISSIONS
- VIBRATION
- SURFACE WATER
- FOUL WATER DRAINAGE

These will be controlled by the implementation of the following techniques:

- Noise assessments will be carried out when deemed necessary. Acoustic screens may be deployed where noise assessment record action levels. A hand-held monitoring device will be available to the Site Team when needed.
- Air quality monitoring will be carried out with monitor readings taken at the southern boundary adjacent to the existing residential developments when deemed necessary. A hand-held monitoring device will be available to the Site Team when needed.
- Vehicles in use and site machinery will comply with Euro VI emissions standard as a minimum.
- All Non-Road Mobile Machinery (NRMM) that comes to site will be logged onto the database.
- Dust suppression techniques such as damping down and collective techniques on individual plant and machinery. Covered waste lorries used.
- Access routes will be clearly displayed. Congestion in locality will be minimised by Just in Time delivery strategy.
- Partnered supply chain will provide information concerning emissions and no vehicle idling will be allowed.
- Vibration monitoring will be carried out during the groundwork phase predominantly to provide reassurance to the residents in the immediate area.
- Main sources of vibration will be from the piling works, if required.
- Surface Water – for the management for surface water during construction, we will endeavor to be in line with industry best practice. This is highly dependent on the surface water strategy as per the drainage design, during the early enabling stages of construction soil bunds will be battered and covered for either off site disposal or kept for re-use. Depending on the on-site duration of said bunds they may be seeded to help prevent surface water run. This decision will be made once the cut and fill strategy has been reviewed, and the classification of arisings has been

determined. As we aim to place a groundworks contractor for the enabling works including all roads and drainage, this should greatly reduce surface water run off during the project life cycle. Areas including SUDS will be part of this early enabling works.

Environmental Protection Requirements

Works carried out at Bartons Road, Havant have the potential to affect the local environment due to the former Travis Perkins yard use, existing hardstanding, nearby football club land, adjacent businesses, boundary trees and groundwater sensitivity. Before works commence, the Site Manager will complete the site environmental risk assessment and relevant protection measure forms/checklists, including the Appendix 5 Environmental Protection & Risk Assessment Checklist Template and GHSE RA021 site set-up assessment where applicable. The assessment will confirm controls for groundwater and surface water protection, spill prevention, dust, noise, lighting, tree protection, invasive species, waste, ecology, traffic movements, wheel washing and the requirement to maintain SSE's 24-hour access through the entrance. The findings and site-specific protection measures will be briefed through inductions, toolbox talks and RAMS reviews. All activities will comply with environmental legislation, planning requirements, permits, approved surveys and requirements of the relevant authorities.

Site Environmental Protection Rules

Site environmental protection rules for Bartons Road are included within Appendix 5 and will be supported by task-specific protection measure forms where required. All employees, visitors and subcontractors will be inducted on the rules before starting work and must comply with the site controls at all times. Key Bartons Road protection rules include: only use the agreed site access from Bartons Road; keep the SSE access route available at all times; prevent mud, silt, fuel, concrete washout and other pollutants entering drains, sewers, groundwater or watercourses; use wheel washing and road sweeping when required; protect retained trees and root protection areas; stop work and report any suspected invasive species, contamination, unexpected archaeology or ecological constraint; control dust, noise, vibration and lighting to avoid nuisance to neighbours, the football club and highway users; segregate and store waste correctly; and ensure spill kits, drip trays, covered skips, designated refuelling areas and emergency procedures are maintained. The rules will be displayed on notice boards and reviewed during inspections, audits and toolbox talks.

Emergency Response Procedures

All environmental incidents are dealt with promptly to minimise any potential impacts. Unexpected or accidental environmental incidents will be managed in accordance with Stonebond's incident response and reporting procedures.

Potential emergencies and incidents may involve:

- fuel or chemical spills;
- unlicensed discharge of pollutants to environment (air, water, noise, soil).
- dumping of waste to an unauthorised site.

The Site Manager on site is responsible for undertaking the incident response according to the procedure. Any incidents on site, which are likely to cause material harm to the environment, will be immediately reported to the Site Management Team who will advise the Project Manager and complete an Incident Reporting Form.

The local Environmental Agency (EA) regulator Pollution Hotline Phone 0800 807060 (for England and Wales) will be notified of pollution incidents on or around the site which have occurred in the course of the works, in the following instances:

- The actual or potential harm to the health or safety of human beings or ecosystem is not trivial

Emergency contact numbers will be displayed at the work sites.

Environmental Training

All project personnel (including subcontractors) shall receive site induction training, which covers:
- Emergency and response procedures on site
- Environmental Awareness of their environmental protection responsibilities and measures to minimise environmental impacts.
- Environmental protection requirements of the site as set out in Appendix of this CMS & CEMP.

Informal training through toolbox meetings are to be implemented when required to cover environmental topics such as erosion and sedimentation control, protection of heritage items, protection of native vegetation and other environment issues relevant to the site. Training to be recorded in the Project records by Stonebond.

Surface Water

General Guidance
It is vital that surface water and effluent discharge is properly managed and controlled on site to protect the environment. Any pollutants getting into surface water drains could end up in nearby streams or rivers.

Site clearance works and topsoil stripping could lead to possible erosion of the sub-soil by wind and rain and generate dust which could cause deposition of sediment in ditches, watercourses and lakes. These operations have the potential for suspended solids and dissolved materials to affect the on-site watercourses, other minor watercourses and the nearby lakes.

Examples of potential impacts are listed below:

- Spills / leaks of polluting substances, e.g. from waste storage areas, oil from car parking areas into the storm drain system and into the receiving water body.
- Possible leakage of fuel oils that are delivered and stored on site.
- Lateral migration of contaminants into the nearby rivers, streams and lakes.
- Contamination of groundwater during earthworks operations.
- Discharge of effluent from wheel washing, washing down of concrete equipment or other cleaning processes.
- Discharge of pumped groundwater from dewatering or excavations.
- Impact on local sewage treatment works from additional discharge from temporary toilets; and
- Leaching of pesticides / herbicides / fertilisers (from grounds maintenance) into adjacent watercourses or groundwater.

Management Controls
Contractors involved, in particular with any work in the ground (e.g. earthworks associated with sub-structure works), will be specifically required to implement pollution prevention measures. Typical controls will include:

- Install oil/water interceptors on drains located within areas where oil is used (eg in car parking areas).
- Marking of drainage point to differentiate foul (red) and surface water (blue) drains in line with EA recommendations.

- Provision of suitably sized settlement ponds/tanks to enable settlement of the suspended solids content of effluents from wheel washing facilities, pumped discharges from excavations and wash down areas for concrete trucks.
- Water treatment and/or settlement prior to discharge.
- Use of silt fences to protect watercourses.
- Effluent monitoring for suspended solids and flow rate.
- Development of a dedicated fuel storage area that is appropriately concreted and bunded.
- Use of EA approved double skinned self-bunded fuel bowsers for refuelling of plant where dedicated refuelling area is impractical.
- Provision of 'spill kits' and or other suitable containment and absorbent materials.
- Consents to discharge to foul sewer/surface watercourses.
- EA consent for discharge to and/or abstraction from controlled waters.
- Ground maintenance contractors should provide a Method Statement detailing the types of chemicals used and volumes applied and how they are managed to minimise environmental impact.

The EA is the main statutory consultee in relation to water quality issues during the construction phase of the project. In order to manage the disposal of surface water in a sustainable manner the EA may impose restrictions on the discharge of surface water from the site. The discharge of surface water from site must be controlled. All Contractors are required to manage and control surface waters on the site to ensure that potentially contaminated run-off does not impact on local water quality.

Discharges to surface water systems (controlled waters) are only permitted with prior consent from the EA. Any discharge from site should not exceed the peak runoff rate agreed with the EA for the final scheme, during the construction period. Contractors must consult with the EA prior to any activity resulting in discharge to the aquatic environment. The Project Manager will maintain a register of all discharge consents.

Surface water settlement tanks and other necessary measures are to be used to control the rate and quality of surface water discharge. The principle of design will be to ensure compliance with any EA Discharge Consent requirements.

No sewage or trade effluent, including vehicle wash waters, steam cleaning, pressure wash or other effluents should be discharged to the surface water system.

It is expected that drainage and effluents from dewatering activities will require treatment through suitably sized settlement lagoons or tanks to remove the suspended solids in the final discharges. The Principal Contractor / Groundworks Contractor will be required to prepare a detailed methodology for water management, which incorporates treatment and consents.

Groundwater and surface water run-off control during the construction phase will include;

- Groundwater pumping to settlement lagoons to allow natural removal of suspended solids and filtration into the sub-soil. These lagoons will need to be maintained on a regular basis & the ground reinstated once no longer required.

- Surface water run-off will be intercepted by silt fencing erected along the adjacent watercourses. If necessary interceptor ditches/bund will also be provided as a suitable cut-off/barrier mechanism providing storage and act similar to settlement lagoons. NB: Currently 856m of silt fencing has been erected on site. The Site Management Team will inspect this daily and carry out repairs if necessary within the same working day. The silt fencing is identified on the Site Strategy Plan.

All Contractors are prohibited from washing out tools or equipment or disposing of surplus materials to surface water drains.

Fuel and Chemical Storage

Stonebond and their appointed Contractors will be responsible for the storage, or the management of storage of fuels and chemicals on the project, ensuring that all fuels and chemicals are properly stored in a dedicated fully protected secure storage area. Refuelling activities will not be situated adjacent to any existing watercourses. Any plant or equipment not able to be refuelled at the dedicated area will be refuelled by the use of EA approved double skinned bowers operated by the contractor. During the process of refuelling, a fuel spillage kit must be available in order to contain any spillage and to prevent contamination.

Stonebond shall be responsible for the construction of an appropriate bunded fuel storage facility on an impervious concrete base, in accordance with best practice. The fuel storage area will be surrounded by a secure impervious bund providing a containment capacity of at least 110% of the largest tank. All associated valves and pipework are to be contained within the bund.

The fuel storage facility is to be inspected by the Site Management Team on a daily basis. Records are to be maintained as to fuel usage. Accumulated rainwater is to be regarded as contaminated and is to be pumped out and disposed of in accordance with legal requirements.

All items of small plant, such as dewatering pumps and generators must be kept away from surface water drains or watercourses and placed on a suitable 'drip tray' in order to contain any spillage or leakage, to be disposed of legally.

Environmental protection measures in relation to any work involving the use of, movement and storage of fuel or chemicals will be fully documented in Method Statements and approved by the Site Management Team prior to commencement of work.

Areas used for waste or chemical storage are to be protected in a manner, which also prevents the spread of contaminants and water pollution via the site drainage and surface water systems.

Plant Maintenance Area

Stonebond will be responsible for the design, construction and management of a construction plant maintenance area to be located in the main compound. This area is to be used by all contractors for the routine maintenance or service of items of plant. Stonebond and appointed sub-contractor will provide suitable waste containers. No maintenance or repairs are to be undertaken until a fuel spillage kit is available. All solid wastes and waste oils are to be transferred to the Plant Maintenance Area for disposal.

Refuelling Protocol

The Refuelling Protocol will apply to all deliveries of fuel and refuelling operations, as follows:

- Refuelling and all tank filling to be carried out in the designated protected refuelling area.
- The use of suitably protected bowsers are only to be used where refuelling at protected area is impractical due to nature of machinery/equipment in use.
- An emergency spill kit containing sand or suitable absorbent materials to be kept readily available in case of spillage in the main fuel storage area.
- All bowsers to carry an emergency spill kit where mobile refuelling is necessary.
- Bowers must be equipped with an automatic cut-out mechanism.
- All refuelling operations must be supervised by trained personnel.
- Valves and taps must not be left open unattended and must be locked when not in use.
- Personnel carrying our refuelling to be made aware of this code of practice and refuelling protocol and trained in the use of spill kits and emergency procedures.

Key Roles & Responsibilities
For the purpose of this document the following summarises the key roles and responsibilities:

Role	Responsibilities
Project Manager	• Responsible for ensuring all comply with environmental legislation. • Overall responsibility for the implementation of this CEMP
Senior Site Manager	• Prepare CMS considering compliance of this CEMP • Review implementation of CEMP • Carry out weekly site audits and prepare monthly reports. • Ensure corrective actions are dealt with in a timely manner
Site Team	• Responsible for delivering the site inductions of environmental aspects. • Toolbox talks to all contractors to ensure implementation of good practice • Assist Site Manager in weekly site audits • Monitor sub-contractors work for compliance. • Manage Considerate Constructors Scheme compliance
Principal Contractor	• Assist Site Manager in preparation of the CMS • Prepare site specific Risk Assessments and Method Statements considering all environmental issues
Contractor / Sub-Contractors	• Ensure workforce is fully aware of the environment issues and are implemented • Take appropriate action to rectify any non-conformance

Project Contact Details – Refer to Appendix 3

Environmental Protection & Risk Assessment Checklist Template – Refer to Appendix 4

6. Noise and Site Working Hours

Noise Control – General

The appointed subcontractors will carry out predicted noise levels for each of their operations where applicable, in reference BS 5228-1:2009. Stonebond will employ best practical means at all times to minimise the noise and vibration impact of the works in line with BS 5228:2009.

To prevent adverse noise to the nearest sensitive facade (residents) the ambient and backgrounds noise levels (measurements) will be compared against the predicted noise levels of the plant. Where there is a significant increase of the predicted plant levels to the measured background, the contractor will implement Best Practicable Means (BPM) to reduce the noise accordingly to achieve 75dB (A).

and/or

Where the measured noise levels are more than 3 dB (A) above the predicted noise levels or in the event of a complaint of noise an investigation will be carried out to ascertain the cause of the exceedance or the complaint and to check that BPM are being used to control the noise. Noise levels will be reduced further if it is reasonably practicable to do so.

All machinery will comply with the current legislation of 80 dB (A).

Noise assessments will be carried out as per Control of Noise at Work Regulations 2005.

Background noise readings will be taken before we commence on site to get an understanding of the current noise levels. This will allow us to better gauge the impact of the work we are undertaking.

If a specific noisy task is being scheduled then additional monitoring will be undertaken as required during this time.

Careful selection of plant to reduce noise ensuring that plant is relatively new and regularly maintained.

The sub-contractors will provide full risk assessments and method statements detailing how they will be managing noise on site and this will be approved by the site team before they commence on site.

Noise Control – Detailed Provisions

The construction site vehicle gate will be controlled to give the minimum amount of time open for passage of vehicles, to minimise stray noise to the external surrounding area.

Vehicles and mechanical plant used for the purpose of the works will be fitted with effective exhaust silencers, will be maintained in good and efficient working order and operated in such a manner as to minimise noise emissions.

On site where environmental disturbance may arise, compressors will be 'sound reduced' models fitted with properly lined and sealed acoustic covers which must be kept closed whenever the machines are in use, and pneumatic percussive tools will be fitted with shrouding or silencers of the type recommended by the manufacturers.

If applicable, any equipment that breaks concrete by munching or similar, rather than by percussion, will be used as far as is practicable. We do not anticipate works of this nature being required on this site.

Noisy plant or equipment will be sited as far away as is practicable from noise sensitive buildings. The use of barriers, i.e. soil mounds, site huts, acoustic sheds or partitions to deflect noise away from noise sensitive areas will be employed wherever practicable.

Care will be taken when loading or unloading vehicles or dismantling scaffolding or moving materials, etc. to reduce impact noise.

Hours of Working

In general, the construction working hours on site will be:

Monday to Friday – 08:00 to 18:00. (Construction Operatives will arrive on site prior to 08:00)

Saturdays – 08:00 to 13:00.

No Works on Sundays, Bank or Public Holidays without prior consent.

If required we shall obtain any relevant certification or approval if we propose to work outside of these hours (Section 61 notice).

No work and ancillary operations, which are audible at the site boundary, outside these hours unless fully justified to the Local Authority on the grounds of engineering necessity or for reasons of Health and Safety. Any such works will be kept to an absolute minimum.

During normal working hours, as defined above, the maximum LAeq, period noise levels measured 1 metre from the facade of any occupied or other building used for residential purposes, generated by construction plant and equipment, including the movement of vehicles to and from the site will not exceed the following limits:

Monday to Friday – 08:00 to 18:00 – Residential – 75 dB (A)

Saturday – 08:00 to 13:00 – Residential – 75 dB (A).

7. Dust & Air Quality

Dust is defined as particles up to 75 μm in diameter and is produced through the action of crushing and abrasive forces on materials. Traffic movement can generate nuisance dust.

Mitigation of Potential Dust Nuisance

Relevant procedures to reduce the impact of dust upon the site will be as follows:

- If monitors are required, then they will be located adjacent to any sensitive areas that would be adversely affected by dust.
- If monitors are required then a dust site action level would be agreed. Incidents of dust levels above this will be logged.
- During construction operations we will be covering skips and loose construction materials as appropriate. Soils will be appropriately battered and sealed If soils are to remain on site and used as backfill or topsoil during the 2nd phase of construction works then these will be seeded again to minimize dust and or soil run off. Materials will be stored away from the site boundary wherever possible.
- By initiating a groundworks only phase as outlined in the project description. A large majority of works ground related for example road construction will be completed in the first 6 months. This means that when further operatives and deliveries arrive to site they will all be working/delivering from a full hard standing this greatly reduces the dust arisings.
- Any instances where there will be mechanical cutting or chasing of masonry or concrete materials such as brickwork, blockwork, paving slabs, kerbs, PC lintels, RC diamond drilling then dust suppression will be controlled by the use of wet cutting. Each mechanical cutter will be fitted with water attachment (preferably battery powered) to control any dust.
- When mechanical cutting of materials such as timber is required dust control will be via the means of all plant being fitted with appropriate dust extraction bags and vacuums.
- All sub-contractors on site will be required to produce a risk assessment and a method statement specific to their task that will highlight the control measures they propose to control dust.
- Stonebond staff will ensure as far as is reasonably practicable that arising's of materials are cleared as work proceed and this will minimise debris and also reduce any potential fire risk.
- Sweeping and spraying all site hard surface walkways and footpaths with water in prolonged spells of dry weather to prevent dust causing a nuisance off-site will be implemented where practical. This will be achieved via a site water bowser and forklift. Spraying via a jetwash and hose at site entrance areas.
- All vehicles leaving the site will have their wheels checked and cleaned as required to ensure that no arising's from site activities are carried onto local roads. This will be minimal due to the use of the new s278 access into site plus associated hard standing and that the access for vehicles onto site after foundations are complete will be via the new roads and accessways.
- Covering all loads entering and leaving the site.
- Regular sweeping of site and external roads and footpaths to remove accumulations of dust and mud.
- Identifying haulage routes through consultation with the council. These roads are to be selected to minimise any environmental effect arising from additional lorry movements on the road network.
- Minimising drop heights to control the fall of materials.

It is considered that given the adoption of the mitigation measures detailed above that any potential effects from dust from the construction works would be minimised to such an extent as to be insignificant.

Air Quality
The burning of materials on the site will not be permitted. All necessary precautions will be taken to prevent the occurrence of smoke emissions or fumes from the site plant or stored fuel oils for safety reasons and to prevent such emissions or fumes drifting into residential areas.

All Non-Road Mobile Machinery (NRMM) will comply with the standards set in the Greater London Authority Supplementary Planning Guidance: Control of Dust and Emissions from Construction and Demolition (2014)' and a register of all NRMM on site will be maintained.

Anti-Idling
Plant will be well maintained and shut down in the intervening periods between work or throttled down to a minimum.

Dust & Air Quality Management Controls

The principal concerns relating to local air quality in the form of dust, fumes and smoke, whereas on a wider scale, emissions of greenhouse gases and ozone depleting substances are of concern.
These may arise from project aspects such as:

- Excavation
- Earth movements
- Activities involving cutting or grinding
- Boilers and other plant and equipment required during construction
- Use of powdered materials during construction (e.g. cement)
- General traffic movements (e.g. plant movements, deliveries and collections, journeys to and from the site by project staff)
- Use of air conditioning units using ozone depleting refrigerants

Contractors will plan, locate and control construction activities that have the potential to generate dust or smoke so that nearby sensitive receptors are not adversely affected. Contractors will also plan and control the orientation, shape and locations of stockpiles to minimise the risk of dust raising through wind action, minimising handling operations and that material put onto stockpiles is dropped from the minimum practical height. Contractors must also consider additional protection measures such as screening and covering and implement as appropriate.

Stonebond will inform Contractors and employees during induction and further training, about the need to minimise dust emissions to neighbouring property and residents and of the health hazards associated with exposure to emissions. Training will include advise on the proper use and maintenance of tools and equipment, the correct storage of chemicals and the location of sensitive neighbours and site boundaries.

Spraying of water mist at work faces during loading operations, enabling works and earthworks will be undertaken to mitigate dust. The use of toxic or potentially polluting binders in water sprays will not be permitted. Water used to suppress dust raising should be recycled where possible. Disposal of water used for dust suppression will only be permitted where discharge consents have been obtained from the EA.

Contractors are to ensure that all plant and vehicles are in good repair and conform to the relevant legislative (DEFRA) and British Standards emission standards. The use of plant and equipment that fails to meet current emission limits will not be permitted until such time as it has been serviced and retested. Records of plant maintenance and defect reports will be maintained by Stonebond site management team and this will made available as required.

Control measures are to include:

- Vehicle exhausts shall be directed vertically upwards where possible, and directed away from the ground at minimum. Stationery plant shall be sited as far from inhabited buildings as possible.

- Wherever possible, plant and equipment shall not be left running for long periods when not

directly in use. Where appropriate, electrically powered plant shall be used instead of petrol or diesel.

- Stationery plant shall be required to be located as far from sensitive receptors and inhabited buildings as is reasonably practical.
- Vehicles transporting materials, capable of generating dust, to and from site shall be suitably sheeted on each journey to prevent the release of dusty materials. The sheeting material will be maintained in good order, free from excessive rips and tears.
- A maximum speed of 10mph will be strictly enforced over all unmade surfaces. Reductions to this speed limit may be applied at the discretion of Stonebond where dust problems dictate.
- Unsurfaced haul roads will be routinely damped down, especially during dry periods and according to weather conditions.
- Ensure all construction plant and equipment is maintained in good working order.
- Where haul routes run over materials with a high dust raising potential that cannot be satisfactorily controlled by watering or other methods, temporary surfacing is to be considered by the contractor and implemented if deemed appropriate by Stonebond.
- All vehicles leaving the site must pass through the wheel washing facility located at site exits.
- Burning of wastes or unwanted materials will not be permitted on site.
- All hazardous materials including, chemicals, cleaning agents, solvents and solvent containing products will be properly sealed in sealed containers at the end of each day by the contractor prior to storage in appropriately protected and bunded storage areas.
- Surfaces of long term stockpiles will be stabilised in accordance with agreed method statements.
- Completed earthworks should be covered and vegetated as soon as it is practicable.

Contractors will maintain records of plant and equipment maintenance and these will be made available upon request.

8. Asbestos

Special precautions will be taken if materials containing asbestos are encountered. We will comply with the Control of Asbestos at Work Regulations 2012. We will adhere to the exposure limits and measurement methods for asbestos, which are set out in the Health and Safety Executive Guidance.

9. Vibration

We will ensure that we work in accordance with BS5228 Code of Practice for Noise and Vibration Control on Construction and Open Sites Part 2: Vibration.

We will ensure that measures are taken to:

1. Protect the residents, users of buildings close by and passers-by from nuisance or harm
2. Protect buildings from physical damage

Upon determining appropriate vibration levels, we will consider:

1. Human exposure
2. Protection of structures

Construction activities will be carried out in such a way that vibrations arising will not cause damage

to adjacent structures.

Sub-contractors are asked to use new plant where possible to ensure that we are using the most modern techniques and equipment. All equipment that is used will be required to be regularly serviced. Sub-contractors whose work is potentially likely to create vibration, will be asked to risk assess the activity before proceeding.

On this particular development only 2 plots are proposed to be piled, to reduce the amount of vibration we will look at using CFA piling rather than driven piles, the 2 plots in question are at a distance of 300m from the nearest resident thus the residents should not be greatly affected by vibration, if CFA is to be utilized then this greatly reduces the noise.

Should the risk of vibration be considered high on any activity we will then ensure monitoring is undertaken during this activity.

We will consider vibration levels for both short term and longer term. However, we do not currently think that this will be an issue on this project.

Short term we will endeavor to not exceed 2mm/s for nearby occupied residential and educational buildings, hospitals and laboratories, 3mm/s for occupied commercial premises where the activities are not of a vibration sensitive nature or potentially vulnerable unoccupied buildings and 5mm/s for other unoccupied buildings. If we do exceed these levels, we will ensure that we stop work and reassess our work and put in appropriate mitigation methods to limit the vibration affects.

10. Lighting

The site compound will have lights during construction which will be placed on top of cabins in various locations they will be motion sensor lights which will be set to a timer and automatically switch off after a period of time. These will be pointed towards the ground as not to disturb the local community.

During work hours only low-level work lighting will be used and predominantly used within dwellings without mains power. We don't envisage needing to use any outdoor lighting for external trades such as groundworkers, if these are used at any stage then they will be switched off at the end of the working day 18:00. All plots under construction with mains power will be switched off at the end of the working day.
Temporary task lighting will be provided to the four-storey apartment block during construction where required for safe access, internal works, stair cores, scaffold access, loading areas and emergency routes. Lighting will be temporary, task-based and controlled by the Site Manager, with fittings positioned and angled to minimise light spill towards neighbouring properties, the football club, highways, trees and ecological features. External temporary lighting to the apartment block will be switched off at the end of the working day unless required for safety, security or emergency access, and any security lighting will be low-level, directional and timer or motion-sensor controlled where practicable.

As the development evolves streetlights only approved streetlights will be installed to specification.

All cabin lights within the compound will be turned off at the end of each working day.

11. Waste Disposal

We will carry out the works in such a way that as far as is reasonably practicable the amount of spoil and waste to be disposed of is minimized, and that any waste arising from the site is classified, transported and disposed in accordance with the Controlled Waste Regulations 1998 and any amendments, also the European Waste Catalogue, Environmental Protection Regulations 1991, and the Hazardous Waste Regulations 2005.

In General, we will Dispose of the Majority of wastes via a selection of segregated skips including inert, plasterboard, timber and general waste. We will use an approved waste collection company. Majority of arisings will be collected via our groundworks contractor and captured within their own site waste management plan.

If the works involve the removal of asbestos, we will comply with the Control of Asbestos at Work Regulations 2002, and the HSE Approved Code of Practice and Guidance Note "Work with Asbestos Insulation, Asbestos Coating and Asbestos Insulating Board".

Asbestos waste will be double sealed in receptacles, which prevent the escape of dust. In the case of crocidolite the receptacles shall be marked in bold "Blue Asbestos – Do Not Inhale Dust".

The disposal of waste materials containing asbestos will be arranged in advance, to a licensed disposal site. We will obtain a license from HSE to remove asbestos.

If materials containing lead are encountered, we will comply with the Control of Lead at Work Regulations 2002 and the Health and Safety Commission Approved Code of Practice 2002 "Control of Lead at Work" to ensure that contaminated materials are handled and disposed of safely and properly.

Re-use of Construction Materials:

We will endeavor to re-use or recycle the construction waste from site. Construction arising's and waste provide a significant opportunity to reclaim, recycle and segregate materials on site. The following measures, where practicable, will be implemented in respect of construction activities on site:

1. Suitable inert earth spoil will be stockpiled for reuse as engineered fill, general fill and landscaping where needed.
2. All metal components will be segregated for recycling.

The reuse of materials will also reduce the number of vehicle movements to site.

12. Community Liaison

Newsletters will be displayed quarterly which will detail the upcoming construction activities and include contact details for the Site Manager. We will outline the activities we envisage coming up over the next quarter and we will put estimated time frames against these activities.

The responsible person may vary depending on the nature of the query. Complaints should be directed to the site team in the first instance and if this does not offer an appropriate or timely resolution, then the Stonebond Head Office contact details will be displayed on the noticeboard and complaints can be escalated via the Head Office.

Stonebond believe that residents should easily be able to register complaints as well as other comments and feedback.

We will provide information to residents to enable them to contact us by email, post or telephone. We will agree the appropriate timescales for responses with the project team.

All complaints received are reviewed at the regular site meetings.

Prior to beginning works a member of the construction team will post a letter out to the local residents which will outline dates and the upcoming works which will be taking place, a direct phone number will be left for any queries. We will also put a letter box on the main gate during the construction phase this can be used for residents who have any questions or queries who are not comfortable contacting the site manager directly via phone.

Project Contact Details – Refer to Appendix 3

13. Considerate Constructors Scheme

If required, the project will be registered as part of the Considerate Constructors Scheme.

This scheme is recognised by industry and the government and encourages firms to be sensitive to the environment by considering aspects such as:

- Appearance: Ensuring that the site and the surrounding area is kept as clean and tidy as possible.

- Community: Positive consideration of the local community at all times and recognising needs as well as being respectful.
- Environment: Minimising disturbance from dust, noise, traffic congestion and sustainable use of resources.
- Safety: ensuring the safety of those living and working in and around the site.
- Workforce: considering the needs of the workforce and ensuring they are respected.

14. Summary of Targets for the Project

Description	Mandatory	Preference	Where Technically Feasible
Contractors must have or be working towards having a full environmental management system		√	
Supply chain must operate robust policies & procedures regarding Health & Safety.	√		
All subcontractors will hold the appropriate Construction Skills Certification Scheme (CSCS) card.	√		
If the supplier or contractor operates Fleet they must be registered with FORS (Fleet Operator Recognition		√	
All fixed timber to be FSC or PEFC certified.	√		
Hoarding and temporary works timber to be FSC or PEFC certified.	√		
Materials to be responsibly sourced to BES6001 or BS8902 standards.			√
Materials used will be rated B or above in the BRE Green Guide.		√	
Low or zero VOC paints & sealants will be used.		√	
Waste hierarchy will be considered when it comes to materials and packaging (reduce / reuse / recycle).	√		
Take back schemes will be adopted where possible.		√	
Plant & equipment to meet the standards set in The	√		
Control of Dust & Emissions Supplementary Planning Guidance July 2014.			
Material reuse will be encouraged using Development Industry Code of Practice or WRAP quality protocol.		√	
Supply chain must demonstrate a commitment to ethical working practices, fair wages and working	√		
Supply chain to operate a strict Equality & Diversity		√	
The use of local labour and suppliers will be promoted.		√	
Support the local communities in which we are working by leaving a positive legacy.		√	

15. Site Ecology & Biodiversity

In the absence of any mitigation measures, the proposed development would have the potential to result in negative effects upon wildlife. However, with the implementation of some straightforward mitigation and precautionary measures as proposed here, the development is not anticipated to result in any significant residual negative effects on important ecological features.

- Habitat Protection Measures - to maintain habitats and protect trees that are to remain. Tree

protection fencing will be installed prior to construction commencing and trees required for removal will be clearly marked.

- Precautionary avoidance measures for amphibians and reptiles -

Pre-commencement of construction activities

- Any removal of dense scrub will be carefully searched by hand looking for reptiles and hedgehogs.
- Any dense scrub and ruderal vegetation will be cleared via a two-stage process to gradually reduce the suitability of the site for reptiles and small mammal. An initial cut will be made to a minimum height of 20cm using brush-cutters/strimmers, followed by a second cut to ground level.
- The vegetation clearance will be undertaken directionally so that any animals present are encouraged to move to the site boundaries (but not the major road to the west). The vegetation will be maintained at ground level prior to the commencement of site work.

During construction activities

- Any stored building materials or waste, such as bricks or debris etc., that might offer shelter for reptiles and hedgehogs will be kept raised off the ground on pallets or on existing hard standing, and efforts should be made to process and removed from site as soon as possible.
- Excavation works will be avoided after dusk and any open excavations or trenches will be backfilled (after a check for amphibian/reptile presence) or left with escape ramps to prevent reptiles and hedgehogs from becoming trapped.
- In the unlikely event that a reptile or hedgehog is found during the course of construction, works will stop immediately and an appropriately experienced ecologist will be called onto site to ensure the reptile is not harmed and provide further advice on how to proceed; work will recommence only once further written advice has been received.

- Precautionary timings for nesting birds - removal of the scrub and small scattered trees on site should be completed outside of the peak bird nesting season (March to August) or alternatively, following an inspection by an ecologist confirming that there is no current nesting activity. If nesting birds are discovered prior to or during any work, work will stop immediately and should only continue once bird nesting has finished, i.e. young have fledged and left the nest.

- Further roles and responsibilities of the ecologist / ECoW are as follows:
    - ensures construction projects comply with environmental regulations and minimise harm to wildlife and habitats.
    - monitor construction activities to ensure they adhere to environmental legislation, planning conditions, and the ecological aspects of the project's documentation.
    - liaison between the construction team and ecological requirements, monitoring site activities, and advising on best practices.
    - provide pre-construction surveys to identify protected species and habitats before construction begins.
    - during sensitive operations like demolition or vegetation clearance, ECoWs may provide watching briefs to ensure minimal impact on wildlife.
    - help ensure projects comply with environmental legislation, avoiding potential fines or legal action.

Where trenches and holes are dug, these should not be left open overnight to avoid wildlife getting trapped in vertical-sided trenches. Therefore, where there is a risk of this occurring, the holes should be refilled, or planks of wood should be placed so that any trapped animals may use these to escape.

The following general working practices will be in operation during the construction process:

- Any trenches or excavations on site should be either covered over at night or a plank of wood placed in to allow any mammals to escape if the animal were to accidentally fall in.
- Any open pipes or conduits laid should be blocked off each night to prevent wildlife from entering them.

- Construction work should only take place between dawn and dusk with no late evening work. This will reduce possible disturbance to wildlife as they emerge to forage and reduce the risk of traffic casualties from late working site traffic.

Ecological Enhancement

Notwithstanding the habitat enhancement works included as part of the landscape scheme and the current limited nature conservation value of the site, the development proposals maintain and provide new opportunities for wildlife through the use of:

- Tree / hedgerow enhancements, including maintenance
- Prioritising the use of native species
- Provision of bat and bird boxes on new buildings and existing trees
- Provision of log and brash piles around woodland, hedgerow, scrub
- Where appropriate, ensure presence of gaps in boundary fencing to allow movement of wildlife such as hedgehogs around the site
- Sensitive use of lighting to avoid adverse effects on nocturnal wildlife (e.g. restrictions on lighting in public areas to the minimum levels required for safety, use of hooded and bollard lighting, low UV bulbs, presence detectors, timers etc.).

Environmental Protection & Risk Assessment Checklist Template – Refer to Appendix 5

16. Method Statements & Good Practice

Method Statements are a working document and will be amended/enhanced should circumstances change on site.

The site management team will be responsible to ensure all contractors to comply with and instigate the recommendations made within this CMS & CEMP.

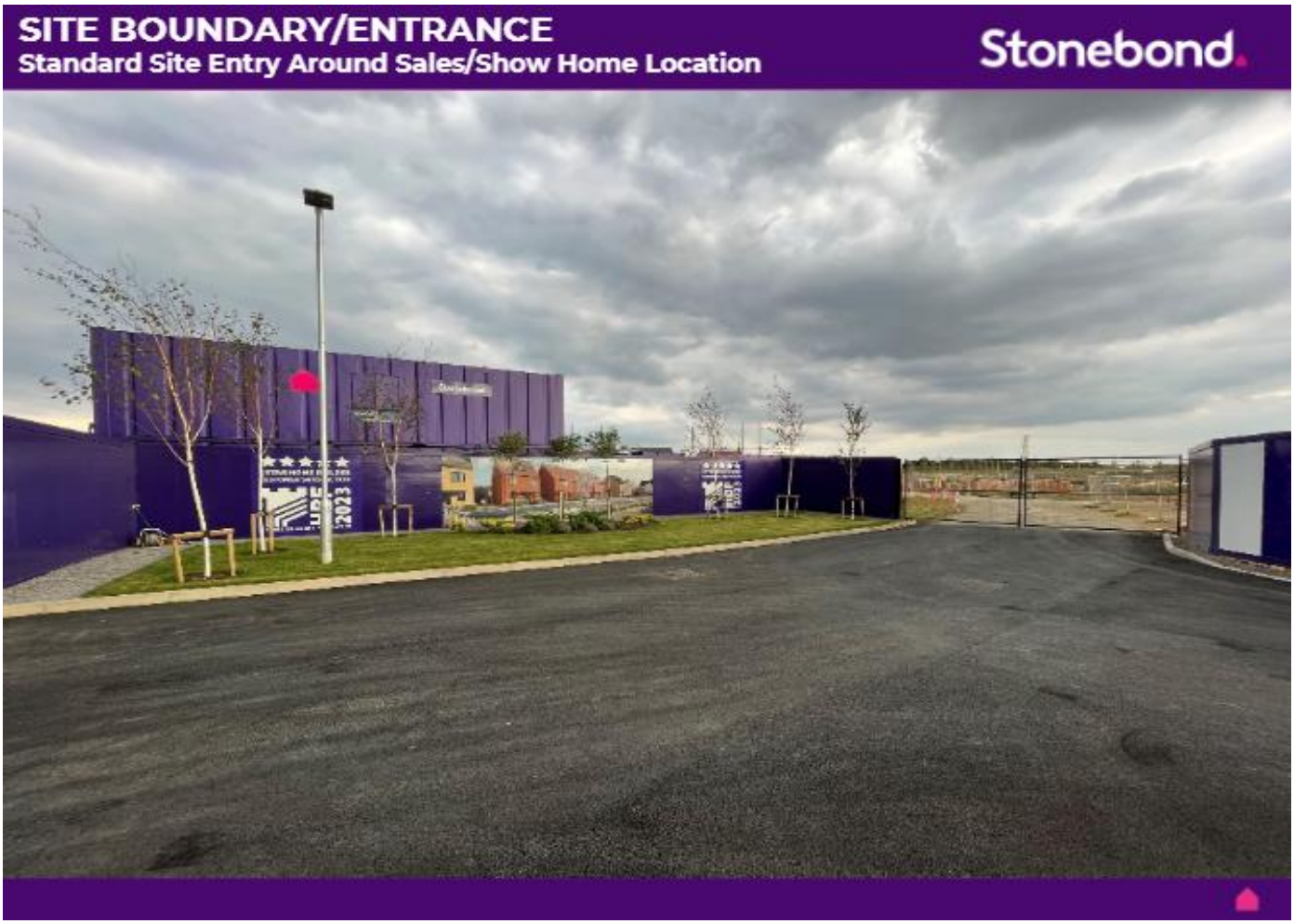
Further Guidance

The following publications give examples of good practice:

CIRIA Publication C650 – Environmental Good Practice – contains a series of on-site checklists and toolbox talks providing key advice for the Site Management Team.

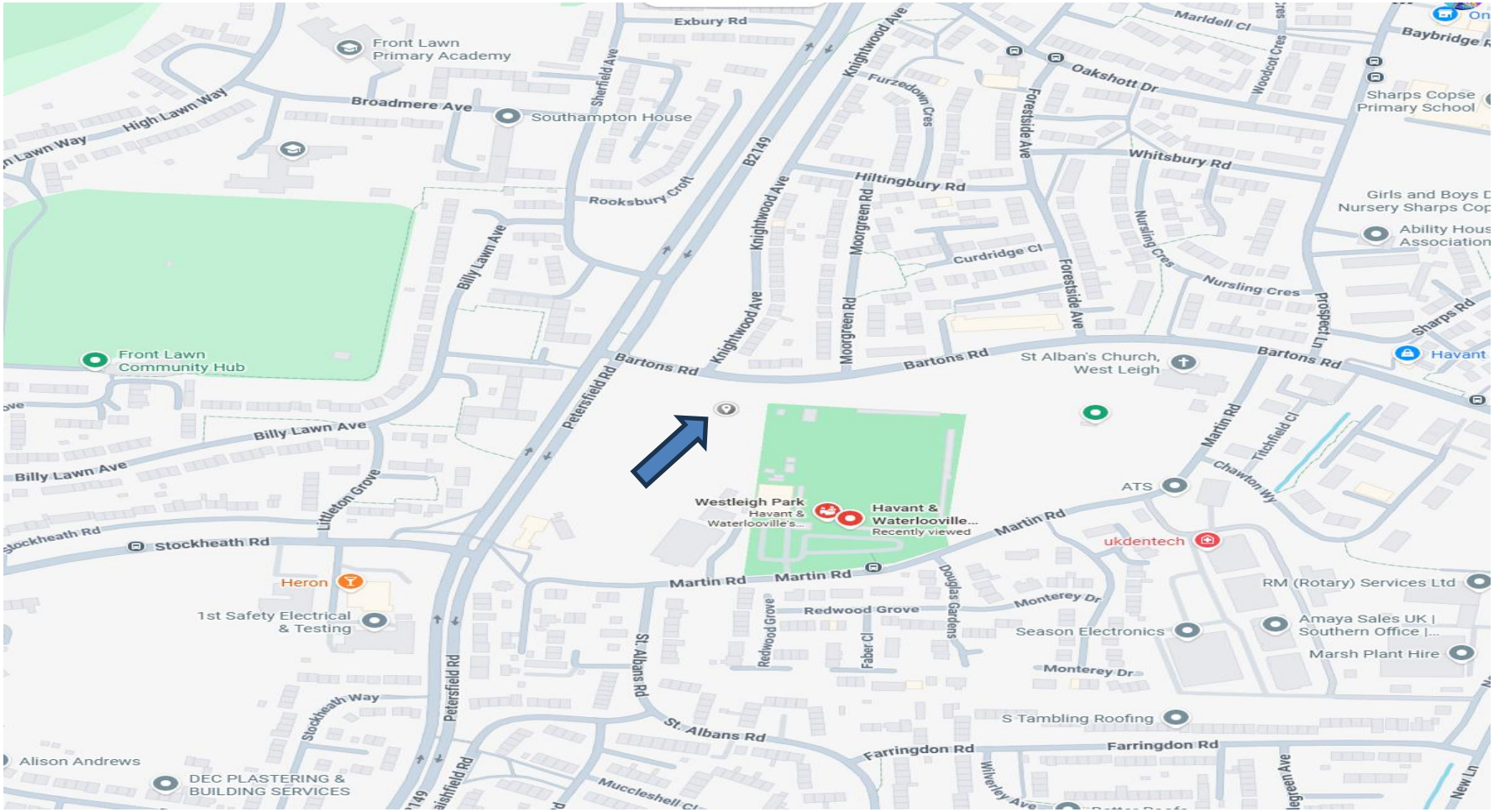
CIRIA Publication SP156 – Control of Water Pollution from Construction Sites. This publication contains a training package, checklists and toolbox talks which will provide further assistance to the Site Management Team in the preparation and management of their sites.

The EA Guidance Notes – Pollution Prevention Guidelines. These Guidelines provide further assistance in respect of the "do's and don'ts", details relevant consent requirement and legislation.


SITE BOUNDARY/ENTRANCE
Standard Site Entry Around Sales/Show Home Location
Stonebond.

APPENDIX 1: Build Route, Phasing & Logistics Plan

APPENDIX 2: Bartons Road Site Location Picture / Map



APPENDIX 3: Project & Emergency Contact Details

PROJECT CONTACT DETAILS	
Contact name	**Contact number**
Emergency Services: Ambulance / Fire Brigade / Police	999
Nearest Hospital with A&E Department	Nearest A&E / Emergency Department Queen Alexandra Hospital, Southwick Hill Road, Cosham, Portsmouth, PO6 3LY. Emergency Department provides 24-hour emergency care. Nearest local hospital to site Spire Portsmouth Hospital, Bartons Road, Havant, Hampshire, PO9 5NP. Private hospital adjacent/local to the site; not an NHS A&E department. Urgent Treatment Centre / minor injuries Practice Plus Group Urgent Treatment Centre, St Mary's Community Healthcare Campus, Milton Road, Portsmouth, PO3 6DW. Open 8am–8pm daily for urgent but non-life-threatening injuries and illnesses. Call NHS 111 before attending where practicable.
Emergency Contacts Utilities: Water Electricity Gas Environmental incident / pollution Havant Borough Council emergency / out of hours	 Southern Water – 0330 303 0368 Thames Water – 0800 3169800 Power cut / electricity emergency – call 105 SSEN emergency / network issue – 0800 072 7282 National Gas Emergency Service – 0800 111 999 Environment Agency Incident Hotline – 0800 80 70 60 Main switchboard – 023 9244 6019; out-of-hours emergency service as directed by Havant Borough Council.
Gas Telecoms	Cadent – 0800 111 999 Openreach - 0800 023 2023
Environment Agency:	0800 80 70 60
Site Team Senior Site Manager	 Name: TBC

Point of Contact	Name: Ricky Johnstone Mobile: 07711983350
Community Liaison Manager:	Ricky Johnstone
H & S Representative:	Stuart Gordon

APPENDIX 4: Environmental Protection & Risk Assessment Checklist Template

Environmental Protection Measures	
Bartons Road, Havant	
Access and Traffic Management	**Sign Off**
Where practical, all works shall be undertaken in a manner least disruptive to the local community.	
Any parties potentially impacted by construction or associated works shall be consulted to minimise impacts.	
The works site shall be fenced to prevent unauthorised access.	
Warning signs to alert road users of the change in conditions will be installed and nearby residents notified. Council conditions will be followed.	
All temporary signs will be removed and, where applicable, permanent signs erected.	
Air Quality	
Construction facilities will be designed and operated to minimise the emissions into the atmosphere.	
Vehicular access will be kept to estate or haul roads wherever possible or to designated site access points.	
A speed limit shall be in force within the construction site.	
Water hoses will be available to reduce dust from exposed surfaces.	
Stockpiles, roads and work areas will be watered down.	
Material transport will be covered to prevent dust generation.	
Landscaping implemented as soon as possible following building activities	
Machinery will not be left idling when not in use and be well maintained.	
Burning/bonfires are not permitted on site at any time.	
In high winds, works that may generate high levels of dust, will be modified or stopped.	
Fire Precautions	
No open fires will be permitted on site.	
Activities likely to generate fires (e.g. cutting, grinding) will be undertaken with adequate fire protection measures in place and operators will be trained in fire prevention, safety and fire fighting skills.	
Fire extinguishers, general purpose and suitable for control of oil/petrol fire will always be available on site.	
The site team will be familiar or trained in the use of fire-fighting equipment.	
Any flammable materials will be in a locked area within the site.	
Fuels and Chemicals	
A hazardous substance register will be kept on site.	
A secure, lockable and floored area will be provided for storing fuels and other chemicals.	
Material Safety Data Sheets (MSDSs) for all chemicals used or stored on site will be available.	
All chemicals to be stored in accordance with manufacturer's recommendations and the MSDS.	
In the event of site spills containment equipment/kits will be used to contain spills and cleaned in accordance with the MSDS requirements.	
Refuelling plant and/or machinery will not be left unattended.	
Noise Management	

Construction noise is to be confined to 0800 to 1800 Monday to Friday and 0800 to 1300 on Saturdays. No work will be undertaken on Sundays or Public Holidays unless approved by the Local Planning Authority.	
Noise from construction activities should not exceed 70 dB(A), measured at the site of a nearest sensitive receptor.	
All plant and equipment used on this job is regularly maintained and serviced by qualified staff.	
Equipment not in use will not be left idling.	
Plant and Equipment	
All machinery will be secured against vandalism outside working hours.	
All plant/equipment inspected daily to avoid leakage of contaminants to the worksite. Machinery found to be leaking will be repaired or replaced.	
Stockpile Sites	
Temporary sediment control structures placed on the downslope side of the area when near watercourses or boundaries.	
Stockpiled materials must not be placed inside vegetation protection areas.	
Water Quality management	
All chlorinated waters will be tested to ensure compliance. If non-compliant water will not be discharged into the stormwater or sewerage system or tankered away.	
Drainage catchment shall be provided for the works compound and materials storage areas.	
All site topsoil shall be retained and protected where practicable	
Disturbed areas shall be promptly revegetated or mulched.	
All access to the site shall be limited to well defined haul roads.	
Silt control	
A silt plan, where required, will be prepared and installed prior to any construction commencing.	
Existing drainage to be protected using silt barriers	
Existing roads near the site entrance will be maintained from mud with a street sweeper if required.	
All controls will be checked daily and after rain	
Cleaning of concrete mixing trucks at designated/protected area.	
Guttering will be connected to the stormwater system as soon as practicable	
Sediment will be prevented from entering the stormwater system	
Silt fencing will be installed on the downslope of stockpiles	
Landscaping will be completed as soon as possible following building activities	
Fill in service trenches as soon as work is completed to minimise erosion	
Cover service trenches with plastic sheeting or another suitable cover if filling cannot be immediately completed	
Flora and Fauna	
Tree protection measures to be installed prior to construction	
No equipment or stockpiles will be placed under the canopy of any vegetation.	
Trees that are to be removed will be clearly marked.	
Exposed surface areas shall be mulched and replanted as soon as possible.	
Vehicle movements to be restricted to haul roads, existing road network or previously disturbed areas. Construction vehicles, personnel and machinery shall not enter fenced off areas.	
Vehicles and machinery shall not be parked or stored in the vicinity of trees	
The condition of boundary fencing and tree protection fencing shall be regularly checked to ensure its effectiveness.	

A qualified ecologist shall be appointed to capture and relocate any fauna (e.g. Reptiles) found.	
All native wildlife must be protected.	
When trees are to be removed from site, a watching brief will be carried out by an ecologist, when in nesting season.	

Site Environmental Protection Rules	
Bartons Road, Havant	
General	
	Sweep roads free of dirt each day & damp down dusty areas
	All vehicles to remain on clean all weather surface within the site
	Install appropriate silt control measures, check & maintain if required
	Install a security fence at the site boundary to prevent unauthorised access
	Minimise clearing of vegetation
	Fence off areas to minimise disturbance & protect trees during construction
	Stockpile materials only in designated areas behind sediment fences
	Limit vehicle entry points and construct all weather surfaces
	Do not disturb any nature strip that is to remain as part of the development
	Implement the Site Waste Management Plan (SWMP) if required to do so
	Separate recyclable from non-recyclable waste
	Ensure the correct waste containers are used by all site personnel
	Minimise chemicals stored on site
	Make staff aware of emergency phone numbers
	Always Keep Material Safety Data Sheets (MSDS'S) on site
	Keep clearly marked absorbent material on site to contain spills if they occur
	If a spill occurs, stop it, contain it and clean in accordance with MSDS's
	Identify site access with minimal impacts on local community where possible
	Avoid parking site vehicles where they will unduly impact local use of the street
	Limit hours of operations to suit planning permission requirements
	Use noise suppressors on machinery
	Advise neighbours prior to commencement, including hours of work (letter drop)
	Do not stockpile soil or other materials under the canopy of trees or hedgerows
Concreting	
	Wash out trucks at supplier's depot
	Return excess concrete with delivery truck to supplier for recycling/disposal or use on site in other areas e.g. fence footings, driveways.
Bricklaying	
	Wash out in an area where water cannot enter stormwater drains
	Collect wash water in an on-site container to allow solids to settle
	Ensure brick cutting is undertaken in a suitable area or design to be cut offsite
	Store excess mortar with waste concrete in a lined bin/pit for recycling/disposal
Painting	
	Wash out in an area where water cannot enter stormwater drains
	Store paints and chemicals in specialist area where spills can be contained
	Always Keep Material Safety Data Sheets (MSDSS) on site
	Keep clearly marked absorbent material on site to contain spills if they occur
	If a spill occurs, stop it, contain it and clean in accordance with MSDS's
Building services	
	Fill in or cover service trenches if filling cannot be immediately completed
	Connect guttering and downpipes to the stormwater system as soon as possible
	Ensure there are no cross connections made between the storm and foul water
Landscaping	
	Complete landscaping and revegetation as soon as possible

	Ensure stockpiles and open dusty areas are damped down as required
	Ensure that soils used in landscaping area are free from weeds and weed seeds

Environmental Inspection Checklist		
Bartons Road, Havant		
Indicate by marking: **√ Acceptable/X Not Acceptable/ NA Not Applicable**	**Results** **√/X/NA**	**Actions / comments**
Water Quality		
Are all drains clear?		
Is runoff from stockpiles/disturbed areas being intercepted?		
Has mud from vehicles been cleared from the road?		
Are concrete trucks washed out off site and excess returned to licensed facilities for washout?		
Silt Controls		
Are silt control measures in place and in good condition?		
Do any silt control structures need clearing out?		
Are all temporary stockpiles surrounded with silt fences?		
Have all newly disturbed areas been protected?		
Have all silt controls been inspected after rainfall events?		
Fuels and Chemicals/ Spills		
Are all fuel and chemicals being stored in secure, lockable bunded, sealed and covered areas?		
Are fuels/chemicals stored at least 20m away from watercourses?		
Are fire extinguishers available?		
Are emergency procedures displayed in the fuel/chemical storage area?		
Are spill absorbent materials kept on site?		
Have all spills been reported to the Site Manager?		
Noise and Vibration		
Is construction complying with working hours stipulated?		
Has the local community been informed of working hours and the level and duration of noise to be expected?		
Is noise from plant/equipment being monitored?		
If any complaints received, have they been closed out?		
Waste		
Is the site and surrounding area free of litter and waste?		
Are all bins being emptied prior to being full?		
Has all site waste been removed to a licensed landfill, or recycled?		
Has contaminated material been disposed of as per EA requirements?		

Environmental Inspection Checklist		
Bartons Road, Havant		
Indicate by marking: **√ Acceptable/X Not Acceptable/ NA Not Applicable**	**Results** **√/X/NA**	**Actions / comments**
Air Quality		
Is water suppression being used to reduce dust whenever necessary?		
Are materials in trucks being covered before transporting?		
Are stockpiles watered down?		
Is any plant/equipment emitting excessive exhaust emissions?		
Flora and Fauna		
Is all vegetation to be retained clearly marked with temporary protection fencing?		
Are site works being limited to clearly defined areas?		
Are all stockpiles located away from trees and protected vegetation?		
Have disturbed areas been revegetated with local species where necessary?		
Are vehicles/heavy plant away from tree canopies?		
Are tree protection measures maintained?		

Inspected by: _____

Comments

Reviewed by: Project Manager **Signature:** **Date:**

APPENDIX 5: SILT MANAGEMENT EXAMPLES

SILT MANAGEMENT – EXAMPLE MANUFACTURERS PRODUCT SHEETS

Product:	Application	Manufacturer and product
Gulley Protection	Prevent silt and construction debris entering the drainage system and blocking gully pots. Proprietary products often yield superior results to straw and Terram and require less maintenance.	Forest Group – Gully Guard Hy-Tex – Ultra drain guards
Silt Fencing	Attenuate water on site to promote settlement of silt within overland run-off.	Frog Environmental – Silt Fence Hy-Tex – Terrastop Silt Fence Siltbuster – Silt Fence
Silt Matting	Capture settled silt as it naturally falls from suspension within watercourses, swales, attenuation basins to prevent its resuspension.	Frog Environmental – Silt Mat Hy-Tex – SediMat
Flocculant Treated Silt Matting	Capture settled silt within watercourses, swales, attenuation basins to prevent its resuspension. The addition of flocculant treatment encourages silt to settle out of suspension more readily. The Environment Agency must be consulted prior to utilisation of flocculants, and an environmental permit gained where required.	• Frog Environmental – Floc Mat
Silt Wattle	Used as check dams within watercourses / swales providing filtration and also slowing the flow of water to promote settlement of silt. Typically used in conjunction with silt matting (or flocculant coated silt matting) to capture sediment that was caused to settle. Can also be used to separate silty and clear water (i.e. within attenuation basins, or watercourses), on slopes to reduce erosion from overland run-off or to divert silty water to collection areas (i.e. on roads to divert silty run-off away from gullies).	Frog Environmental – Silt Wattle Hy-Tex – Ultra Erosion Guard (suitable for use as a check dam to control erosion only, due to its different construction to the Frog Environmental Silt Wattle).
Filter socks	Fitted to hose end during dewatering of excavations to collect sediment. Capable of dealing with smaller volumes and lower flow rates.	Hy-Tex – Pro-Tex Pipe Socks Murlac – Silt Sock Dirtbags UK – Utility Bag

Filter bags	Fitted to hose end during dewatering of excavations to collect sediment. Capable of dealing with larger volumes and larger flow rate, typically up to a 6” pump. Note – * denotes those bags which are sized to be used within a roll on roll off skip for ease of disposal of capture silt.	Hy-Tex – Ultra Dewatering Bag Siltbuster – Siltstoppa Dewatering Bag* Murlac – Silt Bag Dirtbags UK – Dirtbag / Titan Dirtbag*
Settlement Tanks	Settlement and capture of suspended solids during dewatering / over pumping works of a larger volume than suitable for a dewatering bag, or during extended periods of dewatering / over pumping. The unit required is dependent on the grain size of suspended particles, how quickly these settle from suspension, and the required flow rate. Liaison with the supplier is best undertaken to ensure a suitable product is selected. Can be used in conjunction with flocculants and coagulants to promote settlement, however the Environment Agency must be consulted prior to their utilisation, and an environmental permit gained where required.	Siltbuster – wide range of settlement units available Andrew Sykes Group – settlement tanks / Silt Away. Dirtbags UK – Dirtbox

SILT MANAGEMENT – GULLEY PROTECTION

The Gully Guard

Installation guide

1. Lever open gully grid. Gully Guard is designed to fit all size gullies.

2. Hold handles at top of the Gully Guard, work beads to top and insert base into water filled gully pot.

3. Lower the Gully Guard into the pot. The beads will fall freely into the void within the pot.

4. Tuck the holding handles to the side of the Gully Guard.

5. Close gully grid.

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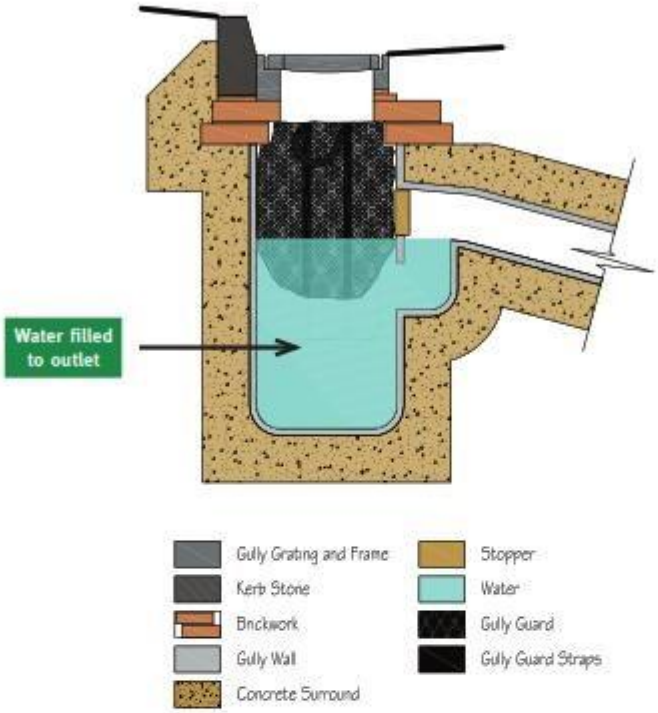
Tel: 01531 828960 Fax: 01531 828969
Email: info@forestgroupuk.co.uk
www.forestgroupuk.co.uk

Patent no. 2472690

The Forest Group
High performance, versatile solutions

The Gully Guard

Installation diagram



Maintenance

The Company (Forest Drainage Products) would recommend that an inspection procedure be put in place for the product by the organisation on a 3–4 months basis depending on site conditions.

Maintenance would simply involve the removal of the Product and power hose off in a bund to contain and manage silt and any contaminants prior to reinsertion back into the gully pot.

Without prior knowledge of the type and concentration of the contaminants that each Gully Guard has been subjected to, the Company cannot advise on appropriate disposal. The Company advises that an environmental risk assessment is conducted on an individual case-by-case basis to fully evaluate the nature of contaminants. In order to determine the appropriate method of disposal the Company would recommend that you follow your organisation's environmental waste disposal policy.

Forest Drainage Products Limited (the "Company")

Forest Drainage Products Ltd, Stardens Works,
Tewkesbury Road, Newent, Gloucestershire GL18 1LG
Tel: 01531 828960 Email: info@forestgroupuk.co.uk
www.forestgroupuk.co.uk

The Forest Group
High performance, versatile solutions

2019 / 69145

Hy-Tex **Ultra Drain Guard** for Drainage Gully Sediment Control

Ultra Drain Guards are designed to remove oil and sediment pollution from surface water running into gully drains from surrounding construction sites, farms, industrial estates, or other areas prone to storm water pollution or cleaning operations.

Ultra Drain Guards are made from a high permeability non-woven polypropylene geotextile that trap solids and oils but allow water to drain through and also incorporate bypass ports to further maintain flow into the drain.

They are designed to be easily placed directly into the drain gully pot to filter out materials as they flow into the drain without compromising drainage, and the Oil and Sediment model absorbs up to 3.29 litres of hydrocarbons as well as up to 18 kg of sediment, sand or debris.

Installation:

1. Remove catch basin grating
2. Clean dirt and debris from grating ledge
3. Insert Drain Guard.
4. Reinstall grate. To insure maximum effectiveness, Drain Guard skirt should be secured (pinched) between grating and ledge.
5. Cut the excess fabric off with a blade or knife if desired.

Maintenance and disposal:

6. The Ultra-Drain Guard filters are designed to be used for 3 to 6 months under normal conditions.
7. Where heavy contamination is present the unit will have a reduced life expectancy. When the unit has collected about 6 inches of sediment it is recommended that it be replaced. The unit should also be replaced if free oil can be seen floating and is not being absorbed. The Ultra-Drain Guards should be inspected on a regular basis.
8. Dispose of unit in accordance with applicable environmental laws and regulations. The user is solely responsible for compliance with maintenance and disposal laws and regulations. The manufacturer or seller assumes no responsibility for proper or improper maintenance or disposal.

Model	Code	Oil Capture	Sediment Capture	Collection Area	Flow Rate	Size
Oil & Sediment	9217	3.29 l (.87 gal)	18 kg (40 lbs)	25.4 x 45.7cm (10" x 18")	1893 l/min (500 gpm)	121.9 x 91.4 x 45.7cm (48" x 36" x 18")

All of this was removed from 50 Ultra Drain Guards after just two weeks in storm drains

Property	ASTM Test	Value
Material		Non-woven polypropylene geotextile
Grab Tensile Strength	D 4632	979 N (220 lb)
Elongation	D 4632	50%
Trapezoid Tear	D 4533	423 N (95 lb)
Puncture Resistance	D 4833	600 N (135 lbs)
Mullen Burst	D 3786	2,896 kpa (420 psi)
Permittivity	D 4491	1.4 sec^{-1}
Pore Size	D 4751	180 micron (80 US sieve no)
UV Stability	D 4355	70% strength retained after 500hr
Weight	D 5261	272 g/m^2 (8 oz/yd^2)
Flow Rate - Fabric	D 4491	3,660 $l/min/m^2$ (90 $gal/min/ft^2$)
Flow Rate - Bypass Ports	D 4491	2,914 l/min

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SILT MANAGEMENT – SILT FENCING

frog environmental

product information sheet

Silt Fence

temporary silt control barrier

frog environmental supply Silt Fence and quarter cut 1.2 metre posts, ideal for providing support

Silt Fence is inexpensive to buy and install, but it must be correctly positioned and maintained for it to be an effective pollution control measure.

Each line of Silt Fence should be inspected on a regular basis, especially after rainfall.

If stakes are broken or gaps appear between the fence and the ground, then the fence should be re-trenched. Accumulated silt must be removed regularly from Silt Fence, typically when it reaches a third of the way up the fence.

Multiple smaller runs of silt fence are usually more effective at controlling pollution than longer lines.

Applications

- Silt Fence is deployed on construction sites to help prevent silt pollution in water bodies or from impacting public highways.
- Silt Fence provides a 'ponding' function; it allows silt laden water to collect behind it and for silt to drop out of suspension while the water slowly drains away or evaporates.
- Silt Fence is usually deployed in conjunction with other silt pollution control measures, especially on sites with clayey soils.

frog environmental Silt Fence is made from high specification geo-textile material and has medium porosity, making it suitable for use on most construction sites.

Poorly installed Silt Fence can cause erosion underneath or around the edges of fencing. This can lead to an increased silt pollution risk.

Technical information — Silt Fence

Dimensions: 100 metres x 0.9 metres (single roll)

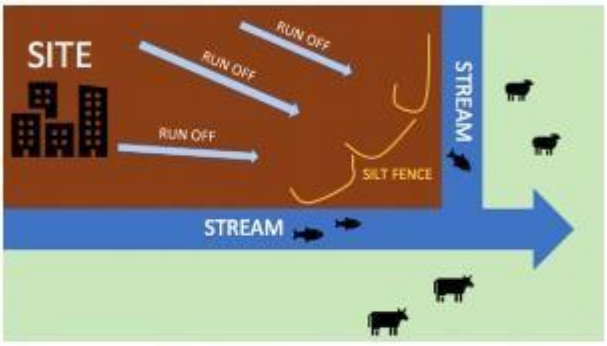
Dry Weight p/m: 110 g/m2 (9.9 kg single roll)

Permeability: 7 (l/m2 /sec)

Material used: tear resistant polypropylene geotextile, PFSC timber stakes (cable ties or staples/ nails to fix)

Function: creates a temporary fence to provide a pooling function that allows silt to drop from suspension

Disposal: all materials fully reusable or recyclable



Shorter J shaped runs of silt fence typically provide more effective pollution control than longer runs

Silt Fence can be used as a temporary measure to prevent muddy water escaping from construction sites

10 TIPS for successful Silt Fence deployments:

- Fence posts should be spaced a maximum of 1.5m apart
- Silt Fence should be trenched a minimum of 20cm into the ground and compacted
- Shorter 'J shaped' installations of Silt Fence act like mini-retention areas and are typically more effective than longer runs (as shown in the diagram above)
- Longer runs of silt fence will concentrate water in the lowest point, where the fence can become weakened and water can undercut or overflow the fence avoid these where possible
- Water flowing around the edges of silt fence can cause erosion and add to the pollution loading from site
- The lower part of the end of each run of silt fence should ideally be above the top of the middle section of the run
- Removal of accumulated silt and regular inspection are key maintenance activity for silt fence. A named individual should be responsible for this action on site
- Silt fences are not designed to handle continuous high volume flows and will not be an effective stand-alone control in these circumstances
- Factors such as soil type, slope angle and slope length are key factors in determining how much silt fence is needed on site
- If ground conditions are clayey Silt Fence alone is unlikely to be an effective pollution control

for technical support and sales of Silt Fence contact frog environmental

0345 057 4040

info@frogenvironmental.co.uk

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Midlands: The Byre, Blakenhall Park, Barton Under Needwood, Staffordshire, DE13 8AJ

SILT MANAGEMENT – SILT MATTING

frog environmental

product information sheet
SiltMat
silt capture mat

SiltMat is a fully biodegradable mat that captures and prevents sediment resuspension.

The mats can be placed in natural or artificial channels, ditches or directly on land to trap suspended sediments.

SiltMat can be orientated sideways or lengthways and fits into all channel types.

SiltMats are used to manage sediment release to watercourses from construction sites and for capturing silts suspended by in channel or works on river banks.

Applications

- Silt control from construction sites
- Silt control from river or bank works
- Deployed in rivers, streams and ditches
- Deployed in Silt Capture Channels
- Used in forestry and agricultural applications

SiltMat is proven in the field to reduce downstream levels of suspended solids

Technical information

SiltMat

Dimensions: 2 x 1 x 0.12 metres

Dry Weight: 12kg per mat

Material used: coir (80%) jute (20%)

Function: Captures and prevents resuspension of silt

Performance: Single mat captures up to 40kg of silt

Disposal: Fully biodegradable, with correct permissions used mats can be disposed ofland.

four step guide to using SiltMats

Use our reference table (below) to judge optimal placement. As a rule of thumb, SiltMat is best placed in areas where stream energy is reduced and natural deposition takes place.

SiltMat is unfolded and orientated to cover the width of the channel. The edges of silt mat can be overlaid without gaps. Mats are staked in place or weighted with local material.

SiltMat will trap large amounts of sediment. Stakes or weights are removed and the mats rolled up ready for disposal.

With correct permission SiltMat can be seeded and left on site, creating an environmental enhancement and avoiding disposal costs.

Reference table showing the distance that different particle sizes travel at differing water velocities

Particle Size	Water Speed (m/s)				
	0.2	0.4	0.6	0.8	1
Fine Gravel	20 cm	40 cm	60 cm	80 cm	1 m
Sand	70 cm	1.4 m	2.1 m	2.8 m	3.5 m
Fine Sand	8 m	17 m	25 m	33 m	40 m
Silt	228 m	456 m	683 m	911 m	1139 m

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SILT MANAGEMENT – FILTER SOCKS

wildlife | specialist | biodegradables | **geotextiles** | agrotextiles | accessories

Hy-Tex **Pro-Tex Dewatering Socks** for Pumped Sediment Control

☑ **Ideal for small dewatering jobs.**

☑ **Traps sediment and oil.**

Pro-Tex Dewatering Socks control pollution caused when pumping dirty water from excavations, and offers an economical alternative to traditional dewatering bags or filtration products.

These easy to use and popular sediment filters bags are ideal for projects with small budgets and minor pollution problems to control of sediment and oil sheen from pumped water.

Designed to attach directly to the discharge pipe, they quickly filter water to help prevent unwanted sediment, silt, debris or pollutants leaving the site in run-off.

The socks have been designed to control pollution caused by pumping dirty water from excavations, trenches, lift shafts, bunds and the like, by filtering out sediment from contaminated water down to 90 micron, while the fabric the socks are constructed from has an inherent ability to absorbs hydrocarbons too.

Advantages

The main advantage of using an Oil & Sediment filter is that it removes hydrocarbons and sediment from pumping activities.

It provides an alternative solution that delivers a considerable cost saving and is user friendly. Furthermore it reduces site time over existing methods such as hiring a vacuum tanker. If you wish to carry out street works with a minimal disruption to the public, this is the ideal solution.

Other benefits include:

- Simple set-up with built in tie
- Hydrocarbon detection strip to identify oil pollution
- Lightweight and compact
- Very easy to empty

OIL DETECTION INDICATOR

A light blue paper oil detection strip is attached to each bag

If strip turns **DARK BLUE**
OIL PRESENT
Stop pumping
Contact your Environmental Manager

Product: Pro-Tex Dewatering Sediment Bag. Premium Pipe Sock.
Application: Oil and Sediment Filter
Effective Pore Size: 90 micron
Sediment Capacity: Approx 18kg
Permeability: 72 litres/m²/sec
Tensile Strength: 19 kN/m
CBR Puncture Strength: 2,900N
Material: UV stabilised. continuous filament, non-woven, needle punched polypropylene fabric.
Bag Size: Approx 1.00 x 0.30m lay flat
Additional Features: Tying cord and hydrocarbon detection strip

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SILT MANAGEMENT – FILTER BAGS

wildlife | specialist | biodegradables | **geotextiles** | agrotextiles | accessories

Hy-Tex **Ultra Dewatering Bags** for Pumped Sediment Control

Hy-Tex Ultra Dewatering Bags provide an effective way to collect harmful sediments from dirty water pumped out of excavation works (such as foundations, pipe line construction, water, sewer and utility trenches, waterways and lakes) that would otherwise pollute the surrounding environment.

It is a legal requirement to prevent silty water from leaving site untreated, and a finable offence if you do not take appropriate pollution control measures. The Environment Agency Pollution Prevention Guidelines PPG6 (See side panel), in summary, require that the majority of suspended solids (gravel, sand, and silt) must be removed from site water before it is discharged into a drain, sewer or watercourse.

Traditionally settlement methods (such as straw bale structures or settlement ponds/tanks) are often ineffective, rely on slow water movement, long settlement times, expensive and time consuming tank maintenance and large works areas.

Ultra Dewatering Bags are an efficient, practical, quick, simple and cost effective alternative solution to manage this ongoing environmental problem of removing suspended solid pollutants from pumped water on construction sites.

Sediment-laden water is simply pumped into the high quality filter bags, which trap the solids inside and allow filtered water to flow freely out through the geotextile fabric to disperse into the surrounding ground or another collection point.

Ultra Dewatering Bags can also be used for gravity feed applications such as outfall pipes from site drainage or lagoons.

The silt filter bags provide a passive non-mechanical solution, without the use of excessive or specialist machinery (other than possible lifting equipment when full), and do not require a large work area.

The sediment bags are also light, compact and easy to store, with minimal cleaning up required - when full just dispose of the bag and replace with another bag.

The Ultra Dewatering Bags detain both oil and sediment, offering a combination of benefits not available in alternative products. They can also be used to contain contaminated sediment whilst treatments are applied (such as flocculants or absorbents).

The standard 1.80 x 1.80m Ultra Dewatering bags has the capacity to trap near 1 tonne of silt and cope with flow rates up to 2,730 l/min, while the larger 3.05 x 4.55m bags can trap over 4 tonnes of silt and cope with flow rates up to 6,818 l/min.

The Environment Agency

"Working at construction and demolition sites: PPG6 Pollution Prevention Guidelines"

"Poor management of silt and silty water is a major cause of serious pollution incidents from construction sites. Silt for these purposes is a fine inert sediment derived from soil and rocks.

Silt pollution can: damage and kill aquatic life by smothering and suffocating; reduce water quality; cause flooding by blocking culverts and channels…"

"You must not discharge any silty water to a drain or watercourse without prior treatment to settle or remove suspended solids. If you've identified that you will be generating silty water, identify suitable means to treat the water before discharge; examples include: lagoons, settlement tanks, silt traps grassy areas that slow water and allow solids to settle…"

"You must have prior permission from the local sewerage provider if you intend to discharge settled water to the foul sewer because this will be regarded as a trade effluent.

You must have prior permission from [the Environment Agency] if you need to discharge anything to a watercourse. In Scotland if you comply with certain conditions, a discharge will be covered by a General Binding Rule and you will not need to contact SEPA."

Property	ASTM Test	Value
Material		Non-woven polypropylene geotextile
Grab Tensile Strength	D 4632	912 N (205 lb)
Elongation	D 4632	50%
Trapezoid Tear	D 4533	378 N (85 lb)
Puncture Resistance	D 4833	578 N (130 lbs)
Mullen Burst	D 3786	2,758 kpa (400 psi)
Permittivity	D 4491	1.4 sec^{-1}
Pore Size	D 4751	180 micron (80 US sieve no)
UV Stability	D 4355	70% strength retained after 500hr
Weight	D 5261	272 g/m^2 (8 oz/yd^2)
Flow Rate	D 4491	3,660 $l/min/m^2$ (90 $gal/min/ft^2$)

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Hy-Tex **Ultra Dewatering Bags** for Pumped Sediment Control

Usage Guidelines

Ideally position the Ultra Dewatering Bag on a slope, so incoming water flows downhill through the bag, and, as a precaution, install Terrastop Premium silt fence down slope of the bags to control any potential run-off pollution.

The bag is fitted with a collar which fits around delivery hoses or connectors. Strap the neck of the Ultra Dewatering Bag tightly to the discharge hose using the attached tying cord.

To increase filtration efficiency place the bag on an aggregate, or a layer of Hy-Pave tiles, to maximize water flow through the under surface of the bag.

Plan ahead for removal, if the filled bags are to be lifted for disposal then place suitable lifting straps under bag prior to pumping, alternatively you can roll the bags into a digger bucket.

Regularly check the bags. The Ultra Dewatering Bag is full when it no longer can efficiently filter sediment or pass water at a reasonable rate.

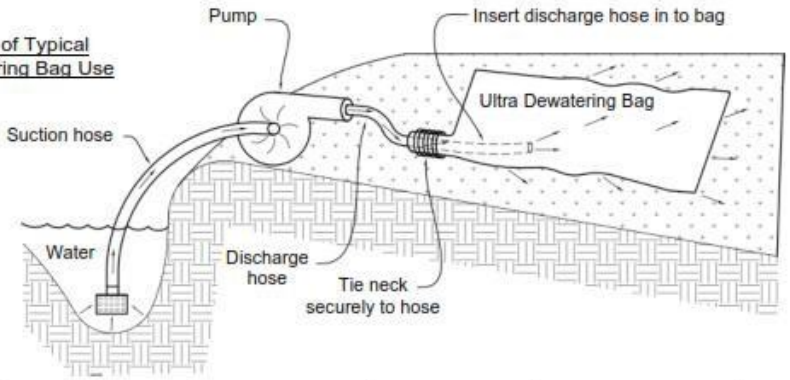
Flow rates will vary depending on the size of the Ultra Dewatering Bag, the type and amount of sediment discharged into the bag, the type of ground, rock or other substance under the bag and the degree of the slope on which the bag lies.

Under most circumstances Ultra Dewatering Bags will accommodate flow rates of up to 2,730 l/min for the 1.80 x 1.80m bags and 6,816 l/min for the 3.05 x 4.55m bags.

Use of excessive flow rates, or overfilling Ultra Dewatering Bags with sediment, may cause ruptures of the bags or failure of the hose attachment straps.

Dispose of the Ultra Dewatering Bag as directed by the site engineer. Normally allow the bags to dry in place then either cut open, spread and landscape on site or remove and dispose of the filled bags (Heavy lifting machinery may be required).

Illustration of Typical Ultra Dewatering Bag Use



Size	Code	Surface Area	Max Flow Rate	Max Pump Size	Sediment Capacity	Oil Capacity
1.80 x 1.80 m (6 x 6 ft)	9724	6.68 m² (72 ft²)	2,730 l/min (500 gal/min)	10 cm (4 inch)	0.51 m³ / 980 kg (18 ft³ / 2,160 lbs)	14 l (3.7 gal)
3.05 x 4.55 m (10 x 15 ft)	9725	27.87 m² (300 ft²)	6,818 l/min (1,500 gal/min)	15 cm (6 inch)	4.20 m³ / 4,082 kg (150 ft³ / 9,000 lbs)	57 l (15.1 gal)

Notes:

Flow/Dewatering rates will vary according to soil type (Sand typically dewaters at the fastest rate, while clay dewaters at the slowest). Clay may also blind over the fabric in some instances, significantly reducing flow.

Max flow rate is a cautious figure based on a significantly de-rating of the clean fabric flow rate of approx 3,660 l/min/m² (90 gal/min/ft²) to allow for pump pressure build up due to silt accumulation.

Sediment capacity is calculated using wet sand weight of approx 1,920kg/m³ (120 lbs/ft³) and a bag fill height of approx 150mm

Oil capacity is estimated at low flow conditions with approx 2.09 l/m² (0.5 gal/yd²) absorption capacity

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Hy-Tex (UK) Limited

Committed to Quality, Value & Service

Siltbuster Siltstoppa Bags

Siltstoppa Bags provide a low cost solution for the dewatering of sludges and slurry.

Pre-conditioned (flocculated) slurry is pumped into the Siltstoppa Bag and allowed to dewater. The water released from the sludge bleeds through the geotextile fabric whilst the trapped solids remain in the bag.

Siltstoppa De-watering Bags are available individually, to sit on a suitable slab or drainage area or can be supplied as a complete treatment solution including as required sludge conditioning unit, and roll-on/roll-off (RORO) container.

When the bag is full and the trapped solids have dewatered, the Siltstoppa bag can either be split open on-site and the dewatered solids removed by means of an excavator (or similar equipment), or the full RORO container can be transported for off-site disposal.

Siltbuster Siltstoppa Bags Specs

Separation Method	Geotextile Membrane
Height	Expands until full
Length	5.5m
Width	2.1m
Dry Weight	Size Dependent
Materials	Sludges and Slurries
Material Colour	Black
Bag Capacity	6m³
Operating Range	Material Dependant

Siltbuster Siltstoppa Skip

Siltstoppa De-Watering Bags have been conviently sized to fit an industry standard roll on roll off (RORO) Siltstoppa skip. The RORO dewatering skip provides a secure and environmentally acceptable means of bunding a Siltbuster Siltstoppa Dewatering Bag.

When the skip is full with either single or multiple bags (stacked up on top of each other), the skip and its contents can be transported to a Waste Management Facility for disposal of the dewatered sludge/slurry contained within the Siltstoppa Bags.

The Siltstoppa Skip comes complete with an integral sump, allowing easy removal of the water which escapes from the dewatering sludge/slurry.

Siltbuster Siltstoppa Skip Specs

Separation Method	Geotextile Membrane
Height	1.2m
Length	6.1m
Width	2.6m
Dry Weight	2.0 tonne
Material	Flocculated Particles
Operating Capacity	1 Bag
Lifting Method	RORO Hooklift
Operating Range	Material Dependant

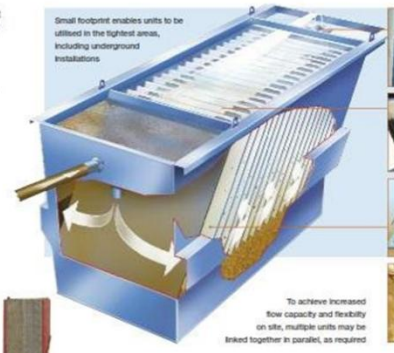
SILT MANAGEMENT – SETTLEMENT TANKS

Siltbuster®

Gravity Settlement ▸ Siltbuster Settlement Units & Water Clarifiers

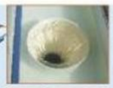
Siltbuster is the UK's leading provider of mobile settlement units and Lamella Clarifiers. Each unit in the extensive range is specifically designed to remove suspended solids and settleable matter from silt and solids laden surface run-off and groundwater.

Effective gravity based solid/liquid separation requires the largest possible settlement area and optimum hydraulic flow. Siltbuster Clarifiers utilise lamella plate technology to maintain ideal settlement conditions within each unit, thereby, ensuring maximum particle settlement and minimum unit footprint.



Small footprint enables units to be utilised in the tightest areas, including underground installations

To achieve increased flow capacity and flexibility on site, multiple units may be linked together in parallel, as required



Innovative outlet design maintains flow even when the unit is not exactly level

Plate technology and configuration hugely increases settlement area. Plates are designed for easy handling

Flow distribution has been designed to meet the rigours of the modern construction site

Emptying can be achieved by a range of methods, e.g. via drain ports & valves, vacuum tanker or by manual or mechanical means

Silt Management

www.siltbuster.com

Siltbuster mobile clarifiers are robust; skid-mounted; compact and lightweight, making them simple to transport, install and operate. They are ideal for sites with limited access, restricted spaces and temporary projects.
Hopper bottomed units can be fitted (on request) with an automatic sludge removal system making their operation virtually maintenance-free.

Typical applications

Construction

- Pumping & de-watering
- Groundwater treatment
- Site run-off treatment
- Drilling, piling & coffer dams
- In-river & near-river works
- De-silting & dredging
- Roads, pipelines & other linear projects
- Plant, vehicle & wheel washing
- Site water management

Silt Management

The Siltbuster Mobile Range

Siltbuster offers a range of various sized units to provide customers with flexibility and the opportunity to hire or purchase a tailored, yet off the shelf, solution.

The Mobile Range, Size Comparison

FB50	HB10	HB20	HB40R	HB50
Flat-bottomed, skid-mounted unit. The Construction Industry's favourite	Hopper-bottomed, skid-mounted unit	Enlarged version of HB10. Increased flow rate and sludge storage. Batch or continuous sludge draw-off	Hopper-bottomed, skid-mounted unit	Performance of the FB50 but with twin hoppers for larger capacity, primary thickening applications and batch or continuous sludge draw-off
Height: 1.9m	Height: 2.1m	Height: 2.6m	Height: 3.1m	Height: 3.1m
Length: 3.7m	Length: 1.9m	Length: 2.5m	Length: 3m	Length: 3.7m
Width: 1.45m	Width: 0.9m	Width: 1.2m	Width: 2.2m	Width: 1.7m
Effective Settlement Area: 50m²	Effective Settlement Area: 10m²	Effective Settlement Area: 20m²	Effective Settlement Area: 40m²	Effective Settlement Area: 50m²
Dry Weight: 1,960kg	Dry Weight: 510kg	Dry Weight: 1,120kg	Dry Weight: 2,480kg	Dry Weight: 2,370kg
Inlet: 4" bauer	Inlet: 2" bauer	Inlet: 3" bauer	Inlet: 4" bauer	Inlet: 4" bauer
Outlet: 6" bauer	Outlet: 3" bauer	Outlet: 4" bauer	Outlet: 6" bauer	Outlet: 6" bauer
Typical Operating Capacity: 1-50m³/hr	Typical Operating Capacity: 1-10m³/hr	Typical Operating Capacity: 1-20m³/hr	Typical Operating Capacity: 1-40m³/hr	Typical Operating Capacity: 1-50m³/hr

The benefits

- Readily transportable, fast and simple to setup, easy to operate.
- Small footprint units with large settlement area
- Unique design enables rapid particle settlement and water clarification
- Up to 20 times more efficient than conventional settlement tanks and lagoons of the same plan area
- Choice of unit sizes and capabilities to suit most applications
- Units can be used individually or linked to accommodate a wide range of flows, pump sizes and particle charcteristics

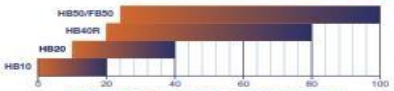
Options & Process Add-ons

Total Water Treatment Solutions

Siltbuster Clarifiers can be configured as single or multiple units for basic gravity separation and discharge-to-sewer applications. They can also be supplied as part of a complete, tailored, packaged treatment solution – including ancillary equipment, such as:

- Lids, covers, walkways & access platforms
- Flow splitter valves, flow meters & flanged ports
- Automatic, flow proportional, single or multi-stage chemical pre-treatment
- Fully containerised dosing systems
- Flash mixers
- Pipe flocculators or mixing/aging tanks
- Automatic desludging systems
- Sludge pumps & sludge storage tanks
- De-watering systems

Siltbuster Mobile Clarifier Operating Range



For hire, sales or more details call Siltbuster on 01600 772256

Process Add-ons

Chemical Dosing, Pre-treatment & Reaction Systems

Siltbuster believes that, wherever possible, the use of chemicals to treat excess site water should be avoided. However, there are some types of waste water, contaminants and effluent which still require the use of chemicals to increase the particle settlement rate, so as to enable their removal. This can be due to either the presence of very fine particles; clay; colloidal matter; colour or simply the soil's own interparticle electrical bonds which need to be interupted in order for settlement to occur.

In such cases, chemical dosing is unavoidable. Consequently, Siltbuster has developed an extensive range of chemical dosing systems to compliment it's award-winning settlement units.

Treatment Systems

Flocculant Blocks
Basically, a flocculant in a solid form. When immersed in water the solid dissolves, releasing the chemicals, causing a reaction.

Single-Stage & Multi-Stage Dosing Systems
Siltbuster's Single-Stage dosing systems range from a single dosing pump linked to a drum of coagulant or acid/alkali for pH adjustment, through to an IBC based flocculant batch makeup system and associated pumped dosing. The dosing rate is fully controllable and can be linked to flow rate and chemicals can be added to mixing/reaction tanks, in-line or via pipeflocculators. For more complex dosing regimes requiring similar levels of accuracy, Siltbuster offers Multi-stage dosing systems, including staged coagulant and flocculant dosing, often with an intermediate stage for pH adjustment.

Chemical Reaction Systems

The reaction rate of treatment chemicals, dictates the system required.

Mixing Tanks
Siltbuster can supply mixing tanks, ranging from 1m³ to 30m³ capacity.

Pipeflocculators
For faster reacting chemicals, various pipeflocculators are available.

Containerised Integrated Dosing Units

Siltbuster can provide secure, self-contained, in-line dosing units which enable the controlled, flow-proportional, multi-stage addition of treatment chemicals. For flows up to 150 m³/hr, the 'plug & play' systems come pre-installed in a 10ft (3m), 20ft (6m) or 40ft (12m) shipping container, as required.

Options include:

- Bunded chemical storage
- Flow-proportional dosing systems
- Reaction/aging tanks and pipeflocculators
- Control panels and datalogging
- Insulation, lighting and heating
- Integrated Lamella or DAF Units (subject to model and size).
- Automatic monitoring of feed and discharge water

Full Treatment Packages

Siltbuster's in-house laboratory can test a wide range of chemicals to identify the treatment regime most suited to your needs. A sample of the untreated water, your flowrate and the required discharge limits are all that is needed.

Silt Management

www.siltbuster.com

APPENDIX 6: SILT MANAGEMENT INSPECTION CHECKLIST

Date	Gully no	Fit for purpose (yes/no)	(if no: action required, clean / replace?)	Comment	Signature

SILT MANAGEMENT – SITE INSPECTION CHECKLIST

Name of person undertaking inspection: .....

Date: .....

Current weather conditions: .....

Description	Comments	Action	Initial
1) What is the current condition of the gully protection measures within the completed / unadopted areas of the site? *Note any gullies requiring maintenance measures*			
2) What is the current condition of the gully protection measures within the active areas of the site? *Note any gullies requiring maintenance measures*			
3) Are site roads clean and relatively free of mud? Is the frequency of visits by the road sweeper adequate? *Consider whether additional visits should be scheduled.*			
4) Are there currently unsurfaced areas being trafficked which may be causing silt to enter the site drainage or stream? *Note if additional measures are required to reduce the run-off from these unsurfaced areas.*			

5) Are control measures in place to prevent silt runoff from unsurfaced areas and soil stockpiles? *Note if the control measures are adequate and whether the increased runoff requires an increase in the frequency of inspection of any control measures.*			
6) What is the current water condition of the water bodies / watercourses (including attenuation basins / swales)? *Note any discolouration of the water or obvious sign of sediment within the water.*			
7) Is there any dewatering of excavations taking place on site? *Note what activities are taking part and their location.* *Note any control measures in place.*			
Notes and actions to be taken:			

Completed by	Name	Signature	Date
Site Manager			

APPENDIX 7: INITIAL SITE ENVIRONMENTAL ASSESSMENT

Initial Site Environmental Risk Assessment

GHSE RA	010
Revision	1

All Risk assessments must be checked and reviewed on a regular basis. Specifically: After an accident/incident, when there are any significant changes to; legislation, equipment, operatives or procedures, at regular intervals as the job, equipment and hazards dictate. The higher the risk the more frequently the assessment must be reviewed.

Persons who may be at risk from activities: (Mark X to all that apply)

Site Staff:	X	**General Public/Residents:**	X	**Visitors:**	X
Sub-Contractors/Operatives:	X	**Young Persons:**	X	**Other Workers:**	X

EVALUATION OF RISKS: (Use the below table to evaluate the level of risk associated with each hazard identified)

Calculation of Risk = Likelihood x Severity						
Severity	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5
		1	2	3	4	5
X	Likelihood					

Likelihood		Severity		Level of Risk = Likelihood x Severity Key
Rating 1	Very Unlikely	Rating 1	No Injury	1 - 4 = Acceptable
Rating 2	Unlikely	Rating 2	Minor Injury or Illness	5 - 10 = Further Review
Rating 3	Likely	Rating 3	7 Day Injury or Illness	11 – 25 = Unacceptable
Rating 4	Very Likely	Rating 4	Major Injury or Illness	
Rating 5	Almost Certain	Rating 5	Fatality	

Activity	Hazard	Risk Rating			Control Measures	Residual Risk Rating			Further Controls (if applicable)
		L	S	L x S		L	S	L x S	
Construction site access / egress	Contact with plant / vehicles / pedestrians Death, serious, injury, damage	4	5	20	A separate pedestrian access gate to be provided to reduce potential vehicle / pedestrian interaction. Segregated walkway to be established from the site entrance to the compound. Traffic marshal or gate man to be utilised as necessary.	2	2	4	GHSE Procedure 14 - Traffic Management & Site Security
Vehicle access and parking	Collision of plant/vehicles and pedestrians Death, serious, injury, damage	4	5	20	Parking on site or at plots to be restricted. Route to car park to be clearly sign posted. A suitable car park to be provided with firm and level ground conditions. One-way systems to be utilised where possible. Safe route from car park to compound.	2	2	4	GHSE Procedure 14 - Traffic Management & Site Security
Traffic management	Collision of plant/vehicles and pedestrians Death, serious, injury, damage	4	5	20	Barriers to be used to ensure segregation of plant/vehicles and pedestrians at all times. Separate pedestrian and vehicle access points into site.	2	2	4	GHSE Procedure 14 - Traffic Management & Site Security
Securing land parcel / Preventing unauthorised access to site.	Unauthorised access to site Death, serious, injury, damage, Underground services Electrocution, death, serious injury	4	5	20	Fencing to be installed to the site perimeter. Perimeter fencing to be inspected daily. Additional security such as CCTV or security patrol may be required if the site fencing does not adequately prevent unauthorised access. Warning signage to be displayed on front access gate.	1	3	3	GHSE Procedure 14 - Traffic Management & Site Security
	Underground services Electrocution, death, serious injury	4	5	20	Service drawings to be made available. Permit to dig to be completed. Ground to be scanned prior to any ground penetration for fence posts.	1	4	4	GHSE Form 025 / Contractor's document Service Drawings / As Built Drawings
	Collapse of fencing Death, serious, injury, damage	3	3	9	Fencing to be installed as per manufacturers guidance or temporary works design. Daily inspections to be completed. Timber hoarding to be inspected by a structural engineer at intervals not exceeding 6 months.	1	4	4	GHSE Procedure 16 – Temporary Works GHSE Form 050 GHSE Form 053/053A or Subcontractors' form
Surface water management, site drainage and pollution prevention	Silt run off, standing water, flooded excavations	4	2	8	Phased earthworks. Weather monitoring Excavations not to be dug and left overnight. Permanent surface wate drainage & infrastructure to be installed. Use of gully bags, silt traps, temporary sediment ponds/silt tanks. Road Sweepers to be utilised to reduce build-up of mud / dust on roads.	2	1	2	GHSE Procedure 24 - Excavating/Digging
Material movement	Nuisance dusts / Inhalation of dusts Occupational health / lung diseases	4	3	12	All cabbed plant operators to ensure doors remain closed during operations, especially in dusty environments. Dry dusty areas to be dampened down regularly to supress dust being dispersed. Road Sweepers to be utilised to reduce build-up of mud / dust on roads.	2	1	2	GHSE Procedure 36 - Control of Dust GHSE Procedure 26 - PPE
COSHH	Inhalation of Dust Occupational health / lung diseases	4	3	12	Any material or substance that produces dust during works that is harmful to health must have a COSSH assessment in place. The Assessment will give direction on what the hazards / risks are and controls to be implemented whilst using the material / substance. Operatives to ensure that task specific PPE is worn as specified within the COSHH assessment.	2	1	2	GHSE Procedure 36 - Control of Dust GHSE Procedure 26 - PPE GHSE Procedure 09 - Control of Substances Hazardous to Health Group COSHH assessments

General use of power tools, machinery, plant	Inhalation of dusts Occupational health / lung disease.	4	4	16	Operatives to ensure M or H class dust extraction devices or water suppression is utilised to reduce Powered air fed respirator with a TH2 particle filter. If dust is generated the operative must ensure that the working area is cleared upon completion of works using a M or H rated hoover, where this is not available the operative must ensure the area is dampened down prior to sweeping and a powered air fed respirator with a TH2 particle filter.	2	2	4	GHSE Procedure 36 - Control of Dust GHSE Procedure 26 - PPE
	Noise	5	3	15	Noise assessments when deemed necessary. Hours of work maintained at 8am - 6pm Weekdays and 8am to 1pm Saturdays. No Sunday working. Plant and equipment to be regularly maintained to manufacturers guidance to control noise through faulty equipment. If the use of noisey/plant and machinery is on a sensitiv boundary, acoustic measures to be utilised to deflect noise where practical. Plant & vehicles not to be left idling	3	1	3	GHSE Procedure 22 - Plant
Storage areas	Falling objects / Slips, trips and falls Personal Injury, Crush Injury, Death, Damage	4	4	16	Ground conditions must be firm and level. Where pedestrians are required to access the materials compound suitable means of segregation must be provided.	1	2	2	
Fuel storage area	Spillage / Fire Ground Contamination, Death, serious, injury, damage	4	4	16	Fuel must be stored in a double bunded tank. Drip trays must be available for use during refuelling. Spill kit to be available. Fire extinguishers to be available.	1	3	3	GHSE Procedure 16 – Chemical storage, Discharge Spillage
Fire	Insufficient Fire Provisions Death, serious, injury, damage	2	4	8	Fire risk assessment to be completed to assess what arrangements have been considered and any additional considerations which may be necessary. Fire plan to be compiled detailing the specific arrangements which must be implemented. All welfare cabins to be fitted with smoke detectors. Fire extinguishers to be available in welfare cabins. Fire points should be provided at all locations of work and are detailed in the fire plan. Fire points should comprise of suitable extinguishers and audible alarm as a minimum. A rotating bell is not suitable. Fire-fighting appliances should be visually inspected on a weekly basis. Annual inspections of fire-fighting appliances must be carried out by a competent person. Fire training must be delivered / provided to those with specific	1	4	4	GHSE Procedure 06 – Fire & Emergency arrangements
First Aid	Insufficient first aid provisions	2	4	8	All sites must have a qualified first aider, sites with over 50 personnel working on site should have an additional first aider. Fully stocked first aid kit, inspected regularly to ensure sufficient supplies are available and in date. Defibrillator to be available on site.	1	4	4	GHSE Procedure 11 – First aid provisions GHSE Procedure 06 – Fire & Emergency arrangements

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