

Construction Environmental Management Plan

For

Merchant Fields, Cleckheaton

BD19 4ED



1	Introduction
2	Construction Details
2.1	Programme and Phasing Details
2.2	Overall Construction Programme
3	Access Arrangements
3.1	Construction Traffic Permitted Routes
3.2	Construction Material Deliveries
3.3	Construction Plant Deliveries
3.4	Signing, Monitoring and Enforcement of Traffic Routes
3.5	Access for other Vehicles and Personnel
3.6	Site Haul Routes
4	Construction Site Layout
4.1	Contractors Site Compound
4.2	Screening and Hoarding
4.3	Operative and Power wash Facility
5	Construction Activities
5.1	Working Hours
5.2	Procedures for Interference with Public Highways
5.3	Public Access
5.4	Complaint Procedures
6	Environmental Issues
6.1	Noise Management
6.2	Dust Management
6.3	Management of Discharges to Watercourses and Groundwater
6.4	Works to Protect/Mitigate Impacts on Biodiversity
6.5	The Management of Waste
6.6	Traffic Management Measures
7	Construction Methods
7.1	Sustainability
7.2	Reduction, Re-use, and Recycling of Construction Waste
7.3	Flood Risk
8	Roles and Responsibilities
Appendix A	Initial Works Traffic Management Plans (Vertase FLI)

1 Introduction

- 1.1 Harron Homes have prepared this Construction Environmental Management Plan in support of a residential planning application on land at Merchant Fields Farm, Cleckheaton.
- 1.2 This CEMP outlines a series of strategies, standards, best practise techniques and procedures that will be observed through the construction process in order to ensure compliance with the environmental legislation and regulations.
- 1.3 The Applicant has planning permission for a residential development of 291 dwellings with associated access from Hunsworth Lane and Kilroyd Drive. The application for planning consent relates to the site described as - Merchant Fields Farm, off Hunsworth Lane, Cleckheaton, BD19 4ED. This CEMP is submitted as required under condition 3 of planning permission 2024/70/91260/E.
- 1.4 This CEMP has been compiled by Harron Homes Ltd. with input from internal departments and external consultants where required.
- 1.5 This CEMP is structured in seven sections which follow this, Section 1.
- Section 2 Construction Details
 - Section 3 Access Arrangement
 - Section 4 Construction Site Layout
 - Section 5 Construction Activities
 - Section 6 Environmental Issues
 - Section 7 Construction Methods
 - Section 8 Roles and Responsibilities

2 Construction Details

2.1 Programme and Phasing Details

- 2.1.1 The main activities anticipated during construction will comprise site preparation, demolition, earthworks and then construction. Works are anticipated to be undertaken in the following order; however, there may be occasions where certain work elements overlap. In the event that the site is developed in discrete phases each individual phase will broadly follow the same order below.
- 2.1.2 Site preparation works to secure the Site and to determine Site protocols during the following stages:
- Localised remediation, validation of ground conditions and a geotechnical ground investigation where required.
 - Initial clearance of vegetation in relevant development phase which will involve the removal of vegetation and trees that are not retained and/or relocated for preservation as part of the approved development
 - Demolition works under section 80 Notice to local authority of intended demolition. and 81 Local authority's powers to serve notice about demolition.
 - Bulk earthworks to ground formation levels and the formation of surface water drainage swales and retention lagoons; and
 - Creation of temporary accesses/haulage routes through the Site.
- 2.1.3 The following site preparation, earthworks and construction activities are considered necessary in order to facilitate construction and development of the Site;
- Securement of Site and the installation of any additional fencing and/or hoarding around the Site.
 - Site preparation, excavation, earthworks, and re-profiling to meet required finished floor levels.
 - Material handling, storage, stock piling and disposal.

- Movement and use of static and mobile plant / construction vehicles.
- Disposal of waste.
- Construction of drainage runs, and utilities duct runs.
- Formation of swales and attenuation features.
- Foundation construction.
- Installation of temporary and permanent infrastructure including roads and haul routes.
- Construction of proposed buildings.
- Site restoration and landscaping.

2.1.4 Principal construction activities will be scheduled for 7-8 years as an achievable time scale, subject to external impacts, e.g. sustained periods of inclement weather, material/labour supplies, unforeseen events, etc.

2.1.5 The site preparation, earthworks and construction phase of the Proposed Development will involve a variety of different plant and equipment. The exact plant and equipment to be utilised throughout the site preparation, earthworks and construction phase will be sourced by the appointed Contractor. For the purpose of this CEMP, it has been assumed that on-site plant will include, but may not be limited to, the following:

- HGV's (inc. tankers, waste collection, fixed & articulated).
- Waste disposal HGV's.
- Dump Trucks.
- Tracked Excavators.
- 360 degree Excavators.
- Diesel Generators.
- Heavy Goods Vehicles (HGVs) including lorry transporters.
- Asphalt spreaders with support lorries.
- Road rollers.
- Cement Mixer Trucks and Concrete pumps.
- Compressors.
- Forklifts/Telehandlers; and
- Scaffolding.

2.2 Overall Construction Programme

2.2.1 It is anticipated that the site will be built in a single continuous phase, following the site preparation and earthwork activities. The entire construction period on Site is anticipated to last no more than 7-8 years. This timescale is predicated on an anticipated build/sales rate of 3 dwellings/month.

3 **Access Arrangements**

3.1 Construction Traffic Permitted Routes

- 3.1.1 Initially, as agreed with Kirklees Council and under the provisions of Condition 5 as attached to the planning permission, construction related traffic will access the Site from Kilroyd Drive for the phase 1 works, for 2-3 weeks. This is to enable the main approved access to the site to be formed from Hunsworth Lane, upon the creation of which all future construction related traffic will be directed to use, as required under the provisions of Condition 4 as attached to the planning permission.

Measures to be employed for managing site access include:

- In advance of works commencing on site, or in the event of works directly affecting the existing highway network, residents/businesses will be notified in writing.
- Signage for construction traffic will be placed along Kilroyd Drive for the initial Phase 1 works to manage speed limits- speed limits (see Appendix A).
- Onsite parking and laydown areas with unloading and loading space, shall be provided.
- Within the traffic will be managed so as to avoid conflict between construction related traffic and residents, so far as is possible, as properties become occupied. This could include a one-way system for traffic in certain areas and/or for specific time periods.

3.2 Construction Materials Deliveries

- 3.2.1 Contractors and suppliers will be requested to avoid deliveries being made before 7.30am and after 6:00pm (Mon-Fri) and before 8.00 am and after 12.30 pm on Saturday, with no works/deliveries on Sundays or Bank Holidays. This allows 30 minutes buffer at the end of each permitted working day to allow deliveries to be received prior to the days operations ending, other than in an emergency or exceptional circumstances.

- 3.2.2 During the initial construction stages most materials will be ordered in bulk and will be delivered to site as and when required in full HGV loads. The role of the holding compound will therefore be:

- To facilitate the delivery of materials and plant outside of the peak periods.
- To manage the supply of materials and plant to the work areas during peak periods.

- 3.2.3 The arrangements and restrictions for deliveries to and from site will be advised in writing to subcontractors and suppliers before work starts any changes to such arrangement and or restrictions will also be notified.

3.3 Construction Plant Deliveries

- 3.3.1 At the current time it is envisaged that construction plant would be delivered to site using standard low loader-type transport vehicles. No significant abnormal loads which would warrant specific engagement with local transport police are anticipated.

3.4 Signing, Monitoring and Enforcement of Traffic Routes

- 3.4.1 Access routes to site would also apply to all site workers, deliveries, and visitors to ensure appropriate management of construction-related traffic. The site access and egress points and proposed traffic management processes will be provided to all suppliers and contract staff to minimise impacts on local roads. Adherence to traffic management will be further managed through the use of appropriate external signage.

- 3.4.2 Site-specific traffic management requirements will be included in contractor and visitor site inductions.

- 3.4.3 Regular meetings will be held with the site management team to review access arrangements. The site management team will monitor traffic movements to ensure compliance with the agreed arrangements.

3.5 Access for other Vehicles and Personnel

- 3.5.1 All vehicles will be directed to the appropriate site access via use of traffic management signage. Upon entering the site, they will be directed to the main site compound from where they will be directed to their

site destination along designated construction traffic routes. The vehicles routes will be subject to a 10mph site speed limit and have directional information/arrows placed along them.

- 3.5.2 All visitors will be required to report to the main site office prior to entering the work area. Provision will be made for site personnel and visitor parking, as close to the site compound/office as is practical, see Harron Homes Build Route and Site Management Plans for further details.
- 3.5.3 The main site compound area will be fenced off and secured.
- 3.5.4 The general public will be excluded from the works area using appropriate fencing and signage.
- 3.5.5 Health and safety signage will be displayed at appropriate locations on site throughout the duration of the construction works.
- 3.5.6 Prior to leaving the site drivers will be advised to inspect vehicles to ensure that the vehicle is clean and safe to leave the site. Waste lorries are to be sheeted over before leaving if there is any risk of material becoming loose during transportation.
- 3.5.7 At all points of exit onto the public highway from the site and as climatic conditions dictate, an operative with power washer will be provided. No vehicle that is likely to deposit mud or other material on the road surface will be permitted back onto the public highway.
- 3.5.8 All adjacent roads will be kept clean by the use of mechanical means if required to reduce the incidence of mud and associated dust generation. The site will also be managed in such a way to keep haul roads free of mud, so this is not dragged out onto the public highway. This will be done by limiting, where possible, the number of vehicles tracking over haul roads between muddy parts of the site and by laying hardstanding on haul roads as early as possible in the build process, so vehicles entering the site have clean hardstanding upon which to manoeuvre.

3.6 Site Haul Routes

- 3.6.1 In order to minimise dust and other environmental disruption, the haul routes on site will be confined to suitable areas.
- 3.6.2 To prevent unauthorised access to construction work areas, suitable barriers will be installed around the boundary. Individual work areas shall have appropriate warning signs applied to the fencing. Areas which are typically prone to unauthorised access will be installed with pedestrian secure fencing. Within the site area, the haul routes may not be fully fenced but will be marked by appropriate means to avoid construction traffic entering unauthorised areas.

4 **Construction Site Layout**

4.1 Contractors Site Compound

The temporary contractors compound will be established to the South Eastern corner of site which will serve the first phases of earthworks, groundworks and the first two to three years of house building.

The temporary compound will then relocate to the central part of site near the northern boundary for the remaining years of build.

- 4.1.1 Site Facilities will include as follows:

- Welfare.
- Haul roads where required

- Designated holding areas
- Pedestrian routes
- Material storage areas

4.2 Screening and Hoarding

4.2.1 Where necessary to ensure safety, individual locations within the site where hazardous activities are being carried out will be secure with the installation of Heras fence panels. Elsewhere the site perimeter will be delineated and will be provided with warning signs to inform of the dangers of construction sites and advice against unauthorised access.

4.3 Power Wash Facility

4.3.1 No vehicle that is likely to deposit mud or other material on the road surface will be permitted back onto the public highway. As required by climatic conditions, a power wash facility will be available at all vehicular access points back onto the public highway to ensure mud deposits are cleaned from vehicles.

5 **Construction Activities**

5.1 Working Hours

5.1.1 Working hours for all construction activities will be as follows:

- 0730 and 1830 Monday to Friday and 0730 to 1300 on Saturday. Work on Sundays and Bank Holidays will only be carried in an emergency or exceptional circumstances.

Where emergency responses are required for service connections (gas, water, electricity), either to install, maintain and or repair, such statutory bodies and their appointed sub-contractors will need to attend site as and when required;

5.1.2

- Contractors will be required to adhere to these working hours as far as is reasonably practicable. However, certain operations are seasonal and weather dependent and, in these instances, it may be necessary to extend working hours for such operations to take advantage of daylight hours, subject to prior agreement with Kirklees Council. Similarly, occasional weekend working may be undertaken where deemed appropriate and approved by Kirklees Council.

5.2 Procedures for Interference with Public Highways

5.2.1 Contactors will be required to take all necessary measure to ensure that public roads are maintained clear of construction debris. Measures will include:

- Vehicles carrying loose aggregate and workings to and from the Site to be sheeted at all times
- Regular monitoring and maintenance of the wheel cleaning facilities; and
- Inspection of the on and off-site routes daily and employing road sweepers.

5.2.2 Disruption to traffic as a result of off-site works in connection with the development will be minimised through the optimum use of traffic management.

5.2.3 Traffic management will be provided in accordance with Chapter 8 of the Traffic Signs Manual (2006),

- "Safety at Street Works and Roadworks" a code of practice (2002), and the 'Guidance for safer temporary traffic management' (2002).

5.2.4 The need for lorries to reverse in public highways will not normally be allowed, but if it is required it will be carried out under the strict control of a banksman

5.2.5 All lorries will be fitted with revolving yellow lights, reversing alarms and wing mirrors.

5.3 Public Access

5.3.1 Construction areas of the site will be made secure from members of the public by fencing, and signage to prevent unauthorised access.

5.4 Complaint Procedures

5.4.1 Any site person receiving a concern or complaint from adjacent properties or passing pedestrians shall refer the matter immediately to the Site Manager who will record the fact and refer the matter to the management team who will then carry out an investigation.

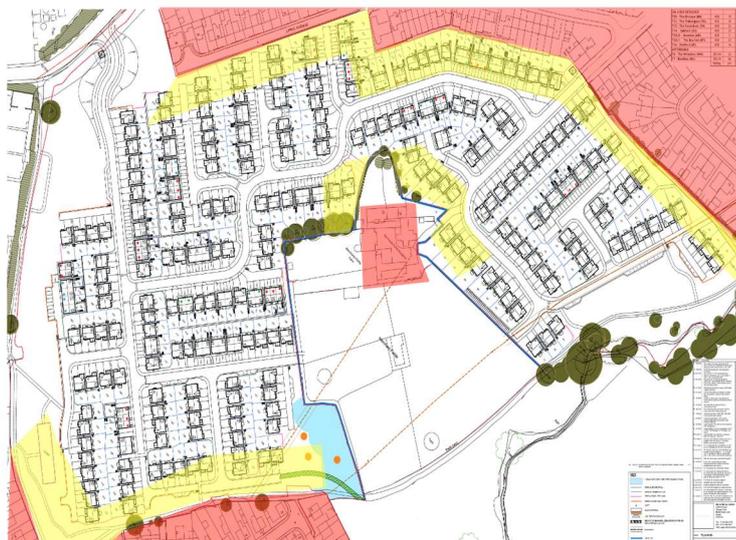
6 **Environmental Issues**

6.0 Construction related artificial lighting

Construction lighting will be limited to headlights on plant and a small amount of lighting within the construction compound welfare area. All of this lighting will be used only within operational hours and will be directed as to avoid spilling outside of the site boundary.

6.1 Noise Management

6.1.1 It is inevitable with any major development that there will be some disturbance caused to those nearby during the site clearance and construction phase. Harron Homes will strive through the adoption of recognised ‘best practicable means’ to minimise this to the lowest practicable level. As build progresses to different areas of the wider development, there will be times that Harron Homes progress into new areas, affecting different receptors on the boundary. The level of noise will be reviewed as the site progresses. Twice monthly inspections by the Environment, Health and Safety team and the appointed external consultants will review site conditions including nuisance dust, noise and vibration.



Sensitive noise receptors and mitigation strategy (during construction)

The areas identified in red are identified as local residents homes that could expect to be exposed to higher than ambient levels of construction noise.

When working in the yellow shaded areas the following controls will be deployed.

- Daily noise checks by site management team (recorded).
- Letter drop to affected residents prior to specific activities, piling, drilling and grouting, setting out the nature and duration of works.
- Location specific controls following daily checks.

6.1.2 The greatest potential for noise disturbance usually occurs during ground works and foundation works, when the heaviest plant equipment is in use. Once a building emerges out of the ground, the level of noise generated is reduced.

- 6.1.3 All contractors will at all times apply the principle of Best Practicable Means (BPM) as defined in Section 72 of the Control of Pollution Act 1974. Best practice measures to mitigate the adverse effects of noise are likely to include:
- Work will be carried out between 0730 and 0630 Monday to Friday and 0730 to 1300 on Saturday. Work on Sundays and Bank Holidays will only be carried in an emergency or exceptional circumstances.
 - Best construction practices and methods would be used in executing the construction works so as to avoid or reduce noise and vibration as far as possible. Only plant that conforms to European Union noise emission standards (as defined in EC Directive 86/662/EEC) and any subsequent amendments) would be used during construction of the Proposed Development.
 - All plant items brought to the Site would be properly maintained, provided with effective bafflers, and operated in a manner so as to avoid causing excessive noise.
 - All items of plant operating on the Site in intermittent use would be shut down in the intervening periods between uses.
 - All stationary plant would be located as far as possible from occupied dwellings as agreed with the Site Manager.
 - Unless otherwise agreed in advance, all deliveries will be during normal site hours to avoid/minimise vehicles waiting outside the site or on the site with their engines running.
 - Loading and unloading vehicles, dismantling of equipment such as scaffolding or moving equipment or material around the site will be conducted in such a manner so as to minimise noise disturbance.
 - The above measures should be revisited as information becomes available regarding the demolition and construction processes and plant details. Where necessary, mitigation measures should be recommended to ensure the effects of construction noise are minimised, where practicable.

Where piling operations are necessary on this site reduction of land vibration and noise pollution will be considered in the following ways:

- Specific assessments of vibration impact at the boundary will be provided by the nominated piling contractors.
- Where necessary, vibration monitoring at the rig and boundary will be deployed.
- Where piling is carried out in proximity to existing dwellings, a condition survey of the adjacent properties will be undertaken.

6.1.4

6.1.5 The specialist contractor will be consulted on the type of piling rig to be used; this pre-start consultation shall consider:

- Type of piling/piling rig- rotary bore hole piling for example or pre-bore holing
- Type have piling hammer to be used, winch rope, Air hammer, Diesel hammer, hydraulic hammer or drop hammer.
- The sound level at the boundary of the construction site and noise sensitive locations (residential, parks and public footpaths) during the daytime (0730 to 1800 hours Monday to Friday) shall not exceed 70dB(A) LAeq, T, measured as 1 hour or a single cycle of piling.

Note:

- LAeq sound level refers to an A weighted equivalent continuous sound pressure level recorded on a BS5969 Type 1 precision sound level meter set to fast response.
- Should a pre-assessment of any sound generating activity identifies a potential issue to noise sensitive locations from impact / bang type noise sources such as from certain types of piling activities then it will be appropriate to set a maximum or peak sound level at the boundary to take short duration sound into account.
- Piling mechanisms being enclosed (acoustically). Vibration and noise dampening. Noise levels are to be as close as reasonably practicable to 84 and 96 db (indicative only depending on pile rig) at the

source of impact and residual noise will be (ALARP) between seventy & eighty decibels to adjacent residential properties and POS boundaries parks & public footpaths.

- The weight of the hammer, height of the drop and number of drops per pile installation.
- Preventative maintenance and inspection of the rig during use.
- Ground conditions & ground calibrations.
- The type of pile, depth, material, and width.

The piling sub-contractor will be consulted, and risk assessments will be developed in line with these items as a pre-start requirement.

The specialist contractor will record on their own piling sheets levels of noise and vibration at regular intervals, data shall include location, ground conditions, method, depth, and Vibration level (P.P.V). As a minimum, decibels at set distances from the source of impact will be taken and such records may also include monitoring vibration in and around adjacent buildings, however this will also be dependent on the distance from buildings, number of properties, the age of properties, materials and size of buildings that could potentially be effected.

6.1.6

In order to adopt an appropriate cost-effective piling procedure, a survey of the sensitivity of the neighbourhood to vibration prior to issuing tender documents shall be conducted, the tender process shall also include points as mentioned above.

6.1.7

After consideration of these constraints, it shall be possible to select the process least likely to give rise to unacceptable vibrations and noise levels.

6.1.8

6.2 Dust Management

6.2.1 To help minimise emissions of dust the following mitigation measures should be implemented as per the 'Redmore Air Quality Assessment (23 Jan 2025) including:

- Site and head office contact details for complaints displayed at the site boundary.
- Ongoing community engagement with affected neighbours on the boundary as works are undertaken in the vicinity.
- All dust complaints will be logged on the company EHS management portal (Work wallet) which will allow tracking and action management.
- Use of appropriately designed vehicles for materials handling.
- Plant will be switched off when not in use.
- Site speed limit is 10mph within all construction areas.
- All plant and equipment to be maintained in good working order. If possible, plant should be located well within the Site, away from the site perimeter and existing sensitive locations.
- Regular inspection of local highways and Site boundaries to check for dust deposits (evident by soiling and marking) on vegetation, cars, and other objects, taking remedial measures where necessary. Inspections will be carried out on a daily basis, during the working week, or more frequently depending on the nature of the activity being undertaken.
- Surfaced and un-surfaced site access roads should be watered as necessary using a water bowser and/or water spray and road surfaces to be kept in order.
- Use of wheel-washing facilities and/or vehicle cleaning techniques to minimise transport of mud and dust outside of the site boundary (i.e., to minimise track out).
- The condition of the roads on and off site will be kept under regular review and sweeping (including water spray) will be carried out where judged necessary
- Where possible, consideration should be given to undertaking on-site aggregate handling in enclosed areas and transfers should be completed in a way that minimises the requirements to deposit materials from height.

- When loading materials into vehicles or using transfer chutes and skips, drop heights should be kept to a minimum and enclosed wherever possible/appropriate.
- Skips should also be securely covered during transportation on the public highway.
- Dust fencing will be deployed to sensitive boundaries where dusty activities are undertaken.
- Site infrastructure will be kept clean.
- Materials and waste stockpiled will be removed from site regularly (having regard for the need for full loads and commercially sensible quantities).
- Observation of wind speed and direction prior to conducting dust-generating activities to determine the potential for dust nuisance to occur, avoiding potentially dust-generating activities during periods when wind direction may carry dust into sensitive areas and avoiding dust-generating operations during periods of high or gusty winds.
- Where possible, stockpiles of soils and materials should be located as far as possible from surrounding sensitive uses, considering of prevailing wind.
- Surface areas of stockpiles should be minimised where possible (subject to health and safety and visual constraints regarding slope gradients and visual intrusion) to reduce the area of surfaces exposed to wind pick-up.
- Stockpiles of materials should also be covered (e.g., using sheeting) or screened, as appropriate, during the day when wind speeds are moderate (>20kph) and when the Site is closed to reduce the potential for wind pick-up and dispersion of dust. Completed stockpiles for future re-use will be allowed to vegetate naturally.
- Dampening of exposed soils and stockpile materials to be carried out as and when appropriate. If longer term exposure is anticipated, then consideration should be given to grassing of these areas.
- Windbreak netting should be positioned around materials stockpiles and vehicle loading / unloading areas, as well as exposed excavation and material handling operations, where appropriate.
- Completed earthworks to be covered or vegetated as soon as is practicable.
- Use of dust-suppressed tools for all operations; and
- No unauthorised burning of any material anywhere on-site.
- Sand and other stored aggregates will be stored in a fenced/ screened area.

6.2.3 The Site Manager shall act as a point of contact for local residents who may be concerned about elevated dust concentrations.

6.3 Management of Discharges to Watercourses and Groundwater

6.3.1 All works undertaken on the site will be required to adhere to CIRIA guidance 'C532 – Control of Pollution from Construction Sites' to help ensure a well-managed operation which minimises environmental risks. Effects to the health of contractors, maintenance staff, future site users and users of adjacent sites from potentially contaminated soils and materials that could be present locally on the Site will be controlled under the Construction (Design & Management) Regulations 2015.

6.3.2 Where necessary, all site works should be undertaken in accordance with the EA's Pollution Prevention Guidelines, in particular:

- PPG1 'General Guide to the Prevention of Water Pollution'.
- PPG5 'Works or Maintenance in or Near Water'.
- PPG6 'Working at Construction and Demolition Sites'; and,
- PPG21 'Incident Response Planning'.

6.3.3 Prior to the commencement of the site preparation, earthworks and construction phase, Site run-off will be controlled to mitigate both flood risks and sediment loading. It is assumed that a phased temporary drainage network will be implemented to prevent sediment laden surface run-off from leaving the Site or entering surface water such as the on-site drains and outfalls (Surface Water Management Plan – Appendix B). A variety of good environmental site practices shall be implemented to avoid or minimise impacts at the source. Such measures include, but are not limited to, the following:

- Working areas shall be defined to ensure the disturbance of soils is minimised, where possible.
- Haul routes and accesses shall be defined to minimise the risk of accidents.
- Controlled cleaning of vehicle wheels prior to leaving site.

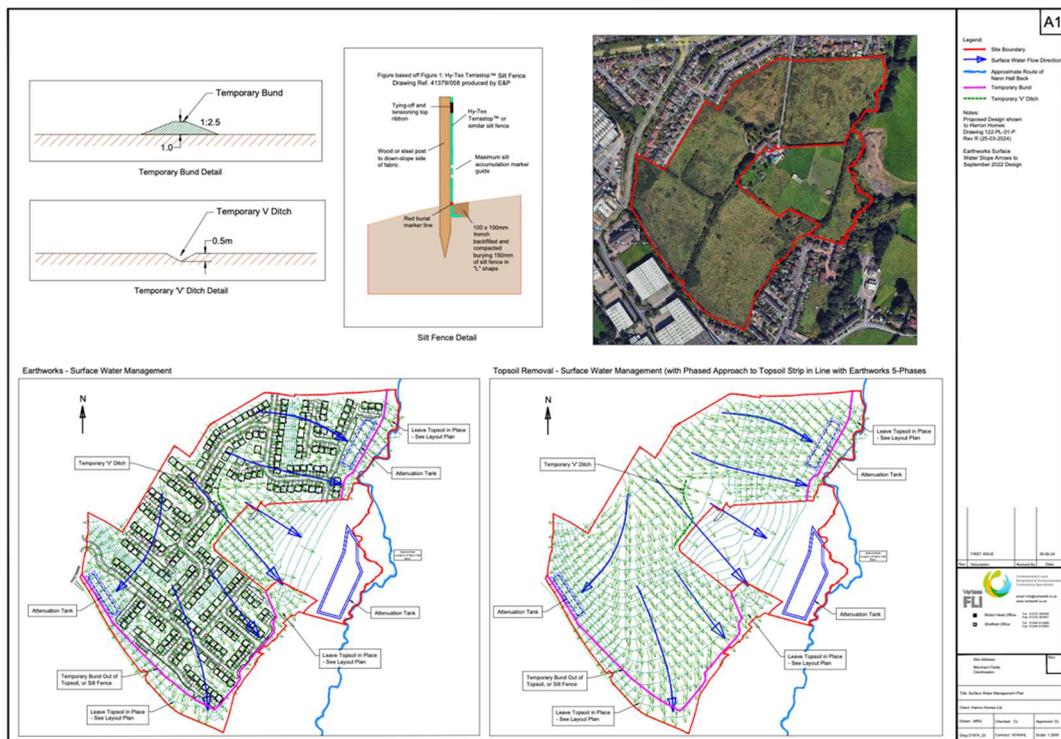
- Controlled and covered waste storage areas.
- Dust suppression (i.e., damping down).
- Installation of systems such as silt traps and swales designed to trap silty water including adequate maintenance and monitoring of these to ensure effectiveness, particularly after adverse weather conditions.

6.3.4 The position and extent of working areas should reflect the sensitivity of surrounding areas and work being carried out. The contractor shall appraise the suitability of such working areas in this respect as part of working method statements.

6.3.5 During demolition, any connected surface water drainage will be protected to ensure demolition generated silts do not enter the surface water network.

6.3.6 The contractor’s CHSP will provide detail on how any temporary facilities required to protect surface water outfalls will be provided and will demonstrate how construction related silts and potential contaminants will be prevented from entering the off-site drainage infrastructure.

Below is an extract from the SWMP to be deployed, including the use of silt fencing and a bund constructed in the locations shown in the drawing.



6.4 Works to Protect/Mitigate Impacts on Biodiversity

6.4.1 See Biodiversity CEMP and EEMP at Appendix C and Arboricultural Method Statement and Tree Protection Plan at Appendix D.

6.5 The Management of Waste

6.5.1 Generation of Inert and Non-Hazardous Waste during Site Preparation and Construction will be kept to a minimum. 'Cut-and-fill' operations are proposed to establish appropriate site levels, installation of drainage infrastructure and to ensure appropriate ground conditions prior to commencement of construction works.

- 6.5.2 Material deemed suitable for reuse on the Proposed Development will be retained and stockpiled where possible to incorporate such materials into the subsequent construction process.
- 6.5.3 Where materials cannot be reused on-site, the Principal Contractors will identify waste streams and action accordingly via a specialist contractor.
- 6.5.4 Implementation of good practice measures in terms of on-site storage will assist in reducing unnecessary wastage of material and ensure that high standards are maintained throughout the development process.
- 6.5.5 To ensure that the system of waste minimisation, reuse and recycling is effective, consideration will be given:
- Quantifying raw material wastage.
 - Quantifying the generation of each waste stream.
 - Any improvements in current working practices.
 - Methods by which the waste streams are being handled and stored; and
- The available waste disposal routes used, e.g., landfill, waste transfer station
- 6.5.6 All construction works on the are monitored against, a Code of Considerate Practice designed to encourage best practice and statutory requirements. The main areas of concern fall into three main categories: the environment, the workforce, and the general public. Waste management is a key area of focus and onsite considerations may include:
- How waste is avoided, reduced, reused, and/or recycled.
 - Whether there is a need for a site waste management plan and how this is monitored; and
 - What type of feedback is received (if any) as to how much waste on-site is diverted from landfill?
- 6.5.7 As part of the encouragement of on-site best practice, there will also be a need to ensure that suppliers of raw materials for the Proposed Development are committed to reducing surplus packaging associated with the supply of any raw materials. This includes the reduction of plastics (i.e., shrink wrap and bubble wrap), cardboard and wooden pallets. This may involve improved procurement and consultation with selected suppliers regarding commitments to waste minimisation, recycling, and the emphasis on continual improvement in environmental performance. Where practicable, the off-site manufacture of building components will be undertaken to help minimise the generation of on-site construction waste.

6.6 Traffic Management Measures

- 6.6.1 During the site preparation, earthworks and construction phases of the proposed development, an increase in HGV traffic will be experienced on the local road network with some disruption to road users and pedestrians from vehicles accessing and egressing the Site.

Traffic Management Measures

- 6.6.2 Appropriate traffic control measures will be implemented on HGV deliveries to control the timing and distribution of on-site deliveries. No specific mitigation measures are currently proposed with respect to pedestrian movements etc.
- 6.6.3 A Construction Traffic Management Plan accompanies this document, Drwg SK1737. Once approved all persons engaged in the site preparation, earthworks and construction phases entering the Site in an HGV will be provided with a copy of the Construction Traffic Management Plan to ensure that it is adhered to.

7 **Construction Methods**

7.1 Sustainability

- 7.1.1 The proposed development will adhere to sustainability principles which will involve:
- Encouraging the sustainable use of materials in construction.

Reducing emissions of greenhouse gases.

7.2 Reduction, Re-use, and Recycling of Construction Waste

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- 7.2.1 The disposal of waste, including any surplus spoil, will be managed to maximise the environmental and development benefits from the use of surplus material and to reduce any adverse effects of disposal.
- 7.2.2 A Site Waste Management Plan will be implemented to encourage the principles of the waste hierarchy, which are to reduce, reuse and recycle waste.
- 7.2.3 Among the measures which will be included are the following:
 - Ensuring that all contractors are contractually obliged to participate in the waste management plan.
 - Reduction of materials wastage through good storage and handling.
 - Use of Modern Methods of Construction for a significant proportion of the development, allowing significant reductions in waste and facilitating greater recycling.
 - Regular toolbox tasks throughout the construction phase to raise awareness of the importance of minimising, segregating, and recycling wastes during the construction process.
 - Ensuring adequate security measures are in place; andAgreeing appropriate waste disposal routes with (ERYC) for recyclable waste streams and residual waste streams for disposal to landfill by specialist contractor.
- 7.2.4 Full details of the proposals for recycling construction waste are provided in the Site Waste Management Plan.

7.3 Flood Risk

- 7.3.1 During the construction works additional temporary settlement ponds may be required to deal with construction-based solids in suspension affecting water quality in off-site watercourses. Contractors will implement surface water protection measures to be adopted during construction.
- 7.3.2 At no stage during the construction process will surface water run-off from the construction site be permitted to discharge in an uncontrolled manner into any watercourse or the sewer system.

8 Roles and Responsibilities

8.1.1 Staff, operatives, and subcontractors have the authority and responsibility to protect and environment at all times during execution of the works; responsibilities are highlighted during the site induction. All personnel will be trained in the necessary skills to fulfil their role. Key personnel for specific job roles are set out in the table below.

8.1.2 The construction phase of the project will be monitored by the site manager at site level and Health & safety will be inspected once a week by him, the contracts manager will also attend site and progress meeting, the contracts will inspect the site once a week. In addition, the regional business's Health and Safety Advisor will also visit the site twice a month.

Role	Key Environmental Responsibilities
Contracts Manager	<ul style="list-style-type: none">• Overall responsibility for undertaking the project and implementing the Environment Policy• Implementation of Construction Environmental Management Plan and Procedures• Investigation of any complaints and the identification and delivery of appropriate and reasonable remedial measures• Management and monitoring to ensure effective resolution

	<ul style="list-style-type: none"> • Notifying the Employer of any Major Environmental Incident • Reviewing Roles and Responsibilities • Maintain records of any communication from and to local residents
Site Manager	<ul style="list-style-type: none"> • Ensure works are carried out in accordance with CEMP. • Ensure staff are aware and follow the requirements of environmental management plans and procedures • Ensure weekly environment site inspections are undertaken • Ensure site documentation (Method Statements and Environmental Risk Assessments) are successfully implemented • Check all necessary notifications to client and local residents have been given • Develop and implement water monitoring as necessary • Implement mitigation measures identified in the CEMP and method statements • Brief site personnel and subcontractors on latest environmental and sustainability issues.
Group H&S Manager	<ul style="list-style-type: none"> • Ensure environmental issues are discussed and communicated effectively to the project team • Liaise with procurement personnel to integrate sustainability into the procurement process • Work with the Employer to develop, manage and maximise the delivery of sustainability initiatives • Providing environmental advice and guidance to the team • Input into the production and ongoing maintenance of the CEMP • Identify and implement ways to avoid, reduce, reuse, and recycle waste • Establish and oversee environment monitoring onsite • Report best practice across the project and to the Employer • Assist in incident investigations and reporting • Encourage near miss reporting and identify trends • Support the site team to ensure compliance with environmental legislation • Assist in preparation of environmental permits, licences and consents as required • Develop relevant toolbox talks for site.
Engineering Staff	<ul style="list-style-type: none"> • Ensure sub-contractor's method statements incorporates the appropriate environmental mitigation and risk assessment prior to the commencement of works • Ensure work is undertaken to reduce or avoid environmental impacts
Procurement Team	<ul style="list-style-type: none"> • Ensure sustainability and environmental requirements are outlined in subcontractor's scope of works and contracts.
Design Team	<ul style="list-style-type: none"> • Incorporate the use of sustainable materials, minimise material consumption and design out waste where feasible.
All Personnel	<ul style="list-style-type: none"> • Carry out the works in accordance with agreed methods and briefings • Report anything that deviates from agreed processes • Report all incidents, spills, and best practice to site managers • Attend environmental training and toolbox talks • Adherence to Considerate Constructor requirements.

Appendix A

