

<b>Project Title:</b>	Residential Development 18 Orchard Street
<b>Sterling Construction Contract No.:</b>	SCL
<b>Client Details:</b>	Orchard Street (Neath) Ltd part of Life Property Group Ltd
<b>Document Reference:</b>	CEMP/SCL/001/R01
<b>Location:</b>	18 Orchard Street, Neath. SA11 1DU
<b>Date of Commencement:</b>	TBC
<b>Programmed Completion:</b>	TBC

<b>Prepared By:</b>	David Legge		Date: 19/01/2021
	Contracts Manager		

<b>Reviewed By:</b>	Simon Thomas		Date:
	Director		

<b>Authorised By:</b>	Simon Thomas		Date:
	Director		

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**Executive summary.**

This initial Construction Environmental Management Plan has been prepared to demonstrate to the Planning Authority the mitigation measures that Sterling CL intend to implement to ensure the protection of the environment, the prevention of pollution from our construction activities, and managing the health, safety and welfare of its employees and those affected by the development.

These fundamental principles are addressed in the C.E.M.P and our holistic responses to managing these risks are integrated into various sections that overlap in risk and control measures.

The C.E.M.P will be subject to review throughout the lifetime of the Project and revised as additional information becomes available and the control measures identified. The plan will be audited as necessary (annually as a minimum). The frequency of the general review will be in accordance with Contract Requirements – Environment and as result of legislative changes, environmental incidents, client requirements or because of concerns raised by any other party.

The C.E.M.P will currently detail our proposed methods of construction, including details of the mitigation measures to minimise construction wastes, prevention of pollution, our structure and roles and responsibilities within the company and on site to manage the construction programme in relation to site establishment, security, drainage including protection of watercourses, and storage of fuels and other potentially harmful materials.

As this initial document has been prepared in advance of mobilisation to site, we have identified our proposals for managing the following environmental aspects but will include additional further detail as we continuously amend and update the C.E.M.P These will include details of our soil management strategy and biodiversity management as soon as practicable. Furthermore, we will also incorporate our protocols for: -

- Biodiversity Management.
- Details and extent of the phasing of the development including the location of landscaping and environmental resources and how these will be designed and integrated will be included in the C.E.M.P Masterplan.
- Pollution Prevention matters.
- Hydrological pollution protection and mitigation (Prevention of Pollution)
- Our proposed methods of managing the control of nuisances including noise, and keeping access roads clean, dust mitigation etc.

A key emphasis is placed on Hydrological pollution protection and mitigation (Prevention of Pollution) Section 3.2 which details a summary of measures for hydrological pollution protection and mitigation. These measures will be implemented from the commencement of the Works and maintained throughout the course of the development phase.


We have included names and responsibilities of key personnel responsible for the activities in the C.E.M.P to include the contracts manager, site safety health and environmental advisor, and our specialist ecological consultant, however, these individuals may change during the project and the C.E.M.P will be updated to remain current throughout the project.

<b>Contractor:</b>  Sterling Construction Ltd Llys Y Barcud Heol Parc Mawr Crosshands Business Park Llanelli Carmarthenshire SA14 6RX	<b>Client Details:</b> Orchard Street (Neath) Ltd part of Life Property Group Ltd  <b>Contract Name:</b> Residential Development at 18 Orchard Street, Neath. SA11 1DU  <b>Contract Scope:</b> Conversion/construction of Build 31 no. (28 – 1 bedroom & 3 – 2-bedroom flats).  <b>Contract Ref:</b> EMP/SCL/001/A01
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Reviewed and Accepted by: \_\_\_\_\_ Name

The responsibility of the Safety of the Contract Works rests fully and unreservedly with the Contractor named above. The acceptance of this Environmental Management Plan by 3<sup>rd</sup> Parties and involvement in Safety Studies or Audits does not in any way absolve the Contractor from that responsibility, nor is it intended to confirm or suggest that the Contractor fully meets the Statutory Requirements.

Issue	Date	By	Approval	Details
001	19/01/2021	David Legge	Simon Thomas	

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## **1 General Environmental Requirements**

### **Introduction**

This Construction Environmental Management Plan does not prejudice any statutory requirements and associated guidelines that may be in force at any time during the life of the contract.

### **Scope and Purpose**

The purpose of this CEMP is to provide a framework to manage the environmental issues associated with the construction project, and to ensure compliance.

The CEMP is applicable to the entire scope of works associated with the Project and includes planning, implementation and embraces work all undertaken by Sterling Construction and our contractors. All sub- contractors will be expected to comply with the requirements of this plan as a minimum requirement, in addition to any systems of their own.

Sterling Construction recognises and accepts customers Contract Requirement - Environment and the Operating Agreement reached with the Natural Resources Wales and the Local Authority. We will ensure that their requirements are made known to all relevant personnel.

Sterling Construction commit to the communication of its Environmental Policy to all employees, sub-contractors and other personnel working on behalf of the Company. This will be achieved via:

- The compulsory project induction for all employees and sub-contractors
- Environmental Toolbox Talks
- Company Notice Boards


### **1.1 Risk and Opportunities**

#### **Register of Significant Environmental Aspects**

Sterling Construction has compiled a register of significant Environmental Aspects and Impacts which describes those products used and services carried out that could impact upon the environment. This information is formulated in IMS and contains information on the criteria used to identify significant aspects and impacts, determine their significance, and assign mitigation options. The register is regularly reviewed and updated as part of the management review process.

Environmental Risks are identified from a variety of sources including information from the client and site surveys. Project risk logs are developed and then used as an aid for reference when producing site specific risk assessments contained in the Work Package Plans/Task briefings. The Contracts Manager has the responsibility for the maintenance of the contract specific risk log.

Risks will be managed in accordance with a hierarchy of control, namely:

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- Avoid at Source
- Reduce at Source
- Abate on Site
- Abate at Receptor
- Administrate (e.g. consents, procedures etc.)
- Repair or remedy (i.e. reinstatement)
- Compensation

The evaluation of risks and opportunities has been carried out and its register can be found in Appendix G.

### **Environmental Legislation**

Environmental legislation, regulations and specific contract requirements have been assessed for relevance to the project site and office operations. Relevant environmental regulatory requirements have been identified and summarised in the Sterling Construction Register of Legislation and Other Requirements.

Updating of environmental legislation will be in accordance with Sterling Construction Management Procedure Integrated Management System (IMS).

### **1.2 Requirements and Consents**

The purpose of this CEMP is to provide a framework to manage the environmental issues associated with the project. It also provides information of the requirements of any permits, consents, licenses, or obligations related to the contract.


The CEMP is applicable to the entire scope of works associated with the Project and includes planning, implementation and embraces work all undertaken by Sterling Construction and our contractors. All sub-contractors will be expected to comply with the requirements of this plan as a minimum requirement, in addition to any systems of their own.

This Environmental Management Plan has been written in conformance with Contract Requirements (Environment). It will be briefed to relevant personnel and actions for implementation assigned accordingly.

During the implementation phase the Sterling Construction Project Team will identify where planning applications, initial permissions and/or consents are required and will develop a Consents Register (Appendix C), this will include all necessary planning applications and specific environmental permissions, or consents needed to undertake the work.

Where Section 61 consent is required, the Contracts Manager will liaise, consult, and co-operate with the local authority in order to submit application and other related documentation in sufficient time to allow the consent to be issued prior to work commencing.

Noise and Nuisance Notification to registered with Neath Port Talbot County Borough Council.

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### 1.3 Objectives and Targets

Project specific objectives and targets will be set in line with Sterling Construction policies. These are illustrated in Appendix 'D'. these will align and feed into Group Environmental performance indicators.

### 1.4 Roles and Responsibilities

In accordance with Contract Requirements Environment, a copy of the Project Team Management Organisation Chart contained in appendix E of this document.

#### **Sterling Contracts Manager**

Carries overall responsibility for: -

- Environmental Management of the project.
- Seeking advice on environmental compliance from the S.H.E Manager.
- Communicating out the requirements of the Environment arrangements for the project.
- Devising performance targets and monitoring compliance with such targets.
- Ensuring adequate resources and training are provided for environmental protection.
- Ensuring where a change to an agreed Work Package Plans/Task briefing has to take place that the change is conducted in accordance with the agreed company procedure i.e. that change is risk assessed and appropriately documented.
- Development, implementation, and monitoring of the SWMP
- Maintenance of the project environmental risk register and the generic mitigation controls register.
- Monitoring compliance to environmental requirements on the project.
- Implementation of the project EMP requirements with assistance from the SQE Advisor

#### **Construction Manager – Project Engineers - Site Managers**

Are responsible for:

- Effective planning and organisation.
- Provision of adequate resources to meet all the environmental needs of the project.
- Ensuring that procedures relating to the environment are identified and complied with.
- Production, review, and approval of site-specific RAMS / briefings (risk assessments).
- Communication with local authorities, statutory bodies, and 3<sup>rd</sup> parties in relation planning approvals for our works.
- Instigation of ecological surveys where required.
- Ensuring notification of works (Mail drops) are issued no more than 28 days and no less than 14 days in advance of work being undertaken.
- Ensuring the requirements of the SWMP are implemented on site and for

recording and logging of waste produced at site.

- Ensuring the delivery of safety and environmental briefings which will form part of the project KPIs.
- Ensuring the delivery of regular toolbox talks to ensure environmental message stays focused which will form part of the project KPIs.
- Implementation of the project EMP requirements with assistance from the SQE Advisor.

### **S.H.E Advisor**

Is responsible for:

- Acting as principal focus and advisor to all managers and supervisors.
- Inspection, monitoring and auditing to ensure compliance with project environmental requirements.
- Ensuring that all staff and operatives are appropriately trained and briefed.
- Specification of spill control and clean up materials.
- Review of RAM's/briefings (Risk Assessments), where required.
- Co-operation and co-ordination with other projects to ensure the sharing and application of best practice across the industry.
- Ensuring all Supervisors are competent to understand briefings through training assessment prior to deployment to sensitive habitat areas.

### **Site Supervisors**

Either or both are responsible for:

- Ensuring formal inductions and briefings has been received, delivered, and understood by all personnel before commencement of works.
- Ensuring that on any change, the staff affected are appropriately re-briefed.
- Ensuring measures indicated in RAM's/briefing forms are carried out and adhered to, with any difficulties being reported back to Site Managers.

### **Plant and Machine Operators:**

Are responsible for:

- Carrying out pre-use checks on their equipment.
- Using it only in accordance with instructions.
- Taking account of the proximity of personnel, structures, and environmentally sensitive areas in accordance with training and briefings
- Bringing to the attention of the Site Supervisor any defect in their equipment so that it can be taken out of service and either repaired or replaced.
- Adherence to no idling policy.
- Ensure that all plant on site is safe and secure.
- Only refuel with the use of a drip tray and funnel.
- Ensure spill kits are near to the area of works and are fully stocked.



**All Staff (including sub-contractors)**

Are responsible for:

- Fully complying with laid down systems of work.
- Only carrying out tasks suitable to their training and understanding.
- Carrying the certification applicable to their competency levels.
- Notifying supervisors over concerns with environment related issues to assist sites achieve their environmental objectives as identified in training, inductions, briefings and toolbox talks.
- Undertaking activities in a manner which does not impact on the environment and implementing the mitigation controls to reduce that risk.

**1.5 Competence, Training and Awareness**

Environmental Management training requirements have been identified based on job descriptions within the Company. The following has been identified:

Job Description	Required Level of Environmental Training
Operatives (including contractors)	S.H.E (Induction) Project Site Induction Toolbox Talks Enviro-Alerts Briefings Site Specific Risk Assessment Briefings (Task Briefings)
Agents / Supervisors	All of the above SEATS Training programmed for 2014 Specific training where required
Site Management and Senior Management	All of the above Specific training where required
Designers	Sustainable Development - Design, Construction And Maintenance
S.H.E Advisors/Manager	IEMA Associate Certificate in Environmental Management

We will provide training and awareness of the specific contract risks and opportunities to directly employed and subcontracted employees, applicable to their roles and responsibilities. This will include managing environment risks and controls through the work package plan process, method statements and task briefing documents.

Where specialist competence requirements are identified as a result of the project risk and opportunities assessment outcome, these will be sourced through approved competent consultants.

Records of competency requirements and training will be maintained through the Sterling competency management system and made available upon request by the Client.

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## 1.6 Internal Communication

The S.H.E Manager will monitor that the appropriate communications concerning environmental issues take place. These communications will take the following forms:

Safety and Environmental briefings will be given to all staff on pertinent issues such as:

- Working in the Vicinity of Controlled Waters
- Contaminated Land
- Wildlife / Ecology (e.g. Badger Sets, Snakes, Great Crested Newts)
- Built Heritage
- Public Nuisance
- Waste Management

In liaison with Clients, regular environmental meetings will be held between Sterling and any relevant consultants. These meetings will have minutes taken and assign actions accordingly. The agenda of such meetings shall include (but will not be limited to): -

- Environmental incidents
- Details of good practice
- Results of audits and inspections (internal and external)
- Complaints
- Adequacy of Environmental Management Plan
- Environmental Risk Assessments / Procedures
- Sub-contractor performance
- New initiatives

All managers and Supervisors will be requested to attend and subsequently required to cascade to all Operatives, where required.

## 1.7 External Communication and Managing Neighbours


Sterling Construction commit to the communication of its Environmental Policy to all employees, sub-contractors and other personnel working on behalf of the Company. This will be achieved via: -

- The compulsory SQE induction for all employees and sub-contractors
- Environmental Toolbox Talks
- Company Notice Boards

Records of this briefing process will be maintained.

The Sterling Contracts Manager will provide a generic overview of our project specifying the nature and scale of the work planned and the duration.

The Sterling supervisor will brief staff on the nature of the works, the duration (including start and finish times), location and the extent of any disruption to affected parties.

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## Prior Notification

The Site Manager in liaison with the Client will ensure that the local authority and all other Statutory Authorities (e.g. Local Authorities, Natural Resources Wales, etc.) affected by the works are communicated with effectively in advance of the work. (We will assume that potential environmental impacts are confined strictly to those properties immediately adjacent to the buildings and access and egress points that may potentially cause nuisance. The Sterling Site Manager will monitor the adequacy of the approach).

The Contracts Manager will ensure the local authorities have been issued notification no more than 6 months and no less than 2 months, in advance to the work being undertaken.

Notification to residents of work will be issued no more than 42 days in advance and no less than 14 days in advance of the work being undertaken. It is the responsibility of the Site Manager to ensure that notification letters are delivered to residents who may be affected by the work undertaken. It is not acceptable that residents receive no warning at all.

All correspondence will be issued on Sterling (letter template) headed paper.

All consultations with third parties will be recorded on a spread sheet to enable trends to be monitored. The spread sheet will include proactive communications (i.e. conversations with local authorities and mailshots) and reactive communications in response to letters or calls from local authorities, residents and third parties. The spread sheet will be maintained by the Project Manager and will carry details of all correspondence, phone calls and meetings with dates and details for response.

## Complaints

All enquiries / complaints will be answered within 14 days. The aim is to close out all complaints within the same timeframe.  
Enquiries from MP's shall be answered in 7 working days.

The Sterling Project Manager will inform the Client of enquiries closed and those still outstanding monthly. Where circumstances mean, the above timescales cannot be achieved, the Clients Environment Manager will be notified.

The Sterling Site Manager (SM) will keep a record of all complaints and enquiries handled. The SM will submit a monthly report summarising the complaints to the Client, stating how enquiries / complaints have been dealt with. The Report will outline the nature of the complaint, action taken and status.

### 1.7.1 Communication

Sterling Construction recognises the clients Sustainability policy, together with the customers Contract Requirement - Environment and the Operating Agreement reached with the Environment Agencies. We will ensure that the Clients Policy is displayed on the project notice boards and its requirements are made known to all

relevant personnel.

The Company will agree communication methods and deliverables at the start of the project and monitor compliance during the Contract.

Method Statements will be approved by Sterling Construction Responsible Engineer with assistance from the SQE Advisor prior to the commencement of work.

Specific briefings for each task will be produced, each person will be required to sign to say that they have received and understood the briefing. The task briefing will contain all the necessary precautions that are to be taken to avoid nuisance, damage and pollution caused by the materials handling, use & storage, and the utilisation of plant and equipment.

### **1.7.2 Statutory Authorities and Non- Governmental Organisations**

Environmental legislation, regulations and specific contract requirements have been assessed for relevance to our projects site and office operations.

Relevant environmental regulatory requirements have been identified and summarised in the Sterling Construction Register of Legislation and Other Requirements and detail the aspects each are deemed applicable to. Updating of environmental legislation will be in accordance with Sterling Construction Management Procedure Integrated Management System.

Relevant legislative requirements are interpreted into Sterling Construction's procedures, which also detail allocated responsibilities for management and implementation of those requirements to ensure compliance.

### **1.7.3 Other Stake holders**

<b>Neath Port Talbot County Council</b>	Noise and Nuisance Notification
<b>Natural Resources Wales</b>	Noise and Nuisance Notification
<b>Dwr Cymru</b>	Wastewater

## **2.0 Site Work**

Sterling Construction has included all risks and opportunities identified from the design stage within the aspects impacts assessments and site risk assessments.

The site works will be managed to ensure that all benefits (financially and environmentally) of risk reduction/opportunities and options for inclusion are included within the scope of work.

To ensure adequate control of aspects identified in the Register of Aspects and Impacts, site specific risk assessments will be developed for each key area of works. These assessments will be briefed to the operational team prior to works commencing.

## 2.1 Records and Documents

Records and documents are to be managed in accordance with Sterling Document Control.

Sterling Construction will document any environmental risks (in the form of site-specific risk assessments) and any other pertinent information relating to the way environmental issues have been managed on the contract.

All key environmental information will be correlated and passed to the Client representative as part of the overall handover / hand back process.

Information likely to be included:

- CEMP and all attachments
- Register of incidents, complaints and action taken
- Permissions and consents
- Environmental Internal and External Audits

## 3.0 Specified Environmental Impact Areas – Design or Works

### 3.1 Air Quality

Best practice means will be utilised for elimination, reduction and/or mitigation of emissions to the air including plant and vehicle emissions, dust, smoke particulates, fumes, and smells. This shall include, but not be limited to: -

- Switching off engines when not in use
- Covering loads leaving the site
- Planning site layout so that machinery and dust causing activities are located away from sensitive receptors (Schools, hospitals etc.).
- Using water as a dust suppressant where applicable
- Keeping stockpiles covered where possible.
- Using ultra low sulphur diesel equivalent fuel on site where possible.

The Company will reduce the impact on receptor sites from omissions to air where elimination of the impact is not reasonably practicable, i.e. barriers around dusty operations

### 3.2 Hydrological pollution protection and mitigation (Prevention of Pollution)

Prior to commencing the construction phase, we will ensure the Implementation of Water Management Plan and this will be maintained throughout the course of the development phase, namely, in section 3.1 air quality where we refer to emissions from internal combustion engines and also primarily in section 3.3 the construction management section and also in section 3.12 noise and vibration.

The prevention of pollution to the immediate environment and environment beyond our site boundaries is integral to our management of construction activities arrangements and is detailed in other sections of this document as well.

In summary we will ensure that risk of pollution from fuels etc are mitigated by adopting the following site protocols: -

- All fuel, oil and chemicals will be stored in bunded containers that can be securely locked.
- Fuel, oil, and chemicals will always be stored a minimum of 50m away from watercourses.
- Spill kits will be stored at key locations, namely fuelling sites, at the main site office accommodation and at storage / laydown areas.
- All plant operators will be required to check their machines for leaks daily.
- All items of plant will be fuelled in a designated bunded area and carry spill kits.
- Generators and other fuel driven equipment will not be sited close to open drains/gulley's.
- All plant and equipment must have appropriate spill response material to include pads, cushions, booms, and disposal bag/container for waste.
- All fuel will be stored in a central location at the main site compound.
- Fuel will be stored in double bunded bowsers.
- Fuel will be transported in a double bunded fuel bowser.
- Re-fuelling will be done using a suitable funnel and drip tray.
- Operators driving the fuel bowser will be trained in the use of Spill kits and emergency procedures in the event of a spillage.

We also acknowledge that risks from pollution from construction materials especially liquid or semi solid concrete materials is a significant pollutant and our proposals for managing these risks are: -

- Trucks delivering concrete must wash out in designated areas close to the site exit. The location of the wash-out-pit will be 10m away from any watercourse and in a location, that will not be affected by heavy rain.
- Concrete wash out pits will be located at major concrete works.
- Access tracks will be designed to have adequate cross fall to avoid ponding of rainwater and surface run-off. Access tracks will incorporate cut-off ditches at regular spacing to direct water into roadside ditches as required.
- Excavations/material stockpiles will be bunded were required to prevent clean water from entering watercourses.
- Exposed bed material from areas which will be disturbed will be retained in stockpiles and used for reinstatement. Stockpiles to be protected from pollution or contamination.
- All materials, debris, tools, plant, and equipment are removed from the work area before re-watering.
- Pumping out of excavations will not be done directly into watercourse but over vegetation or settlement pond as required.
- Working areas will be never de-watered directly into adjacent river. Removed water to be treated before discharge.

- Exposed bed material from areas which will be disturbed will be retained in stockpiles and used for reinstatement. Stockpiles to be protected from pollution or contamination.
- All materials, debris, tools, plant, and equipment are removed from the work area before re-watering.
- Working areas will be checked thoroughly for spillages or potential pollution sources and removed/cleaned up before re-watering.
- Measures will be in place to prevent cement, grout, and unset concrete from entering the watercourse.

### **Site topography / haul roads.**

Sterling CL will undertake the deployment of SUDS prior to construction including the deployment of clean water diversion/cut-off drains, silt traps and settling ponds as required.

All haul roads on the site will be designed to have adequate cross fall to avoid ponding of rainwater and surface run-off and will incorporate cut-off ditches at regular spacing to direct water into roadside ditches as required.

We will ensure that pumping out of excavations will not be done directly into watercourse but over vegetation or settlement pond as required.

Sterling CL will ensure measures are in place to prevent cement, grout and unset concrete from entering the watercourse and we will ensure that hay / straw bales are strategically placed to act as silt fences to prevent any contaminated run off.

### **3.3 Construction Methodology**

Sterling Construction are based some twenty miles from the site and the majority of our workforce and sub-contractors' workforces reside near to our base in west Wales, thereby reducing the carbon footprint for site workers and our supply chain contractors. The property will be converted using a lot of the existing structure.

We will ensure that waste is minimised, and only materials scheduled for use will be delivered to reduce the waste from damage / contamination / weather related issues like damage to plasterboards stored where weather damage may render them non useable.

- Sterling will programme site management to ensure that site welfare and accommodation is mobilised prior to the start of construction works, that will include site clearance activities.
- Site Hours of Work:  
07:30 - 18:00 Monday to Friday  
07:30 – 18:00 Saturday (when required)

No construction will take place on Sundays and Bank Holidays

In order to maintain these working hours, contractor(s) will require a period of 30 minutes before and at the end of the working shift to start up and close down the works activities.

During the construction period it may be necessary in exceptional circumstances to work outside the prescribed working hours. Should this occur, the hours and duration of these works will be subject to consultation with Neath Port Talbot County Council.

The detailed Construction Programme will be made available for review in the site office.

The key dates presented in the programme are as follows:

Milestones	Dates
Project Start	Insert day / month / 2021
Site Access	Insert day / month / 2021
Set up site compound and welfare facilities	Insert day / month / 2021
De-commissioning of site offices welfare	Insert day / month / 2023
Project completion.	Insert day / month / 2023

In terms of the construction phase of the project, mitigation measures will be implemented as part of a construction traffic management plan.

The construction traffic management plan (CTMP) considers the effect of:

- Changes to the existing highway network through road closures and regulation orders required by the scheme.
- Vehicular activity generated by the construction process.
- Public Traffic accessing the site during the construction process
- Designated haul routes and restricted routes for construction traffic.

Sterling Construction's site management team will be based on-site during the construction period to ensure all contractors and material suppliers are safely implementing the CTMP.

All sub-contractors, operatives and suppliers will be made aware of the CTMP.

It also lays out the Traffic Management Principles and areas of storage and construction vehicles.

The primary access to the site compound and works area for all construction traffic will be from the existing highway network. Access to the site compound will be from Orchard Street where a high percentage of materials/plant will be delivered. The site compound plan also highlights main site offices, skip locations, storage areas and vehicle parking. In addition, the following traffic management principles should be observed:



Delivery vehicles will supply and remove materials from site using Orchard Street. In circumstances to reduce vehicular movements, deliveries will be made direct to the work zone to mitigate double handling and double vehicular movements.

- ii. Delivery vehicles whenever practical will avoid 'peak public traffic hours' to reduce traffic congestion and nuisance to the existing road and highway network.
- iii. To avoid construction traffic congestion and nuisance to the surrounding area all suppliers and contractors will be made aware of traffic routes.
- iv. Site entrances will be maintained and kept clean and clear. There will be a road sweeper in operation when required and in line with the works activities to ensure no mud is left on the live highway as a direct result of the works.
- v. All materials will be loaded within the site compound/boundary of the working zone to minimise congestion.
- vi. For environmental and road safety all materials containers leaving site will be appropriately covered to avoid soiling of the roads and highway. Engines of all vehicles, mobile and fixed plant on site are not left running unnecessarily.
- vii. Using low emission vehicles and plant fitted with catalysts, diesel particulate filters or similar devices.
- viii. Using ultra low sulphur fuels in plant and vehicles where possible.
- ix. Plant will be well maintained, with routine servicing of plant and vehicles to be completed in accordance with the manufacturer's recommendations and records maintained for the work undertaken.
- x. All project vehicles, including off-road vehicles, will hold current MOT certificates, where applicable and where required due to the age of the vehicle and that they will comply with exhaust emission regulations for their class.
- xi. Ensure all vehicles switch off engines when stationary - no idling vehicles.
- xii. Avoiding the use of diesel or petrol-powered generators and using mains electricity or battery powered equipment where available.
- xiii. All commercial on road vehicles used in construction must meet the European Emission Standards pursuant to the EC Directive 98/69/EC (commonly known as Euro standards) of Euro 3 during any works.

A construction traffic co-ordinator will be employed during the construction period to monitor heavy goods vehicle deliveries and collections of construction materials to and from the site to ensure compliance so far as practicable by contractors with the above requirements.

Only a limited number of car and HGV construction movements typically occur during the peak hours. The working hours of most operatives would not coincide with the network peak, construction processes would be programmed to avoid reliance on deliveries of concrete and bituminous materials during the more congested periods and delivery drivers would wish to avoid being on the network at congested times of the day when drivable hours used are disproportionate to the quantities of goods deliverable.

A list of Plant to be used on site is provided below:

- Earth Moving Equipment

- Tracked Loader
- Hydraulic Excavator
- Vibratory Compactor
- Road Making Equipment
- Roller
- Road Paver
- Hauling Equipment
- Tractors/trailers
- Trucks
- Tipper
- Crane
- Concreting Equipment:
  - Mixers
  - Dumpers


Only trained, certified, competent operatives will be allowed to operate the plant machinery. A record of all operatives' certificates should be kept in the site office.

All plant should come to site with a current and up to date record of service and an annual inspection sheet. An onsite weekly inspection will be carried out by the Site Agent of all operated plant and recorded. All plant maintenance is to take place in the site compound only. Refuelling of all plant is to take place in the compound and drip trays are to be employed during the fuelling process (ref PPG 7).

### **Management of Dust**

The application of standard dust control measures included in the British Research Establishment guidance (Building Research Establishment, 2003) are normal working practice on all well managed construction sites in the UK. Standard measures will be applied to the construction areas within the Site as agreed with the local authority air quality/pollution control officer or Environmental Health Officer.

- i. Staff will be trained in the control of dust and will ensure the site is monitored for levels of surface dust. Should dust build up this will be damped down with hosepipes.
- ii. Record all dust and air quality complaints, identifying cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
- iii. Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the logbook.
- iv. The access road into and out of the site will be monitored for excessive dust build up. Should surface dust build up the road will be swept.
- v. The name and contact details of person(s) accountable for air quality and dust issues will be displayed on the site boundary. This may be the environment manager/engineer or the site manager.
- vi. Avoid bonfires and burning of waste materials.

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## Storage of Fuels and Chemicals

- Fuel will be stored in double bunded diesel tanks and secured locking mechanism.
- Construction plant will be re-fuelling in designated areas away from watercourses and all re-fuelling operations will be undertaken with the use of spill kits and other environmental mitigation containment measures including drip trays and bunds.
- Fuel will be secured on site.
- All chemical products used in the construction process will be secured in a metal COSHH cupboard that is kept locked shut.
- Sterling Construction will have a site Emergency Plan prepared denoting roles and responsibilities together with contact telephone numbers and escalation protocols before any work commences on site.

### 3.4 Contaminated Land

The Company will identify based on client information potential areas of contamination and minimise disturbance of the area, minimising the introduction of pollution pathways.

In the event of the discovery of unexpected, contaminated land the Company will notify the client.

### 3.5 Ecology

An initial Bat scoping survey has been undertaken of the existing building to identify existing wildlife habitats. No evidence was found of Bats currently using the building or it being suitable.

The initial design is to be assessed against survey information to ensure that environmentally sensitive areas are not adversely affected by construction works. It should be reviewed to ascertain if the design locations / specifications can be repositioned or amended; any other engineering controls can be implemented to mitigate the circumstances.

These will be as follows (but not limited to):

- Re-location of works to avoid disturbance of designated protection areas (e.g. SSSI, Special Areas of Conservation etc)
- Restricting certain activities in sensitive areas e.g. exclusion zones for re-fuelling plant.
- Avoidance of damage to aquatic wildlife and fisheries through disturbance to controlled waters.

Where work can be undertaken on sites which do not directly interfere with existing ecological systems, care will be taken not to disturb wildlife, fauna, and flora in the near vicinity.

The following will be eliminated:

- Dust cover of vegetation
- Run off from oil / silt on contaminated materials into protected ecological habitats.
- Accidents and spillages releasing chemicals onto the protected species, their habitats or other areas, which may damage wildlife.
- Excavation or clearance of ecological habitats
- Excavation or clearance of protected species
- Damage or interference with any protected habitats
- Damage, destruction or obstruction of nesting areas, roosting areas, feeding areas and migration sites
- Accidental or deliberate killing, injuring, possessing, selling, damaging or obstructing access of a protected species, or disturbing a sheltered protected species
- High noise / vibration levels from construction work
- Changes in lighting levels
- Vegetation damage from trampling by people or vehicles

The following specific life forms, detailed below, have either been identified, or are suspected to be present, during the project construction works.

Under each heading are the control measures, specific to the project, to be adopted, to satisfactorily manage the works.

### **Minor Vegetation Clearance for Access/Egress Routes**

- Initial survey by project team
- Survey to be undertaken to identify wildlife habitat.
- Use of in-house labour or specialist staff to plan and undertake clearance as necessary including control of waste.

### **3.6 Method Statements**

To ensure that site specific environmental issues are integrated within Method Statement/briefing forms, the following techniques will be utilised:

- Desk Top Aspects and Impacts completed
- Initial site survey to identify additional aspects and impacts.
- Mitigation and control measures identified and agreed (including roles and responsibilities).
- Information briefed to employees / contractors by Supervisor.

### **3.7 Energy**

- The use of local labour
- The use of local suppliers
- Car/Van share where possible
- Cabins to run of mains power and supply to remove the need for Generators and deliveries

### **3.8 Landscape**

- Local soils and materials used

- Recycle site materials were applicable

### **3.9 Lighting**

- Lighting will be task specific and mostly indoor

### **3.10 Materials**

- The Company shall minimise the use of non-sustainable resources where possible to include:
- Minimising aggregates
- Reducing resource use and waste during construction, for example through appropriate prefabrication methods.
- Appropriate material storage to reduce waste
- Identify routes for reuse, recycling within the project
- Use less hazardous materials where possible

### **3.11 Herbicide and Pesticides**

- NA

### **3.12 Noise and Vibration**

Sterling Construction recognise that noise levels on site represents a major hazard to site workers but can also be a statutory nuisance to neighbours, can disturb wildlife and natural heritage and be the cause of more off-site complaints than any other topic.

Noise will be controlled in one of four ways; Controlling the noise at source, relocating the noise source, procedural measures and controlling the noise between source and receiver.

The use of plant and equipment on site usually gives rise to the greatest amount of noise on site. Hoods and doors on compressors will be closed at all times to reduce the noise emitted from them. All plant, machinery and equipment will be shut down when not in use and a strict maintenance regime will be enforced to reduce the risk of simple problems being overlooked. This will also ensure there is adequate lubrication to reduce squeaks and the tightening of loose nuts and bolts to minimise rattles. All plant (including, pumping equipment, power generation and lighting) will be super-silenced, where possible.

The general operation of the site will also be well controlled. Noise from plant and equipment is not the only source of complaints so other reasons for complaints such as shouting and bad language will not be tolerated.

The location of more permanent plant will be considered in terms of its risk to receptors in the area, for example away from key tourist areas, residential areas or areas identified as homing wildlife.

Should noise present a problem on site, the Company will investigate the possibility of erecting screening to reduce the risk to the receptor. This will interfere with the transmission of noise from the source to the receiver.

Attempts will be made to establish good relationship with those people who can be affected by the noise from site. Any residents in the local vicinity of any works will be warned in advance where we believe there could be an adverse effect of our operation. Sterling Construction Ltd. understand that if neighbours are kept informed, they will perceive the business as more considerate and are less likely to make a complaint.

### 3.13 Traffic Management

Activity	Description	Action By
Risk Assessment	Establish the requirements for Traffic Management and Pedestrian Management	Sterling
Noise Monitoring	Establish local sensitive receptors, where required monitor noise levels based on benchmark reading prior to work commencement.	Sterling
Design Scheme	In accordance with chapter 8 of the Department of Transport Traffic Safety Measures and Signs for Road Works and Temporary Situations	Sterling
Produce Drawing	In accordance with chapter 8 of the Department of Transport Traffic Safety Measures and Signs for Road Works and Temporary Situations	Sterling
Drawing Approval	By the Alliance prior to submittal to the relevant Council authorities	Sterling
Produce Programme	For monitoring purposes	Sterling
Consent Process	Apply for Crane Licence (if applicable) and Hoarding Permits – 3 weeks prior to start	Sterling
Method Statement	Must include traffic and pedestrian control measures	Sterling
Implement Scheme	By competent Sub-Contractor	Sterling
Safety check on Scheme performance	Undertaken by Sterling and must examine all elements of the Method Statement and Traffic Management drawing	Sterling
Remove Scheme	By competent Sub-Contractor	Sterling

### 3.14 Waste

#### Waste Management Plan and Waste Minimisation

Sterling Construction support the Waste Resource Action Programme (WRAP) Halving Waste to Landfill Construction Commitment.

We will comply with associated business unit waste standards and processes.

Sterling Construction will prioritise actions to reduce waste production and disposal to landfill and forecast the resulting improvements. This information will be updated and reported throughout the project in timescales agreed with Client. Actions will include, but not be limited to:

- Delivering any project-level targets
- Appropriate ordering, storage and use of materials to minimise production of waste
- Continuation of any actions to reduce waste production and

- disposal initiated in the design phase
- Follow the waste management hierarchy of reduce/reuse/recycling/recovery/disposal; disposal to landfill shall be the last option
- Assessment of the end-of-life options of materials used to minimise the need for later disposal

Sterling confirm full compliance with waste regulations and will produce a Site Waste Management Plan. The plan will contain the following information:

- The wastes types and quantities likely to be generated throughout the lifetime of the contract
- Opportunities for re-use and / or recycling
- The proposed method of storage, handling and transportation of each waste type
- The means of disposal and the relevant consents and licensing requirements
- The reporting and monitoring arrangements.

Waste Carrier's registration and contact details will be obtained prior to their use. Waste management licence or exemption number of waste management/disposal site(s) will also be obtained prior to their use.

### **Construction Waste**

The principal types of material to be disposed of will be aggregate, soil, woody plant material, some landfill materials (bound within soils) and vegetation.

In addition to excavation material quantities of other waste types will be generated during construction of the proposed development.

Quantities of general construction and demolition wastes are made up of waste such as wood, packaging, metals, plastics, bricks, blocks, canteen waste, hazardous waste (e.g. oils, paints and adhesives), site clearance and residual waste which are generated during the construction phase.

A review of these wastes including their respective European Waste Catalogue (EWC) Codes are outlined below:

EWC Code	Waste Description
17 01 07	Concrete, bricks, tiles and ceramics
17 02 01/02/03	Wood, glass, plastic
17 03 01/02	Bituminous mixtures, coal tar and tarred products
17 04 07	Metal
17 05 03	Soil (incl. excavated soils from contaminated sites), stones and dredging spoil
17 06 05	Insulation materials and asbestos containing construction materials
17 08 02	Gypsum-based construction materials
17 09 04	Other construction and demolition waste
16 02 13/14	WEEE
16 06 04/01	Batteries
13 07 01	Liquid Fuels
17 05 03	Soils and stones containing hazardous substances
17 05 04	Soils and stones other than those mentioned in 17 05 03

The Waste Hierarchy which should be implemented on site is as follows:

**Prevention/Reduction:**

- Re-use: Products and material can sometimes be used again, for the same or a different purpose.
- Recycling and composting- Resources can often be recovered from waste.
- Energy recovery- Value can also be recovered by generating energy from waste.
- Disposal- Only if none of the above options offer an appropriate solution should waste be disposed of.

**Waste Segregation**

Wherever possible, different types of waste should be segregated as they are produced to allow for correct disposal. Each type must be stored separately and securely to prevent pollution and cross-contamination and each waste container should be clearly labelled. Waste limits include:

- Waste must not be stored for longer than 3 months
- No more than 50 cubic metres of non-liquid waste can be stored at any one time
- The total quantity of liquid waste must not exceed 1,000 litres at any one time.



- Waste Electrical and Electronic Equipment (WEEE) includes battery powered items and must be recycled by an authorised recycling centre. Some WEEE can be considered hazardous and must be moved under hazardous waste such as fluorescent tubes and Lithium batteries.

### **Re-use**

Possibilities for re-use of clean non-hazardous excavation material as infill on the site or in landscaping works will be considered following appropriate testing to ensure material is suitable for its proposed end use.

In the event of excavation material which may not be re-used being found, the sub-contractor will endeavour to send material for recovery or recycling so far as it is reasonably practicable. The sub-contractor will ensure that any off-site interim storage facilities for excavated material have the appropriate waste licences or waste facility permits in place.

### **Material Management**

The amount of waste material on site will be reduced as far as reasonably practicable, through waste-minimisation, re-use, and recycling. This shall be implemented by the following measures:

- Storage- material shelf life is not exceeded, damage and contamination are prevented including loss, theft, and vandalism.
- Delivery- Damage during unloading, delivery to the correct location on site, acceptance of materials and components only in accordance with the order
- Handling- Materials and components are handled using correct methods, in minimal fashion.
- Protection- Damage is avoided by provision of temporary protection where applicable.

### **Waste Auditing**

The contractor will record the quantity in tonnes and types of waste and materials leaving the development site during the construction phase. The name, address and authorisation details of all facilities and locations to which and materials from the construction phase are delivered will be recorded along with the quantity of waste in tonnes delivered to each facility. Records will show material which is recovered and disposed of.

### **Waste Types**

#### **Excavated clay, soil and stones**

This will be loaded directly to vehicles for use within the project as appropriate. Where short term temporary storage is unavoidable topsoil will be stored separately from other soil types and where possible clay mounds will not be more than two metres in height as they may damage the soil structures and limit its future use.

### **Concrete**

Waste is to be sent back to the supplier for re-use. Where this is not possible, the concrete may be crushed and screened out and used within the project such as in the sub-base. The necessary permission for any crushing and screening activities required will be discussed within the environmental department of the local authority prior to any works being undertaken.

### **Metals**

One of the primary sources of metal waste is rebar and this will be reduced by ordering made to measure rebar from the manufacturer and detailed scheduling of all Reinforced Concrete (RC) structural elements. Skips may be provided and when full should be sent to a metals recycling facility.

### **Timber**

This will be stored separately as it is readily contaminated by other wastes so any pallets will be returned to the supplier for re-use. Off cuts and trimmings will be used in formwork where at all possible. A container for waste wood will be covered by a waste contractor who will forward it to a wood recycling facility for chipping.

Treatment of timber with chemicals and the overuse of nails will be minimised and avoided as this will make it difficult to reuse/recycle the timber afterwards. The utilisation of reclaimed timber products will also be investigated.

### **Packaging and Plastic**

Double handling will be avoided by segregating packaging wastes immediately after unwrapping. It is intended that where possible materials with recycled packaging will be purchased. Waste packaging will be segregated and stored in separate containers, preferably covered for collection and /or returned to the supplier.

### **Blocks, Bricks and Tiles**

The most likely wastes produced will be off-cuts, trimmings and waste arising from breakages. Every effort will be made to use broken bricks and off cuts.

## **3.15 Water**

In planning and carrying out any work in or near rivers, streams, ditches and other watercourses, precautions must be taken to ensure their complete protection against pollution, silting and erosion.

To protect the controlled waters Sterling will:

Ensure that no oils or wastes are stored on unprotected land e.g. made up ground. Tanks, containers, and other storage vessels will only be located within properly sealed bunds or drip trays.

Ensure that all staff fully understands the consequences of discharging pollutants onto unprotected land, and they will be properly trained in the groundwater protection procedures.

Watercourses are identified at the design stage of the project and where practicable to do so, site will be relocated to reduce the risk from the construction phase and end user activities. Strict site controls will be implemented to prevent any contamination of controlled waters including groundwater.

## **Water Consumption**

Effective construction management can deliver major savings in water use and the associated costs of energy, water supply and wastewater treatment. This can be achieved without compromising the performance and user acceptability of the project.


Typically, the use of water will take place in the following areas.

1. Dust suppression
  - Vehicular dust suppression
  - Stockpiles of soil
2. Cleaning
  - Road sweepers
  - Boot wash
  - Drive-on wheel wash
  - High pressure washing
3. Domestic and Welfare facilities
  - Toilets
  - food preparation
  - canteens
  - offices
  - Drinking water
4. Construction
  - Mortar mixing
  - block work
  - screeding
  - plastering
5. The project should where appropriate will utilise the following examples of best practice, or equivalent.

Enable monitoring of water use: e.g. install meters which are easy to read, e.g. pulsed meters for connecting to a Building Management System; or sub-metering (pulsed) of areas of major water consumption.

Ensure all areas of site water consumption are quantified.

- Consider splitting welfare and “site-based” water consumption.
- Record site water consumption on a regular basis for review at project progress meetings

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- Regular meter readings should be taken from all meters, sub- meters, and metered standpipes (weekly is recommended)

Reduce the risk of uncontrolled water use: e.g. sensor-actuated devices (such as infra-red actuated taps and occupancy sensors).

Minimise the risk of leakage:

- leak detection equipment (including pulsed meters for regular monitoring); ensure valves and overflows are visible for early detection of water loss and easy to access for maintenance.

Influence user behaviour:

- Creating a culture that changes attitude and behaviour to accepting ownership of water efficiency is fundamental to improving the use of water in an efficient manner.

Good housekeeping (e.g. reporting/repairing leaks, turning off taps which are not in use, and generally using water in an efficient manner) can assist the site reduce its overall water use. The provision of information on appropriate use of fittings and appliances; awareness raising of the costs and environmental importance of water efficiency via Tool Box Talks; guidance on processes for identifying and reporting water leakage / poorly-performing fittings; method for providing feedback to building occupants on water.

#### **4.0 Incident Response Plan**

##### **Emergency and Incident Response Contractor:**

A site-specific emergency plan has been developed for depot locations on the project, identifying those personnel who have received emergency control training as incident controllers. A copy of this plan is maintained at each depot.

For the purposes of transient / short term works, the emergency response requirements will be detailed within each of the site-specific work package plans and briefed to all site staff through the briefing process.

The emergency arrangements detailed within these documents will be in accordance the Sterling Construction Emergency Plan. The plan will be tested to ensure suitability and competence of personnel. Spill kits will be provided to all gangs in vans for use on-site and will include the emergency action flowchart. The storage of hazardous liquids will be in suitable leak proof containers and stored either in drip trays or bunds. Any spillages, no matter how minor, will be cleared immediately and the contaminated material disposed of as appropriate to its classification. Any remediated land will be validated as appropriate before work commences.

A full record will be maintained of any incidents on site and reported to the SM and the Director in accordance with Accident & Incident reporting procedure.

For each environmental event, the S.H.E Advisor will assess the criteria detailed

in appendix F to determine if the event requires to be reported to the Environment Agency. All reportable incidents to natural Resources Wales will be reported via the incident hotline on **0300 065 3000**. All environmental events which require reporting to the regulators or where the event requires response from our specialist contractor due to the nature of the occurrence, will be classed as a major event.

A full investigation will be carried out if necessary. A copy of the incident report will be issued to the relevant parties.

## **5.0 Monitoring**

### **Proactive**

To ensure compliance to ISO 14001:2015 requirements and legal requirements, site management will carry out regular auditing of the contract based on a formal audit schedule. All control measures identified within the Environmental Requirements Standard and accompanying documentation will be adhered to and monitored as part of the standard audit process. Should non-conformities be identified throughout these audits, corrective actions will be raised detailing the nature of remedial action and the timescale in which it must be achieved. This process is provided in more detail in the Sterling Constructions Integrated Management System (IMS).

Yard / Depot inspections will be completed informally daily and formally monthly. Records of these inspections will be maintained on site with any non-conformances, suitable action and a timescale raised with the appropriate personnel.

### **Re-Active Monitoring**

Sterling Construction will also carry out re-active monitoring in terms of:

- Incident investigation
- Trend Analysis
- Non-Compliance Analysis
- Environment Performance Indicators (monthly)
- Monthly Performance Report
- Corrective Action Requests Analysis

### **Non-Compliance, Corrective and Preventative Action**


Non –compliance, corrective and preventative action identification will be managed in accordance with IMS, copies of which are available upon request.

## **6.0 Best Practice**

Minimise road usage from haulage of construction materials, removal of waste and other traffic to and from site.

Avoid road closures unless completely necessary to reduce disruption to local traffic flow.

Avoid closures of public footpaths, bridleways, and other rights of way. In those

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instances where roads or footpaths are likely to be affected by construction works, temporary arrangements will be put in place to preserve access.

Avoid interruption to existing parking availability.

Residents will be made aware of any access arrangements due to road or footpath closures.

So far as is reasonably practicable, all footways and road will be kept free from mud and other loose materials arising from the works.



**Appendix 'C' – Permissions and Consents Register**

Activity	Yes	No	Consent Requirement	Approx Time (Required by granting authority)	Details	Person Responsible
<b>Ecology</b>						
Will the development have any impact on bats at the property?		?	Bat scoping survey undertaken. Bat boxes will be installed at the rear of the building to enhance the environment	0 Days		
<b>Archaeology &amp; Heritage</b>						
Will the works affect a listed building or conservation area?	?		Consent required from local authority	8 weeks		



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Activity	Yes	No	Consent Requirement	Approx Time (Required by granting authority)	Details	Person Responsible
<b>Water</b>						
Will any waste/surface water/ground water be discharged into controlled waters?		?				
Will any waste/surface water/ground water be discharged to the sewers?	?		A trade effluent consent or commercial agreement from the sewage undertaker	2 Months		
Will any works temporary or permanent be completed in or under the watercourse (bridge, pipeline etc)?		?				





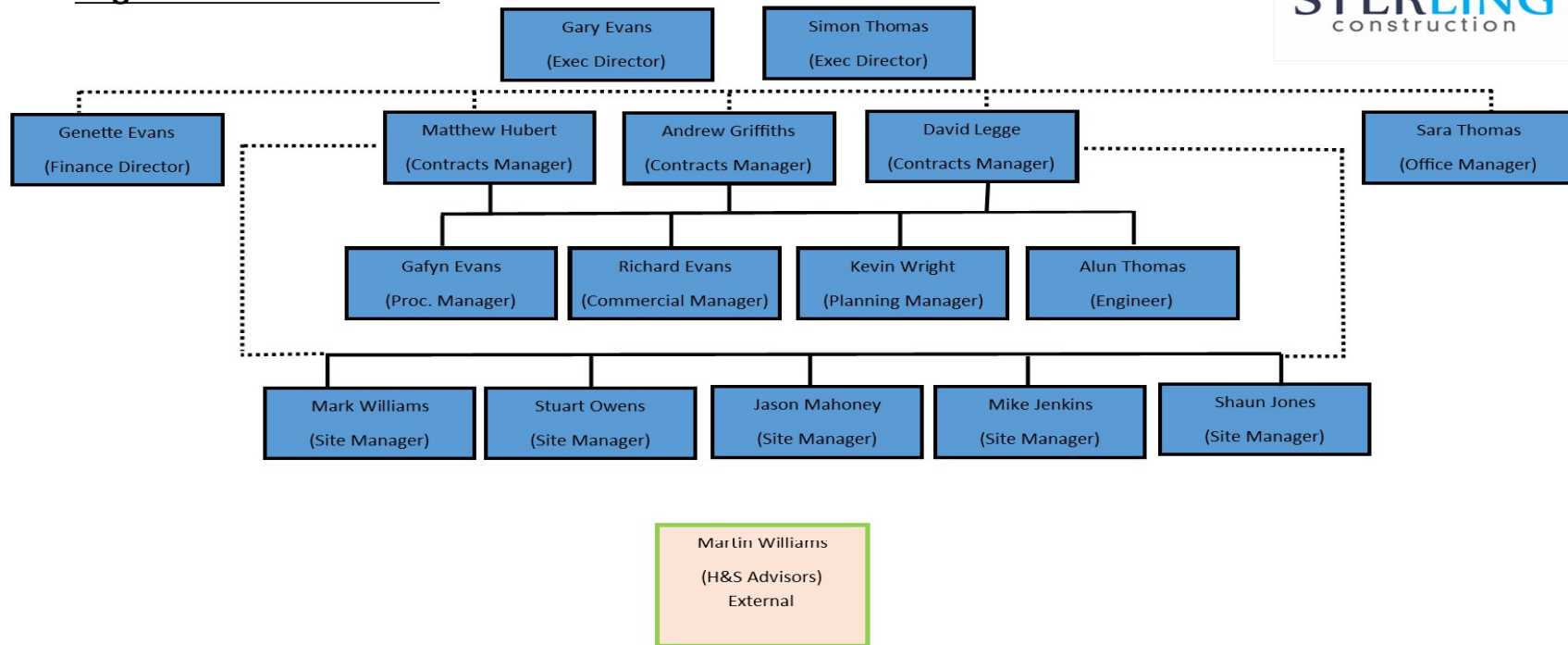
Activity	Yes	No	Consent Requirement	Approx Time (Required by granting authority)	Details	Person Responsible
<b>Waste</b>						
Will non-hazardous waste be produced and transferred from the site?	?		A Waste Transfer license is required from the persons transferring the waste and a copy of the Waste Management License to be obtained for the final destination of the waste	Immediate	Refer to SWMP	)
Will the site be producing hazardous waste?	?		Registration with the EA is required who will the issue a registration code to be quoted on all hazardous waste transfer notes (Note – the client may have registered the site)	Immediate	Refer to SWMP	
Is the site intending to crush or screen material for reuse?		N				
Will the site give rise to noise during out of hours working?		N			Identified on a site-specific basis	
Will the works require any road closures or diversions to be put in place?		N				

**Appendix 'D' – Objectives and Targets**

<b>Objective</b>	<b>Target</b>	<b>Responsibility</b>	<b>Target Date</b>	<b>Status</b>
Commitment to the continual improvement to exceed compliance and raise awareness with our staff in relation to environmental legislative requirements and conservation.	Appoint an environmental specialist to assist in the survey and management of environment aspects for the new areas on the project.			
	Provision of specific training in relation to ecological aspects and conservation to key managers and supervisors and others appropriate to their roles.			
Maintain certification with the CEMARS scheme by reducing carbon emissions, in absolute terms, year on year, with a long-term goal of a 20% reduction against baseline year emissions by 2020.	Achieve a 2% absolute reduction in GHG emissions on an annual basis.			
Continue to effectively manage our waste production, by re-uses or re-cycles at every opportunity	Reduce the amount of waste we send to landfill to a 95% diversion rate.			

**Appendix 'E' – Project Organisation Chart**

**Organisational Structure**



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**Appendix 'F' – Guidance on when the Environment Agency should be Informed**

The following list shows examples of the criteria, which would classify an incident as reportable to the Environment Agency.

- Spillage of Hazchem listed chemicals (unless otherwise stated in note 1)
- Spillage of low hazard products with polluting potential (See Note 3)
- Petrol spillage greater than 100 litres
- Hydrocarbons spillage greater than 20 litres (including hydraulic oils and diesel)
- Incidents into / near a watercourse or direct to groundwater
- Incidents at EA identified "sensitive" sites
- Major incidents in combined drainage areas (see note 2)

At times, there may be incidents that do not fall into any precise category, if there is any doubt the Environment Agency should always be contacted.

**NOTE 1** Incidents involving Hazchem listed substances should normally be notified to the Environment Agency, however incidents involving small quantities of mineral oils generally less than 20 litres will not usually have to be passed on. Additionally, incidents involving most gasses are unlikely to be of interest to the EA. Involvement of other agencies or services, particularly the Fire Service when large quantities of foam or water may be used. However, Ammonia is a notable exception.

**NOTE 2** In areas which are connected to a combined drainage system the Environment Agency will not usually need to be informed unless the incident is of major proportions, such as a large spillage of pesticide, the incident is near a watercourse, or the system drains into marine waters. Incidents in these areas should normally be passed on to the appropriate sewerage undertaker.

**NOTE 3**

**Low hazard products with polluting potential**

<b>Substance</b>	<b>Threshold</b>	<b>Example</b>
Detergents	25 litres	Washing powder, washing up liquid, Shampoo, Soap and car cleaning products.
Disinfectants	25 litres	Toilet Cleaner, Household bleach, Dettol
Food stuffs	250 litres	Most have the potential to cause problems, especially sauces, sugars, salt, syrups, milk, cream, yoghurt and vinegar.
Fertilisers	250 litres	All
Paint and dyes	25 litres	All
Inorganic powders	250 litres	Silt, Sand, Cement, Chalk, gypsum/Plaster
Organic liquids/slurries	25 litres	Blood, Offal, Sewage sludge's, anti-freeze, Cutting lube, Cooking oils, Glycerine, Alcohol's, Latex, Soluble polymers

The effects of these products vary; some such as detergents are directly toxic to aquatic life. Silt and sand can cause the smothering and choking of aquatic life while others such as food stuffs, drinks and blood can lead to deoxygenating of the watercourse. Others still may produce a combination of these effects. All have the potential to compromise the quality of water supplies. Every effort should be made to contain these products. The threshold quantities listed above are only a rough guide and in the event of any spillage advice is freely available from the EA.

**Appendix G - Project Aspect Impact Risk Logs**

										<b>Related Documentation/Legislation</b>
<b>Location:</b>										Refer to Register of Legislation
<b>Contract No:</b>										
<b>Operation:</b>										

Activity	Hazards	Effects of Hazards	Whom Affected	Initial Risk				Control Measures	Residual Risk				Responsible Person	Monitoring Responsibility
				Q/F	C	L	IR		Q/F	C	L	R/R		
Working near Birds	Construction Activities	Damage / Loss of habitat Damage to ecosystem. Breach of procedures / legislation	Birds Protected Plants / trees Other Flora and Fauna Ecosystem Landowner	5	5	5	50	Avoid vegetation removal during the bird breeding season (March – August)  Where works cannot be completed outside of the nesting season the area is to be first surveyed by an ornithologist.  Consult with any Ecological Impact Surveys completed for the area of works.  Tool Box Talk to be provided to all operatives on types of birds likely to be encountered.  Don't use heavy machinery in identified sensitive areas.  Minimise loss of hedgerows, trees and scrub where possible.  Rapid reinstatement of vegetation with native species of local provenance  Avoid damage or disturbance to existing habitats.  Careful removal of vegetation Correct storing of equipment in designated areas only. Careful removal and reinstatement of debris, rubble and materials.	5	3	2	16	Operatives  Site Supervisors / Managers  Sub-Contractors	Contracts Manager  SQE Advisor

								Seek specialist advice if in any doubt.						
Company Vehicles	Exhaust Emissions	Local air pollution, Global air pollution, Photochemical smog, Health problems, Aesthetic issues, Land and Water Pollution, Depletion of natural resources.	Public, Flora and Fauna, Operatives.	5	3	3	24	Well-maintained and serviced vehicles.	5	2	1	7	Vehicle Drivers  Site Managers / Supervisors	Plant and Transport Department  Contracts Manager  SQE Advisor
	Fuel Spillage			5	4	5	45	Engine must be switched off when not in use.  Emergency spillage control training for all operatives.  Drip trays to be provided.  Funnels to be used.	5	4	1	9		
	Fuel Usage			5	3	5	40	Prioritise journeys wherever possible.  Consider car sharing if possible.	5	2	3	21		
Concrete Operations	Dust	Nuisance, Water and Land Pollution, Health Issues (including dermatitis), Burns.  Breach of procedures / legislation	Flora and Fauna, Habitats, Public, Operatives, Watercourses.	3	3	4	24	Mechanical equipment well maintained, serviced and dampened before use, with mixing area barriered off.	3	3	2	12	Site Operatives	Contracts Manager  SQE Advisor
	Noise			3	3	4	24	Materials stored in close proximity to mixing area and covered.	3	3	2	12		
	Spillage			3	5	4	32	Keep mixer as far away as possible to environmentally sensitive areas and drains.  Liaise with affected parties on operating hours where necessary.						
	Breakage of bags			3	3	4	24	Operatives to receive spillage training.	3	3	2	12		
	Waste Packaging			3	2	4	20	Operatives to wear appropriate PPE and barrier cream.  Correct disposal of packaging.						
	Cleaning Operations			3	5	4	32	All pumps and mixers cleaned and residue disposed of via settlement tanks or bowsers.  Small amounts (i.e. mixed in bucket) to be disposed of over rough ground to allow for						

								natural settlement prior to reaching controlled waters.						
Construction work in contaminated areas	Chemicals and Substances	Health risk via absorption, inhalation, ingestion etc  Disturbance of pathways to targets e.g. controlled waters  Ecosystem disturbance  Discharge into controlled waters  Spreading of contamination e.g. dust, mud, leachates, vermin.  Breach of procedures / legislation	Flora and Fauna	4	5	5	45	Determine site history.	3	5	1	8	Site Manager / Supervisor	Contracts Manager  SQE Advisor
	De-watering		Ecosystems	4	5	5	45	Bore holes / Trial holes / soil surveys prior to commencement of work if necessary.	4	5	2	18		
	Storage of contaminated material		Site Operatives	4	5	5	45	Identification of areas for potential pollution e.g. watercourses.	4	2	2	12		
	Vandalism		General Public	4	5	5	45	Wear protective clothing where necessary.	2	3	2	10		
	Disposal			4	5	5	45	Store contaminated spoil/material on impermeable surface, cover and store away from direct pathways to controlled water and arrange for disposal where applicable by specialist contractor,  Prevent further contamination by restricting access to area.  Training and awareness of contaminated land identification.  Keep area well maintained in terms of general housekeeping and stock pile maintenance.	4	3	1	7		
Excavation	Generation of Spoil	Nuisance, depletion of landfill site capacity, production of contaminated / hazardous material, land pollution, health issues, water pollution.  Breach of procedures / legislation	Flora and Fauna / Habitats	5	4	5	45	Adopt alternative methods to open cut wherever possible i.e. directional drilling, moling etc.	3	3	2	12	Operatives  Site Managers / Supervisors	Contracts Manager  SQE Advisor
	Other statutory environmental nuisance e.g. dust, noise etc.		Operatives/ Public	5	4	4	36	Re-use excavated material wherever possible as backfill.	3	2	1	5		
	Disposal of Spoil		Water companies	5	4	5	45	Material not used as backfill to be sent to recycling facility.	3	1	1	4		
	De-watering		Landowners	4	3	5	35		4	3	2	14		
	Failure of machinery		Controlled waters	5	4	5	45	Ensure all plant is well maintained, serviced and inspected before use.	4	3	2	14		
	Insufficient		Waste	5	4	5	45	Ensure all operatives are fully trained and competent.	4	3	2	14		

	training / awareness		management site owner											
Delivery of Fuel (to yard and to working site) and Re-fuelling	Spillage	Land and Water Pollution Fire Explosion Breach of procedures / legislation	Plants, Animals, Habitats, Operatives, Public	5	5	5	50	Use of approved Petroleum companies & their trained staff.  All fuel deliveries to be supervised by authorised Sterling personnel.  Fuel deliveries to be made whilst sited on an impermeable surface.  Responsible person to monitor capacity of tanks during filling.  Responsible person to supervise delivery and safe removal of tanker from site.  All site operatives trained in Environmental Awareness, including emergency procedures and spillage control.  Strategically placed labelled spill kits.  For working sites, fuel must be delivered in suitable and appropriate containers.  Drip trays must be in position when refuelling plant and equipment on site.  Refuel in designated areas, away from direct access routes to watercourses e.g. drain, riverbanks, made up ground etc.	5	5	2	20	Site Operatives  Site Managers / Supervisors  Yard Man (where applicable)  Delivery driver	Contracts Manager  SQE Advisor
General Construction Operations producing statutory environmental nuisances	Dust Noise Vibration Odour Smoke	Nuisance, Water and Land Pollution, Health Issues.  Breach of procedures / legislation	Flora and Fauna  Habitats  Public  Operatives	5 5 3 3 3	3 5 3 3 3	4 4 4 4 4	32 40 24 24 24	Use serviced, well maintained plant and check before use.  Plant turned off, when not in use.  Dust proof netting erected where necessary.  Use water suppression procedures  Noise surveys where necessary	3 3 3 3 3	2 2 2 2 2	1 1 1 1 1	5 5 5 5 5	Site Operatives  Site Manager / Supervisors  Delivery Driver	Contracts Manager  SQE Advisor



	Light			3	3	4	24	<p>Sound proofing equipment used e.g. exhaust/mufflers on pneumatic tools.</p> <p>Super silenced generators.</p> <p>Training for all operatives and management.</p> <p>Communication with interested parties.</p> <p>Use environmentally friendly materials, substances and techniques wherever possible.</p> <p>Seek specialist advice where necessary.</p> <p>No fires on site.</p> <p>Lighting turned off when not in use</p>	3	2	1	5		
Security of Sites	Vandalism	Property Damage, Land and Water Pollution, Breach of procedures / legislation	Habitats, Operatives, Plants, Animals	5	4	5	45	<p>Liaise with Security Advisor on suitable protection required.</p> <p>Inform local emergency services.</p> <p>Use of security officers on selected sites.</p>	5	2	2	14	Site Manager/ Supervisors	Contracts Manager
	Spillages (e.g. Fuel, Chemicals etc)		Plants, Animals, Habitats, Operatives, Public	5	5	5	50	<p>Use of protected, lockable stores containers.</p> <p>Perimeter fences secured &amp; gates chained and padlocked closed.</p> <p>Alarms fitted to site offices where advised</p> <p>Fuel tanks located away from areas of environmental vulnerability.</p>	5	4	1	9	Yard Man	SQE Advisor
Storage of chemicals and substances	Spills (Leakages)	Land and Water Pollution, Nuisance, Health Problems, Fire, Explosion.	Plants, Animals, Habitats, Operatives, Public	5	5	5	50	<p>All chemicals to be stored in a lockable container, inside a drip tray/ spillage container.</p> <p>Diesel to be stored in purpose built/ designed tanks, housed within a leak proof bunded container and sited on protected ground away from possible areas likely to be polluted.</p>	5	3	2	16	Site Manager / Supervisors	Contracts Manager
	Odour	Breach of procedures / legislation		4	3	3	21	<p>Training on spillage prevention</p> <p>Readily stocked spill kit available.</p> <p>COSHH inventory to be developed and up to date data sheets available</p>	4	2	1	6	Yard Man (where applicable)	SQE Advisor

								Assessments to be made whether reactions between certain chemicals is possible						
								Recommended safety equipment and personal protective equipment (PPE)						
								Fire fighting equipment available						
Storage of raw materials/ Aggregates	Run off	Land Pollution Siltng of Watercourse, Blockage of drains Flooding Breach of procedures / legislation	Flora and Fauna Habitats Public Operatives Watercourses Crops.	5	4	5	45	Materials to be stacked / stored correctly to prevent damage and wastage.  Segregate bays with suitably sized segregation capabilities.  Materials to be covered to prevent damage from the elements and cross-contamination/ loss due to the wind where applicable.  Materials stored away from drains, watercourses etc  Locate materials out of wind (or provide wind breaks) and away from perimeter fence unless sheeted.  Keep stockpiles to minimum, avoid over ordering of materials.  Good housekeeping at all times.	5	2	1	7	Site Operatives  Site Manager / Supervisors  Yardman (where applicable)	Contracts Manager  SQE Advisor
Use of sub-contractors	Non-Compliance to Sterling's Procedures and Legislation	Land, Water, Air Pollution Breach of procedures / legislation	Flora and Fauna Habitat Public Operatives	5	5	5	50	Only employ reputable and approved sub-contractors.  All sub-contractors to attend Sterling's SQE induction before commencement of contract.  Environmental training provided for all sub-contractors  Supervised by Sterling staff where applicable. Frequent audits and inspections by Sterlings personnel.  Ensure plant and equipment is fit for purpose and regularly checked.	5	5	5	30	Site Manager  Sub-Contractor Manager	Contracts Manager  SQE Advisor  Sub-Contractor Manager
	Insufficient training and awareness			5	5	5	50		4	3	2	14		

								Sub-Contractor must only use competent personnel.						
Storage and Management of waste	Inappropriate Storage	Health hazards, Fire, Leachates, Escape of Waste, Land and Water Contamination, Incorrect Disposal, Breach of procedures / legislation.	Operatives, Public, Habitats, Flora and Fauna	5	4	4	40	Store in suitable, labelled waste containers located away from potential areas of egress to site.	5	2	1	7	Site Operatives  Site Manager / Supervisors  Yardman (where applicable)	Contracts Manager  SQE Advisor
	Misidentification of Waste			5	4	5	45	Store away from environmentally sensitive areas e.g. drains.	5	1	1	6		
	Mixing of waste streams			5	4	5	45	Segregate hazardous waste in leak proof, lockable containers that are clearly labelled. Where possible, identify waste streams for segregation and recycling.	4	4	1	8		
	Vandalism			5	4	5	45	Training for all operatives on waste identification and disposal	5	2	2	14		
	Spillage			5	5	5	50	Storage containers placed on protected ground.	4	3	2	14		
	Odour			3	3	4	24	Double bag hazardous waste, label bags and log contents with responsible person.	2	2	1	4		
	Vermin			3	3	5	30	Hazardous waste to be removed within 3 month period.	2	2	1	4		
	Insufficient training and awareness			5	4	5	45	Dispose of through registered carrier maintain waste transfer notes for 2 years and consignment notes for 3 years. Arrange for frequent collections of waste by licensed contractor. Obtain copies of all waste licences (carriers and disposal contractor). In the event of vermin infestation, contact specialist services. Fully stocked spill kits available at all times. No domestic waste to enter waste streams Identify all waste in accordance with European Waste Catalogue codes	4	3	2	14		

To evaluate risk: (1-5 rating): - Quantity/Frequency (Q/F) + Consequence (C) x Likelihood (L) = Low (2-20) Medium (21-39) High (40-50)



### BRIEFING SHEET

<b>Topics Briefed:</b>	<b>Construction and Environmental Management Plan Issue 0</b>		
<b>Location:</b>		<b>Project:</b>	xxxxx

**Briefed by:**

<b>Name</b>	<b>Position</b>	<b>Signature</b>

**Briefed to:** (by signing below I confirm that I have received and understood the Topics Briefed)

<b>Name</b>	<b>Signature</b>	<b>Date &amp; Time</b>

**Feedback**

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