

CONSTRUCTION HEALTH ENVIRONMENTAL MANAGEMENT PLAN

(CHEMP)

Project Name:	Covered Structure Rolls-Royce Motor Cars (Technology and Logistics Centre)
Project Number:	G1089
Project Manager:	Steve Enticotte/Peter Goodman



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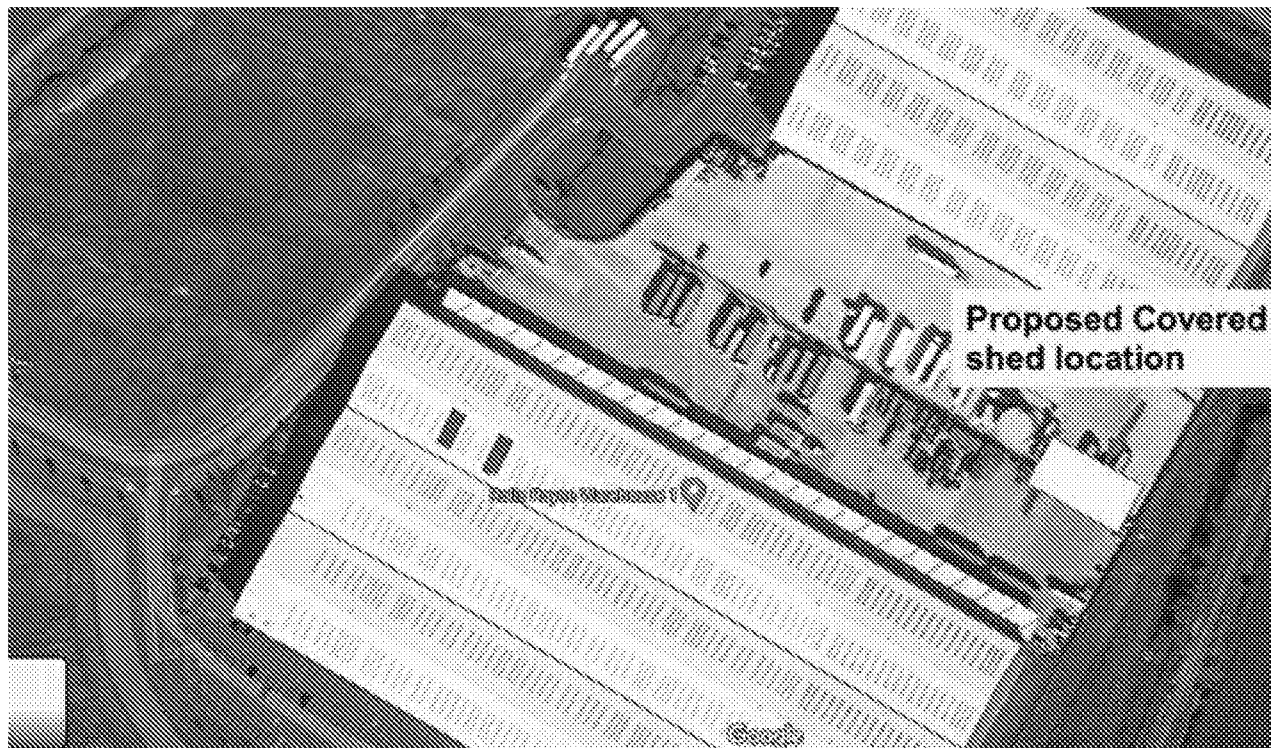
Introduction

Works:

The proposals involve the development of 1 No 'barn' type construction single portal shed. This includes very minor foundation and drainage works. Small size frame and single skin cladding to create a covered material storage area.

Location:

Rolls Royce, Unit 2. Bognor Regis PO229FJ



This document specifically targets and mitigates the issues presented from the construction of the development and the associated works. For ease of reference these are separated into specific elements and covered individually.

Client	BMW	David De-La-Haye (Director)	[REDACTED]	[REDACTED]
Project Manager/Employer's Agent	Construction Site Manager - Glencar	Habib Sharif	[REDACTED]	[REDACTED]
Quantity Surveyor				
Solicitors				
Principal Contractor	Glencar Construction Ltd	Peter Goodman Ben Buchanan	[REDACTED]	[REDACTED]
Principal Designer	NA			
Architect	BCR Infinity			[REDACTED]
Structural Engineer	Burrows Graham		[REDACTED]	[REDACTED]

Proposed Project Programme

29th October 2021

To

16th January 2022

Site Working Hours

Monday to Friday,

7-00am till 18.00pm Monday to Friday

Construction Hours (Noisy Activities)

8-00am till 18-00pm, Monday to Friday

Saturday, Noisy Activities

8.00 till 13.00 (As Required)

Sunday & Bank Holiday Works not Permitted

HGV Routing Plan

Movement of traffic to and from site will be restricted and controlled at sensitive times, and in any event, deliveries will be programmed so as not to conflict with peak periods of the day.

Following a review of the traffic conditions at site, and the limited volume of deliveries it is not expected that any problem will arise. All deliveries are planned for normal working hours.

Deliveries to site will be planned and co-ordinated with each individual sub-contractor to avoid congestion.

Deliveries should be made after 9-00am and prior to 4pm to avoid the morning and evening traffic, however it should be appreciated that due to logistics (hold ups in other traffic or at other drop off locations) this will not always be possible, but in the main, will be the case.

There has been no sign of school children walking near the site or along the HGV routes and it would therefore appear that school opening/closing times should not inform the strategy.

We will utilise a booking in system, so site is ready to receive deliveries and bring them immediately within the site boundary upon arrival.

Vehicles will not be stacked along the road, restricting access for road users, they will be brought straight into site.

The supply chain will be briefed on the delivery routes to site, any restrictions on timing of such, and the protocol to be followed upon arrival at site. This will be provided at the point of order. Given the size of delivery vehicles and their starting location it is anticipated that the route to be briefed to contractors will be accessing RR utilizing main access roads of the A27, A259 and A29.

Should any abnormal loads be required (initial indications are that this should not be the case), the necessary liaison will be undertaken with the relevant parties and agreements obtained.

Site Access Points

The site will be accessed from Newlands Road. The main point of the site access is the same as the R-RMC HGV access to yards 1 and 2. With the yards and roads predesigned for regular HGV access, no difficulties are envisaged.

Delivery vehicles will be controlled to ensure that unloading only takes place within designated times and within the site boundary. Vehicles will enter site immediately and gates will be manned with a permanent gateman to ensure no deliveries are kept on the highway. All subcontractors will be required to produce a procurement schedule for their materials which will be monitored at their weekly/fortnightly meetings and must book delivery slots with our operational team. Efficient and accurate scheduling of deliveries will minimize the storage capacity required, double handling and congestion around the site and surrounding roads and highway infrastructure.

Site storage of materials and plant will be very carefully controlled by restricted allocation of zones to particular trades. Detailed plans of the site will be drawn up regularly to reflect the changing conditions of site.

Site Compound

The Site compound will be located within the far end of the existing unit 2 service yard. As the earlier attached image.

The intention is to have all carparking and compound on the existing yards with where the majority of the deliveries/vehicle movements occur.

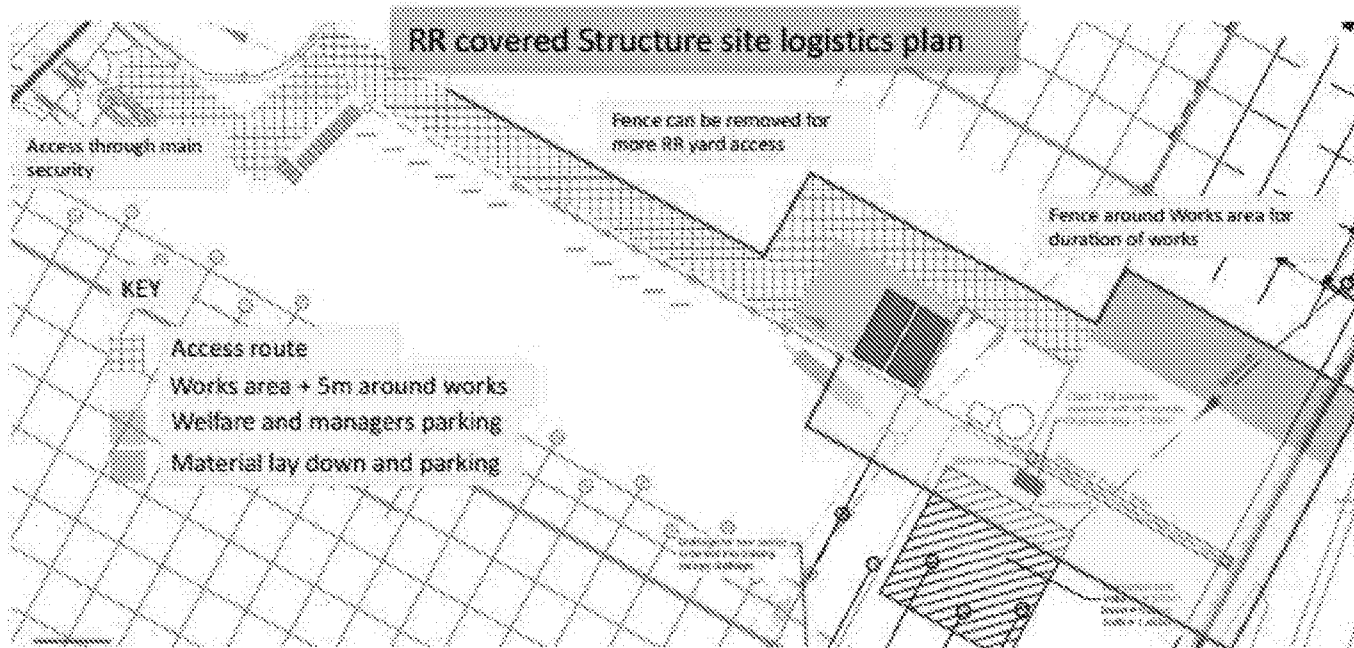
This will serve two purposes, it will provide a clean, tidy, safe environment for operatives working on the site, and will also remove the risk of fines migration (mud on road) and dust being created by construction traffic.

Visitor and Operative Parking

Visitors and Operative Parking shall be in unit 1 carpark, all visitors will be required to sign in at the entrance and park in the designated spaces.

Erection and Maintenance of Security Hoarding

The operatives will utilise a safe system of work to ensure the general public and R-RMC operatives are segregated from the works site. All boundaries of the project will be closed off by a Heras Fence, or where existing fencing exists, this shall be utilised (as per the logistics plan below). All fencing will be visually inspected daily and maintained accordingly. Gates will be kept closed when not in use and locked securely at the close of each working day.



Storage of Plant, Materials and Fuel

Site storage of materials and plant will be very carefully controlled by restricted allocation of zones to particular trades. These will generally be stored adjacent the works, for the relevant Unit, on the hardstanding / working platform. This will obviously fluctuate depending on activities on site and the stage of the project and hence will change almost on a weekly basis as the unit's progress.

Wherever possible materials will be delivered shrink-wrapped and palletised to be unloaded and distributed safely by telehandler. Diesel fuel for site plant will be stored in sealed tanks inside bunded walls with a minimum of 110% of the capacity of the tank. The use of diesel driven plant and equipment will be kept to an absolute minimum. Wherever possible equipment and plant will be electrically powered to reduce noise and prevent emissions.

Dust Control

The control of dust arising from the construction works will be controlled in a number of ways depending on the work source causing/providing the dust and the timing/stage at which the construction works are at. A Separate Dust Management Plan will be held on site.

Dust Assessment

Environmental risk assessments are completed for every contract and particular attention is focused on statutory nuisance. Dust monitoring will be undertaken regularly in line with the control methods detailed in the risk assessment. Records of this will be maintained on site and available on request. If excessive dust levels are reached, works will be temporarily suspended whilst the Environmental Coordinator is consulted, and further appropriate dust measures are implemented to enable works to recommence. This will be recorded.

Additional dust monitoring will be carried out by Glencar Construction Environmental Coordinator on a regular basis. Control methods (such as dust suppression) as necessary, will be identified and considered.

Mitigation Measures

Measures that may be taken include, but are not limited to:

Haulage Routes, Vehicles and Construction Plant

Potential dust Source	Control Measure	Responsibility for implementation
Haul roads and traffic routes	Scheduled deliveries to avoid standing traffic on routes to site.	Project Manager
Vehicle waiting areas and hard standing	Vehicles will be directed into site and unloaded. If waiting is required engines will be switched off	Gateman/Traffic controller
Site traffic	Speed restrictions will be in place including signage and managed by site personnel to avoid back up	Gateman/Traffic controller
Public roads	Gateman/Traffic controller to be aware of scheduled deliveries and coordinate traffic and operations affecting access	
Road cleaning	Road sweeper to be employed on a regular basis for cleaning access roads to site. These operations will be increased when critical activities occur	Gateman/Traffic controller
High level walkways and surfaces (Scaffolding and others)	Operatives will be briefed at induction to the requirements of dust control and suppression	Project Manager

Static and Mobile Plant Emissions

Potential dust Source	Control Measure	Responsibility for implementation
Visible exhaust smoke	All standing/waiting traffic to have engines switched off. All plant brought to site to be well maintained and suppliers advised of this at order stage	Project Manager
Maintenance	All plant and equipment to be maintained off site	Project Manager
Servicing	All plant and equipment to be serviced off site	Project Manager
Operating time	All operations will be conducted in line with the planning conditions and all sub contractors being made aware of restrictions at order stage	Site Team
Exhaust time	Operating plant to be monitored to ensure it is not left running unnecessarily	Project Manager
Exhaust direction and heights	Exhausts from plant will be in line with manufacturers specifications and directed from ground to atmosphere	Project Manager
Location of plant and equipment	Plant and equipment operating close to other businesses and sensitive receptors will be kept to critical activities only.	Project Manager

Surfacing and Coatings (line markings)

Potential dust Source	Control Measure	Responsibility for implementation
Bitumen over heating	Control of tar boilers. Ensure equipment is in good working order	Project Manager
Fume Production	Ensure protection is in place at all times while heating or maintaining heat	Project Manager
Small accidental fires	Have emergency procedures in place and brief at induction and toolbox talks. Monitor RAMS	Project Manager
Housekeeping	Monitored through regular inspections	Project Manager
Direct application of open Flames (torching)	Avoid overheating and keep to a minimum	Project Manager

Material Handling

Potential dust Source	Control Measure	Responsibility for implementation
Material Handling operations	Handling and movement of materials to be kept to a minimum through planning	Project Manager
Transport of powdery materials	Loose materials to be moved in containers or remain wrapped until use	Project Manager
Transport of aggregates	Use enclosed or sheeted vehicles	Project Manager
Handling areas	Keep areas clean and free from dust	Project Manager
Vehicle loading	Use methods that minimise the creation of dust. Damp down with water	Project Manager
Filling Skips	Use enclosed skips where possible	Project Manager
Reducing the spread of dust across the site	Use damping down methods	Project Manager

Storage of Powder Materials

Potential dust Source	Control Measure	Responsibility for implementation
Bulk Cement	To be delivered and stored in tankers/silos	Project Manager
Silos	To be kept in good condition. Regular checks for damage	Project Manager
Accidental spillage when filling or operating silos	Emergency preparedness plan in place identifying R+R	Project Manager
Dry materials > 3mm	Storage to be kept to minimum. Use materials at point of delivery	Project Manager
Dry materials < 3mm	Storage to be kept to minimum. Use materials at point of delivery	Project Manager
Storage	Store materials away from site boundaries and sensitive receptors	Project Manager

Stockpiles

Potential dust Source	Control Measure	Responsibility for implementation
Stockpiles	Stockpiles will be kept away from sensitive receptors and kept to a minimum; damping down systems will be implemented. Materials with potential to cause dust should be removed from site as soon as possible, unless being re-used on site. Bunds should be employed to prevent run-off from entering sensitive receptors should this pose a risk.	Project Manager
Building stockpiles	Ensure any stockpiling is done so that the angle of repose is not such that slippage will occur	Project Manager
Short term stockpiles	Ensure that these are kept to a minimum and avoided by use of material at source	Project Manager
Long term stockpiles	Ensure that these are kept to a minimum and avoided by use of material at source	Project Manager

Site Establishment and Restoration on Completion

Potential dust Source	Control Measure	Responsibility for implementation
Earthworks	Will be completed in sections to minimise over exposure and as programme phasing.	Project Manager
Completed earthworks	To be reinstated as soon as possible in line with programme	Project Manager
Storage mounds	Any mounding will be sealed	Project Manager
Landscaping	To be in line with programme and design. No screening to be on site	Project Manager
Transitory soil mounds	Not required	Project Manager
Crushing and screening	Crushing and screening operations to be kept away from sensitive receptors.	Project Manager

Construction and Fabrication Process

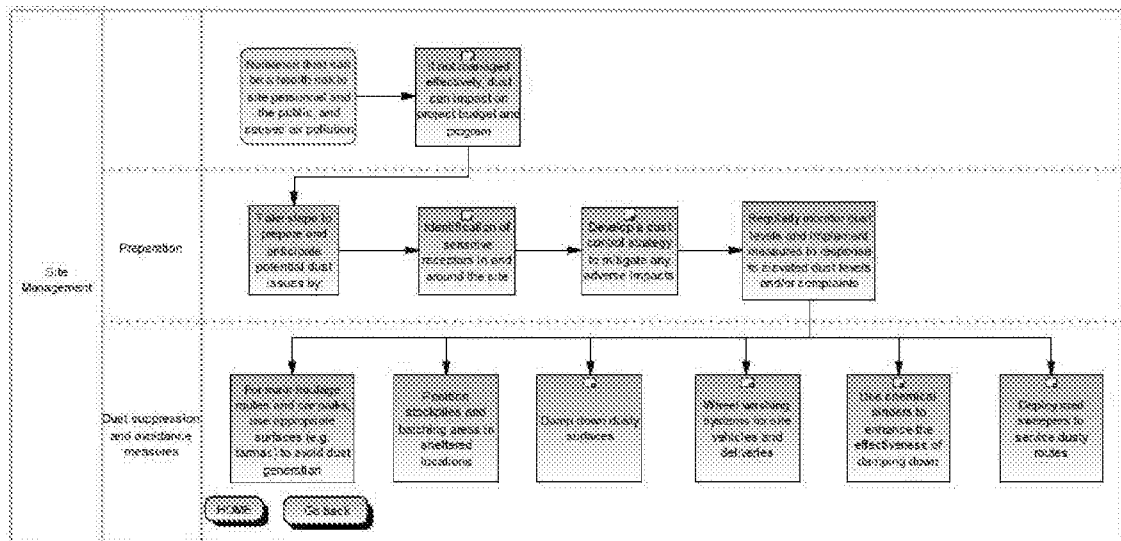
Potential dust Source	Control Measure	Responsibility for implementation
Cutting, grinding, drilling, sawing etc	Consider prefabrication to avoid cutting. Quality checks to prevent errors and re-work. Use dust suppression sprays. Use exhaust ventilation. Robust design to prevent cutting	Project Manager
Dust control exhaust ventilation	Always use diamond cutting blades and water sprays	Project Manager
Cutting roads, pavements, blocks	Always use diamond cutting blades and water sprays	Project Manager
Angle grinders	Always use diamond cutting blades and water sprays	Project Manager
Mixing of granular materials	Use premixed materials. Mix under controlled conditions. Store dry powder materials in a safe dry environment	Project Manager

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Potential dust Source	Control Measure	Responsibility for implementation
Painting and decorating	Use of suppression or extraction equipment should be used. Vacuum cleaning where possible	Project Manager
Plastering rendering, finishing and fitting out	Housekeeping to control dust related activities	Project Manager
Electrical plumbing systems requiring chasing into walls	Use of suppression or extraction equipment should be used. Vacuum cleaning where possible	Project Manager
Fire proofing and insulation	Use of suppression or extraction equipment should be used. Vacuum cleaning where possible	Project Manager
Cleaning	Avoid dry sweeping use vacuum control where possible	Project Manager

Further Dust Guidance

- 'The Control of Dust From Construction and Demolition Activities' document (BRE, 2003)



Noise Control

Construction methodologies should be made as efficient as possible to minimise noise impacts to local residential areas and places of work. Additionally, 'temporary' screening, where it is likely to provide effective mitigation, may be deployed.

Locations closest to the scheme are likely to be subject to the highest construction noise levels, although this will depend on topography and existing infrastructure providing natural screening. The level of impact would also vary considerably, dependent on the current ambient noise levels for given areas. Where properties are already subject to significant road traffic noise, the impact from construction noise will be less than those areas which are set further back from existing road transport corridors.

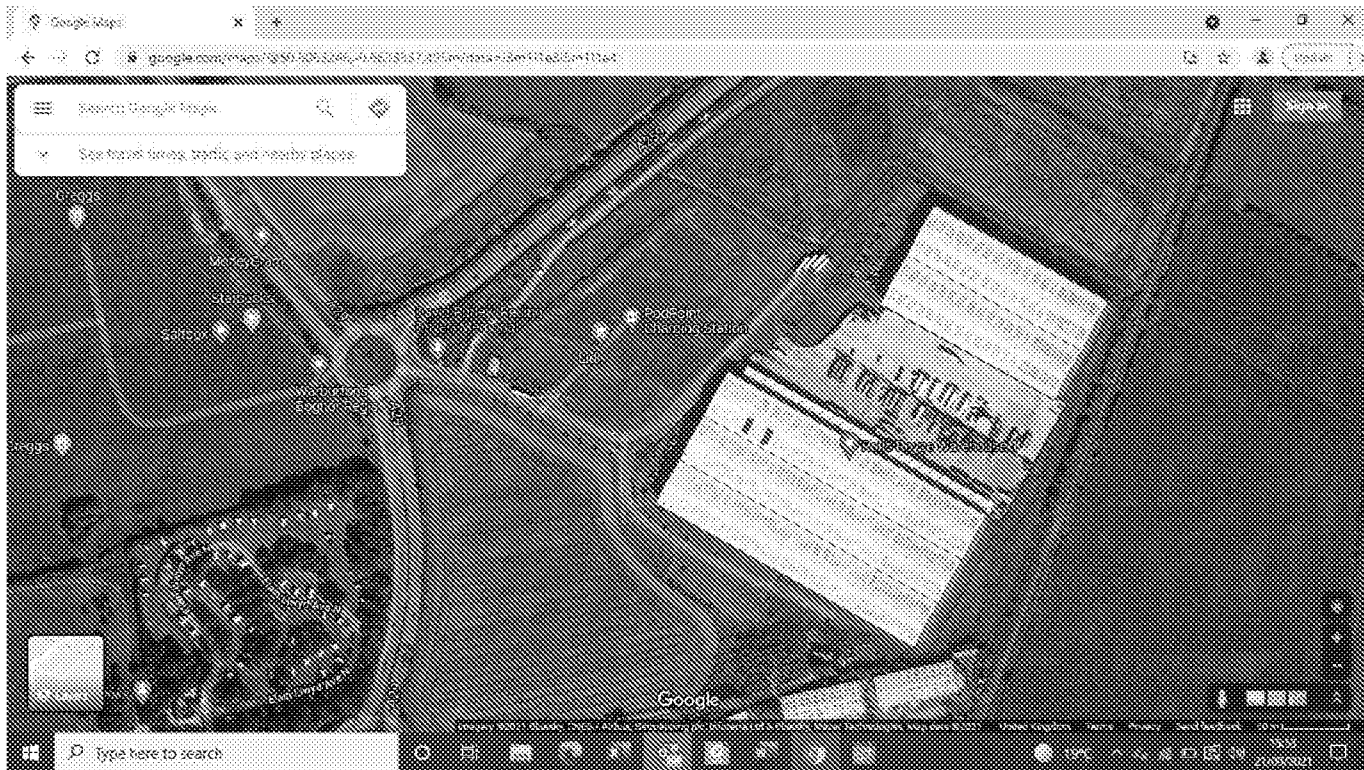
All measures to minimise construction noise would be taken according to best practicable means, as described in the mitigation measures section.

A more detailed Noise Assessment will be carried out by construction site manager upon commencement and at regular intervals throughout the construction process.

Surrounding Area

The area surrounding the site comprises of the following.

- **North** – undeveloped land
- **East** – undeveloped land
- **South** – Business park and 3 farmhouses
- **West** – Undeveloped land/and Lidl



Construction methodologies will be made as efficient as possible to minimise noise impacts to surrounding areas.

Locations closest to the scheme are likely to be subject to the highest construction noise levels, although this will depend on topography and existing infrastructure providing natural screening. The level of impact will vary, dependent on the current ambient noise levels for given areas. Given the existing background levels of noise from road traffic and Construction activity, coupled with that elevation being shielded by both a bund and planted areas, it is not envisaged that the works will impact the neighbouring properties to a significant extent.

All measures to minimise construction noise will be taken according to best practicable means, as described in the mitigation measures section.

A more detailed Noise Assessment will be carried out by the Environmental Coordinator upon commencement and at regular intervals throughout the construction process.

The noise impact of the construction phases can be minimised by use of the noise control measures, as suggested in Section 8 of BS 5228-1:2009. General principles for the control of noise during the construction works are presented below.

- Appropriate choice of plant and equipment
- Regular plant maintenance to keep plant in good working condition and reduce noise from machinery
- Careful phasing of the proposed operations; and
- Provision of temporary barriers where sensitive receptors exist

The site staff will be utilising methods of mitigation outlined, alongside regular monitoring and utilising feedback from residents.

This regular noise monitoring will be carried out by the Environmental Coordinator. This may be substituted by sub-contractors' noise readings as stated in their method of work.

Operating methods of noise reduction

Ensure that all staff and operatives are briefed on the requirement to minimize nuisance from site activities, this will be mentioned within the site inductions, a program of toolbox talks and all method statements. Any significant changes in numbers of workforce on site will force a review of the monitoring program.

No equipment shall operate other than at the manufacturers' rated working levels; site staff shall not 'rev' equipment unnecessarily.

No plant and equipment shall be left running if not required for immediate use. Where this is not practicable, equipment shall be set to idle in the quietest manner to minimize noise emissions and CO2 emissions.

Resilient materials will be used where possible to reduce impact noise where materials are being moved or dropped e.g., lining chutes and dumpers.

Noise Reduction of Mobile Plant

The movement of plant onto and around the site will have regard to the normal operating hours of the site and the location of any noise sensitive receptors. Audible reversing alarms will be of a type, which whilst ensuring that they give proper warning, have a minimum noise impact external to the site.

Internal haul routes will be well maintained and avoid steep gradients.

Earth moving plant will be fitted with efficient sound reduction equipment and manufacturers' enclosure panels will be kept closed.

Location of the site compound is located to minimise the noise impacts of delivery vehicles on unmade ground.

Noise Reduction of Stationary Plant and Tools

Noise reduction measures for tools are as follows:

- Use of hydraulic or electric tools where possible
- Use of alternative quieter equipment for concrete breaking/cutting
- Fitting suitably designed sound reduction equipment to reduce noise without impairing efficiency
- Use of damped tool piece or saw blade
- Enclose in a suitably designed portable or fixed acoustic enclosure with suitable ventilation (with due regard to the health and safety of operatives).

These measures will be considered where appropriate by the Site Manager.

Control of Noise Propagation on Site

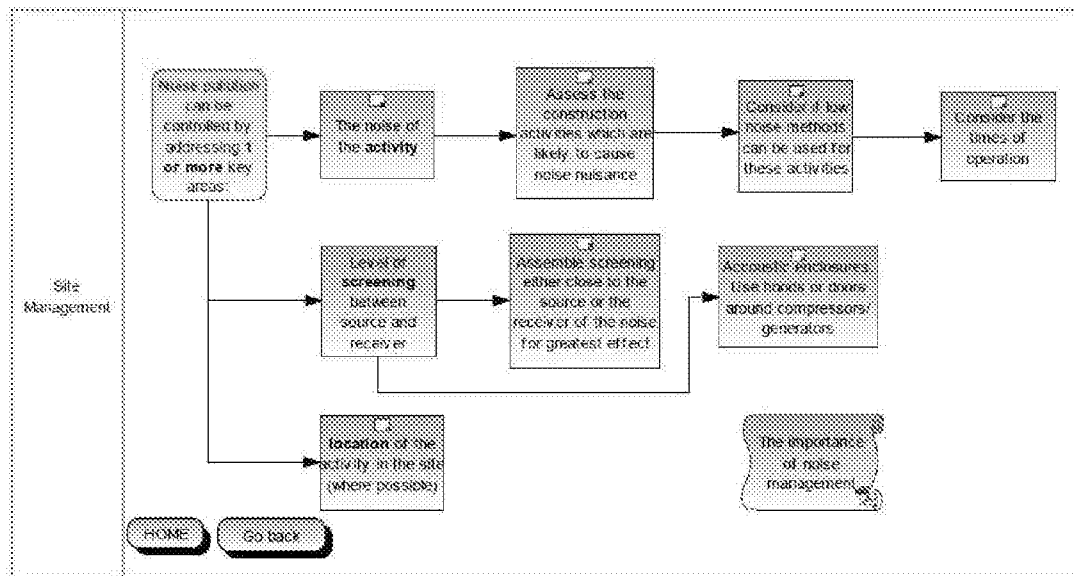
Temporary acoustic barriers, such as hoardings will be used, where possible and appropriate. The degree of protection will be limited to 5-10dB(A) and care must be taken to avoid reflecting noise and increasing the problem elsewhere.

Barriers should be:

- A fairly uniform panel, free from holes with no gaps or openings at joints (uneven ground may leave gaps to be filled)
- Stable and robust enough to stand up to site conditions
- Of a height and width more than enough to completely cut off sight of the source from the receiver, and
- Preferably at right angles to the line of sight of the receiver.

Further Noise Guidance

- BS 5228 -1:2009 'Code of practice for noise and vibration control on construction and open sites – Part: Noise'



Waste Management (Recycling/Disposal)

An important part of the site management process involves site cleansing, rubbish removal and recycling. We will produce a detailed Site Waste Management Plan which will include details of how we intend to reduce, re-use, recycle and manage site waste. This will be produced and implemented to comply with environmental legislation.

The adopted plan will involve the following provisions:

Buying and Storing Materials

- Order the quantity of materials you need as accurately as possible
- Arrange for 'just in time' deliveries to reduce storage and material losses
- Consider the source of materials.
- Consider the packaging used for materials delivered to the site -can this be reduced or recycled
- Ensure that deliveries are rejected if damaged or incomplete
- Make sure storage areas are safe, secure, and weatherproof (where required)
- Store liquids away from drains and in bunded areas to prevent pollution.

Site Activities

- Ensure options for the use of reclaimed and recycled construction materials, that meet the materials specification, are considered.
- Recycle suitable spoil, demolition materials, pruning's, and surplus construction material arising from the works on site to avoid the need to transport materials.
- Keep the site tidy to reduce material losses and waste.

Training and awareness

- Promote good practice awareness as part of health and safety induction /training for workers onsite.

Waste Segregation

- Segregate different types of waste as they are generated using different skips where possible (given the space available).

The responsibility of updating the SWMP belongs to the Glencar Project manager. An untidy site is NOT TOLERATED by Glencar Construction Ltd.

Light Control

Lighting must be able to provide safe working conditions for staff, and therefore the following measures will be put in place when situating & using site lighting.

- All lighting will be situated in such a manner as to provide as much lighting as is necessary for the work & no more, thereby reducing the risk of light pollution & the use of unnecessary numbers of generators.
- The lights will face downwards/sideways so that they do not shine into any nearby premises. Where this is not possible, hoods or louvres may be employed.
- Appropriate selection of innovative site lighting methods e.g., LED to improve the energy efficiency of the site and minimise the spread of the light beyond where required
- Lighting will be turned off at the end of each shift, unless otherwise required for security arrangements.

Site Clearance

- Clearance of the site vegetation is to take place outside of the bird nesting season.
- There are no demolition works to be undertaken.
- Any suspected Asbestos / or Asbestos containing materials which are discovered on site will be treated as Asbestos until proven otherwise. Areas will be segregated, with an exclusion zone established around the affected area until such time that a specialist team can be deployed to remove the material as per the Control of Asbestos Regulations 2006.

Communication

Group communications to GCL

Alerts are issued via a HSEQ **Bulletin** to communicate urgent environmental information. These are issued to all staff via email, and hard copies displayed in all site cabins.

The Environmental Coordinator will contact any external body such as (Natural England, Environment Agency, Local Authority) when an imperative issue arises, thus keeping continual communication channels open.

Communication with Operatives

It will be mandatory, for all sub-contractors and operatives working on the site to undergo a formal **induction** prior to entering the site where all relevant health, safety & environmental information for the site will be briefed. **Toolbox talks** will also be delivered, and records maintained.

Communication with the Local Community

Local residents and businesses that could be disturbed by the works will receive a hand delivered **newsletter** detailing the job, including details of proposed start and completion dates and a summary of the work schedule along with contact details for a representative of Glencar. Letters are delivered at least 14 days prior to the start of the works and at regular intervals throughout the works. Example below:

A **complaints log** exists on each site that records any feedback from local residents along with any measures taken to resolve. Glencar staff are encouraged to respond proactively to any complaints in a timely and fair manner. All environmental complaints are shared to the Environmental Coordinator to assist with an appropriate response.

During and prior to construction, contact with the public may be necessary. This will be done through site notices, leaflets/ sufficient notice. Complaints will be taken seriously and resolved by the Technical and Construction Team for matters relating to the site development. The construction site manager will be responsible for any additional liaison with the local authority and will be responsible for managing site complaints.

A **noticeboard** exists affixed to the hoardings on all our sites. This contains:

- Contact details of the Site Manager
- Contact details for the Head Office
- Most recent newsletter
- Notification of any work opportunities
- Most recent environmental dashboard that contains information regarding waste and carbon data

