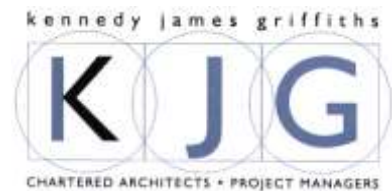


1428:PA:CEMP **Rev 2**

Construction Environmental Management Plan

Proposed Residential Development
Cae Nant Terrace,
Skewen



Kennedy James Griffiths
Architects and Construction Project Managers
10 Victoria Park Court
516 Cowbridge Road East
Cardiff
CF5 1DB

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1.0 Introduction

1.1 Purpose

This document has been prepared in support of a Planning Application, for the Demolition of the existing Snooker Hall building and the construction of 10 no apartments including associated external amenities and parking at 1 Cae Nant Terrace, Skewen.

The Plan has been prepared by the KJG in conjunction with the developer of the project for the works and has been produced in response to a request in advice received from Neath Port Talbot Planning Department during Pre Application discussions. It is intended to demonstrate how the impact of the construction works on adjacent neighbours will be controlled and minimised.

The document is a Draft at this stage and will need to be finalised once a contractor is selected to carry out the demolition and construction works.

The intention is that this CEMP will be approved by the Council as part of any planning consent with a Condition requiring the contents of the document to be adhered to by any selected contractors during construction works.

Whilst the Plan concentrates on the specific works identified in the Planning Application it could also be applied to any periodic external maintenance works which will be required at some stage and will not be subject to a formal planning application.

The principal aims of the CEMP are the protection and conservation of the natural and historic environment and protection of users of the environment within and adjacent to the proposed development during construction.

This document should be read in conjunction with drawing 1428:PL2:13-Site Management Plan, an A4 copy of which is included in Appendix B of this document.

1.1.1. Scope

This CEMP covers the principal construction activities identified at the time of Planning Application. The key elements of this CEMP include:

- Overview of the proposed development and associated construction programme;
- Prior assessment of environmental impacts;
- Minimisation of potential impact through design and other mitigation measures;
- Monitoring of effectiveness of mitigation measures;
- Corrective action procedure; and
- Links to other complementary plans and procedures.

In summary, this document identifies how commitments made in the initial assessment will be translated into actions on-site and includes a schedule for implementing the actions through allocation of key roles and responsibilities.

The Planners have also identified certain issues that need to be specifically addressed within the CEMP and as set out below:

- Steps and procedures to minimise the creation and impact of noise, air quality, vibration, dust and waste disposal resulting from the development,
- Traffic Management associated with the demolition of the existing building and construction, including impact on Air Quality Management Areas,
- Details of enclosure of working areas,
- Site access,
- Wheel washing facilities,

Further Conditions of the approval deal with issues related to:

- Dust suppression measures, having regard to BRE guide '*Control of Dust from Construction and Demolition Activities*',
- Noise mitigation measures,

The Principal Contractor will have responsibility for ensuring compliance with the CEMP throughout the construction phase and updating and reviewing the CEMP in relation to specific activities as necessary. The

Contractor will be expected to designate a suitably qualified site operative to oversee environmental aspects of the CEMP and liaise with the CA as necessary.

All contractors will be responsible for working in accordance with the environmental controls documented in this CEMP. The overall responsibility for implementation of the CEMP will lie with the 'Applicant', which is **Neath Developments SPV 1 Ltd and Tai Tarran Housing Association**.

This CEMP has been designed with the objective of compliance with the relevant environmental legislation and the commitments for mitigation measures documented therein and in particular BRE guide '*Control of Dust from Construction and Demolition Activities*'.

The following sets out the identified parties and their roles within the contract works:

EMPLOYER (CLIENT) Neath Developments SPV 1 Ltd Address: 10 Gloster Place, Newport, Gwent, NP9 7EG Telephone: 01633 381111	QUANTITY SURVEYOR TBC. Address: TBC. Telephone: TBC.
PRINCIPAL CONTRACTOR (CDM) TBC. Address: TBC. Telephone: TBC.	STRUCTURAL ENGINEER Intrado Address: 63/69 Castle House, Cardiff Rd, Taffs Well, CF15, 7RD Telephone: 07855 530066 E-Mail: clare.cooke@intrado.co.uk
ARCHITECT Kennedy James Griffiths. Address: 10 Victoria Park Court, Cowbridge Road East, Cardiff, CF5 1DB. Telephone: 029 20545100. E-mail: ceri@kjg.uk.com.	MECHANICAL AND ELECTRICAL ENGINEER Name: TBC
PRINCIPAL DESIGNER Kennedy James Griffiths. Address: 10 Victoria Park Court, Cowbridge Road East, Cardiff, CF5 1DB. Telephone: 029 20545100. E-mail: ceri@kjg.uk.com	

2.0 The Development and Construction Programme

2.1. Overview of the Proposed Development

The Proposed Development comprises the demolition of an existing single storey building and the construction of 10 no. Apartments along with associated external amenities and parking areas.

The extent of the works is shown in the Planning approval drawings and amplified in further drawings included within the Planning Application submitted by Kennedy James Griffiths. These drawings are:

- 1428:PA:01 Location Plan (A3)
- 1428: PA:02 Site Plan (A3)
- 1428: PA:03 Block A Plans (A3)
- 1428: PA:04 Block B Plans (A3)
- 1428: PA:05 Elevations Block A (A3)
- 1428: PA:06 Elevation & Materials (A3)
- 1428: PA:07 Elevations Block B (A3)
- 1428: PA:08 Sectional Elevations (A3)
- 1428: PA:09 Bird and Bat Boxes (A4)
- 1428: PA:10 Context Plan (A3)
- 1428: PA:11 Bins, Cycles & fencing (A3)
- 1428: PA 12 Survey and Demolitions (A3)
- 1428: PA:13 Site Management Plan (A3)

The site is accessible off Cae Nant Terrace and the proposed blocks are set back from the back of pavement and have a small courtyard in front which allows the erection of scaffold for the works which will not impact on the existing pavement.

2.2. Construction Programme

The current expectation is that construction of the Proposed Development would take approximately 52 weeks.

Allowing sufficient time to discharge expected planning conditions and meet the requirements of the CDM Regulations to adequately prepare a suitable Health & Safety Plan, it is anticipated that the works will commence at the end of August 2020 with an anticipated Completion Date of August 2021, although this may change subject to planning approval and the current national situation.

During Construction, the Principal Contractor will be responsible for programming the works and setting working hours. The Client has not placed any specific constraints on working hours other than a requirement to adhere to guidelines set down by the Local Environmental Health Department and the HSE. The proposed site working hours are therefore:

(i) Construction Hours

No development, (including land raising and demolition if required) shall be carried out other than between the hours of 07.30 and 18.00 Monday to Friday and between the hours of 08.00 and 13.00 on Saturdays.

Should any works that will produce significant noise be required during construction the contractor is to contact the Local Authority Environmental Health Officer to agree suitable start times which are likely to be later than the 7.30AM for general works.

~~(ii) Construction Hours – Piling~~

~~Notwithstanding the requirements of part (i), no construction work involving piling shall be carried out on the site other than between the hours of 08.00 and 17.00 Mondays to Fridays and no construction work involving piling shall be carried out on Saturdays, Sundays or Bank Holidays.~~

(iii) Prior Approval - Out of Hours

Prior approval will be required for any construction to take place outside permitted times and on Sundays and Bank Holidays, where it would create noise audible at the boundary of any residential property

3.0 Environmental Risk Analysis

The proposed construction works have been assessed to establish if a risk exists against a series of categories as set out below:

3.1. Air Quality

The assessment for air quality includes an assessment of the likelihood of dust and airborne contamination being generated by demolition, construction and delivery and transport activities. The assessment includes the potential impact on both site operatives and adjacent occupiers and neighbours.

The site has been evaluated as a Medium Risk site given the overall site size of 1,500m² and the potential for emissions and dust from site activities to have a medium impact on adjacent properties.

The demolition of the existing building has the potential to create dust and mitigation to prevent the creation of dust at source has been included in Section 5.2 of this document.

The building works themselves present a lesser risk of dust creation as the building is predominantly timber frame with modular brick cladding. The timber frame will be fabricated off site removing the need for on site cutting.

Internal finishes are not particularly dust generating although measures will need to be included to ensure that dust is managed during construction. This will include a careful assessment of materials needed to the development to reduce on site cutting and waste generation.

Dust generation by vehicles entering and leaving the site is dealt with in Section 3.6: Traffic, Transportation and Access.

3.2. Noise and Vibration

The site is located within an existing residential street and is bordered directly to the North by a terrace of houses on the other side of Cae Nant Terrace and to the East by 3 further dwellings. The North of the site is bounded a fence to a railway line.

Should piling be required it is anticipated that approval will be required from Network Rail to ensure that there is no detrimental effect to the adjacent railway line.

The contractor will be required to liaise with Network Rail to establish the extent of any consents required.

The site construction works should not create excessive noise over and above that expected from a typical construction site and measures to control noise generated are set out below.

3.3. Ecology

The site is currently covered with existing the building and a tarmac car park.

The Ecology and Tree Surveys submitted as part of the Planning Application fully describe the site Ecology and set out measures to ensure the protection of retained trees and ecological features during construction.

3.4. Cultural Heritage and Archaeology

The Pre-Application Planning process did not identify any potential for the site to be of historical or archaeological interest and as such no measures for their protection are identified. However, the Principal Contractor is to be aware of their responsibilities should anything be found during site excavations.

3.5. Ground Conditions

A full site investigation has been carried out and will be passed to the Principal Contractor. The report identifies raised levels of certain compounds, which may require a capping layer for areas of soft landscaping. Further investigations may be required prior to construction commencing and following the demolition of the existing building. It is important that the existing building is carefully demolished and demolition material removed from site prior to the breaking up of any hard site finishes.

The SI Report requires the notification of the Developer if any unforeseen Ground Contamination is identified during the construction works together with the submission of a suitable mitigation strategy to remove or manage such contamination. The Contractor will be advised of this requirement (by this CEMP) and will adhere to the requirements of the Condition.

The Client will monitor the situation on site to ensure that the Contractor meets their obligations under the relevant condition.

3.6. Traffic, Transportation and Access

Access to the site is obtained from Cae Nant Terrace from the South. The road is reasonably wide and can accommodate the required delivery vehicles and contractor vehicles. The site frontage, which extends along Cae Nant Terrace will be hoarded (see below and Appendix B).

Some parking will be available along this frontage for site operatives along with an area of existing car park adjacent to the site to the East.

A site car park will be provided (see Site Management Plan) for site operatives

Given the above it is not felt that site operative traffic and general deliveries will present a significant problem during the works.

Large deliveries, such as the timber frame, may present a short-term issue and will need to be carefully managed.

The creation of dust and transfer of mud etc. from the site will possibly be an issue and this will need to be addressed by the Principal Contractor as set out below.

3.7. Landscape and Visual

There are a number of existing trees off site but close to the boundaries site that will be retained. A detailed Arboricultural Method Statement and Tree Protection Plan has been prepared and submitted as part of the Planning Application. This document will be provided to the Contractor and will form part of the Contract for the works to ensure that the Contractor adheres to the requirements of the Tree Protection Plan.

4.0 Site Context and Location of Facilities

Organisation of the construction site will be important in delivering mitigation of the risks identified above.

The main Contractor's compound including offices and welfare facilities is to be located at the Western end of the site during the early phases of the works following the demolition of the building on site.

A site hoarding will be erected along Cae Nant Terrace frontage and connected to the existing house at the western end of the site. The remainder of the site already benefits from robust boundary fences/walls.

The demolition of the existing building will be carried out prior to construction works commencing. The demolition will be carried out by a licenced demolition contractor who will be responsible for site management during this stage. They will be responsible for the safe removal from site of all demolition materials and will be subject to the requirements of this CEMP.

Construction phasing will be the responsibility of the appointed contractor. However, they will be required to adhere to the basic principles set out in this CEMP.

Following the demolition of the existing building the site will be stripped to formation level and all surplus material will be removed from site to suitable tip taking account of any identified contamination. Wheel washing facilities will be provided at the main site entrance to ensure that mud and site debris is not transferred to the adjacent roads.

Following the initial site strip a layer of clean stone will be laid over the site and root protection fencing will be erected in accordance with the TPP.

The main access road will be prepared and brought up to subbase level to provide suitable access to the intended site compound and delivery and set down areas. Wheel washing will be maintained throughout the works in the location shown on the Site management Plan.

The site compound and welfare facilities will be installed at an appropriate point during the initial works.

The apartments will be constructed in phases as agreed with the contractor.

Once the apartments are nearing completion the site compound will be disbanded and welfare facilities will be located within one of the units to allow the completion of the access road and parking areas.

5.0 Specific Mitigation Measures

5.1. Traffic Management

Access to the site is obtained from Cae Nant Terrace. The road is reasonably wide and can accommodate the required delivery vehicles and contractor vehicles. The site frontage, which extends along Cae Nant Terrace will be hoarded (see below and Appendix B). A limited amount of parking will be available on street along this frontage as described above along with identified on-site parking during the early phases as shown on the Site Management Plan.

The contractor will put in place management controls for this parking to ensure that it allows for delivery vehicles to use the space as and when required.

Following demolition of the existing building, as the works will be phased, there will be space available on site for limited parking, most likely at the eastern part end of the site.

The contractor will ensure that a banksman is available during all deliveries that need to cross the existing pavement to ensure the safety of the public.

All deliveries will be coordinated to ensure that they occur outside peak traffic flows to minimise disruption to local residents and the traffic network in general.

Given the confined nature of the site the contractor will carefully manage on site storage of materials which will reduce the need for large delivery vehicles.

During demolition and construction the following additional procedures will be implemented to minimise the impact on local residents:

- Suppliers will be provided with delivery restrictions, information and timescale information prior to an order being placed.

- Upon confirmation of a delivery, the details will be added to the "Deliveries Board" on site. The details will also be recorded on the electronic system in advance to ensure single delivery accommodation and co-ordination with waste removal.
- The number of deliveries will be minimised by accumulating smaller orders into larger lots to reduce traffic movements, unless this results in significantly larger delivery vehicles.
- It is the intention to use smaller vehicles whenever possible, so there will be NO reversing of vehicles onto the road network.
- The largest anticipated delivery vehicle will be for the timber frame. Discussions have taken place with the supplier and they have confirmed that the max size of delivery vehicle will be a 7 tonne flatbed lorry approx. 9.2m long. This vehicle can access the site using the semi constructed access road.
- Where kerbside unloading takes place a dedicated banksman will be available to coordinate with any pedestrians needing to use the pavement. Please note that there is a full size pavement on the opposite side of the road should the need arise for short periods.
- The area for the front courtyards of the houses provides a drop off area where deliveries can be unloaded before being transported by hand or small machinery around the site. The public footpath is not required for temporary location of deliveries and will not be obstructed by the works at any stage.
- A lifting plan will be implemented in relation to all lifting operations involving lifting equipment.
- All lifting operations will be undertaken in accordance with lifting operations and lifting equipment regulations 1998 (LOLER)
- Vehicle engines are switched off whilst unloading or stationary,
- No localized waiting. Deliveries will be turned away if a vehicle is already unloading or if the arriving vehicle has not been booked in within agree time slot.
- A dedicated Wheel washing facility will be provided on site at the entrance/exit location (see Appendix B). Please note this location will vary during construction. All vehicles that enter the site will be inspected before they leave and wheels and chassis cleaned as appropriate.

5.2. Dust Suppression measures

Dust has been identified as a potential risk from the demolition of the existing building and grubbing up of slabs/yards in particular. The generation of dust from these activities is to be mitigated in accordance with the requirements set out below:

Generally, adhere to the principles set out in the HSE Construction Information Sheet 36: Construction Dust, included in Appendix A. and also BRE guide '*Control of Dust from Construction and Demolition Activities*',

In particular, the following strategies are to be employed during all construction and demolition works:

Site Planning

Erect Solid barriers to site Boundary: To minimise spread of dust and suppress any potential noise site hoarding (or existing solid fences/walls) will be provided/retained to the entire perimeter of the site. The hoarding will be boarded with WPD ply or OSB board. This hoarding is to be maintained during construction until all potential dust generating activities have been completed.

Plan site Layout: Ensure that any dust generating activities, wherever possible, are located away from boundaries and carried out in accordance with requirements listed below.

Hard Surface Haul routes: prepare the site during construction to minimise muddy or dusty vehicular circulation areas. Either maintain existing hard surfaces, or if being used as recycled material, ensure that an appropriate layer of clean stone/recycled aggregate is used for internal site trafficked areas. These areas are to be regularly damped down during dry weather to minimise dust.

Construction Traffic

Switch Off engines: All vehicles on site are to switch off engines and are not to 'idle' on site. This will reduce noise and minimise potential air pollution.

Wheel Cleaning: All vehicles are to be inspected before leaving site and if required the wheels and underbodies are to be cleaned with a suitable wheel washing facility for the duration of the works. The external road is to be cleaned regularly and damped down during dry periods to minimise dust.

Covered Loads: All loads entering and leaving site are to be covered (wherever practicable) to minimise dust creation.

Demolition Works

Damping Down: Use water as a dust suppressant during demolition activities that generate dust. Pre-wash work surfaces. Screen off work areas. Vacuum up all dusty residue rather than sweeping away.

Cutting Equipment: All equipment should use water suppressant or suitable local exhaust ventilation systems. Use dust extraction techniques where available. Service all fans and filters regularly to ensure they are properly maintained. When materials, such as concrete slabs or bricks, are cut with a power tool without extraction or suppression, a second worker can pour water from a plastic bottle over the material as it is being cut. This greatly reduces the amount of dust generated and can stop the occurrence of a statutory nuisance.

Cover skips and stockpiles: Completely enclose skips whenever possible. Hard surface areas where skips are to be stored. Reduce drop heights by using variable height conveyors or chutes. Regularly damp down surfaces with water.

Sheet and screen building: Sheet and screen buildings with suitable material and where possible strip inside buildings before demolition begins.

Removal of materials from site: Materials should be removed from site as soon as possible. If stored, whenever possible keep stockpiles or mounds away from the site boundary, sensitive receptors, watercourses and surface drains. Wherever possible, enclose stockpiles or keep them securely sheeted.

Hazardous Materials: Under the Control of Substances Hazardous to Health (COSHH) regulations, 2002, contractors must ensure that they take into account risks to the workforce from exposure to any harmful substances generated by work activities. Construction sites are often associated with activities that emit volatile organic compounds (VOCs), such as use of paints, adhesives, bitumen products and concrete and timber treatments. Emphasis should be placed on preventing or reducing emissions at source and where this is not possible personal protective equipment may be appropriate.

Site Activities

Minimise dust generating activities: Cutting, grinding and sawing will be minimised on site; prefabricated material and modules will be brought to site wherever practicable.

Use Water as a dust suppressant: Use water as a dust suppressant during construction activities that generate dust. Pre-wash work surfaces. Screen off work areas. Vacuum up all dusty residue rather than sweeping away. Water sprays, 'Dust Boss' type equipment and pressure washers (which can be used to generate a fine airborne mist) will be used during construction work and other activities that generate a high level of dust.

Burning: No burning is permitted on site.

Sand, Grit and Shot Blasting: Use agreed wet processes, sheet areas to contain dust and use silica-free material.

Planing and sanding: Use fans and/or filters, dust suppression techniques and water sprays.

Fitting out: Fit all machinery for activities such as plastering, sanding or rendering with dust suppression/collection equipment. Vacuum all waste material.

Welding and soldering: Follow control measures in HSE guidance notes EH54 and EH55.

Tarmac laying and use of bitumen: Do not overheat bitumen and cover pots. Use great care in all processes to prevent spillages and extinguish any accidental fires immediately.

Cutting Equipment: Cutting, grinding and sawing will be minimised on site; prefabricated material and modules will be brought to site wherever practicable. If cutting is required, all equipment should use water suppressant or suitable local exhaust ventilation systems. Use dust extraction techniques where available. Service all fans and filters regularly to ensure they are properly maintained. When materials, such as concrete slabs or bricks, are cut with a power tool without extraction or suppression, a second worker can pour water from a plastic bottle over the material as it is being cut. This greatly reduces the amount of dust generated and can stop the occurrence of a statutory nuisance.

Enclose stockpiles or keep them securely sheeted: Completely enclose skips whenever possible. Hard surface areas where skips are to be stored. Reduce drop heights by using variable height conveyors or chutes. Regularly damp down surfaces with water.

Concrete crushing: Ensure concrete crushers or concrete batchers have permits to operate: Notify the local authority if a crusher is to be used as it has a duty to inspect the process. Keep a copy of the permit on-site and adhere to the conditions therein at all times. Ensure material is damped down as it exits crushing machinery to minimise dust.

Manage on and off site vehicular routes: Use agreed wet cleaning methods or mechanical road sweepers on all roads at least once a day or consider using fixed or mobile sprinkler systems. Provide hardstanding areas for vehicles and regularly inspect and clean these areas.

Excavation and earthworks : All dusty activities should be damped down, especially during dry weather. Temporarily cover earthworks if possible. Minimise drop heights to control the fall of materials

General Housekeeping: Good housekeeping measures (i.e. regular sweeping, cleaning, vacuuming etc..) will be adopted and implemented to ensure the construction site is kept in good order. Cement, sand, fine aggregates and other fine powders will be sealed after use and if necessary stored in sealed containers or silos. Where appropriate, materials will be kept damp to avoid drying out.

Dust Control Monitoring: Other than the monitoring activities outlined above, it is not anticipated that routine monitoring to assess environmental nuisance will be required during construction works, provided the control measures outlined above are put in place. However, in the event of a complaint, the Contractor will take appropriate action to deal with the problem.

Air Quality management Procedures: In addition to the above the following management practices are to be adopted during demolition and construction work:

- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.
- Display the head or regional office contact information
- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
- Make the complaints log available to the local authority when asked.
- Record any exceptional incidents that cause dust and/or air emissions, either on or off-site, and the action taken to resolve the situation in the log book.
- Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100m of site boundary, with cleaning to be provided if necessary.
- Carry out regular site inspections to monitor compliance with the CEMP, record inspection results, and make an inspection log available to the local authority when asked
- Ensure all vehicles switch off engines when stationary – no idling vehicles.

5.3. Noise mitigation measures

To ensure construction activities do not cause nuisance to local residents/neighbours the Principal Contractor shall follow construction best practice standards as outlined in BS 5228: 2009.

The Contractor is also to be aware of the following legislation that affects noise at work or on construction sites:

- Health and Safety at Work etc. Act 1974
- Control of Noise at Work Regulations 2005
- Control of Pollution Act 1974 and Environmental Protection Act 1990

BS 5228: 2009, provides practical information on noise and vibration reduction measures, and promotes, “best practice means” approach to control noise and vibration. Best practice activities that may be adopted to address both noise and vibration include the following:

Planning the works

Contractor should take due regard of the following when planning the works:

- Site layout, e.g. location of static noise sources, and use of site buildings, material dumps, etc., as ad hoc barriers;
- Types of machinery likely to be used and whether alternative types or techniques would achieve less disturbance.

- Ensure, where possible, that static items such as generators, are sited away from boundaries and where necessary noise control means, such as barriers, enclosures or silencers are utilised to further reduce noise.
- Ensure that all noise generating equipment is regularly and appropriately maintained.

The Contractor is to inform neighbours when specific noisy activities that may have vibration impacts are to take place. Good neighbour relations are recognised as an important factor in reducing the likelihood of nuisance or damage. Contractor is to provide a contact number for a suitable site operative to all immediate neighbours to enable any complaints to be dealt with at an early stage.

Execution of the Works

The hours of working should be planned and account should be taken of the effects of noise upon persons in areas surrounding site operations and upon persons working on site, taking into account the nature of land use in the areas concerned, the duration of work and the likely consequence of any lengthening of work periods.

Where reasonably practicable, quiet working methods should be employed, including use of the most suitable plant, reasonable hours of working for noisy operations, and economy and speed of operations. Site work continuing throughout 24h of a day should be programmed, when appropriate, so that haulage vehicles will not arrive at or leave the site between 19.00 h and 08.00 h. nor outside of any other times set out on page 3 of this document.

Noise should be controlled at source and the spread of noise should be limited.

On those parts of a site where high levels of noise are likely to be a hazard to persons working on the site, prominent warning notices should be displayed and, where necessary, ear protectors should be provided.

Control of Noise at Source

As a minimum, the following procedures and measures should be adopted on site and for specific site based operations:

- avoid unnecessary revving of engines and switch off equipment when not required;
- keep internal haul routes well maintained;
- use rubber linings in, for example, chutes and dumpers to reduce impact noise;
- minimize drop height of materials;
- start up plant and vehicles sequentially rather than all together.

The movement of plant onto and around the site should have regard to the normal operating hours of the site and the location of any sensitive neighbours as far as is reasonably practicable.

The use of conventional audible reversing alarms has caused problems on some sites and alternatives are available. Audible reversing warning systems on mobile plant and vehicles should be of a type which, whilst ensuring that they give proper warning, have a minimum noise impact on persons outside sites.

When reversing, mobile plant and vehicles should travel in a direction away from boundaries whenever possible. Where practicable, alternative reversing warning systems should be employed to reduce the impact of noise outside sites.

5.4. Details of Temporary lighting

The Temporary lighting for the site is to be designed by the Principal Contractor's electrical designer to provide adequate light to ensure the safety of site operatives without causing undue nuisance to adjacent properties.

Lighting for on site workers should comply with HSE Guide HG38: Lighting at Work.

The following requirements are to be included in any design, location and operation of on site temporary lighting to ensure the amenity of adjacent properties/neighbours:

- Lighting to be time controlled to suit hours of site working (limited nighttime lighting permitted for security purposes).
- All lights to be located at the perimeter of the site facing inwards and angled towards the ground to minimise potential light overspill.
- All lights at high level (on posts) to have suitable shrouds/guards to prevent upwards light spill.

- Wherever possible temporary site lighting to be located on boundary fence below 2m to provide protection to neighbours from light overspill.

5.5. Details of enclosure of working areas

To minimise spread of dust and suppress any potential noise a full site hoarding will be erected around the perimeter of the site. The hoarding will be boarded with WPD ply or OSB board.

Should the hoarding need to be removed to allow the erection of scaffolding the lower lift of the scaffolding will be boarded externally to provide security and control noise and dust as above.

This hoarding is to be maintained during construction until all potential dust generating activities have been completed.

5.6. Recycling and Disposing of Waste

In order to control the waste on site the Principal Contractor will undertake a skip segregation system to separate the main waste streams on site, prior to them being taken to a waste facility for recycling.

In order to manage and monitor the waste process, waste streams will be estimated and monitored and goals set with regards to the waste produced.

All waste to be removed from site will be undertaken by fully licensed waste carriers and taken to licensed waste facilities.

A waste storage and collection facility is to be located close to the main delivery access to reduce the travel on site of collection vehicles, this is shown on drawing 1174:CEMP:01.

In addition, the following measures are to be adopted:

- Order only the amount of materials needed as accurately as possible;
- Arrange for 'just in time' deliveries to reduce storage and material losses;
- 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, burns and in bunded areas to prevent pollution;
- Ensure options for the use of reclaimed and recycled construction materials that meet the required 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;
- Promote good practice awareness as part of Health & Safety induction/training for workers onsite.

5.7. Topsoil Management

Soil resources are easily damaged by being stripped or moved when wet. Consequently, all topsoil should be stripped when dry (in the summer months) for reuse in landscape areas.

Soil is to be handled strictly in accordance with BS3882:2015 (specification for topsoil).

Stripped soils to be stored in bunds no more than 2m high and kept grassed and free from construction traffic until required for reuse.

Topsoil depths to be 150mm for grass areas with a 300mm overall rooting depth, 300mm for shrub planting with a 600mm overall rooting depth and 300mm for trees with a 900mm overall rooting depth.

Existing topsoil on site should be checked by a suitably qualified soil scientist and reconditioned where necessary. Enrich Topsoil backfill with slow release fertilizer. Everris Enmag CRF, or similar approved should be applied at a rate of 70g/m² and to a depth of 200mm.

Spread subsoil should be loosened/ripped after replacement to remove compaction and maximise aeration and drainage. De-compaction to be performed with a tined ripper pulled by an earth-mover or excavator, undertaken when soils are sufficiently dry to be friable.

Any imported soil is to be approved for use by a suitably qualified soil Scientist.

5.8. Consultation

The Contractor will provide full contact details of a site representative with the authority to control the works. Occupants of the adjacent properties will have access to these details and will be able to advise of any adverse impacts.

Regular discussions will be arranged to ensure that all neighbours are kept up to date with the timing and programming of the works. Wherever possible works will be programmed to minimise any impact or disruption to the Ground floor units.

The contractor is to prepare a monthly newsletter for residents, setting out the planned programme of activities for the upcoming period and noting any activities that are likely to have an impact on residents.

The first newsletter, prior to commencement, will clearly set out how residents can get in touch with the contractor and the means of resolving any complaints.

6.0 Complementary Plans and Procedures

In addition to this CEMP, a suite of complementary plans and procedures have been developed to mitigate the environmental impacts associated with the proposed development. These plans and procedures build on the principles and procedures detailed in this CEMP, and include:

- Principal Contractor's Waste Management Plan

7.0 Monitoring

The Principal Contractor is to appoint a designated Environmental Site Officer to check, monitor and report on the strategies employed to implement the requirements of the CEMP. This will most likely be the site manager in control of the overall site.

The Environmental Site Officer will need to be on site generally at all times and will be the point of contact for neighbours who have concerns or complaints regarding any environmental impacts as a result of the construction activities.

The Environmental Site Officer will be required to prepare a written report included in the Contractor's Progress Report to be submitted at each monthly progress meeting as set out in the Contract Preliminaries. The report should list all noisy activities planned for the next month and list any complaints or contacts made on any environmental matter during the previous month.

The Environmental Site Officer (ESO) will be responsible for advising neighbours of any forthcoming activities that could have the potential to cause nuisance and should include details of all such contacts/conversations in the monthly report.

The CA is to be advised immediately of any complaint made to the Environmental Site Officer, or any other site operative.

The ESO is to be responsible for ensuring that all sub contractors are aware of the contents of the CEMP and is to ensure that it is covered in all site inductions and tool box talks.

The ESO is to ensure that, where appropriate, any requirements of the CEMP are included within the Construction Stage Health & Safety File which is to be maintained on site for inspection by the PD and CA whenever required.

8.0 Conclusions

This CEMP has provided a comprehensive list of mitigation measures and monitoring procedures for the proposed development.

As part of the monitoring process an Environmental Site Officer will be designated by the Principal Contractor, who will be present onsite throughout the construction process and when new activities are commencing, and will be responsible for ensuring the mitigation strategies identified in this document are implemented.

A brief report will be produced and submitted to the Employer at each monthly progress meeting and following completion of the monitoring programme. This will summarise the monitoring process, observed deviations from the CEMP and the corrective actions.

Appendix A: Guidance Documents

HSE Construction Information Sheet No. 36: Construction Dust

IAQM: Guidance on the assessment of dust from demolition and construction

IAQM: Guidance on Monitoring in the Vicinity of Demolition and Construction Sites



These documents are available to download at:

<http://iaqm.co.uk/text/guidance/construction-dust-2014.pdf>

http://iaqm.co.uk/text/guidance/guidance_monitoring_dust_2018.pdf

<https://www.hse.gov.uk/pubns/cis36.pdf>

Appendix B: Construction Site Layout

KJG Drawing 1428: PA:13-Site Management Plan showing site hoarding, loading zones, contractor's compound etc.

