

## **CDM Project**

# **PRE-CONSTRUCTION INFORMATION**

# **PRE-CONSTRUCTION INFORMATION**

**for**

**Renovation Works**

**at**

**The Buttercross, King Street, Ludlow, SY8 1AW**

Date:	22 December 2009
Version:	1
Construction Period:	12 weeks estimated

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## 1 Introduction

This Pre-Construction Information draws together the information obtained from the Client, the Designers and the site visit carried out by the CDM Co-ordinator. It provides details on the significant site-specific issues that the Principal Contractor will have to manage during the construction phase.

The Construction (Design and Management) Regulations 2007 (CDM2007) require the Principal Contractor to develop a Construction Phase Plan, outlining how the site is to be managed with regard to health and safety, before work starts on site. Advice relating to the necessary content of the Construction Phase Plan can be obtained by reference to the following HSE publications:

- Managing Health & Safety in Construction – L144  
Approved Code of Practice to Construction (Design and Management) Regulations 2007
- HSE Construction Information Sheet No. 43 ‘The Health and Safety Plan during the Construction Phase’
- Health and Safety in Construction HS (G) 150 rev 3

When developing the Construction Phase Plan, the Principal Contractor will identify the hazards and assess the risk for each of the main construction activities including, but not limited to, those hazards identified in this Pre-Construction Information. The Construction Phase Plan is a working document that needs to be kept up to date throughout the construction phase.

This document should be read in conjunction with tender documentation, the drawings and other documents listed in section 2.5.

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## 2 Project Details

### 2.1 Project Description

The project involves dismantling and reconstruction of the roof top cupola, lead work renewal, painting and decoration, roof repairs, access door repairs, repointing and ground floor step repairs. The facade and clock tower/ cupola are already under scaffold, erected prior to appointment of the CDMC, assumed for emergency repair and inspection purposes.

### 2.2 Key Project Dates

Phase	Commencement Date	Completion Date
Cupola and roofing works	March 2010	June 2010 (12 weeks)

### 2.3 Preparation Time

The Client allowed a mobilisation period of 2 weeks (estimated) from the date of appointing the Principal Contractor. This is the time allocated for the planning and preparation before construction work begins on site.

## 2.4 Project Directory

<b>CLIENT:</b>	<b>Ludlow Town Council</b> The Stable Block, Stone House, Corve Street, Ludlow Shropshire SY8 1DG  Contact: Ms. V Calderbank, Town Clerk. Tel 01743 256175
<b>CDM CO-ORDINATOR:</b>	<b>Graham Projects and Consulting</b> Brook Cottage, Bridges Stone Alfrick Worcester WR6 5HR  Contact: Richard Graham 07900 925098
<b>PRINCIPAL CONTRACTOR</b>	<b>To be appointed</b>  Contact:

**DESIGNERS:**

**Nick Joyce Architects**

5 Barbourne Road

Worcester

Worcestershire

WR1 1RS

Contact: Alan Simcox 01905 29911

## 2.5 Information reviewed by CDM Co-ordinator

<b>Title</b>	<b>Reference</b>	<b>Issuer</b>
Works Schedule and Specification	1166 November 2009	Nick Joyce Architects
Roof and Cupola as existing	1166/1 Sept 2009	Nick Joyce Architects
Roof and Cupola as existing	1166/2 Sept 2009	Nick Joyce Architects
Roof and Cupola as proposed repairs	1166/3 Oct 2009	Nick Joyce Architects
Cupola as existing	1166/4 Oct 2009	Nick Joyce Architects
Cupola Joinery Details	1166/5 Oct 2009	Nick Joyce Architects
Cupola Details	1166/SK1 Oct 2009	Nick Joyce Architects
Photographic Survey	1166/PS 1 to 5 Sept 2009	Nick Joyce Architects

The CDM Co-ordinator visited site on 11 December 2009.

## 2.6 Further information required from the Client

Any asbestos register relevant to the works.

Scaffold design and loadings from scaffolder.

Client requirements

Previous H&S File

This information has been requested and when received by the CDM Co-ordinator it will be considered and distributed as appropriate.

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### 3 Client's Considerations and Management Requirements

#### 3.1 Planning and management of construction

- 3.1.1 The responsibilities of the appointees on this project are detailed in Appendix A. The Client requires compliance with all of the duties listed as a minimum standard for this project, in accordance with CDM2007.
- 3.1.2 All persons working on site must be competent to carry out the duties requested of them. Any person placed in charge of the site will be conversant with all of the Principal Contractor's duties under the CDM2007. HSE expect all site managers on CDM projects to have undergone the CITB 5-day Site Managers Safety Training Scheme or equivalent to be able to demonstrate competence. The Principal Contractor must be satisfied that all sub-contractors are competent prior to offering appointments. Sub-contractors must undergo a form of health and safety competence assessment relevant to the duties they are asked to perform.
- 3.1.3 Contractors will be required to confirm that health and safety standards on site will be controlled and that welfare facilities will be provided, in accordance with schedule 2 of the CDM2007 regulations, prior to commencement on site. Formerly known as the Construction Health Safety and Welfare Regulations 1996.
- 3.1.4 The following arrangements are required on this project:
- a. No smoking is permitted on any area of the site at any time.
  - b. No radios are permitted or any behaviour inappropriate to areas accessed by members of the public.
  - c. Regular report on progress to be provided to client to include details of incidents and near misses
  - d. A Principal Contractor continuous presence on site.
  - e. No headphones to be used on site.
  - f. See appendix A for client standard H&S briefing.

The following health and safety goals are required on this project:

Monitoring of accidents and near misses with a goal of zero major accidents.

Minimise risk, disruption or inconvenience to the staff and public, who will require access during the works.

### **3.2 Communication and liaison between Client and others**

3.2.1 This Pre Construction Information has been compiled as a result of meetings and information shared between the CDM Co-ordinator, Client and Designers.

3.2.2 All unforeseen eventualities which may occur during construction and which affect previously recognised health and safety issues or resources must be reported to the CDM Co-ordinator.

3.2.3 All design work carried out by the Principal Contractor or appointed contractors during the construction phase, to include temporary works, must be notified to the CDM Co-ordinator.

3.2.4 CDM Co-ordinators must be informed of all new design and revised designs. Where required additional meeting will be held with the Client in attendance.

3.2.5 The Principal Contractor is required to liaise with the CDM Co-ordinator should any specific issues be raised that have not been discussed in this information.

### **3.3 Security of the site**

3.3.1 The works are external in nature and mostly located at high level. The premises is not secure at ground level for step repair works, but is generally segregated from the public at roof level with access via a staircase and door to the roof through council office property, to be confirmed by the contractor. Any stored materials or tools should be moved off the public footpath or highway as quickly as possible. Scaffold will provide a possible means of access to the building or opportunity for trespass. Reasonable measures to prevent access to the scaffold should be employed, e.g. any access ladder removed when unattended or at the end of the day.

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### 3.4 Welfare arrangements

- 3.4.1 Toilet and welfare facilities in the Town Clerks Office will be made available to the contractor including access to water and electricity. The contractor will be responsible for ensuring that the facilities meet the requirements of the CDM Regulations 2007. There are plenty of local facilities to obtain hot food/ drink. The contractor must otherwise outline in their Construction Phase Plan how they will meet the requirements for construction site welfare, i.e. drying facilities, drinking water, and rest facilities. Suitable facilities must be provided from the commencement of the project, reflecting the numbers on site and the nature of the work being undertaken. The Construction Phase Plan must adequately describe how these facilities will be maintained.
- 3.4.2 Electricity is available in the form of 240VAC supply. Connection must be negotiated via the Client and contract administrator. All tools will be required to be 110VAC CTE or battery powered, particularly where used outside.

### 3.5 Traffic management and compound location

- 3.5.1 The site layout, size, parking and access/egress points, restricts vehicle access. There are parking restrictions at the site, which is surrounded on all sides by busy pedestrian routes and roads. The contractor must review the site plan and assess the movement of site transport. The construction phase plan must include the proposal for traffic management and deliveries to consider the heavy foot and vehicle traffic immediately outside the site. There is no parking available close to site.

### 3.6 Permits and authorisation requirements

- 3.6.1 A Hot work permit system will be a requirement for these works if there is any, hot lead work, welding, soldering. Hot work should be minimised as far as possible, as the timber floors and structures are old and likely to be dry with accumulated flammable concealed debris.
- 3.6.2 The Principal Contractor must agree procedures for the control of visitors to site. Such procedures will include signing in and out of visitors to the site
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and arrangements for accompanying them at all times.

### 3.7 **Emergency Procedures**

First aid –The principal contractor must identify those with first aid responsibilities. The nearest accident and emergency hospital is Hereford County Hospital, Union Walk Hereford HR1 2ER. Distance 21.8 miles. Tel 01432 355444, alternatively there is a Minor injuries unit at Ludlow Community Hospital, Gravel Hill, Ludlow SY8 1QX, distance 0.3 miles. Tel 01584 872201. This deals with cuts, burns, sprains and broken bones.

- 3.7.1 Fire – The principal contractor must arrange fire prevention and fire-fighting equipment. This should include regular liaison regarding any temporary obstructions to means of escape, fire doors, alarms etc. And coordination with the Clients activities.

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## 4 Environmental Restrictions and Existing On-Site Risks

### 4.1 Boundaries and adjacent land use/s

4.1.1 The site is situated at The Buttercross in the busy commercial centre of Ludlow at the junction of King Street, Broad Street and High Street. It stands in a site surrounded by public access pavements, and is occupied beneath in the “market area”, with an attached commercial premises on the left hand side “Bensons.” The market area beneath The Buttercross was occupied by a stall on the day of the visit.

4.1.2 The works can only be accessed through the existing premises, up a narrow staircase and access door to the roof. This is likely to be unsuitable for larger materials movements.

### 4.2 Existing services

4.2.1 Electrical, water and gas services are assumed to be located in the area. There were no overhead services noted apart from the Christmas decorations. As there will be no excavations, buried services will not be a concern on this project. Normal precautions for internal working, drilling in to walls and the use of wet mortar near services may be required and isolation may be necessary along with the use of a cable detection tool. Services were noted at roof level behind the parapet walls. Air conditioning services will require fixing to the structure as part of the works

4.2.2 Overhead services should not impede the works.

### 4.3 Ground conditions

4.3.1 Not relevant to the works as there will be no excavations.

### 4.4 Existing/demolished structures

4.4.1 The property is of traditional construction. The roof is hipped and pitched

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behind a low parapet wall. It is assumed the roof is clay tile on timber batten and traditional ratters. The Cupola is constructed of oak timbers with lead work weather protection. See existing drawings and photographic survey.

#### 4.5 Existing traffic systems

4.5.1 Heavy traffic volumes and pedestrians were noted passing in front of the property and heavy pedestrian traffic all round including the access to the rear. Any vehicle reversing or large goods vehicle movements and unloading should be competently supervised and may have to be timed outside peak hours, e.g. where vehicles will have to stand during unloading or for large elements of construction such as cupola timbers or additional scaffolding..

#### 4.6 Access and egress

4.6.1 There is limited headroom/ width to deliver materials through the access staircase and roof door. Alternative arrangements will be required for movement of significant construction materials e.g. hoist or similar. Anchoring and support will need to be verified with the scaffold designer or structural engineer to ensure the structure is adequate.

#### 4.7 Health Hazards

4.7.1 The following hazardous substances have been highlighted in the surveys provided. The Principal Contractor is required to assess the risks from the substances and ensure that suitable controls are implemented:

- a. Asbestos has not yet been identified, but survey information has been requested from the Client. Asbestos is not anticipated, but the Principal Contractor must include arrangements for stopping work and obtaining further guidance in the event that suspicious materials are encountered.
- b. Raking out of existing masonry is likely to raise significant amounts of dust, lime rich, and containing animal hair. There will be a significant risk of inhalation of dust and possible allergic reaction to animal by-products. Methods of removal should be designed to minimise the amount of dust

raised and control it at sources if possible.

- c. Possibility of lead in old paintwork when rubbing down.
- d. Contact with biological hazards when removing roof materials or rubbing down areas where birds have roosted, e.g. Psittacosis.
- e. Ingestion of lead or inhalation during any hot work with lead.
- f. Use of pesticides.

## 5 Significant Design and Construction Hazards

### 5.1 Safe access to work at height

Work on the roofs and cupola will require an access scaffold. A scaffold has been erected to part of the facade and around the clock tower/ cupola but will be removed prior to the contract commencing. The Principal Contractor will be responsible for providing scaffold to suit the works. All areas requiring work on the roofs, cupola, lead work, copings, weather vane etc. will require a work at height risk assessment, with edge protection to be provided wherever reasonably practicable. Safe means of access will be required. The scaffold will require design by a competent scaffold designer with ties to allow works without removal. Particular reference will be required to weather protection and hoisting which may impose loads not calculated in the scaffold design. Parapet walls may be used as a leading edge where they are 950mm above working platform, otherwise additional edge protection will be required.

The works are particularly sensitive due to the town centre location, high foot and vehicle traffic and risk of tampering, vandalism or unauthorised access to the scaffold. It is recommended that the scaffolder supply a risk assessment/ method statement for the scaffold erection and striking and that they have good experience of city centre applications.

N.B. The scaffold is of non standard and will require design by a competent engineer.

### 5.2 Manual Handling and lifting of heavy materials

Delivery and handling of roof tiles, cupola timber, lead, stone ball finials and other materials, delivery of access equipment, and removal of waste, considering access constraints. Pre planning for all significant lifts of heavy, bulky or unwieldy items is recommended. The designer been requested to provide max estimated cupola timbers weights and dimensions. All material movements should be assessed to minimise manual handling. The contractor will need to consider the segregation of public areas during material delivery and movements. Any hoist will require

protective measures to exclude persons from the area beneath in case of failure. Placement of heavy materials e.g. stone ball finials will need to consider structural capacity of roof to bear this additional load. The contractor must establish a safe point for loading.

### **5.3 Fall of materials on to people**

Fall of tools, dust & debris, roofing materials etc. particularly at but not limited to the busy public footpaths and roads. Measures will be required to prevent falling materials including smaller particles and dust. Any sheeting material must consider wind loading on the scaffold. There should be no uncontrolled bombing of waste materials.

### **5.4 Fall of materials or persons through roof during repairs.**

Falls in to the roof structure may require protection according to its physical condition once repair commences to prevent a fall in to the superstructure.

### **5.5 Segregation of the public from risk**

Potential for the public to come in to contact with construction activities, e.g. trespass on to scaffold or in to the premises from the front door. Step repairs in public area at ground level in public thoroughfare. Any access from a public area to the scaffold should be supervised and secured when unattended. Any access by Council employees must be restricted by agreement with the Client. The contractor should communicate effectively with the Council to coordinate and significant deliveries and movements of materials.

### **5.6 Fire**

Accidental fire due to hot work or smoking, e.g. lead work, soldering or cutting (sparks) through bulkheads, ceilings, floors or similar. There will be a requirement for minimisation of hot work, hot work permits for essential hot works, fire fighting and fire prevention equipment and post work fire checks. Coordinate activities with the Town Council regarding fire and means of escape.

### **5.7 Cuts and abrasions**

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Risk of cuts and puncture wounds when engaged in dismantling e.g. nailed timber and sharp edges to timber.

## 5.8 Health Hazards

Materials and substances that require specific consideration and appropriate controls are:

- a. Asbestos (not yet determined)
- b. Inhalation and ingestion of Lead when stripping or sanding surfaces decorated previously, or hot lead works.
- c. Paints, primers, knotting solution.
- d. Solvents
- e. Dust during demolition/ soft strip and raking out of masonry.
- f. Wood dusts
- g. Lime mortar with respect to skin and eye contact.
- h. Bird droppings
- i. Pesticide (weed killer)

## 6 Further Design and Hazard Information

- 6.1 Method statements and procedures contained in the Construction Phase Plan must address (but not be limited to) the hazards identified in Sections 4 and 5 and shall be available before the work package commences.
- 6.2 The finished structure will be used as a workplace and will therefore attract the Workplace (Health Safety and Welfare) Regulations 1992. This needs to be considered in the overall design approach.

## 7 The Health & Safety File

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7.1.1 It is a requirement of The Construction (Design and Management) Regulations 2007 that a Health and Safety File is produced and given to the occupier on completion of the works. It is the Client's responsibility to ensure the Health and Safety File is prepared by the CDM Co-ordinator.

The Principal contractor should indicate the location of any suspect materials uncovered during the works, i.e. potential asbestos, and detail any departures from the schedule of works.

**8** Appendices

Appendix A	Responsibilities of Appointees on this Project
Appendix B	Client requirements
Appendix C	General Construction Health and Safety Issues
Appendix D	Photographs

Appendix A – Responsibilities of Appointees on this Project

### CDM 2007 – Summary of Duties of Appointees

	<b>ALL CONSTRUCTION PROJECTS</b>	<b>ADDITIONAL DUTIES FOR NOTIFIABLE PROJECTS</b>
Clients	<ul style="list-style-type: none"> <li>• Check competence &amp; resources of all appointees</li> <li>• Ensure there are suitable management arrangements for the project, including welfare facilities</li> <li>• Allow sufficient time and resources for all stages</li> <li>• Provide pre-construction information to Designers and Contractors</li> </ul>	<ul style="list-style-type: none"> <li>• Appoint CDM Co-ordinator (There must be a CDM Co-ordinator and Principal Contractor until the end of the construction project)</li> <li>• Appoint a Principal Contractor (There must be a CDM co-ordinator and Principal Contractor until the end of the construction project)</li> <li>• Make sure the construction phase does not start unless there are suitable:               <ol style="list-style-type: none"> <li>1) Welfare facilities and,</li> <li>2) Construction Phase Plan in place</li> </ol> </li> <li>• Provide information relating to the health and safety file to CDM Co-ordinator</li> <li>• Retain and provide access to the Health and Safety File</li> </ul>
CDM Co-ordinator		<ul style="list-style-type: none"> <li>• Advise and assist the Client with his/her duties</li> <li>• Notify HSE</li> <li>• Co-ordinate health and safety aspects of design work and co-operate with others involved in the project</li> <li>• Facilitate good communication between Client, Designers and Contractors</li> <li>• Liaise with Principal Contractor regarding ongoing design</li> <li>• Identify, collect and pass on pre-construction information</li> <li>• Prepare/update Health and Safety File</li> </ul>
Designers	<ul style="list-style-type: none"> <li>• Eliminate hazards and reduce</li> </ul>	<ul style="list-style-type: none"> <li>• Check Client is aware of duties and CDM</li> </ul>

	<p>risks during design</p> <ul style="list-style-type: none"> <li>• Provide information about remaining risks</li> </ul>	<p>Co-ordinator has been appointed</p> <ul style="list-style-type: none"> <li>• Check that HSE has been notified</li> <li>• Provide any information needed for the health and safety file</li> </ul>
Principal Contractor		<ul style="list-style-type: none"> <li>• Plan, manage and monitor construction phase in liaison with contractors</li> <li>• Prepare, develop and implement a written plan and site rules (Initial plan completed before the construction phase begins)</li> <li>• Give contractors relevant parts of the plan</li> <li>• Make sure suitable welfare facilities are provided from the start and maintained throughout the construction phase</li> <li>• Check competence of all appointees</li> <li>• Ensure all workers have site inductions and any further information and training needed for the work</li> <li>• Consult with the workers</li> <li>• Liaise with the CDM Co-ordinator re ongoing design</li> <li>• Secure the site</li> </ul>
Contractor	<ul style="list-style-type: none"> <li>• Plan, manage and monitor own work and that of workers</li> <li>• Check competence of all their appointees and workers</li> <li>• Train own employees</li> <li>• Provide information to all workers</li> <li>• Comply with the specific requirements in Part 4 of the</li> </ul>	<ul style="list-style-type: none"> <li>• Check client is aware of duties and a CDM Co-ordinator has been appointed and HSE notified before starting work</li> <li>• Co-operate with Principal Contractor in planning and managing work, including reasonable directions and site rules</li> <li>• Provide details to Principal Contractor of any contractor whom he engages in connection with carrying out the work</li> <li>• Provide information needed for the</li> </ul>

	<p>CDM Regulations (2007)</p> <ul style="list-style-type: none"> <li>• Ensure there are adequate welfare facilities for their workers</li> </ul>	<p>Health and Safety File</p> <ul style="list-style-type: none"> <li>• Inform the Principal Contractor of problems with the plan</li> <li>• Inform Principal Contractor of reportable accidents, diseases and dangerous occurrences</li> </ul>
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<p>Everyone</p>	<ul style="list-style-type: none"> <li>• Check own competence</li> <li>• Co-operate with others and co-ordinate work so as to ensure the health and safety of construction workers and others who may be affected by the work</li> <li>• Report obvious risks</li> <li>• Comply with requirements in Schedule 3 and Part 4 of the CDM Regulations (2007) for any work under their control</li> <li>• Take account of and apply the general principals of prevention when carrying out duties</li> </ul>
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Appendix B – Client Requirements

Information requested, to be advised.

## Appendix C – General Construction Health and Safety Issues

The following hazards generally occur on all construction sites. Some of the issues may be addressed in the “arrangements” section of the Principal Contractor’s health and safety policy: -

#### Working at height

In accordance with the Work at Height Regulations 2005, all work at height must be properly planned, supervised and carried out safely. Ensure risks from WAH are assessed and appropriate work equipment used. In accordance with HSE guidance:

Avoid work at height where possible

Where work at height cannot be avoided, use work equipment or other measures to prevent falls (e.g. scaffold)

Where risk of fall cannot be eliminated, use work equipment or other measures to minimise the distance and consequences of a fall should one occur (e.g. bean-bags / air-bags etc)

Issues to consider if work at height is necessary will include: -

Scaffold erection/dismantling (to NASC SG4: 05 guidance) by trained competent operatives.

No modifications to be made by unauthorised personnel.

Provision of safe ladder access (consider use of fixed aluminium access stairs). Ensure ladders are secured and use restricted to access provision and works of short duration.

Provision of safe working platforms (correct fittings, bracing, ties, adequate width, boarding, guard rails, toe-boards, brick-guards).

Programming works to include early installation of permanent staircases (to reduce ladder usage)

Provision of temporary guardings at exposed leading edges e.g. balconies, low-level windows, stairwells, cellar etc

Provision of fall-protection systems where falls into the building cannot be prevented (e.g. “crash-decks”, “bean-bags”, fall-arrest equipment)

Subsequent works e.g. cleaning, maintenance and repair. If possible specify:-

Low-maintenance materials to reduce maintenance requirements for window frames, fascias, soffits, bargeboards, claddings etc and use of pre-coloured renders to mitigate external re-decoration.

Window designs permitting internal cleaning e.g. “tilt & turn” or “easy-clean” type hinges at second floor level and at first floor level where safe ladder access is not possible e.g. above roof projections.

Installation of satellite-dish mountings during construction.

#### Lifting operations

Lifting operations must be planned (by the “appointed person”), supervised and carried out by trained, competent persons. The level of planning and supervision should be proportionate to the risks associated with the operation. “Lifting plans” should be prepared taking into account issues such as weight/shape of load, ground conditions, proximity to rail line/adjacent structures etc. Loads must not be lifted or suspended above operatives. Outriggers to mobile cranes must be adequately supported i.e. the area and layout of outrigger support must be calculated having regard to the actual loads resulting from the particular lifting operation and the ground bearing capacity. Excavators used as cranes with an SWL above 1 tonne must be fitted with acoustic and visual warning devices and check valves on the main boom. Chains or slings for lifting must not be placed on or around bucket teeth – accessories for lifting may only be attached to a purpose-made point on the machine. Inspection and maintenance of machines should be evidenced by reports.

#### Movement of plant and site vehicles

Accidents are typically caused by reversing vehicles, load-slewing and overturning of dumpers, MEWPs etc. A traffic management plan should be prepared, implemented and developed as the site progresses. A one-way system for plant and vehicle movements should be provided where reasonably practicable, and, if not, dedicated turning areas should be provided with all reversing operations controlled by a banksman. Issues such as speed restrictions, crossing points, signage, pedestrian segregation (on site and at access/egress points), visibility aids and warning devices on vehicles, operating on sloping ground, parking for contractor’s vehicles etc should also be addressed. Maintenance systems should be implemented for checking brakes, steering, lights, hydraulics, seatbelts, safety warning devices etc and all operators should hold evidence of competency and training e.g. CPCS. All persons working in the vicinity of moving plant/vehicles should wear high-visibility clothing.

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### Excavations

All excavations must be adequately supported to prevent collapse and guarded to prevent falls of operatives and materials. Excavations must be inspected in accordance with statutory requirements i.e. before each shift, after any event likely to have affected stability and after any fall of materials or once in any seven-day period. Entry of operatives into excavations must be avoided where possible e.g. by use of “trench fill” foundations. Where entry cannot be avoided, a permit system should be implemented and levels of oxygen and toxic/flammable gases (e.g. methane and carbon dioxide) monitored to ensure a safe working environment before entry and during the operation. Adequate emergency procedures should be prepared including rescue. Depths of all excavations should be kept to the minimum necessary.

### Slips, trips and falls

The site should be kept in good order – clean, tidy and well organised. Pedestrian routes and workplaces should be kept free of obstruction and materials should be stored in a safe and accessible manner. Waste should be removed from work areas as work proceeds and at the end of the working day.

### Working in the sun

Ultraviolet rays in sunlight may cause sunburn, skin blistering and may lead to skin cancer. Wear suitable clothing including head protection and use sunscreens on exposed areas such as face, arms and neck. Skin should be checked regularly and medical advice sought regarding any skin changes or abnormalities.

### Noise

In accordance with the Control of Noise at Work Regulations 2005 (in force April 2006), the action levels at which noise controls are determined have changed. The new levels are:

#### Lower Exposure Action Value

Daily or weekly exposure 80dB

Peak sound pressure 135dB

#### Upper Exposure Action Value

Daily or weekly exposure 85dB

Peak sound pressure 137dB

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Exposure Limit Value (these must not be exceeded)

Daily or weekly exposure 87dB

Peak sound pressure 140dB

You must estimate the level of noise employees are exposed to. This should be based on measurements, information from other reliable sources or information provided by suppliers of machinery. Where the assessment shows that an employee is subjected to more than 80dB(A), see the actions in the table below:

Daily Exposure Level - dB(A)	Action Required
<80	Low level risk – reduce noise as far as reasonably practicable
Between 80 and 85	Make ear defenders available to all operatives
Above 85	Enforce the use of correct ear defenders Set up hearing protection zones and mark them correctly Provide information and training to employees

Certain equipment e.g. cartridge tools may exceed the peak sound pressure of 135dB (lower exposure value) 137dB (upper exposure value) and 140db (exposure limit) and use will require use of hearing protection even though the averaged daily exposure level may not be exceeded.

#### Dust

Dust will be created during the construction works which, as well as being harmful to operatives may create environmental nuisance to local residents. Risk assessment should be undertaken in accordance with COSHH regulations and suitable PPE and RPE provided to operatives to avoid inhalation. Damping-down and ensuring lorries are fully sheeted before leaving site will mitigate dust generation.

#### Hand-Arm Vibration

Avoid use of vibrating equipment where possible e.g. hand-held breakers, angle grinders etc. Where use cannot be avoided, manufacturers' guidance should be followed with regard

to permissible usage times, vibration damped tools should be used and job rotation implemented whenever possible. Operations such as “chasing”, “scabbling” etc should be avoided. Concrete breaking should be undertaken with suitable plant fitted with appropriate accessories.

#### Manual handling

Where possible, avoid manual handling of heavy or awkwardly shaped objects e.g. heavy blocks, kerbs, paving slabs, cills, lintels etc and utilise mechanical lifting methods. Where it is not reasonably practicable to avoid use of blocks over 20kg, provision should be made for mechanical handling or for handling and laying by two operatives. Manual handling risks are still significant with blocks weighing less than 20kg and should be reduced where possible e.g. by specification of lightweight blocks. Kerbs and paving slabs should be lifted by mechanical means e.g. vacuum lift systems (do not lift with 2-person “tongs” which add a further 15kg to the typical 67kg weight of a kerb or slab - already too heavy to be safely carried by 2 persons). All operatives should be trained in basic manual handling techniques and, following risk assessment, information on any residual risk should be conveyed to operatives and reinforced with toolbox talks.

#### Working with cement

To prevent dermatitis and cement burns, suitable PPE must be worn when handling wet cement and adequate welfare facilities provided on site including provision of hot and cold running water, basins in which forearms can be immersed, soap and towels. Operatives should be encouraged to report any occurrence of dermatitis and a competent person should carry out regular skin inspections where there is residual risk. Where possible use pumped concrete to reduce risk of skin contact.

Appendix D – Photographs



Front elevation



View from King Street