

# Methodology for construction of single classroom extension and demolition of portacabin classroom

## Fleetwood Lane School, Holbeach



|                        |                               |
|------------------------|-------------------------------|
| <b>Project Title</b>   | <b>Fleet Wood Lane School</b> |
| <b>Contract Number</b> | <b>312125</b>                 |
| <b>Prepared By</b>     | <b>P Jenkinson</b>            |
| <b>Date</b>            | <b>17/10/2024</b>             |
| <b>Reviewed</b>        |                               |

# **Lindum BMS**

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## 1.0 INTRODUCTION

The methodology for working within the school grounds of Fleetwood Lane Primary School Fleet constructing a single story classroom extension

This methodology sets out how the risk profile of the project will be managed and controls will be translated into actions in the field and means by which they will be monitored.

All associated risk assessments for individual tasks will be included as an appendices to the main methodology as they are submitted and approved.

### The site and surrounding area.

The site is located on an area of land within the existing school grounds of Hazlewood Lane Fleet Holbeach PE12 8NN

## 2.0 SITE COMMUNICATION

Contracts Manager - Paul Jenkinson

Site Manager - TBC

| Communication Method                 | Frequency   | Attendees                                                                            | Risk points for discussion                                                         |
|--------------------------------------|-------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Contract Meetings                    | Monthly     | Contract Managers and Site Managers                                                  |                                                                                    |
| Contractor / School                  | Weekly      | Schools Nominated Person<br>Contracts Manager,<br>Site Manager,<br>Quantity Surveyor | Works affecting the operation of the school and there staff, Children and visitors |
| Contractor / Sub Contractor Meetings | Monthly     | Sub-Contractor,<br>Contracts Manager,<br>Site Manager,<br>Quantity Surveyor          | .                                                                                  |
| Toolbox Talks                        | As required | All site personnel including Sub - Contractors                                       | Toolbox talks will be used to inform all site personnel of key information         |
| Site Induction                       | As required | New employees and Contractors to site                                                | Health and Safety procedures and site specific rules                               |
| Site Manager Daily Diary             | Daily       | Site Manager                                                                         | Records daily activity on site.                                                    |

### 3.0 PLANNING CONSENTS

This construction methodology shall be submitted as part of the planning application to demonstrate how construction activities will be managed on site to minimise impact on the school itself and the wider locality.

## 4.0 DESCRIPTION OF WORKS AND WORKING HOURS

### Working Hours

The project comprises:

- the construction of a single classroom extension to the existing school building to provide accommodation being lost by the removal of a life-expired demountable classroom.
- modifications to the principal school entrance to enhance school security and safeguarding of the children.
- the consequent relocation of 3 no. parking spaces lost by construction of the new classroom extension.
- demolition and removal of the existing demountable classroom at the rear of the school.
- works to the drainage at the rear of the school to alleviate flooding experienced under severe rain conditions.

The site “core hours” will be Monday – Friday 7.30am until 5pm, Saturday, Sunday and work on Bank Holidays will not be permitted unless prior consent is given.

Prior approval will be sought from the council for `out of hours` working, such as earthworks or concrete pouring which can be seasonal and weather dependant.

For reasons of public safety and site logistics, additional weekend and Bank Holiday working may be required. Lincolnshire County Council will be contacted for consent prior to the undertaking of any additional working.

## 5.0 CONSTRUCTION PHASING

- Installation of Heras fencing and setting up site compound and contractor welfare facilities.
- Site clearance and foundation works
- Super structure works
- External works
- Demolition of existing porta cabin classroom
- Landscaping

## 6.0 Risk Profile - Identification of Significant Risks

### 6.1 Construction Site Set Up and Good Housekeeping.

In planning the construction site layout at Fleetwood Lane Primary School Fleet, the following considerations have been taken into account:

- Temporary site screening will also be used including open mesh fence panels and solid hoarding.
- All site hoardings will be inspected on a regular basis and repaired when required.
- All work areas will be kept in a clean and tidy condition to prevent the migration of site waste.
- Wheel washing facilities will be available at all times to prevent migration of site contamination onto the public highway.
- Skips will be enclosed and exchanged frequently to prevent the build-up of site waste.
- Food waste will be removed daily to prevent the presence of rodents.
- Any waste that is susceptible to spreading by the wind will be immediately transferred to the enclosed skips.
- Open fires are prohibited at all times and the housekeeping regime alongside fire risk assessments will avoid any unintentional fires. The site will comply with the requirements of the local fire authority.
- Thought has been given to the location of the site Compound and Accommodation avoiding disturbance to the adjoining residents and Neighbours.
- A temporary carpark will be formed to compensate for loss of staff parking during the construction works keeping cars of the existing highway

### 6.2 Site Security

The Lindum BMS Site will be fully fenced to ensure that there can be no unauthorised access on to Lindum BMS' site. No construction activities will take place until Lindum BMS have erected their own fencing.

CCTV will be installed to monitor the Lindum BMS Site, which will be monitored 24 hours per day, via Lindum Security.

### 6.3 Traffic Management and Site Plant Movements

Construction traffic arriving at site will be required to use the Temporary site entrance located of the emergency access entrance to the school site. Parking will be provided for contractors within the Lindum BMS Site Compound area. Loading and unloading will take place within the site compound in designated areas.

Deliveries to site will be coordinated to avoid busy times when pupils are coming to and leaving school, currently anticipated to be 08.15 and 09.15 and 15.00 to 16.00. This can be refined by discussion with the school.

## 6.4 Waste Management

All waste will be removed to suitable enclosed / covered skips, to ensure that debris cannot be disturbed by wind etc. Skips will be emptied regularly to ensure that debris will not build up on site.

Skips will be located in a designated area.

## 6.5 Noise and vibration

During the construction phase it is possible that noise and vibration will be caused during construction activities by:

- Traffic movements
- Plant movements
- Excavating operations
- General construction activities

Noise and vibration will be limited to the core working hours previously defined.

Contractors must use best practice to minimise noise and vibration. This is to include using appropriate plant and equipment for the task.

The maintenance and location of plant will be planned to minimise noise levels and screening will be used where necessary.

Adherence to noise limits should be included in general induction training for site operatives and specific training for staff having responsibility for particular aspects of controlling noise from site.

- Use of the most environmentally acceptable and quietly operating plant and equipment appropriate for the work maintained on a regular basis to ensure the emission levels are maintained.
- All plant and equipment will be turned off and isolated when not in use.
- All pneumatic tools will be fitted with silencers or mufflers.
- The excavation and demolition of existing structures will, whenever possible, be undertaken without the use of pneumatic tools.
- Whenever possible, the use of hydraulic attachments or other means of crushing concrete will be used in preference to pneumatic breakers.
- Care will be taken when erecting or striking scaffold to avoid impact noise from banging steel. All operatives will be inducted on the importance of handling scaffold to reduce noise to a minimum.
- Deliveries will be programmed to arrive during daytime hours only and at times outside of those peak drop-off and pick-up periods at the start and end of the school day. Delivery vehicles will be routed so as to minimise disturbance to local residents. Care will be taken when loading and unloading vehicles to minimise noise. Delivery vehicles will be prohibited from waiting or parking on the highway or within site with their engines running.
- The use of site generators has been greatly reduced by the ability to ensure mains supplied welfare areas and compound. The use of portable generators for general site operations will be kept to a minimum. Generators will not be left running when not in use and located away from all site boundaries with drip trays used at all times. Only well maintained generators will be available with pre use check completed to

ensure no covers are loose and all sound deadening accessories i.e. exhaust systems and shrouds are in good order.

A positive approach will be taken to ensure the most appropriate piece of plant and equipment is utilised to reduce the risk from unacceptable noise and vibration. This will include:

- Drawing suppliers' attention to the requirements of the below and the trigger values of 80dB (lower exposure) action values, 85Db (upper exposure) action value and 87Db (exposure limit) value of all operatives involved within the process.
- Comparing the noise information declared by the manufacturer to identify low-noise machines that would be appropriate to the task.
- Requiring a statement from all companies who are tendering or supplying, saying if their machinery will meet the above criteria when used in conjunction with the task in hand.
- Discussing noise issues with the supplier of the machine. This may influence the design of future low-noise machines.
- When it is necessary to utilise noisy machinery, keep a record of the reasons for decisions made to help with the preparation of future machine specifications with information on where improvements are necessary.
- Discussing machinery needs and noise emission levels with safety or employee representative(s).
- Considering at an early stage how new or replacement machinery could reduce noise levels in the workplace over and above using existing plant and machinery.
- Asking the suppliers about the likely noise levels under the particular conditions in which the machinery will be operated, as well as under standard test conditions. If the same questions are asked to all suppliers the information can be compared. Noise output data will only ever be a guide as many factors affect the noise levels experienced by employees, but it will help assist in choosing the correct equipment.
- Purchase or hire only from suppliers who can demonstrate a low-noise design, with noise control as a standard part of the machine, not as a costly optional extra.
- Keep a record of your decision process, to help show that you have met your legal duties to reduce workplace noise.
- Ensure advice is obtained from the manufacturer on maintenance arrangements to ensure the machine continues to operate properly and does not get louder over time.
- Ensuring the flow chart below is adhered to wherever possible.
- The use of acoustic barriers or shields where required. This will be determined after a risk assessment of each process, highlighting issues such as proximity of neighboring properties, proximity of pedestrians and other operatives. Barriers can be bespoke, using specific acoustic barriers where required or use of existing

structures such as brick walls or other sound absorbing materials readily available on site. Effectiveness of the acoustic barriers will be monitored during the work process.

### **Vibration Management**

All works will be carried out in accordance with the general recommendations of **British Standards BS 5228: Part 2: 2014, a code of practice for "Noise and Vibration Control on Construction and Open Sites"**. Part 2 of BS 5228 provides recommendations for methods of vibration predication, control and methods for assessing its effects on the environment relating to construction work and operations which generate significant vibration levels. A copy of Part 2 of BS 5228 will be available on site and located within the site office.

Monitoring will be implemented in accordance with BS 5228 including before, during and after the operations to ensure no damage. All records will be maintained on site.

Whilst the vibration levels are not expected to be significant, the construction activities with the greatest potential to result in perceived vibration effects at nearby properties will relate to piling works. Nuisance impacts of piling will be limited by ensuring effective public liaison and communications. The construction vibration action level provided in Table 2.0 below relates to typical site construction activities, and is based upon guidance provided in BS 5228: Part 2.

**Table 2.0 Vibration action levels**

| Vibration level              | Effect                                                                                                                                                                        |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1.0 mm.s<sup>-1</sup></b> | It is likely that vibration of this level in residential environments will cause complaint but can be tolerated if prior warning and explanation has been given to residents. |
| <b>10 mm.s<sup>-1</sup></b>  | Vibration is likely to be intolerable for any more than a very brief exposure to this level.                                                                                  |
| <b>15 mm.s<sup>-1</sup></b>  | Onset of possible cosmetic damage to residential or light commercial buildings                                                                                                |

Where vibration levels exceed the action level of 10 mm.s-1 the following escalation mitigation techniques will be considered and where appropriate implemented including:

- Where vibration is found to exceed safe levels, work methods and/or equipment will be assessed and any reasonable or feasible measures put in place.
- Review of the plant type, equipment type and method used to reduce/minimise vibration.
- Coordination with nearby premises for work tasks that are likely to create excessive vibration.
- Stopping of work until an acceptable means of completing the task has been identified.

Site monitoring will be carried out when activities with a high potential to create excessive vibration are being carried out and during prolonged periods. The daily site diary will be used to record all information relating to vibration management.

The site management team will be responsible for ensuring that construction activities do not pose any harm to the environment, structures and local residents. This includes a

responsibility to utilise plant, equipment, techniques, working patterns and timescales to the mitigate impacts of vibration. Vibration levels will be monitored during the work.

It is the responsibility of all site operatives and subcontractors to work in the specified manner, timeframe, use and maintain plant and equipment to minimise the impact of vibration. Where plant and equipment is hired the hire company will be responsible for ensuring that the plant and equipment is safe and well maintained.

Measures to be implemented when using plant and equipment for the purposes of managing vibration include:

- The use of low vibration equipment will be prioritised at all times.
- Rotary / impacting machinery to be housed on anti-vibration mountings.
- Piling operations carried out in a manner that minimises the transmission of vibration.
- Jackets to be used in pneumatic drills.

Other vibration control measures to be implemented will include:

- No explosives to be used on site
- Locate plant and equipment away from the site boundary wherever possible.
- Make use of plant, equipment and methods which minimise vibration.
- Adhere to any vibration limits that have been set.

## 6.5 Lifting Operations

Mobile cranes and Forklift lifting equipment will be required during the construction works.

Lindum's Policy is that all lifting operations must be carried out in accordance with BS.7121. Lifting operations must be planned by a trained and competent "Appointed Person".

If Lindum BMS are carrying out crane lifting operations we will follow the criteria for a **contract lift** giving a suitable lead-in time for the preparation of the following documentation:

- Lifting Plan.
- Method Statement.
- Risk Assessment.

The Lifting Plan prepared by the Appointed Person must cover the following areas:

- Introduction.
- Project Outline – with particular reference to lifting in close proximity to a working school
- Crane details – duty charts. Lift details – how the load(s) are to be attached – attaching/detailing load difficulties.
- Lifting Accessories.
- Lifting Personnel – driver, lift supervisor, slinger/signaller(s).
- Ground Conditions – crane location, outrigger mats.
- Communication between driver and slinger/signaller(s).
- Weather – wind.
- Overhead obstructions, adjacent buildings, path of the load, protection, no lifting over people.
- Clearances – the area chosen must be sufficient to allow for safe operation and to avoid any trapping points (minimum 0.6m)

Where a lifting operation is being carried out without the use of a crane, for example using a telehandler, a non-crane lifting plan will be completed, this will be available on site.

## 6.7 Dust

Dust may be created by general construction activities. In order to ensure that any dust generated by site operations does not affect the school and surrounding properties the Lindum Dust Policy (App.2) will be followed.

The potential to produce dust will be minimised by implementing the following:

- Site Planning
  - Dampening of exposed soil and material stockpiles using sprinklers and hoses when necessary to prevent dust particles becoming airborne.
  - Stock piles of soils and materials will be located as far away as possible from sensitive properties, taking into account prevailing winds.
  - Surface areas of stockpiles will be minimised (subject to health and safety constraints regarding slopes and gradients) to reduce area of surface exposed to wind pick up.
  - Mesh Heras fencing with debris netting to be erected around the works area to help mitigate the migration of dust.
  - The use of road sweepers on a regular `as required` basis will ensure all roads remain clean. In the early stages of the development, prior to the road construction, clean stone access routes and hard standings will be provided for all site traffic to ensure the cleanliness of the existing parking areas and offsite highways
- Construction Traffic
  - Access roads will be watered as necessary using a water bowser and surfaces kept in good order. Where possible all permanent access roads will be constructed prior to commencing superstructures.
  - Regular inspection of local highways and site boundaries to check for dust deposits will be carried out twice daily and recorded. Road sweepers organised when required. Road sweeper's deposits will be disposed of, off site, in accordance with waste management legislation.
  - Speed limit on site will be restricted to 5mph.
- Construction activities

### **Hierarchy to follow when managing dust generated by general construction activities.**

- **FIRST STAGE - ELIMINATE DUST BY REMOVING THE HAZARD**  
Can be done by:- pre-cutting materials before reaching site – this may include pre-cut or pre-assembled units such as:
  - Door and window sets
  - Pre-cut timbers
  - Pre formed/fabricated roof trusses
  - Pre-cut block and bricks
- **SECOND STAGE - ISOLATE BY SEPARATING PEOPLE FROM THE DUST**  
Minimise people's exposure to dust by setting up designated areas:

- Cutting areas or zones
- LEV systems
- Providing someone e.g. a designated cutting person – trained to wear, face fit tested or mechanical respirator
- External cutting areas with dust collection/suppression
- **THIRD STAGE - CONTROL DUST**  
Provide appropriate test and Personal Protection Equipment and appropriate tools:-
  - H or M type vacuum units are available for each Lindum site. Subcontractors who create dust will supply their own vacuum and inspection records
  - On tool collection. **All** chop-saws cutting timbers, plastics, plaster boards etc., will be fitted with vacuums or bag collection systems
  - Water suppression
  - Use a water bottle fitted to Stihl saws when mechanical cutting kerb stones, bricks, tiles etc.
  - Handheld water sprays to dampen the dust and sweeping with a brush must only be used as a last resort
- Regular visual checks and routine maintenance to minimise the release of fumes on initial start-up of plant and machinery.
- Dust suppression / extraction will be used on all tools with the potential to release dust.
- No burning of any material will be carried out on sit

## 7.0 EMERGENCY RESPONSE PLAN

We will ensure access for emergency vehicles is maintained at all times.

## 8.0 MANAGEMENT OF CONTRACTORS

All contractors and sub-contractors will be made aware of the Construction Methodology for working near to a working school.

All contractors / sub-contractors are required to provide Lindum BMS with a copy of their latest Health and Safety Policy, method statements and risk assessments.