

## Health and safety plan

For notifiable projects under CDM, if you are the principal contractor you are required to prepare, develop and implement a written plan which sets out how health and safety will be managed during the construction phase.

**The following section contains an example of a health and safety plan**



# *Example health and safety plan*



## Health and safety plan

The works will take place at (site address) which includes the construction of two detached two-storey dwellings traditionally built with pre-stressed pre-cast concrete floors, trussed roofs and associated ground works.

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## 1.0 Introduction

### 1.1 Project description and key dates

<b>PROJECT</b>	<i>Insert name of project</i>
<b>PROJECT NUMBER</b>	<i>Insert project number</i>
<b>CONTRACT START DATE</b>	<i>Insert start date</i>
<b>CONTRACT DURATION</b>	9 Months
<b>SUMMARY OF WORKS</b>	<p>The works will take place at:</p> <p><i>Insert site address</i></p> <p>The works include:</p> <p>The construction of two detached two-storey dwellings traditionally built with pre-stressed pre-cast concrete floors trussed roof's and associated ground works.</p>

## 1.2 Key contact details

### **CLIENT**

Name:

Address:

Phone:

Email:

### **ARCHITECT**

Name:

Address:

Phone:

Email:

### **QUANTITY SURVEYORS**

Name:

Address:

Phone:

Email:

### **CDM CO-ORDINATOR**

Name:

Address:

Phone:

Email:

### **PRINCIPAL CONTRACTOR**

Name:

Address:

Phone:

Email:

### **SAFETY ADVISER**

Name:

Address:

Phone:

Email:

### **1.3 Extent and location of existing records and plans relevant to health and safety on site**

In relation to these works, the following documents are contained in the company's health and safety folder within the site office:

- Health and safety policy
- RIDDOR reporting arrangements
- Risk assessments
- Training records
- Plant maintenance and inspection records
- COSHH safety data information sheets
- Service mark up drawings including relevant contact details

## **2.0 Site health and safety management plan**

### **2.1 Programme of works highlighting residual risks which need to be managed**

*(An example of a programme of works set out in the form of a Gantt chart has been provided on the CD supplied with the health and safety folder.)*

### **2.2 Management structure and responsibilities**

The responsibilities of the site management team such as the site manager, site foreman and health and safety adviser can be found within the company's health and safety policy within the health and safety folder in the site office.



## 2.3 Health and safety targets for the project – setting standards

- This project will be completed with no major injury accidents.
- All workers will attend appropriate tool box talks and this will be recorded and monitored.

## 2.4 Arrangements for:

### a) **Regular liaison between the architect, principal contractor and client**

This is achieved via progress meetings, which will include a health and safety item on the agenda. (It is expected that at least 4 meetings will be held throughout duration of the project).

The discussions and actions arising from each meeting will be noted and distributed to all interested parties for further dissemination within their respective organisations.

The site foreman will carry out toolbox talks on site on the topics detailed in appendix C.

When appropriate the arrangements for communicating with workers who speak English as a second language will be followed. These are detailed within the company's health and safety policy in the health and safety folder which is located in the site office.

The site foreman or site supervisor will consult directly with subcontractors, suppliers, the site manager, the public (including neighbours) and local primary schools if appropriate.

**b) Consultation with the workforce**

Employees and sub-contractors are encouraged to raise health and safety issues and concerns with the site foreman on an ongoing basis and during toolbox talks.

Safety data information sheets (SDIS) will be made available to any employee or sub-contractor who wishes to see them.

**c) Handling design changes during construction phase**

The site manager will consult with the client, architect and CDM co-ordinator if any significant design changes arise during the course of construction which give rise to additional significant risks. (eg. the hollow core floor slabs will be a contractor design). These can be discussed during the progress meetings.

**d) The selection and management of sub-contractors**

The selection and control of sub-contractors will be referred to within the company's health and safety policy, which will be kept in the company's health and safety folder which is located in the site office.

**e) The exchange of health and safety information between contractors**

All health and safety information will be communicated to sub-contractors via the site manager during progress meetings. Any health and safety issues the sub-contractors may have can be raised with the site manager at any time.

**f) Arrangements for site security/access**

The site security requirements identified in the site security risk assessment will be fully implemented.

**g) Site induction**

All those working on site will be briefed during the induction stage on the main risks associated with the site and relevant information which can be found in appendix A. The site foreman will check for evidence of competence when personnel arrive on site which may include training records. Visitors will be given a brief site induction – they will be accompanied at all times. A young person's risk assessment will be carried out at this stage for all personnel who are under 18 years of age and this will be held in the company's health and safety folder located in the site office.

**h) On site training**

Where appropriate, on the job training will be given under the supervision of a competent person. Details of training will be recorded and held in the company's health and safety folder within the site office.

**i) Welfare facilities and first aid arrangements**

Welfare facilities such as site office, canteen facilities and a toilet connected to a foul sewer will be on site within a compound for the duration of the contract. The welfare facilities provided will contain hot running water, heating and facilities for heating food.

During the induction, all employees, subcontractors and visitors will be advised of the location of the welfare facilities and canteen.

There will be an appointed person/first aider on site, along with a fully stocked first aid kit located in the site office. There will be a mobile phone available on site to summons an ambulance if needed. Details of the local hospital will be located within the site office.

The name of the First Aider is:

To prevent the infestation of rodents all food will be consumed within the designated canteen area. Personnel are not permitted to consume or be under the influence of alcohol or illegal substances on site.

**j) Reporting of accidents, incidents and near misses**

All accidents must be recorded (see health and safety folder located in the site office). An accident book can be used for this purpose. All accidents will be investigated to prevent any re-occurrence.

The site foreman will be responsible for completing a RIDDOR form where necessary and will advise the site manager of all accidents, incidents and near misses. All RIDDOR forms will be forwarded to HSENI by the site manager (this can be done online).

**k) Production and approval of method statements**

The residual risk register provided by the designer, the SDIS and the risk assessments will all be used to inform the method statements for the project. Method statements are contained in appendix B.

(The residual risk register, safety data information sheets and risk assessments will be held within the company's health and safety folder located in the site office).

In addition, specialised sub-contractors (e.g. pre-cast floor suppliers) are required to produce site specific risk assessments and method statements which will be reviewed by the site manager. All sub-contractors will be expected to work in accordance with the site rules and their method statements.

The site manager/site foreman will review and explain all method statements to the appropriate personnel, who will be carrying out or affected by the particular work activity.

The site manager will arrange for any additional risk assessments and method statements to be written if necessary. All method statements are located in appendix B and risk assessments can be found within the company's health and safety folder within the site office.

**l) Site rules**

All those working on this project will be briefed on the site rules during the induction stage (see appendix A).

**m) Fire and evacuation procedures**

Fire and evacuation arrangements will be displayed in the site office or canteen.

## 3.0 Arrangements for controlling significant site health and safety risks

A number of detailed method statements have been prepared by the site manager for controlling significant site risks (see appendix B). The risk assessments can be found within the company's health and safety folder located in the site office.

## 4.0 Health and safety file arrangements

### 4.1 Layout, format and content

Information for the health and safety file will be agreed with the CDM co-ordinator at the start of the construction project (see appendix D).

## 4.2 Arrangements for collecting and gathering information

The information for the health and safety file will be prepared and collated throughout the contract by the site manager and forwarded to the CDM co-ordinator. The CDM co-ordinator will finalise the health and safety file and make it available to the client on completion of the project.

## Health and safety plan - record of communication

It is the responsibility of the site manager/site foreman to ensure that all sub-contractors are familiarised with the appropriate sections of this health and safety plan relevant to the work in which they are involved.

Sub-contractors must sign off on the following:

1. That they have read and understand the appropriate sections of the health and safety plan.
2. That any additions or corrections have been put in writing to the site manager.

Name	Company	Signature	Date
J. SUREBRICK	Sure Foundations Ltd	<i>J. Surebrick</i>	20/01/11
R. LEVELLER	Floors and Co. Ltd	<i>R. Leveller</i>	14/03/11
B. JOINER	Roofing Solutions Ltd	<i>B. Joiner</i>	31/03/11



# *Appendix A - Site induction*



A PRACTICAL GUIDE FOR THE SMALLER CONTRACTOR



## Site induction

Induction is not intended to provide general health and safety training, but it should include a site-specific explanation of the following (CDM Regulations 2007):

- (a) senior management commitment to health and safety;
- (b) the outline of the project;
- (c) the individual's immediate line manager and any other key personnel;
- (d) any site-specific health and safety risks, for example in relation to access, transport, site contamination, hazardous substances and manual handling;
- (e) control measures on the site, including:
  - any site rules,
  - any permit-to-work systems,
  - traffic routes,
  - security arrangements,
  - hearing protection zones,
  - arrangements for personal protective equipment, including what is needed, where to find it and how to use it,
  - arrangements for housekeeping and materials storage,
  - facilities available, including welfare facilities,
  - emergency procedures, including fire precautions, the action to take in the event of a fire, escape routes, assembly points, responsible people and the safe use of any fire-fighting equipment;
- (f) arrangements for first aid;
- (g) arrangements for reporting accidents and other incidents;
- (h) details of any planned training, such as 'toolbox' talks;
- (i) arrangements for consulting and involving workers in health and safety, including the identity and role of any:
  - appointed trade union representatives,
  - representatives of employee safety,
  - safety committees;
- (j) information about the individual's responsibilities for health and safety.





# *Appendix B - Method statements*



A PRACTICAL GUIDE FOR THE SMALLER CONTRACTOR

## Method statement for excavations:

- (a) strip foundations
- (b) storm and sewerage to connect into existing manholes

### *Site Details*

**Contractor:** The name and contact details of the contractor.

**Project name and site address:** Insert relevant details.

**Site manager:** Name, telephone number and email address.

### *Transfer of information from client/contractor to groundworks sub-contractor*

- The site investigation will establish the engineering properties of the ground on which the structure will be founded and provide details on bearing capacity. This information will be communicated to the groundworks sub-contractor.
- If the site investigation identifies any contamination of the ground from previous industrial uses, details of this will be given to the groundworks sub-contractor.
- Provide utility services drawings showing the location of any buried services.
- Where work has to be undertaken close by or beneath overhead lines, enquires will be made with the line operator to establish whether the line can be made dead or diverted. Where lines remain live ensure that plant is selected or modified so that it cannot reach the lines. Ground works sub-contractor to comply with guidance note GS 6 'Avoidance of danger from overhead power lines'.

## *Attendances*

Prior to any work taking place on site the client / contractor shall: -

- Use cable detection tools to accurately identify service locations on the ground and mark same.
- Ensure that vehicle routes are carefully planned so that plant does not have to approach close to the edge of the excavation. These routes need to be clearly marked i.e. baulks of timber and/or fencing.
- Consider site access from the public road onto and around the site before vehicles arrive on site, taking into account the site traffic management plan, the designated work area for delivery vehicles and the storage area for materials. Clearly identify and communicate this information to the groundworks sub-contractor.
- Make welfare facilities available to the groundworks sub-contractor.

## *Work activity*

**Pre-start checks:** The pre-start checks must cover the following areas: - availability of plant and equipment to be used; ground conditions; proximity hazards and welfare facilities. Ensure the excavation area has been checked for overhead and underground services prior to the commencement of work.

**Description of the contract:** Excavation and casting of strip foundations (600mm x 1.5m deep excavation). Construction of storm and foul sewers (12m long) falling from a depth of 1.2m to 2.0m and connecting them into existing storm and foul manholes (information taken from working drawings).

**(a) Sequence of work for strip foundation:**

- On this particular site the average depth of excavation is 1.5m. It has been identified that the ground conditions will allow for the trench sides to stand vertically without the use of shutters. Strip foundations are to be excavated and concrete foundations poured on the same day.
- **No operatives are to enter excavation.** The concrete will be poured directly into the excavation and moved using rakes without the workers having to enter the excavation.
- The area to be excavated will be clearly marked on the surface using lime.
- Physical barriers will be erected around the excavation where appropriate.
- The groundworks sub-contractor will liaise with the client/contractor to ensure that any live services on the site have been identified and clearly marked. Where necessary hand-digging measures will be used to expose existing services.
- A 360 deg excavator will be used to dig a 600mm wide by approximately 1.5m deep excavation.
- The material from the excavation will be loaded into a dumper and tipped away from the working area so it does not apply a surcharge to the side of the excavation.
- The dumper will be fitted with roll-over protection and the driver must wear the seat belt. No edge tipping is to take place.
- A banksman will be used to assist in the safe operation of the plant and to observe the area being excavated to ensure there are no undiscovered services.
- Loose soil from both the base and the sides of the trench is to be removed prior to placing concrete using the excavator.

- Formation level to be inspected and passed. The excavation is to be filled with concrete to the required level as set out using a laser.
- Ready mixed concrete will be used. Where the concrete cannot be poured directly into the excavation via the chutes on the concrete lorry, the concrete will be placed in the clean excavator bucket which will then place the concrete in the strip foundations.

**(b) Sequence of work for excavations to lay storm and foul sewers and to connect into existing manholes:**

- A drag box (size 4.0m long by 2.0m high) will be selected to provide support to the sides of the excavation as battering back the excavation is not an option on this site. A 360 deg 15tonne excavator is to be used in conjunction with the drag box.
- There are no significant groundwater problems anticipated on this site but if ingress of water occurs during any time the excavation is open, it will be removed by a pump.
- A banksman is to be used to assist in the safe operation of the plant and to observe the area being excavated to ensure there are no undiscovered services.
- Work will commence at the 1.2m deep end. A 360 deg excavator will be used to excavate the trench to the recommended width (1.2m), pipe alignment and invert. The drag box will be lowered into the pre-dug trench using the excavator.
- Excavated material will be stock piled away from the excavation using a dumper.
- Edge protection will be either connected to the drag box or free standing.
- **Operatives must never use an unsupported section of the trench to gain access.** Access to the excavation will be by means for a secured ladder which extends 1m above the step off level.

- The sewer pipes are to be bedded on pea gravel (granular material), minimum depth 150mm.
- The trench will be progressed by digging ahead of the drag box and the excavator dragging the box forward by pulling on the leading strut. **Workers must work from within the confines of the protected area i.e. inside the drag box to lay the sewers.**
- Before operatives enter the foul manhole to connect incoming pipe, they must use a gas tester to check the atmosphere to identify whether there is a risk of oxygen deficiency, toxic gas, fire or explosion.
- If flammable or toxic gases are present they need to be purged from the manhole and the atmosphere checked to ensure that purging has been effective.
- The drag box will be carefully removed by lifting and dragging the front strut when operatives are well clear.
- The pipe surround (pea gravel over the pipe to a depth of 150mm) will be placed as soon as the pipes have been laid, jointed and inspected. Selected backfill from the trench excavation which is free from stones larger than 40mm and vegetable matter will be used to complete the backfilling of the trench. Mechanical compaction is to be avoided until the fill is at least 450mm above the pipe-work.
- It is the responsibility of the groundworks foreman to check the safety of the excavation:
  1. at the start of the shift;
  2. after any event likely to have affected the strength or stability of the excavation; and
  3. after any material unintentionally falls or is dislodged.
- If excavation work lasts longer than seven days an inspection record is to be completed by the foreman.

**Plant details:** The foreman will inspect the thorough examination certificate for the excavator and the inspection report on the dumper.



## *Personnel*

**Foreman:** The foreman, (Name of Foreman) will identify himself to the site management on arrival at site.

**Banksman, excavator driver and dumper driver:** The banksman and driver's names are:

**Training:** All operatives will be fully trained and copies of training certificates for the following will be available for inspection: slinger/signaller/banksmen; first aider; excavator driver; dumper driver use of gas monitoring equipment and use of cable locating equipment. Operatives / supervisors who require access to sewers must complete confined space training.

**Other site operations / third parties:** where co-operation and co-ordination with other site operations / third parties is required this must be stated.

## *Health and safety management and control measures*

**Personal protective equipment:** All operatives will wear the following: safety wellington boots whilst working with concrete, safety helmet, high visibility vest and gloves.

**Site rules:** All operatives will be informed (via a site induction / toolbox talk) of and expected to comply with the contractor's site rules.

**Specific site hazards:** Any specific site hazards will be identified and dealt with prior to any excavation work.

**Access to the work area:** The provision of a safe means of access to the work area is the responsibility of the contractor / client.

**Falls into excavation:** The groundworks sub-contractor must provide and maintain fencing to prevent operatives from falling into the excavation where required.

**Welfare facilities:** The contractor / client must provide access to the welfare facilities.

### *Amendments and additional information*

**Amendments to the method statement:** Should any part of this method statement require amendment or alteration, this must be notified for agreement by all relevant parties prior to it being enforced.

**Communicate method statement:** Communicate to all relevant parties (via toolbox talk) and ensure it is signed by all personnel.

This method statement was prepared by: J. Surebrick.

Date: 19/01/11.

(Note - this method statement has been developed using the site specific risk assessment, the designer's residual risk register, 'Health and safety in excavations - Be safe and shore' (HSG185), 'Avoiding danger from underground services' (HSG 47), 'Avoidance of danger from overhead power lines' (guidance note GS 6) and 'Safe work in confined spaces' (L010).)

**Method statement record:**

Please sign to confirm you have read and understand this method statement.

Name:	Company:	Signature:	Date:
A. DIGGER	Sure Foundations Ltd	A. Digger	20/01/11
B. BANKSMAN	Sure Foundations Ltd	B. Banksmán	20/01/11
C. DUMPER	Sure Foundations Ltd	C. Dumper	20/01/11
D. SLINGER	Sure Foundations Ltd	D. Slinger	20/01/11

# Method statement for the installation of pre-stressed pre-cast concrete floor slabs

## *Site details*

**Contractor:** The name & contact details of the contractor.

**Project name and site address:** Insert relevant details.

**Site manager:** Name, telephone number and email address.

## *Transfer of information from client / contractor to flooring sub-contractor*

- The person responsible for the provision of craneage must be agreed.
- Proximity hazards such as overhead power lines, third party air space, railway lines, etc., must be identified by the contractor, the necessary permissions obtained and the flooring sub-contractor kept informed.
- The structural stability of the receiving structure must be confirmed.
- Structural obstructions which will foul or hinder the safe operation of the crane or safe placing of the floor units must be removed and eventually replaced by the contractor who is responsible for obtaining the approval of the structural engineer.

## *Attendances*

Prior to any work taking place on site the client / contractor shall: -

- Provide and maintain hard access roads, hard standing for the crane (a 12m x 8m consolidated, level hard standing, capable of carrying the outrigger loads as specified in the Lifting Plan) and stacking area / off-loading area.

- Consider the site access from the public road onto and around the site before vehicles arrive on site, taking into account the site traffic management plan, the designated work area for the delivery vehicles and the storage area for materials. Clearly identify and communicate this information to the flooring sub-contractor.
- Provide and maintain perimeter scaffolding of the working area, together with handrails, guardrails, platforms or staging required for safe access and to prevent operatives from falling.
- Welfare facilities shall be made available to the flooring sub-contractor.
- The provision of passive fall protection must be agreed and in place – this can be achieved by working platforms, staging, crash decks, safety nets, air bags or other soft landing systems.

### *Work activity*

**Pre-start checks:** The pre-start checks must cover the following areas: -

Crane and lifting requirements; work at height; structural stability; ground conditions; proximity hazards and welfare facilities.

**Description of the contract:** Brief description of the work to be completed – may include the number of visits that will be necessary to complete the contract.

**Sequence of work and method of erection:**

- The units will be fixed in sequence (where possible) and placed in accordance with working drawings (see figure 1).
- Fall protection from trailers is required to mitigate a fall as personnel will be required to attach lifters to the concrete units and then clip on the relevant chains. Air bags must be erected around the trailer.
- Where airbags are not a reasonably practical solution, a pole and zip line should be erected to the trailer and a harness with a fixed lanyard be worn to create a work restraint system. This will provide the person on the trailer a working area of 1.5m from the centre of the trailer and it should not be possible to reach the unprotected edge.
- A ladder will be used to gain access to the trailer. The ladder will be tied to the trailer, set at the appropriate angle and extend 1m above the working platform.

- The slinger / banksmen will choke the chains around the floor units approximately 300mm in from each end of each unit, with the open face of the hook facing out toward the end of the slab. Two leg chains with a minimum safe working load (SWL) of 4.25t will be used to lift the floor units. The floor units will be lifted horizontally. Any exception to this must be carried out in accordance with the advice given in the Precast Flooring Federation code of practice.
- If a clamp is used to lift the units instead of chains, the clamp will securely grip the sides of each unit and lift, safety chains will be placed around the clamp and slab before lifting away from the trailer to the building, again under the control of a trained slinger / banksman.
- Where necessary, units can be moved into their final position using crowbars or a small hydraulic jack. *(Other relevant requirements should be detailed eg. whether propping will be required, where the work will commence from etc.)*

**Crane details:** Details to be provided of the crane type (mobile or tower crane), tonnage rating, contract lift or plant hire, name of crane supplier, general location of the crane etc. Communication between crane operative and banksman to be by two-way radios. Only approved lifting equipment with a current test certificate will be used. The installation foreman will inspect the crane documents, all lifting certificates, the thorough examination report for the crane and the record of training for the crane driver prior to the commencement of work.

**Maximum component weights and crane working radius:** The maximum weight/radius for each component type must be stated and any recommendations from the crane supplier must be considered. The appointed person must ensure the heaviest lift is within the crane safe lifting radius.

**Deliveries and site access:** Floor units to be delivered to the site on articulated lorries, and directed to designate loading areas. The contractor is to be given details of the number and size of lorries to be used and any access requirements.

**Site cutting of floor units:** Pre-cast concrete units should not be cut or otherwise altered on site without consultation with the flooring sub-contractor's technical department. If cutting is authorised then a diamond tipped petrol cut off saw will be used for cutting. When cutting is to take place appropriate PPE (see section on PPE below) will be worn and other people nearby made aware of any hazards associated with the cutting tasks i.e. – all nearby personnel must wear PPE including eye and ear protection in addition to dust masks (to avoid inhalation of silica dust).

## *Structural stability*

**Stability and bearings:** The contractor (or the domestic client if they are acting as contractor) must ensure that all load bearing masonry walls are fully cured and ready to receive concrete units. No units will be placed onto bearings that the flooring sub-contractor's foreman considers to be in an unsafe or unfit condition. External brick or blockwork courses should be either level with, or no more than 225mm below the bearing level coursework. All non load bearing walls should be left 225mm below the level of the bearing walls so that they will not interfere with any lifting equipment, eg. chain slings.

## *Personnel*

**Foreman:** The foreman, (name of foreman) will identify himself to the site management on arrival at site.

**Slinger / signaller (banksman) erectors:** The banksman and erectors names are:

**Training:** All operatives will be fully trained and copies of training certificates for the following will be available for inspection: abrasive wheels; slinger/signaller/banksmen; first aid; appointed persons.

**Appointed person:** Name the appointed person who will be in control of the lifting operations and responsible for preparing the lifting plans.

**Other site operations / third parties:** Where co-operation and co-ordination with other site operations / third parties is required this must be stated.

## *Health and safety management and control measures*

**Personal protective equipment:** All operatives will wear the following: - safety helmet, high visibility vest, gloves and safety footwear.

The following PPE must be used when cutting concrete floor units: safety glasses/goggles; ear defenders; dust mask (PP3). Water dust suppression must be applied to the saw. All operatives and erectors will comply with any other specific site requirements.

**Site rules:** All operatives and erectors will be informed (via a site induction / toolbox talk) of the contractor's site rules and expected to comply with them.

**Specific site hazards:** Any specific site hazards must be identified and dealt with prior to placing operations commencing on site. e.g. provide suitable protection to up-standing steel reinforcing starter bars or provide adequate bearing for props.

**Access to the work area:** The provision of safe means of access to the work area is the responsibility of the contractor / client.

**Positioning of components:** The foreman must give consideration to the robustness of the bearings to withstand the standard methods of positioning to determine the need for properly designed temporary support to the components or additional bracing of the bearings.

**Work at heights:** The contractor / client must provide and maintain perimeter scaffolding of the working area, together with handrails, guardrails, platforms or staging required for safe access and to prevent operatives from falling.

**Leading edge protection:** This is provided by using a passive and collective system e.g. safety nets / air bags etc. Air bags and associated inflation equipment to be installed by flooring sub-contractor.

Air bags must be installed so as to ensure appropriate coverage of the work area. The absolute minimum coverage should be 4.8m ahead of the leading edge and 2.4m behind or to the side where the storey height is less than 4m.



The system must be continually monitored during the operation to ensure the air bags are fully inflated and work suspended immediately in situations of non-compliance.

**Welfare facilities:** The contractor / client must provide access to welfare facilities. The flooring sub-contractor will make a first aid box available.

### *Amendments and additional information*

**Amendments to the method statement:** Should any part of this method statement require amendment or alteration, this must be notified for agreement by all relevant parties prior to it being enforced.

**Communicate method statement:** Communicate to all relevant parties (via a toolbox talk) and ensure it is signed by all personnel.

This method statement was prepared by: R. Leveller.

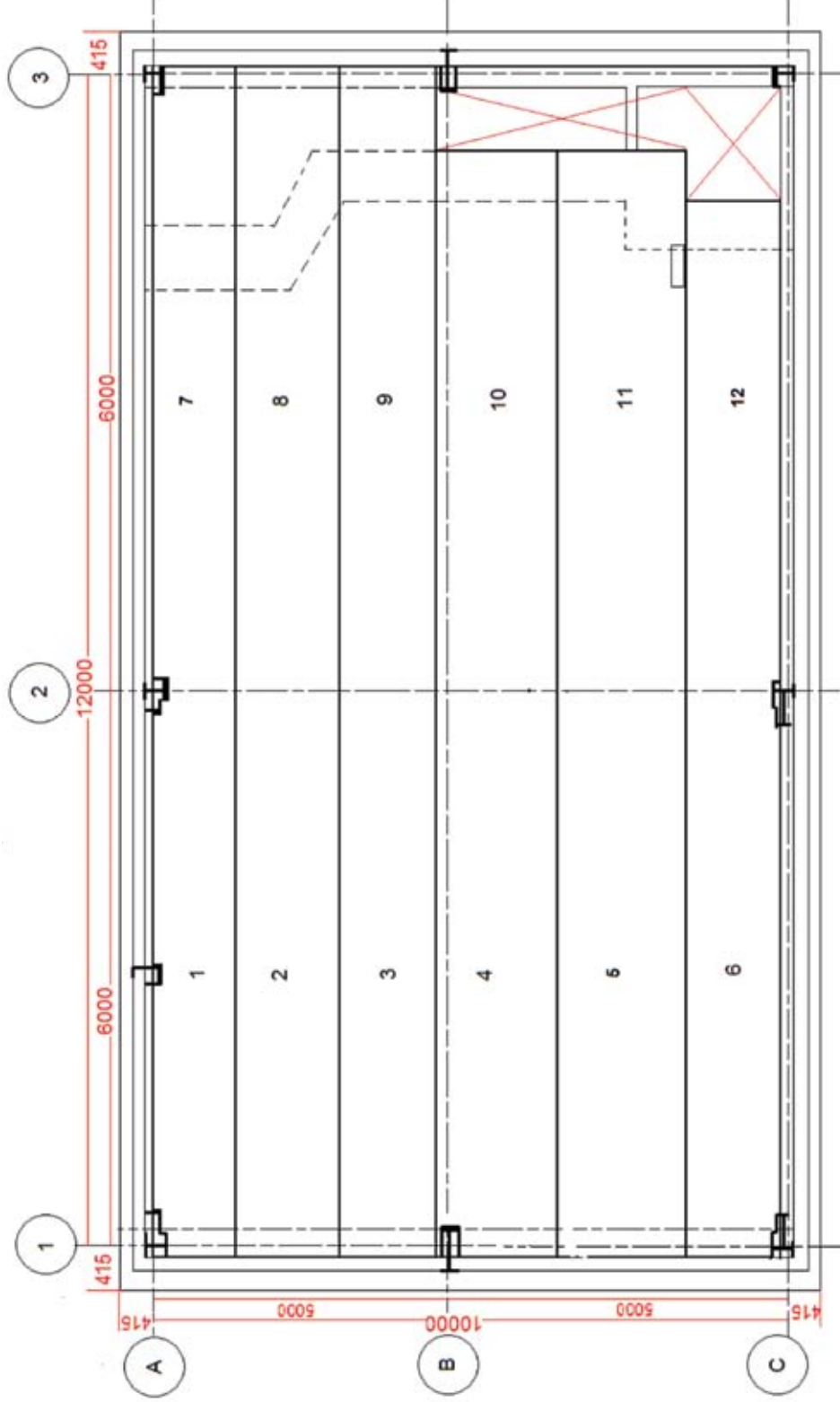
Date: 01/03/11.

(Note - this method statement has been developed using the site specific risk assessment, the designer's residual risk register and the Precast Flooring Federation's code of practice: '*For the safe erection of precast concrete flooring and associated components*'.)

**Method statement record:**

Please sign to confirm you have read and understand this method statement.

Name:	Company:	Signature:	Date:
A. BANKSMAN	Floors & Co. Ltd	A. Banksman	31/03/11
B. SLINGER	Floors & Co. Ltd	B. Slinger	31/03/11
C. DRIVER	Floors & Co. Ltd	C. Driver	31/03/11



*Figure 1: First floor slab layout*

## Method statement for installation of roof trusses

### *Site Details*

**Contractor:** The name and contact details of the contractor.

**Project name and site address:** Insert relevant details.

**Site manager:** Name, telephone number and email address.

### *Transfer of information from client/contractor to joinery sub-contractor*

- The structural stability of the receiving structure must be confirmed.
- Proximity hazards such as overhead power lines, third party air space, railway lines, etc. must be identified by the contractor, the necessary permissions obtained and the joinery sub-contractor kept informed.
- The person responsible for the provision of craneage or materials handling machine must be agreed. The appropriate lifting machine must be selected depending on reach, weight of trusses etc.

### *Attendances*

Prior to any work taking place on site the client / contractor shall: -

- Provide and maintain hard access roads, hard standing for the crane (a 12m x 8m consolidated, level hard standing, capable of carrying the outrigger loads as specified in the lifting plan) and a stacking / off-loading area.
- Consider the site access from the public road onto and around the site before vehicles arrive on site, taking into account the site traffic management plan, the designated work area for delivery vehicles and the storage area for materials. Clearly identify and communicate this information to the joinery sub-contractor.

- Provide and maintain perimeter scaffolding of the working area, together with handrails, guardrails, platforms or staging required for safe access and to prevent operatives from falling.  
Note: Where the perimeter scaffolding top working platform is located at a height 950mm below wall-plate level then the wall can act as fall protection into the building.
- The provision of passive fall protection where the system of work requires it must be agreed and in place before work starts, for example, a safety decking system as shown in figure 1.
- Welfare facilities shall be made available to the joinery sub-contractor.

### *Work activity*

**Pre-start checks:** The pre-start checks must cover the following areas: -

Crane and lifting requirements; work at height; structural stability; ground conditions; manufacturer's technical data (e.g. the weight of each of the trusses); suspension of work during adverse weather conditions (strong winds, heavy rain etc.); proximity hazards and welfare facilities.

**Description of the contract:** A brief description of the work to be completed – this may include the number of visits that will be necessary to complete the contract.

### **Sequence of work and method of erection:**

- The trusses will be fixed in sequence and placed in accordance with working drawings.
- Fall protection from trailers is required to mitigate a fall as personnel will be required to attach chains / slings to the bundles of trusses. Air bags or other soft landing system or staging must be erected around the trailer.
- A ladder will be used to gain access to the trailer. The ladder will be tied to the trailer, set at the appropriate angle and extend 1m above the working platform.
- Where the perimeter scaffolding top working platform is located at a height of less than 950mm below wall-plate level then a safety decking system (lightweight working platform) must be erected at the top floor level to provide an effective passive collective fall prevention system. This is to be installed by the main contractor.
- Where safety decking is not in use the slings used to lift the trusses must be removed whilst standing on the working platform.

- The slinger/ banksman will access the lorry via the ladder and band the trusses into separate bundles in compliance with the crane's or materials handling machine's safe lifting capacity.
- Each bundle will be lifted separately and the slinger/banksman will attach the chains from the spreader bar to the two node points at each side of the truss as shown in figure 2.
- The bundle of trusses will then be lifted onto the wall plate and temporarily braced until needed.
- The joiners will then mark each position of the trusses, as specified on the drawing, along each wall plate.
- The bundle of trusses will be carefully separated by two joiners and the first truss will be lifted into position manually and temporary braced to both wall plates **(Do not manually lift trusses which exceed 95kg)**. The remaining trusses will then also be manually lifted into position and temporarily braced back to the first truss.
- The diagonal bracing will be fixed to the top of the first truss and nailed to the wall plate using 75mm long galvanised nails.
- All longitudinal bracing will be fixed to the trusses, ceiling ties and struts using 75mm long galvanised nails.
- The trusses will then be fixed to the walls and gables by bracing using galvanised metal retaining straps.
- The two joiners will then remove the temporary bracing and inspect all trusses to ensure they are aligned vertically and free from bowing.

**Lifting equipment details:** These should include the crane type (mobile or tower crane), tonnage rating, whether it is a contract lift or plant hire, the name of crane supplier, the general location of the crane etc. Communication between the crane operative and banksman is to be by two-way radios or hand signals if there is a good line of vision. Only approved lifting equipment with current test certificates will be used. Prior to the commencement of work the installation foreman will inspect the crane documents, all lifting certificates, the thorough examination report for the crane and the record of training for the crane driver. This equally applies to the materials handling machine.

**Maximum component weights and lifting machine's working radius:** The maximum weight/radius for each bundle of trusses must be stated and any recommendations from the crane supplier must be considered. The appointed person must ensure the heaviest lift is within the crane or materials handling machine's safe lifting limit.

**Deliveries and site access:** Trusses will be vertically propped and delivered to site on articulated lorries and the drivers directed to designated loading areas. Details to be given of the number and size of lorries to be used with any access requirements clearly specified.

### *Structural stability*

**Stability and bearings:** The contractor (or the domestic client if they are acting as contractor) must ensure that all wall plates are level and adequately secured to the load bearing walls (which must be cured). No trusses will be placed onto any of the wall plates if the joinery sub-contractor's foreman considers this to be in an unsafe or unfit condition.

### *Personnel*

**Foreman:** The foreman, (Name of foreman) will identify himself to the site management on arrival at site.

**Slinger / signaller (banksman) erectors:** The banksman and erectors names are:

**Training:** All operatives will be fully trained and copies of training certificates for the following will be available for inspection; slinger/signaller/banksman; first aider; appointed persons.

**Appointed person:** Name the appointed person to be in control of the lifting operations and who will be responsible for preparing the lifting plans.

**Other site operations / 3<sup>rd</sup> parties:** Where co-operation and co-ordination with other site operations / 3<sup>rd</sup> parties is required this must be stated.

### *Health and safety management and control measures*

**Personal protective equipment:** All operatives will wear the following: - safety helmet, high visibility vest, gloves and safety footwear.

All operatives and erectors will comply with any other specific site requirements.

**Site rules:** All operatives and erectors will be informed of (via a site induction / toolbox talk) and expected to comply with the contractor's site rules.

**Specific site hazards:** Any specific site hazards must be identified and dealt with prior to fixing operations commencing on site, such as the need to ensure steels or lintels are securely fixed in position before trusses are placed on them.

**Access to the work area:** The provision of safe means of access to the work area is the responsibility of the contractor / client.

**Work at heights:** The contractor / client must provide and maintain perimeter scaffolding of the working area, together with handrails, guardrails, platforms or staging required for safe access and to prevent operatives from falling.

**Leading edge protection:** This can be provided by erecting a safety decking system as mentioned above.

**Welfare facilities:** The contractor / client must provide access to welfare facilities. The joinery sub-contractor will make a first aid box available.

### *Amendments and additional information*

**Amendments to the method statement:** Should any part of this method statement require amendment or alteration, this must be notified for agreement by all relevant parties prior to it being enforced.

**Communicate method statement:** Communicate to all relevant parties (via a toolbox talk) and ensure it is signed by all personnel.

The method statement was prepared by: B. Joiner.

Date: 31/03/11.

(Note - this Method Statement has been developed using the site specific risk assessment, the designer's residual risk register, the Trussed Rafter Association's product data sheets and 'Health and Safety in Roof Work' (HSG33).)

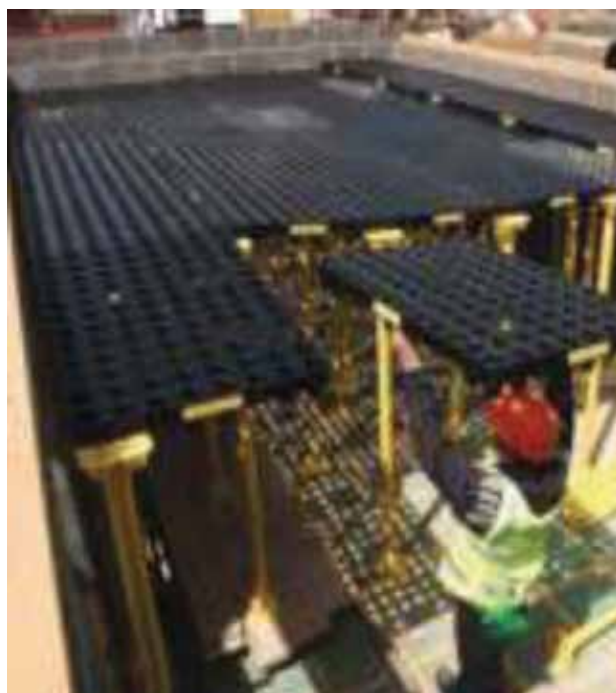


**Method statement record:**

Please sign to confirm you have read and understand this method statement.

Name:	Company:	Signature:	Date:
A. BANKSMAN	A & B Joinery Ltd	A. Banksman	01/04/11
B. SLINGER	A & B Joinery Ltd	B. Slinger	01/04/11
C. DRIVER	A & B Joinery Ltd	C. Driver	01/04/11

*Figure 1: Safety decking system*

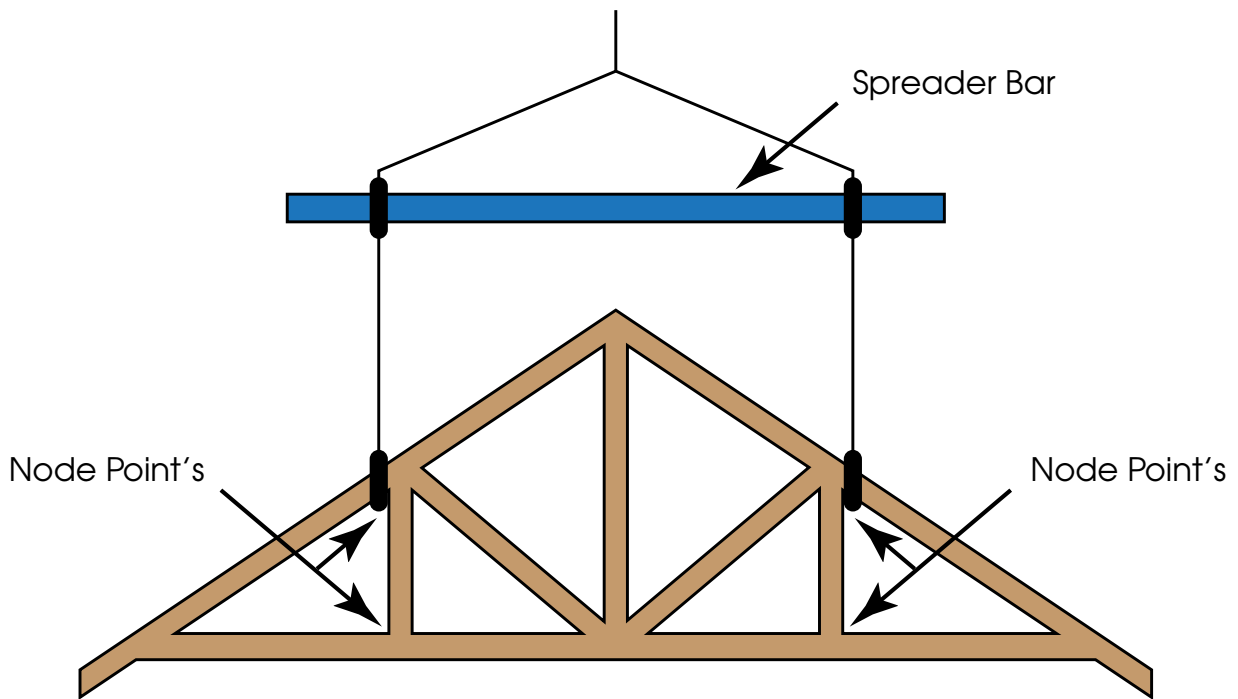


Safety decking system being erected.



Safety decking system now complete providing a lightweight platform and an effective fall prevention system.

*Figure 2 - Good mechanical lifting practice*





# *Appendix C - Toolbox talks*



A PRACTICAL GUIDE FOR THE SMALLER CONTRACTOR

## Toolbox talks

The following toolbox talks will be given throughout the project at the appropriate stages:

### 1. Excavations:

- Demolition
- Existing services
- Methods of trench support
- Plant and machinery cranes and lifting appliances
- Traffic management
- Protecting the public

### 2. Work at heights:

- Ladders/ step ladders
- Scaffolding management
- Roof work
- Site tidiness
- Storage of materials
- Plant, machinery, cranes and lifting appliances
- Hoists
- Protecting the public

### 3. Health:

- Asbestos (if appropriate)
- Dermatitis
- Silica
- Noise
- Vibration
- Weil's disease
- Manual handling
- Hazardous substances





# *Appendix D - Health & safety file*



A PRACTICAL GUIDE FOR THE SMALLER CONTRACTOR

## Health and safety file

### What you must do

Clients, designers, principal contractors, other contractors and CDM co-ordinators all have legal duties in respect of the health and safety file:

- (a)** CDM co-ordinators must prepare, review, amend or add to the file as the project progresses, and give it to the client at the end of project;
- (b)** Clients, designers, principal contractors and other contractors must supply the information necessary for compiling or updating the file;
- (c)** Clients must keep the file to assist with future construction work; and
- (d)** Everyone providing information should make sure that it is accurate, and provided promptly.

A file must be produced or updated (if one already exists) as part of all notifiable projects. For some projects, for example redecoration using non-toxic materials, there may be nothing of substance to record. Only information likely to be significant for health and safety in future work need be included. The NHBC Purchaser Manual provides suitable information for developers to give to householders. You do not have to produce a file on the whole structure if a project only involves a small amount of construction work on part of the structure.

The client should make sure that the CDM co-ordinator compiles the file. In some cases, for example, design and build contracts, it is more practical for the principal contractor to obtain the information needed for the file from the specialist contractors. In these circumstances the principal contractor can assemble the information and give it to the CDM co-ordinator as the work is completed.

It can be difficult to obtain information for the file after designers or contractors have completed their work. What is needed should be agreed in advance to ensure that the information is prepared and handed over in the required form and at the right time.



## The contents of the health and safety file

When putting together the health and safety file, you should consider including information about each of the following where they are relevant to the health and safety of any future construction work. The level of detail should allow the likely risks to be identified and addressed by those carrying out the work:

- (a)** A brief description of the work carried out;
- (b)** Any residual hazards which remain and how they have been dealt with (for example surveys or other information concerning asbestos; contaminated land; water bearing strata; buried services etc);
- (c)** Key structural principles (for example, bracing, sources of substantial stored energy, including pre- or post-tensioned members) and safe working loads for floors and roofs, particularly where these may preclude placing scaffolding or heavy machinery there;
- (d)** Hazardous materials used (for example lead paint; pesticides; special coatings which should not be burnt off etc);
- (e)** Information regarding the removal or dismantling of installed plant and equipment (for example any special arrangements for lifting, order or other special instructions for dismantling etc);
- (f)** Health and safety information about equipment provided for cleaning or maintaining the structure;
- (g)** The nature, location and markings of significant services, including underground cables, gas supply equipment, fire-fighting services etc;
- (h)** Information and as-built drawings of the structure, its plant and equipment (for example, the means of safe access to and from service voids, fire doors and compartmentalisation etc).

## Do not include within the file

The file does not need to include things that will be of no help when planning future construction work, for example:

- (a) The pre-construction information, or construction phase plan;
- (b) Construction phase risk assessments, written systems of work and COSHH assessments;
- (c) Details about the normal operation of the completed structure;
- (d) Construction phase accident statistics;
- (e) Details of all the contractors and designers involved in the project (though it may be useful to include details of the principal contractor and CDM co-ordinator);
- (f) Contractual documents;
- (g) Information about structures, or parts of structures, that have been demolished – unless there are any implications for remaining or future structures, for example voids;
- (h) Information contained in other documents (but relevant cross-references should be included).

Some of the above items may be useful to the client, or may be needed for purposes other than complying with the CDM Regulations, but the Regulations themselves do not require them to be included in the file. Including too much material may hide crucial information about risks.

## Storing the file after the work is complete

To be useful, the file needs to be kept up to date, and retained for as long as it is relevant – normally the lifetime of the structure. It may be kept electronically (with suitable backup arrangements), on paper, on film, or in any other durable form. Where clients dispose of their entire interest in a structure, they should pass the file to the new owners and ensure that they are aware of the nature and purpose of the file. Where they sell part of a structure, any relevant information in the file should be passed or copied to the new owner.

If the client leases out all or part of the structure, arrangements need to be made for the health and safety file to be made available to leaseholders. In some cases, the client might transfer the file to the leaseholder during the lease period. In other cases, it may be better for the client to

keep the file, but tell leaseholders that it is available. If the leaseholder acts as a client for future construction projects, the leaseholder and the original client will need to make arrangements for the file to be made available to the new CDM co-ordinator.

In multi-occupancy situations, for example where a housing association owns a block of flats, the owner should keep and maintain the file, but ensure that individual flat occupiers are supplied with health and safety information concerning their home.

A development may include roads and sewers that will be adopted by the local authority or water company. It is generally best to prepare separate files covering each client's interests.





## HEALTH & SAFETY WORKS NI

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