Introduction:
This method statement records the significant findings of the risk assessment carried out in accordance with the all current legislation. It is drafted to inform all those working on site of possible hazards together with the safe systems of work to be adopted to allow all those involved with the works to carry out their tasks safely with the minimum of risk to themselves & others.

List of known key hazards associated with the work and identified by the risk assessment:
- Moving plant/Vehicles
- Manual Handling
- Equipment
- Unstable ground
- Weather
- Noise
- Chemicals

Details of work; List in a logical order the activities that make up the whole job, along with control measures for health and safety issues.

- Arrive on site and attend site induction as required
- Follow site management direction on site set up and pumping locations.
- Complete the job sheet
- Designated stable level ground to be identified to support the load.
- The pump is to be banked into the designated area via a competent person (locations to be agreed on site).
- Pump is to be set up correctly in accordance with the manufacturer's instructions.
- Cones and barriers etc. are to be supplied by site if they are necessary.
- Operator to be familiarized with the area and operation before pumping begins.
- Boom/pipe to be put into position.
- Any extension pipes required will be connected by the operator on a suitable hard standing.
- Grouting procedures will be carried out by the operator using cement supplied by site.
- On arrival of concrete, the Banksman supplied by site will back the mixer onto the pump. When the job commences, the Banksman will assist the operator with boom movements’. Concrete trucks to be banked to pump via competent person.
- Pumping to commence once it is safe to do so.
- If a blockage has occurred the pump operator shall reverse the pump to relieve the pressure then:
  - Step 1 - Lower the boom to ground level clear of site personnel
  - Step 2 - Remove pipe where the blockage has taken place if not in reducer
  - Step 3 - Up end the pipe to remove the blockage
  - Step 4 - Re-assemble then return to the pumping position for concrete placement to commence
- When the job is completed, the pump will be washed down by the operator in the designated area instructed by site foreman. Wagons and pumps are to be cleaned in the designated washout area.
• Fencing to remain in position until the concrete has cured

Notes:
• Extension of the placing boom end delivery hose be on the size specified by the manufacturers’ recommendation. Any alterations in extending or reducing size/length of delivery hose is forbidden.
• All blockages and breakdowns must be reported to the foreman immediately.
• The operator must ensure residual pressure is reduced before breaking joints.
• All spillage must be cleared immediately and only wash out in a designated area.
• Please instruct all concreting placing personnel to stand the full length away from the hose, both before starting the pour and before you resume pouring. This should also be done between the concrete loads and during any delays. Any concrete placing personnel should be trained, competent and authorized to carry out such works.

Manager/Supervisor: Tom Gledhill  Tel No: 07961 391 446

Workforce Details:

Training skills required:
CPCS – Plant Operatives

List Plant and equipment required:
All plant will be serviced and maintained in line with manufacturers recommendations and will comply to PUWER, LOLER and other relevant legislation applicable to the equipment. A copy of the relevant service, maintenance or inspections will be provided to the Principal Contractor before use on site.

Concrete Pump

List Hazardous substances to be used:
Substances that are potentially harmful to health will be covered by specific product information & such hazards of use will be identified. Training, control measures, health surveillance, PPE requirements will be applied as appropriate.

Concrete

Personal protective equipment to be used (PPE/RPE):
All operatives to wear the mandatory site PPE
Safety footwear, midsole protection and steel toe capped
High-visibility Vest,
Hard-Hat,

Task specific PPE identified within the risk assessments
Gloves,
Goggles to be worn whenever using concrete,
Ear protection

Inductions & Toolbox talks
All operatives before starting on site will have the company method statements & risk assessments relevant to their work explained to them & they will be required to sign the former. All inductions, briefings, toolbox talks will be signed by the employee to confirm they have read/attended and fully understand the information given to them.

Health & Safety monitoring details:
The director responsible for health and safety is Tom Gledhill.
Site management will be completing weekly inspections.

Occupational Health assessments:
Before use of any “vibrating” plant on site, the competent person will undertake an exposure time assessment using the HSE’s Ready Reckoner. Operatives will be advised of their daily exposure points and will be limited to the EAV and not exposed to above
Occupational health assessments are completed for workers that are exposed to Noise; Chemicals; Manual handling and Vibration. Also safety critical workers for example Plant Operators.

Emergency procedures:
In the event of an emergency the site manager/supervisor will where appropriate, use his mobile telephone to contact the relevant emergency services.

All accidents, however minor, to be entered in to the accident book which will be stored within the site vehicles. Once entered the form is to be removed and given to the Contracts Manager.

If an accident does occur Tom Gledhill is to be informed immediately.

Security and Welfare facilities:
The welfare facilities on site are: - Supplied by Main Contactor

These will be inspected by our site management and safety advisor regularly.

Site security and safety will be provided by the Main contactor

Briefing register
I the undersigned have read the Method statement, including risk assessments and COSHH assessments and fully understand the health and safety arrangements and my responsibilities and obligations to ensure their compliance.

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
<th>Signature</th>
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<tbody>
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**ID NO:** 14  

**COSHH ASSESSMENT RECORD**

<table>
<thead>
<tr>
<th><strong>SUBSTANCE</strong></th>
<th>READY MIXED CONCRETE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IDENTIFICATION</strong></td>
<td>A mixture of aggregate, cement and water</td>
</tr>
<tr>
<td><strong>PROCESS/OR USE</strong></td>
<td>Used to cast a plastic material into a required shape prior to hardening</td>
</tr>
<tr>
<td><strong>RISKS TO HEALTH</strong></td>
<td>Contact with wet cement mixes such as concrete can cause skin diseases and burns.</td>
</tr>
<tr>
<td><strong>CAN THE EXPOSURE BE ELIMINATED</strong></td>
<td>NO</td>
</tr>
</tbody>
</table>

**FIRST AID MEASURES**

- EYES: Wash with water for 15 minutes, seek medical advice
- SKIN: Wash with soapy water, wash contaminated clothing
- INHALATION: Move to fresh air, seek medical advice if airway becomes inflamed
- INGESTION: Do not induce vomiting, give patient plenty to drink

**COPY MUST BE SENT WITH INJURED PARTY TO HOSPITAL**

**FIRE FIGHTING MEASURES (Tick Box)**

- [ ] CO₂ GAS
- [ ] FOAM
- [ ] WATER
- [ ] POWDER

**SPILLAGE & ENVIRONMENTAL DETAILS**

In the event of spillage, entry of material to water courses should be avoided. Unused hardened concrete is inert but should be disposed of in accordance with local requirements.

**EXPOSURE LIMITS (EH 40)**

<table>
<thead>
<tr>
<th>Crystalline Silica / Total Dust, Respirable dust</th>
</tr>
</thead>
</table>

- **Time Exposed:**
  - Maximum Exposure Limit (MEL): 8 Hour TWA – **0.3mg/m³**
  - 15 Minute STEL – None
- **Number of People Exposed:**
  - Occupational Exposure Standard (OES):
  - 8 Hour TWA – **10mg/m³ / 4mg/m³**
  - 15 Minute STEL – None

**PPE (Tick Box)**

- [ ]
- [ ]
- [ ]
- [ ]
- [ ]
- [ ]
- [ ]
- [ ]

**CONTROL MEASURES**

Advising all persons involved in the use of cement on the inherent dangers of cement in the form of site start up briefing. Thorough site supervision to be maintained to ensure that PPE is worn without exemption. Cutting of hardened concrete produces dust which should not be inhaled.
The mobile truck-mounted concrete pump is designed to convey concrete from the machine's delivery hopper to a point designated by the hirer/site management. This is achieved via a hydraulically powered pump, through pipe sections attached upon an articulated boom, to a suspended flexible rubber delivery hose, solid ‘tremmie’ pipe, or via a steel pipeline laid on the ground or fixed vertically.

**Data Sheets** detailing pump dimensions, outrigger loadings/ positioning, boom type/ reach, and pumping delivery pressures/ volume outputs are available upon request from City Concrete Pumping Ltd.

**Information, Instruction, Training, Monitoring** - All City Concrete Pump Operators (CPO's) are issued with a detailed Operators Procedure Guide (OPG). Every CPO holds a current CPCS card for concrete pumping operations and has attained, or is working towards, NVQ Level 2 qualification.

CPO’s are assessed periodically, and are also subject to unannounced ‘spot checks’, in order to ensure safety, quality, & operating standards are maintained and developed. Encouragement by site management of this progress would be appreciated. This enables us as a company to comply with our employers legal requirements.

**British Standard BS 8476:2007 ‘Code of practice for the safe use of concrete pumps’** is recommended to hirers and interested parties as a reference document detailing the general minimum requirements in respect of the operation of concrete pumping equipment. Copies of the standard are available from BSI – [www.bsi-global.com](http://www.bsi-global.com).

**Safe Systems of Work** – City concrete pumping Ltd have assessed all aspects of its operations, and have developed procedures and safe systems of work that aim to reduce and control risks to safety, health, and the environment.

**Significant Risks** As an overview, the significant risks that are present in respect of concrete pumping activities are noted below, along with appropriate control measures. Any additional risks are have been assessed and are recorded within our company Specific Risk Assessments.

<table>
<thead>
<tr>
<th>Risk</th>
<th>Professional Control</th>
<th>Site Management and Hirer Considerations &amp; Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>collapse or settlement of pump due to ground conditions/ inadequate ground bearing</td>
<td>sole plates are provided for placement below outrigger feet to support the pumps outriggers/ reduce surface damage these are designed for use on firm, level standing</td>
<td>ensure ground conditions at set-up position are adequate for imposed load of pump provide sufficient extra support (timbers, steel sheets, etc.) as required</td>
</tr>
<tr>
<td>overturning of pump/ collapse of boom due to insufficient stability</td>
<td>the CPO shall ensure that outriggers are extended to the appropriate position</td>
<td>ensure adequate space is available for the pump, and for the full deployment of its outriggers</td>
</tr>
<tr>
<td>collapse of placing boom due to failure of hydraulics</td>
<td>all hydraulic rams are fitted with lock valves to limit movement should failure occur</td>
<td>-</td>
</tr>
<tr>
<td>structural failure of pump/ boom, or part thereof</td>
<td>all pumps undergo an annual thorough examination (which is certificated), and are also inspected as part of the regular servicing schedule</td>
<td>-</td>
</tr>
<tr>
<td>vehicle movements (reversing) - crushing or trapping of persons when moving pump to work position on site</td>
<td>all City mobile concrete pumps are fitted with a warning ‘blipper’ which is activated when reverse gear is selected. City mobile concrete pumps are fitted with appropriate visibility aids (mirrors, CCTV) subject to age/ vehicle size</td>
<td>provide a competent person to act as a banks-man during reverse movements limit access for persons to area of vehicle movement</td>
</tr>
<tr>
<td>Risk</td>
<td>Professional Control</td>
<td>Site Management and Hirer Considerations &amp; Controls</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>vehicle movements (reversing) - crushing/ trapping of persons by</td>
<td>where possible, the CPO will direct the mixer truck during the reversing maneuver onto the concrete pump</td>
<td>provide a competent banksman to direct concrete mixers trucks (especially when the CPO is required to operate the boom/ pump at a distance from the machine)</td>
</tr>
<tr>
<td>visiting concrete mixer trucks</td>
<td></td>
<td>ensure that the proposed pump set up location is such that neither the pump nor the boom can make contact with overhead cables.</td>
</tr>
<tr>
<td>contact with overhead electricity cables</td>
<td>City Concrete Pumping follow industry guidance (GS6), which specifies that the minimum safe working distance from electric cables, is 6 metres. This includes the fully extended boom radius. (Exceptions may apply, and closer distances may be permitted where engineered controls are provided, however these must be managed by a written safe system of work)</td>
<td>where set-up location cannot be clear of overhead cables, consideration should be given to the provision of a ground level pipeline to convey the concrete</td>
</tr>
<tr>
<td>crush or impact by boom, or struck by placing hose, during initial or subsequent positioning, or during ‘off the boom’ placement of concrete</td>
<td>every pump is provided with a remote control unit (RCU) allowing the CPO to operate the pump/boom from a position of safety/improved visibility the CPO shall visually monitor the unfolding/folding, and positioning of the boom, and ensure no person is placed at risk by any movements the CPO shall ensure that during movement to position, the placing hose is not allowed to swing in the vicinity of any person</td>
<td>provide sufficient set-up space, and height for unfolding/folding/moving the boom operatives controlling the position of the placing hose should hold it at arms length person(s) shall be nominated to converse with and signal the CPO, for minor boom positioning during concrete placement ensure adequate luminance and visibility is available where the boom has to be unfolded/ folded/ moved during the hours of darkness or in low light environments.</td>
</tr>
<tr>
<td>contact with moving pump components</td>
<td>all moving components upon the concrete pump are fully guarded either by virtue of its manufacture, by mechanical guard, or by automatic interlock systems</td>
<td>ensure operator has carried out his required daily and weekly checks ensure all machinery examination certificates are checked on arrival to site</td>
</tr>
<tr>
<td>injury to persons in vicinity of pumping operation</td>
<td>the CPO shall follow the requirements as stated in the City Concrete Pumping OPG, safe systems of work documentation, and ‘local’ site rules as advised during induction</td>
<td>ensure operators are trained and qualified to operate the necessary category of plant (e.g. CPCS/NVQ held by operator) ensure ALL concrete laying personnel and other persons working in the vicinity are briefed prior to the pour, on all risks involved with the pumping operations. The briefing should be acknowledged and recorded. -demarcate area of pump operation limit access to persons, especially below boom, or in vicinity of pipeline or placing hose</td>
</tr>
<tr>
<td>Risk</td>
<td>Professional Control</td>
<td>Site Management and Hirer Considerations &amp; Controls</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
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<tr>
<td>Potential injury to persons and property damage due to concrete spillage/splatter (predominantly from upper floors)</td>
<td>The CPO shall inform controller of pour of the risks involved and record on Job sheet</td>
<td>Ensure pour area has adequate edge protection to contain any concrete spray or spillage.</td>
</tr>
<tr>
<td># potential blockages at start or restart of the pump – use of suspended hose ‘off the boom’, resulting in hose whipping into the danger area (ref; Hose blockage – Pictorial Safety Risk card)</td>
<td>only ‘single ended’ hoses shall be used – double/ steel collared ended hoses shall NOT be used ‘off the boom’</td>
<td>ensure ALL persons shall remain clear of the hose at EVERY start or restart of the pump. ‘Clear’ means a safe position at a radial distance of at least twice the length of the suspended delivery hose – referred to as the ‘Danger Zone’</td>
</tr>
<tr>
<td># bursting of pipelines/ hoses under pressure</td>
<td>only pipes, hoses, clips, of sufficient safety rating shall be used wear and damage shall be monitored by the CPO, and checked during scheduled services. excessively damaged/ worn components shall be withdrawn.</td>
<td>-</td>
</tr>
<tr>
<td>- # - For blockage RISK REDUCTION and CONTROL MEASURES, see below</td>
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<td></td>
</tr>
<tr>
<td>forceful ejection of air/ concrete from end of pipeline</td>
<td>pipe jointing seals shall be clean and in good order concrete level in the pumps hopper must be maintained at the required level– newer pumps have level sensors as standard</td>
<td>(where the CPO is required to position himself remote from the pump) appoint a competent person to monitor deliveries and hopper concrete level (to ensure air is not pumped into the pipe system) employees of the hirer must NOT uncouple pipes without express permission of the CPO</td>
</tr>
<tr>
<td>- air sucked into line and compressed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pressurised concrete release - dismantling of a pipeline</td>
<td>the CPO shall ensure that the pipeline is de-pressurised before freeing any jointing clips</td>
<td>employees of the hirer must NOT uncouple pipes without express permission of the CPO</td>
</tr>
<tr>
<td>pipeline cleaning with compressed air - pressurised release/ ejection of sponge ball/ concrete/ water/ air</td>
<td>the CPO has a specific written procedure for this operation other personnel shall only be involved under his strict direction</td>
<td>a demarcated and access restricted area shall be provided at the end of the pipeline that is to be air cleansed</td>
</tr>
<tr>
<td>working at height (upon the pump deck)</td>
<td>access shall be restricted to ‘short duration’ only (e.g. to retrieve a required component, fill the water box, etc) for longer duration tasks (e.g. to change a pipe seal, etc.), the use of a harness and restraint lanyard(s) shall be required</td>
<td>no hirer personnel, or other non City employee shall be permitted to access the pump deck, unless express permission is given by the CPO</td>
</tr>
<tr>
<td>harmful substances - health effects or personal injury</td>
<td>all substances used as part of the pumping process have been COSHH assessed, and briefing provided to those affected (cement/ concrete, grout products, fuels, oils, greases, etc)</td>
<td>-</td>
</tr>
<tr>
<td>environmental impact</td>
<td>a kit is provided in all pumps, to contain/absorb fuel/oil spillage</td>
<td>-</td>
</tr>
</tbody>
</table>
**Significant Risk Identification/ Control Measure Statement**

**TRUCK MOUNTED MOBILE CONCRETE PUMP**

- spillage of fuel/ oils
- inappropriate wash out facility

the CPO shall only wash out in areas defined and authorised by site management

hirer/ site management shall provide adequate wash out facilities for concrete residues, etc.

<table>
<thead>
<tr>
<th>Blockages - why do they occur?</th>
<th>Risk Reduction/ Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>segregation of the concrete/ aggregates as it is pressurised through the pipeline with the primer/ grout</td>
<td>it shall be ensured that the appropriate grout mix is used (P)</td>
</tr>
<tr>
<td>maximum pipeline and delivery hose length shall be considered - grouting may be more successful in shorter sections (P), (H)</td>
<td></td>
</tr>
<tr>
<td>inappropriate concrete mix design or consistency – not suitable for pumping</td>
<td>only concrete that is of ‘pump mix design’ and appropriate quality should be specified for delivery to the pump (H) or (SM).</td>
</tr>
<tr>
<td>stiffening of the concrete in boom/ pipeline from standing for too long (usually when awaiting delivery of fresh concrete) - water bleeds from concrete/ aggregates separate - incorrect dosage of plasticiser (flash set)</td>
<td>for ‘standing concrete’ the CPO shall circulate or ‘move’ the concrete in the hopper/ boom/ pipeline (P)</td>
</tr>
<tr>
<td>deliveries shall be time managed and planned appropriately (H) or (SM)</td>
<td></td>
</tr>
<tr>
<td>the flexible placing hose has become kinked, restricting concrete flow</td>
<td>the flexible delivery hose must never be kinked – it should be suspended vertically when used ‘off the boom’, or kept ‘straight’ if used at the end of pipelines (H)</td>
</tr>
<tr>
<td>‘foreign objects’ delivered from visiting mixer drums</td>
<td>the quality of the delivered concrete shall be monitored (P), (H) and (SM)</td>
</tr>
</tbody>
</table>

NOTE: Where the concrete condition is believed to be of poor or un-pumpable quality, or where fresh concrete has not arrived in time, and concrete in the boom/ pipeline is becoming too stiff, the CPO may have to reject the load, or clear the concrete from the pump. The hirer shall be informed of this should it be likely to occur.

**Blockages – reacting to**

Where possible, the CPO will stop the pump action and reverse the pumping direction (this may free the blockage). Before the CPO restarts the pumping action, he should ensure all persons retreat to a safe distance away from the boom/ pipeline.

Should the blockage persist, the CPO will stop the pump, depressurise the line, and investigate the location of the blockage before taking appropriate action (i.e. disconnecting pipe work to locate and remove the blockage).

A momentary blockage may occur that frees immediately this is often accompanied by increased engine/ pump revs, and noise. The CPO shall endeavour where possible to warn persons in the vicinity to stand clear. However, the release is likely to cause the delivery hose and/or boom to move or ‘kick’, before the pump action can be stopped.

**Further Information**

The above information has been provided to assist hirers, customers, and site management in identifying and controlling the significant risks associated with concrete pumping operations.

Where any doubt remains in respect of acceptable operational or safety, health, or environmental standards, clarification may be sought at the time of order/ hire.