

# SHE STANDARDS LIST

## Introduction:

The following standards have been written to describe how construction sites should operate to meet legal and good practice requirements.

## Purpose:

The standards are intended to assist the site management teams, direct trade operatives and sub-contractors by providing process information and guidance on:

- Health and safety planning
- Implementing general controls appropriate to the risks identified
- Implementing trade specific controls appropriate to the risks

## Scope:

The standards aim to cover operations that should apply to many construction sites and should where reasonably practicable be applied. They are intended as a guide only, supplementing the requirements of the [Health and Safety Policy](#) and [The Works Manual](#).

Further information for specific hazards may should be sought from the HSQE Manager as appropriate. Further guidance is also available from the HSE: <http://www.hse.gov.uk/>

The standards will be revised/added to as necessary in consultation with the company's health and safety committee.



## Standards List:

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# 1. ACCIDENT AND INCIDENT REPORTING AND INVESTIGATION

## 1.0 General

**1.1** This standard applies to all work related accidents, dangerous occurrences, environmental damage and near misses on or off-site where the company is in control of the area. The standard applies to all employees, contractors, visitors and members of the public.

**1.2** All accidents and near misses should be reported and investigated; however, not all events will need to be investigated to the same extent or depth. The level of investigation will be dependant upon the severity of the incident and the potential for serious injury or environmental damage.

**1.3** All accidents shall be recorded in the Site Accident Book and an accident investigation carried out. The [Borras Accident Investigation Report](#) shall be completed.

**1.4** The purpose of the investigations shall be to identify:

- Direct and Indirect causes of accidents
- System Failures
- Training Requirements
- Organisational Failures
- Actions to prevent recurrence

**1.5** As soon as possible the local manager in charge shall prepare the accident report. Information relating to the accident shall be obtained as soon as practically possible and shall include the following as appropriate:

- Facts of the incident (including photographs of the scene, risk assessments, method statements, inductions, witness statements, tool-box talks etc)
- Details of immediate action taken (e.g. first aid given, made area safe etc)
- Recommendations for improvement or changes to prevent any recurrence of the incident (longer term actions such as changes to work processes, procedures, additional training, PPE etc).

**1.6** Changes to practices or procedures will be reviewed through the risk assessment process before being implemented. **Note:** The first priority in all situations is to make the area safe, provide first aid and if necessary contact the emergency services.

**1.7** All accident book entries and investigation reports are to be sent to head office for the attention of the HSQE Manager.

## 2.0 Notifications

**2.1** Where a notification to either the HSE or the Environment Agency is required this shall be done in conjunction with the HSQE Manager as follows:



EVENT	PROCEDURE
<b>Major Incident</b>	<p>Reportable to either the HSE or Environment Agency and include:</p> <ul style="list-style-type: none"> <li>• Death or life threatening injury</li> <li>• Fire or explosion resulting in significant loss</li> <li>• Extensive environmental damage caused by release of substance to land, air or water</li> </ul> <p>As soon as practical or as a minimum ½ hour after the incident the site shall contact the HSQE Manager and their Stream Director. The site team are to enter detail into the accident book and report the accident to the HSE.</p> <p>A detailed investigation is to be carried out. The investigation team will include the HSQE Manager, a Stream Director and where necessary an independent representative from BSG.</p>
<b>Major Injury</b>	<p>Reportable to the HSE. A full definition of a Specified Injury is given in RIDDOR, however examples include:</p> <ul style="list-style-type: none"> <li>• Any fracture other than to thumbs, finger or toes</li> <li>• Dislocation of hip, knee or spine</li> <li>• Loss of sight, penetrating injury to eye or chemical burn to eye</li> <li>• Any injury resulting in hypothermia, loss of consciousness or where the resuscitation was required</li> </ul> <p>As soon as practical or as a minimum 2 hours after the incident the site shall contact the HSQE Manager and their Stream Director. The site team are to enter detail into the accident book and report the accident to the HSE.</p> <p>A detailed investigation is to be carried out. The investigation team may include the HSQE Manager, a Stream Director and where necessary, an independent representative from BSG.</p>
<b>Dangerous Occurrence</b>	<p>Reportable to the HSE. A full definition of a dangerous occurrence is given in RIDDOR, however examples include:</p> <ul style="list-style-type: none"> <li>• Collapse of any scaffold (over 5 meters or if the scaffold is next to water)</li> <li>• Collapse, overturning or failure of any load bearing part of a crane, lift or hoist, excavator, Fork Lift Truck or Powered mobile platform</li> <li>• If plant or equipment comes into contact with overhead power lines</li> <li>• Unintentional Collapse of building or structure (where over 5 tonnes of material)</li> <li>• Electrical short circuit or overload attended by fire or explosion which results in the stoppage of the plant involved for more than 24 hours or is potentially fatal</li> </ul> <p>As soon as practical or as a minimum 4 hours after the incident the site shall contact the HSQE Manager and their Stream Director. The site team are to enter detail into the accident book and report the accident to the HSE.</p> <p>A detailed investigation is to be carried out. The investigation team may include the HSQE Manager, a Stream Director and where necessary, an independent representative from BSG.</p>
<b>Reportable Disease</b>	<p>Certain diseases are reportable to the HSE. A full list of reportable diseases is included in RIDDOR however examples include:</p> <ul style="list-style-type: none"> <li>• Hand-Arm Vibration Syndrome (HAVS)</li> <li>• Leptospirosis (Weils Diseases)</li> <li>• Legionellosis (Legionnaires Disease)</li> <li>• Various Cancers e.g. as a result of working with Asbestos or Silica (stone cutting)</li> </ul> <p>The HSQE Manager will report the case of disease to the HSE. A detailed investigation is to be carried out. The investigation team may include the HSQE Manager, a Stream Director and where necessary, an independent representative from BSG.</p>
<b>Over 7 Day Injury</b>	<p>Reportable to the HSE. An over 7 day injury is one which is not 'major' but results in the injured person being away from work OR unable to do the full range of their normal duties for more than 7 consecutive days. When calculating 'more than 7 consecutive days' the day of the accident</p>



	<p>should not be counted, only the period after it. Any days the injured person would not normally have been expected to work, such as weekends, rest days or holidays, must be included.</p> <p>As soon as practical or as a minimum 1 day after the incident the site shall contact the HSQE Manager and their Stream Director. The site team are to enter detail into the accident book and report the accident to the HSE.</p> <p>An investigation is to be carried out. The investigation team will include the Site Management and, dependant on the severity or potential severity of the incident, the HSQE Manager. The Accident Investigation Report (see paragraph 1.3) is to be completed.</p>
<b>First Aid Injury</b>	<p>Not Reportable to the HSE. A first aid injury is where any first aid is administered following an injury.</p> <p>As soon as practical or as a minimum 1 day after the incident the site shall contact the HSQE Manager. The site team are to enter detail into the accident book.</p> <p>An investigation is to be carried out. The investigation team will include the Site Management and, dependant on the severity or potential severity of the incident, the HSQE Manager. The Accident Investigation Report (see paragraph 1.3) is to be completed.</p>
<b>Near Miss</b>	<p>Not Reportable to the HSE. A near miss is any unplanned or uncontrolled event that <i>could have</i> resulted in injury, damage to plant or damage to the environment. Examples of near misses will include:</p> <ul style="list-style-type: none"> <li>• Cable strikes (not resulting in electrical arching or explosions)</li> <li>• Falling materials not causing injury</li> <li>• Falls/trips not causing injury</li> <li>• Note that some near misses may also be classified as dangerous occurrences under RIDDOR.</li> </ul> <p>As soon as practical or as a minimum 1 day after the incident the site shall contact the HSQE Manager and their Stream Director. Details do not need to be entered into the accident book on site; however the <a href="#">Borras Accident Investigation Report</a> is to be completed by the site team.</p> <p>An investigation is to be carried out. The investigation team will include the Site Management and, dependant on the severity or potential severity of the incident, the HSQE Manager. The Accident Investigation Report (see paragraph 1.3) is to be completed.</p>

<b>Health and Safety Executive</b>	<a href="http://www.hse.gov.uk/riddor/what-must-i-report.htm">http://www.hse.gov.uk/riddor/what-must-i-report.htm</a>
<b>Environmental Agency</b>	<b>0800 80 70 60</b>



## 2. ASBESTOS IS OWNED OR OCCUPIED PREMISES

### 1.0 General:

1.1 This standard applies to the management of asbestos in premises that are owned or occupied by BGHL Group Companies (including head office and rented office locations).

### 2.0 Control Arrangements:

2.1 Group Companies shall manage the asbestos risks relating to the structures they own or occupy. In the first instance a competent person shall be appointed for each occupied property where the Company are the dutyholder (this will typically be the HSQE Manager)

- **Note:** The dutyholder is the person that has the duty to manage a premise. This is the person that has the ultimate responsibility for the safety of the staff working within a building (or building section). In larger buildings where there are multiple tenants, there may be many dutyholders. In such instances there will also be a dutyholder responsible for common areas such as stairwells and lifts and, this will normally be the owner. The hard and fast rule is that if you employ a contractor (i.e. lift engineer, cleaner, etc.) to do work within an area of a building, you are the dutyholder for that section/area and therefore have the duty to manage. In practice this will typically mean that BGHL Companies are the dutyholders at head offices where as temporary site accommodation (within customer or other premises) the owner will be the dutyholder. Where there is any doubt the HSQE Manager shall be consulted.

2.2 Asbestos surveys shall be carried out or obtained for all properties where asbestos may be present (that is any building built before the year 2000). It can be assumed that buildings that have been built after 2000 are free from asbestos.

- **Note:** Asbestos surveys shall be carried out in accordance with HSG264 Asbestos: The Survey Guide. The surveyors shall be UKAS accredited to ISO17020:1998, an accreditation certificate shall be requested and maintained as part of the sub-contract file where BGHL employ the surveyors.

2.3 Where a BGHL Company is deemed as the dutyholder the competent person shall hold the relevant surveys, asbestos registers and drawings.

2.4 An asbestos management plan shall be developed and shall include:

- The location of the suspected asbestos
- Inspection arrangements
- How this is to be communicated to staff **and** contractors who may work on or near the suspected asbestos

2.5 All staff and contractors that work on BGHL owned or occupied buildings where we are the dutyholder shall be made aware of the asbestos register for that site. Should any maintenance/repair works be required in buildings that have the potential to disturb asbestos the competent person shall consult with The HSQE Manager.



### 3. ASBESTOS WORK THAT DOES NOT REQUIRE A LICENCE

#### 1.0 General

**1.1** This standard applies to work with asbestos that can be carried out without a licence and includes minor removal tasks as well as drilling, cutting into Asbestos Containing Materials (ACM's).

**1.2** An asbestos survey shall be obtained/viewed for works in buildings where asbestos is suspected and the works are likely to result in the asbestos being disturbed. The asbestos survey shall be an intrusive survey (refurbishment or demolition type survey) that samples the area where works are being carried out.

**1.3** Where surveys are being carried out on our behalf the surveyors shall provide site specific risk assessments and method statements to control:

- The unintentional spread of asbestos during the survey (including segregation of general public)
- Non-asbestos related hazards (such as working at height and confined spaces etc)

**1.4** The asbestos survey shall be reviewed by the Site Manager responsible for the project prior to commencement of the works to identify the following in relation to the works being undertaken:

- The location of the asbestos identified
- The limitations of the survey (i.e. areas that have not been included within the scope of the survey or areas that were inaccessible/not sampled during the survey at the time of the survey)

**1.5** Where ACM's have been identified this information shall be communicated to the relevant project staff. Inductions highlighting ACM's shall reference the following:

- Location of identified or suspected asbestos.
- ACM's may be present even if not identified on building surveys – in Asbestos Cement, Textured coatings (artex), floor tiles, sprayed coatings, insulation board, lagging and as loose debris in cavities
- To stop works if the operatives uncover suspected ACM's and inform the Site Manager

**1.6** If no asbestos has been identified by the surveys the inductions shall still identify the potential for asbestos to be uncovered that has not been identified on the surveys and to stop works if the operatives uncover materials that they suspect may contain asbestos.

**1.7** All operatives whose work has the potential to disturb ACM's on refurbishment/demolition projects shall have received asbestos awareness training.

**Note:** asbestos awareness training is **mandatory** for anyone liable to be exposed to asbestos fibres at work. This includes maintenance workers and others who may come into contact with or who may disturb asbestos (carpenters, electricians, plumbers, cable installers etc) as well as those involved in asbestos removal work.

**1.8** All operatives that carry out in asbestos removal, repair (including drilling/cutting ACM's) or encapsulation works shall also have received training for the task in line with the [HSE's Asbestos Essentials](#) task sheets.

**1.9** Records of this training shall be requested and held on site.

**1.10** If during the course of works material that may contain asbestos is uncovered the works shall be stopped immediately and the area segregated. No one shall be allowed in the potentially contaminated area without appropriate protective clothing and respirators. A sample of the material should be sent for analysis to determine the course of



action to be taken. Spread of any potential contamination should be minimised, if necessary the area cordoned off and exposed persons cleaned with wet rags. Potentially contaminated clothes should be treated as hazardous waste until confirmed as otherwise and the HSQE Manager informed.

**1.11** If asbestos contamination is confirmed the persons exposed shall be notified of the type of exposure, and a "Dangerous Occurrence" Notified to the HSE (refer to the accident/investigation standard for detail).

## **2.0 Control Measures During Asbestos Works**

**2.1** All works including removal repair and encapsulation shall be accompanied by a full risk assessment and method statement for the task in accordance with the [HSE Asbestos Essentials](#) Task Sheets.

**2.2** The risk assessments and method statements shall be developed with the controls identified in the [HSE Asbestos Essentials](#) Task Manual Sheet for the Task including:

- Use of operatives trained in non-licenced asbestos removal techniques
- Use FFP3 Dust Masks (as a minimum)
- Use of Disposable Overalls (type 5)
- Use of dust suppression/wetting down
- Careful removal techniques that are to be utilised
- How the works are to be segregated and signed
- How the area is to be cleaned following removal
- Requirements for disposal, clearance and handover

**2.3** For asbestos removal works carried out by BGHL operative's the Generic Risk Assessment: RA002a held on the company intranet, shall be completed.

**2.4** Where contractors are carrying out asbestos removal works the contracts manager and/or site manager shall formally evaluate the contractor's method statements and risk assessments signing and dating the documents as evidence of the evaluation.

**2.5** Where works are classified as Notifiable Non-Licenced Works (NNLW), the HSE is to be notified by the asbestos removal contractors, before works commence via the online HSE Form [ASB1 NNLW](#). Where works are being carried out by sub-contractors they shall complete this notification and provide a copy to the site manager to be kept in the site safety file.

**2.6** Although not strictly required, it is Borrás policy that all NNLW works are to be carried out by licenced asbestos removal contractors.

**2.7** Site managers should verify that contractors are completing exposure records where NNLW work is being carried out, however, contractor's exposure records should not be maintained as part of the job files.

**2.8** On completion of any asbestos works on textured coating written confirmation of cleanliness shall be provided by the contractor prior to reoccupation.

**2.9** All asbestos waste shall be treated as hazardous, be double bagged and be marked with warning signage. Skips shall be lockable and hazardous waste consignment notes provided for all asbestos waste movements.

## **3.0 References:**

Control of Asbestos Regulations 2012: <http://www.legislation.gov.uk/ukxi/2012/632/contents/made>

HSE Asbestos Essentials: <http://www.hse.gov.uk/asbestos/essentials/index.htm>

Illustration of Asbestos Work Categories: <http://www.hse.gov.uk/asbestos/licensing/asbestos-work-categories.pdf>





## 4. ASBESTOS WORK THAT REQUIRES A LICENCE

### 1.0 General:

1.1 This standard applies to work with asbestos that must be carried out by contractors licenced under the Control of Asbestos Regulations 2012 and includes work with Asbestos Insulation Board (AIB) and sprayed coatings.

### 2.0 Construction Phase Activities:

2.1 The asbestos removal contractors shall notify the HSE of works at least 14 days prior to start on site on the approved HSE form (ASB5).

2.2 The asbestos removal contractor shall provide documentation relating to the works and ensure that this is available on site. Documentation provided will include:

- ASB5 (14 day notification to the HSE)
- Site Specific Plan of Works (may also be called a method statement)
- Risk Assessments
- Operative Training Certificates
- Contractor Standard Asbestos Removal Procedures
- Equipment Maintenance Records (e.g. for Decontamination units clearance certificates, Respiratory Equipment Maintenance Records and air handling units filter checks) etc.

2.3 The asbestos removal contractor shall ensure that the following controls have been considered in accordance with HSE Guidance Note Publication: HSG247: The Licenced Contractors Guide including:

- The method of removal should be selected to reduce exposure to airborne asbestos fibres by utilising careful stripping techniques
- Decontamination Units (DCU's) located as close as possible to the works
- The Decontamination Unit, transit routes and the work areas shall be isolated from other site users
- Skips shall be lockable, sealed and marked as containing asbestos
- The work area shall be tented up, with warning notices fixed in prominent positions
- A site plan should be in place and include: location of DCU, access/egress routes, position of air locks, position of any viewing panels, transit routes and location of the skip.
- A "Smoke Test" will be witnessed before works commence (to determine any leaks in the enclosure)
- Scaffolding that will be used for the removal of asbestos shall be erected by a asbestos licensed scaffolding company
- Reassurance Sampling can be considered for the area outside the Tented Area (e.g. where working in occupied buildings such as schools)
- Asbestos Workers to be wearing transit overalls, RPE and footwear when travelling between 3 stage Lock and Decontamination Area
- Asbestos materials are double bagged (Red inside clear 500g bags)
- Inspection of Works to be a "Clearance Certificate" issued by an UKAS sampling company, which is independent of the Asbestos contractor
- Only after the issue of a Clearance Certificate can the materials used for tenting etc be put into the skip

2.4 All asbestos waste shall be treated as hazardous, be double bagged and be marked with warning signage. Skips shall be lockable and hazardous waste consignment notes provided for all asbestos waste movements.



## 5. BRICK AND BLOCKWORK

### 1.0 General:

1.1 Subcontractor method statements shall identify the controls required during concreting operations including but not limited to:

- Sequence of works
- Safe means of access/working at height
- Safe of vibrating equipment
- Safe use of plant & machinery and
- PPE/RPE required

### 2.0 Construction Phase Activities

2.1 Contractors shall provide evidence of training for operatives in accordance with the Training, Awareness and Competence Standard.

2.2 During works the following controls shall be implemented:

- Non-porous gloves shall be worn when working with mortar
- Eye protection is to be worn where there is a risk of mortar splashes or where mechanically cutting/chasing
- Safety helmets shall be worn where there is a risk of being struck by falling or swinging objects or materials
- Safety footwear including steel toecaps and steel midsoles
- Overalls/clothing shall be worn to cover bare arms and legs where there is a risk of skin contact
- Respiratory protection (minimum FFP3 Type) and dust suppression shall be used when cutting/chasing units
- Suitable hearing protection shall be worn where noise levels are above 80db (e.g. during cutting or chasing works)
- Manual Handling of units shall be reduced to a minimum through use of lifting aids/equipment to place units near to working areas, reducing twisting and stooping (e.g. by providing mortar boards/bricks at a convenient height), keeping units dry where possible, working with the design team to choose lighter options.
- Units of greater than 20kg should be handled mechanically or using a two person team if they have to be handled repetitively
- Units should be stacked on a firm level base wherever possible without double stacking
- Safe lift/build heights will vary dependant upon the block type, thickness, etc. Weather conditions can also affect lift heights and restrictions may be needed due to forecasted windy weather. However, generally, lift heights should not exceed 6 full block courses in a single working day. For cavity wall construction, the 2 leaves should be built up together and the difference in leaf height, at any stage during construction, should generally not exceed 675mm.
- New work will be protected from frost when air temperature is likely to fall below 2°C
- Hoppers/mixers etc. that have contained mortar must be washed out in a contained area away from watercourses, surface water drains, storm water drains, grids and channels to prevent pollution
- Fuel for plant will be sited on an impervious base within a bund. Drums will be secured in a locked container over night



## 6. CARPENTRY WORKS

### 1.0 General

1.1 Subcontractor method statements shall identify the controls required during concrete scabbling, cutting or drilling operations including but not limited to:

- Sequence of works
- Safe of vibrating equipment
- Safe Handling of materials
- Safe use of plant & machinery and;
- PPE/RPE required

### 2.0 Construction Phase Activities

2.1 Contractors shall provide evidence of training for use of pneumatic nail or staple gun (e.g. paslode guns) operators in accordance with the Training, Awareness and Competence Standard.

2.2 During carpentry works the following controls shall be implemented:

- Suitable gloves shall be worn
- Suitable Eye protection is to be worn when using powered equipment
- Dust masks (minimum FFP3 type) shall be worn where works generate significant amounts of dust whilst using woodworking machines particularly if working internally
- Dust collection systems **with Class M or H filtration** shall be used in addition to dust masks where significant amounts of wood dust is generated (particularly if working internally in poorly ventilated areas)
- Suitable hearing protection shall be worn where noise levels are above 80db (this will include many wood working machines including nail & staple guns)
- Safety footwear including steel toecaps and steel midsoles shall be worn
- COSHH Assessments will be carried out for the areas surrounding any powered wood working equipment, for hard wood and MDF
- Works shall be carried out in well ventilated areas where possible – it may be necessary to provide forced ventilation when carrying out dusty works in confined or restricted areas
- Where internal, mechanical cutting, drilling or sawing is carried out the working areas shall be segregated or designated as respiratory protection zones
- Facilities for washing and changing should be available on site and workers should wash their hands before eating, drinking, smoking and going to the toilet. Eating, drinking and smoking should take place away from the work area
- Working areas shall be maintained in a tidy condition – no wood dust shall be allowed to accumulate
- All guards and riving knives shall be in place and adjusted as close to the cutting piece as possible before work commences
- Operatives are to use push sticks when using bench saws where the cut is less than 300mm or for the last 300mm of a longer cut
- Fire extinguishers shall be provided in the locality of woodworking machinery
- Timber will be denailed during stripping operations



## 7. CDM

### 1.0 General

**1.1** This standard and the *Construction Design and Management Regulations 2015 (CDM2015)* applies to all construction works

**1.2** Under CDM2015 the HSE requires notification for projects that are likely to last more than **30 consecutive days and will have 20 persons or more on site at any one time or last 500 person days or more.**

**1.3** Under CDM 2015 the client has the legal duty to notify where applicable.

### 2.0 Non-notifiable Construction Works

**2.1** All works shall be subject to project specific risk assessments. **Under CDM2015 a construction phase plan is now required for all projects (irrespective of the size and duration of the project).** The [Generic Risk Assessment](#) documents and/or the [Short Risk Assessment and Method Statement](#) and the **Construction Phase Plan documents held on the company intranet will be utilised.**

**2.2** Where the works are not notifiable to the HSE the Non-notifiable Construction Phase Plan should be utilised and prepared prior to works starting on site.

**2.3** All construction sites, irrespective of their size or duration, shall be remain safe and without risk to health as far as is practicable e.g. adequate access, tidy, suitable warning signage, traffic routes segregated from pedestrians, suitable PPE worn etc.

### 3.0 Client Responsibilities

**3.1** Borrás will not normally take the role of the client, however we will if acting as the client, ensure that:

- All parties **will have the necessary training, skills, experience, where they are an organisation the organisation capability to carry out the works** and adequately resourced including designers, **principal designers**, principal contractors, and Contractors
- A **Principal Designer is appointed in writing right at the start of design work where there is more than 1 contractor.**
- A **Principal Contractor is appointed in writing prior the construction phase beginning where there is likely to be more than 1 contractor on the project.**
- Suitable methods of communication and consultation are established
- The HSE is notified of construction works if works last more than **30 consecutive days and will have 20 persons or more on site at any one time or last 500 person days or more.**
- Construction works are not started unless suitable construction phase plan is in place and adequate welfare facilities have been provided
- The health and safety file is reviewed updated or prepared at the end of construction works and made available.



## 4.0 Design Team

4.1 Typically Borrás will not act as the designer; however, where Borrás sub-contract the design to a third party we will ensure that:

- The competence of the professional service providers has been assessed using the [PSQ1 Professional Services Questionnaire](#) by the Project Surveyor (*including the Principal Designer where we are acting as the client*).
- Designers give due regard to health and safety in design work including specification of materials to eliminate risk during construction and in the continued operation of the facility.
- Adequate information regarding the health and safety risks of the design is provided to interested parties
- The design teams co-operate with all interested parties including other designer and the Principal Designer

## 5.0 Principal Designer

5.1 Typically Borrás will not act as a Principal Designer on projects. Where we are acting as a client we shall employ a Principal Designer in writing at the earliest opportunity.

5.2 The skills, knowledge, experience and (if an organisation) the organisational capability necessary of the Principal Designer shall be assessed using the [PSQ1 Professional Services Questionnaire](#) obtained by the Project Surveyor.

5.3 Where acting as the Principal Designer Borrás will ensure that:

- **We take account of the General Principles of Prevention contained within the CDM2015 Regulations**
- **The client is aware of their duties under CDM2015**
- **We plan, plan, manage and monitor the pre-construction phase and coordinate matters relating to health and safety during the pre-construction phase to ensure that, so far as is reasonably practicable, the project is carried out without risks to health or safety.**
- **We identify and eliminate or control, so far as is reasonably practicable, foreseeable risks to the health or safety of any person—**
  - (a) carrying out or liable to be affected by construction work;
  - (b) maintaining or cleaning a structure; or
  - (c) using a structure designed as a workplace
- Advice is provided to the client on the, provision of information and the adequacy of the health and safety plan
- There is proper coordination of the design ensuring safety during construction, use and demolition
- Collect and provide information to relevant parties
- **Draw up the health and safety file and pass to the client at the end of the project where appropriate**



## 6.0 *Principal Contractor*

Where acting as the Principal Contractor Borrás will ensure that:

- ***We take account of the General Principles of Prevention contained within the CDM2015 Regulations***
- ***We plan, plan, manage and monitor construction phase and coordinate matters relating to health and safety during the construction phase to ensure that, so far as is reasonably practicable, the project is carried out without risks to health or safety.***
- ***Ensure cooperation between contractors and that effective, preventative and protective measures are put in place to control the risks;***
- ***A site induction is carried out. The inductions should be proportionate to the nature of the visit. Inductions provided to escorted visitors need not have the detail that unescorted visitors should have. Escorted visitors only need to be made aware of the main hazards and control measures.***
- ***The site is secured against unauthorised access***
- ***Welfare facilities are provided in line with schedule 2 of the CDM2015 regulations***
- ***We liaise with the Principal Designer***

**6.1** ***The training, skills, experience, where they are an organisation the organisation capability of contractors*** shall be assessed for each project they undertake and take account of any relevant information provided in the [SQ1 Sub-contractor Questionnaire](#) and any previous experience of that contractor safety performance on similar jobs. The HSQE Manager is to be consulted if the contractor to be used has no previous experience of jobs of a similar size and complexity.

**6.2** For significant work packages or those that may be considered medium or high risk (e.g. groundwork/piling/tunnelling) the sub-contractors will be interviewed and a [SP01 Sub-Contractor Pre-Start Meeting](#) Completed.

**6.3** A [Construction Phase Plan](#) is to be produced by the Contracts Manager prior to commencement containing project specific information focussed on the specific health, safety and environmental hazards and risks associated with that project and are updated as necessary.

**6.4** The construction phase plan shall aim to communicate the project specific procedures in place to effectively control the risks posed by the project. Where appropriate the construction phase plan shall be supplemented by project and task specific method statements.

**6.5** When developing the Construction Phase Plan the Contracts Manager is to consider the risk to all those involved in and those that may be affected by the works e.g. neighbours, residents, local schools etc.

**6.6** The Contracts Manager shall consult with the Site Manager, HSQE Manager and other interested parties as necessary when developing the Construction Phase Plan (e.g. existing building users, local residents, sub-contractors etc). Consideration should be given to communicating health and safety information to interested parties such as the programme of works, road closures etc via, for example, letters to local residents, school safety talks etc.

**6.7** To support the Construction Phase Plan the Contract Manager shall complete the [Generic Risk and COSHH Assessments](#) relevant to the specific element of the works. The Generic Assessments shall be made site specific detailing any special hazards that are of note on that site and the site specific controls that are to be employed.

**6.8** The generic risk assessments should only be carried out where Borrás are either in control of or actually carrying out the operations e.g. for General Site Hazards, traffic management, fire, lifting operations, working at height etc. They should **not** take the place of sub-contractors task based risk assessments and method statements.



**6.8 Sub-contractors shall provide method statements relating to their works. The Site Manager shall evaluate the sub-contractors method statements utilising the RAMS Checklist. The RAMS provided shall ensure that that effective, preventative and protective measures are put in place to control the risks.**

**6.9** The Site Manager shall carry out tool-box talks at a minimum frequency of one per month throughout the duration of the project. Tool-box talks shall relate to the significant health safety and environmental risks at that stage of the project and a record maintained (may be maintained on the [TBT Tool-box Talk Record](#)).

**6.10 All visiting Borrás Staff shall, though their actions, demonstrate visible leadership in health and safety. These actions include setting standards for working practices and providing an example by following them, challenging unsafe conditions and working practices when they arise and consulting effectively with workers, taking into account their views.**

#### **Appendix 1 General Principals of Prevention**

**These principles are a requirement of the Management of Health and Safety at Work Regulations 1999 (MHSW) and apply to all industries, including construction. They provide a framework to identify and implement measures which are necessary to control risks on a construction project and are referenced within the CDM2105 regulations:**

- a) **avoid risks;**
- b) **evaluate the risks which cannot be avoided;**
- c) **combat the risks at source;**
- d) **adapt the work to the individual, especially as regards the design of workplaces, the choice of work equipment and the choice of working and production methods, with a view, in particular, to alleviating monotonous work and work at a predetermined work-rate and to reducing their effect on health;**
- e) **adapt to technical progress;**
- f) **replace the dangerous by the non-dangerous or the less dangerous;**
- g) **develop a coherent overall prevention policy which covers technology, organisation of work, working conditions, social relationships and the influence of factors relating to the working environment;**
- h) **give collective protective measures priority over individual protective measures; and**
- i) **give appropriate instructions to employees.**



## 8. CONCRETE SCABBLING, CUTTING OR DRILLING

### 1.0 General:

1.1 Subcontractor method statements shall identify the controls required during concrete scabbling, cutting or drilling operations including but not limited to:

- Sequence of works
- Safe of vibrating equipment
- Safe use of plant & machinery and;
- PPE/RPE required

### 2.0 Construction Phase Activities

2.1 Contractors shall provide evidence of training for abrasive wheel operators in accordance with the Training, Awareness and Competence Standard.

2.2 During concrete scabbling, cutting or drilling operations the following controls shall be implemented:

- Suitable gloves shall be worn
- Suitable Eye protection is to be worn
- Dust masks (minimum FFP3 type) shall be worn where works generate significant amounts of dust including during cutting and scabbling
- Safety helmets shall be worn where there is a risk of being struck by falling or swinging objects or materials
- Dust suppression techniques (e.g. water suppression or use of dust collection systems) shall be used in addition to dust masks where significant amounts of dust is generated
- Suitable hearing protection shall be worn where noise levels are above 80db
- Safety footwear including steel toecaps and steel midsoles
- Works shall be organised to reduce the need for scabbling, cutting or drilling where possible
- Works shall be carried out in well ventilated areas where possible – it may be necessary to provide forced ventilation when carrying out dusty works in confined or restricted areas
- Where internal cutting, drilling or sawing is carried out the working areas shall be segregated or designated as hearing/respiratory protection zones
- Facilities for washing and changing should be available on site and workers should wash their hands before eating, drinking, smoking and going to the toilet. Eating, drinking and smoking should take place away from the work area





## 9. CONCRETING OPERATIONS

### 1.0 General:

1.1 Subcontractor method statements shall identify the controls required during concreting operations including but not limited to:

- Sequence of works
- Safe of vibrating equipment
- Safe use of plant & machinery
- Requirements of temporary works (including process for dismantling temporary works after pouring of concrete) and
- PPE/RPE required

### 2.0 Construction Phase Activities

2.1 Contractors shall provide evidence of training for concrete plant operators in accordance with the Training, Awareness and Competence Standard.

2.2 Where concrete pumps are utilised the contractor shall provide evidence of maintenance and 12 monthly thorough examination of lifting equipment. A record of this is to be kept on site.

2.3 Operators of concrete pumps are to be made aware of overhead obstruction during site induction.

2.4 During concrete placement the following controls shall be implemented:

- Non-porous gloves shall be worn
- Eye protection is to be worn where there is a risk of concrete splashes
- Safety helmets shall be worn during placement and where there is a risk of being struck by falling or swinging objects or materials
- Overalls/clothing shall be worn to cover bare arms and legs where there is a risk of skin contact
- Safety footwear including steel toecaps and steel midsoles
- Suitable hearing protection shall be worn where noise levels are above 80db (e.g. for operator during pumping)
- Working areas shall be segregated during pumping/placing of concrete
- All concrete delivery trucks should be fitted with audible reversing devices
- Concrete pumps should not be positioned over or adjacent to:
  - previously disturbed ground that has been back-filled,
  - excavations, trenches or holes in the ground,
  - cellars, basements or pits, or
  - inadequately compacted or soft ground
- Concrete should be deposited as near as possible to its final position to reduce handling of concrete.
- Scabbling purely for architectural aesthetic effect should not be carried out, alternative methods to achieve a suitable finish should be sought.



- Drivers of pre-mix concrete delivery trucks should not be considered workers for pumping operations, unless trained to carry out this function and authorised to act in this capacity by their employer.
- Trucks, hoppers, mixers and concrete pumps that have contained concrete must be washed out in a contained area away from watercourses, surface water drains, storm water drains, grids and channels to prevent pollution.



## 10. CONFINED SPACES

### 1.0 General:

1.1 Subcontractor method statements shall identify the controls required when carrying out works in confined spaces including but not limited to:

- Sequence of works
- Control of hazardous substances
- Safe Access/Egress
- Qualifications of Staff
- Emergency Procedures and;
- PPE/RPE required

### 2.0 Construction Phase Activities

2.1 Where carrying out works in confined spaces risk assessment [RA032 Working in Confined Spaces](#) shall be completed by a confined space trained Contracts or Site Manager.

2.2 Contractors shall provide suitable evidence of training when carrying out any works in confined spaces in accordance with the Training, Awareness and Competence Standard. This shall include confined space training for all those entering the confined space, authorised persons completing risk assessment and permits and persons providing supervision and outside/rescue personnel.

2.3 A [Confined Space Permit](#) shall be completed by the authorised/confined space trained person.

2.4 The person completing the confined space permit shall have received confined space training commensurate with the level of risk associated with the confined space.

2.5 During confined space working the following controls shall be implemented:

- Confined space working will be avoided where ever possible
- An authorised/confined space trained person will carry out a Risk Assessment and Method Statement for the works
- An adequate communication system will be needed and should enable communication:
  - between those inside the confined space;
  - between those inside the confined space and those outside; and
  - to summon help in case of emergency
- The atmosphere within a confined space may need testing for hazardous gas, fume or vapour or to check the concentration of oxygen prior to entry and during works
- Where ventilation is required, forced ventilation is normally preferable to exhaust ventilation (which has only a local benefit). It is essential to ensure that extract ventilation is routed away from possible sources of re-entry
- Where isolation from ingress of hazardous substances is required it needs to be tested to ensure it is sufficiently reliable by checking for substances to see if isolation has been effective
- Any equipment provided for use in a confined space needs to be suitable for the purpose. Where there is a risk of a flammable gas, specially protected electrical equipment shall be used



- A suitable means of access/egress shall be provided taking into account the size of openings, number of persons and, where applicable, use of breathing apparatus
- The First Aid Equipment shall contain suitable Resuscitation Equipment
- Never use petrol-fuelled internal combustion engines in confined spaces. Gas cylinders should not normally be used within a confined space unless special precautions are taken. Portable gas cylinders for heat, power or light, and diesel-fuelled internal combustion engines are nearly as dangerous as petrol-fuelled engines, and are inappropriate unless exceptional precautions are taken
- Flammable and combustible materials should not be stored in confined spaces
- Suitable lighting, including emergency lighting, should be provided
- Exclude static discharges and all sources of ignition if there is a risk of a flammable or explosive atmosphere in the confined space. All conducting items such as steel trunking and airlines should be bonded and effectively earthed
- Smoking should be prohibited in confined spaces (note: it may also be necessary to extend this cordon outside the confined space)
- Where respiratory protective equipment (RPE) is provided or used in connection with confined space entry or for emergency or rescue, it should be suitable for the purpose for which it is intended, ie correctly selected and matched both to the job and the wearer. RPE will not normally be suitable unless it is breathing apparatus
- Record of 6 monthly thorough examination of lifting equipment shall be provided for any rescue equipment used for lifting persons.



## 11. CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH (COSHH)

### 1.0 General

1.1 This standard applies to all Hazardous Substances in line with the COSHH Regulations 2002. Where hazardous materials are used in the workplace they shall be labelled, stored, used and disposed of appropriately. The COSHH Regulations apply to:

- Substances classified as Very Toxic, Toxic, Harmful, Corrosive, Carcinogens, Mutagens or Irritants under Chemical (Hazard Information for Packing for Supply) Regulations 2002
- Biological Agents (such as Leptospirosis/Weils disease, legionnaires disease etc)
- A dust of any kind in air in significant quantities (**including silica & wood dusts**)
- Any other substance which creates a risk to health (e.g. carbon monoxide is not hazardous but if in significant quantities in a confined space may be an asphyxiant)
- COSHH **does not** cover asbestos, lead, flammable or explosive substances, separate risk assessments will need to be completed when using substances with these properties (including the [Generic Risk Assessments](#) for works under the control of Borrás Construction)

1.2 For most purchased products the hazard symbols on the packaging will show if a COSHH assessment is required. COSHH Assessments may also be required if generating significant emissions of a hazardous nature or dust from a process e.g. Carbon Monoxide in a confined space from a generator or dust from wood or block cutting.

1.3 For Work Carried out by directly employed operatives the [Generic COSHH Assessments](#) are held on the intranet and shall be completed by the Site Manager/Foremen for substances that are in common use such as cement, plaster, paint etc. Where the substance is not listed a separate COSHH Assessment is to be developed.

1.4 The following should be considered during the COSHH Assessment:

- Can you avoid using a hazardous substance or use a safer process – preventing exposure, e.g. using water-based rather than solvent-based products, applying by brush rather than spraying?
- Can you substitute it for something safer – e.g. swap an irritant cleaning product for something milder, or using a vacuum cleaner rather than a brush?
- Can you use a safer form, e.g. can you use a solid rather than liquid to avoid splashes or a waxy solid instead of a dry powder to avoid dust?
- How might the substance be taken into the body e.g. will it be breathed-in, absorption (through skin) or swallowed?
- Work should be carried out so as to minimise the generation of dusts, vapours or fumes as far as possible.
- Where adequate control cannot be achieved by other means only then can PPE be considered (in conjunction with the other measures)
- The controls should consider the possibility of other people being exposed to the substance e.g. members of the public, visitors or residents (that may have some health conditions of their own e.g. asthma).

1.5 Where manufacturers or other information suggests that the substance is a **Carcinogen, Mutagen or Respiratory Sensitizer** the HSQE Manager is to be consulted before works commence.

### 2.0 Construction Phase Activities

2.1 The Contract Manager shall complete the [Generic COSHH Assessments](#) relevant to BGHL's element of the works.



2.2 The Contracts Manager shall obtain COSHH Assessment from contractors as part of their method statement documentation sent to site.

2.3 The site manager shall ensure that the following standard controls are implemented on all sites:

- Ensure that personnel using hazardous substances are briefed on the risks to their health and the environment, and the control measures to minimise the risk, a record of the briefing is to be maintained (as part of the induction record)
- Where PPE is provided it shall be suitable for the task, clean and well maintained. The site team shall ensure that PPE is used as described within the COSHH Assessments/method statements.
- **Where persons are using tight fitting face pieces they shall have a valid face fit test for that mask**
- Suitable washing facilities - including hand washing facilities shall be available.
- Eating and drinking and smoking on site should be prohibited when working with hazardous substances.
- Suitable, secure storage areas for hazardous materials should be provided; these areas should be marked with warning signs detailing any special precautions that need to be taken.
- Working areas shall be well ventilated and measures taken to control the generation of dust.
- Substances should wherever possible, be stored in their original containers, away from drains, water courses or other environmentally sensitive areas.
- Drums shall be stored on bunds, where there are several containers stored on the bund the bund should have the capacity of at least 110% of the largest container or at least 25% of the volume of all the containers.
- Bulk containers (e.g. diesel) should have bunds of at least 110% of the capacity of the container with any hoses within the bunded area.
- Standard emergency arrangements shall include Spill kits placed in a prominent position near to the storage areas and the availability of sterile eye wash stations. Additional emergency arrangements shall be in place commensurate to the level of risk.



## 12. DEMOLITION

### 1.0 General

1.1 This standard should be read in conjunction with *the CDM Standard*.

### 2.0 Tender and Design Planning

2.1 During site investigation the tender team should not enter any area of proposed demolition that is potentially unsafe unless it has been confirmed as safe by a competent person (including structurally safe by a structural engineer where appropriate).

2.2 The estimators shall seek information on of the proposed demolition and ensure that this is passed to the Contracts Manager where applicable including:

- General location of the demolition including adjacent structures or where there is restricted working
- Asbestos Surveys
- Contamination
- Services information
- Voids and confined spaces (e.g. cellars, fuel tanks etc)

### 3.0 Construction Phase Activities

3.1 A section 80 notification of demolition to the local authority shall be in place prior to works commencing.

3.2 Demolition works are considered high risk a [SP01 Sub-Contractor Pre-Start Meeting](#) is therefore required to confirm contractor attendances and outline method statement.

3.3 When demolition activities are to take place a written method statement and safety plan is to be provided regardless of the duration of the works. This safety plan is to be evaluated by the Contracts Manager and signed and dated to evidence this evaluation (may also use the [RAMS Checklist](#) as evidence of evaluation).

3.4 Welfare facilities shall be provided during demolition works including canteen, toilet and drying room facilities.

3.5 A structural engineer shall provide a Demolition Survey of every building to be demolished to identify key structural elements of the building(s) and their condition, and connection of the structure with other structures not to be demolished.

3.6 All temporary support works shall be designed by a suitably qualified engineer.



**3.7** The following standard controls shall be in place on all sites and referenced in contractor's method statements. Where applicable, these controls should deal with both the health and safety and environmental issues associated with the works:

- Suitable gloves shall be worn
- Suitable Eye protection is to be worn
- Dust masks (minimum FFP3 type) shall be worn where works generate significant amounts of dust
- Safety helmets shall be worn where there is a risk of being struck by falling or swinging objects or materials
- Dust suppression techniques (e.g. water suppression or use of dust collection systems) shall be used in addition to dust masks where significant amounts of dust is generated
- Suitable hearing protection shall be worn where noise levels are above 80db
- Safety footwear including steel toecaps and steel midsoles
- The method of demolition and safe sequence of dismantling the structure shall be identified; the method should ensure that any structures remain stable whilst being dismantled.
- All substances hazardous to health shall be removed from the building under controlled conditions; ideally prior to demolition for the structure, including asbestos, anthrax contaminated plaster, Lead and any chemicals or waste residue from previous uses of the building(s).
- All demolition operatives must hold the demolition operatives CSCS Card or equivalent. As a minimum, the work gang must include at least one Demolition Supervisor (CSCS Demolition Gold Card or equivalent).
- Plant operators are to hold relevant plant operator certificates (CPCS Cards or equivalent).
- Exclusion zones around the demolition areas must be established (larger zones may be required dependant on the method of demolition and size of the structure) to include solid hoarding at least 2 meters high for protection of the public.
- There shall be suitable fall protection arrangements in place (to prevent falls from open edges, openings in floors etc).
- Services in the demolition area must be confirmed as dead. If this is not possible, pipes and cables must be labelled clearly, to make sure they are not disturbed.
- Traffic management arrangements shall consider the risk of being hit by demolition vehicles turning, slewing, or reversing. Where possible, vision aids and zero tail swing machines should be used.
- All plant and equipment should be in good working order including warning beacons and reversing sirens where appropriate.
- Where excavators are used as lifting equipment a copy of the equipments last thorough examination shall be obtained and kept on file.
- Dust, Noise and Vibration (including hand-arm vibration and structural vibration) controls will be in place.
- Trees and shrubs to be left untouched, shall be securely signed and protected to prevent accidental removal or damage, by fencing at a distance of half the height of the tree. Other areas of flora or fauna identified shall be protected in accordance with Local Authority/Environment Agency/project specification requirements where identified.





## 13. DUST CONTROL

### 1.0 General

1.1 This standard refers to environmental controls on construction sites and should be read in conjunction with health and safety dust controls set out within standards relating to specific work activities e.g. Concrete Scabbling, Cutting or Drilling Standard.

### 2.0 Construction Phase Activities

2.1 The following will be implemented during site activities:

- Consider controlling dust by use of solid hoarding around perimeter/barriers around dusty activities
- No bonfires will be allowed on site
- Re-use hard core material where possible to avoid unnecessary vehicle trips
- Cutting grinding and sawing to be kept to a minimum. All cutting grinding or sawing equipment shall use water suppressant and/or suitable local exhaust ventilation systems
- Any complaints will be logged, investigated and appropriately actioned

2.2 Construction traffic:

- All vehicle drivers are instructed to switch off engines – no idling vehicles
- Effective vehicle cleaning and specific wheel-washing on leaving site shall be considered where there is potential for significant mud to be deposited on the adjacent roads
- All loads entering and leaving site are to be covered
- Drains shall be covered to prevent site runoff of water or mud
- Appropriate speed limits shall be implemented around site
- Vehicles and plant to be maintained with checks before first use and then weekly and recorded in the plant register. Should any emissions of dark smoke occur (except during start up) then the machinery should be stopped immediately and any problem rectified before being used.
- Drivers shall be instructed to direct vehicle exhausts so they are not directed at site entrances.
- Plant shall be located away from the boundaries close to residential areas as far as possible.
- Vehicle movements on and off site will be planned to minimise the number and distance of journeys

2.3 The following specific controls shall be considered for Demolition Works:

- Water will be used as dust suppressant
- Drop heights will be minimised to control the fall of materials
- Any asbestos will be dealt with by a registered contractor

2.4 The following specific controls shall be considered for Groundwork's:

- Water will be used as dust suppressant in dry weather
- Earthworks will be temporarily covered where possible
- Drop heights will be minimised to control the fall of materials
- Steep sided stockpiles or mounds or those that have sharp changes in shape will be avoided.
- Stockpiles to be kept away from the boundary, sensitive receptors, watercourses and surface drains
- Take into account the predominant wind direction when siting stockpiles



**2.5** The following specific controls shall be considered for Waste Management:

- Skips will be securely covered
- Waste will not be allowed to accumulate
- Drop heights will be minimised to control the fall of materials.
- Waste will be regularly removed and covered during transport

**2.6** *The following additional controls shall be considered where working inside or adjacent to sensitive healthcare locations e.g. hospitals, care homes etc. The HSQE Manager should be consulted on these controls:*

- *Pre-construction information relating to dust controls and sensitive receptors shall be consulted*
- *Existing building users shall also be consulted (including infection control team where working within hospital environments).*
- *HEPA filtered dust extraction systems vented away from the works areas may be considered (in addition to on-tool extraction as described within separate task specific SHE Standards)*
- *Work areas generating dust to be physically segregated by use of hoarding that aims to prevent migration of dust outside the working area*
- *Tear off “tacky mats” shall be used on every entrance/exit to the working areas*
- *Waste to be transported outside of the working area in closed containers that are also free from dust*
- *Site to have a M-Class filtration vacuum cleaner available on site at all times when generating dust from construction/demolition works (note that contractors should be providing this if they are generating the dust during their operations)*
- *Operatives to be instructed to clean themselves of dust before leaving the working area*
- *For specific dust generating tasks additional secondary containment within the site may also be considered*



## 14. ELECTRICAL INSTALLATIONS

### 1.0 General

1.1 All electrical equipment should be suitable for intended use and be in good working order.

1.2 Only qualified electricians or operatives under the direct supervision of a qualified electrician are permitted to work on electrical systems.

1.3 For use of portable electrical equipment see the Portable Appliance Testing Standard

### 2.0 Construction Phase Activities

2.1 Requirements for Temporary Electrical Installations:

- The site cabins must be formally inspected and tested in accordance with IEE Wiring Regulations every 12 months
- Generators over 5kVA providing temporary electrical supplies shall also be inspected and tested by a competent electrician upon installation and every 3 months thereafter. A record of the test shall be maintained.
- Particular care shall be taken to ensure that generators providing temporary electrical supplies over 110v (about 5kVA) are suitably earthed. Note: generators connected directly to double insulated (Class II) 110v equipment does not need to be earthed.
- Other site temporary electrical installations shall also be inspected and tested by a competent electrician upon installation and every 3 months thereafter. A record of the test shall be maintained.
- External cabling for temporary supplies shall be armoured and suitably identified
- Cables must be run in such a manner as to reduce the risk of creating a trip or overhead hazard
- Where cables risk being damaged such as where there is heavy pedestrian or vehicular traffic they must be adequately protected by mechanical barriers
- Overhead cables must be adequately identified
- Contractors should provide and use 110 volt portable tools (or low voltage battery operated equipment where possible), plant and lighting.
- 110v equipment should be operated from a 240 / 110-volt transformer, centre-tapped to earth
- Where 240v equipment must be used this shall be protected by Residual Current Device with a rated tripping current of 30 mA. RCD's on portable equipment should be fitted with a test button and checked before each use.

2.2 Contractor method statements/risk assessments shall include the following controls where carrying out electrical installations:

- Electrical works are to be carried out by competent electrician or by operatives under the direct supervision of a competent electrician. Evidence of electricians NICEIC or ECA qualifications are to be filed with the operative induction records
- Where works are to be carried out on electrical systems these shall be turned off AND isolated. ***Isolation procedures shall be detailed in the electrical contractor's method statements and should include proving that the apparatus is dead before work commences, ways of ensuring that the system is not accidentally energised (e.g. warning notices/locking off or removing fuses etc), earthing, provision of***



**suitable PPE (e.g. flame retardant jackets, rubber mats etc) and provision of dry powder/CO<sup>2</sup> fire extinguishers**

- Live working shall be prohibited unless deemed absolutely necessary. Where live working is necessary the contractor will provide a method statement detailing the safe system of live works and provide for the issuing of live works permits to work for each instance of live working. The Borrás [Live Works Permit](#) may be utilised.
- All items of test equipment, should receive a regular inspection and, where necessary, a test/calibration. The inspection and test status shall be identified on the equipment and records available from the contractor on request
- In all instances where there is a foreseeable risk that the supply could be reinstated, an appropriate “caution” notice should be placed at the point of isolation. For DBs with ‘multiple isolations’ a single suitably worded notice on each DB, would suffice. Note: The practice of simply placing PVC insulating tape over a circuit breaker to prevent inadvertent switch-on is not a safe means of isolation
- The procedure for proving dead should be by use of a proprietary test lamp or two pole voltage detector as recommended in HSE Guidance Note GS38, *Electrical test equipment for use by electricians*. Non-contact voltage indicators (voltage sticks) and multi-meters should not be used. The test instrument should be proved to be working on a known live source or proprietary proving unit before and after use. All phases of the supply and the neutral should be tested and proved dead
- Where there is uncertainty regarding isolation these cables shall be assumed to be live until proved dead. Clamp meters can be used as a means of identifying cables by testing for current flow in the conductors. Non-contact voltage indicators (voltage sticks) can be used to test for voltage where cables without a metallic sheath are to be identified. However, once insulation is pared using live working practices to reveal the underlying conductors, contact voltage detectors should be used as the means of proving dead
- Before energising any final circuit (i.e. lighting, power, etc.) it should be checked that the wiring system within the area has been completed and equipment, including luminaries and accessories, fitted. If the service in question is energised for the testing and commissioning of equipment/system, it must be switched OFF and locked upon completion of this work
- When live services are provided prior to final commissioning, warning signs should be displayed on each item of live switchgear, plant and along cable routes that pass through the work areas in exposed positions particularly where switchgear and cables are exposed to damage that may be caused by other trades or environmental conditions
- Electrical contractor’s method statements shall also identify safe work practices as appropriate including: a suitable means of working at height, asbestos awareness training for all personnel who may disturb asbestos containing materials, specific training for electricians who are to enter confined space etc
- All electrical installations are to be inspected by a competent electrician and a NICEIC or ECA Certificate provided



## 15. EXCAVATIONS

### 1.0 General

1.1 All excavations shall be safe as far as is reasonably practicable; the site management shall complete a [Permit to Break Ground](#) for all excavations.

1.2 The Contracts Manager, in conjunction with the Site Manager, shall complete [Generic Risk Assessment RA005 Excavations](#) where excavations are carried out by direct labour.

1.2 The Contracts Manager, in conjunction with the Site Manager, shall complete [Generic Risk Assessment RA013 Overhead/Underground Services](#) recording the general location of services any site specific controls that are to be employed.

1.3 All excavations shall be subject to ongoing inspections as follows:

- Before any persons enters the excavation
- At the start of each day/shift
- After any event that is likely to affect the stability of the structure
- Inspections shall be recorded at least every 7 days
- Where employees are carrying out these inspections they are to be recorded Records of Reports and Inspection GS0307 Book, however the preference should be for the ground works contractor to complete the inspection and provide evidence.

1.4 Excavations may also be confined spaces, please refer to the confined spaces standard for details.

### 2.0 Construction Phase Activities

2.1 The Contracts Manager/Site Manager shall ensure that the following is in place when reviewing contractor method statements and on site operations:

- The need for shoring/battering of excavations shall be assessed by the contractor carrying out the works (depending on ground conditions shoring/battering may be required on shallow excavations).
- Drag boxes or other proprietary shoring systems shall be utilised. Where non-proprietary systems are used they shall be accompanied by a temporary works design from a suitably qualified engineer.
- Consider contacting the utilities companies to arrange temporary supplies and/or isolation/re-routing of the underground services. It is preferable for services to be re-routed thus eliminating the potential for service strikes.
- Service information of the proposed excavation area shall be obtained.
- Where excavations undermine structures surveys of the foundations and the advice of a structural engineer will be required.
- CAT Scans/Trial holes (as many as necessary) will be arranged to mark out the position (including depth) of the services. Where cable locators are used they shall be used by competent operators and accompanied by a current test and calibration certificate.
- Trial holes shall be dug by hand with caution using insulated tools. Picks or forks may be used with care to free up stones etc, they should not be used in soft clay or sandy soils. Every effort should be made to excavate alongside the service rather than directly above it. Final exposure of the service by horizontal digging is recommended.



- Handheld power tools should not be used above or within 500mm of any buried service. Because of the difficulty in confirming depth, hand-held power tools should not be used over the line of a cable.
- Mechanical excavators shall not be used within 500mm of any gas pipe (greater safety distances may be advised by the network operator depending on pressure).
- Where mechanical excavators are used in the possible vicinity of underground electrical cables, keep everyone well clear of the excavator bucket. If there is a cable strike the operator shall be instructed to jump clear of the machine and the area cordoned off until the cable has been made safe.
- Once services have been uncovered they should be correctly marked and identified. The line of any identified services should be noted and marked with waterproof crayon, chalk or paint on paved surfaces or with wooden pegs in grassed or unsurfaced areas. Steel pins, spikes or long pegs should not be used.
- Services shall be supported if they span more than 1 m (support may be required for shorter distances than this if joints have been exposed or if otherwise susceptible damage).
- Plant or materials should not be placed/stored next to the edge of any excavation.
- Protection to prevent materials falling into the excavation is required where a risk of falling materials exists. Where persons are working in excavations hard hats shall be mandatory where there is any risk of materials falling
- If the excavation is 2 m or more deep, or accessible to the general public, provide substantial barriers around the excavation, shallow excavations should be protected by using bunting or similar.
- Plant operators shall be competent. Copies of plant operator certificates shall be maintained with the induction records (CPCS or Equivalent)
- Do not site petrol or diesel-engine equipment such as generators or compressors in, or near the edge of an excavation unless exhaust fumes can be ducted away or the area can be ventilated
- Backfilling of any excavation should be done carefully, any warning tiles, tape etc above the services should be put back in their original position unless visual examination showed this to be incorrect, in which case they should be replaced above the service to which they refer. Warning tape should not be used for any other purpose (e.g. guarding an excavation) and should not be discarded in an excavation. Backfill materials containing items likely to damage the services, such as large pieces of rock and hard core, should not be used.
- All service strikes must be immediately reported to the HSQE Manager using the near miss reporting form (or accident book records if the strike has resulted in injury).



## 16. FIRE

### 1.0 General

1.1 The Contracts Manager in conjunction with the Site Manager shall develop a fire risk assessment on [RA029 - Fire Risk Assessment](#) that

- **Identifies Hazards:** sources of fuel, sources of ignition and oxygen (in addition to oxygen in the air)
- **Identifies Persons at Risk:** including adjacent properties, vulnerable persons, visitors etc
- **Remove and protect from risk:** identify additional controls to remove or control sources of ignition, fuel or oxygen and reduce effects should a fire occur
- **Record/Train:** record actions taken and train all staff on the controls as part of the induction process
- **Review:** the risk assessment and associated controls should be reviewed at regular intervals

*Where the works are considered high risk e.g. works within in buildings over 30m high or on high fire risk construction methods (e.g. timber frame) or locations the [RA029a Construction Fire Plan Incorporating Fire Risk Assessment](#) shall be completed and the HSQE Manager shall be consulted during the development of the assessment.*

1.2 When developing the risk assessment the project team shall consult existing building users, neighbours, local fire services and other interested parties appropriate to the nature of the project.

1.3 Contractors shall identify the fire hazards for their construction process and identify suitable controls within the project specific method statements in line with the requirements of this standard.

### 2.0 Construction Phase Fire Risk Controls

2.1 [Fire Plans \(Appendix A\)](#) shall be developed as a result of the risk assessment process. The fire plans shall:

- Identify the means of raising the alarm (fire detection), appropriate to the nature of the works.
- Include a site plan with location of fire extinguishers, alarm points, egress routes, flammable material storage areas, location of temporary building, location of water supplies, designated smoking areas (if applicable) access for emergency services and muster points
- Identify what to do in the event of an emergency
- Detail the name and contact details of the fire warden(s)
- communicated during site induction
- [Fire Action Notices](#) shall be displayed in prominent positions through the site

2.2 There shall be at least 1 designated fire warden on site at all times. Their duties are to include:

- Checking that the sites fire arrangements remain effective
- Liaising with the emergency services in the event of a fire
- Contacting neighbours where the fire poses a risk to them
- Checking that all personnel are accounted for
- Carrying out a fire check at the end of each shift/day
- Carry out and record a fire



**2.3** A weekly check, recorded in the site inspection register by the nominated fire warden shall check:

- The Fire Plan remains current
- Escape routes are free from obstructions and clearly signed
- Waste has not been allowed to accumulate
- Fire fighting facilities are in place and prominently signed
- Fire Alarms/fire detection equipment remains operational
- Routing and condition of temporary electrical cables

**2.4** Warning bells or air horns should only be used on small sites (single storey/1 – 2 roomed buildings), other sites should wired or wireless alarms to BS5839 as a minimum. Where there is significant risk of fire (e.g. timber frame) automatic fire detection systems should also be installed.

**2.5** There shall be a minimum of 2 x 9L Water and 2 x 1.1kg CO<sup>2</sup> type fire extinguishers per 200m<sup>2</sup> of floor area, positioned in prominent areas near to exits on each floor of construction. The fire extinguishers shall be situated in red boxes or portable trolleys with a “FIRE POINT” sign.

**2.6** Extinguishers shall be tested/maintained at least annually; the date of the next test is to be clearly visible on the extinguisher.

**2.7** Wherever possible sites will maintain at least 2 emergency exit points in different directions for each working area. Note: If fire safety (safe travel distances and preventing internal and external spread) cannot be achieved from a single fire zone (i.e. the whole structure), then consideration must be given to appropriate levels of internal compartmentation to protect escape routes and limit fire spread during the construction phase e.g. on multi-storey or timber frame construction projects.

**2.8** Fire Rated Materials to LPS1207 will be used for all temporary covers. Fire rated covers to LPS 1215 will be used for all temporary covers to scaffolding.

**2.9** Exit signs shall be posted and located in prominent positions (note: this may require temporary signage and the covering of permanent signage temporarily).

**2.10** Sites shall keep a signing in book to be used to account for staff in the event of a fire.

**2.11** Waste materials will not be allowed to accumulate on site. Wastes shall be collected to suitable containers (e.g. skips) located away from permanent and temporary buildings.

**2.12** All hot works will be controlled using the Borrás [HWP Hot Works Permit](#)

**2.13** Temporary buildings will:

- be separated from the building under construction as a far as possible.
- sourced from the approved temporary accommodation supplier. Where other suppliers are used they must be provided with a ½ hour fire rating
- have a means of automatic fire detection if within 6m or located inside a building
- have a means of automatic fire detection where used for cooking food or drying clothes





**2.14** Site storage and use of flammable liquids and LPG shall comply with the following:

- Use of acetylene shall be eliminated wherever possible. Where acetylene is in use during a fire the area shall be evacuated to a distance of 200m
- Quantities of flammable liquids and LPG – in particular quantities of full *or empty* acetylene cylinders, shall be kept to a minimum (ideally no more than a days supply)
- Flammable liquids and LPG must not be stored together
- Refuelling operations shall be carried out in designated areas away from combustible materials
- Flammable liquids shall be stored on impermeable bunds at 110% of the capacity of the largest drum
- Acetylene and LPG cylinders shall always be kept securely upright including those in use even when empty. Oxygen cylinders can be stacked horizontally but shall be wedged to prevent rolling
- Gas cages provided to store cylinders are to be lockable, ventilated and stored as far away from permanent buildings as possible
- Products that may add to the intensity of a fire such as oxygen or acetylene, or are toxic in the event of a fire, such as chlorine, must not be stored in the same compound as flammable liquids and LPG
- Storage areas shall have appropriate signage (e.g. “No Smoking”/“Highly Flammable”) and fire extinguishers (e.g. preferably Powder or Foam for LPG)

**2.15** Sites shall be secured against the risk of arson, measures shall include suitable storage of materials (including fire proof lockable containers for flammable liquids), suitably segregated sites (typically by the use of Herras fencing). Measures including provision of security staff, CCTV or alarmed entry points (such as on scaffolding) may also be utilised as appropriate and identified on the risk assessment.

**2.16** Smoking will only be allowed in designated smoking areas located away from permanent or temporary buildings. Where the project is of timber frame construction smoking should be totally banned from site.



## 17. FIRST AID

### 1.0 General

1.1 All workplaces will have as a minimum:

- Designated First aiders as follows:
  - Under 5 employees on site: 1 x appointed person
  - Over 5 employees on site: 1 x first aider at work
  - Over 50 employees on site: an additional first aider at work
- A fully stocked first aid kit, prominently displayed and readily accessible
- Eye-wash stations prominently displayed and readily accessible
- Emergency arrangements documented on [First Aid \(Emergency\) Arrangements](#) and displayed in prominent positions around the site office. These arrangements should include locations of first aid kits, location of local hospitals, directions to local hospitals and names of first aider(s) on site.

1.2 First aid arrangements shall be detailed in the construction phase plan and communicated during the site inductions.

1.3 Contractors shall provide their own qualified first aiders as well as suitable first aid equipment for the works they are carrying out.

**Note:** Specialist operations may require specific first aid/emergency equipment e.g. works involving specialist rescue such as working in confined spaces, this should be detailed within the contractor's method statement and risk assessments.

1.4 First aiders are responsible for ensuring that first aid boxes and equipment are replenished after use and the contents of the first aid kits are within the recommended use-by dates.

1.5 Where transient work is being carried out a first aid kit will be provided with every company vehicle, the driver is responsible for checking the contents are kept stocked and within use by dates.

1.6 All first aid incidents shall be recorded on the accident book on site and a record sent to the HSQE Manager. Copies of accident book entries are not to be retained on site.

1.7 As soon as the first aid incident ends the contracts manager is to carry out an investigation and report the incident as per the Accident and Incident Investigation and Reporting Standard, preserving and taking photographs of the scene of the incident as necessary.

### 2.0 References:

Online Hospital Locator: <http://www.nhs.uk/Pages/HomePage.aspx>



## 18. HOUSEKEEPING AND WORKING PLACES

### 1.0 General

1.1 All workplaces including temporary construction sites shall be, as far as reasonably practicable, free from trip and slip hazards with suitable arrangements for cleaning, storage of materials, storage and collection of waste materials and management of trailing leads.

1.2 All construction sites will, as a minimum:

- Complete Generic Risk Assessment [RA007 General Site Hazards](#)
- Check that housekeeping standards are being maintained and record a check in the inspection registers on a weekly basis
- Provide safe access and egress to the site, providing physical barriers between pedestrians and vehicles and one way routes to limit the need for vehicle reversing where possible
- Provide suitable signage and designating pedestrian/vehicle access routes where applicable
- Have suitable arrangements for ensuring that the site remains in a reasonable state of cleanliness at all times including regular waste removal arrangements
- Provide suitable lighting for all working areas (task lighting may also be provided by sub-contractors)
- Ensure that trailing leads are kept to a minimum, particularly at the top of stairs or changes in levels. Where possible leads are to be removed from the floor level in heavily trafficked areas
- Designate areas for storage of plant and materials
- Designate areas for storage of waste materials
- Determine suitable arrangements for the collection of waste materials
- Ensure that sharp objects/protruding nails are made safe or stored so as to not present a risk to safety of any person
- All holes in floors, shall be protected by either fixed boards, or handrails and toe-boards to prevent falls of persons and materials
- Stairs/lift shafts/changes in levels shall have substantial barriers to prevent falls of materials/persons
- Arrangements for ensuring that places of work remain safe in all foreseeable weather conditions (e.g. arrangements for gritting if cold weather is expected or securing of materials in high winds)
- Sites should implement steps to ensure workers are protected from harmful exposure to the sun when working outdoors including: providing a high factor sunscreen of at least SPF15 for use on any exposed skin, scheduling more frequent rest breaks, providing an area for breaks in the shade whenever possible, scheduling work to cooler times of the day where possible, providing shade where work tasks are being undertaken. Operatives should be reminded to cover exposed skin where possible by wearing loose fitting long sleeved shirts and hats.



## 19. LIFTING OPERATIONS

### 1.0 General

1.1 All lifting operations should be properly planned and supervised. Lifting equipment shall only be operated by suitably trained personnel.

1.2 Lifting operations are classified as follows:

- Simple: items of plant are carrying out lifting operations e.g. excavators, hi-abs, telehandlers etc
- Complex: where using any type of crane
- Specialist: for specialist lifting devices e.g. Passenger or goods hoists

1.3 For simple lifting operations a basic lifting plan shall be produced by the contracts manager in conjunction with the site manager and HSQE Manager (where required), this should include details of suitability of ground conditions, summary of items to be lifted and the safe means of lifting employed. This may be detailed on the [Generic Risk Assessment RA012](#) or a separate lifting operations method statement as deemed necessary.

1.4 Where materials are being delivered to sites and off-loaded using lorry mounted cranes:

- A Lifting Plan should be available for the lift being carried out (may not necessarily be site specific)
- The driver must be able to provide evidence that he is trained to operate the crane and oversee the lift.

1.5 Complex lifting operations will be planned by qualified appointed person and a detailed lifting plan produced giving details of the following:

- Working environment (e.g. weather restrictions, ground conditions, obstructions, overhead cables, voids, location of crane in respect of this)
- Person(s) completing the plan
- Equipment to be used (e.g. slings/chains/hooks/cranes/spreader plates etc)
- Materials to be lifted (weight/size/method of slinging/lifting points)
- Communication methods (e.g. hand signals, radio)
- Competent persons (e.g. slingers/signallers/banksmen/crane driver)
- Rescue Plan (e.g. for tower crane drivers)

Form [LP1 – Lifting Plan](#) may be utilised where the competent person is a member of directly employed staff.

1.6 Specialist lifting installations of hoists shall be installed in strict accordance with the contractors risk assessment and method statement. This should include details of:

- Safe method of erection
- Qualifications of installers
- Operator Training Provision
- Equipment Used (including Safe Working Load, safety devices e.g. anti-slip clutches/interlock devices/fencing below hoist etc)
- Inspection requirements (operator checks/thorough examination)

1.7 Where contractors are carrying out lifting operations their safe working arrangements shall be detailed in their method statements and risk assessments. These shall be evaluated as per the CDM Standard.



## 2.0 Standard Site Based Controls:

2.1 The following operational controls shall be implemented on all sites:

- Ground conditions must be checked for adequacy, the location of overhead services established and the means of excluding those not involved in the lift from the area determined all as part of the lift planning.
- The Site Manager shall keep copies of thorough examinations of lifting equipment used on site (including tele-handlers, cranes, hoists etc). Inspection intervals are 6 monthly for lifting accessories (chains, eye bolts etc) or equipment that lifts any person and 12 monthly through examinations for all other lifting equipment.
- Operators of lifting equipment including crane drivers, tele-handler drivers, hoist operators, slingers, signallers, banksmen and appointed persons, shall provide the appropriate CPCS or other CITB approved training qualification on induction and a copy kept with the induction records.
- Where lifting equipment requires on site assembly a record of through examination will be required before first use (e.g. for tower cranes or hoists).
- Lifting equipment shall be clearly marked with its safe working load (SWL) and an identification mark/serial number, to ensure it is traceable to its thorough examination certificate.
- Lifting equipment shall be subject to weekly inspections by a competent person and records maintained (in weekly plant register). Note: this may be carried out by the operator of the equipment e.g. the crane operator.
- Lifting equipment and accessories shall be stored in clean, dry conditions that minimise damage
- Warning or safety devices on equipment must never be bypassed in any circumstance
- All personnel and third parties shall be kept out of any area where they might be struck or crushed by a load or lifting equipment if it swings, shifts or falls. No one shall stand or work directly below a load. Note: Physical barriers may be required for this.
- The equipment used for lifting persons shall be specifically designed, approved/certified and clearly marked as suitable for personnel lifting. A test lift without personnel shall be carried out where there is confined access, potential for snagging or other hazard.



## 20. LONE WORKING

### 1.0 General

1.1 Employees will be considered as lone workers in the following circumstances:

- Working alone on a clients premises (e.g. school, hospital or other facility)
- Visits made alone to a client or member of the public at a private location that is not a place of work (e.g. visits to housing tenants at their homes).

1.2 The frequency and duration of lone working should be reduced to as low as reasonably practicable for all activities and prohibited for high risk activities such as live electrical working or working in a confined space.

1.3 Where lone working is deemed necessary for a specific contract then the contracts manager shall:

- Complete Generic Risk Assessment [RA028 Lone Working](#)
- Ensure that persons who will be working alone are consulted during the development of the risk assessment and briefed in the controls that are to be implemented as a result
- Ensure that suitable means of communication are in place in the event of an accident or incident
- Ensure that suitable checks on the location of the worker are made (this will be typically done via by reception as per the [RA028 risk assessment](#), however, alternative arrangements may be required for out of hours working).

1.4 When carrying out the risk assessment the contracts manager will take account of the following:

- If there is a risk of violence at the work location
- What is the risk of carrying out the tasks themselves (e.g. are they hazardous by their nature or are the clients activities hazardous at the work location)
- Are workers vulnerable in any way (e.g. where the worker has a disability is a young person or pregnant).

1.5 Where the risk assessment highlights risks as described in paragraph 1.4 additional controls may be considered. These additional controls may include:

- Personal Alarms
- More frequent checks on staff
- Arranging for making areas safe prior to works being carried out (e.g. removal of dangerous machinery/substances, dangerous animals or potentially violent individuals).



## 21. MANUAL HANDLING

### 1.0 General

1.1 Manual handling of loads should be reduced to as low as possible.

1.2 All employed staff will be trained in the correct manual handling techniques.

### 2.0 Design and Tender Planning

2.1 Design teams should, where reasonably practicable, design out heavy materials or substitute them for lighter materials, to reduce the risk of manual handling.

### 3.0 Construction Phase Activities

3.1 The Contracts/Site Manager shall identify manual handling activities that are to be undertaken by staff and labour only/agency workers under their direct control, where identified the following shall be implemented:

- Complete Generic Risk Assessment [RA014 Manual Handling](#), identifying the general tasks/activities covered and brief the operatives in relation to the controls identified on the generic risk assessment
- Carry out a toolbox talk for labour only/agency staff on manual handling techniques

3.2 Where contractors are carrying out manual handling activities their method statements should refer to controls including: manual handling training for operative, equipment to be used, PPE required etc. The contractor's method statements shall be evaluated as described in the CDM Standard.

3.3 The following shall be considered to reduce the risk of manual handling injuries on all sites:

- ***Mechanical lifting aids should be considered to reduce the need for manual handling where they are available this will include use of pallet trucks, block/paver/kerb lifting devices, wheelbarrows etc.***
- Store and use materials to reduce double handling/distance of lifting required or the potential for construction materials to become wet where possible (as water logged materials weigh more)
- The capability of individuals should be considered when assessing risk (e.g. does the operative have back problems)
- The properties of the load is to be considered (i.e. not only the weight, but how awkward is it to carry, does it obstruct vision when carrying it, does it have any lifting points, can it be carried by 2 or more people etc)
- The task is to be considered (i.e. where does the load have to be lifted from/to, does it involve bending/stretching/twisting/getting into an awkward space, are there a lot of items to be lifted)
- The working environment is to be considered (i.e. the working areas are to be free from trip or slip hazards and suitably lit, this is particularly important where items are to be handled e.g. stairwells, corridors or changes in levels)



## 22. NOISE

### 1.0 General

1.1 The Contracts/Site Manager shall carry out a [Noise Risk Assessment RA016](#) where noisy operations are to be carried out by company and agency employees working under our direct control to reduce the noise levels to as low as practical and where possible below **80dB**.

**Note:** Guidance noise values for equipment can be obtained from the equipment manufacturer or Hire Company.

1.2 When carrying out the risk assessment the risk assessor is to identify sources and levels of noise.

1.3 Sub-contractor risk assessments and method statements shall identify their noisy operations and provide for suitable control measures including those outlined in this standard.

1.4 Before PPE is considered noise should be reduced to as low as practical though the use of collective protective measures such as:

- Use of well maintained, low noise emitting equipment
- Using any noise reduction equipment available e.g. mixer doors, hoods on generators etc
- Consideration of acoustic barriers (e.g. shutting doors or putting plywood barrier around noisy equipment particularly if used internally)
- Turning machinery off when not in use
- Segregating the working area (use of signage, hearing protection zones etc)
- Distancing operatives from sources of noise (e.g. put the compressor in another room)
- Changing work methods to minimise noise or limiting the time operatives are exposed to noise (e.g. by job rotation)

1.5 If after the above collective protective measures have been taken and/or considered, an operative is likely to be exposed to noise above action levels described below then PPE is to be provided as follows:

- **Lower exposure action level:** Noise exposure likely to be above **80dB** averaged over an 8 hour working day or **135dB** maximum sound pressure at any point in time: **PPE** is to be made available, operatives informed of the risks, instructed in the correct use of PPE and supervised to ensure its correct use.
- **Upper exposure action level:** Noise exposure likely to be above **85dB** averaged over an 8 hour working day or **137dB** maximum sound pressure at any point in time: The wearing of PPE is **mandatory**, operatives informed of the risks, instructed in the correct use of PPE and supervised to ensure its correct use.
- **Exposure limit:** Noise exposure likely to be above **87dB** averaged over an 8 hour working day or **140dB** maximum sound pressure at any point in time: Work cannot commence until steps are taken to reduce noise exposure to at least below the upper exposure action level.

1.6 Where hearing protection is provided it should provide an adequate level of protection, standard foam ear plugs may not be adequate and ear defenders should be used where there are high levels of noise for longer periods i.e. for noise levels above 100db and where the noise is of a low frequency (e.g. made by pumps, generators etc).

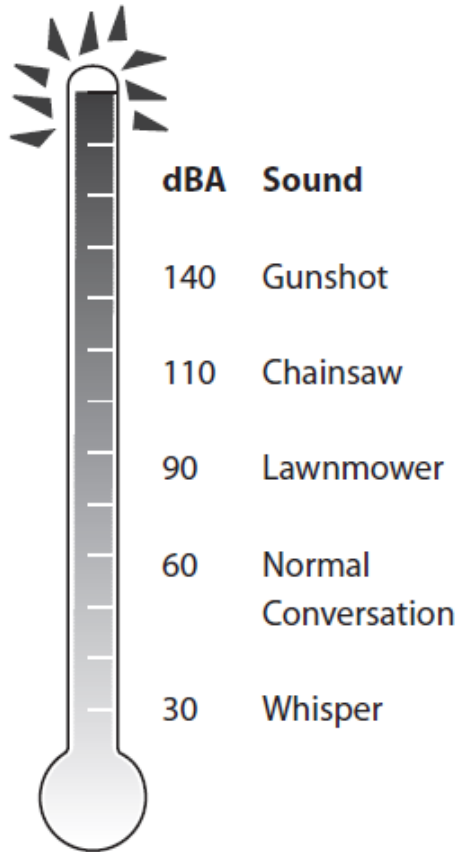
1.7 Hearing protection must be clean, used in accordance with manufacturers instructions and be able to be worn with other PPE (such as goggles or hard hats where required).





1.8 If answer is yes to any of the questions below it is likely that noise will be above the action levels and preventative steps should be taken:

- Is the noise intrusive – like a busy street, a vacuum cleaner or a crowded restaurant – for most of the working day? - It is possible you are above the lower exposure action level - traffic noise is around 80 db.



- Do employees have to raise their voices to carry out a normal conversation when about 2 m apart for at least part of the day? – You are likely to be at the upper exposure action level – a generator may operate at 90 db.

- Do employees use noisy powered tools or machinery for more than half an hour each day? - You are likely to be at or above the upper exposure action level (e.g. a chainsaw typically operates around 110 db – unprotected exposure to this level of noise for as little as a minute can cause permanent hearing damage).

- Are there noises due to impacts (such as hammering, pneumatic impact tools etc), explosive sources such as cartridge-operated tools or detonators, or guns? - Although only generating noise for short durations this equipment may generate noise above the maximum sound pressures listed above and hearing protection would be required.

- Are construction works being carried out internally? Works inside buildings can magnify noise particularly if inside large open spaces with no soft furnishings (e.g. Concrete frame structure). Noisy operations in these areas should be designated as mandatory hearing protection zones for all workers.

Fig 1. Typical Noise Examples



## 23. PILING

### 1.0 General

1.1 Subcontractor method statements shall identify the controls required during piling operations including but not limited to:

- Sequence of works
- Safe of vibrating equipment (e.g. to reduce HAVs when breaking off pile caps)
- Safe Handling of materials
- Safe use of plant & machinery and;
- PPE/RPE required

1.2 A [Permit to Break Ground](#) is required for all piling operations before work commences

### 2.0 Construction Phase Activities

2.1 Contractors shall provide evidence of training including:

- Piling equipment mounted onto crane machines (i.e. piling equipment being attached to a crane): The operator shall have a crane operator's CPCS card as well as the card for a Piling Rig Operator as the machine is primarily a crane.
- Piling equipment fitted to base machines: The base machine being used is set up for piling with a fitted piling mast. This determines the primary use, not the machine it is mounted onto. Therefore the operator will need only a Piling Rig Operator CPCS card as the machine cannot operate as an excavator, etc.

2.2 Piling method statements shall include a lifting plan prepared by a suitably qualified appointed person (refer to the Lifting Operations Standard for detail).

2.3 Contractors shall provide copies of thorough examination of lifting equipment for the piling rig and lifting accessories (refer to the Lifting Operations Standard for detail).

2.4 A suitable working platform must be provided for piling operations. The design of the working platform must take account of the bearing pressures of the plant which will use it and the ground conditions on which it will be constructed. It should be undertaken by a qualified designer with appropriate geotechnical expertise.

2.5 During piling works the following controls shall be implemented:

- Non-porous gloves shall be worn when working with concrete
- Safety helmets shall be worn where there is a risk of being struck by falling or swinging objects or materials
- Suitable Eye protection is to be worn when placing concrete
- Overalls/clothing shall be worn to cover bare arms and legs where there is a risk of skin contact with concrete
- Suitable hearing protection shall be worn where noise levels are above 80db
- Safety footwear including steel toecaps and steel midsoles shall be worn
- Dust masks (minimum FFP3 type) shall be worn where works generate significant amounts of dust
- Breaking of pile caps using hand held vibrating tools should be kept to a minimum by use of hydraulic core breakers, reinforcement de-bonding or other means
- A 'physical' barrier shall be established to enforce a Safety Exclusion Zone. Operatives working within the exclusion zone shall wear ear defenders
- Piling rigs movements around site shall be controlled by a qualified banksman
- Where fitting / removing augers to piling rigs– the zone must be relevant to the size of auger(s)



- If there is any possibility of unexploded munitions being present on the site, advice must be sought from the relevant services i.e. Army, Navy, Air Force
- The statutory undertaker shall be consulted to confirm location of their services
- If services are within 2m of a pile location they should be physically located and as appropriate relocated, protected or removed
- Where possible piling rigs shall be fitted with a 'physical' guard – preventing access to moving / rotating parts. The guard must be interlocked so that if the guard is opened to allow access, then rotation stops. Note: On rotary bored piling rigs fixed guards may not be practical therefore a controlled zone must be nominated at each pile location. This controlled zone will extend 2m beyond the area occupied by the rig and its slewing area, the pile bore and the discharge spoil heap. This shall be demarcated by means of a fence or barrier, along with appropriate signage. A rotary piling rig banksman will be at all times in attendance on the piling rig and will be given responsibility and authority to ensure only authorised persons are permitted within the zone
- A mechanical means of cleaning augers should be used except where exceptional circumstances do not permit it. Should any manual cleaning be required then the auger must not be rotated whilst this operation is being performed
- Piling frames are to be founded on stable flat ground and constructed in accordance with recognised good practice and include safe access with edge protection
- Empty bores are to be protected to prevent falls into them
- Before attempting the removal of any temporary casing or pile from the ground, the contractors shall provide a detailed assessment of the required extraction force including assessment of Geometry of casing/pile (diameter, length, self-weight etc.), friction on the inside and outside of casing/pile (soil friction) and friction on inside of casing (wet concrete). It is noted that extraction by the use of cranes alone, without for example a vibrator or extractor, is not recommended. The HSE considers this to be an unsafe practice and should be considered only for relatively short 'lead' lengths of temporary casing which would be dependant on diameter and length of casing, capacity of crane being used and following an assessment of the extraction load



## 24. PLANT, TOOLS AND EQUIPMENT

### 1.0 General

**1.1** All work equipment including plant, tools and equipment shall be in good working order, well maintained and suitable for the task being carried out. Where work equipment is hired for use by Borrás staff it shall only be hired from the approved suppliers via the buying department.

**1.2** The risks associated with the use of all work equipment shall be assessed. Where work is carried out by directly employed or agency employees the Contracts/Site Manager is to complete the relevant generic risk assessment (e.g. [RA006](#) if using Forklifts/Telehandlers)

**1.3** The Site Manager shall carry out a visual inspection for obvious signs of damage to work equipment e.g. damaged cables, casings, handles etc. Where the work equipment defective, the contractor will be instructed to remove the items from site. Note: it may not be possible to inspect all equipment brought onto site by the sub-contractors before they are used, however, a representative sample of equipment is to be checked.

**1.4** Contractors shall identify the most appropriate work equipment for the task and identify this on their method statements. The method statement shall clearly identify any specific safety or environmental controls associated with using that equipment including, where applicable, controls for:

- Noise
- Vibration (HAVS)
- Contact with moving parts
- Ejection of materials (including dust from chasing/cutting)
- Hazardous Substances (for use in or with the equipment)
- PPE

**1.5** All employees shall have sufficient knowledge they need to use and maintain equipment safely. Specific training records for different equipment types is mandatory e.g. PASMA for the erection of tower scaffolds, training personnel using cartridge tool and gas powered nail guns or abrasive wheels etc. Please refer to the appropriate standard for details.

**1.6** The site team shall ensure that the following controls are implemented for small tools and plant in general:

- All machinery (including plant) on site shall be CE Marked to guarantee that the machinery is safe
- PPE shall be worn as per the PPE standard including those using abrasive wheels and cartridge tools shall have eye protection to EN166B (BS2092/1)
- Noise/Vibration controls shall be implemented as per the Noise/Vibration Standards
- Dust suppression techniques and appropriate RPE will be used when cutting or dressing materials likely to emit dust.
- Fire suppression equipment must be available and a Hot Work Permit issued for any equipment that generates heat or emits hot particles (cutting, grinding etc.)
- Personnel not involved in the operation and/or members of the public, must be protected from risk generally and flying particles in particular.



## 2.0 Plant

**2.1** All mobile plant shall be visually inspected on a weekly basis and a record maintained (in the plant register).

**Note:** This inspection may be carried out by the operator of the equipment i.e. the sub-contractor, however, the site manager should still have copies of the inspection records in the site files.

**2.2** The Site Manager shall maintain copies of CPCS or other CITB approved training records for all ride on plant operators with the induction records on site.

**2.3** When using ride-on mobile plant the following on-site controls shall be implemented:

- Site Manager shall brief operatives on a traffic management plan for the site detailing speed limits, loading areas, storage areas, parking areas, traffic routes, turning areas, crossing points.
- Plant operators shall carry out daily visual checks on the equipment before use (there is no need to record this check) to include hydraulic hoses, tyre pressures, warning beacons, breaks and audible alarms.
- Traffic routes shall be well maintained; avoiding any excessive gradients Note: When loaded drivers should reverse down-hill to ensure stability, if turning on a slope is unavoidable, turn uphill – not downhill.
- Mobile plant and pedestrians shall be segregated by means of a physical barrier as far as practicable.
- Unless the equipment is designed to take passengers the carriage of passengers is strictly prohibited.
- Use of mobile phones or media players (MP3 players) whilst using mobile plant is strictly prohibited.
- Seat-belts shall be used and the operator is to remain seated whilst the vehicle is in operation.
- Roll over protection systems (ROPS) shall be fitted.
- Vehicles shall be fitted with warning beacons, mirrors (or other means of seeing behind rear of vehicle) and/or audible warnings.
- Provide wheel stops at the edges of excavations, pits, spoil heaps etc to prevent site dumpers falling when tipping. The blocks provided need to be positioned a sufficient distance away from any unsupported edges and slopes to prevent the weight of the vehicle causing collapse
- Machines are to be switched off, handbrake applied and keys removed when not in use.
- Loads are to be distributed evenly not obscuring the operator's vision.
- If using ride on mobile plant on public highways the following shall also apply:
  - Vehicle fitted with flashing beacons and break lights
  - Operator to hold a full driving licence
- Banksmen shall be fully trained and a record of their training maintained on the site file.



## 25. PORTABLE ELECTRICAL APPLIANCE TESTING ON CONSTRUCTION SITES

### 1.0 General

**1.1** As works progress the Site Manager is to carry out a visual inspection on a sample of electrical equipment for the PAT test status of equipment and visible signs of damage.

**Note:** it may not be possible to inspect all equipment brought onto site by the sub-contractors before they are used, however, a representative sample of equipment is to be checked.

**1.2** Where the work equipment is defective, or outside of the specified PAT testing frequencies the contractor will be instructed to remove the items from site or carry out a re-test.

### 2.0 On Site Testing Requirements

#### 2.1 Borrás Owned Equipment:

All electrical equipment shall be PAT tested. The equipment shall be marked to identify the date of the test and the due date of the next test as follows:

- All Construction equipment (including leads, splitter boxes etc): **Six Monthly**
- 240v Construction Equipment (including items that are used on site but not items such as battery chargers): **Quarterly**
- Non-construction Equipment (including items such as battery chargers, laptops, kettles etc): **Yearly**

**2.2** It should be noted that the frequencies less than the IEE recommended frequencies for construction equipment, however, the historical failure rate from the group combined inspection and tests carried out is very low (less than 1 per annum). Therefore the frequency of PAT testing has been increased to 6 monthly for construction equipment and quarterly for 240v construction equipment.

#### 2.3 Hired Equipment:

All hired equipment should come with a valid PAT test certificate. Where the PAT test expires whilst the equipment is on hire the hirer should be contacted to provide either a piece of replacement equipment or carry out a PAT test.

#### 2.4 Contractors Equipment:

All electrical equipment shall be PAT tested. The equipment shall be marked to identify the date of the test and the due date of the next test. For guidance the typical PAT test frequencies should be in line with the following unless the contractor can demonstrate alternative frequencies are appropriate (via a risk assessment).

- 110v Construction equipment (including leads, splitter boxes etc): **Quarterly**
- 240v Construction Equipment (including items that are used on site but not items such as battery chargers): **Monthly**
- Non-construction Equipment (including items such as battery chargers, laptops etc): **Yearly**



## 26. PPE

### 1.0 General

**1.1** Personal Protective Equipment (PPE) should be considered as a “last resort” and wherever possible, the risk should be eliminated to negate the need for PPE to be worn (although it should be noted that in many cases this will not be possible).

**1.2** All PPE must be provided free of charge by the operatives employer (typically the contractor).

**1.3** PPE must be kept in a good state of cleanliness, stored away from harmful substances, damp and sunlight and maintained in accordance with the manufacturer's recommendations.

**1.4** All PPE must be suitable for the specific risks involved in the task being performed and compatible with other PPE worn.

**1.5** Contractor's method statements and risk assessment shall identify the specific type of PPE to be utilised during their works. This is to include the general PPE listed below as well as other task specific PPE required for their works.

**1.6** Where PPE is provided, employees must be provided with adequate information, instruction and/or training on its use. The extent of information, instruction and/or training will vary with the complexity and performance of the kit. For example, a full Breathing Apparatus kit will require a fully certificated training course whereas use of ear plugs can be explained using the accompanying product literature.

### 2.0 PPE Minimum Requirements

**2.1** General PPE is to include:

- Hard hats (to EN397), shall be worn at all times on construction sites where there is a risk of falling/swinging objects. Note: Turban-wearing Sikhs can be exempted from the requirement to wear hard hats on construction sites.
- Safety footwear including steel toecaps and steel midsoles (to EN 345) shall be worn at all times on construction sites.
- High visibility vests/jackets shall be worn at all times on all sites.
- Suitable eye protection (to EN166) shall be worn at all times where there is a risk injury of injury to the eye e.g. chiselling, breaking of stone or concrete, cutting by power tool, cartridge tools, welding, arc eye, burning, working with substances where there is a risk of liquid splashes (e.g. concreting, mixing mortar etc), where there are significant levels of dust, where using lasers and blowing out using compressed air.
- Suitable Gloves shall be worn at all times where there is:
  - Mechanical Risk (abrasion, cuts, and penetrating injuries) gloves to EN388
  - Chemical Risks (such as acids or alkaline substances e.g. cement) gloves to EN374
  - Heat and Fire Risks (when carrying out hot works, particularly welding) gloves to EN407
- Suitable respiratory protective equipment (RPE) shall be worn including:
  - When generating dust through cutting, chasing, sawing or demolishing building materials
  - Generating dust through wood working
  - If the COSHH assessment identifies RPE as a requirement.
- Suitable hearing protection is to be worn where there these is a risk of noise at or above the first exposure action level of 80dB (A)8 as per the noise standard.



## 27. ROOF WORKS

### 1.0 General

1.1 Subcontractor method statements shall identify the controls required during roof-work operations including but not limited to:

- Sequence of works
- Safe access and working at height
- Safe Handling of materials
- Safe use of plant & machinery and;
- PPE/RPE required

1.2 This standard must be read in conjunction with the Scaffolding Standard.

### 2.0 Construction Phase Activities

2.1 Contractors shall provide evidence of training in accordance with the Training, Awareness and Competence Standard.

2.2 During roof works the following controls will be implemented:

- Access below or immediately adjacent to any form of work at height shall be adequately signed, fenced and secured to prevent dangers to others and unauthorised access
- Tower scaffold access points should be placed to minimise distances travelled at height
- Access using a running line should only be used as a last resort. If no safer alternative exists and the operation can be carried out safely then:
  - There must be evidence that the inertia reel being used is suitable for the application being carried out
  - There must be evidence that the running line has been formally inspected within the last 12 months
  - There must be evidence that the harness/lanyard and any inertia reel being used, has been formally inspected within the last 3 months
  - The harness/lanyard/inertia reel must be visually inspected before use
- All temporary guardrails or protection including to eaves and gable end and to fragile materials or openings must be inspected before work commences and at 7 day intervals, with a record being kept in the Inspection Register
- Roof sheets and other materials stored at roof level must be safely stacked and secured so they will not move in high winds
- No materials shall be thrown from any roof. Suitable protection shall be in place to ensure that materials do not fall from any roof during works.
- During roof removal works suitable means of protecting against falls must be taken as the works progress (e.g. netting, boarding out roof below joists, birdcage scaffolding etc)

### 3.0 Flat Roofs

3.1 During flat roof works the following additional controls will be implemented:





- Where the design of the roof does not provide permanent edge protection, such as solid parapet wall of at least 950 mm in height, temporary edge protection of suitable strength to prevent falls will be required
- Where work is at least 2m away from any edge or fragile surface temporary barriers (chapter 8 type or similar) may be utilised to barrier the work area and any access route to it.

#### 4.0 Pitched Roofs:

4.1 During Pitched roof works the following additional controls will be implemented:

- Edge protection will be provided before work commences. If the work requires access within 2 m of gable ends, edge protection will be needed there as well as at the eaves.
- Leading edge protection must be provided as the roof progresses in preference to other means of fall prevention
- For long, steep pitched roofs additional protection (such as intermediate platforms, harness or fall mitigation) shall be in place.

#### 5.0 Fragile Roofs:

5.1 During works on potentially fragile roofs the following additional controls will be implemented:

- The fragility, or otherwise, of a roof should be confirmed by the site manager before work starts. If there is any doubt, the roof should be treated as fragile unless, or until, confirmed that it is not.
- All fragile material or floor openings (roof lights, lift openings, slab edges etc.) must be protected against falls of persons or materials by signing and covering with non-fragile materials, or by being adequately fenced off
- On fragile roofs, crawling boards must be provided - being at least 600 mm wide, secured to prevent movement and fitted with handrails.
- ***Where hand rails are not provided some other means of fall prevention/arrest\* must be provided e.g. work restraint lanyards/safety nets.***
- Walking along the line of roof bolts above the purlins is forbidden

#### 6.0 Short Duration Roof Work

6.1 Short-duration work means tasks lasting less than ½ an hour and includes tasks such as inspection, replacing a few tiles or minor adjustments to a television aerial.

6.2 Where it is not deemed to be reasonably practicable to install safeguards such as a full independent scaffold or even edge protection for such work a risk assessment shall be provided to determine the minimum controls required.

6.3 The minimum safety requirements for short duration are:

- A safe means of access to the roof level; and
- A properly constructed and supported roof ladder (on a pitched roof)
- on a flat roof without edge protection, a harness with a sufficiently short —lanyard, attached to a secured anchorage, that it prevents the wearer from reaching a position from which they could fall.

6.4 Where there are short duration tasks that need to be completed across several location consideration should be give to using safe access equipment (such as cherry pickers).

***\* Where fall arrest systems such as nets are used the contractor's method statement must include a means of safely getting a person down in the event of an emergency.***



## 28. SCAFFOLDING

### 1.0 General

**1.1 It is a requirement of the Work at Height Regulations 2005 that unless a scaffold is assembled to a generally recognised standard configuration, e.g. NASC Technical Guidance TG20 for tube and fitting scaffolds or similar guidance from manufacturers of system scaffolds, the scaffold should be designed by bespoke calculation, by a competent person, to ensure it will have adequate strength, rigidity and stability while it is erected, used and dismantled.**

**As a result sites managers should be provided with one of the following before the scaffold is handed over:**

- **A “Compliance Sheet” generated from TG20:13**
- **A bespoke design**
- **For system scaffolds access to the technical literature for the scaffold**

**1.2 Scaffolders will provide site specific risk assessments and method statements to adequately control falls of workers and materials during erection and dismantling.**

**1.3 During erection, and dismantling, a minimum of three boards and a hand-rail are to be used to provide scaffolders with access in accordance with SG4:10. Note that this will be in addition to any harnesses used.**

**1.4 Means to protect the public shall be available e.g. nets, fans or monoflex etc. where applicable.**

**1.5 Scaffold must not be over loaded, or loaded above toe-board height without brick guards.**

**1.6 Fire rated covers to LPS 1215 will be used for all temporary covers to scaffolding.**

### 2.0 Scaffold Design

**At the start of the planning process, the Contracts Manager should supply relevant information to the scaffold contractor to ensure an accurate and proper design process is followed. Typically this information should include:**

- **site location**
- **period of time the scaffold is required to be in place**
- **intended use**
- **height and length and any critical dimensions which may affect the scaffold**
- **number of boarded lifts**
- **maximum working loads & number of people using the scaffold at any one time**
- **type of access onto the scaffold e.g. staircase, ladder bay, external ladders**
- **whether there is a requirement for sheeting, netting or brickguards**
- **specific requirements e.g. pedestrian walkways, restriction on tie locations, inclusion/provision for mechanical handling plant e.g. hoist)**
- **nature of the ground conditions or supporting structure**
- **information on the structure/building the scaffold will be erected against together with any relevant dimensions and drawings**
- **any restrictions that may affect the erection, alteration or dismantling process**

**2.1 Scaffolds that are produced in compliance with TG20:2013 will not require a bespoke design to be produced. Scaffolders who are providing scaffolds in accordance with TG20:2013 shall provide the compliance sheets generated from the TG20 e-guide as part of their method statement. The compliance sheets shall be utilised as part of the checking and handover process.**



**Scaffolds that are included within the scope of TG20:2013 include (this list is not exhaustive):**

- **Sheeted Scaffolds**
- **Tied Independent scaffolds**
- **Some untied independent scaffolding**
- **Loading bays**
- **Towers**
- **Putlog Scaffolds**
- **Ladder access towers**
- **Chimney stack scaffolds**
- **Bridging with Beams**
- **Pre-fabricated transom units**
- **Light duty protection fans**
- **Pavement lifts**
- **Some cantilevered scaffolds**
- **Inside board bracket platforms**

**2.2 Any scaffold falling outside the scope of TG20:13 will require a bespoke design. This should be provided prior to erection and used as part of the checking/handover process. Design scaffold includes (this list is NOT exhaustive):**

- **all shoring scaffolds (dead, raking, flying)**
- **cantilevered scaffolds <sup>i</sup>**
- **truss-out Scaffolds**
- **façade retention**
- **access scaffolds with more than the 2 working lifts<sup>ii</sup>**
- **buttressed free-standing scaffolds**
- **temporary roofs and temporary buildings**
- **support scaffolds**
- **complex loading bays <sup>i</sup>**
- **mobile and static towers <sup>i</sup>**
- **free standing scaffolds <sup>i</sup>**
- **temporary ramps and elevated roadways**
- **staircases and fire escapes (unless covered by manufacturers instructions e.g. HAKI)**
- **spectator terraces and seating stands**
- **bridge scaffolds <sup>i</sup>**
- **towers requiring guys or ground anchors**
- **offshore scaffolds**
- **pedestrian footbridges or walkways**
- **slung and suspended scaffolds**
- **protection fans <sup>i</sup>**
- **pavement gantries**
- **marine scaffolds**
- **boiler scaffolds**
- **power line crossings**
- **lifting gantries and towers**
- **steeple scaffolds**
- **radial / splayed scaffolds on contoured facades**
- **system scaffolds used outside the manufacturers guidance**
- **sign board supports**
- **sealing end structures (such as temporary screens)**



- **temporary storage on site**
- **masts, lighting towers and transmission towers**
- **advertising hoardings/banners**
- **rubbish chutes**
- **any scaffold structure not mentioned above that falls outside the 'compliant scaffold' criteria in TG20 or similar guidance from manufacturers of system scaffolds.**

**The above list is not exhaustive and any scaffold that is not a standard configuration or does not comply with published manufacturers' guidelines will require a specific design produced by a competent person.**

**Note to above list of design scaffolds:**

***i TG20:13 provides compliant scaffolds for a limited range of cantilever scaffolds, loading bays, static towers, use of rakers, bridges and protection fans.***

***ii TG20:13 provides a range of compliant scaffolds, which can be boarded at any number of lifts, but only two platforms can be used as working platforms at any one time.***

**2.3** Loading bays shall be of sufficient strength and offer full edge protection (hoist gates may be used). Safe Working Load (SWL) signs to be displayed on the loading bays.

**2.4** All scaffolding companies responsible for erecting design scaffolding must either hold PI insurance or have employed an engineer who holds PI insurance to do the design for them. In both cases the insurance details must be checked by the contract surveyor before the contract is awarded.

**2.5 Tie patterns must be checked against either the bespoke designs or the TG20:2013 compliance sheet requirements and a pull test carried out and recorded.**

**2.6** All ties that have been pull tested should be identified with a tag i.e. (this tie has been pull tested) and location and number recorded.

**2.7** Adaption's carried out on a designed scaffold that can affect the structure must have a separate design for the adaption, along with a method statement and risk assessment.

### **3.0 Training**

**3.1** All scaffold gangs must have one CISRS qualified scaffolder. For designed scaffolds at least one advanced scaffolder/scaffolding supervisor will be required.

**3.2** No trainee or part trained scaffolder will be allowed on to the scaffold unless under the supervision of a CISRS qualified scaffolder.

**3.3** Scaffold Supervisors must hold an advanced scaffolders card.

**3.4** Qualified scaffolders are deemed competent to inspect basic scaffolds (covered within the scope of TG20:2013). Qualified Advanced scaffolders & scaffolding supervisors are deemed competent to inspect advanced scaffolders.

**3.4 A person who has been on a Basic Scaffold Inspection Training Scheme Course would be deemed competent to inspect a basic scaffold structure (i.e. a scaffold that is within the scope of TG20:2013).**

**3.5 A person who has been on an Advanced Scaffold Inspection Training Scheme Course would be deemed competent to inspect more complex scaffold structures (such as bespoke designed scaffolds).**



**3.6 Persons who are required to carry out inspections of System Scaffolds must, in addition to the basic scaffold inspection course, have product knowledge of the system to be inspected. This may be sought via CISRS approved training providers, the manufacturer/supplier or as an absolute minimum by obtaining and using the information provided in the official product user guide.**

3.6 All CISRS & CSCS cards must be seen and verified before any work takes place.

#### 4.0 Supervision

4.1 Scaffold supervisor will be required to visit site once a week to insure works are supervised and carried out safely and are in accordance with design and statutory requirements.

4.2 Sites with more than 12 scaffolders will require a dedicated site supervisor.

4.3 The scaffold supervisor must ensure only competent workers experienced in the works are deployed to carried out the works

4.4 The scaffold supervisor must ensure the movement and storage of martial and delivery to site is carried out safely. Particular consideration is required toward maintaining safe access routes around site.

4.5 The scaffold supervisor must insure the adequacy and availability of scaffold drawings and instruct all parties on content and measures required for compliance.

#### 5.0 Handover and Inspection

5.1 Scaffold incomplete signs shall be in place prior to handover to ensure that incomplete scaffold is only accessed by trained scaffolders.

5.2 When all parties are satisfied with the adequacy and safety of the scaffold the scaffold supervisor will then issue a hand over certificate.

5.3 The scaffold contractor must insure all hand over documents make reference to design drawings where applicable.

5.4 The scaffold must be inspected before first use, every 7 days and after any event which may affect the structural integrity of the scaffold. A record of the inspections shall be maintained on site.

5.5 Any faults found with the scaffold must be reported the site manager and scaffold contractor immediately.

#### 6.0 Access

6.1 Staircases shall be used in preference to Ladder access to all scaffolds over 4 weeks duration and 1 lift high. Risk Assessments must be undertaken where Ladders are used for access with fall prevention measures provided at all lifts.

**6.2 Any external ladder access will be fitted with a ladder gate.**

**6.3 Ladders not fit for use are to be removed from site immediately.**

**6.4 Wooden ladders that are painted are to be removed from site.**

#### 7.0 Personal Protective Equipment

**7.1 Note that PPE should be seen as a last resort – in the first instance scaffolders should be operating from a minimum of three boards and a hand-rail in accordance with SG4.**



**7.2** All PPE should be fit and suitable for use.

**7.3** Harnesses must be checked before start of work each day by user.

**7.4** Harnesses to be checked once a week by Forman /supervisor and recorded in the site register.

**7.5** Harnesses not fit for use to be removed from site

## **8.0 Rescue plan**

**8.1** A full rescue plan must be in place which is included in the method statement /risk assessment.



## 29. SECURITY AND PUBLIC SAFETY

### 1.0 General

1.1 All Visitors will receive an induction and should be accompanied on site at all times.

1.2 Where security companies are employed they shall be Security Industry Association (SIA) Accredited.

### 2.0 Construction Phase Activities

2.1 The Contracts Manager in conjunction with the Site Manager, shall carry out a risk assessment to determine the security requirements for each site by completing generic risk assessment [RA007 - General Site Hazards](#).

2.2 The Construction Phase Plan shall detail perimeter fence construction, security and access/egress arrangements to be employed on site (note: this may be detailed as part of a traffic management plan or similar).

2.3 Working areas shall be secured against unauthorised access with secure fencing and controlled access points.

2.4 The barriers shall be of a suitable construction for the works to be carried out including:

- “Unauthorised access” signs shall be displayed on the site perimeter.
- Provision for out of hours emergency contact, clearly displayed on the site perimeter.
- Access gates shall be secured at all times to prevent unauthorised access to sites.
- Site access should be via a single entrance.
- Fencing shall be secured to prevent wind damage.
- Members of the public shall be protected against falling materials when adjacent to the site, e.g. scaffold fan, debris netting, Monarflex etc. Materials must never be thrown or dropped from a height.
- Where debris netting is fixed to the fencing additional structural support, to account for the added wind loading, is to be provided.
- Materials will not be stored against the perimeter fence (as this can be used for easier access/egress).
- Where the building envelope forms the site perimeter, all accessible openings such as ground floor windows shall be secured against unauthorised entry.
- The Site Manager is to check the integrity of the fencing at the start and end of each working day. A record of this check is to be detailed in the site “Records of Reports and Inspection” (GS0307) book on a weekly basis.

2.5 Where high winds are forecast and before site shut down site checks should pay particular attention to:

- Scaffolding i.e. check ties, bracing boards and connections
- Stability and security of boundary fences
- Storage of materials including sheet and waste materials
- Stability of cranes and all temporary works

2.6 All site staff and visitors shall report to the site office to sign in.

2.7 All construction staff will wear company branded high-visibility vests/jackets.

2.8 Where working in an occupied building(s) all construction staff are to wear identification badges or similar.

2.9 Where possible plant, tools, equipment and materials shall be stored out of sight in securely locked areas.



**2.10** Plant is to be immobilised when not in use with the key removed and kept in a secure location.

**2.11** Loading/unloading of materials shall be carried out inside the site compound area where possible as per the Traffic Management Standard.

**2.12** Hazardous materials including waste materials such as asbestos are to be kept in locked containers.

**2.13** Fuel stored shall be kept in locked containers when not in use.

**2.14** All losses are to be reported by the Contracts Manager to their stream director (e.g. Burglary/Theft/Damage/Loss) as per the accident and incident reporting and investigation standard.

**2.15** Occupants near to construction sites shall receive initial and update communications to confirm progress, safety and environmental issues.

**2.16** Where working in or near schools the project team shall offer the school a construction safety talk that tells children to never go on a building site.





## 30. STRUCTURAL STEEL

### 1.0 General

1.1 Subcontractor method statements shall identify the controls required during operations including but not limited to:

- Sequence of erection and connection
- The method of maintaining stability for the part-erected structure including any requirements for temporary bracing or propping in accordance with the Temporary Works Standard where applicable
- Safe lifting and placing of components
- Safe of vibrating equipment
- Safe Handling of materials
- Safe use of plant & machinery and;
- PPE/RPE required

1.2 The method statements and risk assessments shall include a suitable lifting plan in accordance with the Lifting Operations Standard.

### 2.0 Construction Phase Activities

**2.1 Contractors shall provide evidence of training for operators of plant and equipment in accordance with the Training, Skill and Awareness Standard.**

2.2 During fixing works the following controls shall be implemented:

- Suitable gloves shall be worn during connection
- Suitable eye protection shall be worn where there is a risk of eye injury
- Safety helmets shall be worn during placement and where there is a risk of being struck by falling or swinging objects or materials
- Suitable hearing protection shall be worn where noise levels are above 80db (e.g. when using pneumatic nut runners)
- Safety footwear including steel toecaps and steel midsoles
- Risk Assessments and Method Statements must also consider pre-erection works to make the operation safer—for example:
  - Integral edge protection, fitted whilst units on ground
  - Reduced number of units being lifted, by coupling prior to lifting at ground level
  - Correctly positioned lifting points for coupled units
  - Anchor points / holes to enable harnesses to be easily attached
  - Pre-erection work has included fabricating extra holes required for harness anchors
- Exclusion zones shall be operated to keep others away the working areas. Access below structural steelwork during erection shall be prohibited to other site users
- Steelwork that is to be stacked and stored should be laid on timber packers avoiding risk of collapse.
- Subcontractors must be responsible for the management and supervision of the loading/unloading of their materials from vehicles



**2.3** The method statements shall include safe access arrangements as follows:

Low Rise Buildings:

- Erection should be from mobile platforms or baskets with fall restraint lanyards.
- Ladders may only be used for very short duration tasks e.g. replacing a bolt and must be tied or footed at all times during the operation

Multi-storey buildings:

- Cherry Pickers for access/working (generally only up to 20m – i.e. around the first splice level)
- Small boom MEWP's or scissor lift MEWP positioned around the structure (i.e. on a floor slab)
- Crane mounted cradles (man baskets)
- Tower scaffolds may be used for sporadic works
- Using scaffolding with suitable edge protection
- Ladders may only be used in conjunction with a suitable fall prevention or arrest harness clipped onto a suitable anchor point
- Beam straddling can only be used where one of the methods described above is not practicable. Where beam straddling must be utilised it shall be accompanied by a site specific risk assessment and method statement to include:
  - Controls needed to reduce risk (e.g. use of double lanyards or girder trolleys, fall arrest, how and where attachment/relocation of fall arrest is to be achieved, how working area is to be accessed)
  - Training and experience of operatives
  - How recovery of individual is to take place should a fall occur (emergency plan)
  - Operators should be prohibited from “walking” beam top flanges



## 31. TEMPORARY WORKS

### 1.0 General

**1.1** This standard covers all temporary works ranging from the provision of site hoardings or fencing, foundations and support to site cabins and accommodation units, trench and excavation supports, scaffolding, support of construction plant, through to the provision of falsework and formwork for reinforced concrete structures, temporary bracing and propping of structural frames under construction and temporary propping, shoring, bases for tower cranes, facade retention and needling works for refurbishment.

### 2.0 Pre-Construction

**2.1** The [TWCR1 - Temporary Works Control Register](#) Sheet must be used by the Planner/Estimator to identify the activities or elements of the project requiring temporary works.

**2.2** The Planner/Estimator will then complete, as far as possible, temporary works control register. Each element of Temporary Works should be allocated a preliminary risk level and design check category based on the tables in Appendix A & B. The presence of potential public risk must also be considered.

**2.3** During the tender stage, it may be necessary for sufficient preliminary designs to be undertaken to enable proper allowances (cost and programme) to be made in the tender submission. Where this is the case the estimators/planners shall liaise with the TW designers to allow sufficient preliminary/outline designs to be undertaken. The appropriate design check requirements will be identified in order that proper allowances are made for the design checking process. Where TW Designers are engaged for preliminary/outline designs their competency must be assessed utilising the Professional Services CDM Questionnaire PSQ1.

**2.4** Where a tender submission is successful the internal pre-commencement meeting will be used to handover TWCR1 and the file of temporary work schemes to project delivery team.

### 3.0 Appointments

**3.1** On the basis of his review of the TW involved in the project, the relevant director shall appoint in writing a competent person as Temporary Works Coordinator (TWC).

**3.2** The appointment shall include the TWC duties which shall include the following:

- Co-ordinate all temporary works activities between designers, engineers and contractors
- Ensure the design is made available to relevant parties
- Register or record all drawings, calculation and other relevant documents relating to the final design
- Ensure that those responsible for on-site supervision receive full details of the design, including any limitations and guidance notes
- Ensure that risk assessments and guidance notes are in place covering the safe erection and dismantling sequence
- Make checks at appropriate stages during construction of temporary works and if necessary issue a permit to load
- Ensure that appropriate maintenance is carried out to temporary works (e.g. to facade retention structures)
- Where appropriate carry out and record inspections at least every 7 days and after severe weather (or other event that may affect the stability of the structure).
- Where appropriate, once the permanent works have attained adequate strength, issue formal permission to dismantle the temporary works.
- Ensure the temporary works are dismantled in accordance with a defined procedure



**3.3** The name of the TWC shall then be entered into the relevant section of the construction phase plan for the project.

Note: it is anticipated that the TWC will typically be the Contracts Manager for the project. The inspection duties should then be delegated to a Temporary Works Supervisor (TWS) on site (typically the Site Manager or for elements such as false work a sub-contractors competent TWC/TWS). Where complex activities are to take place the roles of the TWC & TWS may be outsourced to another competent person. It is expected that the roles of TWC & TWS will be outsourced for works that are classified as high risk category 2 works (see appendices A & B below for examples of high/medium/low risk temporary works).

#### **4.0 Appointment of TW Designers (TWD) and Design Check Engineers (DCE)**

**4.1** Designers of temporary works must be qualified design engineers with the relevant experience of the type of temporary works they are being engaged to design.

**4.2** TWD and DCE will be appointed as appropriate for each element of TW. Proposed TWD and DCE must be provided with a copy of this Work Instruction and confirm their ability / willingness to support its implementation. They must also demonstrate appropriate competence (where engaged by Borrás they will have been approved having completed the Professional Services CDM Questionnaire PSQ1) as outlined in Appendix B and carry a level of Professional Indemnity Insurance commensurate with the risk of the work being undertaken.

#### **5.0 Temporary Works Design**

**5.1** The TWC will coordinate the writing of a design brief. Depending on the TWC's experience this may require the assistance of other project team personnel, the Design Coordinator or the TWD. The design brief shall include the information necessary to enable the TWD to complete his design and may include:

- Drawings of Permanent Works, including relevant specification(s)
- Soil and ground water conditions as applicable
- Details of site conditions, including services, access and proximity hazards
- Preferred methods of construction and dismantling if known
- Available materials, equipment and plant
- Particular loads, including impact that the TW may be subjected to
- Anticipated programme if impacting on TW
- Anticipated duration of temporary works
- Accepted tolerances

**5.2** The TWD must perform his design in line with the brief provided and all relevant legislation, standards codes of best practice and manufacturer's data as applicable. The TWD must provide a statement of any residual risks he has not been able to eliminate during the design.

**5.3** The design must be checked in terms of calculations and compliance with applicable standards. The independence of the DCE will be in accordance with the category assigned in the TW schedule.

**5.4** A site review of TW designs is to be carried out by the TWC. Note that this is a separate review to that described in paragraph 5.3 which focused on calculations and compliance with applicable standards. At this point the TWC (supported by other members of the project team as necessary) will review each design submitted to ensure that it meets the brief provided (e.g. stated loadings, specified materials), is workable on site (will fit in the space available and support the intended construction sequence), includes a statement on residual risk and has a certificate confirming that the necessary design checks have been performed.

**5.5** Where two or more sections of temporary works interact with each other the TWC will ensure that both are assessed together. The TWC will consult as necessary with relevant parties (e.g. Site Manager, Foremen, Subcontractors) to ensure designs are fit for purpose.



**5.6** The Design of temporary works shall take account of the following considerations as a minimum:

- Foundations – the ability of the ground to carry the loads transmitted from the temporary works structure without failure or excessive deformation or settlement.
- Structural integrity – the ability of the temporary works structure itself to carry and transmit loads to the ground via the foundations without failure of the structural elements, including fixings and connections (e.g. by buckling, bending, shear, tension, torsion), and without excessive deflection.
- Stability – the ability of the temporary works structure to withstand horizontal or lateral loading without sway, overturning or sliding failure (stability may be inherent in the temporary works structure itself or provided by the permanent works).
- Access/egress of site traffic
- Safe Access for installation, maintenance, dismantling and placing of construction material
- Provision to prevent falls of materials
- The effects of weather

## **6.0 Construction Phase**

**6.1** Erection work must not start until the following is in place:

- Construction issue drawings / design details are issued to the TWC.
- RAMS have been assessed using the RAMS Checklist and briefed to the erection team
- Where applicable the TWC has prepared an appropriate checklist
- The TWC has made appropriate checks that the design requirements / manufacturer's standard solution requirements and relevant SHE Standard requirements have been met.

**6.2** Each item of temporary works shall be inspected as required (either via the site inspection registers for simple items or bespoke inspection checklists for more complex structures) and inspected at regular intervals (at least prior to first use/loading, every 7 days and after any event that may affect the structures stability). The person carrying out the inspection shall be suitably qualified to carry out those inspections. In effect this will mean that in particular for high and medium risk temporary works the person inspecting the TW will have had specific training on inspecting that specific type of temporary works.

E.g. low risk (see appendix A) TW such as propping of doorways can be inspected by any SMSTS/SSSTS qualified site management. Medium risk TW such as scaffolds may be inspected by a person who has attended a scaffold inspection course, (bespoke designed scaffold structures will need to be inspected by a person who has attended an advance scaffold inspection course). High risk TW such as structures that are very complex or involve innovative designs may require an independent inspection by a visiting, suitably qualified engineer.

**6.3** Where defects are found the TWC will take any steps necessary to control risk until the defects are rectified. This may include stopping use and restricting access.

**6.4** Proprietary temporary works systems (e.g. temporary fencing, propping systems, trench-boxes etc), must be installed/erected in accordance with manufacturers' requirements.

**6.5** Prior to any load being imposed e.g. prior to/after concrete pours to structural concrete frames, the TWC shall issue a permit to load. When it has been confirmed that the permanent structure has attained adequate strength, issue formal permission to dismantle the falsework.

**6.6** For simple structures e.g. minor propping in single storey buildings, the permit to load may be simply entered into the on site inspection register (i.e. the first check before loading the props). For more complex structures a more detailed permit to load procedure shall be implemented and detailed on the project specific risk assessment and method statement e.g. via completing the form [Permit to Load](#).



APPENDIX 1		
Risk Level	Example of Temporary Works Activity (HSE – SIM 02/2010/04)	Suggested Alignment with BS 5975 Categories of Design Check (see appendix 2)
Simple and/or potentially <b>low risk</b> temporary works	<ul style="list-style-type: none"> <li>• Standard scaffold (TG20)</li> <li>• Formwork less than 1.2m high</li> <li>• Hoarding and fencing up to 1.2m high</li> <li>• Simple propping schemes – 1 or 2 props</li> <li>• Internal hoarding systems and temporary partitions not subject to wind loading</li> <li>• Shallow excavations less than 1.2m deep/high</li> </ul>	<b>Category 0 or 1</b>
More complex and/or potentially <b>medium risk</b> temporary works	<ul style="list-style-type: none"> <li>• Falsework up to 3m high</li> <li>• Formwork for columns and walls up to 3m high</li> <li>• More complex propping schemes – multiple props at single level</li> <li>• Needling of structures up to 2 storeys high</li> <li>• Excavations up to 3m deep/high</li> <li>• Net systems not fixed to robust primary members</li> <li>• Hoarding and fencing up to 3m high</li> <li>• Simple designed scaffold</li> <li>• Temporary roofs</li> </ul>	<b>Category 1 or 2</b>
Complex and/or potentially <b>high risk</b> temporary works	<ul style="list-style-type: none"> <li>• Falsework and formwork over 3m high</li> <li>• Trenchless construction, including headings, thrust bores, mini tunnels</li> <li>• Working platforms for cranes and piling rigs</li> <li>• Tower crane bases</li> <li>• Façade retention schemes</li> <li>• Flying and raking shores</li> <li>• Complex propping schemes – multiple props and multiple levels</li> <li>• Needling of structures greater than 2 storeys high</li> <li>• Ground support schemes greater than 3m deep</li> <li>• Complex designed scaffold</li> <li>• Cofferdams</li> <li>• Bridge erection schemes</li> <li>• Jacking schemes</li> <li>• Complex structural steelwork and precast concrete erection schemes</li> <li>• Hoarding and fencing over 3m high</li> </ul>	<b>Category 2 or 3</b>

**Note:** the above risk levels are suggestions only, in practice, even relatively simple temporary works may require careful consideration in their design, construction, commissioning, inspection and loading. Low risk temporary works should be restricted to simple schemes and “standard solutions”. A “standard solution” is an arrangement for which the basic design work has already been carried out and is presented in a tabular or similar form, and for which no further calculations are required.



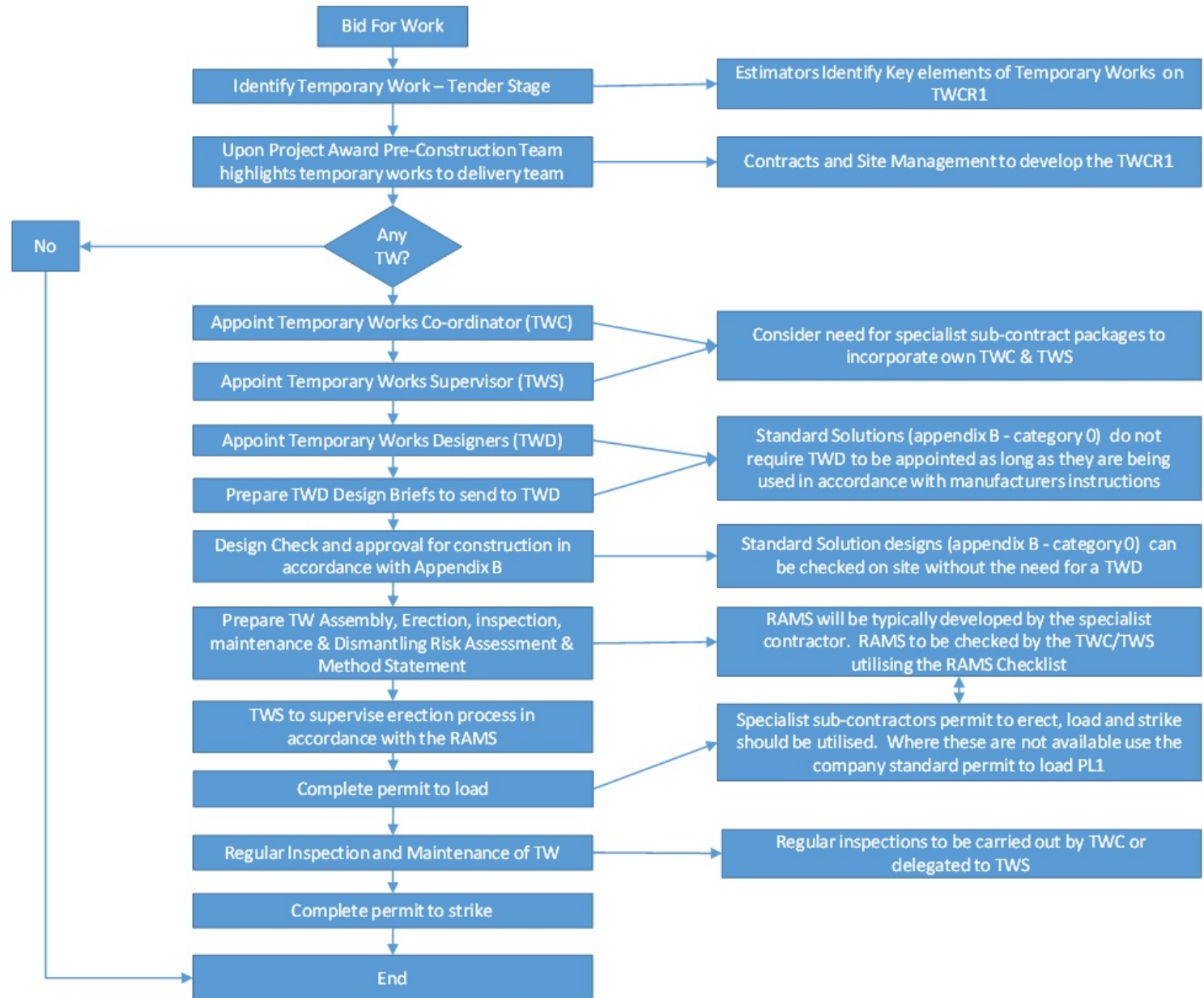
<b>APPENDIX 2 – CATEGORIES OF DESIGN CHECK (taken from BS 5975)</b>			
<b>Category</b>	<b>Scope</b>	<b>Comment</b>	<b>Independence of checker</b>
0	Restricted to standard solutions only, to ensure the site conditions do not conflict with the scope or limitations of the chosen standard solution	This applies to the use of standard solutions and not the original design which will require both structural calculation and checking to category 1,2 or 3 as appropriate	Because this is a site issue, the check may be carried out by another member of site or design team
1	For simple designs. These may include: formwork: false work (where top restraint is not assumed): needling and propping to brickwork openings in single storey construction	Such designs would be undertaken using simple methods of analysis and be in accordance with the relevant standards, supplier's technical literature or other reference publications	The check may be carried out by another member of the design team
2	On more complex or involved designs. Designs for excavations, for foundations, for structural steelwork connections, for reinforces concrete	Category 2 checks would include designs where a considerable degree of interpretation of loading or soils' information is required before the design of the foundations or excavation support or slope	The check should be carried out by an individual not involved in the design and not consulted by the designer
3	For complex or innovative designs, which result in complex sequences of moving and/or construction of either the temporary works or permanent work	These designs include unusual designs or where significant departures from standards, novel methods of analysis or considerable exercise of engineering judgement are involved	The check should be carried out by another organisation

These categories are subjective and may require discussion by the site team before agreement between the TWC, TWD or DCE. The outcome of this decision can have a significant time impact so must be assessed as early as possible. Some Manufacturers and suppliers of TW equipment provide standard solutions for the use of the equipment on site (e.g. the manufacturer's erection booklet for Cuplock or Kwikstage scaffold, for an aluminium access tower, for a trench box or for a fencing / hoarding system).

When using standard solutions the TWC must ensure that the standard solution is appropriate for the situation it is to be used in and that the manufacturer's instructions are available on site with the Method Statement and fully complied with as if they were any other TW design.



Appendix 3 - Temporary Works Process Control





## 32. TRAFFIC MANAGEMENT

### 1.0 General

1.1 All sites shall have measures to ensure that pedestrians and others affected by the works are not put at risk due to vehicle movements either on or off site including use of cars, vans, lorries, low-loaders, earth-moving machinery, tractors and lift trucks etc.

1.2 Local/highway authorities shall be contacted at an early stage to agree suitable traffic management schemes for works affecting highways/adopted roads.

1.3 All ride on plant operated by competent persons and shall be in good working order and well maintained as per the plant tools and equipment standard.

1.4 Where ride on plant is operated on the public highway it must comply with the requirements of the Road Traffic Act (including full driving licence for operator, lights, brakes etc).

1.5 Traffic management plans shall be reviewed/updated at regular intervals during the construction phase.

1.6 All site staff shall be briefed on the traffic management arrangements as part of the site induction and as there are changes to the traffic management arrangements on site.

### 2.0 Construction Phase Activities

2.1 The Contracts Manager in conjunction with the Site Manager, shall complete [Generic Risk Assessment RA008 Traffic Management](#) detailing or referencing a traffic management plan that identifies the site specific traffic controls.

2.2 The Contracts Manager shall ensure that pedestrians and vehicles are adequately separated by establishing and documenting a traffic management plan that includes the following as far as reasonably practicable:

- Segregated pedestrian-only areas from which vehicles are excluded
- Separate entry and exit gateways for pedestrians and vehicles
- Mandatory high visibility jackets for all pedestrians
- Vehicle-only areas, especially where space is limited or traffic is heavy
- Safe vehicle routes around the site
- Designated on site materials delivery/offloading area(s)
- Designated haulage route to site (avoiding residential areas where possible)
- On site speed limit (no more than 5mph)
- **Speed limits for entrances to site to be maximum of 10mph where there the route is suitably segregated from pedestrians**
- Vehicles to be immobilised when not in use with keys removed, parked on level ground
- **Deliveries scheduled to avoid busy traffic periods in liaison with relevant existing building users (e.g. school drop off and pick up times).**
- Deliveries offloaded within the site boundary, where this is not possible the areas shall be segregated and supervised by a competent banksman or physically segregated by use of barriers
- Warning signs shall be clearly displayed (including speed limits, site access and vehicle routes)
- Barriers shall be of adequate strength for both the type and speed of vehicle
- Where vehicle reversing on site is necessary it shall be done under the supervision of a trained banksman
- Physical protection, e.g. goalposts and warning signs shall be provided where there are overhead restrictions/services
- Traffic routes shall be maintained in good order



## 33. TRAINING, AWARENESS AND COMPETENCE

### 1.0 General

**1.1 All employees shall have received sufficient training to enable them to safely carry out their duties. Contractors shall provide evidence of the necessary training, skills and awareness of their staff.**

**1.2** Site Managers shall ensure that all staff receive a site specific induction highlighting the key safety and environmental hazards on site. A record of the inductions shall be maintained in the site files.

**1.3** Site Managers shall ensure that regular health, safety and environmental tool-box talks, relevant to the works, are carried out on site. A record of attendees and the subject of the toolbox talks shall be maintained in the site files.

**1.4 Evidence of training, skills and awareness can be demonstrated by providing the appropriate CSCS Card or evidence of training related to their works e.g. for groundworkers, carpenters, bricklayers, tillers, painters and decorators, roofers, etc.**

**1.5** Operatives without the required CSCS or approved training may be allowed on site under the direct supervision of a qualified operative.

**1.6** The Site Managers shall view copy of the CSCS card/approved training record as per Table 1 below. A record of the CSCS/approved training provider card number should be obtained during the site induction and filed with the induction records.

**1.7** Table 1 below, gives details of specific training requirements for specified trades or operations. The list is not exhaustive and therefore where a trade or operation is not listed, CSCS cards will be the default requirement.

### 2.0 Table 1:

QUALIFICATION	ISSUING AUTHORITY	REQUIRED FOR
Abrasive Wheels	CITB Approved Training Provider	All persons who change, set or mount abrasive wheels
Asbestos Awareness	UKATA <i>or</i> IATP, <i>or</i> CITB Approved Training Provider	All personnel who may disturb asbestos during demolition or refurbishment works including: demolition operatives, carpenters, plumbers, electricians etc.
Asbestos Removal (non-notifiable)	UKATA <i>or</i> IATP, <i>or</i> CITB Approved Training Provider	All personnel who carry out non-notifiable asbestos works including removal of floor tiles, drilling into artex ceilings, removal of asbestos cement products etc.
Asbestos Removal (Notifiable)	CSCS Carded <i>or</i> UKATA <i>or</i> IATP <i>or</i> BOHS Approved Training Provider	All personnel carrying out notifiable asbestos removal. Can be operative or supervisor trained, however, the work gang is to include at least one trained supervisor on site at all times.
<b>MEWP's (cherry pickers, scissor lifts)</b>	<b>IPAFF <i>or</i> NPORS <i>or</i> ITSSAR <i>or</i> CITB Approved Training Provider</b>	<b>Required for all operators of Mobile Elevated Working Platforms - training records should indicate the class of plant the operator is trained in.</b>



<b>Ride On Plant (dumpers, excavators, tele-handlers, cranes etc).</b>	<b>CPCS or NPORS or ITSSAR or LANTRA Approved Training Provider</b>	<b>All plant operators (including dumpers, excavators, tele-handlers, cranes and other ride on plant operators) - training records should indicate the class of plant the operator is trained in.</b>  <b>For Forklifts RTITB Approved training also demonstrates the required competence.</b>
Tower Scaffolds	PASMA <b>or</b> NPORS <b>or</b> CITB Approved Training Provider	All persons erecting, dismantling and inspecting tower scaffolds.
Scaffolding	CISRS Approved Training Provider	All persons erecting or adapting scaffolding. Note: trainee scaffolders cannot work on their own and must be under the direct supervision of a qualified scaffolder.  Advanced Scaffolder cards are required in a squad if the works carried out is of an Advanced nature (i.e. complex design work, hanging scaffolds, support scaffolds etc).  Additional system specific training is required for system scaffolds.
Confined Spaces	CITB Approved Training Provider	For all persons who enter or act as the “top man” in confined spaces.
Electrical Works	City & Guild (2330 and 2356 or G&G 2357) or JIB Electrotechnical CSCS Card	For all electricians. Trainee electricians may work under the supervision of qualified electricians. Note: from September 2011 the C&G 2330 and 2356 is being replaced by G&G 2357.
Gas Works	Gas Safe Registration or UK-PHMES CSCS or Engineering Services SKILLcard	Required for anyone who works on gas installations.  Note: the gas safe id card will identify the type of work the engineer is qualified to carry out.
Works on the public highways	New Roads and Street Works Act Cards	Required for all operatives who carry works on the public highway
Demolition Works	Certificate of Competence of Demolition Operatives (CCDO Card)	Required for all demolition operatives



## 34. VIBRATION

### 1.0 General

**1.1** Employees exposure to vibrating tools and equipment shall be reduced to as low as reasonably practicable by the selection/use of plant/tools with low/reduced vibration values.

**1.2** Where employees are identified as regular users of vibrating equipment they shall be subject to regular occupational health monitoring for signs and symptoms of hand arm vibration.

**1.3** Always strive to work below the 2.5m/s<sup>2</sup> A(8) action level – never exceed the 5m/s<sup>2</sup> A(8) exposure limit.

### 2.0 Construction Phase Activities

**2.1** The Contracts Manager in conjunction with the Site Manager, shall complete [Generic Risk Assessment RA010 HAV](#) and [RA010a HAV Calculator](#) where Borrás employees or directly employed agency labour uses hand held vibrating equipment with a vibration rating above 5m/s<sup>2</sup>.

**2.2** Employees exposure to hand arm vibration shall not exceed the exposure limit value of 5 m/s<sup>2</sup> averaged over and 8 hour day. Where the exposure is above the exposure action value of 2.5 m/s<sup>2</sup> actions shall be taken to reduce the exposure as far as reasonable practical.

**2.3** Where the risk assessment identifies that the exposure will be at or above the Exposure Action Value of 2.5m/s<sup>2</sup> average over an 8 hour day then the Site Manager shall ensure that [Vibration Log Sheet](#) is completed and sent to the HSQE Manager who will maintain a log of the employee's exposure.

**2.4** Exposure to vibration shall be reduced to as low as reasonably practicable through:

- Use of appropriate/alternative working methods e.g. Pile cap removal using hand-operated breakers is not acceptable – use alternative methods (although some dressing using hand operated tools may still be required)
- Selection of suitable tools with low vibration ratings
- Tools and accessories shall be well maintained with sharp drill bits/cutting tools
- Provision of regular breaks from work involving vibration and encourage operators to exercise fingers
- Encourage employees to stop or cut down smoking, which can lead to impairment of circulation

**2.5** Contractors shall provide method statements that include safe systems of work for using vibrating tools to reduce exposure to below the exposure limits and as low as reasonably practical. Method statements shall include the following as appropriate:

- Use of gloves (gloves cannot be relied upon to protect against vibration, however they will help aid circulation by keeping hands warm and dry)
- Type of equipment to be utilised and where relevant the maximum exposure times for that equipment
- Methods of reducing employees exposure to HAVs e.g. job rotation, correct working methods etc
- Wearing of PPE to control other hazards (dust, noise, damage to eyes)



## 35. WELFARE

### 1.0 General

**1.1** All construction sites shall have suitable welfare facilities that are clean, tidy, well lit, warm, well ventilated and provided with hot and cold running water, hand drying facilities, adequate supply of fresh drinking water, means of heating water and food that are sufficient for the number of persons employed on site (including sub-contractors) from the start of a project.

**1.2** Where works last less than 5 continuous days the use of public/private facilities can be identified (subject to permission from the owner). Public toilets should only be used where it is not practical to return to site facilities or it is not practical to provide portable toilets on site.

**1.3.** Smoking is prohibited in enclosed public places and workplaces such as construction sites or work vehicles. Smoking will only be permitted in designated smoking areas by prior agreement with the client.

### 2.0 Construction Phase Activities

**2.1** The minimum standards for static construction sites are to include:

- Washing facilities to include hot & cold water, soap, paper towels and/or hot air dryer
- Sinks should be large enough to wash face, hands and forearms
- Facilities for changing, storing/drying clothes that are secure and capable of being locked
- A clean rest area with sufficient seating - rest areas should not be used to store materials and operatives should be discouraged from eating/drinking on site where facilities are provided
- Clean drinking water should be provided, where running water is not suitable for drinking this should be clearly marked on the tap
- A means of heating food and water
- Flushing toilets and running water connected to mains water and drainage systems. If this is not possible, facilities with a built-in water supply and drainage tanks should be used.
- Portable chemical toilets are acceptable only if it is not reasonably practicable to make other adequate provision
- It is recommended 1 toilet for every 7 operatives on site
- Men and women may use the same toilet, if it is in a lockable room and partitioned from any urinals. Otherwise separate toilets should be provided
- Where female employees are present toilets should also have suitable sanitary disposal
- First Aid Facilities in line with the First Aid Standard
- Fire Fighting Equipment in line with the Fire Standard
- Welfare units should be sited to ensure adequate segregation of pedestrians and vehicles and where possible away from permanent buildings in line with the Fire Standard
- Posters and forms shall be displayed as required by the Site Safety File

**2.2** Welfare unit suppliers shall provide a method statement for the installation of the welfare units to site to include safe methods of lifting and segregation of pedestrians during operations.



## 36. WORKING AT HEIGHT - GENERAL

### 1.0 General

1.1 This standard covers general working at height issues including stepladders, ladders, mobile towers, podiums, staging and low level platforms.

1.2 All working at height will be planned to select the most appropriate work equipment for the task.

1.3 The hierarchy of controls will be applied to when working at height:

1. Avoid working at height if possible
2. Use an existing safe place of work
3. Provide work equipment to prevent falls
4. Mitigate distance and consequences of a fall
5. Instruction and training and/or other means.

1.4 Collective protective measures (such as scaffolding) must be prioritised over personal protection (such as using a fall arrest harness).

1.5 All persons using and erecting equipment shall be trained in accordance with the Training, Awareness and Competence Standard including:

- PASMA or CITB approved Training for Tower Scaffolds
- IPAF or CITB approved Training for Mobile Elevated Working Platforms (Scissor lifts/Cherry Pickers)
- CISRS Cards for Scaffolders

1.6 Mobile Towers, podiums or other work platforms with suitable handrails must be used in preference to Stepladders/Ladders where ever possible.

1.7 Contractors shall identify in their method statement the access equipment to be used for their works, utilising the most appropriate work equipment in line with the requirements of this standard.

### 2.0 Construction Phase Activities

2.1 Contracts Managers will complete [RA024 Working at Height General](#) where working at height activities are to take place on site.

### 3.0 Step Ladders

**3.1 Step ladders can only be used if it is not possible to use podiums or towers (or another type of platform with guardrails to prevent falls).**

3.2 Use of step ladders as a working platform shall be subject to a site specific risk assessment demonstrating that they are the most suitable working platform for the task(s) to be carried out.

3.3 Where stepladders are used the following controls must be implemented:

- Stepladders shall be the correct height, to ensure the user has a hand hold
- Stepladders shall not be used, where the feet of the operative are more than two metres from ground level



- Stepladders and trestles are not designed for any degree of side loading or over reaching, and this must be avoided
- They must be spread to their fullest extent and properly levelled for stability and placed at right angles to the work on a level surface
- The rear parts of steps must not be used for foot support
- Stepladders are prevented from spreading by means of stays or cords. They must be of sufficient and equal length, kept in good order and renewed if found to be defective
- Only one person must use a Stepladder at any one time and if steps are used in a doorway, the door should be wedged open securely
- The operative shall face the direction of the treads
- Stepladders are to be used on firm flooring and not on any other temporary platform
- Stepladders shall be in good condition Stepladders/Ladders must be in good condition and should never be painted as defects can be hidden
- Stepladders should be visibly inspected by the user before every use
- Stepladders shall be heavy industrial grade (class 1 industrial or EN131)

#### 4.0 Ladders

**4.1 Use of Ladders as a working platform is only acceptable if it is not possible to use podiums or towers (or another type of platform with guardrails to prevent falls).**

4.2 Use of ladders as a working platform shall be subject to a site specific risk assessment demonstrating that they are the most suitable working platform for the task(s) to be carried out.

4.3 Where ladders are used the following controls must be implemented:

- Ladders are only to be used for access or for light, short duration works, lasting no more than 30 minutes.
- Only one person must use a ladder at any one time and if used in a doorway, the door should be wedged open securely
- The operative shall face the direction of the treads
- Ladders are to be used on firm flooring and not on any other temporary platform
- Ladders shall be in good condition
- Ladders shall be heavy industrial grade (colour code Blue)
- Ladders shall be tied/stabilised or footed when in use
- Ladders are to extend 1.05 m above landing platforms
- Ladders must not extend more than 9 m without an intermediate platform
- Angle of rake of ladders should approximately be at a 75° angle to the horizontal (4:1)
- No work shall be carried out from a ladder that requires removal of both hands from ladder
- No compressed air or water hose works shall be carried out from a ladder
- Ladder rungs are not to be used to support platforms of any sort
- Operatives will maintain three points of contact
- Ladders must be in good condition and should never be painted as defects can be hidden
- Ladders should be visibly inspected by the user before every use
- Ladders shall be heavy industrial grade (class 1 industrial or EN131)

#### 5.0 Tower Scaffolds

5.1 Where tower scaffolds are used the following controls must be implemented:

- All platforms must be inspected before use and, if they remain erected, every 7 days thereafter. A record of the weekly check shall be made in the site inspection register
- Towers must be erected using “through the trap” or the advanced guard rail method
- Towers must be erected in accordance with the manufacturers erection guidance including:



- Allowable height to base ration
- Erection of outriggers
- Static towers must have metal base plates placed on a hard level surface. Mobile towers must only be used on hard level surfaces
- Towers must only be moved by pulling or pushing at the base and no person shall remain on the tower while it is being moved
- No steps, ladders or additional platforms shall be placed on the tower
- Castors must be locked when the tower is in use
- Towers must only be moved by pulling or pushing at the base and no person shall remain on the tower while it is being moved
- Incomplete Towers shall have warning signs to ensure they are not used

## 6.0 Podiums

6.1 Where podiums are used the following controls must be implemented:

- Podium steps will only be used on level surfaces
- Where provided, the platform gate must be shut when the podium is in use
- Work must not be carried out from steps up to the platform
- Where provided, outriggers or stabilisers must be used
- The platform must not be placed on the handrails to gain extra height
- The handrails must not be climbed on to gain extra height
- Over reaching from the Podium is prohibited – this will make the Podium unstable
- Material must not be stacked against the side of the Podium
- Wheels must be locked-off when the Podium is in use
- The Podium must not be pulled along whilst the platform is in use
- All materials and operatives must be removed from the podium before it is moved
- No steps, ladders or additional platforms shall be placed on the Podium to gain extra height

## 7.0 Staging/Trestles:

7.1 Where staging/trestles are used the following controls must be implemented:

- All platforms must be inspected before use and, if they remain erected, every 7 days thereafter. A record of the weekly check shall be made in the site inspection register
- Platforms shall be fitted with handrails/mid rails and toe-boards
- All platforms must be provided with a safe means of access, i.e. tied ladders etc.
- Only manufacturer's fittings may be used. Makeshift components must never be used nor should components from different manufacturers be mixed
- No work platform should be overloaded
- No steps, ladders or additional platforms shall be placed on the platform
- Brick guards or other means of preventing falling materials shall be used where materials are to be stored above toe-board height

## 8.0 Other Working Platforms

8.1 Low level platforms that have no handrail e.g. proprietary hop ups/stilts must only be used at working heights below 2 metres where there is no risk of significant injury, i.e. falling onto starter bars, work adjacent to stair wells etc.

8.2 These working platforms shall be subject to a site specific risk assessment demonstrating that they are the most suitable working platform for the task(s) to be carried out.

8.3 The working area shall be free from trip hazards and the platforms placed on a firm level surface.

