

## Management System

### STANDARD

### Work at height

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### 1. Key responsibilities

#### Temporary works co-ordinator

An appointed person who co-ordinates the actions of all parties involved with temporary works schemes to ensure that they are designed, installed, used maintained and dismantled in a safe and controlled manner. This may include temporary access and scaffolding.

#### Scaffolding

All scaffolding is subject to the requirements of The Work at Height Regulations 2005, and, where applicable, The Construction, Design and Management Regulations 2007, and shall be constructed to meet the standards specified in BS EN 12811, 2003, part one where systems scaffolds are concerned; and TG20:08, Guide to good practice for scaffolding with tube and fittings, for tube and fitting scaffolding.

All scaffold companies employed on our contracts, whether directly to us or to a subcontractor, shall be required to work in accordance with legislation, the above codes, and the National Association of Scaffolding Contractors (NASC) Guidance Note SG4, The use of fall arrest equipment whilst erecting altering and dismantling scaffolding.

#### General

The project/site manager has overall responsibility and shall ensure that trained operatives who hold either Construction Industry Scaffolders Registration Scheme (CISRS) basic or advanced scaffolder's cards erect all scaffolding. Holders of a basic CISRS card shall only be permitted to erect basic specification scaffolds as detailed in TG 20:08. Holders of advanced CISRS cards shall be used to erect special scaffolds, i.e., designed scaffolds, including slung, cantilevered, trussed out, or suspended scaffolds.

All scaffolding shall conform to the basic conditions and specifications detailed in TG 20:08 and shall be designed, have structural calculations made, and shall have design drawings available to those erecting and dismantling it, and shall be erected in strict accordance with the design. With the exception of low level, simple scaffolding, all scaffolding shall be treated as significant items of temporary works and shall be designed and undergo design checks as per the temporary works process and shall be added to the temporary works register. The appropriate temporary works co-ordinator shall monitor the design and design checking, and shall

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be satisfied that the scaffolding has been erected in accordance with the design drawings before permitting the scaffolding to be used or loaded.

Depending on the complexity of the scaffolding, an erection, use and dismantling plan shall be produced by a competent person and shall be available to those supervising and erecting/dismantling the scaffolding. The project/site manager shall liaise with the temporary works co-ordinator to achieve this.

The erectors of scaffolds shall provide a handover certificate on completion of the scaffolding, or, alternatively shall make the first entry into the scaffold register to indicate that it is in good order and fit for use. When signing to receive a scaffold from an erector the site manager and/or other competent person, shall only ever sign to receive the scaffold. The erector must sign to indicate the scaffold is in good order at the time of handover.

The site manager shall ensure that regular inspections of scaffolds are conducted and results recorded in the inspection register. The inspections and records may be delegated to a competent nominee or co-ordinator providing they have the necessary qualifications, knowledge and experience.

## 2. Site conditions and potential hazards

Consideration shall be given initially at design stage then at construction stage to eliminate potential hazards by consideration of the following: -

- **Overhead power lines**
- **Buried services**
- **Work at height.** Protection of personnel working at height/personnel working below others/avoidance of work at height by fabrication/assembly at ground level, management of leading edges when work area is changing rapidly as erection progresses
- **Access.** Stairways on scaffolding preferred to ladders. Use of appropriate MEWP devices, competent PASMA certified operators
- **Ground bearing capacity.** Ground conditions are an important factor to consider prior to erection. A suitable hard standing access both internal and external shall be provided for cranes, hoists and mobile scaffold towers etc. Requires input from temporary works manager/co-ordinator
- **Manoeuvrability of cranes.** Special provisions shall be provided in the method statement when steel is lifted by cranes in close proximity to overhead power lines
- **Storage.** Large structural components require large space to store, assemble and manoeuvre structural components and associated handling equipment
- **Weather conditions.** Ice/wind/rain/thunderstorm carry increased risk for work at height
- **Proximity of other buildings/general public,** Consideration of oversailing by cranes moving steelwork, control of third party pedestrians when work at height is underway.

## 3. Inspections

Where a place of work has any working platform, permanent guard rails or other fall protection measure i.e. edge protection, the following inspection regime shall be adopted:

- Before being taken into use for the first time
- After any substantial addition, dismantling or other alteration
- After any event likely to have affected its strength or stability
- At regular intervals not exceeding seven days since the last inspection

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- Checked on every occasion before the place is used.

Subcontractors shall inspect their own scaffolds and keep an Inspection register. Site managers shall have to ensure that this is carried out and monitoring checks shall be made by site management and/or the health and safety manager/ advisor. Morgan Sindall requires Scafftags or similar to be used on all scaffolding to record inspections.

All scaffolding on our contracts shall be of an independent tied type, (pudlog scaffolding is not allowed on Morgan Sindall contracts) and all scaffolding shall be erected in accordance with NASC guidance, both for the specification of scaffolding, TG 20:08, and for erection SG4, (The Use of Fall Arrest Equipment whilst Erecting Altering and Dismantling Scaffolding) Any scaffold company that we use must be committed to and agree to implement the NASC guidance.

#### 4. Scaffold erection and dismantling

All those involved in scaffolding erection/dismantling operations must wear and use fall arrest equipment, and have received appropriate training in its' use (this shall be a full body harness with shock absorber and rear dorsal ring, a maximum 1.75m lanyard and 55mm opening scaffold hook for one handed operation).

Scaffolders shall clip on to the first suitable anchor point when working at 4m and above:-

- When not working within a protected area (three boards, 600mm wide, and a single guardrail as a minimum).
- When moving their working platform e.g. when raising or lowering boards.
- When climbing up or down the scaffold structure or working directly from/ off the scaffold structure.

Anchor points should ideally be above waist height. Scaffolders must adopt a method of work that will limit traversing at an exposed edge. When raising or lowering scaffold materials scaffolders shall be clipped on at all times or a safe handling platform with double guardrail provided. A properly secured access ladder shall be used to gain access to upper levels.

The ratio of 1:8 advanced to basic scaffolders shall apply on Morgan Sindall projects. Only one trainee scaffolder will be permitted per advanced scaffolder.

#### Scaffolding in false work

Scaffolding in false works shall be erected by persons holding either Construction Industry Scaffolders Registration Scheme (CISRS) basic or advanced cards.

#### Subcontract works

Where scaffolding has been erected by a sub-contractor, or other contractor, it is the responsibility of our Site Manager to take steps to ensure that it is erected in accordance with current statutory requirements before it is used by our operatives, or by persons under our control or supervision.

#### General standards applicable to all scaffolding

The following requirements apply to all scaffolding which at all times shall be erected in full compliance with the design drawings and requirements of TG20:08.

Scaffold board shall be clean; free of nails; not split or badly warped; and the steel banding should not be torn or jagged.

Scaffolding shall not be erected upon an unprepared foundation. If based on soil or loose material it shall be well compacted, and in all cases shall have timber soleplates, extending under at least two standards so that there are no gaps between timber and ground, and steel base plates used under all standards and resting on sole plates.

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The standard lift height for basic scaffolding is 2m, except for the first lift where pedestrian access is needed. In this case a first lift of 2.7m is acceptable providing the first level is tied at alternate standards.

Any joints in the standards should occur just above the ledger. Joints shall be staggered in adjacent standards so that they do not occur in the same lift.

Ledgers shall be horizontal, placed inside the standards and clamped to them with right angle couplers. Joints shall be staggered so that in adjacent ledgers they do not occur in the same bay. Only **sleeve** couplers shall be used at ledger joints.

All scaffolding shall be adequately tied to the structure. Using load bearing double couplers, with ties evenly spaced throughout the scaffold. Ties shall be of a physical type wherever possible and resist both outward and inward movement of the scaffolding structure. If more than ten percent of ties are of a friction type then calculations shall be required to justify their adequacy. As a general rule ties shall have a tensile and compressive force of 6.1kn or 12.2kn, depending on whether one or two couplers are used at each tie point. For basic scaffolding the general rule, for guidance only, is for ties to be positioned:-

- On alternate pairs of standards
- At alternate levels with a maximum vertical interval of 4m
- At the top level platform.

On sheeted scaffolding design calculations shall be required for tie spacing, type of tie and numbers etc.

Where ties are made by setting anchors into the fabric of a structure, pull out tests on a minimum of 10% of the ties shall be made, achieving a tensile and compressive force of 6.1kn or 12.2kn depending on whether one or two couplers are used at each tie point.

Bracing shall be provided to stiffen the scaffolding. Ledger bracing, from ledger to ledger, using load bearing couplers, shall be provided at alternate pairs of standards and at all lifts. On working levels a clear access shall be provided. To facilitate this, a maximum of two levels at a time may have ledger bracing removed for access. This applies to basic scaffolding only, and prior to removing any bracing the designer must be consulted via the temporary works co-ordinator.

Façade bracing shall be provided to all scaffolding, and shall be provided for every five bays of scaffolding with scaffold tubes set at between 35degrees and 55degrees and shall extend from top to bottom of the scaffolding. A zigzag pattern of bracing or a continuous tube extending across the scaffold and to the full height may be used.

For basic scaffolding that needs to extend to a height over 8m plan bracing shall be used. Plan bracing shall be fitted at a maximum spacing of four lifts and at intervals of not more than ten bays and shall be secured with load bearing couplers.

Decking will generally be completed with 38mm x 225mm boards, and each board should have at least three supports. The span of boards is dependant on the loadings but shall never be more that 1.2m. Checks with TG20:08 shall always be required. Boards are normally butted, but may be lapped if bevel pieces are fitted or other measures taken to prevent tripping. Board shall extend between 50mm and 150mm beyond its end support. Where there is any risk of board tipping because of their short length or because they are lapped etc, they shall be secured to prevent such tipping or displacement risk.

Where scaffolding is erected within shafts or other situations where excessive overhang may exist, or be caused by the shaft curvature, then additional ledgers or transoms shall be provided at the end of board runs to prevent the excessive overhang situations.

Guardrails shall be fitted at all working platforms; minimum height shall be 950mm. Where there is a risk of falling from the inner face of the scaffold this shall be protected in a similar fashion. The space between toe boards and guardrails shall not exceed 470mm and an intermediate guardrail shall always be provided. Toe boards shall be at least 150m high. Where necessary a higher toe board shall be used. Brick/material guards or suitable netting shall be used on all scaffold platforms. All loading bays, platforms etc shall be fitted with adequate guardrails and materials fall protection on all exposed sites.

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Written confirmation shall be obtained that a person independent from those directly responsible for the design has checked designed scaffold details and calculations. This check may be carried out in the same office by someone not involved in the design. This confirmation shall be submitted to Morgan Sindall before work commences. For complex or high risk designed scaffolds, details of the qualifications and professional indemnity insurance of the person designing or checking the design shall be provided to Morgan Sindall before work commences.

Bandstands or trestle scaffolds shall not be used as working platforms or as a means of access unless they incorporate a proprietary edge protection system.

Hop-ups shall only be used if they are designed and manufactured for that purpose and are not more than 500mm in height and industrial grade. In all cases a specific risk assessment shall be carried out.

All edge protection including scaffolds, roof edges and floor edges shall incorporate material fall protection i.e. brick guards or similar.

### 5. Means of access

**Stair access systems are the Morgan Sindall preferred means of access to all scaffoldings and shall be used wherever practical in preference to ladder systems. Where ladder systems are the only practical means of access the following shall apply.**

- Any static access ladder that rises five meters or more from its base to the stepping off point shall be contained in a properly constructed ladder tower
- Access ladders shall not be positioned within the main body of a scaffold or protrude through the working platforms unless site conditions make it absolutely essential, and approval has been given by the safety adviser. This section shall apply to all types of ladder access points including those that are not associated with scaffolding
- Stairs and stair-wells shall be provided with double handrails, shall be kept free from debris, be adequately lit, and if slippery shall be cleaned or sanded as quickly as possible.

Ladders shall stand on a firm and even base and shall be secured so that they cannot move from top to bottom. They shall extend at least 1.05m above the landing place. Ladders may be varnished or treated with preservative, but shall not be painted. All rungs shall be sound and properly wedged. Stiles shall not be warped, cracked or splintered. Damaged ladders shall be taken out of use. The use of ladders as a place of work shall be discouraged and suitable alternative methods made available.

A list of all ladders on site shall be kept and a record of their weekly inspection shall be entered into the "F91" or similar register. Metal ladders are acceptable but shall not be used on sites where there is a risk of contact with overhead or other electrical cables. Ladders shall not be considered as the principal method of access and shall be used only when other means of access are impractical. Ladder use shall be strictly controlled and they shall not be used as a place of work unless no other method is practical. Ladders that rise more than 9m shall have an intermediate landing place so that no single run exceeds 5m. In shafts a suitable ladder bay may be used. Where it is not possible because of site conditions to comply fully with these requirements the site manager shall agree other means of access with the safety adviser.

Ladders shall be boarded or otherwise secured to prevent unauthorised access after working hours; stairs shall be barred.

**NOTE:** Special arrangements exist for utilities linesmen and reference to specified industry guidelines should be made.

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#### 6. Ladders and stepladders on site

When considering the use of ladders, including stepladders, they shall not be used for work at height unless risk assessment has demonstrated that other systems such as podium or tower scaffolds are not practicable or they are to be used for very short duration only. All steps and ladders shall be of industrial grade.

Stepladders and ladders shall only be used as a last resort and in such exceptional cases the following must apply:

- A specific risk assessment has been undertaken which eliminates all other means of working at height;
- And a specific permit to work has been issued by the Morgan Sindall management to the operative who will be undertaking the work
- Stepladders shall not be used on Morgan Sindall projects unless no other safer alternatives are available. Where no other safe alternatives are available the following shall apply
  - Stepladders shall be limited to lightweight duties where no side ways loading is exerted, for example second fix operations, and where the use of a scaffold tower or podium step ladders is not reasonably practical
  - Stepladders shall be checked to ensure that they are in good condition. Damaged stepladders shall be taken out of service immediately
- Every care shall be taken to ensure that the proposed work location for stepladders is suitable for such work and where it is not our site management shall require an alternative method of work
- Operatives shall use stepladders only for work that can be readily reached for the third step down from the top step.

#### 7. Cradle scaffolds

Cradle scaffolds shall be treated as significant items of temporary works and shall be subject to design and design checks as per the temporary works process and shall be entered in to the temporary works register. Their use will be monitored and managed by the temporary works co-ordinator.

Cradle scaffolds present special problems and risks and their use requires careful consideration. Operative who are to use them shall be fully trained in safe operation techniques, should be physically and mentally suitable for work in them. Persons who are prone to fits, dizziness, fainting or the like shall not be allowed to work in cradles.

All cradles shall be erected and moved (other than rail mounted cradles) by the supplier, who will issue a certificate of thorough examination for the hoisting mechanism, equipment, and ropes and will also issue a hand over certificates for the installation of the cradle. A thorough examination shall be repeated at six monthly intervals and shall be inspected daily before first use, and with a recorded inspection weekly.

Before a cradle is mounted on a roof or similar structure, adequate checks shall be made to ensure that the structure will carry the full load of the cradle, the outrigger equipment and ballast, and the load to be applied within the cradle.

Before work from the cradle commences the site manager shall ensure that:

- The cradle is marked with the S.W.L. i.e. number of persons plus weight of materials and tools
- The safety ropes (ropes in addition to the hoisting ropes) are fixed and kept taut
- The ballast (counterweights) are bolted or locked onto the outriggers
- Rail mounted cradles have stops at each end of track
- All rope anchorage points are securely fixed with the correct pins (hardened steel)
- All operatives who work from the cradle have been trained in its operation by the Supplier, or other competent person

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- Access to the cradle is from ground level or a suitable landing platform.

## 8. Tube and fitting towers

All scaffold towers are subject to the requirements of The Work at Height Regulations 2005,, and shall be constructed to meet the standards specified in BS EN 12811, 2003, part one; and TG20:08, Guide to good practice for scaffolding with tube and fittings, for tube and fitting scaffolding.

Towers shall be erected on firm level ground with base plates and sole boards situated beneath corner standards. Where castors are to be used they shall be of the swivel type and fixed to the corner standards so that they can not fall off the standard if it comes clear of the ground. The castors shall be fitted with brakes, which shall be applied during use. Castors and wheels shall not be less than 125mm in diameter. On soft ground sole boards should be used beneath castors.

The tower shall be adequately braced on all four sides for its full height and in plan at every alternative lift, starting at the base of the tower and including below the working platform.

The platform shall be fully boarded with provision made to ensure that the ends of the boards do not slip off their supporting transoms. 38mm boards shall not span more than 1.2m and 50mm thick boards not more than 2.6m.

The distributed load on the platform of a light duty tower is 1.5kN/m<sup>2</sup>. Heavier duty towers shall be specially designed.

Guard-rails and toe boards shall be necessary on all four sides, with the guardrail at the ladder point being fitted with gravity gates to provide access.

Toe boards shall rise at least 150mm above platform level. Guard-rails shall be 950mm above platform with the distance between the top of the toe boards and the guardrail not exceeding 470mm. An intermediate guardrail shall always be provided. A system of brick guard mess panels shall be used on all working platforms. A ladder for access purposes can be lashed vertically to one of the narrow sides, the foot resting on an additional transom. The ladder shall extend at least 1.05m above platform level to provide handhold at the stepping-off point.

The height to base ratio shall be not greater than that shown for each condition:

- Stationary internal tower: 4 to 1
- Stationary external tower: 3.5 to 1
- Mobile internal tower: 3.5 to 1
- Mobile external tower: 3 to 1

The recommended maximum height for mobile scaffolds is 9.6m except that this may be increased to 12m if it is tied to a structure when in use. A static access tower shall not exceed a maximum of 12m free standing. Above these heights towers should be tied and be specially designed to ensure stability by means of ground anchors, guys or kentledge. No free-standing or mobile tower with a base dimension less than 1.2m is permitted. To move a tower, pressure may only be applied to the base. No person or materials are allowed to remain on the working platform whilst the tower is being moved. Loads shall be raised within the base area of the tower unless specific arrangements for additional and adequate tying in have been made.

## 9. Prefabricated aluminium scaffold towers

Aluminium scaffold towers shall be erected in accordance with the Prefabricated Aluminium Scaffolding Manufacturers Association (P.A.S.M.A.) operators code of practice and the relevant manufacturer's instructions. The general safety principals applying to tube and fittings towers (T.F.T.) also apply to aluminium towers. However, because of their lightweight construction and variation in design, the following also apply and shall be taken into account:

- Bracing requirements will be as detailed in the manufacturers handbook

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- Platforms are supplied as pre-made units, single scaffold boards shall not be used
- The use of single width platform units is not permitted except in a situation where physical obstructions prevent the use of double width platforms
- Guard-rails and toe boards shall be fitted on all four sides of the tower, as for tube and fitting towers
- Access onto the working platform shall be by the correct ladders system for the particular tower and this shall be fitted within the tower unit
- Trap doors are provided within the platform units. The towers shall never be climbed by using the ledgers as if they were ladders
- Traditional ladders shall never be fitted against the outside of the towers as this could result in the tower overturning.

The height restriction for free standing mobile towers is on a ratio of 3.5 times the minimum base size but with the additional provision that towers used externally are limited to a height based on a ratio of three times the minimum base size. Because of the real risk of overturning, light loads only may be raised within the base area of the tower. In many instances when using towers inside buildings it is impossible to fit the guard-rails because of overhead services, i.e. pipes work, ducting etc. In such conditions site manager shall ensure an alternative method of fall protection is provided.

#### **10. Use of scaffolds, personal fall protection equipment, nets, harnesses provided by Morgan Sindall and used by Morgan Sindall personnel and sub or work package contractors**

Morgan Sindall retain the responsibility for ensuring that any such equipment it provides for use by its own personnel or others is safe for proper use. Prior to use of personal suspension equipment or safety harnesses or mobile tower scaffolds confirmation of training of the users shall be obtained by the Scaffold and appointed co-ordinator responsible.

Sub or work package contractors have a responsibility to check any equipment/scaffolds etc. provided for their use is safe before the use it and that their operatives are adequately trained.

The appointed co-ordinator shall also monitor that scaffolds etc. erected by Morgan Sindall or sub/work package contractors are safe and inspected as required by the regulations.

#### **11. Scaffolds, work positioning equipment, nets, air bags etc and harnesses erected/used by sub or work package contractors' personnel**

All sub/work package contractors' personnel retain the responsibility for ensuring that any such equipment provided is safe for proper use and inspected as required by the regulations.

Each sub or work package contractor has a responsibility to inspect equipment provided to it by another contractor before they use it.

Morgan Sindall has a responsibility to ensure that any workplace that is part of a scaffold is safe before others under Morgan Sindall' control or Morgan Sindall' own employees use it.

The appointed co-ordinator shall also monitor that scaffolds etc. erected by Morgan Sindall/sub/work package contractors are safe and inspected as required by regulations.

#### **12. Scaffold cranes (saga hoist)**

Scaffold cranes, sometimes referred to as a saga hoist, and similar winch type hoists, are subject to, The Lifting Operations and Lifting Equipment Regulations 1998, (LOLER) and The Provision and Use of Work Equipment Regulations 1998, (PUWER) The site manager shall liaise with the crane/hoist supplier and the scaffold supplier to ensure that scaffolds are adequately designed for the purpose and certificates of thorough examinations are available and that weekly inspections are conducted and the F91 registers maintained. Copies shall be kept on site. The site manager shall ensure that operators are trained in their use and that

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systems are in place to ensure that safe slinging and lifting practices are used. When a scaffold crane/hoist is fitted to the scaffold, plan bracing shall be fitted from the supporting standard to the rear standards, both above the crane and below the operational platform. The supporting standard shall be tied to the opposite rear standard. Through ties to the building shall be fitted to the scaffold at these points. The crane/hoist controls shall remain within the working platform limits throughout the slewing action of the crane/hoist. Where the guardrail is split to allow landing of materials a suitable gate shall be provided. The operator shall be a trained person over 18 years of age. A barrier shall be erected at ground level to prevent persons walking under the load. Before the crane/hoist is put into use and after each move to a new location or at 12 monthly intervals, it shall be subjected to a thorough examination and a new certificate of thorough examination issued. The crane shall also be examined weekly and the results entered recorded.

### 13. Steel work

Erection work is principally governed by the Construction Design, Management Regulations 2007, Work at Height Regulations 2005 and the *Lifting Operations and Lifting Equipment Regulations 1998*. It is further subject to the provision of the H.S.E Guidance Note GS 28 Part 3, BS5531; Safety in erecting Structural Frames and SH GUID3 Work at height.

Where work is carried out off the ground a suitable and safe means of access shall be provided. Consideration to this shall be given at the beginning of the contract and arrangements included in the method statement. Access by ladders shall be a last resort but where necessary a ladder as temporary accesses shall be provided and secured. In all cases access by powered elevating working platforms operated by competent operatives shall be provided in preference to other methods unless this is not practicable. Walking on the top surface of steelwork shall not be permitted. Beam "straddling" shall not be permitted. In exceptional situations and by agreement with the safety adviser, where the agreed method is detailed in the method statement, limited beam "straddling" may be permitted where access is of short duration and there is adequate hand and footholds. Where beam "straddling" is used as working position or access, an effective means of preventing a fall is required, and should be detailed in the method statement.

Suitable full body safety harness shall be worn by all erectors when at height who shall clip onto a secure anchor. Other personnel on site shall not be allowed into areas where erection is taking place and shall never work below erection operations.

Where high winds or wet and icy conditions make erection work unsafe, the Site Manager shall make a decision to stop the operation wherever the subcontractor has not done so himself.

Additional detailed information may be found by reference to the Health and Safety Guidance Note GS28 Part 3 - Safe Erection of Structures.

### 14. Mobile Elevated Work Platforms (MEWPs)

The site manager shall make checks to ensure that machines are only hired from reputable suppliers who have the facilities to conduct thorough examinations and provide maintenance, and/ or provide training in the use of the equipment if necessary. The site manager shall make checks to ensure that safe working practices are employed and shall identify the remote method of lowering the platform in case of injury to the occupant who may become incapacitated. The operatives shall be given adequate instruction and training in the operational controls and the working limitations of the machine, which shall be a minimum of one day's training, in preference operators shall hold a current CITB/CTA card or IPAF card (International Powered Access Federation Ltd). Prior to any mobile elevated work platform working on any of our operations a competent person nominated by the site agent shall check that a current certificate of thorough examination is available and a copy shall be filed on site. These are valid for six months. The MEWP will require a new thorough examination following any major alteration, damage or repair which could affect its safe working. The operator of a MEWP shall be required to conduct a weekly inspection of the machine to check that it is in good visual repair and shall make a written record of the results in form F91.

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*MEWPs shall be marked with their safe working load and shall have information on the various safe working loads where these vary at different configurations. A suitable system for indicating when the safe working load is being reached shall be provided. These may be in the form of capacity limiters or capacity indicators.*

Machines must have fixed guards to prevent access to the scissor mechanism or winding gear. The machine shall incorporate a self levelling device on the chassis to ensure verticality in use, and be designed for stability in use and allowance made for the effects of wind (scissor lifts only). Operator controls shall be at platform level with override controls at ground level for emergency use only. Locking wheels or the use of outriggers shall be in accordance with the manufacturer's instruction and suitable sole plates used under outriggers where necessary. Machines should incorporate a warning horn and flashing light which will operate when travelling and shall be locked in a safe out of service position when out of use or unattended.

When working in cherry pickers operatives shall wear body harnesses anchored to secure points on the platform.

The site manager shall ensure that account has been taken of emergency situations; including the incapacity of the operator and that the remote means of lowering platforms is known to at least one responsible person on site, in order that the platform can be lowered from ground level in an emergency.

### 15. Additional precautions for mast climbers

Mast climbers must not exceed their freestanding duties. Ties into the structures shall be in accordance with the manufacturer's instructions. Mast sections, and ties in to the structure shall be installed by competent persons and shall be subject to design checks in accordance with the temporary works process. A full method statement that addresses separately the erection and dismantling of the platform shall be produced by the supplier/erectors. If the platform tables are not made of galvanised materials then the suppliers shall issue confirmation that the tables have been tested for internal metal corrosion and that they are fit to be used.

*After erection the suppliers of the platforms shall issue a certificate of test to the Morgan Sindall manager before the platform is put into use.*

The platform and masts shall be inspected weekly by a competent person and the results of inspection recorded.

Further references can be found in:

- BS EN 12811 Temporary works equipment
- BS EN 12810 Facade scaffolds made of prefabricated components
- BS 5925 Code of practice for ventilation principles and designing for natural ventilation
- BS 5974 Code of practice for the planning, design, setting up and use of temporary suspended access equipment
- BS 1139 Metal scaffolding
- BS EN 13374 Temporary edge protection
- BS 2482 Specification for timber scaffold boards
- BS EN 1004 Mobile access and working towers made of prefabricated elements.

### 16. Reference documents

Work at height guidance.

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