



# WORK METHOD STATEMENT

## “QUICK ALLY MODULAR SYSTEM SCAFFOLDING”

### INTRODUCTION

The following procedure describes the process by which Instant Scaffolds & Access Equipment’s employee’s erect and dismantle Quick Ally Modular Scaffold

### IDENTIFICATION OF HAZARDS

**Proximity of power lines** – Scaffold components must not be erected in a “No Go Zone” as defined by the Chief Electrical Officer. The “No Go Zone” extends 4 metres laterally and 5 metres vertically from any power line. If you intend to erect scaffold in the vicinity of power lines the following procedure should be followed.

- a) **Notify the power authority before commencing work.**
- b) Obtain written permission from the power authority.
- c) Do not commence work until a pre-start site/job meeting and risk assessment has been completed.

### **The supporting surface**

The ground or structure on which a scaffold is to be erected must be adequate to carry and distribute the loads imposed at each standard (vertical member) and of the whole loaded scaffold. The following measures are recommended to ensure that the supporting surface is suitable.

- a) **Compact any ground or excavation which has been back filled**
- b) Always place the standards on sole boards not less than the size of a timber scaffold plank – 220mm wide.
- c) The standards (vertical members) must always be placed on a base jack or base plate.
- d) Seek expert advice if the scaffold is to be erected on top of a suspended slab, balcony, roof or similar surface.

The method of calculating loads imposed on the supporting surface at each standard is described in detail in “Guidelines for Scaffolding” 8.3. A soil test maybe required in certain circumstances.

### **Erection procedure**

Ensure the following tasks are carried out prior to the erection of the scaffold.

- a) **Establish whether the persons erecting the scaffold require a certificate of competency**
- b) Identify risks and hazards.
- c) Take appropriate precautionary measures and install any necessary barricading etc.
- d) Obtain permits from local councils and power authorities.
- e) Make sure the public are isolated from the work area and protected from any potential hazard.

### WORK METHOD SEQUENCE

#### **“Basing Out” the Scaffold**

Each erector will require a “Kwikstage type” hammer, a scaffold “key”, a one metre ruler, a small magnetic spirit level and a leather belt and “frogs” to carry these tools.

- a. Level the ground and/or clear the area on which the scaffold is to be erected of any debris.
- b. Determine the point at which to start building the scaffold (placement of the first standard). This will normally be at the high point of any slope.
- c. Establish how far from the building or structure the inside standards have to be placed. Note – the maximum allowable gap between the building or structure and the edge of the working platform is 200mm however, we recommend a gap of 100mm. Look up to ensure that there are no obstructions and that the scaffold will not encroach on an electrical “No Go Zone”.
- d. Place a sole board on the ground ensuring that it bears evenly along its full length.
- e. Place an adjustable base jack (jack) on the sole board.
- f. Place a 2000 standard (vertical member) on the jack. This is the “1<sup>st</sup> Standard”. (An “inside” standard)
- g. While one person holds the first standard upright a second member of the crew lays a transom (platform support) at 90 degrees to the building from the base of the first standard.
- h. The second person then places a jack and a 3000 standard on the sole board. This is the “2<sup>nd</sup> Standard”. (An “Outside” standard).
- i. While one person holds the two standards erect (one standard in each hand) the second person places the transom into the “v” pressing (connection point) on the inside of each standard to create an “H” type arrangement.
- j. The second person then places a ledger (horizontal spacing member) into the “v” pressings of each standard at 90 degrees to the transom.
- k. Using a suitable hammer the second person can now, firmly but without excessive force, knock the wedges on the ledgers and transoms into the “v” pressings of the first two standards.
- l. You now have an “L” shaped configuration that, once the wedges have been knocked in, will support itself if laid over onto the ends of the ledgers.

Repeat steps d) to i) above to create a second “H” type arrangement. The inside standard is 2000 (the 3<sup>rd</sup> standard); the outside standard is 3000 (the 4<sup>th</sup> standard).

- m. Whilst one person holds the standards plumb the second person carefully raises the ends of each ledger and locates them in the appropriate “v” pressing on the second set of standards (“H” type arrangement). It should be noted that this procedure is much easier and therefore safer using a third person in the crew.
- n. Knock the wedges of the ledgers firmly into the “v” pressings on the standards.
- o. Place a spirit level on the first transom and wind the second jack up or down until the transom is level.
- p. Place the spirit level on the inside ledger and wind the third jack up or down until it is level.
- q. Place the spirit level on the second transom and wind the fourth jack up or down until it is level.
- r. You have now erected one “bay” of scaffold – (the rectangular area between 4 adjacent standards).
- s. Make sure the “bay” is parallel to the building and is “square” – adjust as required.
- t. Place a second transom between the 1<sup>st</sup> and 2<sup>nd</sup> and the 3<sup>rd</sup> and 4<sup>th</sup> standards 1.5metres above the lower set of transoms.
- u. Place a second ledger between the 1<sup>st</sup> and 3<sup>rd</sup> standards and the 2<sup>nd</sup> and 4<sup>th</sup> standards 1.5 metres apart, i.e. at the same level as the upper and second set of transoms.
- v. You have now erected the first “lift” of scaffold – a lift is the area between 2 vertically adjacent rows of transoms and ledgers. The effective top working platform is 2 metres above the supporting surface.
- w. Place a diagonal cross (End) brace between and on the outer side of the 1<sup>st</sup> and 2<sup>nd</sup> standards.
- x. Place a diagonal (Face) brace between and on the outer side of the 2<sup>nd</sup> and 4<sup>th</sup> standards.
- y. The working platform is created by placing a platform on and between the second set of transoms. A double handrail (guardrail) should be fixed to the standards on any side of the working platform from which a person could fall. A toe board (kick board) must be fitted immediately underneath all handrails using toe clip boards or some other suitable means of fixing.

Repeat steps d) to y) as required to base out the complete area to be scaffolded.

Clause 3.6.1 of AS1576:1 states that – “Safe access and egress from all working platforms shall be provided. Such access shall take the form of stairways, access ways, ladders and other means”. This guide deals with the use of ladders only. For information regarding stair access systems please consult our drawing office. Access towers should be located in the scaffold in such a way that it is not necessary for someone using the scaffold to walk more than 15 metres to an access tower halfway along the length of any run of scaffold.

- a) Place a transom in the bottom “v” pressing of an outer standard halfway along the length of the run of the scaffold.
- b) Place a second transom in the bottom “v” pressing of an adjacent standard.
- c) Place a sole board immediately under the free end of each transom.
- d) Place an adjustable base jack on the first of the sole boards.
- e) Place a 3000 standard on the jack.(the 5<sup>th</sup> Standard)
- f) Place an adjustable jack on the second of the sole boards.
- g) Place a 3000 standard on the jack.(the 6<sup>th</sup> standard)
- h) Connect the “v” pressings of the 5<sup>th</sup> and 6<sup>th</sup> standards with a 2400 ledger.
- i) Place a second transom between the outside standards and the 5<sup>th</sup> and 6<sup>th</sup> standards at the same level as the working platform.
- j) Connect the 5<sup>th</sup> and 6<sup>th</sup> standards at working platform height with a 2400 ledger.
- k) Place a Access Platform at the working platform height.
- l) You have now created the first “landing” in the ladder tower tray.
- m) Fix a double handrail to the outer edges of the landing.
- n) Fix toe boards immediately below all handrails.
- o) A 3000 ladder is located into position in the ladder bay landing and the hooks of the ladder are connected over the top handrail above and the ladder is restrained and secured by the Access Platform., particular care should be taken when handling aluminium ladders – if the ladder has to be stood on end the risk of accident from contact with power lines is greatly increased as are the risks associated with high winds.

The scaffold is now ready for use and the working platform can be loaded to its maximum evenly distributed safe working load of 450kg per bay – (the rectangular area between 4 adjacent standards) per working platform – provided the supporting surface is adequate. Please note that we recommend that the number of working platforms that can be used would depend on the height of the scaffold and the duty loading (see attached chart and handover for clarification)

#### **Increasing the Height of Scaffold.**

The person or persons (erectors) carrying out this procedure should hold a current scaffold certificate and be properly trained and supervised. During the erection or dismantling process the erectors must observe and adhere to the following key points.

- a) All lifts to be decked out complete with toe boards and double handrails, these to be left in position for the lifetime of the scaffold.
- b) They must access each working platform from a properly constructed access tower.
- c) They must raise and lower materials using a “Rope & Wheel” or by the manual handling method known as the “handballing”. Whichever method is used erectors must at all times work from a minimum of a decked working platform which has a handrail on all sides.

The recommended and maximum, lift height for each and every lift above the “first lift” is 2 metres. The maximum heights stipulated so as to guarantee that the standards are capable of supporting the maximum safe working load of the scaffold which is 450kg per bay (unless stated otherwise on the Handover Certificate). Additionally each 2 metre lift is a potential working platform along which the average sized person has sufficient headroom to walk without stooping.

In the “Basing Out” procedure above, the suggested size for the “outside standards” was 3000 and the suggested height for the “first lift” was 1.5 metres. The “splice” in a standard is the joint where two standards are connected. Using this method the height of the splice will never be more than 1.3 metres above the temporary working platforms, provided that all lifts are of the recommended height of 2 metres. If adopted this configuration will eliminate the occurrence of a “high splice” in the standards. This in turn makes the erection process easier and contributes to the safety of the erectors.

The procedure is as follows.

- e) "Splice" a 2000 metre standard on top of all existing standards of the scaffold. If it is intended to extend the height of the scaffold more than one 2 metre lift it is recommended that 3000 metre standards are used.
- f) Fix ledgers and transoms in the "v" pressings 2 metres above the existing working platform to create the next 2metre lift.
- g) A diagonal cross brace should be fixed to each end of the scaffold between the "Outside" and "Inside" standards and on the access tower. End braces should be placed lift to the top working lift of the scaffold.
- h) Diagonal face braces should be fixed to the end bay of the scaffold and at least every third bay along the scaffold including the access tower. End braces should run continuously from the bottom to the top working lift of the scaffold.
- i) The scaffold should now be fixed to the building or structure using tube and double couplers to create a series of "Positive Ties". The minimum spacing between positive ties is – every 3<sup>rd</sup> bay on every 2<sup>nd</sup> lift.

The correct placement of bracing and positive ties is critical to ensuring the stability and strength of any scaffold and consequently the safety of persons using it. Work should not proceed on the scaffold until the bracing and ties are securely in position. As soon as the ties and bracing are located, a platform can be placed to the newly created lift.

The first priority in the next phase of the erection procedure is to provide a handrail for the erectors. The process by which this is achieved is as follows.

Working from the access tower out along the temporary working platform, place a standard (if necessary) in the first standard point. Double handrails and Kickboards are then fixed all around exposed faces of the working platform.

If the height of the scaffold is to extend, the procedure outlined previously should be repeated, always ensuring that bracing and ties are secured at the appropriate phase of the erection process.

#### **Dismantling**

Dismantling of the scaffold will be in the reverse of the erection procedure above.

**When dismantling all materials must be lowered down by hand or via Gin Wheel, under no circumstances are any materials to be dropped to the ground that could cause structural damage to the components.**

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