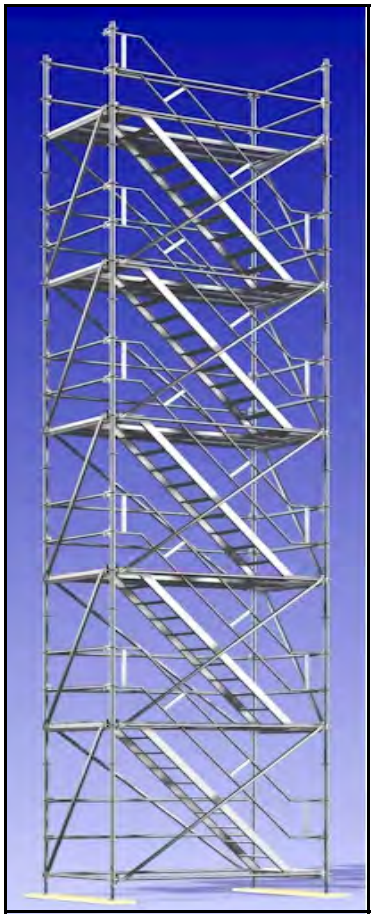
Layher
More possibilities. The Scaffolding System.

USER GUIDE



PARALLEL ~ SAME DIRECTION

ALTERNATING ~ DOG LEG

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NOTE: It is the responsibility of the customer to ensure they read the correct pages

USE_4STD

Valid guide as at, 24/06/03

Layher 4 Standard Stair Tower
Assembly & Use Instructions

Index

1. General.

The Layher 4 Standard Stair Tower is designed for short term to medium term use by operatives on smaller building sites.

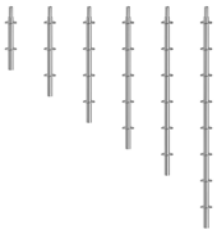
2. Types.

The stair modules are manufactured from aluminium, with a width of 0.64m and lengths of either 2.57m or 3.07m. In each case the stair module provides both stair and landing in a single unit, and can be erected in the same or alternating (dog-leg) directions. Duty rating 2kN/m2.

Each Stairtower must be designed by a competent engineer to meet the particular contract requirements.

The notes which follow have been prepared for the guidance of those concerned with the erection of the system. Layher wish to maintain the most effective methods at all times and therefore reserve the right to amend the following information.

3. Components.

DESCRIPTION	LENGTH	WEIGHT	PART NO
0.60m BASE JACK. Steel, adjustable, robust and self cleaning spindle thread, with colour and indent marks which prevent over-extension. 	0.6m	2.9kg	4001.060
BASE COLLAR. The standard steel base collar with rosette is to be used in conjunction with adjustable base jacks, to form the scaffolding base. always place a base collar onto the adjustable base jacks first and then place the standards. 		1.6kg	2602.000
STANDARDS. Standards are made from tubular steel, OD 48.3 X 3.2 mm hot dip galvanised, with rosettes at 500 mm centres for up to 8 connections at the same joint. Small holes are for right-angled connections and the large holes are for variable angle connections. 	1m 2m 3m 4m	5.1kg 12.0kg 14.6kg 19.1kg	2603.100 2603.200 2603.300 2603.400

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DESCRIPTION	LENGTH	WEIGHT	PART NO.
LEDGER.  Made from hot dipped galvanised steel. Wedge lock system forms a frictional positive locking connection, and ensures an even distribution of load between standard and ledger. **TELESCOPIC LEDGER**—Extending top guardrail closer ledger.	1.09m 1.40m 2.57m 3.07m	4.6kg 5.8kg 10kg 12kg	2607.109 2607.140 2607.257 2607.307
U-TRANSOM.  Reinforced and made from steel, the U-transoms house the steel decking, stair units and lock against lift offs.	1.09m	5.0kg	2613.109
DIAGONAL BRACE.  Constructed from steel and used to brace standards and ledgers	2.57m 3.07m	10.3kg 11.4kg	2620.257 2620.307
CLOSER UNIT. The closer unit is used to form a stop-end guard-rail at the top of the stairtower exit point.			
TOE BOARDS.  Timber , with steel end sections which fit over the hook on the lalos.	1.40m 2.57m 3.07m	3.0kg 5.7kg 6.3kg	1756.140 1756.257 1756.307
STEEL DECKS.  0.32m wide, up to scaffold group 6, (6kN/m2) according to length; perforated, non slip.	2.57m 3.07m	18.7kg 22.2kg	3802.257 3802.307
R320 ERECTION DECKS. Hooks over the Ledgers to provide a temporary work platform. 	1.40m	10.8kg	0706.804
LALO.  For securing the decks against lift-off.	1.40m	2.6kg	9634.140

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Layher—4 Standard Site Stair

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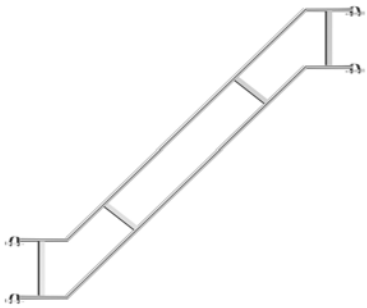
DESCRIPTION	LENGTH	WEIGHT	PART NO.
ALUMINIUM PLATFORM STAIRS. Safe labour saving all in one unit, constructed from aluminium for either 2.57m or 3.07m tower bays x 2m lift. 	2.57m 3.07m	23.10kg 27.50kg	1751.257 1751.307
NEW PARTS: 1.5m Lift height stair units.	2.57m 3.07m	23.00kg 28.00kg	0707.501 0714.263
EXTERNAL GUARDRAIL. Constructed from steel, and attaches to the ledgers from 2m upwards. At ground level use two guardrail adaptors. 	2.57m 3.07m	18.10kg 20.10kg	2638.257 2638.307
NEW PARTS: 1.5m Lift height stair guardrails.	2.57m 3.07m	18.00kg 19.00kg	0714.736 0715.968
INTERNAL GUARDRAIL. Constructed from steel, and attaches to the stair units with half couplers. 	2.0m lift 1.5m lift	14.80kg 14.80kg	1752.000 0714.737
GUARDRAIL ADAPTOR. Steel attachment to take the external guardrail at ground lift level.		0.7kg	2637.000

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4.0 Dimensions

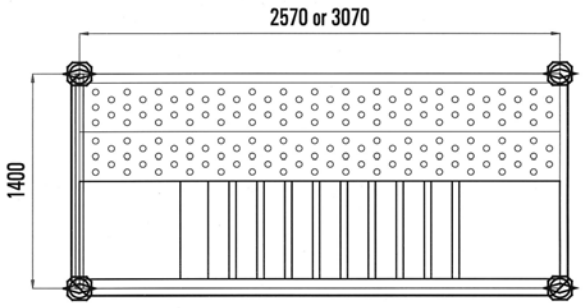
Each stair module has a total going of 2.57m or 3.07m and a total rise of 2.00m. Horizontal landings are built in at the top and bottom of each stair flight, the width of which is determined by the length of stair chosen, according to the following table:

Stair Length	Landing Width
2.57m	392mm
3.07m	642mm

The stair modules are supported by standard Layher transoms of length 1.4m. The overall footprint of a completed 4 standard stair is according to the stair module length according to table 1 below:

Overall Width A	Overall Length L
1.400	2.572
1.400	3.072

Note: Above dimensions are centre to centre of standard. For absolute outside to outside dimensions add 122mm.



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5.0 Assembly Procedure

5.1 Prior to Assembly

5.1.1 Equipment

All equipment should be inspected for condition and suitability. Any damaged or incorrect material should be removed and replaced with new or undamaged material. Only genuine Layher material should be used.

5.1.2 Foundations

- The foundations for a scaffold should be adequate to carry and dispose the load imposed both locally at each standard and, in general, to carry the whole weight of the scaffold.
- On surfaces such as steel and concrete which are even and level and where there is adequate hardness and thickness to prevent the scaffold tube penetrating into the surface, the uprights of a scaffold may be placed directly on the surface, although it is generally preferable to use a base plate.
- On surfaces such as hard asphalt, timber and flooring, where there is possibility of the standards deforming the surface, base plates or metal packing plates should be used at the bottom of the standards.
- On soil, ash, hogging, gravel, soft asphalt and any type of flooring or paving which would be penetrated by a standard with a base plate beneath it, or if there is doubt about the surface, there should be a further spreading of the load by a sole plate of timber or other suitable material.
- When a sole plate is used, the sole plate area beneath any one standard should be at least 1000cm², with a least dimension of 219mm, and if the sole plate is of timber, it should be not less then 35mm thick. On sites where the ground is soft, or has been disturbed, the sole plate area should be not less than 1700cm² when individual sole plates are used, e.g. under hoist towers, and not less than 3400cm² when two are combined together under two standards. In this case, if the sole plate is of timber, it may be necessary to use one with a total thickness in excess of 35mm. Sole plates should be long enough to support two standards.
- The soil or ground beneath the sole plate should be well compacted and free from irregularities, which would make the sole plate unstable or poorly bedded.
- On slopes exceeding 1 vertical to 10 horizontal, a check may have to be made on the foundations to ensure the stability of the scaffold.

5.1.3 Protection of the Public

- Scaffolding is frequently erected in areas to which members of the public have access, such as streets, courtyards, halls and gardens. The precautions which need to be taken to protect the public during the erection, modification and dismantling of scaffolds are similar to those which need to be taken to protect other workpeople on an enclosed site but, because of the public's unfamiliarity with the dangers and curiosity about the work and because there may be a large number of people at risk, high standards of physical protection and more effective systems of work and supervision will generally be needed.
- During erection, modification and dismantling, care should be taken to exclude the public from the area of the work and a sufficient area around the work. In confined areas it may be necessary to provide an adequately protected thoroughfare while the scaffold is in use. Effective steps should be taken to prevent persons being struck by falling objects and again the provision of a protected thoroughfare, suitable brick guards, façade nets, sheeting or fans may be necessary.
- In general, care should be taken that, at the lower levels of a completed scaffold, there are no protruding tubes, low headroom, etc. that could cause damage or injury to members of the general public or their property, e.g. clothing. Where access through parts of the base of a scaffold structure might prove

- hazardous, entrance to such areas should be barred by means of a barrier or other suitable obstruction.
- Children pose a special problem; many being injured either through falling or causing the scaffold to collapse after climbing up scaffolding, either by the standards or by easy access at ground level. It is essential to remove or prevent all ground level access whenever scaffolds are left unattended; it is also advisable to fully deck the bottom lift of such scaffolds.
- In addition to the general duties to the public under the Health and Safety at Work etc. Act 1974 outlined above, persons erecting or using scaffolding in or near public places may also have specific duties under other legislation, such as the Highway Act 1971, the Public Health Act 1930, the London Building (Amendment) Act 1939 and the Building (Scotland) Act 1959, and advice in such cases should be sought from the appropriate local or highway authority.

5.2 Tools

It is essential to use the correct tools when erecting Layher System Scaffolds. Scaffold fittings should be tightened to 50Nm torque using a suitable ratchet or swing over spanner, 19mm size. Wedges should be driven tight using a minimum 500g hammer, 1 or 2 good blows with this hammer is adequate to set the joint.

The following tools are required to erect a Layher System Scaffold:

- **19mm Spanner**
- **500g Hammer**
- **Sprit Level**
- **Measuring Tape**

5.2.1 Protection against falls from heights

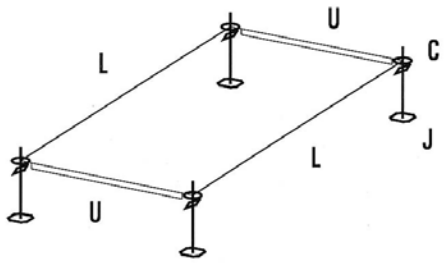
Certain steps of the erection process will inevitably require the erector to work from unprotected parts of the structure. At these times the erector must use the an **approved safety harness** and clip-on to the structure at the **approved locations** indicated in the assembly drawings to follow. **NASC Guidance Note SG4:00** outlines the general principles which should be followed.

5.3 Erection Sequence

Note: Follow all local and site regulations when erecting the structure. Safety harnesses should be worn by all erectors and used whenever work is being carried out from an un-protected position.

5.3.1 Stair Direction: Parallel

1. Position 4 no.adjustable base plates on suitable spreaders (not supplied by Layher) according to the plan dimensions I.e. 1.4m wide x 2.57m or 3.07m long.
2. Place base collars on base plates.
3. Link base collars with ledgers. (Use a U-transom at the foot of the first stair). Check carefully the orientation and position of the first stair to assure that the exit from the uppermost lift(s) is as required. Use only the small holes on the base collar rosette for fixing ledgers and transoms. (See fig 1.)



L - Ledger 2.57 or 3.07m
U - Transom 1.40m
C - Collar
J - Base jack

FIGURE 1.

4. Check the base layout again for squareness, line and position relative to the structure or scaffold. Select adjustable base on highest ground level then level the base lift from this point, using a spirit level on each ledger/transom in turn. When satisfied that base lift is level, drive all wedges tight with a hammer (minimum 500g). See Figure 1

5. Insert 4m standards in to the base collars and connect with 2 ledgers and 2 U-transoms at the 2m level.
6. Brace outer face and each end of the stair tower with the appropriate diagonal brace (labels on braces show length of bay i.e. 1.4m, 2.57m or 3.07m). See figure 2
7. Lift aluminium stair unit into position, inserting claws into the U-transom at top first then at the bottom. Slide to extreme left or right according to desired position. Install 2 decks at the base and 2m levels. Fit the internal guardrail by entering the stirrups over the stiles. Engage the retaining straps and secure by tightening the 19mm nuts. As illustrated in figures 3 & 4
8. Ascend stair to platform and attach 2 ledgers to form double guardrail across tower.

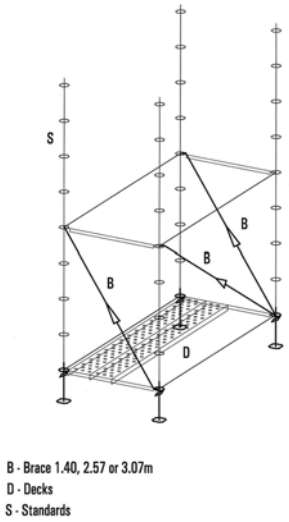


FIGURE 2.

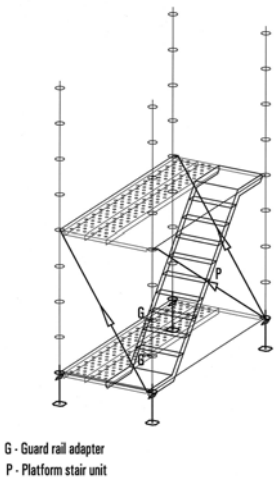


FIGURE 3.

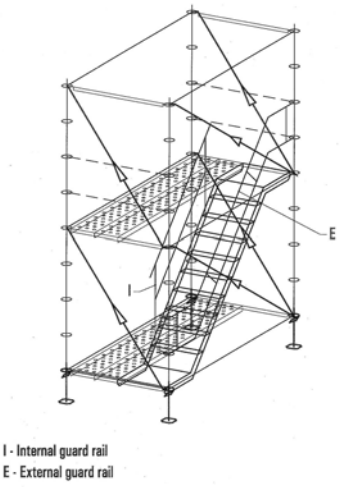


FIGURE 4.

9. Attach 2 guardrail adaptors to the inside of the standard at the foot of the stair (attach at 1.0m and 0.5m heights). Sequence detailed in figure 4. Fit external guardrail unit and secure with wedges. Note: external guardrail fits over end guardrails at top and over guardrail adaptors at bottom.
10. Standing on the 2m level decks connect 2 ledgers as handrails for the 2m level and a further 2 ledgers and 2 transoms at the 4m level. (Figure 4.)
11. Fit diagonal braces to every face. (Figure 4.)

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12. Lift 2nd stair unit into position and secure claws into U-transoms at top and bottom. (Figure 5.)
13. Lift 2 further steel decks into position at the 4m level, positioning them directly above the decks at 2m level.
14. Secure stairs and decks by inserting board lock into U-transoms at top and bottom platforms.
15. Fix 1.4m end toe board across each end of platform at 2m level, fitting loop over pin on board lock and engaging cupped end with the opposite standard. (Figure 6.)
16. Proceed in a similar fashion in 2m lifts, using 2m or 4m standards until the top section is reached. (Figure 6)
17. Note: The tower is to be tied to the permanent structure as erection proceeds on both inside standards at 4.0m height intervals.
18. Finish the top lift with 3m standards to support double handrails. Layout is variable to suit different exit points (Figure 7)

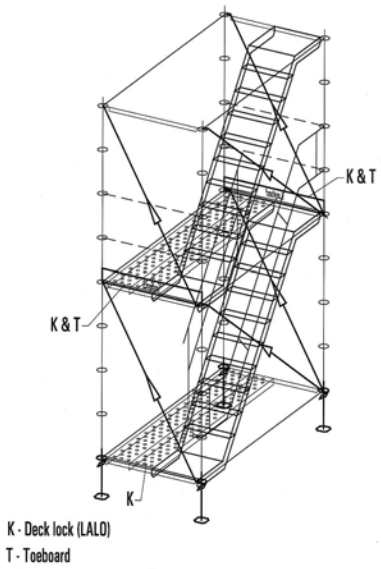

FIGURE 5.

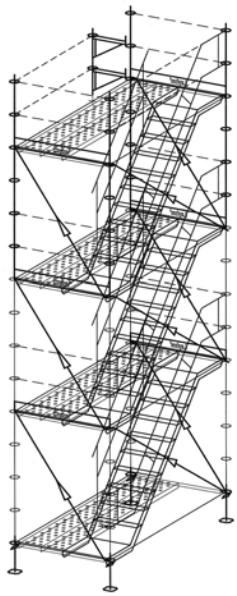

FIGURE 6.

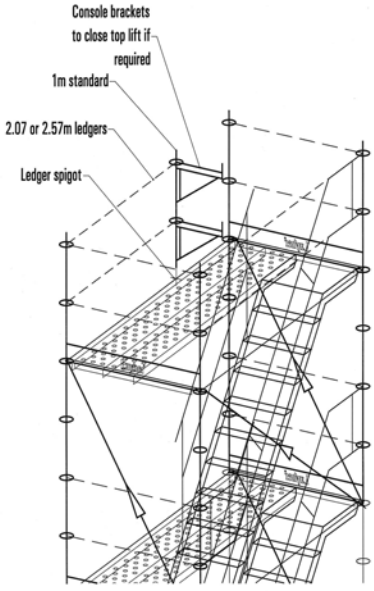

FIGURE 7.

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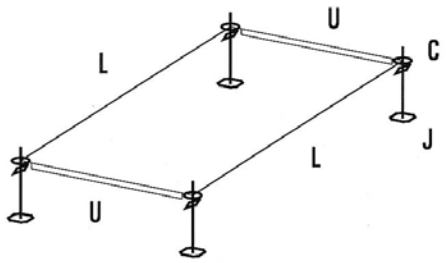
5.3 Erection Sequence

Note: Follow all local and site regulations when erecting the structure. Safety harnesses should be worn by all erectors and used whenever work is being carried out from an un-protected position.

5.3.2 Stair Direction: Alternating.

1. Position 4 no.adjustable base plates on suitable sole boards or spreaders (not supplied by Layher) according to the plan dimensions I.e. 1.4m wide x 2.57m or 3.07m long.
2. Place base collars on base plates.
3. Link base collars with ledgers. (Use a U-transom at the foot of the first stair). Check carefully the orientation and position of the first stair to assure that the exit from the uppermost lift(s) is as required. Use only the small holes on the base collar rosette for fixing ledgers and transoms. **(See fig 1.)**



L - Ledger 2.57 or 3.07m
U - Transom 1.40m
C - Collar
J - Base jack

FIGURE 1.

4. Check the base layout again for squareness, line and position relative to the structure or scaffold. Select adjustable base on highest ground level then level the base lift from this point, using a spirit level on each ledger/transom in turn. The final required height of the uppermost platform will determine the necessary extension of the base jack. When satisfied that base lift is level, drive all wedges tight with a hammer (minimum 500g). See Figure 1

5. Insert 3m standards in to the base collars and connect by 2 ledgers and 2 U-transoms at the 2m level. Note: U-transoms only at landing positions. All connections are made to the small holes on the rosette. Place 2 steel decks in the lower most U-transoms, leaving space for the stair unit on the required side. **(Fig 1.)**
6. Brace outer face and each end of the stair tower with the appropriate diagonal brace (labels on braces show length of bay i.e. 1.4m, 2.57m or 3.07m). **(Fig 2.)**
7. Lift aluminium stair unit into position, inserting claws into the U-transom at top and bottom. Slide to the outside left or right according to desired position. Fit the internal guardrail by entering the stirrups over the stiles. Engage the retaining straps and secure by tightening the 19mm nuts. **(Fig's 3&4.)**
8. Ascend stair to platform and attach 2 ledgers to form double guardrail across tower. **(Fig 4.)**

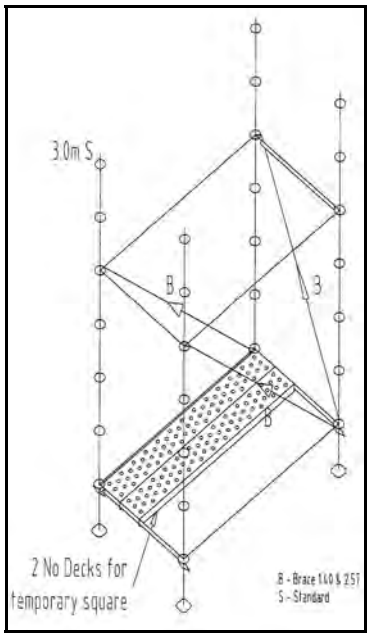


FIGURE 2.

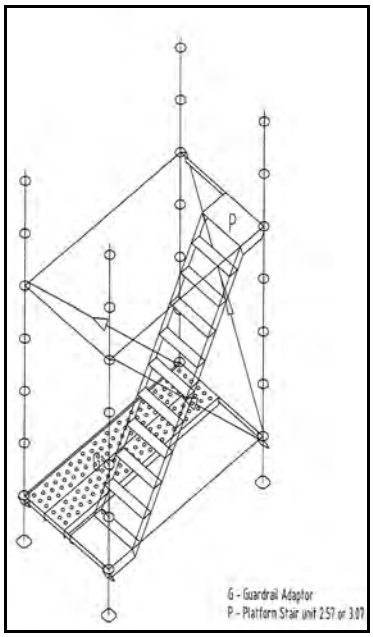


FIGURE 3.

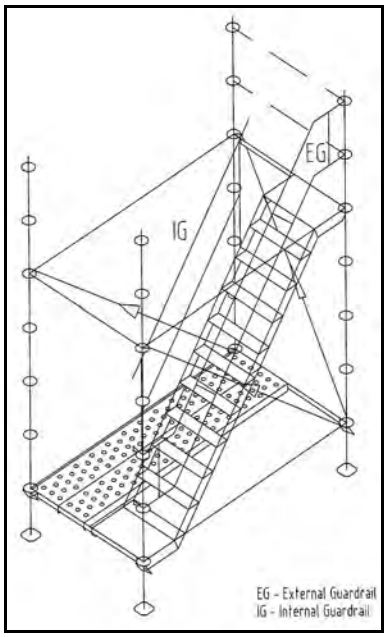


FIGURE 4.

9. Attach 2 guardrail adaptors to the inside of the standard at the foot of the stair (attach at 1.0m and 0.5m heights). Fit external guardrail unit and secure with wedges. Note: external guardrail fits over end guardrails at top and over guardrail adaptors at bottom. **(Fig 4.)**

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10. Lift 1.4m erection decks into position at the 2m level above the installed stair unit lower landing **(See fig 5).** Attach harness to the ledger at 2m height on the guardrail side. Ascend to the erection platform using the guardrail and rosettes for hand and foot-holds.
11. Standing on the erection decks, connect 2 ledgers & 2-U-transoms at the 4m level. Transfer harness clip to ledger at the 4m level. **(See fig 6).** Lift the 2nd stair unit into place so that the lower landing engages into the same transom as the 1st stair upper landing.
12. Fit diagonal braces to outside face. (Two men will be required for this operation, 1 on the lower stair landing and the other standing on the erection deck.) **See fig 7.**

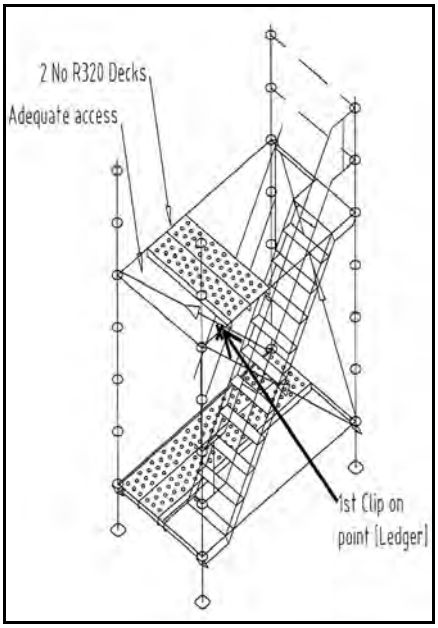

FIGURE 5.

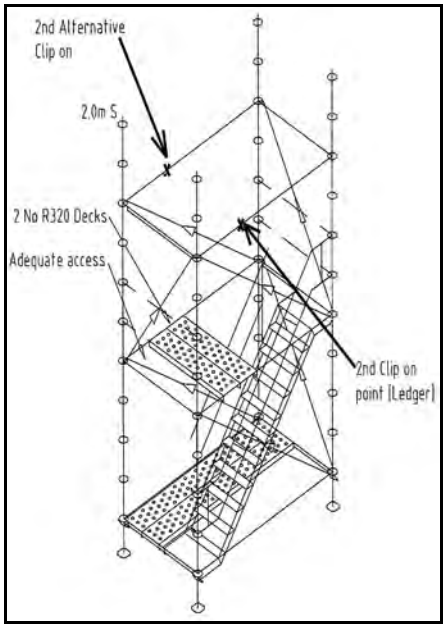

FIGURE 6.

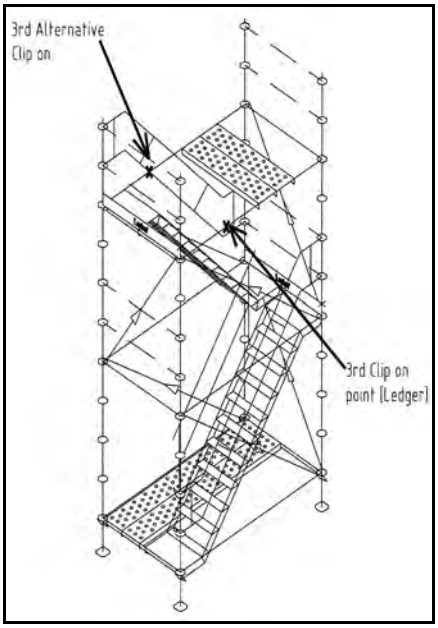

FIGURE 7.

13. Secure lower stairs by inserting board lock into U-transoms at top and bottom platforms. (To fit board lock—flip hinged plate over and locate hooks in slots at bottom of U-transom, slide plate in direction of hook so that the cut out engages with the wedge securing the U-transom; flip over plate so that it engages with the wedge at the other end).
14. Fix end toe board across platform at 2m level, fitting the looped end over the lalo pin, and attach the cupped end of the toe-board to the opposite standard, **(Figure 7).**
15. Descend from erection decks at the 2m level and remove them. Ascend the 1st stair unit and replace the eretion decks onto the ledgers at the 4m level (**figure 7).**

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16. Proceed in a similar fashion in 2m lifts, using the appropriate size standards, (usually 2m) until the top section is reached. **NOTE: The tower is to be tied to the permanent structure as erection proceeds on both inside standards at 4.0m height intervals., or as advised by Layher Technical Bureau. (figure 8).**
17. For the construction of the top lift see **figures 9,10 & 11** Layout is variable to suit different exit points and variable parts: I.e. either gate closer & extending ledgers or 2 x console brackets.

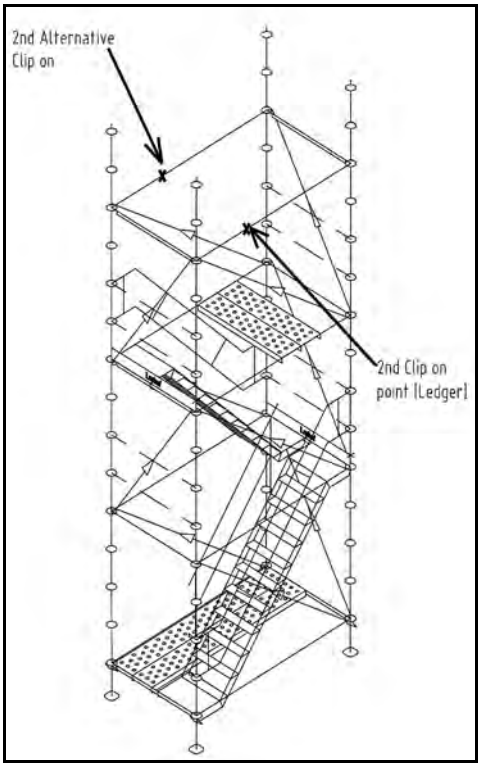

FIGURE 8.

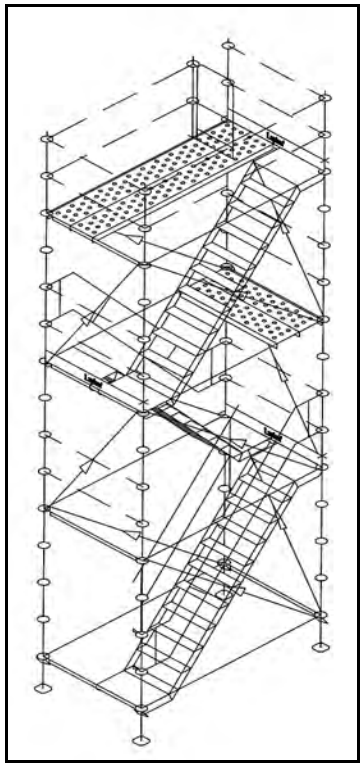

FIGURE 9.

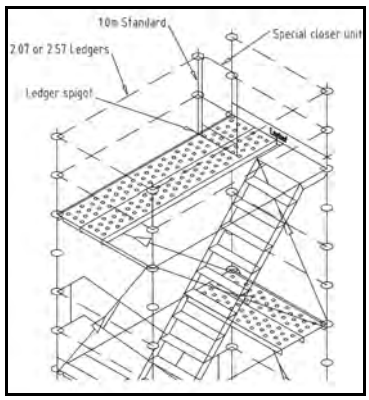

FIGURE 10.

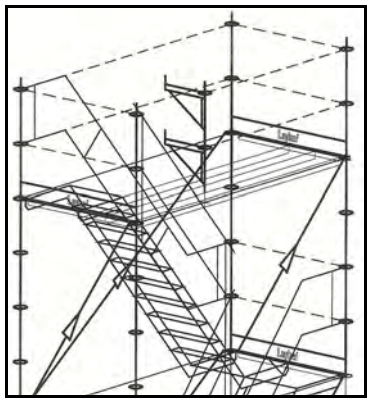

FIGURE 11.

To facilitate easy access to ledges or obstructions the stair landing platforms can be extended with the use of console brackets.

Tying in: the tie pattern will vary with the expected scaffold usage, loading and height, as will the expected anchor forces. As a general rule and to a height of 60m, the external standards of the stair tower should be tied at each 4m vertically. Each anchor should be rated to 6.3kN minimum capacity.

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6.0 Do's and Don'ts

DO:

- Ensure all on-site users know for what purpose the scaffold is intended and the loads it is designed to take.
- Prepare the ground for the scaffold and the loads it will impose.
- Ensure that you provide agreed storage areas for scaffolding on site to reduce handing and prevent tripping hazards.
- Keep access routes clear and Inspect the scaffolds and issue reports. It is required by law.
- Give consideration to the use of a tagging system.
- Prevent access to incomplete and/or unsafe scaffolds and ensure that you have "scaffold not to be used" signs in place. Tell the scaffolding contractor if the scaffold gets damaged, repairs can then be arranged.
- Protect scaffold from damage by site plant. Ensure loads on the platform are evenly distributed.
- Consider the weight of the materials you are loading on the scaffold and instruct operatives on maximum loading.
- Instruct forklift driver on maximum loading. Instruct operatives who will be using scaffold not to make adaptations.
- Report scaffold defects to scaffolding contractor.

DON'T:

- Remove ties or guardrails, toe-boards, or brick-guards or any components or adapt scaffolding.
- Create gaps in platform by removing scaffold boards from platform.
- Work on or use scaffolds which are being erected or dismantled or remove ladders or overload the scaffold.
- Undermine the scaffold by digging trenches or foundations under or adjacent to it.
- Add sheeting or netting to scaffold without the approval of the scaffold designer.
- Forklift loads directly onto access scaffold (instead, use a loading tower).
- Allow site plant to run over scaffold materials. Damaged scaffold boards cause accidents, bent tubes could lead to collapse of the structure.

7.0 Hints and Tips:

Tip 1: When fixing the AR wedges always use a hammer with a minimum weight of 500g (1lb). It is not acceptable to use the handles of spanners or light duty "toffee" hammers.

Tip 2: Always ensure that the holes in the standards are facing in the same direction. This ensures that if ever the joints are required to be bolted the bolts will fit.

Tip 3: Sway braces are available in all sizes, however to brace a lift different from the brace sizes to hand, it is permissible to connect the brace at one end by the wedge and at the other end by a swivel coupler within 150 mm of the node point.

Tip 4: To assist with assembly, one end of a ledger can be temporarily located on top of a rosette by inserting the end of the wedge through the hole whilst the other end is being fixed. After fixing it is imperative that this 'resting' end is properly fixed.

Tip 5: When commencing construction always ensure that the scaffold is started from the highest point. Work away from this point adjusting the base jacks at each standard, when the maximum extension is reached the standard can be lowered 500mm and the above procedure is then repeated.

Tip 6: Always plan your scaffold first. Using the Layher software or traditional methods, an outline plan should always be prepared in advance.

Tip 7: If base jacks are extended beyond the limit necessary to achieve the required capacity they should be braced together using tubes and special base jack couplers.

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Tip 8: For working platforms diagonal braces should be installed in the same direction, as it is not possible to fit the brace on the inside of the rosette when decking is present. For non-working scaffolds it is permissible to install the braces in a zigzag pattern.

Tip 10 : To fit board lock – flip hinged plate up and locate hooks in slots at bottom of U-transom, slide plate in direction of hook so that the cut-out engages with the wedge securing the U-transom; flip down plate so that it engages with the wedge at the other end.

Tip 11: Toe board loops are staggered, if toe board won't fit at one end, invert the end toe board.

8.0 Inspection Check List

The following list is a guide for the acceptance and inspection of Allround Scaffolding and is issued for information purposes without obligation. This list does not claim to be complete. Every scaffold must be checked individually in accordance with the Allround approval and technical data, general safety rules, local regulations and actual site conditions. The recommendations of BS 5973: 1993 and in particular clause 20 (Inspection) should always be followed.

General Criteria

- Are all components undamaged and serviceable?
  Are all wedges driven home?
  Has a site-specific static calculation been made? If so, have all specified requirements been met?
  Have warning signs been fixed to incomplete or non-inspected parts of the scaffold?
- **Have only original Layher components been used?**

General Safety Rules

- Guardrails and toe boards are necessary where persons may fall from height of 2m or more.
- The distance to the building from the inner edge of platform should be a maximum 30cm; otherwise edge protection must be used.
- In working access bays guardrails and toe boards must be built in.

Foundations

- Do the scaffold foundations conform to BS 5973 Section 11?
- Are the sole plates, if necessary, of adequate area and thickness?
- Have base plates and base collars been built in?
- **Has the lowest level been braced by ledgers and transoms?**

Anchorage

- Has the scaffolding been anchored properly, according to the Allround approval or design calculations?
- **Have the wall ties been pullout tested?**

Scaffolding

- Ledgers must be built in every 2m in height if no system decks have been used.
- Façade braces according to the assembly instructions must be fitted. Connection of braces is made only on ledger levels.
- Console brackets 0.73m must be supported by braces. Boards which are not system decks (e.g. wooden boards or battens) are not secured against unintended lift-off, neither do they provide the structure with adequate plan bracing. The consequences of this should be considered. Using Allround system decks, a lock against lift-off must be built in to each 'U' – transom. Accesses & openings on deck levels must be protected or covered.
- Gaps in working platforms must be as small as is reasonably practical: we recommend maximum 2cm within main or console decks and maximum 8cm between main and console decks. Decks or board/battens must correspond to the required load capacity/scaffold group. **Ledgers and transoms should have a maximum vertical separation of 2cm.**

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9.0 References :

Listed below are a selection of British Standards and Regulations that are applicable in whole or in part to the manufacture, use and design of scaffolding. This list is not exhaustive and it's provided for information only.

BRITISH STANDARDS

BS 648 Schedule of weights of building material

BS 1139 Metal Scaffolding

BS 1139: Part 1 Tubes

BS 1139: Part 1: Section 1: 1990 CEN HD 1039: 1990

Specification for steel tube. Requirements for the tube and methods of test and criteria for the quality control of the protective paint coating.

BS 1139: Part 1: Section 1.2: 1990

Specification for aluminium tube. Requirements and test methods for aluminium tubing used for scaffolds.

BS 1139: Part 2: Couplers.

BS 1139: Part 2: Section 1.2: 1990 EN 74: 1988 IDT

Specification for steel couplers, loose spigots and base-plates for use in working scaffolds and false work made of steel tubes. Requirements for materials and design and test procedures for couplers, loose spigots and base plates used for connecting steel tubes of 4.3mm outside diameter and of at least 3.2mm nominal wall thickness.

BS 1139: Part 2: Section 2.2: 1991

Specification for steel and aluminium couplers, fittings and accessories for use in tubular scaffolding. Does not cover steel components in EN 74, which are included in BS 1139: Part 2: Section 2.1.

BS 1139: Part 3: 1994 CEN HD 1004:1992

Specification for prefabricated mobile access and working towers. Covers the design and manufacture of aluminium mobile access and working towers with a height from 2.5m to 12.0m (indoors) and from 2.5m to 8.0m (outdoors).

BS 1139: Part 4: 1982 (1990)

Specification for prefabricated steel split heads and trestles. Specifies materials and performance requirements for steel split heads and trestles as used to provide temporary working platforms.

BS 1139: Part 5: 1990 CEN HD 1000: 1988 IDT; CEN HD 1000: 1988

Specification for materials, dimensions, design loads and safety requirements for service and working scaffolds made of prefabricated elements. Covers unsheeted anchored prefabricated service and working scaffolds erected up to a height of 30m from ground level. Does not include ladder components.

BS 2482	**Specification for timber scaffold boards**
BS 3913	**Specification for industrial safety nets**
BS 4360	**Specification for weldable structural steels**
BS 4848	**Hot-rolled80 structural steel sections Part 2 Specification for hot-finished hollow sections**
BS 5268	**Structural use of timber**
BS 5400	**Steel, concrete and composite bridges Part 2 Specification for loads**
BS 5555	**Specification for SI units and recommendations for use of their multiples and of certain other units.**
BS 5974	Code of practice for temporarily installed suspended scaffolds and access equipment
BS 5975	Code of practice for false-work
BS 618	Code of practice for protective barriers in and about buildings.
BS 6399	Loading for buildings
	Part 1 Code of practice for dead and imposed loads
	Part 3 Code of practice for imposed roof loads
BS 8093	Code of practice for the use of safety nets, containment nets and sheets on constructional works
CP 3	Code of basic data for the design of buildings Chapter V Loading, Part 2 Wind Loads
CP 118	The structural use of aluminium
BS 5973	Code of practice for: Access and working scaffolds and special scaffold structural in steel

Regulations and Guidelines, Building Regulations 1994, Health and Safety at Work Act 1970, Construction (Health, Safety and Welfare) Regulations 199 CDM Regulations, Workplace (Health, Safety and Welfare) Regulations 1992 Approved Code of Practice L24 ISBN 07176, Health and Safety in construction HSG 150, Safe use of work equipment Provision and Use of Work Equipment Regulations 1998 L22, Electrical Safety on construction sites HSG 141 Health and Safety on Roof Work HSG 33 1999, Manual handling operation Regulations, The use of Fall Arrest Equipment whilst Erecting, Altering and Dismounting Scaffolding. NASC Guidance Note : SG4: 00, NASC Technical Guidance Notes.

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