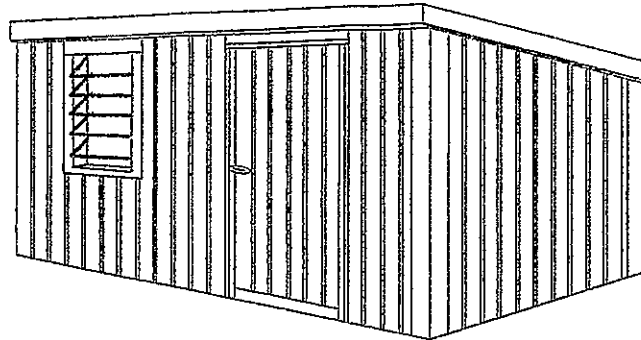


# TUBE TOOLSHED

## ASSEMBLY INSTRUCTIONS

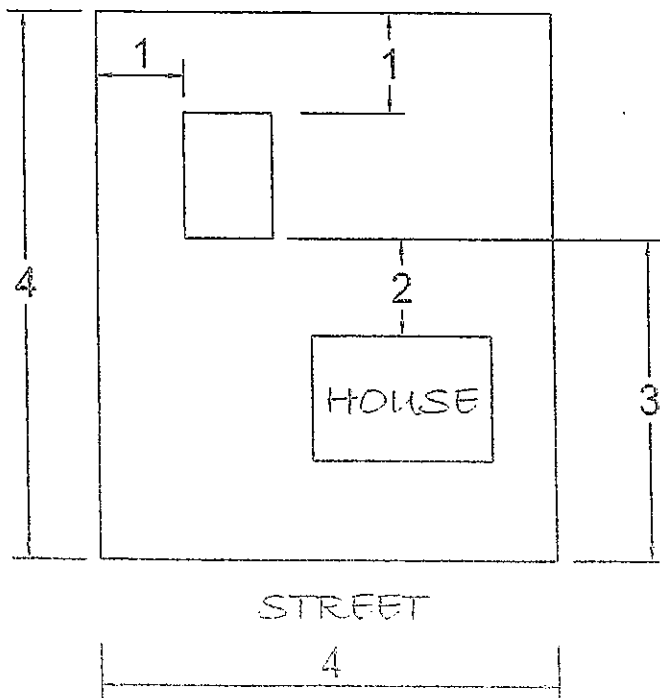


### GENERAL INFORMATION

Congratulations on your choice of a fully engineered prefabricated toolshed. Thoroughly read these 'assembly instructions' right through, and by following the procedures carefully, "you, like us", will be proud of a job well done.

### BEFORE COMMENCING

Approval from your local district council is necessary, if the toolshed is larger than 10m<sup>2</sup> in size. Council will require a sketch showing position of proposed toolshed showing distances from boundaries and existing buildings.



### NOTES

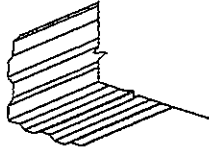
1. Minimum distance from side and rear boundary 600mm, or on boundary subject to council consent.
2. The toolshed can not be constructed closer than 1.2 metres from any external wall of any other building.
3. The toolshed should be situated at least 8 metres from any street alignment.
4. Show overall dimensions of block.

### BLOCK PLAN

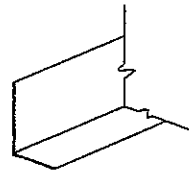
Should approval be required to erect a toolshed on a corner block, check your local council for variations to minimum boundary distances etc which may be applicable.

In all cases the SA Water department should be notified and a check made for possible easements.

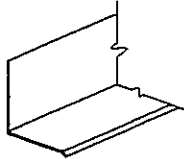
Before erection of toolshed is commenced a check of materials supplied to client is suggested to avoid any inconvenience in the case of incorrect materials supplied.



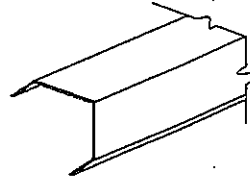
CORNER BARGES & ROOF BARGES



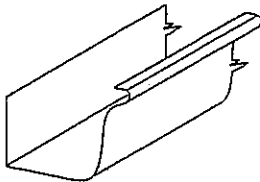
FLASHING FOR ABOVE ACCESS DOOR



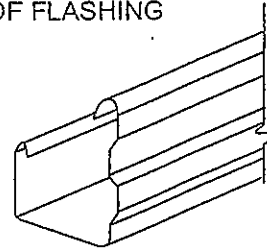
FLASHING FOR ABOVE AL/ WINDOW



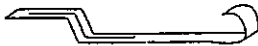
ROOF FLASHING



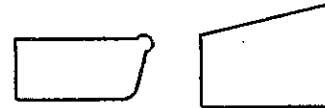
D-GUTTER



FASCIA GUTTER



GUTTER STRAPS



GUTTER STOP ENDS

**NECESSARY TOOLS**

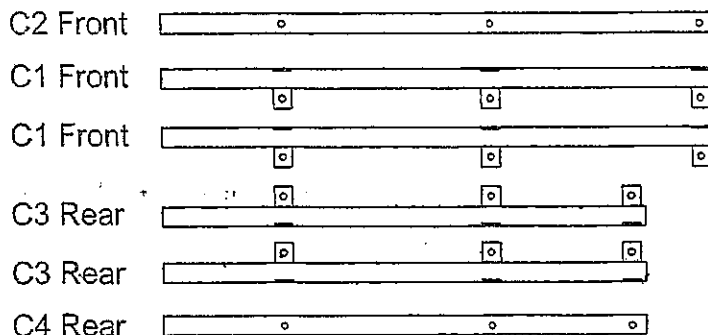
Necessary tools required to assemble toolshed include the following:

- Tin snips
- Hacksaw
- Pliers
- Screwdrivers (Phillips and flat)
- Power drill (preferably reversible)
- Power saw (if available)
- pop rivet gun
- Spanners
- Silicone applicator
- Tape measure
- Shovel
- Spirit level
- Texta colour or marker

Note: some cutting of sheets is unavoidable

**COLUMN IDENTIFICATION**

Use fig.2 (below) - to identify and keep columns in order for easy, unconfused handling.



LONGEST COLUMNS ARE FRONT COLUMNS

SHORTEST COLUMNS ARE REAR COLUMNS

**(FIG. 2.)**

**CLADDING REQUIREMENTS FOR FULLY FRAMED TOOLSHEDS**

LENGTH (Front and Rear Walls)	NO. SHEETS FRONT WALL (1)	NO. SHEETS REAR WALL (1)
7'0 2100	3A	3B
8'0 2400	3A	3B
9'0 2745	4A	4B
10'0 3050	4A	4B
12'0 3660	5A	5B
14'0 4270	6A	6B
16'0 4875	6A	6B
18'0 5550	7A	7B
20'0 6100	8A	8B

Sheet A is 2135 for 7'0 height and 2440 for 8'0 height

Sheet B is 1955 for 7'0 height and 2260 for 8'0 height

In the situation where a personal access door or louvre window is to be include to your structure, a 2135mm or 2440mm wall sheet may be substituted, according to your window, and or door selection.

2135	replaced with	1955	for	7'0 high shed.	PERSONAL ACCESS DOOR
2440	replaced with	2260	for	8'0 high shed.	PERSONAL ACCESS DOOR
2135	replaced with	1500	for	7'0 high shed.	LOUVRE WINDOW
2440	replaced with	1800	for	8'0 high shed.	LOUVRE WINDOW

In the situation where a personal access door is required on a 8'0 high structure, but is not on the high side (front), an extra rail is supplied for the side on which the door is located, also a 1500mm sheet is supplied.

WIDTH (End Walls)	SHEETS REQUIRED FOR BOTH END WALLS
7'0 2100	6A
8'0 2400	6A
9'0 2745	8A
10'0 3050	8A
12'0 3660	10A

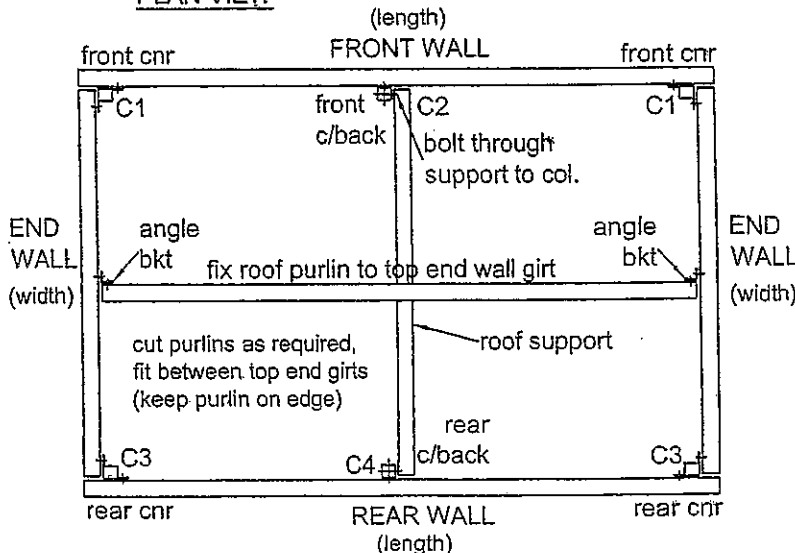
LENGTH OF TOOLSHED	NUMBER AND LENGTH OF GIRTS FOR FRONT WALL	NUMBER AND LENGTH OF GIRTS FOR REAR WALL	DRILLING REQUIREMENTS
7'0	3 at 2100mm	3 at 2100mm	1 Hole 143mm from each end
8'0	3 at 2440mm	3 at 2440mm	1 Hole 143mm from each end
9'0	3 at 2745mm	3 at 2745mm	1 Hole 143mm from each end
10'0	3 at 3050mm	3 at 3050mm	1 Hole 143mm from each end
12'0	3 at 3655mm	3 at 3655mm	1 Hole 143mm from each end 1 Hole mid span of girt
14'0	3 at 4270mm	3 at 4270mm	1 Hole 143mm from each end 1 Hole mid span of girt
15'0	3 at 4560mm	3 at 4560mm	1 Hole 143mm from each end 1 Hole mid span of girt
16'0	3 at 4875mm	3 at 4875mm	1 Hole 143mm from each end 1 Hole mid span of girt
18'0	3 at 5500mm	3 at 5500mm	1 Hole 143mm from each end 1 Hole mid span of girt
20'0	3 at 6100mm	3 at 6100mm	1 Hole 143mm from each end 1 Hole mid span of girt

WIDTH OF TOOLSHED	NUMBER AND LENGTH OF GIRTS FOR END WALLS	DRILLING REQUIREMENTS
7' (2.14m)	6 at 2000mm	1 hole 68mm from each end
8' (2.44m)	6 at 2360mm	1 hole 68mm from each end
9' (2.75m)	6 at 2660mm	1 hole 68mm from each end
10' (3.05m)	6 at 2970mm	1 hole 68mm from each end
12' (3.66m)	6 at 3580mm	1 hole 68mm from each end

**ROOF PURLINS**

- 1 required for 7' (2.14) to 9' (2.75) wide  
2 required for 10' (3.05) to 12' (3.66) wide

PLAN VIEW



DRILL 10mm HOLES AS PER REQUIREMENTS



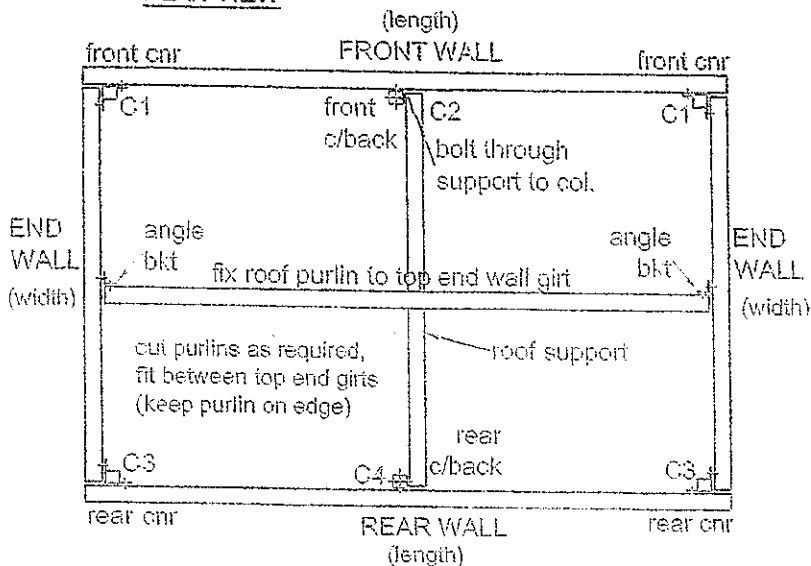
SIDE VIEW OF GIRTS

LENGTH OF TOOLSHED	NUMBER AND LENGTH OF GIRTS FOR FRONT WALL	NUMBER AND LENGTH OF GIRTS FOR REAR WALL	DRILLING REQUIREMENTS
7'0	3 at 2100mm	3 at 2100mm	1 Hole 163mm from each end
8'0	3 at 2440mm	3 at 2440mm	1 Hole 163mm from each end
9'0	3 at 2745mm	3 at 2745mm	1 Hole 163mm from each end
10'0	3 at 3050mm	3 at 3050mm	1 Hole 163mm from each end
12'0	3 at 3655mm	3 at 3655mm	1 Hole 163mm from each end 1 Hole mid span of girt
14'0	3 at 4270mm	3 at 4270mm	1 Hole 163mm from each end 1 Hole mid span of girt
15'0	3 at 4560mm	3 at 4560mm	1 Hole 163mm from each end 1 Hole mid span of girt
16'0	3 at 4875mm	3 at 4875mm	1 Hole 163mm from each end 1 Hole mid span of girt
18'0	3 at 5500mm	3 at 5500mm	1 Hole 163mm from each end 1 Hole mid span of girt
20'0	3 at 6100mm	3 at 6100mm	1 Hole 163mm from each end 1 Hole mid span of girt

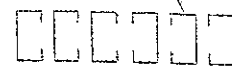
WIDTH OF TOOLSHED	NUMBER AND LENGTH OF GIRTS FOR END WALLS	DRILLING REQUIREMENTS
7' (2.14m)	6 at 2000mm	1 hole 88mm from each end
8' (2.44m)	6 at 2360mm	1 hole 88mm from each end
9' (2.75m)	6 at 2660mm	1 hole 88mm from each end
10' (3.05m)	6 at 2970mm	1 hole 88mm from each end
12' (3.66m)	6 at 3580mm	1 hole 88mm from each end

**ROOF PURLINS** - 1 required for 7' (2.14) to 9' (2.75) wide  
 2 required for 10' (3.05) to 12' (3.66) wide

PLAN VIEW

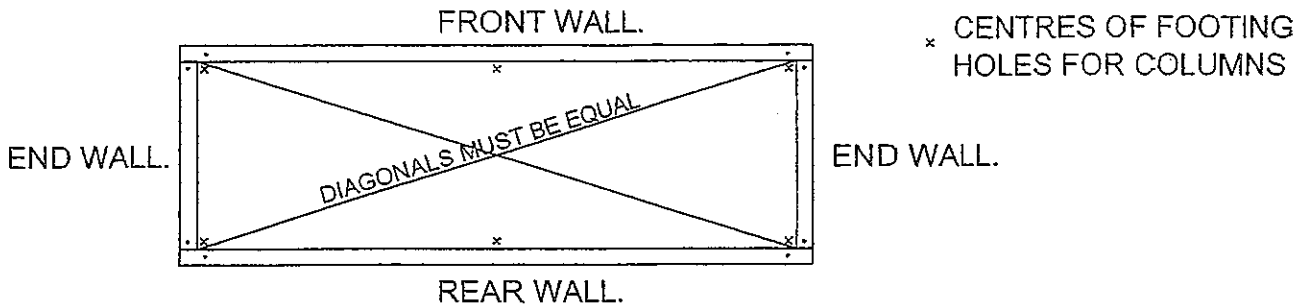


DRILL 10mm HOLES AS PER REQUIREMENTS

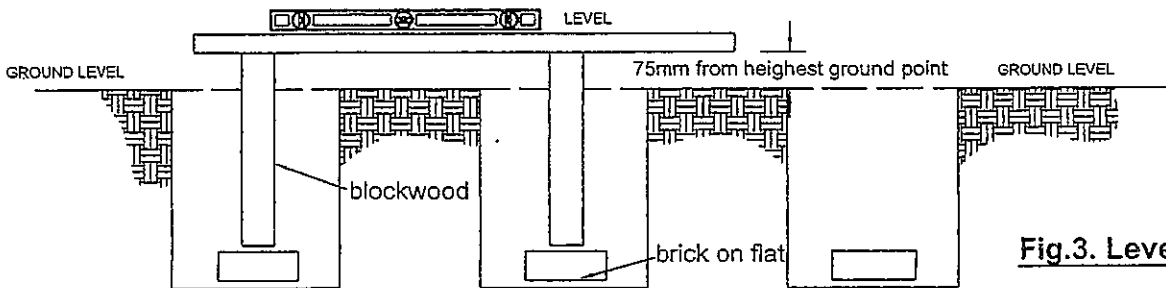


SIDE VIEW OF GIRTS

- 1/ Drill girts as per page 4 or 5 accordingly, cut back end wall girts to fit between front and rear as per diagram below.
- 2/ Lay 1 front & 1 rear girt & 2 end wall girts in proposed position of shed and square diagonally as per diagram below. Mark footing holes to correspond with holes in girts:

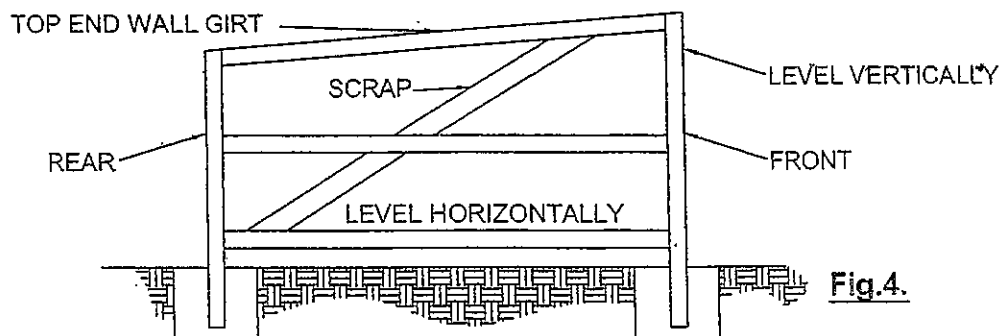


- 3/ Dig holes approximately 275 square or dia x 275mm deep for CAT3 & 375mm deep for CAT2 and level as Fig 3. P.A. Door footing (if required) will be approximately 200x200x300mm deep.



**Fig.3. Level column holes**

- 4/ Lay out columns & girts for back & front and bolt together. (step 4)
- 5/ Lay out sheets & fix leaving equal distances on front & rear girts each end. (step 5)
- 6/ Fit door (as per page 9).
- 7/ Fix gutter if required (should be fitted prior to standing walls).
- 8/ Stand up cladded front & back walls to face each other (as Fig 4, also see page 10).
- 9/ Bolt on end wall girts & level horizontally and vertically. Fix a scrap piece of timber or steel ( as per Fig. 4.) to hold the wall straight, whilst fixing on the end wall sheets.

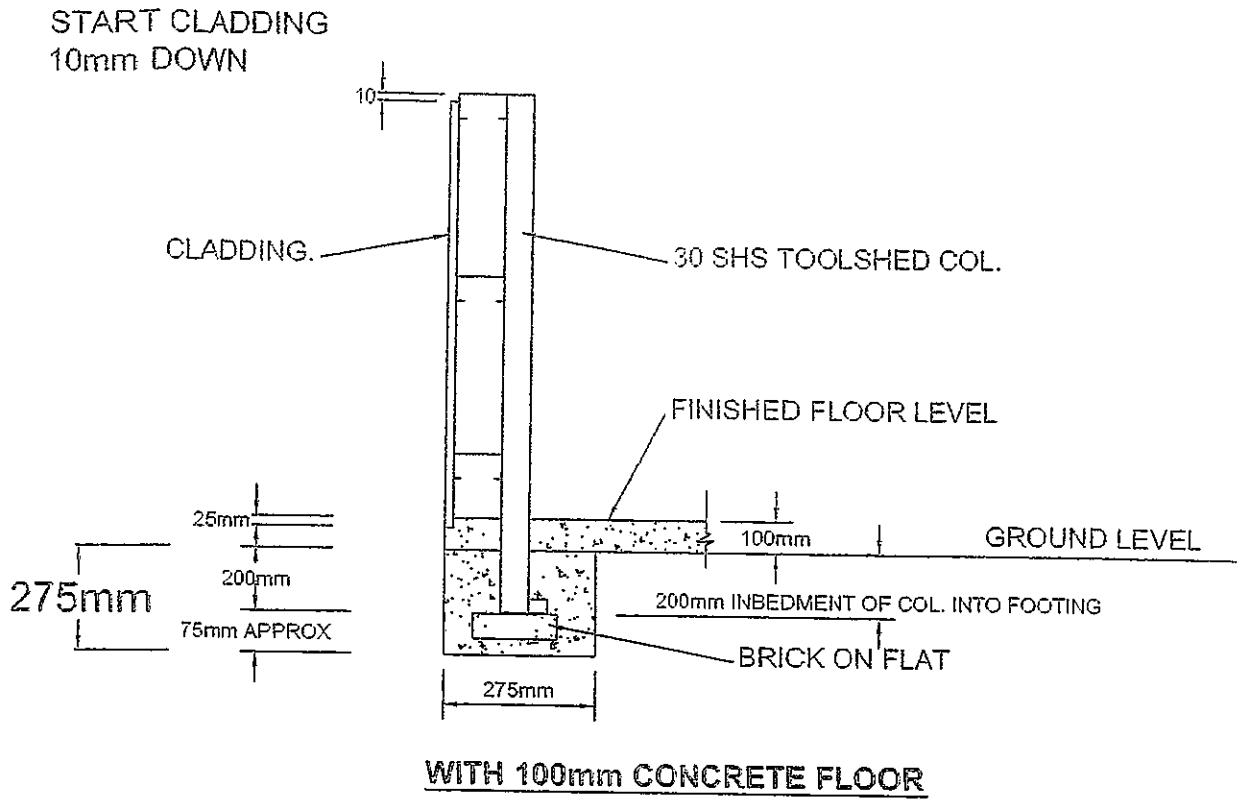


**Fig.4.**

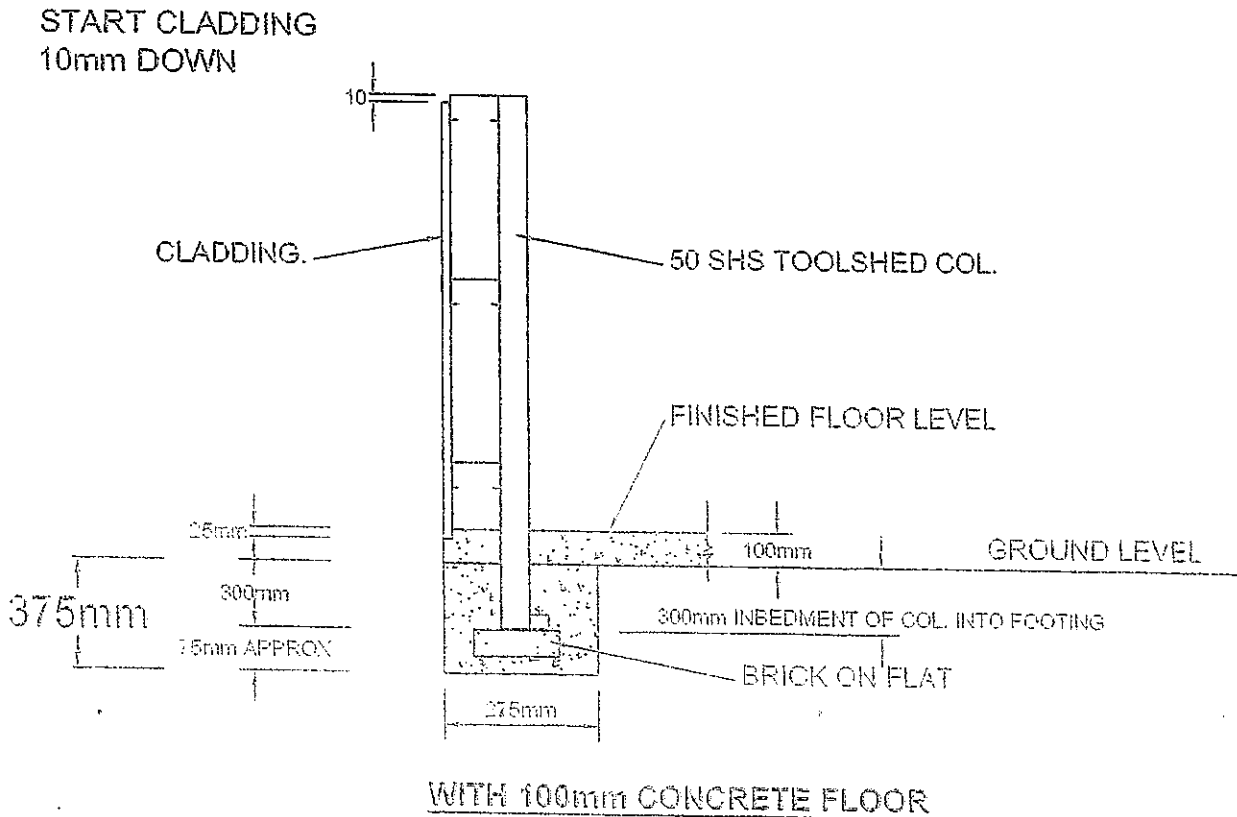
- 10/ Cut off end wall sheets flush with top of end wall girt. Fit window (as page 9 if required).
- 11/ Fit roof support and fix in roof purlins.
- 12/ Square diagonally & fix roofing iron.
- 13/ Fit roof flashings, check all levels and diagonals & concrete in.

\* Note the 13 steps are the correct procedure, for more detail study the following pages no. 8 - 11.

**TYPICAL END VIEW - CAT 3**



**TYPICAL END VIEW - CAT 2**

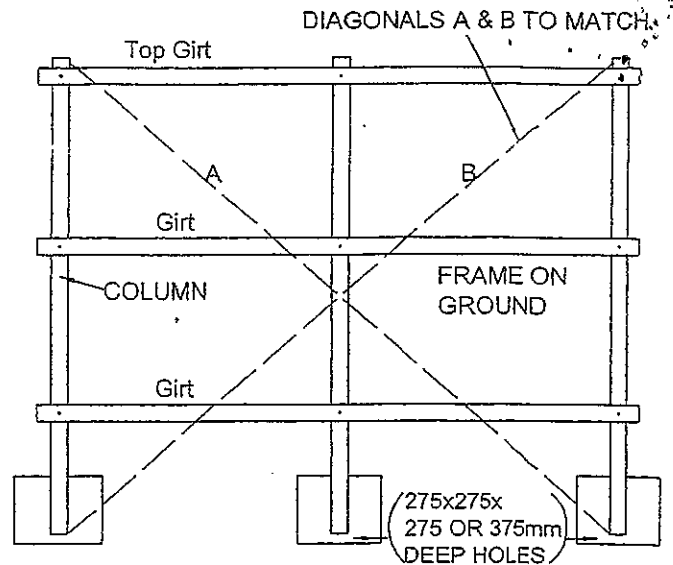


**STEP 4**  
**BOLTING OF GIRTS TO COLUMNS**

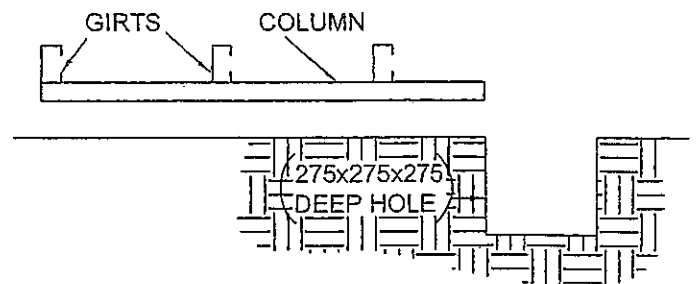
First layout the bottom of the columns at the edges of the holes. Bolt up the blank wall first. i.e. the low side (rear wall) unless it is a reverse toolshed i.e. door on the low side. Hand tighten bolts to the columns, and measure the diagonals of the wall, if necessary square accordingly.

**STEP 5**  
**CLADDING**

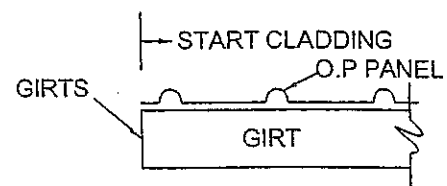
The frame is now ready to clad. Study the cladding sequence and check the toolshed master quantity list on pages 2 & 3. Identify position of the personal access door and louvre window (if applicable). When fitting standard width personal access doors (P.A.D.) the required gap is 780mm between sheet ends. For fitting of personal access door or louvre window refer to page 8. When a personal access door is fitted in a front or rear wall start sheet as shown in Fig. A. If your personal access door is not on a front or rear wall start wall sheets as shown in fig. B. If no P.A.D is required on either end walls then cladding is to begin as shown in Fig. C. If a P.A.D is required then cladding is to be installed as on front and rear walls see Fig. A.



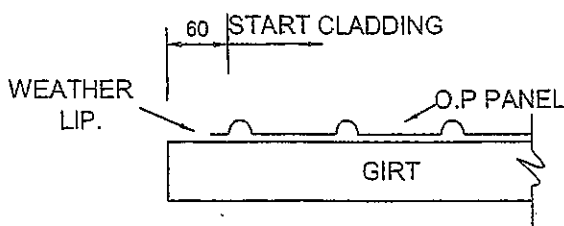
**FIG. 9 LAYOUT OF COLS & GIRTS READY FOR CLADDING**



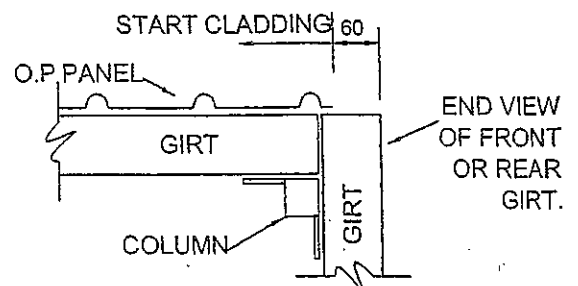
**FIG. 10 SIDE VIEW OF FIG. 9**



**FIG. (A) CLADDING SEQUENCE ON FRONT OR REAR WALL WITH PAD**



**FIG. (B) CLADDING SEQUENCE ON FRONT OR REAR WALL WITHOUT PAD**

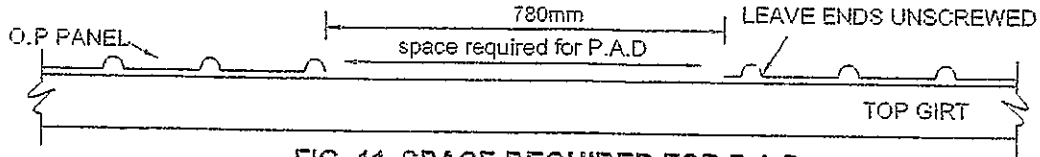


**FIG. (C) CLADDING SEQUENCE ON END WALL WITHOUT PAD**



### FITTING STANDARD PERSONAL ACCESS DOOR (P. A. Door)

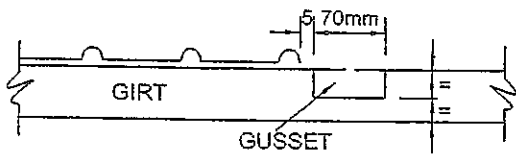
Designate a desired position of P.A.D, start cladding leaving a space between 2 sheets of 780mm where P.A.D is required. The edges of the sheets at the sides of this gap must be left unscrewed to allow the P.A.D, frame to be fitted underneath. i.e. Fig. 11.



**FIG. 11. SPACE REQUIRED FOR P.A. Door**

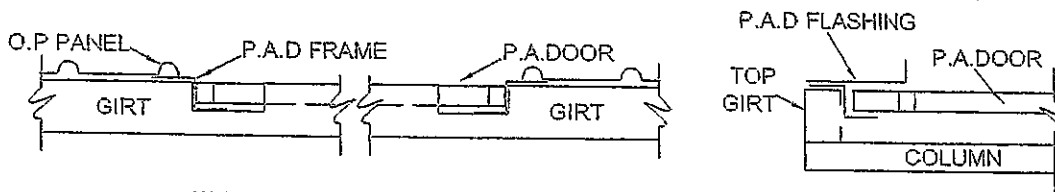
### SPACE REQUIRED FOR P.A. Door

Using a power saw with an abrasive metal cutting disc, (for "c" section) cut the middle girt and bottom girt 5mm in from the edge of the sheet both sides, then again but in another 70mm (i.e: Fig 12). DO NOT CUT ALL THE WAY THROUGH, only halfway. Then bend the flap down so a gusset is created to receive a PAD frame. Clad P.A. Door with weather lip on door locking side, (not on hinge side).



**FIG. 12. CUTTING GIRTS FOR INSTALLATION OF P.A.D**

Put PAD flashing on with teks screwing through flashing, frame and girts. i.e. Fig. 13.

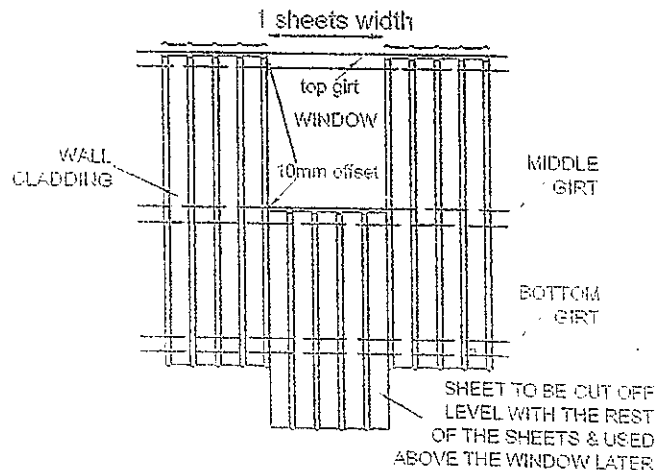


**FIG. 13. INSTALLATION OF P.A.D FRAME AND FLASHING**

### FITTING OF LOUVRE WINDOW

Leave one sheet gap, O.P roll towards the opening i.e, (without weather lip), must face into opening created for louvre window on both sides.

Start window sheets 10mm down from the top of the middle girt. i.e. Fig. 14. Secure window sheet. Fit louvre window (frame only) with the bottom sill on the outside of the wall sheet, and the rest of the frame fitted behind the wall sheets. Measure the wall sheet required on top of the louvre window. Allow the sheet to cover the top of the louvre window frame by 40mm, this will weather the window. no flashing is required. Cut off the above window wall sheet first while the window sheet is securely held, then make the second cut to finish the bottom window sheet flush with the rest of the wall sheets.



**FIG. 14. PREPARATION FOR INSTALLATION OF LOUVRE WINDOW**

**STEP 5**  
**CLADDING CONT.....**

Screw down first sheet along top girt check gap (B) when satisfied that it is equal, screw down remainder of sheets. (If gap B is not equal simply move column until correct check diagonals again) i.e. Fig. 15.

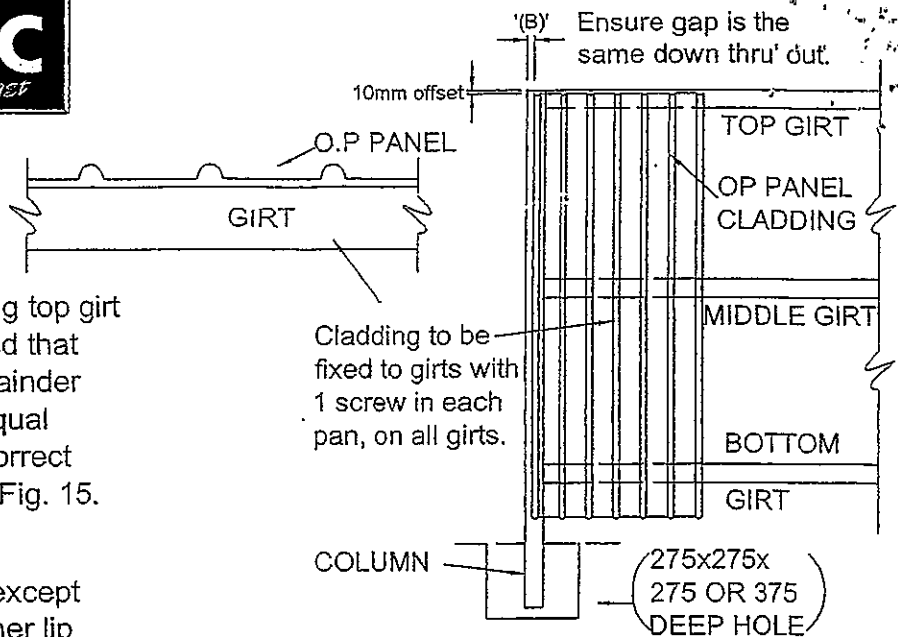
The next sheet is identical except the leading edge with weather lip fits under first sheet. Again start from the top adjusting the sheet after the top is fixed if required. (If the whole toolshed frame is **DIAGONALLY SQUARE** and the top girt is straight, sheets will fall together square!). Next if gutters are required ( see step 5A and page 10). When side has been completely cladded, and gutters fitted (if required), stand the wall up in the footing holes and prop accordingly with your temporary bracing (this step should not be attempted if very windy conditions prevail), see Fig. 16. Place bricks or the like in the holes to prevent the columns from sinking. Once satisfied that the wall is secure, repeat for the opposing wall (step 6).

**STEP 5A**  
**GUTTER FIXING IF REQUIRED**

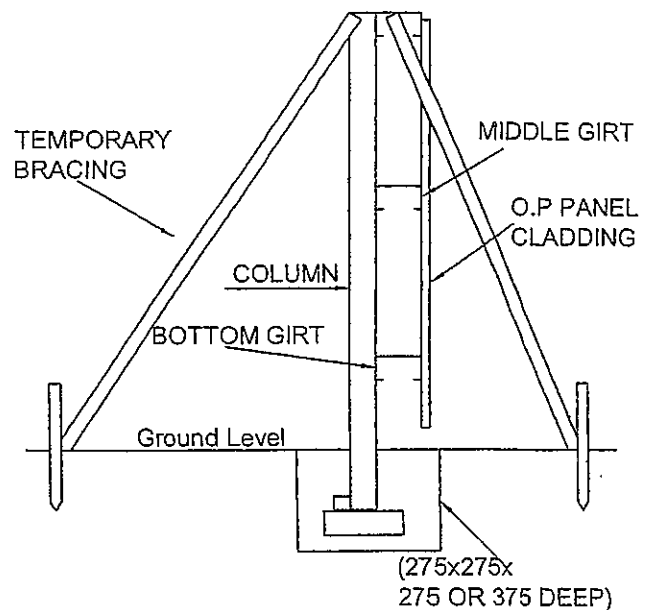
Place gutter on rear wall where it is to be fitted, (checking length) then mark position for downpipe (ensuring that the flute of wall cladding will not interfere with downpipe).

Next fit the stop ends in place. i.e. Fig. (i) Then trace downpipe onto gutter and cut out flaps as shown in Fig. (ii), and install downpipe.

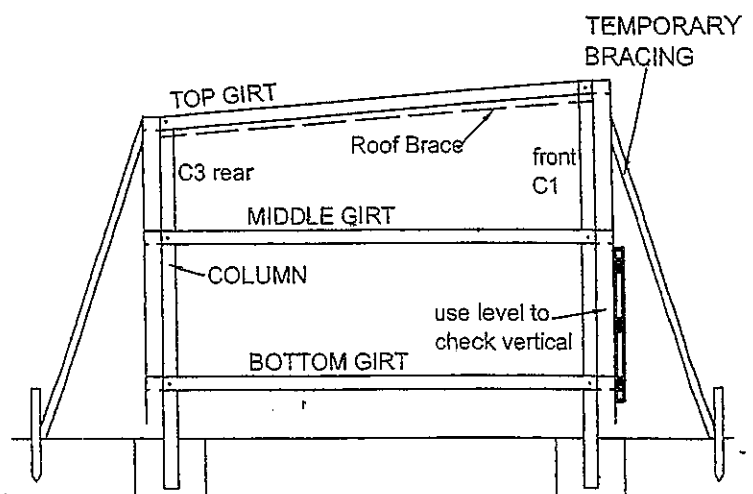
Place back of gutter against wall with screws allowing - 25mm fall to downpipe. Screw on gutter straps as shown in Fig. (iii).



**FIG. 15: CLADDING OF REAR WALL**



**FIG. 16: COLUMNS FITTED INTO POSITION AND BRACED**



**FIG. 17: ERECTION OF TOOLSHED**

**STEP 6**

Repeat step 4 with the front columns, once finished and P.A.D. is in position, which is the usual configuration for the P.A.D. Rear wall should be raised as per front wall, and brace. Fig. 16.

**STEP 7**

Fit all side girts linking front wall with rear wall and level C1 front column by adjusting braces. Fit side girts between C1 front & C3 rear column, i.e. Fig 17, repeat on other end. Next start cladding on the front corner (high side) work down to rear corner ensure that the bottom of wall sheets are level with both front and rear side, i.e. Fig.18.

Repeat the same procedure on the other end and fit external corners.

**STEP 8**

**Fitting of purlin/s**

Refer back to page 4, & 4A for fitting of roof purlins. Bolt roof support to C2 & C4 columns. Refer to Page 4, for required No. of purlins.

**STEP 9**

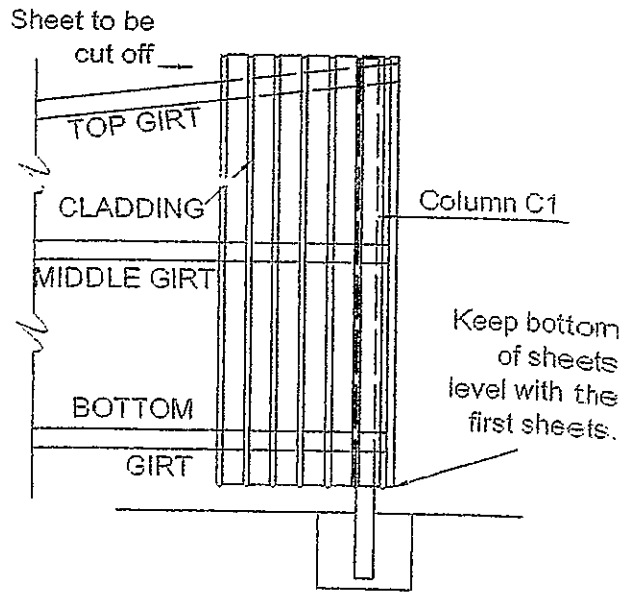
Square diagonally when purlins fitted, next step is roof cladding. Keep roof sheets flush at front (high side) and weather the sheets i.e.(turn up the down flute with pliers or a shifting spanner). Fix roof sheet at every second flute at both ends, fix in centre only at overlaps and two in between.

**STEP 10**

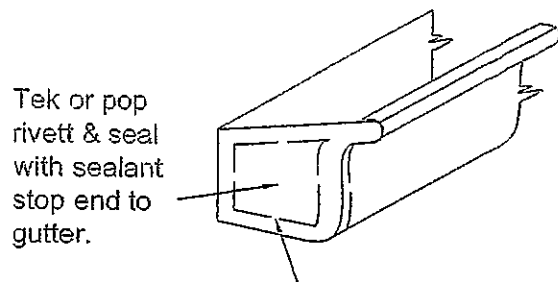
Fit roof flashings on front and sides. Fit front flashing with overhang each end not to exceed 75mm. Trim corners neatly (longer structures will need 2 lengths of flashing). Side flashings are to be fitted underneath front flashings.

**STEP 11**

- Level C1 front and C3 rear
- C2 front and C4 rear
- Plus P.A.D. legs
- Water test the gutter (if applicable)
- POUR CONCRETE INTO THE HOLES.

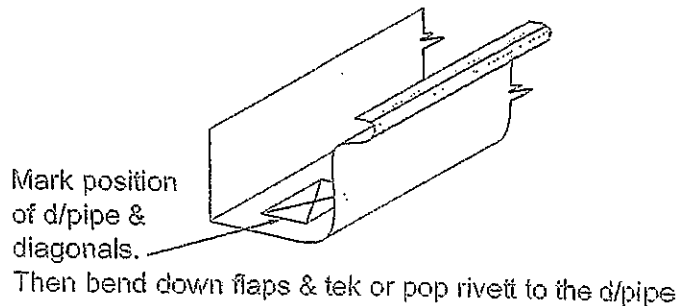


**FIG. 18: CLADDING OF SIDE WALL**

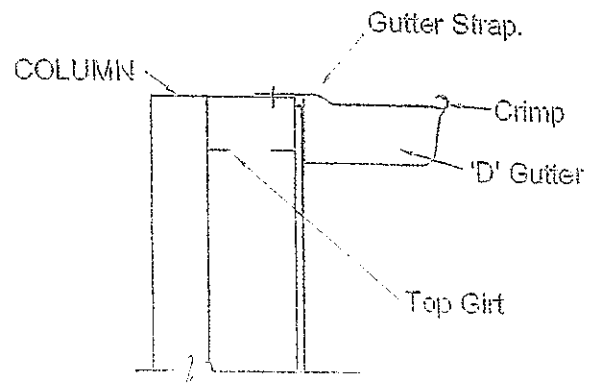


Left & right stop ends are Identical.

**FIG. (i)**



**FIG. (ii)**



**FIG. (iii)**



# **TUBE TOOL SHED**

## **ASSEMBLY INSTRUCTIONS**

### **MAINTENANCE GUIDE OF PRODUCTS**

#### **CARE AND STORAGE**

TO PRESERVE THE ZINC SURFACE, HANDLING SHOULD ONLY BE CARRIED OUT USING CLEAN DRY GLOVES. ALTHOUGH STEEL ROOFING AND WALLING PRODUCTS ARE INTENDED FOR EXTERNAL APPLICATIONS, IT IS ESSENTIAL TO ENSURE THAT WATER IS NOT DRAWN BY CAPILLARY ACTION IN BETWEEN CLOSELY PACKED BUNDLES OF SHEETING DURING TRANSPORT AND SITE STORAGE PRIOR TO INSTALLATION. SHOULD PACKS BECOME WET, SHEETS SHOULD BE IMMEDIATELY SEPARATED, WIPED WITH A CLEAN DRY CLOTH AND ALLOWED TO HAVE FULL AIR CIRCULATION AROUND EACH SHEET TO COMPLETE THE DRYING PROCESS. THESE PROCEDURES ARE RECOMMENDED TO AVOID POSSIBLE DETERIORATION OF THE COATING WHICH WOULD LEAD TO A REDUCED LIFE EXPECTANCY OR POOR PRODUCT APPEARANCE.

#### **COMPATIBILITY**

WHILST GALVANIZED STEEL IS COMPATIBLE WITH LEAD, ZINCALUME IS NOT. NEITHER PRODUCT SHOULD BE USED IN CONJUNCTION WITH COPPER AND DO NOT ALLOW WATER RUN OFF FROM A COPPER PRODUCT TO RUN ONTO ZINCALUME OR GALVANIZED STEEL.

#### **ADVERSE CONDITIONS**

ZINCALUME, GALVANIZED AND COLOURBOND STEEL IS NOT NORMALLY RECOMMENDED WITH IN 1 KILOMETER OF COASTAL SHORE LINES OR SIMILAR LOCATIONS. THEY SHOULD NOT BE BURIED OR TOUCHING SOIL OR CONCRETE; OR USED AS CLADDING FOR INTENSIVE ANIMAL SHELTERS, CONCRETE FORM WORK OR CULVERTS. ZINCALUME STEEL (AND COLOURBOND STEEL MANUFACTURED WITH A ZINCALUME STEEL SUBSTRATE BASE) IS NOT RECOMMENDED FOR IMMERSION IN WET CEMENT AS RAPID CORROSION AND DEGRADATION OF THE ALLOY STRUCTURE WILL QUICKLY OCCUR.

#### **SWARF**

SWARF IS THE TERM GIVEN TO DEBRIS ARISING FROM CUTTING OR DRILLING OPERATIONS WHEN USING FRICTION SAWS, ABRASIVE DISCS, DRILLS ETC. ON STEEL ROOFS AND WALLS. SWARF LEFT ON THE SURFACE, WILL CORRODE AND CAUSE RUST STAINS, WHICH WILL DETRACT FROM THE FINISHED APPEARANCE OF THE PRODUCT. THESE STAINS ARE OFTEN MISTAKEN FOR EARLY DETERIORATION OF THE ROOFING AND WALLING ITSELF. FRESH SWARF STAINS ARE CHARACTERIZED BY SMALL REDDISH BROWN COLORED AREAS WITH A DARK CENTRAL SPOT. THE SURFACE WILL FEEL LIKE SANDPAPER, AND THE PARTICLE MAY BE LIFTED EASILY WITH YOUR FINGERNAIL.

#### **CLEAN UP**

SWARF SHOULD BE SWEEPED OR HOSED FROM THE JOB PROGRESSIVELY AND CERTAINLY AT THE END OF THE DAY AS THIS WILL HELP REMOVE LOOSE PARTICLES. WHEN ATTEMPTING TO REMOVE SWARF THAT HAS BECOME STUCK, MAXIMUM CARE SHOULD BE TAKEN TO ENSURE THAT YOU DO NOT DAMAGE THE PAINT OR METAL COATINGS. FOR MILD STAINS A HOUSEHOLD CREAM CLEANSER USED ACCORDING TO DIRECTIONS SHOULD BE SUFFICIENT. FOR MORE SEVERE STAINS RECOMMENDATIONS CONTAINED IN BHP'S TECHNICAL BULLETIN SHOULD BE FOLLOWED. WHEN SWEEPING OR HOISING INTO A GUTTER, ENSURE THAT THE GUTTER IS ALSO CLEANED BEFORE LEAVING THE JOB IN ORDER TO PREVENT PREMATURE CORROSION. ON COMPLETION OF THE JOB, GIVE A FINAL WASH OR SWEEP DOWN.

#### **MAINTENANCE**

AS WITH ANY PRODUCT, A LITTLE CARE AND ATTENTION DURING SERVICE IS WELL REPAID BY EXTERNAL SERVICE LIFE. REGULAR CLEANING OF SURFACES BY HOISING, AND THE REMOVAL OF ACCUMULATED DEBRIS SUCH AS LEAVES, DIRT, POLLUTION FALLOUT ETC.; WILL HELP PREVENT LOCALIZED BUILT UP AREAS WHERE ACCELERATED CORROSION MAY OCCUR.

IN PARTICULAR, ACCUMULATION OF WIND BORNE SALTY DEPOSITS IN SEASIDE LOCATIONS CAN HAVE AN EXCESSIVE EFFECT ON STEEL PRODUCTS, BUT BEING FAIRLY SOLUBLE THESE SALTY DEPOSITS ARE READILY REMOVED BY A GENTLE HOISING DOWN WITH CLEAN WATER.

#### **PROTECTION**

RAINWATER AND COLOURBOND PRODUCTS ARE USUALLY SUPPLIED WITH A SPECIALLY DESIGNED POLYETHYLENE FILM CALLED "CORSTRIP", WHICH PROTECTS THE PRODUCT DURING STORAGE, HANDLING AND TRANSPORT. THIS FILM IS EASILY REMOVED BY SIMPLY PEELING THE LAYER OFF, THIS SHOULD BE DONE IMMEDIATELY ON INSTALLATION AS EXPOSURE TO SUNLIGHT CAN INCREASE THE ADHESION OF THE FILM TO THE PRODUCT THEREFORE IT IS VITAL THAT THE MATERIALS ARE NOT LEFT OUTSIDE AND EXPOSED TO SUN LIGHT FOR A LONG PERIOD OF TIME.

#### **TOUCHING UP**

SCRATCHING OF COLOURBOND STEEL MAY OCCUR DURING HANDLING, HOWEVER THE MANUFACTURERS HAVE WARNED AGAINST USING TOUCH UP PAINTS UNLESS IT IS ABSOLUTELY NECESSARY. THE USE OF SPRAY CANS CAN RESULT IN NOT ONLY THE COVERAGE OF THE SCRATCH BUT ALSO OVER A LARGER AREA AROUND THE SCRATCH WHICH WAS NOT REQUIRING TOUCH UP. TO MINIMIZE THIS A STENCIL SHOULD BE USED IN CONJUNCTION WITH THE TOUCH UP. TOUCH UP PAINT WEATHERS AT A DIFFERENT RATE TO THE OVEN BAKED COLOURBOND STEEL AND EVENTUALLY YOU WILL BE LEFT WITH AN UNSIGHTLY BLEMISH. MINOR SCRATCHING WILL NOT AFFECT THE LIFE OF THE PRODUCT AND IS RARELY OBVIOUS TO A CASUAL OBSERVER. WHERE THE PAINT IS REQUIRED FOR FASTENERS OR TO COVER UP RIVETS, TOUCH UP LACQUER IS AVAILABLE AND MUST BE USED ACCORDING TO THE APPROPRIATE INSTRUCTIONS.