



# Iron

Fitting Instructions

# Important information.

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The following instructions are for installing the Cheshire Mouldings **Iron Range**

Cheshire Mouldings **Iron Range** has been designed to suit stair pitches between **40 and 43°**

**Cheshire Mouldings Iron Range has been independently tested by FIRA and when installed in accordance with these instructions, conforms with Building Regulations for balustrades at 900mm high and 0.36KN/m domestic loadings.**

**As only official Cheshire Mouldings parts have been tested, the use of non Cheshire Mouldings products used in conjunction with this system cannot be guaranteed to conform**

If you have any queries please contact our technical helpline on (0800) 085 3475

Please note:

All components should be inspected BEFORE installation commences for any damage, as Cheshire Mouldings cannot be held responsible for any damage caused during installation

Tools required:

Saw, Battery drill, Drill bits - ø4mm, ø7.5mm, ø12mm, ø25mm, ø50mm for bases,  
Adjustable Bevel, Square, Tape Measure, PVA glue, PU glue, Multi Purpose Adhesive i.e No Nails

**For installation of 1 piece newels go to Fig.31 then follow instructions from Fig.2**

### **Using Existing Newel bases**

Place the pre-drilled base rail onto the stair nosing, ensuring the holes are facing directly up and offer up against sides of newel bases. Align so that gap between newel base and holes are equal top and bottom (2 people is easier). Mark base rail and cut to length (**Fig.1**).

Check fit between newel bases.

Place a 15mm dowel in the holes at each end of the base rail (**Fig.2**). Offer stair handrail onto the dowels and slide down until the rail faces touch. Mark handrail both ends from cut lines on base rail. This will ensure rails will be perfectly aligned when installed (**Fig.2A**).

Base rail can now be fixed using No.8 screws through the base rail holes into the string.

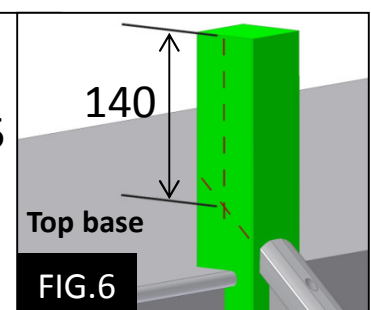
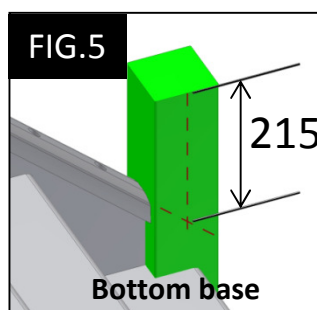
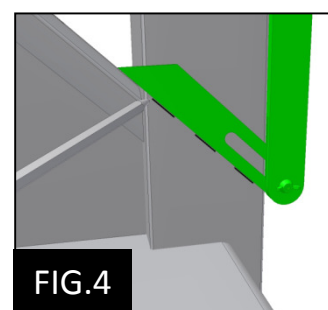
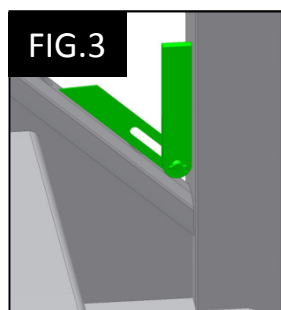
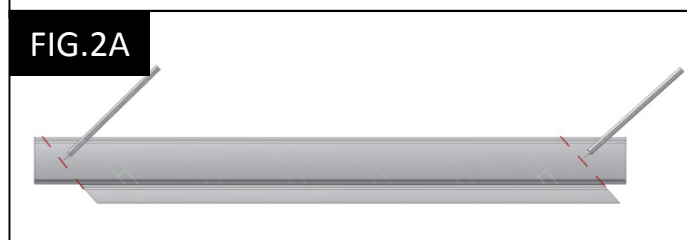
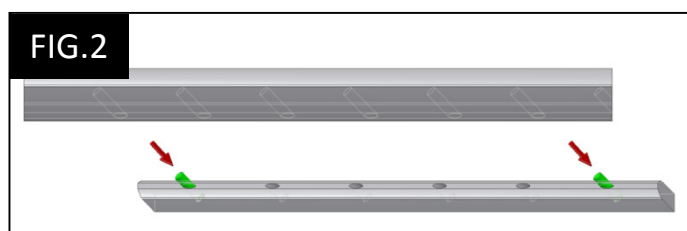
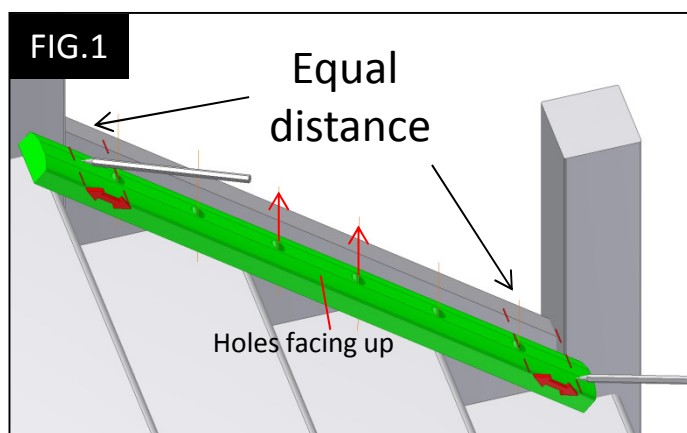
### **Bottom Newel Base**

Iron Range uses pre-cut spindles and all cut off points are referenced off top of base rail. Set adjustable bevel to angle of the stairs (**Fig.3**). Use adjustable bevel to strike a line from top of base rail across inside face of newel base (**Fig.4**).

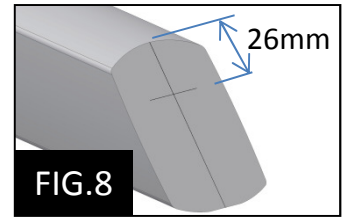
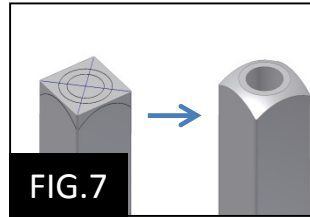
Mark a line down the centre of the newel base and where the lines intersect, measure up 215mm (**Fig.5**).

### **Top Newel Base**

Same procedure should be used for top newel base but height should be 140mm (**Fig.6**). Ensure bases are cut off square

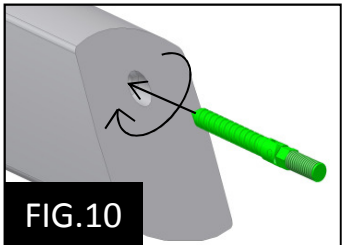
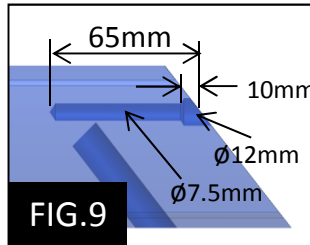


To prepare the newel base ready for the newel, mark centre of top and drill using 50mm bit to depth of 95mm. Mark a radius on each side of the base and sand and chamfer the top face and corners (**Fig.7**). Insert newel to check fit and plumb but do not fix at this stage

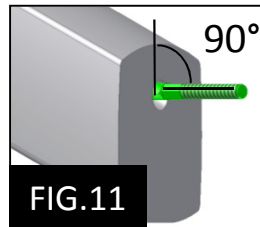


### Fitting Handrails

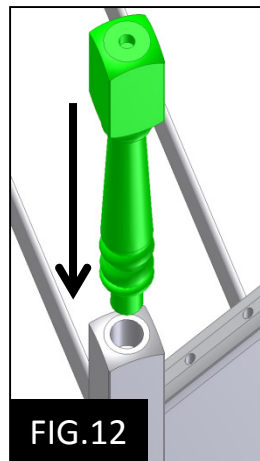
Mark centre line on handrail cut face and measure down 26mm and mark (**Fig.8**). Using a 12mm dia drill bit, drill a hole to a depth of 10mm. Then, using a 7.5mm dia bit, drill a hole 65mm deep (**Fig.9**)



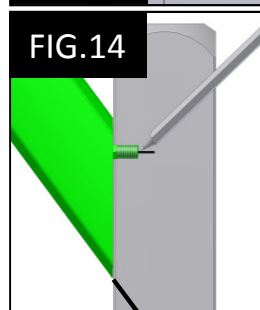
Take fastener and insert woodscrew end into hole and wind into rail using spanner or drive it in using cordless drill on slow speed (**Fig.10**). Once inserted, align so that threaded end can be rotated 90 degrees to cut rail face (**Fig.11**)



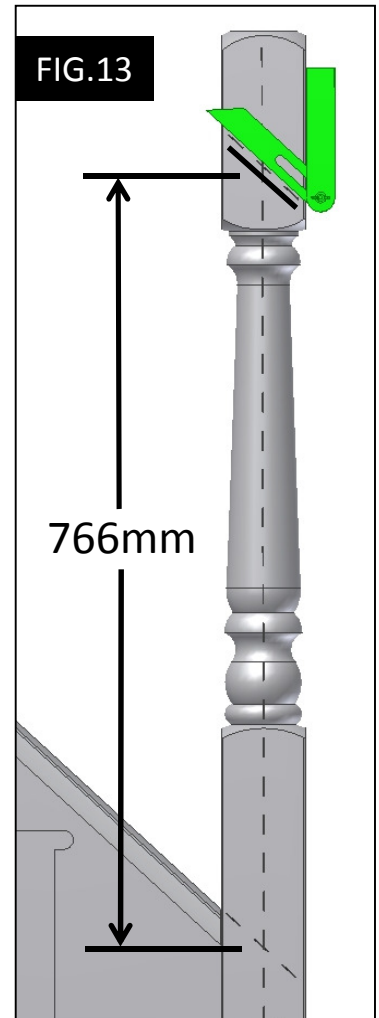
With the newels inserted in top and bottom newel bases (**Fig.12**), measure up 766mm from bottom intersect point on base and mark on the centreline. Use adjustable bevel to mark through. This mark will be used to align the bottom of the handrail (**Fig.13**). Repeat for top newel.



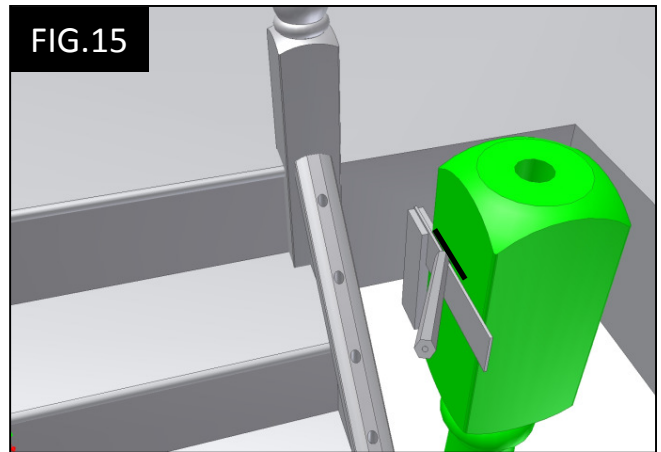
Alternatively, cut 2 off battens at 766mm long on the edge, cut to the angle of the stairs



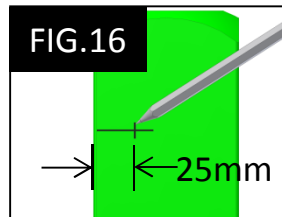
Offer handrail between newels with fasteners to side face and mark centre position of threaded stud (**Fig.14**). Ensure that the fasteners are at 90 degrees.



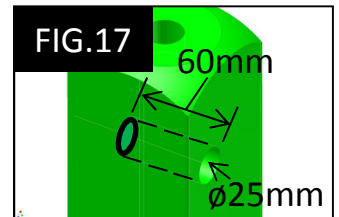
Using a square, draw a horizontal line across from threaded stud mark **(Fig.15)**.



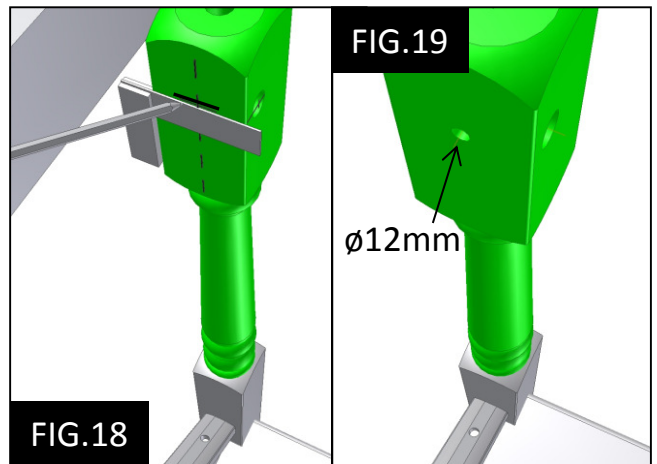
Measure 25mm in from rail side and mark **(Fig.16)**.



Using 25mm dia bit, drill hole to a depth of 60mm **(Fig.17)**

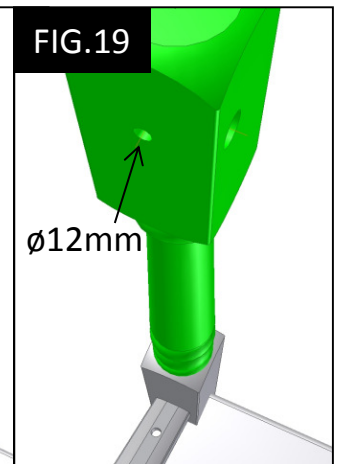


Using a square, draw a line on rail face side of newel post, level with side horizontal line previously marked. Find and mark centre **(Fig.18)**



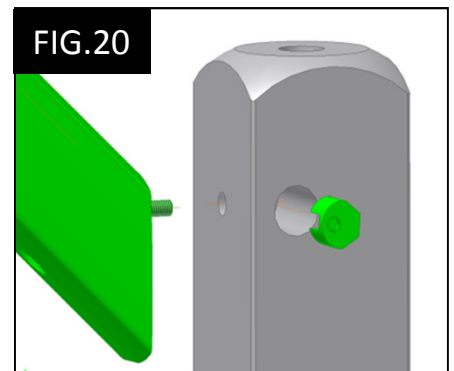
Using a 12mm dia bit, drill hole so that it intersects with previously drilled 25mm dia hole **(Fig.19)**.

Repeat procedure for top newel



To secure handrail to the newel posts, offer fixing bracket stud into 12mm dia holes in top and bottom newel posts (this will require 2 people). Offer locking nut into 25mm dia holes and hand tighten using a 5mm hex key **(Fig.20)**. Check fit.

Undo locking nut and remove rail, apply pva glue to rail faces and re tighten as above.

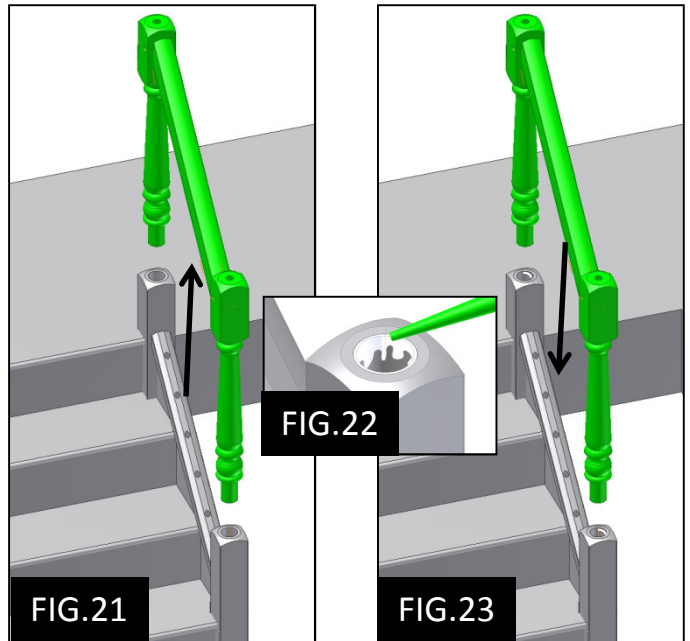




Lift rail and post assembly out of newel bases and place to one side (**Fig.21**).

Apply a large bead of proprietary **fast grab PU adhesive** to the inside of the newel base hole and a small bead on the flat ring on top of newel base (**Fig.22**)

Insert the rail and newel post assembly back into newel base holes ensuring they are pushed fully down onto tops of newel bases (**Fig.23**)



### ***Fitting Metal Balusters***

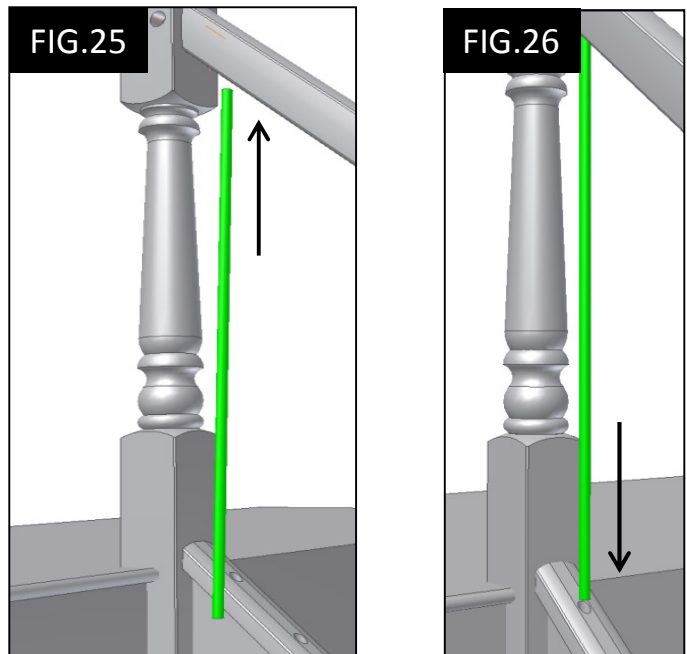
Place a bead of multi purpose adhesive i.e Gripfill, No Nails etc, in and around the pre-drilled hole in base rail and handrail (**Fig.24**). Do not use too much



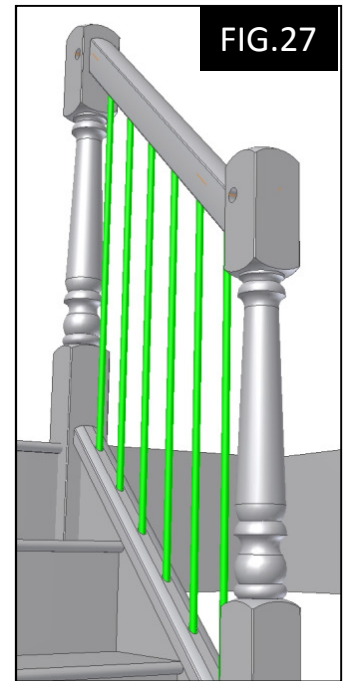
Holding at a slight angle, insert baluster up into handrail hole (**Fig.25**) until the bottom of the baluster can swing back over the aligned base rail hole and push down fully (**Fig.26**).

Twist the spindle half a turn to ensure the good adhesive coverage.

**NOTE - wipe off any excess adhesive from rails and balusters immediately.**



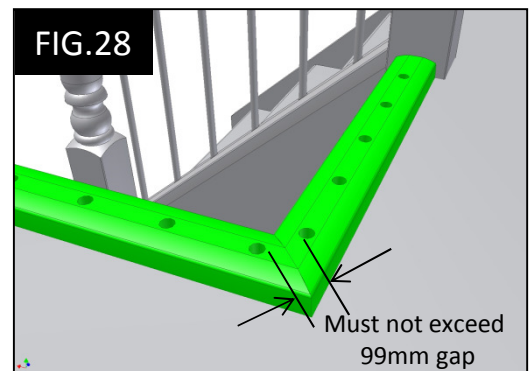
Repeat procedure for all remaining spindles (**Fig.27**)



### ***Landing Balustrade***

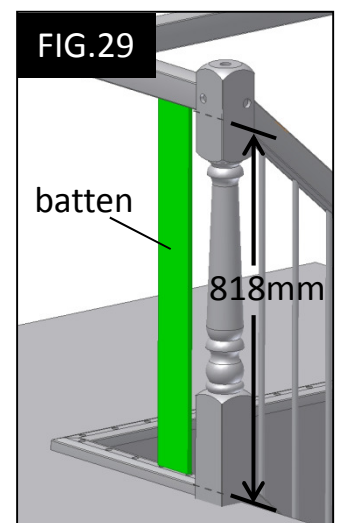
Cut base rail to length. Follow same procedure to cut handrail to length using location dowels in rail holes to ensure correct alignment when installed

If you have a 90 degree corner and you need to mitre the base rail, please ensure the holes either side of the mitred cut are not spaced greater than 99mm. Cut handrail following same procedure used for the stairs. Glue and dowel mitred handrail lengths together.



### ***Setting Handrail Height on Landing***

Mark a line off top of base rail onto newel base. Measure up 818mm and draw horizontal line. This is where bottom edge of handrail will be located. Alternatively cut 2 off battens at 818mm and use these to sit handrail to establish fixing bracket stud centre on newel post (**Fig.29**)



Install as per procedure used on stairs

## One Piece Newels

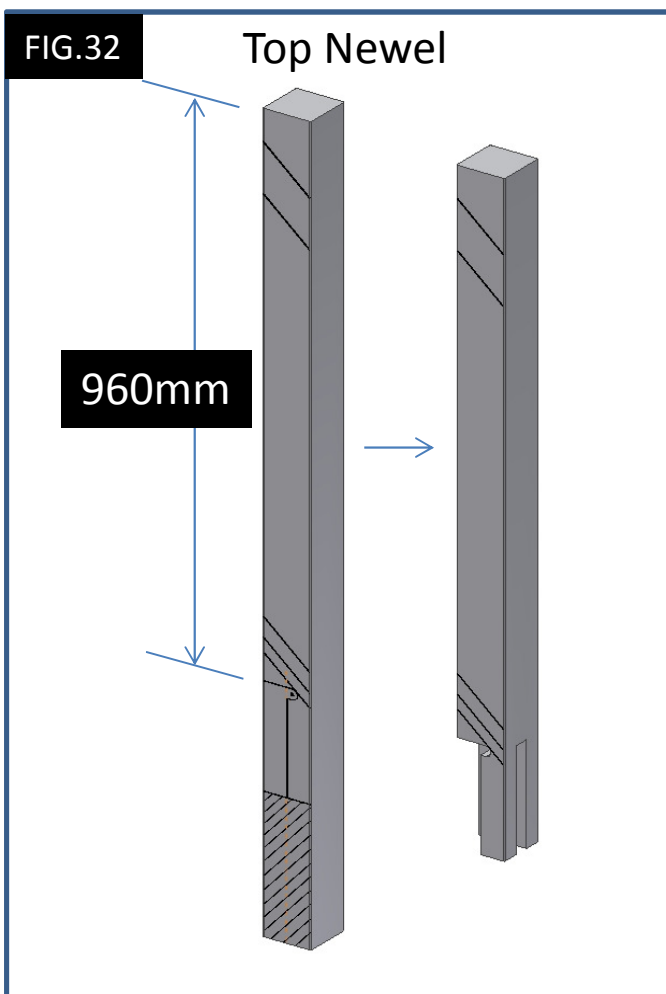
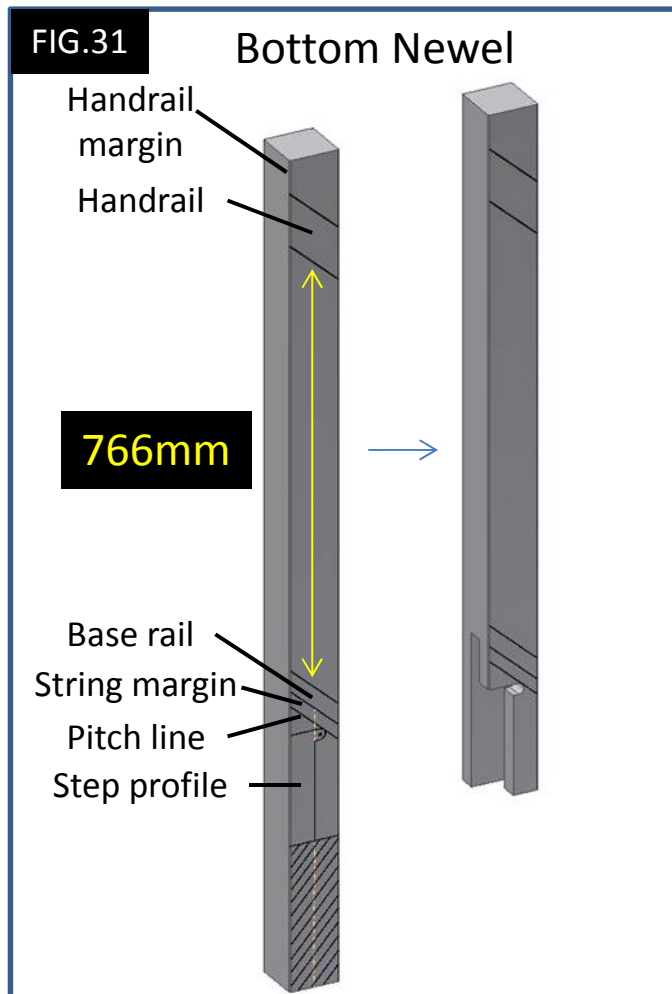
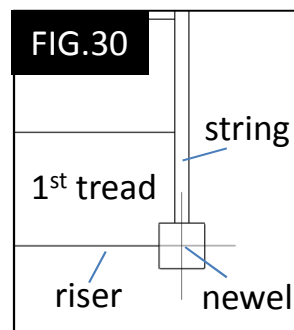
All newel posts should be secured central to riser and string (Fig.30).

### Bottom newel

Establish location for handrail and mark location on side of newel post using adjustable bevel set to pitch of the stairs (leaving a handrail margin that is aesthetically pleasing). Measure down 766mm from bottom of handrail location, strike line for base rail location. Draw another parallel line to account for string margin then draw step profile (Fig.31)

### Top newel

Measure down 960mm from top of newel post, this will be location of top of the step. Mark out rest of newel from this point (Fig.32)







Unit 7, Normans Road, Sutton, St Helens WA9 4JQ

01744 811 545

Freephone 0800 0853475

[www.cheshiremouldings.co.uk](http://www.cheshiremouldings.co.uk)

[www.planyourstairs.co.uk](http://www.planyourstairs.co.uk)