X1 series balustrade

A versatile semi frameless stainless steel and glass system for all balustrade and pool fencing applications

thump architectural fittings

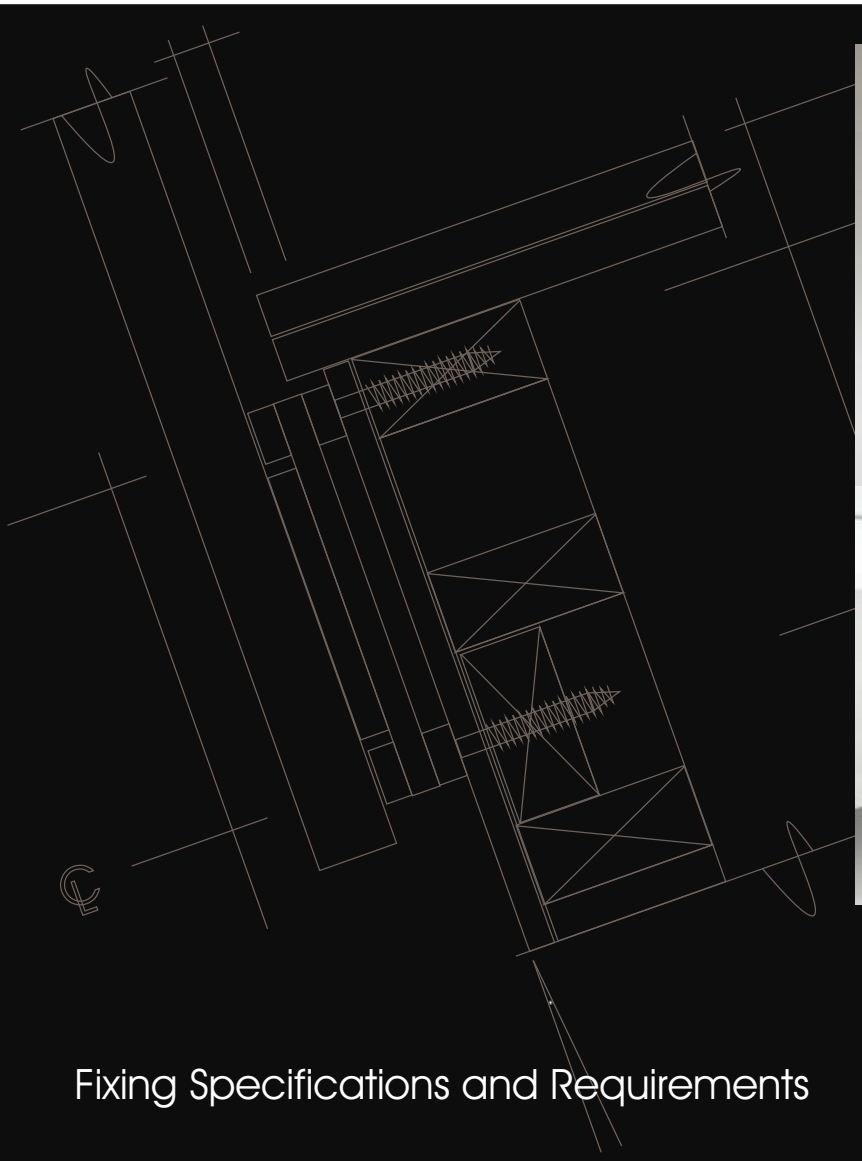




5 / 32 Meadow Ave
Coopers Plains 4108
ACN 10 867 697

Tel 07 3277 0720
Fax 07 3277 0721

www.thumpaf.com



Fixing Specifications and Requirements

The X1 series has been designed to accommodate as many forms of standard construction as possible. The series remains fundamentally the same, with the only two variables being the base connection of the posts and whether or not a top rail is desired. The base connection is dependant upon the construction of the floor or wall to which the balustrade is to be fixed. Details are given in this document for all common construction techniques. The top rail option is required by legislation in all cases where the balustrade protects a difference in height of greater than one metre. The X1 series balustrade system is fully compliant with AS 1288-2006.

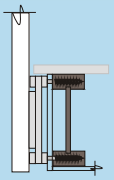
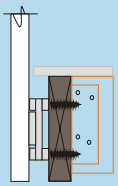
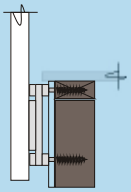
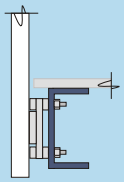
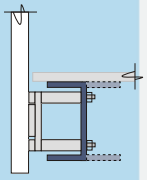
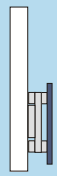
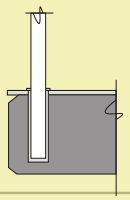
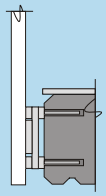
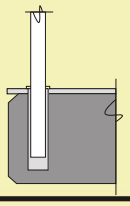
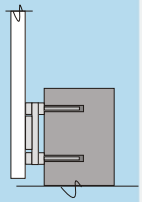
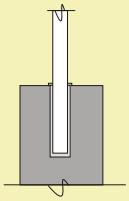
Balustrade

100mm

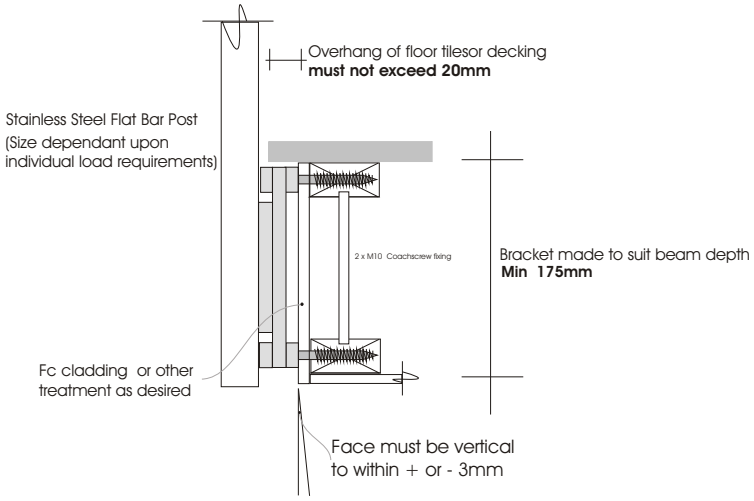
M10 s/s bolt fixing


26

X1 series Balustrade

Floor Structure		Compatible Base Connection Details		
Timber	Engineered Timber (Hyne Beams)			See FF CT1 Page 10
	Solid Timber/ LVL Beams			See FF CT2 Page 11 Page 12
	Stud Framing			See FF CT3 Page 13 Page 14
Steel	PFC facing inwards			See FF CS1 Page 15 Page 16
	PFC facing outwards or Universal Beams			See FF CS2 Page 17 Page 18
	Flat bar			See FFCS3 Page 23
Concrete	Concrete slabs 100 - 200mm			See CF CC12 Page 25
	Concrete slabs 200mm and greater		or 	See FF CC20 Page 19 Page 20 CF CC20 Page 25
Blockwork	Reinforced Blockwork		or 	See FF CB1 Page 21 Page 22 CF CB1 Page 24

FF CT1

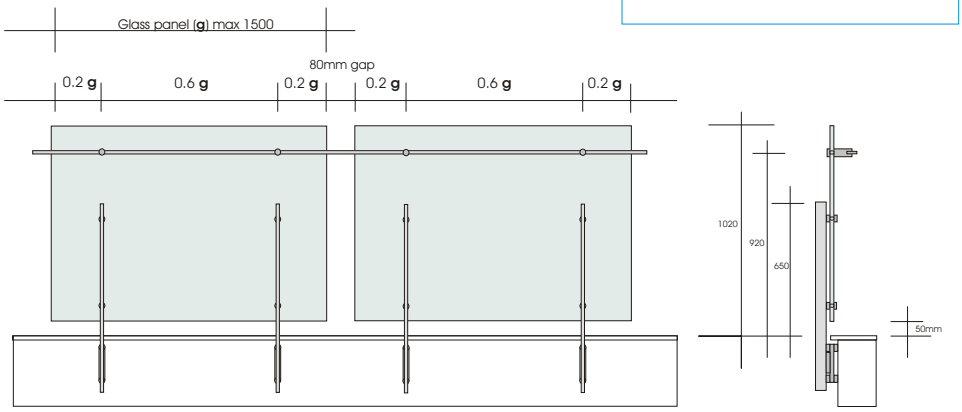


Timber framed structures- Fascia fixed - Engineered Timber

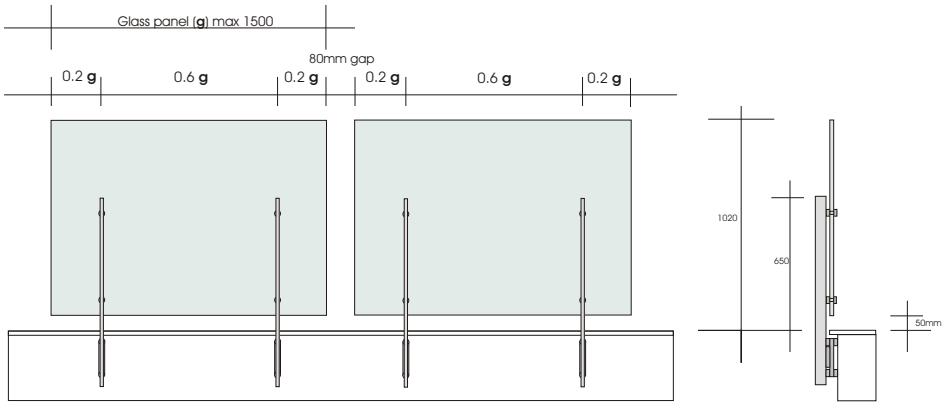
Notes

Site measure by *Thump Architectural Fittings* is to take place after Engineered Beams and flooring have been installed, and prior to the application of any fascia finishes such as Plasterboard or Fibre Cement. Should the beams be concealed prior to measure then any remedial works that may be required will be the clients responsibility. If this delays agreed installation dates then the client will be charged additional site visit charges in accordance with *Thump Architectural Fittings* Standard Terms and Conditions.

Installation will occur once the final finish has been applied



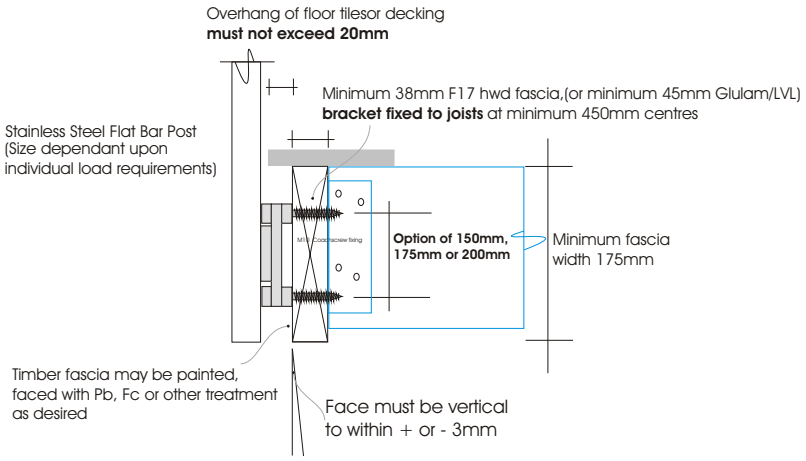
Fascia Fixed - With Toprail - Specify FF CT1



Fascia Fixed - No Toprail - Specify FF CT1
(Protecting a difference in height of less than 1000mm only)

Timber framed structures- Fascia fixed - Engineered Timber

FF CT2

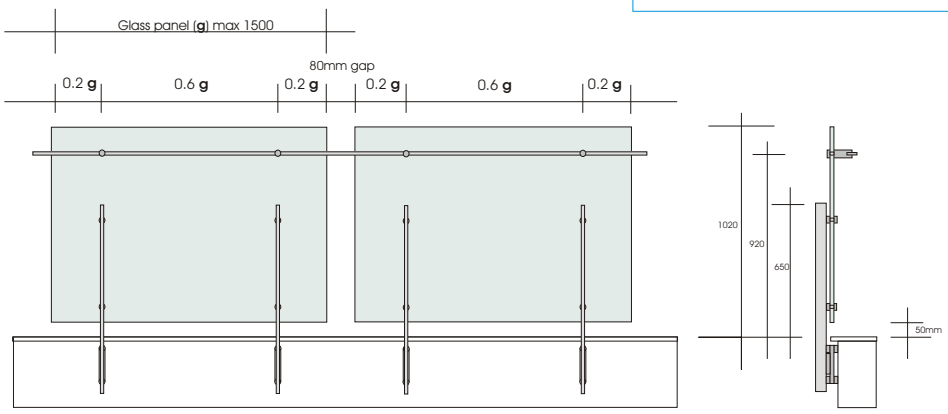


Timber framed structures- Fascia fixed - Solid Fascia/ LVL

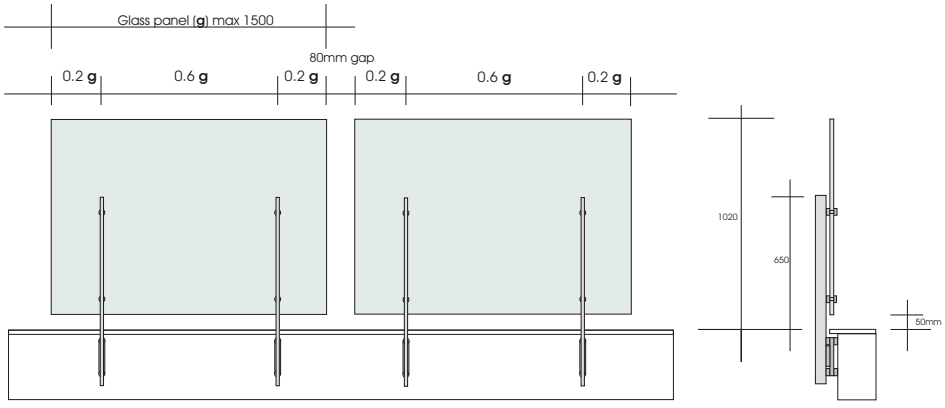
Notes

Site measure by *Thump Architectural Fittings* is to take place after Fascia and flooring have been installed in accordance with this detail. If fascia and flooring are not constructed as per this detail then any remedial works required will be the clients responsibility. If this delays agreed installation dates then the client will be charged additional site visit charges in accordance with *Thump Architectural Fittings* Standard Terms and Conditions.

Installation will occur once the final finish has been applied to the fascia. Installation can occur prior to painting if desired, although

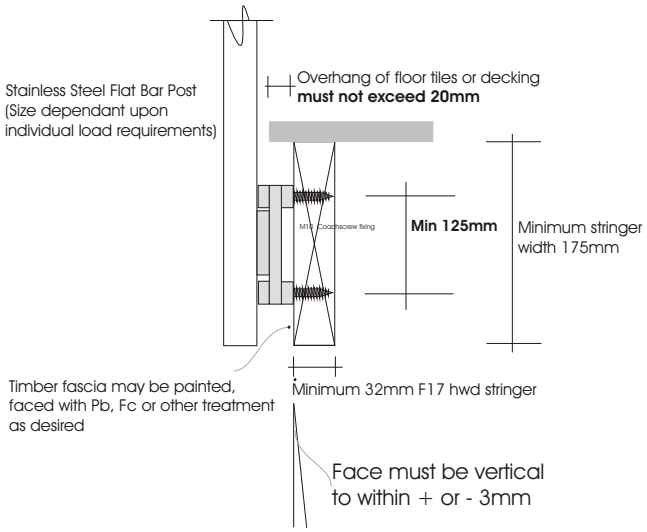


Fascia Fixed - With Toprail - Specify FF CT2



Fascia Fixed - No Toprail - Specify FF CT2
(Protecting a difference in height of less than 1000mm only)

FF CT2

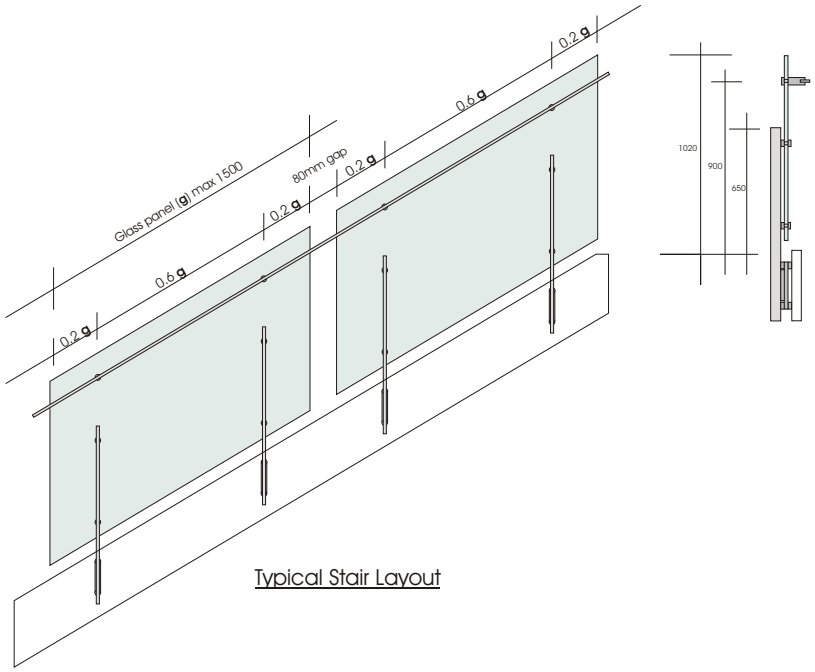


Solid Timber Stringers - Fascia Fixed - Typical Detail

Notes

Site measure by *Thump Architectural Fittings* is to take place once stairs and floor surfaces have been installed.

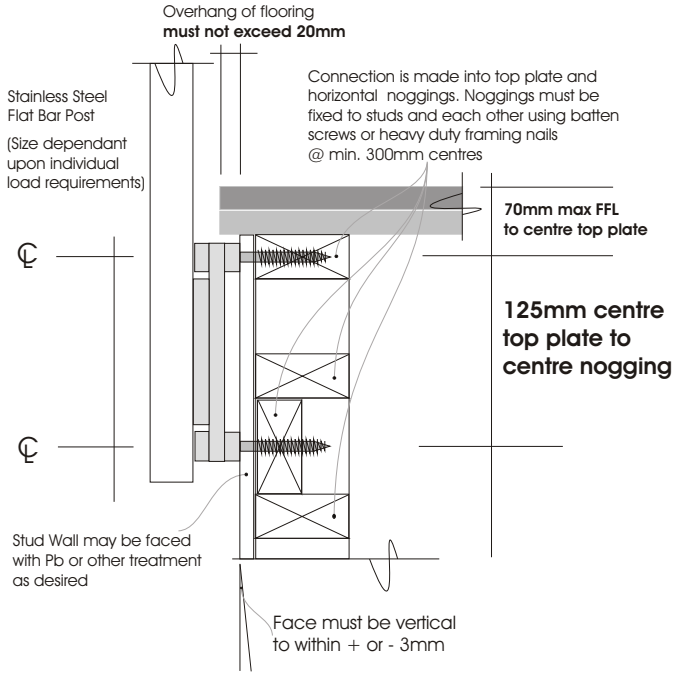
Installation will occur once the final finish has been applied to the fascia. Installation can occur prior to painting if desired, although this will render painting a slightly more difficult process.



Typical Stair Layout

Solid Timber Stringers - Fascia Fixed

FF CT3

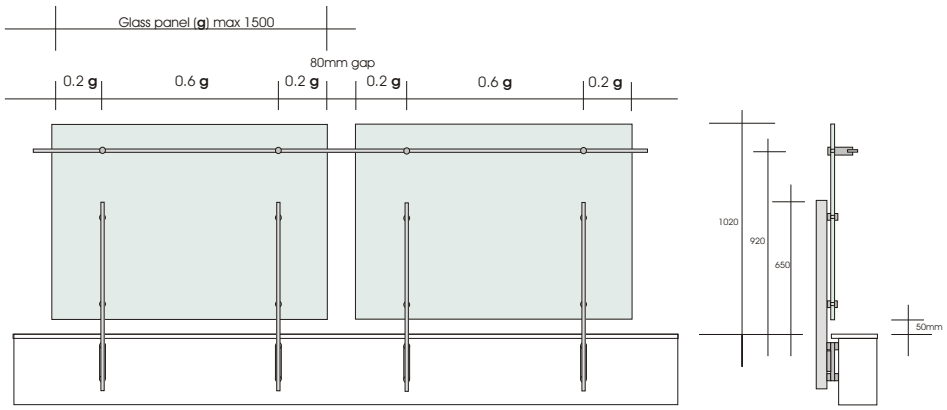


Timber framed structures- Fascia fixed - Stud Framing

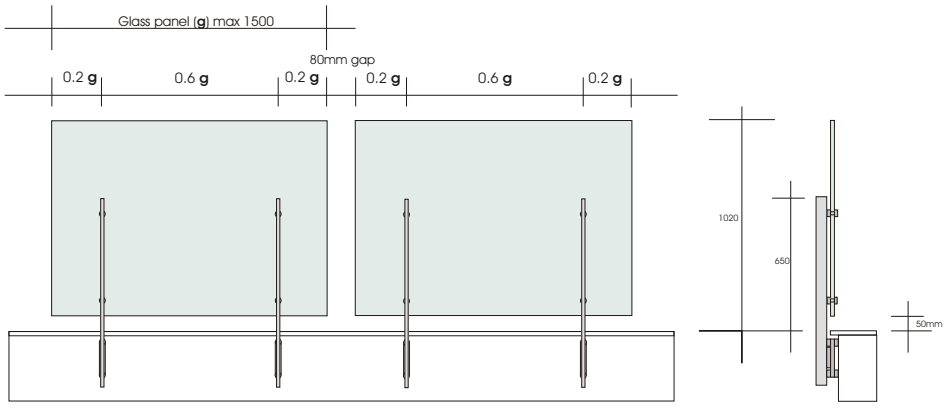
Notes

Site measure by *Thump Architectural Fittings* is to take place after noggings have been installed in accordance with this detail. If wall has been plastered prior to site measure then *Thump Architectural Fittings* takes no responsibility for location of studs and noggings, and any remedial works required will be the clients responsibility. If this delays agreed installation dates then the client will be charged additional site visit charges in accordance with *Thump Architectural Fittings* Standard Terms and Conditions.

Installation will occur once the wall has been plastered and painted. Installation can



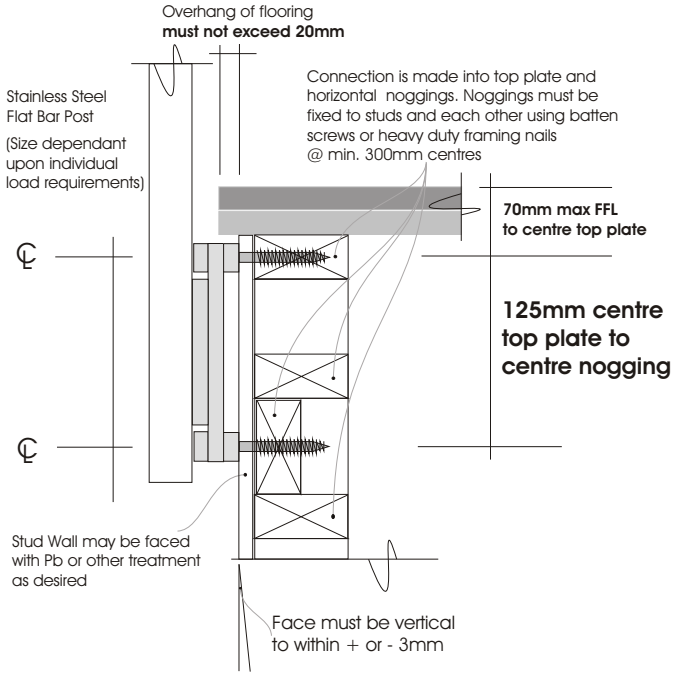
Fascia Fixed - With Toprail - Specify FF CT3



Fascia Fixed - No Toprail - Specify FF CT3
(Protecting a difference in height of less than 1000mm only)

Timber framed structures- Fascia fixed - Stud Framing

FF CT3

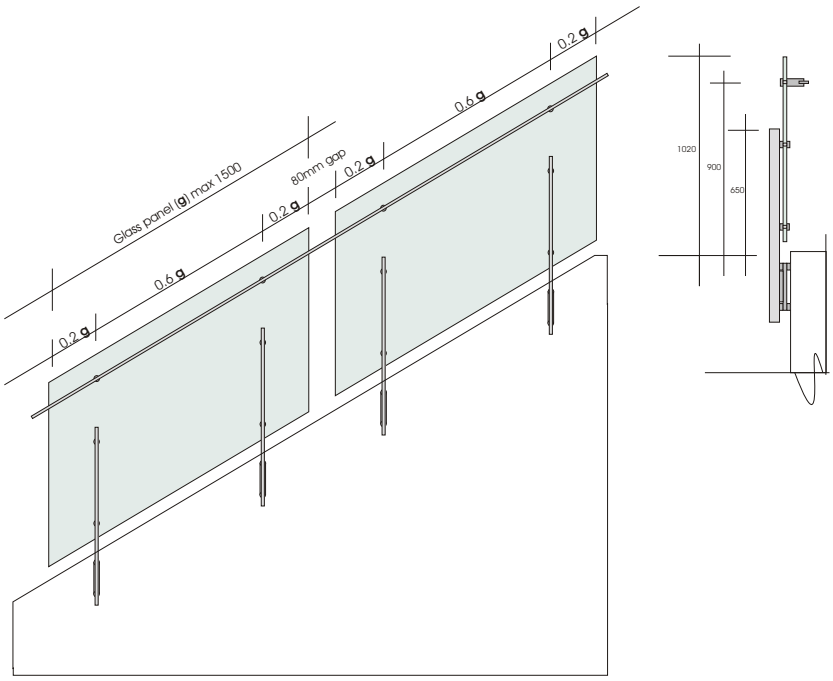


Timber framed structures- Fascia fixed - Stud Framing

Notes

Site measure by *Thump Architectural Fittings* is to take place after noggings have been installed in accordance with this detail. If wall has been plastered prior to site measure then *Thump Architectural Fittings* takes no responsibility for location of studs and noggings, and any remedial works required will be the clients responsibility. If this delays agreed installation dates then the client will be charged additional site visit charges in accordance with *Thump Architectural Fittings* Standard Terms and Conditions.

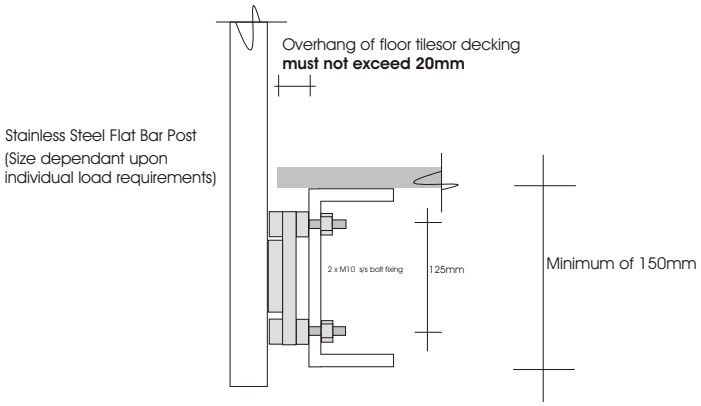
Installation will occur once the wall has been plastered and painted. Installation can occur prior to painting if



Typical Stair Layout

Side Mounted to Stud Framing

FF CS1

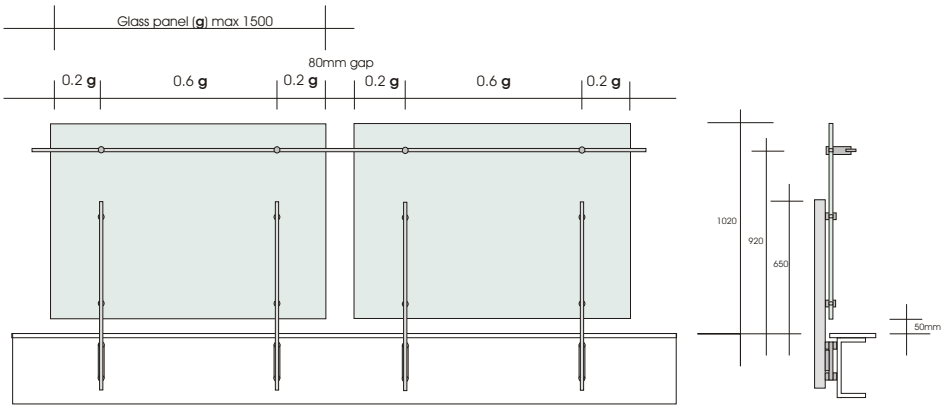


PFC Beam must be laterally braced to prevent buckling under imposed handrail loads.

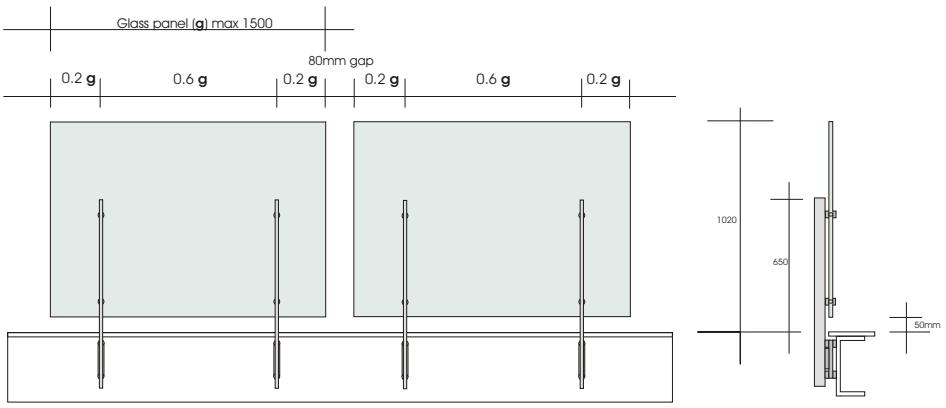
Notes

Site measure by *Thump Architectural Fittings* is to take place after beams and flooring have been installed in accordance with this detail.

PFC(facing inwards)- Fascia fixed - Typical Detail



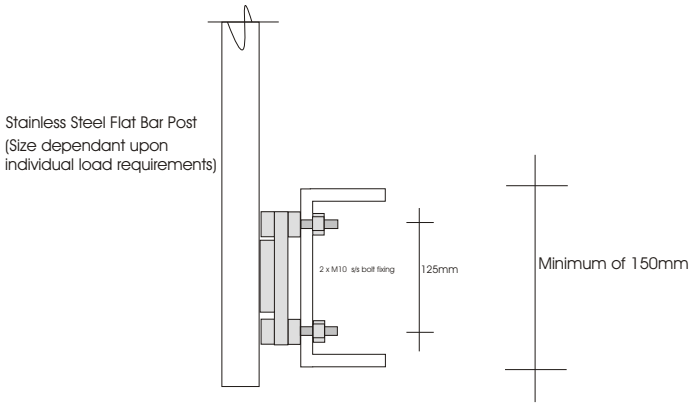
Fascia Fixed - With Toprail - Specify FF CS1



Fascia Fixed - No Toprail - Specify FF CS2
(Protecting a difference in height of less than 1000mm only)

Steel structures- Fascia fixed - PFC

FF CS1

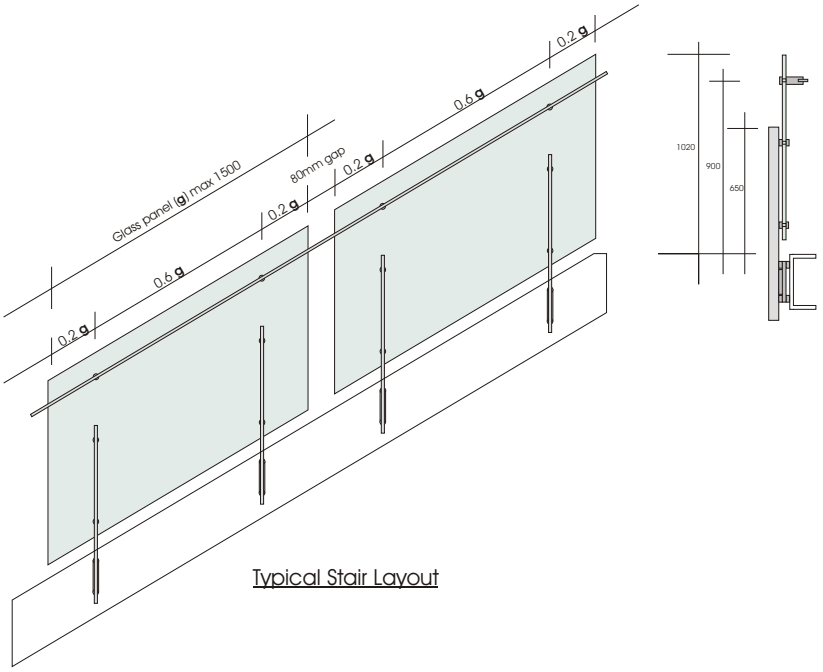


PFC Beam must be laterally braced to prevent buckling under imposed handrail loads.

PFC(facing inwards)- Fascia fixed - Typical Detail

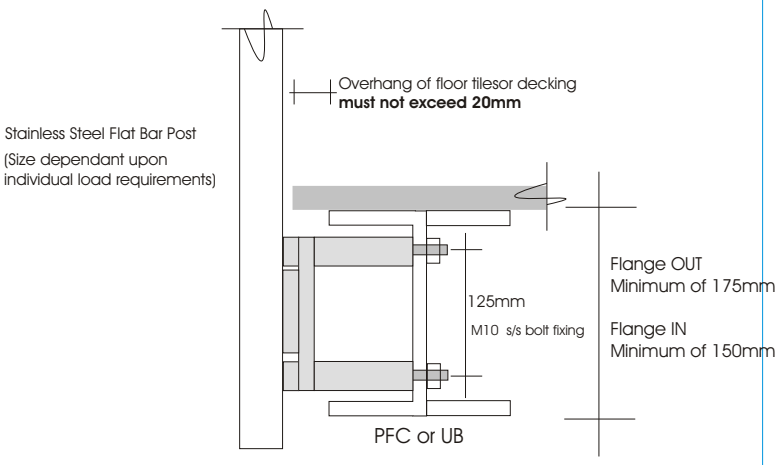
Notes

Site measure by *Thump Architectural Fittings* is to take place after stringers, treads and final floor surfaces have been installed.



Typical Stair Layout

PFC Stringers facing inwards - Fascia Fixed

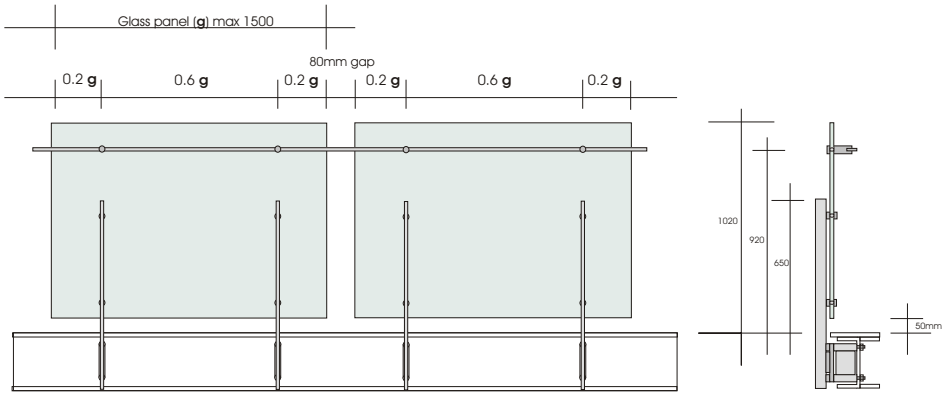


Beam must be laterally braced to prevent buckling under imposed handrail loads.

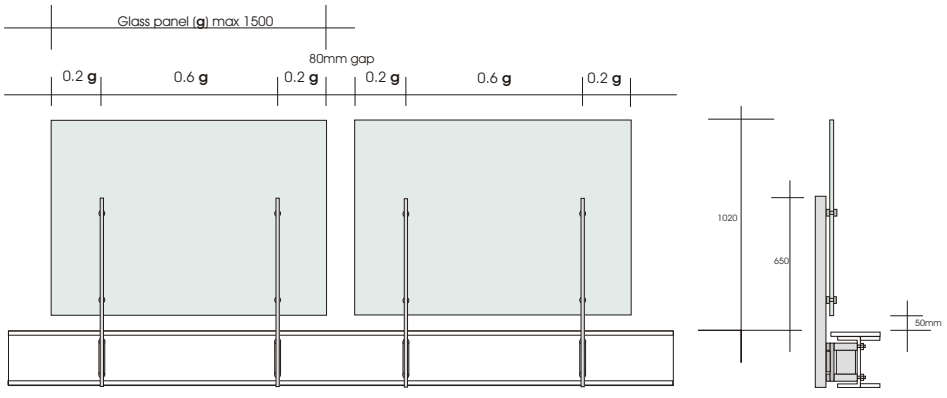
Notes

Site measure by *Thump Architectural Fittings* is to take place after beams and flooring have been installed in accordance with this detail

PFC(facing outwards) / UB- Fascia fixed - Typical Detail



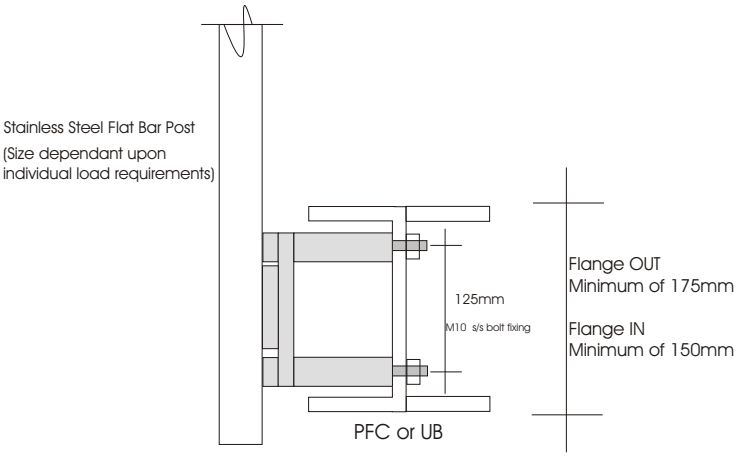
Fascia Fixed - With Toprail - Specify FF CS2



Fascia Fixed - No Toprail - Specify FF Cs2
(Protecting a difference in height of less than 1000mm only)

Steel structures- Fascia fixed - PFC(facing outwards /UB

FF CS2

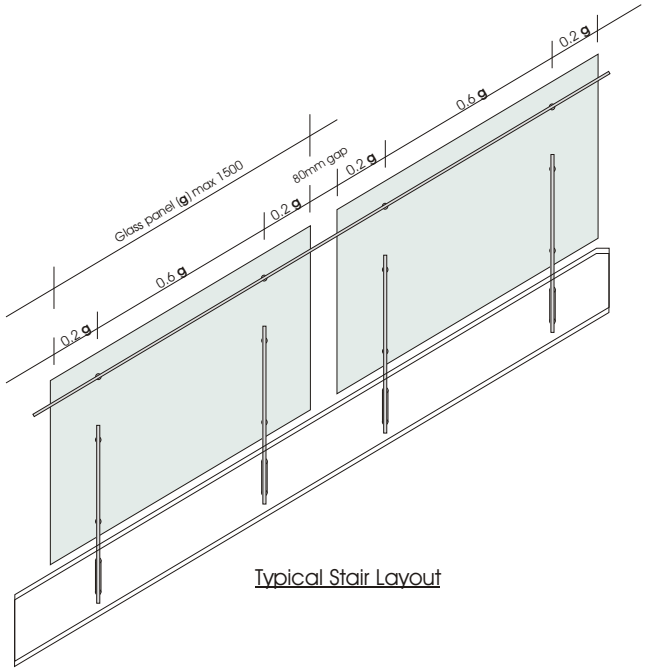


Beam must be laterally braced to prevent buckling under imposed handrail loads.

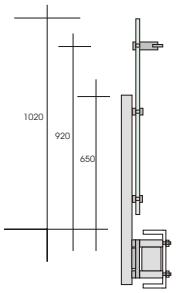
PFC(facing outwards) / UB- Fascia fixed - Typical Detail

Notes

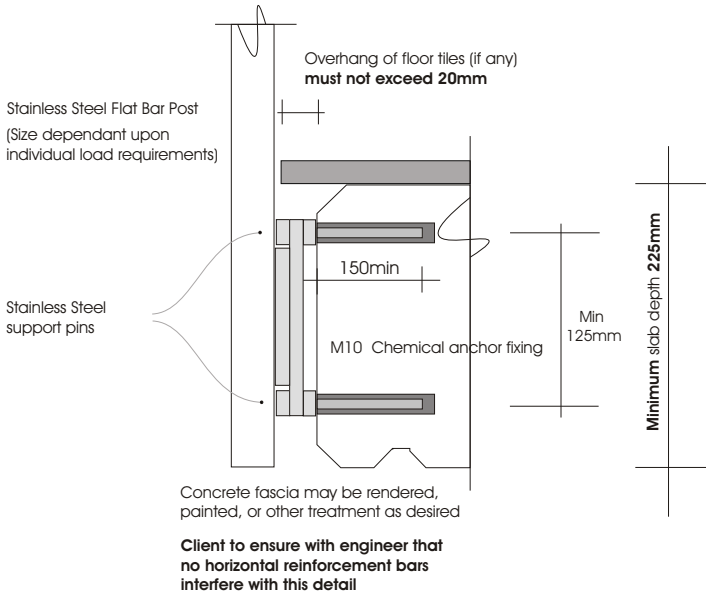
Site measure by *Thump Architectural Fittings* is to take place after stringers, treads and final floor surfaces have been installed.



Typical Stair Layout



PFC Stringers facing outwards/ Universal Beams - Fascia Fixed

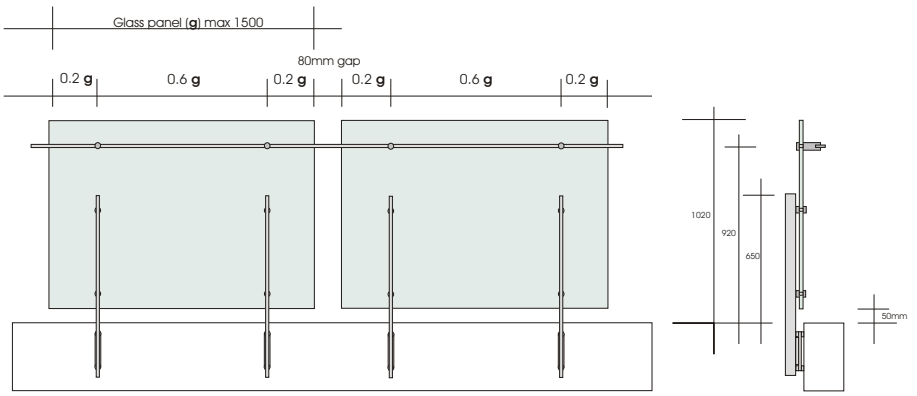


Concrete Slabs min. 200mm Fascia fixed - Typical Detail

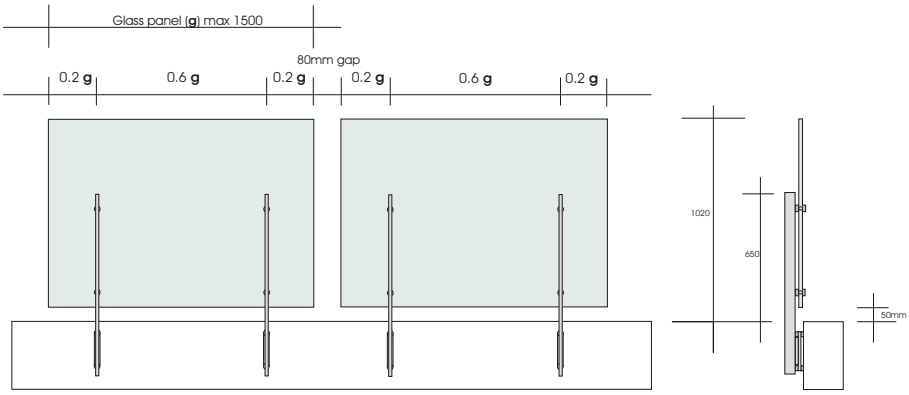
Notes

Site measure by *Thump Architectural Fittings* is to take place after flooring has been laid. If concrete is to have applied finishes such as Plasterboard or Fibre Cement then measure must take place prior to their application.

Installation can occur at any stage after flooring has been laid,(typically when fascia of slab has final finish applied) although if installation is desired prior to painting or rendering then these two procedures will have to be done with handrail brackets in place.

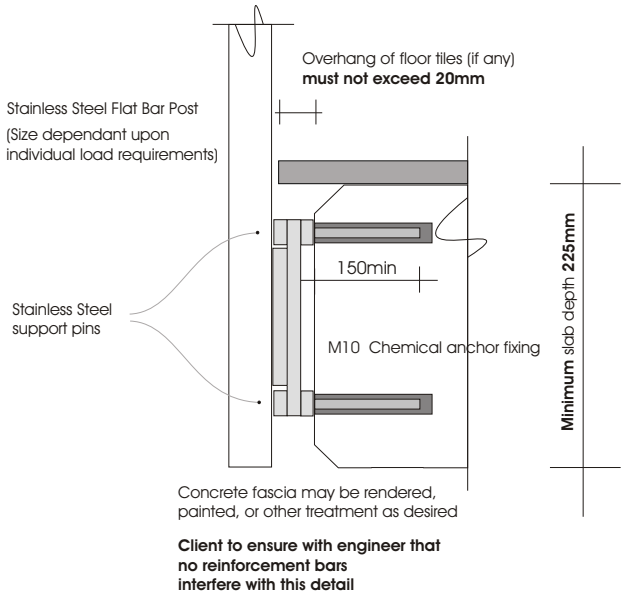


Fascia Fixed - With Toprail - Specify FF CC20



Fascia Fixed - No Toprail - Specify FF CC20
(Protecting a difference in height of less than 1000mm only)

Concrete Slabs (min 175mm)- Fascia fixed

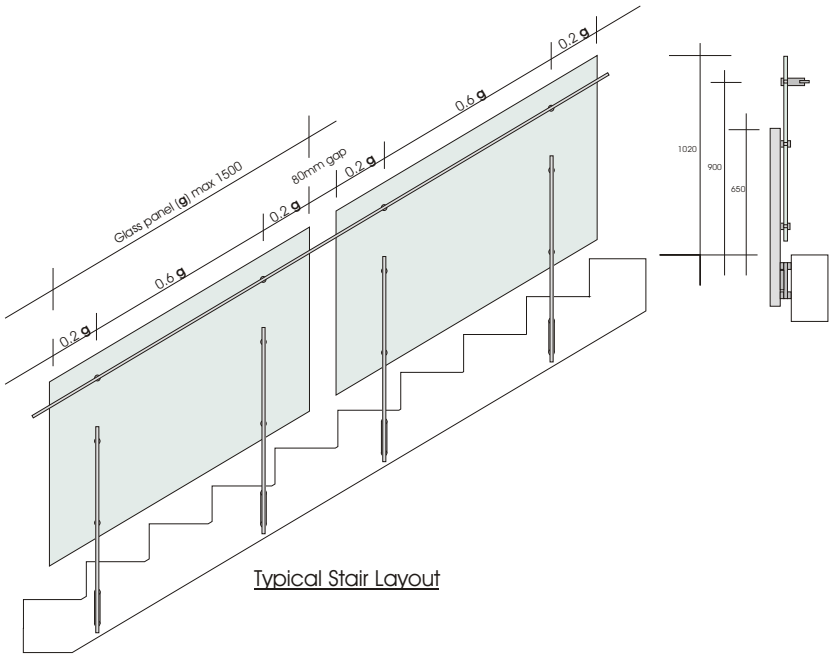


Concrete Slab Stairs - Fascia fixed - Typical Detail

Notes

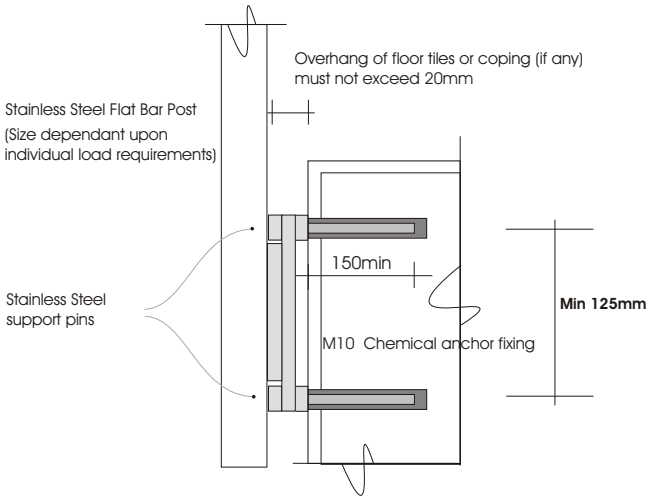
Site measure by *Thump Architectural Fittings* is to take place after stair slab has been poured and tread material has been laid. If concrete fascia is to have applied finishes such as Plasterboard or Fibre Cement then measure must take place prior to their application.

Installation can occur at any stage after measuring, (typically when fascia of slab has final finish applied) although if installation is desired prior to painting or rendering then these two procedures will have to be done with handrail brackets in place.



Typical Stair Layout

Concrete Stairs- Fascia fixed

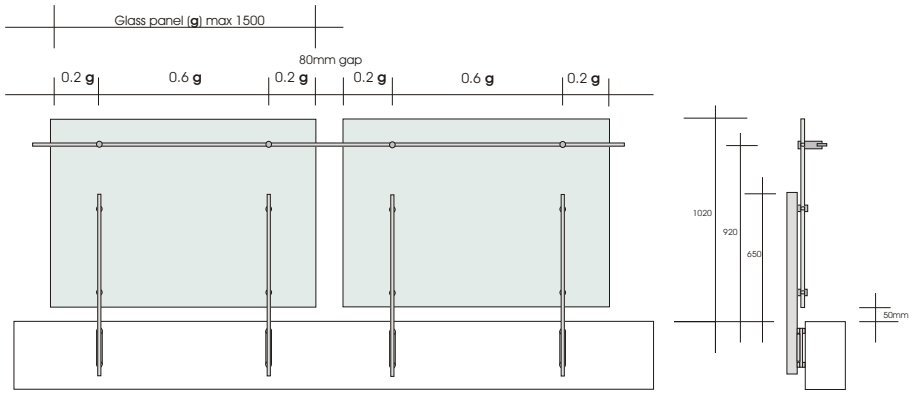


Reinforced Blockwork Fascia fixed - Typical Detail

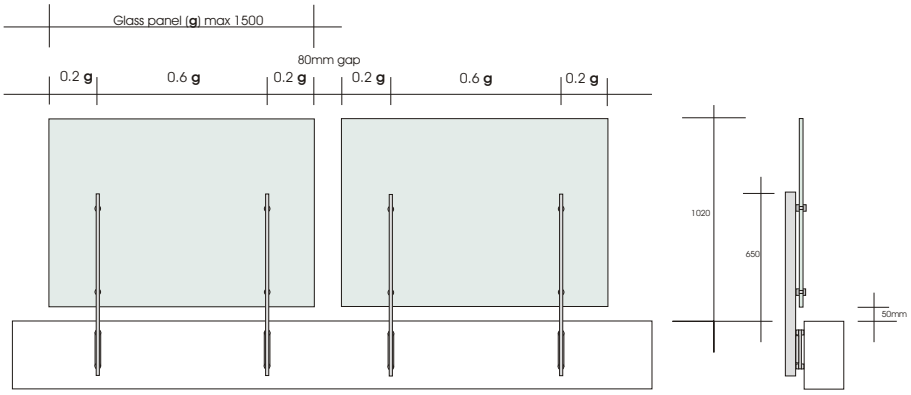
Notes

Site measure by *Thump Architectural Fittings* is to take place after blockwork has been laid and rendered. If blockwork is to have applied finishes such as Plasterboard or Fibre Cement then measure must take place prior to their application.

Installation can occur when final finish has been applied, although if installation is desired prior to painting or rendering then these two procedures will have to be done with handrail brackets in place.



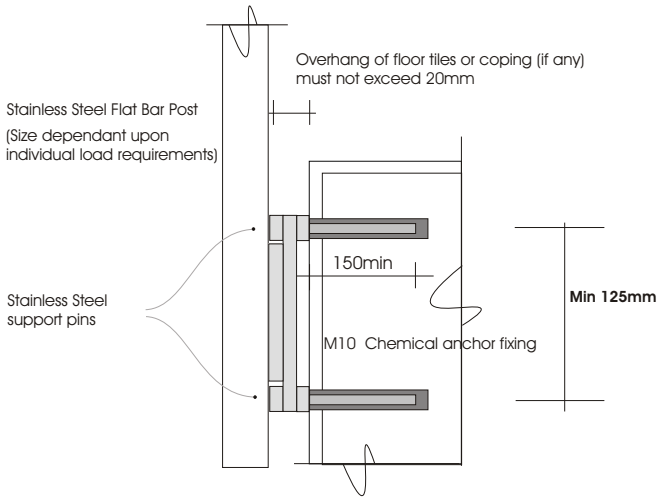
Fascia Fixed - With Toprail - Specify FF CB1



Fascia Fixed - No Toprail - Specify FF CB1
(Protecting a difference in height of less than 1000mm only)

Reinforced Blockwork- Fascia fixed

FF CB1

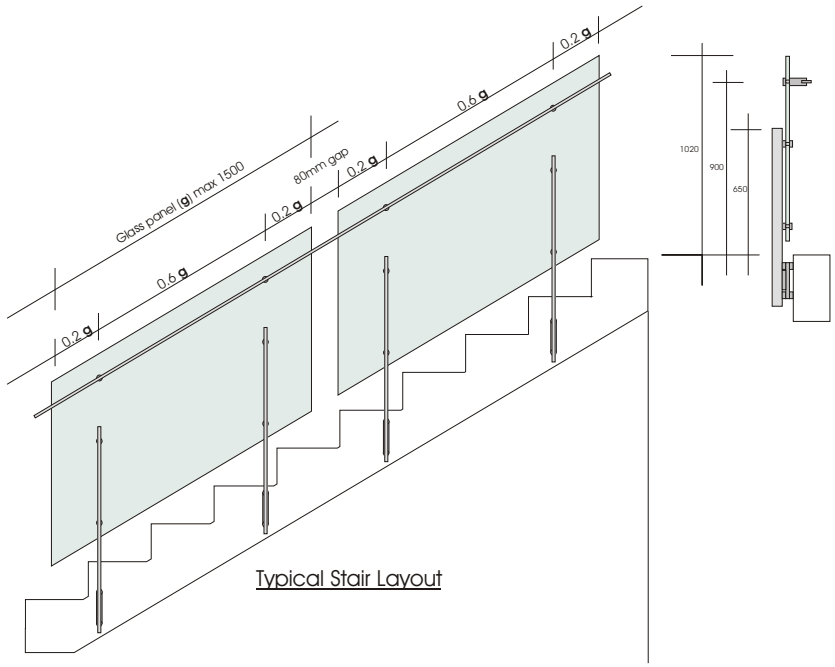


Reinforced Blockwork Fascia fixed - Typical Detail

Notes

Site measure by *Thump Architectural Fittings* is to take place after stair slab has been poured and tread material has been laid. If concrete fascia is to have applied finishes such as Plasterboard or Fibre Cement then measure must take place prior to their application.

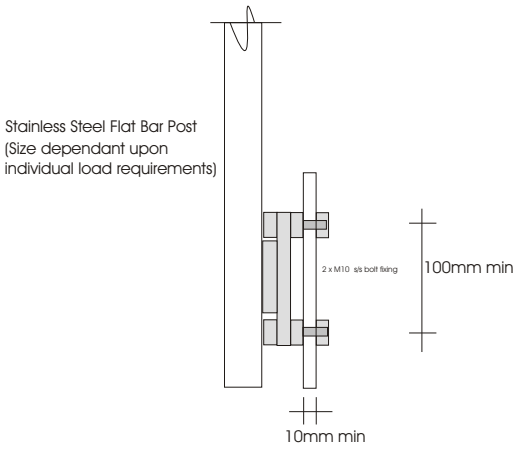
Installation can occur at any stage after measuring, (typically when fascia of slab has final finish applied) although if installation is desired prior to painting or rendering then these two procedures will have to be done with handrail brackets in place.



Typical Stair Layout

Concrete Stairs- Fascia fixed

FF CS3



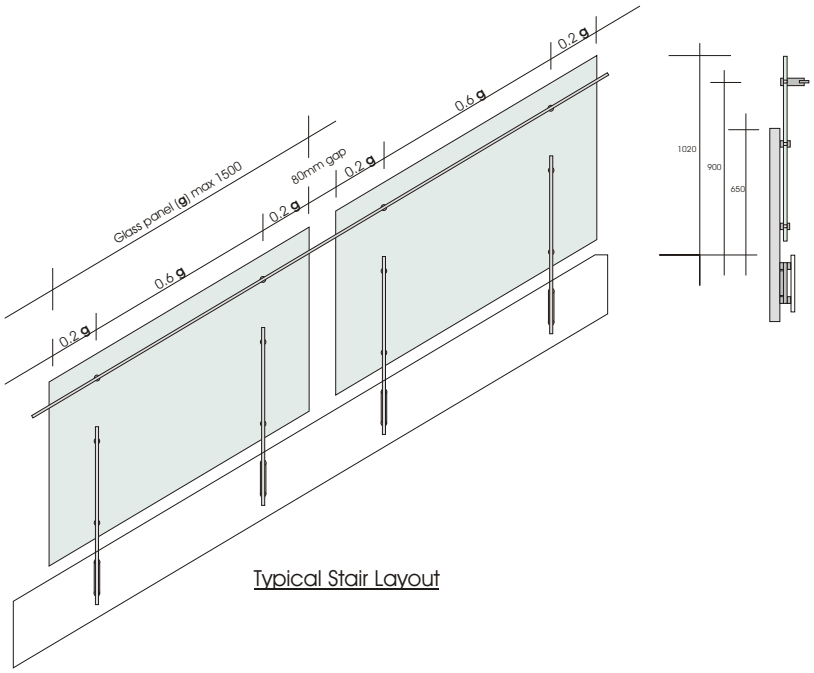
Stringer must be laterally braced to prevent buckling under imposed handrail loads.

Flat Bar Stringer - Fascia fixed - Typical Detail

Notes

Site measure by *Thump Architectural Fittings* is to take place after stringers, treads and final floor surfaces have been installed, and prior to any ceiling works which may restrict access to the rear of the stringer. If rear of stringer has been concealed then any remedial works required will be the clients responsibility. If this delays agreed installation dates then the client will be charged additional site visit charges in accordance with *Thump Architectural Fittings* Standard Terms and Conditions.

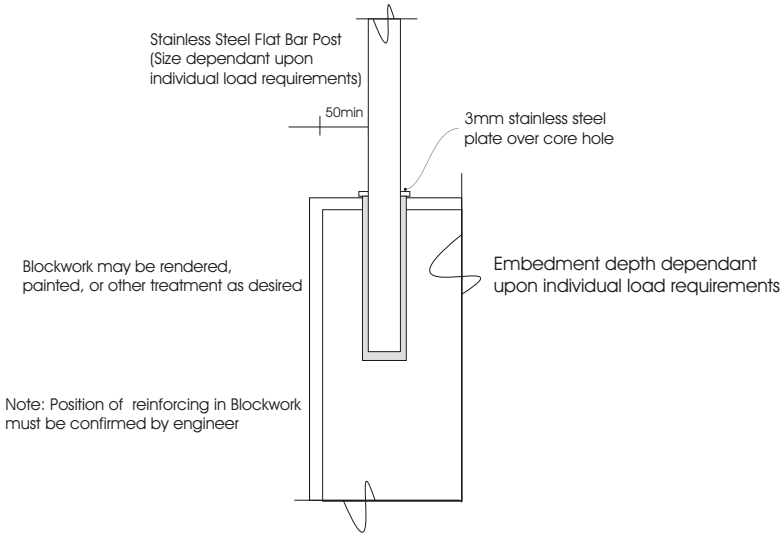
Installation will occur prior to any concealment of the rear of the stringer.



Typical Stair Layout

Flat Bar Stringers - Fascia Fixed

CF CB1



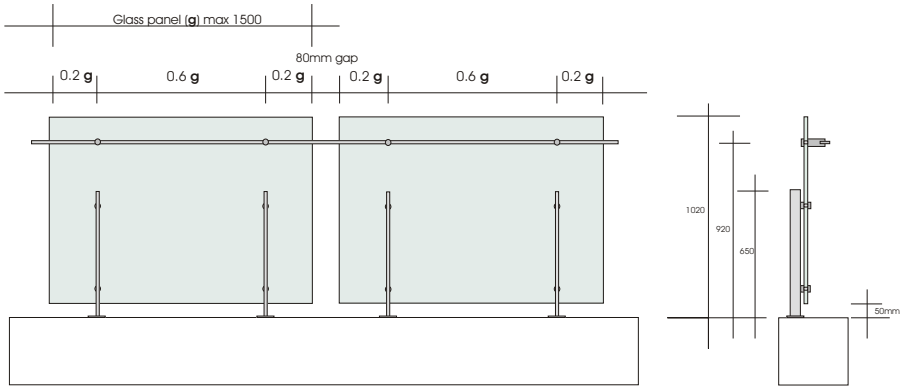
Client to ensure with engineer that no horizontal reinforcement bars are affected by this detail

Blockwork Walls- Typical Detail

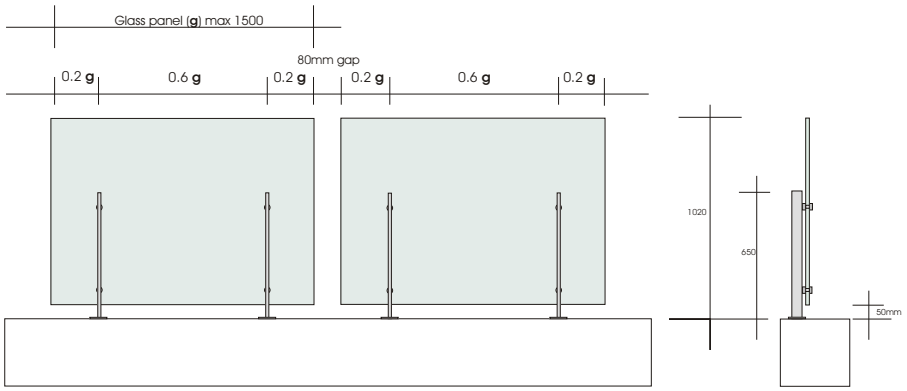
Notes

Site measure by *Thump Architectural Fittings* is to take place after Blockwork has been laid and rendered. If Blockwork is to have applied finishes such as Plasterboard or Fibre Cement then measure must take place prior to their application.

Installation occurs when final finishes have been applied.



Core Drilled - With Toprail

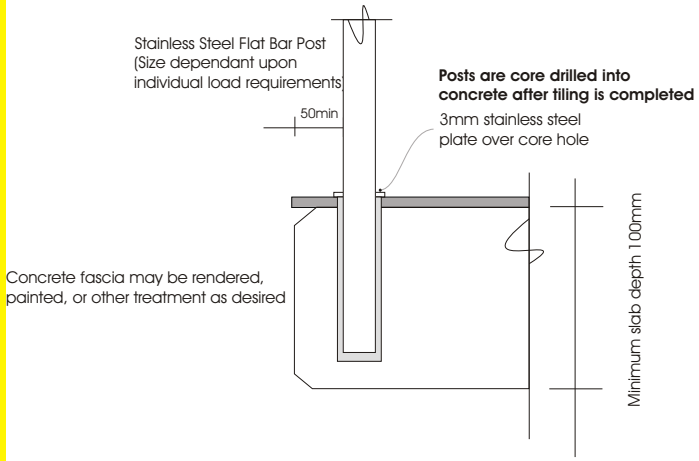


Core Drilled - No Toprail

(Protecting a difference in height of less than 1000mm only)

Reinforced Blockwork Walls - Core Drilled

CF CC12



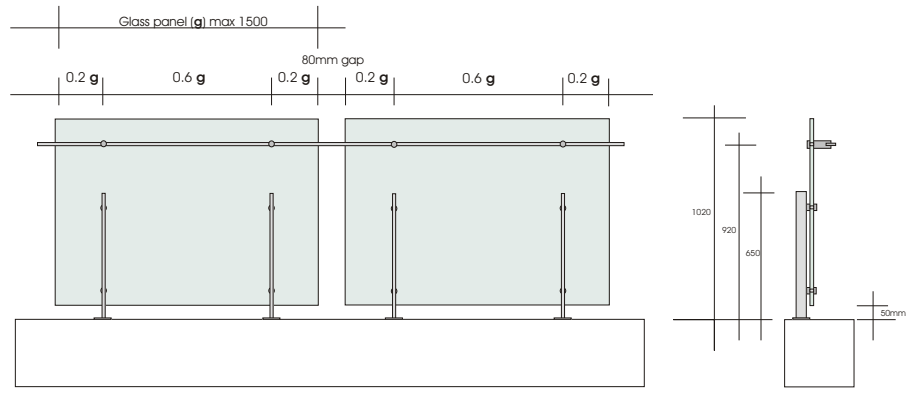
Client to ensure with engineer that no horizontal reinforcement bars are affected by this detail

Concrete Slabs- Typical Detail

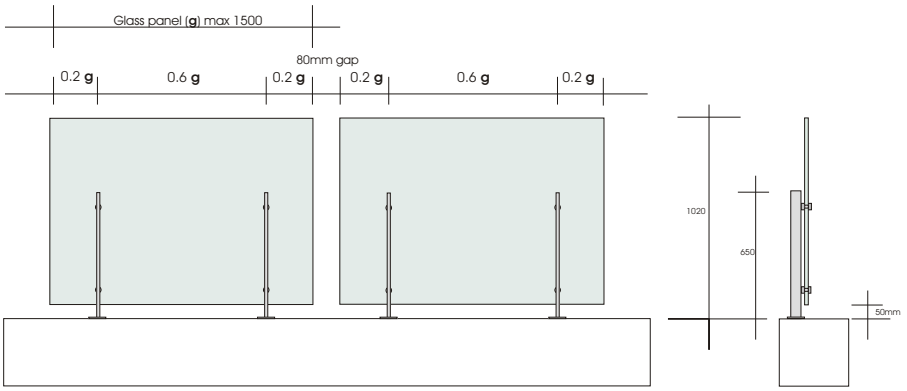
Notes

Site measure by *Thump Architectural Fittings* is to take place after Slab has been poured and tiled. If concrete is to have applied finishes such as Plasterboard or Fibre Cement then measure must take place prior to their application.

Installation occurs when final finishes have been applied.



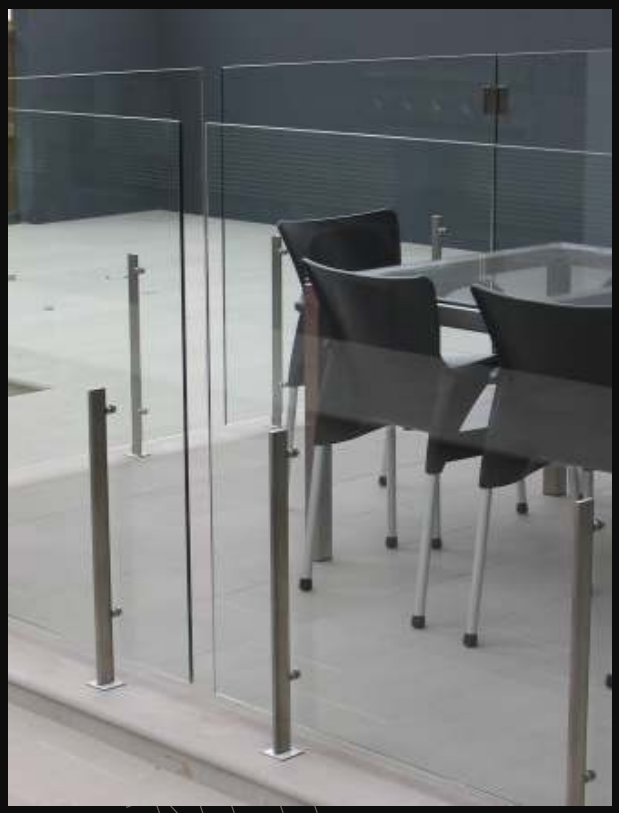
Core Drilled - With Toprail



Core Drilled - No Toprail

(Protecting a difference in height of less than 1000mm only)

Concrete Slabs - Core Drilled



Pool Fencing

X1 series Pool Fencing

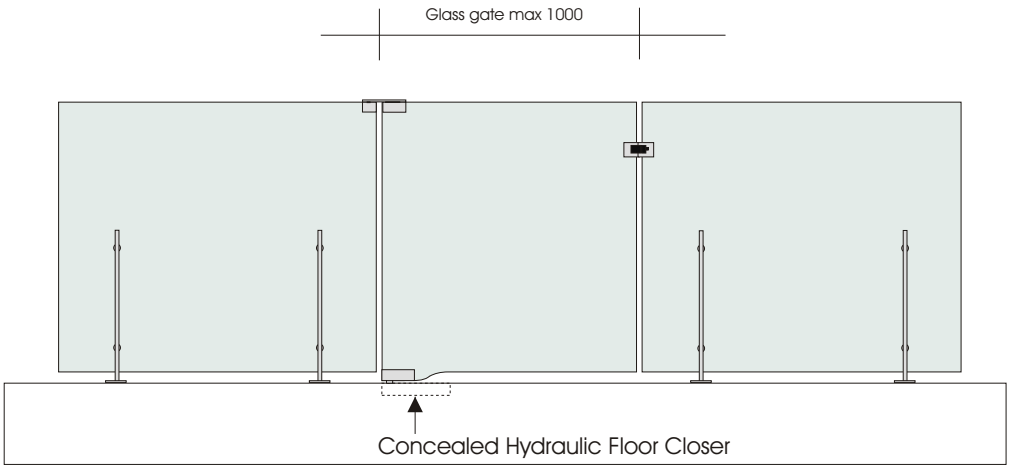
Floor Structure	Compatible Base Connection Details	
Timber	As per details for Balustrade and Appendix A	See App. A Page 30
Steel	As per details for Balustrade and Appendix A	See App. A Page 30
Concrete	As per details for Balustrade and Appendix A	See App. A Page 30
Blockwork	As per details for Balustrade and Appendix A	See App. A Page 30

Pool Fencing Design Consideration

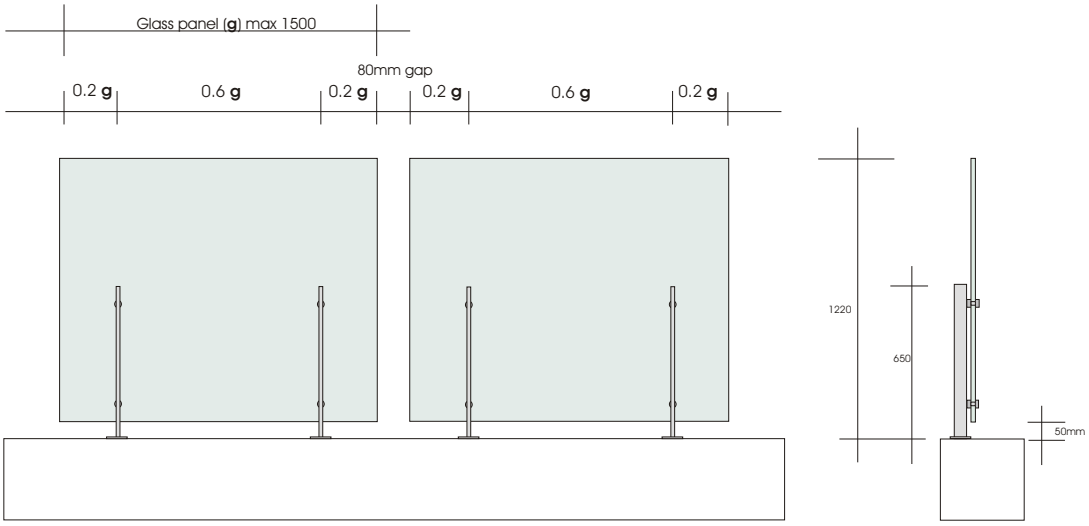
Legislation stipulates that Pool Fencing with metal posts (or any metal object that does not fit within a 100mm square box) within two metres of the waters edge are required to be electrically connected and earthed to avoid injury resulting from voltage differences in certain instances of electrical fault. This adds considerable cost and if possible we recommend that this be considered at design stage and fencing be located at distances greater than 2 metres from the water

Notes

Gate layout shown is notional. Gates may be placed against walls, in the centre of panelling runs or on corners as preferred.



Typical Pool Fence Gate



Typical Pool Fencing - Core drilled

Pool Fencing - Appendix A (to be read in conjunction with relevant balustrade detail)