



# Typical Details

# Enviro™

## AAC Floor Panel System

VERSION : JULY 2023 - v2

DWG NO.	DRAWING TITLE
ENVIRO - 75 MM AAC FLOOR PANEL - TIMBER	
01	DT01 TYPICAL PANEL LAYOUT -TIMBER
02	DT02 , DT03 TYPICAL PANEL FIXING DETAILS
03	DT04 , DT05 TYPICAL PANEL JOINTS
04	DT06 TYPICAL PENETRATION DETAILS
05	DT07, DT08 TYPICAL BRACE WALL FIXING
06	DT09, DT10 TYPICAL INTERNAL WALLS
07	DT12, DT13 TYPICAL CONTROL JOINTS

### APPENDIX

A1	TYPICAL FLOOR PLAN - TIMBER
A2	SPAN TABLE 1
A3	SPAN TABLE 2
A4	SPAN TABLE 3 (a)
A5	SPAN TABLE 3 (b)

**REFERENCES :** THIS DRAWING IS TO BE READ IN CONJUNCTION WITH MASON DESIGN AND INSTALLATION GUIDE FOR ENVIRO AAC FLOOR PANEL SYSTEM

#### DISCLOSURE NOTE:

The information provided is for guide only and must be used along side professional architectural/structural design. Professional architectural/structural design takes preference with any conflicting areas of the building design.

All documents or data downloaded from www.mpb.co.nz or emailed from MASONS Plastabrick Limited is the intellectual property of MASONS Plastabrick Limited. MASONS Plastabrick Limited takes no responsibility for any of the documents or data being used for any other purpose than for professional architectural/structural design.



**MASONS**  
Designed Smart, Built Tough.

MASONS TYPICAL DETAIL  
ENVIRO - 75 MM AAC FLOOR PANEL - TIMBER  
DT01 TYPICAL PANEL LAYOUT -TIMBER

Scale  
1 : 25 @A3

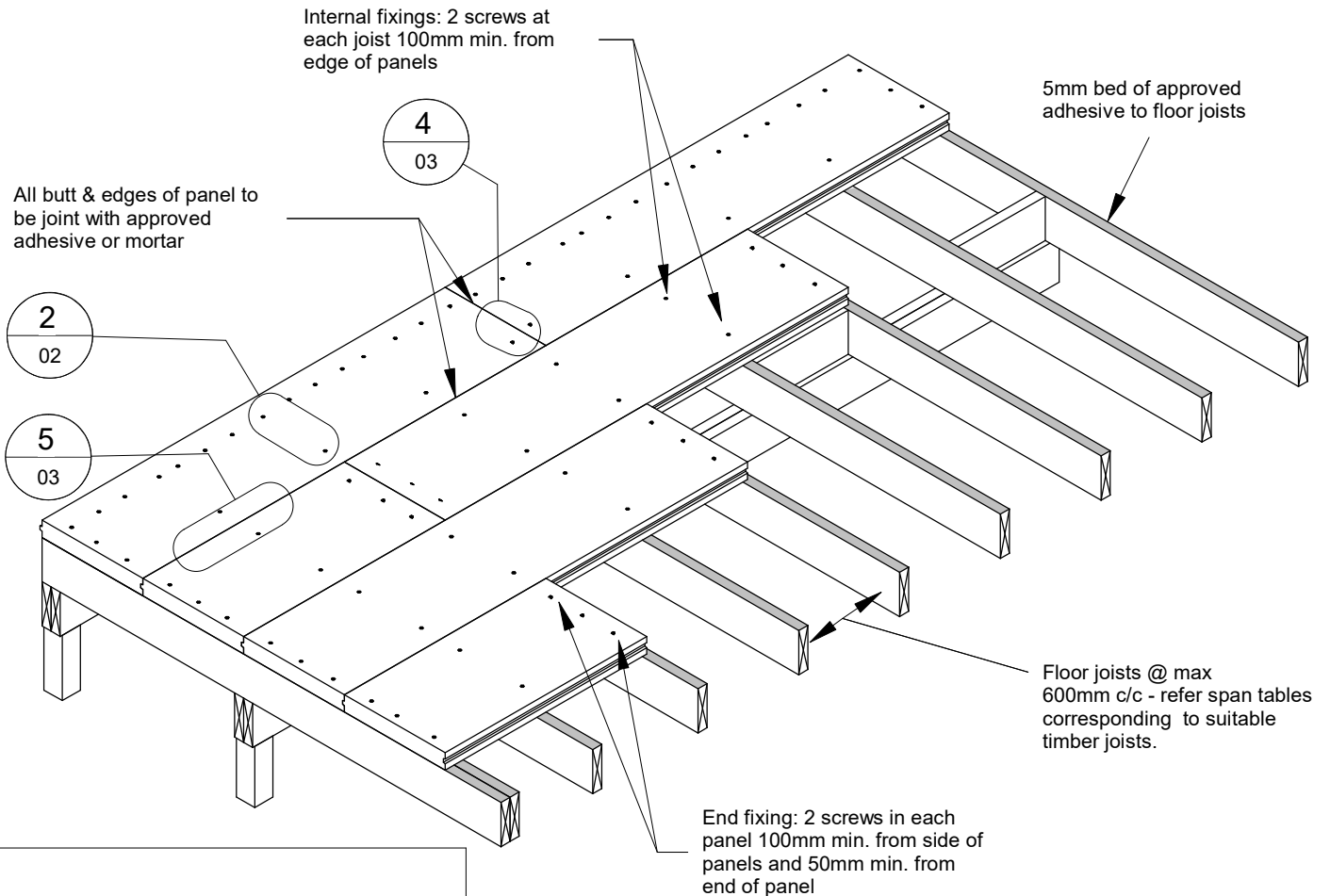
Date

Drawing No.

Version

01

JULY 2024 - v2



**NOTE:**

**Panel orientation**

1. Set out joists to suit 2200mm lengths of Enviro Panel – see span tables in the appendix. Place panels at right angles to the floor joists
2. Lay sheets in a staggered – brick bond pattern
3. Panels must be supported by at least two joists
4. Panels must be butt jointed on joists or blocking

**Adhesives**

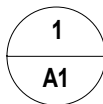
5. Panels must be bonded or jointed edge to edge using one of three adhesives to be selected by the designer.
  - Enviro Glue Mortar
  - Soudal Gorilla Grip 2 HR PU construction adhesive (or similar)
  - Soudal Sudabond adhesive foam
6. The panels are glued to the timber floor framing using either
  - Soudal Gorilla Grip 2 HR PU construction adhesive (or similar)
  - Soudal Sudabond adhesive foam

**Sealants and Foam Filler**

7. Use a premium MS sealant such as Soudal MS sealant, and Gorilla Pro range of expanding PU foams. **These PU foams are for gap filling only.**

**Fixing Screws**

8. Use 14g 10 x 100 Bugle Head (Class 3) Screws- 2 per joist ( all locations other than note 9 & 10)
9. Use 14g 10 x 120 Bugle Head (Class 3) screws - 3 per joist at short ends and 150 crs around openings.
10. Use 14g 10 x 150 Bugle Head (Class 3) screws @ 150 crs at floor perimeter, brace walls, and internal walls- fixing through the bottom plates



**TYPICAL PANEL LAYOUT (TIMBER)**

1 : 25



**MASONS**  
Designed Smart, Built Tough.

MASONS TYPICAL DETAIL  
ENVIRO - 75 MM AAC FLOOR PANEL - TIMBER  
DT02 , DT03 TYPICAL PANEL FIXING DETAILS

Scale  
1 : 10 @A3

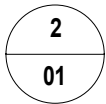
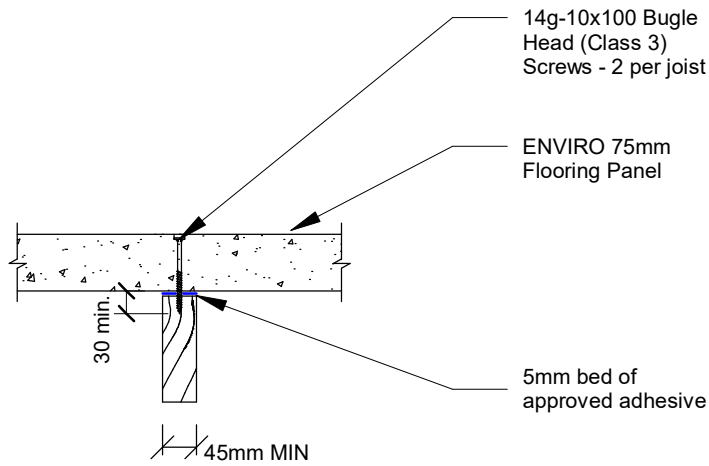
Date

Drawing No.

02

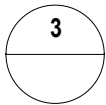
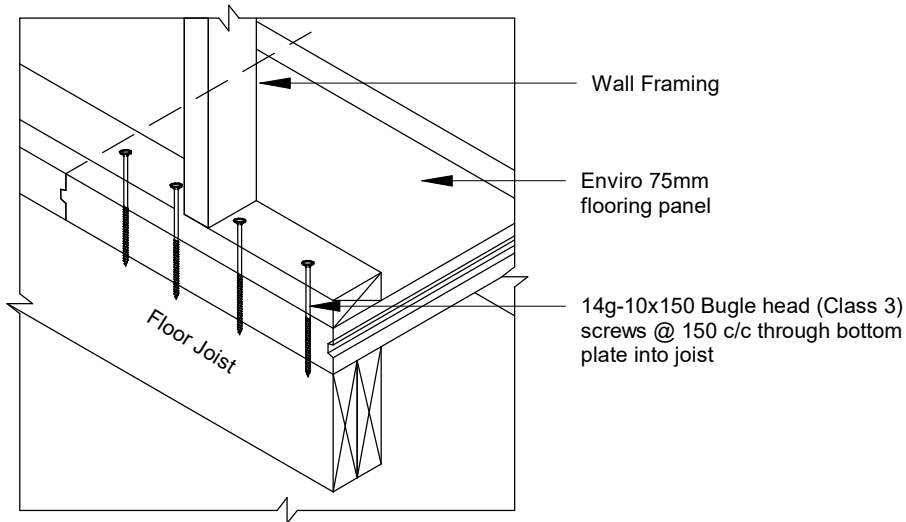
Version

JULY 2024 - v2



## TYPICAL PANEL TO JOIST FIXING

1 : 10



## TYPICAL PANEL TO WALL FIXING

1 : 10



MASONS TYPICAL DETAIL  
 ENVIRO - 75 MM AAC FLOOR PANEL - TIMBER  
 DT04 , DT05 TYPICAL PANEL JOINTS

Scale  
 1 : 10 @A3

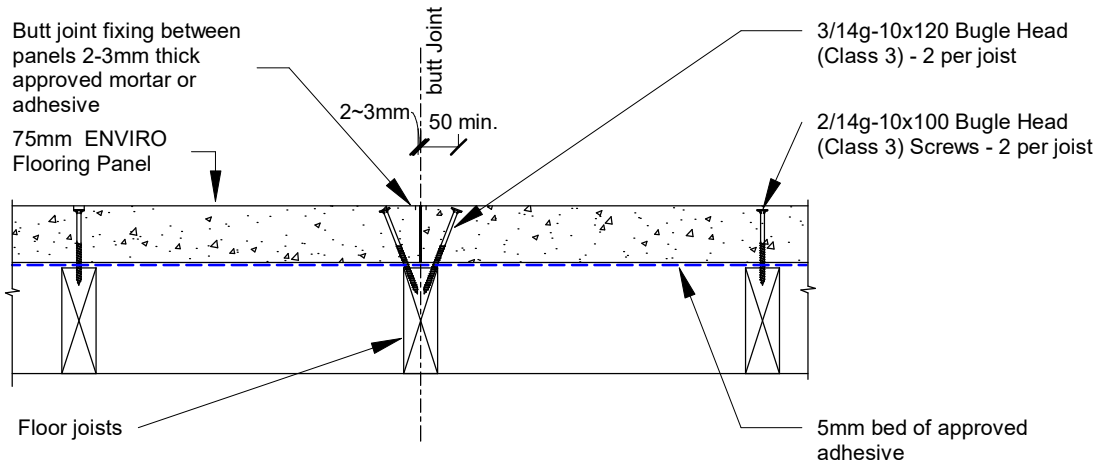
Date

Drawing No.

Version

03

JULY 2024 - v2

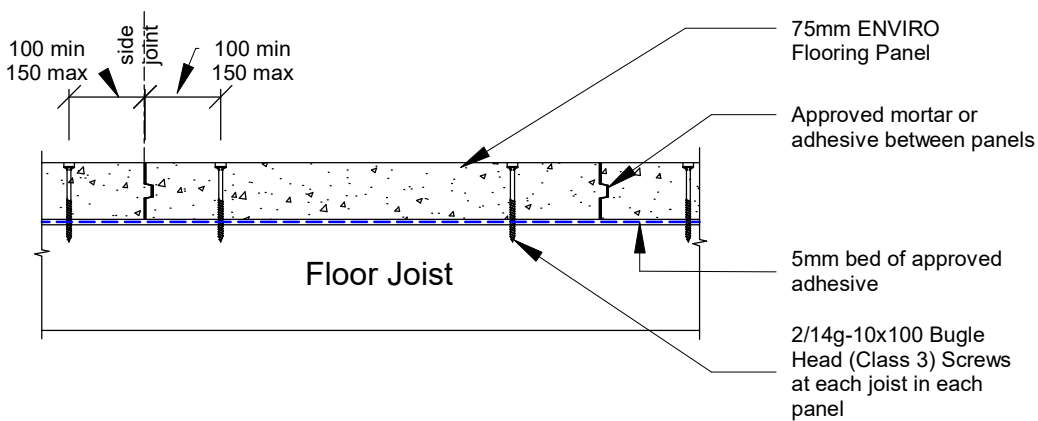


**NB:** ENVIRO Panel to be supported on a minimum of 2 joists

4  
 01

## TYPICAL PANEL JOINT AT SHORT EDGE

1 : 10



5  
 01

## TYPICAL PANEL JOINT AT LONG EDGE

1 : 10

Also refer detail 13 for control joints.



**MASONS**  
Designed Smart, Built Tough.

MASONS TYPICAL DETAIL  
ENVIRO - 75 MM AAC FLOOR PANEL - TIMBER  
DT06 TYPICAL PENETRATION DETAILS

Scale  
1 : 10 @A3

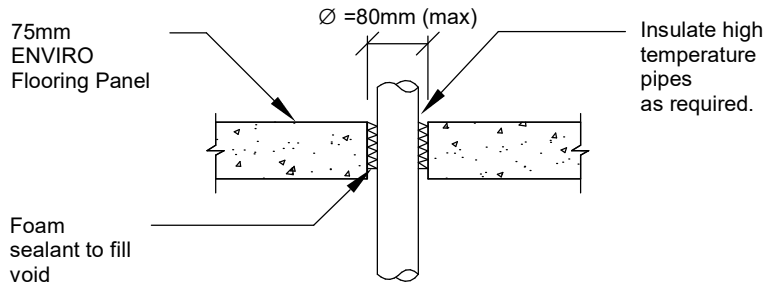
Date

Drawing No.

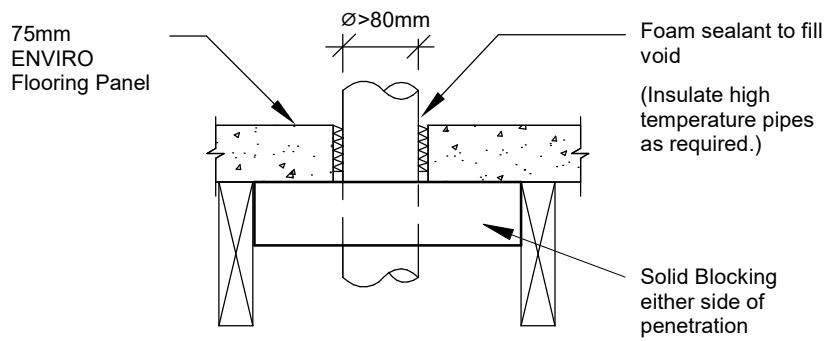
04

Version

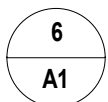
JULY 2024 - v2



**CASE 1 : PIPE Ø 80MM MAX.**



**CASE 2 : PIPE Ø > 80MM**



**TYPICAL PENETRATION**

1 : 10



MASONS TYPICAL DETAIL  
 ENVIRO - 75 MM AAC FLOOR PANEL - TIMBER  
 DT07, DT08 TYPICAL BRACE WALL FIXING

Scale  
 1 : 10 @A3

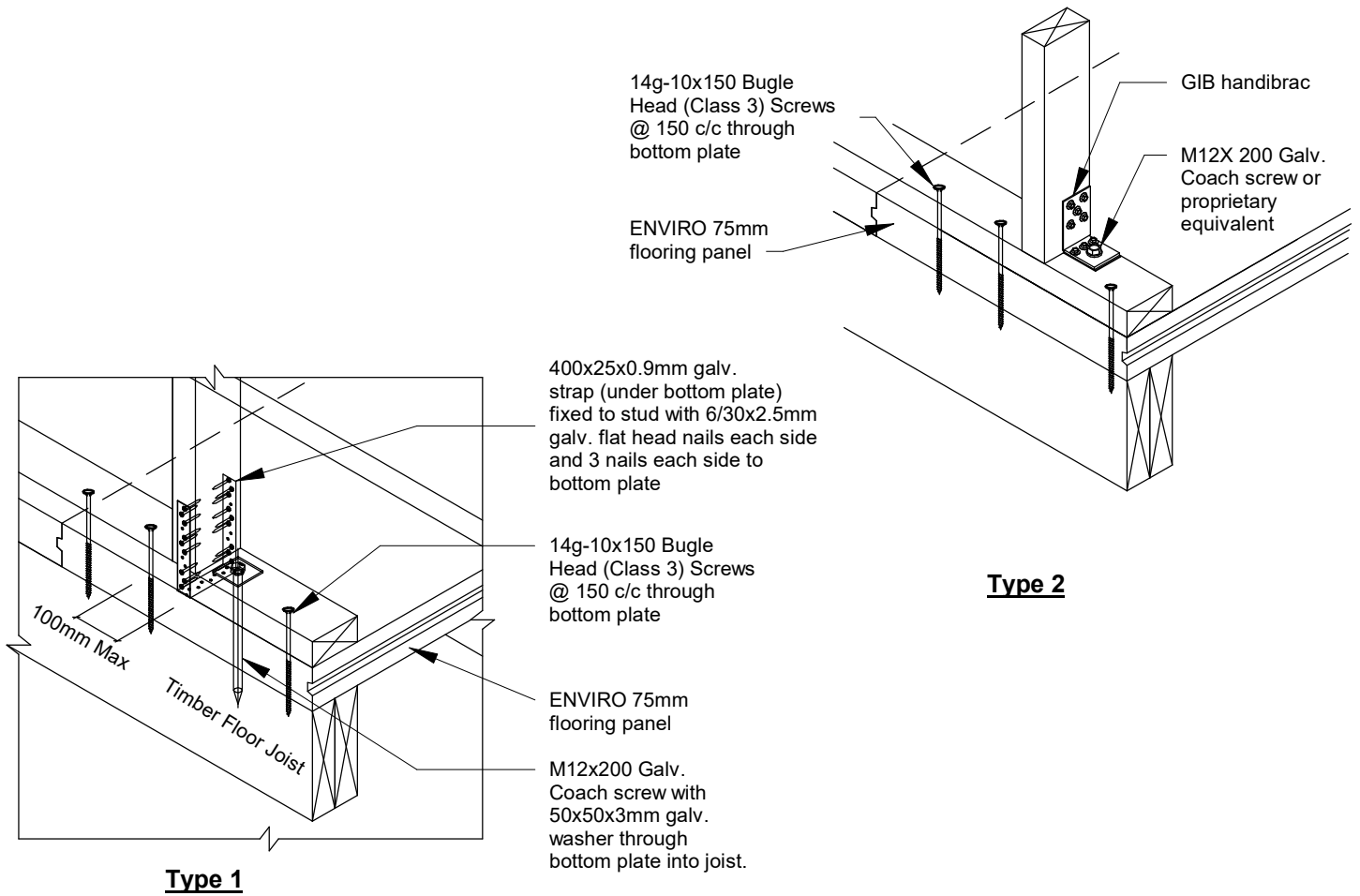
Date

Drawing No.

Version

05

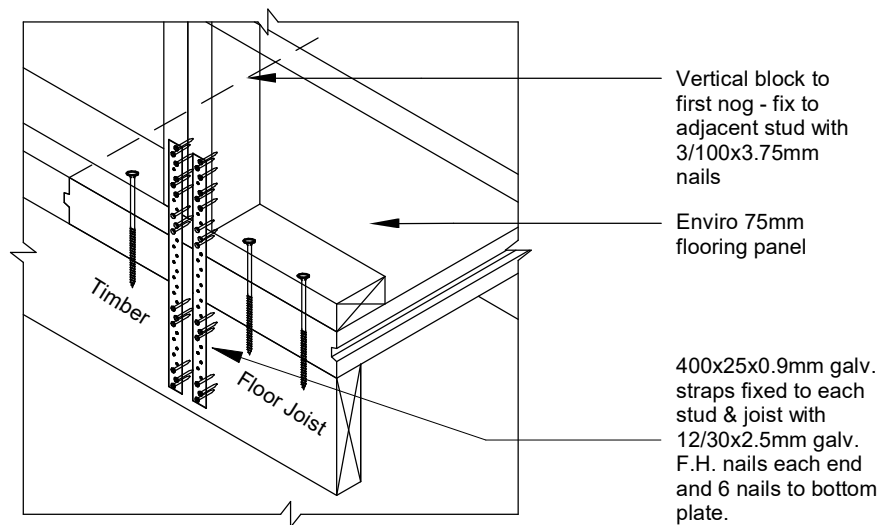
JULY 2024 - v2



7  
 A1

**TYPICAL EXTERNAL (BRACE) WALL**

1 : 10



8

**TYPICAL EXTERNAL (BRACE) WALL 12kN - ALTERNATIVE**

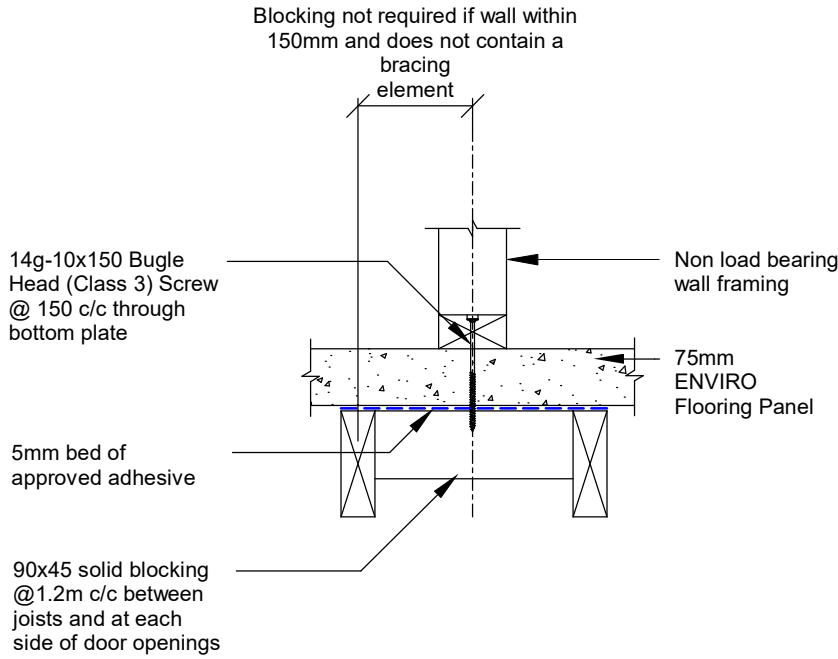
1 : 10



MASONS TYPICAL DETAIL  
 ENVIRO - 75 MM AAC FLOOR PANEL - TIMBER  
 DT09, DT10 TYPICAL INTERNAL WALLS

Scale  
 1 : 10 @A3  
 Drawing No.  
**06**

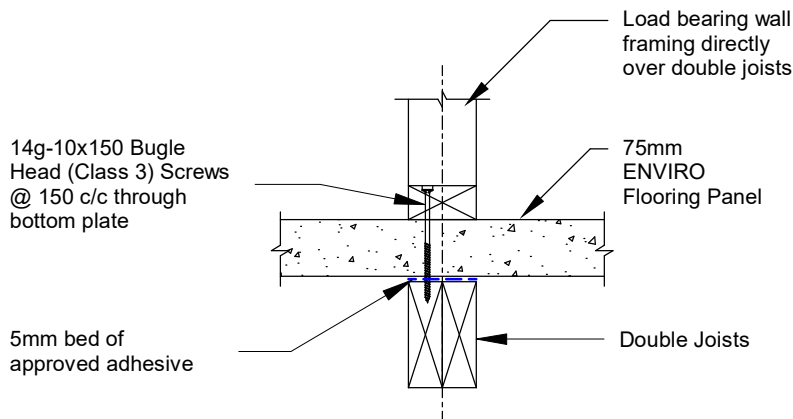
Date  
 Version  
 JULY 2024 - v2



9  
 A1

## TYPICAL INTERNAL WALL (NON LOAD BEARING)

1 : 10



10  
 A1

## TYPICAL INTERNAL WALL (LOAD BEARING)

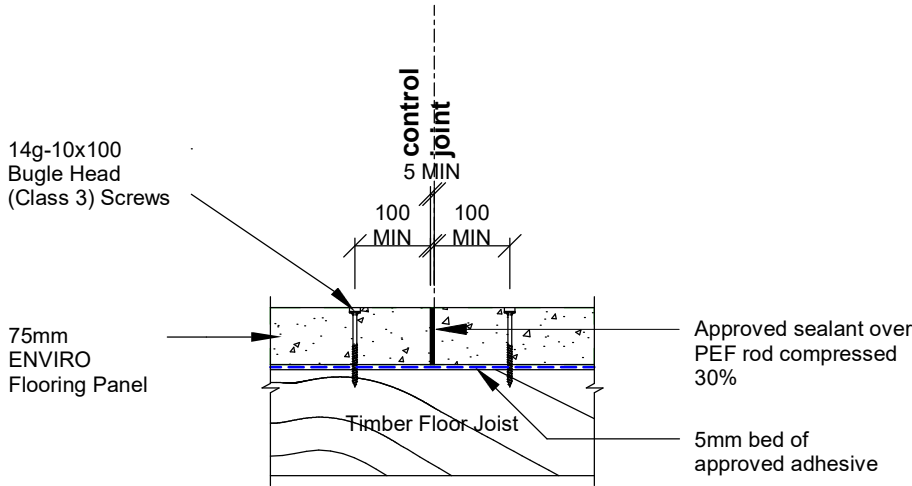
1 : 10



MASONS TYPICAL DETAIL  
 ENVIRO - 75 MM AAC FLOOR PANEL - TIMBER  
 DT12, DT13 TYPICAL CONTROL JOINTS

Scale  
 1 : 10 @A3  
 Drawing No.  
**07**

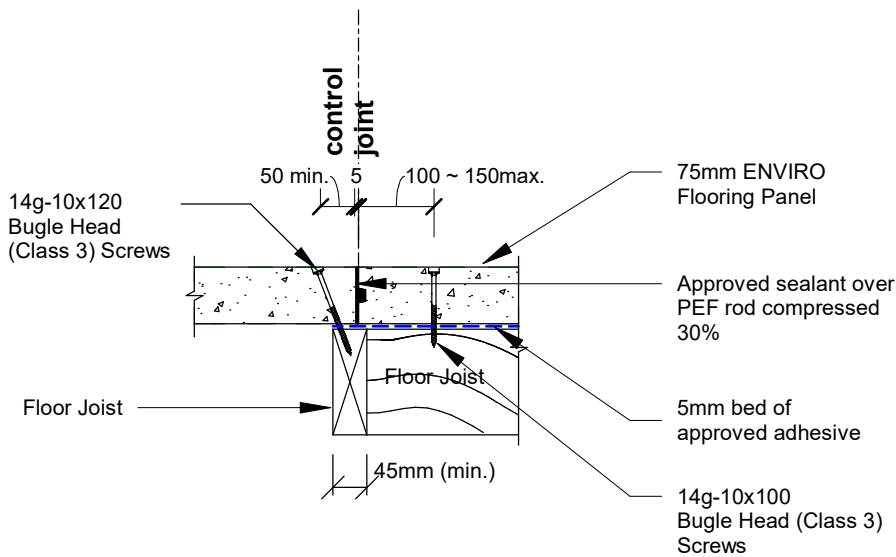
Date  
 Version  
 JULY 2024 - v2



11  
 A1

## TYPICAL CONTROL JOINT

1 : 10



12  
 A1

## TYPICAL CONTROL JOINT - AT LONG/SHORT EDGE JUNCTION

1 : 10





MASONS TYPICAL DETAIL  
APPENDIX  
TYPICAL FLOOR PLAN - TIMBER

Scale  
1 : 75 @A3

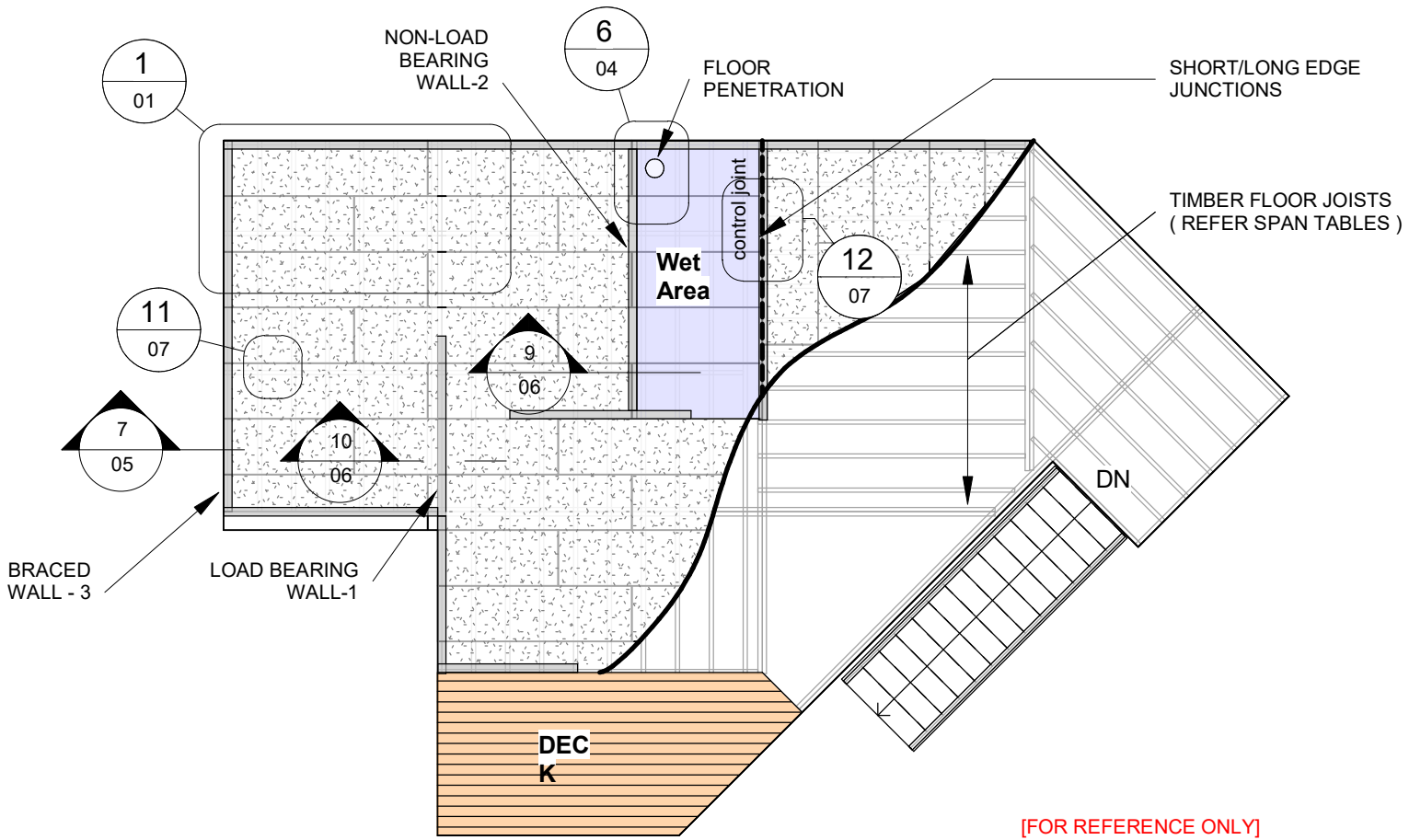
Date

Drawing No.

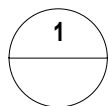
A1

Version

JULY 2024 - v2



[FOR REFERENCE ONLY]



# TYPICAL FLOOR PLAN (TIMBER)

1 : 75



**Design Load:**

1. Framing sizes should be selected from the appropriate table with the maximum allowance for the unfactored Total Dead Load of 0.85kPa. Live Loads as per Tables
2. Permissible concentrated live load = 2.7 kN applied over a 0.3mx 0.3m area.
3. Concentrated loads from load bearing walls or point loads shall be supported by additional framing such as joists or blocking.
4. In service mass of Enviro Floor Panel is 45 kg/m2.

**Table 1: Span Table for Timber Joists SG8 H1.2**

Floor joist size	Maximum Joist Span (m)		
	366mm	440mm	550mm
<b>(a) 1.5 kPa Floor Load (Internal Floors)</b>			
90 x 45	1.35	1.30	1.25
140 x 35	2.00	1.90	1.80
140 x 45	2.20	2.10	2.00
190 x 45	3.10	2.95	2.80
240 x 45	4.00	3.80	3.55
290 x 45	4.85	4.60	4.30
<b>(b) 3 kPa floor load (Internal Floors)</b>			
90 x 45	1.35	1.30	1.15
140 x 35	2.00	1.85	1.75
140 x 45	2.15	2.05	1.90
190 x 45	2.90	2.75	2.55
240 x 45	3.65	3.45	3.25
290 x 45	4.40	4.15	3.90



MASONS TYPICAL DETAIL  
APPENDIX  
SPAN TABLE 2

Scale  
1 : 10 @A3

Date

Drawing No.  
**A3**

Version  
JULY 2024 - v2

**Design Load:**

1. Framing sizes should be selected from the appropriate table with the maximum allowance for the unfactored Total Dead Load of 0.85kPa. Live Loads as per Tables
2. Permissible concentrated live load = 2.7 kN applied over a 0.3m x 0.3m area.
3. Concentrated loads from load bearing walls or point loads shall be supported by additional framing such as joists or blocking.
4. In service mass of Enviro Floor Panel is 45 kg/m<sup>2</sup>.

**Table 2: Span Table for Hy- Joists H1.2**

Floor joist size	Maximum Joist span (m)	
	440mm	550mm
<b>(a) 1.5 kPa Floor Load (Internal Floors)</b>		
HJ-200x45	3.35	3.15
HJ-240x45	4.10	3.80
HJ-240x63	4.40	4.10
HJ-240x90	4.95	4.65
HJ-300x45	4.90	4.60
HJ-300x63	5.25	4.90
HJ-300x90	5.90	5.50
HJ-360x63	6.05	5.65
HJ-360x90	6.80	6.35
HJ-400x90	7.35	6.85
<b>(b) 3 kPa floor load (Internal Floors)</b>		
HJ-200x45	3.10	2.90
HJ-240x45	3.70	3.50
HJ-240x63	4.00	3.75
HJ-240x90	4.50	4.20
HJ-300x45	4.50	4.20
HJ-300x63	4.80	4.40
HJ-300x90	5.40	5.00
HJ-360x63	5.50	5.10
HJ-360x90	6.20	5.70
HJ-400x90	6.70	6.25



MASONS TYPICAL DETAIL  
APPENDIX  
SPAN TABLE 3 (a)

Scale  
1 : 10 @A3

Date

Drawing No.  
**A4**

Version  
JULY 2024 - v2

**Design Load:**

1. Framing sizes should be selected from the appropriate table with the maximum allowance for permanent Dead Load upto 1kPa.
2. Live Loads as below :
 

	distributed	concentrated
Domestic	1.5kPa	1.8 kN
Office	3.0kPa	2.7kN

**Table 3a : Posi Strut Floor Trusses Span (1.5 kPa Live Load)**

Truss Code	D mm	MSG8			MSG10		
		Maximum Span (m) at Spacing = S , mm					
		400	450	600	400	450	600 (Posi Strut standard)
		<b>366</b>	<b>440</b>	<b>550</b>	<b>366</b>	<b>440</b>	<b>550</b> (MASON recommended)
PS20-21x07	217	3.0	2.8	2.1	3.2	3.1	2.3
PS25-25x07	248	3.4	3.1	2.4	3.9	3.8	3.2
PS30-30x07	302	3.8	3.7	3.1	4.4	4.2	3.6
PS40-40x07	412	4.6	4.2	3.2*	5.4	4.8	4.3
PS20-21x09	217	3.4	3.2	2.8	3.8	3.6	<b>3.0</b>
PS25-25x09	248	3.8	3.5	3.1	4.3	4.1	3.6
PS30-30x09	302	4.3	4.1	3.4	5.0	4.7	4.2
PS40-40x09	412	5.0	4.8	4.2	5.8	5.7	4.9*
PS20-21x14	217	<b>3.9</b>	<b>3.8</b>	<b>3.2</b>	<b>4.2</b>	<b>3.9</b>	<b>3.2</b>
PS25-25x14	248	4.4	4.3	3.8	4.8	4.6	4.2
PS30-30x14	302	5.1	5.0	4.3	5.6	5.4	4.8
PS40-40x14	412	<b>6.1</b>	<b>6.0</b>	<b>5.2</b>	<b>6.7</b>	<b>6.5</b>	<b>5.8</b>
	D/(d1)						
PS40-45x05	463/(70)	4.7	4.5	4.0	5.6	5.3	4.3
PS40-50x05	502/(90)	5.5	5.2	4.4	6.4	6.0	5.2
PS40-60x05	602/(140)	7.1	6.8	5.9	7.8	<b>7.6</b>	<b>6.9</b>

\* Additional vertical webs are required at end panels.

**Notes:**

1. For shaded spans, double webs (DW) are required at end panels.
2. Span less than 2m are not included in the table.



MASONS TYPICAL DETAIL  
APPENDIX  
SPAN TABLE 3 (b)

Scale  
1 : 10 @A3

Date

Drawing No.  
**A5**

Version  
JULY 2024 - v2

**Design Load:**

- Framing sizes should be selected from the appropriate table with the maximum allowance for permanent Dead Load upto 1kPa.
- Live Loads as below :
 

	distributed	concentrated
Domestic	1.5kPa	1.8 kN
Office	3.0kPa	2.7kN

**Table 3 (b) : Posi Strut Floor Trusses Span (3 kPa Live Load)**

Truss Code	D mm	MSG8			MSG10		
		Maximum Span (m) at Spacing = S , mm					
		400	450	600	400	450	600 (Posi Strut standard)
		366	440	550	366	440	550 (MASON recommended)
PS20-21x09	217	-	-	-	-	-	-
PS25-25x09	248	2.9	2.6	-	3.2	3.4	-
PS30-30x09	302	3.3	3.1	2.8	3.8	3.6	3.2
PS40-40x09	412	3.9*	3.7*	3.1*	4.5*	3.9*	3.4*
PS20-21x14	217	-	-	-	-	-	-
PS25-25x14	248	3.5	3.3	2.9	4.1	3.8	3.5
PS30-30x14	302	4.0	3.8	3.3	4.7	4.3	3.6
PS40-40x14	412	4.6	4.4*	3.5*	5.3	4.9*	3.7*
D/(d1)							
PS40-45x05	462/(70)	-	-	-	-	-	-
PS40-50x05	502/(90)	4.3	4.1	3.5	4.9	4.6	4.1
PS40-60x05	602/(140)	5.7	5.3	4.6	6.6	6.0	4.8

\* Additional vertical webs are required at end panels.

**Notes:**

- For shaded spans, double webs (DW) are required at end panels.
- Span less than 2m are not included in the table.