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Title:

The fire resistance performance of an asymmetric non-loadbearing, steel stud partition system when tested in accordance with BS EN 1364-1:2015 and BS EN 1363-1: 2012

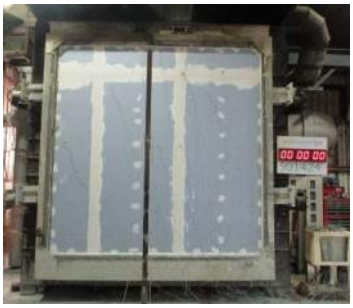
Date Of Test:

02/06/2021

Issue 1
03/02/2023

WF Report No:

WF 501424



Prepared for:

Hadley Industries Holding Ltd
Downing Street
Smethwick
West Midlands
B66 2PA

Approved Body No. 1314

1762

Test Specimen

Summary of Tested Specimen

The partition system comprised a plasterboard clad steel stud frame, built directly into a refractory lined steel restraint frame. The left edge of the partition remained unrestrained.

The size of the partition system was 3000mm high x 3000mm wide x 138mm deep overall and consisted of 70mm Hadley C steel studs fitted into 72mm Hadley U head and base tracks. The partition was clad with 2No. layers of 12.5mm Gyproc Soundbloc on each face of the Hadley C studs at 600mm centres with a resilient bar at 600mm centres. 1No. layer of Hadley Flat Strap was fitted behind the horizontal board joints of each layer.

Detailed drawings of the test specimen and a comprehensive description of the test construction based on a detailed survey of the specimen and information supplied by the sponsor of the test are included in the Test Specimen and Schedule of Components sections of this report.

Performance Criteria and Test Results

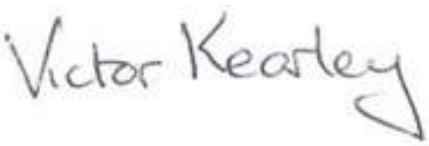
Integrity	
Cotton pad	74 minutes*
Sustained flaming	74 minutes*
Gap gauges	74 minutes*
Thermal Insulation	74 minutes*
Radiation (time to 15kW/m^2)	74 minutes*

* No failure of this test criteria was observed at termination of the test at 74 minutes

Date of Test 02/06/2021

Signatories

Report Prepared by:
Stephen Dorme
Technical Officer*



Report Authorised by:
Dr Vic Kearley
Technical Author*

* For and on behalf of **Warringtonfire.**

Report Issued:

Date: 03/02/2023

Revision History

Issue No :	Re-issue Date:
Revised By:	Approved By:
Reason for Revision:	

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Reason for Revision:	

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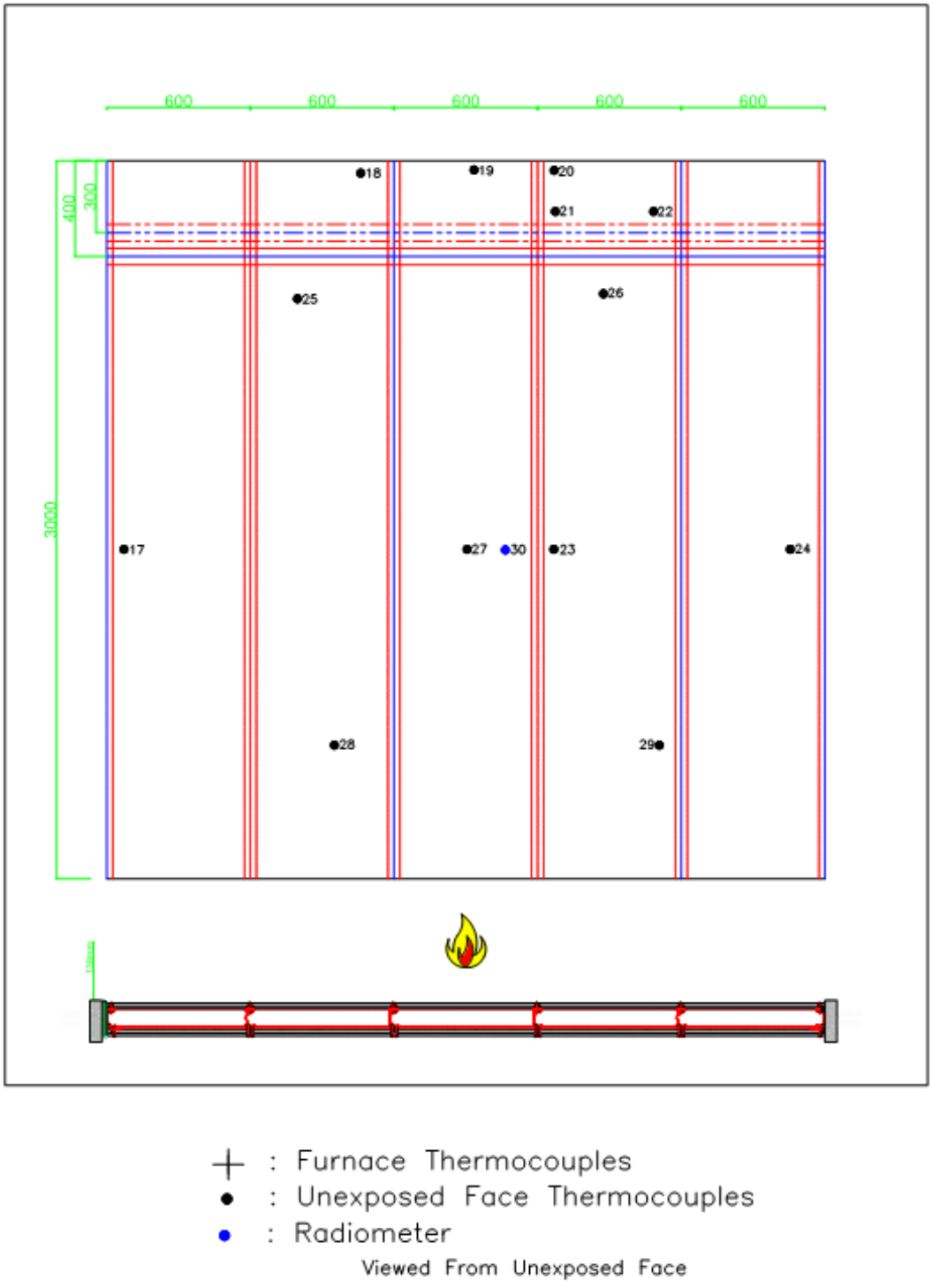
Test Conditions

Standard	BS EN 1364-1, Fire resistance tests for non-loadbearing elements Part 1: Walls and BS EN 1363-1.
Sampling	**Warringtonfire** was not involved in the sampling or selection of the tested specimens or any of the components, and as such the results apply to the sample as received.
Installation	The components were received during the month of May 2021. The partition system was constructed and installed directly into a refractory line steel restraint frame by representatives of **Warringtonfire** to the client's specification.
Conditioning	Warringtonfire stored the specimens in climatic conditions approximate to those expected in normal service, and used the guidelines of Annex F.1 of BS EN 1363 – 1: 2012 to establish a suitable conditioned level where possible.
Ambient Temperature	The ambient air temperature in the vicinity of the test construction was 21ºC at the start of the test with a maximum variation of +1ºC during the test.
Furnace	The furnace was controlled so that its mean temperature complied with the requirements of BS EN 1363-1: 2012 Clause 5.1 using seven plate thermometers, distributed over a plane 100±50 mm from the surface of the test construction.
Thermocouples	Thermocouples were provided to monitor the unexposed surface of the specimen. The output of all instrumentation was recorded at no less than one minute intervals. The locations and reference numbers of the various unexposed surface thermocouples are shown in Figure 1.
Radiation	A water-cooled foil heat-flux meter was used to record the heat radiation from the partition. The heat-flux meter was positioned at mid height at a distance of 1 metre from the centre of the partition.
Furnace Pressure	After the first 5 minutes of the test, the furnace pressure was maintained at -1.3 ± 5 Pa and after 10 minutes was maintained at -1.3 ± 3 Pa with respect to atmosphere, at a point 0.5m from the notional floor level, equating to a pressure of 20Pa at the head of the wall.

Test Specimen Drawings

Figure 1 – General Elevation of the Test Construction and Thermocouple Locations



+ : Furnace Thermocouples
● : Unexposed Face Thermocouples
● : Radiometer

Viewed From Unexposed Face

Do not scale. All dimensions are in mm

Figure 2 – Typical cross section of head track to restraint frame junction

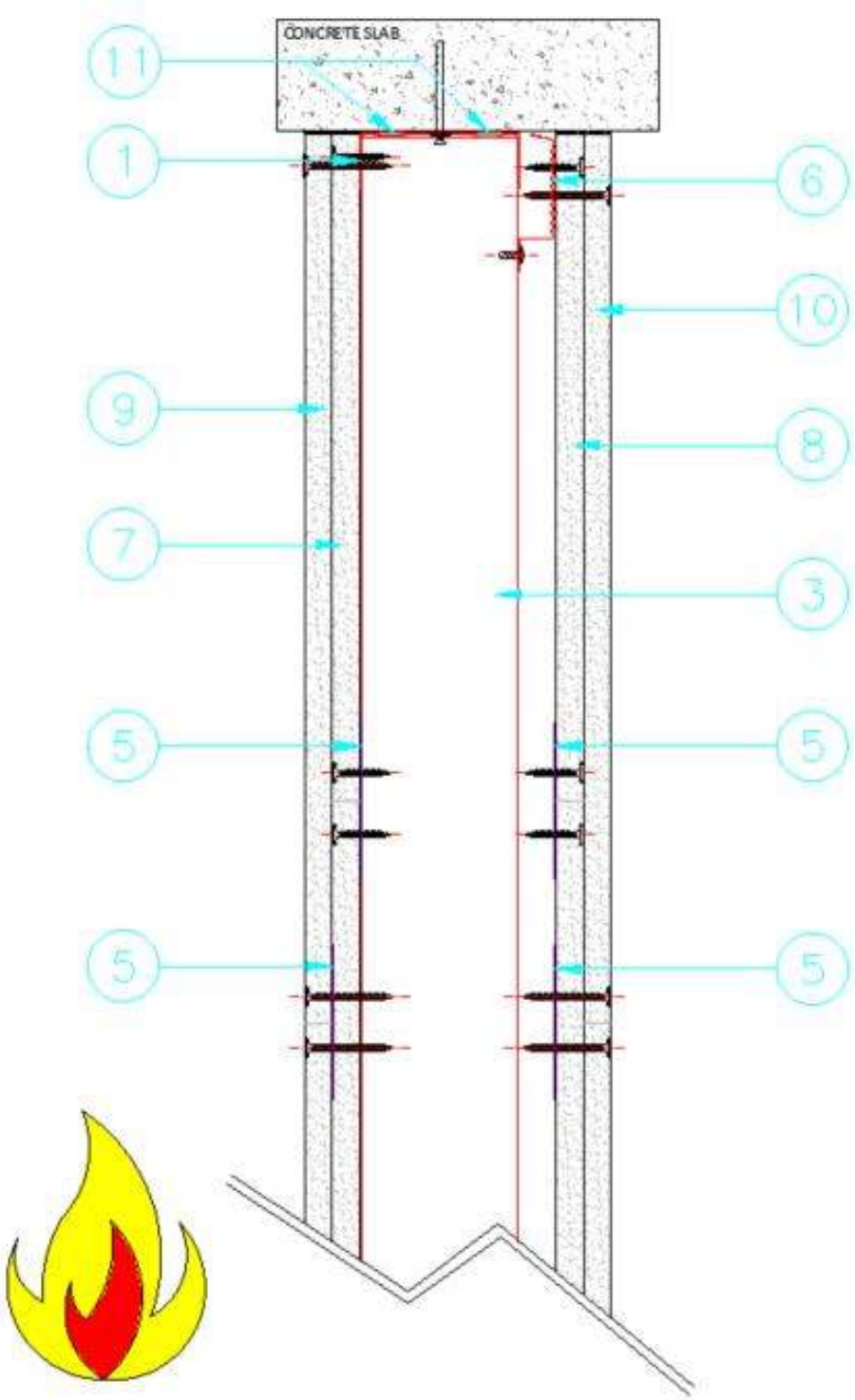


Figure 3 – Typical cross section of base track to restraint frame

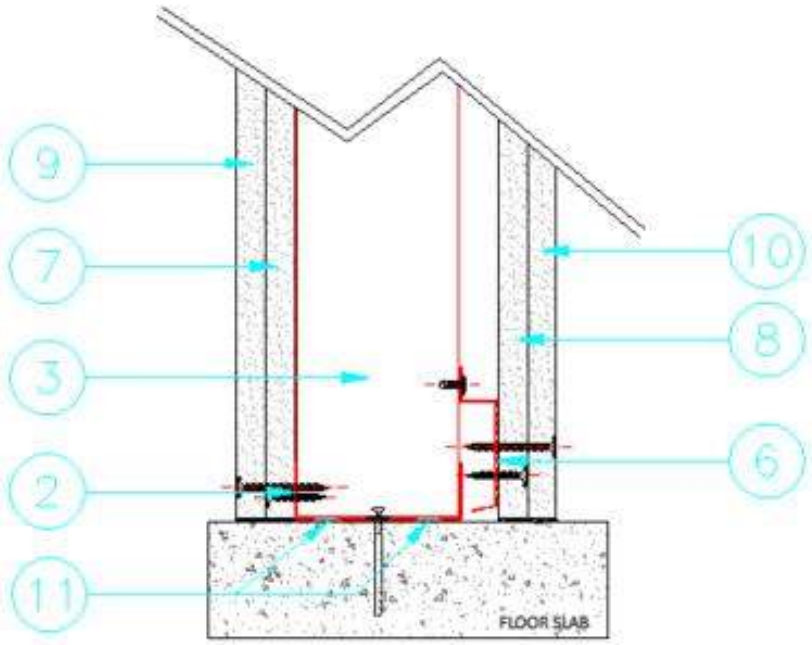


Figure 4 – Typical cross section of vertical stud to board junction

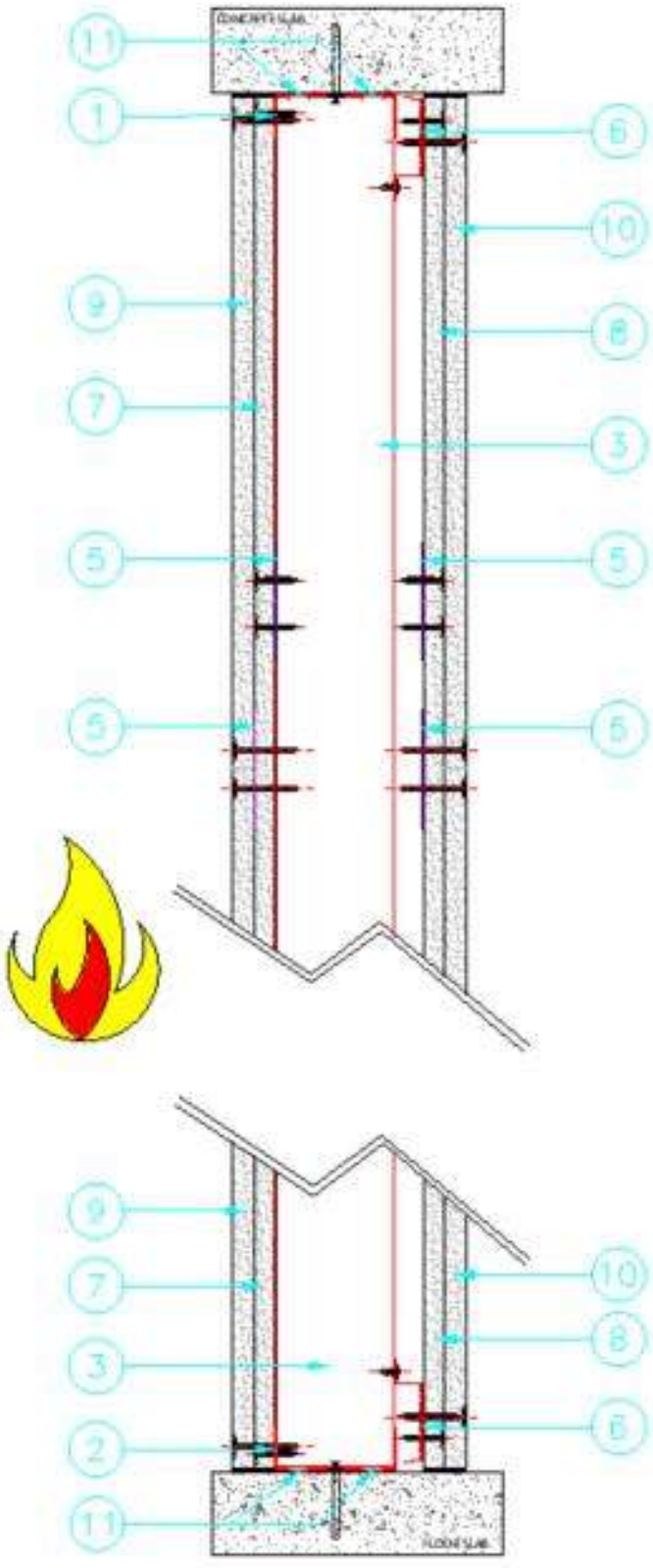
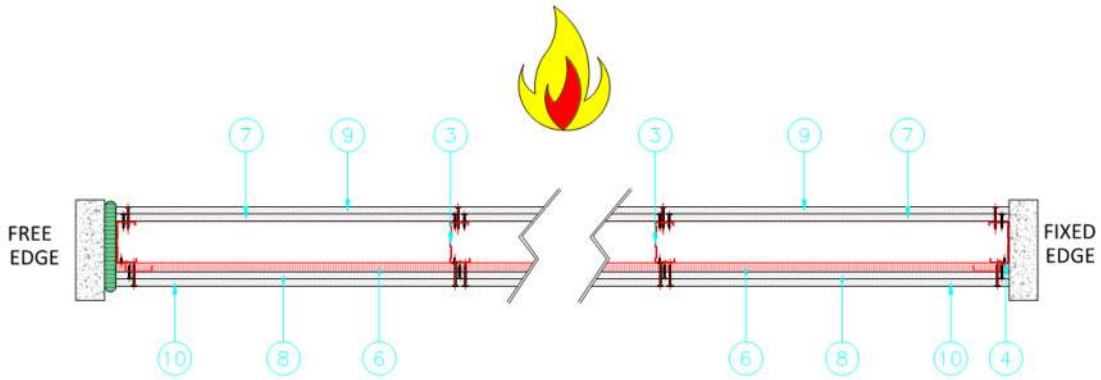


Figure 5 – Typical horizontal cross section



Schedule of Components

(Refer to Figures 1 to 5)
(All values are nominal unless stated otherwise)
* Stated by sponsor, not verified by laboratory

Internal Framing

Item		**Description**
1. Head Track		
Manufacturer or Supplier	:	Hadley Group
Reference	:	72mm Hadley track
Material	:	Steel
Overall size		
i. Depth	:	72mm*
ii. Height	:	25mm
iii. Thickness	:	0.55mm*
Fixing Method to restraint frame and centres	:	Hadley track to be used at the head and the base of the partition, using Hadley C studs at abutments. Lay the track on 2 continuous beads of sealant. secure with fixings at 600mm centres and 50mm from the end of channel.
Details of fixings to Restraint frame	:	
i. Manufacturer	:	Kingfisher International
ii. Reference	:	Easydrive
iii. Type & material	:	Zinc-plated carbon steel
iv. Overall size	:	7.5mm x 60mm
v. Spacing	:	600mm

2. Base Track		
Manufacturer or Supplier	:	Hadley Group
Reference	:	72mm Hadley track
Material	:	Steel
Overall size		
i. Depth	:	72mm*
ii. Height	:	3000mm*
iii. Thickness	:	0.55mm*
Fixing Method to restraint frame and centres	:	Hadley track to be used at the head and the base of the partition, using Hadley C studs at abutments. Lay the track on 2 continuous beads of sealant. secure with fixings at 600mm centres and 50mm from the end of channel.
Details of fixings to Restraint frame	:	
i. Manufacturer	:	Kingfisher International
ii. Reference	:	Easydrive
iii. Type & material	:	Zinc-plated carbon steel
iv. Overall size	:	7.5mm x 60mm
v. Spacing	:	600mm

3. Vertical Studs		
Manufacturer or Supplier	:	Hadley Group
Reference	:	70mm Hadley C studs
Material	:	Steel
Location and Spacing	:	600mm centres
Overall size		
i. Depth	:	32mm*
ii. Width	:	70mm*
iii. Height	:	3000mm
iv. Thickness	:	0.55mm*
Fixing Method to Head and Base Track (If applicable)	:	Friction fitted inside head and base track

4. Vertical Stud (fixed edge)		
Manufacturer or Supplier	:	Hadley Group
Reference	:	70mm Hadley Group “C” studs
Material	:	Steel
Location and Spacing	:	600mm centres
Overall size		
i. Width	:	70mm*
ii. Depth	:	32mm*
iii. Height	:	3000mm
iv. Thickness	:	0.55mm*
Fixing Method to restraint frame	:	
i. Manufacturer	:	Kingfisher International
ii. Reference	:	Easydrive
iii. Type & material	:	Zinc-plated carbon steel
iv. Overall size	:	7.5mm x 60mm

5. Flat Strap		
Manufacturer	:	Hadley Group
Reference	:	Hadley 70mm flat strap
Material	:	Steel
Location	:	Behind horizontal board joints on both faces. For joint on inner layer 300mm from top For joint on outer layer 400mm from top on both sides (2.4mm lengths needs to be butt jointed)
Overall size		
i. Length	:	2400mm
ii. Thickness	:	70mm
Fixing Method to vertical studs	:	Wafer head screws
Details of fixings to vertical studs	:	
i. Manufacturer	:	Evolution*
ii. Reference	:	Evolution Drywall Wafer Head Screws*
iii. Type & material	:	Wafer Head Screws*
iv. Overall size	:	4.2mm x 13mm*
v. Location	:	300mm centres

6. Resilient Bars		
Manufacturer or Supplier	:	Hadley
Reference	:	2593B
Material	:	Steel
Location	:	1200mm centres
Overall size		
i. Depth	:	16mm*
ii. Height	:	3000mm*
iii. Thickness	:	0.55mm*
Fixing Method to restraint frame and centres	:	2No. fixings per stud to attach the resilient bar
Details of fixings to Restraint frame	:	Evolution wafer heads
i. Manufacturer	:	Evolution*
ii. Reference	:	Evolution Drywall Wafer Head Screws*
iii. Type & material	:	Wafer Head Screws*
iv. Overall size	:	4.2mm x 13mm*
v. Location	:	2No. fixings to secure the resilient bar to the stud on all resilient bar/stud junctions

Cladding Material

7. First Layer of board applied to the internal framing exposed face		
Manufacturer	:	British Gypsum
Reference	:	12.5mm Gyproc Soundbloc
Material	:	Gypsum plasterboard
Batch Reference/ Number	:	53GST*
Individual board dimension	:	12.5mm x 3000mm x 1200mm
Overall dimension	:	12.5mm x 3000mm x 1200mm*
Moisture Content (%)	:	< 2%
Board Weight (kg/m^2)	:	10.6
Application method	:	Screw fixed
Fixing Method to restraint frame and centres	:	Screw fixed using drywall screws at 300mm centres
Details of fixings to Internal framing		
i. Manufacturer	:	Evolution*
ii. Reference	:	Evolution Drywall Screws*
iii. Type & material	:	Drywall Screws*
iv. Overall size	:	3.9mm x 25mm*
v. Spacing	:	300mm

8. First Layer of board applied to the internal framing unexposed face		
Manufacturer	:	British Gypsum
Reference	:	12.5mm Gyproc Soundbloc
Material	:	Gypsum plasterboard
Batch Reference/ Number	:	53GST*
Individual board dimension	:	12.5mm x 3000mm x 1200mm
Overall dimension	:	12.5mm x 3000mm x 1200mm*
Moisture Content (%)	:	< 2%
Board Weight (kg/m^2)	:	10.6
Application method	:	Screw fixed
Fixing Method to restraint frame and centres	:	Screw fixed using drywall screws at 300mm centres
Details of fixings to Internal framing		
i. Manufacturer	:	Evolution*
ii. Reference	:	Evolution Drywall Screws*
iii. Type & material	:	Drywall Screws*
iv. Overall size	:	3.9mm x 25mm*
v. Spacing	:	300mm

9. Second Layer of board applied to the internal framing exposed face		
Manufacturer	:	British Gypsum
Reference	:	12.5mm Gyproc Soundbloc
Material	:	Gypsum plasterboard
Batch Reference/ Number	:	53GST*
Individual board dimension	:	12.5mm x 3000mm x 1200mm
Overall dimension	:	12.5mm x 3000mm x 1200mm*
Moisture Content (%)	:	< 2%
Board Weight (kg/m^2)	:	10.6
Application method	:	Screw fixed
Fixing Method to restraint frame and centres	:	Screw fixed using drywall screws at 300mm centres
Details of fixings to Internal framing		
i. Manufacturer	:	Evolution*
ii. Reference	:	Evolution Drywall Screws*
iii. Type & material	:	Drywall Screws*
iv. Overall size	:	3.9mm x 35mm*
v. Spacing	:	300mm

10. Second Layer of board applied to the internal framing unexposed face		
Manufacturer	:	British Gypsum
Reference	:	12.5mm Gyproc Soundbloc
Material	:	Gypsum plasterboard
Batch Reference/ Number	:	53GST*
Individual board dimension	:	12.5mm x 3000mm x 1200mm
Overall dimension	:	12.5mm x 3000mm x 1200mm*
Moisture Content (%)	:	< 2%
Board Weight (kg/m^2)	:	10.6
Application method	:	Screw fixed
Fixing Method to restraint frame and centres	:	Screw fixed using drywall screws at 300mm centres
Details of fixings to Internal framing		
i. Manufacturer	:	Evolution*
ii. Reference	:	Evolution Drywall Screws*
iii. Type & material	:	Drywall Screws*
iv. Overall size	:	3.9mm x 35mm*
v. Spacing	:	300mm

Sealing Materials

11.Sealant		
Manufacturer	:	Everbuild
Reference	:	Everflex Fire Mate intumescent sealant
Material	:	Sealant*
Location	:	2No. continuous beads under the head and base track and under board abutments
Nominal Application thickness	:	10mm

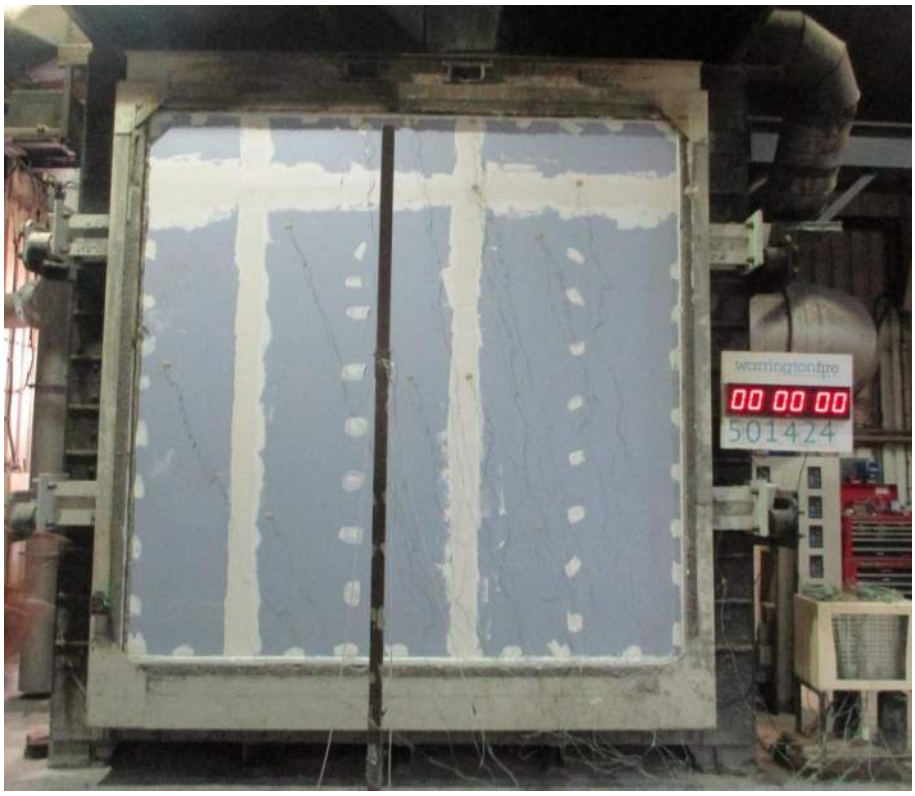
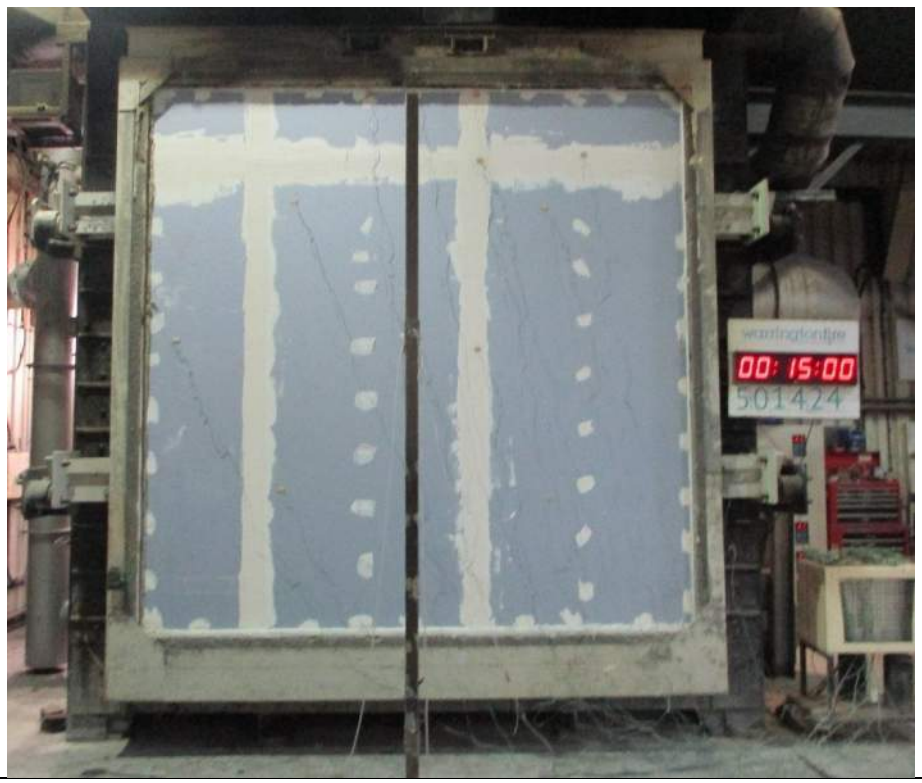
12. Jointing Tape		
Manufacturer	:	British Gypsum
Reference	:	Gyproc Joint Tape
Material	:	Paper Tape
Location	:	Fitted over the plasterboard joints on both faces

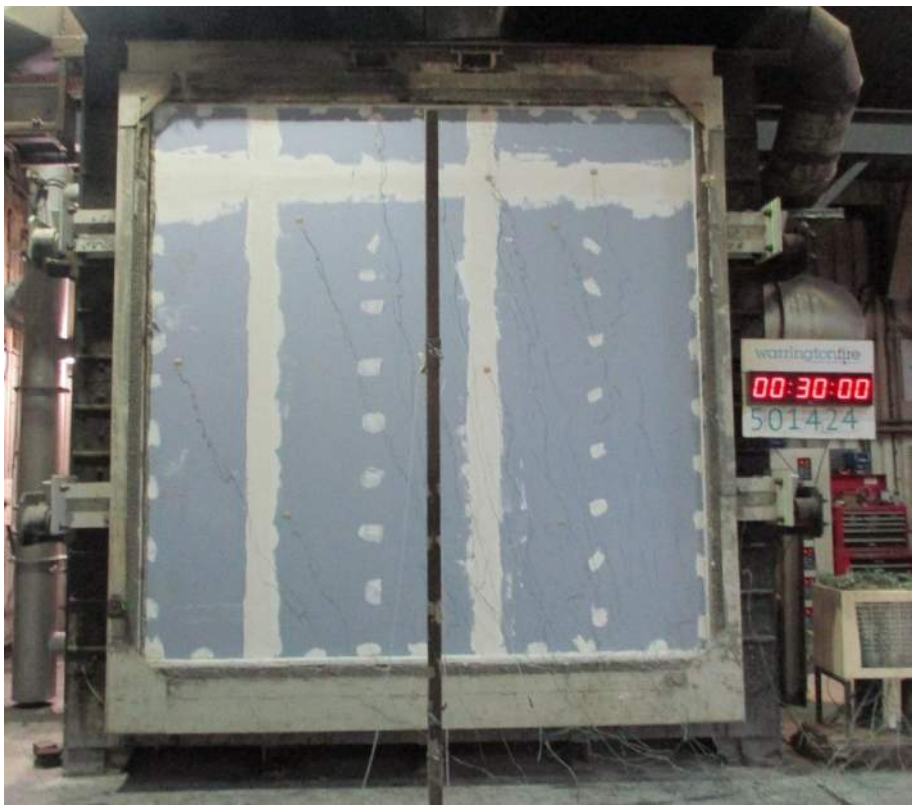
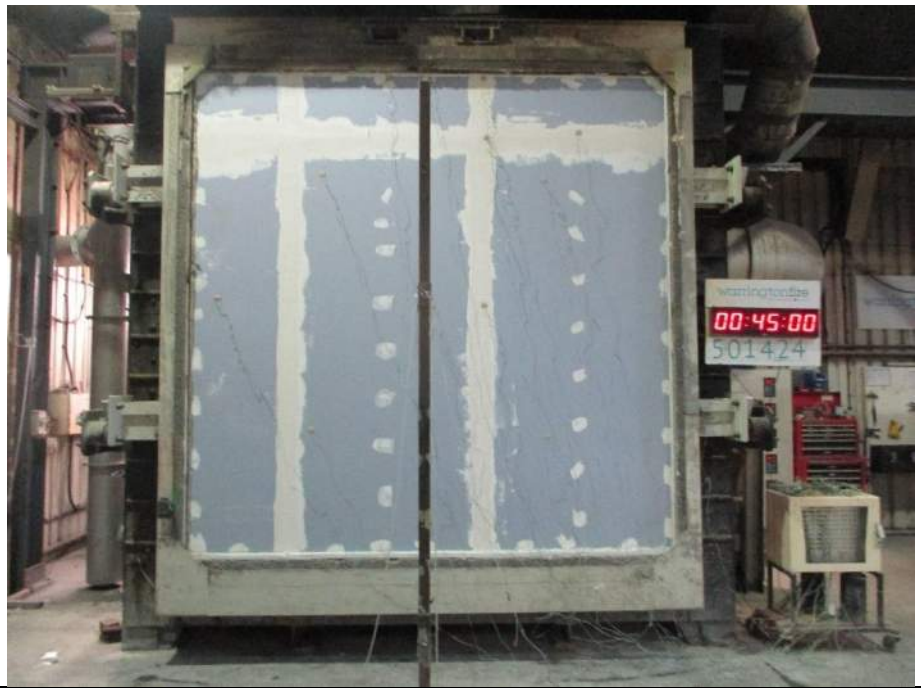
13. Jointing Compound		
Manufacturer	:	British Gypsum
Reference	:	Gyproc Joint Filler
Material	:	Mixture of calcium sulphate hemihydrate, limestone and water
Location	:	Fitted over the plasterboard joints on both faces

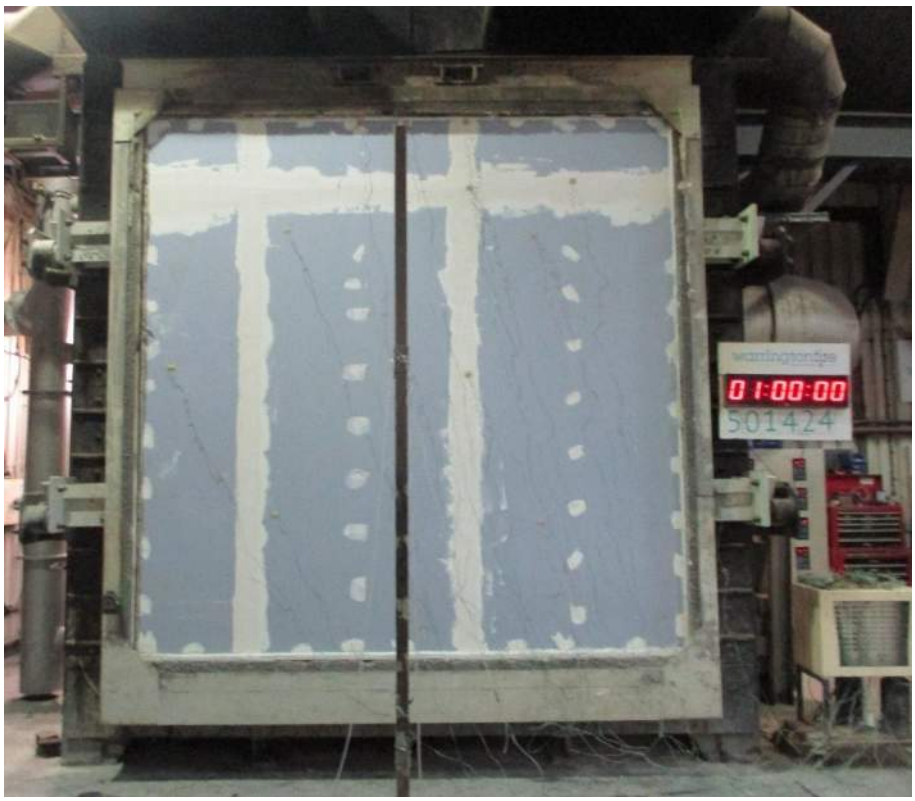
Test Observations

Time (minutes)	All observations are from the unexposed face unless noted otherwise.
00:00	The test has started.
08:56	There is smoke issuing at the head track above the 600 mm board.
16:30	There is a decrease in smoke issuing at the head track above the 600 mm board.
18:19	On the exposed face, the tape and fill has fallen away and there is a large crack visible in the first layer on the right full board.
21:20	On the exposed face, the board joint is visible at approximately 3 – 4 mm wide.
27:44	On the exposed face, the board joint is visible at approximately 6 – 7 mm wide and the crack has widened to approximately 6 – 7 mm.
30:00	No visible change.
44:32	On the exposed face, the board joint is visible at approximately 10 – 12 mm wide.
50:10	There is smoke issuing at the free edge approximately half-way up.
60:00	No visible change.
63:32	On the exposed face, the first layer is falling away from the stud and the crack is approximately 10 – 11 mm wide.
74:05	Test terminated.

Test Photographs

The unexposed face prior to testing	
The unexposed face after a test duration of 15 minutes	

The unexposed face after a test duration of 30 minutes	
The unexposed face after a test duration of 45 minutes	

The unexposed face after a test duration of 60 minutes	
The exposed face after a test duration of 18 mins (large crack visible)	

The exposed face after the completion of the test	

Temperature and Deflection Data

Mean furnace temperature, together with the temperature/time relationship specified in BS EN 1363-1: 2012

Time	Mean Furnace	ISO834
min	°C	°C
0	20	20
1	335	349
2	404	445
3	464	502
4	579	544
5	593	576
6	584	603
7	607	626
8	638	645
9	663	663
10	677	678
11	688	693
12	699	705
13	710	717
14	722	728
15	732	739
16	744	748
17	756	757
18	764	766
19	772	774
20	782	781
21	790	789
22	798	796
23	806	802
24	813	809
25	820	815
26	828	820
27	834	826
28	837	831
29	842	837
30	847	842
31	853	847
32	860	851
33	865	856
34	870	860
35	872	865
36	878	869
37	880	873

Time	Mean Furnace	ISO834
min	°C	°C
38	882	877
39	888	881
40	891	885
41	893	888
42	897	892
43	899	896
44	903	899
45	907	902
46	910	906
47	914	909
48	917	912
49	921	915
50	924	918
51	929	921
52	932	924
53	935	927
54	938	930
55	940	932
56	942	935
57	945	938
58	947	940
59	948	943
60	950	945
61	952	948
62	953	950
63	955	953
64	958	955
65	960	957
66	962	960
67	965	962
68	966	964
69	967	966
70	970	968
71	971	971
72	974	973
73	975	975
74	966	977

Individual And Mean Temperatures Recorded On The Unexposed Face

Time	Chan 25	Chan 26	Chan 27	Chan 28	Chan 29
min	°C	°C	°C	°C	°C
0	22	22	22	22	22
1	22	22	22	22	22
2	22	22	22	22	22
3	22	22	22	22	22
4	22	22	22	22	22
5	22	22	22	22	22
6	22	22	22	22	22
7	22	22	22	22	22
8	22	22	22	22	22
9	23	23	22	22	22
10	23	23	23	23	23
11	24	23	23	23	23
12	24	24	23	23	23
13	25	25	24	24	24
14	27	26	24	25	25
15	28	27	25	26	26
16	29	28	26	27	26
17	30	29	27	28	27
18	32	31	28	29	28
19	33	32	29	30	30
20	35	34	30	32	31
21	37	35	31	33	32
22	38	37	32	34	33
23	40	39	34	35	34
24	42	41	35	36	36
25	43	42	36	38	37
26	45	44	38	39	38
27	47	46	39	40	40
28	49	48	41	42	41
29	51	50	42	43	43
30	52	51	44	45	45
31	54	53	46	46	46
32	56	55	47	48	48
33	57	56	49	50	50
34	58	57	50	51	51
35	59	58	52	52	53
36	60	59	53	54	55
37	61	60	54	55	56
38	61	61	55	56	57
39	62	61	56	57	58
40	62	61	57	57	59
41	62	62	57	58	59
42	62	62	57	58	60
43	62	62	58	58	60
44	62	62	58	59	61
45	62	62	58	58	61
46	62	62	58	59	61
47	62	62	58	59	61
48	62	63	58	59	61

Time	Chan 25	Chan 26	Chan 27	Chan 28	Chan 29
min	°C	°C	°C	°C	°C
49	62	63	59	59	62
50	63	63	59	60	62
51	63	64	60	60	63
52	64	64	60	61	63
53	65	65	61	61	63
54	66	65	61	62	64
55	66	66	62	62	64
56	67	66	62	63	65
57	67	67	63	64	65
58	68	67	63	64	66
59	68	68	64	64	66
60	69	69	64	64	67
61	69	69	65	64	68
62	70	70	65	65	68
63	70	71	66	65	68
64	71	71	66	65	69
65	71	72	66	65	69
66	72	72	67	65	70
67	73	73	67	66	70
68	73	73	67	66	70
69	74	74	68	66	70
70	74	75	68	66	70
71	75	75	68	66	71
72	75	75	68	66	71
73	75	75	68	66	71
74	75	75	68	66	71

Maximum Temperatures Recorded On The Unexposed Face

Time	Chan 17	Chan 18	Chan 19	Chan 20	Chan 21	Chan 22	Chan 23	Chan 24
min	°C	°C	°C	°C	°C	°C	°C	°C
0	21	22	22	21	20	21	21	21
1	22	22	22	21	20	21	21	21
2	21	22	22	21	20	21	21	21
3	22	22	22	21	20	21	21	22
4	22	22	22	21	20	21	21	22
5	22	22	22	21	20	22	21	22
6	22	22	22	21	20	22	21	22
7	22	22	22	21	20	22	21	22
8	22	22	22	21	20	22	21	22
9	22	23	22	22	20	22	21	22
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12	23	28	25	24	21	24	22	23
13	24	31	26	25	22	25	23	23
14	24	35	28	27	23	26	23	24
15	25	38	30	28	24	29	24	25
16	26	41	32	30	25	31	25	26
17	27	44	34	32	26	34	26	27
18	28	46	36	33	27	38	27	28
19	29	49	38	35	28	41	28	29
20	31	50	40	37	29	44	29	31
21	32	52	42	38	31	46	30	32
22	33	53	43	39	32	49	32	33
23	34	54	44	41	33	51	33	35
24	36	54	46	42	34	54	34	36
25	37	55	47	43	36	56	35	38
26	38	56	48	44	37	58	37	39
27	40	57	50	45	38	59	38	41
28	41	57	50	47	40	61	39	43
29	43	58	52	48	41	62	40	44
30	44	59	53	49	42	64	42	46
31	46	59	54	50	43	65	43	47
32	47	60	55	52	45	66	45	49
33	49	61	55	53	46	66	46	51
34	50	61	56	54	47	66	47	52
35	51	61	57	55	48	65	49	53
36	52	62	57	56	49	65	50	55
37	54	62	58	57	49	64	51	56
38	54	62	58	58	50	64	52	58
39	55	62	59	58	51	63	53	59

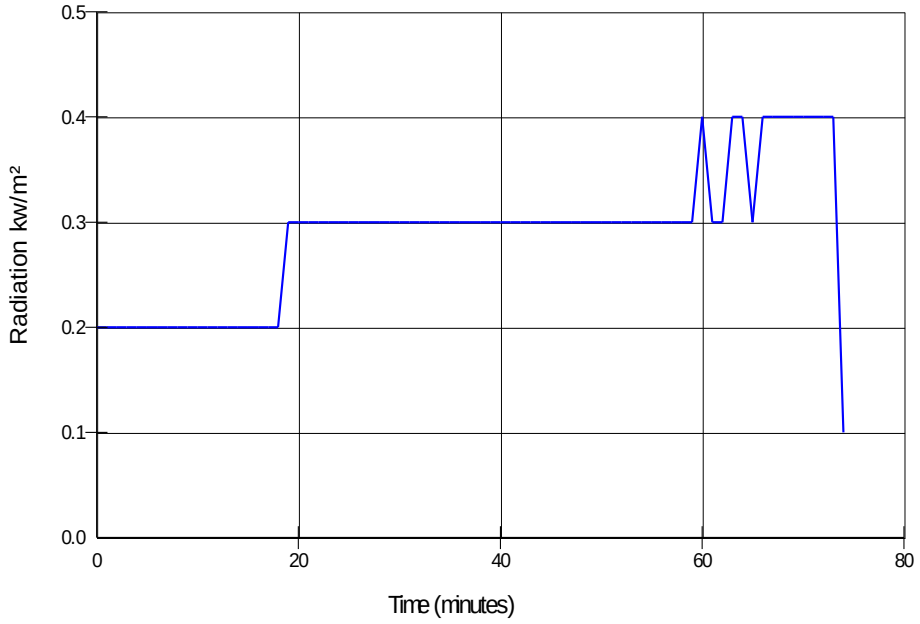
40	55	62	59	59	51	63	54	60
41	56	62	59	59	51	62	55	61
42	56	63	59	59	52	62	56	61
43	56	63	59	59	52	61	56	62
44	56	63	59	59	52	61	57	62
45	56	64	59	59	52	61	57	62
46	56	65	58	59	52	60	58	62
47	56	66	59	60	53	60	59	62
48	56	67	59	60	53	60	59	63
49	56	69	59	61	53	60	60	62
50	56	72	60	62	53	60	61	62
51	57	74	60	63	54	61	62	62
52	57	76	62	65	55	61	63	62
53	58	77	63	66	56	62	64	62
54	59	77	65	67	56	63	65	63
55	60	78	66	68	57	64	66	63
56	60	78	68	69	58	65	66	64
57	60	78	69	70	59	66	66	65
58	61	79	70	70	60	67	67	66
59	61	79	70	71	60	68	67	67
60	62	79	70	71	61	69	67	68
61	62	79	71	72	62	69	68	68
62	63	79	72	73	63	70	68	69
63	63	80	72	73	63	71	68	70
64	64	80	72	74	64	71	68	70
65	64	80	72	74	64	72	68	70
66	64	80	72	74	65	72	69	71
67	65	80	72	75	65	73	69	71
68	65	81	73	75	66	73	69	72
69	66	81	72	76	67	74	69	72
70	66	81	73	76	68	75	69	72
71	67	82	73	76	69	75	69	73
72	66	82	73	76	70	76	69	73
73	67	82	73	76	70	76	69	74
74	67	83	74	77	71	77	69	74

Recorded Radiation Intensity From The Partition Specimen

Time	Chan 30
min	kW/m²
0	0.2
1	0.2
2	0.2
3	0.2
4	0.2
5	0.2
6	0.2
7	0.2
8	0.2
9	0.2
10	0.2
11	0.2
12	0.2
13	0.2
14	0.2
15	0.2
16	0.2
17	0.2
18	0.2
19	0.3
20	0.3
21	0.3
22	0.3
23	0.3
24	0.3

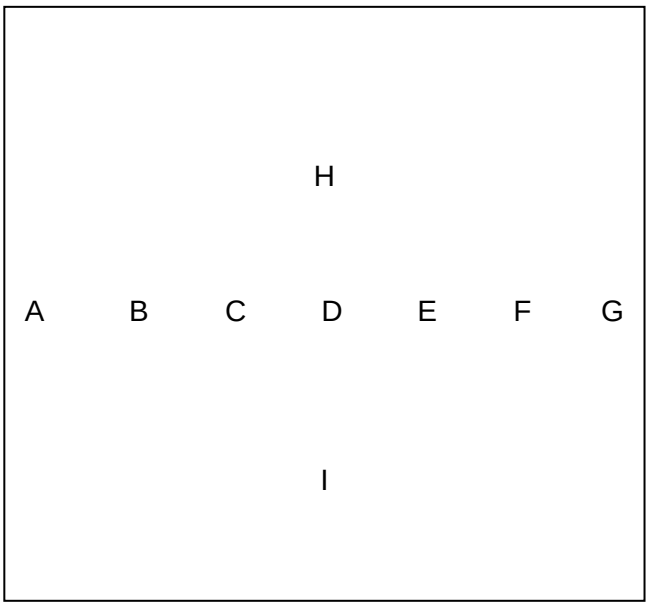
Time	Chan 30
min	kW/m²
25	0.3
26	0.3
27	0.3
28	0.3
29	0.3
30	0.3
31	0.3
32	0.3
33	0.3
34	0.3
35	0.3
36	0.3
37	0.3
38	0.3
39	0.3
40	0.3
41	0.3
42	0.3
43	0.3
44	0.3
45	0.3
46	0.3
47	0.3
48	0.3
49	0.3

Time	Chan 30
min	kW/m²
50	0.3
51	0.3
52	0.3
53	0.3
54	0.3
55	0.3
56	0.3
57	0.3
58	0.3
59	0.3
60	0.4
61	0.3
62	0.3
63	0.4
64	0.4
65	0.3
66	0.4
67	0.4
68	0.4
69	0.4
70	0.4
71	0.4
72	0.4
73	0.4
74	0.1



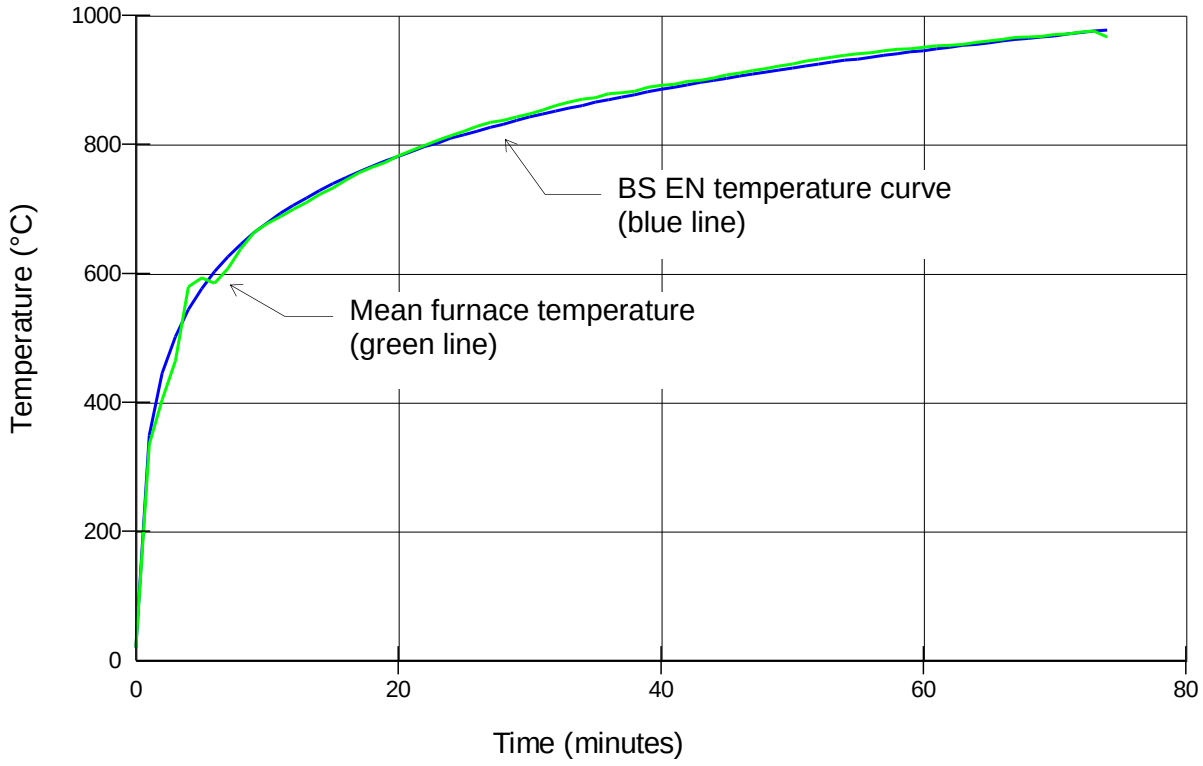
Horizontal Deflections Of The Partition Specimen

The deflection of the specimen partition was measured from the centre point, and at mid height on each stud. The readings have been tabulated and are shown graphically below. A positive reading represents deflection in towards the furnace. A negative reading represents deflection away from the furnace.

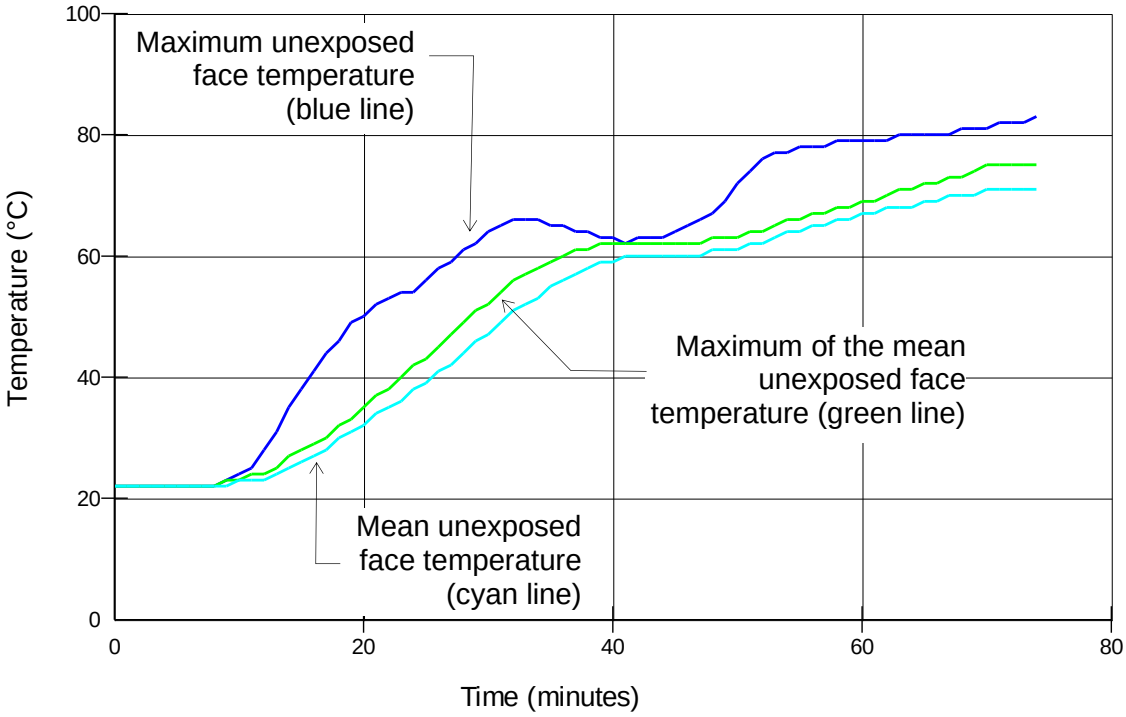


TIME mins	A	B	C	D	E	F	G	H	I
15	1	5	5	6	4	6	6	6	5
30	1	5	4	5	3	5	7	6	5
45	3	13	16	17	15	12	7	14	14
60	6	30	38	38	37	27	7	31	27

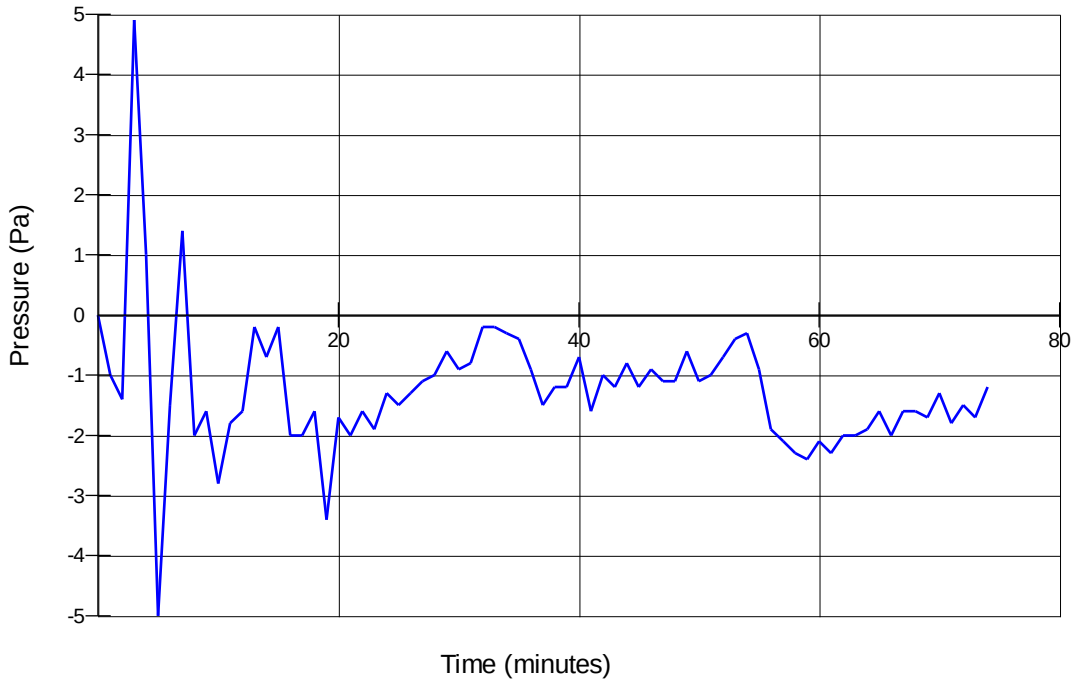
Graph showing mean furnace temperature, together with the temperature/time relationship specified in BS EN 1363-1: 2012



Graph Showing Mean and Maximum Temperatures Recorded On The Unexposed Surface



Graph showing recorded furnace pressure at 0.5m from the notional floor level



On-going Implications

Limitations

This report details the method of construction, the test conditions and the results obtained when the specific element of construction described herein was tested following the procedure outlined in BS EN 1364-1, BS EN 1363-1, and where appropriate BS EN 1363-2. Any significant deviation with respect to size, construction details, loads, stresses and edge or end conditions other than those allowed under the field of direct application in the relevant test method is not covered by this report.

The results only relate to the behaviour of the element of construction under the particular conditions of test; they are not intended to be the sole criteria for assessing the potential fire performance of the element in use nor do they reflect the actual behaviour in fires.

The specification and interpretation of fire test methods are the subject of ongoing development and refinement. Changes in associated legislation may also occur. For these reasons it is recommended that the relevance of test reports over 5 years old should be considered by the user. **Warringtonfire** will be able to offer, on behalf of the legal owner, a review of the procedures adopted for a particular test to ensure that they are consistent with current practices, and if required may endorse the test report.

Because of the nature of fire resistance testing and the consequent difficulty in quantifying the uncertainty of measurement of fire resistance, it is not possible to provide a stated degree of accuracy of the result.

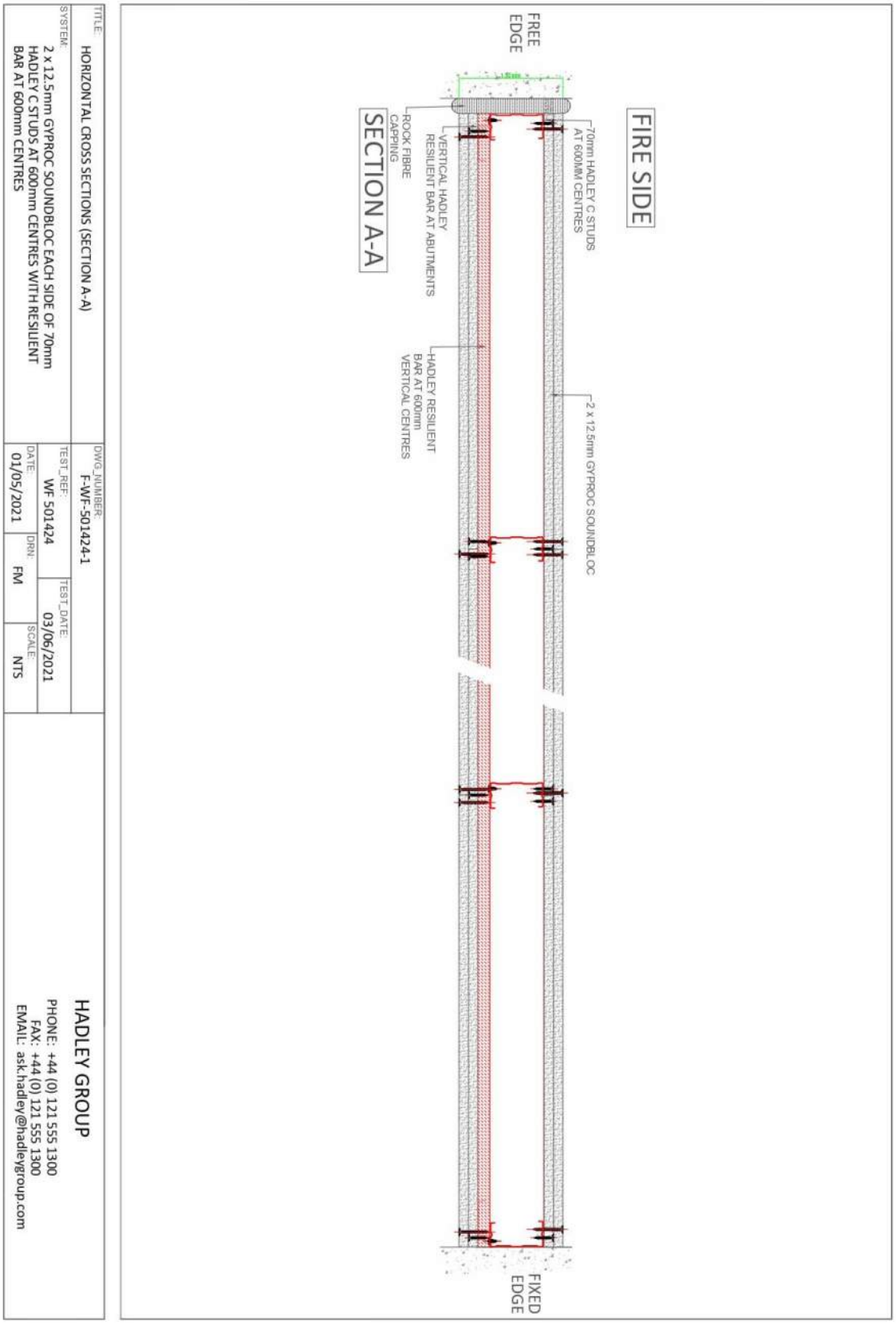
EGOLF

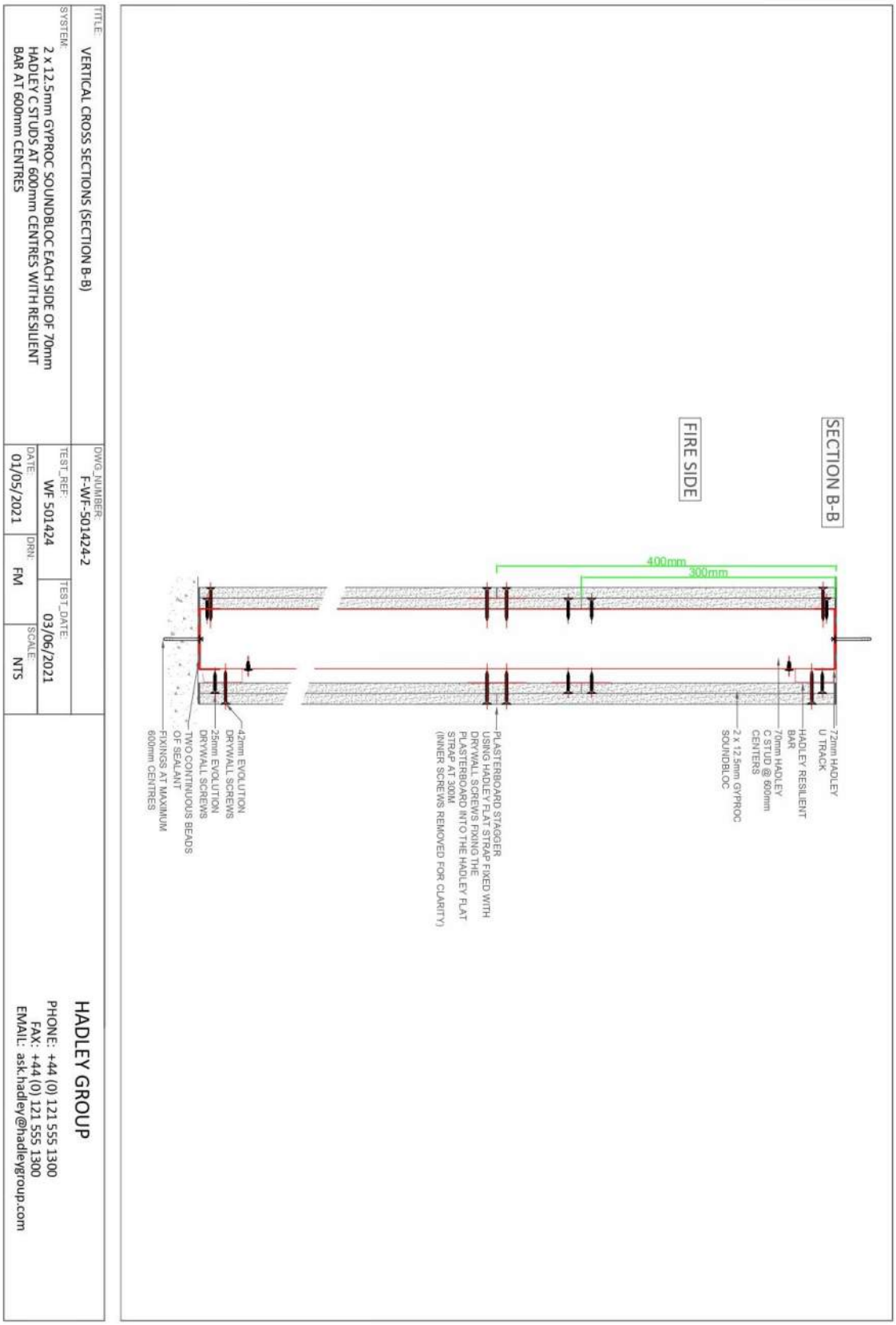
Certain aspects of some fire test specifications are open to different interpretations. EGOLF have identified a number of such areas and have agreed Resolutions which define common agreement of interpretations between fire test laboratories which are members of the Groups. Where such Resolutions are applicable to this test they have been followed.

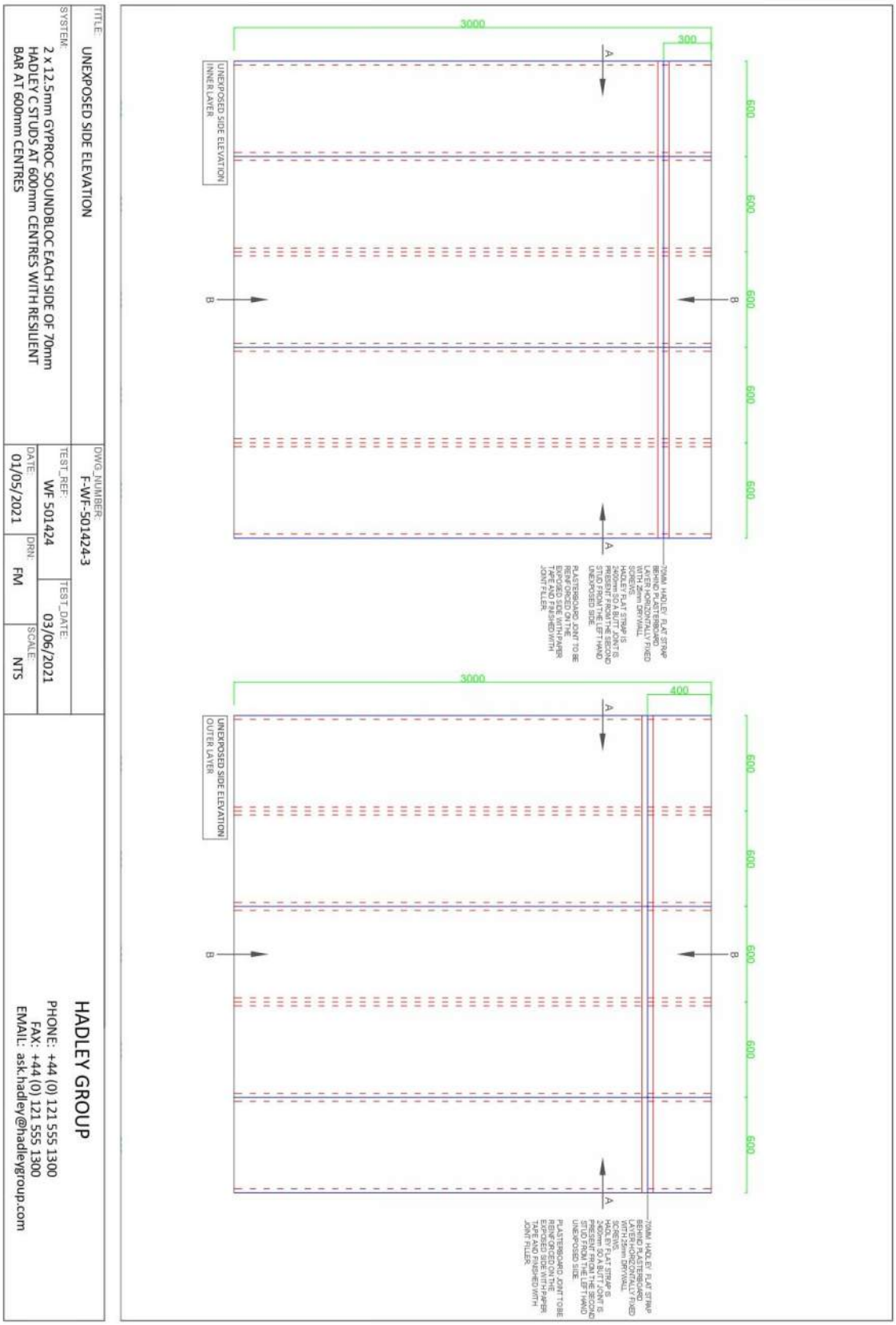
Field of Direct Application

BS EN 1363-1:2012, Fire resistance tests - Part 1: General requirements, states within Section 12.1, Clause v) that “The field of direct application of the results for the specimen being evaluated, either in the form of the full text from the appropriate standard, or only those clauses which are relevant for the specimen tested” shall be included within the test report. The full text of the field of direct application for the results of the specimen being evaluated herein, can be found within the appropriate test standard, which is referenced on the front cover of this report.

Client Drawings




SECTION B-B
FIRE SIDE
400mm
300mm
72mm HADLEY U TRACK
HADLEY RESILIENT BAR
70mm HADLEY C STUD @ 600mm CENTERS
2 x 12.5mm GYPROC SOUNDBLOC
PLASTERBOARD STAGGER USING HADLEY FLAT STRAP FIXED WITH DRYWALL SCREWS FIXING THE PLASTERBOARD INTO THE HADLEY FLAT STRAP AT 300M (INNER SCREWS REMOVED FOR CLARITY)
42mm EVOLUTION DRYWALL SCREWS
25mm EVOLUTION DRYWALL SCREWS
TWO CONTINUOUS BEADS OF SEALANT
FIXINGS AT MAXIMUM 600mm CENTRES
TITLE:
VERTICAL CROSS SECTIONS (SECTION B-B)
SYSTEM:
2 x 12.5mm GYPROC SOUNDBLOC EACH SIDE OF 70mm HADLEY C STUDS AT 600mm CENTRES WITH RESILIENT BAR AT 600mm CENTRES
DWG_NUMBER:
F-WF-501424-2
TEST_REF:
WF 501424
TEST_DATE:
03/06/2021
DATE:
01/05/2021
DRN:
FM
SCALE:
NTS
HADLEY GROUP
PHONE: +44 (0) 121 555 1300
FAX: +44 (0) 121 555 1300
EMAIL: ask.hadley@hadleygroup.com



TITLE: UNEXPOSED SIDE ELEVATION

SYSTEM: 2 x 12.5mm GYPROC SOUNDBLOC EACH SIDE OF 70mm HADLEY C STUDS AT 600mm CENTRES WITH RESILIENT BAR AT 600mm CENTRES

DWG_NUMBER: F-WF-501424-3

TEST_REF: WF 501424

TEST_DATE: 03/06/2021

DATE: 01/05/2021

DRN: FM

SCALE: NTS

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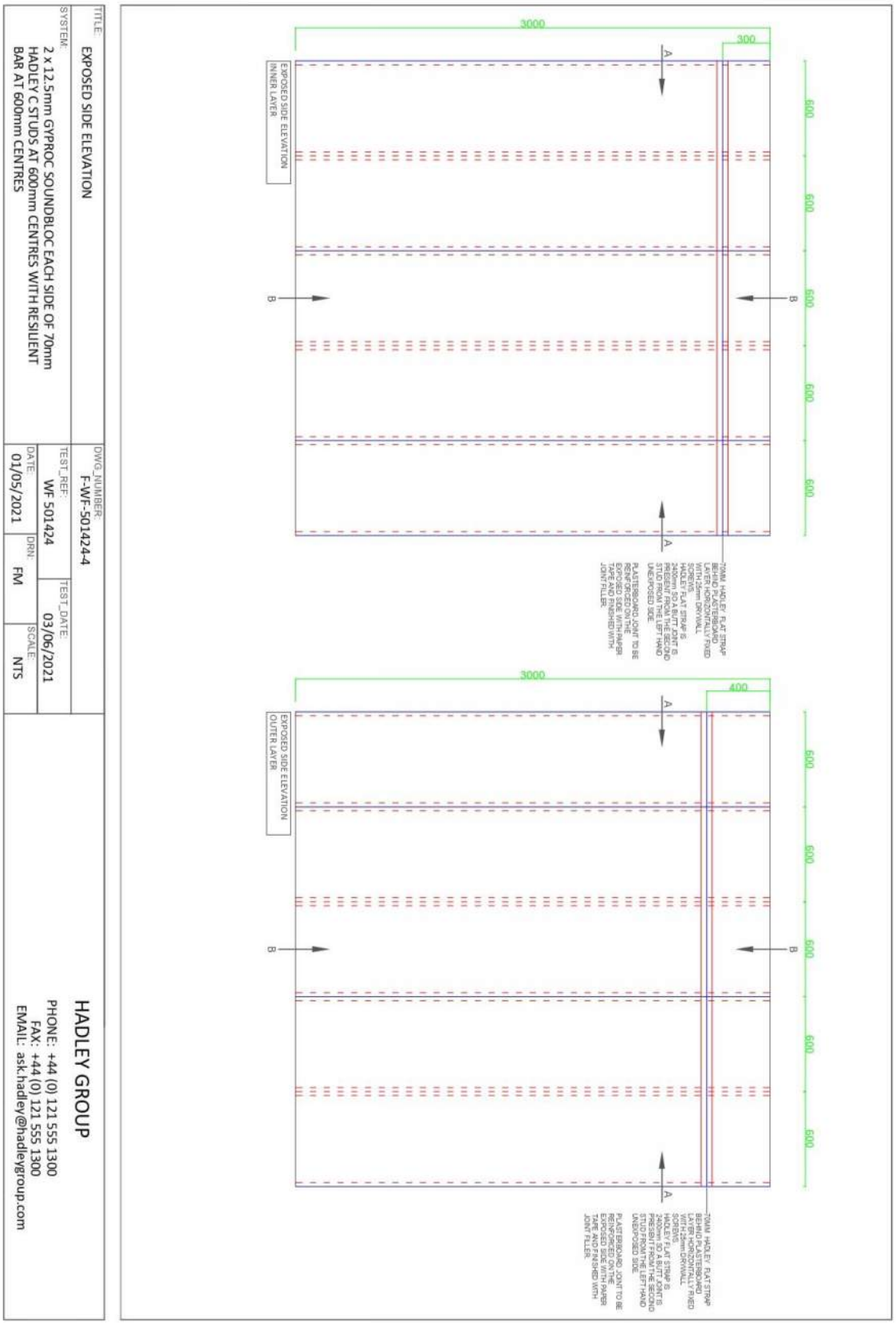

TITLE:	EXPOSED SIDE ELEVATION
SYSTEM:	2 x 12.5mm GYPROC SOUNDBLOC EACH SIDE OF 70mm HADLEY C STUDS AT 600mm CENTRES WITH RESILIENT BAR AT 600mm CENTRES
DWG_NUMBER:	F-WF-501424-4
TEST_REF:	WF 501424
TEST_DATE:	03/06/2021
DATE:	01/05/2021
DRN:	FM
SCALE:	NTS

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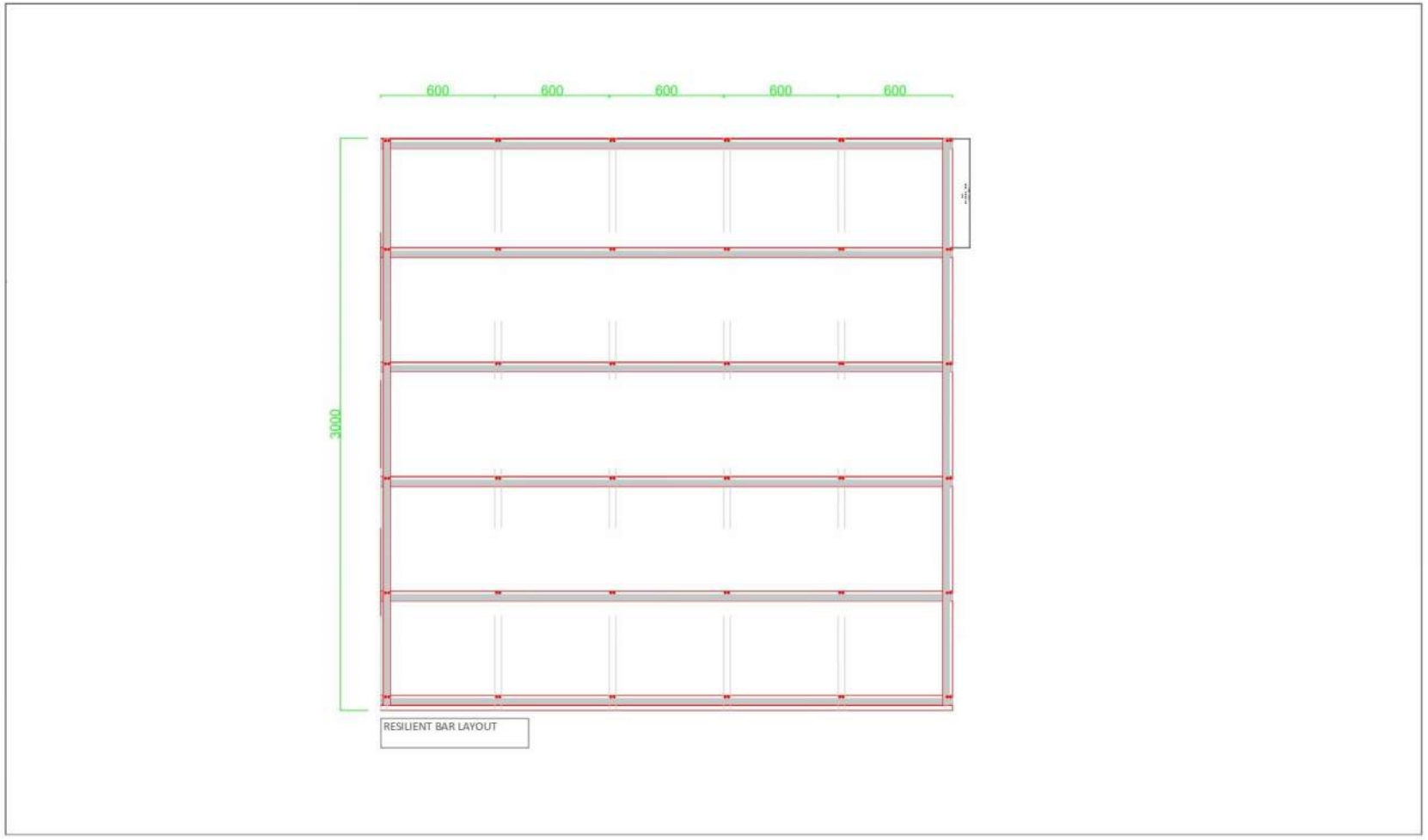

TITLE: RESILIENT BAR ELEVATION	DWG_NUMBER: F-WF-501424-5	HADLEY GROUP
SYSTEM: 2 x 12.5mm GYPROC SOUNDBLOC EACH SIDE OF 70mm HADLEY C STUDS AT 600mm CENTRES WITH RESILIENT BAR AT 600mm CENTRES	TEST_REF: WF 501424 / TEST_DATE: 03/06/2021	
	DATE: 01/05/2021 / DRN: FM / SCALE: NTS	

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