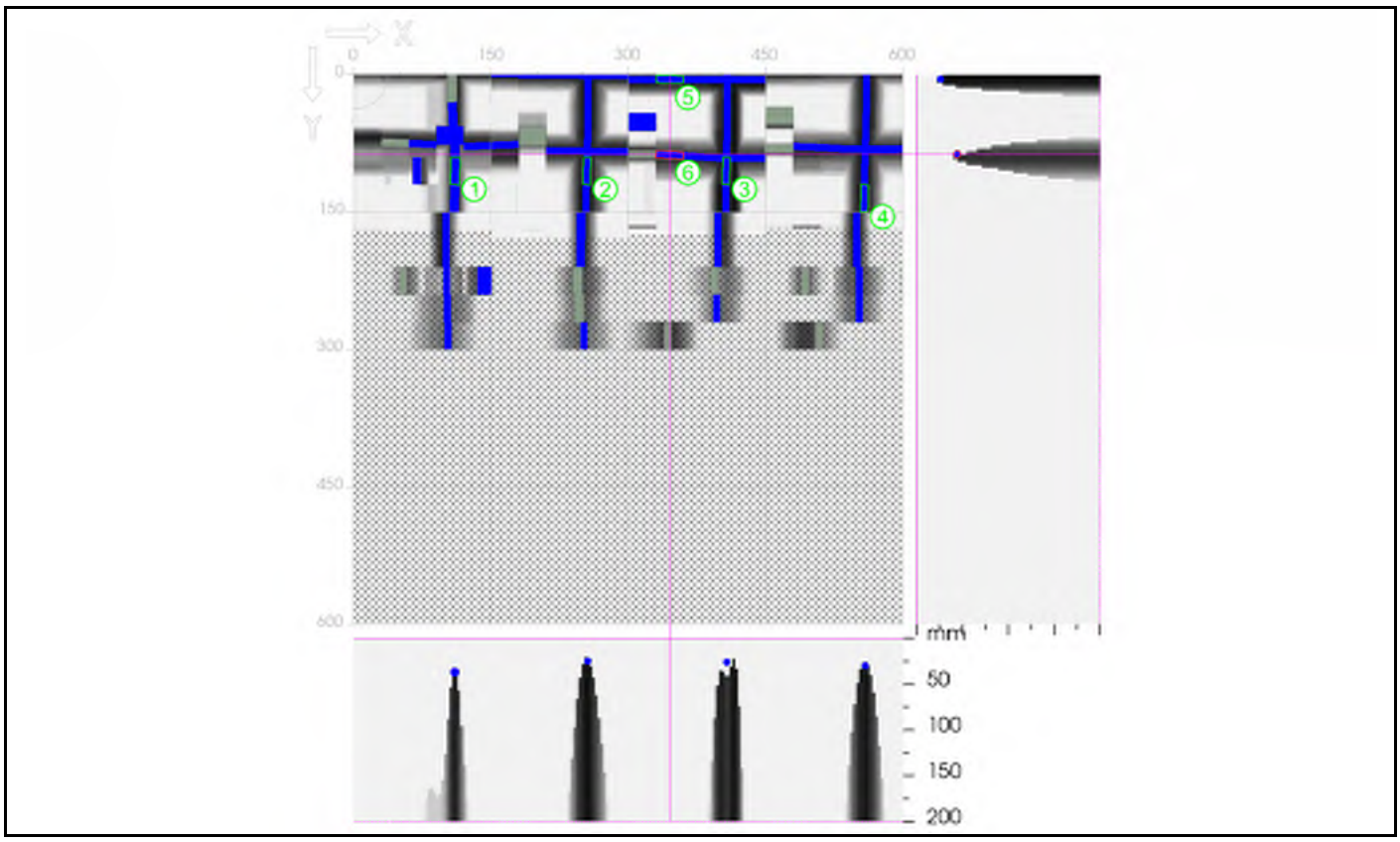
Hilti PROFIS Detection Report

Scan File:	110.fscan
Serial number:	227190008
Date / Time:	2019-10-02 22:12:06
Comment:	-



x: 345 mm	y: 87 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

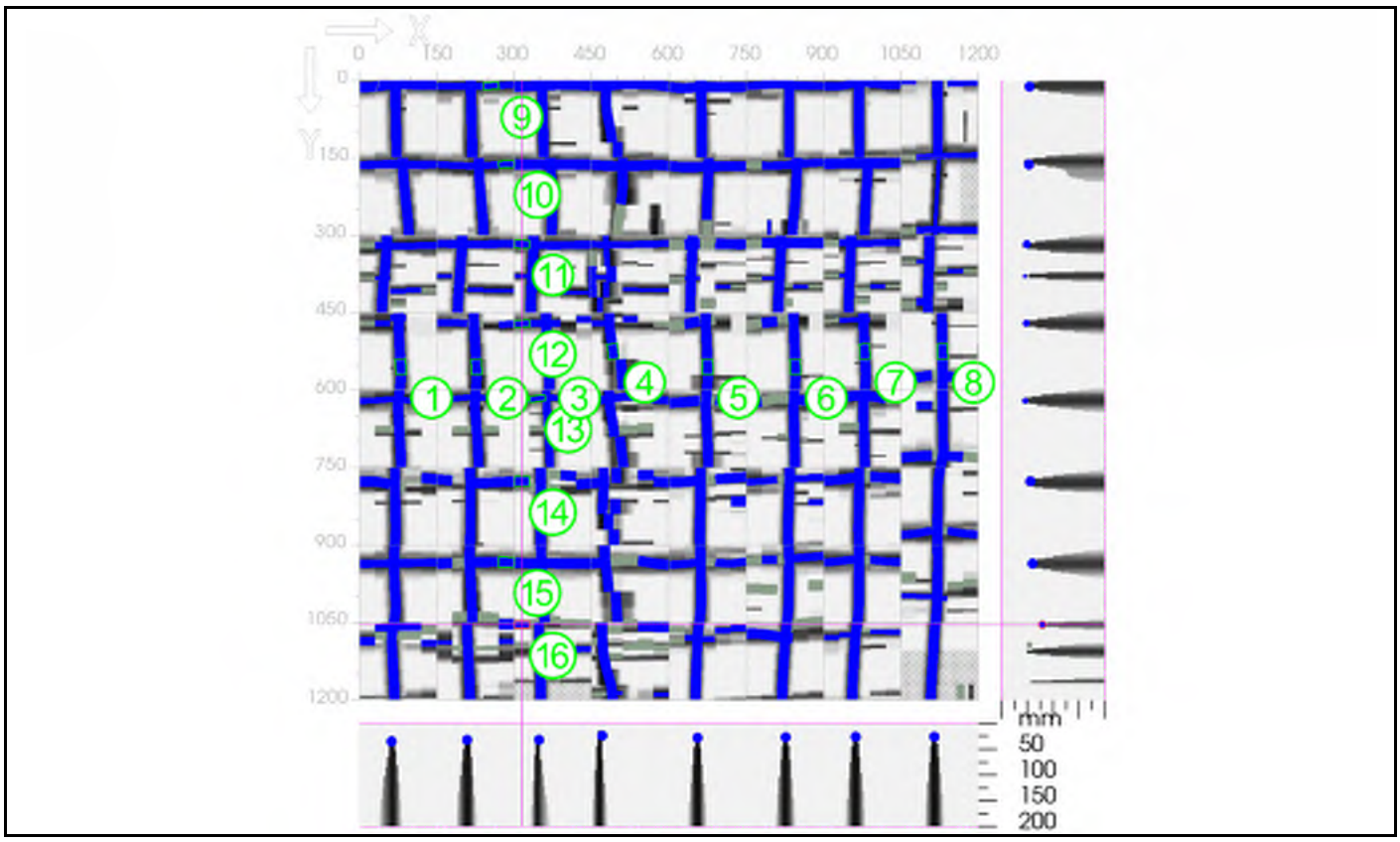
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G1
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	111 mm	105 mm	33 mm	10 mm	Vertical	High
2.	254 mm	105 mm	22 mm	8 mm	Vertical	High
3.	407 mm	105 mm	22 mm	8 mm	Vertical	High
4.	557 mm	135 mm	24 mm	8 mm	Vertical	High
5.	345 mm	5 mm	22 mm	8 mm	Horizontal	High
6.	345 mm	87 mm	40 mm	8 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	150.fscan
Serial number:	227190008
Date / Time:	2019-10-04 22:52:14
Comment:	-



x: 315 mm	y: 1054 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G2
User:	BD		
Comment:	-		

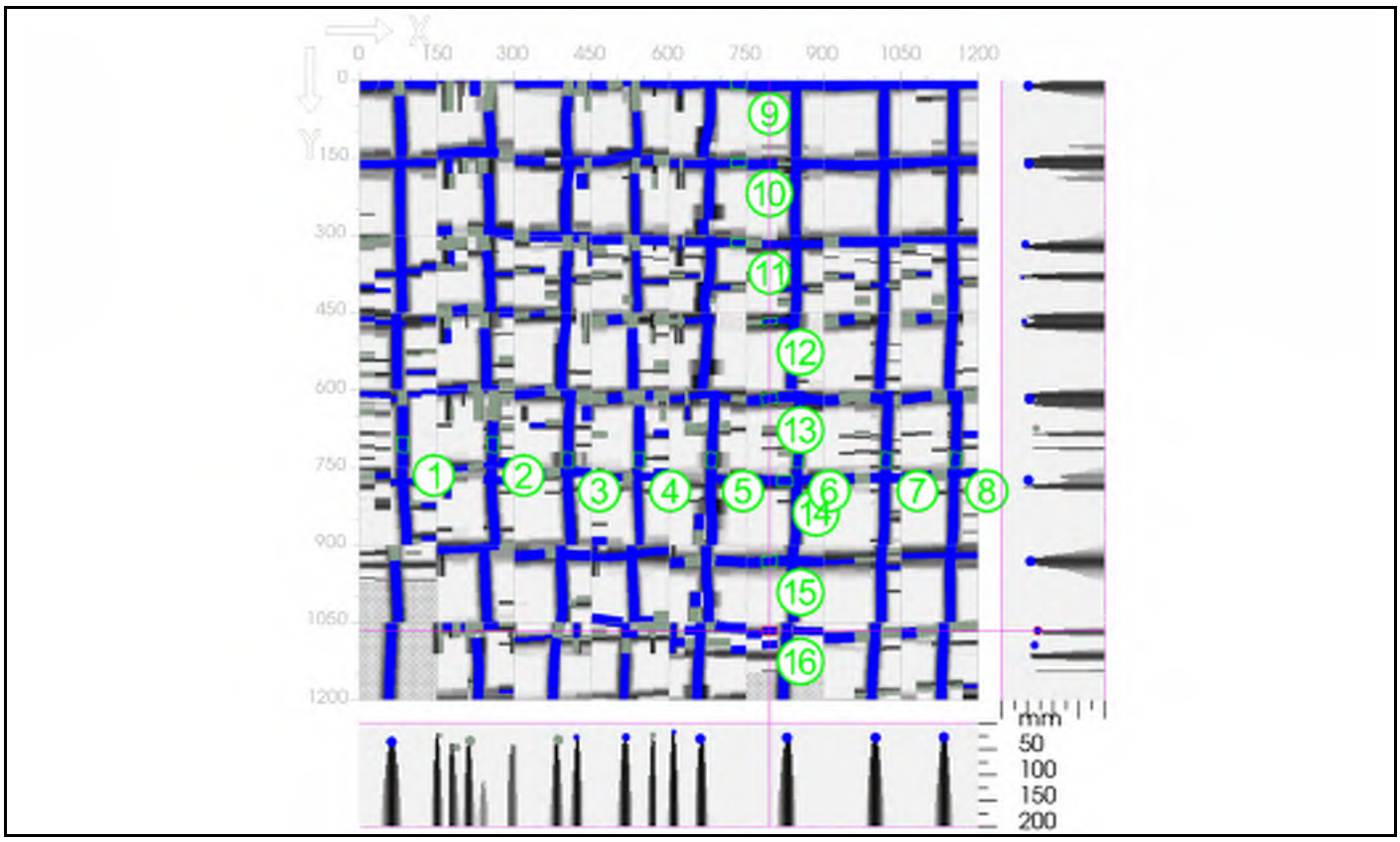
⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	80 mm	555 mm	25 mm	20 mm	Vertical	High
2.	227 mm	555 mm	23 mm	20 mm	Vertical	High
3.	366 mm	555 mm	23 mm	20 mm	Vertical	High
4.	493 mm	525 mm	16 mm	20 mm	Vertical	High
5.	675 mm	555 mm	18 mm	20 mm	Vertical	High
6.	845 mm	555 mm	17 mm	20 mm	Vertical	High
7.	979 mm	525 mm	16 mm	20 mm	Vertical	High
8.	1130 mm	525 mm	16 mm	20 mm	Vertical	High
9.	255 mm	11 mm	40 mm	14 mm	Horizontal	High
10.	285 mm	162 mm	39 mm	14 mm	Horizontal	High
11.	315 mm	317 mm	41 mm	16 mm	Horizontal	High
12.	315 mm	470 mm	41 mm	14 mm	Horizontal	High
13.	345 mm	616 mm	39 mm	12 mm	Horizontal	High

14.	315 mm	776 mm	46 mm	20 mm	Horizontal	High
15.	285 mm	932 mm	48 mm	20 mm	Horizontal	High
16.	315 mm	1054 mm	72 mm	14 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	151.fscan
Serial number:	227190008
Date / Time:	2019-10-04 22:57:39
Comment:	-



x: 795 mm	y: 1066 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G3
User:	BD		
Comment:	-		

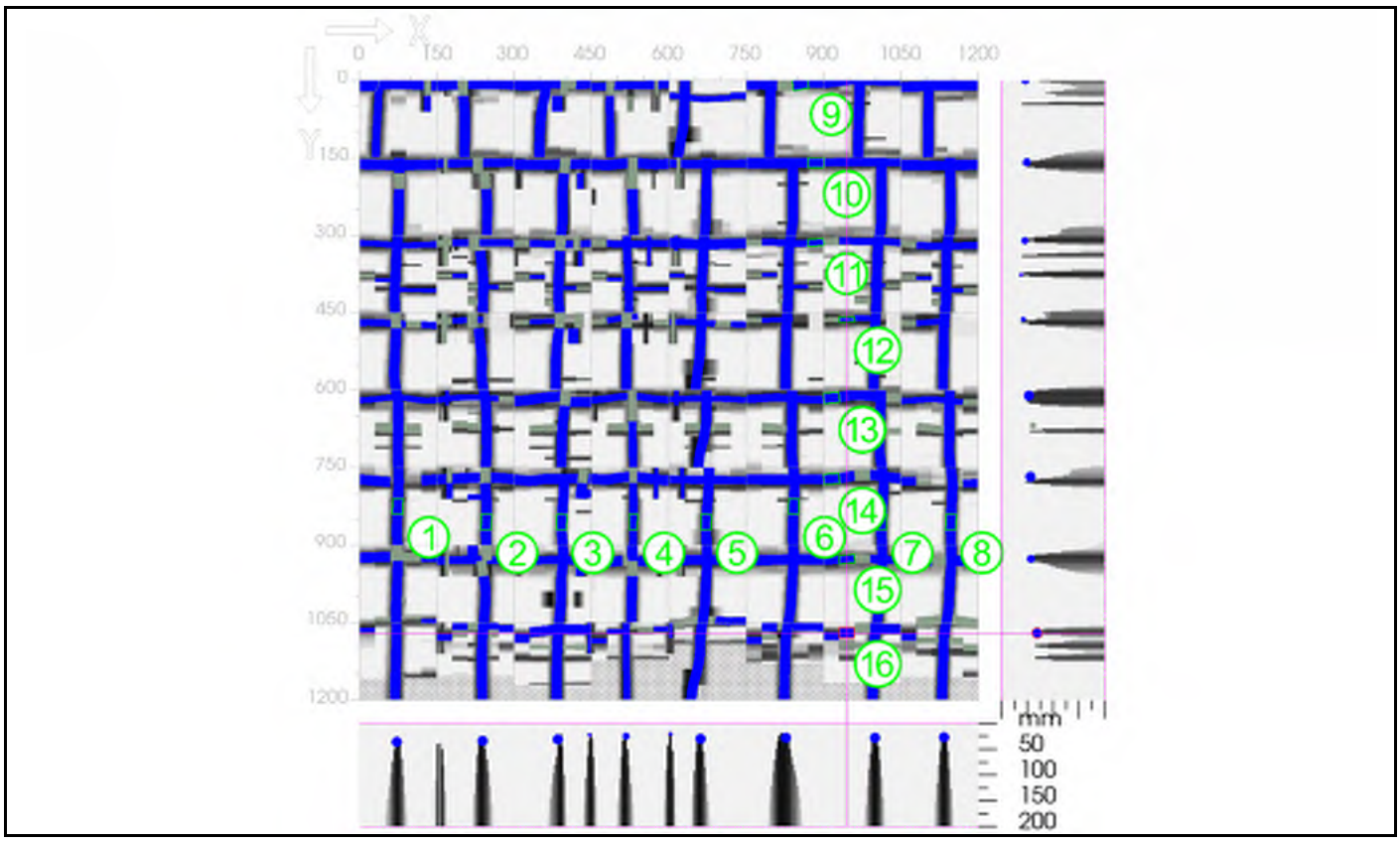
⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	84 mm	705 mm	26 mm	20 mm	Vertical	High
2.	258 mm	705 mm	25 mm	20 mm	Vertical	High
3.	405 mm	735 mm	22 mm	20 mm	Vertical	High
4.	542 mm	735 mm	22 mm	20 mm	Vertical	High
5.	683 mm	735 mm	20 mm	20 mm	Vertical	High
6.	851 mm	735 mm	18 mm	20 mm	Vertical	High
7.	1022 mm	735 mm	18 mm	20 mm	Vertical	High
8.	1156 mm	735 mm	16 mm	20 mm	Vertical	High
9.	735 mm	5 mm	43 mm	20 mm	Horizontal	High
10.	735 mm	159 mm	42 mm	16 mm	Horizontal	High
11.	735 mm	314 mm	37 mm	16 mm	Horizontal	High
12.	795 mm	467 mm	38 mm	12 mm	Horizontal	High
13.	795 mm	617 mm	44 mm	20 mm	Horizontal	High

14.	825 mm	777 mm	40 mm	20 mm	Horizontal	High
15.	795 mm	931 mm	46 mm	20 mm	Horizontal	High
16.	795 mm	1066 mm	62 mm	16 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	152.fscan
Serial number:	227190008
Date / Time:	2019-10-04 23:02:17
Comment:	-



x: 945 mm	y: 1070 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G4
User:	BD		
Comment:	-		

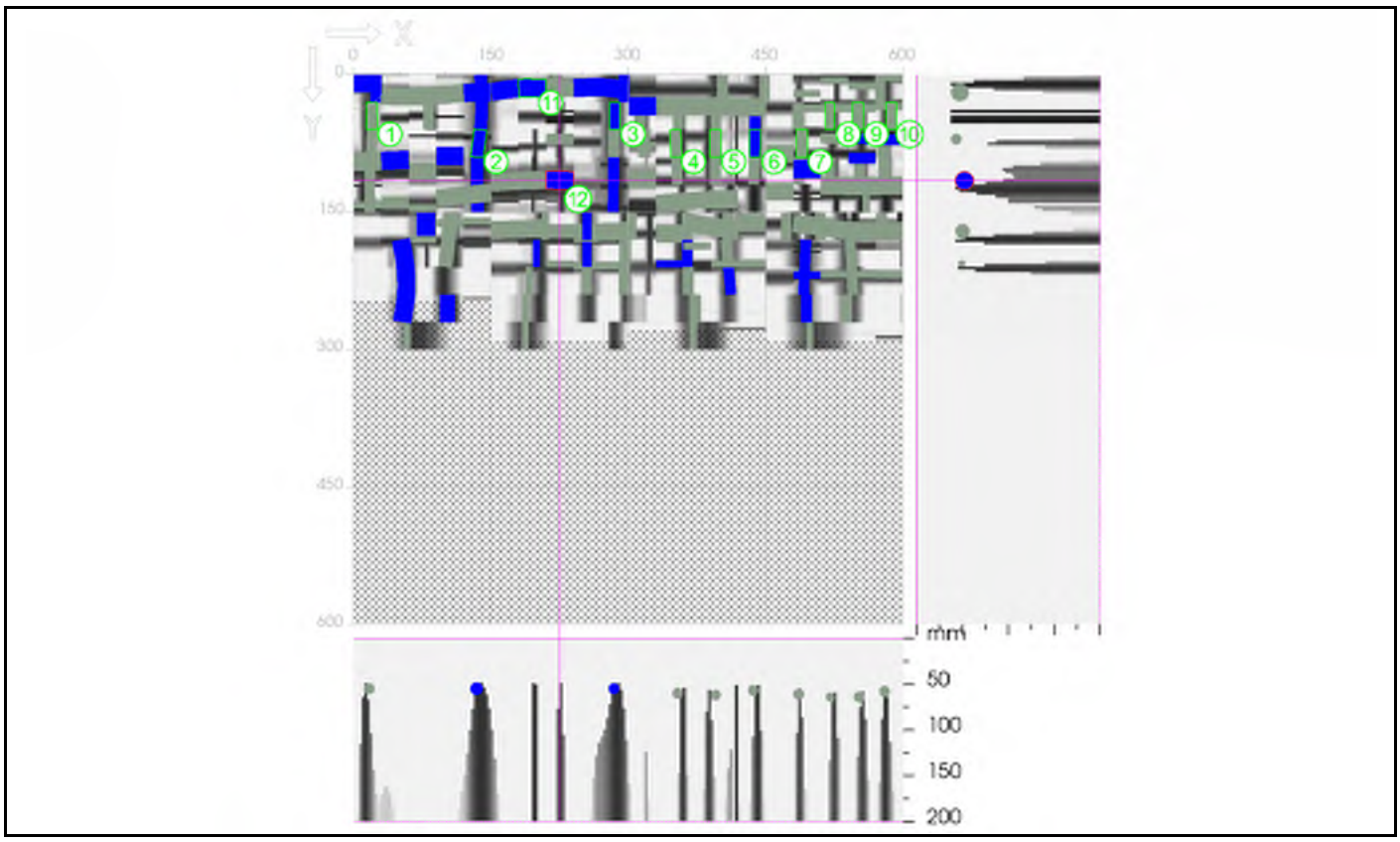
⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	74 mm	825 mm	26 mm	20 mm	Vertical	High
2.	246 mm	855 mm	25 mm	20 mm	Vertical	High
3.	392 mm	855 mm	23 mm	20 mm	Vertical	High
4.	531 mm	855 mm	21 mm	16 mm	Vertical	High
5.	672 mm	855 mm	20 mm	20 mm	Vertical	High
6.	842 mm	825 mm	18 mm	20 mm	Vertical	High
7.	1012 mm	855 mm	18 mm	20 mm	Vertical	High
8.	1147 mm	855 mm	17 mm	20 mm	Vertical	High
9.	855 mm	6 mm	41 mm	20 mm	Horizontal	High
10.	885 mm	160 mm	43 mm	20 mm	Horizontal	High
11.	885 mm	314 mm	36 mm	14 mm	Horizontal	High
12.	945 mm	463 mm	37 mm	10 mm	Horizontal	High
13.	915 mm	616 mm	44 mm	20 mm	Horizontal	High

14.	915 mm	773 mm	47 mm	20 mm	Horizontal	High
15.	945 mm	927 mm	49 mm	16 mm	Horizontal	High
16.	945 mm	1070 mm	59 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	114.fscan
Serial number:	227190008
Date / Time:	2019-10-03 00:06:14
Comment:	-



x: 225 mm	y: 116 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

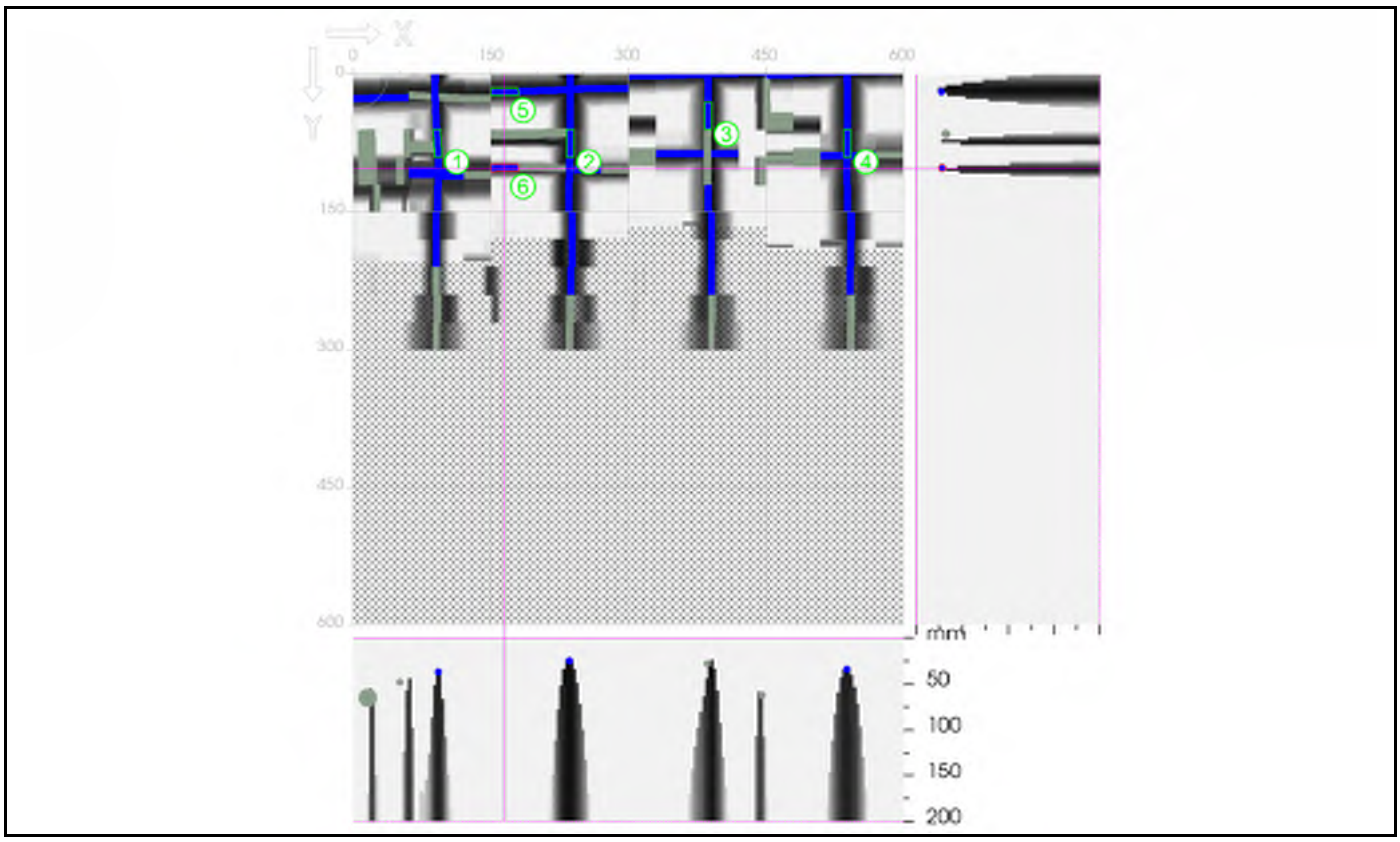
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G5
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	19 mm	45 mm	44 mm	12 mm	Vertical	Low
2.	135 mm	75 mm	47 mm	14 mm	Vertical	High
3.	285 mm	45 mm	56 mm	12 mm	Vertical	High
4.	351 mm	75 mm	55 mm	12 mm	Vertical	Low
5.	395 mm	75 mm	49 mm	12 mm	Vertical	Low
6.	439 mm	75 mm	51 mm	12 mm	Vertical	High
7.	490 mm	75 mm	47 mm	12 mm	Vertical	Low
8.	520 mm	45 mm	58 mm	10 mm	Vertical	Low
9.	551 mm	45 mm	60 mm	12 mm	Vertical	Low
10.	587 mm	45 mm	51 mm	12 mm	Vertical	Low
11.	195 mm	11 mm	45 mm	20 mm	Horizontal	High
12.	225 mm	116 mm	42 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	115.fscan
Serial number:	227190008
Date / Time:	2019-10-03 00:07:04
Comment:	-



x: 165 mm	y: 102 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

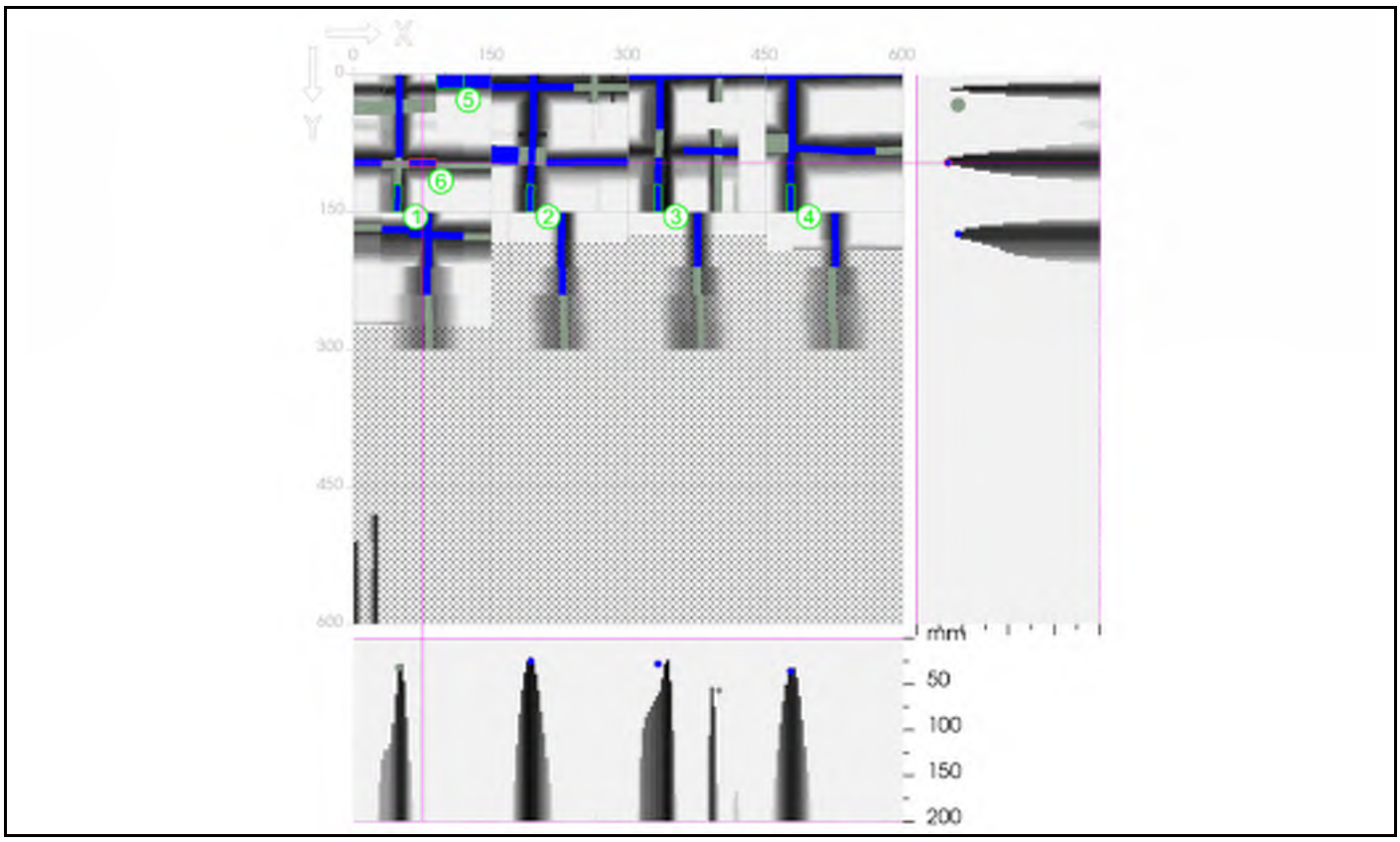
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G5
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	92 mm	75 mm	32 mm	8 mm	Vertical	High
2.	236 mm	75 mm	21 mm	8 mm	Vertical	High
3.	387 mm	45 mm	23 mm	8 mm	Vertical	High
4.	539 mm	75 mm	26 mm	8 mm	Vertical	High
5.	165 mm	19 mm	23 mm	8 mm	Horizontal	High
6.	165 mm	102 mm	24 mm	8 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	113.fscan
Serial number:	227190008
Date / Time:	2019-10-03 00:05:09
Comment:	-



x: 75 mm	y: 96 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

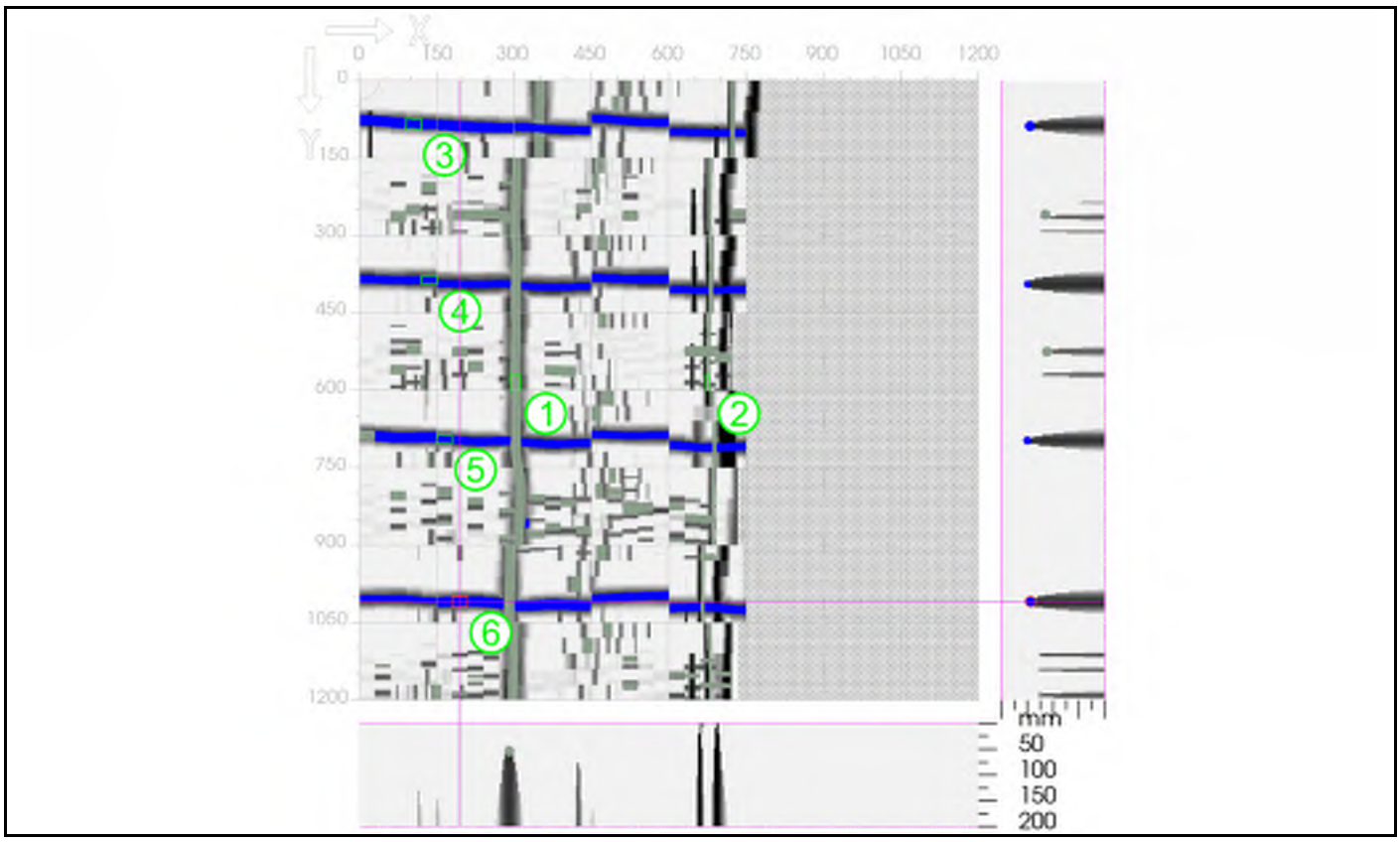
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G5
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	47 mm	135 mm	27 mm	8 mm	Vertical	High
2.	192 mm	135 mm	21 mm	8 mm	Vertical	High
3.	332 mm	135 mm	24 mm	8 mm	Vertical	High
4.	477 mm	135 mm	31 mm	8 mm	Vertical	High
5.	105 mm	8 mm	47 mm	16 mm	Horizontal	High
6.	75 mm	96 mm	30 mm	8 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	124.fscan
Serial number:	227190008
Date / Time:	2019-10-03 20:02:18
Comment:	-



x: 195 mm	y: 1009 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

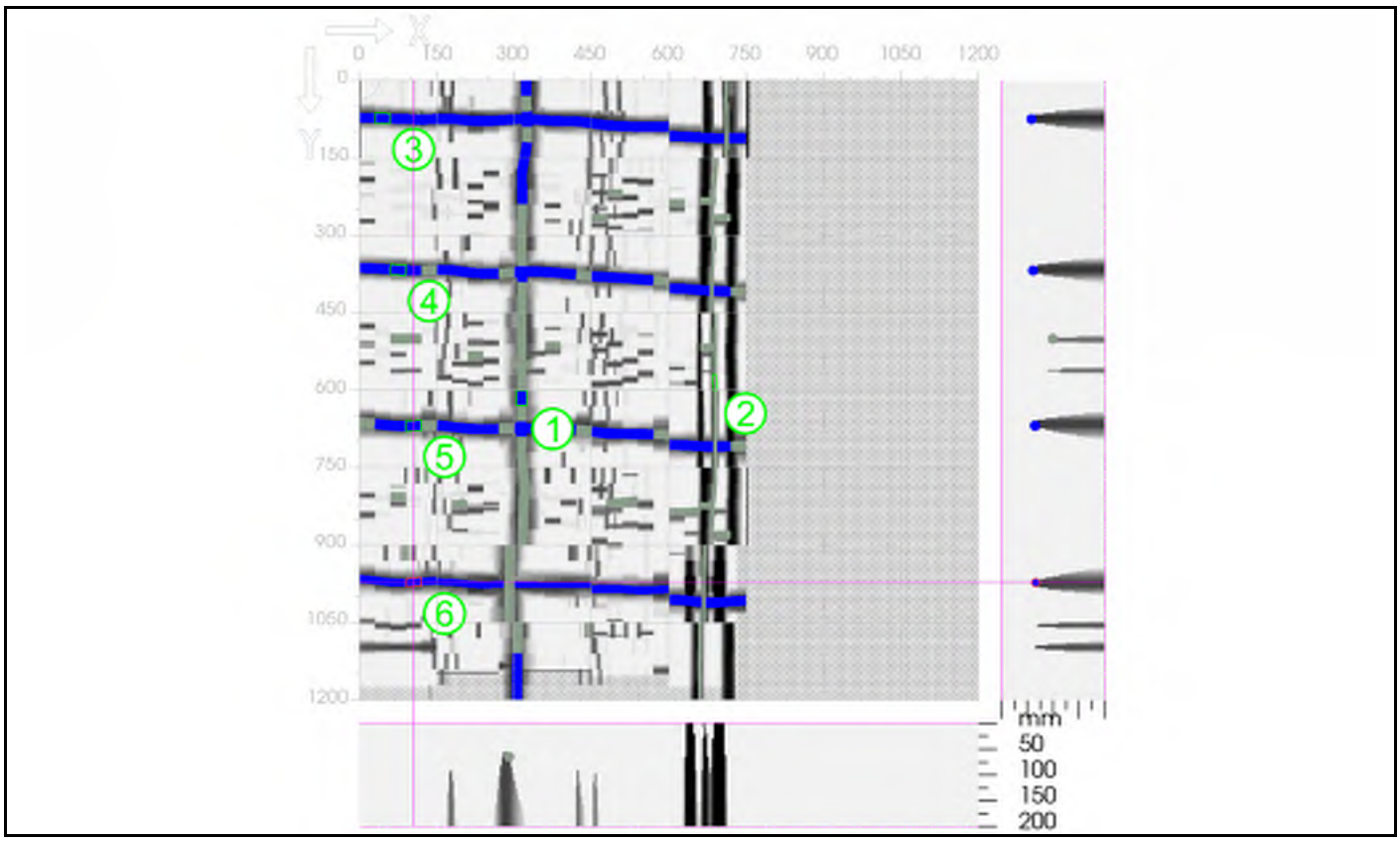
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G6
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	301 mm	585 mm	43 mm	20 mm	Vertical	Low
2.	676 mm	585 mm	0 mm	8 mm	Vertical	Low
3.	105 mm	85 mm	45 mm	20 mm	Horizontal	High
4.	135 mm	387 mm	45 mm	16 mm	Horizontal	High
5.	165 mm	694 mm	45 mm	16 mm	Horizontal	High
6.	195 mm	1009 mm	46 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	123.fscan
Serial number:	227190008
Date / Time:	2019-10-03 19:58:05
Comment:	-



x: 105 mm	y: 972 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

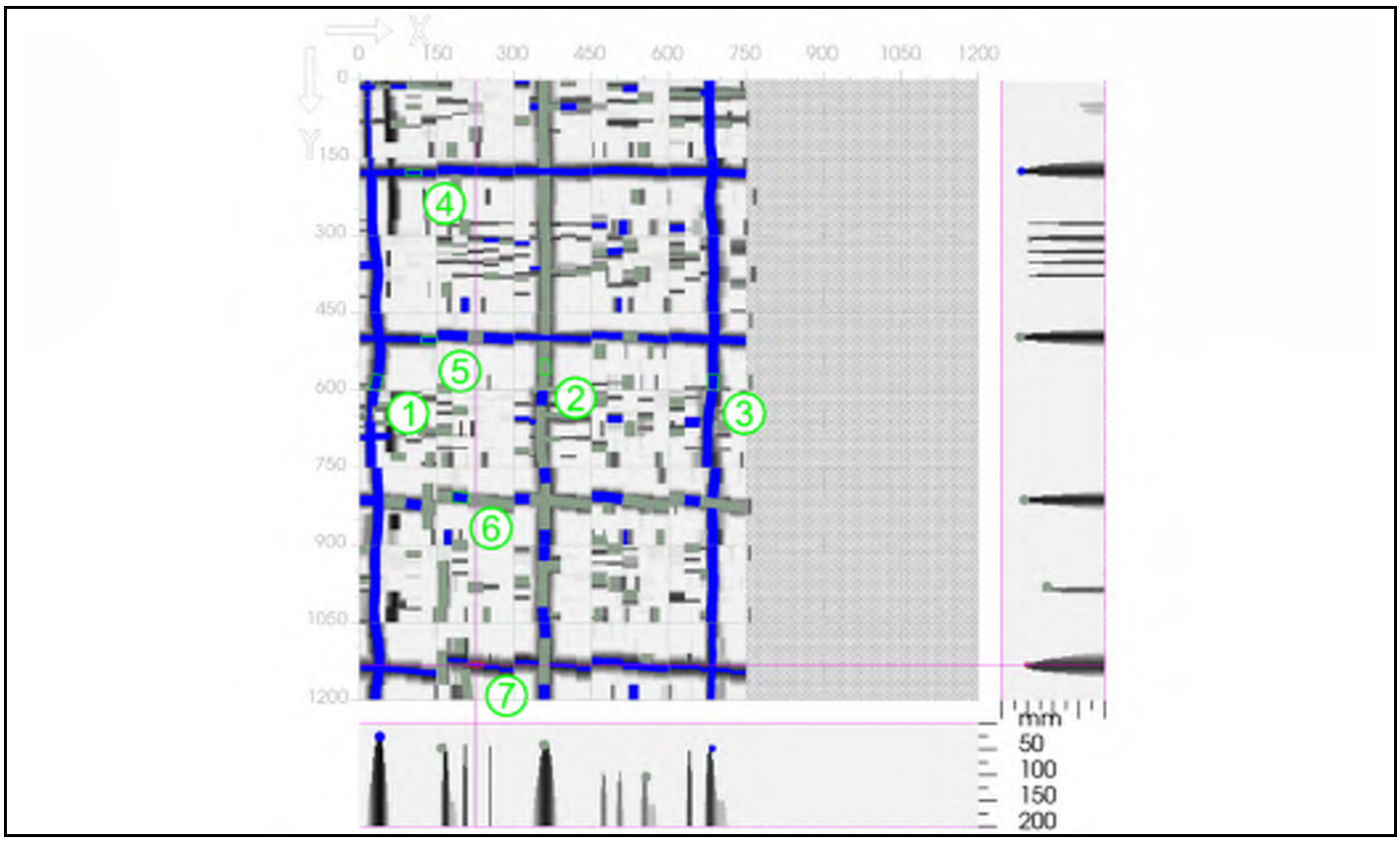
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G6
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	314 mm	615 mm	46 mm	20 mm	Vertical	High
2.	688 mm	585 mm	0 mm	8 mm	Vertical	Low
3.	45 mm	73 mm	47 mm	20 mm	Horizontal	High
4.	75 mm	367 mm	48 mm	20 mm	Horizontal	High
5.	105 mm	669 mm	55 mm	20 mm	Horizontal	High
6.	105 mm	972 mm	58 mm	16 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	126.fscan
Serial number:	227190008
Date / Time:	2019-10-03 20:10:29
Comment:	-



x: 225 mm	y: 1132 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

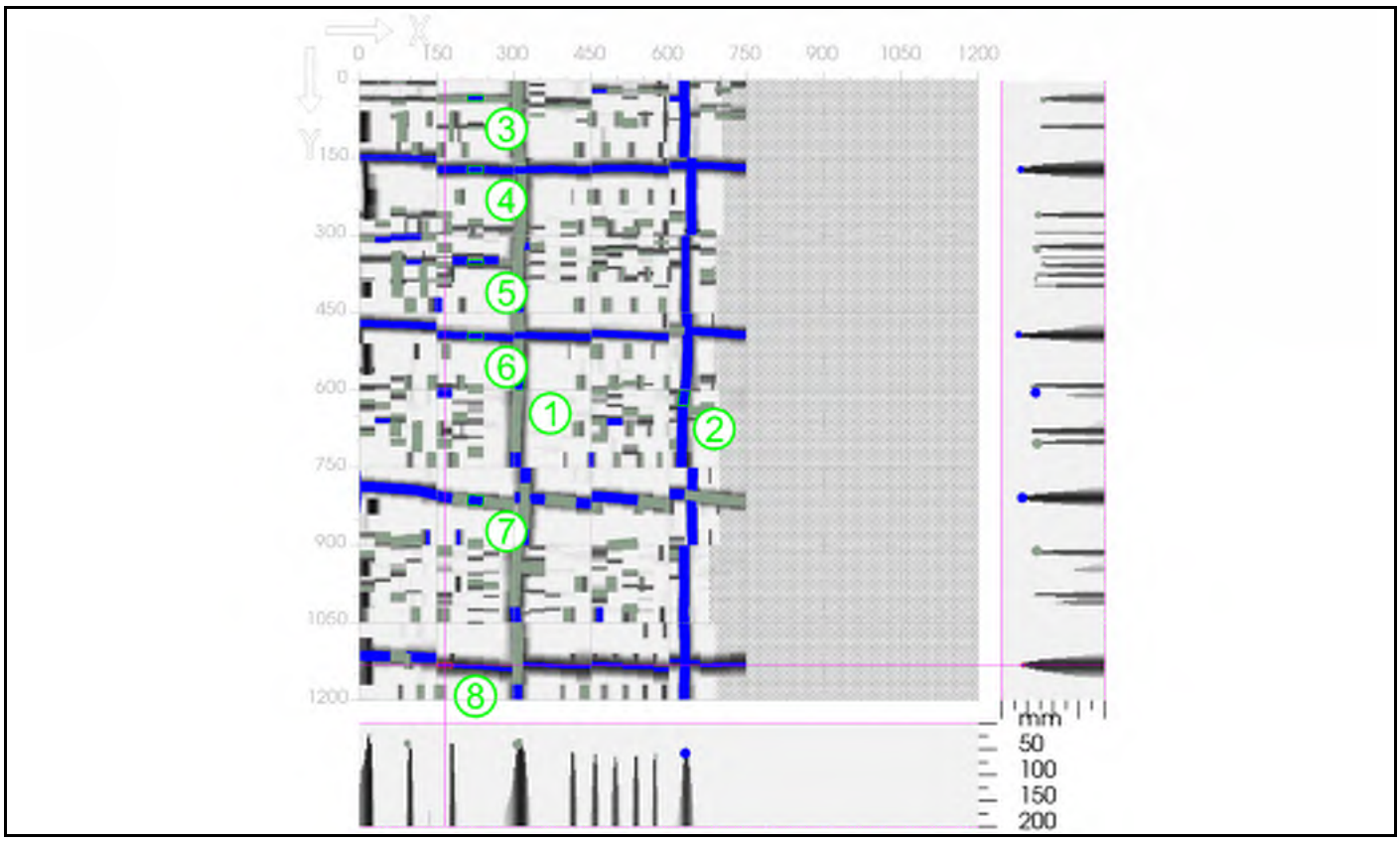
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G7
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	34 mm	585 mm	21 mm	20 mm	Vertical	High
2.	359 mm	555 mm	32 mm	20 mm	Vertical	Low
3.	686 mm	585 mm	44 mm	20 mm	Vertical	High
4.	105 mm	179 mm	30 mm	12 mm	Horizontal	High
5.	135 mm	503 mm	31 mm	12 mm	Horizontal	High
6.	195 mm	807 mm	33 mm	20 mm	Horizontal	High
7.	225 mm	1132 mm	45 mm	8 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	125.fscan
Serial number:	227190008
Date / Time:	2019-10-03 20:08:25
Comment:	-



x: 165 mm	y: 1132 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

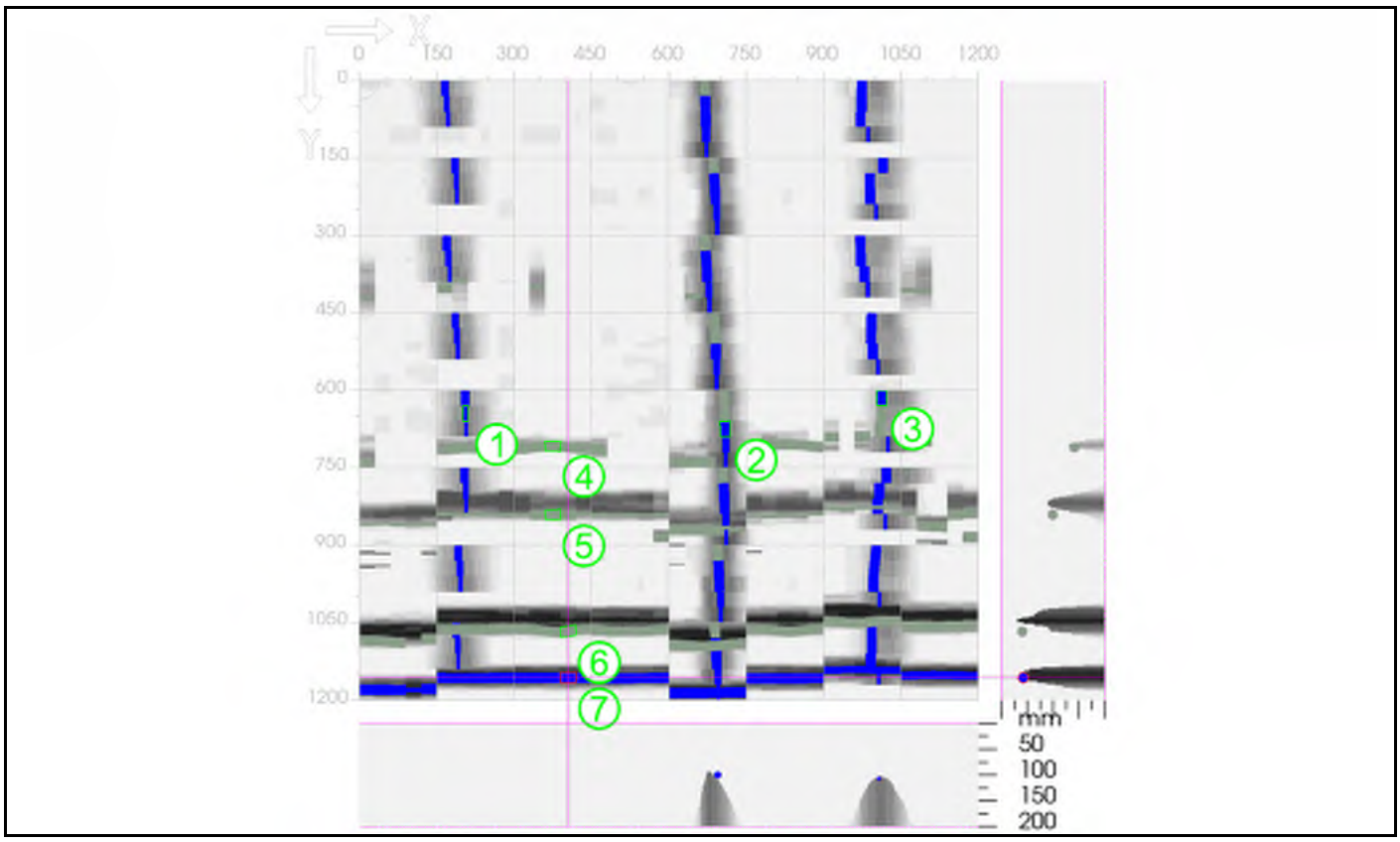
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G7
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	310 mm	585 mm	33 mm	20 mm	Vertical	High
2.	628 mm	615 mm	47 mm	20 mm	Vertical	High
3.	225 mm	34 mm	47 mm	12 mm	Horizontal	High
4.	225 mm	172 mm	29 mm	14 mm	Horizontal	High
5.	225 mm	352 mm	50 mm	10 mm	Horizontal	High
6.	225 mm	495 mm	24 mm	14 mm	Horizontal	High
7.	225 mm	813 mm	31 mm	20 mm	Horizontal	High
8.	165 mm	1132 mm	37 mm	8 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	127.fscan
Serial number:	227190008
Date / Time:	2019-10-03 20:17:56
Comment:	-



x: 405 mm	y: 1157 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

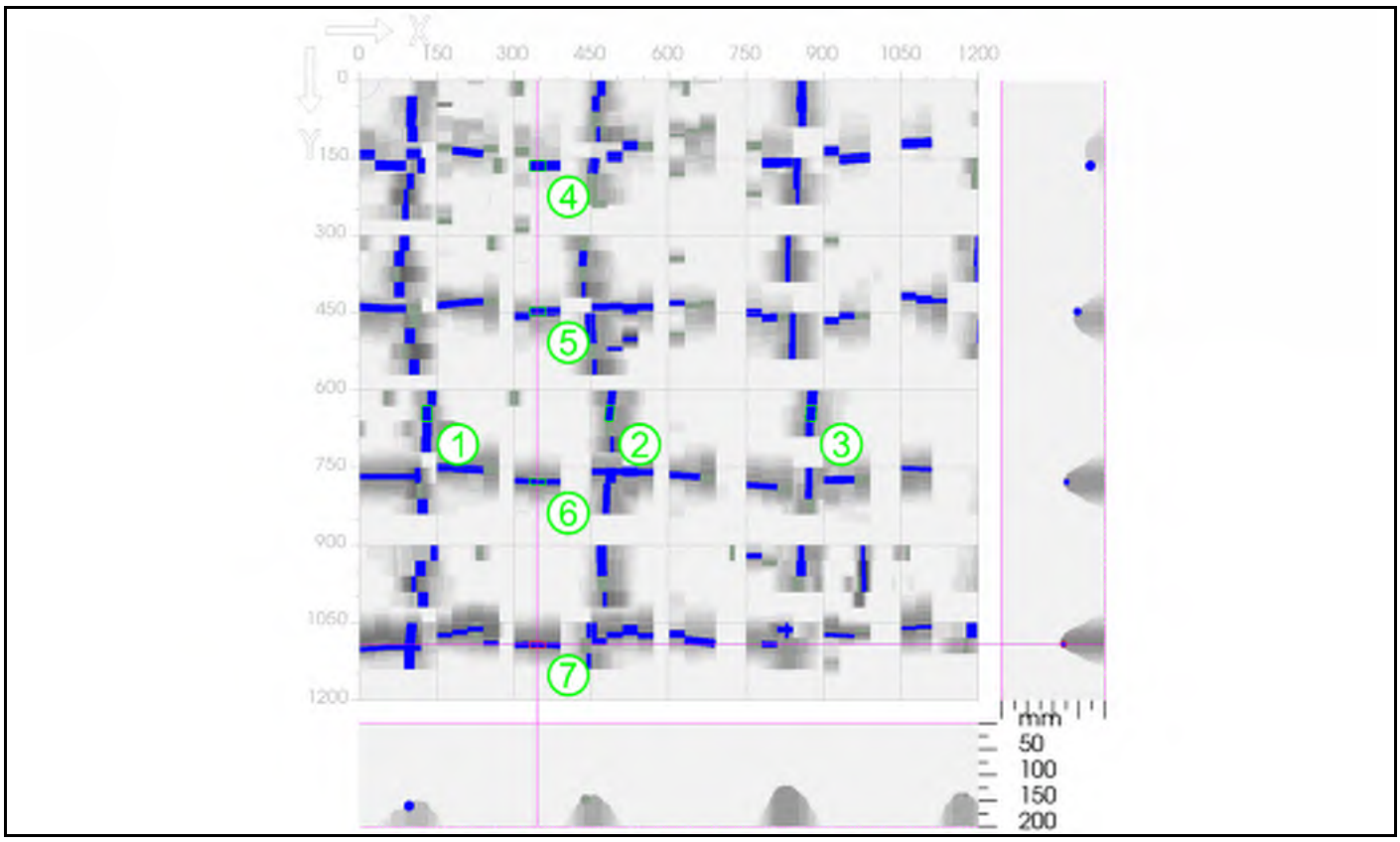
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G8
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	206 mm	645 mm	112 mm	10 mm	Vertical	High
2.	709 mm	675 mm	100 mm	20 mm	Vertical	High
3.	1013 mm	615 mm	116 mm	20 mm	Vertical	High
4.	375 mm	707 mm	133 mm	20 mm	Horizontal	Low
5.	375 mm	841 mm	91 mm	20 mm	Horizontal	Low
6.	405 mm	1067 mm	30 mm	20 mm	Horizontal	Low
7.	405 mm	1157 mm	32 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	128.fscan
Serial number:	227190008
Date / Time:	2019-10-03 20:43:24
Comment:	-



x: 345 mm	y: 1092 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

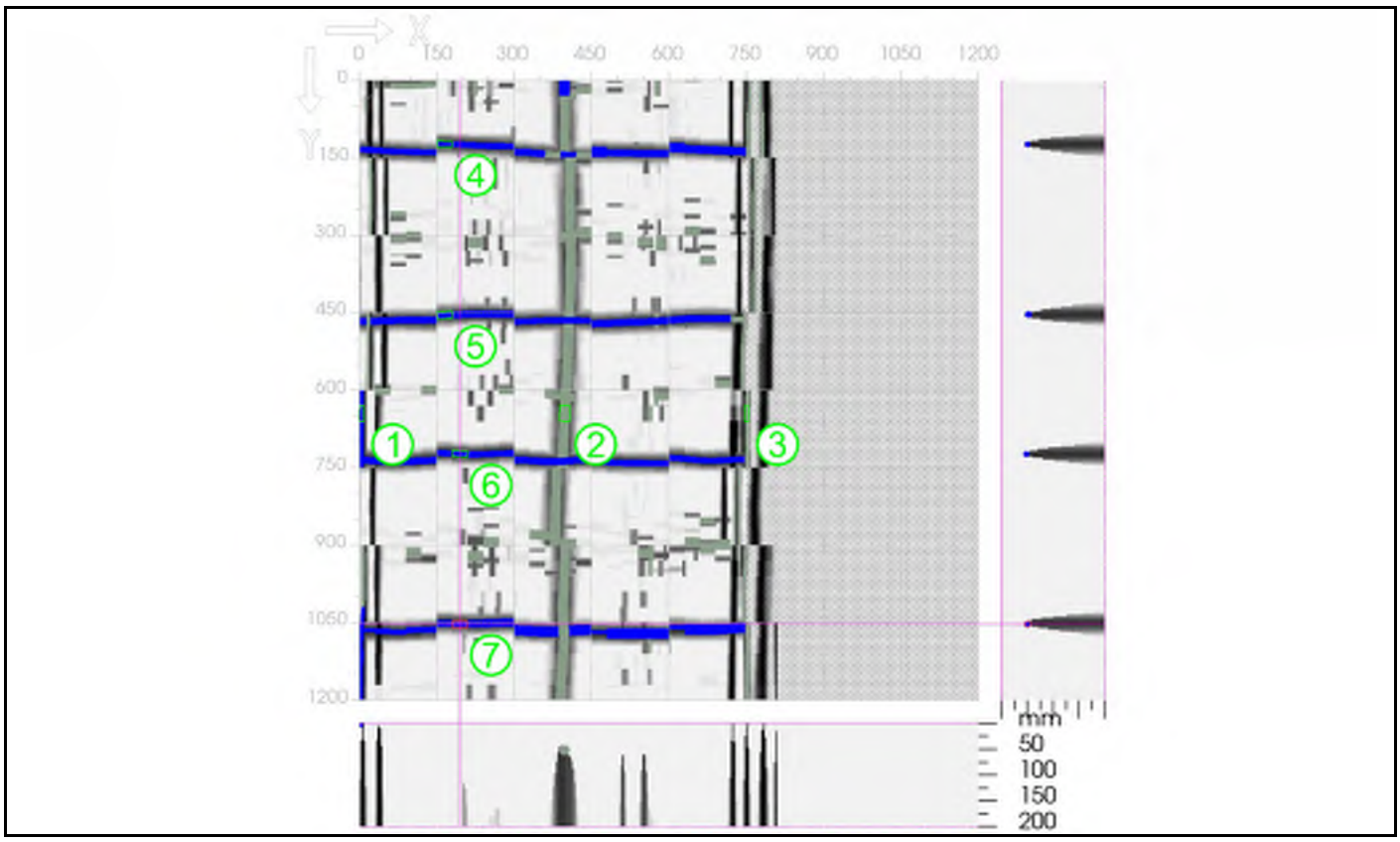
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G9
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	131 mm	645 mm	125 mm	20 mm	Vertical	High
2.	483 mm	645 mm	124 mm	16 mm	Vertical	High
3.	874 mm	645 mm	138 mm	20 mm	Vertical	High
4.	345 mm	165 mm	162 mm	20 mm	Horizontal	High
5.	345 mm	448 mm	139 mm	16 mm	Horizontal	High
6.	345 mm	778 mm	120 mm	12 mm	Horizontal	High
7.	345 mm	1092 mm	114 mm	12 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	130.fscan
Serial number:	227190008
Date / Time:	2019-10-03 20:54:02
Comment:	-



x: 195 mm	y: 1053 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

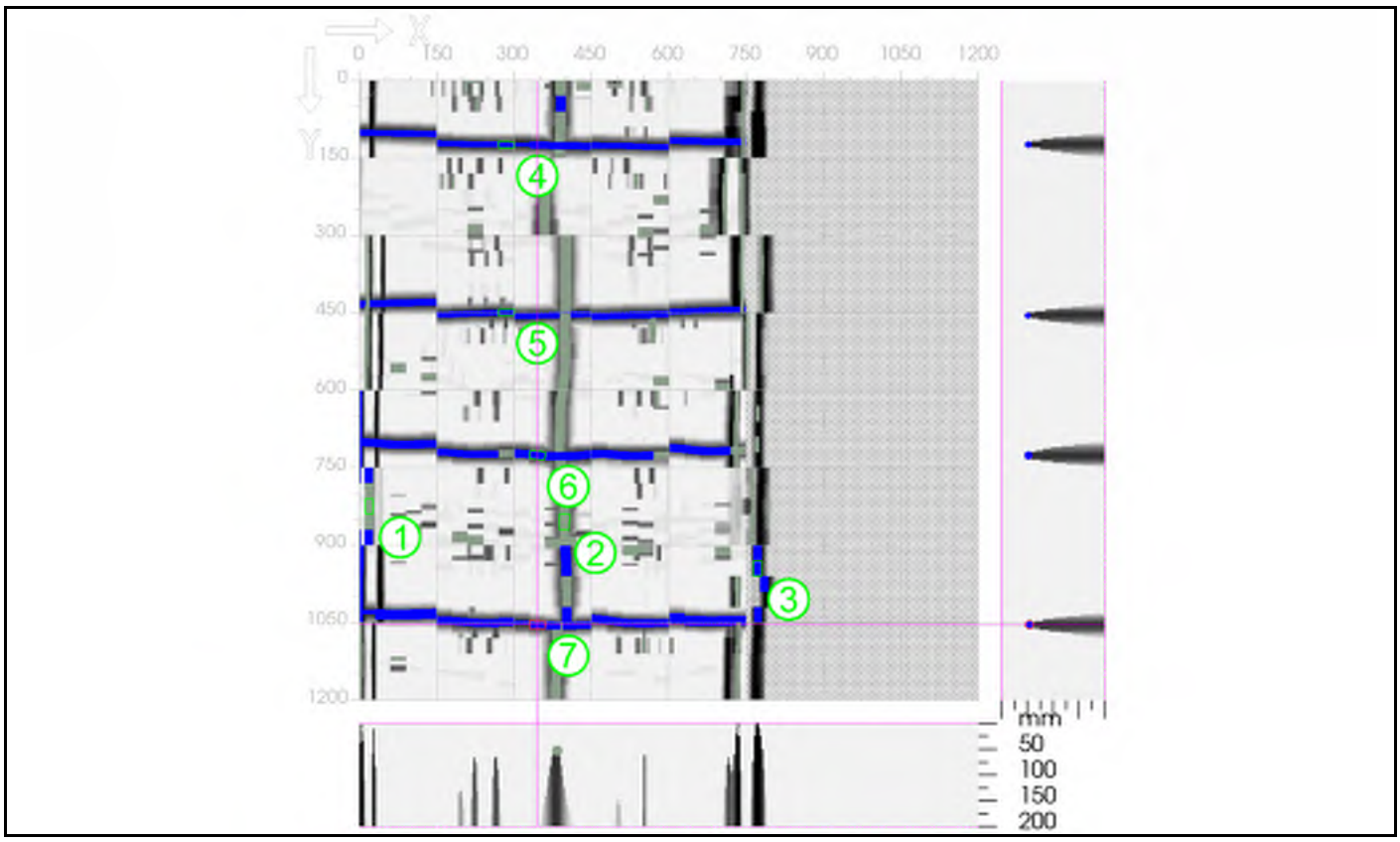
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G10
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	4 mm	645 mm	0 mm	8 mm	Vertical	High
2.	398 mm	645 mm	45 mm	20 mm	Vertical	Low
3.	751 mm	645 mm	0 mm	8 mm	Vertical	Low
4.	165 mm	123 mm	45 mm	12 mm	Horizontal	High
5.	165 mm	455 mm	48 mm	14 mm	Horizontal	High
6.	195 mm	724 mm	42 mm	12 mm	Horizontal	High
7.	195 mm	1053 mm	44 mm	12 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	129.fscan
Serial number:	227190008
Date / Time:	2019-10-03 20:50:52
Comment:	-



x: 345 mm	y: 1054 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

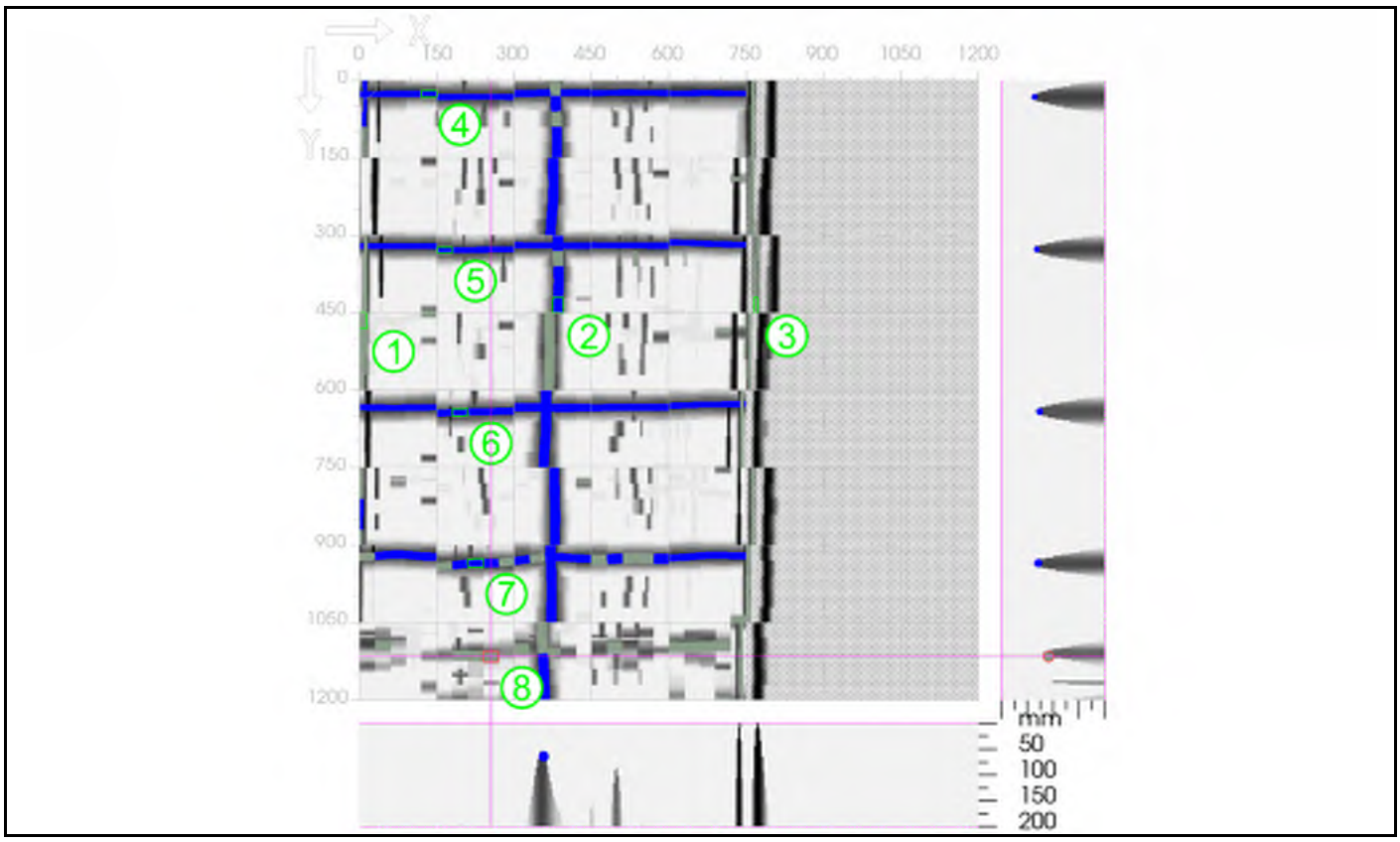
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G10
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	19 mm	825 mm	5 mm	16 mm	Vertical	Low
2.	397 mm	855 mm	47 mm	20 mm	Vertical	Low
3.	772 mm	945 mm	0 mm	16 mm	Vertical	High
4.	285 mm	125 mm	46 mm	12 mm	Horizontal	High
5.	285 mm	449 mm	44 mm	12 mm	Horizontal	High
6.	345 mm	726 mm	44 mm	16 mm	Horizontal	High
7.	345 mm	1054 mm	46 mm	16 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	132.fscan
Serial number:	227190008
Date / Time:	2019-10-03 21:04:53
Comment:	-



x: 255 mm	y: 1116 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

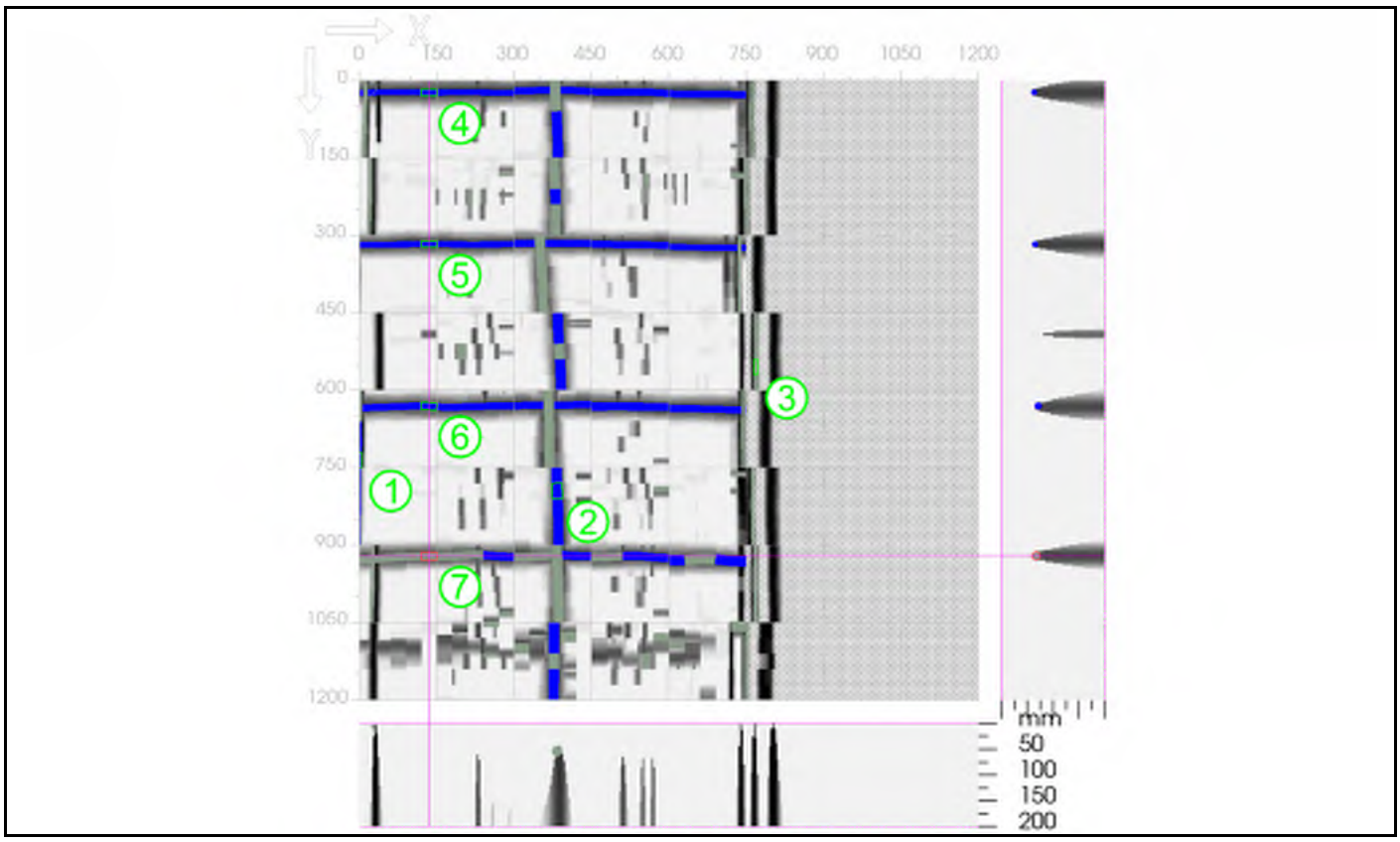
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G11
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	6 mm	465 mm	2 mm	16 mm	Vertical	Low
2.	385 mm	435 mm	56 mm	20 mm	Vertical	High
3.	769 mm	435 mm	0 mm	8 mm	Vertical	Low
4.	135 mm	26 mm	57 mm	12 mm	Horizontal	High
5.	165 mm	328 mm	64 mm	12 mm	Horizontal	High
6.	195 mm	643 mm	69 mm	14 mm	Horizontal	High
7.	225 mm	935 mm	65 mm	16 mm	Horizontal	High
8.	255 mm	1116 mm	81 mm	20 mm	Horizontal	Low

Hilti PROFIS Detection Report

Scan File:	131.fscan
Serial number:	227190008
Date / Time:	2019-10-03 21:00:58
Comment:	-



x: 135 mm	y: 921 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

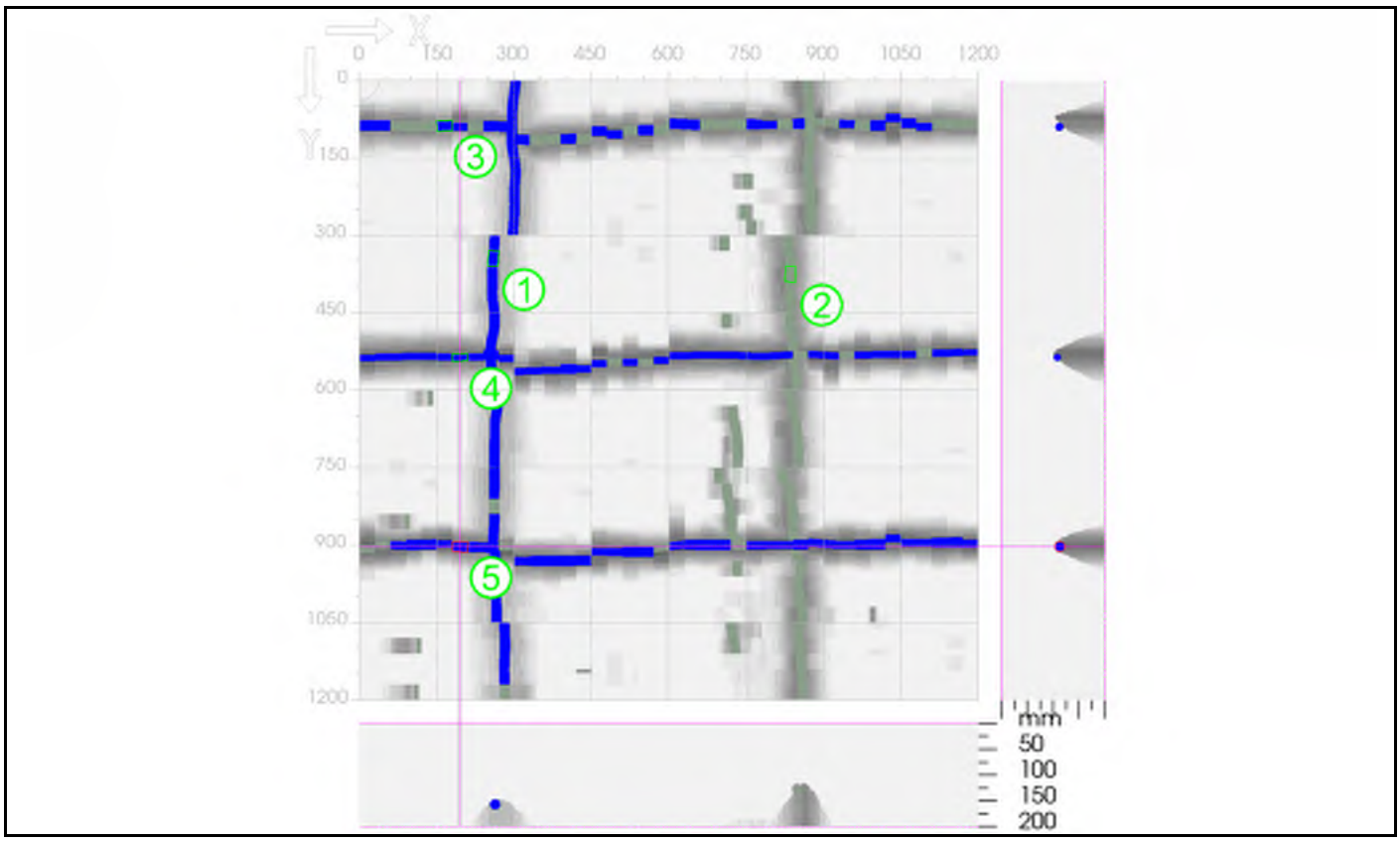
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G11
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	1 mm	735 mm	0 mm	8 mm	Vertical	High
2.	383 mm	795 mm	47 mm	20 mm	Vertical	High
3.	769 mm	555 mm	0 mm	8 mm	Vertical	Low
4.	135 mm	23 mm	57 mm	12 mm	Horizontal	High
5.	135 mm	317 mm	59 mm	12 mm	Horizontal	High
6.	135 mm	630 mm	64 mm	14 mm	Horizontal	High
7.	135 mm	921 mm	59 mm	16 mm	Horizontal	Low

Hilti PROFIS Detection Report

Scan File:	133.fscan
Serial number:	227190008
Date / Time:	2019-10-03 21:16:28
Comment:	-



x: 195 mm	y: 903 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

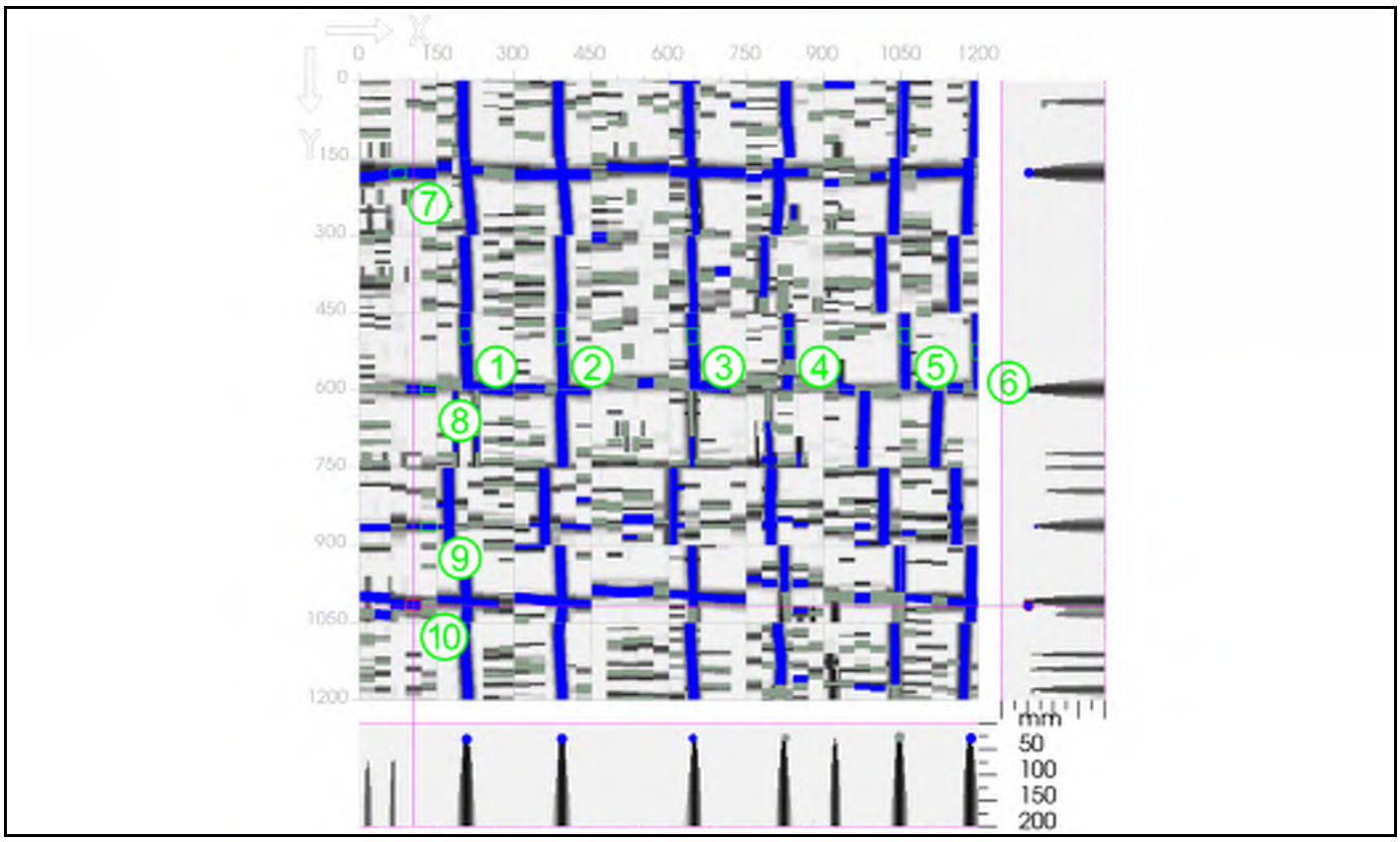
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G12
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	259 mm	345 mm	145 mm	20 mm	Vertical	High
2.	836 mm	375 mm	110 mm	20 mm	Vertical	Low
3.	165 mm	88 mm	115 mm	20 mm	Horizontal	High
4.	195 mm	536 mm	101 mm	14 mm	Horizontal	High
5.	195 mm	903 mm	103 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	134.fscan
Serial number:	227190008
Date / Time:	2019-10-03 22:31:40
Comment:	-



x: 105 mm	y: 1017 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

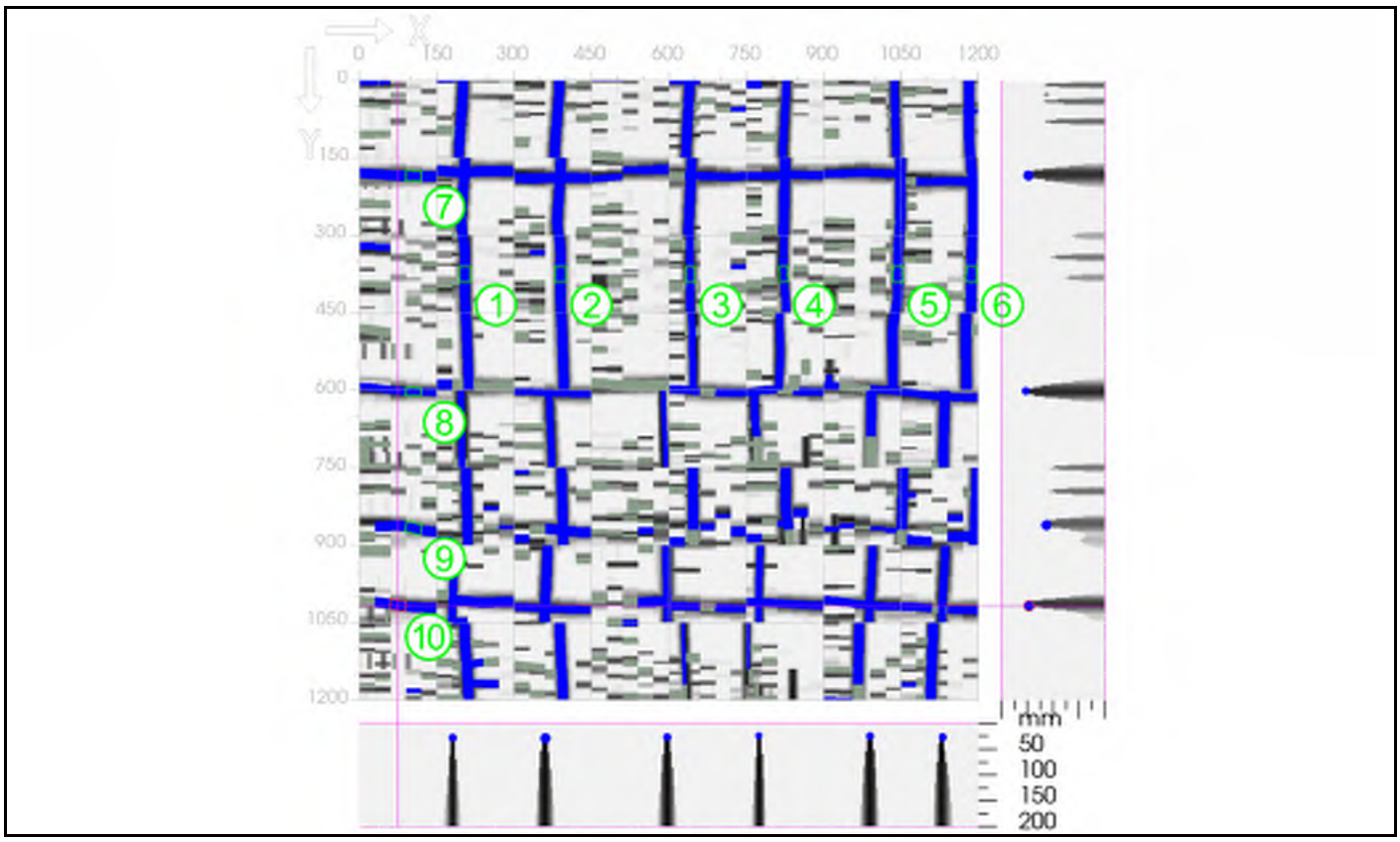
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G13
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	206 mm	495 mm	20 mm	20 mm	Vertical	High
2.	391 mm	495 mm	19 mm	20 mm	Vertical	High
3.	646 mm	495 mm	20 mm	20 mm	Vertical	High
4.	832 mm	495 mm	19 mm	20 mm	Vertical	High
5.	1057 mm	495 mm	18 mm	20 mm	Vertical	High
6.	1199 mm	525 mm	19 mm	20 mm	Vertical	High
7.	75 mm	179 mm	43 mm	20 mm	Horizontal	High
8.	135 mm	599 mm	41 mm	16 mm	Horizontal	High
9.	135 mm	865 mm	69 mm	14 mm	Horizontal	High
10.	105 mm	1017 mm	42 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	135.fscan
Serial number:	227190008
Date / Time:	2019-10-03 22:27:18
Comment:	-



x: 75 mm	y: 1018 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

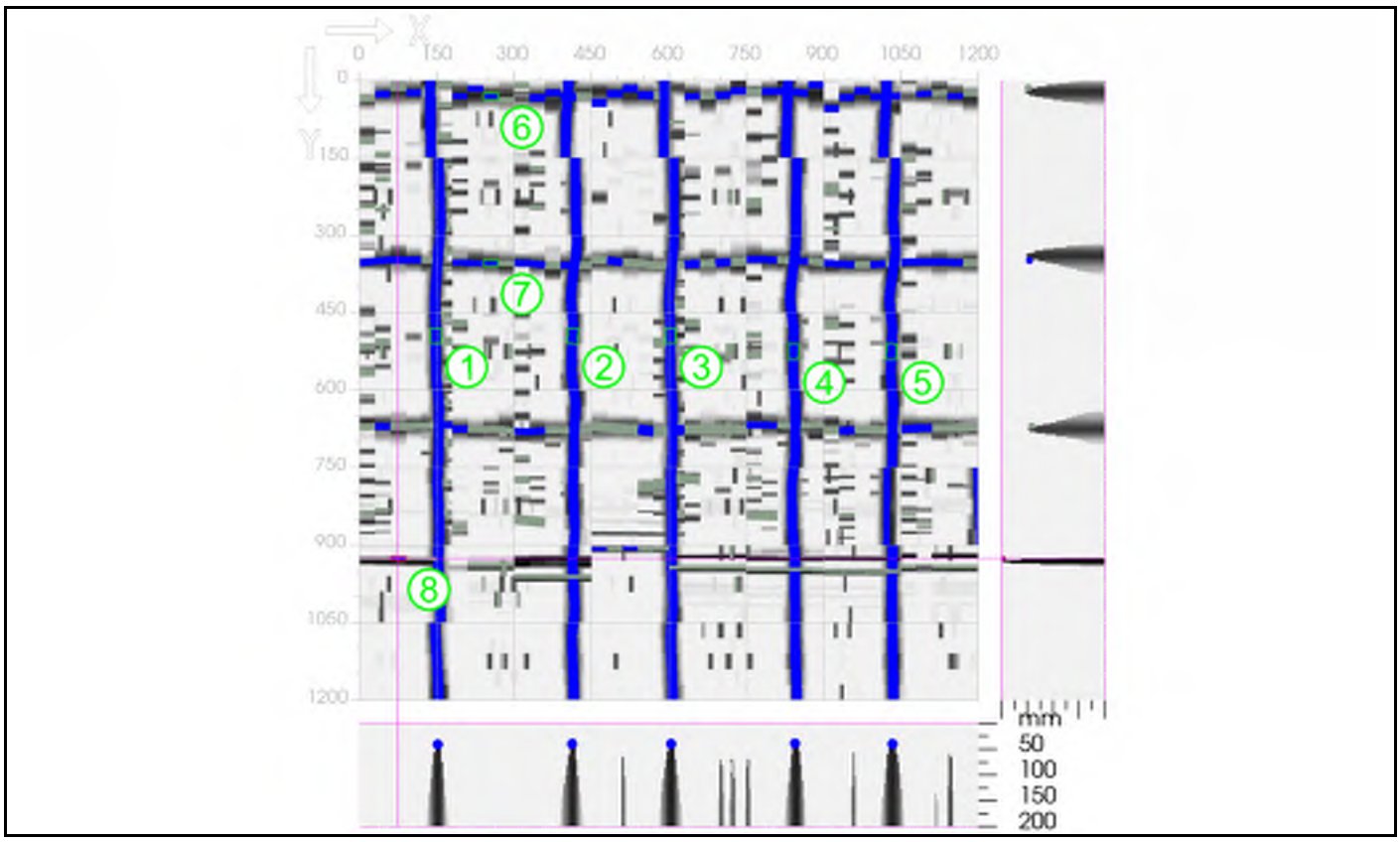
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G14
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	205 mm	375 mm	20 mm	20 mm	Vertical	High
2.	390 mm	375 mm	19 mm	20 mm	Vertical	High
3.	641 mm	375 mm	19 mm	16 mm	Vertical	High
4.	822 mm	375 mm	17 mm	16 mm	Vertical	High
5.	1044 mm	375 mm	17 mm	20 mm	Vertical	High
6.	1186 mm	375 mm	20 mm	20 mm	Vertical	High
7.	105 mm	185 mm	42 mm	20 mm	Horizontal	High
8.	105 mm	602 mm	40 mm	16 mm	Horizontal	High
9.	105 mm	866 mm	75 mm	20 mm	Horizontal	High
10.	75 mm	1018 mm	43 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	136.fscan
Serial number:	227190008
Date / Time:	2019-10-03 22:45:06
Comment:	-



x: 75 mm	y: 926 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

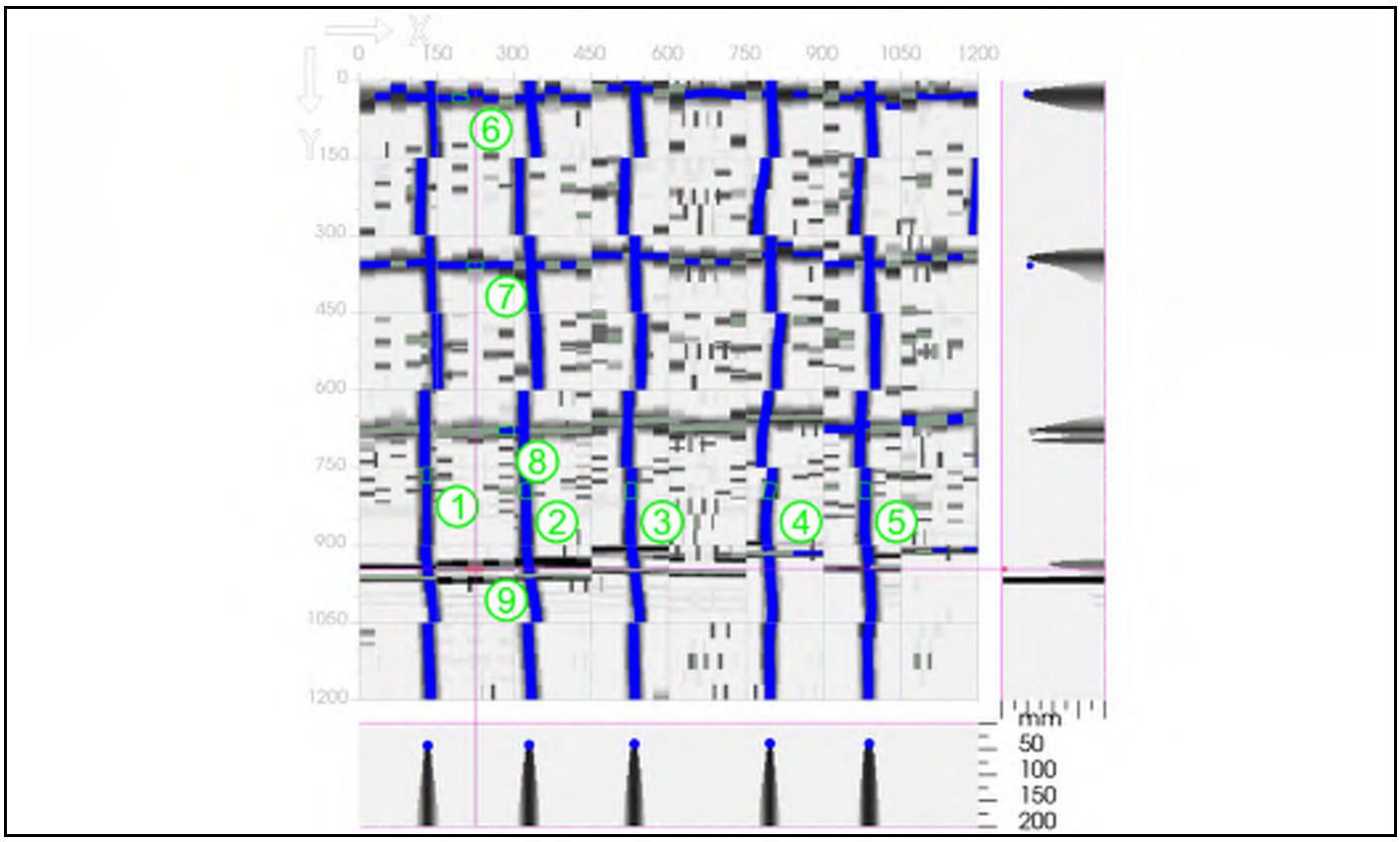
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G15
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	148 mm	495 mm	31 mm	20 mm	Vertical	High
2.	413 mm	495 mm	29 mm	20 mm	Vertical	High
3.	603 mm	495 mm	30 mm	20 mm	Vertical	High
4.	841 mm	525 mm	29 mm	20 mm	Vertical	High
5.	1031 mm	525 mm	30 mm	20 mm	Vertical	High
6.	255 mm	31 mm	46 mm	12 mm	Horizontal	High
7.	255 mm	354 mm	46 mm	12 mm	Horizontal	High
8.	75 mm	926 mm	0 mm	8 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	137.fscan
Serial number:	227190008
Date / Time:	2019-10-03 22:59:05
Comment:	-



x: 225 mm	y: 946 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

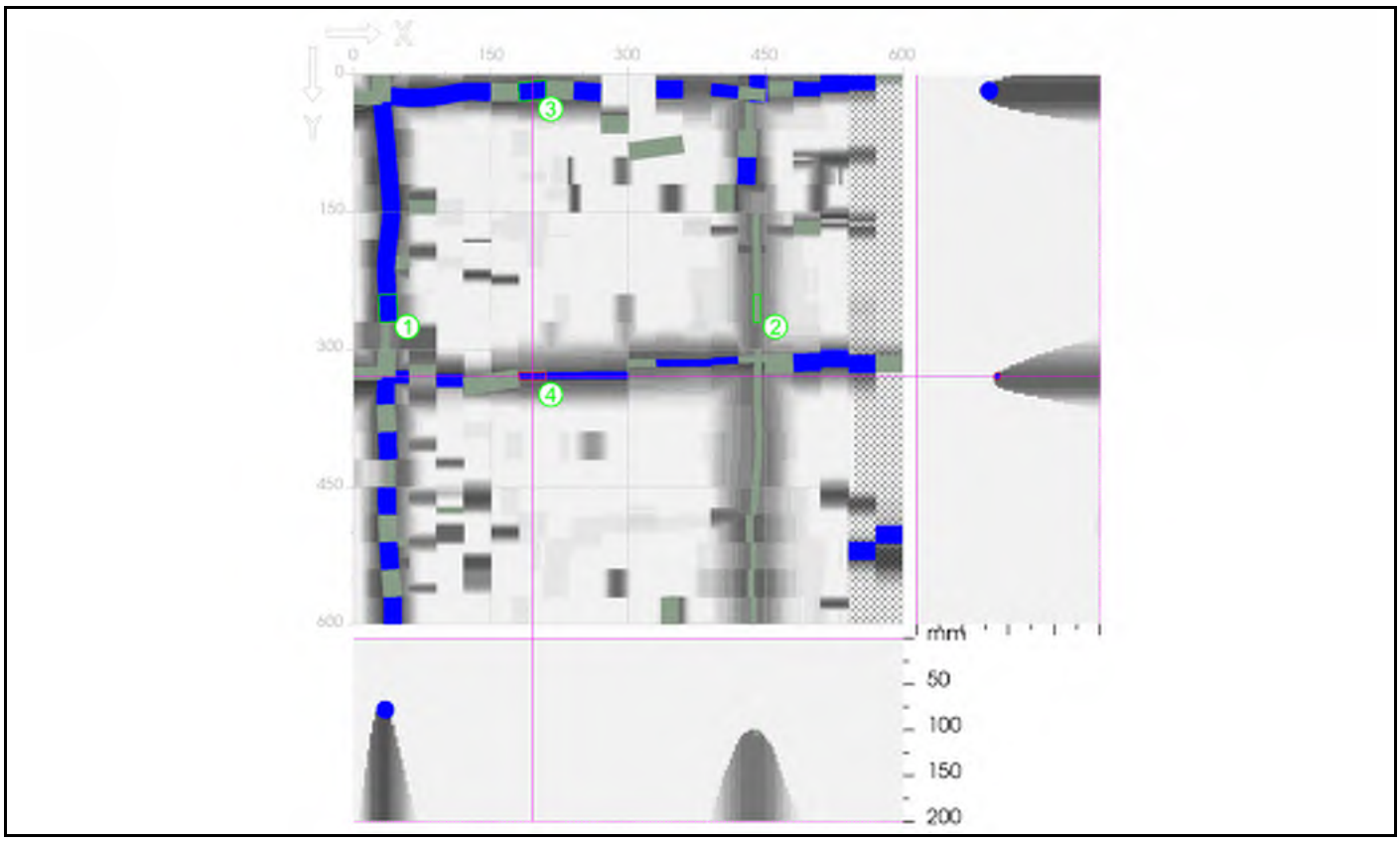
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G16
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	130 mm	765 mm	31 mm	16 mm	Vertical	High
2.	323 mm	795 mm	32 mm	20 mm	Vertical	High
3.	527 mm	795 mm	31 mm	20 mm	Vertical	High
4.	796 mm	795 mm	28 mm	20 mm	Vertical	High
5.	981 mm	795 mm	30 mm	20 mm	Vertical	High
6.	195 mm	35 mm	47 mm	14 mm	Horizontal	High
7.	225 mm	359 mm	48 mm	14 mm	Horizontal	High
8.	285 mm	678 mm	52 mm	16 mm	Horizontal	High
9.	225 mm	946 mm	2 mm	8 mm	Horizontal	Low

Hilti PROFIS Detection Report

Scan File:	142.fscan
Serial number:	227190008
Date / Time:	2019-10-04 18:43:49
Comment:	-



x: 195 mm	y: 329 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

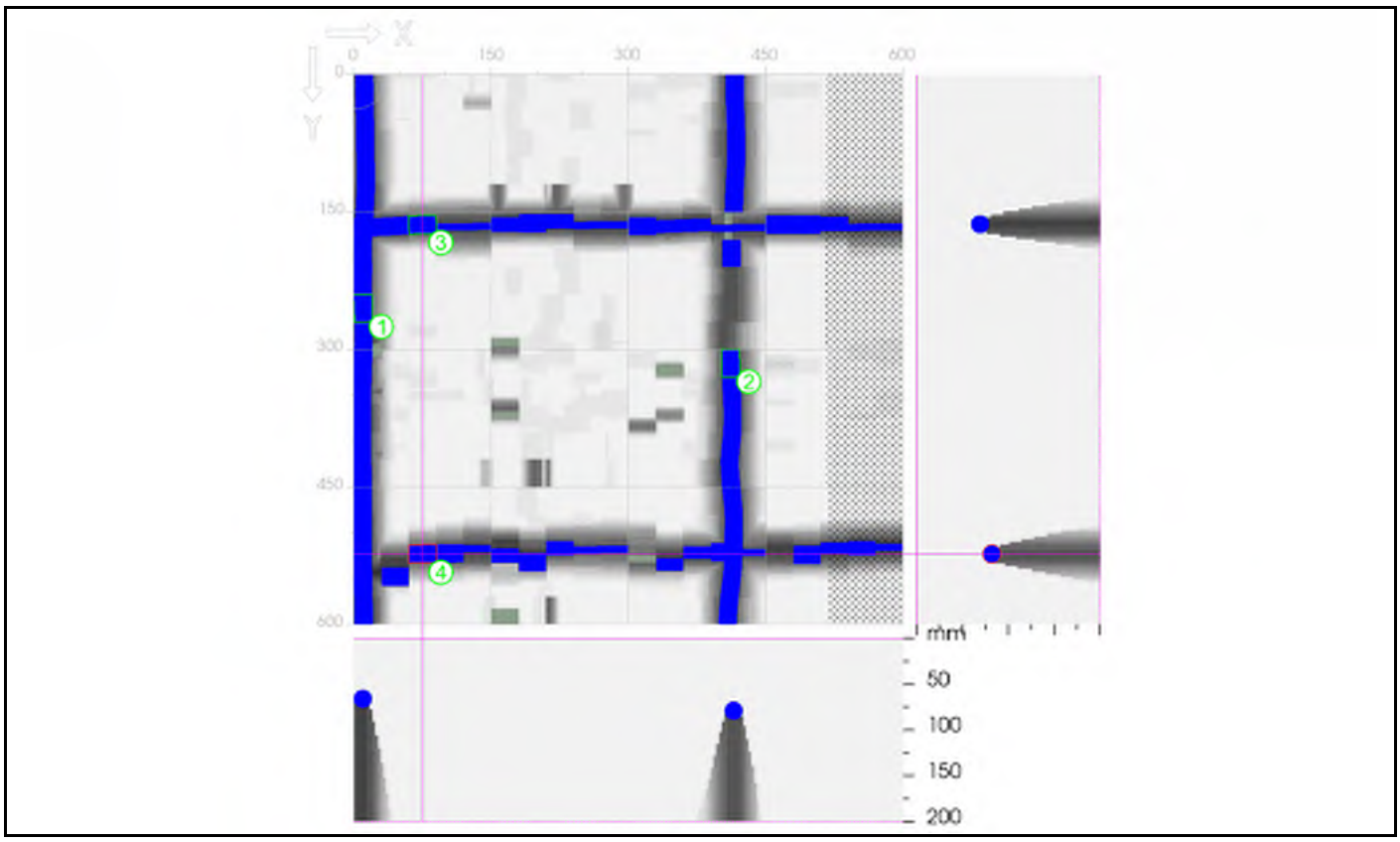
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G17
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	38 mm	255 mm	68 mm	20 mm	Vertical	High
2.	440 mm	255 mm	100 mm	8 mm	Vertical	Low
3.	195 mm	17 mm	69 mm	20 mm	Horizontal	High
4.	195 mm	329 mm	84 mm	8 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	141.fscan
Serial number:	227190008
Date / Time:	2019-10-04 18:41:53
Comment:	-



x: 75 mm	y: 523 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

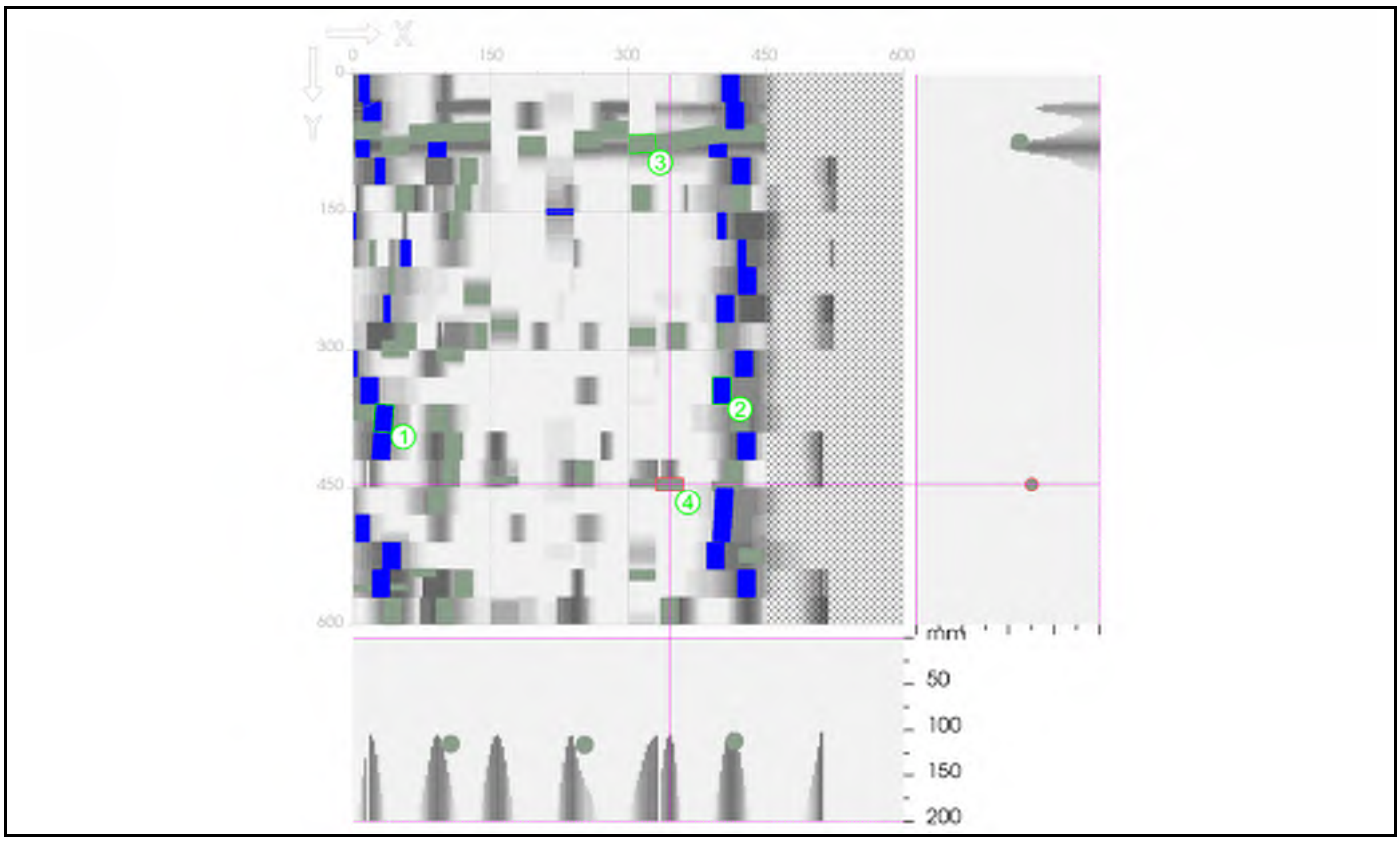
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G17
User:	BD		
Comment:	-		

∅ Horizontal:	14 mm +/- 6 mm	Type:	Input
∅ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	∅:	Orientation:	Quality:
1.	10 mm	255 mm	56 mm	20 mm	Vertical	High
2.	411 mm	315 mm	67 mm	20 mm	Vertical	High
3.	75 mm	163 mm	59 mm	20 mm	Horizontal	High
4.	75 mm	523 mm	72 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	144.fscan
Serial number:	227190008
Date / Time:	2019-10-04 18:51:55
Comment:	-



x: 345 mm	y: 447 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

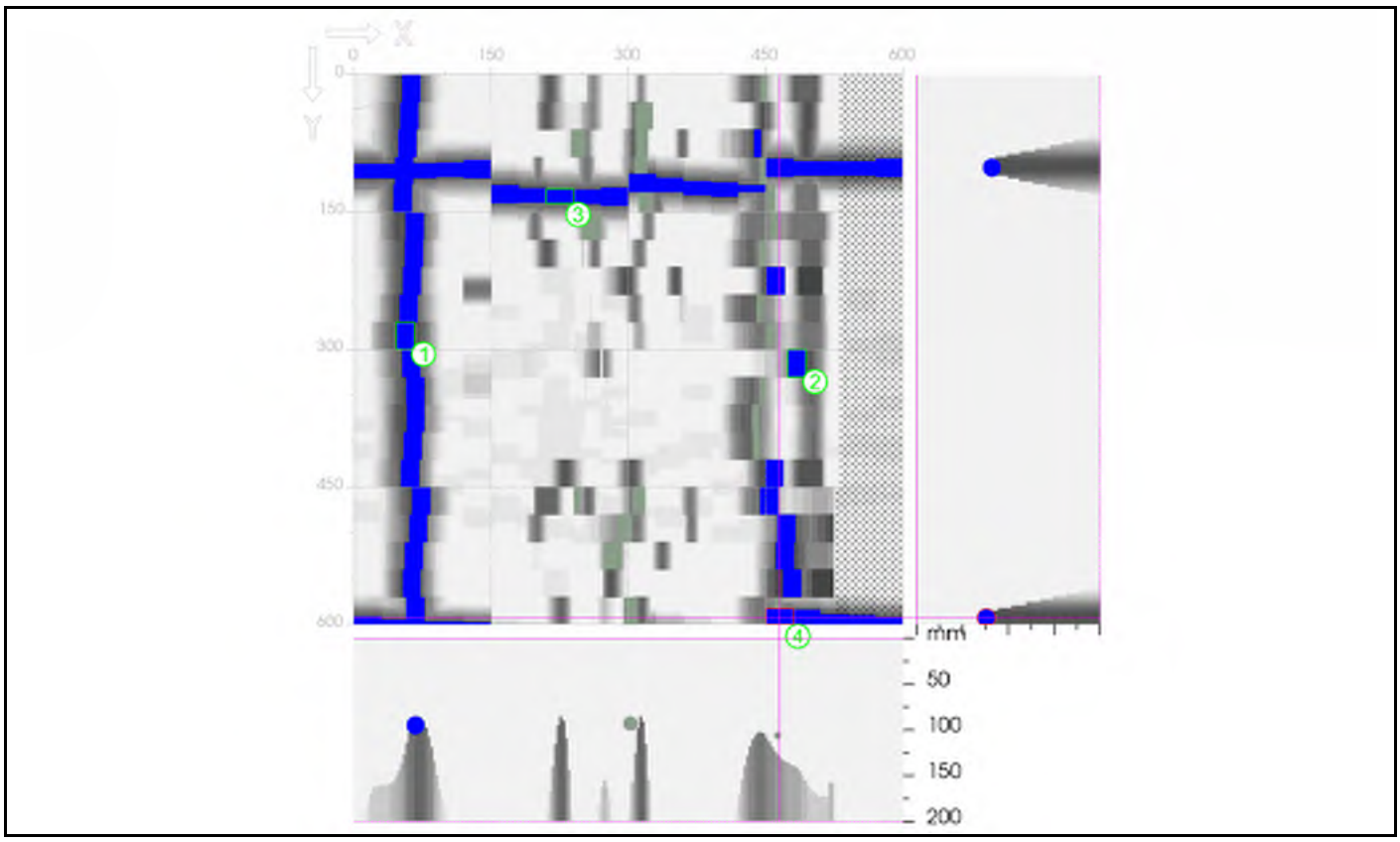
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G18
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	34 mm	375 mm	105 mm	20 mm	Vertical	High
2.	402 mm	345 mm	108 mm	20 mm	Vertical	High
3.	315 mm	76 mm	95 mm	20 mm	Horizontal	Low
4.	345 mm	447 mm	118 mm	14 mm	Horizontal	Low

Hilti PROFIS Detection Report

Scan File:	143.fscan
Serial number:	227190008
Date / Time:	2019-10-04 18:50:25
Comment:	-



x: 465 mm	y: 593 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

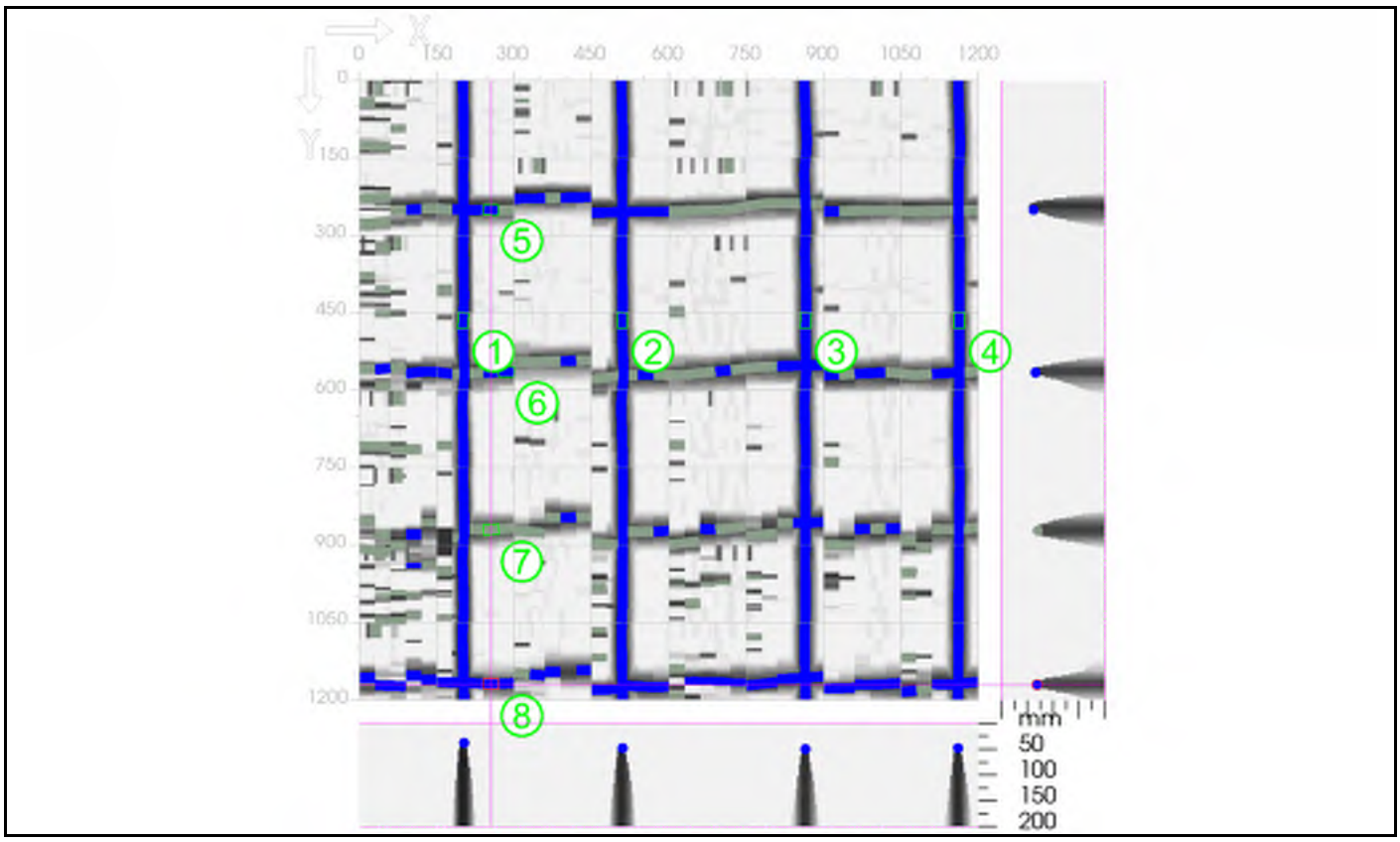
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G18
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	56 mm	285 mm	64 mm	20 mm	Vertical	High
2.	484 mm	315 mm	73 mm	20 mm	Vertical	High
3.	225 mm	133 mm	71 mm	16 mm	Horizontal	High
4.	465 mm	593 mm	66 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	145.fscan
Serial number:	227190008
Date / Time:	2019-10-04 20:03:35
Comment:	-



x: 255 mm	y: 1170 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

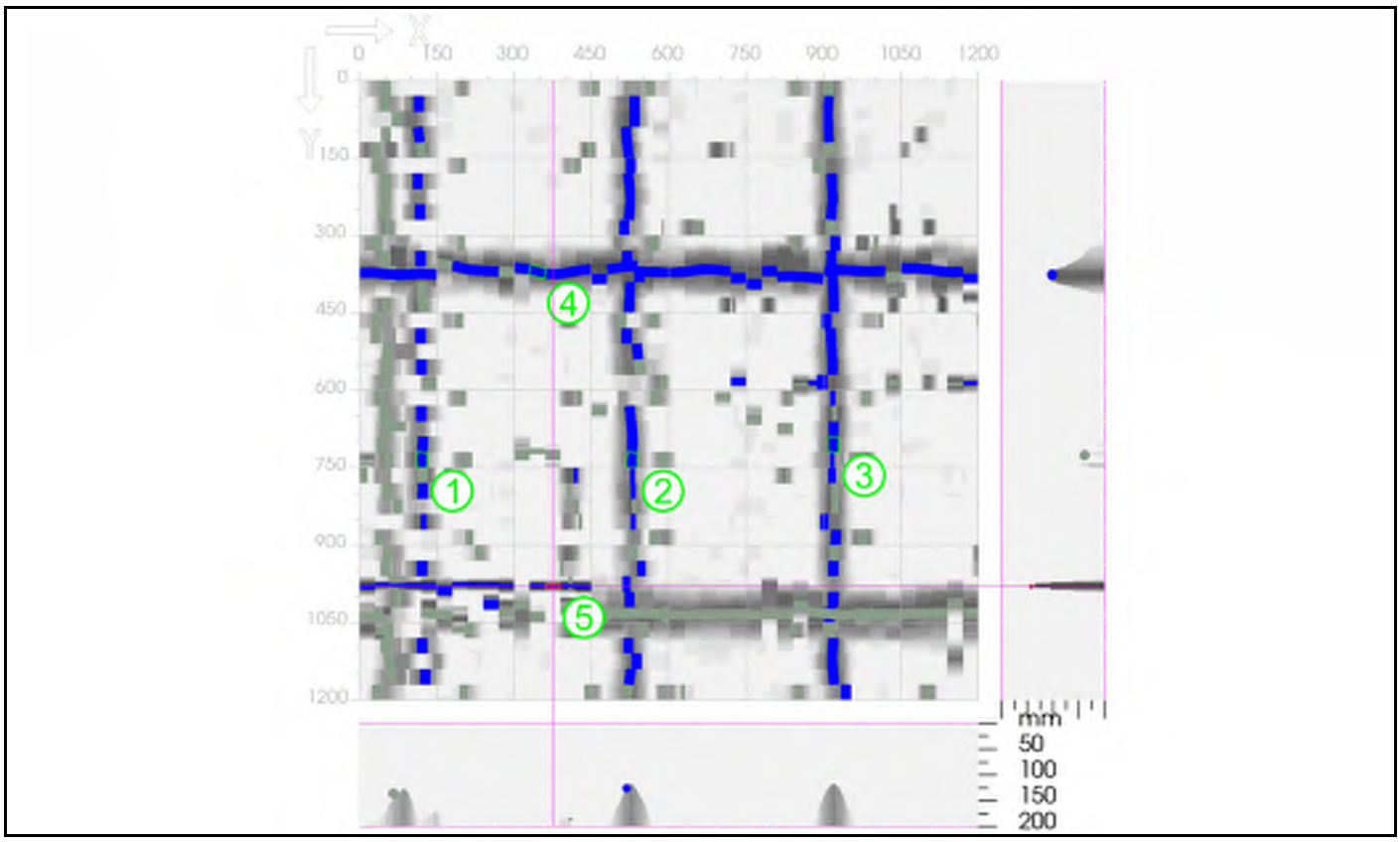
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G19
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	200 mm	465 mm	25 mm	20 mm	Vertical	High
2.	509 mm	465 mm	36 mm	20 mm	Vertical	High
3.	865 mm	465 mm	39 mm	20 mm	Vertical	High
4.	1163 mm	465 mm	37 mm	20 mm	Vertical	High
5.	255 mm	251 mm	52 mm	20 mm	Horizontal	High
6.	285 mm	565 mm	56 mm	20 mm	Horizontal	High
7.	255 mm	872 mm	60 mm	20 mm	Horizontal	Low
8.	255 mm	1170 mm	59 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	146.fscan
Serial number:	227190008
Date / Time:	2019-10-04 20:48:34
Comment:	-



x: 375 mm	y: 980 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

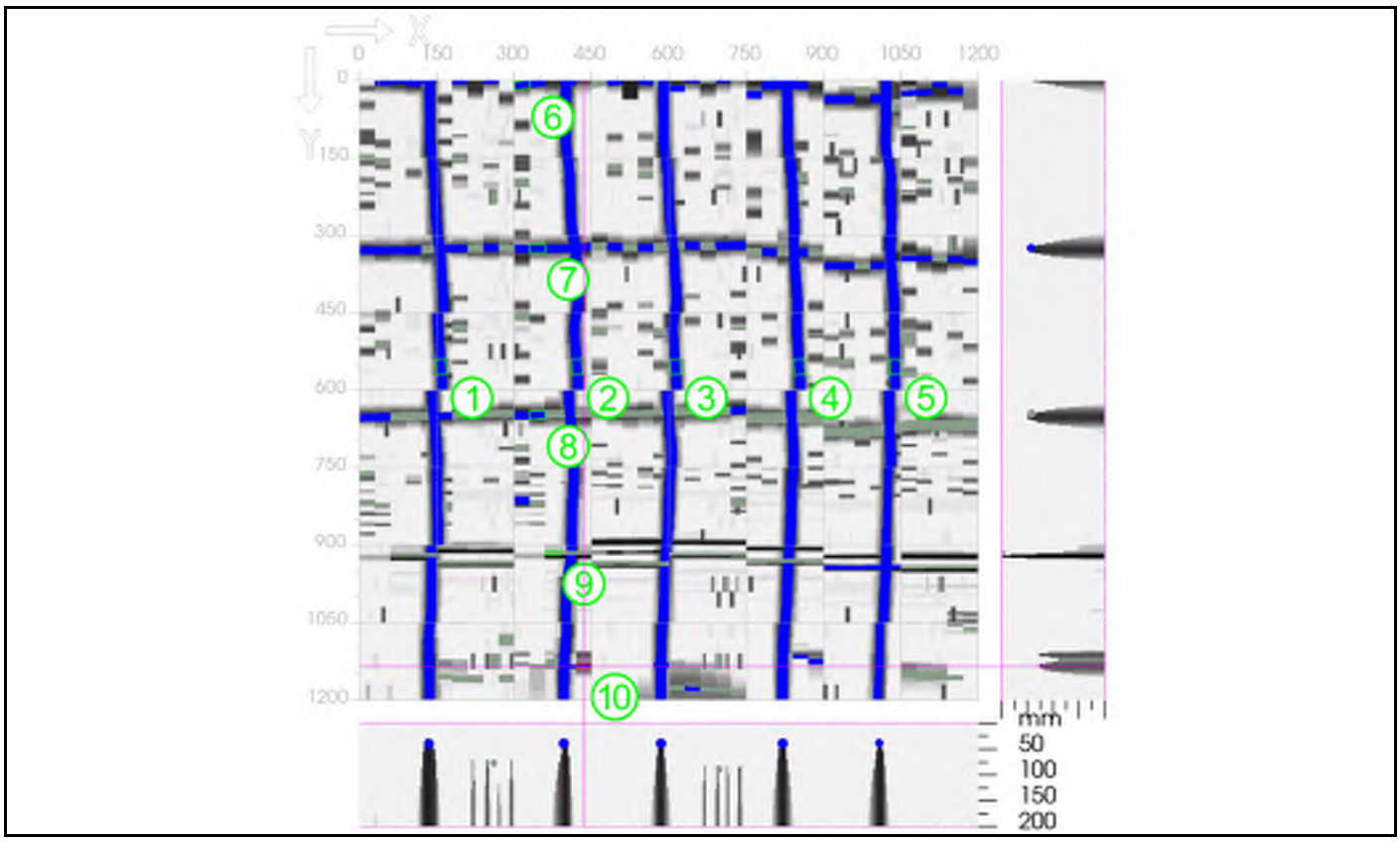
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G23
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	120 mm	735 mm	94 mm	20 mm	Vertical	High
2.	528 mm	735 mm	89 mm	20 mm	Vertical	High
3.	918 mm	705 mm	84 mm	20 mm	Vertical	High
4.	345 mm	371 mm	87 mm	20 mm	Horizontal	High
5.	375 mm	980 mm	54 mm	8 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	147.fscan
Serial number:	227190008
Date / Time:	2019-10-04 21:32:04
Comment:	-



x: 435 mm	y: 1134 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

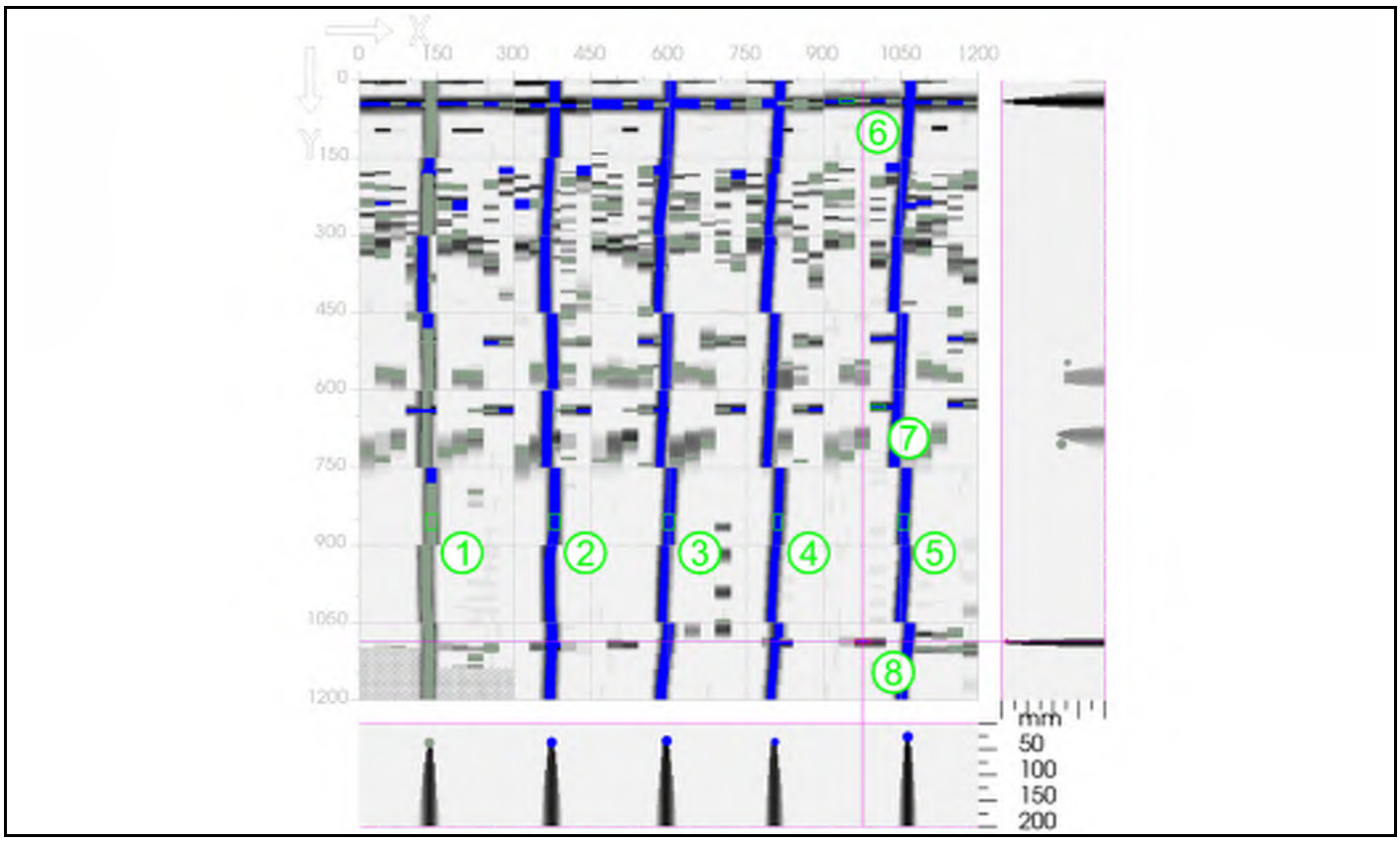
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G24
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	158 mm	555 mm	30 mm	20 mm	Vertical	High
2.	422 mm	555 mm	29 mm	20 mm	Vertical	High
3.	613 mm	555 mm	29 mm	20 mm	Vertical	High
4.	852 mm	555 mm	28 mm	20 mm	Vertical	High
5.	1038 mm	555 mm	31 mm	20 mm	Vertical	High
6.	315 mm	11 mm	49 mm	16 mm	Horizontal	High
7.	345 mm	326 mm	48 mm	16 mm	Horizontal	High
8.	345 mm	649 mm	50 mm	16 mm	Horizontal	High
9.	375 mm	915 mm	0 mm	8 mm	Horizontal	Low
10.	435 mm	1134 mm	73 mm	8 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	148.fscan
Serial number:	227190008
Date / Time:	2019-10-04 21:49:25
Comment:	-



x: 975 mm	y: 1087 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

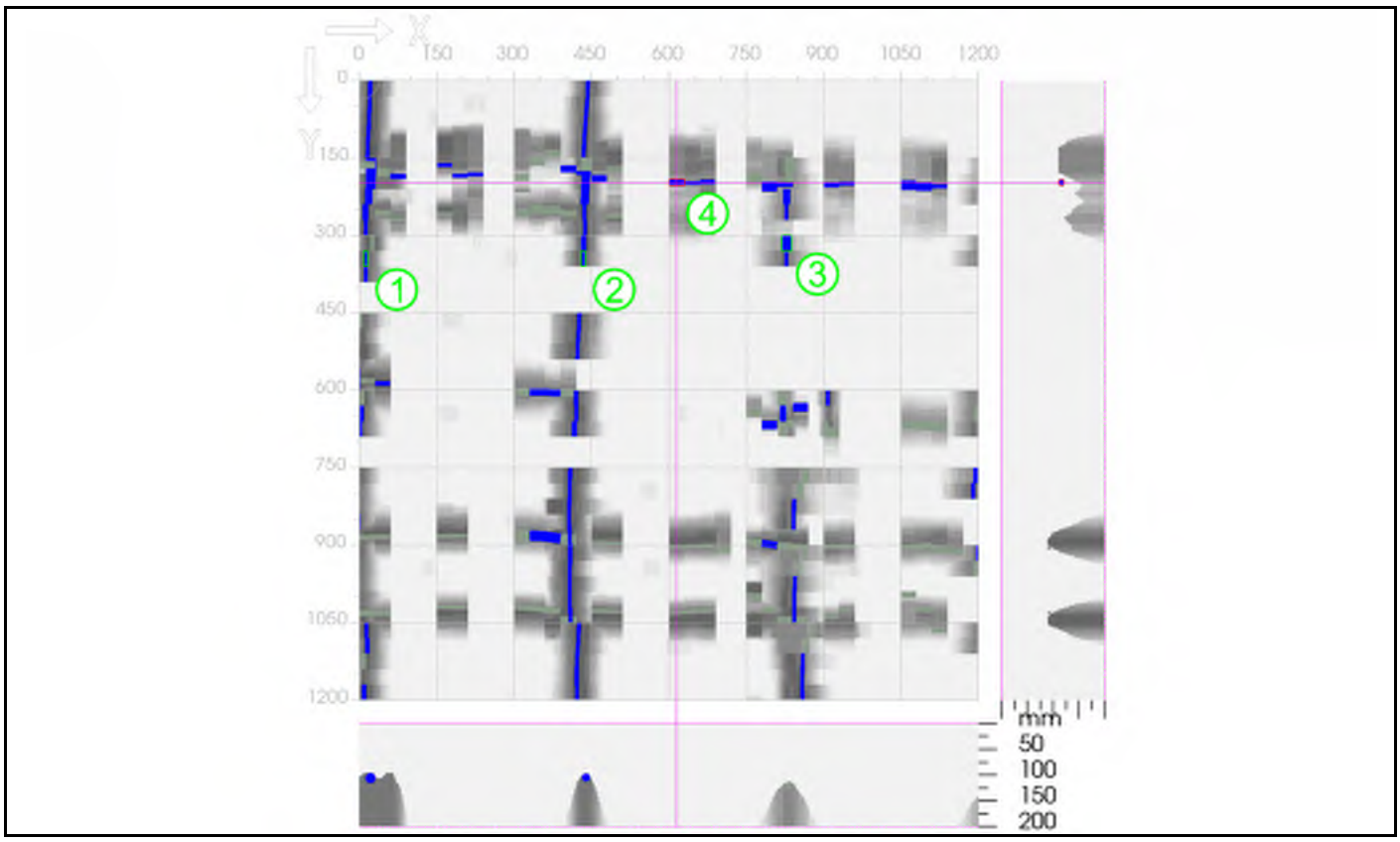
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G25
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	139 mm	855 mm	28 mm	20 mm	Vertical	Low
2.	378 mm	855 mm	26 mm	20 mm	Vertical	High
3.	600 mm	855 mm	24 mm	20 mm	Vertical	High
4.	811 mm	855 mm	20 mm	16 mm	Vertical	High
5.	1055 mm	855 mm	17 mm	20 mm	Vertical	High
6.	945 mm	40 mm	0 mm	8 mm	Horizontal	High
7.	1005 mm	633 mm	19 mm	8 mm	Horizontal	High
8.	975 mm	1087 mm	6 mm	8 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	149.fscan
Serial number:	227190008
Date / Time:	2019-10-04 22:17:10
Comment:	-



x: 615 mm	y: 198 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

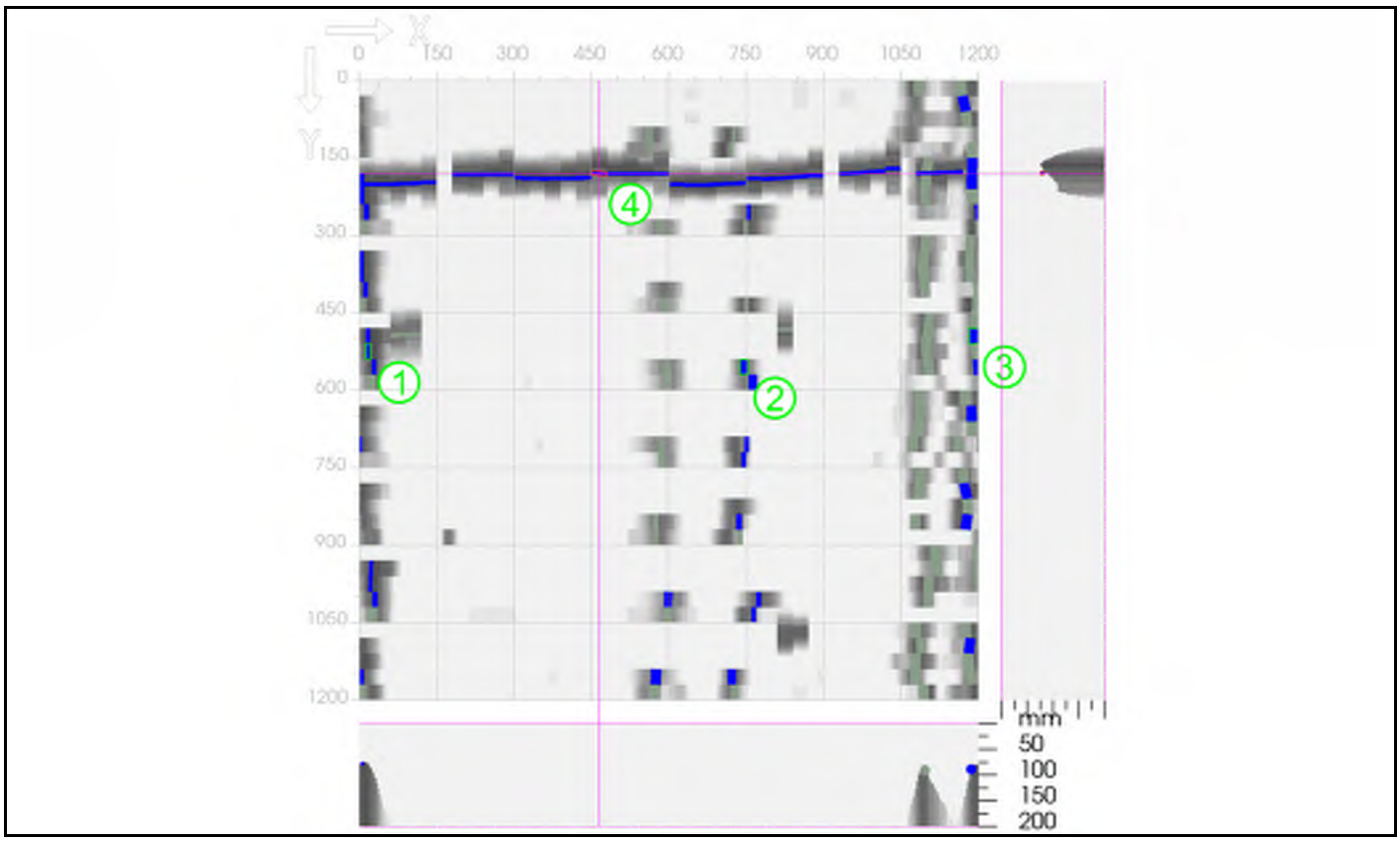
Project name:	CIS Tower	Customer:	Curtins
Location:	Ground Floor	Object:	G26
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	12 mm	345 mm	83 mm	8 mm	Vertical	High
2.	434 mm	345 mm	87 mm	8 mm	Vertical	High
3.	828 mm	315 mm	134 mm	20 mm	Vertical	High
4.	615 mm	198 mm	110 mm	12 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	155.fscan
Serial number:	227190008
Date / Time:	2019-10-05 00:24:36
Comment:	-



x: 465 mm	y: 180 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

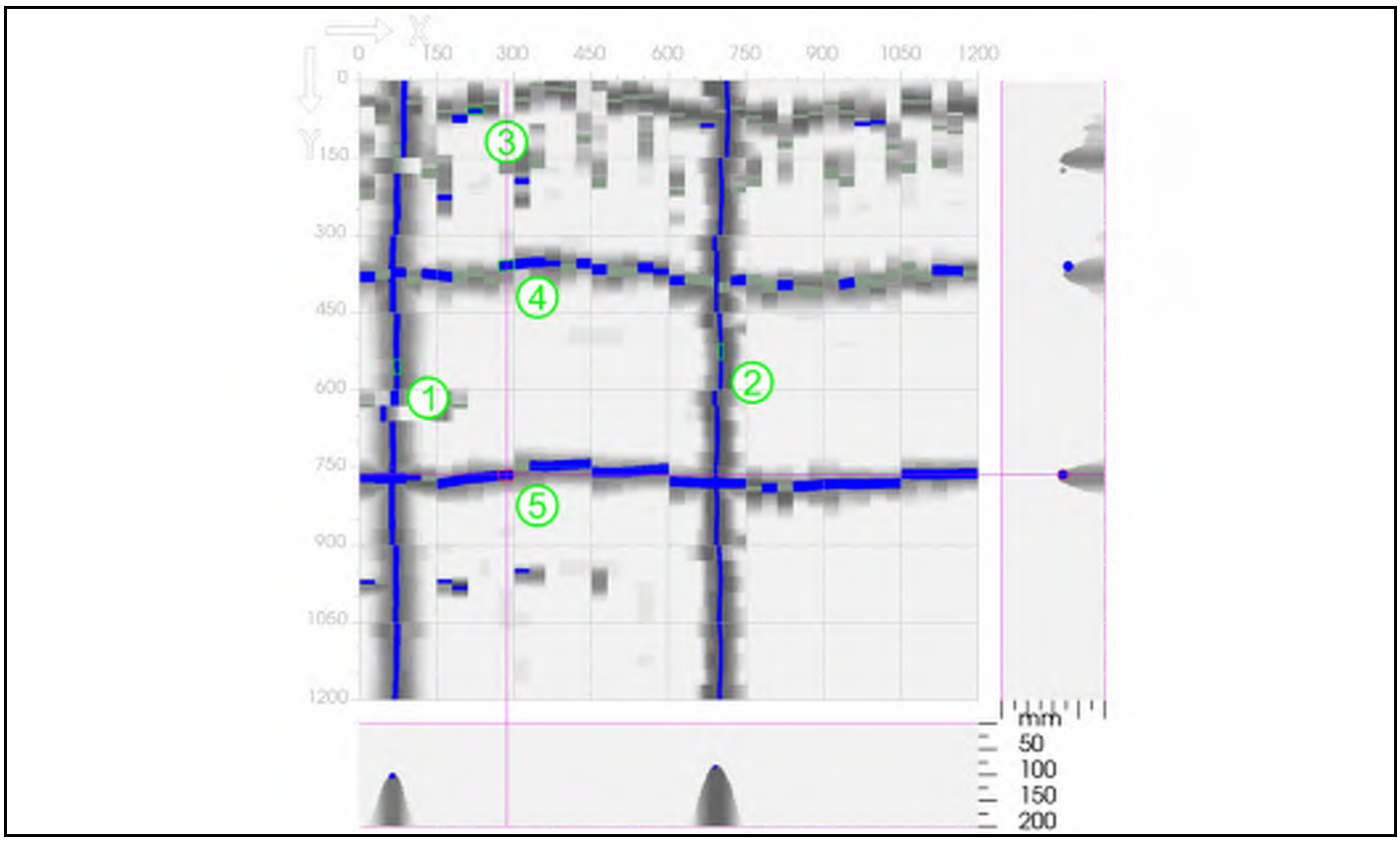
Project name:	CIS Tower	Customer:	Curtins
Location:	Mezzanine Floor Level	Object:	M1
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	17 mm	525 mm	69 mm	8 mm	Vertical	High
2.	745 mm	555 mm	92 mm	16 mm	Vertical	High
3.	1190 mm	495 mm	82 mm	20 mm	Vertical	High
4.	465 mm	180 mm	75 mm	8 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	156.fscan
Serial number:	227190008
Date / Time:	2019-10-05 00:31:14
Comment:	-



x: 285 mm	y: 763 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

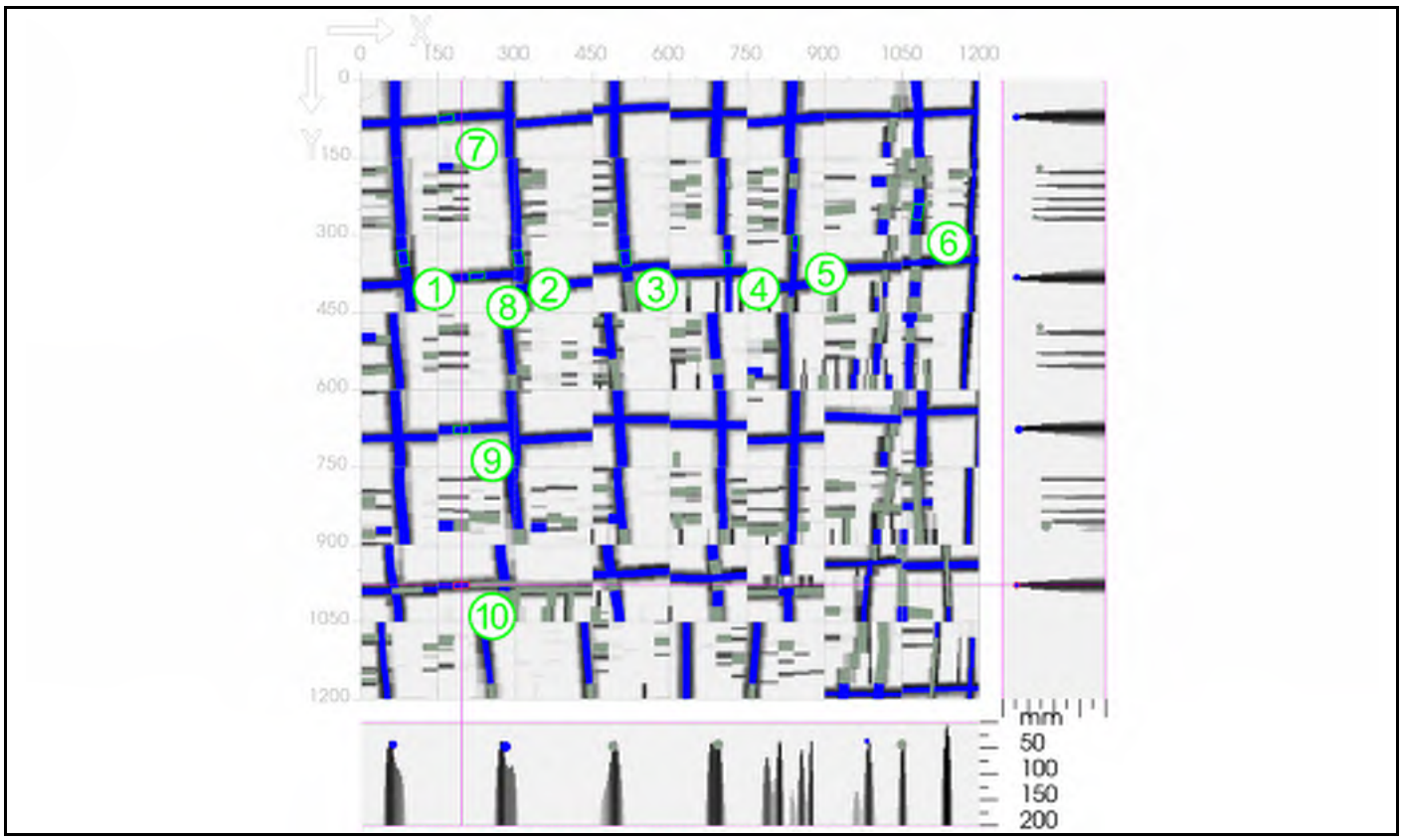
Project name:	CIS Tower	Customer:	Curtins
Location:	Mezzanine Floor Level	Object:	M2
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	73 mm	555 mm	96 mm	12 mm	Vertical	High
2.	701 mm	525 mm	79 mm	8 mm	Vertical	High
3.	225 mm	59 mm	92 mm	12 mm	Horizontal	High
4.	285 mm	360 mm	119 mm	20 mm	Horizontal	High
5.	285 mm	763 mm	109 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	153.fscan
Serial number:	227190008
Date / Time:	2019-10-05 00:12:31
Comment:	-



x: 195 mm	y: 979 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

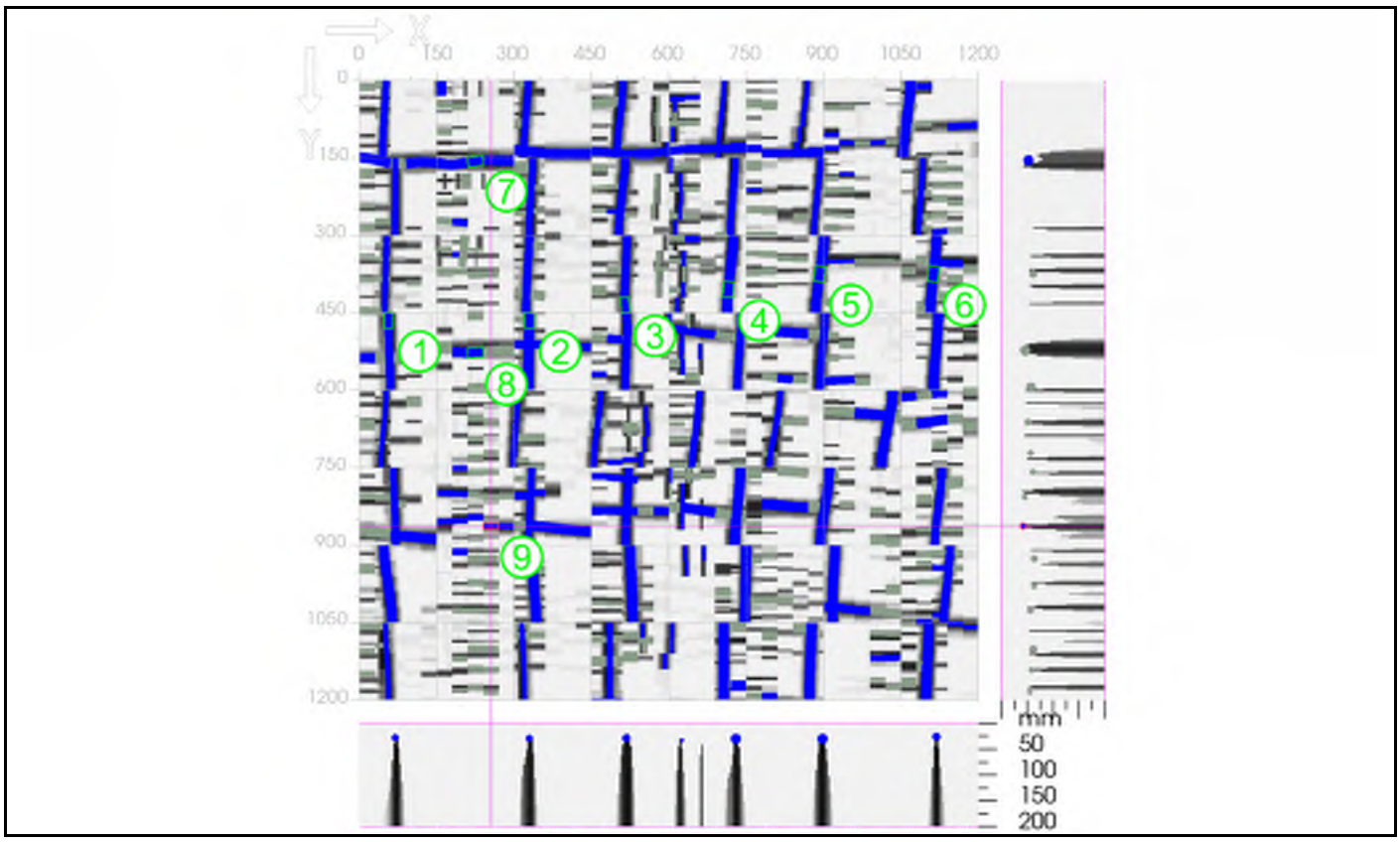
Project name:	CIS Tower	Customer:	Curtins
Location:	Mezzanine Floor Level	Object:	M3
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	82 mm	345 mm	36 mm	20 mm	Vertical	High
2.	305 mm	345 mm	37 mm	20 mm	Vertical	High
3.	513 mm	345 mm	35 mm	20 mm	Vertical	High
4.	712 mm	345 mm	33 mm	14 mm	Vertical	High
5.	843 mm	315 mm	30 mm	12 mm	Vertical	High
6.	1081 mm	255 mm	34 mm	20 mm	Vertical	High
7.	165 mm	73 mm	19 mm	14 mm	Horizontal	High
8.	225 mm	380 mm	22 mm	14 mm	Horizontal	High
9.	195 mm	677 mm	24 mm	16 mm	Horizontal	High
10.	195 mm	979 mm	22 mm	12 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	154.fscan
Serial number:	227190008
Date / Time:	2019-10-05 00:19:03
Comment:	-



x: 255 mm	y: 863 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

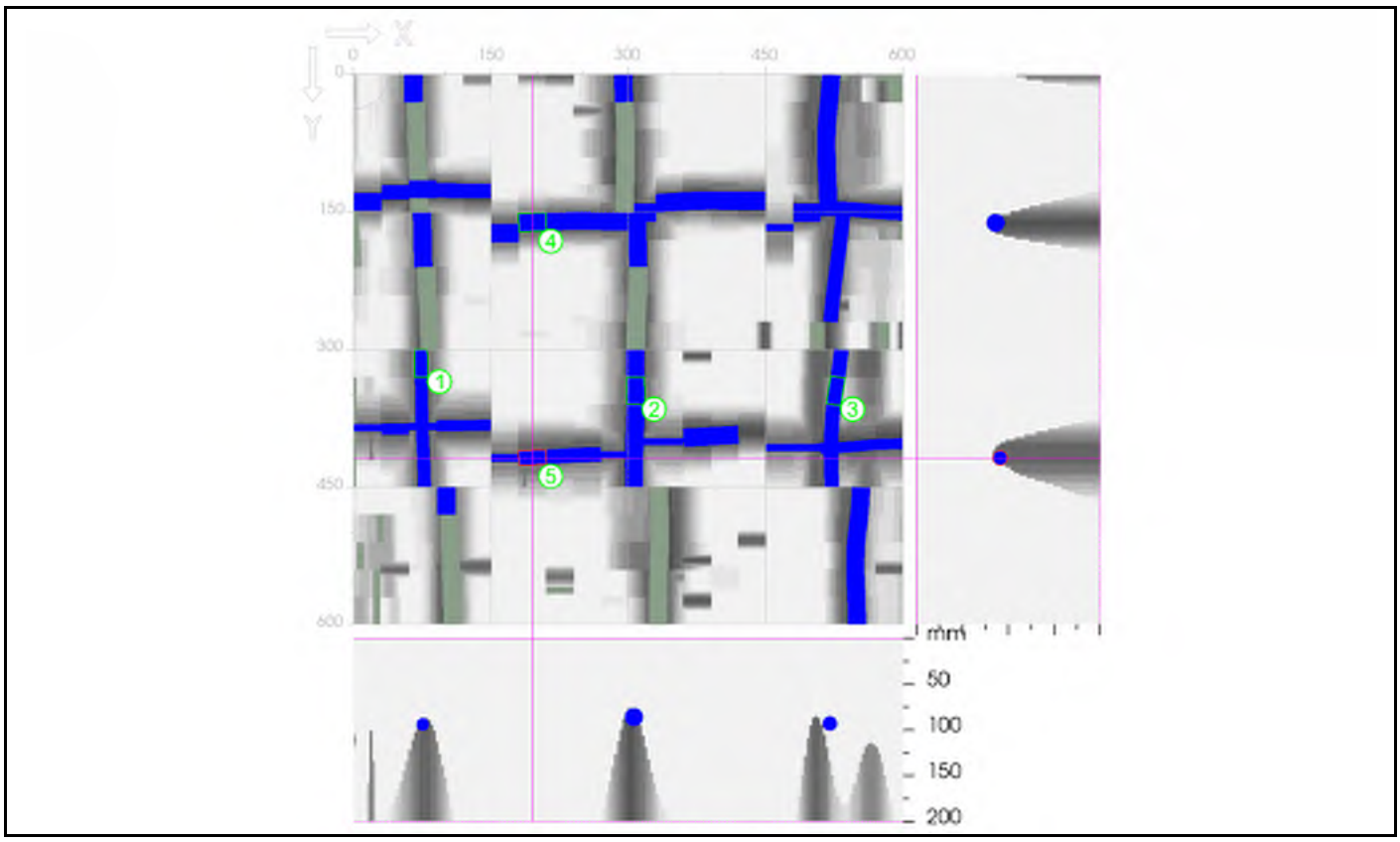
Project name:	CIS Tower	Customer:	Curtins
Location:	Mezzanine Floor Level	Object:	M4
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	56 mm	465 mm	23 mm	16 mm	Vertical	High
2.	329 mm	465 mm	23 mm	20 mm	Vertical	High
3.	513 mm	435 mm	21 mm	16 mm	Vertical	High
4.	715 mm	405 mm	20 mm	20 mm	Vertical	High
5.	893 mm	375 mm	20 mm	20 mm	Vertical	High
6.	1113 mm	375 mm	18 mm	20 mm	Vertical	High
7.	225 mm	155 mm	45 mm	20 mm	Horizontal	High
8.	225 mm	529 mm	34 mm	20 mm	Horizontal	High
9.	255 mm	863 mm	36 mm	12 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	205.fscan
Serial number:	227190008
Date / Time:	2019-10-07 19:32:42
Comment:	-



x: 195 mm	y: 418 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

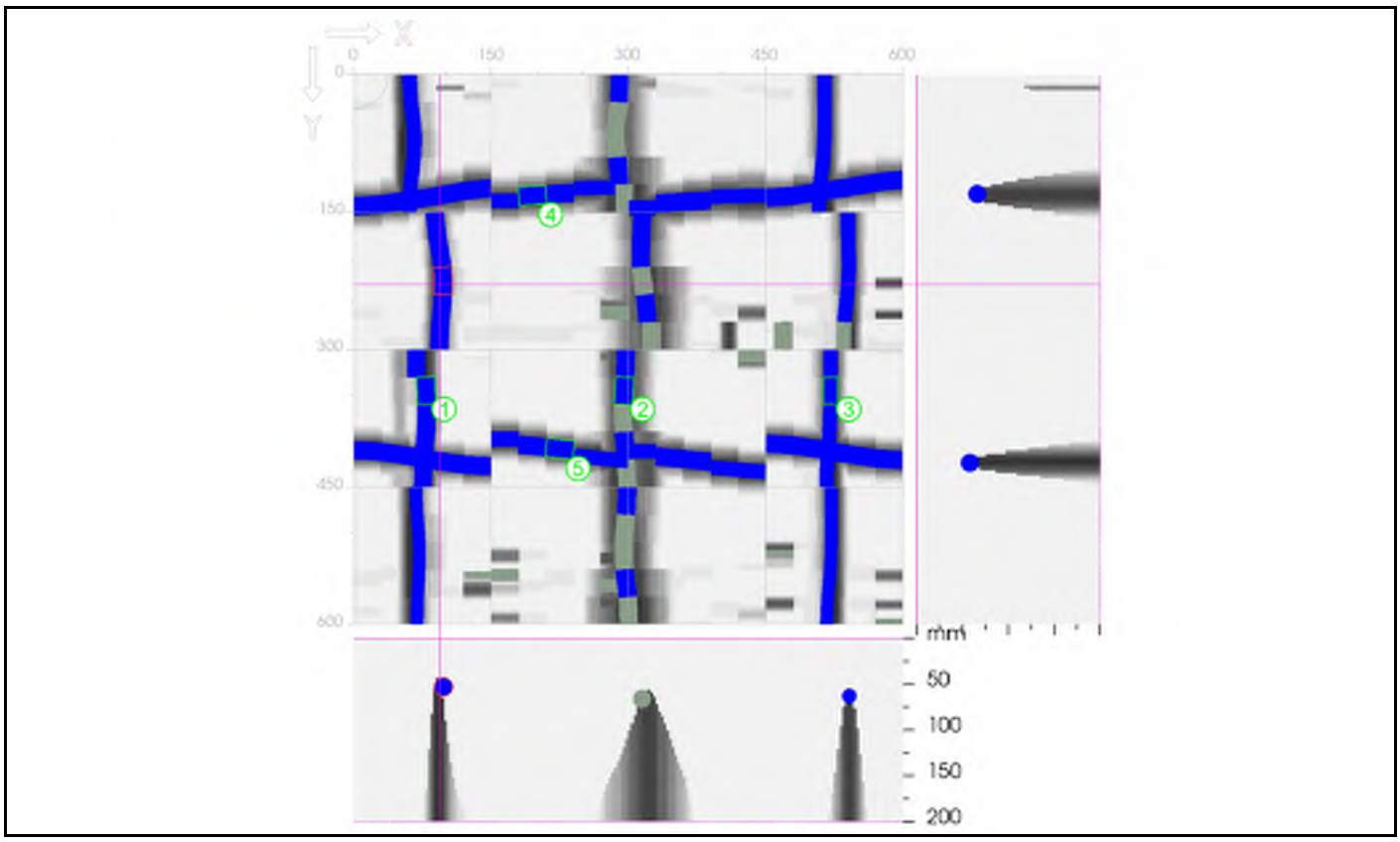
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 1
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	73 mm	315 mm	87 mm	14 mm	Vertical	High
2.	308 mm	345 mm	78 mm	20 mm	Vertical	High
3.	525 mm	345 mm	83 mm	16 mm	Vertical	High
4.	195 mm	162 mm	76 mm	20 mm	Horizontal	High
5.	195 mm	418 mm	83 mm	16 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	204.fscan
Serial number:	227190008
Date / Time:	2019-10-07 19:31:17
Comment:	-



x: 94 mm	y: 229 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

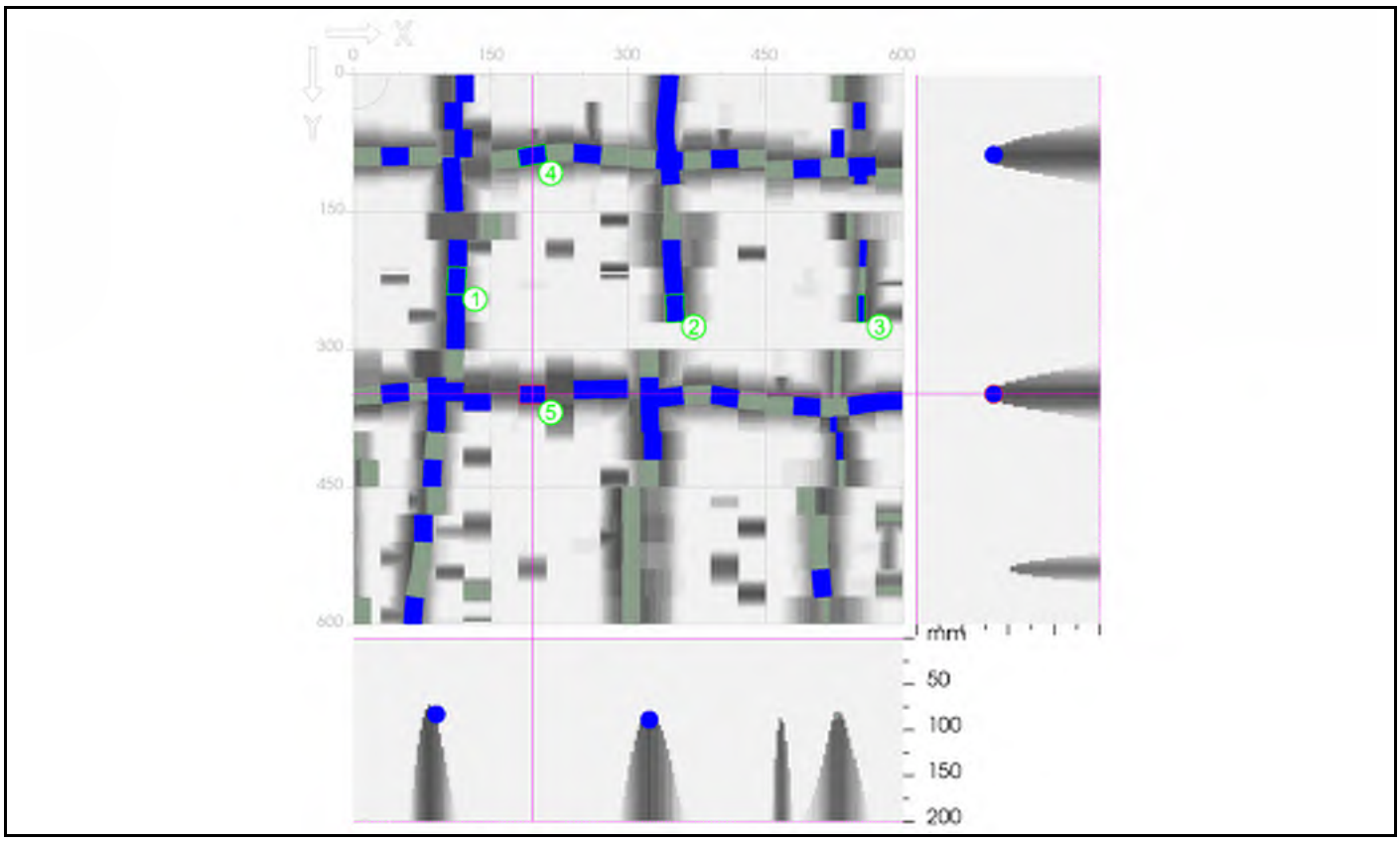
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 1
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	78 mm	345 mm	48 mm	20 mm	Vertical	High
2.	295 mm	345 mm	60 mm	20 mm	Vertical	High
3.	521 mm	345 mm	52 mm	16 mm	Vertical	High
4.	195 mm	133 mm	50 mm	20 mm	Horizontal	High
5.	225 mm	410 mm	47 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	203.fscan
Serial number:	227190008
Date / Time:	2019-10-07 19:03:43
Comment:	-



x: 195 mm	y: 349 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

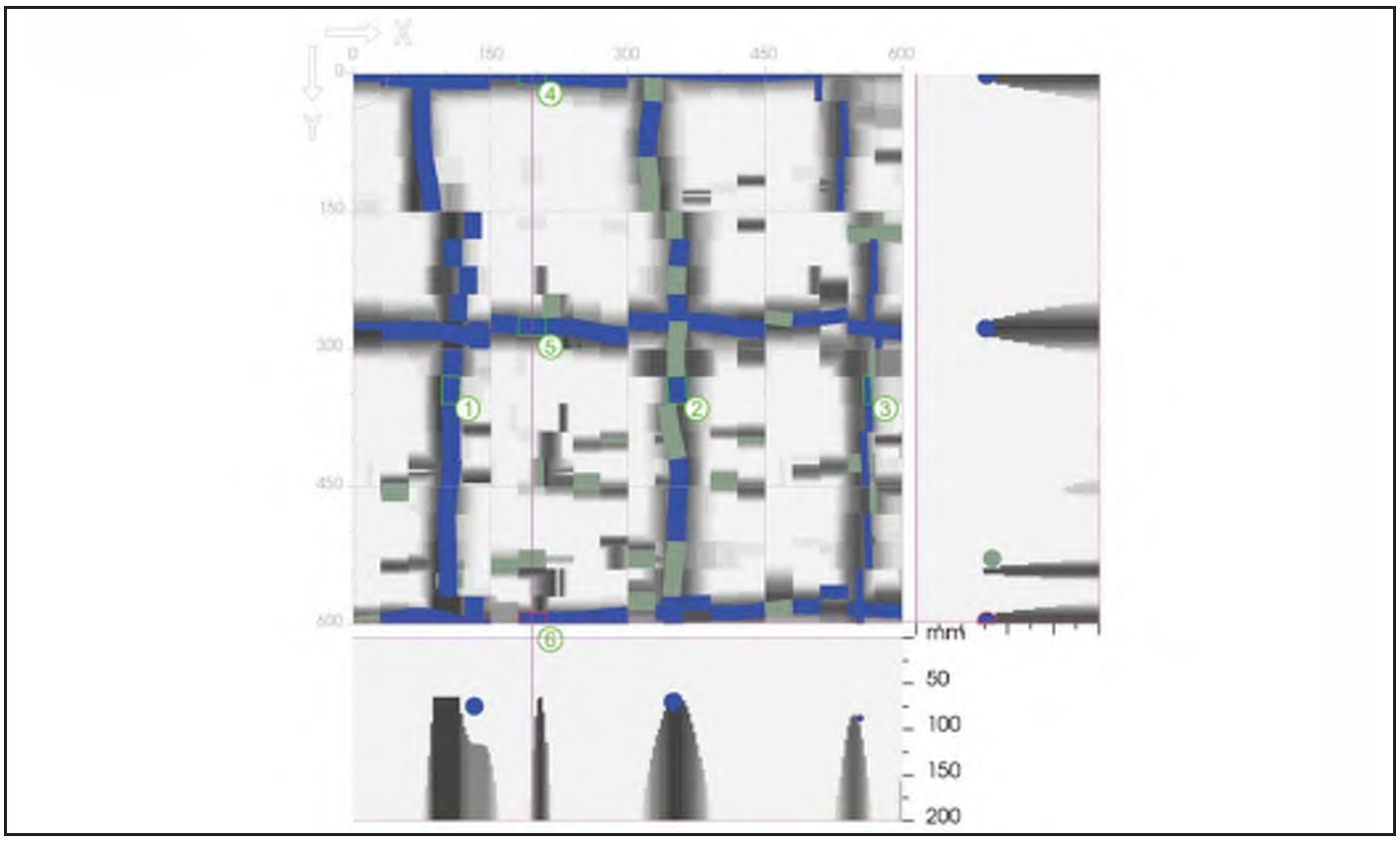
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 2
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	112 mm	225 mm	72 mm	20 mm	Vertical	High
2.	351 mm	255 mm	77 mm	20 mm	Vertical	High
3.	554 mm	255 mm	72 mm	8 mm	Vertical	High
4.	195 mm	87 mm	74 mm	20 mm	Horizontal	High
5.	195 mm	349 mm	74 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	202.fscan
Serial number:	227190008
Date / Time:	2019-10-07 19:02:18
Comment:	-



x: 195 mm	y: 597 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

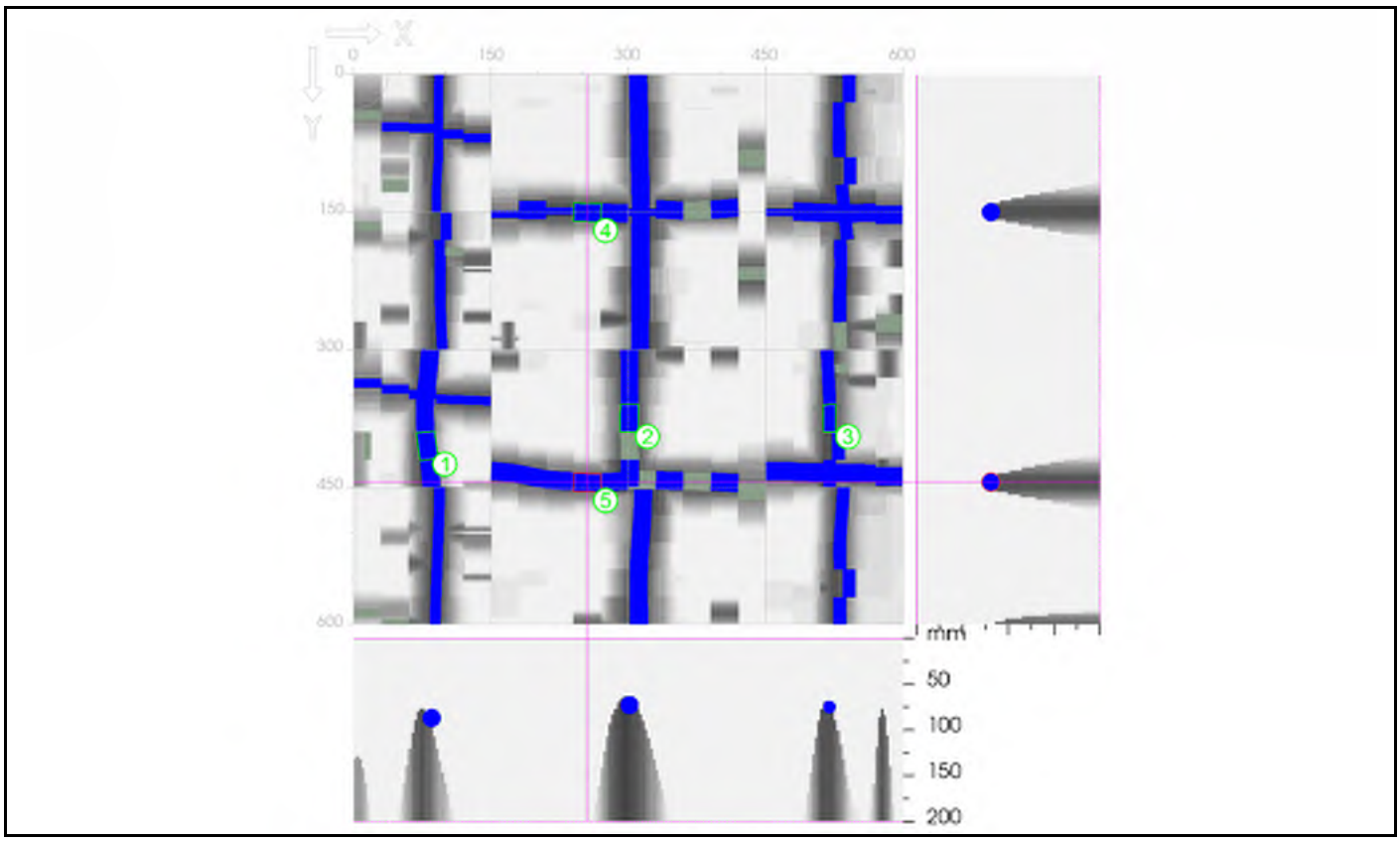
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 2
User:	BD		
Comment:	-		

Ø Horizontal:	14 mm +/- 6 mm	Type:	Input
Ø Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	Ø:	Orientation:	Quality:
1.	105 mm	345 mm	65 mm	20 mm	Vertical	High
2.	355 mm	345 mm	73 mm	20 mm	Vertical	High
3.	561 mm	345 mm	79 mm	8 mm	Vertical	High
4.	195 mm	2 mm	67 mm	20 mm	Horizontal	High
5.	195 mm	278 mm	66 mm	20 mm	Horizontal	High
6.	195 mm	597 mm	67 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	201.fscan
Serial number:	227190008
Date / Time:	2019-10-07 18:55:47
Comment:	-



x: 255 mm	y: 445 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

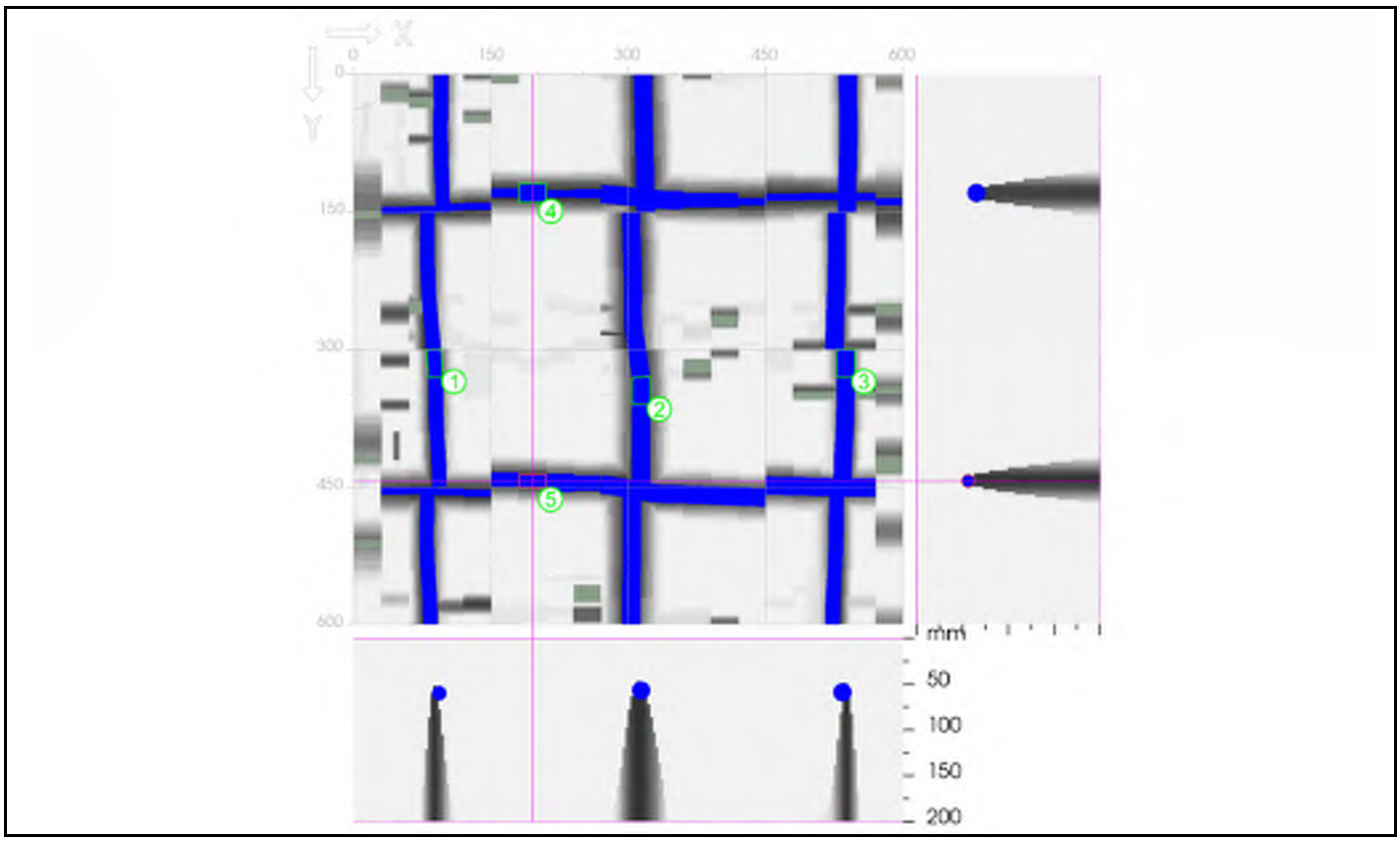
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 3
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	79 mm	405 mm	79 mm	20 mm	Vertical	High
2.	301 mm	375 mm	71 mm	20 mm	Vertical	High
3.	520 mm	375 mm	73 mm	14 mm	Vertical	High
4.	255 mm	150 mm	71 mm	20 mm	Horizontal	High
5.	255 mm	445 mm	71 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	200.fscan
Serial number:	227190008
Date / Time:	2019-10-07 18:53:39
Comment:	-



x: 195 mm	y: 443 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

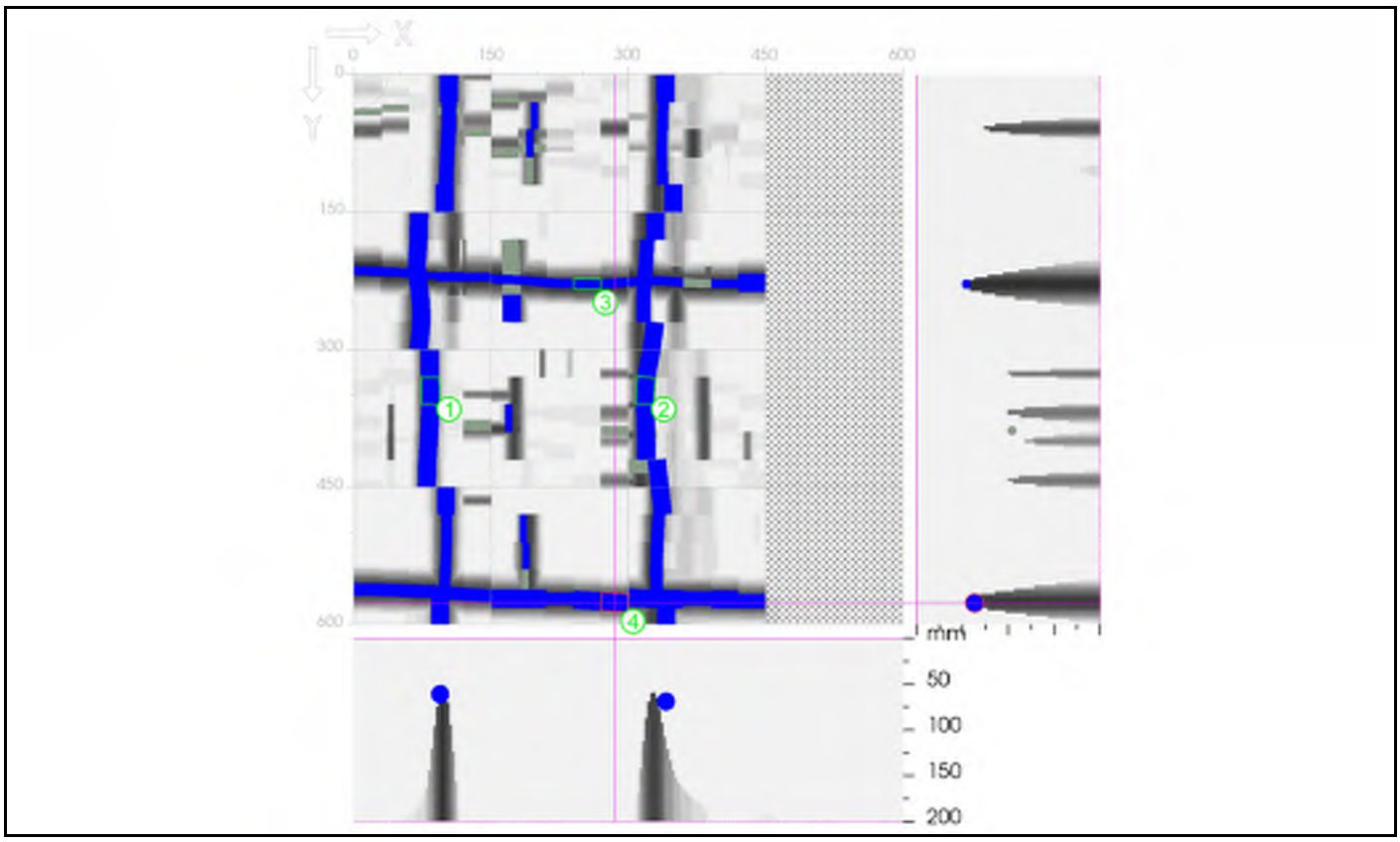
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 3
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	89 mm	315 mm	52 mm	16 mm	Vertical	High
2.	314 mm	345 mm	53 mm	20 mm	Vertical	High
3.	537 mm	315 mm	52 mm	20 mm	Vertical	High
4.	195 mm	129 mm	55 mm	20 mm	Horizontal	High
5.	195 mm	443 mm	49 mm	14 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	207.fscan
Serial number:	227190008
Date / Time:	2019-10-07 19:12:27
Comment:	-



x: 285 mm	y: 577 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

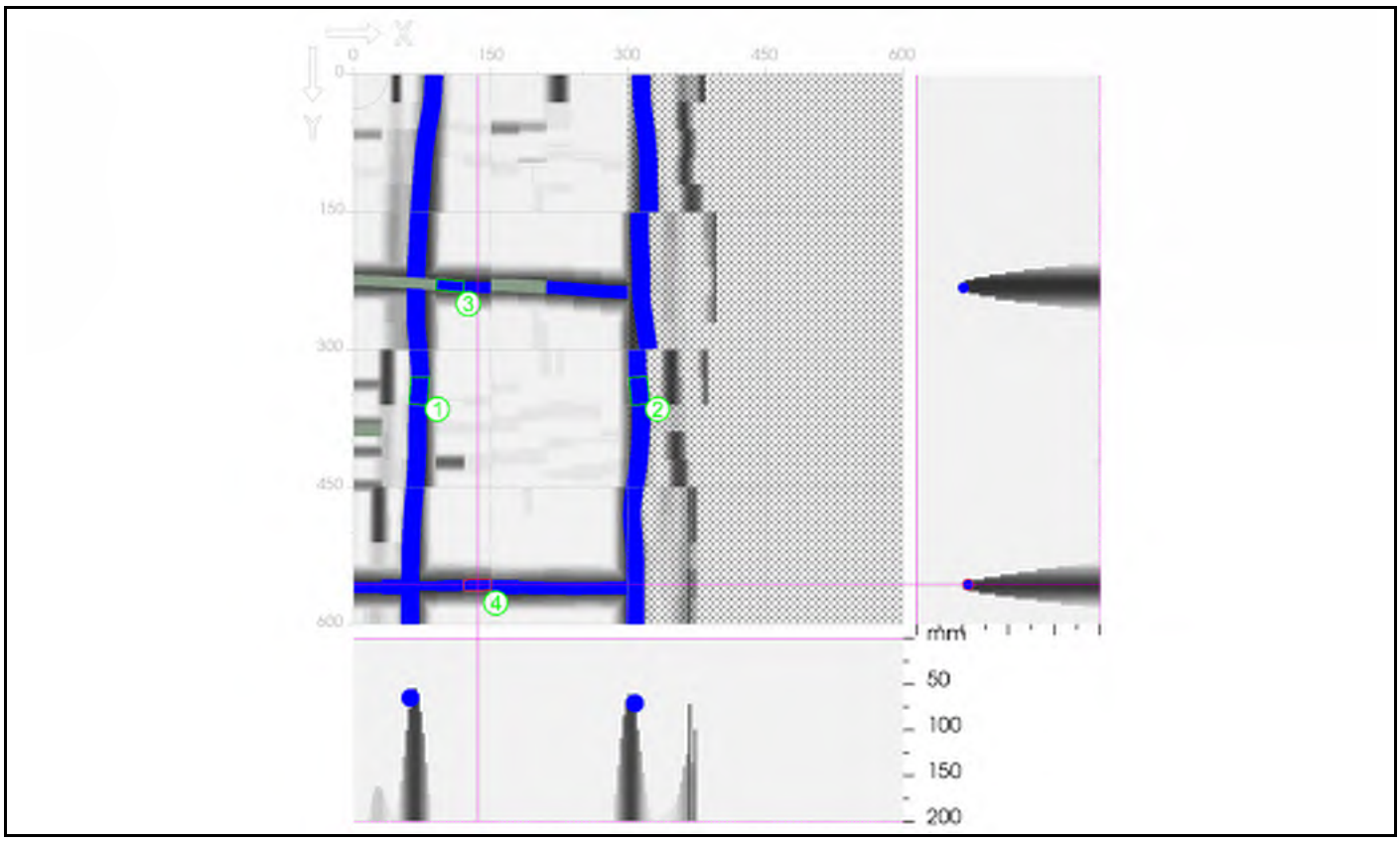
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 4
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	84 mm	345 mm	49 mm	20 mm	Vertical	High
2.	318 mm	345 mm	57 mm	20 mm	Vertical	High
3.	255 mm	228 mm	48 mm	12 mm	Horizontal	High
4.	285 mm	577 mm	53 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	206.fscan
Serial number:	227190008
Date / Time:	2019-10-07 19:11:18
Comment:	-



x: 135 mm	y: 556 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

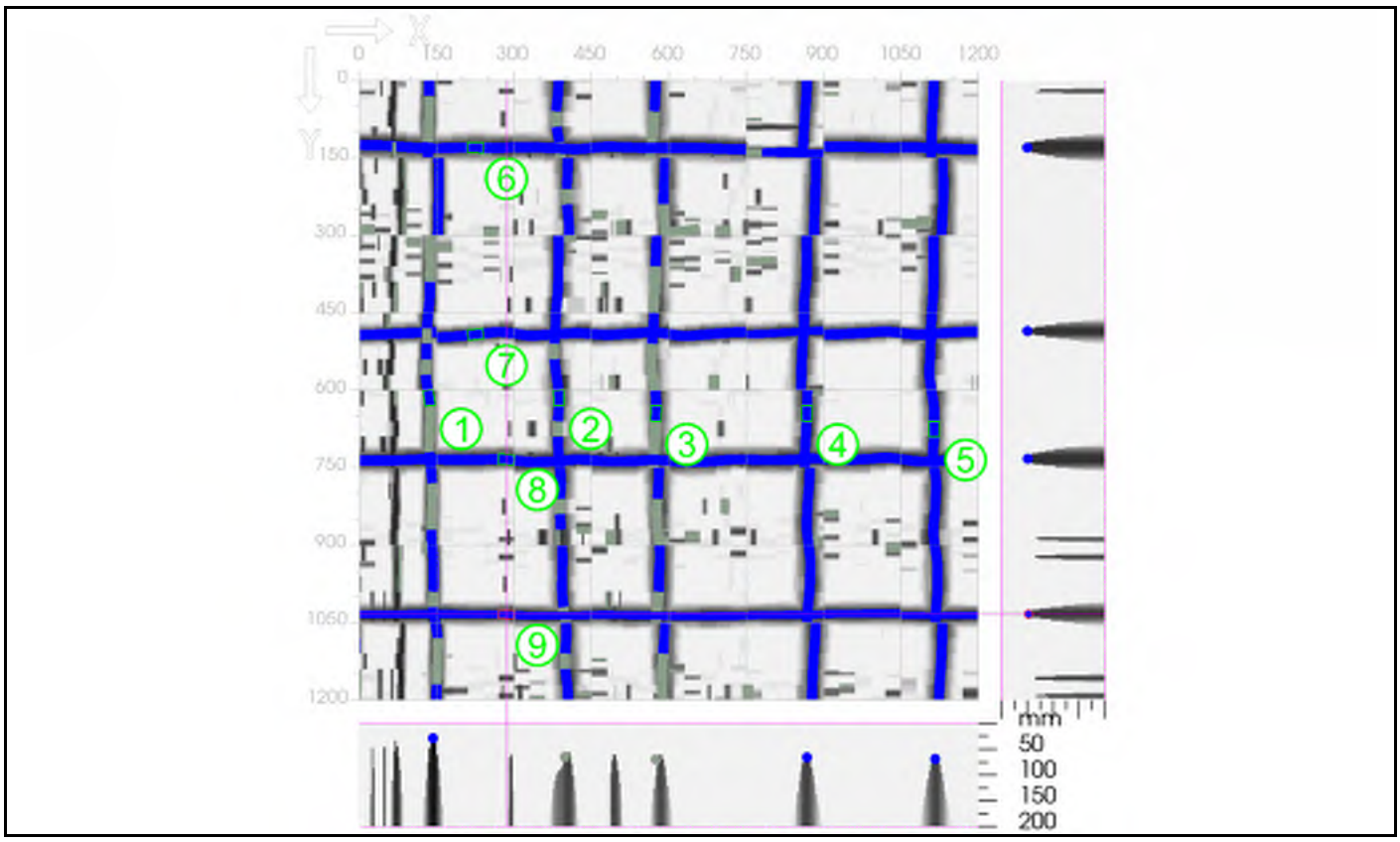
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 4
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	71 mm	345 mm	53 mm	20 mm	Vertical	High
2.	312 mm	345 mm	58 mm	20 mm	Vertical	High
3.	105 mm	230 mm	44 mm	12 mm	Horizontal	High
4.	135 mm	556 mm	50 mm	12 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	208.fscan
Serial number:	227190008
Date / Time:	2019-10-07 20:34:16
Comment:	-



x: 285 mm	y: 1034 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

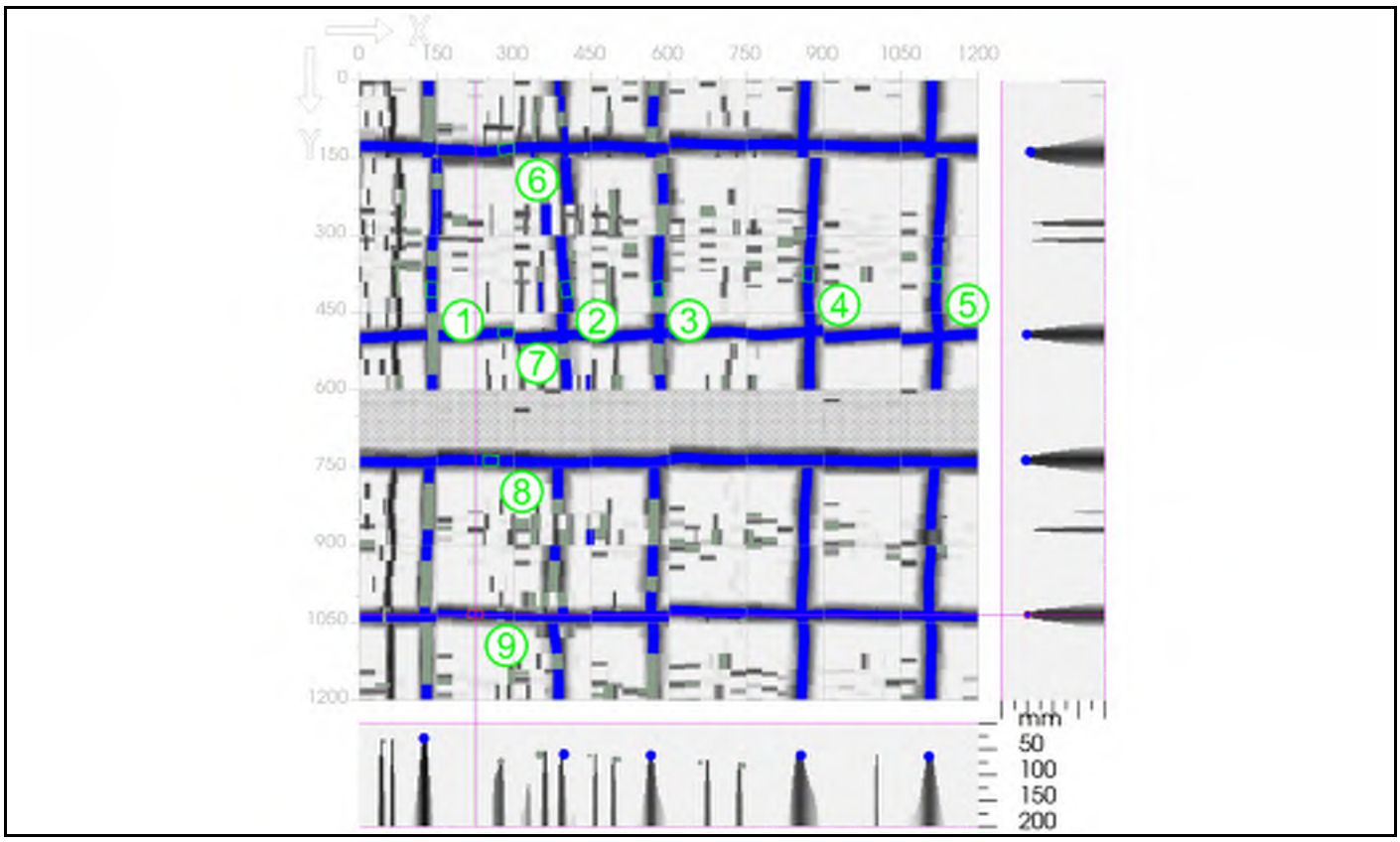
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 7
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	137 mm	615 mm	19 mm	20 mm	Vertical	High
2.	388 mm	615 mm	58 mm	20 mm	Vertical	High
3.	575 mm	645 mm	57 mm	20 mm	Vertical	High
4.	867 mm	645 mm	55 mm	20 mm	Vertical	High
5.	1115 mm	675 mm	56 mm	20 mm	Vertical	High
6.	225 mm	130 mm	42 mm	20 mm	Horizontal	High
7.	225 mm	492 mm	40 mm	20 mm	Horizontal	High
8.	285 mm	733 mm	41 mm	20 mm	Horizontal	High
9.	285 mm	1034 mm	44 mm	16 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	210.fscan
Serial number:	227190008
Date / Time:	2019-10-07 22:48:21
Comment:	-



x: 225 mm	y: 1035 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

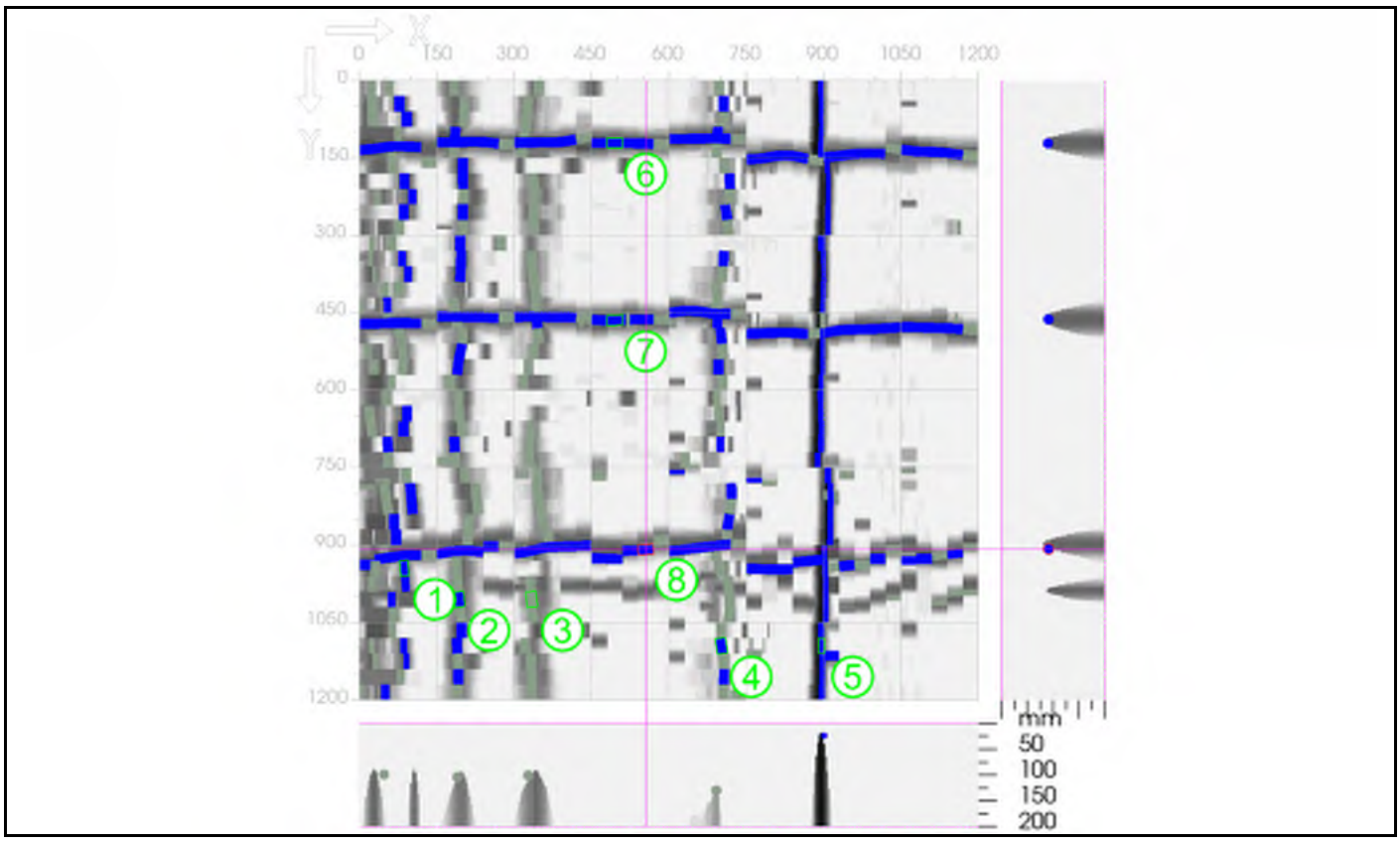
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 8
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	141 mm	405 mm	19 mm	20 mm	Vertical	High
2.	400 mm	405 mm	54 mm	20 mm	Vertical	High
3.	579 mm	405 mm	65 mm	20 mm	Vertical	High
4.	870 mm	375 mm	56 mm	20 mm	Vertical	High
5.	1119 mm	375 mm	56 mm	20 mm	Vertical	High
6.	285 mm	133 mm	47 mm	20 mm	Horizontal	High
7.	285 mm	488 mm	40 mm	20 mm	Horizontal	High
8.	255 mm	736 mm	38 mm	20 mm	Horizontal	High
9.	225 mm	1035 mm	43 mm	14 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	209.fscan
Serial number:	227190008
Date / Time:	2019-10-07 22:27:43
Comment:	-



x: 555 mm	y: 907 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

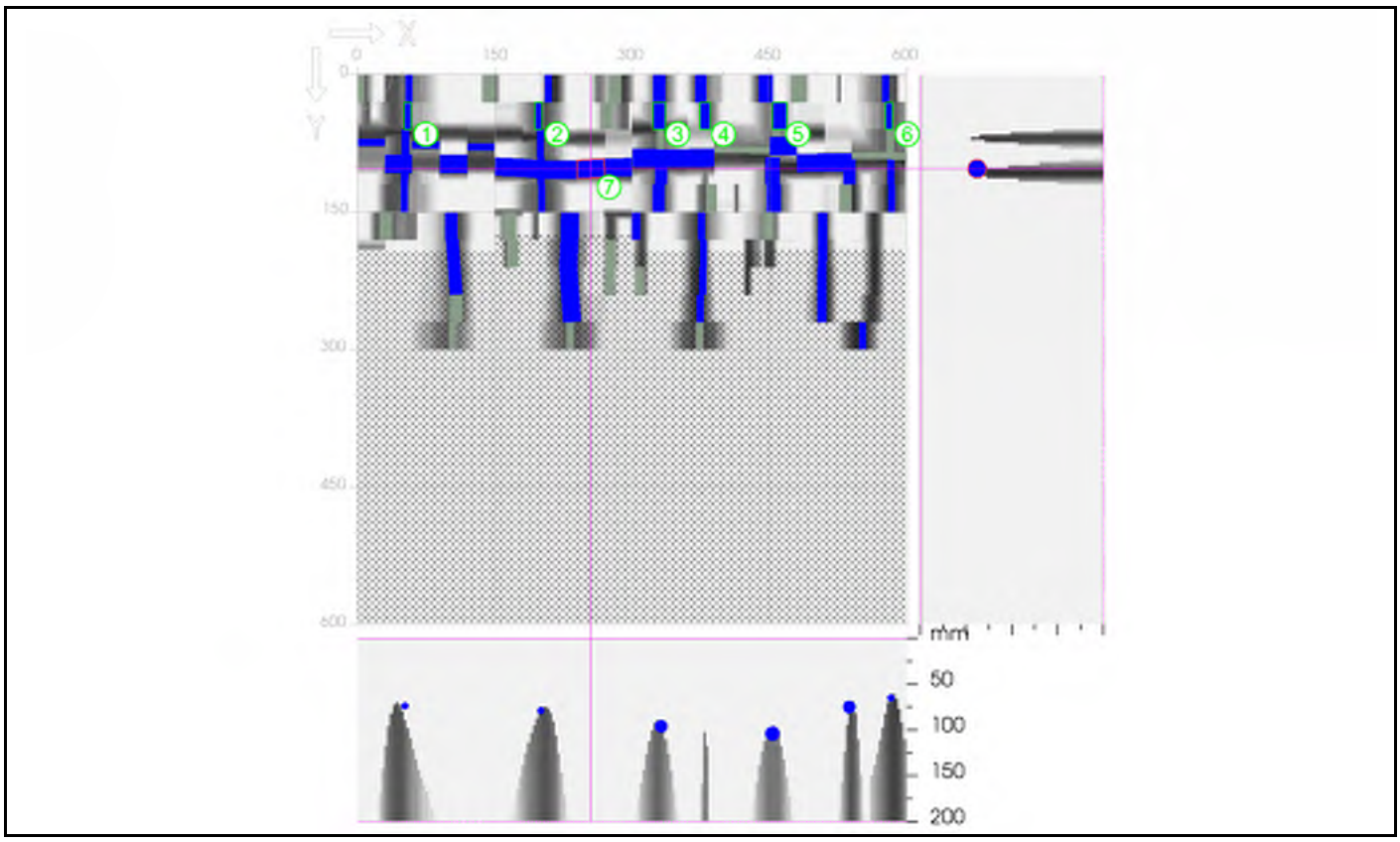
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 9
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	86 mm	945 mm	94 mm	16 mm	Vertical	High
2.	191 mm	1005 mm	90 mm	20 mm	Vertical	High
3.	334 mm	1005 mm	97 mm	20 mm	Vertical	Low
4.	700 mm	1095 mm	103 mm	20 mm	Vertical	High
5.	896 mm	1095 mm	26 mm	12 mm	Vertical	High
6.	495 mm	121 mm	76 mm	20 mm	Horizontal	High
7.	495 mm	465 mm	79 mm	20 mm	Horizontal	High
8.	555 mm	907 mm	81 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	211.fscan
Serial number:	227190008
Date / Time:	2019-10-07 23:08:48
Comment:	-



x: 255 mm	y: 103 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

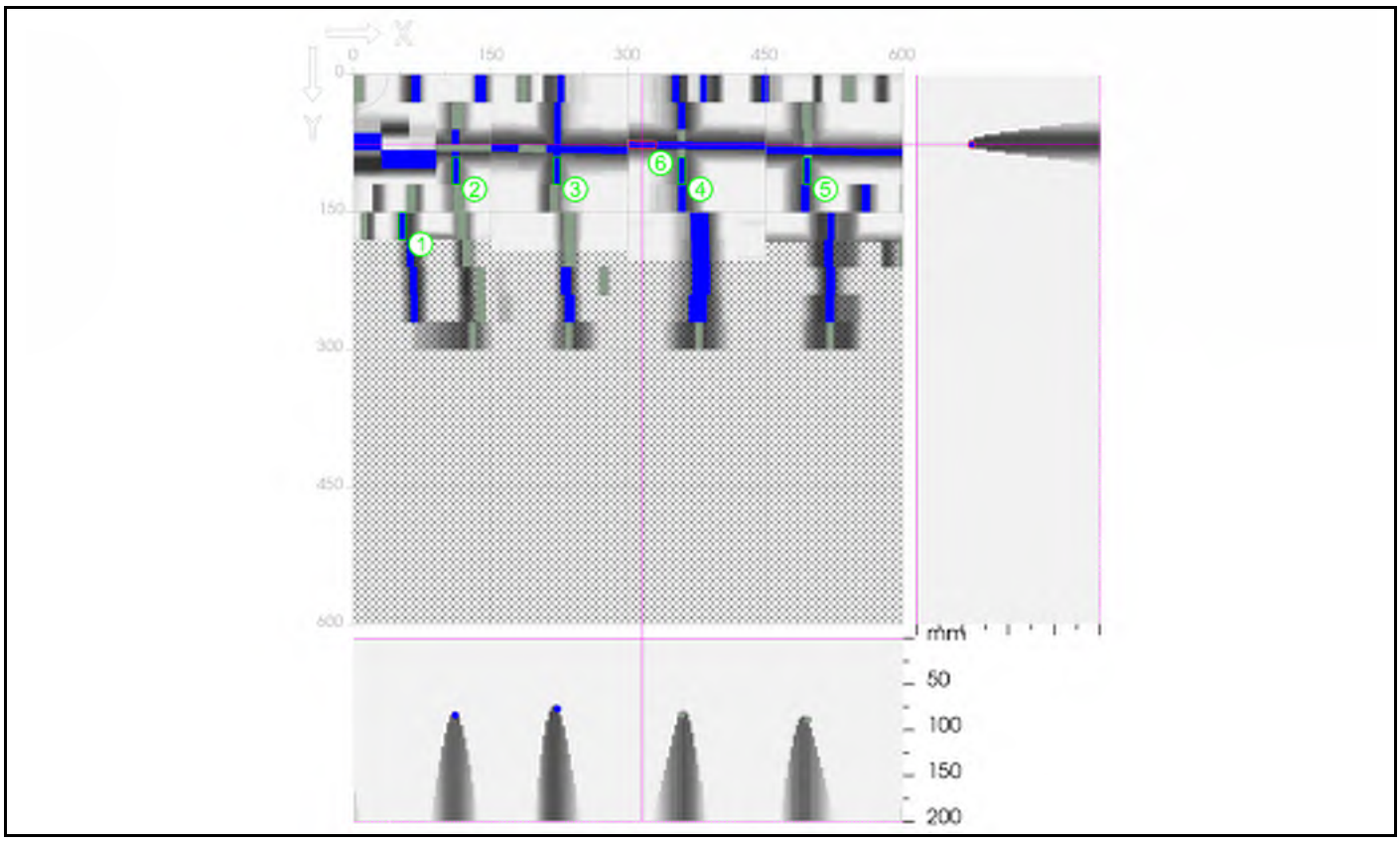
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 10
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	**x:**	**y:**	**Cover:**	**⌀:**	**Orientation:**	**Quality:**
1.	55 mm	45 mm	74 mm	8 mm	Vertical	High
2.	198 mm	45 mm	73 mm	8 mm	Vertical	High
3.	330 mm	45 mm	100 mm	14 mm	Vertical	High
4.	380 mm	45 mm	86 mm	12 mm	Vertical	High
5.	461 mm	45 mm	97 mm	16 mm	Vertical	High
6.	581 mm	45 mm	87 mm	8 mm	Vertical	High
7.	255 mm	103 mm	52 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	212.fscan
Serial number:	227190008
Date / Time:	2019-10-07 23:09:47
Comment:	-



x: 315 mm	y: 76 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

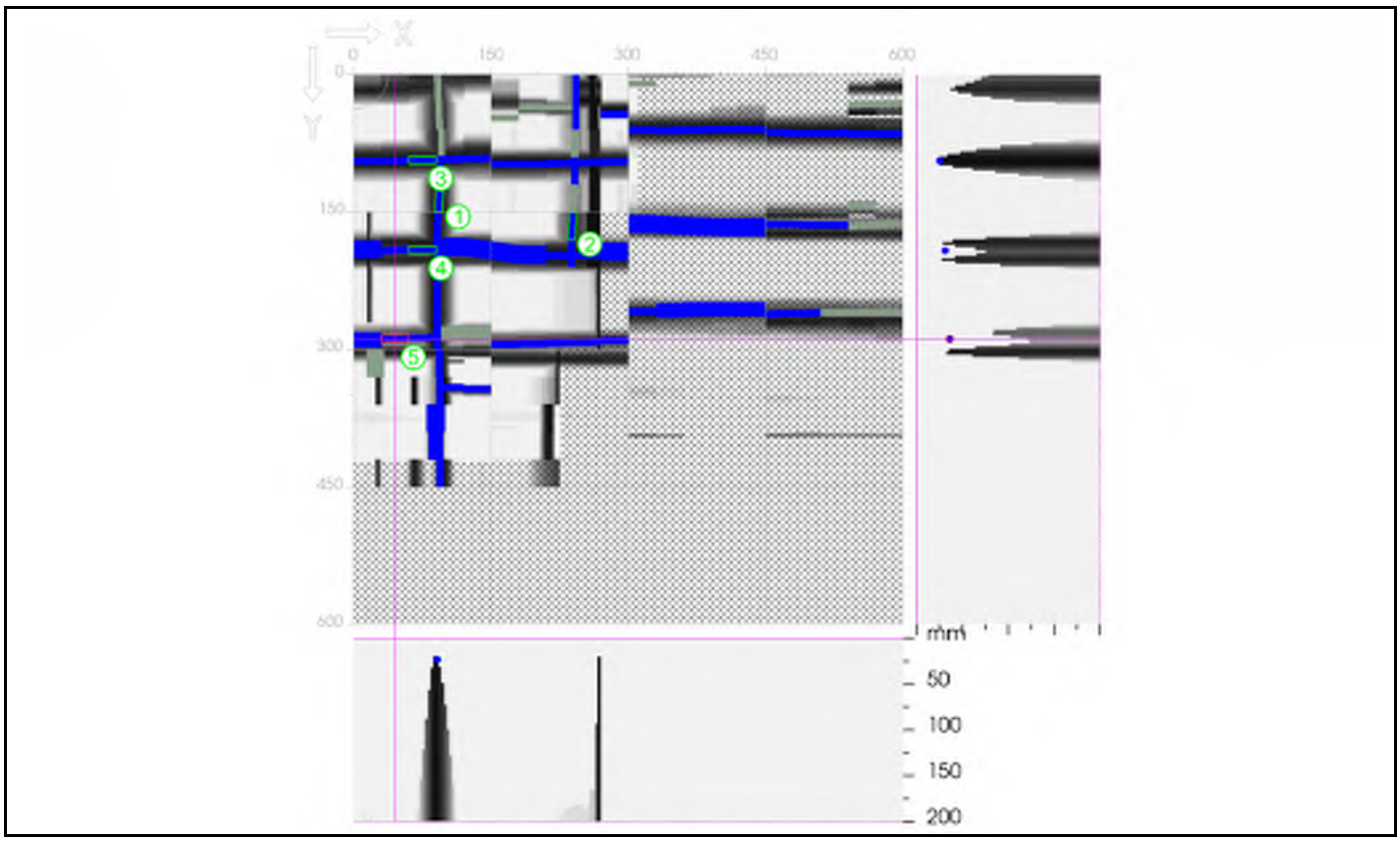
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 10
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	53 mm	165 mm	54 mm	8 mm	Vertical	High
2.	112 mm	105 mm	75 mm	8 mm	Vertical	High
3.	222 mm	105 mm	70 mm	8 mm	Vertical	High
4.	358 mm	105 mm	74 mm	8 mm	Vertical	High
5.	495 mm	105 mm	79 mm	8 mm	Vertical	High
6.	315 mm	76 mm	56 mm	8 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	213.fscan
Serial number:	227190008
Date / Time:	2019-10-07 23:11:01
Comment:	-



x: 45 mm	y: 288 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

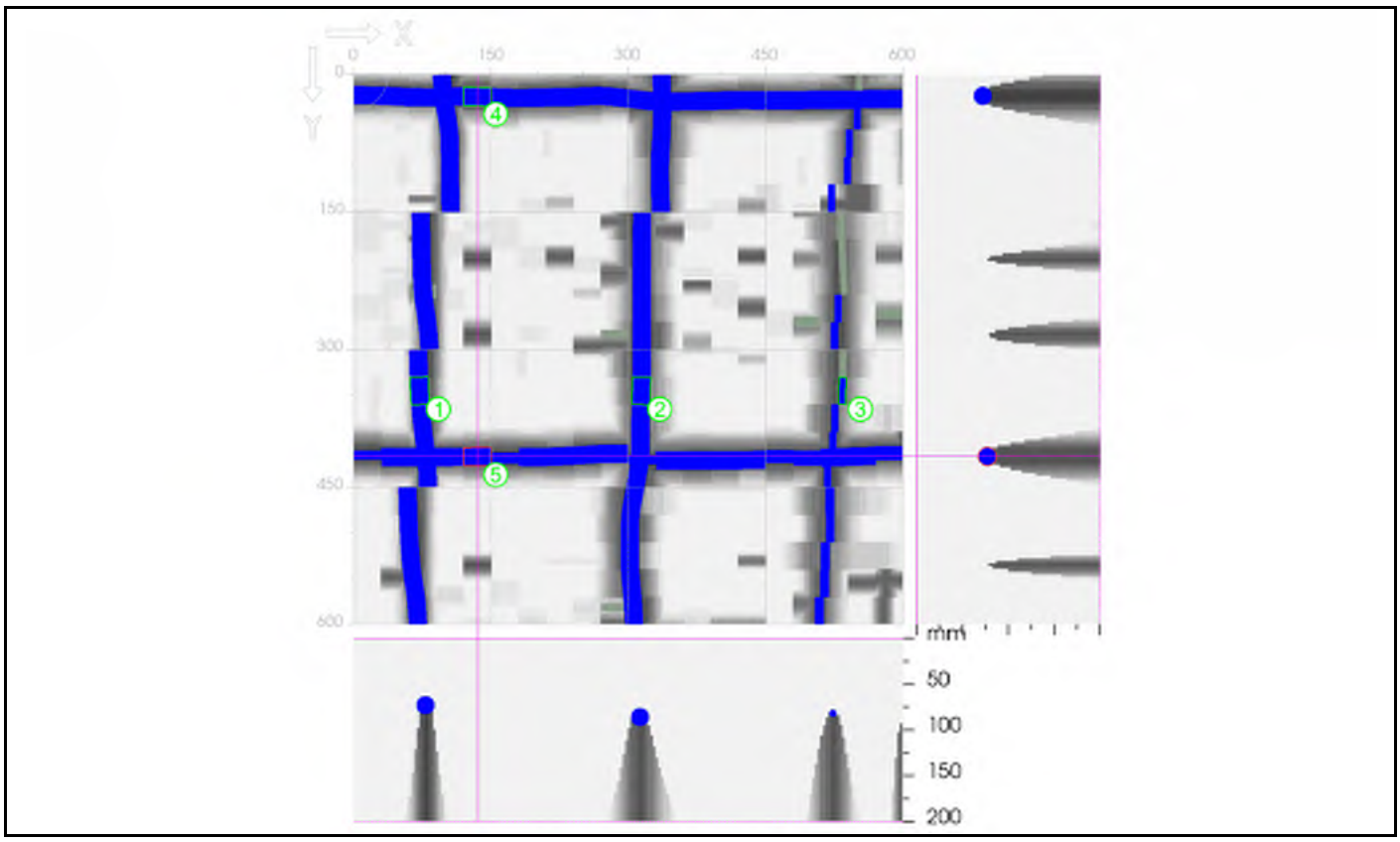
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 10
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	94 mm	135 mm	24 mm	8 mm	Vertical	High
2.	238 mm	165 mm	23 mm	8 mm	Vertical	High
3.	75 mm	93 mm	22 mm	8 mm	Horizontal	High
4.	75 mm	191 mm	28 mm	8 mm	Horizontal	High
5.	45 mm	288 mm	32 mm	8 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	215.fscan
Serial number:	227190008
Date / Time:	2019-10-07 23:29:55
Comment:	-



x: 135 mm	y: 417 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

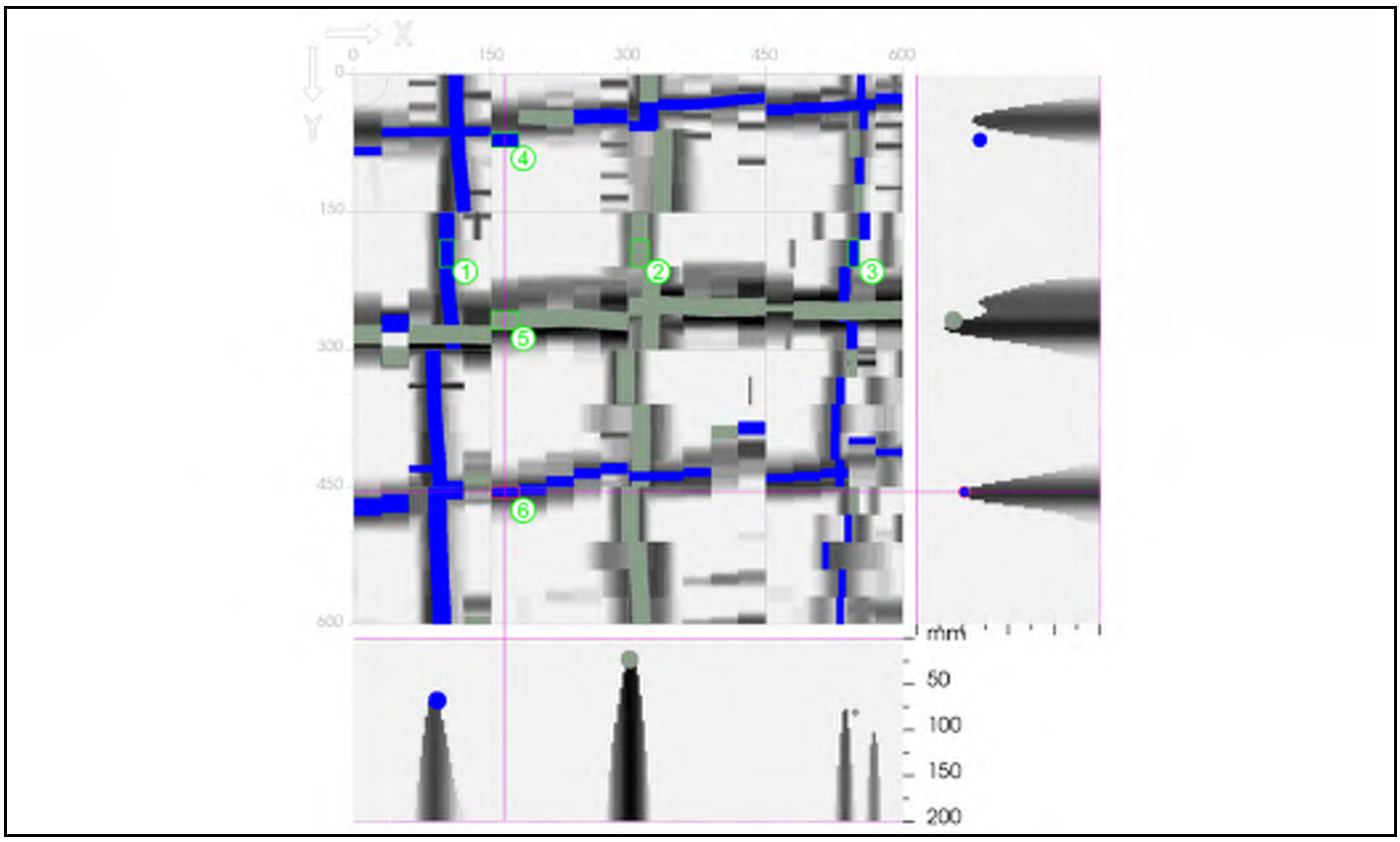
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 11
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	72 mm	345 mm	64 mm	20 mm	Vertical	High
2.	314 mm	345 mm	77 mm	20 mm	Vertical	High
3.	533 mm	345 mm	76 mm	8 mm	Vertical	High
4.	135 mm	23 mm	62 mm	20 mm	Horizontal	High
5.	135 mm	417 mm	67 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	214.fscan
Serial number:	227190008
Date / Time:	2019-10-07 23:27:16
Comment:	-



x: 165 mm	y: 455 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

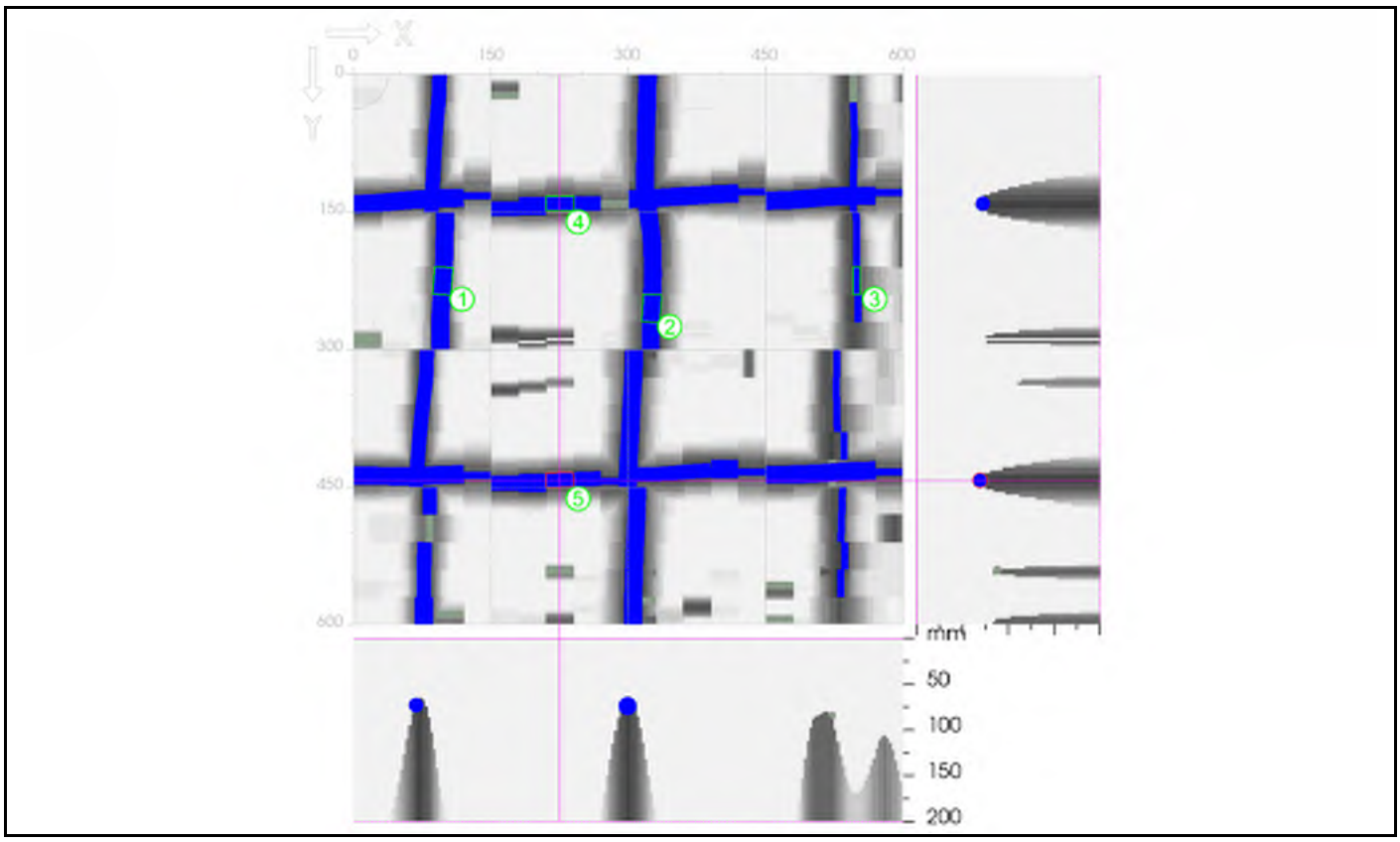
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 11
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	102 mm	195 mm	57 mm	16 mm	Vertical	High
2.	312 mm	195 mm	20 mm	20 mm	Vertical	Low
3.	546 mm	195 mm	83 mm	12 mm	Vertical	High
4.	165 mm	71 mm	61 mm	16 mm	Horizontal	High
5.	165 mm	268 mm	30 mm	20 mm	Horizontal	Low
6.	165 mm	455 mm	46 mm	12 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	217.fscan
Serial number:	227190008
Date / Time:	2019-10-07 23:34:35
Comment:	-



x: 225 mm	y: 443 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

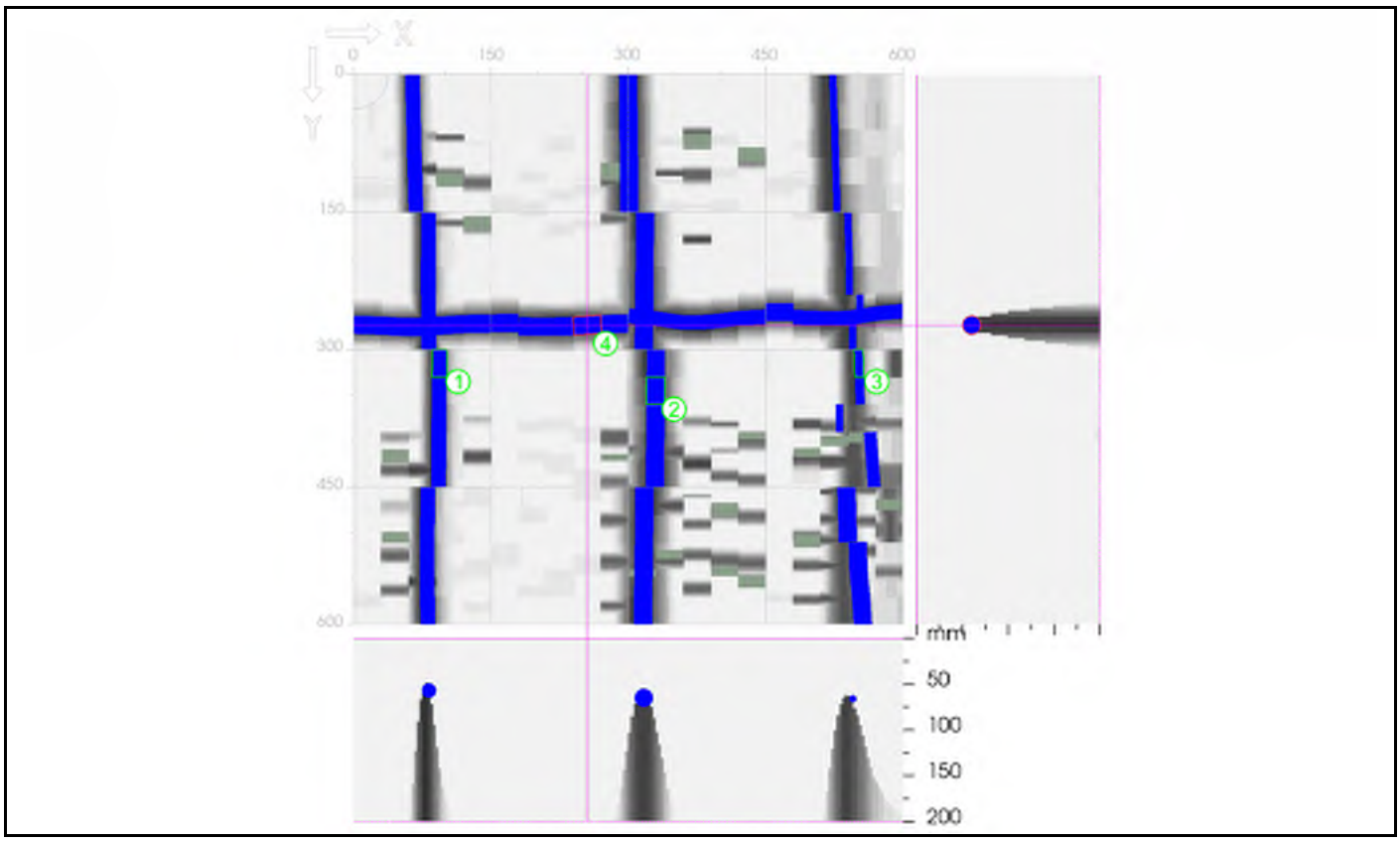
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 12
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	98 mm	225 mm	72 mm	20 mm	Vertical	High
2.	325 mm	255 mm	63 mm	20 mm	Vertical	High
3.	549 mm	225 mm	70 mm	8 mm	Vertical	High
4.	225 mm	141 mm	64 mm	16 mm	Horizontal	High
5.	225 mm	443 mm	61 mm	16 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	216.fscan
Serial number:	227190008
Date / Time:	2019-10-07 23:33:33
Comment:	-



x: 255 mm	y: 273 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

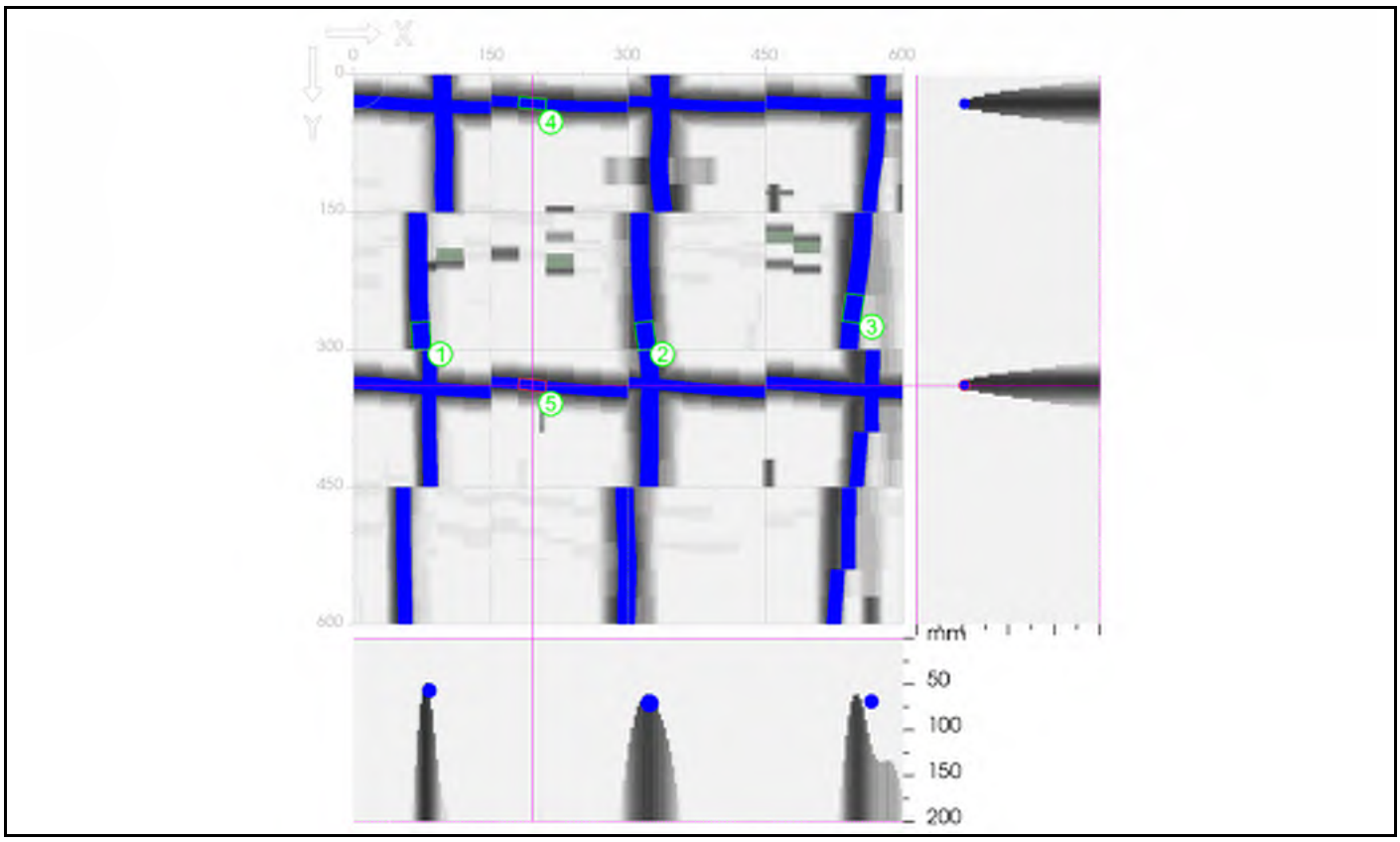
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 12
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	94 mm	315 mm	50 mm	16 mm	Vertical	High
2.	330 mm	345 mm	55 mm	20 mm	Vertical	High
3.	551 mm	315 mm	63 mm	10 mm	Vertical	High
4.	255 mm	273 mm	50 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	219.fscan
Serial number:	227190008
Date / Time:	2019-10-07 23:41:57
Comment:	-



x: 195 mm	y: 339 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

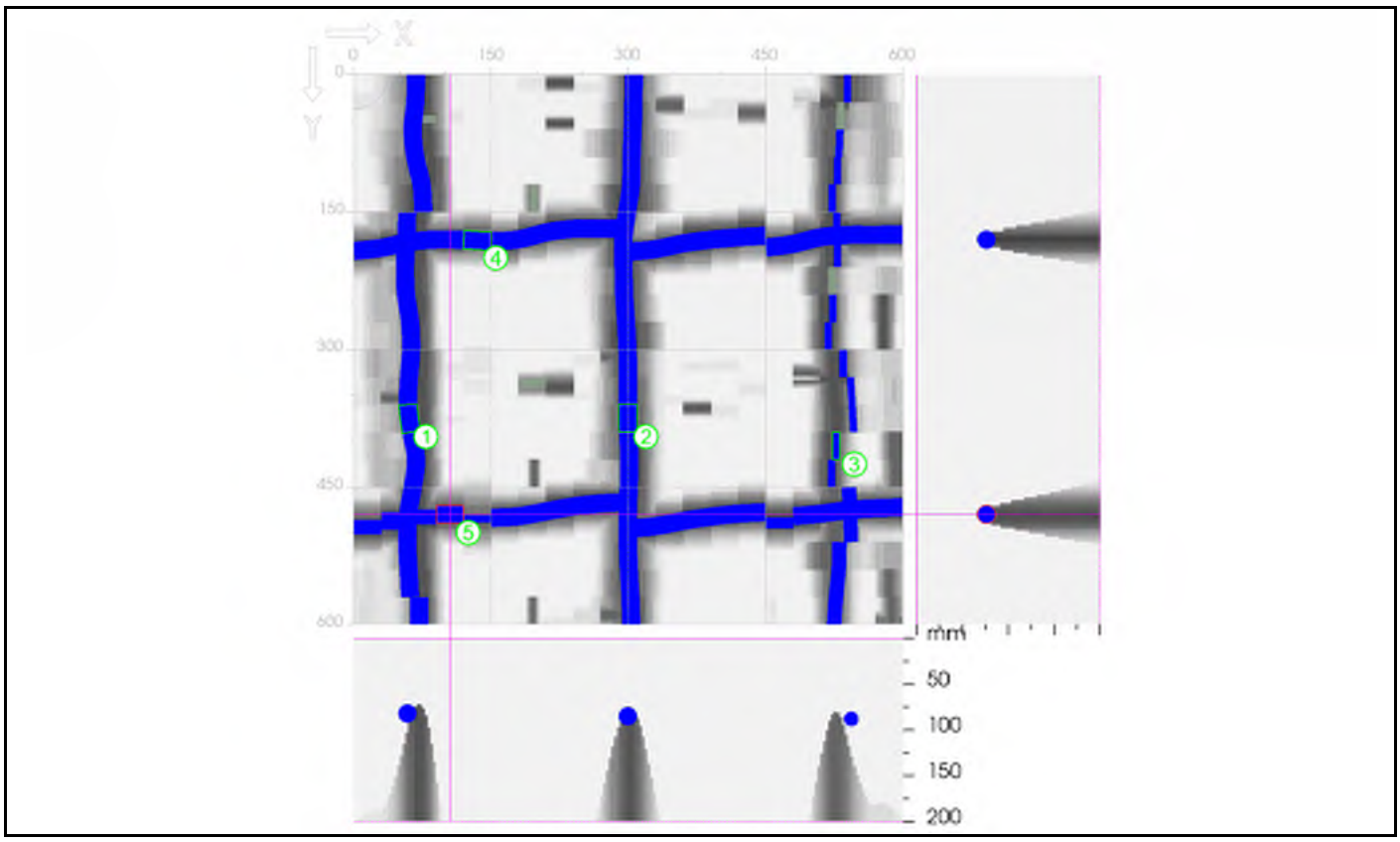
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 13
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	**x:**	**y:**	**Cover:**	**Ø:**	**Orientation:**	**Quality:**
1.	74 mm	285 mm	51 mm	20 mm	Vertical	High
2.	317 mm	285 mm	56 mm	20 mm	Vertical	High
3.	546 mm	255 mm	62 mm	20 mm	Vertical	High
4.	195 mm	32 mm	46 mm	12 mm	Horizontal	High
5.	195 mm	339 mm	46 mm	12 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	218.fscan
Serial number:	227190008
Date / Time:	2019-10-07 23:41:02
Comment:	-



x: 105 mm	y: 480 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

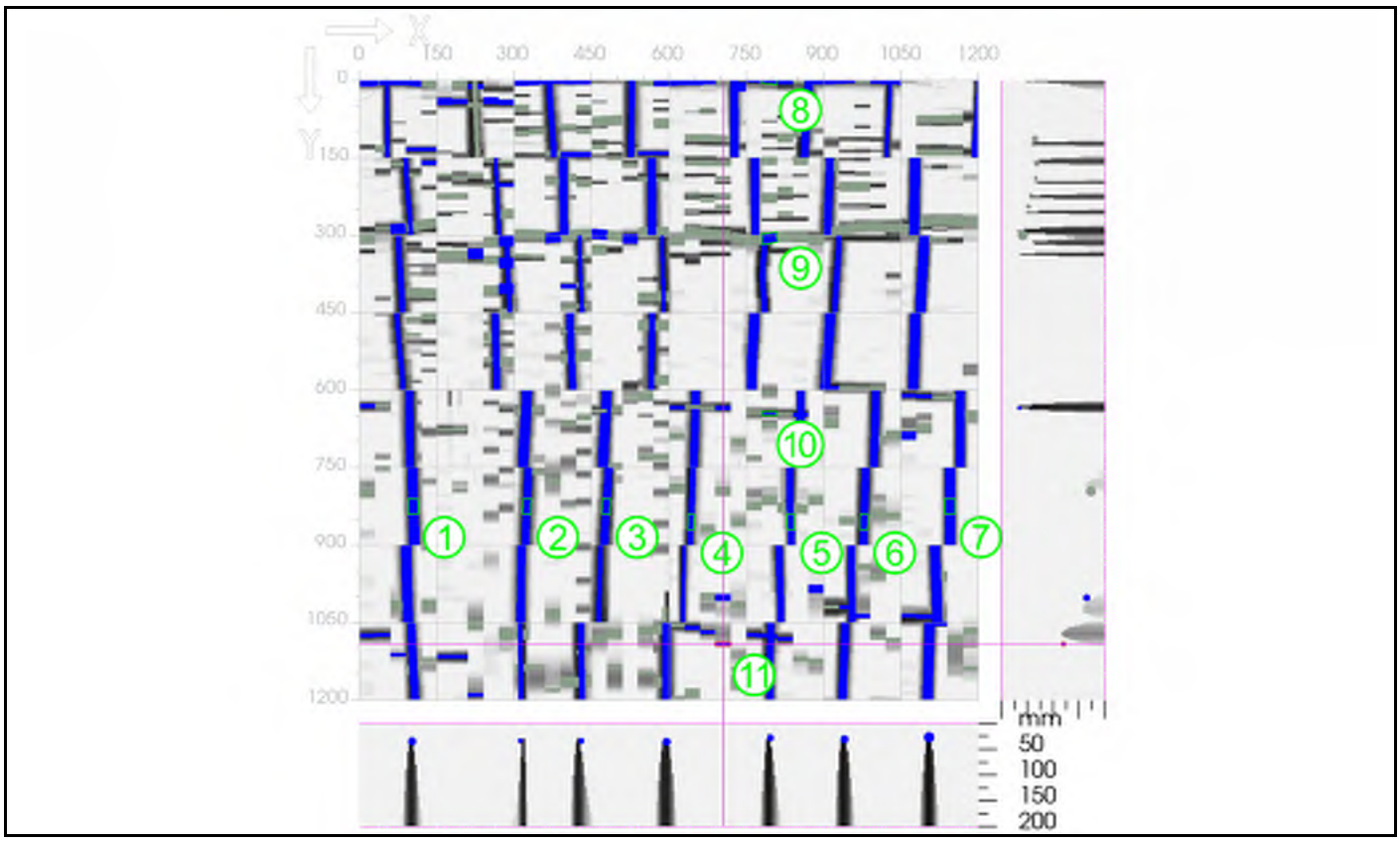
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 13
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	59 mm	375 mm	72 mm	20 mm	Vertical	High
2.	299 mm	375 mm	75 mm	20 mm	Vertical	High
3.	527 mm	405 mm	71 mm	8 mm	Vertical	High
4.	135 mm	180 mm	76 mm	20 mm	Horizontal	High
5.	105 mm	480 mm	66 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	221.fscan
Serial number:	227190008
Date / Time:	2019-10-08 19:38:57
Comment:	-



x: 705 mm	y: 1092 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

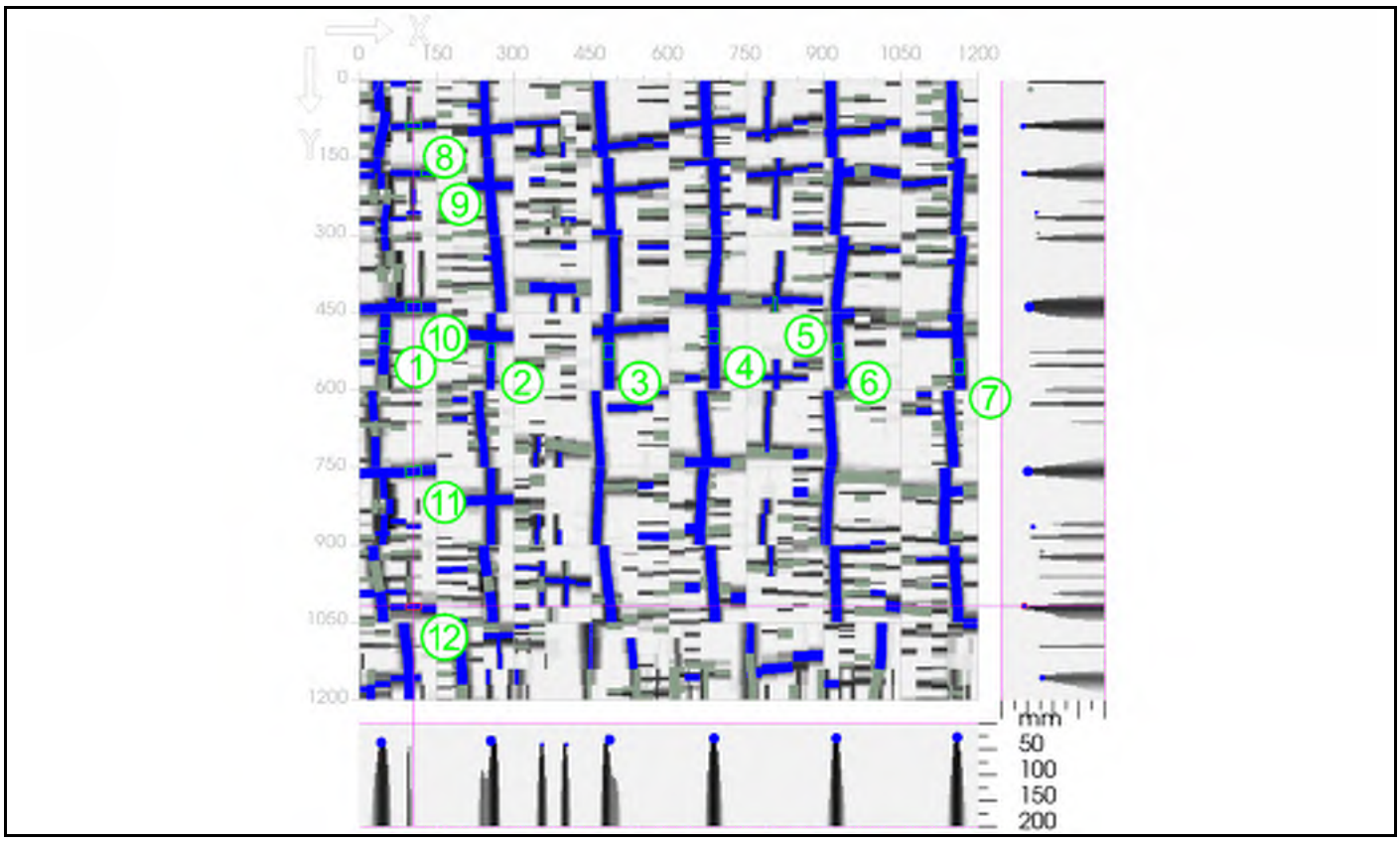
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 14
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	104 mm	825 mm	29 mm	20 mm	Vertical	High
2.	325 mm	825 mm	32 mm	16 mm	Vertical	High
3.	478 mm	825 mm	29 mm	16 mm	Vertical	High
4.	643 mm	855 mm	26 mm	12 mm	Vertical	High
5.	836 mm	855 mm	18 mm	14 mm	Vertical	High
6.	978 mm	855 mm	25 mm	16 mm	Vertical	High
7.	1145 mm	825 mm	17 mm	20 mm	Vertical	High
8.	795 mm	-2 mm	42 mm	20 mm	Horizontal	High
9.	795 mm	303 mm	33 mm	20 mm	Horizontal	High
10.	795 mm	645 mm	20 mm	8 mm	Horizontal	High
11.	705 mm	1092 mm	116 mm	8 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	220.fscan
Serial number:	227190008
Date / Time:	2019-10-08 19:20:49
Comment:	-



x: 105 mm	y: 1018 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

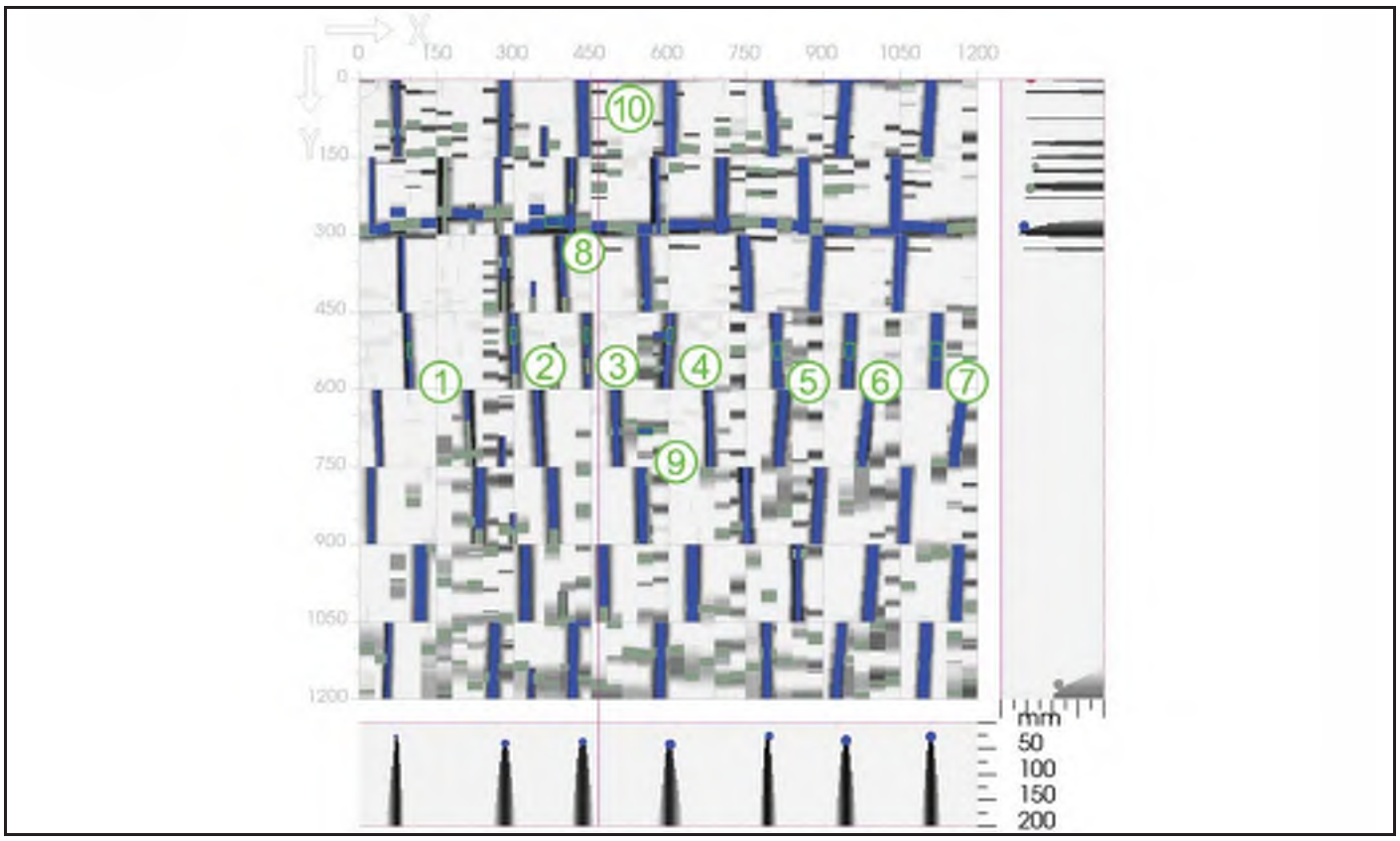
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 -
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	49 mm	495 mm	27 mm	20 mm	Vertical	High
2.	255 mm	525 mm	23 mm	16 mm	Vertical	High
3.	484 mm	525 mm	22 mm	20 mm	Vertical	High
4.	687 mm	495 mm	20 mm	20 mm	Vertical	High
5.	805 mm	435 mm	22 mm	8 mm	Vertical	High
6.	928 mm	525 mm	20 mm	20 mm	Vertical	High
7.	1163 mm	555 mm	18 mm	20 mm	Vertical	High
8.	105 mm	89 mm	36 mm	12 mm	Horizontal	High
9.	135 mm	180 mm	38 mm	12 mm	Horizontal	High
10.	105 mm	439 mm	44 mm	20 mm	Horizontal	High
11.	105 mm	757 mm	41 mm	20 mm	Horizontal	High
12.	105 mm	1018 mm	38 mm	12 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	222.fscan
Serial number:	227190008
Date / Time:	2019-10-08 19:43:52
Comment:	-



x: 465 mm	y: 0 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

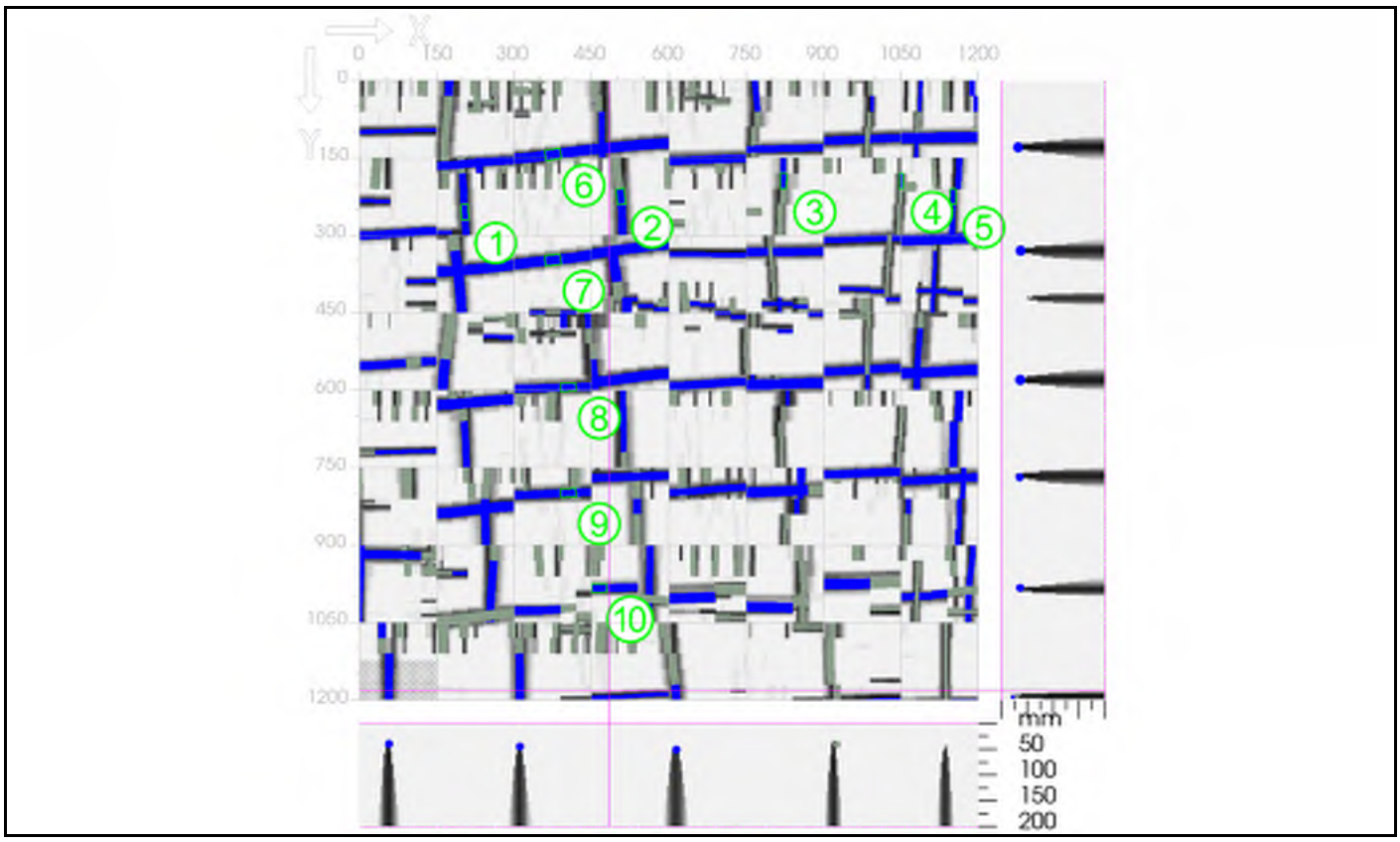
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 16
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	97 mm	525 mm	21 mm	8 mm	Vertical	High
2.	300 mm	495 mm	28 mm	12 mm	Vertical	High
3.	441 mm	495 mm	27 mm	8 mm	Vertical	High
4.	602 mm	495 mm	27 mm	12 mm	Vertical	High
5.	811 mm	525 mm	18 mm	16 mm	Vertical	High
6.	951 mm	525 mm	25 mm	16 mm	Vertical	High
7.	1120 mm	525 mm	18 mm	20 mm	Vertical	High
8.	375 mm	274 mm	32 mm	20 mm	Horizontal	High
9.	555 mm	680 mm	94 mm	14 mm	Horizontal	High
10.	465 mm	-4 mm	48 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	223.fscan
Serial number:	227190008
Date / Time:	2019-10-08 20:02:46
Comment:	-



x: 485 mm	y: 1182 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

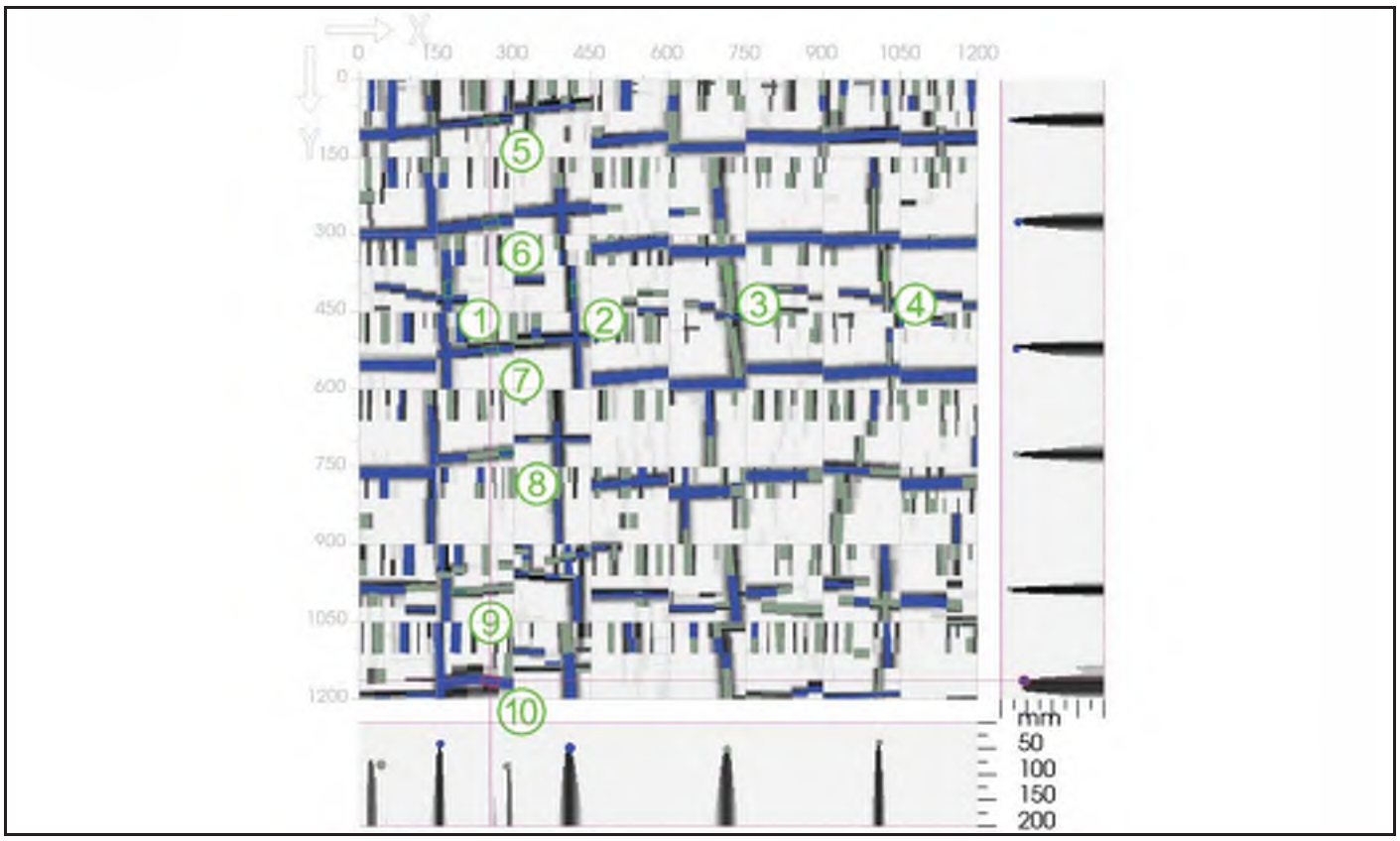
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 -17
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	204 mm	255 mm	37 mm	14 mm	Vertical	High
2.	507 mm	225 mm	42 mm	16 mm	Vertical	High
3.	823 mm	195 mm	43 mm	12 mm	Vertical	High
4.	1050 mm	195 mm	28 mm	8 mm	Vertical	High
5.	1151 mm	225 mm	39 mm	12 mm	Vertical	High
6.	375 mm	143 mm	22 mm	20 mm	Horizontal	High
7.	375 mm	348 mm	26 mm	20 mm	Horizontal	High
8.	405 mm	594 mm	25 mm	16 mm	Horizontal	High
9.	405 mm	799 mm	26 mm	16 mm	Horizontal	High
10.	465 mm	984 mm	28 mm	16 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	224.fscan
Serial number:	227190008
Date / Time:	2019-10-08 20:09:22
Comment:	-



x: 255 mm	y: 1164 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

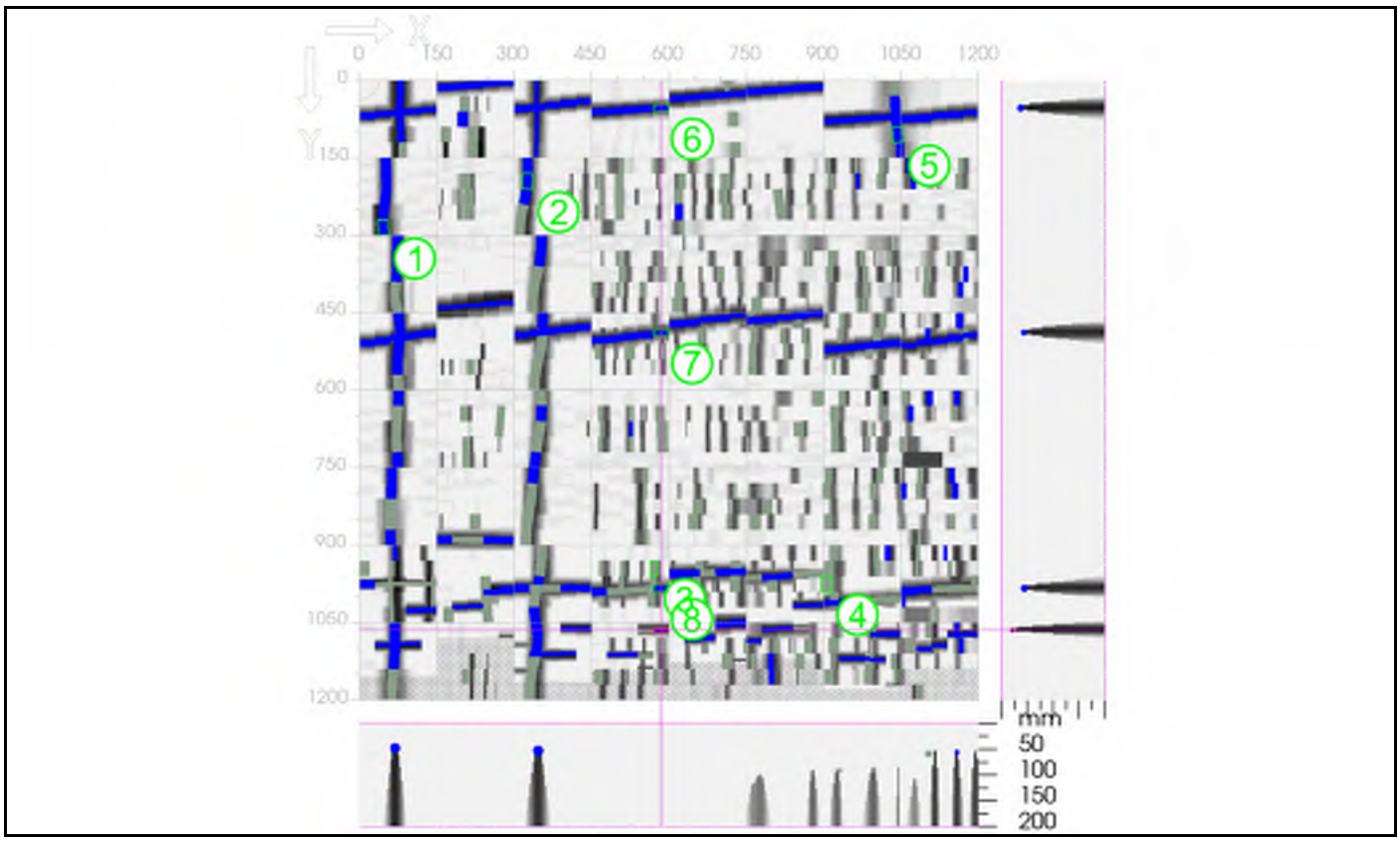
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 18
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	172 mm	405 mm	32 mm	16 mm	Vertical	High
2.	415 mm	405 mm	34 mm	10 mm	Vertical	High
3.	715 mm	375 mm	43 mm	16 mm	Vertical	Low
4.	1019 mm	375 mm	28 mm	8 mm	Vertical	Low
5.	255 mm	78 mm	15 mm	8 mm	Horizontal	High
6.	255 mm	276 mm	26 mm	16 mm	Horizontal	High
7.	255 mm	522 mm	23 mm	14 mm	Horizontal	High
8.	285 mm	723 mm	23 mm	14 mm	Horizontal	High
9.	195 mm	991 mm	15 mm	10 mm	Horizontal	High
10.	255 mm	1164 mm	35 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	225.fscan
Serial number:	227190008
Date / Time:	2019-10-08 20:38:03
Comment:	-



x: 585 mm	y: 1065 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

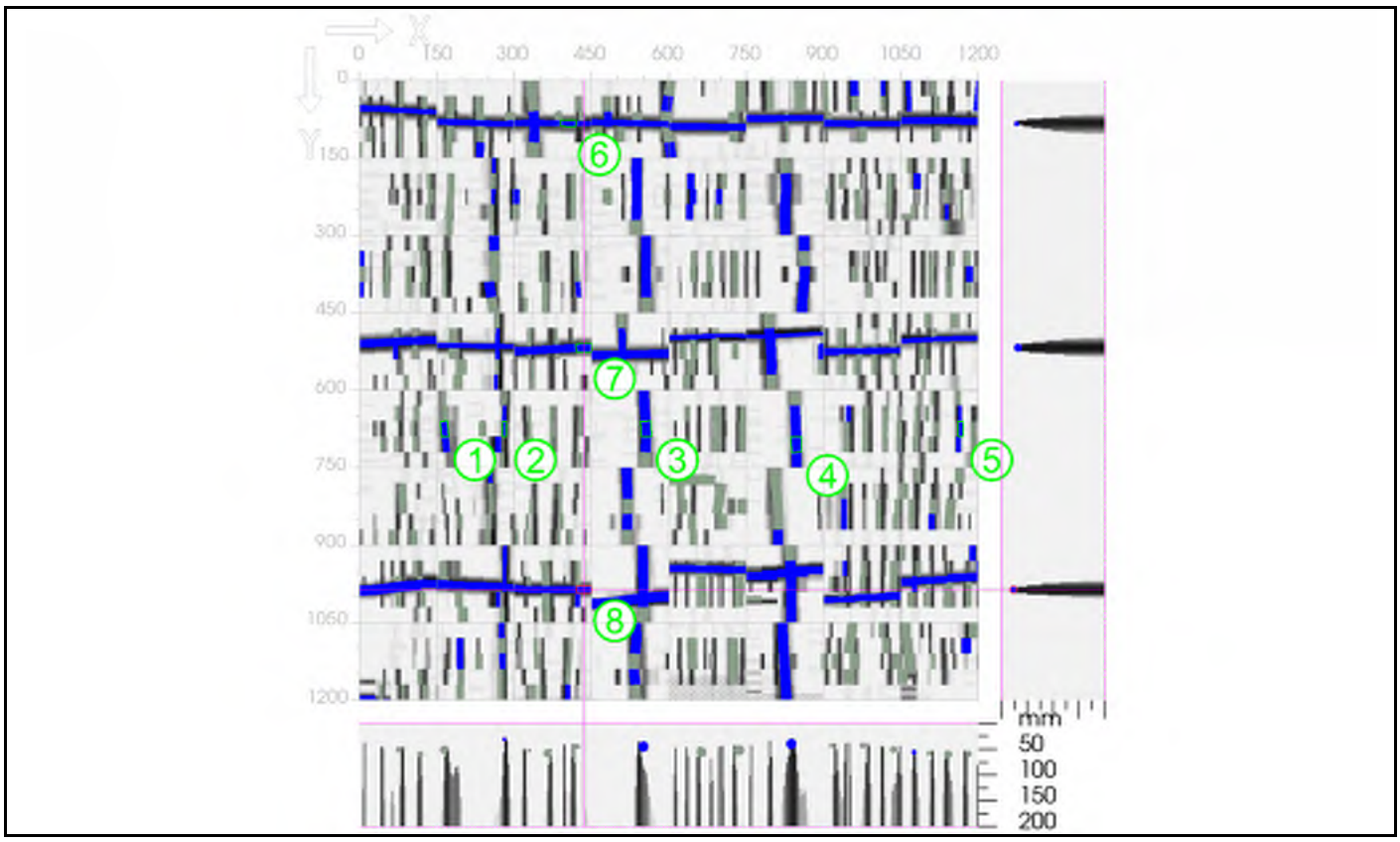
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 19
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	47 mm	285 mm	31 mm	20 mm	Vertical	High
2.	326 mm	195 mm	41 mm	20 mm	Vertical	High
3.	571 mm	945 mm	74 mm	14 mm	Vertical	Low
4.	906 mm	975 mm	83 mm	20 mm	Vertical	Low
5.	1045 mm	105 mm	115 mm	20 mm	Vertical	High
6.	585 mm	54 mm	30 mm	14 mm	Horizontal	High
7.	585 mm	488 mm	37 mm	12 mm	Horizontal	High
8.	585 mm	984 mm	37 mm	14 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	226.fscan
Serial number:	227190008
Date / Time:	2019-10-08 22:16:14
Comment:	-



x: 435 mm	y: 986 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

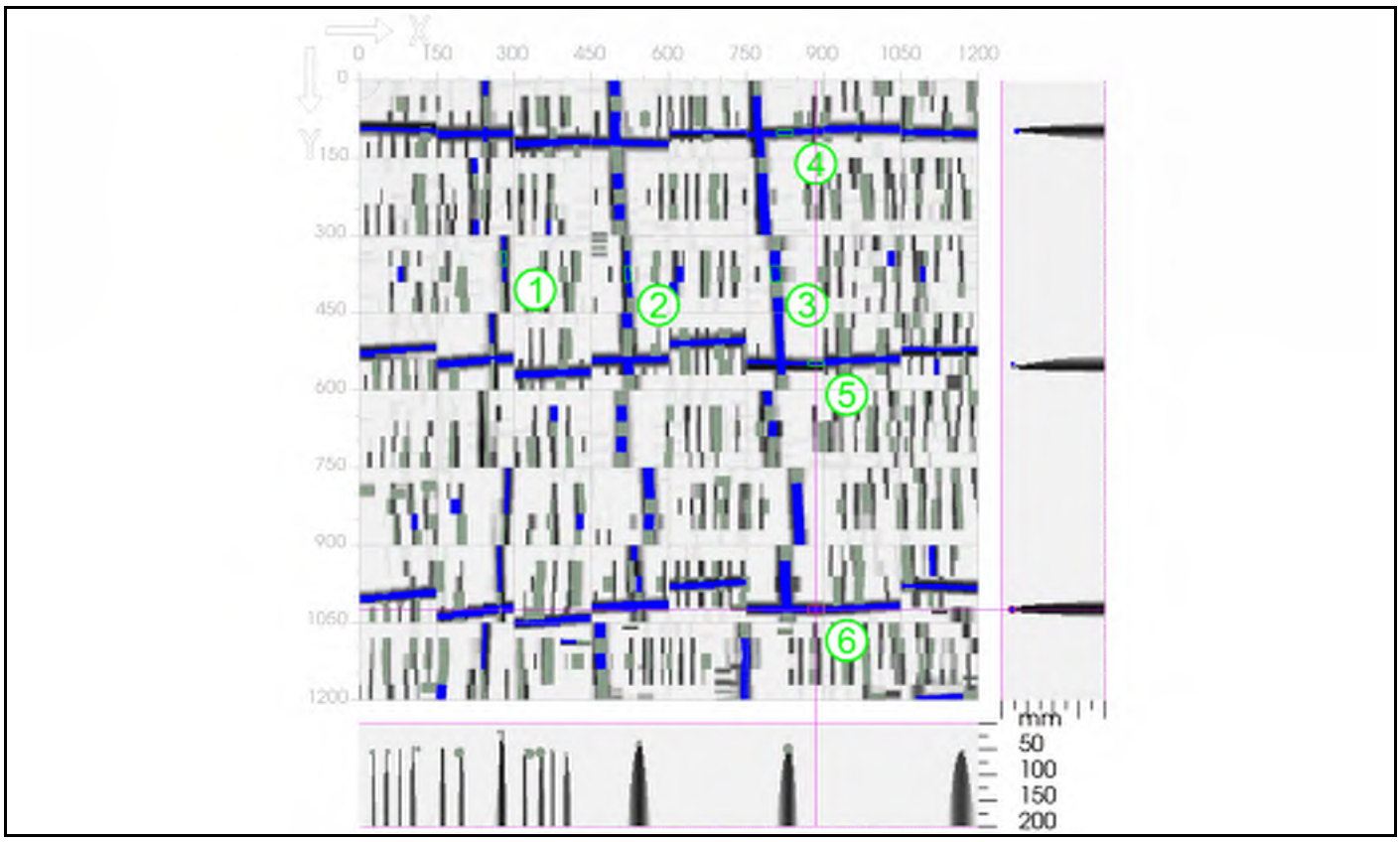
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 -20
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	164 mm	675 mm	47 mm	14 mm	Vertical	High
2.	281 mm	675 mm	23 mm	8 mm	Vertical	High
3.	556 mm	675 mm	35 mm	20 mm	Vertical	High
4.	847 mm	705 mm	32 mm	20 mm	Vertical	High
5.	1166 mm	675 mm	56 mm	10 mm	Vertical	High
6.	405 mm	84 mm	24 mm	12 mm	Horizontal	High
7.	435 mm	518 mm	24 mm	16 mm	Horizontal	High
8.	435 mm	986 mm	16 mm	14 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	228.fscan
Serial number:	227190008
Date / Time:	2019-10-08 22:28:58
Comment:	-



x: 885 mm	y: 1025 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

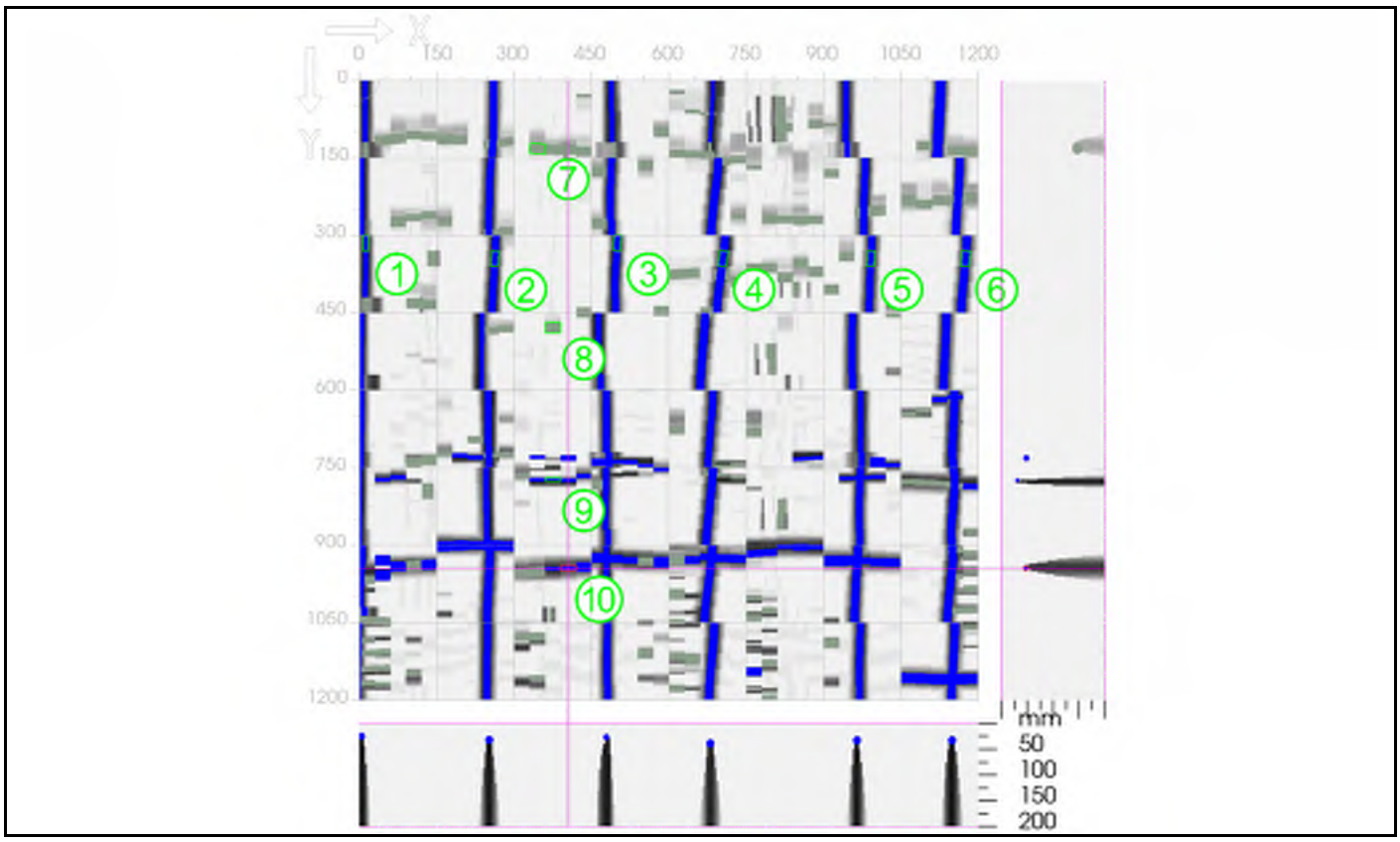
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 22
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	281 mm	345 mm	29 mm	8 mm	Vertical	High
2.	520 mm	375 mm	28 mm	12 mm	Vertical	High
3.	808 mm	375 mm	30 mm	20 mm	Vertical	High
4.	825 mm	101 mm	24 mm	10 mm	Horizontal	High
5.	885 mm	549 mm	18 mm	8 mm	Horizontal	High
6.	885 mm	1025 mm	13 mm	14 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	229.fscan
Serial number:	227190008
Date / Time:	2019-10-08 22:40:34
Comment:	-



x: 405 mm	y: 945 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

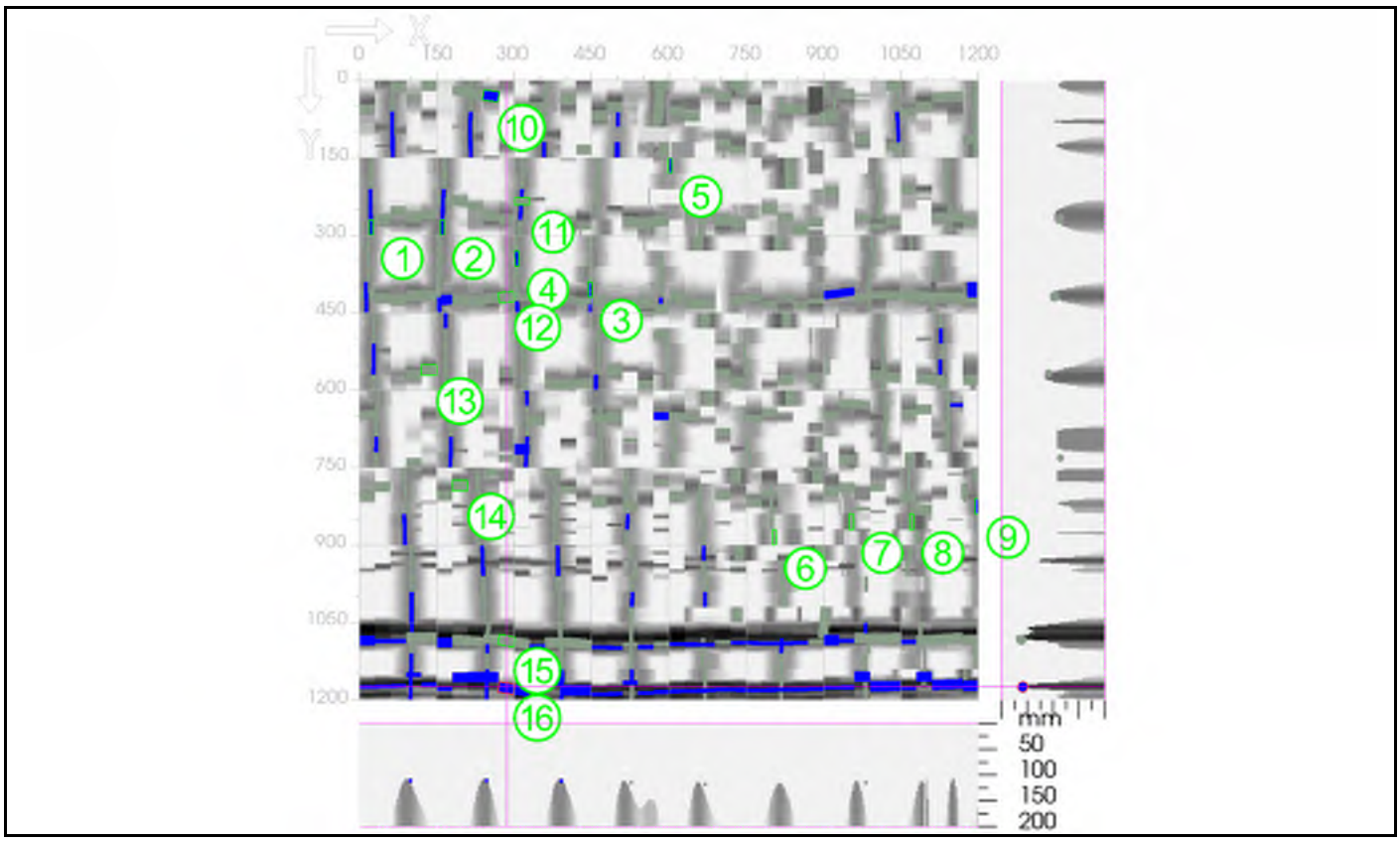
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 2	Object:	2 - 23
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	13 mm	315 mm	15 mm	10 mm	Vertical	High
2.	263 mm	345 mm	24 mm	14 mm	Vertical	High
3.	500 mm	315 mm	22 mm	14 mm	Vertical	High
4.	705 mm	345 mm	32 mm	16 mm	Vertical	High
5.	992 mm	345 mm	25 mm	14 mm	Vertical	High
6.	1175 mm	345 mm	25 mm	16 mm	Vertical	High
7.	345 mm	131 mm	140 mm	20 mm	Horizontal	Low
8.	375 mm	479 mm	168 mm	20 mm	Horizontal	Low
9.	375 mm	773 mm	22 mm	8 mm	Horizontal	High
10.	405 mm	945 mm	42 mm	10 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	230.fscan
Serial number:	227190008
Date / Time:	2019-10-08 23:12:19
Comment:	-



x: 285 mm	y: 1175 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

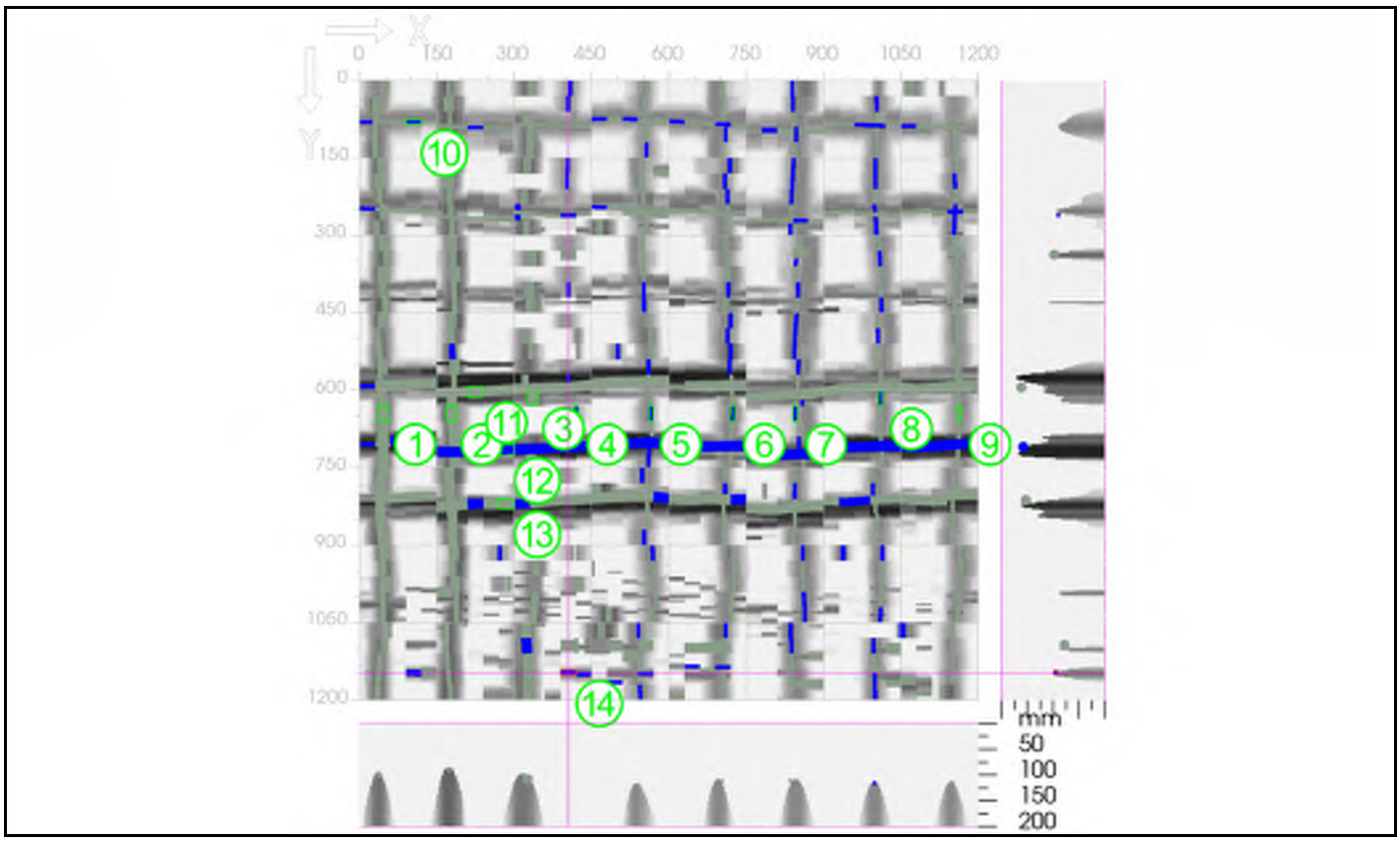
Project name:	CIS Tower	Customer:	Cutins
Location:	Level 7	Object:	7 - 5
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	23 mm	285 mm	111 mm	8 mm	Vertical	High
2.	161 mm	285 mm	96 mm	8 mm	Vertical	High
3.	448 mm	405 mm	114 mm	8 mm	Vertical	High
4.	306 mm	345 mm	111 mm	8 mm	Vertical	High
5.	602 mm	165 mm	121 mm	8 mm	Vertical	High
6.	805 mm	885 mm	118 mm	8 mm	Vertical	Low
7.	954 mm	855 mm	91 mm	8 mm	Vertical	Low
8.	1071 mm	855 mm	82 mm	8 mm	Vertical	Low
9.	1197 mm	825 mm	97 mm	8 mm	Vertical	High
10.	255 mm	32 mm	98 mm	20 mm	Horizontal	High
11.	315 mm	234 mm	110 mm	14 mm	Horizontal	Low
12.	285 mm	419 mm	93 mm	20 mm	Horizontal	Low
13.	135 mm	561 mm	100 mm	20 mm	Horizontal	Low

Hilti PROFIS Detection Report

Scan File:	234.fscan
Serial number:	227190008
Date / Time:	2019-10-08 23:17:27
Comment:	-



x: 405 mm	y: 1147 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

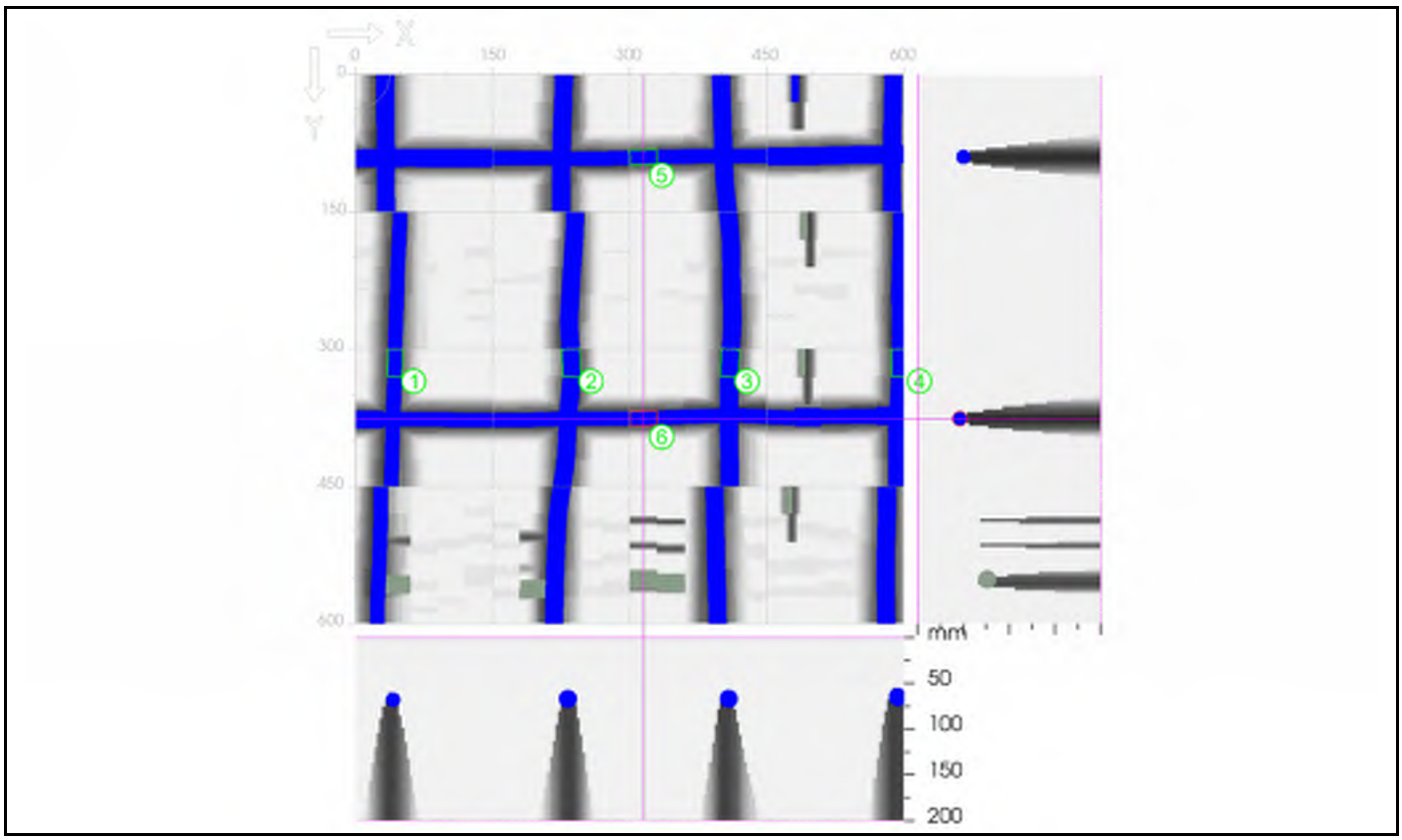
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 16	Object:	16-2
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	48 mm	645 mm	89 mm	20 mm	Vertical	Low
2.	177 mm	645 mm	89 mm	20 mm	Vertical	Low
3.	336 mm	615 mm	81 mm	20 mm	Vertical	Low
4.	421 mm	645 mm	126 mm	8 mm	Vertical	High
5.	563 mm	645 mm	118 mm	8 mm	Vertical	High
6.	725 mm	645 mm	109 mm	8 mm	Vertical	High
7.	845 mm	645 mm	111 mm	8 mm	Vertical	High
8.	1010 mm	615 mm	112 mm	8 mm	Vertical	High
9.	1162 mm	645 mm	115 mm	8 mm	Vertical	Low
10.	105 mm	81 mm	109 mm	8 mm	Horizontal	High
11.	225 mm	603 mm	28 mm	20 mm	Horizontal	Low
12.	285 mm	715 mm	32 mm	20 mm	Horizontal	High
13.	285 mm	819 mm	35 mm	20 mm	Horizontal	Low

Hilti PROFIS Detection Report

Scan File:	232.fscan
Serial number:	227190008
Date / Time:	2019-10-09 19:29:36
Comment:	-



x: 315 mm	y: 376 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

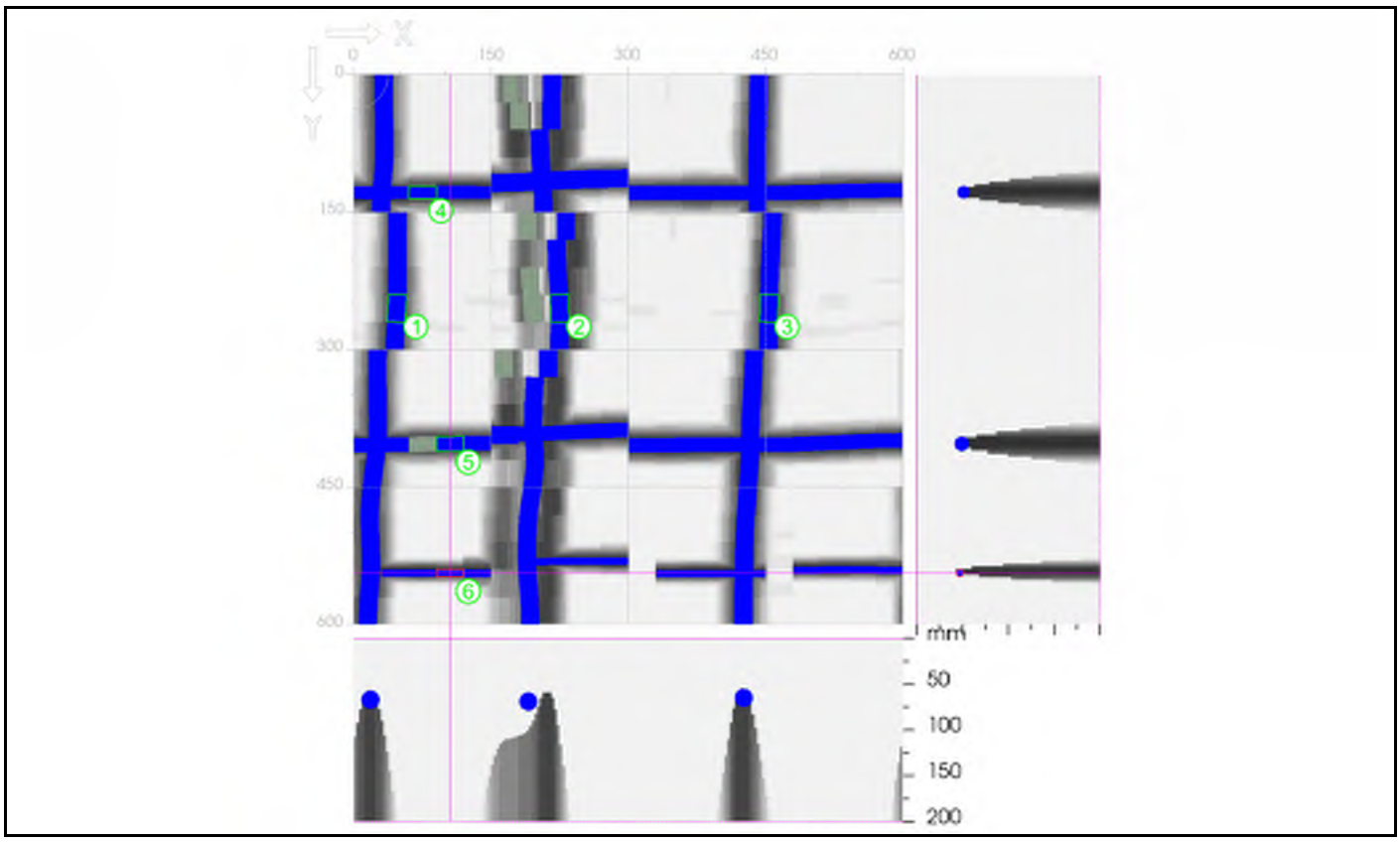
Project name:	CIS Tower	Customer:	Curtins
Location:	Level 25	Object:	25 - 1
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	44 mm	315 mm	61 mm	16 mm	Vertical	High
2.	238 mm	315 mm	57 mm	20 mm	Vertical	High
3.	408 mm	315 mm	55 mm	20 mm	Vertical	High
4.	597 mm	315 mm	54 mm	20 mm	Vertical	High
5.	315 mm	90 mm	42 mm	16 mm	Horizontal	High
6.	315 mm	376 mm	38 mm	16 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	233.fscan
Serial number:	227190008
Date / Time:	2019-10-09 19:35:25
Comment:	-



x: 105 mm	y: 544 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

Project name:	CIS Tower	Customer:	Curtins
Location:	Level 25	Object:	25-2
User:	BD		
Comment:	-		

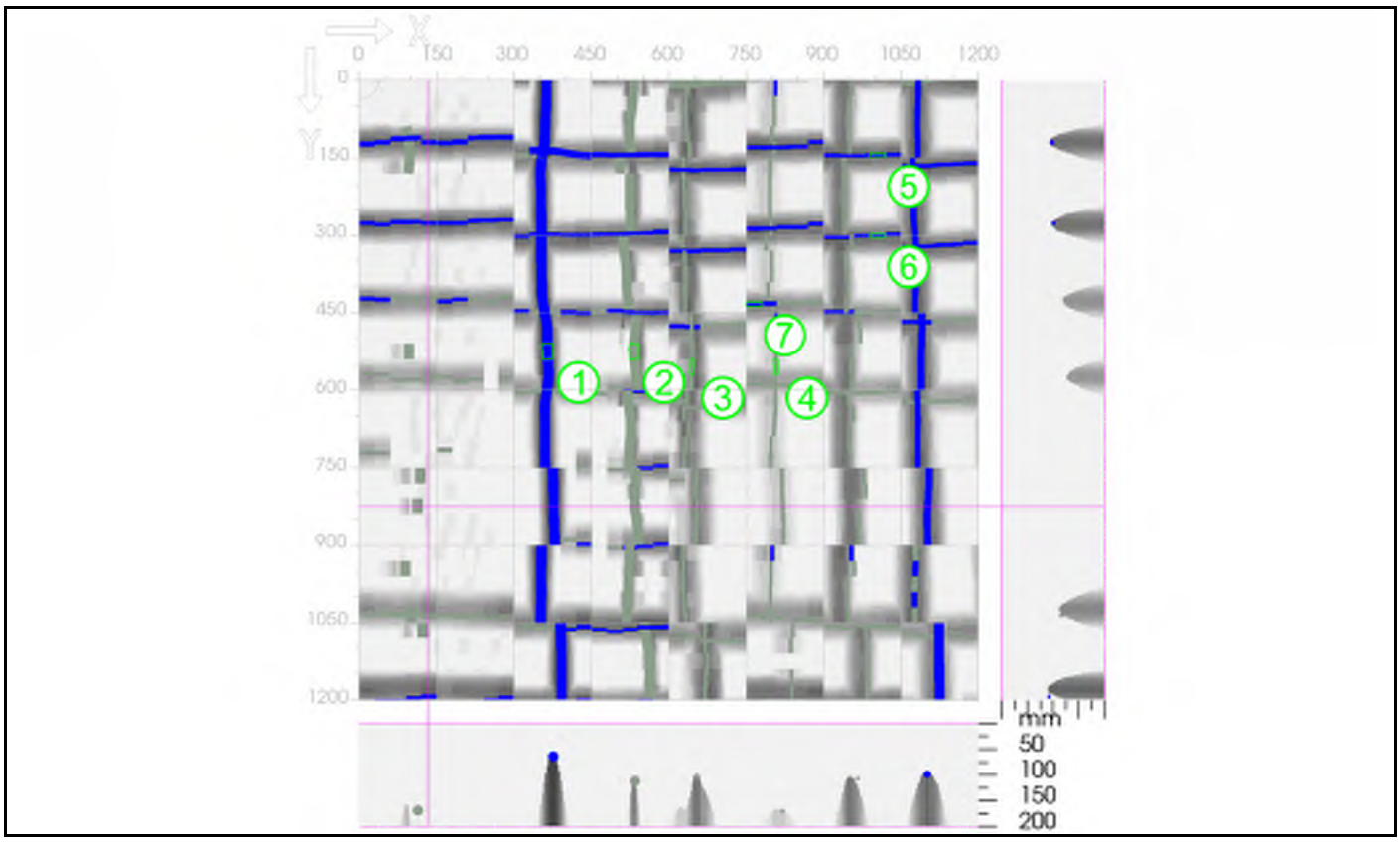
⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	48 mm	255 mm	56 mm	20 mm	Vertical	High
2.	226 mm	255 mm	63 mm	20 mm	Vertical	High
3.	453 mm	255 mm	55 mm	20 mm	Vertical	High
4.	75 mm	129 mm	44 mm	14 mm	Horizontal	High
5.	105 mm	403 mm	41 mm	16 mm	Horizontal	High
6.	105 mm	544 mm	43 mm	8 mm	Horizontal	High

14.	405 mm	1147 mm	100 mm	10 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	235.fscan
Serial number:	227190008
Date / Time:	2019-10-09 19:59:16
Comment:	-



x: 133 mm	y: 826 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

Project name:	CIS Tower	Customer:	Curtins
Location:	Level 16	Object:	16-2
User:	BD		
Comment:	-		

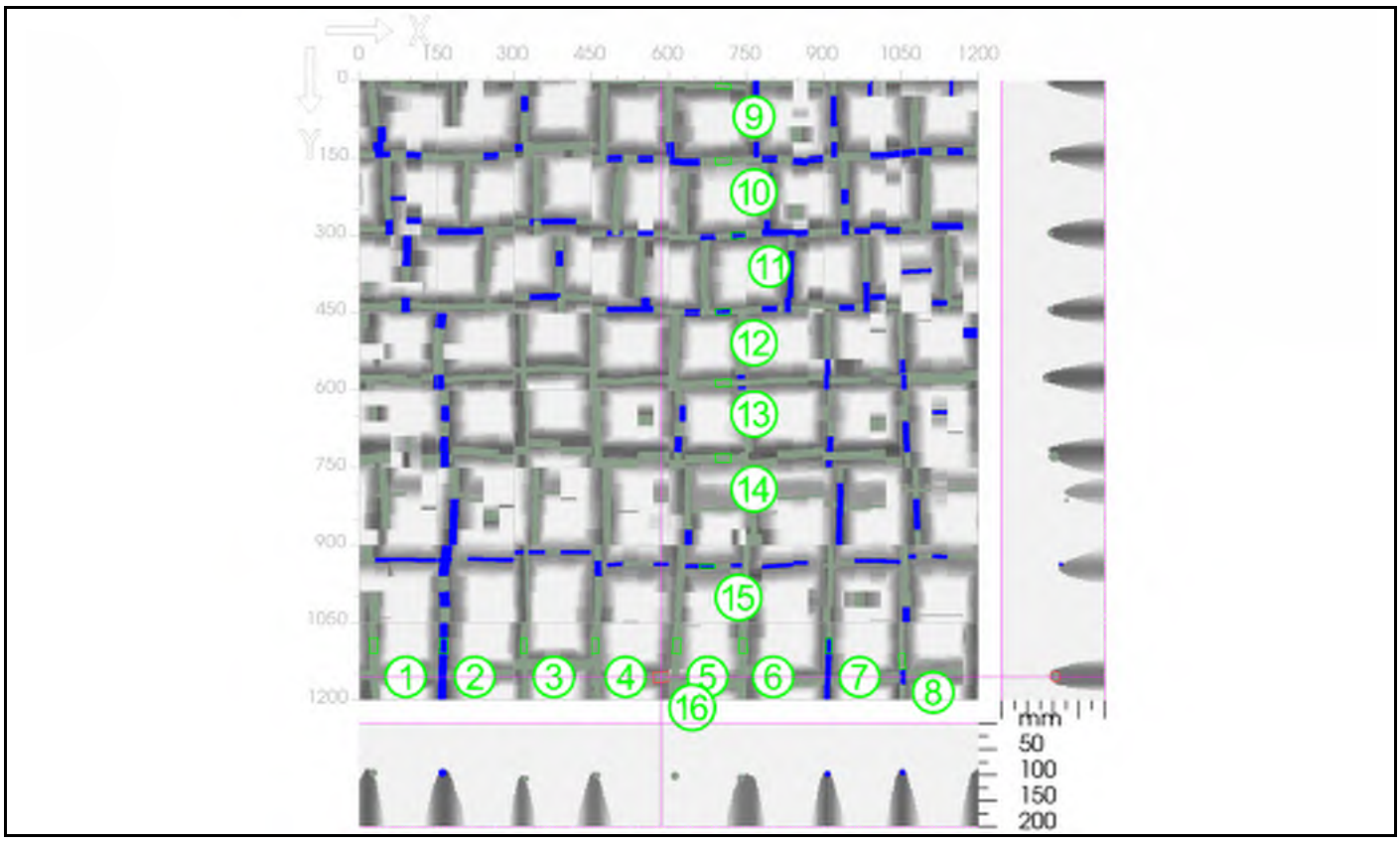
⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	364 mm	525 mm	54 mm	20 mm	Vertical	High
2.	531 mm	525 mm	103 mm	20 mm	Vertical	Low
3.	644 mm	555 mm	92 mm	8 mm	Vertical	Low
4.	808 mm	555 mm	163 mm	8 mm	Vertical	Low
5.	1005 mm	145 mm	96 mm	8 mm	Horizontal	High
6.	1005 mm	301 mm	100 mm	8 mm	Horizontal	High
7.	765 mm	433 mm	105 mm	8 mm	Horizontal	High

14.	195 mm	784 mm	97 mm	20 mm	Horizontal	Low
15.	285 mm	1083 mm	28 mm	20 mm	Horizontal	Low
16.	285 mm	1175 mm	31 mm	20 mm	Horizontal	High

Hilti PROFIS Detection Report

Scan File:	231.fscan
Serial number:	227190008
Date / Time:	2019-10-08 23:20:55
Comment:	-



x: 585 mm	y: 1154 mm	z: 0 mm	Thickness: 200 mm
Overlay: - mm			

Project name:	CIS Tower	Customer:	Cutins
Location:	Level 7	Object:	7 - 9
User:	BD		
Comment:	-		

⌀ Horizontal:	14 mm +/- 6 mm	Type:	Input
⌀ Vertical:	14 mm +/- 6 mm	Type:	Input
Detection mode:	Auto		

Recorded measurements:	x:	y:	Cover:	⌀:	Orientation:	Quality:
1.	30 mm	1095 mm	91 mm	16 mm	Vertical	Low
2.	164 mm	1095 mm	90 mm	16 mm	Vertical	High
3.	317 mm	1095 mm	95 mm	12 mm	Vertical	Low
4.	456 mm	1095 mm	94 mm	14 mm	Vertical	Low
5.	615 mm	1095 mm	95 mm	16 mm	Vertical	Low
6.	742 mm	1095 mm	99 mm	16 mm	Vertical	Low
7.	910 mm	1095 mm	93 mm	12 mm	Vertical	High
8.	1052 mm	1125 mm	91 mm	12 mm	Vertical	Low
9.	705 mm	10 mm	92 mm	10 mm	Horizontal	Low
10.	705 mm	156 mm	99 mm	14 mm	Horizontal	Low
11.	735 mm	301 mm	89 mm	12 mm	Horizontal	High
12.	705 mm	448 mm	91 mm	12 mm	Horizontal	High
13.	705 mm	586 mm	91 mm	14 mm	Horizontal	Low

14.	705 mm	731 mm	87 mm	16 mm	Horizontal	Low
15.	675 mm	941 mm	112 mm	8 mm	Horizontal	High
16.	585 mm	1154 mm	94 mm	20 mm	Horizontal	Low

The Tower, Manchester Structural Investigation

Test Report

Client: Bowmer & Kirkland Ltd

Site Address: The Tower, Miller Street, Manchester

Report Ref: STR454 **Issue Number: 01** **Issue Date:** 13/09/2021

M1 Commerce Park, Markham Lane, Duckmanton, Chesterfield S44 5HS
T: 01246 828318
E: structures@constructiontesting.co.uk
W: www.constructiontesting.co.uk

Contents

1.0 Introduction

2.0 Sampling/Testing Methods & Equipment

3.0 Test Results/Investigation Findings

Approval

Report No: STR454		Issue No: 01
Client Address:	High Edge Court Heage Belper Derbyshire DE56 2BW	Compiled by: [redacted]
		Approved by: [redacted] Scott Grayson - Operations Director
		Email: bd@constructiontesting.co.uk
Issued for and on behalf of Construction Testing Solutions.		

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Results reported herein relate solely to the samples or locations tested and are not necessarily representative of a larger sample population.

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Distribution					
Date:	Name	Company	PDF	Hard copy	Issue No
13/09/2021	Sean Gilmour	Bowmer & Kirkland Ltd	X		01
The latest version of this report supersedes any previous versions issued					

1.0 Introduction

Following written instructions from Sean Gilmour of Bowmer & Kirkland Ltd, Construction Testing Solutions visited the site between June and August 2021 in order to carry out a non-intrusive and intrusive structural investigation to identify as built details of the building.

These surveys were an addition to surveys conducted by Construction Testing Solutions in 2019 which were reported in an earlier report.

- Dust samples were taken from specified locations and sent to CTS's sister laboratory and were tested within their UKAS accredited scope.

- Tensile steel samples were taken from specified locations and sent to a CTS approved UKAS accredited testing laboratory.

Construction Testing Solutions were provided with a set of marked drawings 068327-CUR-00-XX-DR-S-02002 to 02125.The drawings highlighted specific locations to be surveyed and the information required from each location on levels B3 - 25.

Level B2 slab was instructed within this investigation to be diamond drilled in 5 No locations around the level to determine the depth of the slab at this level.

During these investigations, several investigation locations were not accessible due to asbestos being present. These locations will be surveyed once the Asbestos has been removed from the building and this report updated to include the final surveys.

2.0 Sampling/Testing Methods

Test covered under our current UKAS scope of accreditation.

Depth of Concrete Cover Over Embedded Steel –In accordance with BS 1881-204:1988
Sampling of Concrete by Dust Drilling – In accordance with BRE IP 21/86
Depth of Carbonation – In accordance with BRE Digest 405
Carbonation testing has been carried out insitu by breaking off a fresh concrete surface and sprayed with 1% Phenolphthalein Solution.
Drilling of Concrete Cores – In accordance with BS EN 12504-1:2009

Tests outside of our UKAS accreditation.

Ferroscan Imaging – In-House Method TP87
Determination of Rebound Number – In House Method TP 68 based on BS EN12504-2: 2012

2.1 Equipment

Before use checks are carried out on cover meters, half cells and other electronic test equipment in accordance with the relevant documented in-house procedure.

Where reinforcement size is known, cover meter measurements are accurate to at least ±2mm. If the size is determined by other means, then BS1881-204 estimates the accuracy to be "±15% or ±5mm, whichever is the greater, for reinforcement at covers of less than 100mm".

Equipment used:

- Cover meter – Elcometer 331
- Ferroscan – Hilti PS300

2.2 Environment

The following environmental conditions and concrete/reinforcement properties are known to influence depth of cover results:

- Presence of large metallic structures or electrical equipment within close proximity to the test area.
- Closely spaced or very large diameter reinforcing steel.
- Non-standard bar shapes and sizes.
- Metallic debris within the concrete such as tie wire, nails, etc.

Results from the Ferroscan (when used in Image Scan mode) should be confirmed where possible by direct measurements of the depth of cover and bar size.

Results from the Ferroscan with a file name prefix FS are not covered under our current scope of accreditation.

3.0 Test Results/Investigation Findings

Test results can be found on the following pages.

Appendix A – Summary of results

3.1 Basement level 3
3.2 Basement level 2 including slab thickness
3.3 Basement level 1 lower
3.4 Basement level 1
3.5 Ground level
3.6 Mezzanine level
3.7 Level 1
3.8 Level 2
3.9 Level 3
3.10 Level 4
3.11 Level 5
3.12 Level 6
3.13 Level 7
3.14 Level 8
3.15 Level 9
3.16 Level 15
3.17 Level 25

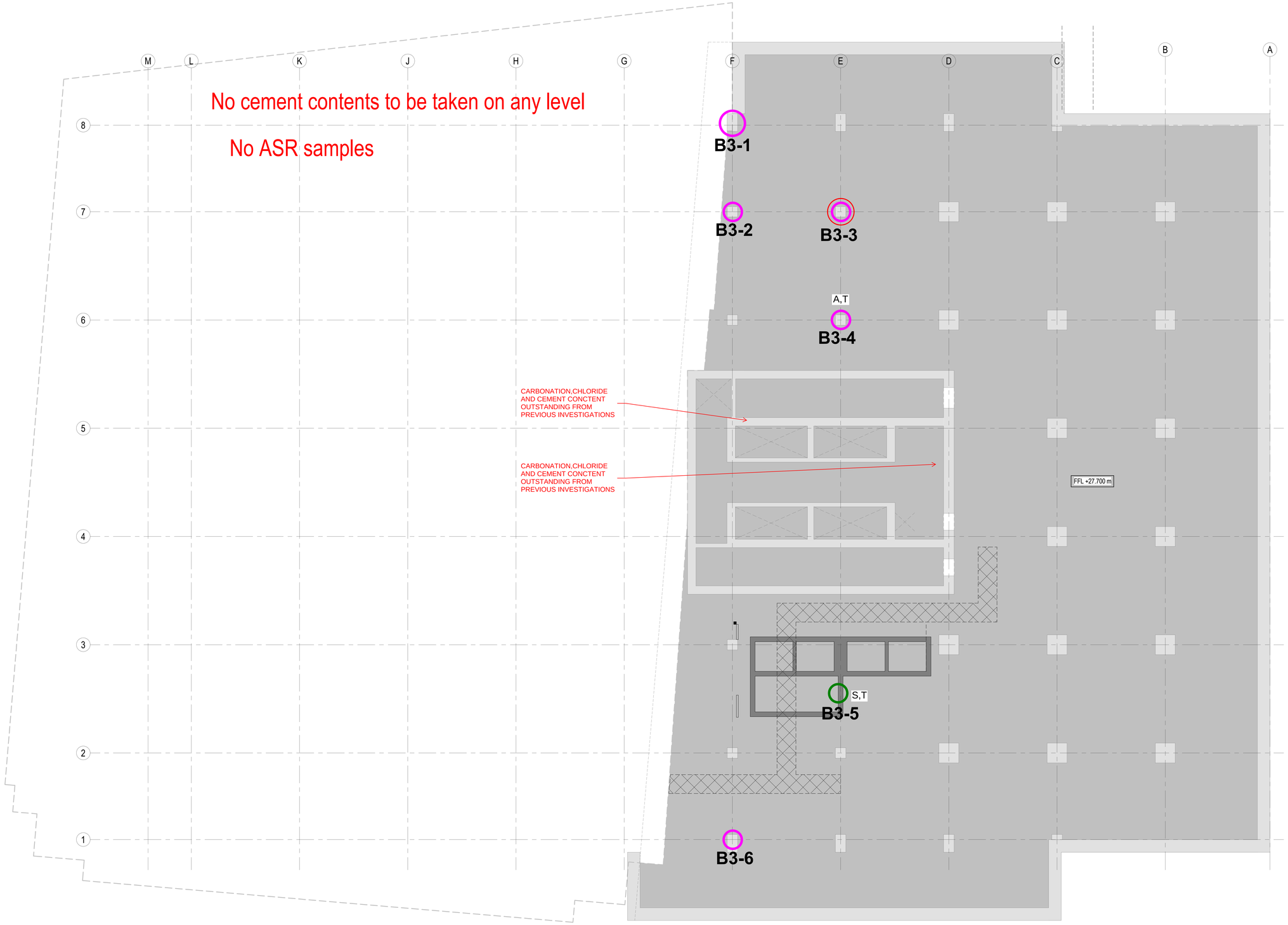
Appendix B – Laboratory test results

4.1 Concrete chemistry
4.2 Compressive strength test certificates
4.3 Tensile strength test certificates

Appendix C – Individual Ferroscans

Appendix A – Summary of results

3.1 Basement level 3



GENERAL NOTES:

CONCRETE COLUMN SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D
Test type at locations noted on plan: T,A,S, CC

CONCRETE WALL SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types Test types to all locations:
C,F,CH,D,CC
Test type at locations noted on plan: T,A,S

CONCRETE BEAM SURVEYS: HIGHLIGHTED BEAMS ARE BEAMS UNDER

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: T,S,A

CONCRETE SLAB SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed where noted

Confirm slab thickness and build up and determine condition.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A, T

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm reinforcement, cover and concrete grade.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D,S,CC,R
Test type at locations noted on plan:

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm column bearing details and geometry. Provide photographs of bearings.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A,T

STEEL COLUMN SURVEYS:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of concrete encasement, grade, thickness, presence of reinforcement. Confirm reinforcement grade and size.

Test types Test types to all locations: D,F,CH, Steel Verification
Test type at locations noted on plan: T,C

STEEL BEAMS & FINISHES:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of of the finishes, material, thickness etc.

Test types to all locations: D,F,CH,C
Test type at locations noted on plan: T,C

CONCRETE SLAB SURVEYS:

Concrete slabs formed in ribs and flat topping.

Identify reinforcement type so grade can be assessed and determine condition of concrete.

Measure all element dimensions, thickness, cover etc.

Test types to all locations: C,F,CH,D,HAC.
Test type at locations noted on plan: CC,S,A, T

Denotes cover meter survey required to precast beams

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS

Rev:	Description:	Date:	By:	Chkd:
P01	UPDATED TO REFLECT STAGE 2 SCHEME	28.07.20	PM	MA

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Birmingham • Bristol • Cambridge • Cardiff • Douglas • Dublin • Edinburgh • Glasgow • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

Status:
STAGE 2

Project:
CIS TOWER REFURBISHMENT

Drg Title:
Basement Level B3
Survey Scope

Size:	Date:	Drawn By:	Designed By:	Checked By:
A0	27.07.2020	P.M	M.A	M.A

Scale: 1 : 100

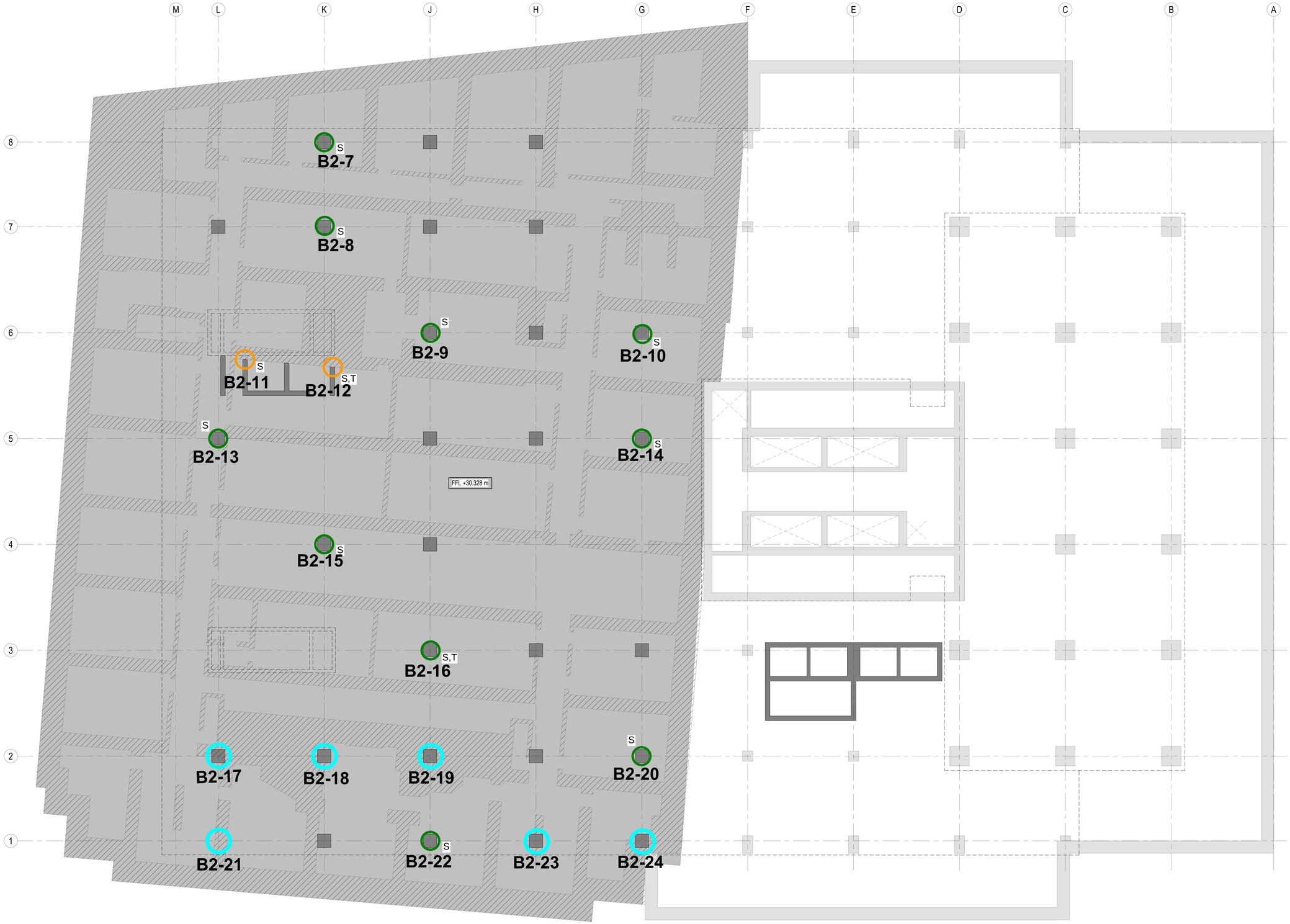
Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
068327 -	CUR -	00 -	B3 -	DR -	S -	02002 -	P01

Model Name:068327-CUR-00-ZZ-M3-S18-00001_CENTRAL

Construction Testing Solutions

		Client: Bowmer & Kirkland					**Report Ref:**		STR454				
		Site: CIS Tower - Manchester					**Report Date:**		10/09/201				
		Location: Level B3					**Reported By:**		S.Grayson				
		Summary Of Results							**Chloride Content % by mass of**		**Depth of Carbonation (mm)**	**Rebound Number**	**Compressive Strength (N/mm2)**
Location	**Vertical Bar Type**	**Average Vertical Bar Spacing (mm)**	**Cover To Vertical Reinforcement (mm)**	**Horizontal Bar Type**	**Average Horizontal Bar Spacing (mm)**	**Cover To Horizontal Reinforcement (mm)**	**Ferroscan Ref:**	**Column Type:**	**Sample**	**Cement**			
Level B3 Columns													
B3-1	28mmØ Smooth	500	60	10mmØ Smooth	300	50	1	Concrete	0.010	0.07	10	42	24.1
B3-2	38mmØ Smooth	500	60	10mmØ Smooth	300	50	2	Concrete	0.009	0.08	<5	52	24.6
B3-3	38mmØ Smooth	500	60	10mmØ Smooth	300	50	3	Concrete	0.008	0.07	<5	50	37.9
B3-4	38mmØ Smooth	500	70	10mmØ Smooth	300	55	4	Concrete	0.006	0.06	<5	46	29.5
B3-6	38mmØ Smooth	500	40	10mmØ Smooth	300	20	6	Concrete	0.007	0.05	<5	50	37.4
Level B3 Slab													
Location	**Longitudinal Bar Type**	**Average Longitudinal Bar Spacing (mm)**	**Cover To Longitudinal Reinforcement (mm)**	**Transverse Bar Type**	**Average Transverse Bar Spacing (mm)**	**Cover To Transverse Reinforcement (mm)**	**Ferroscan Ref:**	**Slab Thickness (mm)**	**Chloride Content % by mass of**		**Depth of Carbonation (mm)**	**Rebound Number**	**Compressive Strength (N/mm2)**
									Sample	**Cement**			
B3-5	28mmØ Smooth	215	90	28mmØ Smooth	280	50	5	>1.76m	0.020	0.14	5	52	43.8
Comments:		Unable to drill any deeper in the slab due to bottom reinforcement within the slab positioned at an angle											
Column & Beam Dimensions - Reinforcement Layout													
All beam and column drawings provided on separate sheets													

3.2 Basement level 2 including slab thickness



GENERAL NOTES:

CONCRETE COLUMN SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D
Test type at locations noted on plan: T,A,S, CC

CONCRETE WALL SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types Test types to all locations:
C,F,CH,D,CC
Test type at locations noted on plan: T,A,S

CONCRETE BEAM SURVEYS:
HIGHLIGHTED BEAMS ARE BEAMS UNDER

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: T,S,A

CONCRETE SLAB SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed where noted

Confirm slab thickness and build up and determine condition.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A, T

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm reinforcement, cover and concrete grade.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D,S,CC,R
Test type at locations noted on plan:

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm column bearing details and geometry. Provide photographs of bearings.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A,T

STEEL COLUMN SURVEYS:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of concrete encasement, grade, thickness, presence of reinforcement. Confirm reinforcement grade and size.

Test types Test types to all locations: D,F,CH, Steel Verification
Test type at locations noted on plan: T,C

STEEL BEAMS & FINISHES:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of of the finishes, material, thickness etc.

Test types to all locations: D,F,CH,C
Test type at locations noted on plan: T,C

CONCRETE SLAB SURVEYS:

Concrete slabs formed in ribs and flat topping.

Identify reinforcement type so grade can be assessed and determine condition of concrete.

Measure all element dimensions, thickness, cover etc.

Test types to all locations: C,F,CH,D,HAC
Test type at locations noted on plan: CC,S,A, T

Denotes cover meter survey required to precast beams

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS

Rev:	Description:	Date:	By:	Chkd:
P01	UPDATED TO REFLECT STAGE 2 SCHEME	28.07.20	PM	MA

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Status:
STAGE 2

Project:
CIS TOWER REFURBISHMENT

Drg Title:
Basement Level B2
Survey Scope

Size:	Date:	Drawn By:	Designed By:	Checked By:
A0	27.07.2020	P.M	M.A	M.A

Scale: 1 : 100

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
068327 -	CUR -	00 -	B2 -	DR -	S -	02003 -	P01

Model Name:068327-CUR-00-ZZ-M3-S18-00001_CENTRAL

Construction Testing Solutions	Client: Bowmer & Kirkland	Report Ref:	STR454
	Site: CIS Tower - Manchester	Report Date:	10/09/2021
	Location: Level B2	Reported By:	S.Grayson

Summary Of Results

Location	Vertical Bar Type	Average Vertical Bar Spacing (mm)	Cover To Vertical Reinforcement (mm)	Horizontal Bar Type	Average Horizontal Bar Spacing (mm)	Cover To Horizontal Reinforcement (mm)	Ferroscan Ref:	Column Type:	Chloride Content % by mass of		Depth of Carbonation (mm)	Rebound Number	Compressive Strength (N/mm2)
									Sample	Cement			
Level B2 Columns													
B2-17	In B1 Lower Crawl Space - Surveys to be completed within return visit												
B2-18	In B1 Lower Crawl Space - Surveys to be completed within return visit												
B2-19	In B1 Lower Crawl Space - Surveys to be completed within return visit												
B2-21	In B1 Lower Crawl Space - Surveys to be completed within return visit												
B2-23	In B1 Lower Crawl Space - Surveys to be completed within return visit												
B2-24	In B1 Lower Crawl Space - Surveys to be completed within return visit												
Level B2 Slab													
Location	**Longitudinal Bar Type**	**Average Longitudinal Bar Spacing (mm)**	**Cover To Longitudinal Reinforcement (mm)**	**Transverse Bar Type**	**Average Transverse Bar Spacing (mm)**	**Cover To Transverse Reinforcement (mm)**	**Ferroscan Ref:**	**Slab Thickness (mm)**	**Chloride Content % by mass of**		**Depth of Carbonation (mm)**	**Rebound Number**	**Compressive Strength (N/mm2)**
									Sample	Cement			
B2-7	32mmØ Smooth	250	90	25mmØ Smooth	300	115	7	-	0.139	0.99	<5	-	54.9
B2-8	28mmØ Smooth	125	65	25mmØ Smooth	300	85	8	-	0.043	0.31	5	-	54.2
B2-9	28mmØ Smooth	250	100	25mmØ Smooth	-	120	9	-	0.051	0.36	5	-	36.6
B-10	28mmØ Smooth	225	60	25mmØ Smooth	-	90	10	-	0.027	0.19	5	-	39.8
B2-13	28mmØ Smooth	-	170	25mmØ Smooth	-	185	13	-	0.054	0.38	5	-	41.4
B2-14	28mmØ Smooth	250	25	25mmØ Smooth	-	45	14	-	0.032	0.23	5	-	27.8
B2-15	28mmØ Smooth	250	95	25mmØ Smooth	200	120	15	-	0.044	0.32	5	-	51.8
B2-16	28mmØ Smooth	-	90	25mmØ Smooth	250	125	16	-	0.042	0.30	5	-	80.5
B2-20	28mmØ Smooth	-	70	25mmØ Smooth	250	110	20	-	0.105	0.75	5	-	60.1
B2-22	32mmØ Smooth	-	40	25mmØ Smooth	-	60	22	-	0.060	0.43	5	-	54.4
Level B2 Walls													
B2-11	Wood Cladding on wall - Cannot remove by order of client												
B2-12	Wood Cladding on wall - Cannot remove by order of client												

Comments:

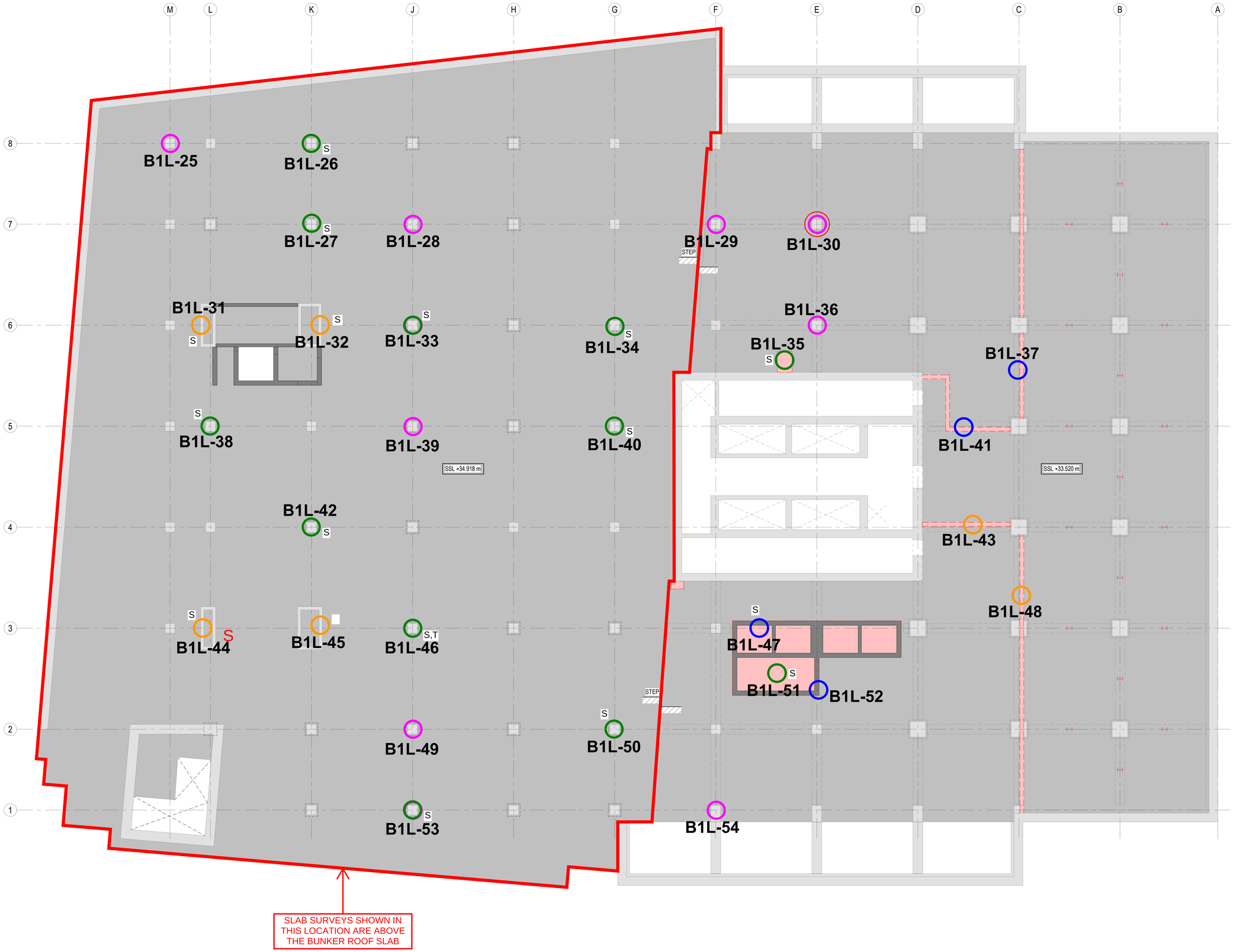
All beam and column drawings provided on separate sheets

Level B2 Floor Slab Thickness Survey

Cores drilled through slab, slab thickness results;

Core Location	Slab Thickness
Core 1	1.32m
Core 2	1.1m
Core 3	0.955m
Core 4	1.37m
Core 5	1.05m

3.3 Basement level 1 lower



GENERAL NOTES:

CONCRETE COLUMN SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D
Test type at locations noted on plan: T,A,S, CC

CONCRETE WALL SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types Test types to all locations:
C,F,CH,D,CC
Test type at locations noted on plan: T,A,S

CONCRETE BEAM SURVEYS: HIGHLIGHTED BEAMS ARE BEAMS UNDER

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: T,S,A

CONCRETE SLAB SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed where noted

Confirm slab thickness and build up and determine condition.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A, T

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm reinforcement, cover and concrete grade.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D,S,CC,R
Test type at locations noted on plan:

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm column bearing details and geometry. Provide photographs of bearings.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A,T

STEEL COLUMN SURVEYS:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of concrete encasement, grade, thickness, presence of reinforcement. Confirm reinforcement grade and size.

Test types Test types to all locations: D,F,CH, Steel Verification
Test type at locations noted on plan: T,C

STEEL BEAMS & FINISHES:

Confirm sufficient dimensions of the steel to determine section size and connection details.

Confirm details of of the finishes, material, thickness etc.

Test types to all locations: D,F,CH,C
Test type at locations noted on plan: T,C

CONCRETE SLAB SURVEYS:

Concrete slabs formed in ribs and flat topping.

Identify reinforcement type so grade can be assessed and determine condition of concrete.

Measure all element dimensions, thickness, cover etc.

Test types to all locations: C,F,CH,D,HAC
Test type at locations noted on plan: CC,S,A, T

Denotes cover meter survey required to precast beams

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS

Rev:	Description:	Date:	By:	Chkd:
P01	UPDATED TO REFLECT STAGE 2 SCHEME	28.07.20	PM	MA

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Birmingham • Bristol • Cambridge • Cardiff • Douglas • Dublin • Edinburgh • Glasgow • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

Status: STAGE 2

Project: CIS TOWER REFURBISHMENT

Drg Title: Lower Basement Level B1 Survey Scope

Size:	Date:	Drawn By:	Designed By:	Checked By:
A0	27.07.2020	P.M	M.A	M.A

Scale: 1 : 100

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
068327 -	CUR -	00 -	B1 -	DR -	S -	02004 -	P01

Model Name:068327-CUR-00-ZZ-M3-S18-00001_CENTRAL

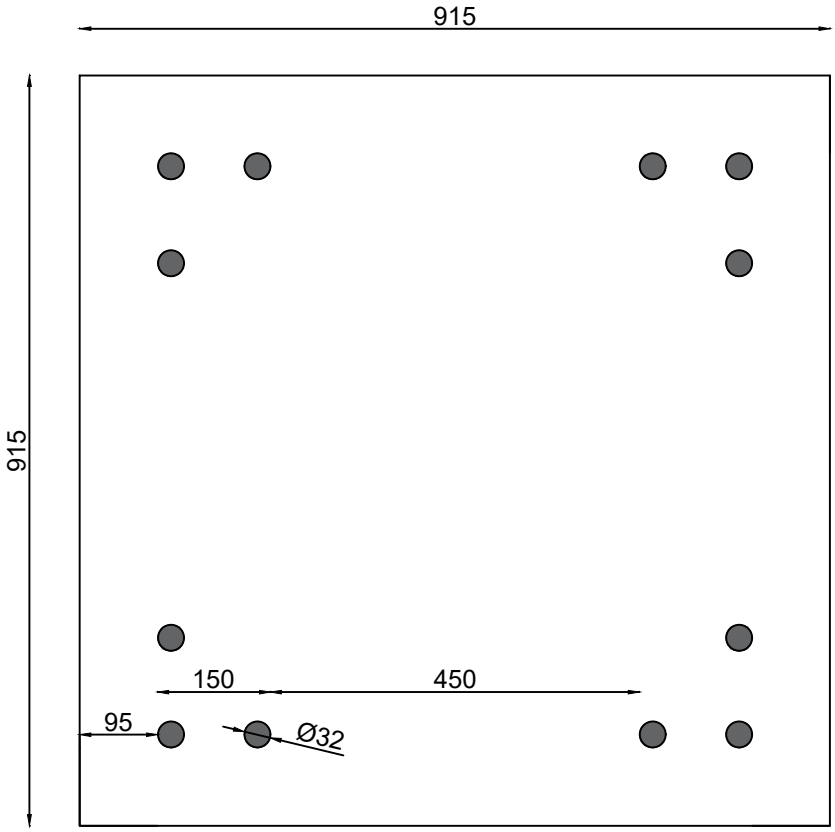
Construction Testing Solutions

		Client: Bowmer & Kirkland					**Report Ref:**		STR454				
		Site: CIS Tower - Manchester					**Report Date:**		10/09/2021				
		Location: Level B1 Lower					**Reported By:**		S. Grayson				
		Summary Of Results							**Chloride Content % by mass of**		**Depth of Carbonation (mm)**	**Rebound Number**	**Compressive Strength (N/mm2)**
Location	**Vertical Bar Type**	**Average Vertical Bar Spacing (mm)**	**Cover To Vertical Reinforcement (mm)**	**Horizontal Bar Type**	**Average Horizontal Bar Spacing (mm)**	**Cover To Horizontal Reinforcement (mm)**	**Ferroscan Ref:**	**Column Type:**	**Sample**	**Cement**			
Level B1 Columns													
B1L - 25	Location Located in Crawl Space - Surveys to be completed within return visit												
B1L - 28	Location Located in Crawl Space - Surveys to be completed within return visit												
B1L - 29	32mmØ Smooth	150 / 450	95	12mmØ Smooth	300	80	29	Concrete	0.007	0.05	<5	48	21.9
B1L - 30	32mmØ Smooth	150 / 470	80	12mmØ Smooth	300	38	30	Concrete	-	-	5	48	18.0
B1L - 36	32mmØ Smooth	150 / 450	120	12mmØ Smooth	300	80	36	Concrete	0.010	0.07	<5	52	20.0
B1L - 39	Location Located in Crawl Space - Surveys to be completed within return visit												
B1L - 49	Location Located in Crawl Space - Surveys to be completed within return visit												
B1L - 54	22mmØ Smooth	300	60	10mmØ Smooth	300	45	54	Concrete	0.006	0.04	5	44	14.9
Level B1 Core Walls													
B1L - 31	Location Located in Crawl Space - Surveys to be completed within return visit												
B1L - 32	Location Located in Crawl Space - Surveys to be completed within return visit												
B1L - 43	16mmØ Smooth	300	45	12mmØ Smooth	220	60	43		0.008	0.06	<5	-	-
B1L - 44	Location Located in Crawl Space - Surveys to be completed within return visit												
B1L - 45	Location Located in Crawl Space - Surveys to be completed within return visit												
B1L - 48	16mmØ Smooth	300	50	12mmØ Smooth	220	65	48		0.007	0.05	<5	-	-
Level B1 Slab													
Location	**Longitudinal Bar Type**	**Average Longitudinal Bar Spacing (mm)**	**Cover To Longitudinal Reinforcement (mm)**	**Transverse Bar Type**	**Average Transverse Bar Spacing (mm)**	**Cover To Transverse Reinforcement (mm)**	**Ferroscan Ref:**	**Slab Thickness (mm)**	**Chloride Content % by mass of**		**Depth of Carbonation (mm)**	**Rebound Number**	**Compressive Strength (N/mm2)**
									Sample	**Cement**			
B1L - 26	Location Located in Crawl Space - Surveys to be completed within return visit												
B1L - 27	Location Located in Crawl Space - Surveys to be completed within return visit												
B1L - 33	Location Located in Crawl Space - Surveys to be completed within return visit												
B1L - 34	Location Located in Crawl Space - Surveys to be completed within return visit												
B1L - 35	16mmØ Ribbed	250	40	12mmØ Smooth	350	38	35	470	0.014	0.10	5	48	19.1
B1L - 38	Location Located in Crawl Space - Surveys to be completed within return visit												
B1L - 40	Location Located in Crawl Space - Surveys to be completed within return visit												
B1L - 42	Location Located in Crawl Space - Surveys to be completed within return visit												
B1L - 46	Location Located in Crawl Space - Surveys to be completed within return visit												
B1L - 50	Location Located in Crawl Space - Surveys to be completed within return visit												
B1L - 51	16mmØ Ribbed	300	60	16mmØ Smooth	250	74	51	470	0.041	0.30	<5	48	17.4
B1L - 53	Works to be completed once Soft Strip completed												
Level B1L Beams													
B1L - 37	10mmØ Smooth	350	80	28mmØ Smooth	200	100	37	Concrete	0.006	0.04	<5	-	-
B1L - 41	10mmØ Smooth	350	70	28mmØ Smooth	200	90	41	Concrete	0.006	0.04	<5	-	-
B1L - 47	10mmØ Smooth	400	40	28mmØ Smooth	200	60	47	Concrete	0.008	0.06	<5	52	38.6
B1L - 52	10mmØ Smooth	300	80	28mmØ Smooth	150	100	52	Concrete	0.003	0.02	<5	-	-
Comments:													
All beam and column drawings provided on separate sheets													

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level B1L
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 23/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Lower Column Details

Location 29

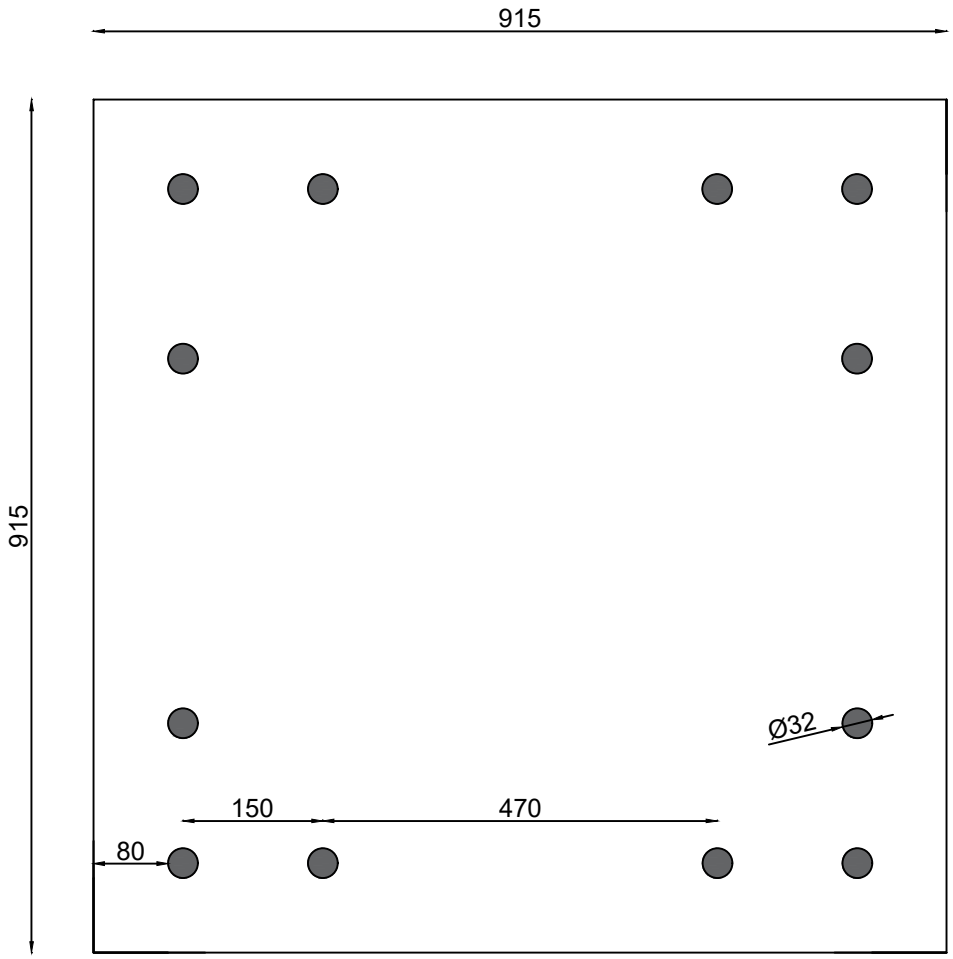


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1L
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	23/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Lower Column Details

Location 30

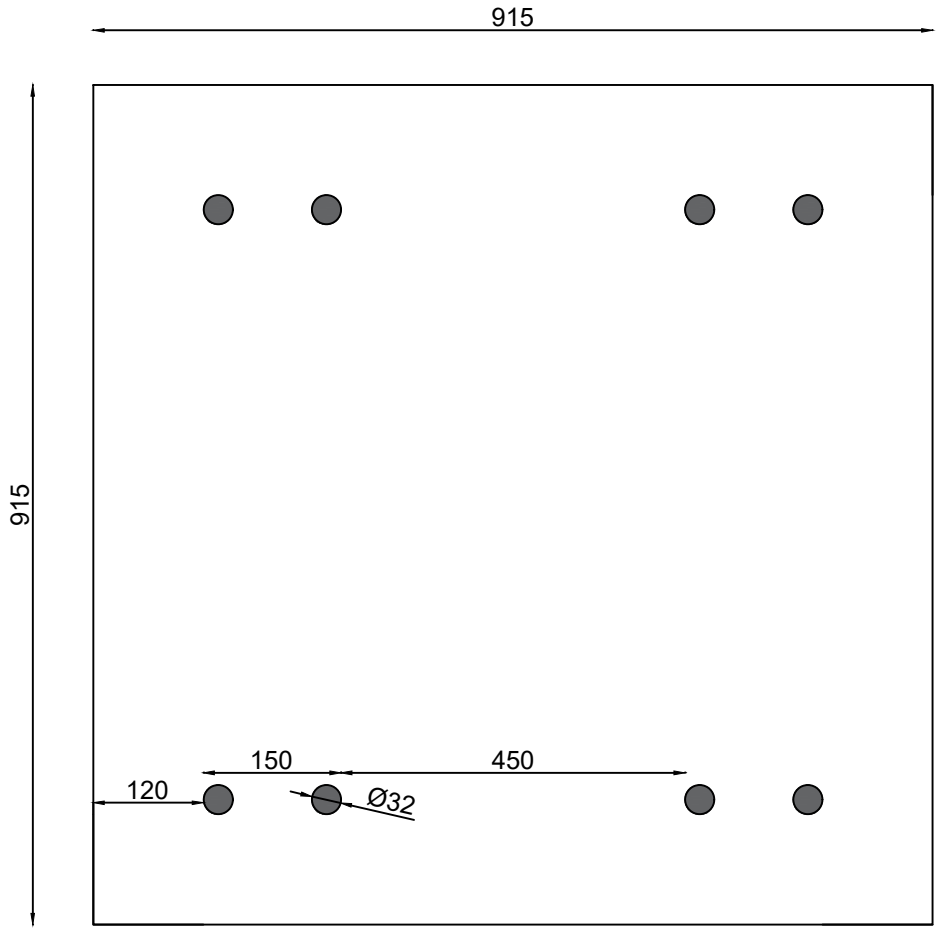


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level B1L
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 23/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

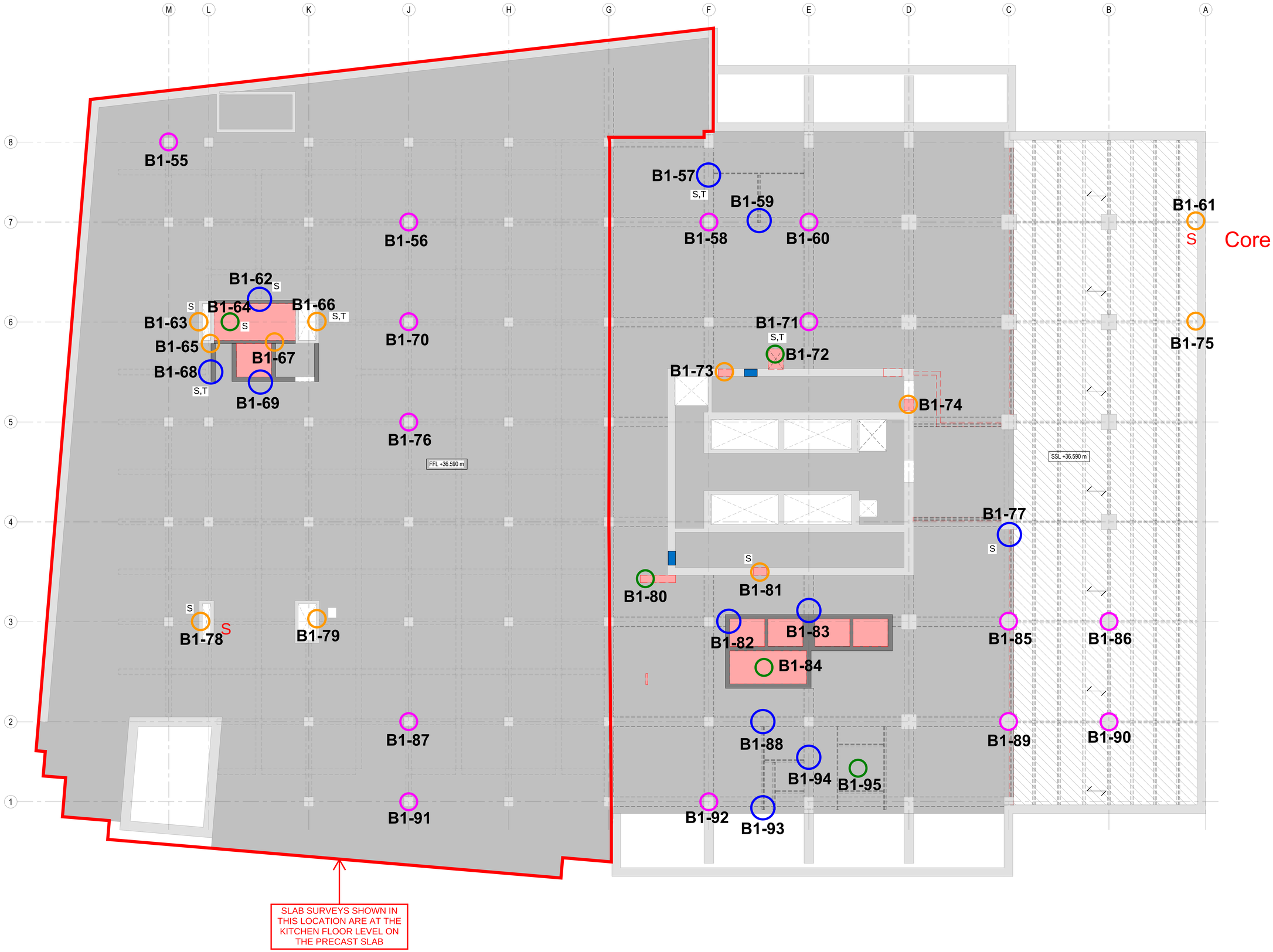
Level B1 Lower Column Details

Location 36



Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

3.4 Basement level 1



GENERAL NOTES:

CONCRETE COLUMN SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D
Test type at locations noted on plan: T,A,S, CC

CONCRETE WALL SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types Test types to all locations:
C,F,CH,D,CC
Test type at locations noted on plan: T,A,S

CONCRETE BEAM SURVEYS: HIGHLIGHTED BEAMS ARE BEAMS UNDER

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: T,S,A

CONCRETE SLAB SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed where noted

Confirm slab thickness and build up and determine condition.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A, T

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm reinforcement, cover and concrete grade.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D,S,CC,R
Test type at locations noted on plan:

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm column bearing details and geometry. Provide photographs of bearings.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A,T

STEEL COLUMN SURVEYS:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of concrete encasement, grade, thickness, presence of reinforcement. Confirm reinforcement grade and size.

Test types Test types to all locations: D,F,CH, Steel Verification
Test type at locations noted on plan: T,C

STEEL BEAMS & FINISHES:

Confirm sufficient dimensions of the steel to determine section size and connection details.

Confirm details of of the finishes, material, thickness etc.

Test types to all locations: D,F,CH,C
Test type at locations noted on plan: T,C

CONCRETE SLAB SURVEYS:

Concrete slabs formed in ribs and flat topping.

Identify reinforcement type so grade can be assessed and determine condition of concrete.

Measure all element dimensions, thickness, cover etc.

Test types to all locations: C,F,CH,D,HAC
Test type at locations noted on plan: CC,S,A, T

Denotes cover meter survey required to precast beams

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS

Rev:	Description:	Date:	By:	Chkd:
P01	UPDATED TO REFLECT STAGE 2 SCHEME	28.07.20	PM	MA

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Status: STAGE 2

Project: CIS TOWER REFURBISHMENT

Drg Title: Basement Level B1 Survey Scope

Size:	Date:	Drawn By:	Designed By:	Checked By:
A0	27.07.2020	P.M	M.A	M.A

Scale: 1 : 100

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
068327 -	CUR -	00 -	B1 -	DR -	S -	02005 -	P01

Model Name:068327-CUR-00-ZZ-M3-S-18-00001_CENTRAL

Construction Testing Solutions

Client: Bowmer & Kirkland	**Report Ref:** STR454
Site: CIS Tower - Manchester	**Report Date:** 10/09/2021
Location: Level B1	**Reported By:** S.Grayson

Summary Of Results

Location	Vertical Bar Type	Average Vertical Bar Spacing (mm)	Cover To Vertical Reinforcement (mm)	Horizontal Bar Type	Average Horizontal Bar Spacing (mm)	Cover To Horizontal Reinforcement (mm)	Ferroscan Ref:	Column Type:	Chloride Content % by mass of Sample	Chloride Content % by mass of Cement	Depth of Carbonation (mm)	Rebound Number	Compressive Strength (N/mm2)
Level B1 Columns													
B1-55	25mmØ Smooth	320	40	10mmØ Smooth	300	30	55	Concrete	0.010	0.01	<5	48	25.4
B1-56	32mmØ Smooth	300	50	10mmØ Smooth	350	35	56	Concrete	0.008	0.06	5	38	26.3
B1-58	32mmØ Smooth	340	65	10mmØ Smooth	300	50	58	Concrete	0.010	0.07	<5	40	14.9
B1-60	28mmØ Smooth	480	60	10mmØ Smooth	300	55	60	Concrete	0.010	0.07	5	58	27.1
B1-70	32mmØ Smooth	150	70	10mmØ Smooth	300	60	70	Concrete	0.010	0.07	5	40	19.5
B1-71	28mmØ Smooth	48	70	10mmØ Smooth	300	60	71	Concrete	0.009	0.07	5	48	19.0
B1-76	Column encased in Plaster												
B1-85	36mmØ Smooth	130	40	10mmØ Smooth	300	30	85	Concrete	0.006	0.04	5	36	21.5
B1-86	36mmØ Smooth	220	60	10mmØ Smooth	300	50	86	Concrete	0.007	0.05	<5	42	11.9
B1-87	32mmØ Smooth	320	45	10mmØ Smooth	300	35	87	Concrete	0.012	0.08	5	50	32.6
B1-89	36mmØ Smooth	130/210	50	10mmØ Smooth	300	40	89	Concrete	0.007	0.05	-	46	14.7
B1-90	36mmØ Smooth	270/480	60	10mmØ Smooth	300	40	90	Concrete	0.007	0.05	<5	42	15.8
B1-91	25mmØ Smooth	350	70	10mmØ Smooth	300	55	91	Concrete	0.008	0.06	5	48	24.4
B1-92	25mmØ Smooth	320	60	10mmØ Smooth	300	50	92	Concrete	0.006	0.05	<5	38	20.4
Level B1 Core Walls													
B1-61	28mmØ Smooth	230	40	16mmØ Smooth	250	65	61		0.006	0.05	<5	40	18.2
B1-63	16mmØ Smooth	280	40	12mmØ Smooth	300	30	63		0.009	0.07	<5	40	25.3
B1-65	16mmØ Smooth	330	55	12mmØ Smooth	300	44	65		0.013	0.09	5	38	-
B1-66	16mmØ Smooth	300	30	12mmØ Smooth	300	20	66		0.014	0.10	5	38	24.3
B1-67	No Wall Located												
B1-73	25mmØ Smooth	200	65	16mmØ Smooth	300	50	73		0.009	0.07	5	-	-
B1-74	28mmØ Smooth	200	80	16mmØ Smooth	200	60	74		0.008	0.05	<5	-	-
B1-75	28mmØ Smooth	270	55	16mmØ Smooth	280	85	75		0.006	0.04	5	-	-
B1-78	16mmØ Smooth	300	60	12mmØ Smooth	300	45	78		0.007	0.05	5	40	28.1
B1-79	16mmØ Smooth	300	40	12mmØ Smooth	320	25	79		0.008	0.06	-	42	25.2
B1-81	25mmØ Smooth	460	70	16mmØ Smooth	270	55	81		0.005	0.04	<5	40	18.1

Level B1 Slab

Location	Longitudinal Bar Type	Average Longitudinal Bar Spacing (mm)	Cover To Longitudinal Reinforcement (mm)	Transverse Bar Type	Average Transverse Bar Spacing (mm)	Cover To Transverse Reinforcement (mm)	Ferroscan Ref:	Slab Thickness (mm)	Chloride Content % by mass of Sample	Chloride Content % by mass of Cement	Depth of Carbonation (mm)	Rebound Number	Compressive Strength (N/mm2)
B1-64	6mmØ Smooth	100	130	4mmØ Smooth	180	165	64	220	0.006	0.04	5	44	25.2
B1-72	16mmØ Smooth	150	50	12mmØ Smooth	180	65	72	-	0.009	0.07	5	40	16.7
B1-84	12mmØ Smooth	-	40	16mmØ Ribbed	-	35	84	-	0.009	0.06	5	-	-
B1-95	12mmØ Smooth	-	35	16mmØ Ribbed	-	40	95	-	0.013	0.09	5	-	-
B1-80	16mmØ Smooth	-	60	16mmØ Ribbed	-	72	80	-	0.011	0.08	5	-	-
Level B1L Beams													
B1-57	12mmØ Smooth	300	70	32mmØ Smooth	100	85	57	Concrete	0.006	0.04	5	58	28.4
B1-59	12mmØ Smooth	250	38	32mmØ Smooth	100	75	59	Concrete	0.009	0.07	<5	-	-
B1-62	High Level Crawl Space (confined space and asbestos) - Surveys to be completed within return visit												
B1-68	High Level Crawl Space (confined space and asbestos) - Surveys to be completed within return visit												
B1-69	High Level Crawl Space (confined space and asbestos) - Surveys to be completed within return visit												
B1-77	10mmØ Smooth	400	65	32mmØ Smooth	100	55	77	Concrete	0.008	0.06	<5	56	24.7
B1-82	12mmØ Smooth	300	50	32mmØ Smooth	100	70	82	Concrete	0.008	0.06	5	-	-
B1-83	12mmØ Smooth	300	35	12mmØ Smooth	100	50	83	Concrete	0.008	0.06	<5	-	-
B1-88	12mmØ Smooth	320	50	32mmØ Smooth	100	85	88	Concrete	0.010	0.07	<5	-	-
B1-93	12mmØ Smooth	310	28	12mmØ Smooth	100	40	93	Concrete	0.008	0.06	<5	-	-
B1-94	12mmØ Smooth	300	85	32mmØ Smooth	120	75	94	Concrete	0.009	0.06	5	-	-

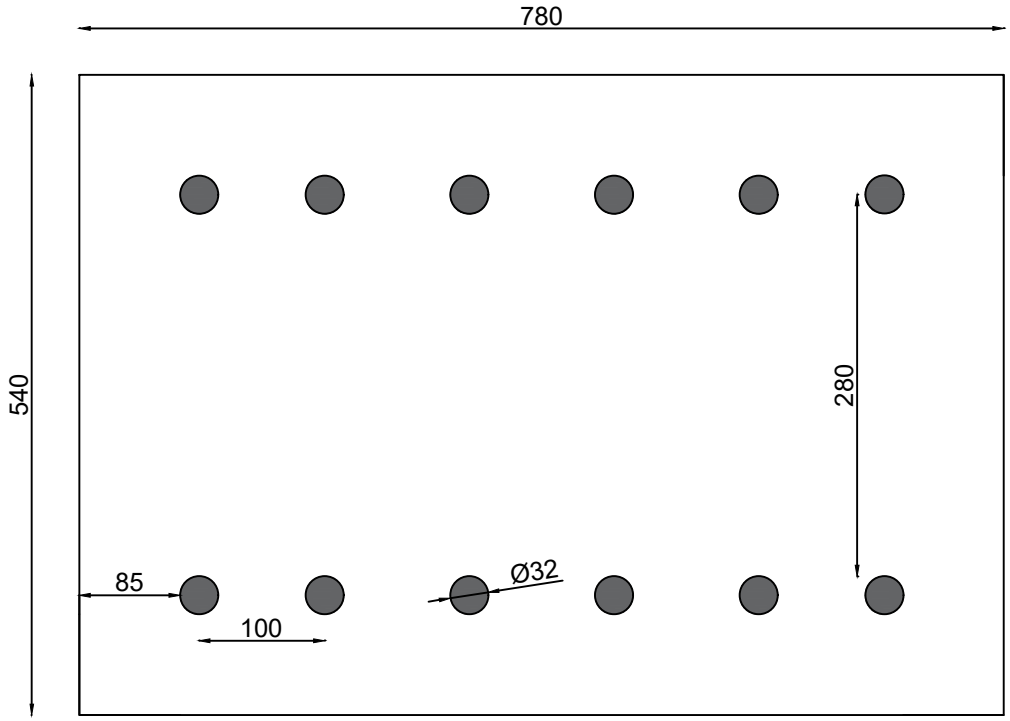
Comments:

All beam and column drawings provided on separate sheets

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	24/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Beam Details

Location 57

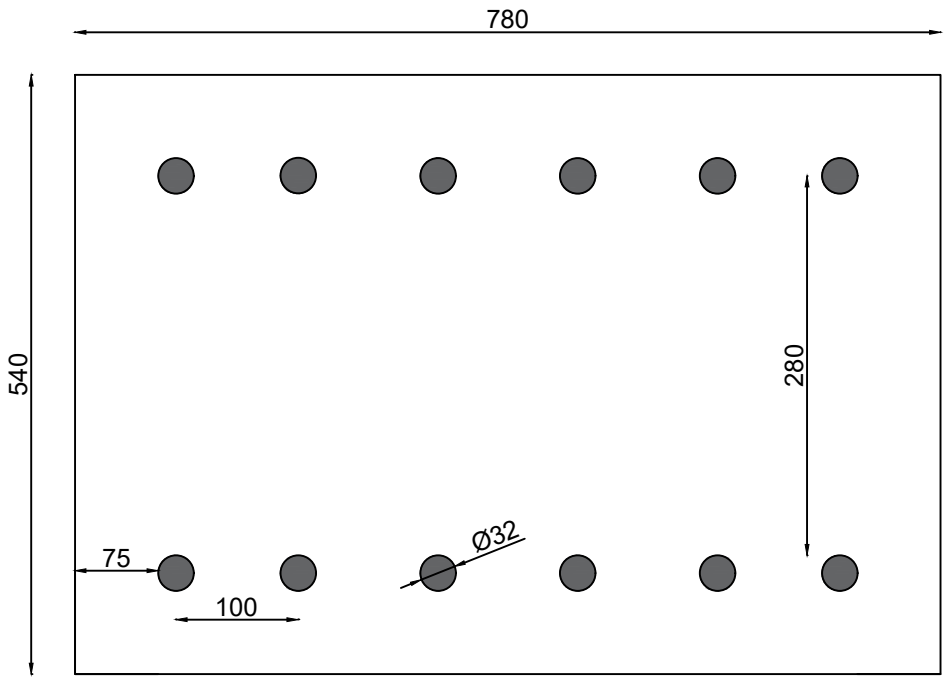


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	24/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Beam Details

Location 59

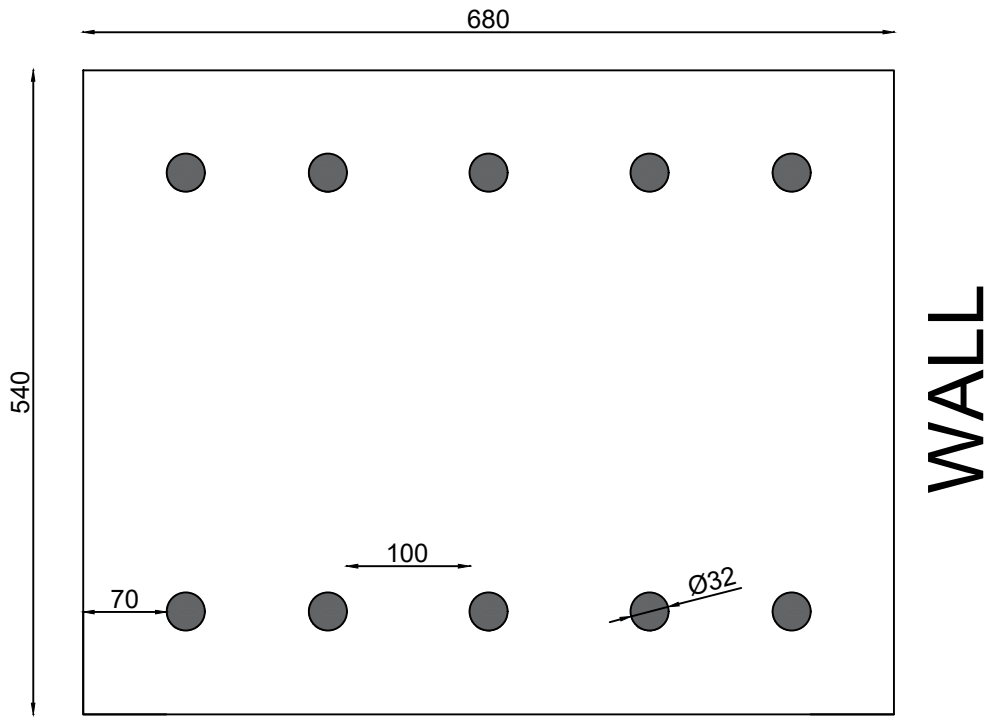


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	24/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Beam Details

Location 82

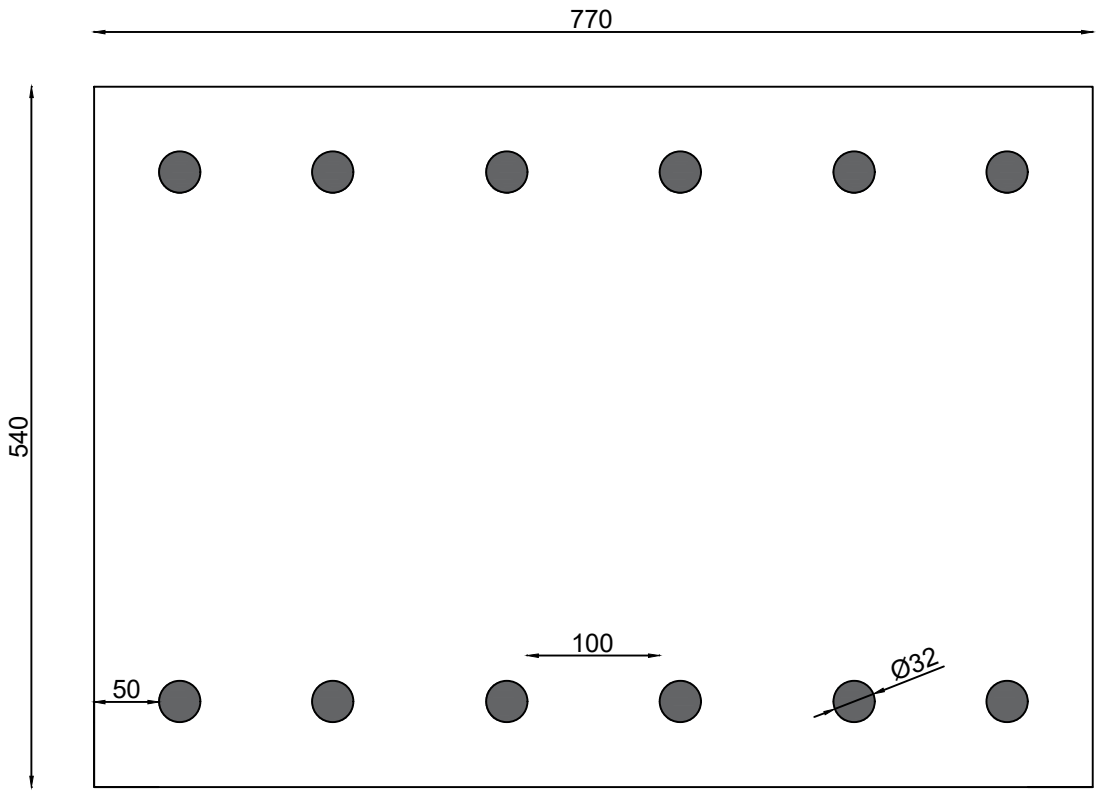


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	24/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Beam Details

Location 83

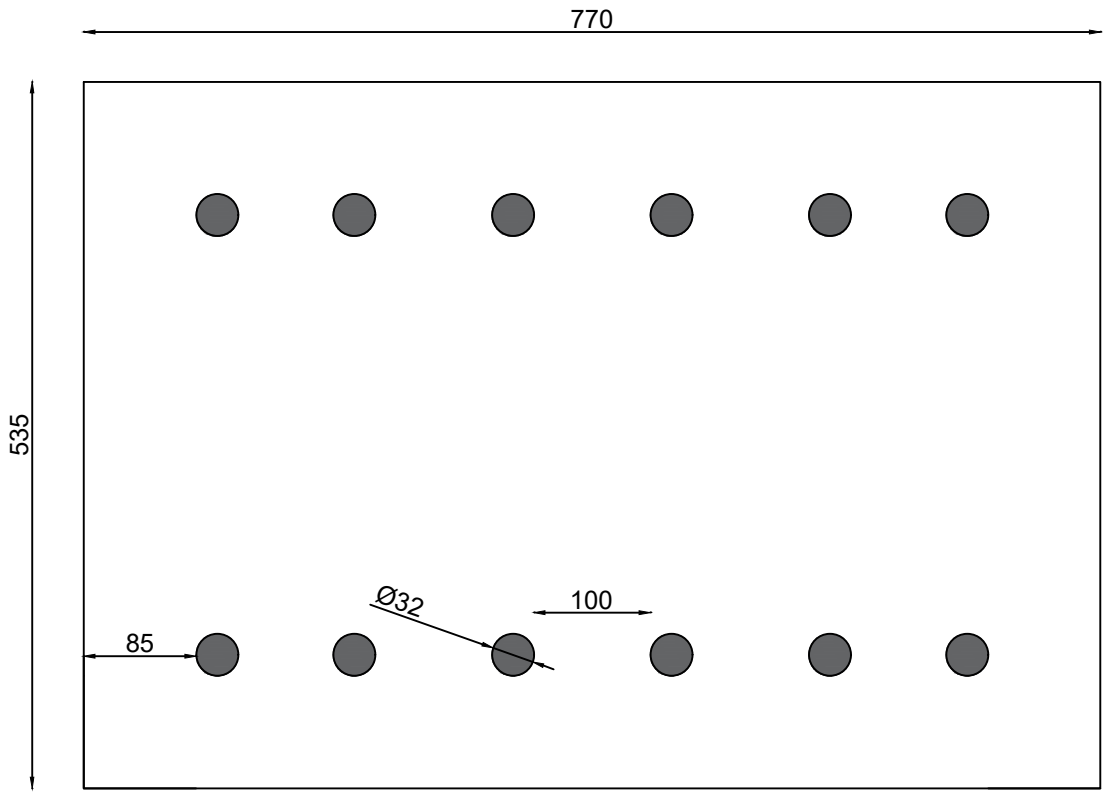


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	24/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Beam Details

Location 88

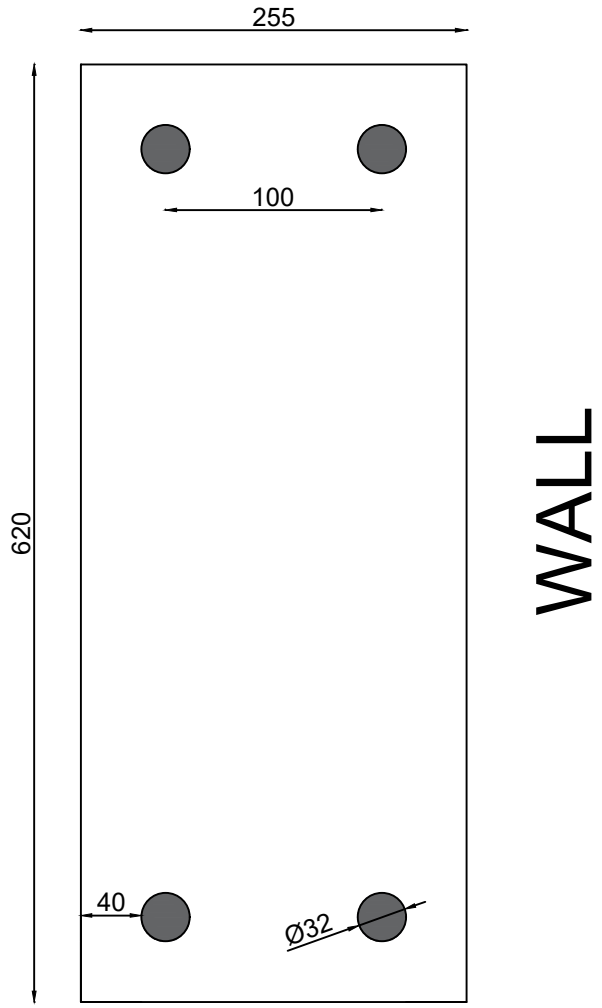


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	24/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Beam Details

Location 93

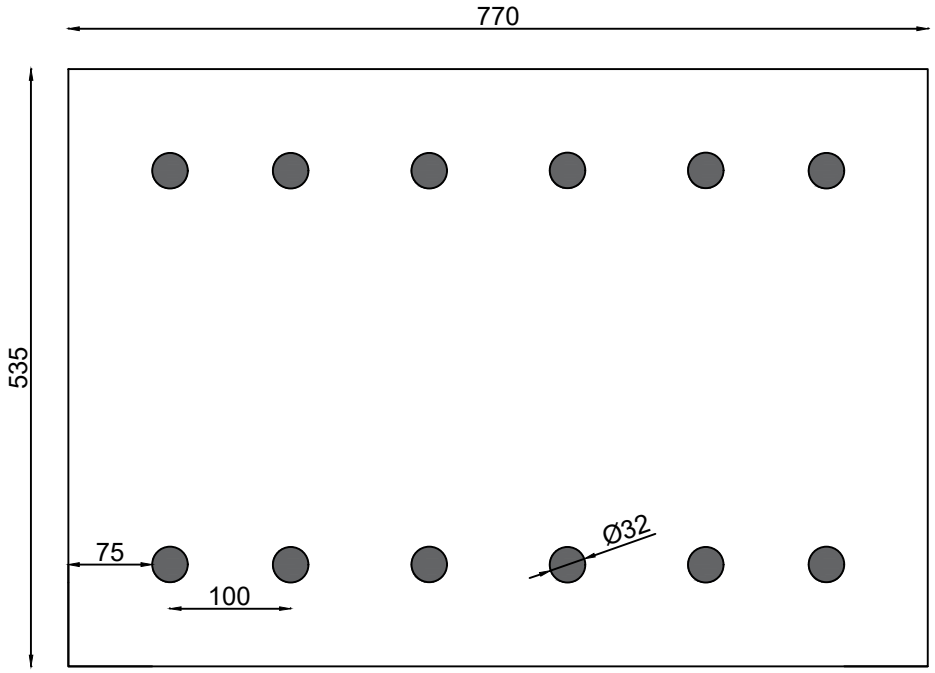


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	24/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Beam Details

Location 94

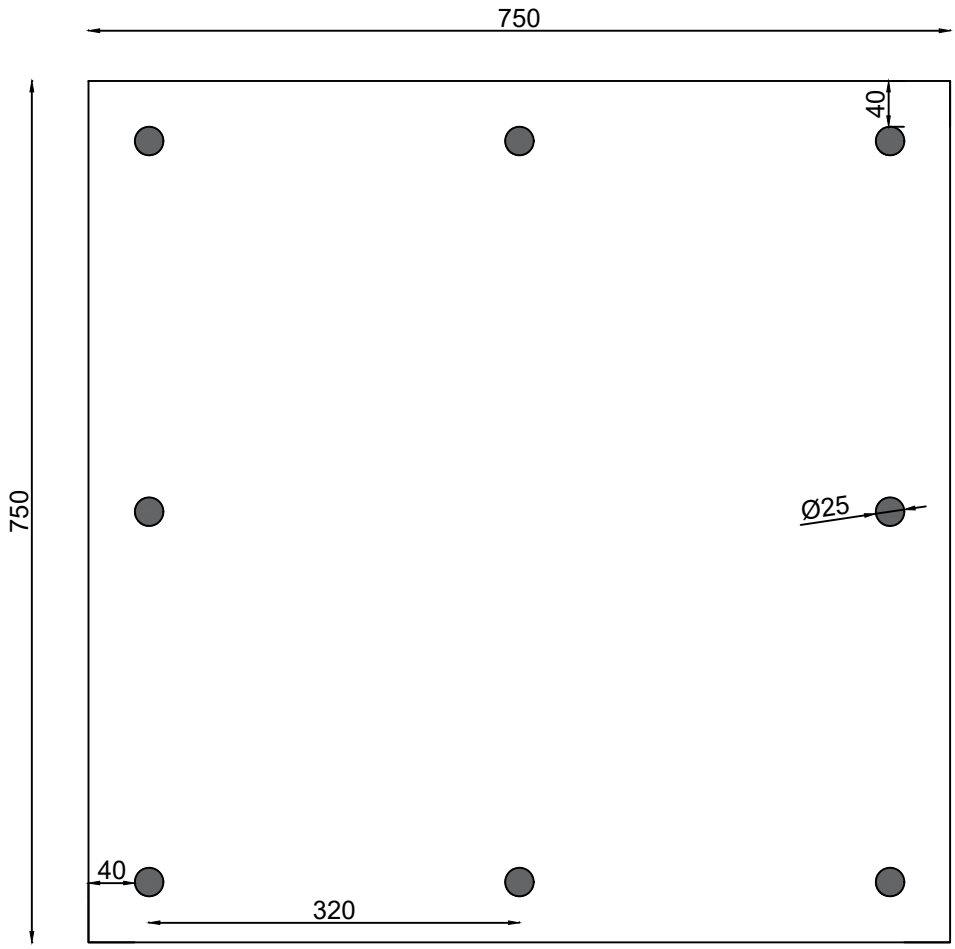


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	18/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Column Details

Location 55

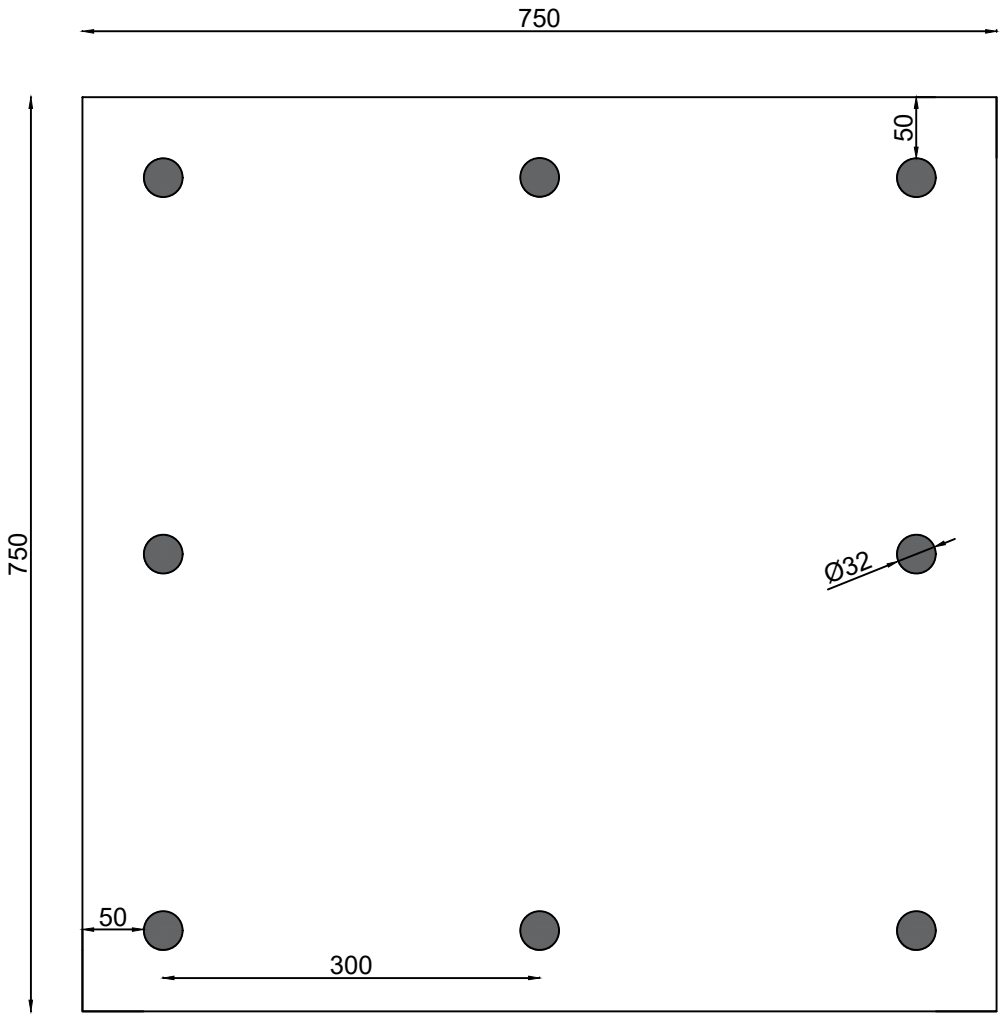


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	18/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Column Details

Location 56

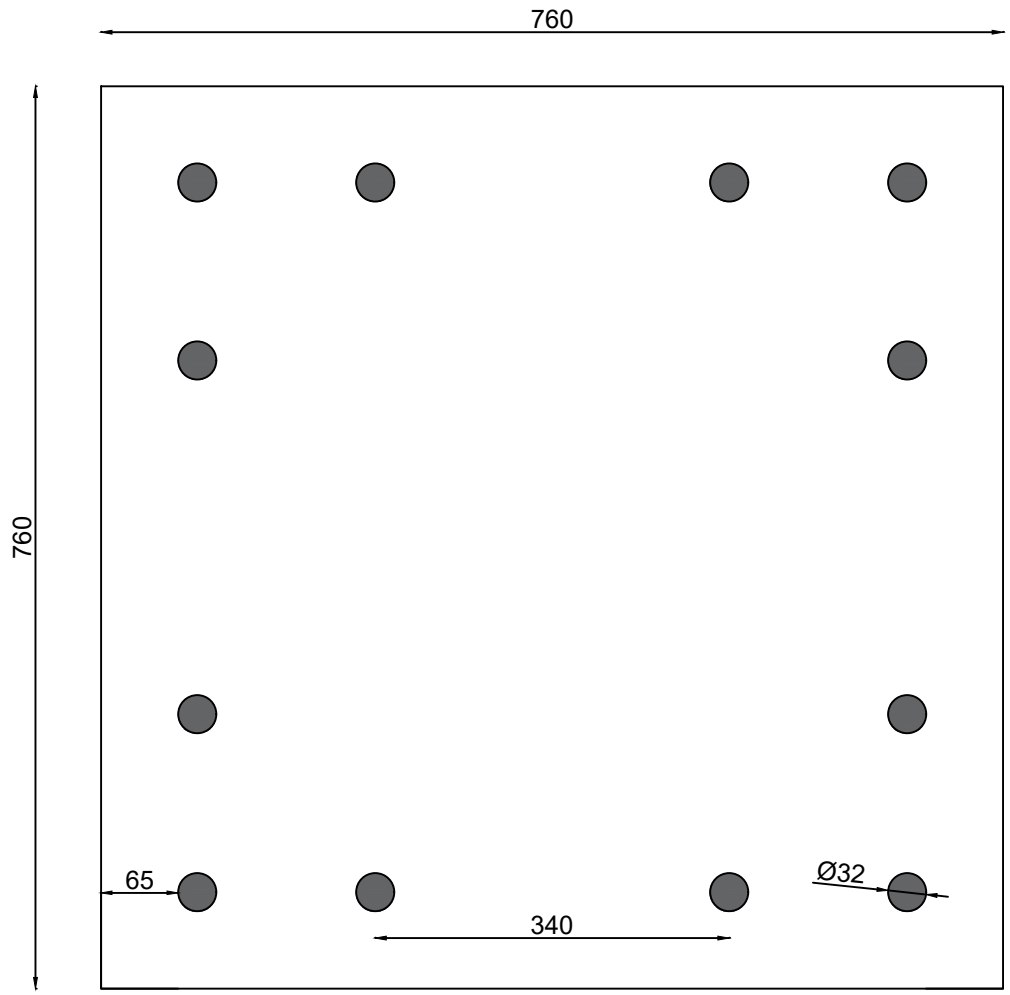


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	09/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Column Details

Location 58

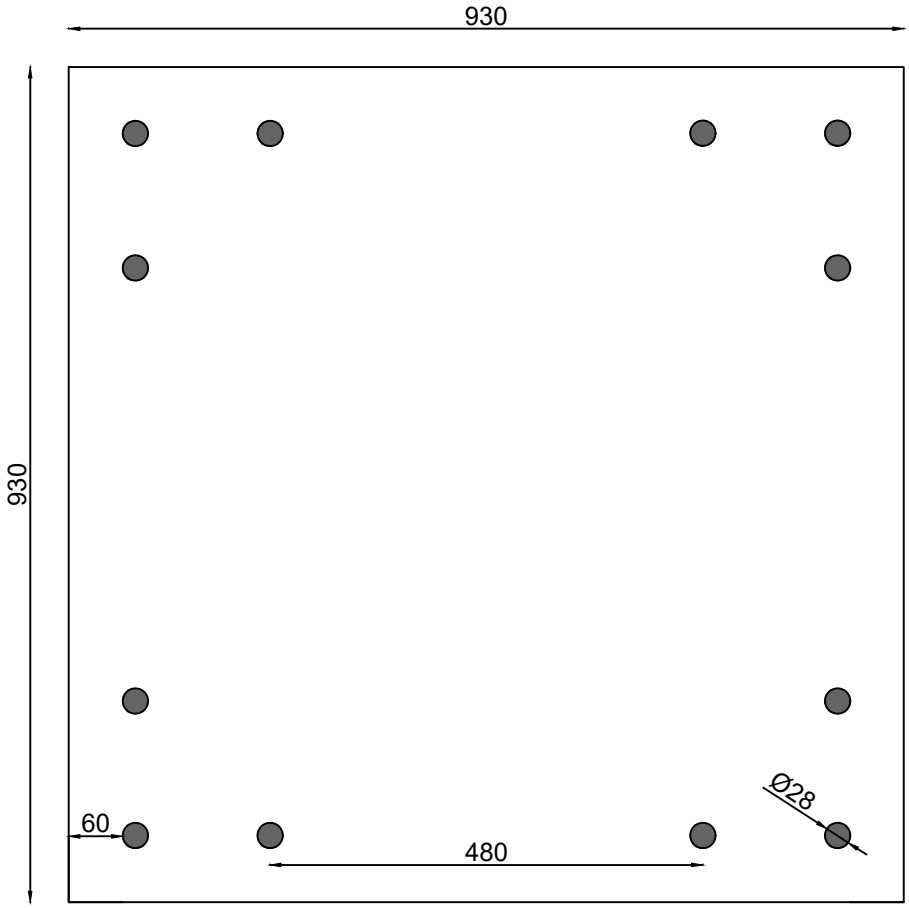


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	23/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Column Details

Location 60

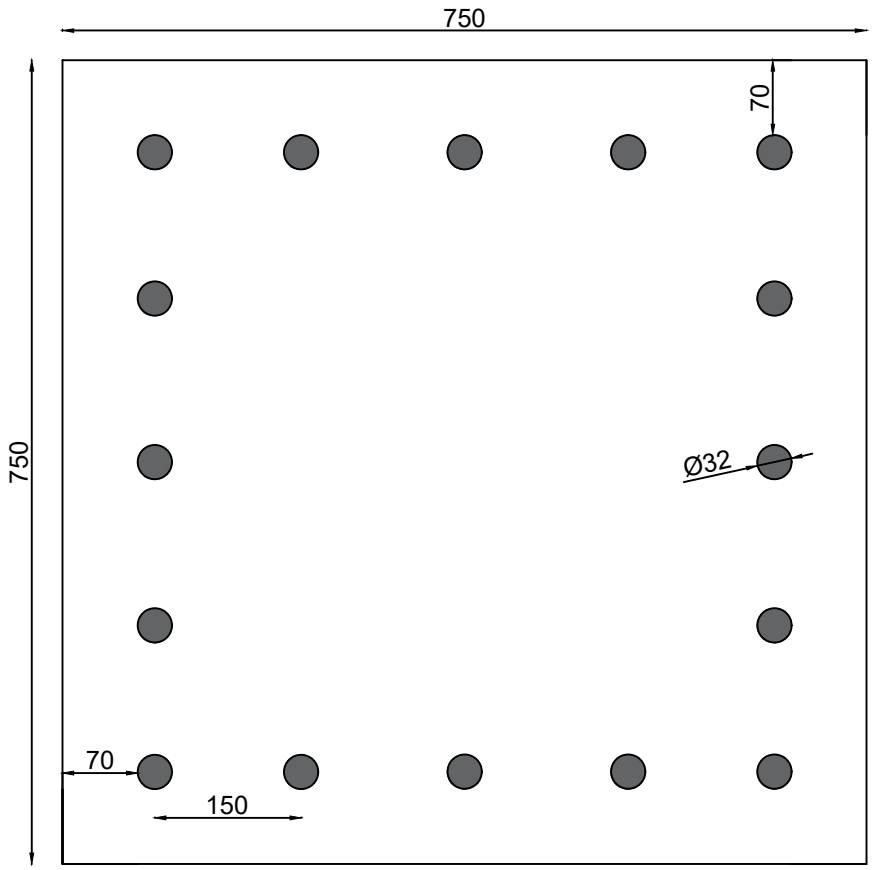


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	18/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Column Details

Location 70

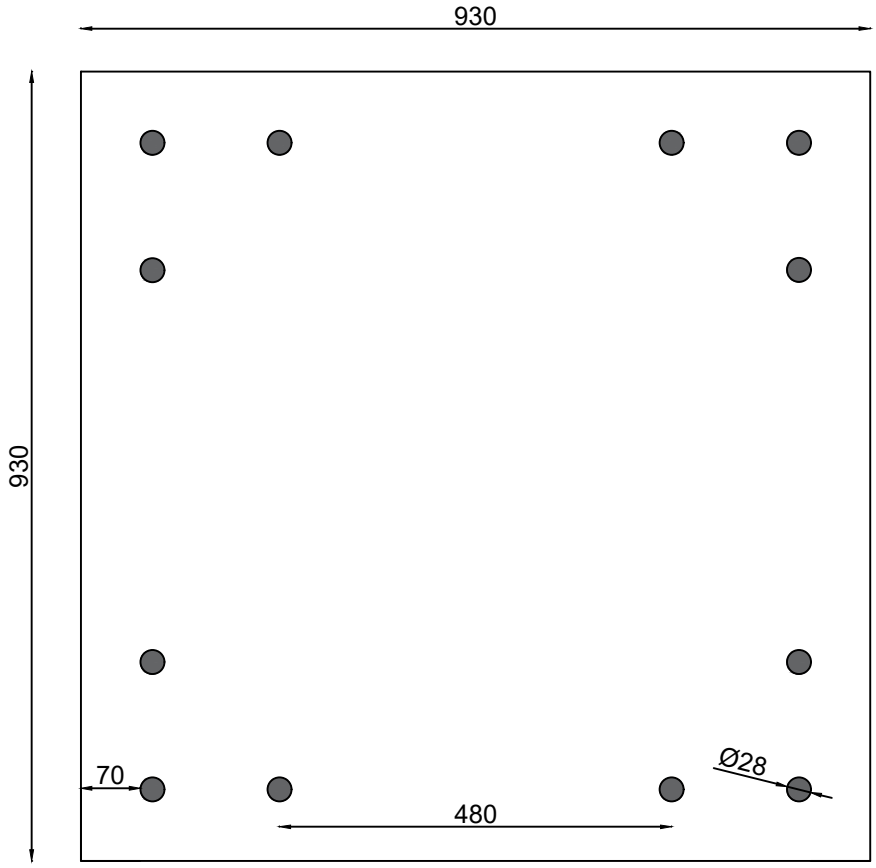


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	23/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Column Details

Location 71

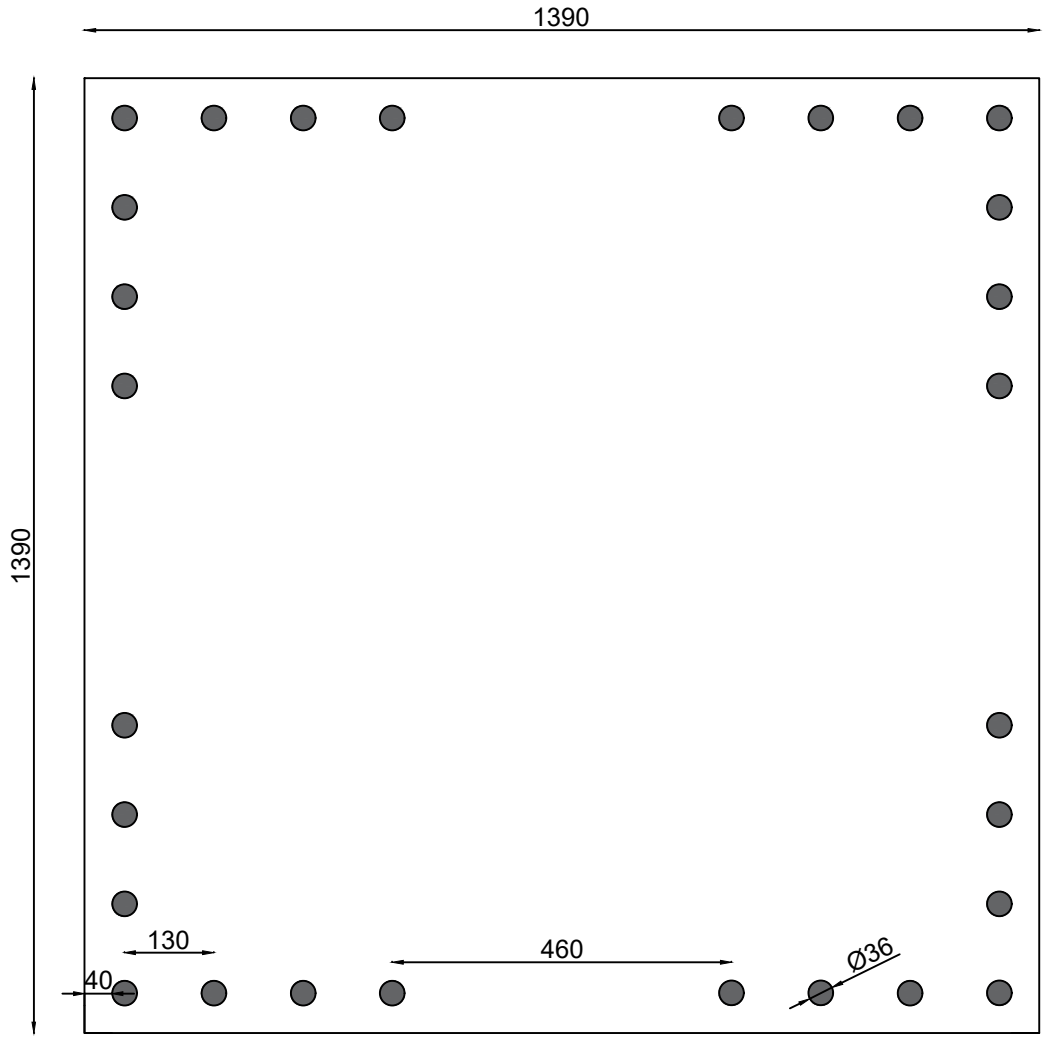


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	19/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Column Details

Location 85

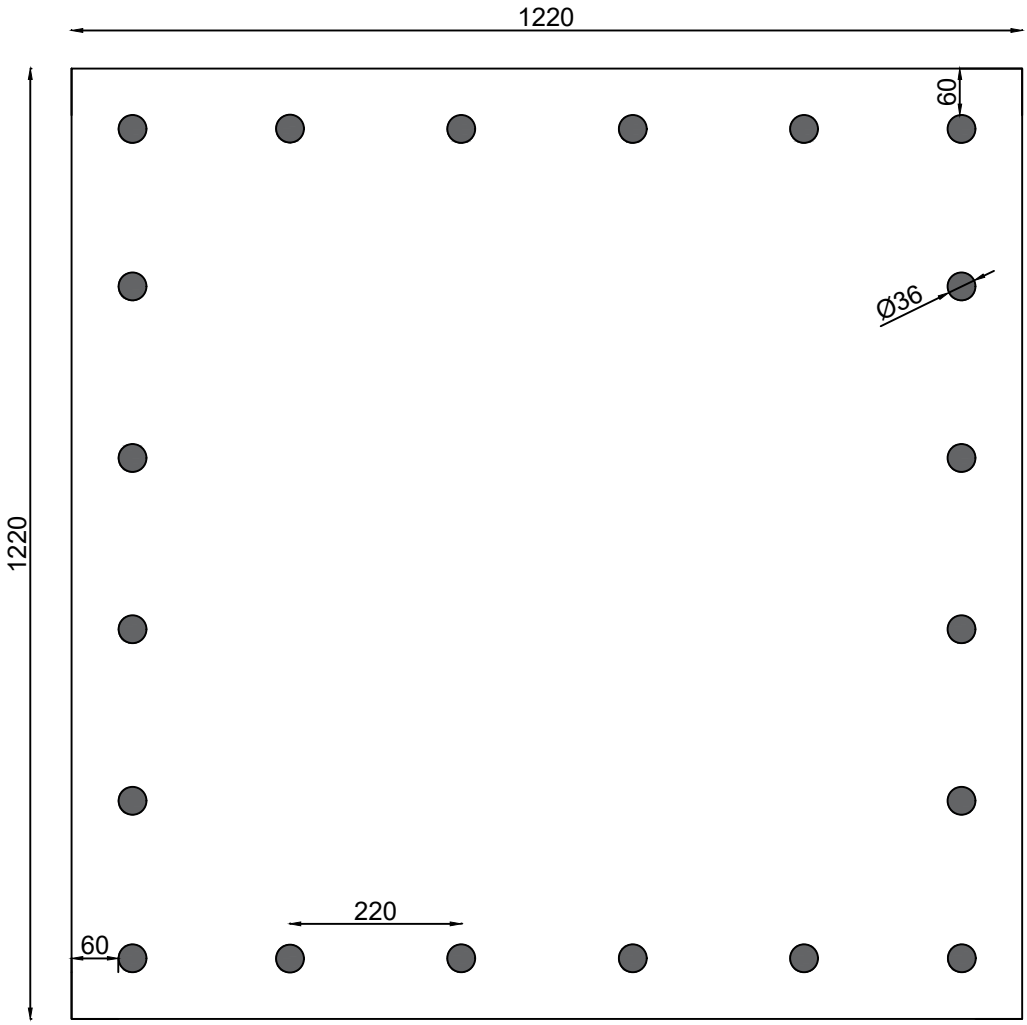


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	19/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Column Details

Location 86

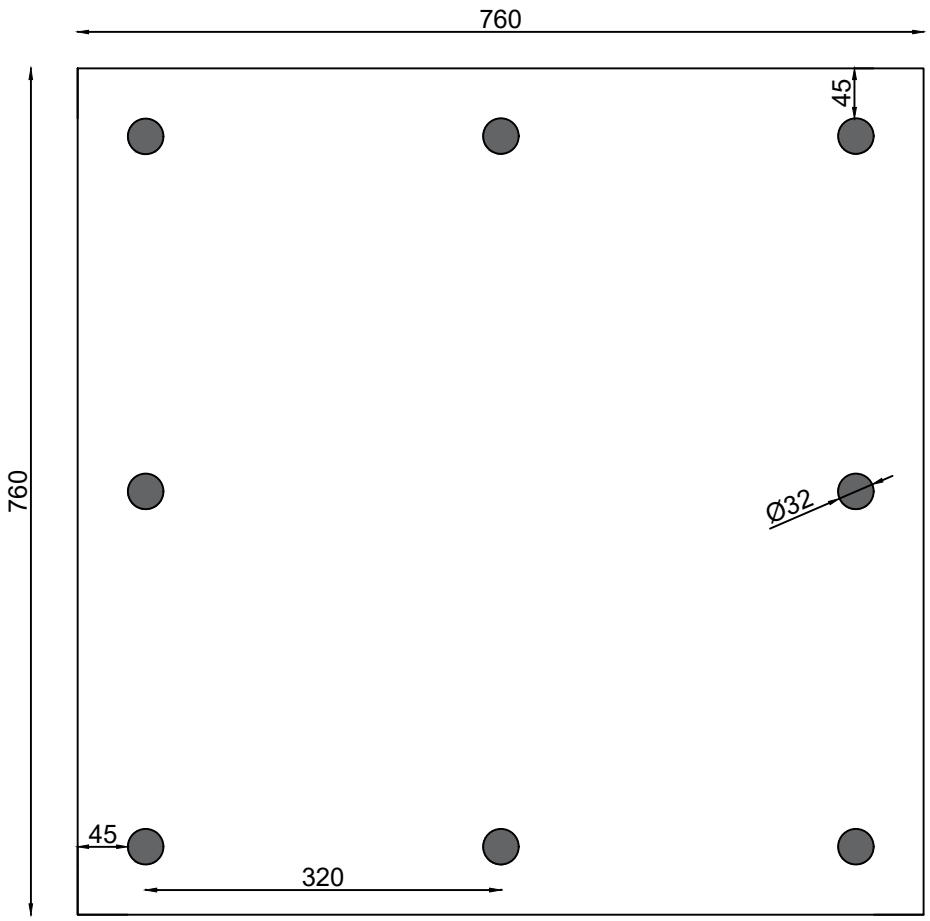


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	18/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Column Details

Location 87

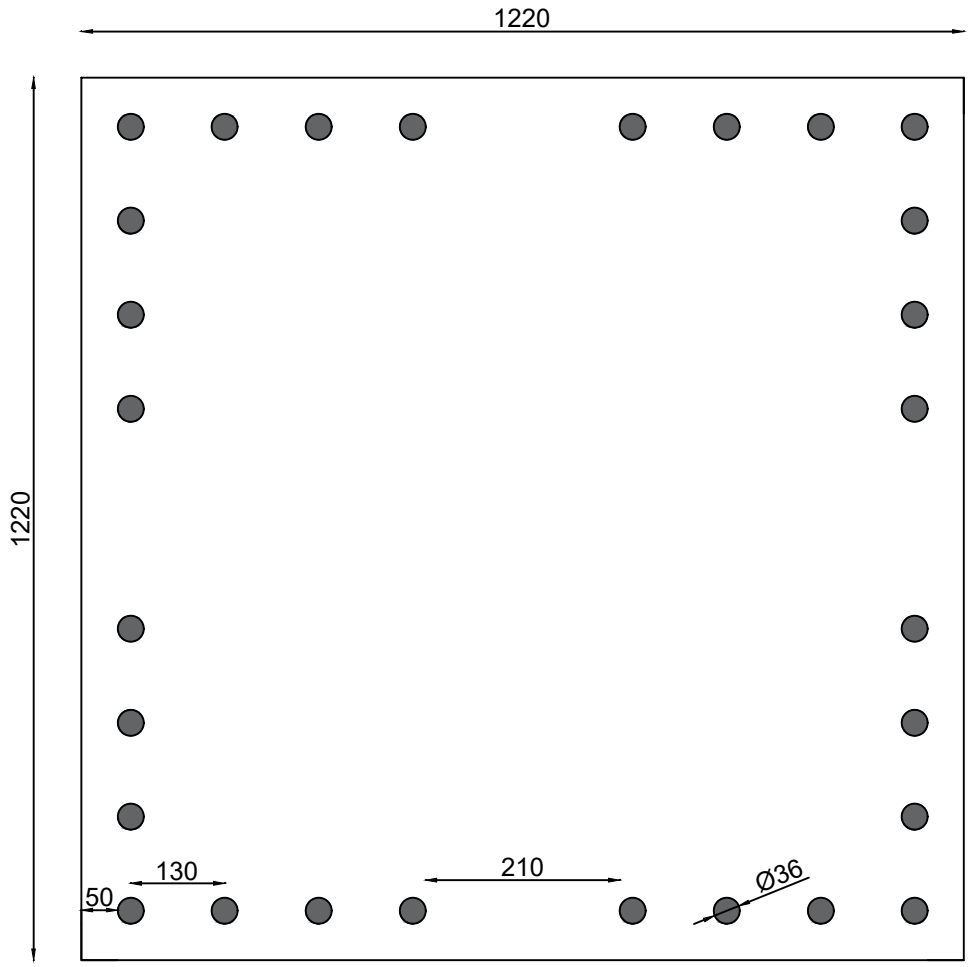


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	19/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Column Details

Location 89

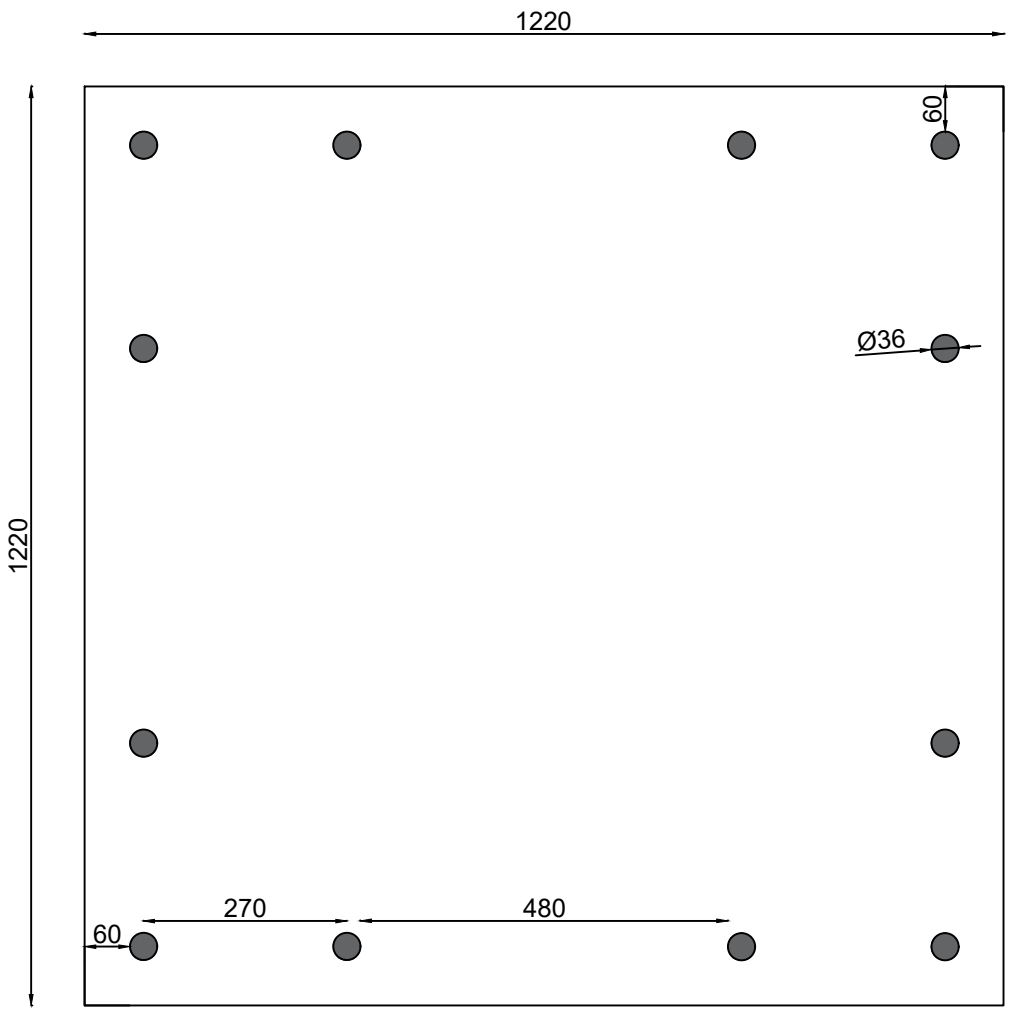


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	19/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Column Details

Location 90

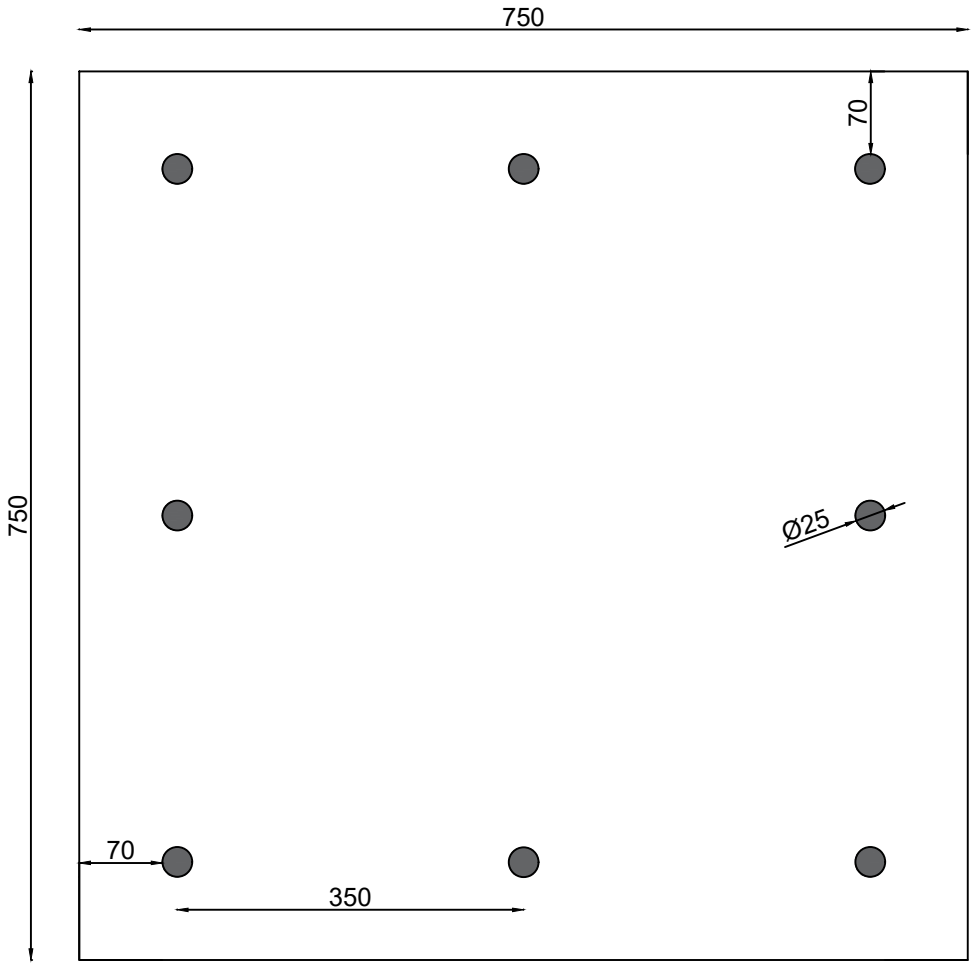


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	18/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level B1 Column Details

Location 91

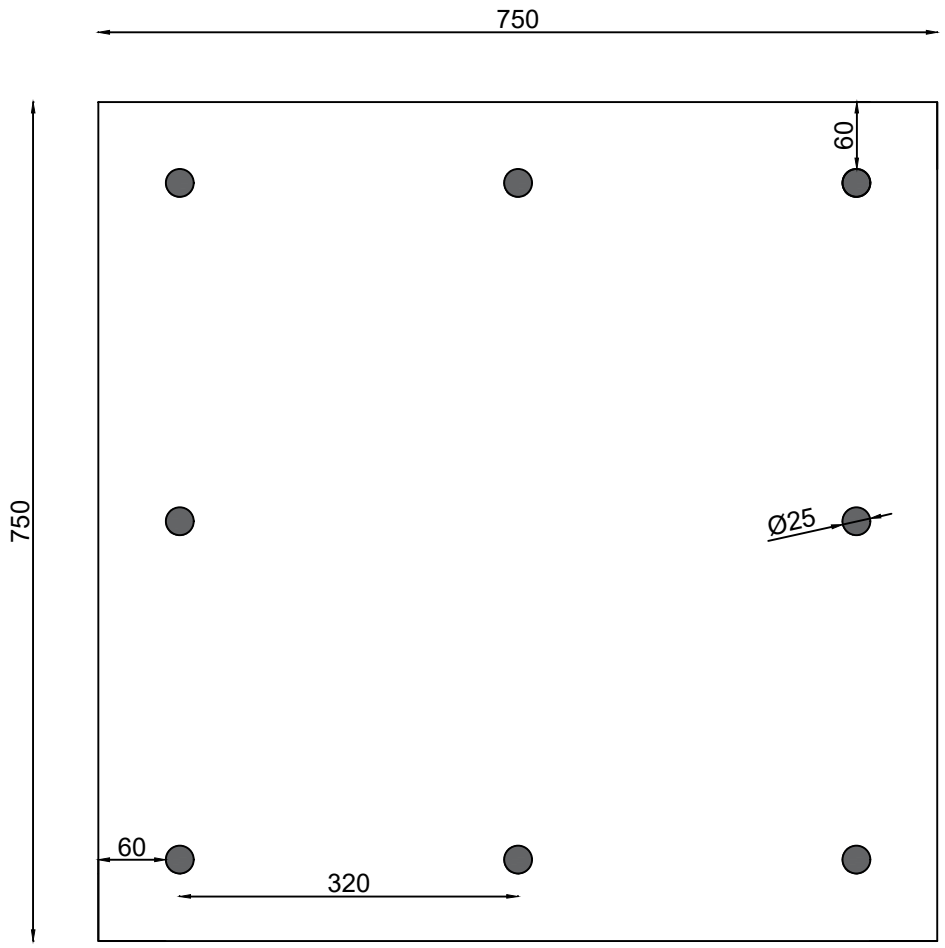


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level B1
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	19/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

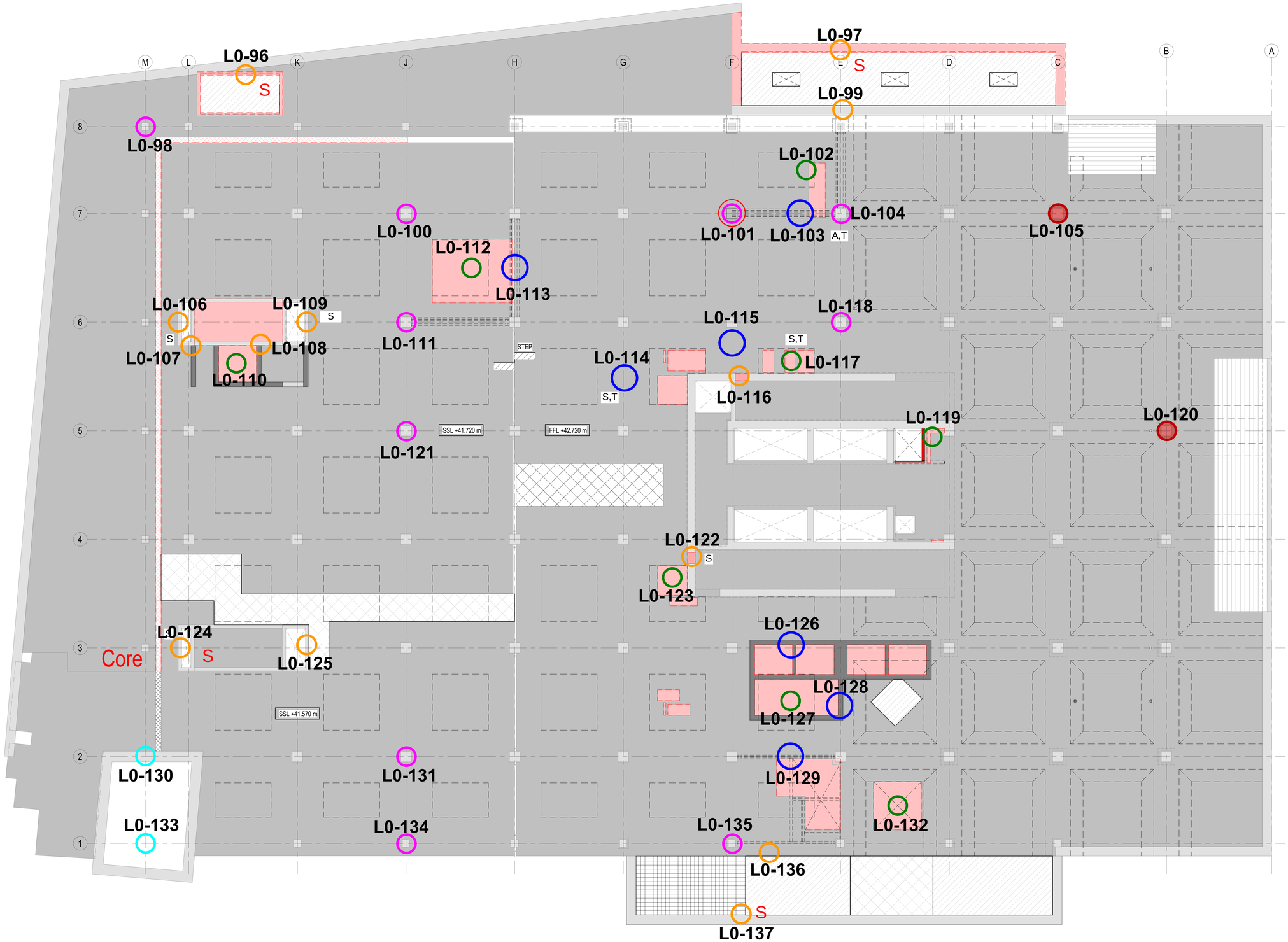
Level B1 Column Details

Location 92



Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

3.5 Ground level



GENERAL NOTES:

CONCRETE COLUMN SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D
Test type at locations noted on plan: T,A,S, CC

CONCRETE WALL SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types Test types to all locations:
C,F,CH,D,CC
Test type at locations noted on plan: T,A,S

CONCRETE BEAM SURVEYS: HIGHLIGHTED BEAMS ARE BEAMS UNDER

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: T,S,A

CONCRETE SLAB SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed where noted

Confirm slab thickness and build up and determine condition.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A, T

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm reinforcement, cover and concrete grade.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D,S,CC,R
Test type at locations noted on plan:

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm column bearing details and geometry. Provide photographs of bearings.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A,T

STEEL COLUMN SURVEYS:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of concrete encasement, grade, thickness, presence of reinforcement. Confirm reinforcement grade and size.

Test types Test types to all locations: D,F,CH, Steel Verification
Test type at locations noted on plan: T,C

STEEL BEAMS & FINISHES:

Confirm sufficient dimensions of the steel to determine section size and connection details.

Confirm details of of the finishes, material, thickness etc.

Test types to all locations: D,F,CH,C
Test type at locations noted on plan: T,C

CONCRETE SLAB SURVEYS:

Concrete slabs formed in ribs and flat topping.

Identify reinforcement type so grade can be assessed and determine condition of concrete.

Measure all element dimensions, thickness, cover etc.

Test types to all locations: C,F,CH,D,HAC
Test type at locations noted on plan: CC,S,A, T

Denotes cover meter survey required to precast beams

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS

Rev:	Description:	Date:	By:	Chkd:
P01	UPDATED TO REFLECT STAGE 2 SCHEME	28.07.20	PM	MA

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0161 236 2394
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Civils & Structures • Transport Planning • Environmental • Infrastructure • Geotechnical • Conservation & Heritage • Principal Designer
Birmingham • Bristol • Cambridge • Cardiff • Douglas • Dublin • Edinburgh • Glasgow • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

Status: STAGE 2

Project: CIS TOWER REFURBISHMENT

Drg Title: Level 00 Survey Scope

Size:	Date:	Drawn By:	Designed By:	Checked By:
A0	27.07.2020	P.M	M.A	M.A

Scale: 1 : 100

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
068327 -	CUR -	00 -	00 -	DR -	S -	02007 -	P01

Model Name: 068327-CUR-00-ZZ-M3-S18-00001_CENTRAL

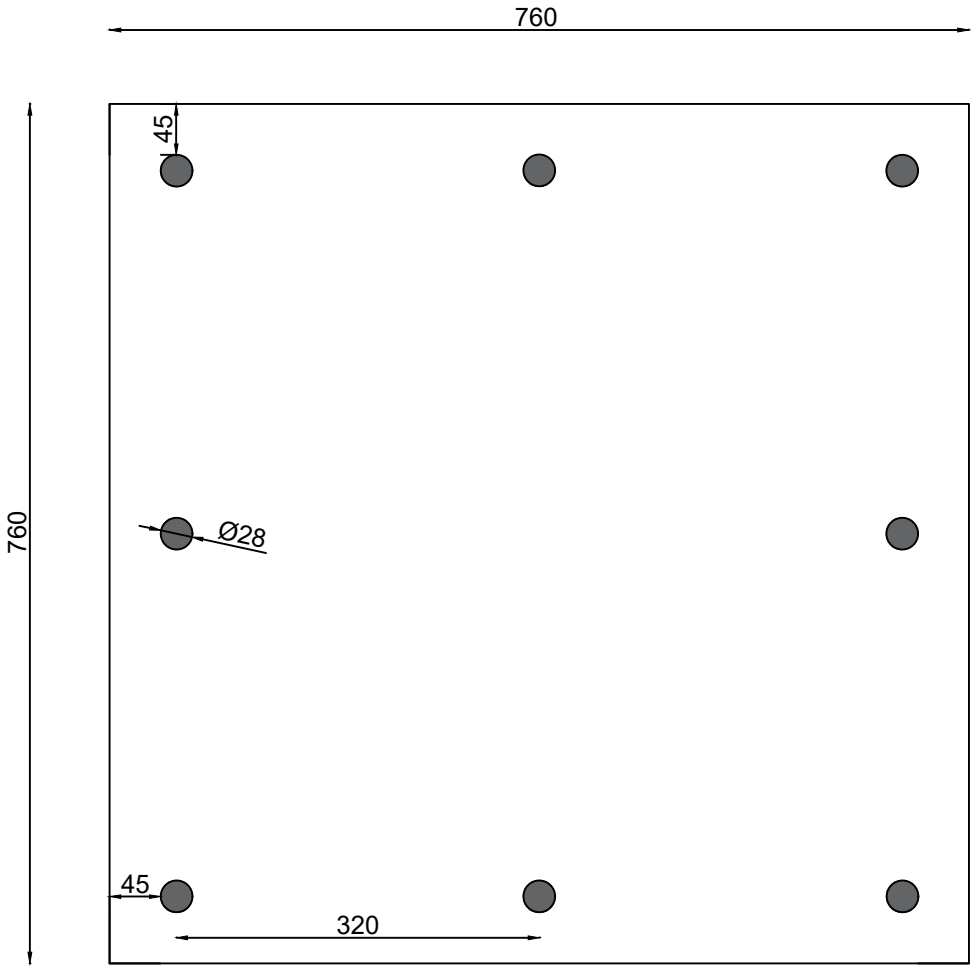
Construction Testing Solutions

		Client: Bowmer & Kirkland					**Report Ref:**		STR454				
		Site: CIS Tower - Manchester					**Report Date:**		10/09/2021				
		Location: Level L0					**Reported By:**		S.Grayson				
		Summary Of Results							**Chloride Content % by mass of**				
Location	**Vertical Bar Type**	**Average Vertical Bar Spacing (mm)**	**Cover To Vertical Reinforcement (mm)**	**Horizontal Bar Type**	**Average Horizontal Bar Spacing (mm)**	**Cover To Horizontal Reinforcement (mm)**	**Ferroscan Ref:**	**Column Type:**	**Sample**	**Cement**	**Depth of Carbonation (mm)**	**Rebound Number**	**Compressive Strength (N/mm2)**
Level L0 Columns													
L0-98	Surveyed under V4 Scope												
L0-100	28mmØ Smooth	320	45	10mmØ Smooth	300	30	100	Concrete	0.009	0.07	<5	44	22.9
L0-101	28mmØ Smooth	340	35	10mmØ Smooth	380	20	101	Concrete	-	-	<5	42	23.5
L0-104	28mmØ Smooth	300	55	10mmØ Smooth	340	45	104	Concrete	0.013	0.09	<5	44	25.7
L0-111	Survyed Column at Location ML-145 due to access												
L0-118	28mmØ Smooth	380	40	10mmØ Smooth	300	30	118	Concrete	0.013	0.09	5	42	29.8
L0-121	28mmØ Smooth	320	40	10mmØ Smooth	280	30	121	Concrete	0.009	0.06	<5	48	24.0
L0-131	28mmØ Smooth	320	65	10mmØ Smooth	300	50	131	Concrete	0.006	0.04	5	38	23.8
L0-134	25mmØ Smooth	350	60	10mmØ Smooth	300	40	134	Concrete	0.005	0.03	<5	38	14.0
L0-135	Column covered in Metal												
L0-130	Unable to Locate Column at this level												
L0-133	Unable to Locate Column at this level												
L0-105	Steel Column - Dimensions on separate page - External Metal Clad												-
L0-120	Steel Column - Dimensions on separate page - External Metal Clad												-
Level L0 Core Walls													
L0-96	16mmØ Smooth	-	105	Unable to Locate	-	-	96		0.011	0.08	10	40	34.2
L0-97	20mmØ Smooth	340	60	16mmØ Smooth	300	45	97		0.009	0.06	<5	42	17.1
L0-99	16mmØ Smooth	170	30	12mmØ Smooth	230	20	99		0.033	0.23	5	-	-
L0-106	16mmØ Smooth	300	65	12mmØ Smooth	300	40	106		0.008	0.06	<5	40	28.5
L0-107	16mmØ Smooth	200	75	12mmØ Smooth	300	60	107		0.007	0.05	5	-	-
L0-108	16mmØ Smooth	200	40	12mmØ Smooth	220	30	108		0.008	0.06	<5	-	-
L0-109	16mmØ Smooth	270	40	12mmØ Smooth	350	25	109		0.006	0.04	<5	40	26.3
L0-116	25mmØ Smooth	470	50	16mmØ Smooth	330	35	116		0.016	0.12	<5	44	-
L0-122	25mmØ Smooth	140	70	16mmØ Smooth	210	55	122		0.008	0.06	5	46	26.9
L0-124	16mmØ Smooth	300	50	12mmØ Smooth	300	40	124		0.007	0.05	<5	40	14.4
L0-125	16mmØ Smooth	350	50	12mmØ Smooth	270	40	125		0.006	0.04	5	38	19.0
L0-136	16mmØ Smooth	270	60	12mmØ Smooth	240	50	136		0.005	0.04	<5	-	-
L0-137	36mmØ Smooth	320	120	2 x 22mmØ Smooth	240	95	137		0.008	0.06	5	46	7.8
Level L0 Slab													
Location	**Longitudinal Bar Type**	**Average Longitudinal Bar Spacing (mm)**	**Cover To Longitudinal Reinforcement (mm)**	**Transverse Bar Type**	**Average Transverse Bar Spacing (mm)**	**Cover To Transverse Reinforcement (mm)**	**Ferroscan Ref:**	**Slab Thickness (mm)**	**Chloride Content % by mass of**		**Depth of Carbonation (mm)**	**Rebound Number**	**Compressive Strength (N/mm2)**
									Sample	**Cement**			
L0-102	20mmØ Smooth	300	70	12mmØ Smooth	240	60	102	310	0.008	0.06	5	-	-
L0-110	25mmØ Smooth	250	130	12mmØ Smooth	300	120	110	550	0.015	0.11	5	-	-
L0-112	3mmØ Smooth	150	110	3mmØ Smooth	150	116	112	180	0.031	0.22	<5	-	-
L0-117	20mmØ Smooth	410	30	20mmØ Smooth	290	10	117	310	0.053	0.38	<5	42	31.1
L0-119	Unable to Locate reinforcement at this location							-	0.007	0.05	<5	-	-
L0-123	20mmØ Smooth	-	40	12mmØ Smooth	-	50	123	200	0.011	0.08	-	-	-
L0-127	20mmØ Smooth	500	120	12mmØ Smooth	350	90	127	300	0.010	0.07	5	-	-
L0-132	20mmØ Smooth	-	100	12mmØ Smooth	-	80	132	300	0.009	0.07	-	-	-
Level L0 Beams													
L0-103	Works to be completed once Soft Strip completed												
L0-113	Works to be completed once Soft Strip completed												
L0-114	Works to be completed once Soft Strip completed												
L0-115	Works to be completed once Soft Strip completed												
L0-126	Works to be completed once Soft Strip completed												
L0-128	Works to be completed once Soft Strip completed												
L0-129	Works to be completed once Soft Strip completed												
Comments:	Slabs have 70-90mm screed above them												
Column & Beam Dimensions - Reinforcement Layout													
All beam and column drawings are provided on separate sheets													

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 0
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	03/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 0 Column Details

Location 100

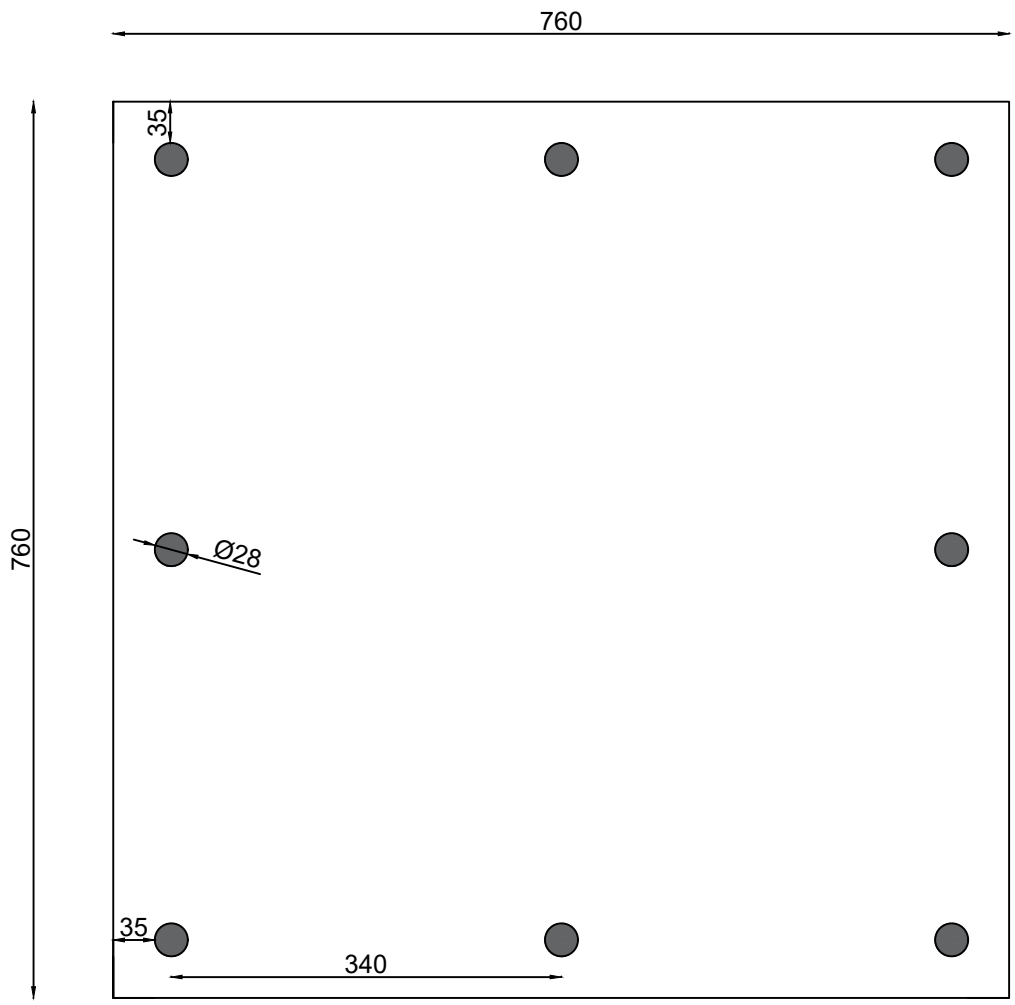


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 0
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	03/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 0 Column Details

Location 101

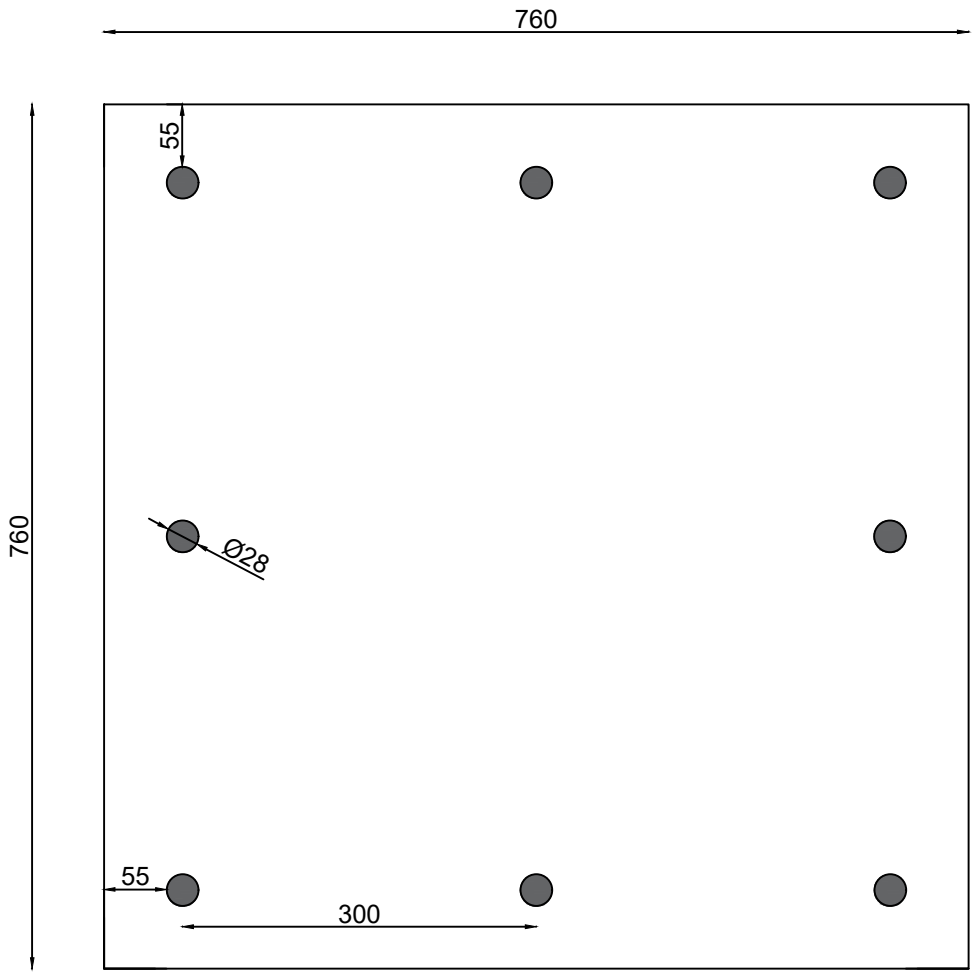


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 0
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	03/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 0 Column Details

Location 104

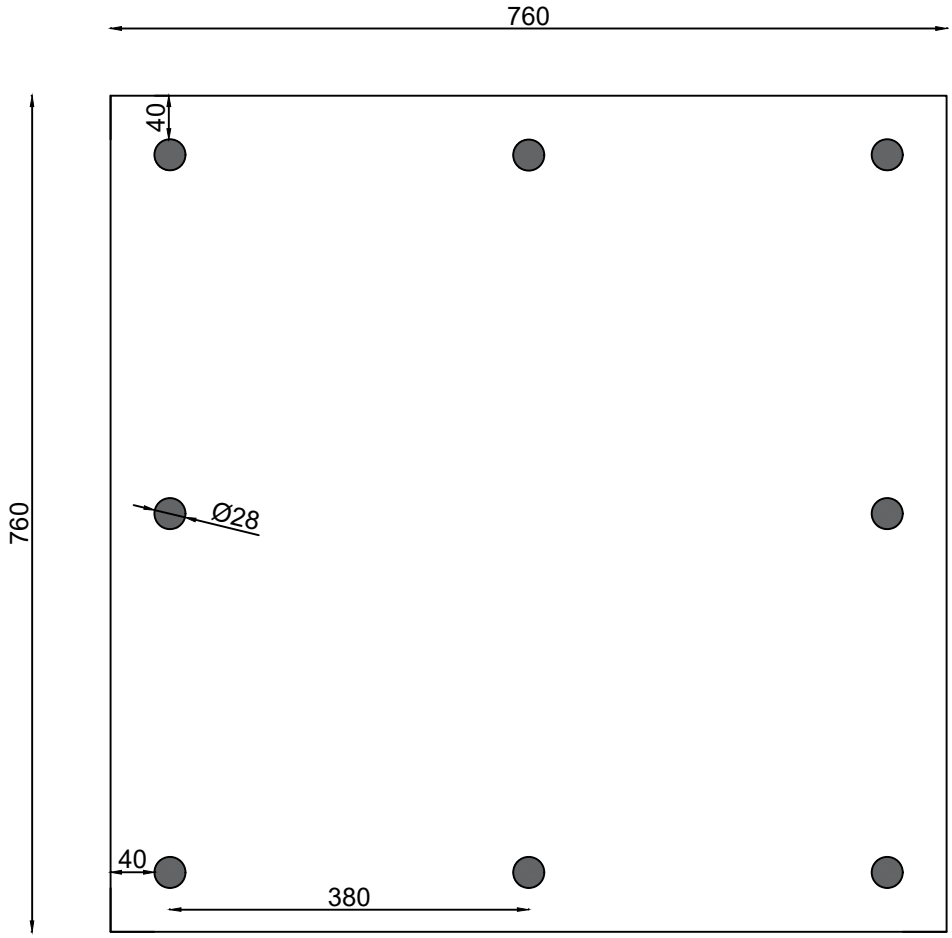


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 0
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	03/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 0 Column Details

Location 118

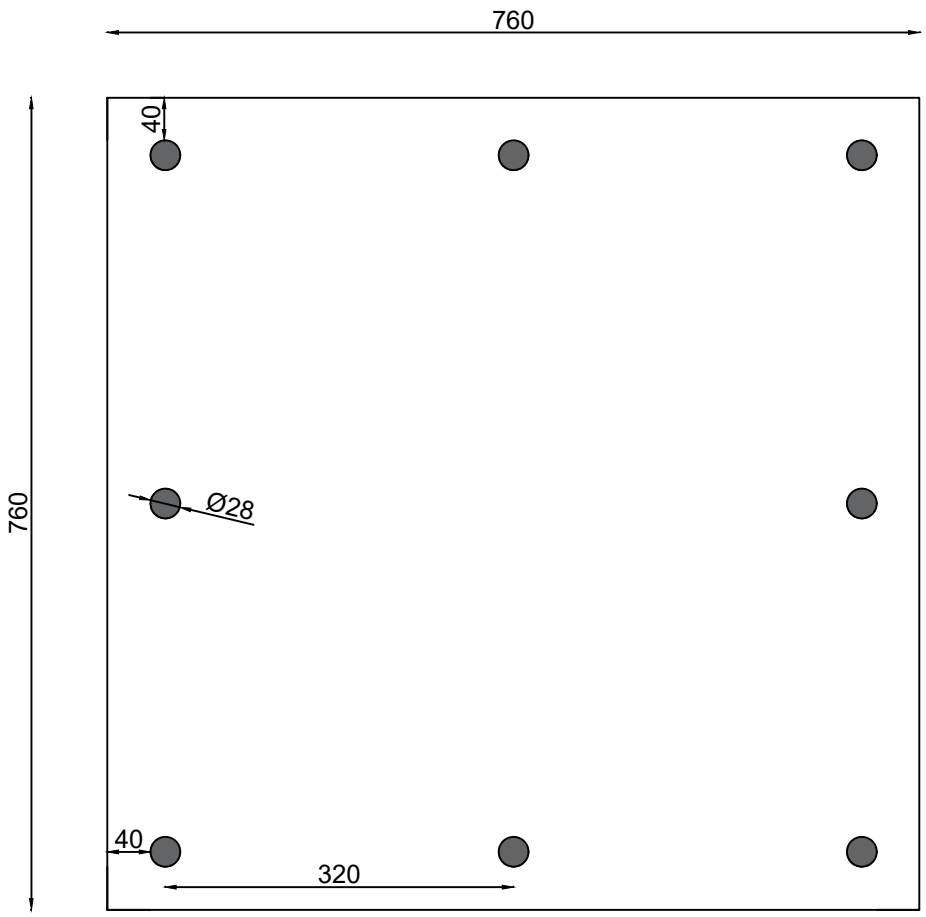


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 0
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	03/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 0 Column Details

Location 121

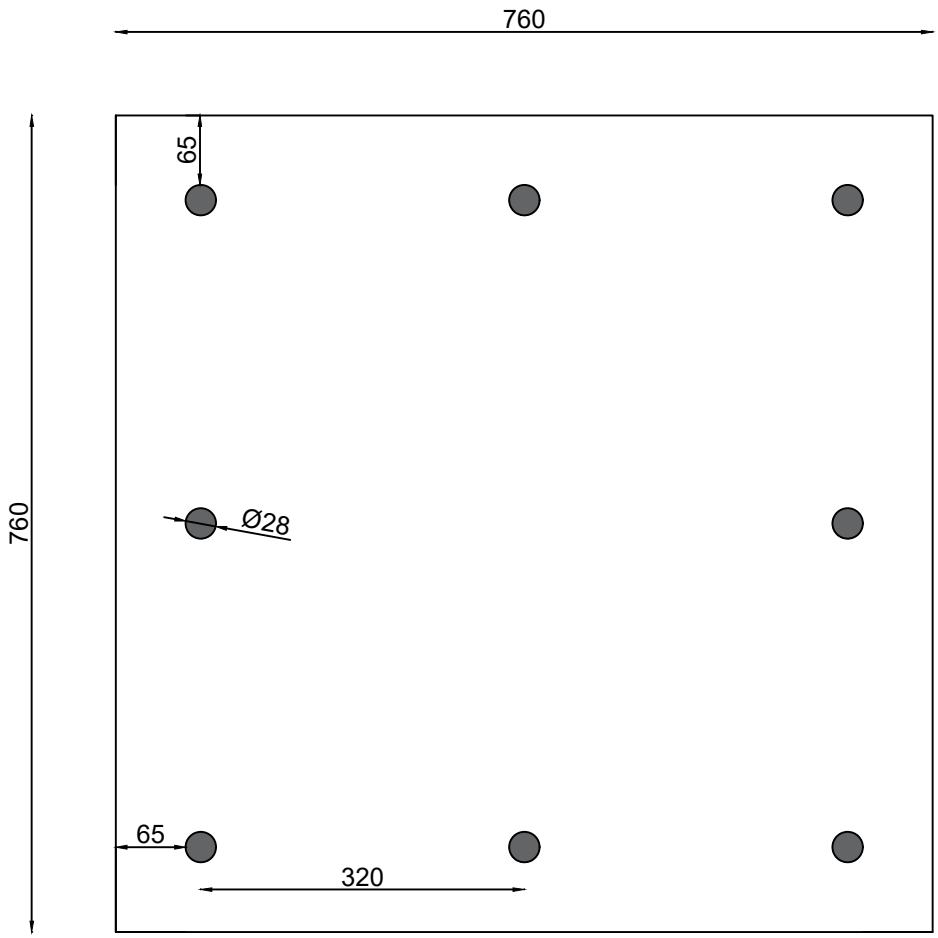


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 0
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	05/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 0 Column Details

Location 131

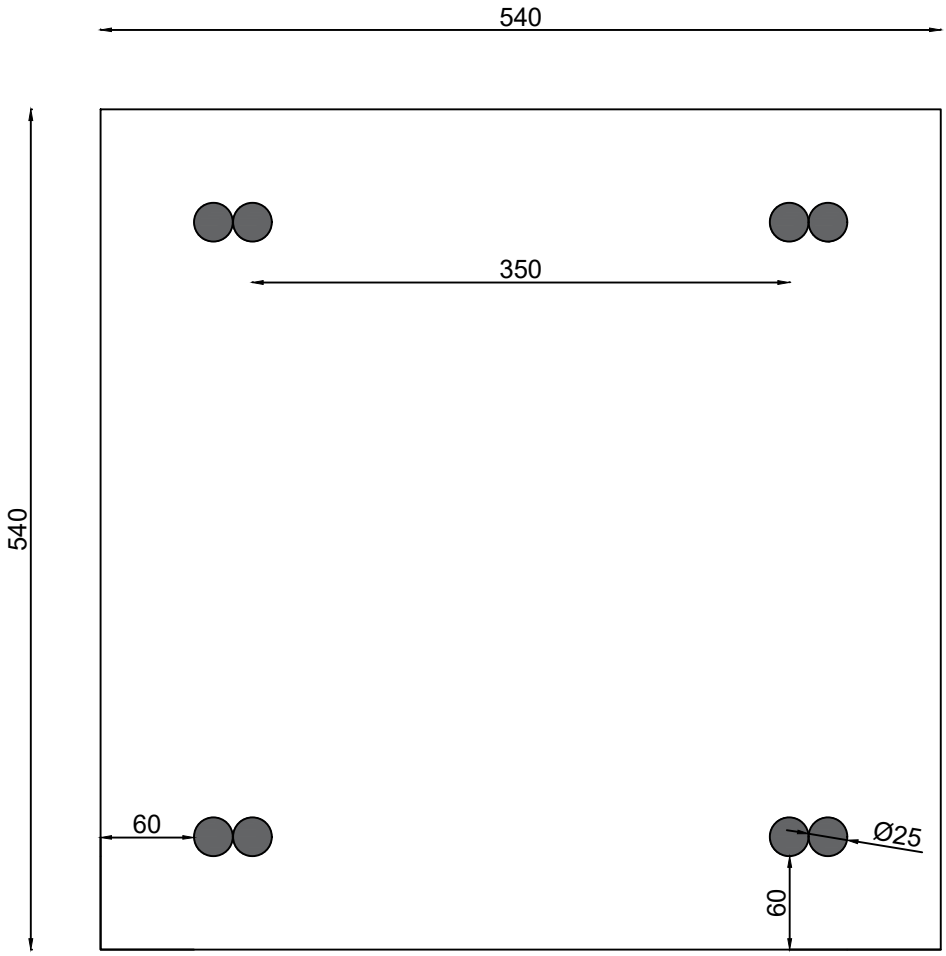


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 0
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	05/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

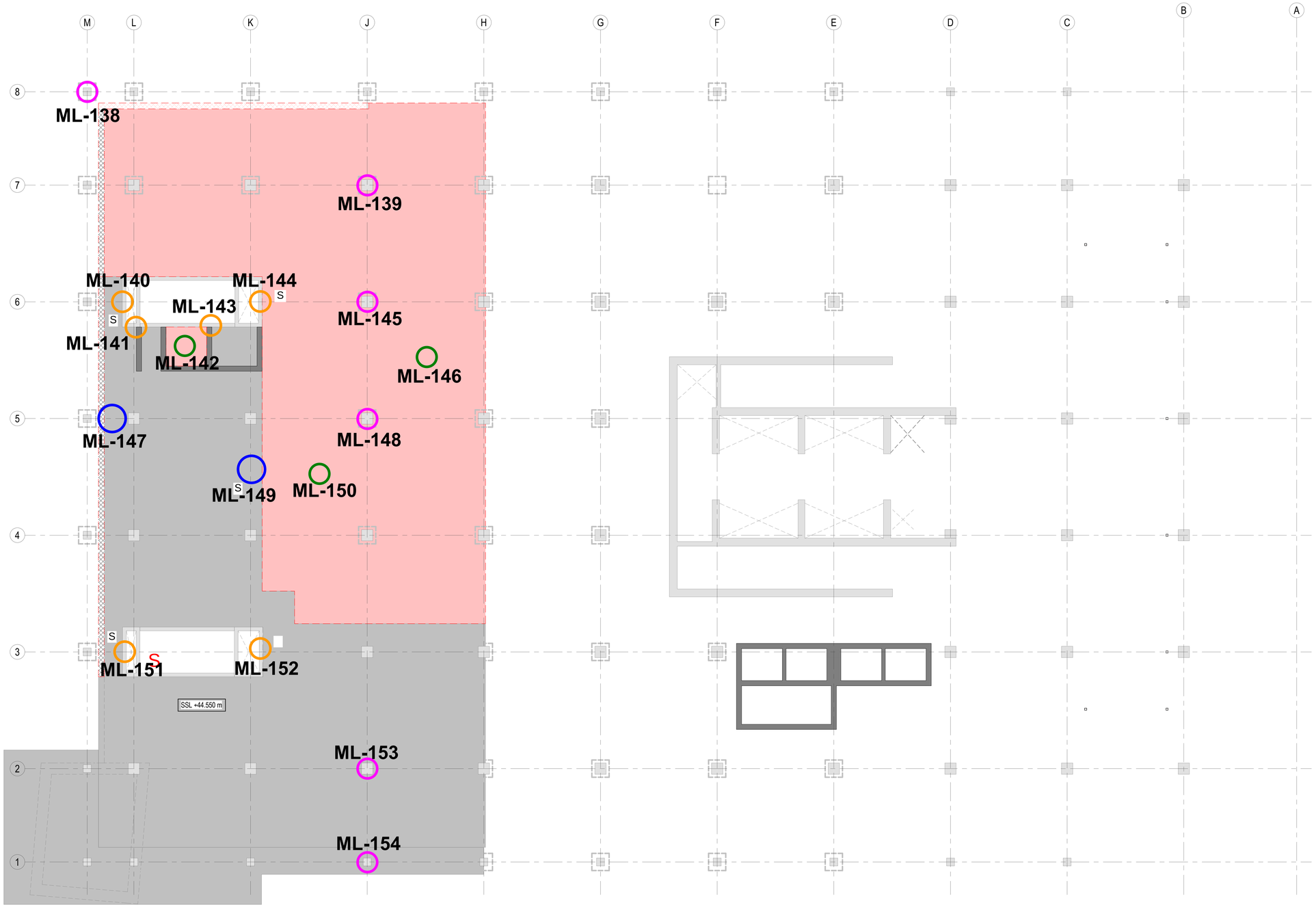
Level 0 Column Details

Location 134



Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

3.6 Mezzanine level



GENERAL NOTES:

CONCRETE COLUMN SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D
Test type at locations noted on plan: T,A,S, CC

CONCRETE WALL SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types Test types to all locations:
C,F,CH,D,CC
Test type at locations noted on plan: T,A,S

CONCRETE BEAM SURVEYS:
HIGHLIGHTED BEAMS ARE BEAMS UNDER

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: T,S,A

CONCRETE SLAB SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed where noted

Confirm slab thickness and build up and determine condition.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A, T

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm reinforcement, cover and concrete grade.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D,S,CC,R
Test type at locations noted on plan:

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm column bearing details and geometry. Provide photographs of bearings.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A,T

STEEL COLUMN SURVEYS:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of concrete encasement, grade, thickness, presence of reinforcement. Confirm reinforcement grade and size.

Test types Test types to all locations: D,F,CH, Steel Verification
Test type at locations noted on plan: T,C

STEEL BEAMS & FINISHES:

Confirm sufficient dimensions of the steel to determine section size and connection details.

Confirm details of of the finishes, material, thickness etc.

Test types to all locations: D,F,CH,C
Test type at locations noted on plan: T,C

CONCRETE SLAB SURVEYS:

Concrete slabs formed in ribs and flat topping.

Identify reinforcement type so grade can be assessed and determine condition of concrete.

Measure all element dimensions, thickness, cover etc.

Test types to all locations: C,F,CH,D,HAC.
Test type at locations noted on plan: CC,S,A, T

Denotes cover meter survey required to precast beams

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS

Rev:	Description:	Date:	By:	Chkd:
P01	UPDATED TO REFLECT STAGE 2 SCHEME	28.07.20	PM	MA

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Status:
STAGE 2

Project:
CIS TOWER REFURBISHMENT

Drg Title:
Mezzanine Level
Survey Scope

Size:	Date:	Drawn By:	Designed By:	Checked By:
A0	27.07.2020	P.M	M.A	M.A

Scale: 1 : 100

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
068327 -	CUR -	00 -	MZ -	DR -	S -	02010 -	P01

Model Name: 068327-CUR-00-ZZ-M3-S18-00001_CENTRAL

Construction Testing Solutions

Client: Bowmer & Kirkland	**Report Ref:** STR454
Site: CIS Tower - Manchester	**Report Date:** 10/09/2021
Location: Level - Mezzanine Level (ML)	**Reported By:** B.Dimbleby

Summary Of Results

Location	Vertical Bar Type	Average Vertical Bar Spacing (mm)	Cover To Vertical Reinforcement (mm)	Horizontal Bar Type	Average Horizontal Bar Spacing (mm)	Cover To Horizontal Reinforcement (mm)	Ferroscan Ref:	Column Type:	Chloride Content % by mass of Sample	Chloride Content % by mass of Cement	Depth of Carbonation (mm)	Rebound Number	Compressive Strength (N/mm2)
Level ML Columns													
ML-138	-	-	-	-	-	-	138	Concrete	0.013	0.10	-	36	44.9
ML-139	32mmØ Smooth	320	45	10mmØ Smooth	300	30	139	Concrete	0.009	0.06	5	44	36.4
ML-145	32mmØ Smooth	300	45	10mmØ Smooth	300	30	145	Concrete	0.010	0.07	<5	44	26.2
ML-148	32mmØ Smooth	320	40	10mmØ Smooth	340	20	148	Concrete	0.008	0.06	<5	48	37.5
ML-153	32mmØ Smooth	310	70	10mmØ Smooth	300	50	153	Concrete	0.011	0.08	5	44	24.9
ML-154	28mmØ Smooth	390	25	10mmØ Smooth	-	15	154	Concrete	0.013	0.10	-	36	16.2
Level ML Core Walls													
ML-140	16mmØ Smooth	300	30	12mmØ Smooth	300	75	140	-	0.013	0.09	5	48	23.8
ML-141	16mmØ Smooth	310	95	12mmØ Smooth	270	75	141	-	0.011	0.08	5	44	-
ML-143	16mmØ Smooth	240	80	12mmØ Smooth	300	60	143	-	0.009	0.06	<5	42	-
ML-144	19mmØ Smooth	300	32	12mmØ Smooth	300	20	144	-	0.007	0.05	<5	42	20.8
ML-151	16mmØ Smooth	270	60	12mmØ Smooth	280	45	151	-	0.010	0.07	5	40	22.7
ML-152	16mmØ Smooth	250	30	12mmØ Smooth	300	10	152	-	0.010	0.07	5	46	21.2

Level ML Slab

Location	Longitudinal Bar Type	Average Longitudinal Bar Spacing (mm)	Cover To Longitudinal Reinforcement (mm)	Transverse Bar Type	Average Transverse Bar Spacing (mm)	Cover To Transverse Reinforcement (mm)	Ferroscan Ref:	Slab Thickness (mm)	Chloride Content % by mass of Sample	Chloride Content % by mass of Cement	Depth of Carbonation (mm)	Rebound Number	Compressive Strength (N/mm2)
ML-142	16mmØ Smooth	-	20	12mmØ Smooth	-	50	142	310	0.012	0.01	5	-	-
ML-146	16mmØ Smooth	-	40	12mmØ Smooth	-	25	146	310	0.016	0.11	5	-	-
ML-150	25mmØ Smooth	-	50	25mmØ Smooth	-	20	150	310	0.020	0.14	5	-	-
Level ML Beams													
ML-147	No Beam in this Location												
ML-149	12mmØ Smooth	290	30	16mmØ Smooth	230	42	149	Concrete	0.015	0.11	5	52	21.5

Comments: * = Bars exposed ** = Four bars in each corner of column with larger spacing in centre of column

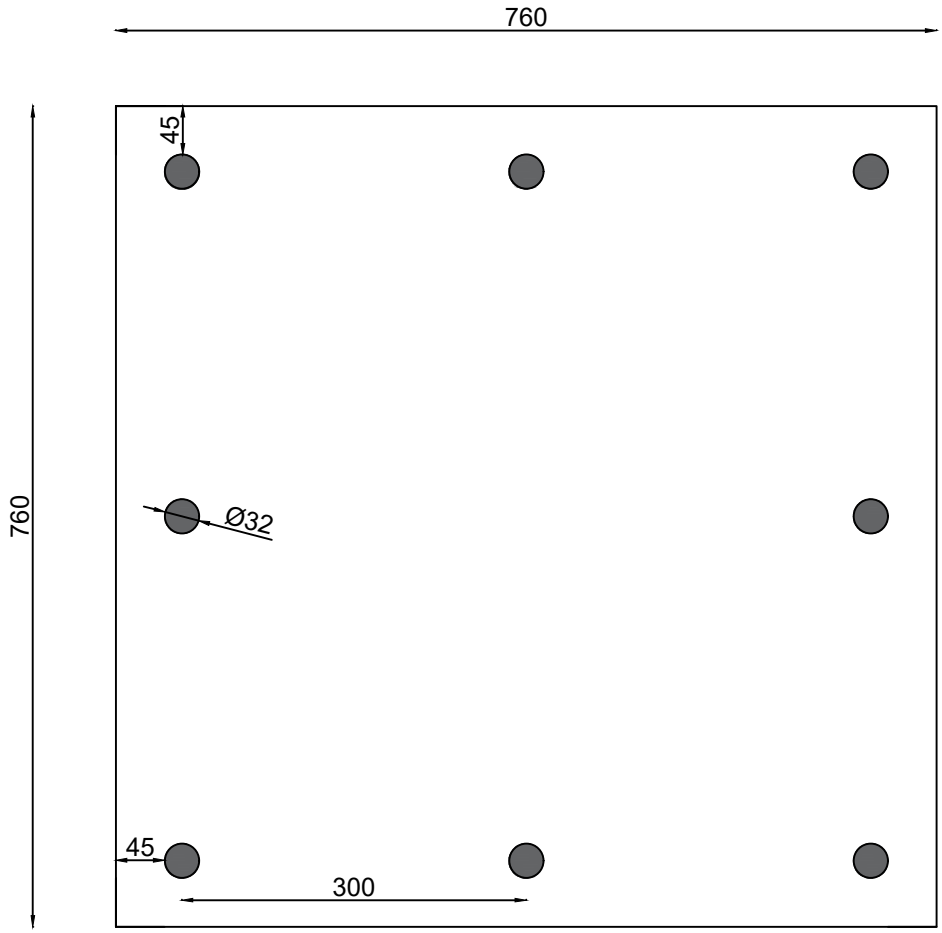
Column & Beam Dimensions - Reinforcement Layout

All beam and column drawings provided on separate sheets

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Mezzaine
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	30/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Mezzaine Column Details

Location 145

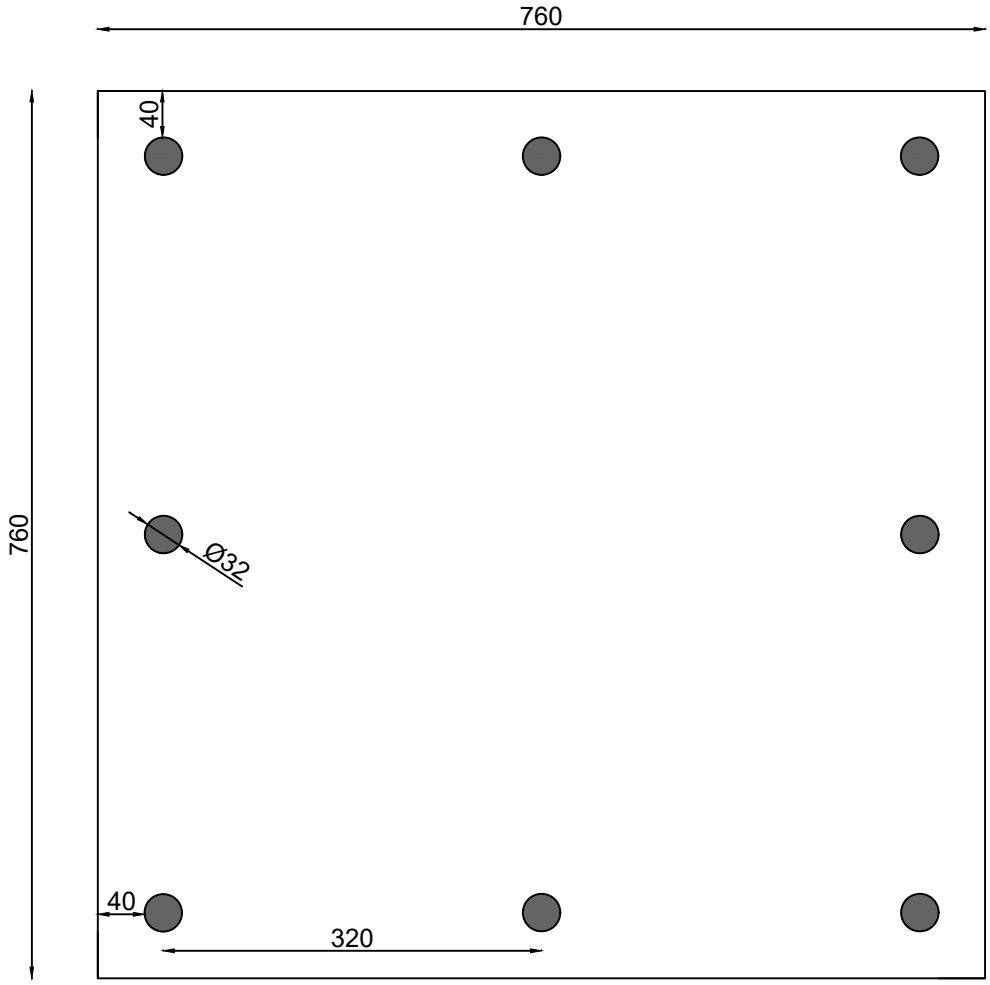


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Mezzaine
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	30/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Mezzaine Column Details

Location 148

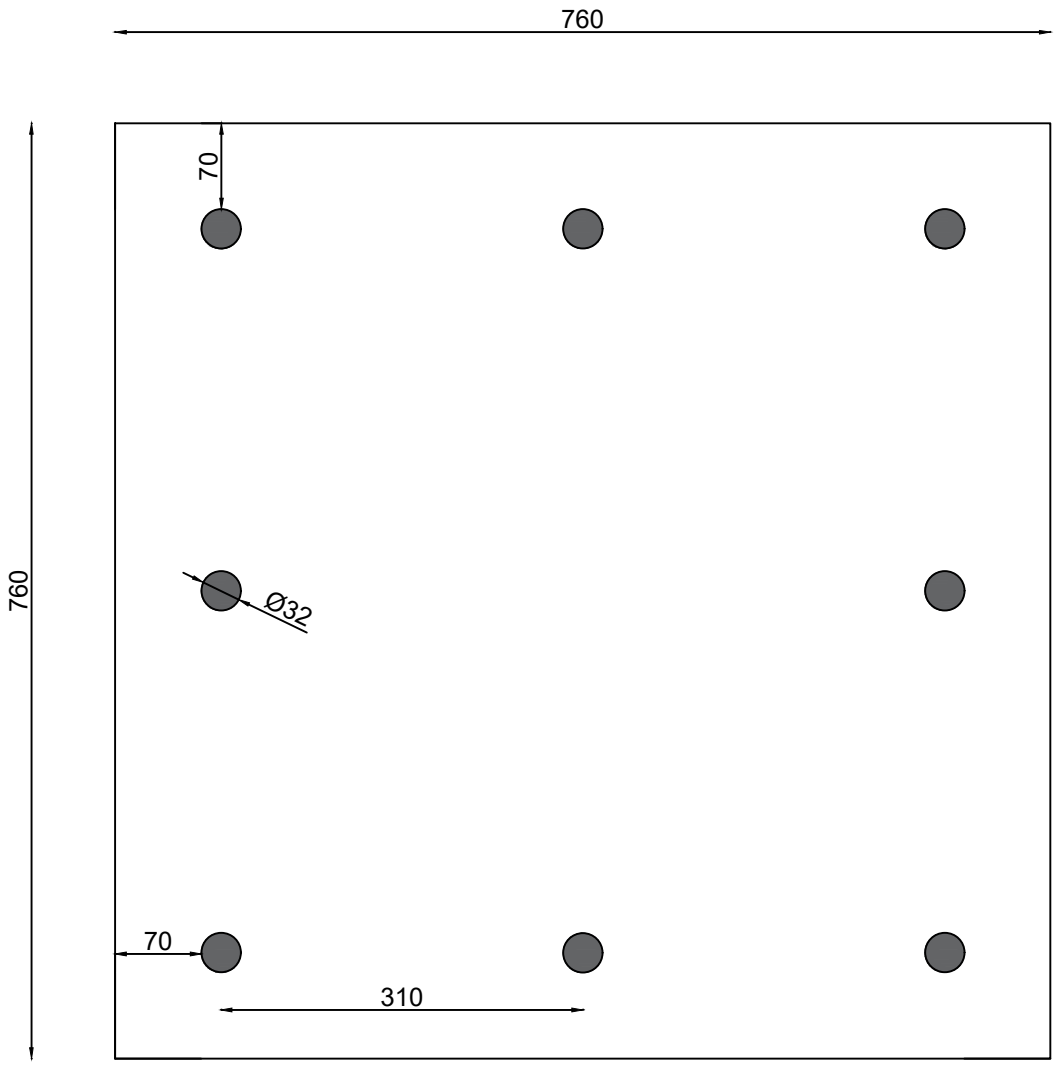


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Mezzaine
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	30/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

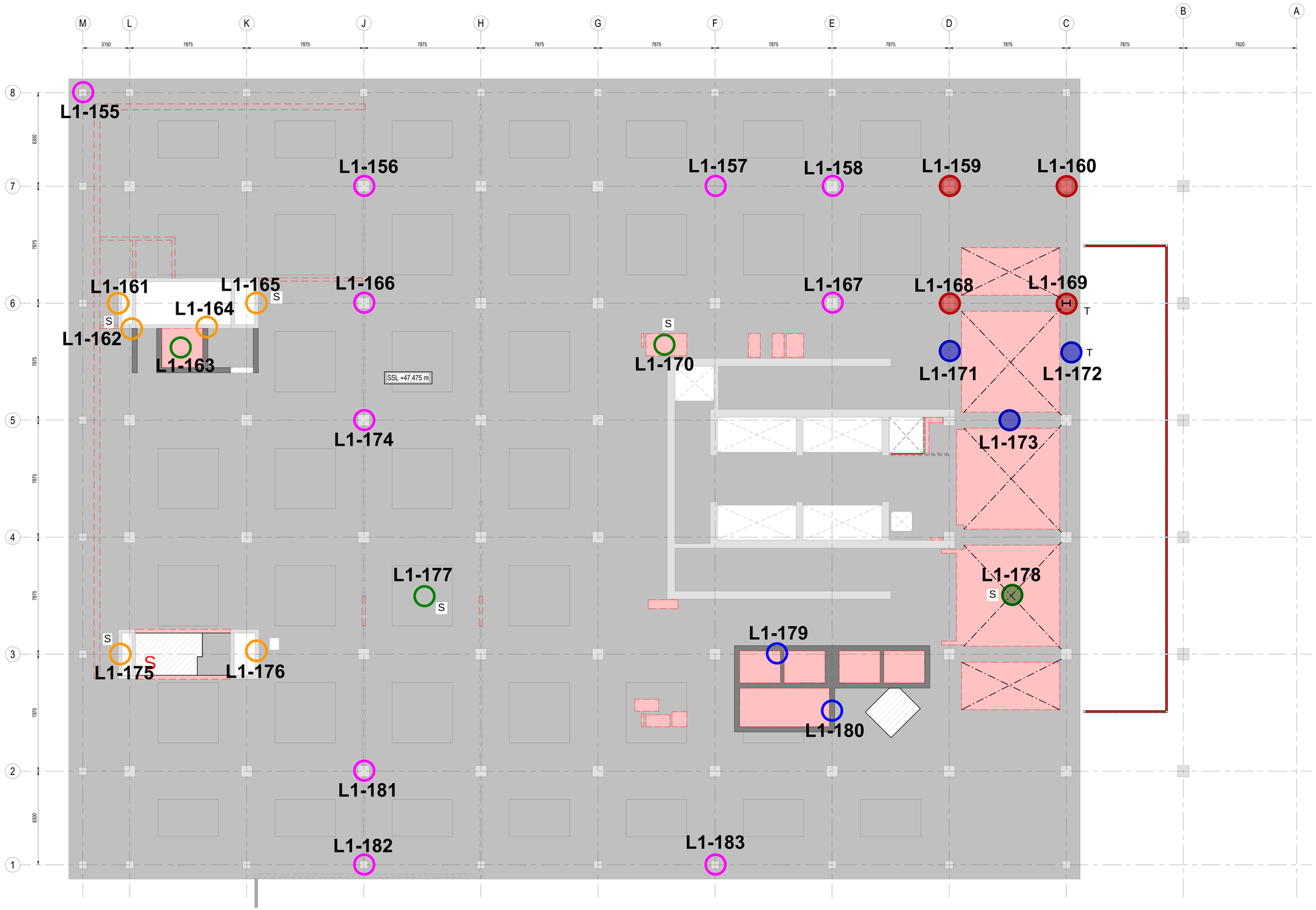
Mezzaine Column Details

Location 153



Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

3.7 Level 1



GENERAL NOTES:

CONCRETE COLUMN SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D
Test type at locations noted on plan: T,A,S, CC

CONCRETE WALL SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types Test types to all locations:
C,F,CH,D,CC
Test type at locations noted on plan: T,A,S

CONCRETE BEAM SURVEYS:
HIGHLIGHTED BEAMS ARE BEAMS UNDER

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: T,S,A

CONCRETE SLAB SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed where noted

Confirm slab thickness and build up and determine condition.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A, T

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm reinforcement, cover and concrete grade.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D,S,CC,R
Test type at locations noted on plan:

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm column bearing details and geometry. Provide photographs of bearings.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A,T

STEEL COLUMN SURVEYS:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of concrete encasement, grade, thickness, presence of reinforcement. Confirm reinforcement grade and size.

Test types Test types to all locations: D,F,CH, Steel Verification
Test type at locations noted on plan: T,C

STEEL BEAMS & FINISHES:

Confirm sufficient dimensions of the steel to determine section size and connection details.

Confirm details of of the finishes, material, thickness etc.

Test types to all locations: D,F,CH,C
Test type at locations noted on plan: T,C

CONCRETE SLAB SURVEYS:

Concrete slabs formed in ribs and flat topping.

Identify reinforcement type so grade can be assessed and determine condition of concrete.

Measure all element dimensions, thickness, cover etc.

Test types to all locations: C,F,CH,D,HAC
Test type at locations noted on plan: CC,S,A, T

Denotes cover meter survey required to precast beams

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS

Rev:	Description:	Date:	By:	Chkd:
P01	UPDATED TO REFLECT STAGE 2 SCHEME	28.07.20	PM	MA

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Birmingham • Bristol • Cambridge • Cardiff • Douglas • Dublin • Edinburgh • Glasgow • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

Status: STAGE 2

Project: CIS TOWER REFURBISHMENT

Drg Title: Level 01 Survey Scope

Size:	Date:	Drawn By:	Designed By:	Checked By:
A0	27.07.2020	P.M	M.A	M.A

Scale: 1 : 100

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
068327 -	CUR -	00 -	01 -	DR -	S -	02101 -	P01

Model Name:068327-CUR-00-ZZ-M3-S-01001_CENTRAL

Construction Testing Solutions

Client: Bowmer & Kirkland	**Report Ref:** STR454
Site: CIS Tower - Manchester	**Report Date:** 10/09/2021
Location: Level L1	**Reported By:** S.Grayson

Summary Of Results

Location	Vertical Bar Type	Average Vertical Bar Spacing (mm)	Cover To Vertical Reinforcement (mm)	Horizontal Bar Type	Average Horizontal Bar Spacing (mm)	Cover To Horizontal Reinforcement (mm)	Ferroscan Ref:	Column Type:	Chloride Content % by mass of Sample	Chloride Content % by mass of Cement	Depth of Carbonation (mm)	Rebound Number
Level L1 Columns												
L1-155	28mmØ Smooth	400	60	10mmØ Smooth	300	45	155	Concrete	0.012	0.08	<5	48
L1-156	28mmØ Smooth	300	60	10mmØ Smooth	300	50	156	Concrete	0.010	0.07	<5	44
L1-157	28mmØ Smooth	300	55	10mmØ Smooth	1000	35	157	Concrete	0.016	0.12	5	48
L1-158	28mmØ Smooth	300	55	10mmØ Smooth	300	40	158	Concrete	0.011	0.08	5	42
L1-159	Steel Column - Dimensions on separate page								0.011	0.08	-	-
L1-160	Steel Column - Dimensions on separate page								0.017	0.12	-	-
L1-166	28mmØ Smooth	310	50	10mmØ Smooth	300	45	166	Concrete	0.010	0.07	5	44
L1-167	28mmØ Smooth	280	40	10mmØ Smooth	320	30	167	Concrete	0.010	0.07	5	44
L1-168	Steel Column - Dimensions on separate page								0.008	0.06	-	-
L1-169	Steel Column - Dimensions on separate page								0.009	0.06	-	-
L1-174	28mmØ Smooth	300	80	10mmØ Smooth	300	65	174	Concrete	0.011	0.08	<5	44
L1-181	28mmØ Smooth	320	75	10mmØ Smooth	310	60	181	Concrete	0.011	0.08	5	38
L1-182	28mmØ Smooth	420	40	10mmØ Smooth	300	30	182	Concrete	0.009	0.06	<5	44
L1-183	28mmØ Smooth	400	60	2 x 10mmØ Smooth	300	50	183	Concrete	0.008	0.06	<5	40
Level L1 Core Walls												
L1-161	16mmØ Smooth	300	20	12mmØ Smooth	300	10	161		0.010	0.07	5	42
L1-162	16mmØ Smooth	320	60	12mmØ Smooth	300	45	162		0.013	0.09	<5	-
L1-164	19mmØ Smooth	230	90	12mmØ Smooth	300	75	164		0.009	0.07	5	-
L1-165	16mmØ Smooth	150	80	12mmØ Smooth	300	60	165		0.009	0.06	5	48
L1-175	19mmØ Smooth	450	30	16mmØ Smooth	400	10	175		0.009	0.07	<5	42
L1-176	19mmØ Smooth	300	55	16mmØ Smooth	380	40	176		0.011	0.08	<5	44

Level L1 Slab

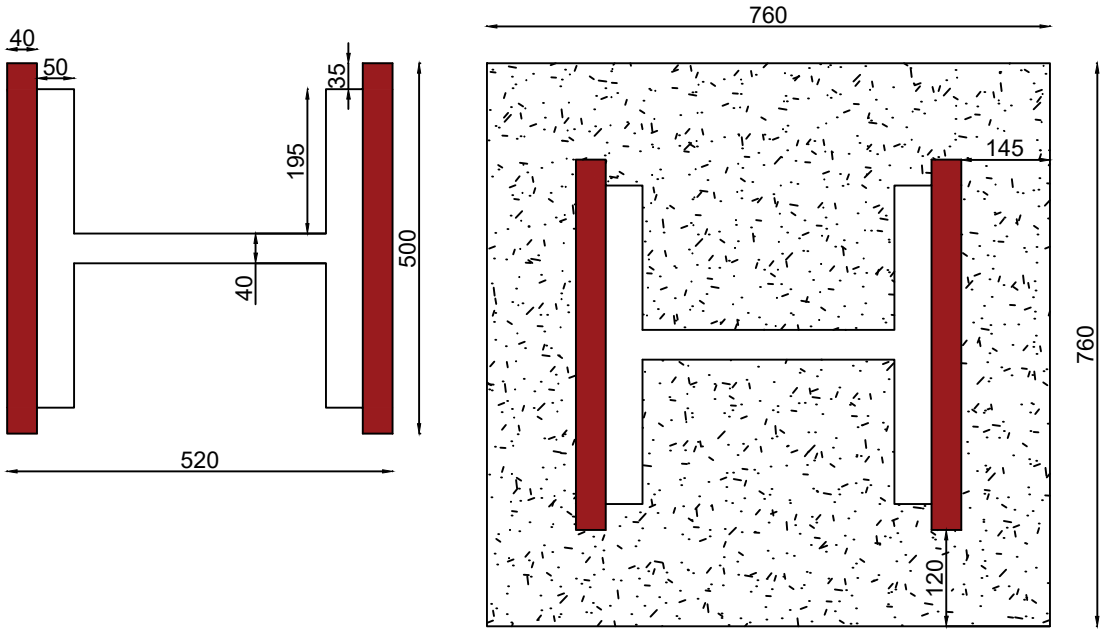
Location	Longitudinal Bar Type	Average Longitudinal Bar Spacing (mm)	Cover To Longitudinal Reinforcement (mm)	Transverse Bar Type	Average Transverse Bar Spacing (mm)	Cover To Transverse Reinforcement (mm)	Ferroscan Ref:	Slab Thickness (mm)	Chloride Content % by mass of Sample	Chloride Content % by mass of Cement	Depth of Carbonation (mm)	Rebound Number
L1-163	16mmØ Smooth	-	80	12mmØ Smooth	-	94	163	315	0.007	0.05	5	-
L1-170	16mmØ Smooth	380	50	12mmØ Smooth	44	40	170	250	0.012	0.09	5	42
L1-177	16mmØ Smooth	-	90	12mmØ Smooth	-	102	177	330	0.008	0.06	5	40
L1-178	6mmØ Smooth	-	65	6mmØ Smooth	-	70	178	105	0.008	0.06	5	42
Level L1 Beams												
L1-179	Listed Lobby Area											
L1-180	Listed Lobby Area											
L1-171	Steel Beam - Dimensions on separate page											
L1-172	Listed area - Unable to survey											
L1-173	Listed area - Unable to survey											

Comments:	Slab has 75mm screed over it. HAC sample was shown as negative
Column & Beam Dimensions - Reinforcement Layout	
All beam and column drawings are provided on separate sheets	

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 1
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 16/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 1 Beam Details

Location 159

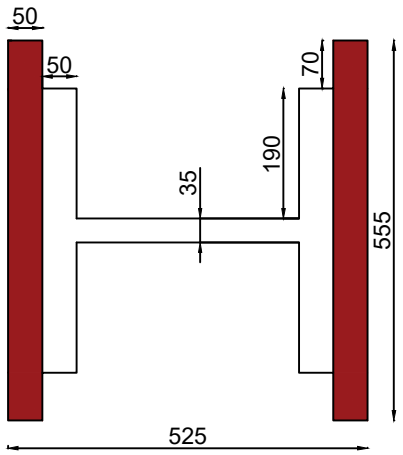


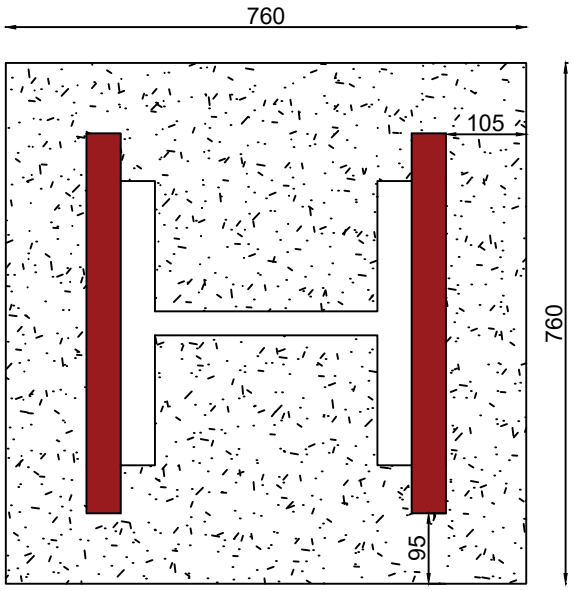
Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 1
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 16/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 1 Beam Details

Location 160



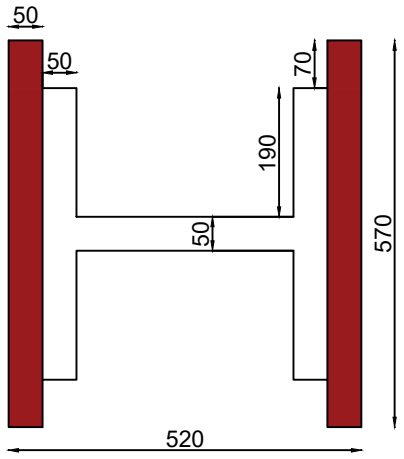


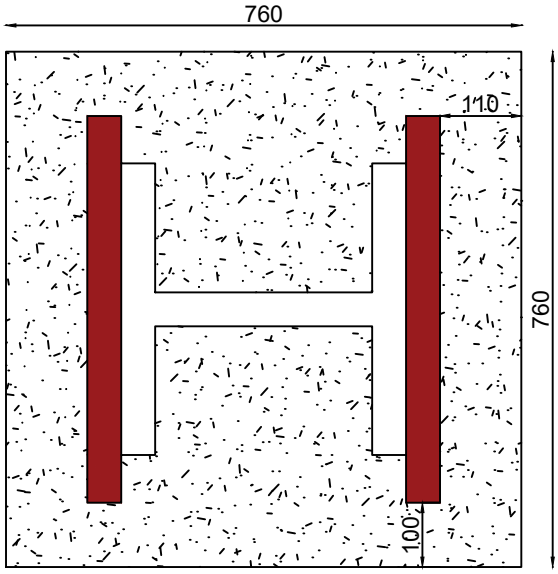
Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 1
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 16/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 1 Beam Details

Location 168



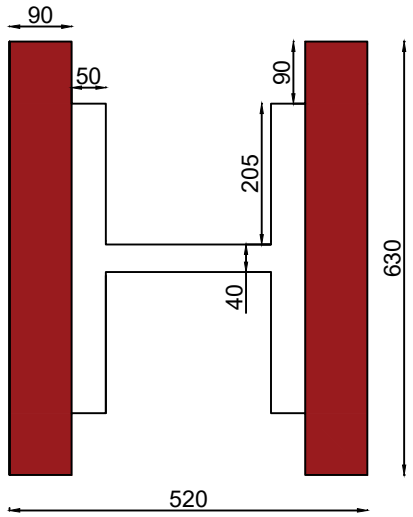


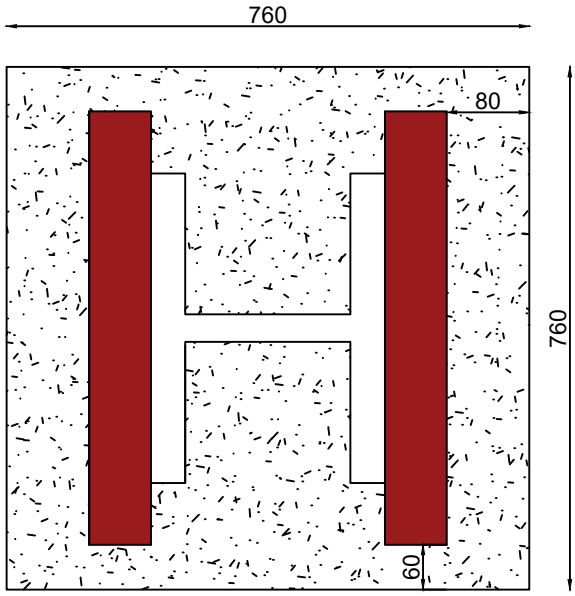
Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 1
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 16/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 1 Beam Details

Location 169



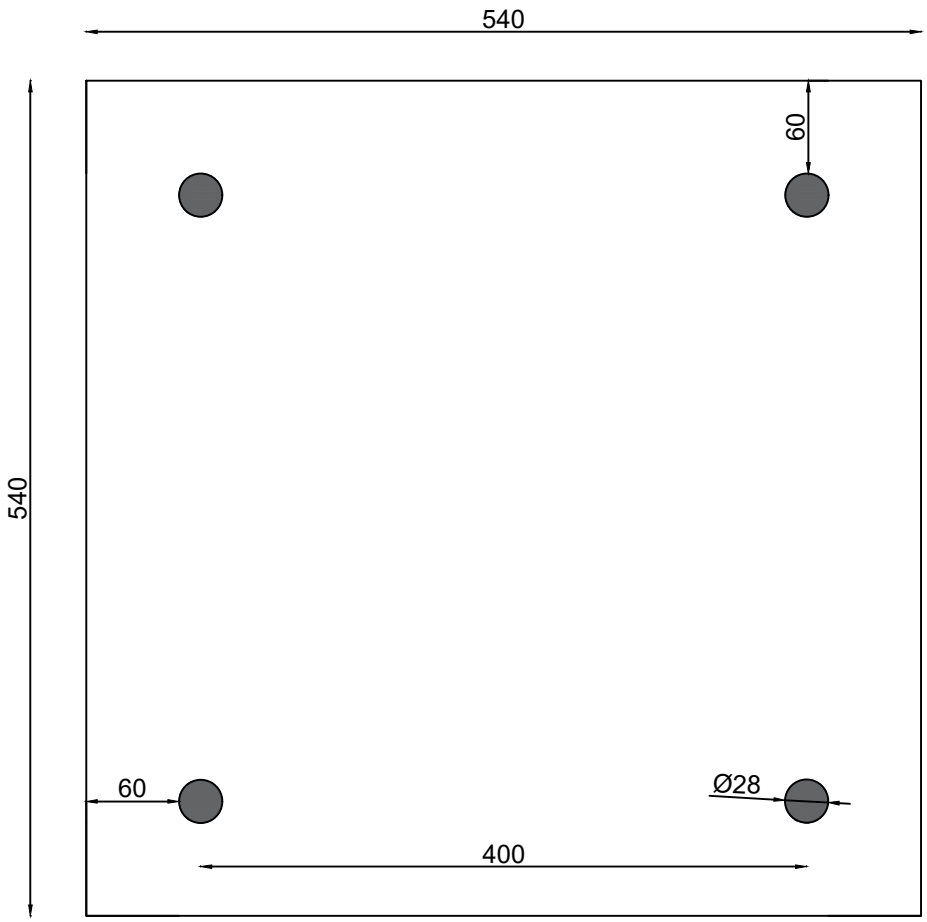


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 1
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 11/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 1 Column Details

Location 155

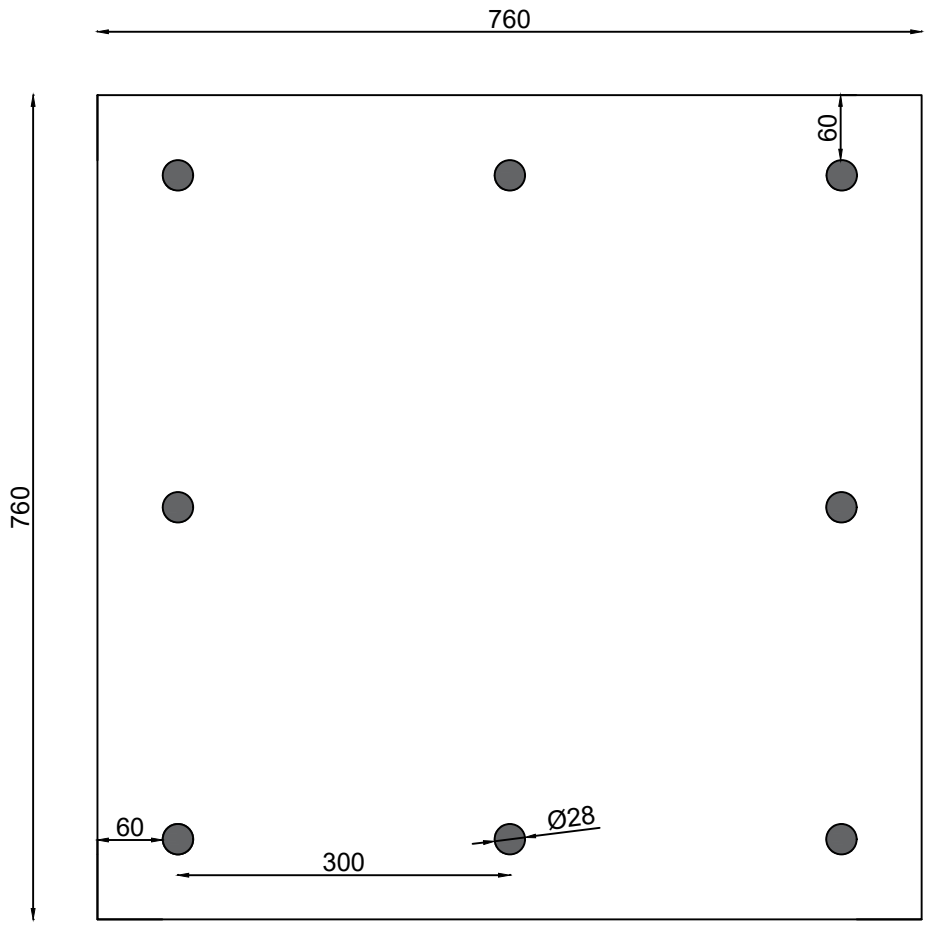


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 1
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 11/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 1 Column Details

Location 156

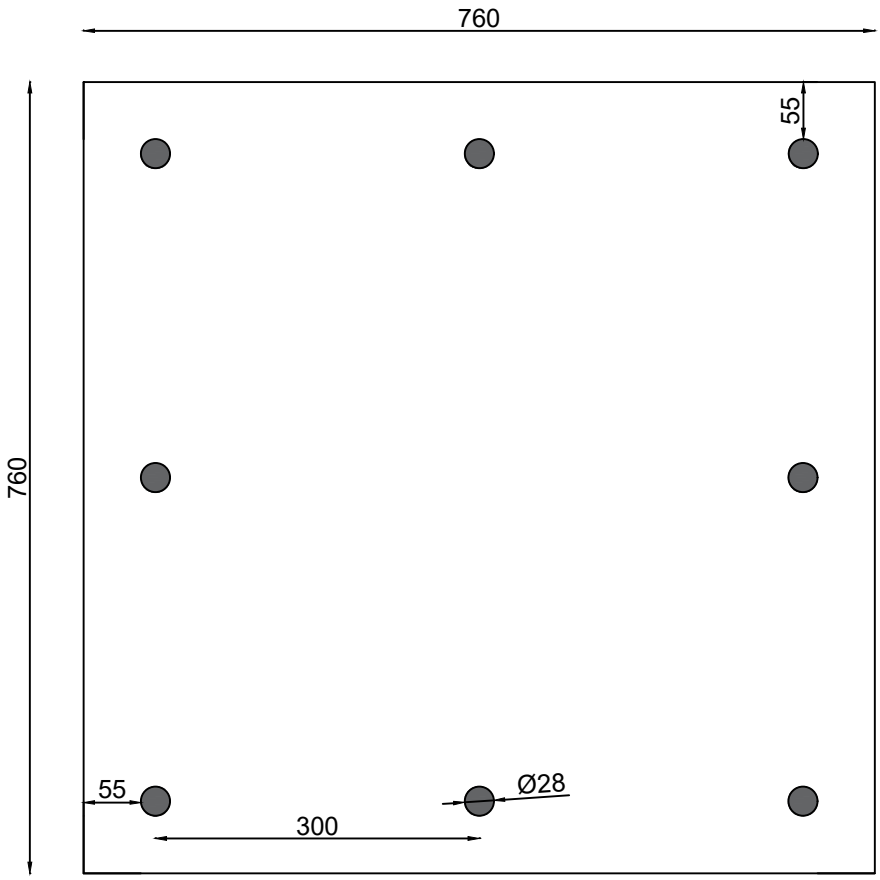


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 1
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 12/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 1 Column Details

Location 157

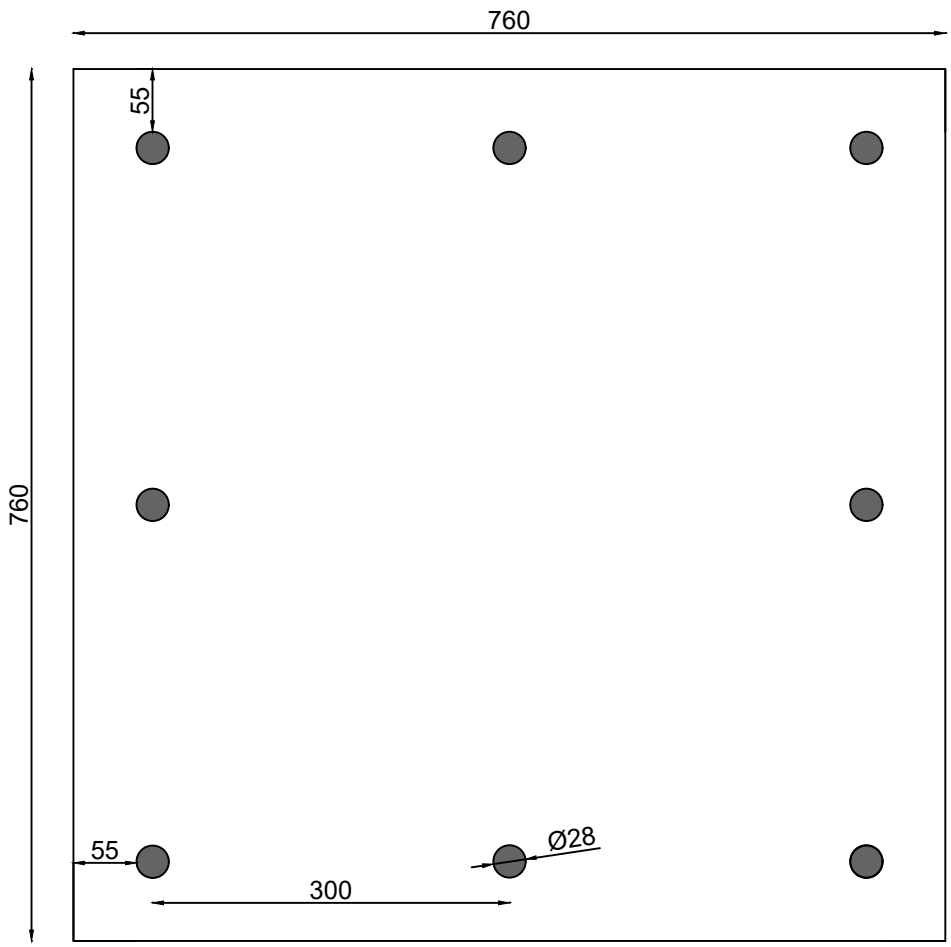


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 1
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 12/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 1 Column Details

Location 158

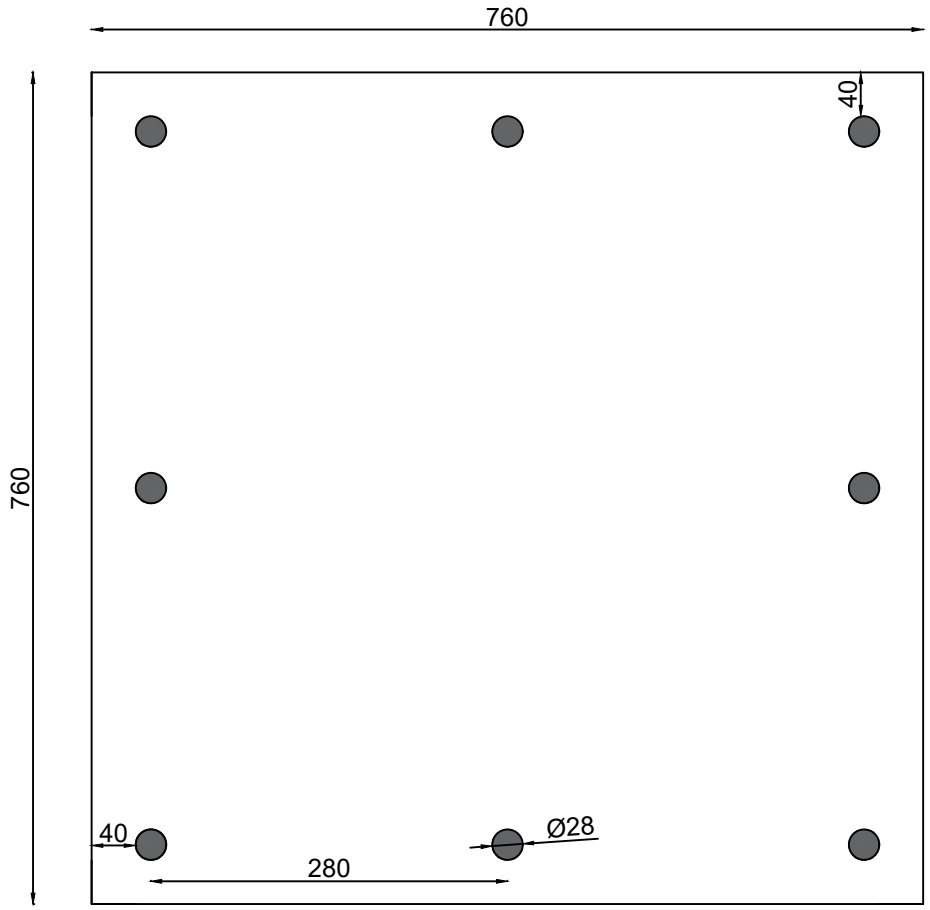


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 1
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 12/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 1 Column Details

Location 167

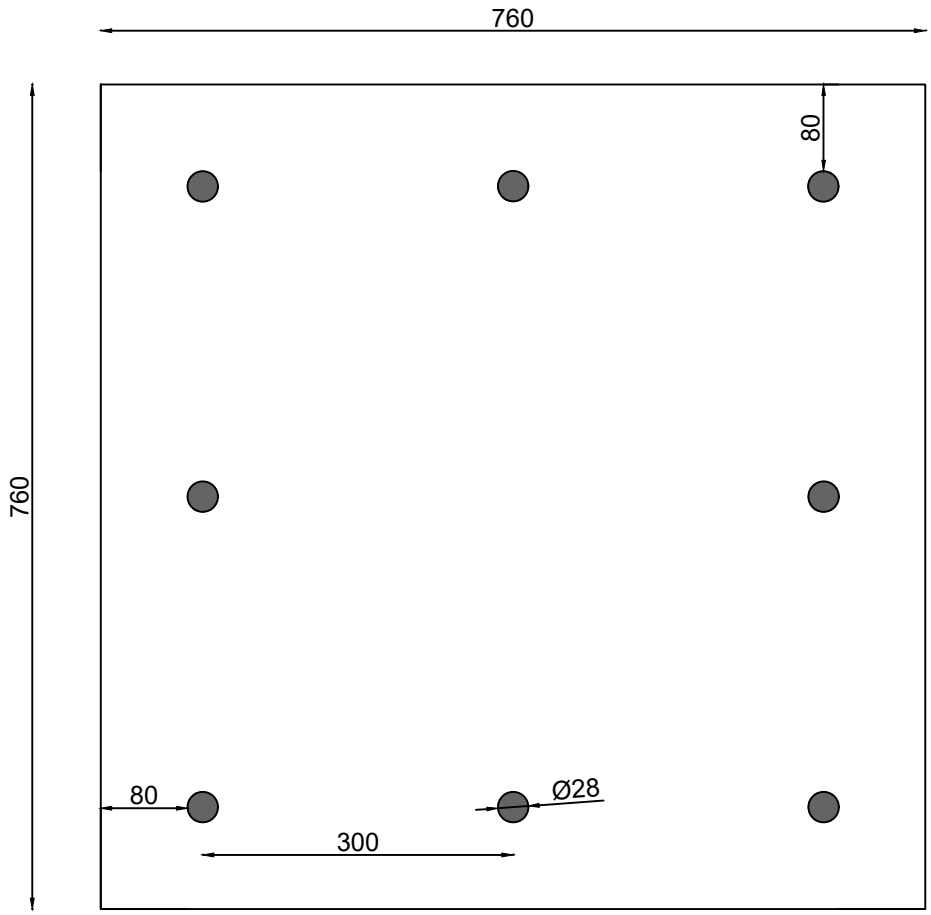


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 1
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 11/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 1 Column Details

Location 174

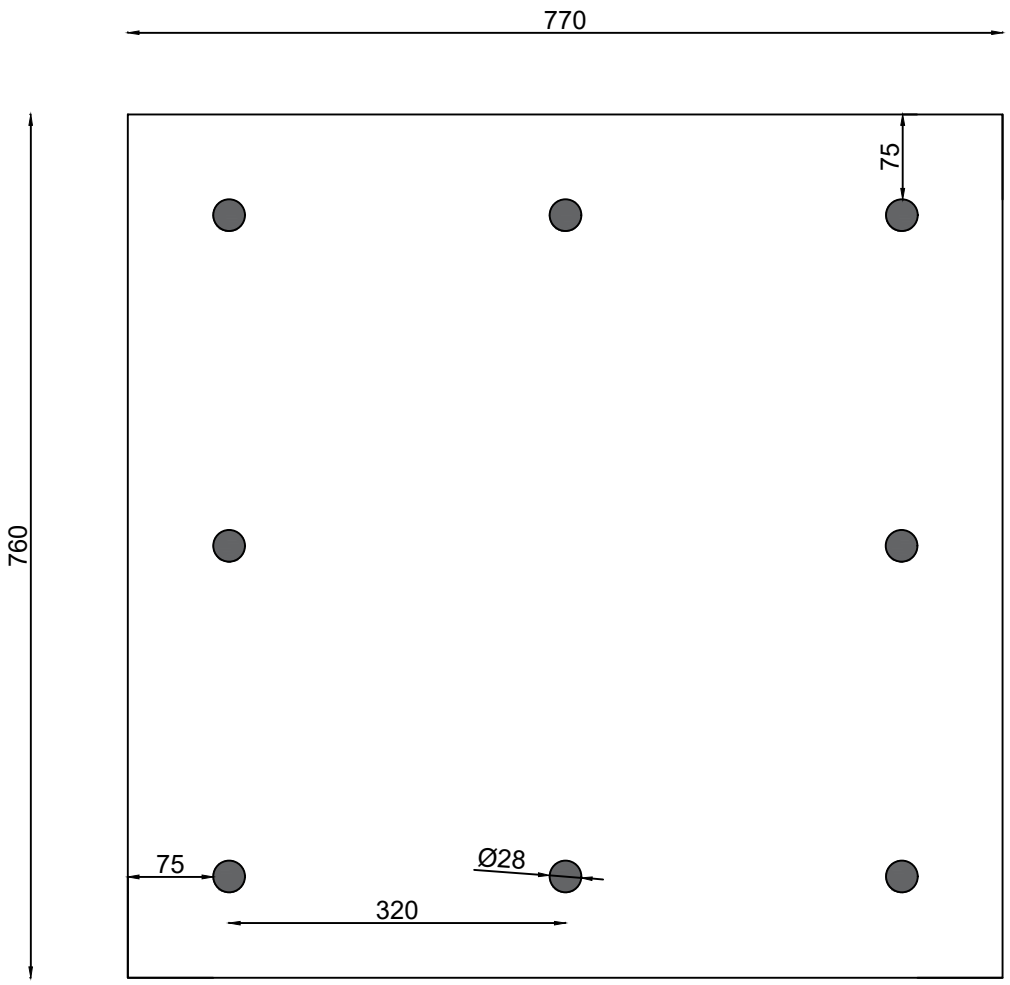


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 1
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 11/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 1 Column Details

Location 181

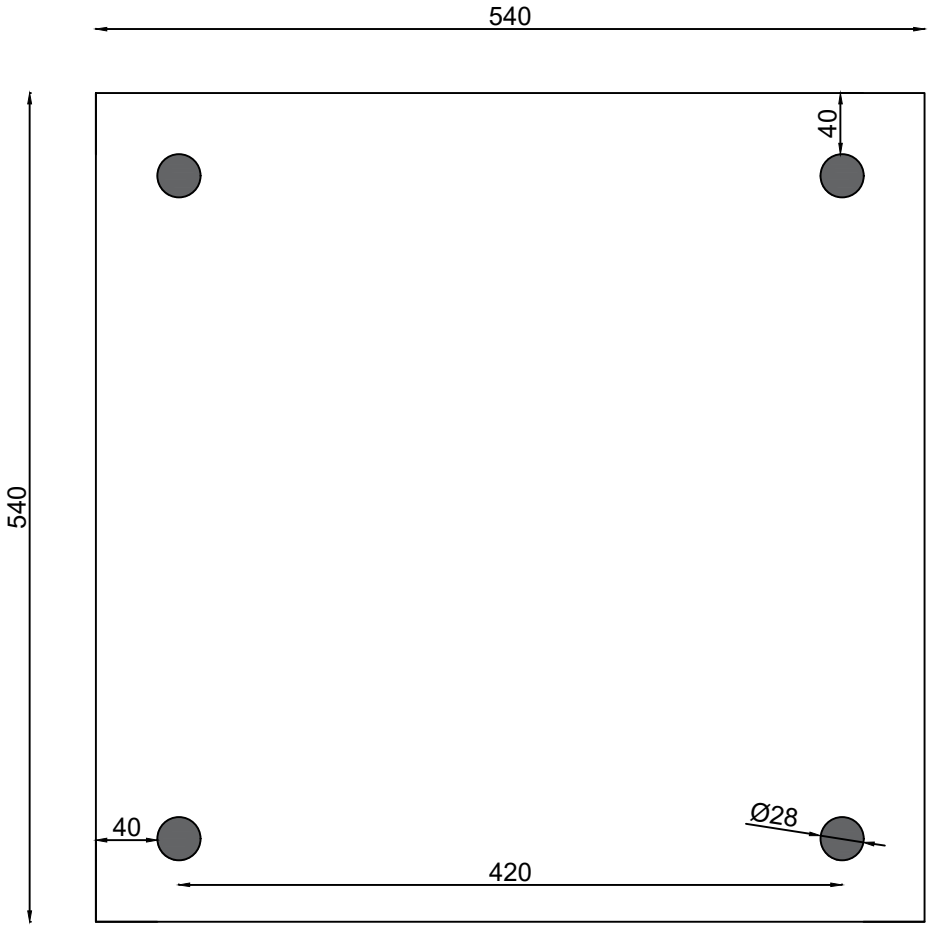


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 1
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 11/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 1 Column Details

Location 182

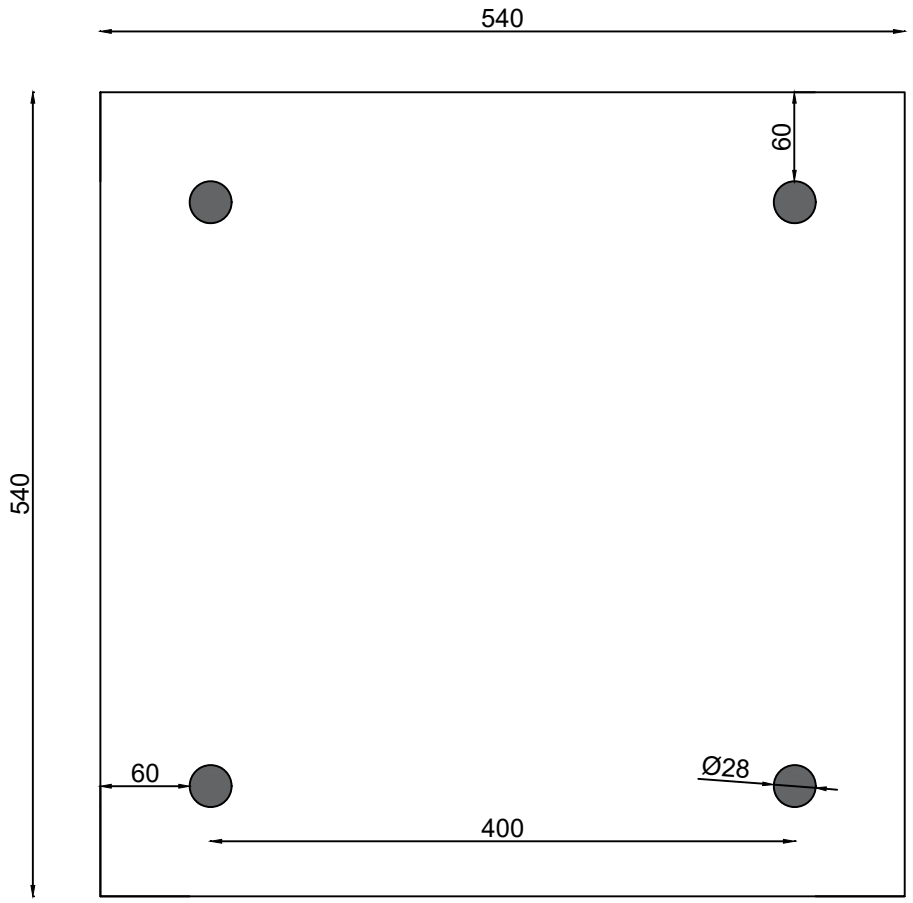


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 1
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 11/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

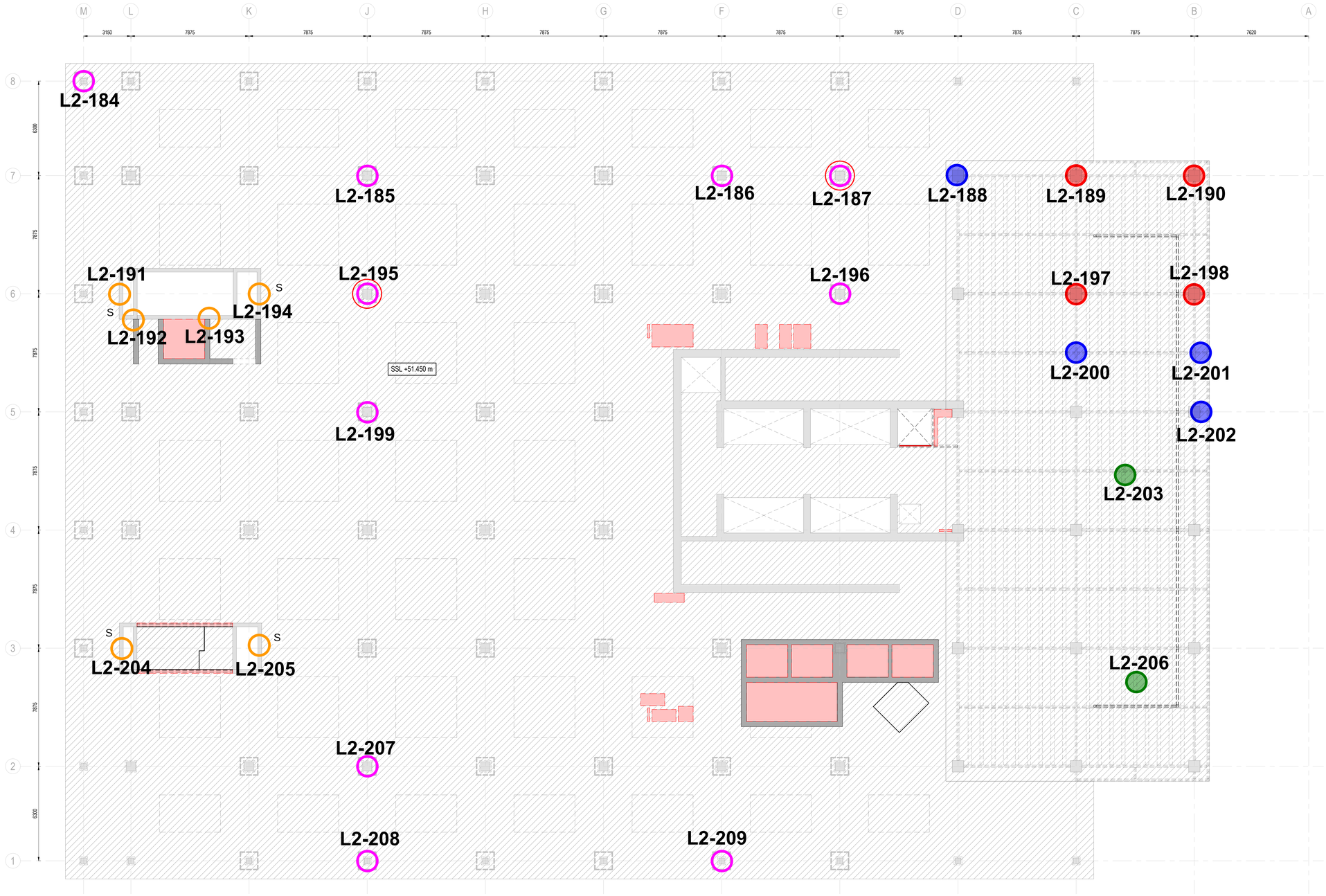
Level 1 Column Details

Location 183



Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

3.8 Level 2



GENERAL NOTES:

CONCRETE COLUMN SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D
Test type at locations noted on plan: T,A,S, CC

CONCRETE WALL SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types Test types to all locations:
C,F,CH,D,CC
Test type at locations noted on plan: T,A,S

CONCRETE BEAM SURVEYS: HIGHLIGHTED BEAMS ARE BEAMS UNDER

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: T,S,A

CONCRETE SLAB SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed where noted

Confirm slab thickness and build up and determine condition.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A, T

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm reinforcement, cover and concrete grade.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D,S,CC,R
Test type at locations noted on plan:

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm column bearing details and geometry. Provide photographs of bearings.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A,T

STEEL COLUMN SURVEYS:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of concrete encasement, grade, thickness, presence of reinforcement. Confirm reinforcement grade and size.

Test types Test types to all locations: D,F,CH, Steel Verification
Test type at locations noted on plan: T,C

STEEL BEAMS & FINISHES:

Confirm sufficient dimensions of the steel to determine section size and connection details.

Confirm details of of the finishes, material, thickness etc.

Test types to all locations: D,F,CH,C
Test type at locations noted on plan: T,C

CONCRETE SLAB SURVEYS:

Concrete slabs formed in ribs and flat topping.

Identify reinforcement type so grade can be assessed and determine condition of concrete.

Measure all element dimensions, thickness, cover etc.

Test types to all locations: C,F,CH,D,HAC
Test type at locations noted on plan: CC,S,A, T

Denotes cover meter survey required to precast beams

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS

Rev:	Description:	Date:	By:	Chkd:
P01	UPDATED TO REFLECT STAGE 2 SCHEME	28.07.20	PM	MA

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Civils & Structures • Transport Planning • Environmental • Infrastructure • Geotechnical • Conservation & Heritage • Principal Designer
Birmingham • Bristol • Cambridge • Cardiff • Douglas • Dublin • Edinburgh • Glasgow • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

Status: STAGE 2

Project: CIS TOWER REFURBISHMENT

Drg Title: Level 02 Survey Scope

Size:	Date:	Drawn By:	Designed By:	Checked By:
A0	27.07.2020	P.M	M.A	M.A

Scale: 1 : 100

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
068327 -	CUR -	00 -	02 -	DR -	S -	02102 -	P01

Model Name: 068327-CUR-00-ZZ-M3-S18-00001_CENTRAL

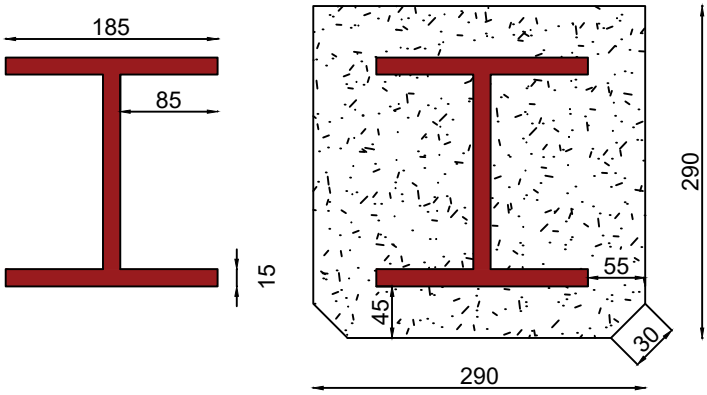
Construction Testing Solutions

		Client: Bowmer & Kirkland					**Report Ref:**	STR454					
		Site: CIS Tower - Manchester					**Report Date:**	10/09/2021					
		Location: Level L2					**Reported By:**	S.Grayson					
		Summary Of Results							**Chloride Content % by mass of**		**Depth of Carbonation (mm)**	**Rebound Number**	**Compressive Strength (N/mm2)**
Location	**Vertical Bar Type**	**Average Vertical Bar Spacing (mm)**	**Cover To Vertical Reinforcement (mm)**	**Horizontal Bar Type**	**Average Horizontal Bar Spacing (mm)**	**Cover To Horizontal Reinforcement (mm)**	**Ferroscan Ref:**	**Column Type:**	**Sample**	**Cement**			
Level L2 Columns													
L2-184	28mmØ Smooth	235	50	10mmØ Smooth	320	35	184	Concrete	0.008	0.06	5	42	16.9
L2-185	28mmØ Smooth	230	35	10mmØ Smooth	450	25	185	Concrete	0.006	0.05	<5	50	23.6
L2-186	28mmØ Smooth	220	70	10mmØ Smooth	280	55	186	Concrete	0.006	0.04	<5	40	16.7
L2-187	28mmØ Smooth	210	65	10mmØ Smooth	350	50	187	Concrete	-	-	<5	42	19.0
L2-189	Surveys completed in 2019 at this location												
L2-190	Surveys completed in 2019 at this location												
L2-195	28mmØ Smooth	235	60	10mmØ Smooth	400	30	195	Concrete	0.008	0.06	<5	48	28.1
L2-196	28mmØ Smooth	220	45	10mmØ Smooth	280	30	196	Concrete	0.008	0.06	<5	48	27.2
L2-197	Steel Column - Drawings on separate page								0.007	0.05	-	-	-
L2-198	Steel Column - Drawings on separate page								0.006	0.04	-	-	-
L2-199	28mmØ Smooth	220	60	10mmØ Smooth	310	48	199	Concrete	0.008	0.05	<5	48	19.7
L2-207	28mmØ Smooth	230	53	10mmØ Smooth	300	20	207	Concrete	0.008	0.05	<5	48	21.5
L2-208	28mmØ Smooth	250	30	6mmØ Smooth	200	28	208	Concrete	0.010	0.07	<5	50	23.5
L2-209	28mmØ Smooth	270	30	10mmØ Smooth	250	20	209	Concrete	0.010	0.07	5	32	24.1
Level L2 Core Walls													
L2-191	12mmØ Smooth	270	40	10mmØ Smooth	300	25	191		0.008	0.06	5	42	24.0
L2-192	12mmØ Smooth	230	40	10mmØ Smooth	300	20	192		0.007	0.05	<5	-	-
L2-193	12mmØ Smooth	230	65	10mmØ Smooth	320	52	193		0.012	0.08	<5	-	-
L2-194	12mmØ Smooth	300	50	10mmØ Smooth	330	44	194		0.009	0.07	5	48	25.5
L2-204	16mmØ Smooth	350	45	10mmØ Smooth	320	30	204		0.008	0.06	<5	36	16.8
L2-205	16mmØ Smooth	300	55	10mmØ Smooth	310	35	205		0.008	0.05	<5	42	20.4
Level L2 Slab													
Location	**Longitudinal Bar Type**	**Average Longitudinal Bar Spacing (mm)**	**Cover To Longitudinal Reinforcement (mm)**	**Transverse Bar Type**	**Average Transverse Bar Spacing (mm)**	**Cover To Transverse Reinforcement (mm)**	**Ferroscan Ref:**	**Slab Thickness (mm)**	**Chloride Content % by mass of**		**Depth of Carbonation (mm)**	**Rebound Hammer**	**Compressive Strength (N/mm2)**
									Sample	**Cement**			
L2-203	6mmØ Smooth	-	70	6mmØ Smooth	-	60	203	250	0.009	0.07	5	-	-
L2-206	6mmØ Smooth	-	70	6mmØ Smooth	-	60	206	250	0.011	0.08	<5	-	-
Level L2 Beams													
L2-188	Steel Beam - Drawings on separate page								0.009	0.07	-	-	-
L2-200	Not completed - No access during visit								-	-	-	-	-
L2-201	External beam - inaccessible location								-	-	-	-	-
L2-202	External beam - inaccessible location								-	-	-	-	-
Comments:	Floor slab had 70mm screed over concrete. HAC results reported as Negative												
Column & Beam Dimensions - Reinforcement Layout													
All beam and column drawings provided on separate sheets													

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 2
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 18/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 2 Beam Details

Location 188



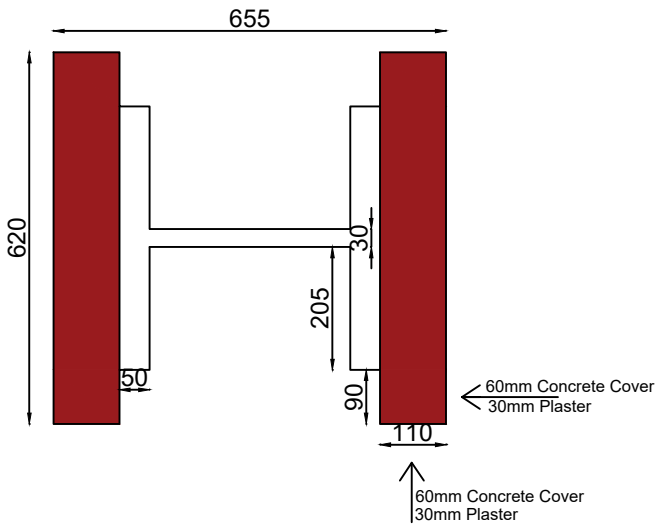
Unable to find the top of the beam due to access.
Same with the column connection

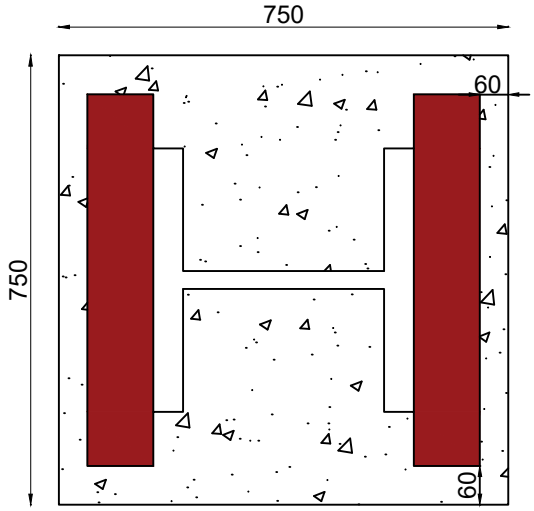
Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 2
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 21/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 2 Column Details

Location 197



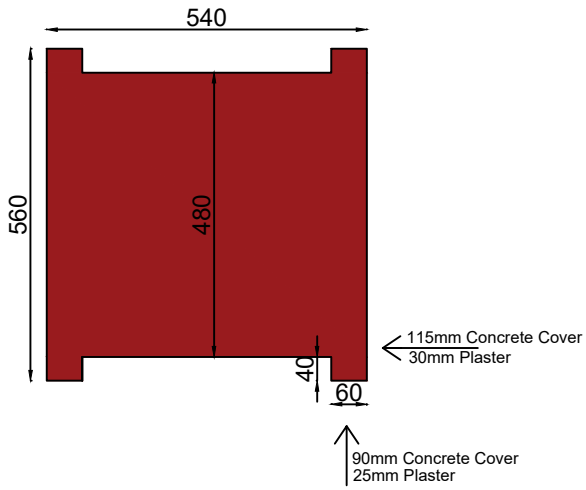


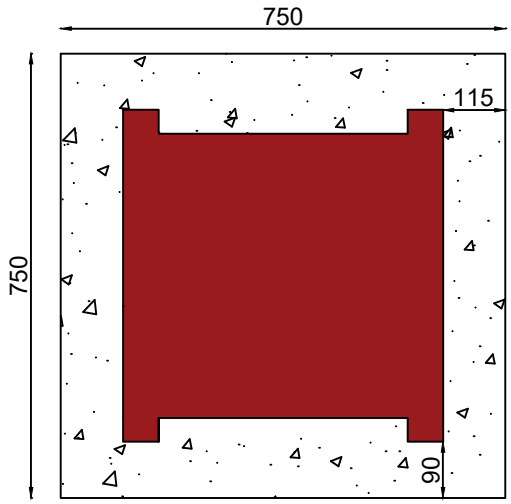
Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 2
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 21/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 2 Column Details

Location 198





Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

3.9 Level 3

GENERAL NOTES:

CONCRETE COLUMN SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D
Test type at locations noted on plan: T,A,S, CC

CONCRETE WALL SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types Test types to all locations:
C,F,CH,D,CC
Test type at locations noted on plan: T,A,S

CONCRETE BEAM SURVEYS:
HIGHLIGHTED BEAMS ARE BEAMS UNDER

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: T,S,A

CONCRETE SLAB SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed where noted

Confirm slab thickness and build up and determine condition.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A, T

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm reinforcement, cover and concrete grade.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D,S,CC,R
Test type at locations noted on plan:

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm column bearing details and geometry. Provide photographs of bearings.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A,T

STEEL COLUMN SURVEYS:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of concrete encasement, grade, thickness, presence of reinforcement. Confirm reinforcement grade and size.

Test types Test types to all locations: D,F,CH, Steel Verification
Test type at locations noted on plan: T,C

STEEL BEAMS & FINISHES:

Confirm sufficient dimensions of the steel to determine section size and connection details.

Confirm details of of the finishes, material, thickness etc.

Test types to all locations: D,F,CH,C
Test type at locations noted on plan: T,C

CONCRETE SLAB SURVEYS:

Concrete slabs formed in ribs and flat topping.

Identify reinforcement type so grade can be assessed and determine condition of concrete.

Measure all element dimensions, thickness, cover etc.

Test types to all locations: C,F,CH,D,HAC
Test type at locations noted on plan: CC,S,A, T

Denotes cover meter survey required to precast beams

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS

Rev:	Description:	Date:	By:	Chkd:
P01	UPDATED TO REFLECT STAGE 2 SCHEME	28.07.20	PM	MA

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Birmingham • Bristol • Cambridge • Cardiff • Douglas • Dublin • Edinburgh • Glasgow • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

Status:
STAGE 2

Project:
CIS TOWER REFURBISHMENT

Drg Title:
Level 03
Survey Scope

Size:	Date:	Drawn By:	Designed By:	Checked By:
A0	27.07.2020	P.M	M.A	M.A

Scale: 1 : 100

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
068327 -	CUR -	00 -	03 -	DR -	S -	02103 -	P01

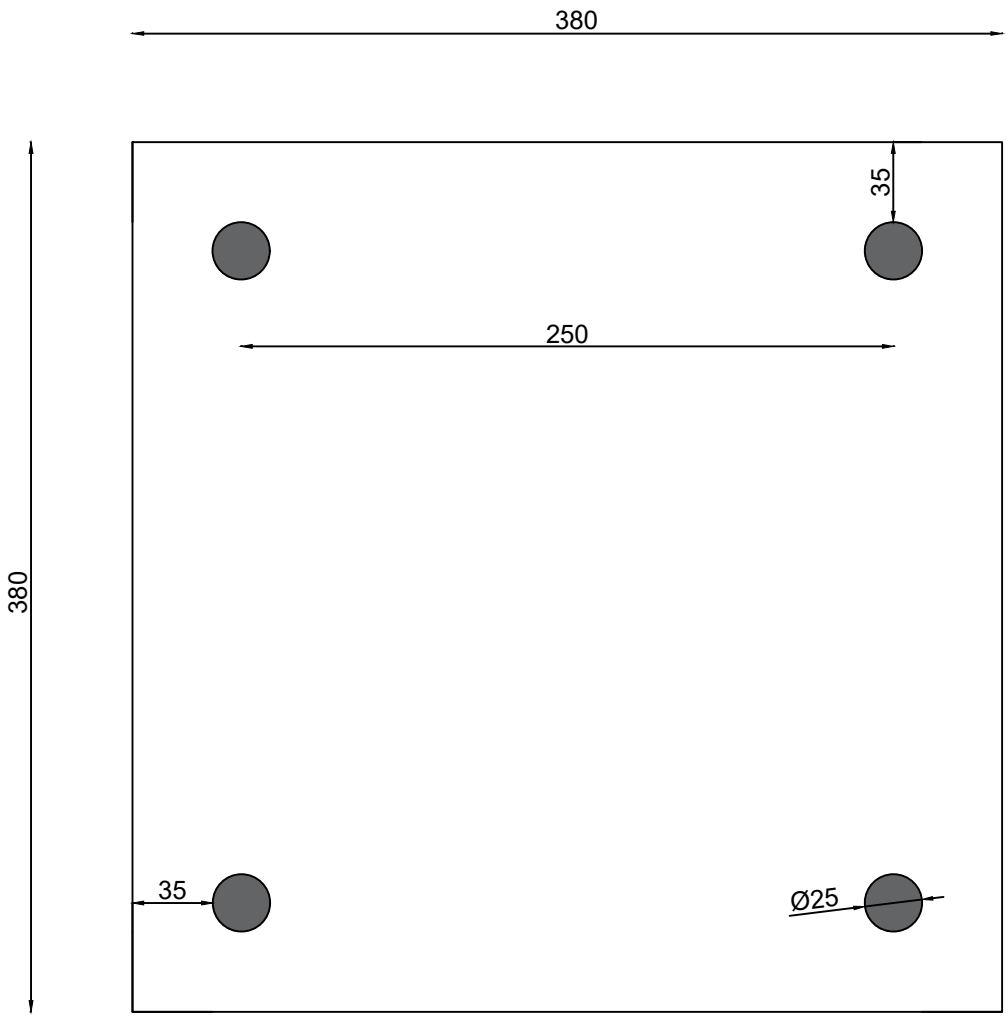
Model Name:068327-CUR-00-ZZ-M3-S18-00101_CENTRAL

Construction Testing Solutions		Client: Bowmer & Kirkland					Report Ref:		STR454				
		Site: CIS Tower - Manchester					Report Date:		10/09/2021				
		Location: Level L3					Reported By:		S.Grayson				
		Summary Of Results							Chloride Content % by mass of		Depth of Carbonation (mm)	Rebound Number	Compressive Strength (N/mm2)
Location	Vertical Bar Type	Average Vertical Bar Spacing (mm)	Cover To Vertical Reinforcement (mm)	Horizontal Bar Type	Average Horizontal Bar Spacing (mm)	Cover To Horizontal Reinforcement (mm)	Ferroscan Ref:	Column Type:	Sample	Cement			
Level L3 Columns													
L3-210	25mmØ Smooth	250	35	6mmØ Smooth	310	24	210	Concrete	0.009	0.06	<5	42	21.9
L3-211	28mmØ Smooth	240	50	6mmØ Smooth	300	40	211	Concrete	0.010	0.07	5	44	18.2
L3-212	28mmØ Smooth	240	60	6mmØ Smooth	290	40	212	Concrete	0.007	0.05	<5	46	23.6
L3-213	28mmØ Smooth	220	55	6mmØ Smooth	280	45	213	Concrete	0.013	0.09	5	40	34.5
L3-218	28mmØ Smooth	200	50	6mmØ Smooth	320	20	218	Concrete	0.005	0.04	<5	44	19.9
L3-219	25mmØ Smooth	240	90	6mmØ Smooth	300	80	219	Concrete	0.010	0.07	<5	48	32.7
L3-220	25mmØ Smooth	240	55	6mmØ Smooth	300	40	220	Concrete	0.005	0.04	<5	48	22.0
L3-223	25mmØ Smooth	220	70	6mmØ Smooth	320	60	223	Concrete	0.008	0.06	<5	42	19.9
L3-224	25mmØ Smooth	240	50	2 x 6mmØ Smooth	300	40	224	Concrete	0.007	0.05	<5	48	29.5
L3-225	25mmØ Smooth	240	65	6mmØ Smooth	150	55	225	Concrete	0.006	0.04	<5	48	36.5
Level L3 Core Walls													
L3-214	16mmØ Smooth	300	40	12mmØ Smooth	280	20	214	N/A	0.007	0.05	<5	38	20.1
L3-215	16mmØ Smooth	200	60	12mmØ Smooth	300	45	215	N/A	0.007	0.05	<5	-	-
L3-216	16mmØ Smooth	200	45	12mmØ Smooth	300	25	216	N/A	0.008	0.05	<5	-	-
L3-217	16mmØ Smooth	280	30	12mmØ Smooth	300	15	217	N/A	0.006	0.04	<5	40	21.4
L3-221	16mmØ Smooth	250	50	12mmØ Smooth	290	30	221	N/A	0.007	0.05	5	44	15.3
L3-222	20mmØ Smooth	300	60	2 x 12mmØ Smooth	300	40	22	N/A	0.005	0.04	5	46	*
Comments:		*L3 - 222 - Unsuitable for Compressive Strength testing.											
Column & Beam Dimensions - Reinforcement Layout													
All beam and column drawings provided on separate sheets													

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 3
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	10/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 3 Column Details

Location 210

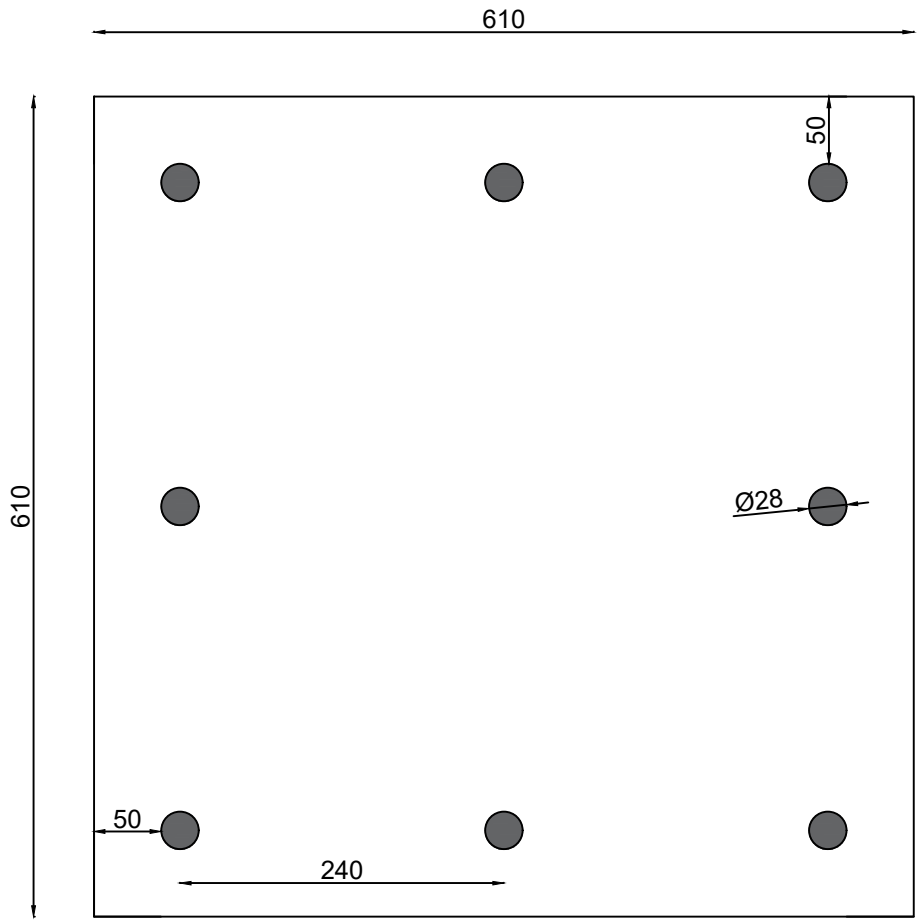


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 3
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	09/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 3 Column Details

Location 211

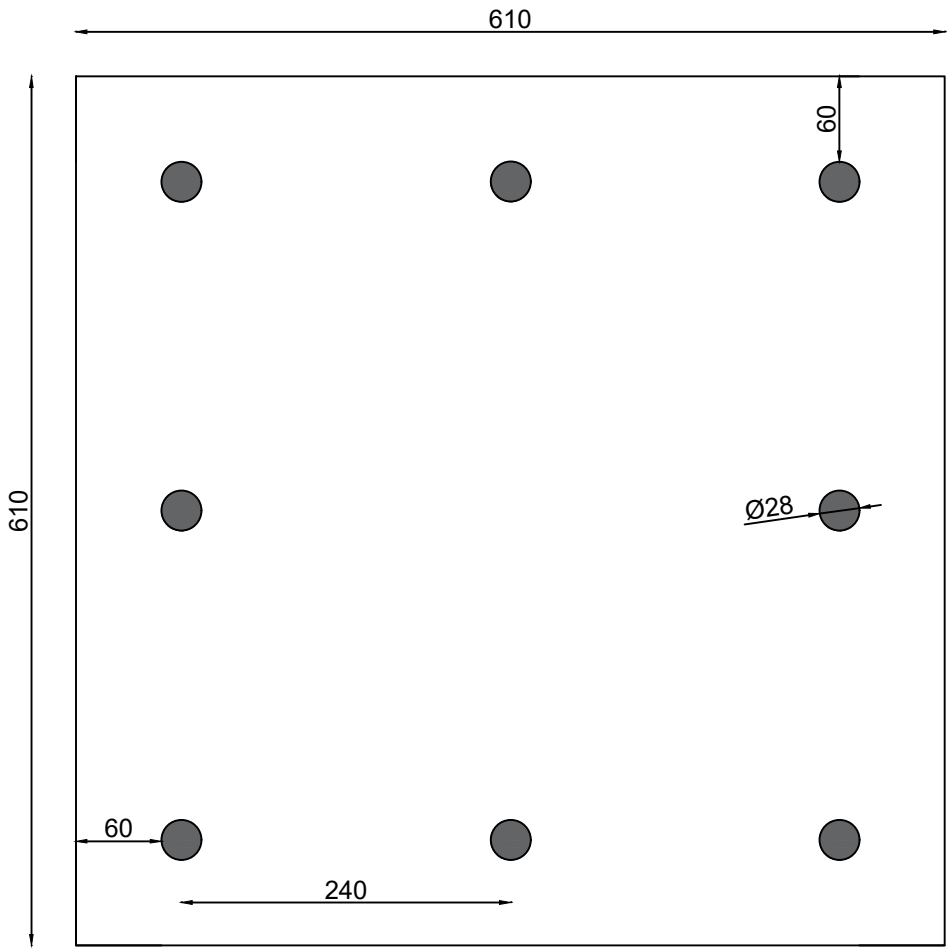


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 3
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	09/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 3 Column Details

Location 212

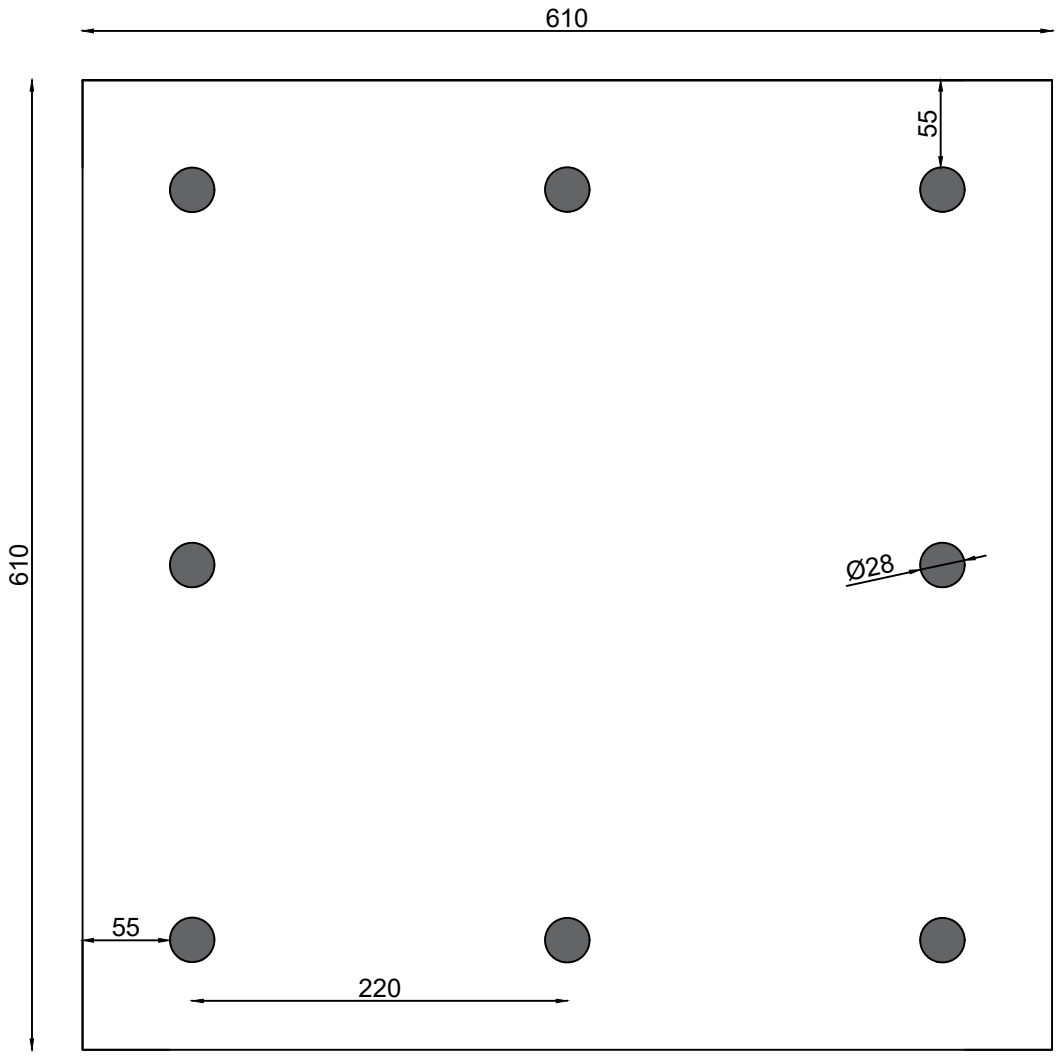


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 3
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	09/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 3 Column Details

Location 213

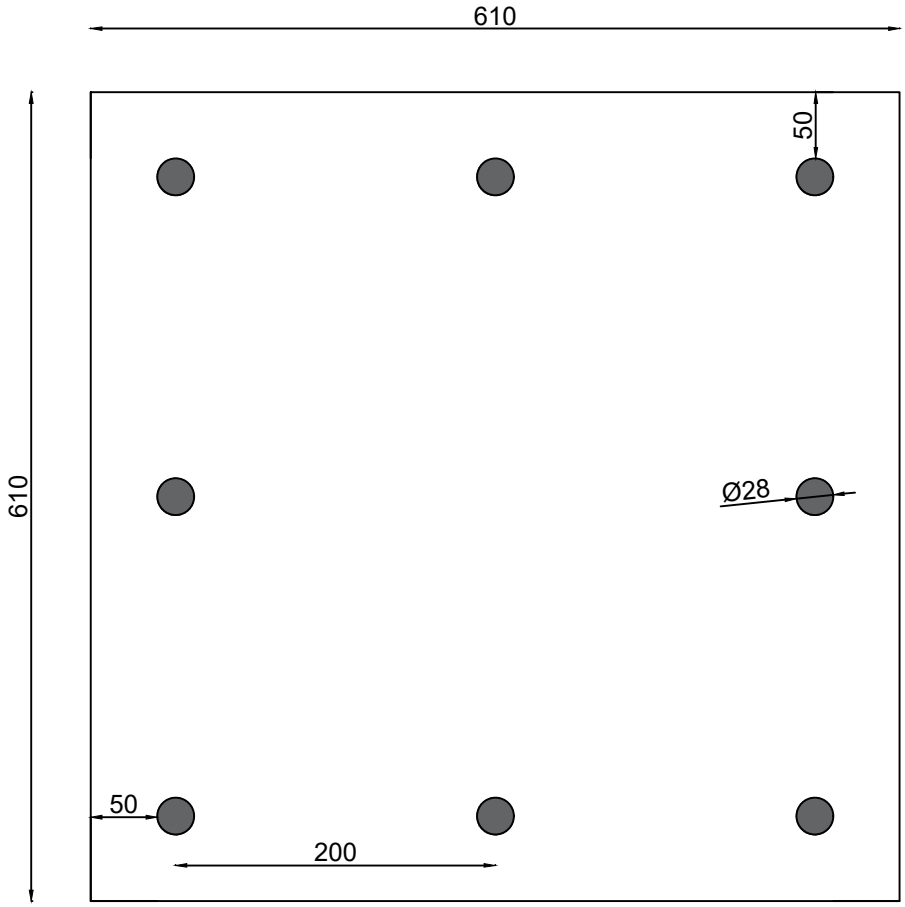


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 3
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	09/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 3 Column Details

Location 218

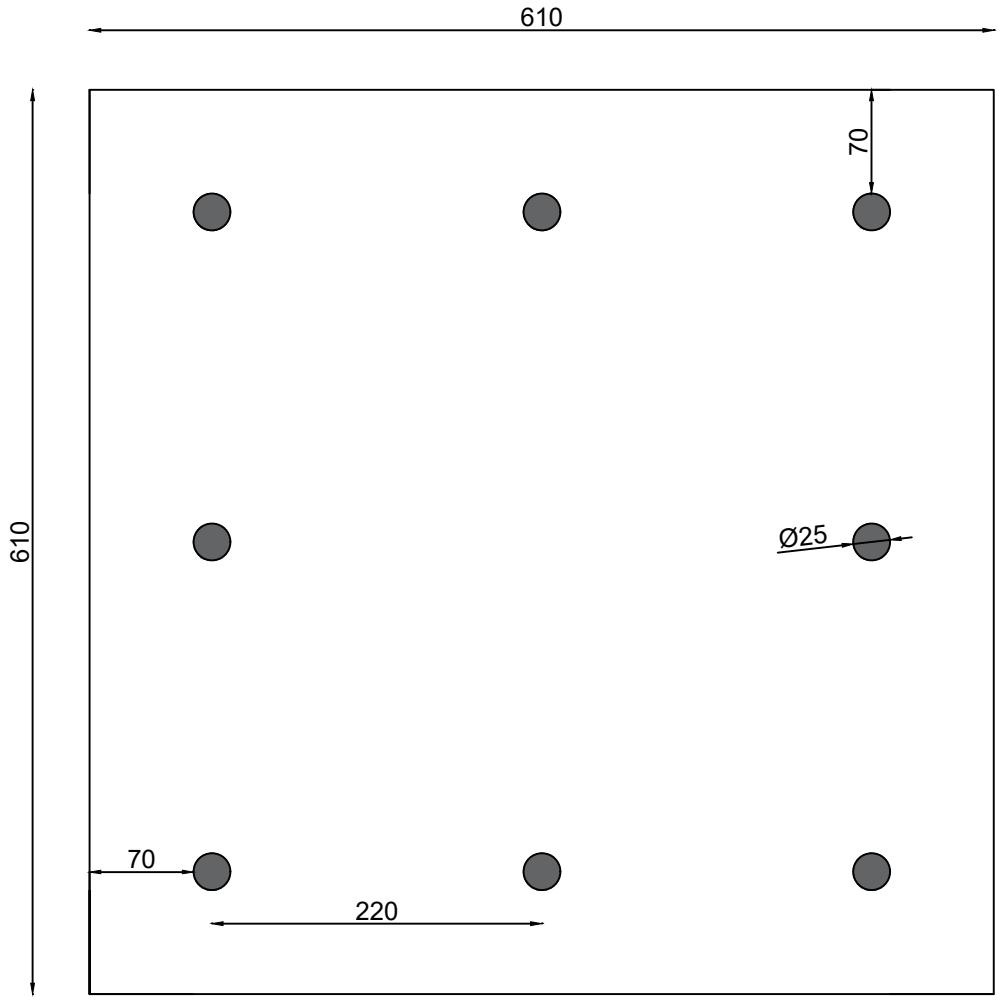


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 3
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	10/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 3 Column Details

Location 223

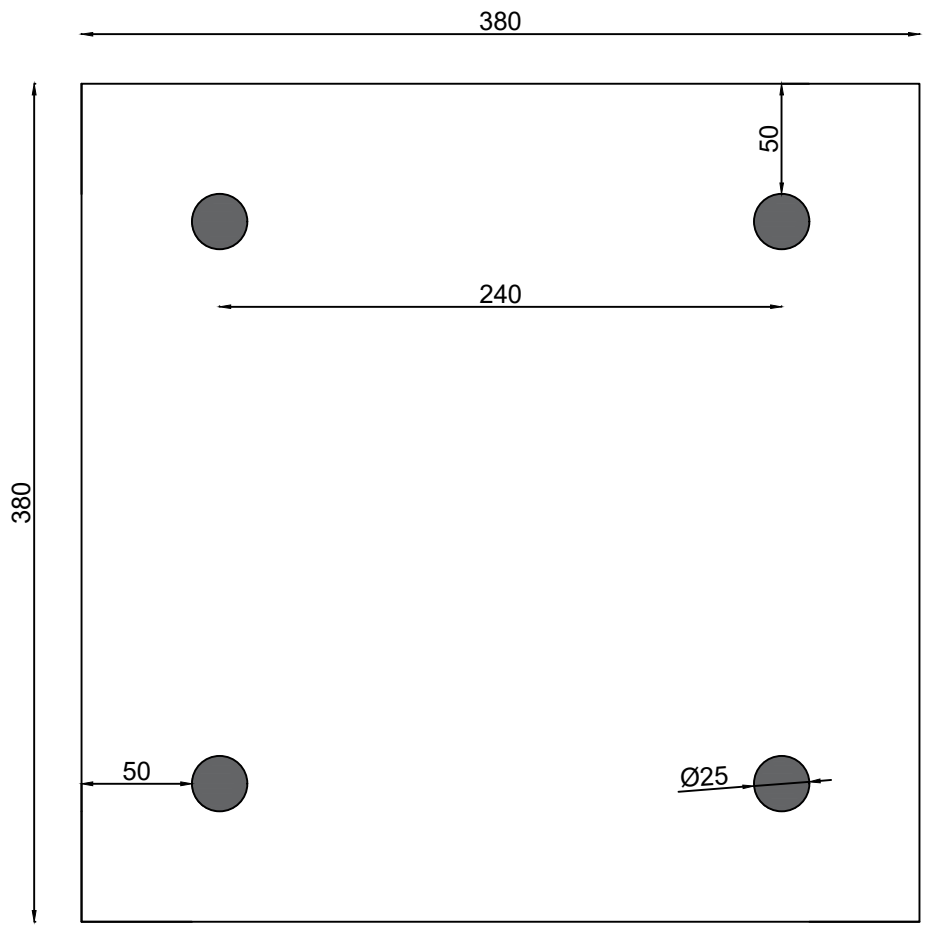


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 3
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	10/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 3 Column Details

Location 224

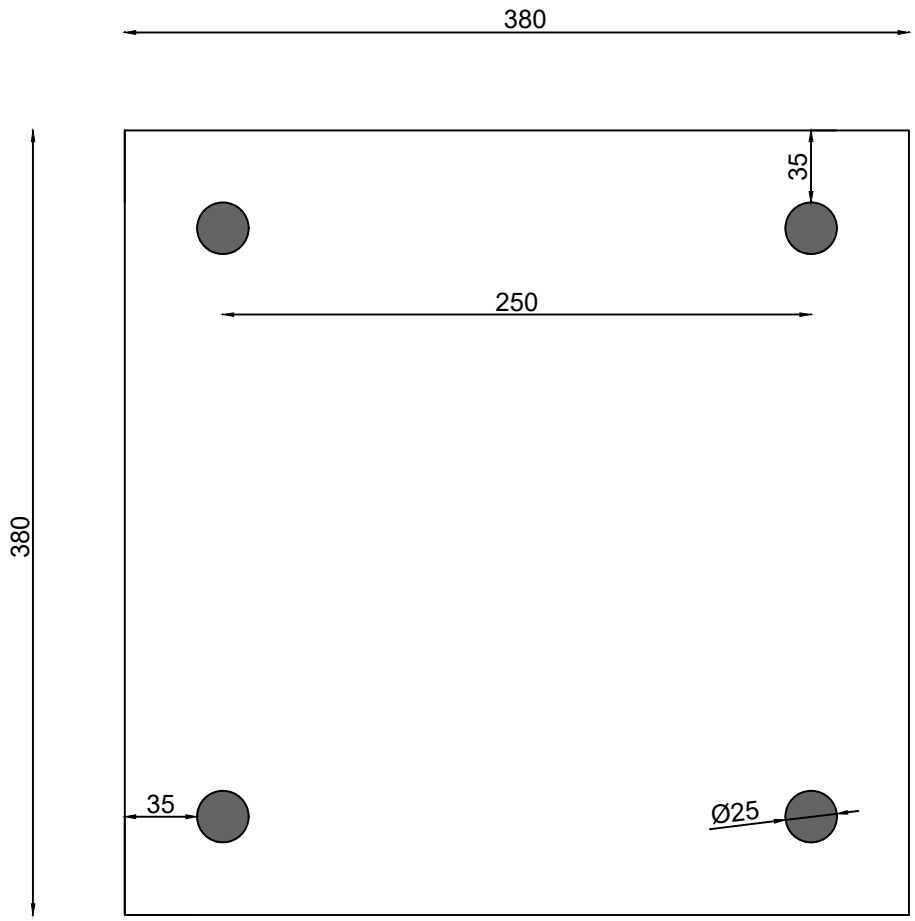


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 3
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	10/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

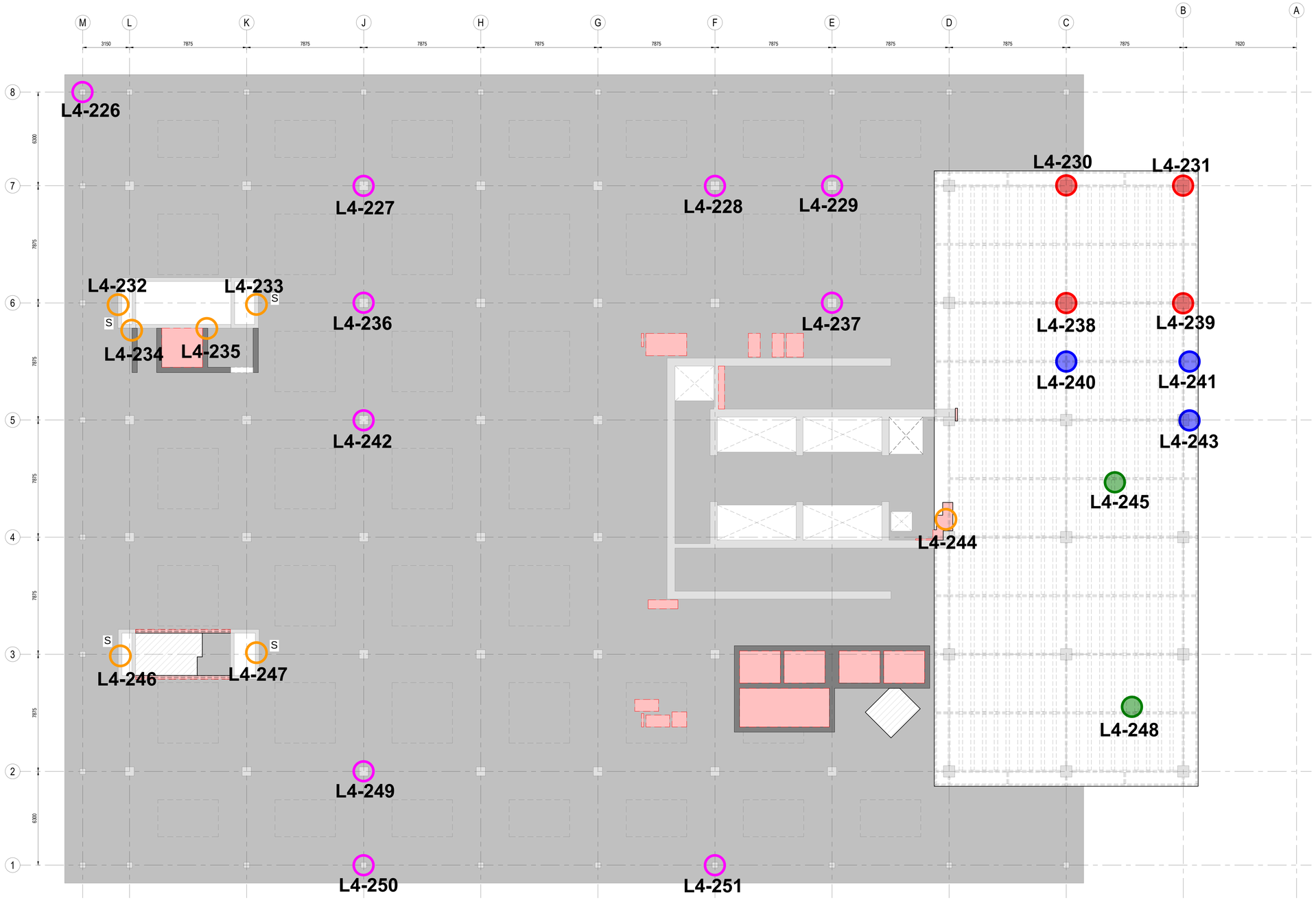
Level 3 Column Details

Location 225



Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

3.10 Level 4



GENERAL NOTES:

CONCRETE COLUMN SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D
Test type at locations noted on plan: T,A,S, CC

CONCRETE WALL SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types Test types to all locations:
C,F,CH,D,CC
Test type at locations noted on plan: T,A,S

CONCRETE BEAM SURVEYS:
HIGHLIGHTED BEAMS ARE BEAMS UNDER

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: T,S,A

CONCRETE SLAB SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed where noted

Confirm slab thickness and build up and determine condition.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A, T

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm reinforcement, cover and concrete grade.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D,S,CC,R
Test type at locations noted on plan:

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm column bearing details and geometry. Provide photographs of bearings.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A,T

STEEL COLUMN SURVEYS:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of concrete encasement, grade, thickness, presence of reinforcement. Confirm reinforcement grade and size.

Test types Test types to all locations: D,F,CH, Steel Verification
Test type at locations noted on plan: T,C

STEEL BEAMS & FINISHES:

Confirm sufficient dimensions of the steel to determine section size and connection details.

Confirm details of of the finishes, material, thickness etc.

Test types to all locations: D,F,CH,C
Test type at locations noted on plan: T,C

CONCRETE SLAB SURVEYS:

Concrete slabs formed in ribs and flat topping.

Identify reinforcement type so grade can be assessed and determine condition of concrete.

Measure all element dimensions, thickness, cover etc.

Test types to all locations: C,F,CH,D,HAC
Test type at locations noted on plan: CC,S,A, T

Denotes cover meter survey required to precast beams

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS

Rev:	Description:	Date:	By:	Chkd:
P01	UPDATED TO REFLECT STAGE 2 SCHEME	28.07.20	PM	MA

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Civils & Structures • Transport Planning • Environmental • Infrastructure • Geotechnical • Conservation & Heritage • Principal Designer
Birmingham • Bristol • Cambridge • Cardiff • Douglas • Dublin • Edinburgh • Glasgow • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

Status: STAGE 2

Project: CIS TOWER REFURBISHMENT

Drg Title: Level 04 Survey Scope

Size:	Date:	Drawn By:	Designed By:	Checked By:
A0	27.07.2020	P.M	M.A	M.A

Scale: 1 : 100

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
068327 -	CUR -	00 -	04 -	DR -	S -	02104 -	P01

Model Name: 068327-CUR-00-ZZ-M3-S-19-0001_CENTRAL

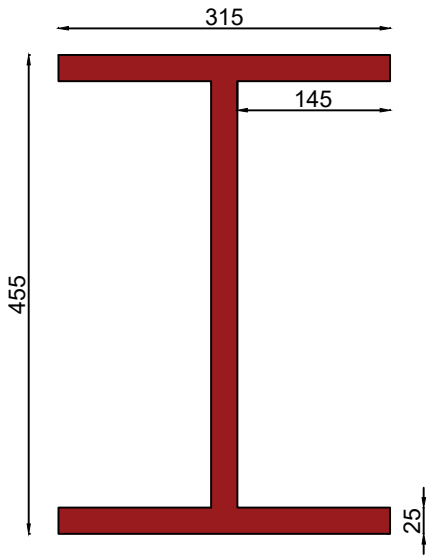
Construction Testing Solutions		Client: Bowmer & Kirkland					Report Ref:		STR454				
		Site: CIS Tower - Manchester					Report Date:		10/09/2021				
		Location: Level L4					Reported By:		S.Grayson				
		Summary Of Results							Chloride Content % by mass of		Depth of Carbonation (mm)	Rebound Number	Compressive Strength (N/mm2)
Location	Vertical Bar Type	Average Vertical Bar Spacing (mm)	Cover To Vertical Reinforcement (mm)	Horizontal Bar Type	Average Horizontal Bar Spacing (mm)	Cover To Horizontal Reinforcement (mm)	Ferroscan Ref:	Column Type:	Sample	Cement			
Level L4 Columns													
L4-226	28mmØ Smooth	110	50	10mmØ Smooth	310	40	226	Concrete	0.012	0.09	<5	40	12.5
L4-227	25mmØ Smooth	250	60	8mmØ Smooth	320	50	227	Concrete	0.010	0.07	<5	50	24.3
L4-228	25mmØ Smooth	230	52	6mmØ Smooth	300	43	228	Concrete	0.010	0.07	5	48	22.9
L4-229	25mmØ Smooth	240	65	8mmØ Smooth	300	52	229	Concrete	0.011	0.08	<5	48	24.6
L4-230	Steel Column - Drawings on separate page								0.010	0.07	-	-	-
L4-231	Steel Column - Drawings on separate page								0.013	0.09	-	-	-
L4-236	25mmØ Smooth	230	60	8mmØ Smooth	300	52	236	Concrete	0.009	0.06	5	40	19.0
L4-237	25mmØ Smooth	230	46	6mmØ Smooth	300	35	-	Concrete	0.011	0.08	<5	48	17.3
L4-238	Steel Column - Drawings on separate page								0.009	0.07	-	-	-
L4-239	Steel Column - Drawings on separate page								0.011	0.08	-	-	-
L4-242	25mmØ Smooth	230	56	8mmØ Smooth	300	34	242	Concrete	0.012	0.08	5	42	24.4
L4-249	25mmØ Smooth	230	54	8mmØ Smooth	300	43	249	Concrete	0.010	0.07	<5	46	20.0
L4-250	28mmØ Smooth	110	75	12mmØ Smooth	300	63	250	Concrete	0.012	0.09	<5	48	18.0
L4-251	25mmØ Smooth	250	50	10mmØ Smooth	320	40	251	Concrete	0.011	0.08	5	38	21.6
Level L4 Core Walls													
L4-232	18mmØ Smooth	250 / 180	40	12mmØ Smooth	280	10	232	N/A	0.009	0.07	<5	46	25.3
L4-233	16mmØ Smooth	350	55	12mmØ Smooth	300	40	233	N/A	0.011	0.08	10	46	31.1
L4-234	16mmØ Smooth	250	60	12mmØ Smooth	300	43	234	N/A	0.010	0.07	<5	-	-
L4-235	16mmØ Smooth	250	55	12mmØ Smooth	300	35	235	N/A	0.014	0.10	<5	-	-
L4-244	Single skin Brick wall with 20mm plaster either side												
L4-246	16mmØ Smooth	280	45	12mmØ Smooth	340	38	246	N/A	0.009	0.07	<5	36	21.7
L4-247	16mmØ Smooth	300	58	12mmØ Smooth	300	44	247	N/A	0.009	0.06	<5	38	16.6
Level L4 Slab													
Location	Longitudinal Bar Type	Average Longitudinal Bar Spacing (mm)	Cover To Longitudinal Reinforcement (mm)	Transverse Bar Type	Average Transverse Bar Spacing (mm)	Cover To Transverse Reinforcement (mm)	Ferroscan Ref:	Slab Thickness (mm)	Chloride Content % by mass of Sample	Chloride Content % by mass of Cement	Depth of Carbonation (mm)	Rebound Number	Compressive Strength (N/mm2)
L4-245	6mmØ Smooth	100	65	6mmØ Smooth	150	55	248	250	0.017	0.12	<5	-	-
L4-248	6mmØ Smooth	100	48	6mmØ Smooth	150	55	248	250	0.013	0.10	5	-	-
Level L4 Beams													
L4-240	Steel Beam - Drawings on separate page								0.008	0.06	-	-	-
L4-241	Steel Beam - Drawings on separate page								0.005	0.04	-	-	-
L4-243	Location inaccessible due to column obstructing beam								-	-	-	-	-
Comments:	HAC results were reported as Negative												
Column & Beam Dimensions - Reinforcement Layout													
All Beam and column drawings provided on separate sheets													

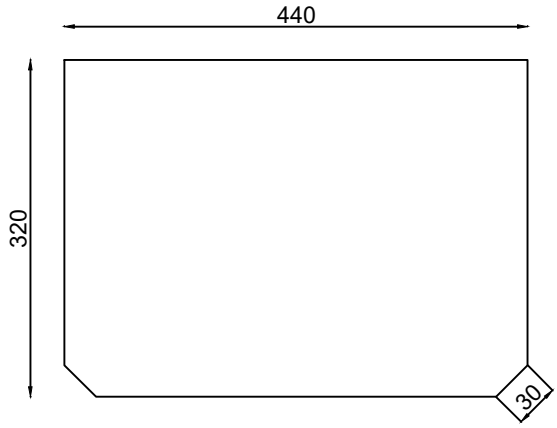
Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 4
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 31/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 4 Beam Details

Location 240

Beam B





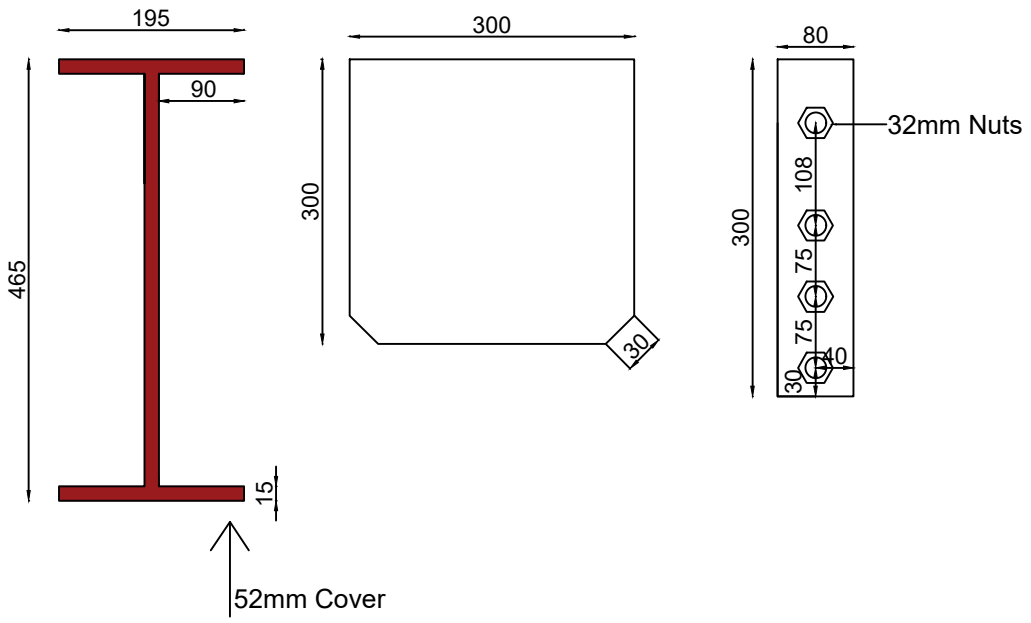
Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 4
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 31/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 4 Beam Details

Location 240

Beam A

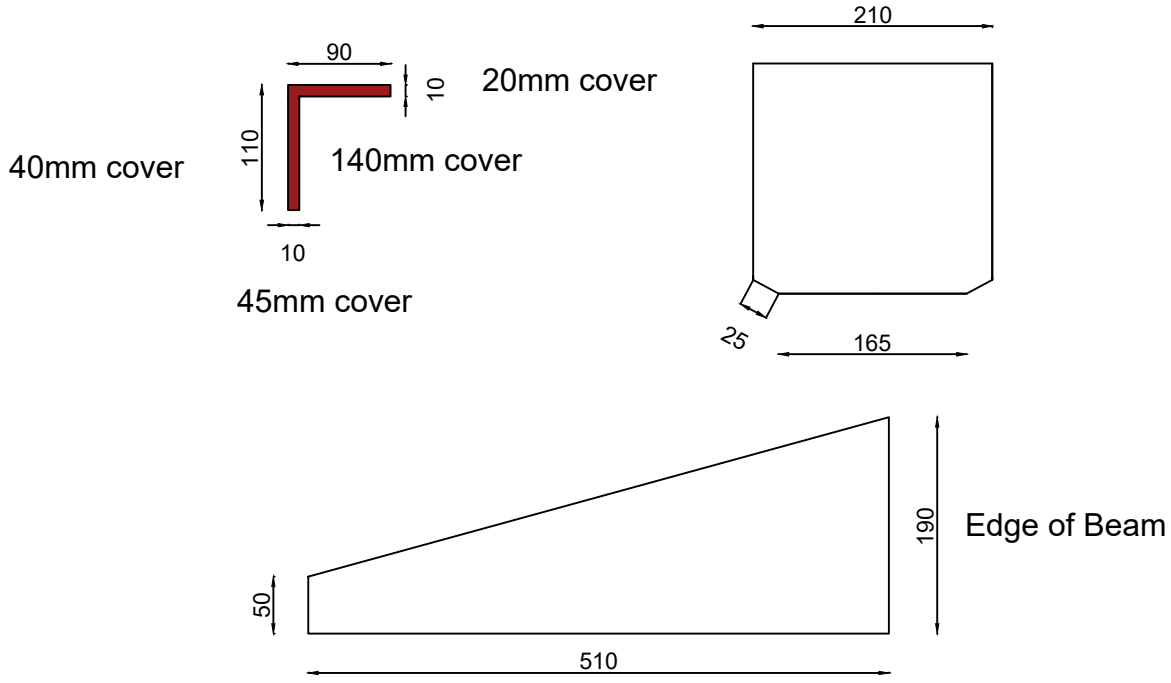


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 4
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 31/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 4 Beam Details

Location 241



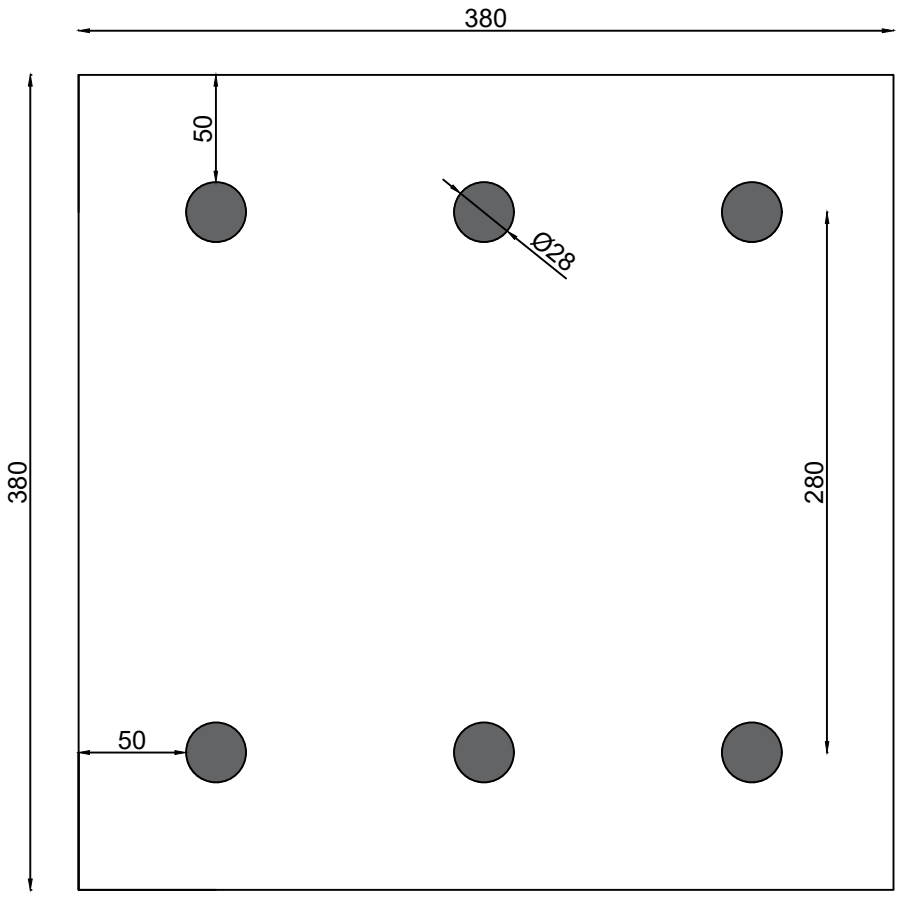
Beam had 'L' shaped bracket cast in to concrete section

Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 4
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 14/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 4 Column Details

Location 226

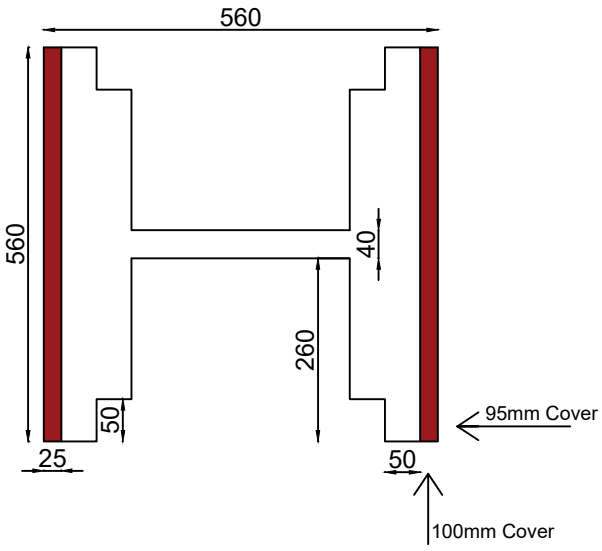


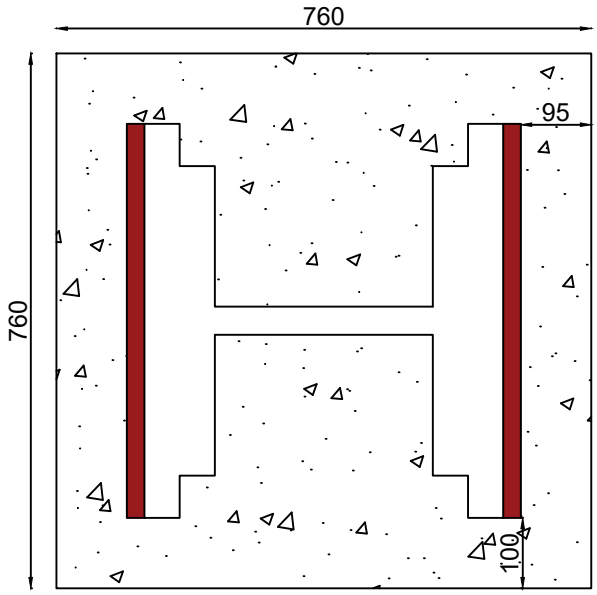
Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 4
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 19/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 4 Column Details

Location 230





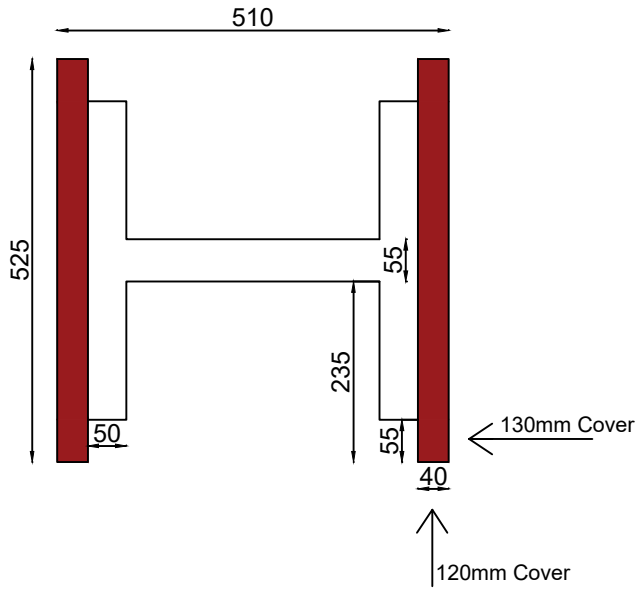
Column size no plaster

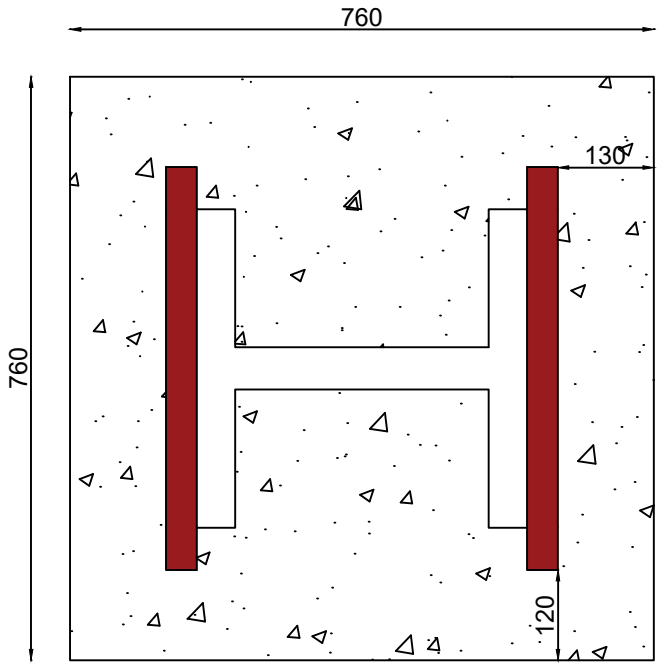
Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 4
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	19/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 4 Column Details

Location 231



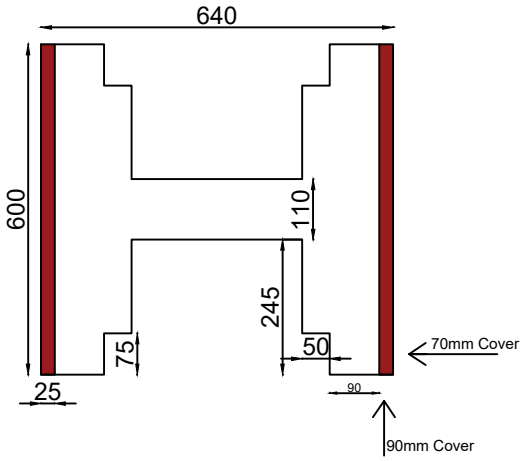


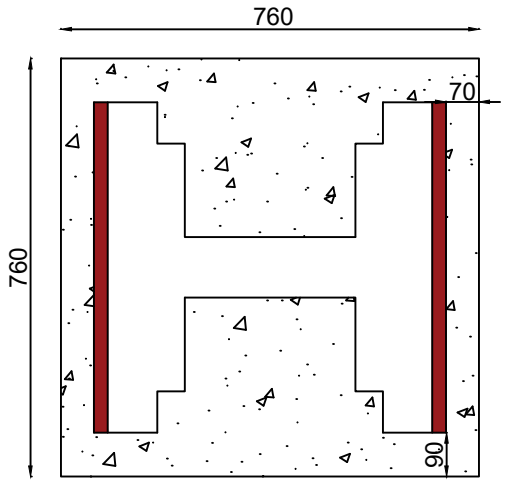
Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 4
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 19/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 4 Column Details

Location 238



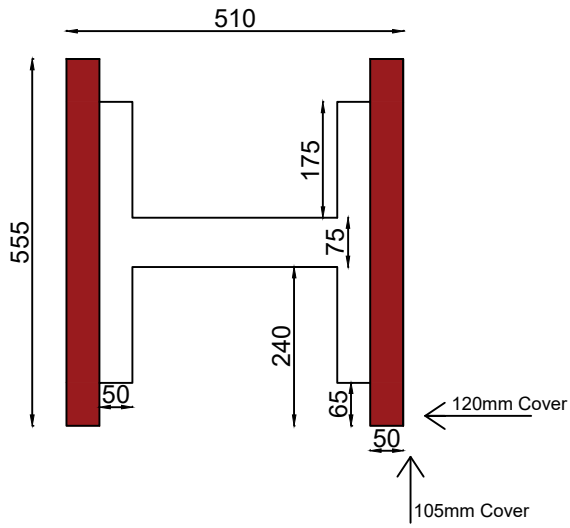


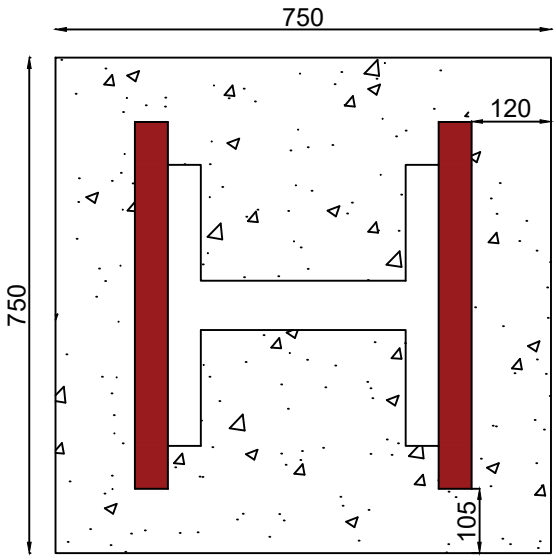
Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 4
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	19/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 4 Column Details

Location 239





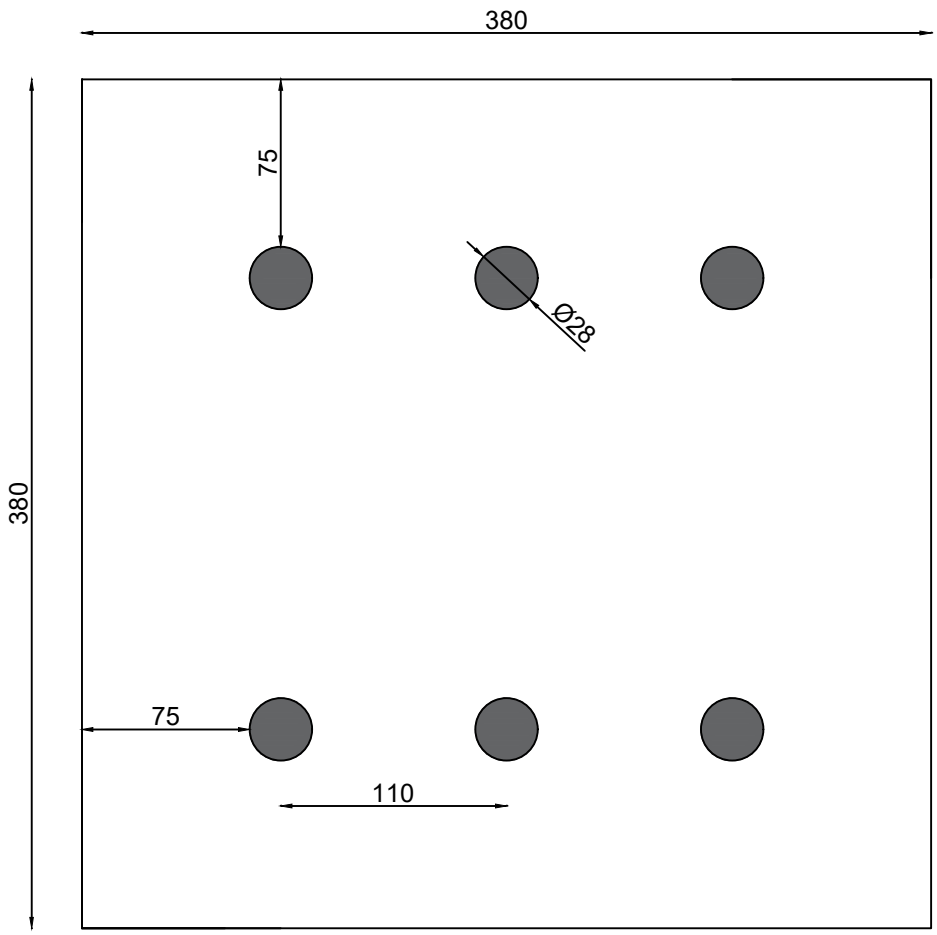
Column size no plaster

Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 4
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 14/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 4 Column Details

Location 250

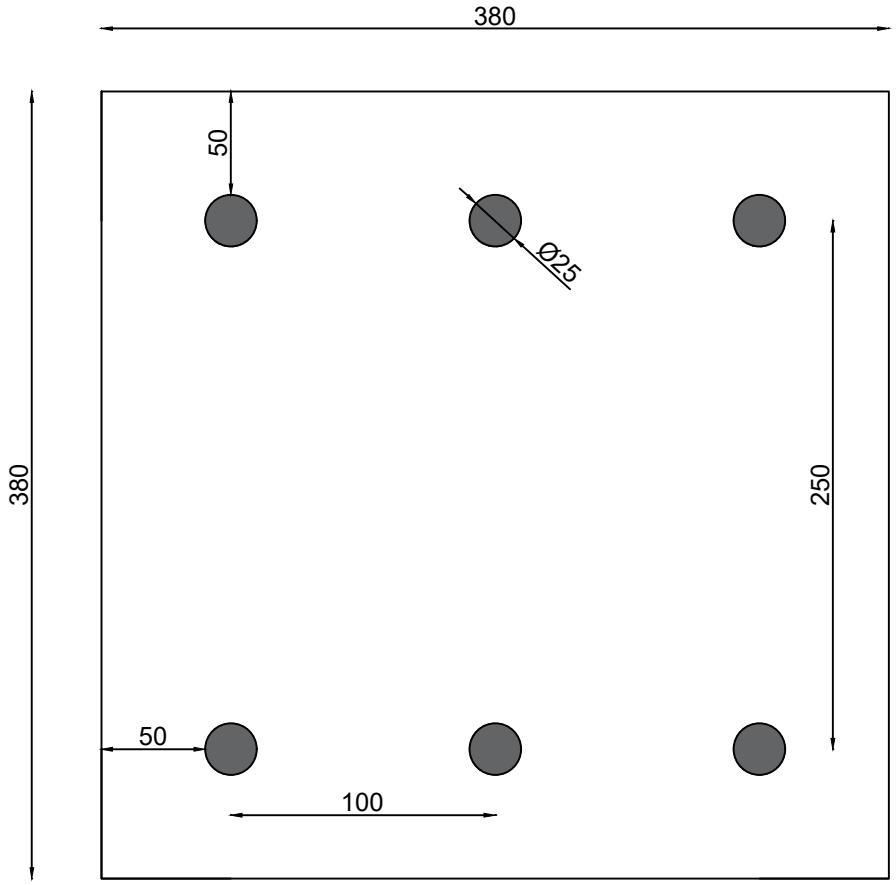


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 4
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 15/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

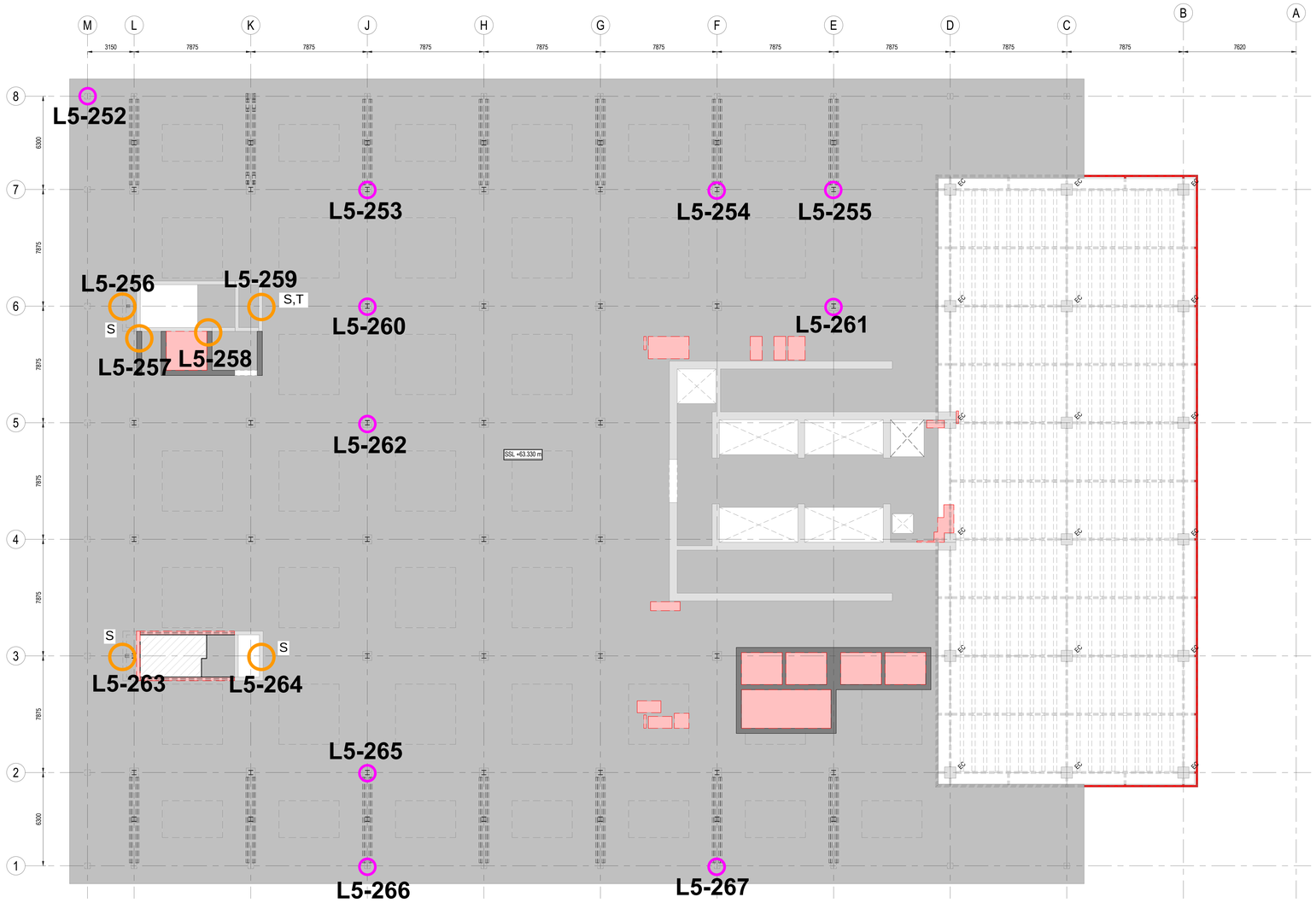
Level 4 Column Details

Location 251



Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

3.11 Level 5



GENERAL NOTES:

CONCRETE COLUMN SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D
Test type at locations noted on plan: T,A,S, CC

CONCRETE WALL SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types Test types to all locations:
C,F,CH,D,CC
Test type at locations noted on plan: T,A,S

CONCRETE BEAM SURVEYS: HIGHLIGHTED BEAMS ARE BEAMS UNDER

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: T,S,A

CONCRETE SLAB SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed where noted

Confirm slab thickness and build up and determine condition.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A, T

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm reinforcement, cover and concrete grade.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D,S,CC,R
Test type at locations noted on plan:

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm column bearing details and geometry. Provide photographs of bearings.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A,T

STEEL COLUMN SURVEYS:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of concrete encasement, grade, thickness, presence of reinforcement. Confirm reinforcement grade and size.

Test types Test types to all locations: D,F,CH, Steel Verification
Test type at locations noted on plan: T,C

STEEL BEAMS & FINISHES:

Confirm sufficient dimensions of the steel to determine section size and connection details.

Confirm details of of the finishes, material, thickness etc.

Test types to all locations: D,F,CH,C
Test type at locations noted on plan: T,C

CONCRETE SLAB SURVEYS:

Concrete slabs formed in ribs and flat topping.

Identify reinforcement type so grade can be assessed and determine condition of concrete.

Measure all element dimensions, thickness, cover etc.

Test types to all locations: C,F,CH,D,HAC
Test type at locations noted on plan: CC,S,A, T

Denotes cover meter survey required to precast beams

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS

Rev:	Description:	Date:	By:	Chkd:
P01	UPDATED TO REFLECT STAGE 2 SCHEME	28.07.20	PM	MA

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Status:
STAGE 2

Project:
CIS TOWER REFURBISHMENT

Drg Title:
Level 05
Survey Scope

Size:	Date:	Drawn By:	Designed By:	Checked By:
A0	27.07.2020	P.M	M.A	M.A

Scale: 1 : 125

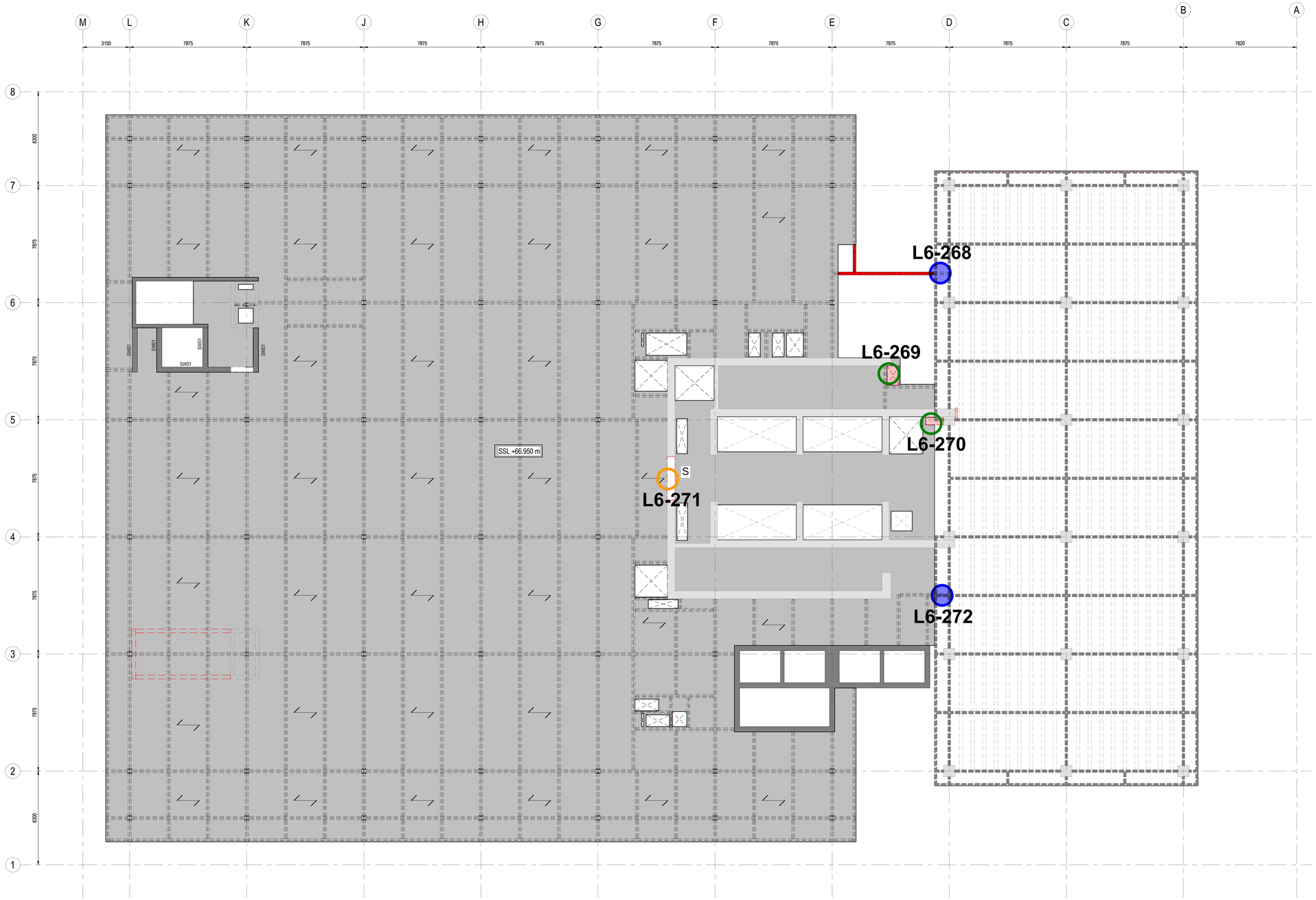
Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
068327 -	CUR -	00 -	05 -	DR -	S -	02105 -	P01

Model Name:068327-CUR-00-ZZ-M3-S15-00001_CENTRAL

Construction Testing Solutions

		Client: Bowmer & Kirkland					**Report Ref:**	STR454					
		Site: CIS Tower - Manchester					**Report Date:**	10/09/2021					
		Location: Level L5					**Reported By:**	S.Grayson					
		Summary Of Results							**Chloride Content % by mass of**		**Depth of Carbonation (mm)**	**Rebound Number**	**Compressive Strength (N/mm2)**
Location	**Vertical Bar Type**	**Average Vertical Bar Spacing (mm)**	**Cover To Vertical Reinforcement (mm)**	**Horizontal Bar Type**	**Average Horizontal Bar Spacing (mm)**	**Cover To Horizontal Reinforcement (mm)**	**Ferroscan Ref:**	**Column Type:**	**Sample**	**Cement**			
Level L5 Core Walls													
L5-256	16mmØ Smooth	300	45	12mmØ Smooth	360	35	256	Concrete	0.009	0.06	5	44	20.8
L5-257	16mmØ Smooth	450	50	12mmØ Smooth	300	35	257	Concrete	0.010	0.07	<5	-	-
L5-258	19mmØ Smooth	250	20	12mmØ Smooth	310	10	258	Concrete	0.010	0.07	5	-	-
L5-259	16mmØ Smooth	300	60	12mmØ Smooth	300	50	259	Concrete	0.011	0.08	5	44	20.2
L5-263	16mmØ Smooth	300	40	12mmØ Smooth	300	30	263	Concrete	0.010	0.07	<5	-	16.8
L5-264	16mmØ Smooth	300	51	12mmØ Smooth	280	30	264	Concrete	0.012	0.09	<5	44	25.6
Comments:													
Column & Beam Dimensions - Reinforcement Layout													
All beam and column drawings are provided on separate sheets													

3.12 Level 6



GENERAL NOTES:

CONCRETE COLUMN SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D
Test type at locations noted on plan: T,A,S, CC

CONCRETE WALL SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types Test types to all locations:
C,F,CH,D,CC
Test type at locations noted on plan: T,A,S

CONCRETE BEAM SURVEYS: HIGHLIGHTED BEAMS ARE BEAMS UNDER

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: T,S,A

CONCRETE SLAB SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed where noted

Confirm slab thickness and build up and determine condition.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A, T

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm reinforcement, cover and concrete grade.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D,S,CC,R
Test type at locations noted on plan:

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm column bearing details and geometry. Provide photographs of bearings.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A,T

STEEL COLUMN SURVEYS:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of concrete encasement, grade, thickness, presence of reinforcement. Confirm reinforcement grade and size.

Test types Test types to all locations: D,F,CH, Steel Verification
Test type at locations noted on plan: T,C

STEEL BEAMS & FINISHES:

Confirm sufficient dimensions of the steel to determine section size and connection details.

Confirm details of of the finishes, material, thickness etc.

Test types to all locations: D,F,CH,C
Test type at locations noted on plan: T,C

CONCRETE SLAB SURVEYS:

Concrete slabs formed in ribs and flat topping.

Identify reinforcement type so grade can be assessed and determine condition of concrete.

Measure all element dimensions, thickness, cover etc.

Test types to all locations: C,F,CH,D,HAC
Test type at locations noted on plan: CC,S,A, T

Denotes cover meter survey required to precast beams

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS

Rev:	Description:	Date:	By:	Chkd:
P01	UPDATED TO REFLECT STAGE 2 SCHEME	28.07.20	PM	MA

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Status: STAGE 2

Project: CIS TOWER REFURBISHMENT

Drg Title: Level 06 Survey Scope

Size:	Date:	Drawn By:	Designed By:	Checked By:
A0	27.07.2020	P.M	M.A	M.A

Scale: 1 : 100

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
068327 -	CUR -	00 -	06 -	DR -	S -	02106 -	P01

Model Name:068327-CUR-00-ZZ-M3-S-19-00001_CENTRAL

Construction Testing Solutions	**Client:** Bowmer & Kirkland	**Report Ref:**	STR454
	Site: CIS Tower - Manchester	**Report Date:**	10/09/2021
	Location: Level L6	**Reported By:**	S.Grayson

Summary Of Results

Location	Vertical Bar Type	Average Vertical Bar Spacing (mm)	Cover To Vertical Reinforcement (mm)	Horizontal Bar Type	Average Horizontal Bar Spacing (mm)	Cover To Horizontal Reinforcement (mm)	Ferroscan Ref:	Column Type:	Chloride Content % by mass of Sample	Chloride Content % by mass of Cement	Depth of Carbonation (mm)	Rebound Number	Compressive Strength (N/mm2)
Level L6 Core Walls													
L6-271	No Access - Located in Riser Cupboard												
Level L6 Slab													
Location	**Longitudinal Bar Type**	**Average Longitudinal Bar Spacing (mm)**	**Cover To Longitudinal Reinforcement (mm)**	**Transverse Bar Type**	**Average Transverse Bar Spacing (mm)**	**Cover To Transverse Reinforcement (mm)**	**Ferroscan Ref:**	**Slab Thickness (mm)**	**Chloride Content % by mass of Sample**	**Chloride Content % by mass of Cement**	**Depth of Carbonation (mm)**	**Rebound Number**	**Compressive Strength (N/mm2)**
L6-269	16mmØ Smooth	-	105	16mmØ Smooth	-	122	269	130	0.053	0.38	5	-	-
L6-270	6mmØ Smooth	150	20	6mmØ Smooth	150	28	270	130	0.046	0.33	5	-	-
Level L6 Beams													
L6-268	Steel Beam - Dimensions on separate page								0.011	0.08	-	-	-
L6-272	Steel Beam - Dimensions on separate page								0.012	0.09	-	-	-

Comments:

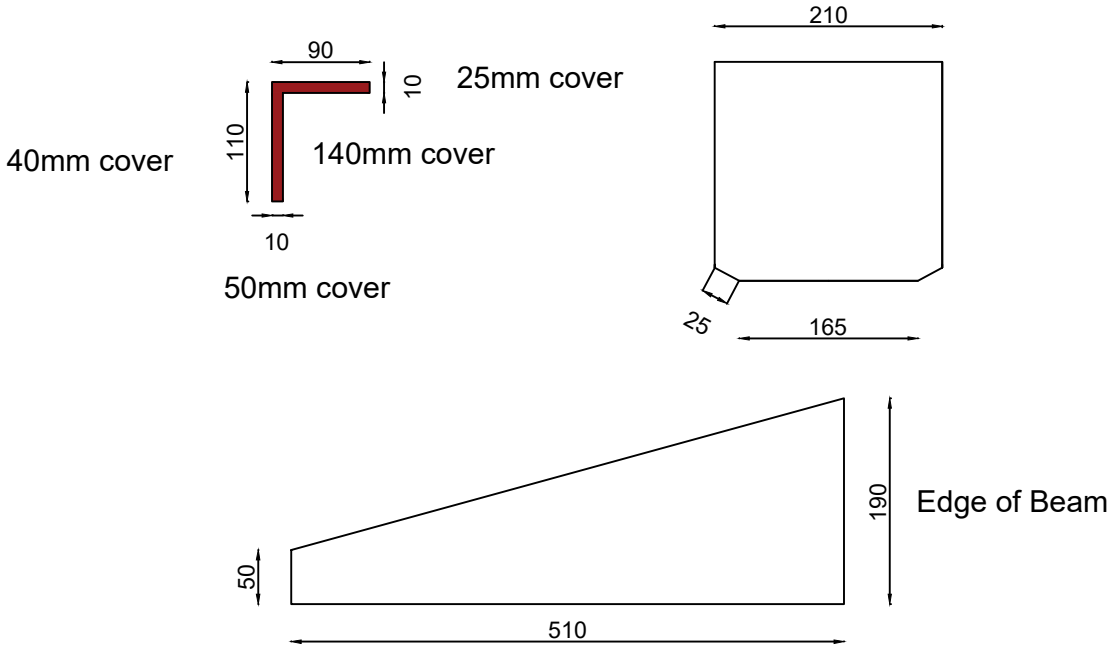
Column & Beam Dimensions - Reinforcement Layout

All Beam and column drawings provided on separate sheets

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 6
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 27/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 6 Beam Details

Location 268



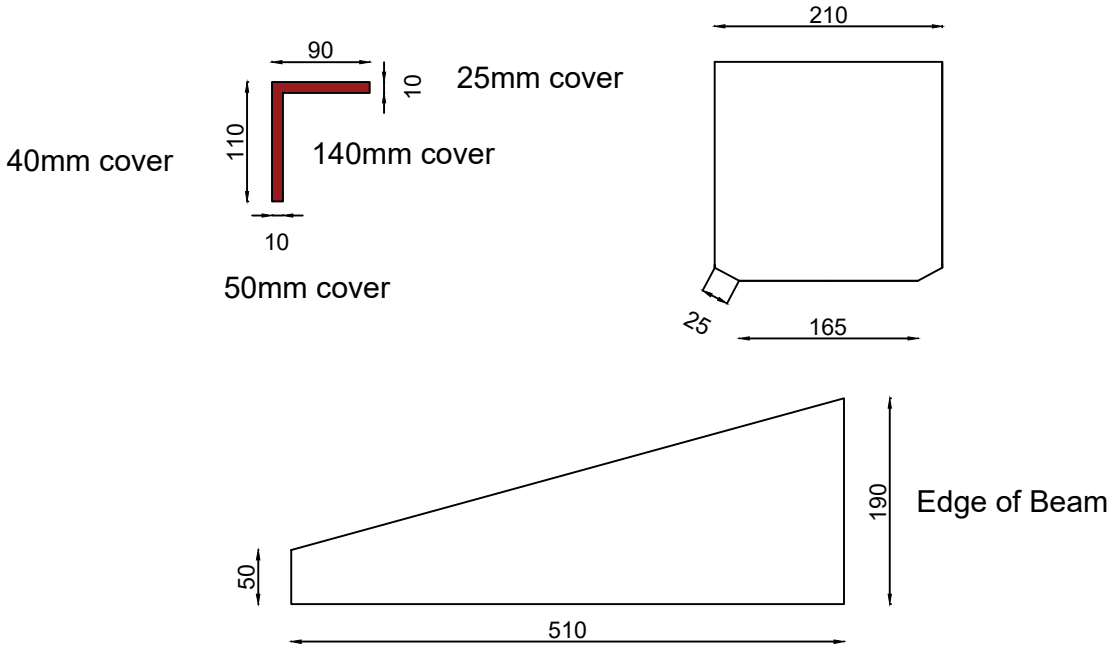
Beam had 'L' shaped bracket cast into concrete

Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 6
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 27/08/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 6 Beam Details

Location 272



Beam had 'L' shaped bracket cast in to concrete

Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

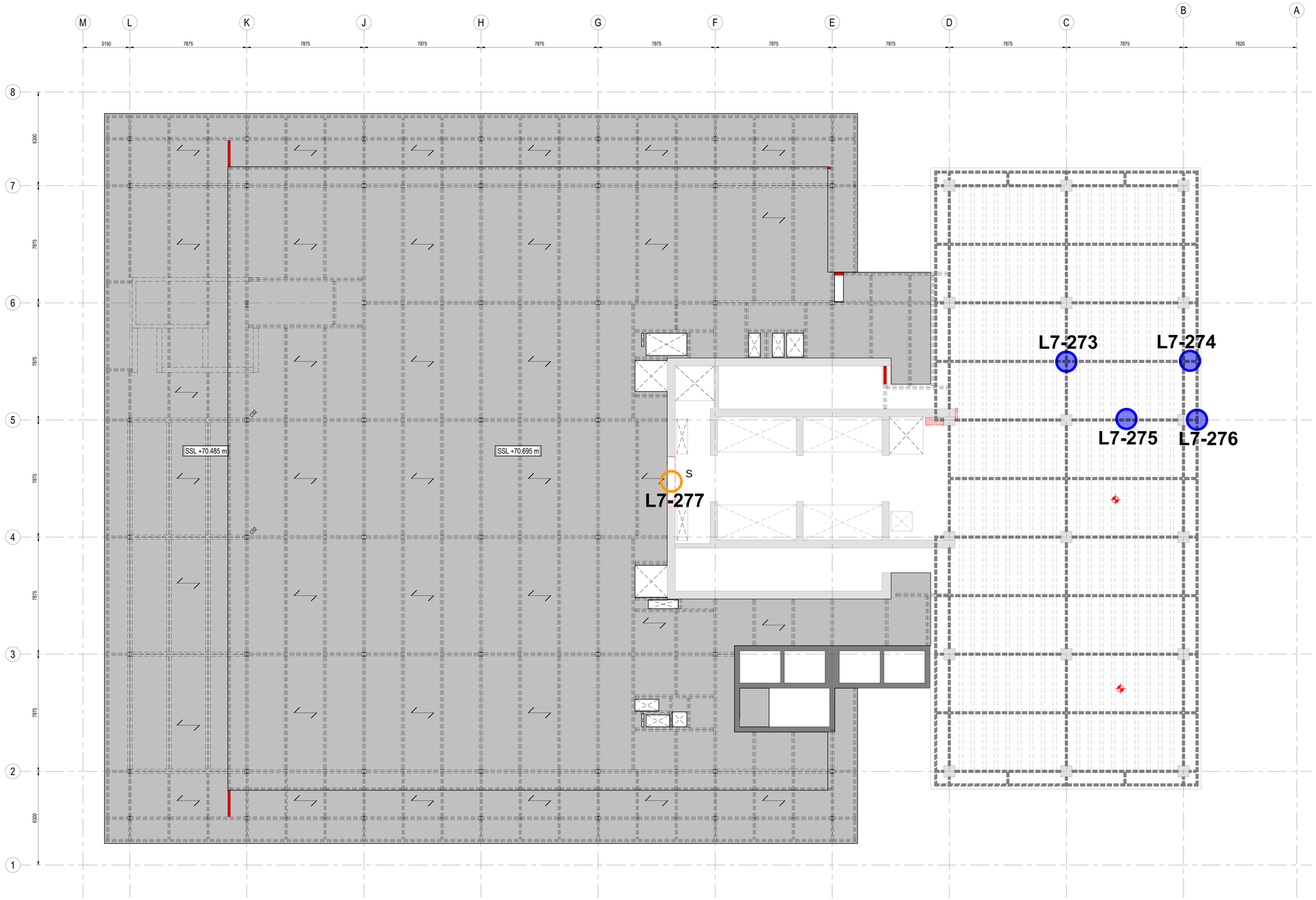
3.13 Level 7

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS



GENERAL NOTES:

CONCRETE COLUMN SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D
Test type at locations noted on plan: T,A,S, CC

CONCRETE WALL SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types Test types to all locations:
C,F,CH,D,CC
Test type at locations noted on plan: T,A,S

CONCRETE BEAM SURVEYS: HIGHLIGHTED BEAMS ARE BEAMS UNDER

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: T,S,A

CONCRETE SLAB SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed where noted

Confirm slab thickness and build up and determine condition.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A, T

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm reinforcement, cover and concrete grade.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D,S,CC,R
Test type at locations noted on plan:

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm column bearing details and geometry. Provide photographs of bearings.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A,T

STEEL COLUMN SURVEYS:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of concrete encasement, grade, thickness, presence of reinforcement. Confirm reinforcement grade and size.

Test types Test types to all locations: D,F,CH, Steel Verification
Test type at locations noted on plan: T,C

STEEL BEAMS & FINISHES:

Confirm sufficient dimensions of the steel to determine section size and connection details.

Confirm details of of the finishes, material, thickness etc.

Test types to all locations: D,F,CH,C
Test type at locations noted on plan: T,C

CONCRETE SLAB SURVEYS:

Concrete slabs formed in ribs and flat topping.

Identify reinforcement type so grade can be assessed and determine condition of concrete.

Measure all element dimensions, thickness, cover etc.

Test types to all locations: C,F,CH,D,HAC
Test type at locations noted on plan: CC,S,A, T

Denotes cover meter survey required to precast beams

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS

Rev:	Description:	Date:	By:	Chkd:
P01	UPDATED TO REFLECT STAGE 2 SCHEME	28.07.20	PM	MA

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Status:

STAGE 2

Project:

CIS TOWER REFURBISHMENT

Drg Title:

Level 07
Survey Scope

Size:	Date:	Drawn By:	Designed By:	Checked By:
A0	27.07.2020	P.M	M.A	M.A

Scale: 1 : 100

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
068327 -	CUR -	00 -	07 -	DR -	S -	02107 -	P01

Model Name:068327-CUR-00-ZZ-M3-S-18-00001_CENTRAL

Construction Testing Solutions													
		Client: Bowmer & Kirkland						**Report Ref:**	STR454				
		Site: CIS Tower - Manchester						**Report Date:**	10/09/2021				
		Location: Level L7						**Reported By:**	S.Grayson				
		Summary Of Results							**Chloride Content % by mass of**		**Depth of Carbonation (mm)**	**Rebound Number**	**Compressive Strength (N/mm2)**
Location	**Vertical Bar Type**	**Average Vertical Bar Spacing (mm)**	**Cover To Vertical Reinforcement (mm)**	**Horizontal Bar Type**	**Average Horizontal Bar Spacing (mm)**	**Cover To Horizontal Reinforcement (mm)**	**Ferroscan Ref:**	**Column Type:**	**Sample**	**Cement**			
Level L7 Core Walls													
L7-277	No Access - Located in Riser Cupboard - Asbestos Found												
Level L7 Steel Beams													
L7-273	Steel Beam - Dimensions on separate page								Plaster only on beam			-	-
L7-274	Steel Beam - Dimensions on separate page								0.011	0.08	<5	-	-
L7-275	Steel Beam - Dimensions on separate page								Plaster only on beam			-	-
L7-276	Steel L section found in concrete					50	276	-	0.014	0.10	<5	-	-
Comments:													
Column & Beam Dimensions - Reinforcement Layout													
All beam and column drawings are provided on separate sheets													

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 7
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 13/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 7 Beam Details

Location 273

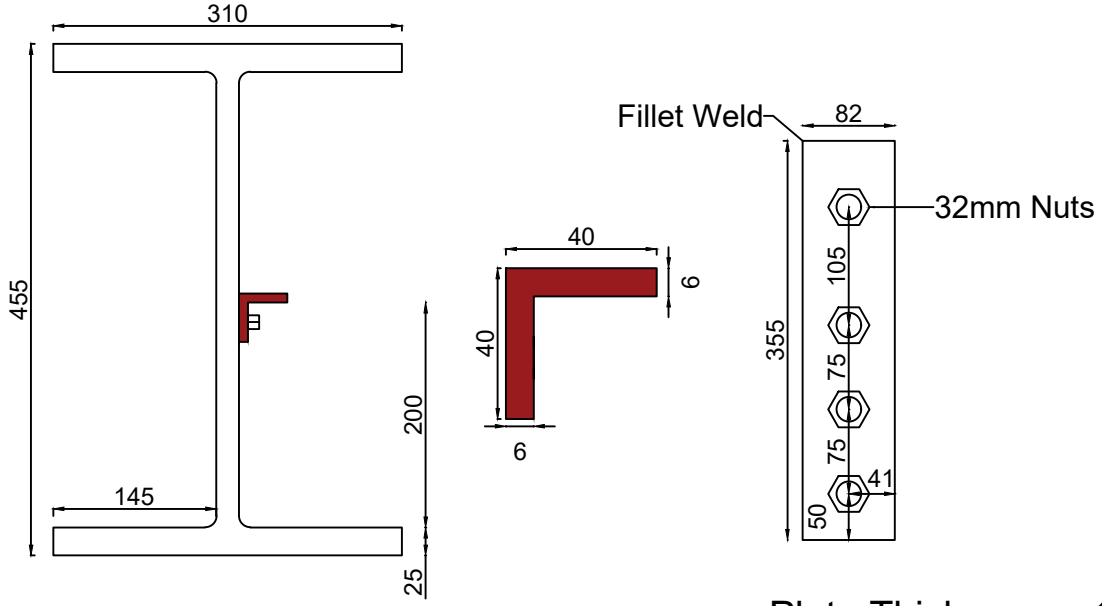


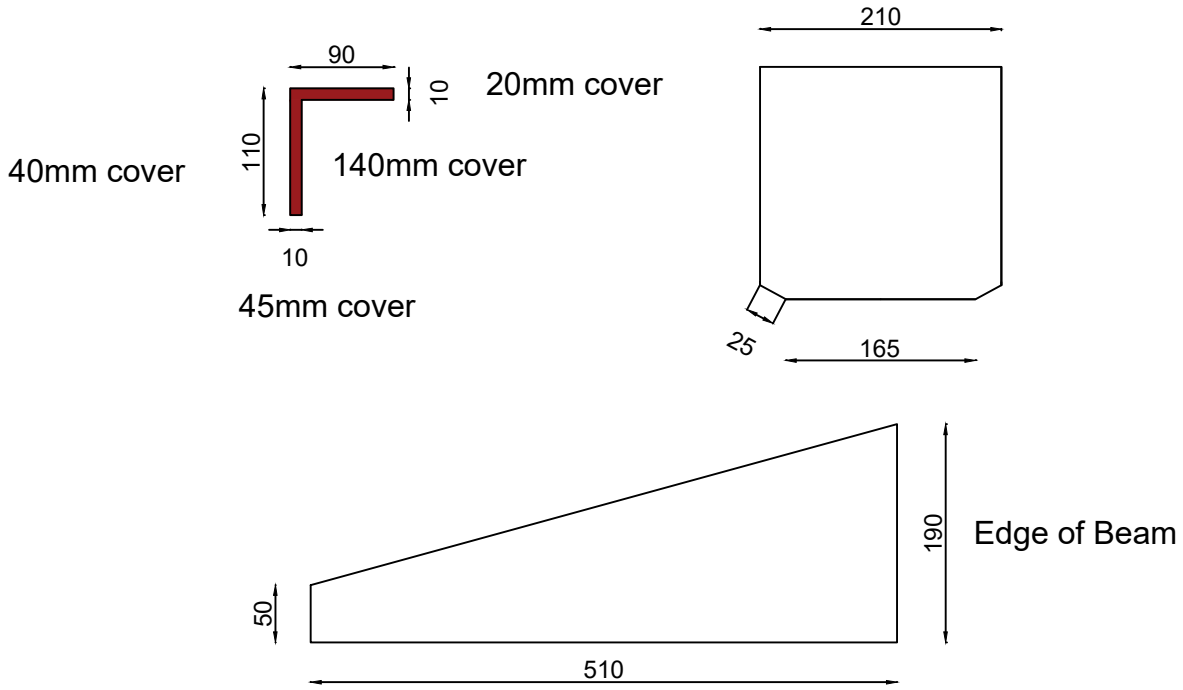
Plate Thickness = 15mm

Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 7
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 13/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 7 Beam Details

Location 274



Beam had 'L' shaped bracket cast into concrete

Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 7
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	13/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 7 Beam Details

Location 275

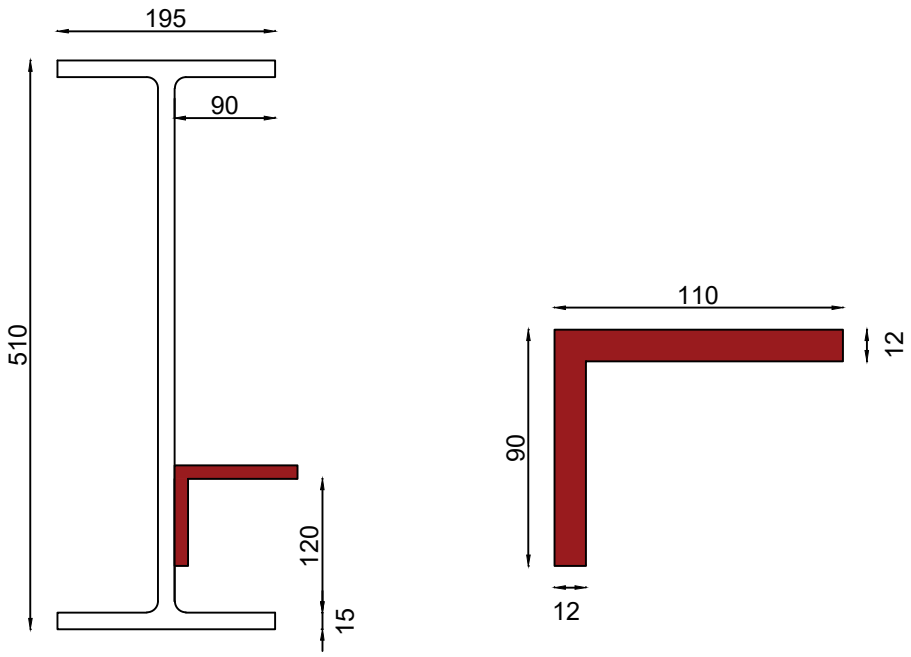


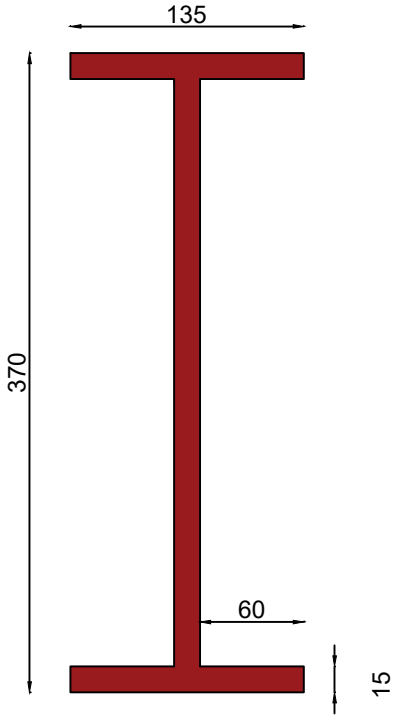
Plate holding pre-cast beam in place.

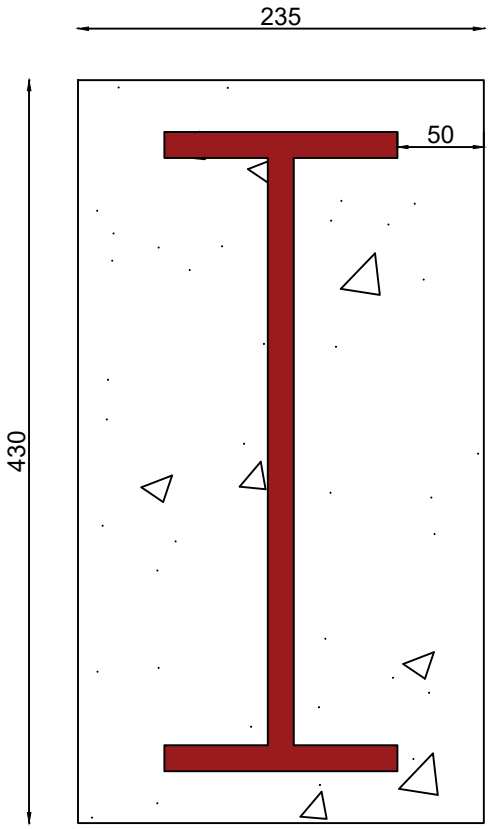
Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 7
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 14/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 7 Beam Details

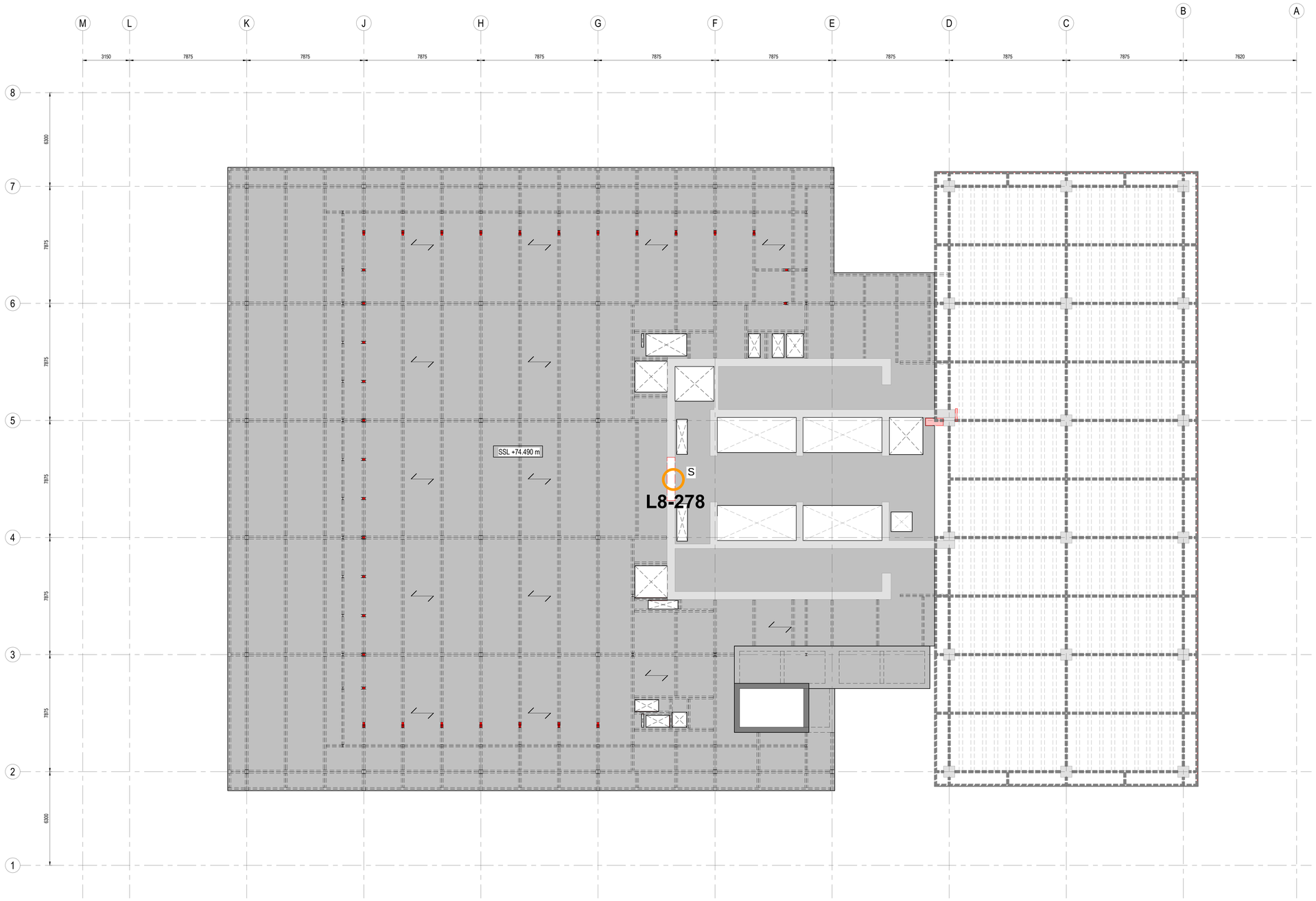
Location 276





Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

3.14 Level 8



GENERAL NOTES:

CONCRETE COLUMN SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D
Test type at locations noted on plan: T,A,S, CC

CONCRETE WALL SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types Test types to all locations:
C,F,CH,D,CC
Test type at locations noted on plan: T,A,S

CONCRETE BEAM SURVEYS:
HIGHLIGHTED BEAMS ARE BEAMS UNDER

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: T,S,A

CONCRETE SLAB SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed where noted

Confirm slab thickness and build up and determine condition.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A, T

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm reinforcement, cover and concrete grade.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D,S,CC,R
Test type at locations noted on plan:

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm column bearing details and geometry. Provide photographs of bearings.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A,T

STEEL COLUMN SURVEYS:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of concrete encasement, grade, thickness, presence of reinforcement. Confirm reinforcement grade and size.

Test types Test types to all locations: D,F,CH, Steel Verification
Test type at locations noted on plan: T,C

STEEL BEAMS & FINISHES:

Confirm sufficient dimensions of the steel to determine section size and connection details.

Confirm details of of the finishes, material, thickness etc.

Test types to all locations: D,F,CH,C
Test type at locations noted on plan: T,C

CONCRETE SLAB SURVEYS:

Concrete slabs formed in ribs and flat topping.

Identify reinforcement type so grade can be assessed and determine condition of concrete.

Measure all element dimensions, thickness, cover etc.

Test types to all locations: C,F,CH,D,HAC
Test type at locations noted on plan: CC,S,A, T

Denotes cover meter survey required to precast beams

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS

Rev:	Description:	Date:	By:	Chkd:
P01	UPDATED TO REFLECT STAGE 2 SCHEME	28.07.20	PM	MA

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Status:
STAGE 2

Project:
CIS TOWER REFURBISHMENT

Drg Title:
Level 08
Survey Scope

Size:	Date:	Drawn By:	Designed By:	Checked By:
A0	27.07.2020	P.M	M.A	M.A

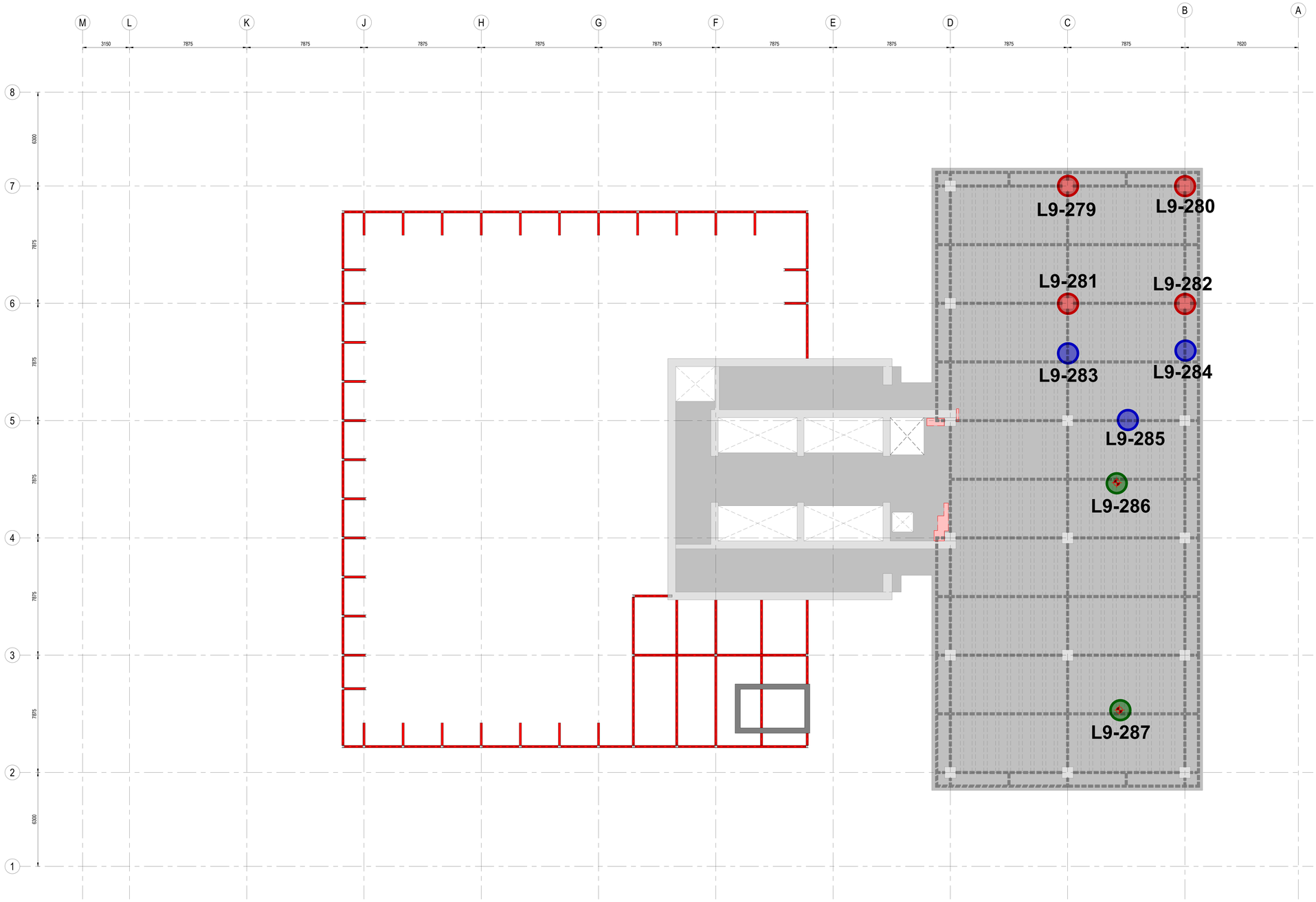
Scale: 1 : 100

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
068327 -	CUR -	00 -	09 -	DR -	S -	02108 -	P01

Model Name:068327-CUR-00-ZZ-M3-S18-00091_CENTRAL

Construction Testing Solutions		**Client:** Bowmer & Kirkland					**Report Ref:**		STR454				
		Site: CIS Tower - Manchester					**Report Date:**		10/09/2021				
		Location: Level L8					**Reported By:**		S.Grayson				
		Summary Of Results							**Chloride Content % by mass of**		**Depth of Carbonation (mm)**	**Rebound Number**	**Compressive Strength (N/mm2)**
Location	**Vertical Bar Type**	**Average Vertical Bar Spacing (mm)**	**Cover To Vertical Reinforcement (mm)**	**Horizontal Bar Type**	**Average Horizontal Bar Spacing (mm)**	**Cover To Horizontal Reinforcement (mm)**	**Ferroscan Ref:**	**Column Type:**	**Sample**	**Cement**			
Level L8 Core Walls													
L8-278		No Access - Located in Riser Cupboard											
Comments:													
Column & Beam Dimensions - Reinforcement Layout													

3.15 Level 9



GENERAL NOTES:

CONCRETE COLUMN SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D
Test type at locations noted on plan: T,A,S, CC

CONCRETE WALL SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types Test types to all locations:
C,F,CH,D,CC
Test type at locations noted on plan: T,A,S

CONCRETE BEAM SURVEYS:
HIGHLIGHTED BEAMS ARE BEAMS UNDER

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: T,S,A

CONCRETE SLAB SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed where noted

Confirm slab thickness and build up and determine condition.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A, T

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm reinforcement, cover and concrete grade.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D,S,CC,R
Test type at locations noted on plan:

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm column bearing details and geometry. Provide photographs of bearings.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A,T

STEEL COLUMN SURVEYS:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of concrete encasement, grade, thickness, presence of reinforcement. Confirm reinforcement grade and size.

Test types Test types to all locations: D,F,CH, Steel Verification
Test type at locations noted on plan: T,C

STEEL BEAMS & FINISHES:

Confirm sufficient dimensions of the steel to determine section size and connection details.

Confirm details of of the finishes, material, thickness etc.

Test types to all locations: D,F,CH,C
Test type at locations noted on plan: T,C

CONCRETE SLAB SURVEYS:

Concrete slabs formed in ribs and flat topping.

Identify reinforcement type so grade can be assessed and determine condition of concrete.

Measure all element dimensions, thickness, cover etc.

Test types to all locations: C,F,CH,D,HAC.
Test type at locations noted on plan: CC,S,A, T

Denotes cover meter survey required to precast beams

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS

Rev:	Description:	Date:	By:	Chkd:
P01	UPDATED TO REFLECT STAGE 2 SCHEME	28.07.20	PM	MA

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Status:
STAGE 2

Project:
CIS TOWER REFURBISHMENT

Drg Title:
Level 09
Survey Scope

Size:	Date:	Drawn By:	Designed By:	Checked By:
A0	27.07.2020	P.M	M.A	M.A

Scale: 1 : 100

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
068327 -	CUR -	00 -	09 -	DR -	S -	02109 -	P01

Model Name: 068327-CUR-00-ZZ-M3-S18-00001_CENTRAL

Construction Testing Solutions	Client: Bowmer & Kirkland	Report Ref:	STR454
	Site: CIS Tower - Manchester	Report Date:	10/09/2021
	Location: Level L9	Reported By:	S.Grayson

Summary Of Results

Location	Vertical Bar Type	Average Vertical Bar Spacing (mm)	Cover To Vertical Reinforcement (mm)	Horizontal Bar Type	Average Horizontal Bar Spacing (mm)	Cover To Horizontal Reinforcement (mm)	Ferroscan Ref:	Column Type:	Chloride Content % by mass of Sample	Chloride Content % by mass of Cement	Depth of Carbonation (mm)	Rebound Number	Compressive Strength (N/mm2)
Level L9 Columns													
L9-279	Steel Column - Dimensions on separate sheet								0.004	0.03	-	-	-
L9-280	Steel Column - Dimensions on separate sheet								0.007	0.05	-	-	-
L9-281	Steel Column - Dimensions on separate sheet								0.004	0.03	-	-	-
L9-282	Steel Column - Dimensions on separate sheet								0.006	0.05	-	-	-

Level L9 Slab

Location	Longitudinal Bar Type	Average Longitudinal Bar Spacing (mm)	Cover To Longitudinal Reinforcement (mm)	Transverse Bar Type	Average Transverse Bar Spacing (mm)	Cover To Transverse Reinforcement (mm)	Ferroscan Ref:	Slab Thickness (mm)	Chloride Content % by mass of Sample	Chloride Content % by mass of Cement	Depth of Carbonation (mm)	Rebound Number	Compressive Strength (N/mm2)
L9-287	6mmØ Smooth	150	75	6mmØ Smooth	150	68	287	130	0.007	0.05	10	-	-
L9-287 Precast Beam	8mmØ Smooth	-	50	12mmØ Smooth	80	80	287 Top of beam	-	-	-	-	-	-
L9-286	6mmØ Smooth	150	74	6mmØ Smooth	150	70	286	130	0.006	0.04	10	-	-

Level L9 Beams

L9-283	Steel Beam - Dimensions on separate sheet	Plaster only on beam	-	-
L9-284	Steel Beam - Dimensions on separate sheet	Plaster only on beam	-	-
L9-285	Steel Beam - Dimensions on separate sheet	Plaster only on beam	-	-

Comments:

Column & Beam Dimensions - Reinforcement Layout

All beam and column drawings provided on separate sheets

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 9
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 09/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 9 Beam Details

Location 283

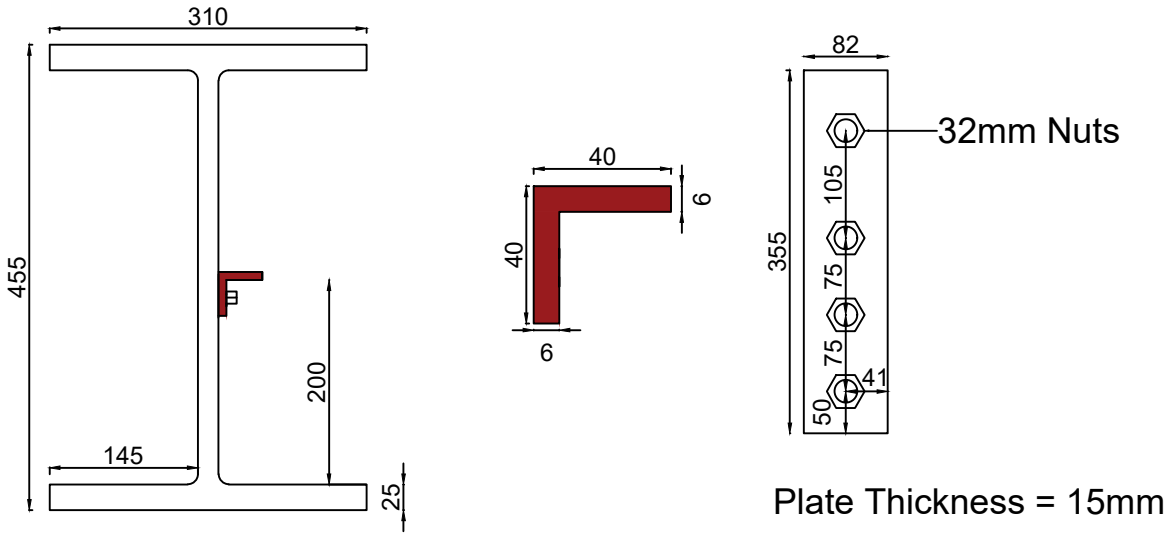


Plate Thickness = 15mm

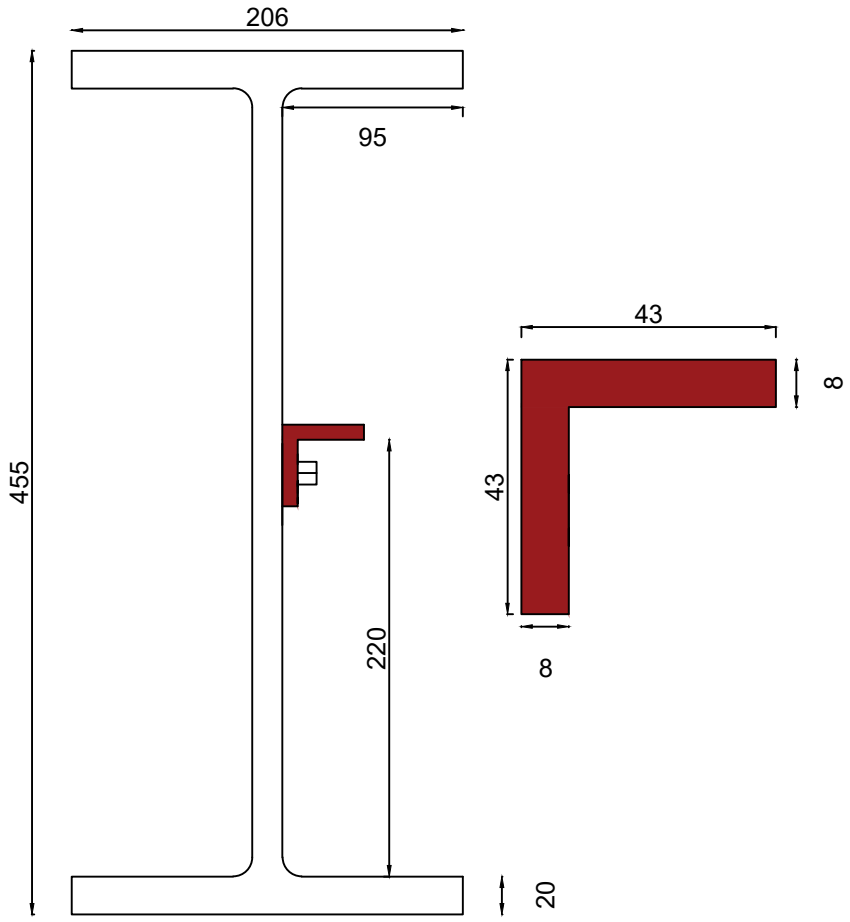
Fillet Weld onto Beam A nut and bolt to Beam B

Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 9
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	09/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 9 Beam Details

Location 284

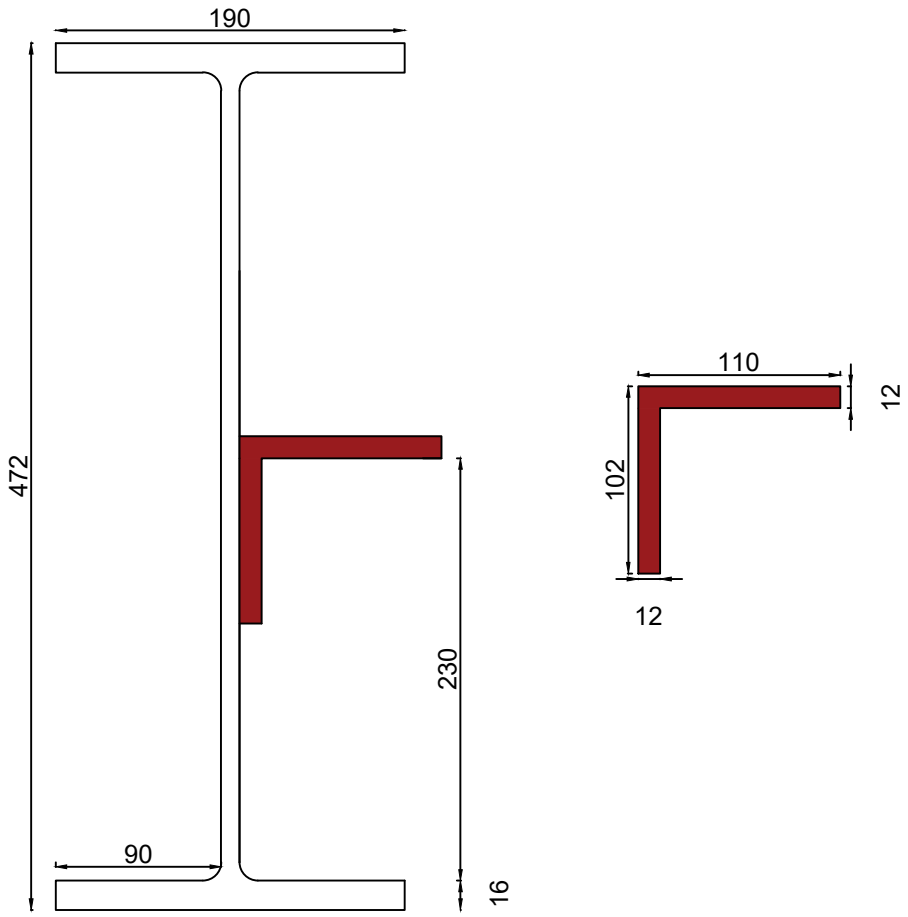


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 9
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 09/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 9 Beam Details

Location 285

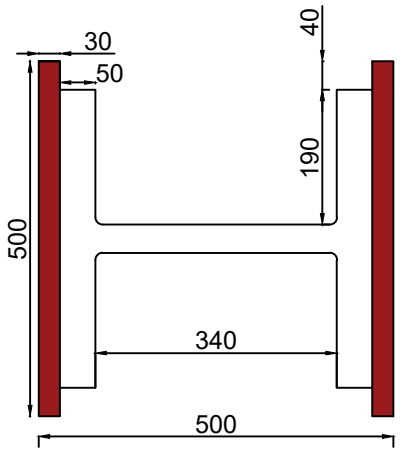


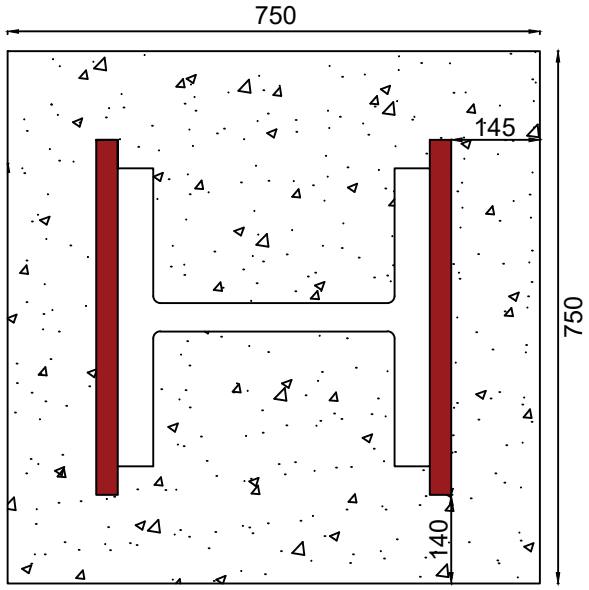
Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 9
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	09/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 9 Column Details

Location 279





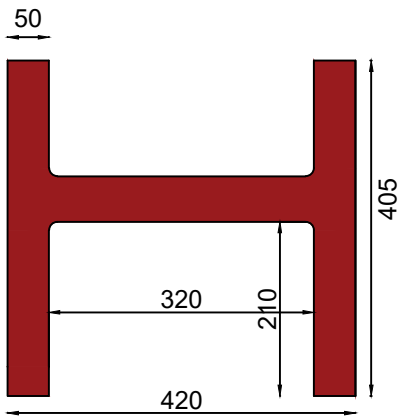
Concrete encasment is reinforced with a 6mm mesh.

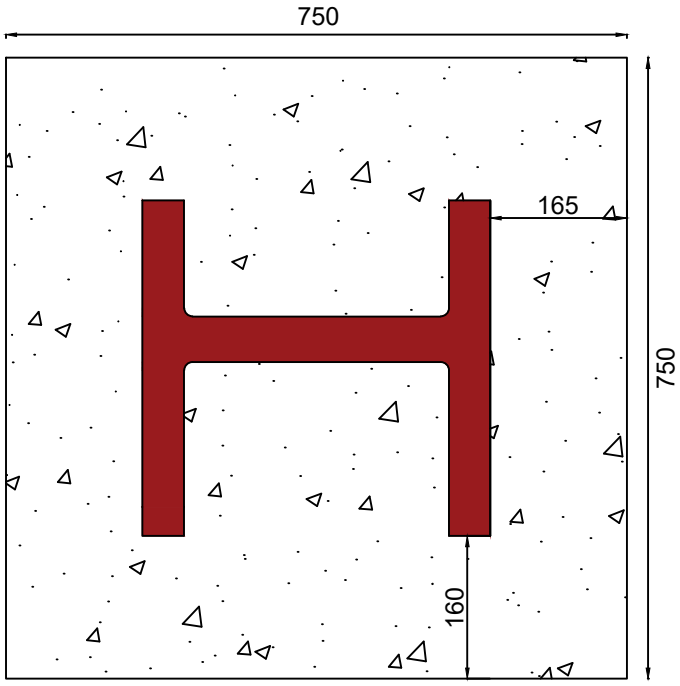
Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 9
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	09/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 9 Column Details

Location 280





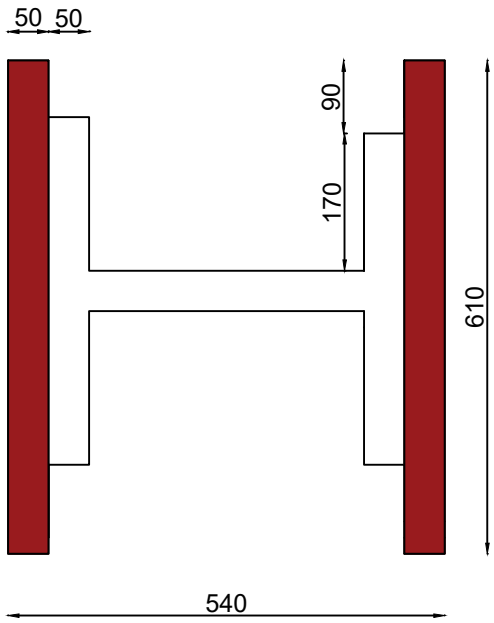
Concrete encasment is reinforced with a 6mm mesh.

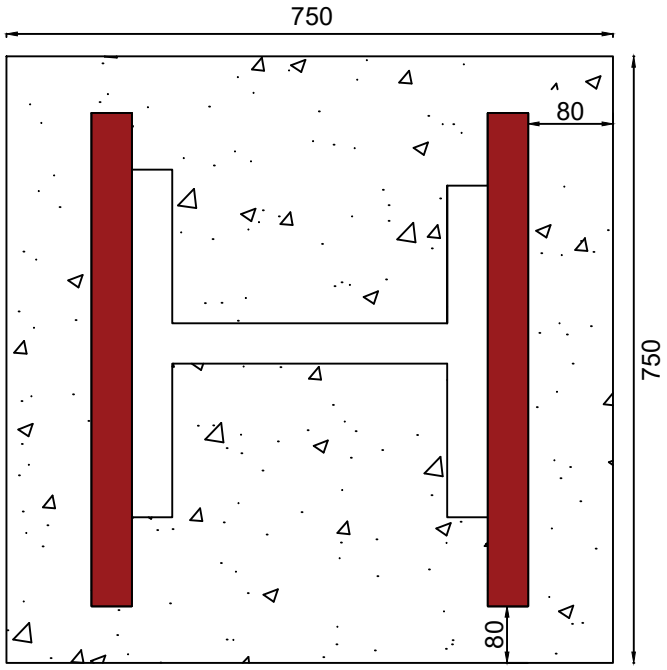
Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions		Client:	Bowmer & Kirkland	Location: Level 9
		Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported:	09/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 9 Column Details

Location 281





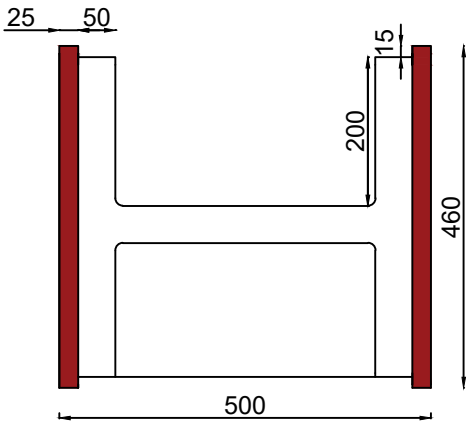
Concrete encasment is reinforced with a 6mm mesh.

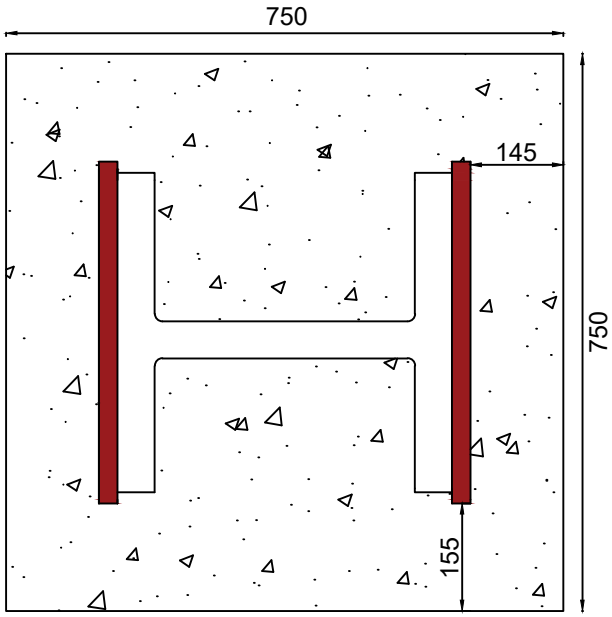
Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 9
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 09/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 9 Column Details

Location 282

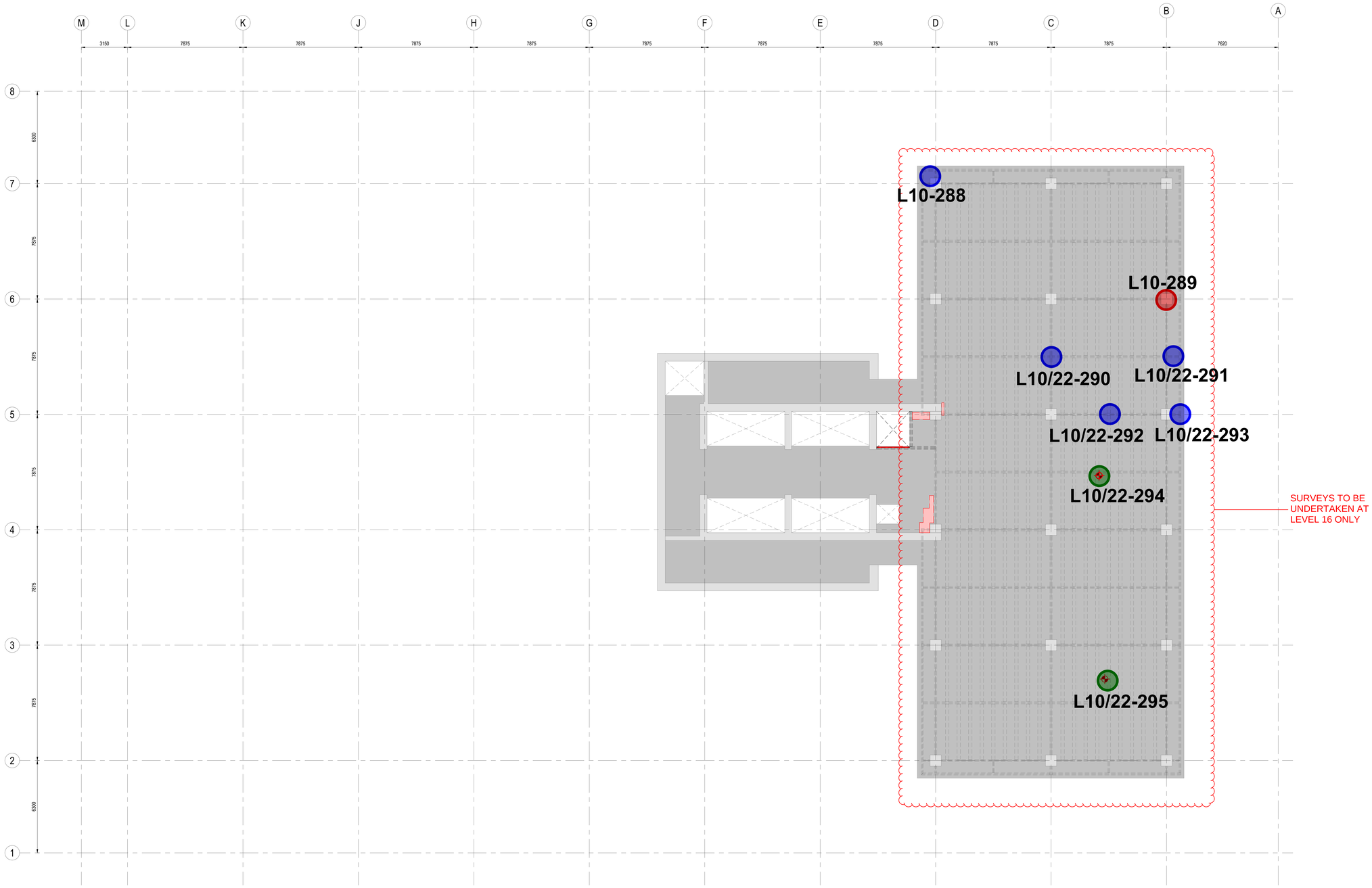




Concrete encasment is reinforced with a 6mm mesh.

Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

3.16 Level 15



GENERAL NOTES:

CONCRETE COLUMN SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D
Test type at locations noted on plan: T,A,S, CC

CONCRETE WALL SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types Test types to all locations:
C,F,CH,D,CC
Test type at locations noted on plan: T,A,S

CONCRETE BEAM SURVEYS: HIGHLIGHTED BEAMS ARE BEAMS UNDER

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: T,S,A

CONCRETE SLAB SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed where noted

Confirm slab thickness and build up and determine condition.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A, T

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm reinforcement, cover and concrete grade.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D,S,CC,R
Test type at locations noted on plan:

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm column bearing details and geometry. Provide photographs of bearings.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A,T

STEEL COLUMN SURVEYS:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of concrete encasement, grade, thickness, presence of reinforcement. Confirm reinforcement grade and size.

Test types Test types to all locations: D,F,CH, Steel Verification
Test type at locations noted on plan: T,C

STEEL BEAMS & FINISHES:

Confirm sufficient dimensions of the steel to determine section size and connection details.

Confirm details of of the finishes, material, thickness etc.

Test types to all locations: D,F,CH,C
Test type at locations noted on plan: T,C

CONCRETE SLAB SURVEYS:

Concrete slabs formed in ribs and flat topping.

Identify reinforcement type so grade can be assessed and determine condition of concrete.

Measure all element dimensions, thickness, cover etc.

Test types to all locations: C,F,CH,D,HAC.
Test type at locations noted on plan: CC,S,A, T

Denotes cover meter survey required to precast beams

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS

Rev:	Description:	Date:	By:	Chkd:
P01	UPDATED TO REFLECT STAGE 2 SCHEME	28.07.20	PM	MA

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Status:

STAGE 2

Project:

CIS TOWER REFURBISHMENT

Drg Title:

Levels 10 to 22
Survey Scope

Size:	Date:	Drawn By:	Designed By:	Checked By:
A0	27.07.2020	P.M	M.A	M.A

Scale: 1 : 100

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
068327 -	CUR -	00 -	ZZ -	DR -	S -	02110 -	P01

Model Name: 068327-CUR-00-ZZ-M3-S18-00001_CENTRAL

Construction Testing Solutions	Client: Bowmer & Kirkland	Report Ref:	STR454
	Site: CIS Tower - Manchester	Report Date:	10/09/2021
	Location: Level L15	Reported By:	S.Grayson

Summary Of Results

Location	Vertical Bar Type	Average Vertical Bar Spacing (mm)	Cover To Vertical Reinforcement (mm)	Horizontal Bar Type	Average Horizontal Bar Spacing (mm)	Cover To Horizontal Reinforcement (mm)	Ferroscan Ref:	Slab Thickness (mm)	Chloride Content % by mass of Sample	Chloride Content % by mass of Cement	Depth of Carbonation (mm)	Rebound Number	Compressive Strength (N/mm2)
Level L15 Columns													
L15-289	Steel Column - Dimensions on separate sheet								0.006	0.04	-	-	-
Level L15 Slab													
Location	**Longitudinal Bar Type**	**Average Longitudinal Bar Spacing (mm)**	**Cover To Longitudinal Reinforcement (mm)**	**Transverse Bar Type**	**Average Transverse Bar Spacing (mm)**	**Cover To Transverse Reinforcement (mm)**	**Ferroscan Ref:**	**Slab Thickness (mm)**	**Chloride Content % by mass of Sample**	**Chloride Content % by mass of Cement**	**Depth of Carbonation (mm)**	**Rebound Number**	**Compressive Strength (N/mm2)**
L15-294	6mmØ Smooth	150	50	6mmØ Smooth	150	42	294	110	0.007	0.05	<5	-	-
L15-295	6mmØ Smooth	150	40	6mmØ Smooth	150	48	295	110	0.006	0.05	<5	-	-
Level L15 Beams													
L15-288	Beam inaccessible								-	-	-	-	-
L15-290	Steel Beam - Dimensions on separate sheet								-	-	-	-	-
L15-291	Steel Beam - Dimensions on separate sheet								-	-	-	-	-
L15-292	Steel Beam - Dimensions on separate sheet								-	-	-	-	-
L15-293	Steel Beam - Dimensions on separate sheet								0.008	0.05	-	-	-

Comments: All HAC tests have been reported as negative

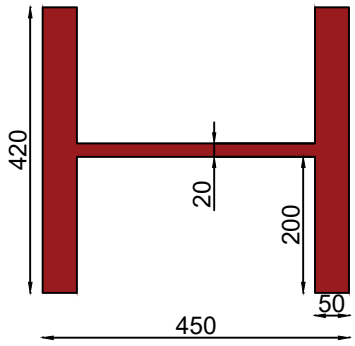
Column & Beam Dimensions - Reinforcement Layout

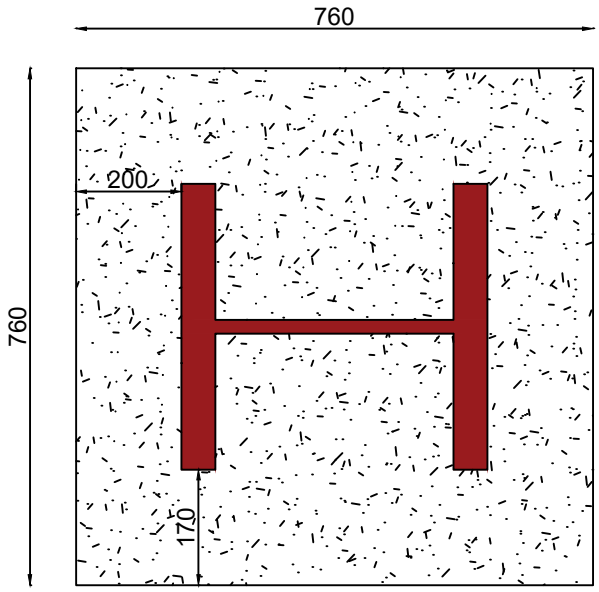
All Beam and column drawings provided on separate sheets

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 15
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 28/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 15 Beam Details

Location 289





Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 15
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 28/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 15 Beam Details

Location 290

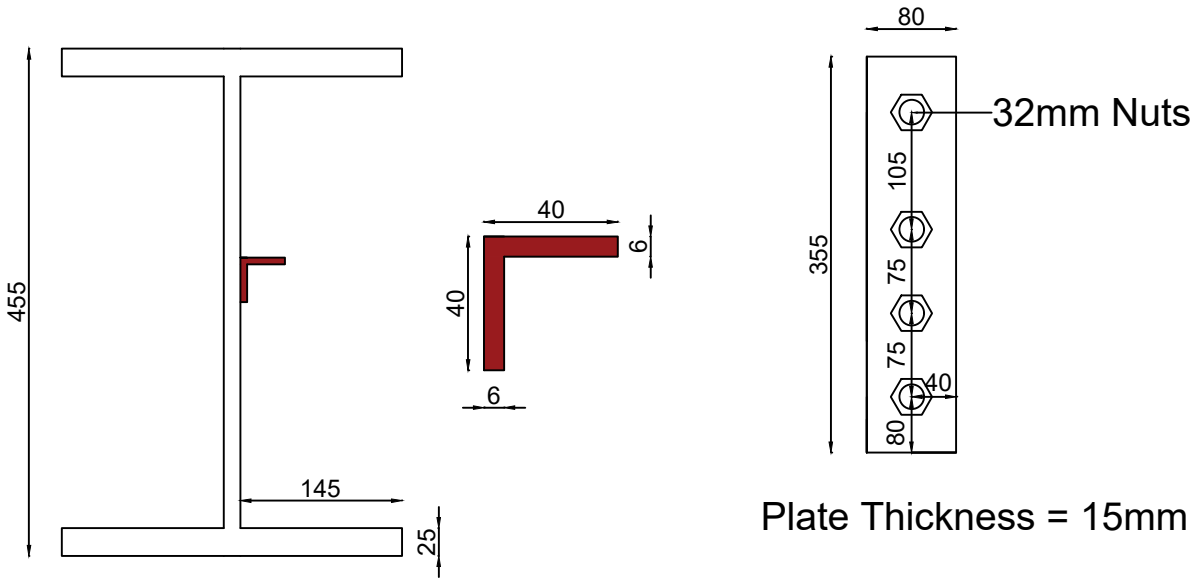


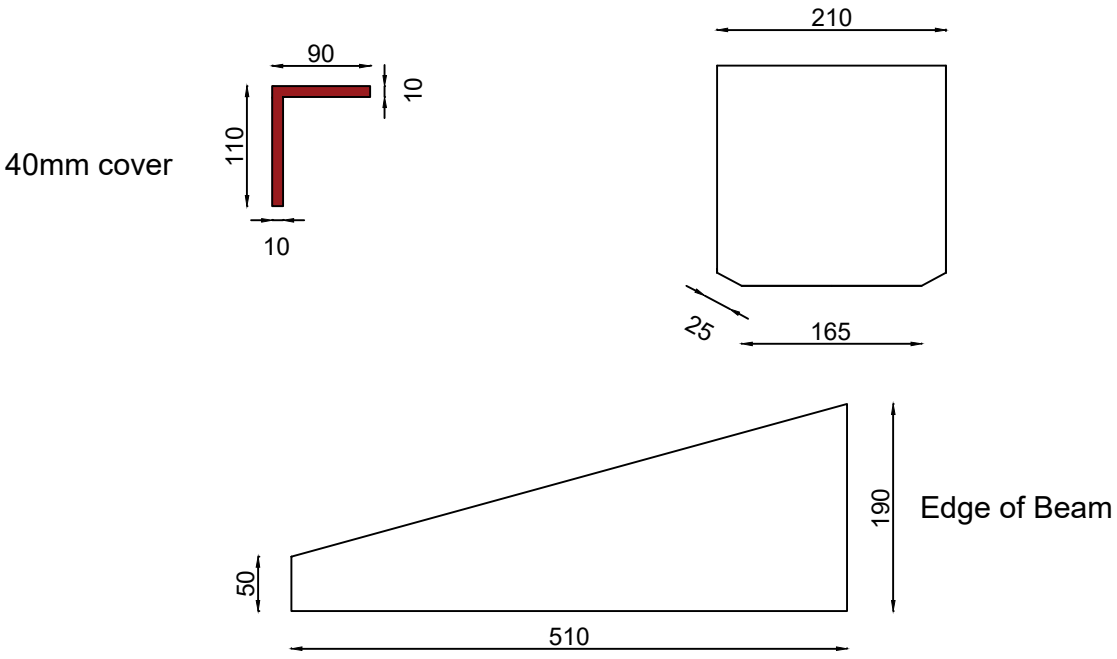
Plate Thickness = 15mm

Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 15
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 28/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 15 Beam Details

Location 291



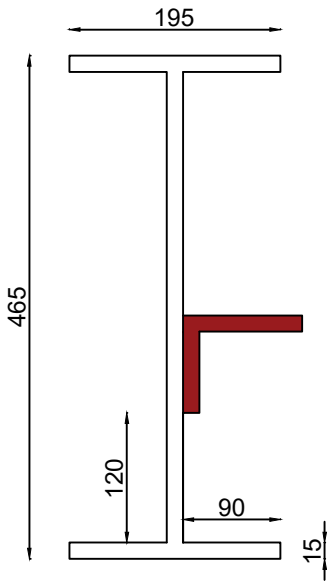
Beam had 'L' shaped bracket cast into concrete

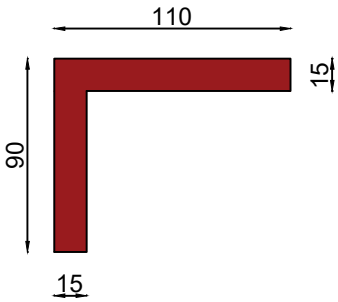
Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 15
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 28/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 15 Beam Details

Location 292





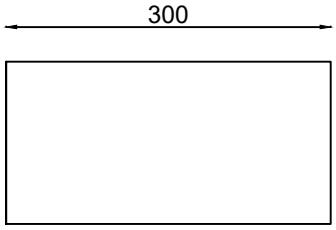


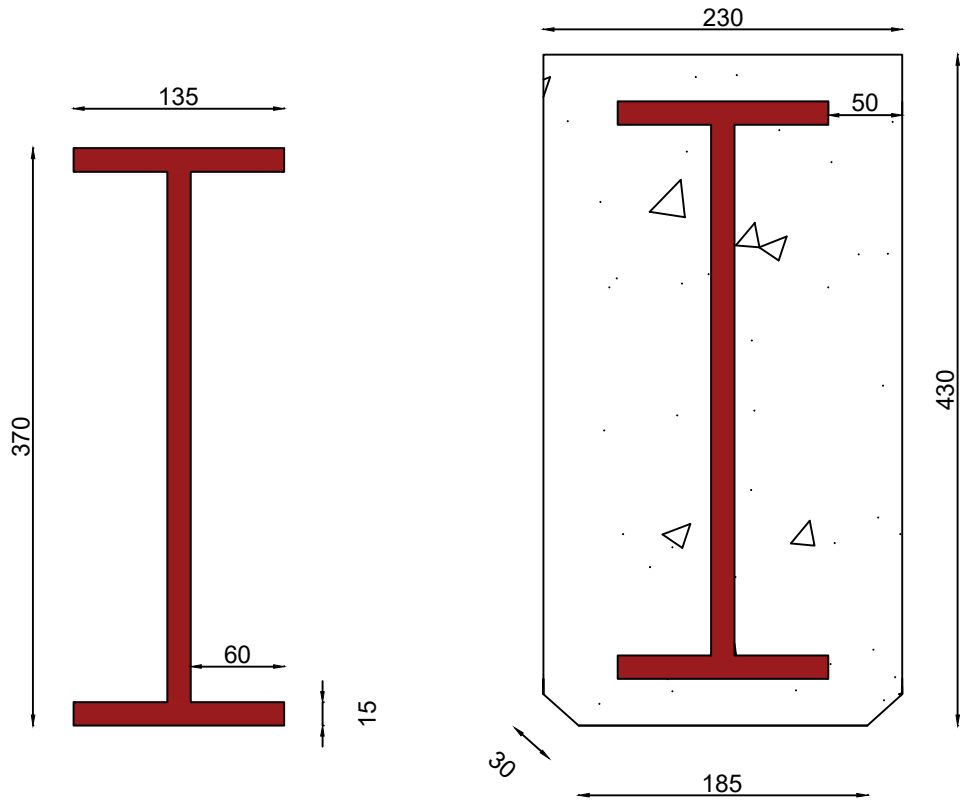
Plate holding pre cast beams up

Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 15
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 28/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

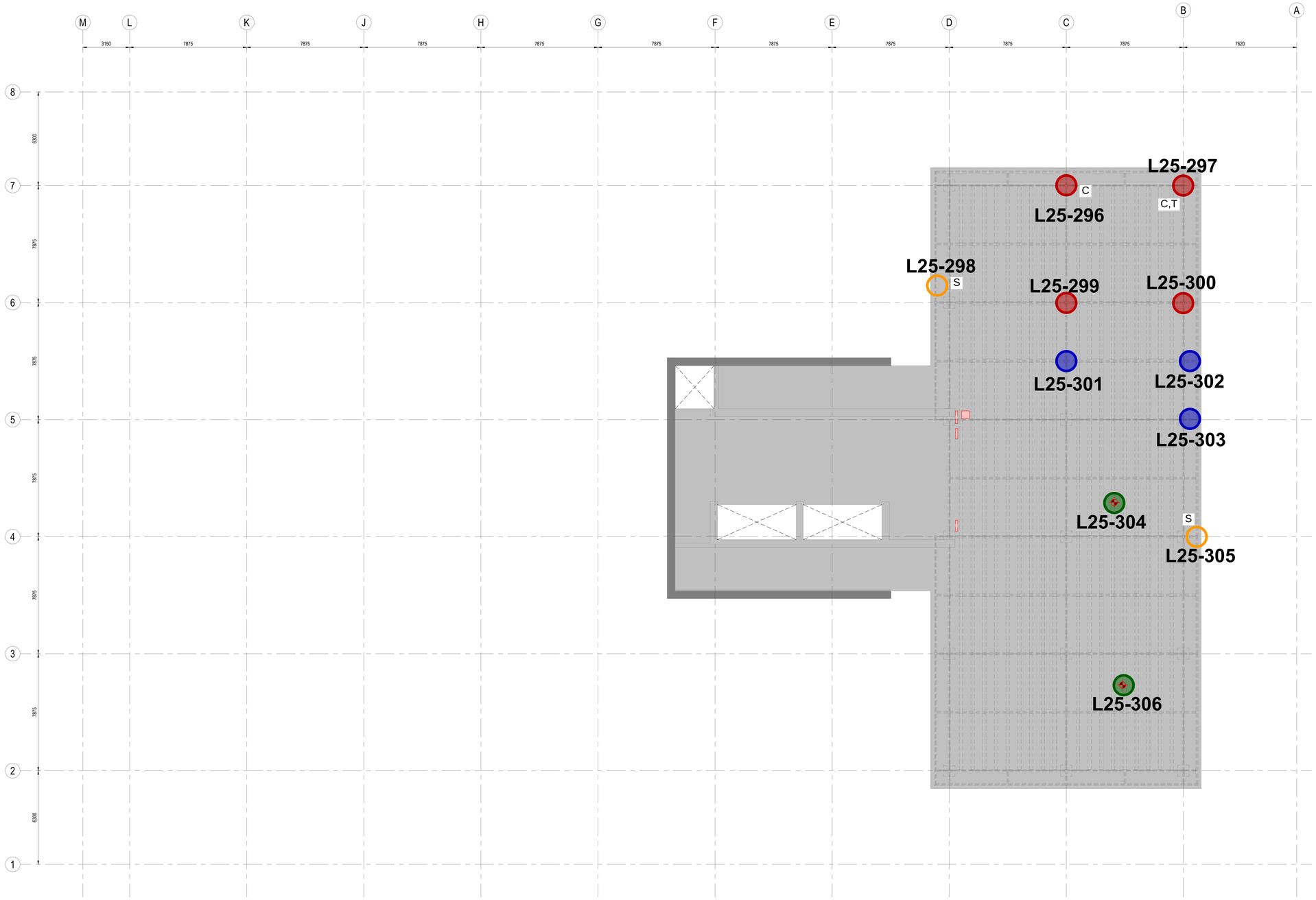
Level 15 Beam Details

Location 293



Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

3.17 Level 25



GENERAL NOTES:

CONCRETE COLUMN SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D
Test type at locations noted on plan: T,A,S, CC

CONCRETE WALL SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition.

Test types Test types to all locations:
C,F,CH,D,CC
Test type at locations noted on plan: T,A,S

CONCRETE BEAM SURVEYS:
HIGHLIGHTED BEAMS ARE BEAMS UNDER

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed.

Measure element dimensions and determine condition

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: T,S,A

CONCRETE SLAB SURVEYS:

Confirm reinforcement, cover and concrete grade.

Identify reinforcement type so grade can be assessed where noted

Confirm slab thickness and build up and determine condition.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A, T

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm reinforcement, cover and concrete grade.

Measure element dimensions and determine condition.

Test types to all locations: C,F,CH,D,S,CC,R
Test type at locations noted on plan:

CONCRETE COLUMN SURVEYS - POST STAGE 2:

Confirm column bearing details and geometry. Provide photographs of bearings.

Test types to all locations: C,F,CH,D,CC
Test type at locations noted on plan: S,A,T

STEEL COLUMN SURVEYS:

Confirm sufficient dimensions of the steel to determine section size.

Confirm details of concrete encasement, grade, thickness, presence of reinforcement. Confirm reinforcement grade and size.

Test types Test types to all locations: D,F,CH, Steel Verification
Test type at locations noted on plan: T,C

STEEL BEAMS & FINISHES:

Confirm sufficient dimensions of the steel to determine section size and connection details.

Confirm details of of the finishes, material, thickness etc.

Test types to all locations: D,F,CH,C
Test type at locations noted on plan: T,C

CONCRETE SLAB SURVEYS:

Concrete slabs formed in ribs and flat topping.

Identify reinforcement type so grade can be assessed and determine condition of concrete.

Measure all element dimensions, thickness, cover etc.

Test types to all locations: C,F,CH,D,HAC.
Test type at locations noted on plan: CC,S,A, T

Denotes cover meter survey required to precast beams

XX DENOTES LOCATIONS OF CONCRETE COLUMNS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE WALLS WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE BEAMS OVER WITH PREVIOUSLY COMPLETED TESTS

XX DENOTES LOCATIONS OF CONCRETE SLABS WITH PREVIOUSLY COMPLETED TESTS

Rev:	Description:	Date:	By:	Chkd:
P01	UPDATED TO REFLECT STAGE 2 SCHEME	28.07.20	PM	MA

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Status:
STAGE 2

Project:
CIS TOWER REFURBISHMENT

Drg Title:
Level 25
Survey Scope

Size:	Date:	Drawn By:	Designed By:	Checked By:
A0	27.07.2020	P.M	M.A	M.A

Scale: 1 : 100

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
068327 -	CUR -	00 -	25 -	DR -	S -	02125 -	P01

Model Name: 068327-CUR-00-ZZ-M3-S18-00001_CENTRAL

Construction Testing Solutions

Client: Bowmer & Kirkland	**Report Ref:** STR454
Site: CIS Tower - Manchester	**Report Date:** 10/09/2021
Location: Level L25	**Reported By:** S.Grayson

Summary Of Results

Location	Vertical Bar Type	Average Vertical Bar Spacing (mm)	Cover To Vertical Reinforcement (mm)	Horizontal Bar Type	Average Horizontal Bar Spacing (mm)	Cover To Horizontal Reinforcement (mm)	Ferroscan Ref:	Column Type:	Chloride Content % by mass of Sample	Chloride Content % by mass of Cement	Depth of Carbonation (mm)	Rebound Number	Compressive Strength (N/mm2)
Level L25 Columns													
L25-296	28mmØ Smooth	210	50	10mmØ Smooth	300	38	296	Steel	0.008	0.06	<5	44	-
L25-297	28mmØ Smooth	218	65	10mmØ Smooth	335	40	297	Steel	0.008	0.05	<5	46	-
L25-299	No column at this location												
L25-300	28mmØ Smooth	250	40	10mmØ Smooth	290	25	300	Steel	0.006	0.04	<5	48	-
Level L25 Core Walls													
L25-298	12mmØ Ribbed	200	70	12mmØ Ribbed	300	63	298	N/A	0.005	0.04	5	-	21.6
L25-305	13mmØ Ribbed	200	50	13mmØ Ribbed	300	34	305	N/A	0.004	0.03	3	-	19.7

Level L25 Slab

Location	Longitudinal Bar Type	Average Longitudinal Bar Spacing (mm)	Cover To Longitudinal Reinforcement (mm)	Transverse Bar Type	Average Transverse Bar Spacing (mm)	Cover To Transverse Reinforcement (mm)	Ferroscan Ref:	Slab Thickness (mm)	Chloride Content % by mass of Sample	Chloride Content % by mass of Cement	Depth of Carbonation (mm)	Rebound Number	Compressive Strength (N/mm2)
L25-304	12mmØ Smooth	150	45	6mmØ Smooth	150	30	304	120	0.014	0.10	<5	36	-
L25-306	6mmØ Smooth	150	67	6mmØ Smooth	150	60	306	120	0.019	0.14	<5	40	-
Level L25 Beams													
L25-301	No beam in this location												
L25-302	10mmØ Smooth	200	23	28mmØ Smooth	70	28	302	Steel	0.006	0.04	<5	-	-
L25-303	10mmØ Smooth	150	20	28mmØ Smooth	50	35	303	Steel	0.004	0.03	<5	-	-

Comments:

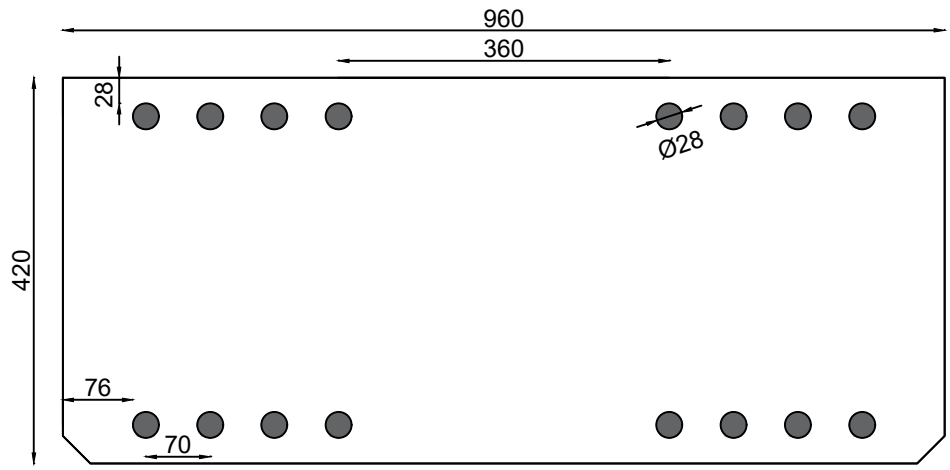
Column & Beam Dimensions - Reinforcement Layout

All Beam and column drawings provided on separate sheets

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 25
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 06/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 25 Beam Details

Location 302

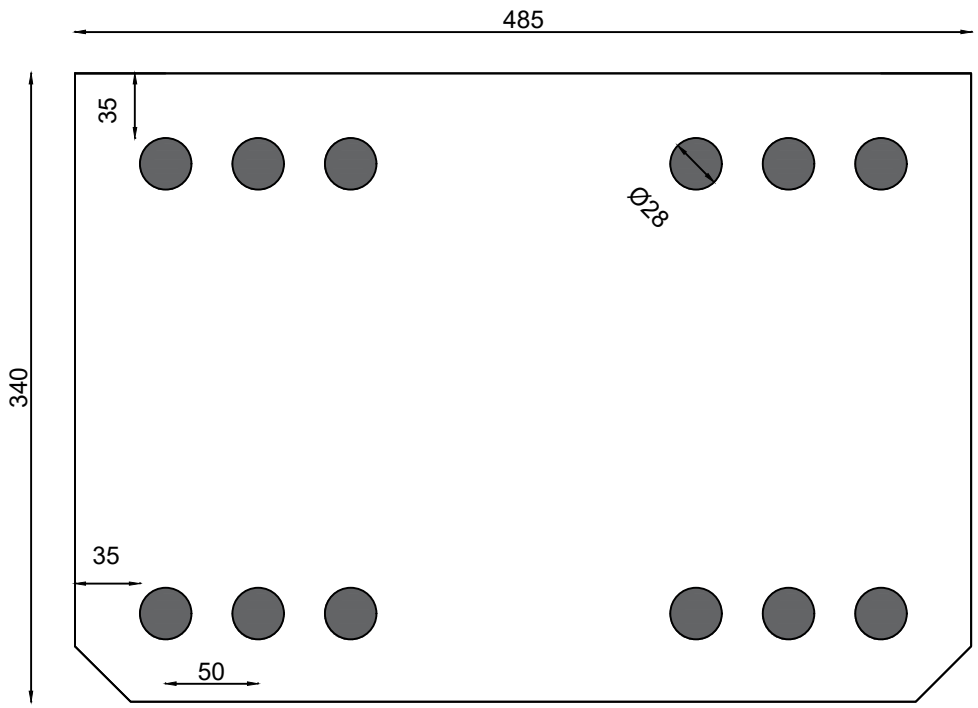


Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Construction Testing Solutions	Client:	Bowmer & Kirkland	Location: Level 25
	Project:	The Tower, Manchester	Sheet 1 of 1
Date Reported: 06/07/2021	Reported By:	B.Dimbleby	Project Reference: STR454

Level 25 Beam Details

Location 303



Issue No:	001	Revision No:	001	Scale:	1:20	www.constructiontesting.co.uk

Appendix B – Laboratory test results

4.1 Concrete chemistry

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Construction Testing Solutions
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Duckmanton
S44 5HS

Analytical Test Report: L21/02187/CTS/21-19404

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	02/07/2021
Your Order Number:	PO/2021/JK/2085	Testing Instruction Received:	02/07/2021
Report Issue Number:	1	Sample Tested:	02/07 to 12/07/2021
Samples Analysed:	14 concrete samples	Report issued:	12/07/2021

[redacted]
Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Samples were supplied by customer, results apply to the samples as received.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Accreditation Key

UKAS = UKAS Accreditation, u = Unaccredited

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Authorised by James Gane - Commercial Manager
J:\Public\Projects\2021\L21\CTS - Construction Testing Solutions\L21-2187-CTS\[L21-02187-CTS - 21-19404.XLSX]Chloride

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L21/02187/CTS/21-19404

Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
176565	L9-279	Dust	14.0	**0.004**	**0.03**
176566	L9-280	Dust	14.0	**0.007**	**0.05**
176567	L9-281	Dust	14.0	**0.004**	**0.03**
176568	L9-282	Dust	14.0	**0.006**	**0.05**
176569	L9-286	Dust	14.0	**0.006**	**0.04**
176570	L9-287	Dust	14.0	**0.007**	**0.05**
176571	L25-298	Dust	14.0	**0.005**	**0.04**
176572	L25-302	Dust	14.0	**0.006**	**0.04**
176573	L25-303	Dust	14.0	**0.004**	**0.03**
176574	L25-304	Dust	14.0	**0.014**	**0.10**
176575	L25-305	Dust	14.0	**0.004**	**0.03**

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Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Concrete

NC Reference		176562	176563	176564
Client Sample Reference		L9-286	L9-287	L25-304
Sample Description		45 mm concrete core lump	45 mm concrete core lump	Concrete lumps
BRE DETECTION OF HIGH ALUMINA CEMENT	**Accreditation**			
Presence Of High-Alumina Cement (HAC)	UKAS	No	No	No

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L21/02187/CTS/21-19404

Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.
BRE Detection of High Alumina Cement	1. Testing was in accordance with BRE Information Sheet IS 15/74. 2. Contaminated samples may give a false result. 3. Samples taken from extensively carbonated concrete containing Portland Cement may give a false positive result. 4. If conclusive identification of the presence of High Alumina Cement is required this result should be confirmed by a more definitive test.

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Analytical Test Report: L21/02297/CTS/21-19548

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	09/07/2021
Your Order Number:	PO/2021/JK/2102	Testing Instruction Received:	09/07/2021
Report Issue Number:	1	Sample Tested:	09/07 to 16/07/2021
Samples Analysed:	16 dust samples	Report issued:	16/07/2021

Signed

[redacted]

Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

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L21/02297/CTS/21-19548

Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Client Sample Location	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
178227	L4-226	-	Dust	14.0	**0.012**	**0.09**
178228	L4-227	-	Dust	14.0	**0.010**	**0.07**
178229	L4-228	-	Dust	14.0	**0.010**	**0.07**
178230	L4-229	-	Dust	14.0	**0.011**	**0.08**
178231	L4-232	-	Dust	14.0	**0.009**	**0.07**
178232	L4-233	-	Dust	14.0	**0.011**	**0.08**
178233	L4-234	-	Dust	14.0	**0.010**	**0.07**
178234	L4-235	-	Dust	14.0	**0.014**	**0.10**
178235	L4-236	-	Dust	14.0	**0.009**	**0.06**
178236	L4-237	-	Dust	14.0	**0.011**	**0.08**
178237	L4-242	-	Dust	14.0	**0.012**	**0.08**
178238	L4-246	-	Dust	14.0	**0.009**	**0.07**
178239	L4-247	-	Dust	14.0	**0.009**	**0.06**
178240	L4-249	-	Dust	14.0	**0.010**	**0.07**
178241	L4-250	-	Dust	14.0	**0.012**	**0.09**
178242	L4-251	-	Dust	14.0	**0.011**	**0.08**

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L21/02297/CTS/21-19548

Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.

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Analytical Test Report: L21/02300/CTS/21-19551

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	09/07/2021
Your Order Number:	PO/2021/KH/2096	Testing Instruction Received:	09/07/2021
Report Issue Number:	1	Sample Tested:	09/07 to 16/07/2021
Samples Analysed:	4 dust samples	Report issued:	16/07/2021

Signed

[redacted]

Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

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L21/02300/CTS/21-19551

Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Client Sample Location	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
178255	L6-270	-	Dust	14.0	**0.046**	**0.33**
178256	L6-269	-	Dust	14.0	**0.053**	**0.38**
178257	L6-274	-	Dust	14.0	**0.011**	**0.08**
178258	L6-276	-	Dust	14.0	**0.014**	**0.10**

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L21/02300/CTS/21-19551

Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.

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Analytical Test Report: L21/02313/CTS/21-19569

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	12/07/2021
Your Order Number:	PO/2021/JW/2108	Testing Instruction Received:	12/07/2021
Report Issue Number:	1	Sample Tested:	12/07 to 16/07/2021
Samples Analysed:	2 concrete samples, 6 dust samples	Report issued:	16/07/2021

Signed

[redacted]

Peter Swanston
Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

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Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Client Sample Location	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
178355	L4-230	-	Dust	14.0	**0.010**	**0.07**
178356	L4-231	-	Dust	14.0	**0.013**	**0.09**
178357	L4-238	-	Dust	14.0	**0.009**	**0.07**
178358	L4-239	-	Dust	14.0	**0.011**	**0.08**
178359	L4-245	-	Dust	14.0	**0.017**	**0.12**
178360	L4-248	-	Dust	14.0	**0.013**	**0.10**

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L21/02313/CTS/21-19569

Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Concrete

NC Reference		178353	178354
Client Sample Reference		L4-245	L4-248
Location		-	-
Sample Description		Concrete lumps	45 mm Concrete core
BRE DETECTION OF HIGH ALUMINA CEMENT	**Accreditation**		
Presence Of High-Alumina Cement (HAC)	UKAS	No	No

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L21/02313/CTS/21-19569

Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.
BRE Detection of High Alumina Cement	1. Testing was in accordance with BRE Information Sheet IS 15/74. 2. Contaminated samples may give a false result. 3. Samples taken from extensively carbonated concrete containing Portland Cement may give a false positive result. 4. If conclusive identification of the presence of High Alumina Cement is required this result should be confirmed by a more definitive test.

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Analytical Test Report: L21/02319/CTS/21-19576

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	13/07/2021
Your Order Number:	TBC	Testing Instruction Received:	13/07/2021
Report Issue Number:	1	Sample Tested:	13/07 to 16/07/2021
Samples Analysed:	3 dust samples	Report issued:	16/07/2021

Signed

[redacted]

Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

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L21/02319/CTS/21-19576

Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Client Sample Location	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
178374	L2-184	-	Dust	14.0	**0.008**	**0.06**
178375	L2-208	-	Dust	14.0	**0.010**	**0.07**
178376	L2-209	-	Dust	14.0	**0.010**	**0.07**

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L21/02319/CTS/21-19576

Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.

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Analytical Test Report: L21/02352/CTS/21-19614

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	14/07/2021
Your Order Number:	PO/2021/JK/2118	Testing Instruction Received:	14/07/2021
Report Issue Number:	1	Sample Tested:	14/07 to 19/07/2021
Samples Analysed:	16 dust samples	Report issued:	19/07/2021

Signed

[redacted]

Peter Swanston
Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Samples were supplied by customer, results apply to the samples as received.

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L21/02352/CTS/21-19614

Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Client Sample Location	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
178504	L2-185	-	Dust	14.0	**0.006**	**0.05**
178505	L2-186	-	Dust	14.0	**0.006**	**0.04**
178506	L2-189	-	Dust	14.0	**0.006**	**0.05**
178507	L2-190	-	Dust	14.0	**0.008**	**0.06**
178508	L2-191	-	Dust	14.0	**0.008**	**0.06**
178509	L2-192	-	Dust	14.0	**0.007**	**0.05**
178510	L2-193	-	Dust	14.0	**0.012**	**0.08**
178511	L2-194	-	Dust	14.0	**0.009**	**0.07**
178512	L2-195	-	Dust	14.0	**0.008**	**0.06**
178513	L2-196	-	Dust	14.0	**0.008**	**0.06**
178514	L2-197	-	Dust	14.0	**0.007**	**0.05**
178515	L2-198	-	Dust	14.0	**0.006**	**0.04**
178516	L2-199	-	Dust	14.0	**0.008**	**0.05**
178517	L2-204	-	Dust	14.0	**0.008**	**0.06**
178518	L2-205	-	Dust	14.0	**0.008**	**0.05**
178519	L2-207	-	Dust	14.0	**0.008**	**0.05**

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L21/02352/CTS/21-19614

Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.

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Analytical Test Report: L21/02423/CTS-21-19711

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	20/07/2021
Your Order Number:	PO/2021/JK/2136	Testing Instruction Received:	20/07/2021
Report Issue Number:	1	Sample Tested:	20/07 to 23/07/2021
Samples Analysed:	1 concrete sample, 4 dust samples	Report issued:	23/07/2021

Signed

[redacted]

Peter Swanston
Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Samples were supplied by customer, results apply to the samples as received.

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Uncertainty of measurement values are available on request.

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L21/02423/CTS-21-19711

Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Client Sample Location	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
179918	L25-296	-	Dust	14.0	**0.008**	**0.06**
179919	L25-297	-	Dust	14.0	**0.008**	**0.05**
179920	L25-300	-	Dust	14.0	**0.006**	**0.04**
179921	L25-306	-	Dust	14.0	**0.019**	**0.14**

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Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Concrete

NC Reference	**179922**
Client Sample Reference	L25-306
Location	-
Sample Description	45 mm Concrete core lump

BRE DETECTION OF HIGH ALUMINA CEMENT	**Accreditation**	
Presence Of High-Alumina Cement (HAC)	UKAS	No

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L21/02423/CTS-21-19711

Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.
BRE Detection of High Alumina Cement	1. Testing was in accordance with BRE Information Sheet IS 15/74. 2. Contaminated samples may give a false result. 3. Samples taken from extensively carbonated concrete containing Portland Cement may give a false positive result. 4. If conclusive identification of the presence of High Alumina Cement is required this result should be confirmed by a more definitive test.

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Analytical Test Report: L21/02424/CTS-21-19712

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	20/07/2021
Your Order Number:	PO/2021/JK/2127	Testing Instruction Received:	20/07/2021
Report Issue Number:	1	Sample Tested:	20/07 to 23/07/2021
Samples Analysed:	2 concrete samples, 8 dust samples	Report issued:	23/07/2021

Signed

[redacted]

Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Samples were supplied by customer, results apply to the samples as received.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

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L21/02424/CTS-21-19712

Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Client Sample Location	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
179925	L2-203	-	Dust	14.0	**0.009**	**0.07**
179926	L2-206	-	Dust	14.0	**0.011**	**0.08**
179927	B3-1	-	Dust	14.0	**0.010**	**0.07**
179928	B3-2	-	Dust	14.0	**0.009**	**0.06**
179929	B3-3	-	Dust	14.0	**0.008**	**0.05**
179930	B3-4	-	Dust	14.0	**0.006**	**0.04**
179931	B3-5	-	Dust	14.0	**0.020**	**0.14**
179932	B3-6	-	Dust	14.0	**0.007**	**0.05**

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Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Concrete

NC Reference		179923	179924
Client Sample Reference		L2-203	L2-206
Sample Description		45 mm Concrete core lump	45 mm Concrete core lump
BRE DETECTION OF HIGH ALUMINA CEMENT	**Accreditation**		
Presence Of High-Alumina Cement (HAC)	UKAS	No	No

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L21/02424/CTS-21-19712

Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.
BRE Detection of High Alumina Cement	1. Testing was in accordance with BRE Information Sheet IS 15/74. 2. Contaminated samples may give a false result. 3. Samples taken from extensively carbonated concrete containing Portland Cement may give a false positive result. 4. If conclusive identification of the presence of High Alumina Cement is required this result should be confirmed by a more definitive test.

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Analytical Test Report: L21/02470/CTS/21-19768

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	21/07/2021
Your Order Number:	PO/2021/JK/2145	Testing Instruction Received:	21/07/2021
Report Issue Number:	1	Sample Tested:	21/07 to 29/07/2021
Samples Analysed:	2 concrete samples, 3 dust samples	Report issued:	29/07/2021

Signed

[redacted]

Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Samples were supplied by customer, results apply to the samples as received.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

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Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
180259	L14/15-289	Dust	14.0	**0.006**	**0.04**
180260	L14/15-294	Dust	14.0	**0.007**	**0.05**
180261	L14/15-295	Dust	14.0	**0.006**	**0.05**

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Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Concrete

NC Reference		180257	180258
Client Sample Reference		L14/15-294	L14/15-295
Sample Description		Concrete lumps	Concrete lumps
BRE DETECTION OF HIGH ALUMINA CEMENT	**Accreditation**		
Presence Of High-Alumina Cement (HAC)	UKAS	No	No

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L21/02470/CTS/21-19768

Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.
BRE Detection of High Alumina Cement	1. Testing was in accordance with BRE Information Sheet IS 15/74. 2. Contaminated samples may give a false result. 3. Samples taken from extensively carbonated concrete containing Portland Cement may give a false positive result. 4. If conclusive identification of the presence of High Alumina Cement is required this result should be confirmed by a more definitive test.

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Analytical Test Report: L21/02538/CTS/21-19848

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	23/07/2021
Your Order Number:	PO/2021/JK/2153	Testing Instruction Received:	23/07/2021
Report Issue Number:	1	Sample Tested:	23/07 to 30/07/2021
Samples Analysed:	13 dust samples	Report issued:	30/07/2021

Signed

[redacted]

Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Samples were supplied by customer, results apply to the samples as received.

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L21/02538/CTS/21-19848

Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
180782	L14/15-293	Dust	14.0	**0.008**	**0.05**
180783	ML-140	Dust	14.0	**0.013**	**0.09**
180784	ML-141	Dust	14.0	**0.011**	**0.08**
180785	ML-142	Dust	14.0	**0.012**	**0.09**
180786	ML-143	Dust	14.0	**0.009**	**0.06**
180787	ML-144	Dust	14.0	**0.007**	**0.05**
180788	ML-145	Dust	14.0	**0.010**	**0.07**
180789	ML-146	Dust	14.0	**0.016**	**0.11**
180790	ML-148	Dust	14.0	**0.008**	**0.06**
180791	ML-150	Dust	14.0	**0.020**	**0.14**
180792	ML-151	Dust	14.0	**0.010**	**0.07**
180793	ML-152	Dust	14.0	**0.010**	**0.07**
180794	ML-153	Dust	14.0	**0.011**	**0.08**

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Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.

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Analytical Test Report: L21/02631/CTS/21-19968

Your Project Reference:	**STR454 - CIS Tower, Manchester**	Samples Received on:	29/07/2021
Your Order Number:	PO/2021/JK/2165	Testing Instruction Received:	29/07/2021
Report Issue Number:	1	Sample Tested:	29/07 to 04/08/2021
Samples Analysed:	9 dust samples	Report issued:	04/08/2021

Signed
[redacted]
Peter Swanston
Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

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L21/02631/CTS/21-19968

Project Reference - STR454 - CIS Tower, Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Date Sampled	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
181754	B2 - 7	27/07/2021	Dust	14.0	**0.139**	**0.99**
181755	B2 - 8	27/07/2021	Dust	14.0	**0.043**	**0.31**
181756	B2 - 13	27/07/2021	Dust	14.0	**0.054**	**0.38**
181757	B3 - 1 Old	27/07/2021	Dust	14.0	**0.007**	**0.05**
181758	B3 - 2 Old	27/07/2021	Dust	14.0	**0.008**	**0.06**
181759	L0 - 104	27/07/2021	Dust	14.0	**0.013**	**0.09**
181760	L0 - 116	27/07/2021	Dust	14.0	**0.016**	**0.12**
181761	L0 - 117	27/07/2021	Dust	14.0	**0.053**	**0.38**
181762	L0 - 118	27/07/2021	Dust	14.0	**0.013**	**0.09**

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L21/02631/CTS/21-19968

Project Reference - STR454 - CIS Tower, Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.

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Analytical Test Report: L21/02632/CTS/21-19969

Your Project Reference:	**STR454 - CIS Tower, Manchester**	Samples Received on:	29/07/2021
Your Order Number:	PO/2021/JK/2163	Testing Instruction Received:	29/07/2021
Report Issue Number:	1	Sample Tested:	29/07 to 04/08/2021
Samples Analysed:	4 dust samples	Report issued:	04/08/2021

Signed

[redacted]

Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Samples were supplied by customer, results apply to the samples as received.

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L21/02632/CTS/21-19969

Project Reference - STR454 - CIS Tower, Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Date Sampled	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
181763	ML - 138	26/07/2021	Dust	14.0	**0.013**	**0.10**
181764	ML - 139	26/07/2021	Dust	14.0	**0.009**	**0.06**
181765	ML - 149	26/07/2021	Dust	14.0	**0.015**	**0.11**
181766	ML - 154	26/07/2021	Dust	14.0	**0.013**	**0.10**

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L21/02632/CTS/21-19969

Project Reference - STR454 - CIS Tower, Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.

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Analytical Test Report: L21/02662/CTS/21-20025

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	02/08/2021
Your Order Number:	CTS000689	Testing Instruction Received:	02/08/2021
Report Issue Number:	1	Sample Tested:	02/08 to 06/08/2021
Samples Analysed:	16 dust samples	Report issued:	06/08/2021

Signed

[redacted]

Peter Swanston
Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

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L21/02662/CTS/21-20025

Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Date Sampled	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
182404	L0-100	28/07/2021	Dust	14.0	**0.009**	**0.07**
182405	L0-102	29/07/2021	Dust	14.0	**0.008**	**0.06**
182406	L0-106	28/07/2021	Dust	14.0	**0.008**	**0.06**
182407	L0-107	28/07/2021	Dust	14.0	**0.007**	**0.05**
182408	L0-108	28/07/2021	Dust	14.0	**0.008**	**0.06**
182409	L0-109	28/07/2021	Dust	14.0	**0.006**	**0.04**
182410	L0-110	28/07/2021	Dust	14.0	**0.015**	**0.11**
182411	L0-112	28/07/2021	Dust	14.0	**0.031**	**0.22**
182412	L0-121	28/07/2021	Dust	14.0	**0.009**	**0.06**
182413	L0-122	29/07/2021	Dust	14.0	**0.008**	**0.06**
182414	L0-124	29/07/2021	Dust	14.0	**0.007**	**0.05**
182415	L0-125	29/07/2021	Dust	14.0	**0.006**	**0.04**
182416	L0-127	29/07/2021	Dust	14.0	**0.010**	**0.07**
182417	L0-131	29/07/2021	Dust	14.0	**0.006**	**0.04**
182418	L0-132	29/07/2021	Dust	14.0	**0.009**	**0.07**
182419	L0-134	29/07/2021	Dust	14.0	**0.005**	**0.03**

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L21/02662/CTS/21-20025

Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.

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Analytical Test Report: L21/02675/CTS/21-20053

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	02/08/2021
Your Order Number:	CTS000703	Testing Instruction Received:	02/08/2021
Report Issue Number:	1	Sample Tested:	02/08 to 11/08/2021
Samples Analysed:	5 dust samples	Report issued:	11/08/2021

Signed

[redacted]

Peter Swanston
Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Samples were supplied by customer, results apply to the samples as received.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

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Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Date of Sampling	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
182537	L0-96	30/07/2021	Dust	14.0	**0.011**	**0.08**
182538	L0-97	30/07/2021	Dust	14.0	**0.009**	**0.06**
182539	L0-99	30/07/2021	Dust	14.0	**0.033**	**0.23**
182540	L0-119	30/07/2021	Dust	14.0	**0.007**	**0.05**
182541	L0-123	30/07/2021	Dust	14.0	**0.011**	**0.08**

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Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.

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Analytical Test Report: L21/02752/CTS/21-20154

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	05/08/2021
Your Order Number:	CTS000750	Testing Instruction Received:	05/08/2021
Report Issue Number:	1	Sample Tested:	05/08 to 12/08/2021
Samples Analysed:	5 dust samples	Report issued:	12/08/2021

Signed

[redacted]

Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Samples were supplied by customer, results apply to the samples as received.

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L21/02752/CTS/21-20154

Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Date Sampled	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
183338	L3-221	03/08/2021	Dust	14.0	**0.007**	**0.05**
183339	L3-222	03/08/2021	Dust	14.0	**0.005**	**0.04**
183340	L3-223	03/08/2021	Dust	14.0	**0.008**	**0.06**
183341	L3-224	03/08/2021	Dust	14.0	**0.007**	**0.05**
183342	L3-225	03/08/2021	Dust	14.0	**0.006**	**0.04**

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L21/02752/CTS/21-20154

Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.

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Analytical Test Report: L21/02790/CTS/21-20195

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	09/08/2021
Your Order Number:	CTS000825	Testing Instruction Received:	09/08/2021
Report Issue Number:	1	Sample Tested:	09/08 to 13/08/2021
Samples Analysed:	21 dust samples	Report issued:	13/08/2021

Signed

[redacted]

Peter Swanston
Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Samples were supplied by customer, results apply to the samples as received.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

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Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Client Sample Location	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
183484	L1-155	-	Dust	14.0	**0.012**	**0.08**
183485	L1-156	-	Dust	14.0	**0.010**	**0.07**
183486	L1-157	-	Dust	14.0	**0.016**	**0.12**
183487	L1-158	-	Dust	14.0	**0.011**	**0.08**
183488	L1-159	-	Dust	14.0	**0.011**	**0.08**
183489	L1-160	-	Dust	14.0	**0.017**	**0.12**
183490	L1-161	-	Dust	14.0	**0.010**	**0.07**
183491	L1-162	-	Dust	14.0	**0.013**	**0.09**
183492	L1-164	-	Dust	14.0	**0.009**	**0.07**
183493	L1-165	-	Dust	14.0	**0.009**	**0.06**
183494	L1-166	-	Dust	14.0	**0.010**	**0.07**
183495	L1-167	-	Dust	14.0	**0.010**	**0.07**
183496	L1-168	-	Dust	14.0	**0.008**	**0.06**
183497	L1-169	-	Dust	14.0	**0.009**	**0.06**
183498	L1-170	-	Dust	14.0	**0.012**	**0.09**
183499	L1-174	-	Dust	14.0	**0.011**	**0.08**
183500	L1-175	-	Dust	14.0	**0.009**	**0.07**
183501	L1-176	-	Dust	14.0	**0.011**	**0.08**
183502	L1-181	-	Dust	14.0	**0.011**	**0.08**
183503	L1-182	-	Dust	14.0	**0.009**	**0.06**
183504	L1-183	-	Dust	14.0	**0.008**	**0.06**

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Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.

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Analytical Test Report: L21/02812/CTS/21-20225

Your Project Reference:	**STR464 CIS Tower Manchester**	Samples Received on:	11/08/2021
Your Order Number:	CTS000894	Testing Instruction Received:	11/08/2021
Report Issue Number:	1	Sample Tested:	11/08 to 17/08/2021
Samples Analysed:	1 concrete sample, 3 dust samples	Report issued:	17/08/2021

Signed

[redacted]

Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Samples were supplied by customer, results apply to the samples as received.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

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L21/02812/CTS/21-20225

Project Reference - STR464 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
183741	L1-163	Dust	14.0	**0.007**	**0.05**
183742	L1-177	Dust	14.0	**0.008**	**0.06**
183743	L1-178	Dust	14.0	**0.008**	**0.06**

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Project Reference - STR464 CIS Tower Manchester

Analytical Test Results - Concrete

NC Reference	**183744**
Client Sample Reference	L1-178
Sample Description	Concrete lump

BRE DETECTION OF HIGH ALUMINA CEMENT	**Accreditation**	
Presence Of High-Alumina Cement (HAC)	UKAS	No

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Project Reference - STR464 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.
BRE Detection of High Alumina Cement	1. Testing was in accordance with BRE Information Sheet IS 15/74. 2. Contaminated samples may give a false result. 3. Samples taken from extensively carbonated concrete containing Portland Cement may give a false positive result. 4. If conclusive identification of the presence of High Alumina Cement is required this result should be confirmed by a more definitive test.

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Analytical Test Report: L21/02815/CTS/21-20230

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	11/08/2021
Your Order Number:	CTS000926	Testing Instruction Received:	11/08/2021
Report Issue Number:	1	Sample Tested:	11/08 to 17/08/2021
Samples Analysed:	5 dust samples	Report issued:	17/08/2021

Signed

[redacted]

Peter Swanston
Environmental Laboratories Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Samples were supplied by customer, results apply to the samples as received.

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L21/02815/CTS/21-20230

Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
183832	L2-188	Dust	14.0	**0.009**	**0.07**
183833	B1-56	Dust	14.0	**0.008**	**0.06**
183834	B1-79	Dust	14.0	**0.008**	**0.06**
183835	B1-87	Dust	14.0	**0.012**	**0.08**
183836	B1-91	Dust	14.0	**0.008**	**0.06**

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L21/02815/CTS/21-20230

Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.

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Analytical Test Report: L21/02870/CTS/21-20311

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	13/08/2021
Your Order Number:	CTS001011	Testing Instruction Received:	13/08/2021
Report Issue Number:	1	Sample Tested:	13/08 to 20/08/2021
Samples Analysed:	16 dust samples	Report issued:	20/08/2021

Signed

[redacted]

James Gane
Group Data Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

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Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Date of Sampling	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
184523	B1-55	11/08/2021	Dust	14.0	**0.010**	**0.07**
184524	B1-61	12/08/2021	Dust	14.0	**0.006**	**0.05**
184525	B1-63	11/08/2021	Dust	14.0	**0.009**	**0.07**
184526	B1-64	11/08/2021	Dust	14.0	**0.006**	**0.04**
184527	B1-65	12/08/2021	Dust	14.0	**0.013**	**0.09**
184528	B1-66	11/08/2021	Dust	14.0	**0.014**	**0.10**
184529	B1-70	11/08/2021	Dust	14.0	**0.010**	**0.07**
184530	B1-74	12/08/2021	Dust	14.0	**0.008**	**0.05**
184531	B1-75	12/08/2021	Dust	14.0	**0.006**	**0.04**
184532	B1-78	11/08/2021	Dust	14.0	**0.007**	**0.05**
184533	B1-81	12/08/2021	Dust	14.0	**0.005**	**0.04**
184534	B1-85	12/08/2021	Dust	14.0	**0.006**	**0.04**
184535	B1-86	12/08/2021	Dust	14.0	**0.007**	**0.05**
184536	B1-89	12/08/2021	Dust	14.0	**0.007**	**0.05**
184537	B1-90	12/08/2021	Dust	14.0	**0.007**	**0.05**
184538	B1-92	12/08/2021	Dust	14.0	**0.006**	**0.05**

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Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.

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Analytical Test Report: L21/02903/CTS/21-20353 - Amendment A

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	17/08/2021
Your Order Number:	CTS001034	Testing Instruction Received:	17/08/2021
Report Issue Number:	2	Sample Tested:	17/08 to 25/08/2021
Samples Analysed:	5 dust samples	Report issued:	27/08/2021

Signed

[redacted]

Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

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Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Date of Sampling	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
184783	B1-58	13/08/2021	Dust	14.0	**0.010**	**0.07**
184784	B1-60	13/08/2021	Dust	14.0	**0.010**	**0.07**
184785	B1-71	13/08/2021	Dust	14.0	**0.010**	**0.07**
184786	B1-72	13/08/2021	Dust	14.0	**0.009**	**0.07**
184787	B1-73	13/08/2021	Dust	14.0	**0.009**	**0.07**

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Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.

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Analytical Test Report: L21/02924/CTS/21-20380

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	18/08/2021
Your Order Number:	CTS001071	Testing Instruction Received:	18/08/2021
Report Issue Number:	1	Sample Tested:	18/08 to 24/08/2021
Samples Analysed:	9 dust samples	Report issued:	24/08/2021

Signed

[redacted]

Peter Swanston
Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

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Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Date Sampled	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
184883	B1-80	16/08/2021	Dust	14.0	**0.011**	**0.08**
184884	B1-84	16/08/2021	Dust	14.0	**0.009**	**0.06**
184885	B1-95	16/08/2021	Dust	14.0	**0.013**	**0.09**
184886	B1L-29	16/08/2021	Dust	14.0	**0.007**	**0.05**
184887	B1L-35	16/08/2021	Dust	14.0	**0.014**	**0.10**
184888	B1L-36	16/08/2021	Dust	14.0	**0.010**	**0.07**
184889	B1L-43	16/08/2021	Dust	14.0	**0.008**	**0.06**
184890	B1L-48	16/08/2021	Dust	14.0	**0.007**	**0.05**
184891	B1L-54	16/08/2021	Dust	14.0	**0.006**	**0.04**

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L21/02924/CTS/21-20380

Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.

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Analytical Test Report: L21/02945/CTS/21-20410

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	19/08/2021
Your Order Number:	CTS001095	Testing Instruction Received:	19/08/2021
Report Issue Number:	1	Sample Tested:	19/08 to 24/08/2021
Samples Analysed:	9 dust samples	Report issued:	24/08/2021

Signed

[redacted]

Peter Swanston
Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

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L21/02945/CTS/21-20410

Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Date Sampled	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
185035	B1-57	12/08/2021	Dust	14.0	**0.006**	**0.04**
185036	B1-59	12/08/2021	Dust	14.0	**0.009**	**0.07**
185037	B1-77	12/08/2021	Dust	14.0	**0.008**	**0.06**
185038	B1-82	12/08/2021	Dust	14.0	**0.008**	**0.06**
185039	B1-83	12/08/2021	Dust	14.0	**0.008**	**0.06**
185040	B1-88	12/08/2021	Dust	14.0	**0.010**	**0.07**
185041	B1-93	12/08/2021	Dust	14.0	**0.008**	**0.06**
185042	B1-94	12/08/2021	Dust	14.0	**0.009**	**0.06**
185043	B1L-51	12/08/2021	Dust	14.0	**0.041**	**0.30**

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L21/02945/CTS/21-20410

Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.

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Analytical Test Report: L21/02992/CTS-21-20473

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	24/08/2021
Your Order Number:	CTS001177	Testing Instruction Received:	24/08/2021
Report Issue Number:	1	Sample Tested:	24/08 to 27/08/2021
Samples Analysed:	15 dust samples	Report issued:	31/08/2021

Signed

[redacted]

Peter Swanston
Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

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Uncertainty of measurement values are available on request.

Accreditation Key

UKAS = UKAS Accreditation, u = Unaccredited

Date of Issue 10/12/2020
Owned by Emily Blissett - Customer Services Supervisor
Authorised by James Gane - Commercial Manager
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Nicholls Colton Group
7 - 11 Harding Street
Leicester
LE1 4DH

L21/02992/CTS-21-20473

Project Reference - STR454 CIS Tower Manchester

Analytical Test Results - Chloride Ion Content of Hardened Concrete

NC Reference	Client Sample Reference	Client Sample Location	Date Sampled	Sample Type	Cement content used for calculation (%)	Chloride Ion by mass of Sample (%)	Chloride Ion by mass of Cement (%)
185446	L5-256	-	18/08/2021	Dust	14.0	**0.009**	**0.06**
185447	L5-257	-	18/08/2021	Dust	14.0	**0.010**	**0.07**
185448	L5-258	-	18/08/2021	Dust	14.0	**0.010**	**0.07**
185449	L5-259	-	18/08/2021	Dust	14.0	**0.011**	**0.08**
185450	L5-263	-	18/08/2021	Dust	14.0	**0.010**	**0.07**
185451	L5-264	-	18/08/2021	Dust	14.0	**0.012**	**0.09**
185452	L6-268	-	18/08/2021	Dust	14.0	**0.011**	**0.08**
185453	L6-272	-	18/08/2021	Dust	14.0	**0.012**	**0.09**
185454	B2-9	-	19/08/2021	Dust	14.0	**0.051**	**0.36**
185455	B2-10	-	19/08/2021	Dust	14.0	**0.027**	**0.19**
185456	B2-14	-	19/08/2021	Dust	14.0	**0.032**	**0.23**
185457	B2-15	-	19/08/2021	Dust	14.0	**0.044**	**0.32**
185458	B2-16	-	19/08/2021	Dust	14.0	**0.042**	**0.30**
185459	B2-20	-	19/08/2021	Dust	14.0	**0.105**	**0.75**
185460	B2-22	-	19/08/2021	Dust	14.0	**0.060**	**0.43**

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L21/02992/CTS-21-20473

Project Reference - STR454 CIS Tower Manchester

Analysis Methodologies and Notes

Determinant	Test method and notes
Chloride content in hardened concrete by Aquakem	1. Testing was in accordance with in house method statement MS - CL – Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.

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Leicester
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Construction Testing Solutions
M1 Commerce Park
Markham Lane
Duckmanton
S44 5HS

Analytical Test Report: L21/03109/CTS - 21-20622

Your Project Reference:	**STR454 CIS Tower Manchester**	Samples Received on:	01/09/2021
Your Order Number:	CTS001316	Testing Instruction Received:	01/09/2021
Report Issue Number:	1	Sample Tested:	01/09 to 07/09/2021
Samples Analysed:	6 dust samples	Report issued:	07/09/2021

Signed

[redacted]

Peter Swanston
Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

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