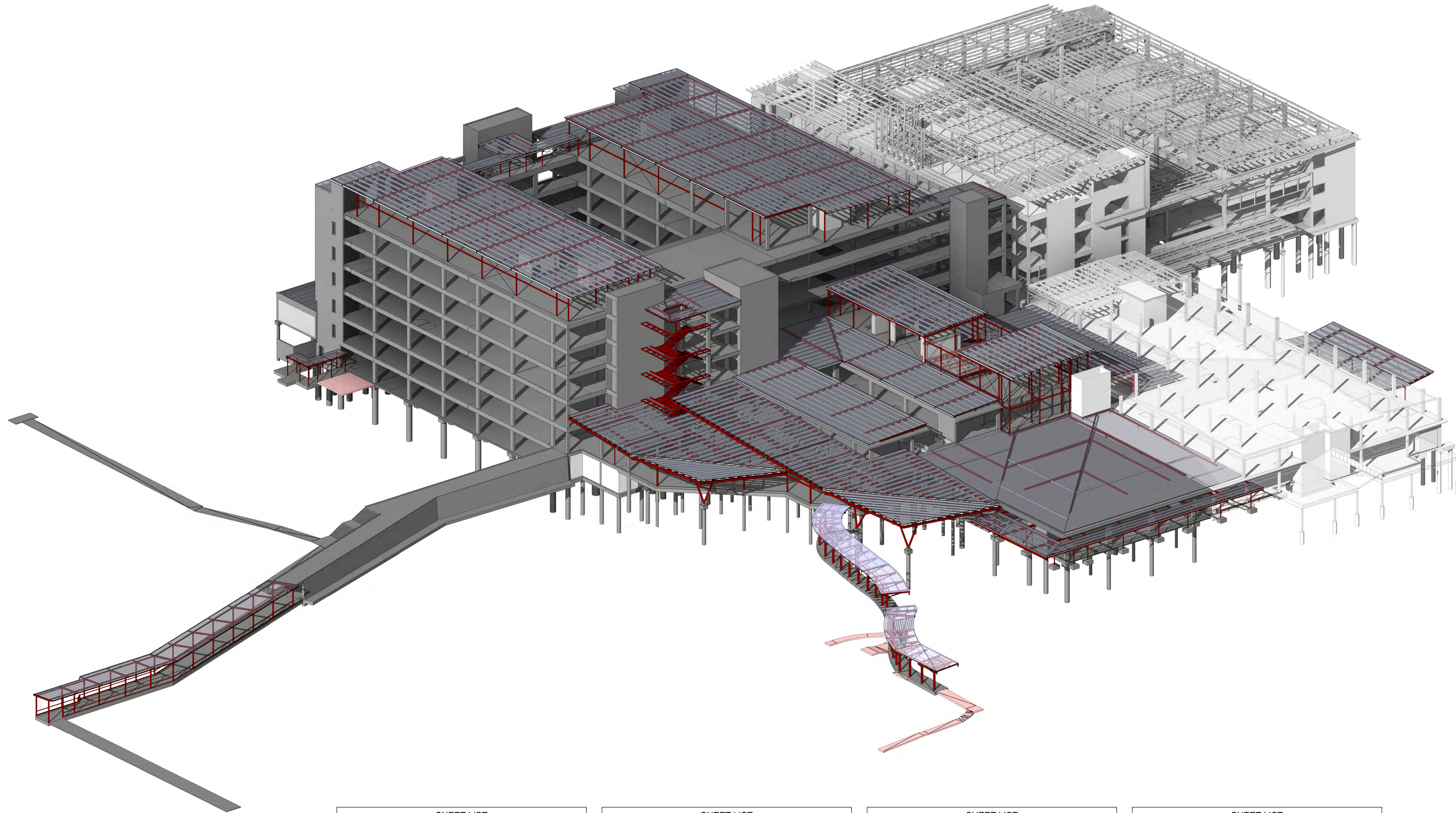
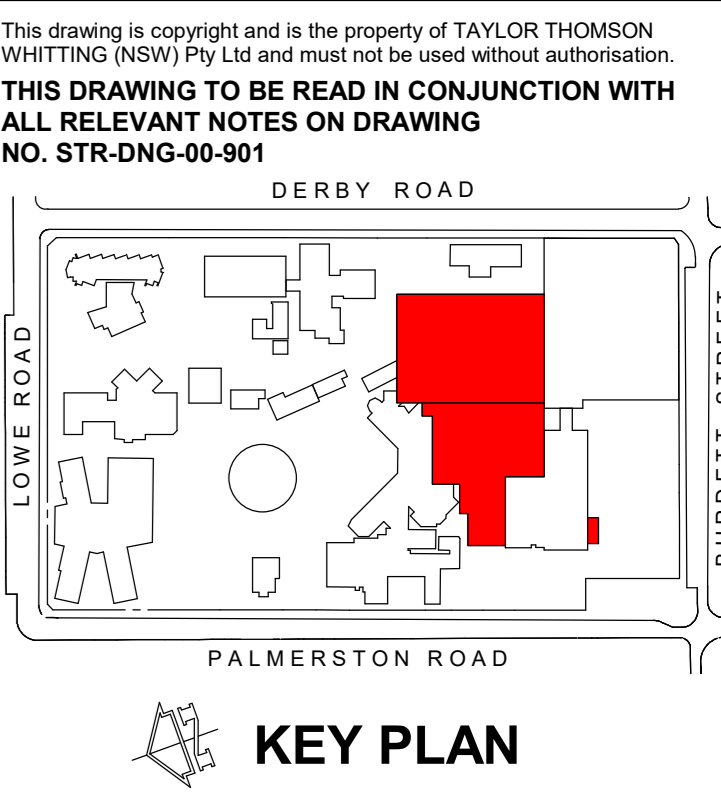


HORNSBY KU-RING-GAI HOSPITAL - STAGE 2 STRUCTURAL DRAWINGS



FOR CONSTRUCTION

A ISSUED FOR CONSTRUCTION M.R. 28.06.18

Rev Description Eng Draft Date

Builder

WATPAC Level 10, 105 Clarence Street Sydney NSW 2000

Architect SILVER THOMAS HANLEY 3 Glenmore Road Glen Iris Victoria 3146

Client

NSW Health Infrastructure
Level 8, 77 Pacific Highway, North Sydney NSW 2060

Project
HORNSBY KU-RING-GAI HOSPITAL - STAGE 2
Palmerston Road, Hornsby NSW 2077
Sheet Subject
COVER SHEET

Structural Engineer
TTW Taylor Thomson Whitting
612 9439 7288 | 48 Chandos Street St Leonards NSW 2065

Scale: A0 Drawn: Authorised
D.J.

TTW Job Number Drawing No. Revision
161607 STR-DNG-00-900 A
28/06/2018 3:52:02 PM

Drawing No.	SHEET LIST	Drawing Name
00-900	COVER SHEET	
00-901	GENERAL NOTES SHEET	
10-901	FOOTING PLAN - AREA 1	
10-902	FOOTING PLAN - AREA 2	
10-903	FOOTING PLAN - AREA 3	
10-911	SHORING WALL ELEVATIONS	
10-912	SHORING DETAILS	
10-921	FOOTING DETAILS - SHEET 1	
10-922	FOOTING DETAILS - SHEET 2	
10-923	FOOTING DETAILS - SHEET 3	
10-924	FOOTING DETAILS - SHEET 4	
20-901	COLUMN SCHEDULE	
20-902	COLUMN DETAILS	
30-901	TYPICAL WALL DETAILS - SHEET 1	
30-902	TYPICAL WALL DETAILS - SHEET 2	
30-911	WALL ELEVATIONS - SHEET 1	
30-912	WALL ELEVATIONS - SHEET 2	
30-913	WALL ELEVATIONS - SHEET 3	
30-914	WALL ELEVATIONS - SHEET 4	
30-915	WALL ELEVATIONS - SHEET 5	
30-916	WALL ELEVATIONS - SHEET 6	
40-901	STAIR KEY ELEVATIONS & DETAILS	
50-001	LEVEL 0 - OUTLINE PLAN	
50-101	LEVEL 1 - AREA 1 - OUTLINE PLAN	
50-102	LEVEL 1 - AREA 2 - OUTLINE PLAN	
50-103	LEVEL 1 - AREA 3 - OUTLINE PLAN	
50-104	LEVEL 1 - PATHWAY SLAB OUTLINE PLAN & DETAILS	
50-111	LEVEL 1 - AREA 1 - BOTTOM REINFORCEMENT PLAN	

Drawing No.	SHEET LIST	Drawing Name
50-112	LEVEL 1 - AREA 2 - BOTTOM REINFORCEMENT PLAN	
50-113	LEVEL 1 - AREA 3 - BOTTOM REINFORCEMENT PLAN	
50-121	LEVEL 1 - AREA 1 - TOP REINFORCEMENT PLAN	
50-122	LEVEL 1 - AREA 2 - TOP REINFORCEMENT PLAN	
50-123	LEVEL 1 - AREA 3 - TOP REINFORCEMENT PLAN	
50-201	LEVEL 2 - AREA 1 - OUTLINE PLAN	
50-202	LEVEL 2 - AREA 2 - OUTLINE PLAN	
50-203	LEVEL 2 - AREA 3 - OUTLINE PLAN	
50-204	LEVEL 2 - BONDEK SLAB PART PLAN & DETAILS	
50-301	LEVEL 3 - AREA 1 - OUTLINE PLAN	
50-302	LEVEL 3 - AREA 2 - OUTLINE PLAN	
50-401	LEVEL 4 OUTLINE PLAN	
50-501	LEVEL 5 OUTLINE PLAN	
50-601	LEVEL 6 OUTLINE PLAN	
50-701	LEVEL 7 - FIRE RATED SLABS OVER MECHANICAL SHAFTS	
51-001	SUBSTATION OUTLINE PLANS	
51-011	SUBSTATION REINFORCEMENT PLANS	
52-001	TUNNEL - LEVEL 0 SLAB PLANS	
52-002	TUNNEL - LEVEL 0 REINFORCEMENT PLAN	
52-001	TUNNEL - LEVEL 1 SLAB PLAN	
52-102	TUNNEL - LEVEL 1 REINFORCEMENT PLAN	
52-901	TUNNEL - WALL AND BEAM ELEVATIONS	
60-001	LEVEL 0 SLAB DETAILS	
60-101	LEVEL 1 SLAB DETAILS - SHEET 1	
60-102	LEVEL 1 SLAB DETAILS - SHEET 2	
60-103	LEVEL 1 SLAB DETAILS - SHEET 3	
60-201	LEVEL 2 SLAB DETAILS - SHEET 1	
60-202	LEVEL 2 SLAB DETAILS - SHEET 2	

Drawing No.	SHEET LIST	Drawing Name
60-301	LEVEL 3 SLAB DETAILS - SHEET 1	
60-302	LEVEL 3 SLAB DETAILS - SHEET 2	
60-401	LEVEL 4 SLAB DETAILS	
60-501	LEVEL 5 SLAB DETAILS	
60-601	LEVEL 6 SLAB DETAILS	
60-901	TYPICAL SLAB JOINT DETAILS - SHEET 1	
60-902	TYPICAL SLAB JOINT DETAILS - SHEET 2	
70-101	LEVEL 1 BEAM ELEVATIONS	
70-301	LEVEL 3 BEAM ELEVATIONS - SHEET 1	
80-900	STEELWORK SCHEDULES	
80-901	TYPICAL STEELWORK DETAILS	
81-110	TUNNEL - LEVEL 1 STEELWORK PLAN	
81-120	PATHWAY STEELWORK PLAN	
81-130	LEVEL 0 TO BUILDING 14 LINK OUTLINE PLAN	
81-140	SUBSTATION ROOF STEELWORK PLAN & DETAILS	
81-210	AMBULANCE BAY CANOPY & MORTUARY CANOPY STEELWORK PLAN	
81-220	LEVEL 2 ED ROOF & AWNING STEELWORK PLAN	
81-221	LEVEL 2 ED ROOF STEELWORK ELEVATIONS	
81-230	ENTRY CANOPY STEELWORK PLAN	
81-231	ENTRY CANOPY STEELWORK ELEVATIONS - SHEET 1	
81-232	ENTRY CANOPY STEELWORK ELEVATIONS - SHEET 2	
81-250	LEVEL 2 LINK BRIDGE STEELWORK PLAN & ELEVATION	
81-260	LEVEL 2 - MEDICAL IMAGING ROOF STEELWORK PLAN	
81-310	LEVEL 3 ROOF & PLANT ROOM STEELWORK PLAN	
81-311	LEVEL 3 ROOF STEELWORK ELEVATIONS - SHEET 1	
81-312	LEVEL 3 ROOF STEELWORK ELEVATIONS - SHEET 2	
81-601	LEVEL 6 ROOF STEELWORK PLAN	
81-710	LEVEL 7 PLANT ROOM ROOF STEELWORK PLAN	

Drawing No.	SHEET LIST	Drawing Name
81-711	LEVEL 7 PLANT ROOM ROOF ELEVATIONS - SHEET 1	
81-712	LEVEL 7 PLANT ROOM ROOF ELEVATIONS - SHEET 2	
81-713	LEVEL 7 PLANT ROOM ROOF ELEVATIONS - SHEET 3	
81-910	ENTRY STAIR 4 STEELWORK PLANS & ELEVATIONS	
81-920	TYPICAL FACADE STEELWORK ELEVATIONS	
81-930	TYPICAL FACADE STEELWORK DETAILS	
81-990	STEEL FIRE RATINGS 3D VIEWS	
90-901	LOADING DIAGRAMS - SHEET 1	
90-902	LOADING DIAGRAMS - SHEET 2	
90-903	LOADING DIAGRAMS - SHEET 3	
90-904	LOADING DIAGRAMS - SHEET 4	

STRIP FOOTING SCHEDULE

MARK	WIDTH	DEPTH
SF1	1500	550
SF2	750	550
SF3	1500	750
SF4	900	550
SF5	1200	550
SF6	500	500
SF7	1200	550

PILE CAP SCHEDULE

MARK	LENGTH	WIDTH	DEPTH
PC1-A	1050	1050	600
PC1-B	1050	1050	600
PC2-A	1200	1200	600
PC2-B	1200	1200	600
PC2-C	1200	1200	600
PC2-D	1200	1200	600
P6	750	750	600
PC3-B	750	750	600
PC4-A	2400	1200	750
PC4-B	2400	1200	750
PC5-A	2925	1200	1000
PC5-B	2925	1200	1000
PC5-C	2925	1200	1000
PC6-A	900	900	600
PC6-B	900	900	600
PC6-C	900	900	600
PC6-D	900	900	600

PILE SCHEDULE

MARK	DIAMETER (mm)	SOCKET LENGTH (mm)	WORKING LOAD (kN)	PILE ULTIMATE LOAD (kN)		
				ULTIMATE COMPRESSION	ULTIMATE TENSION	LATERAL
P1	450	300	550	800	-	50
P2	600	300	950	1350	-	100
P3	750	750	1900	2600	-	200
P4	900	1500	3400	4500	-	200
P5	1200	1500	6000	7500	-	250
P6	750	1500	1500	3200	-	200
P7	1200	2500	6900	8700	-	250
P8	600	1000	1600	1950	-	300
P9	900	2000	2400	4500	2200	300
P10	900	2500	2800	4700	2800	450
P11	1200	2750	3800	7000	4100	450
P12	1200	3000	7900	10000	-	250

FOOTING PLAN - AREA 1

- SCALE 1:100
- REFER TO ARCHITECTS DRAWINGS FOR LOCATION & SET OUT OF ALL COLUMNS, WALLS, HOBS, PLINTHS & SETDOWNS.
 - REFER DRAWING 00-901 FOR FOOTING NOTES REGARDING BEARING PRESSURE & ALLOWABLE SIDE SHEAR.
 - ALL LIFT PIT BASES & WALLS BELOW GROUND LEVEL ARE TO HAVE XYPEX ADMIXTURE.
 - REFER RELEVANT LEVEL 0 DETAILS FOR TOP OF PILE CAP LEVELS.
 - PILES TO BE SOCKETED INTO CLASS III SANDSTONE WITH 3500 kPa BEARING CAPACITY AND 350 kPa SHAFT FRICTION.
 - ALL EXISTING SERVICES UNDER BUILDING FOOTPRINT TO BE LOCATED & REMOVED OR DIVERTED IN ACCORDANCE WITH THE SERVICE ENGINEERS REQUIREMENTS PRIOR TO INSTALLATION OF FOOTINGS AND PILES.
 - CONTRACTOR TO ALLOW FOR GEOTECHNICAL ENGINEER TO INSPECT AND CERTIFY THAT THE REQUIRED BEARING CAPACITIES HAVE BEEN ACHIEVED BEFORE CASTING FOOTINGS.
 - ☛ DENOTES BOREHOLE LOCATIONS. REFER TO GEOTECHNICAL REPORT 7324 06 Rev 2 DATED AUGUST 2014 BY DOUGLAS PARTNERS.
 - PAD FOOTING - PF1 & PF2 TO BE FOUND ON STIFF CLAYS WITH MINIMUM 10 kPa BEARING CAPACITY.

PAD FOOTING SCHEDULE

MARK	LENGTH	WIDTH	DEPTH	REINFORCEMENT
PF1	1200	1200	600	7N16 EACH WAY TOP & BOTTOM
PF2	1200	900	600	7N16 LONG, 5N16 WIDE TOP & BOTTOM
PF3	600	600	400	4N16 EACH WAY TOP & BOTTOM

SOCKET LENGTH, PILE DIAMETER AND PILE REINFORCEMENT IS PROVIDED FOR COSTING PURPOSES ONLY. FINAL DESIGN BY D+C PILING CONTRACTOR.

ALL PILE CAP & FOOTING BEAM SIZES ARE BASED ON PILE DIAMETERS AS SHOWN IN THE PILE SCHEDULE. ANY PROPOSED PILE DIAMETER CHANGES MAY RESULT IN CHANGES TO THE PILE CAPS AND FOOTING BEAMS. ALL RE-DESIGN WILL BE AT THE D+C CONTRACTORS EXPENSE.

FOR CONSTRUCTION

ISSUED FOR CONSTRUCTION M.R. 28.06.18

Rev Description Eng Draft Date

WATPAC Level 10, 155 Clarence Street Sydney NSW 2000

STH SILVER THOMAS HANLEY 3 Clarence Road Glen Iris Victoria 3146

NSW GOVERNMENT Health Infrastructure

Level 8, 77 Pacific Highway, North Sydney NSW 2060

Project: **HORNSBY KU-RING-GAI HOSPITAL - STAGE 2**
 Palmerston Road, Hornsby NSW 2077
 Sheet Subject: **FOOTING PLAN - AREA 1**

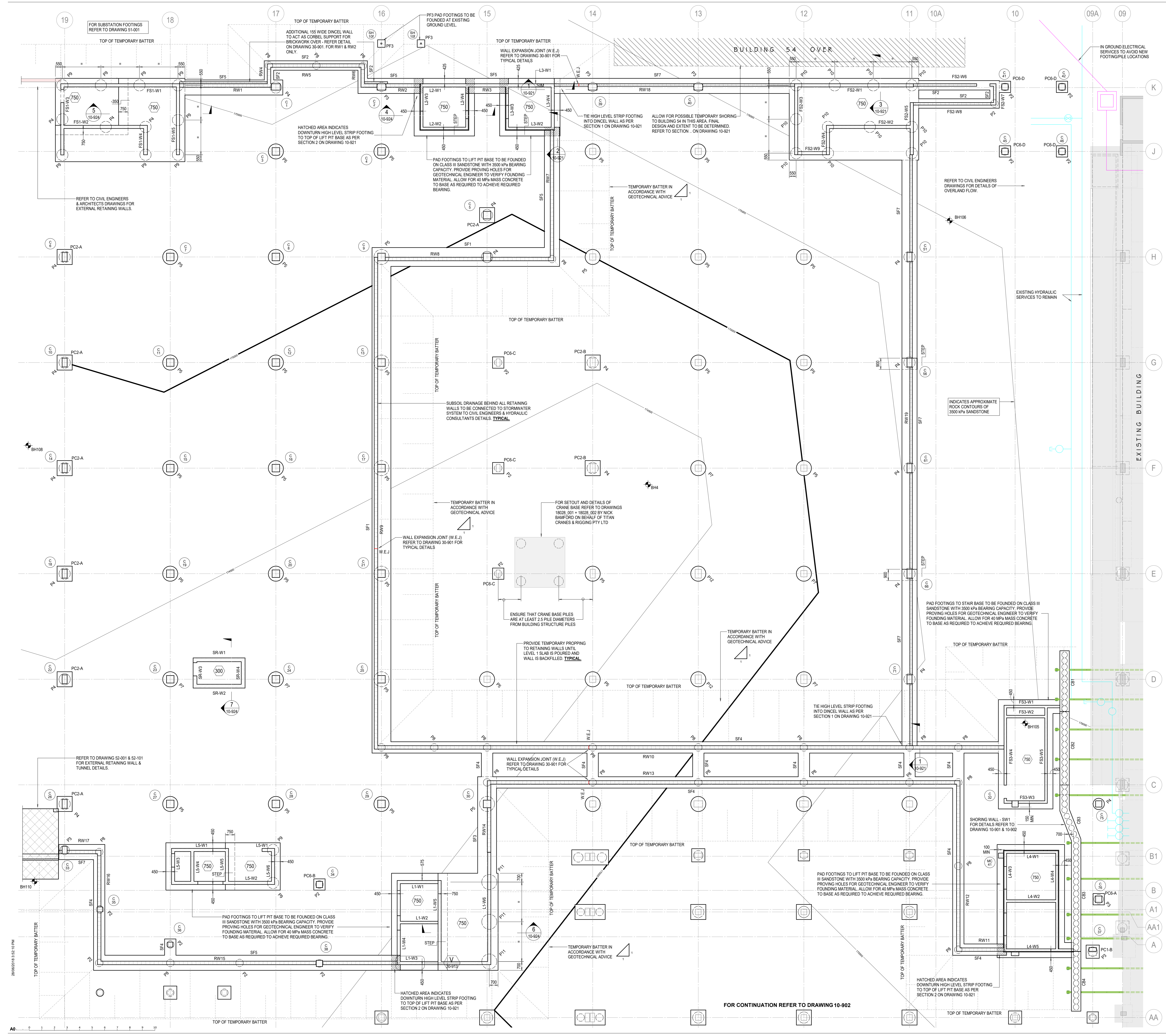
Structural Engineer

TTW Taylor Thomson Whitting

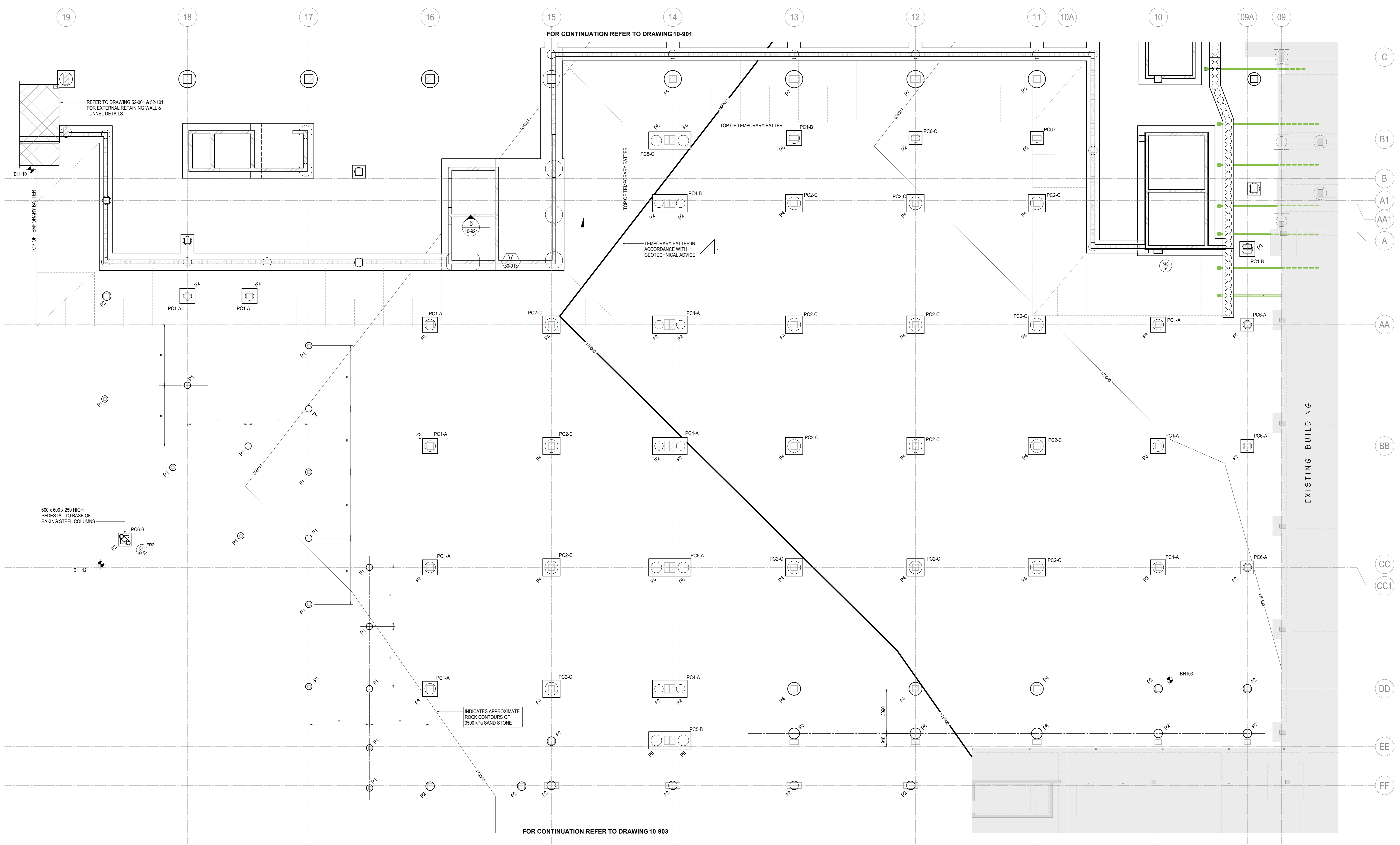
612 9439 7288 | 48 Chandos Street St Leonards NSW 2065

Scale: A0 Drawn: Authorised As indicated: D.J.

TTW Job Number: Drawing No: 161607 STR-DNG-10-901 A Revision: 28/06/2018 3:52:10 PM



FOR CONTINUATION REFER TO DRAWING 10-902



FOOTING PLAN - AREA 2

- SCALE 1:100
- REFER TO ARCHITECTS DRAWINGS FOR LOCATION & SET OUT OF ALL COLUMNS, WALLS, HOBBS, PLINTHS & SETDOWNS.
 - REFER DRAWING 00-901 FOR FOOTING NOTES REGARDING BEARING PRESSURE & ALLOWABLE SIDE SHEAR
 - ALL LIFT PIT BASES & WALLS BELOW GROUND LEVEL ARE TO HAVE XYPEX ADMXTURE
 - REFER RELEVANT LEVEL 0 DETAILS FOR TOP OF PILE CAP LEVELS
 - PILES TO BE SOCKETED INTO CLASS III SANDSTONE WITH 3500 kPa BEARING CAPACITY AND 350 kPa SHAFT FRICTION.
 - ALL EXISTING SERVICES UNDER BUILDING FOOTPRINT TO BE LOCATED & REMOVED OR DIVERTED IN ACCORDANCE WITH THE SERVICE ENGINEERS REQUIREMENTS PRIOR TO INSTALLATION OF FOOTINGS AND PILES.
 - CONTRACTOR TO ALLOW FOR GEOTECHNICAL ENGINEER TO INSPECT AND CERTIFY THE REQUIRED BEARING CAPACITIES HAVE BEEN ACHIEVED BEFORE CASTING FOOTINGS
 - ☛ DENOTES BOREHOLE LOCATIONS. REFER TO GEOTECHNICAL REPORT 7324.06 Rev 2 DATED AUGUST 2014 BY DOUGLAS PARTNERS.
 - PAD FOOTING - PF1 & PF2 TO BE FOUND ON STIFF CLAYS WITH MINIMUM 100 kPa BEARING CAPACITY.

PILE CAP SCHEDULE

MARK	LENGTH	WIDTH	DEPTH
PC1-A	1050	1050	600
PC1-B	1050	1050	600
PC2-A	1200	1200	600
PC2-B	1200	1200	600
PC2-C	1200	1200	600
PC2-D	1200	1200	600
PC3-A	750	750	600
PC3-B	750	750	600
PC4-A	2400	1200	750
PC4-B	2400	1200	750
PC5-A	2925	1200	1000
PC5-B	2925	1200	1000
PC5-C	2925	1200	1000
PC6-A	900	900	600
PC6-B	900	900	600
PC6-C	900	900	600
PC6-D	900	900	600

STRIP FOOTING SCHEDULE

MARK	WIDTH	DEPTH
SF1	1500	550
SF2	750	550
SF3	1500	750
SF4	900	550
SF5	1200	550
SF6	500	500
SF7	1200	550

PAD FOOTING SCHEDULE

MARK	LENGTH	WIDTH	DEPTH	REINFORCEMENT
PF1	1200	1200	600	7N16 EACH WAY TOP & BOTTOM
PF2	1200	900	600	7N16 LONG, 5N16 WIDE TOP & BOTTOM
PF3	600	600	400	4N16 EACH WAY TOP & BOTTOM

PILE SCHEDULE

MARK	DIAMETER (mm)	SOCKET LENGTH (mm)	WORKING LOAD (kN)	PILE ULTIMATE LOAD (kN)		
				ULTIMATE COMPRESSION	ULTIMATE TENSION	LATERAL
P1	450	300	550	800	-	50
P2	600	300	950	1350	-	100
P3	750	750	1900	2600	-	200
P4	900	1500	3400	4500	-	200
P5	1200	1500	6000	7500	-	250
P6	750	1500	1500	3200	1300	200
P7	1200	2500	6900	8700	-	250
P8	600	1000	1600	1950	-	300
P9	900	2000	2400	4500	2200	300
P10	900	2500	2800	4700	2800	450
P11	1200	2750	3800	7000	4100	450
P12	1200	3000	7900	10000	-	250

SOCKET LENGTH, PILE DIAMETER AND PILE REINFORCEMENT IS PROVIDED FOR COSTING PURPOSES ONLY. FINAL DESIGN BY D+C PILING CONTRACTOR.

ALL PILE CAP & FOOTING BEAM SIZES ARE BASED ON PILE DIAMETERS AS SHOWN IN THE PILE SCHEDULE. ANY PROPOSED PILE DIAMETER CHANGES MAY RESULT IN CHANGES TO THE PILE CAPS AND FOOTING BEAMS. ALL RE-DESIGN WILL BE AT THE D+C CONTRACTORS EXPENSE.

FOR CONSTRUCTION

Rev	Description	Eng	Draft	Date
A	ISSUED FOR CONSTRUCTION	M.R		28.06.18

WATPAC Level 10, 155 Clarence Street, Sydney NSW 2000

STH SILVER THOMAS HANLEY 3 Clarence Road, Glen Iris Victoria 3146

NSW GOVERNMENT Health Infrastructure

Level 8, 77 Pacific Highway, North Sydney NSW 2060

Project: **HORNSBY KU-RING-GAI HOSPITAL - STAGE 2**
 Palmerston Road, Hornsby NSW 2077
 Sheet Subject: **FOOTING PLAN - AREA 2**

Structural Engineer: **TTW Taylor Thomson Whitting**
 612 9439 7288 | 48 Chandos Street St Leonards NSW 2065

Scale: A0 Drawn: Authorised As indicated: D.J

TTW Job Number: Drawing No: 161607 STR-DNG-10-902 A
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FOOTINGPLAN - AREA 3

- SCALE 1:100
- REFER TO ARCHITECTS DRAWINGS FOR LOCATION & SET OUT OF ALL COLUMNS, WALLS, HOBS, PLINTHS & SETDOWNS.
 - REFER DRAWING 00-901 FOR FOOTING NOTES REGARDING BEARING PRESSURE & ALLOWABLE SIDE SHEAR
 - ALL LIFT PIT BASES & WALLS BELOW GROUND LEVEL ARE TO HAVE KYPEX ADMIXTURE
 - REFER RELEVANT LEVEL 0 DETAILS FOR TOP OF PILE CAP LEVELS
 - PILES TO BE SOCKETED INTO CLASS III SANDSTONE WITH 3500 kPa BEARING CAPACITY AND 350 kPa SHAFT FRICTION.
 - ALL EXISTING SERVICES UNDER BUILDING FOOTPRINT TO BE LOCATED & REMOVED OR DIVERTED IN ACCORDANCE WITH THE SERVICE ENGINEERS REQUIREMENTS PRIOR TO INSTALLATION OF FOOTINGS AND PILES.
 - CONTRACTOR TO ALLOW FOR GEOTECHNICAL ENGINEER TO INSPECT AND CERTIFY THE REQUIRED BEARING CAPACITIES HAVE BEEN ACHIEVED BEFORE CASTING FOOTINGS
 - ⚡ DENOTES BOREHOLE LOCATIONS. REFER TO GEOTECHNICAL REPORT 73224 06 Rev 2 DATED AUGUST 2014 BY DOUGLAS PARTNERS.
 - PAD FOOTING - PF1 & PF2 TO BE FOUND ON STIFF CLAYS WITH MINIMUM 100 kPa BEARING CAPACITY.

STRIP FOOTING SCHEDULE

MARK	WIDTH	DEPTH
SF1	1500	550
SF2	750	550
SF3	1500	750
SF4	900	550
SF5	1200	550
SF6	500	500
SF7	1200	550

PILE CAP SCHEDULE

MARK	LENGTH	WIDTH	DEPTH
PC1-A	1050	1050	600
PC1-B	1050	1050	600
PC2-A	1200	1200	600
PC2-B	1200	1200	600
PC2-C	1200	1200	600
PC2-D	1200	1200	600
PC3-A	750	750	600
PC3-B	750	750	600
PC4-A	2400	1200	750
PC4-B	2400	1200	750
PC5-A	2925	1200	1000
PC5-B	2925	1200	1000
PC5-C	2925	1200	1000
PC6-A	900	900	600
PC6-B	900	900	600
PC6-C	900	900	600
PC6-D	900	900	600

PAD FOOTING SCHEDULE

MARK	LENGTH	WIDTH	DEPTH	REINFORCEMENT
PF1	1200	1200	600	7N16 EACH WAY TOP & BOTTOM
PF2	1200	900	600	7N16 LONG, 5N16 WIDE TOP & BOTTOM
PF3	600	600	400	4N16 EACH WAY TOP & BOTTOM

PILE SCHEDULE

MARK	DIAMETER (mm)	SOCKET LENGTH (mm)	WORKING LOAD (kN)	PILE ULTIMATE LOAD (kN)		
				ULTIMATE COMPRESSION	ULTIMATE TENSION	LATERAL
P1	450	300	550	800	-	50
P2	600	300	950	1350	-	100
P3	750	750	1900	2600	-	200
P4	900	1500	3400	4500	-	200
P5	1200	1500	6000	7500	-	250
P6	750	1500	1500	3200	1300	200
P7	1200	2500	6900	8700	-	250
P8	600	1000	1600	1950	-	300
P9	900	2000	2400	4500	2200	300
P10	900	2500	2800	4700	2800	450
P11	1200	2750	3800	7000	4100	450
P12	1200	3000	7900	10000	-	250

SOCKET LENGTH, PILE DIAMETER AND PILE REINFORCEMENT IS PROVIDED FOR COSTING PURPOSES ONLY. FINAL DESIGN BY D+C PILING CONTRACTOR.

ALL PILE CAP & FOOTING BEAM SIZES ARE BASED ON PILE DIAMETERS AS SHOWN IN THE PILE SCHEDULE. ANY PROPOSED PILE DIAMETER CHANGES MAY RESULT IN CHANGES TO THE PILE CAPS AND FOOTING BEAMS. ALL RE-DESIGN WILL BE AT THE D+C CONTRACTORS EXPENSE.

FOR CONSTRUCTION

Rev	Description	Eng	Draft	Date
A	ISSUED FOR CONSTRUCTION	M.R.		28.06.18

WATPAC Level 10, 155 Clarence Street, Sydney NSW 2000

STH SILVER THOMAS HANLEY 3 Glemare Road, Glen Iris Victoria 3146

NSW Health Infrastructure

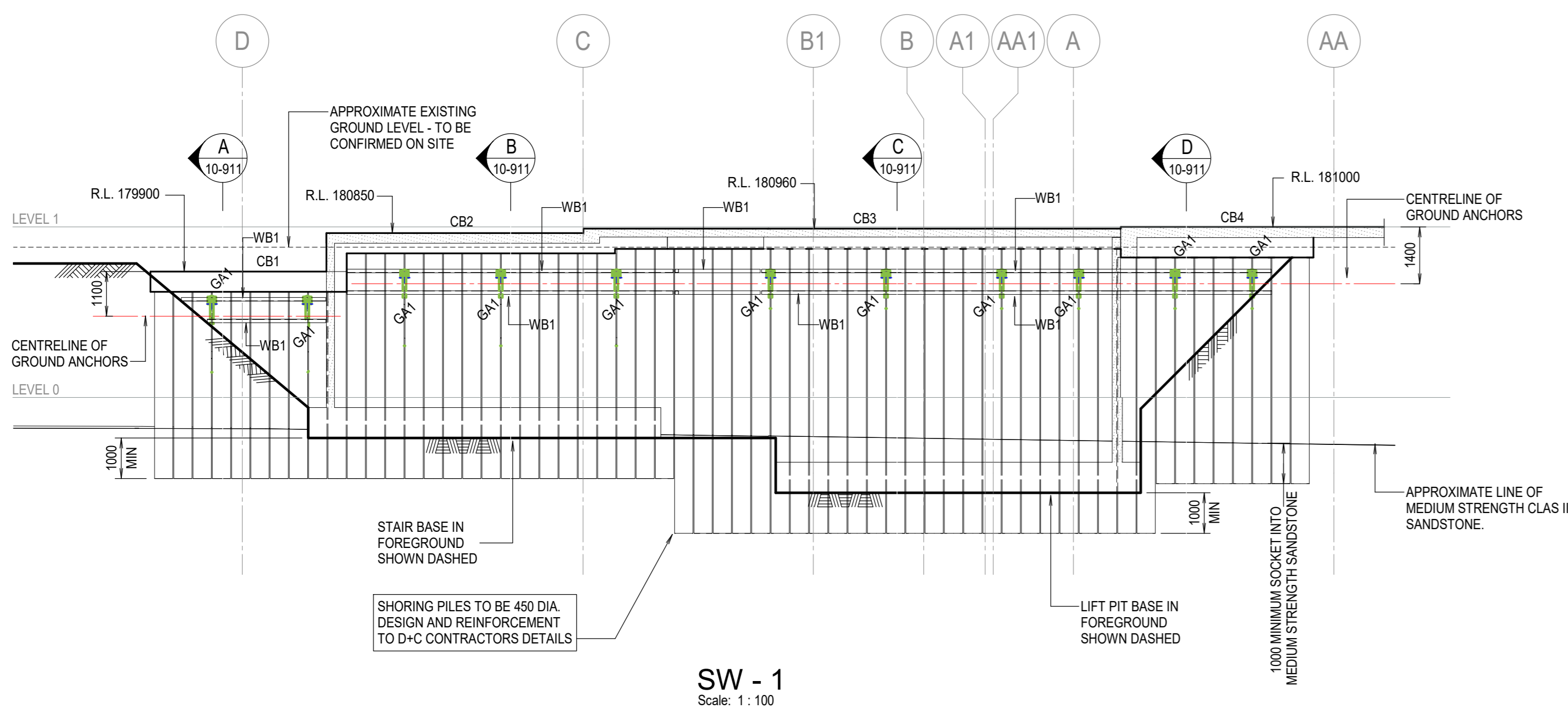
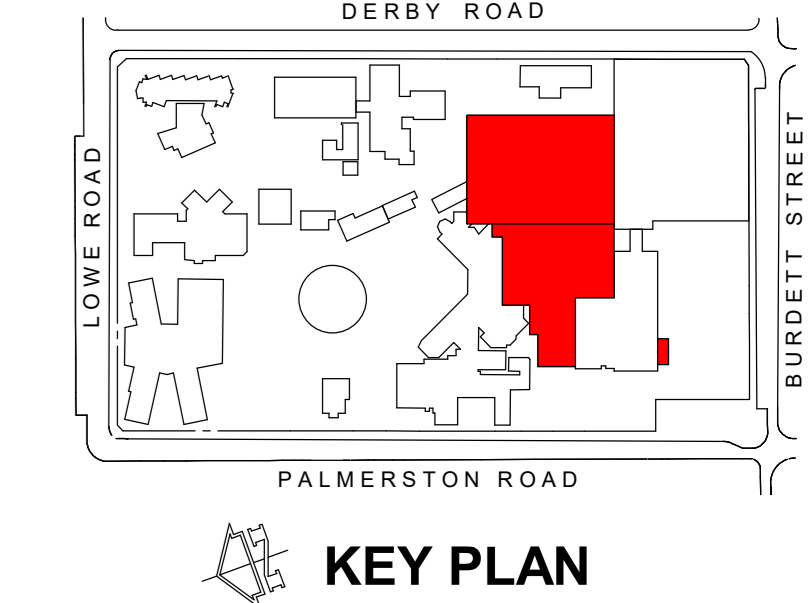
Level 8, 77 Pacific Highway, North Sydney NSW 2060

Project: **HORNSBY KU-RING-GAI HOSPITAL - STAGE 2**
 Palmerston Road, Hornsby NSW 2077
 Sheet Subject: **FOOTING PLAN - AREA 3**

Structural Engineer: **TTW Taylor Thomson Whitting**
 612 9439 7288 | 48 Chandos Street St Leonards NSW 2065

Scale: As Indicated Drawn: D.J. Authorised: D.J.

TTW Job Number: Drawing No: 161607 STR-DNG-10-903 A
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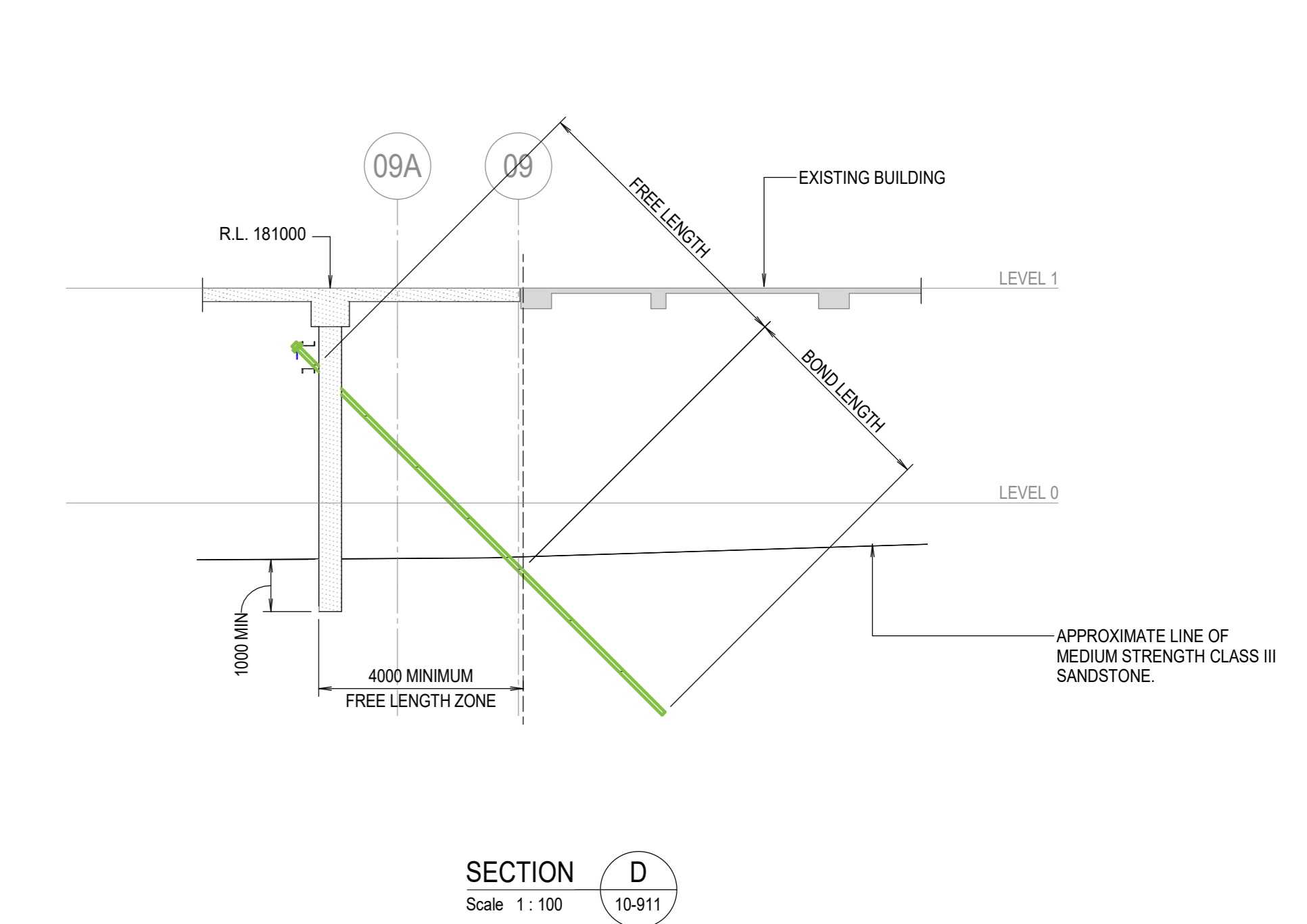
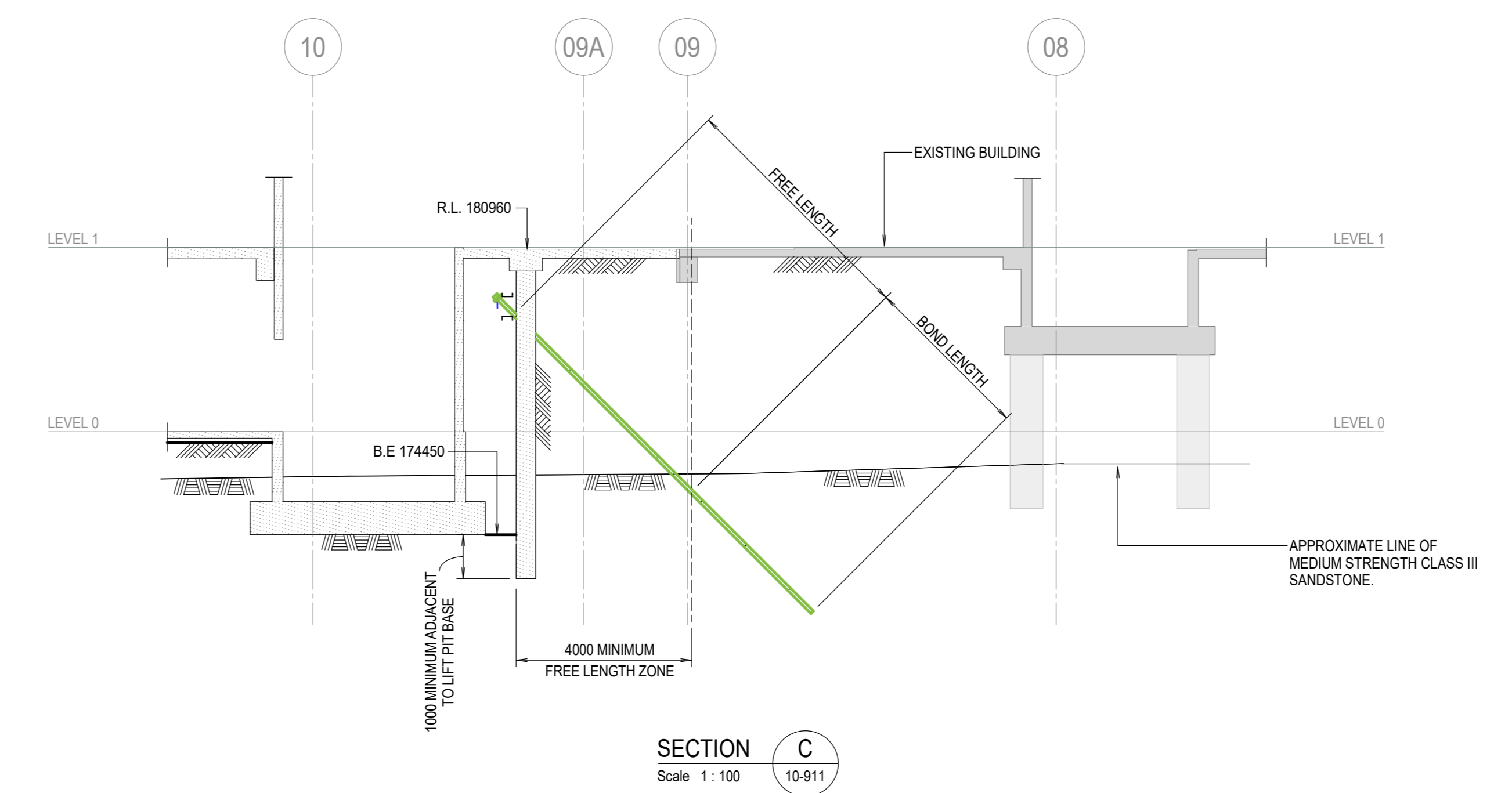
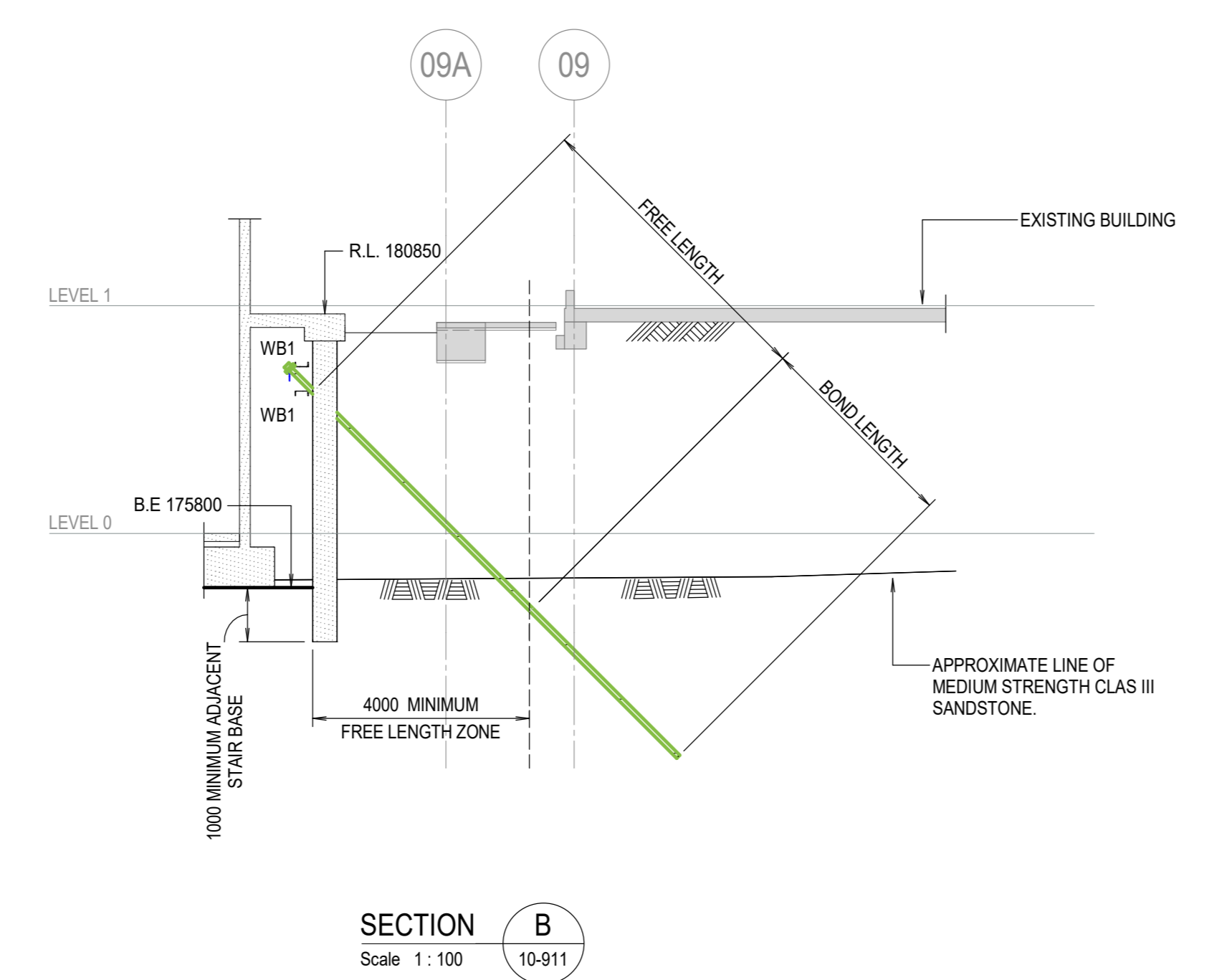
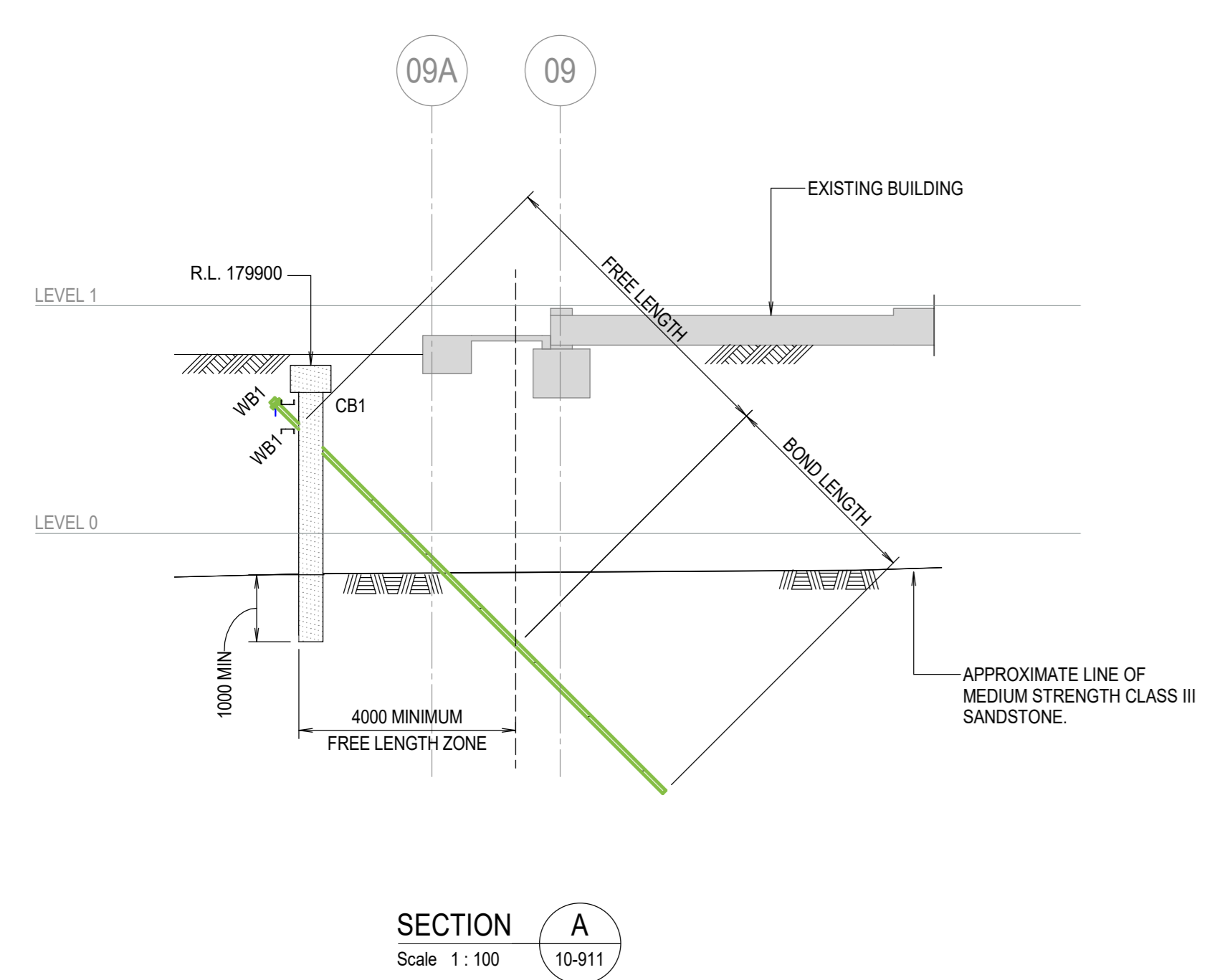


WALER BEAM SCHEDULE		
MARK	TYPE	SIZE
WB1	WALER BEAM	250 PFC

CAPPING BEAM SCHEDULE		
MARK	WIDTH	DEPTH
CB1	750	500
CB2	750	500
CB3	750	500
CB4	750	750

TEMPORARY GROUND ANCHOR SCHEDULE			
MARK	GROUND ANCHOR ANGLE	DESIGN WORKING LOAD (TD)	PRESTRESS RESIDUAL LOAD (TR)
GA1	45.00°	150.00 kN	100.00 kN

NOTE:
 ALL SHORING PILES, GROUND ANCHORS, WALERS AND SHOTCRETE WALLS ARE SHOWN FOR COSTING PURPOSES ONLY. FINAL DESIGN & CERTIFICATION IS TO BE BY D&C SHORING CONTRACTOR



- SHORING AND BULK EXCAVATION CONSTRUCTION SEQUENCE**
1. ALL EXISTING SERVICES ARE TO BE LOCATED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
 2. INSTALL SHORING PILES.
 3. EXCAVATE TO NO MORE THAN 500mm BELOW FIRST ROW OF ANCHORS.
 4. EXCAVATION TO BE INSPECTED BY THE GEOTECHNICAL ENGINEER EVERY 1500mm OF EXCAVATED DEPTH.
 5. INSTALL WALER BEAMS AND TEMPORARY GROUND ANCHORS GA1.
 6. STRESS TEMPORARY ANCHORS GA1.
 7. EXCAVATE TO BULK EXCAVATION LEVEL.
 8. INSTALL PERMANENT STRUCTURE.
 9. ONCE PERMANENT STRUCTURE IS INSTALLED ABOVE LEVEL 1, TEMPORARY ANCHORS ARE TO BE DE-STRESSED (ADJACENT TO BATTERS DO NOT DE-STRESS UNTIL VOID HAS BEEN BACKFILLED TO 500mm BELOW TEMPORARY ANCHORS).
 10. REMOVE WALER BEAM AND MAKE GOOD.

FOR CONSTRUCTION

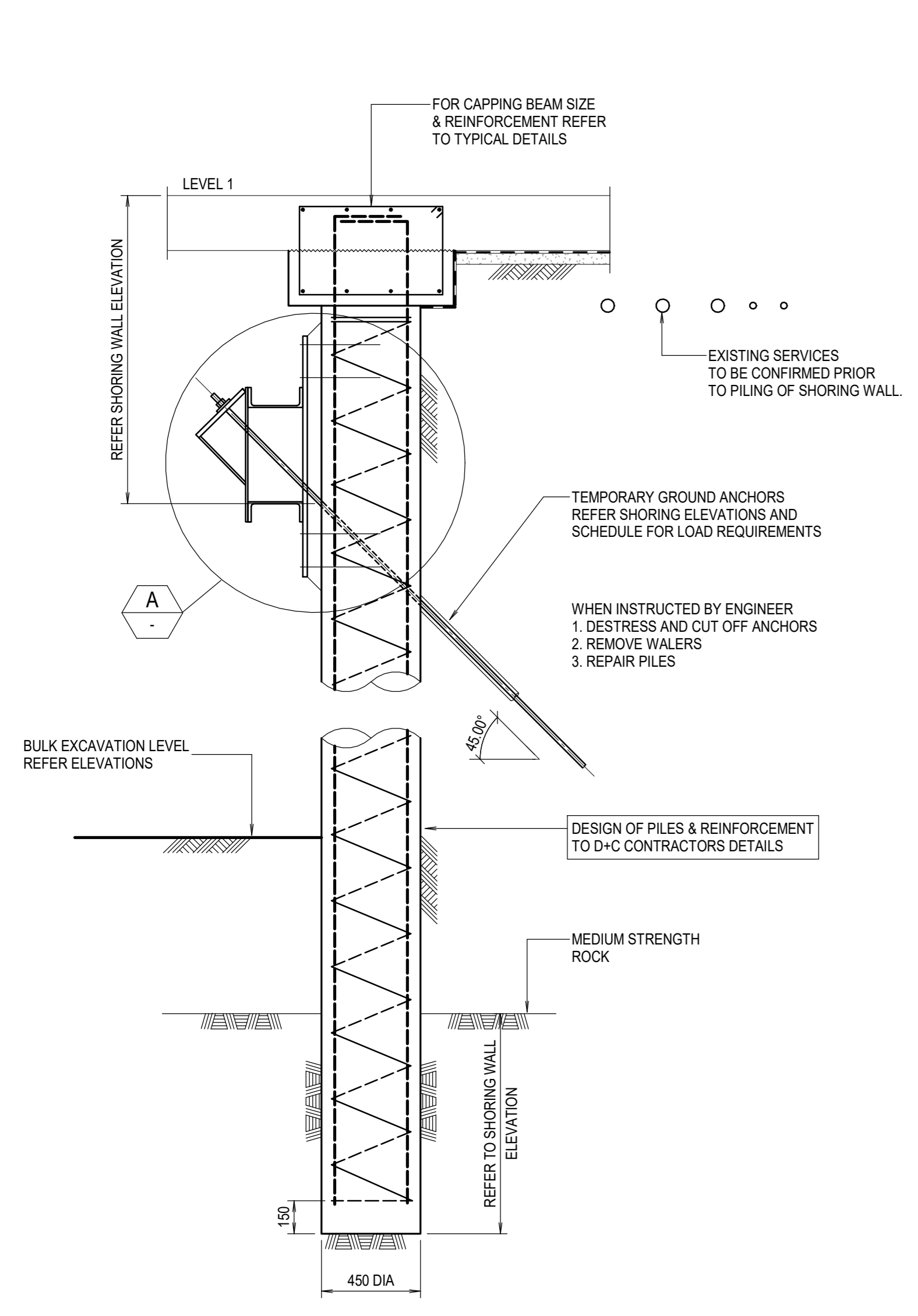
Rev	Description	Eng	Draft	Date
A	ISSUED FOR CONSTRUCTION	M.R		28.06.19

WATPAC 155 Clarence Street Sydney NSW 2000
STH SILVER THOMAS HANLEY 3 Glenara Road Glen Iris Victoria 3146

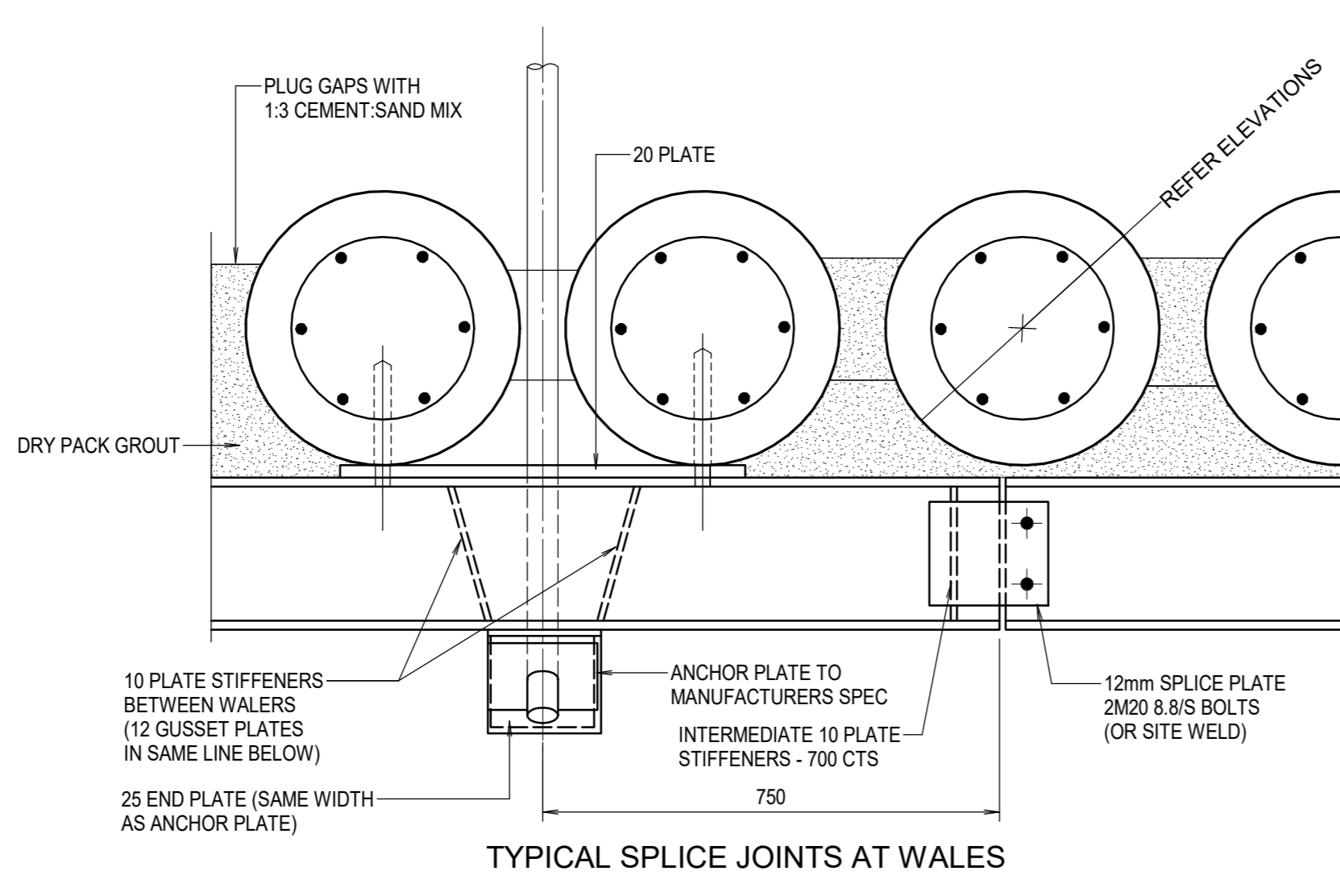
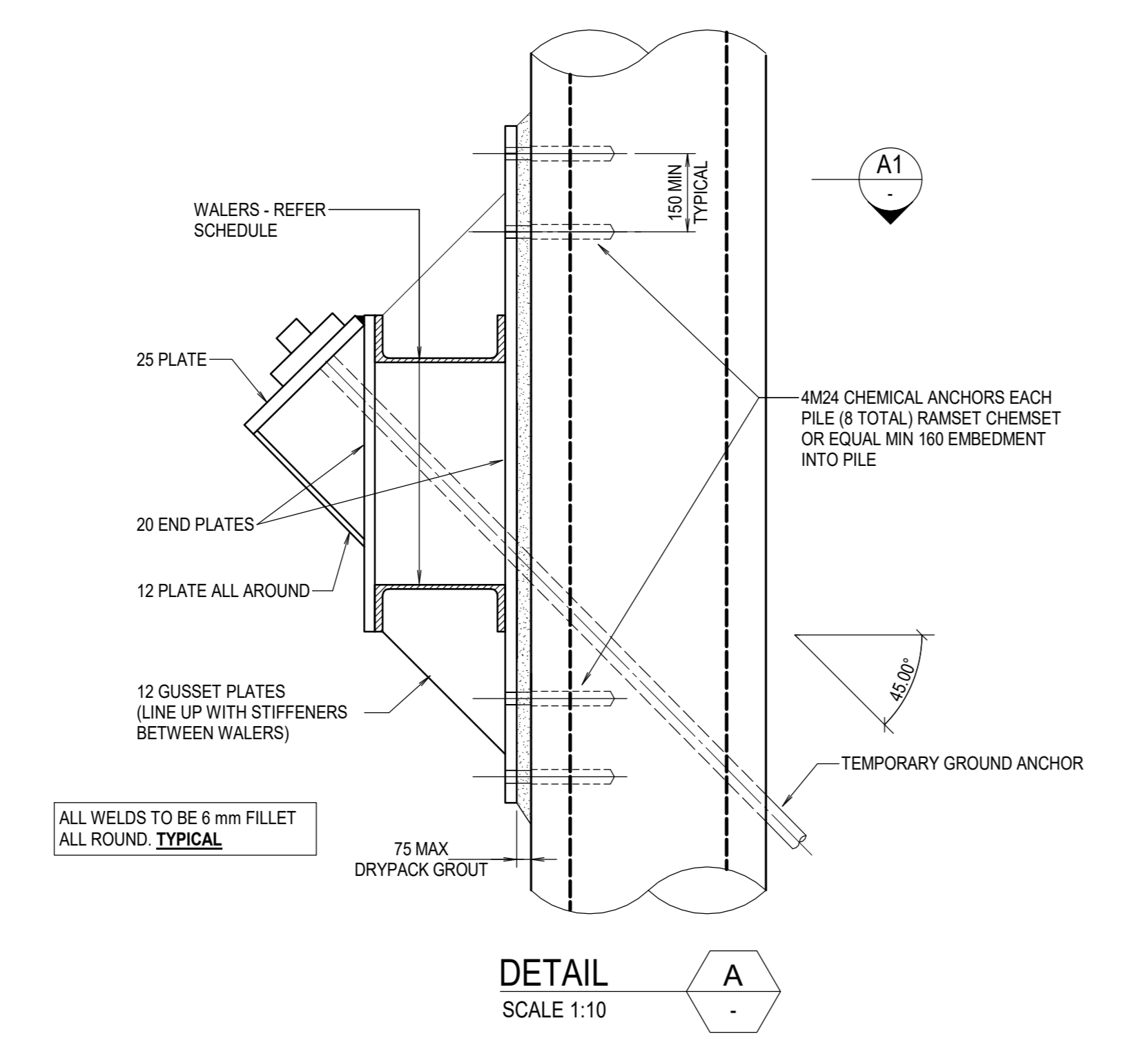


Project: **HORNSBY KU-RING-GAI HOSPITAL - STAGE 2**
 Palmerston Road, Hornsby NSW 2077
 Sheet Subject: **SHORING WALL ELEVATIONS**

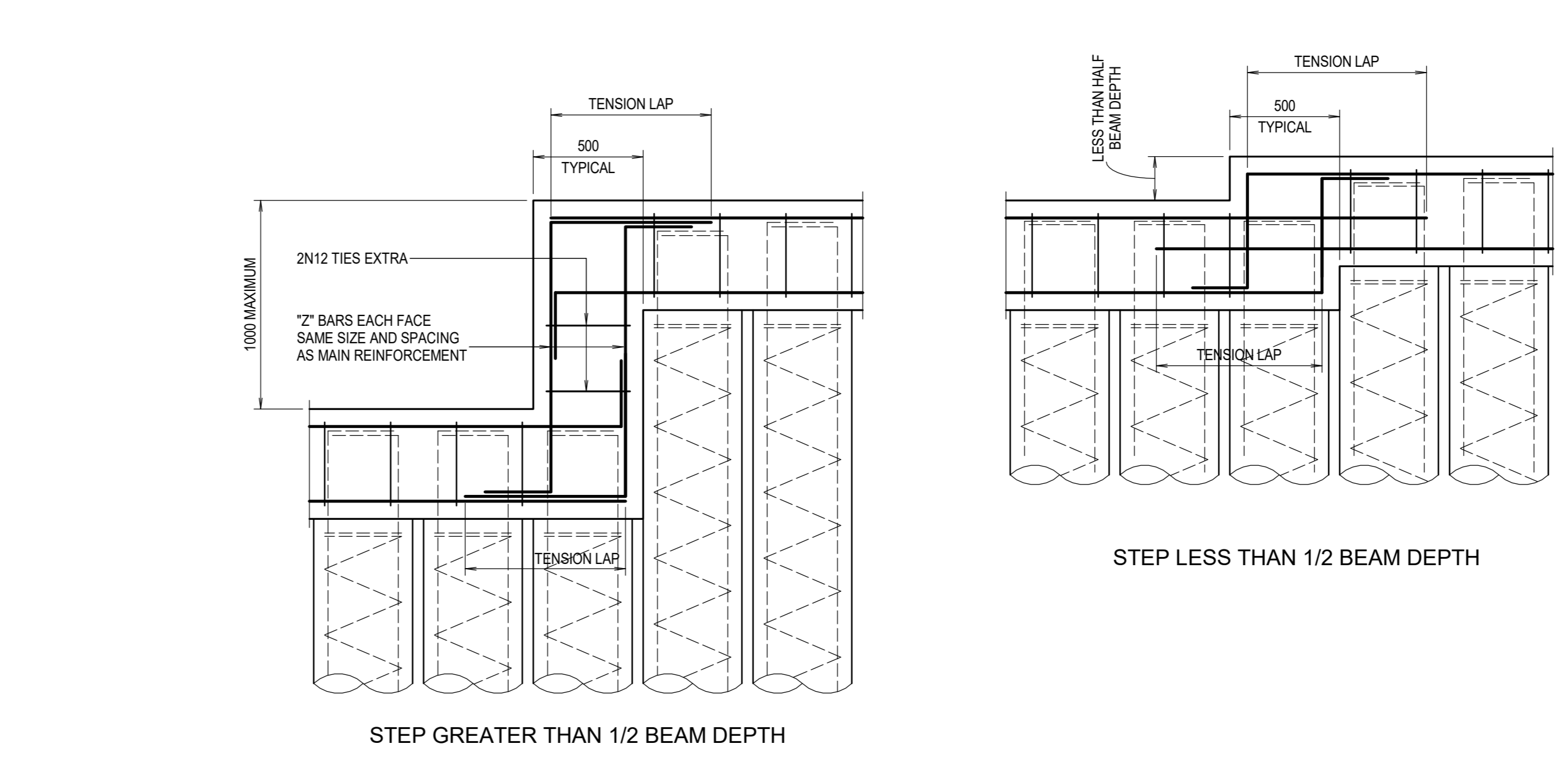
Structural Engineer: **TTW Taylor Thomson Whitting**
 612 9439 7288 | 48 Chandos Street St Leonards NSW 2065
 Scale: A0 Drawn: Authorised As indicated: D.J
 TTW Job Number: Drawing No: 161607 STR-DNG-10-911 A
 28/06/2019 3:52:24 PM



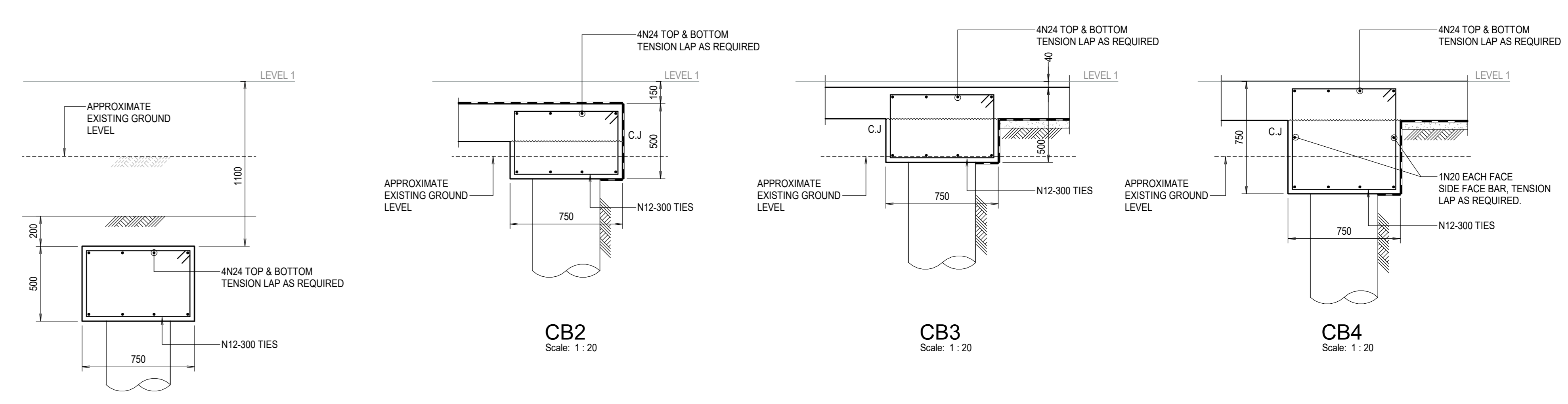
TYPICAL CONTIGUOUS PILING SHORING DETAIL - SW1
 SCALE 1:20



PLAN SCALE 1:10



TYPICAL CAPPING BEAM DETAILS
 SCALE 1:20



TYPICAL CAPPING BEAM SECTIONS

- SHORING AND BULK EXCAVATION CONSTRUCTION SEQUENCE**
1. ALL EXISTING SERVICES ARE TO BE LOCATED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
 2. INSTALL SHORING PILES.
 3. EXCAVATE TO NO MORE THAN 500mm BELOW FIRST ROW OF ANCHORS.
 4. EXCAVATION TO BE INSPECTED BY THE GEOTECHNICAL ENGINEER EVERY 1500mm OF EXCAVATED DEPTH.
 5. INSTALL WALER BEAMS AND TEMPORARY GROUND ANCHORS GA1.
 6. STRESS TEMPORARY ANCHORS GA1.
 7. EXCAVATE TO BULK EXCAVATION LEVEL.
 8. INSTALL PERMANENT STRUCTURE.
 9. ONCE PERMANENT STRUCTURE IS INSTALLED ABOVE LEVEL 1, TEMPORARY ANCHORS ARE TO BE DE-STRESSED (ADJACENT TO BATTERS DO NOT DE-STRESS UNTIL VOID HAS BEEN BACKFILLED TO 500mm BELOW TEMPORARY ANCHORS).
 10. REMOVE WALER BEAM AND MAKE GOOD.

**ALL SHORING DETAILS ARE INDICATIVE ONLY
 FINAL DETAILS BY D+C SHORING CONTRACTOR**

FOR CONSTRUCTION

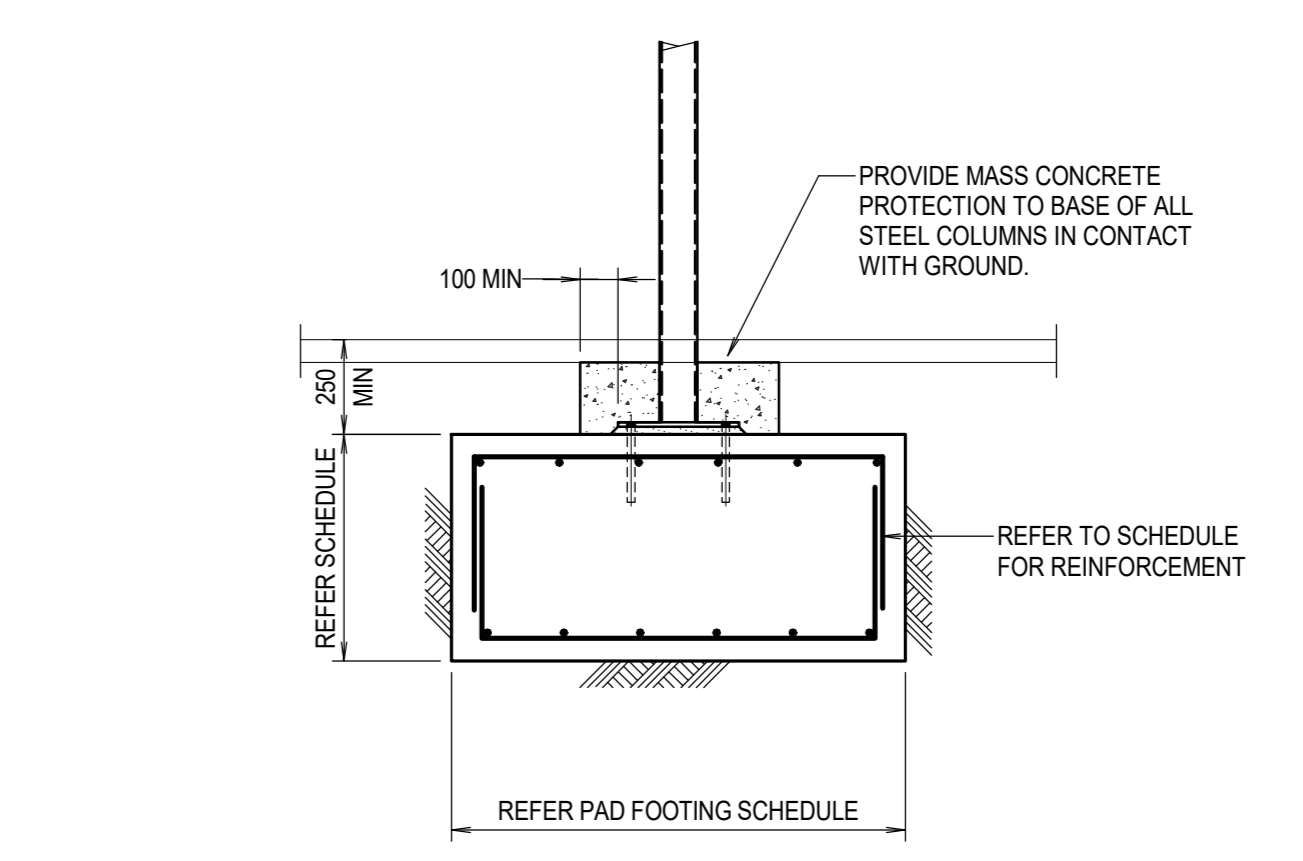
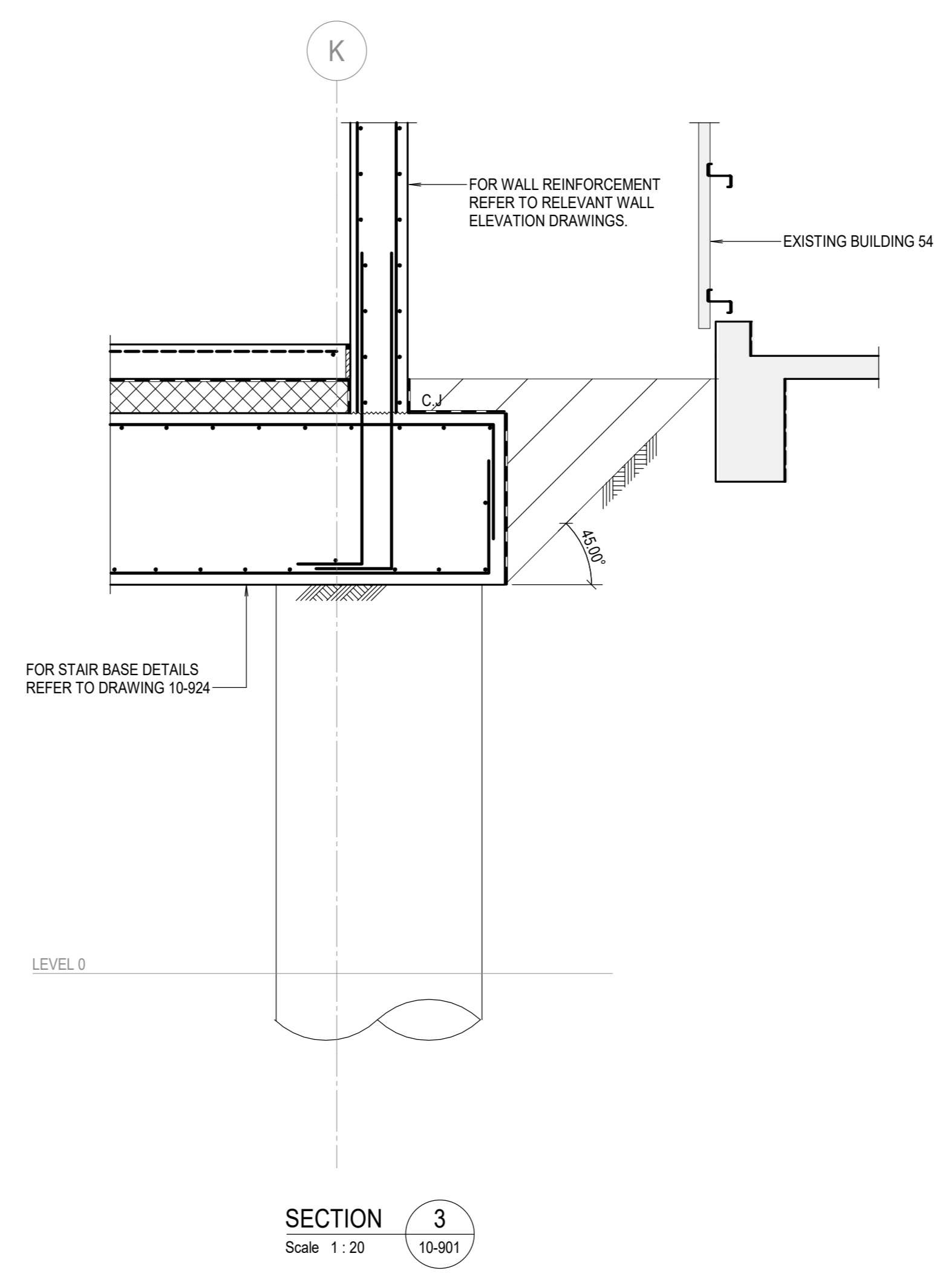
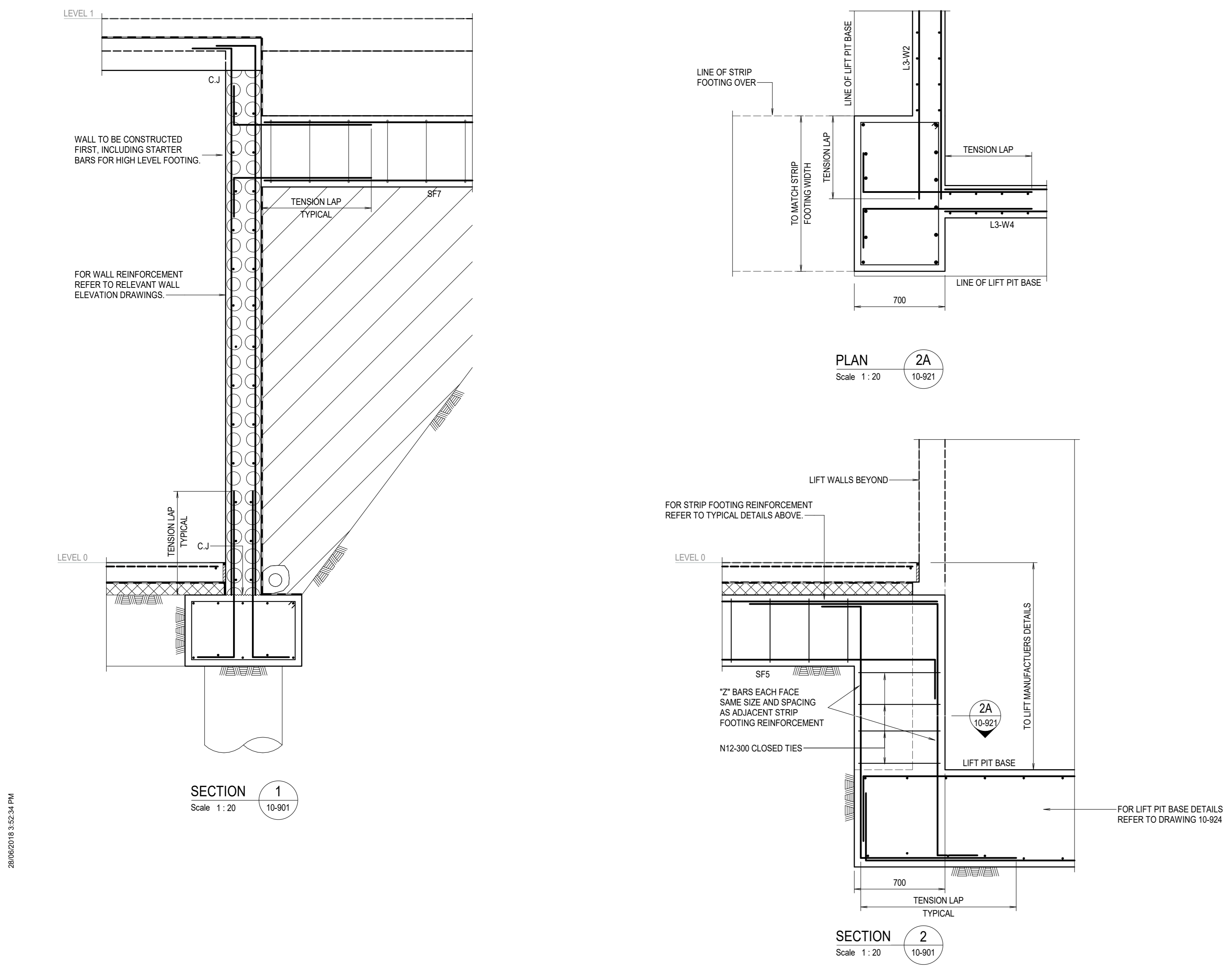
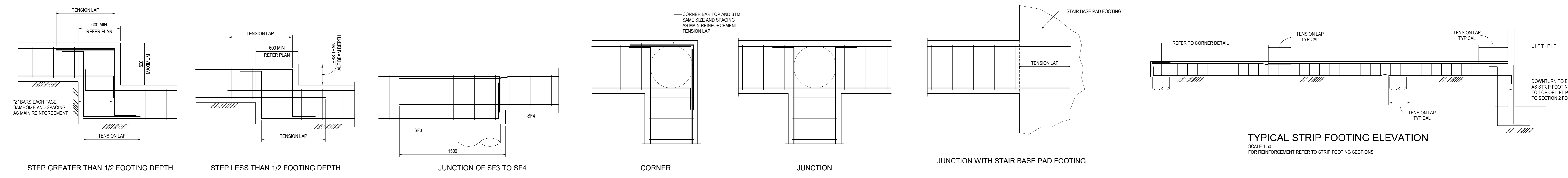
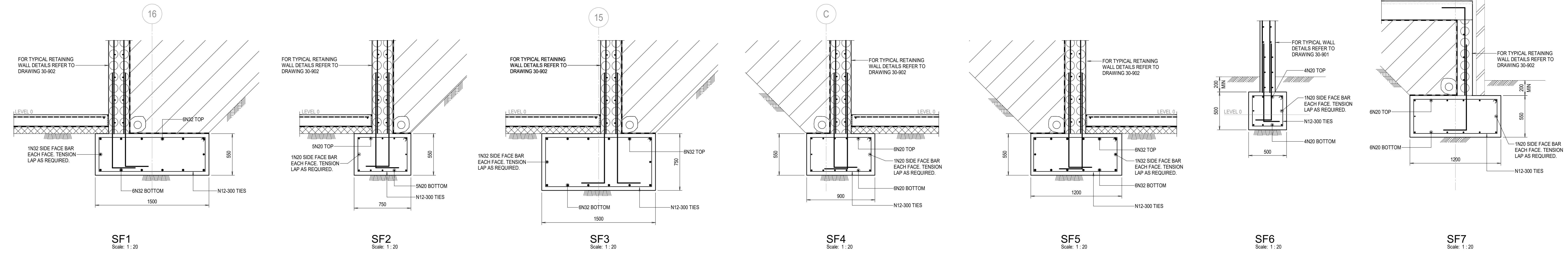
Rev	Description	Eng	Draft	Date
A	ISSUED FOR CONSTRUCTION	M.R		28.06.19

WATPAC 155 Clarence Street Sydney NSW 2000
STH SILVER THOMAS HANLEY 3 Glenara Road Glen Iris Victoria 3146
 Client



Project
HORNSBY KU-RING-GAI HOSPITAL - STAGE 2
 Palmerston Road, Hornsby NSW 2077
 Sheet Subject
SHORING DETAILS

Structural Engineer
TTW Taylor Thomson Whitting
 612 9439 7288 | 48 Chandos Street St Leonards NSW 2065
 Scale: A0 Drawn: Authorised
 As indicated D.J
 TTW Job Number Drawing No Revision
161607 STR-DNG-10-912 A
 28/06/2019 3:52:27 PM



PAD FOOTING SCHEDULE

MARK	LENGTH	WIDTH	DEPTH	REINFORCEMENT
PF1	1200	1200	600	7N16 EACH WAY TOP & BOTTOM
PF2	1200	900	600	7N16 LONG, 5N16 WIDE TOP & BOTTOM
PF3	600	600	400	4N16 EACH WAY TOP & BOTTOM

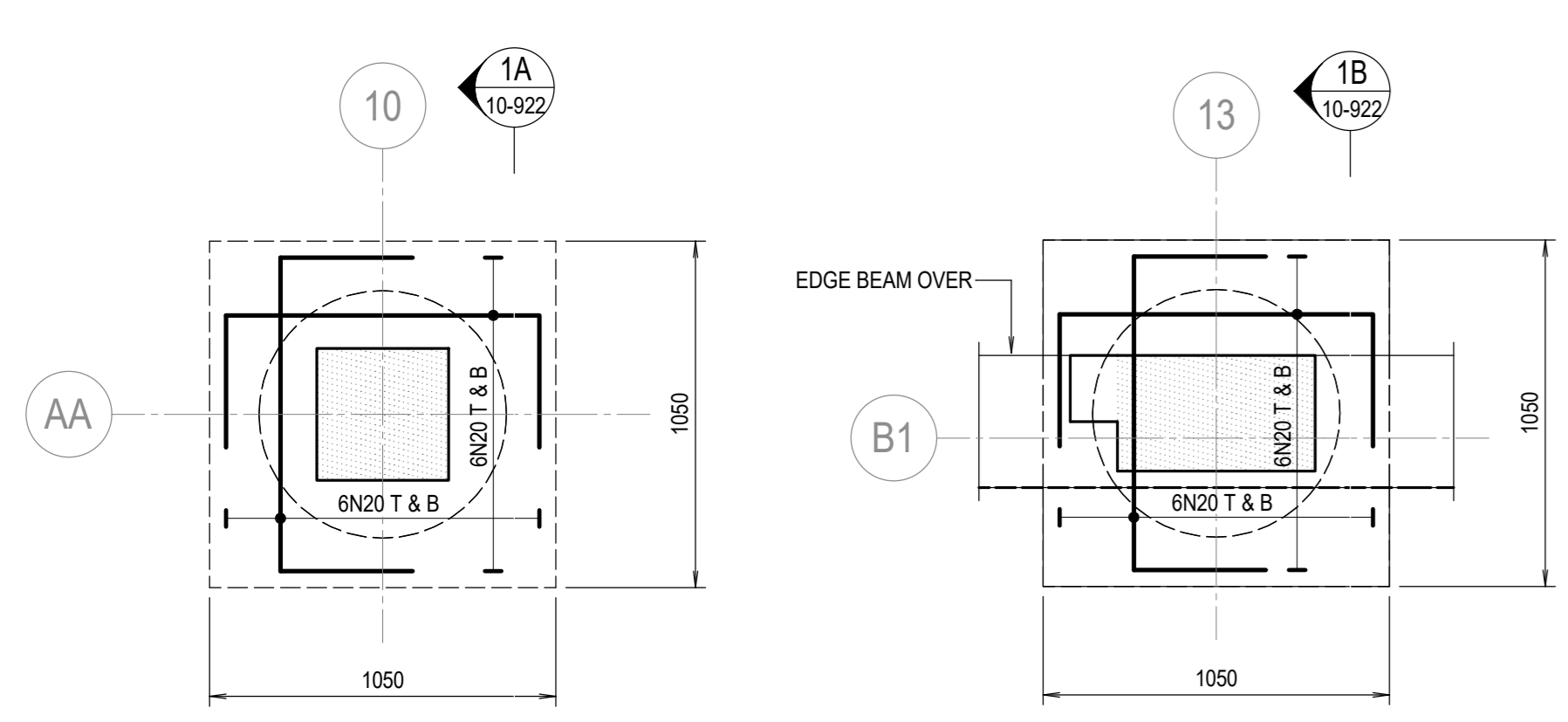
FOR CONSTRUCTION

ISSUED FOR CONSTRUCTION M.R. 28.06.18
 Rev Description Eng Draft Date
 WATPAC 155 Clarence Street Sydney NSW 2000
 STH SILVER THOMAS HANLEY 3 Glemare Road Glen Iris Victoria 3146
 Client
 NSW Health Infrastructure
 Level 8, 77 Pacific Highway, North Sydney NSW 2060

Project
HORNSBY KU-RING-GAI HOSPITAL - STAGE 2
 Palmerston Road, Hornsby NSW 2077
 Sheet Subject
FOOTING DETAILS - SHEET 1

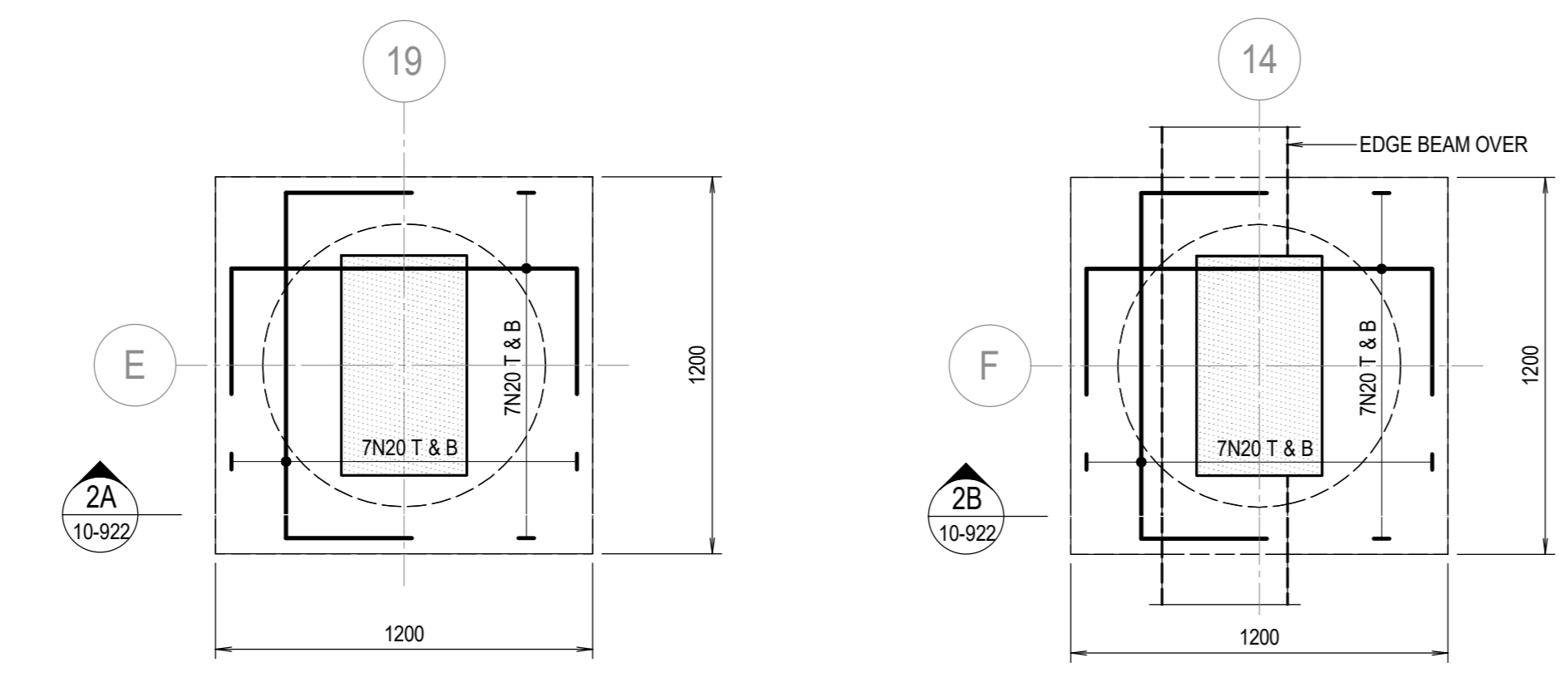
Structural Engineer
TTW Taylor Thomson Whitting
 612 9439 7288 | 48 Chandos Street St Leonards NSW 2065
 Scale: A0 Drawn: Authorised
 As Indicated D.J.
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161607 STR-DNG-10-921 A
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28/06/2018 3:52:34 PM



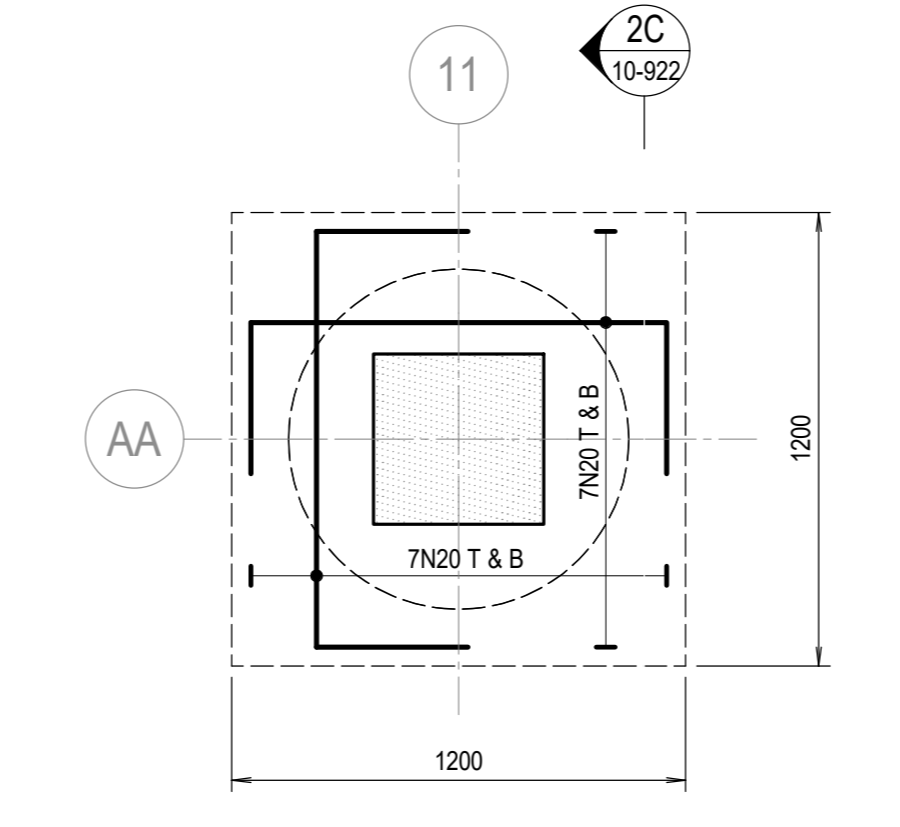
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PC1-B
Scale: 1:20

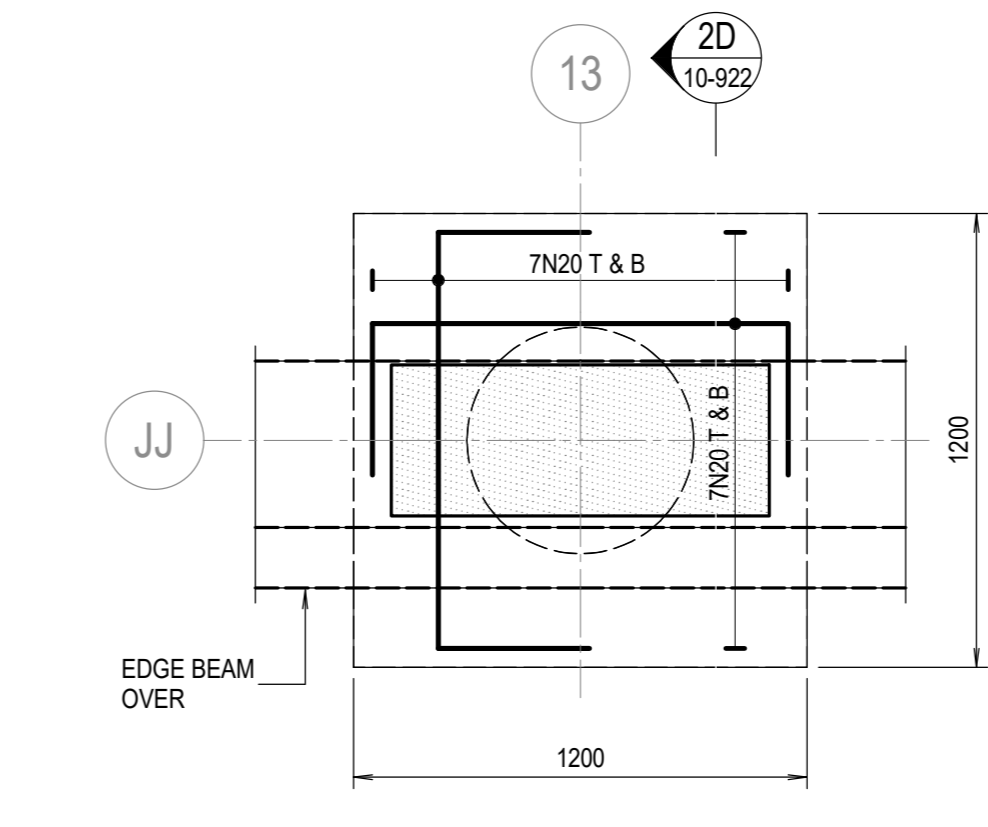


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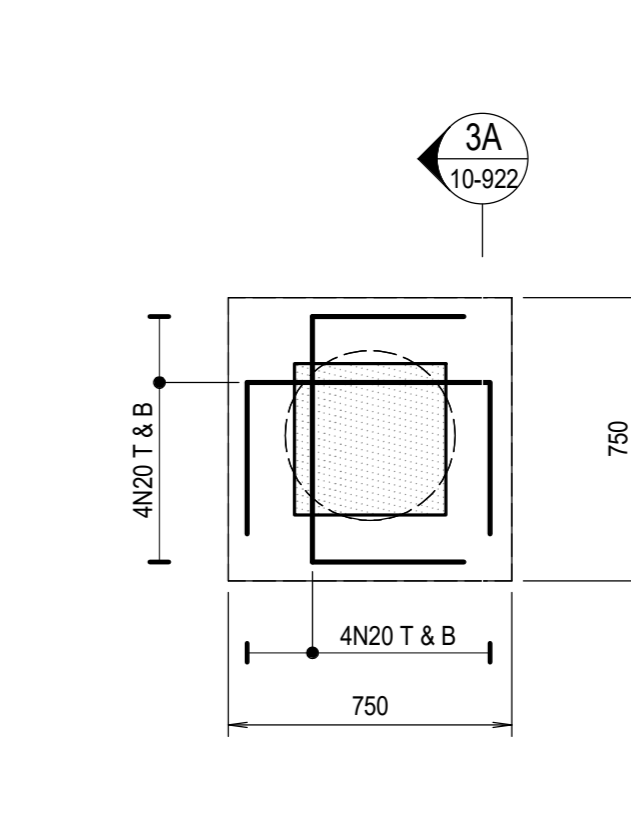
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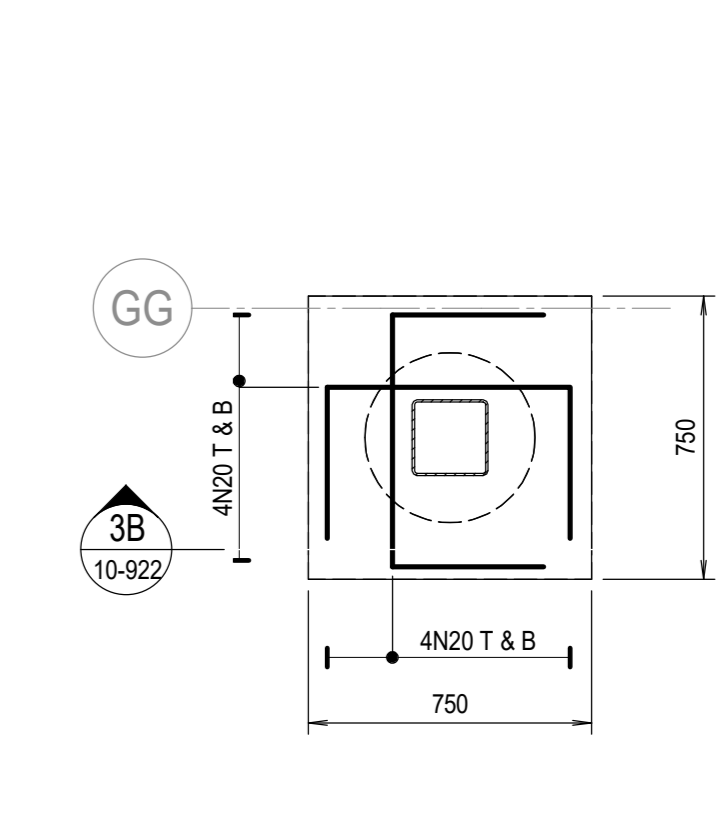
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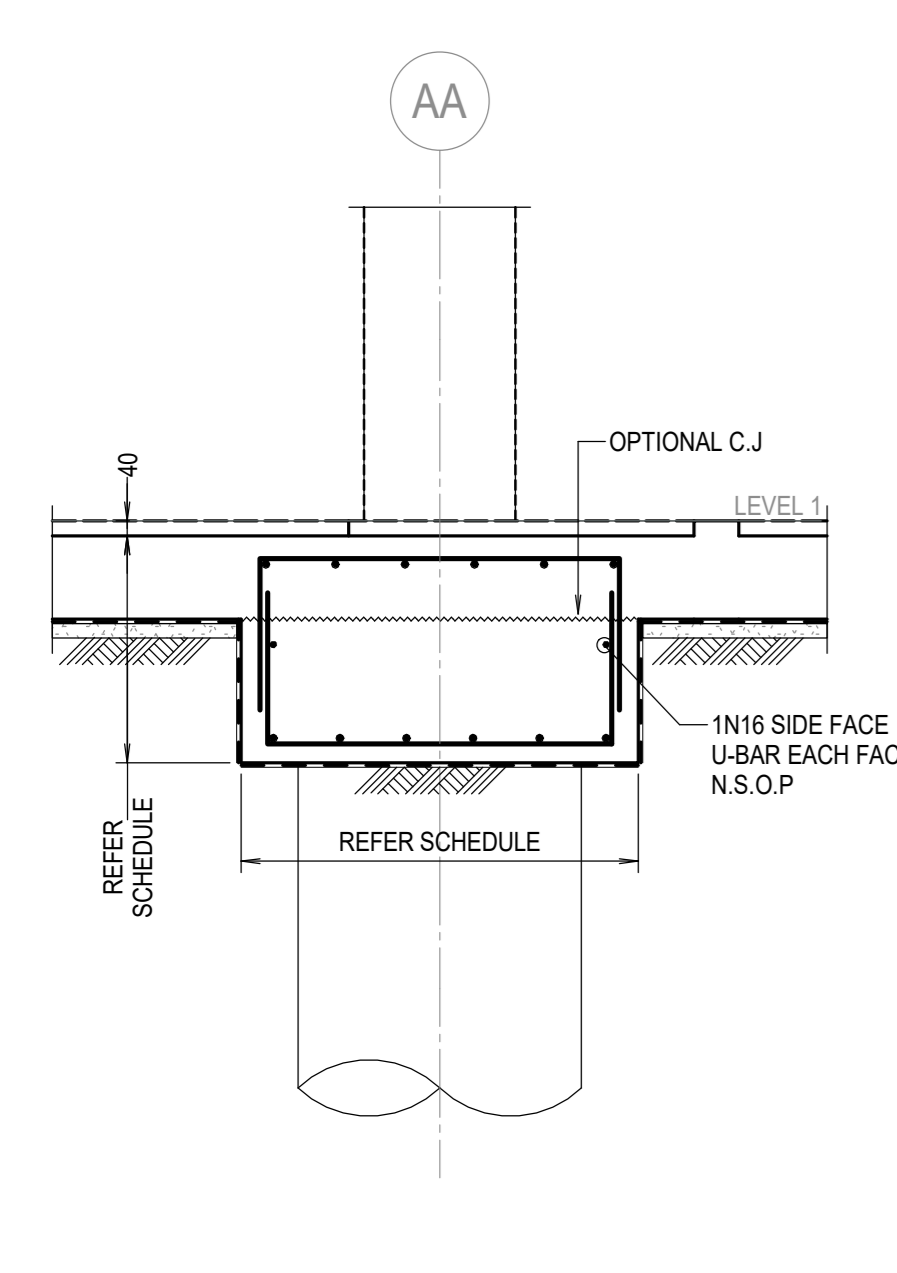
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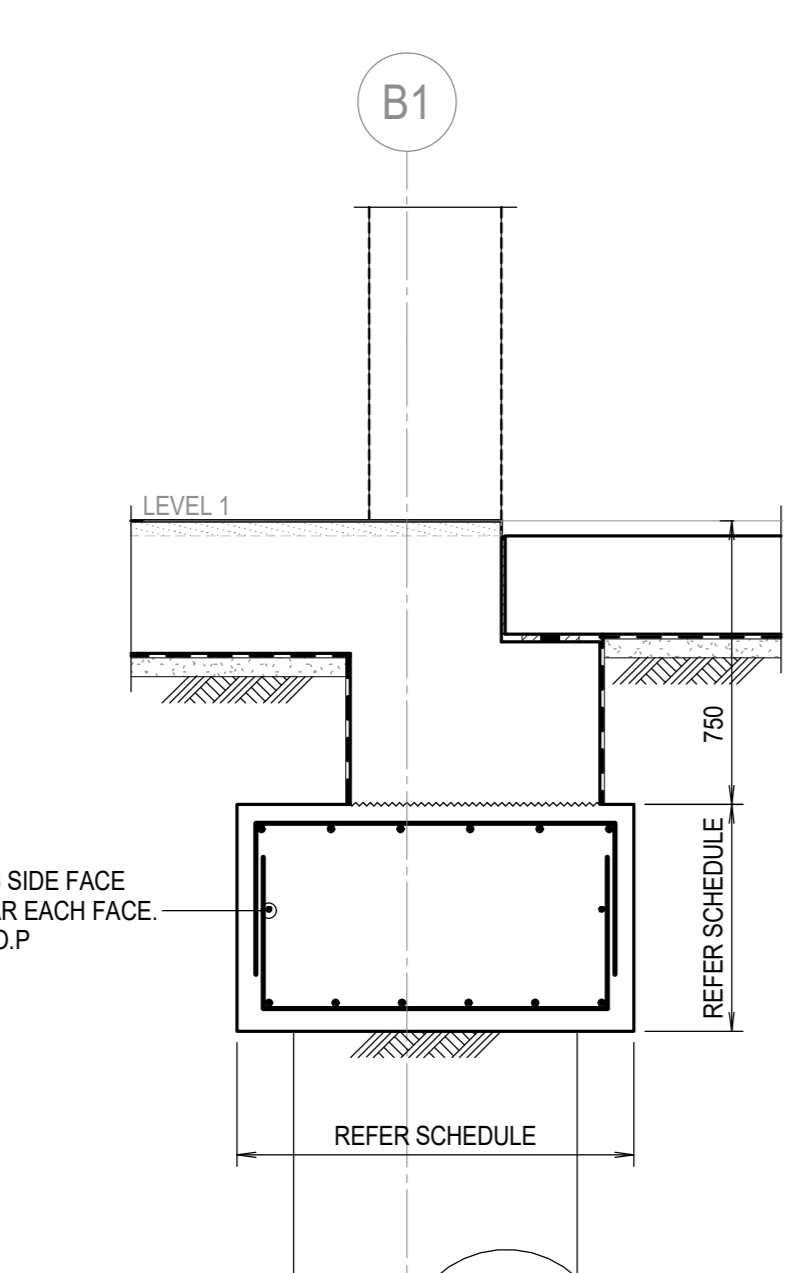
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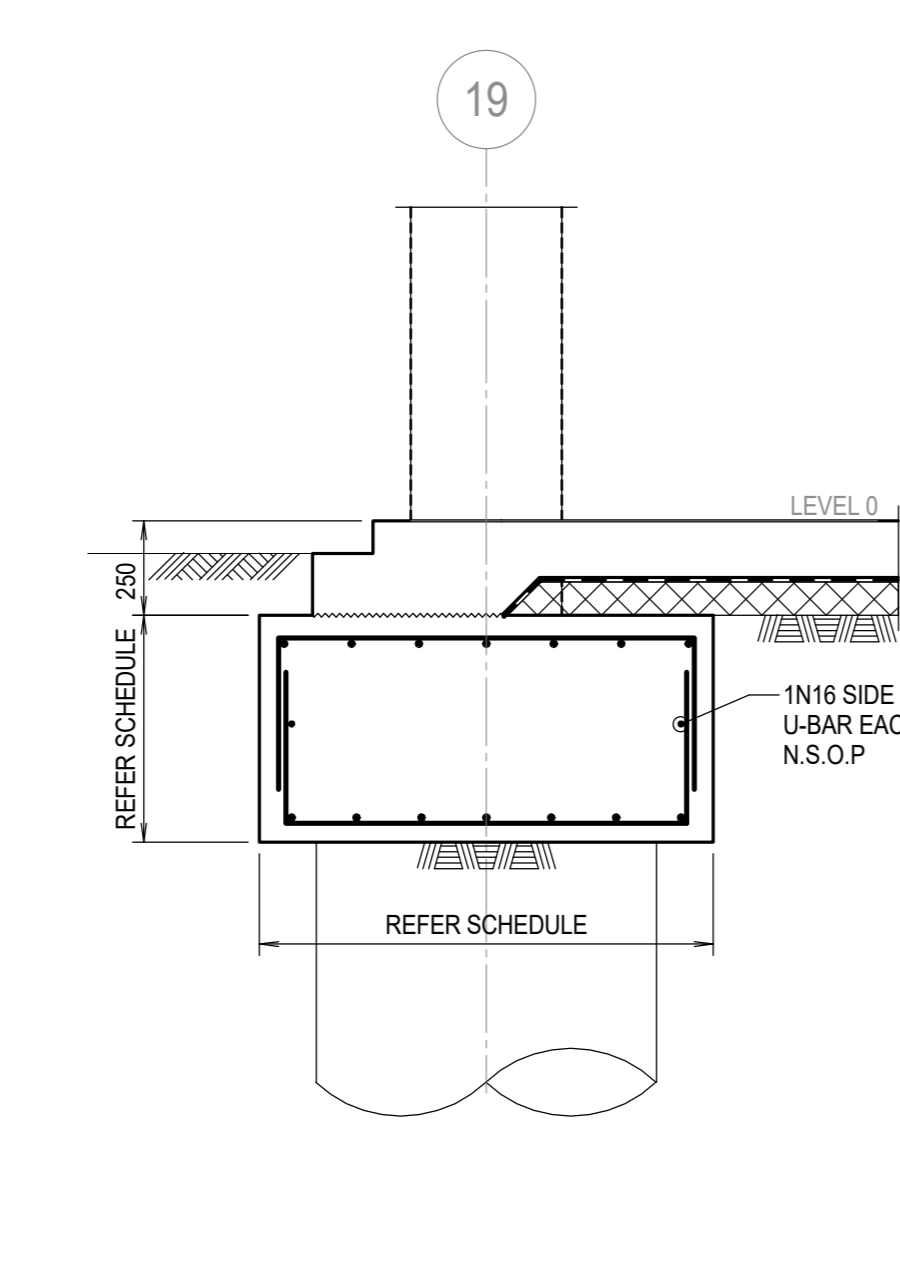
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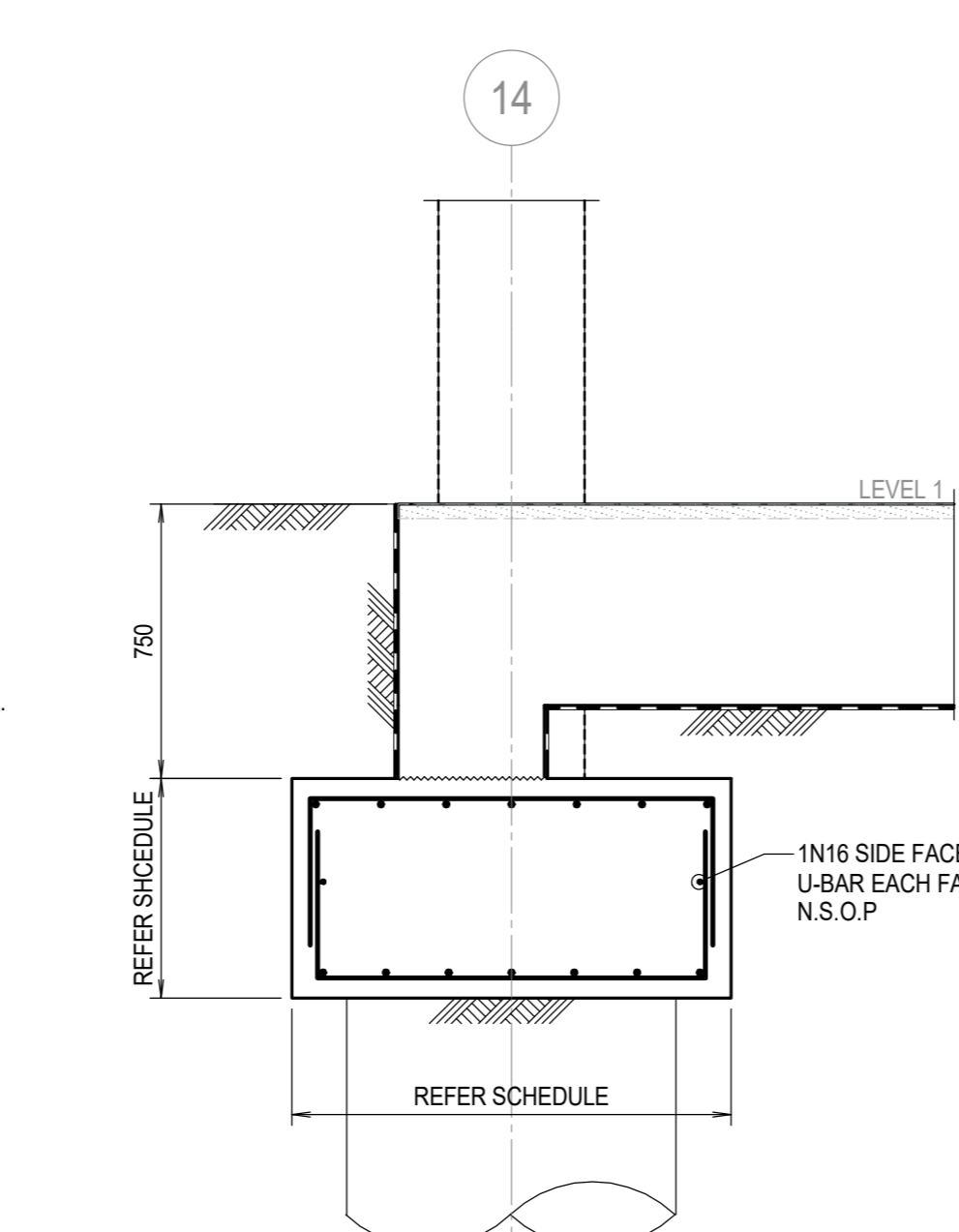
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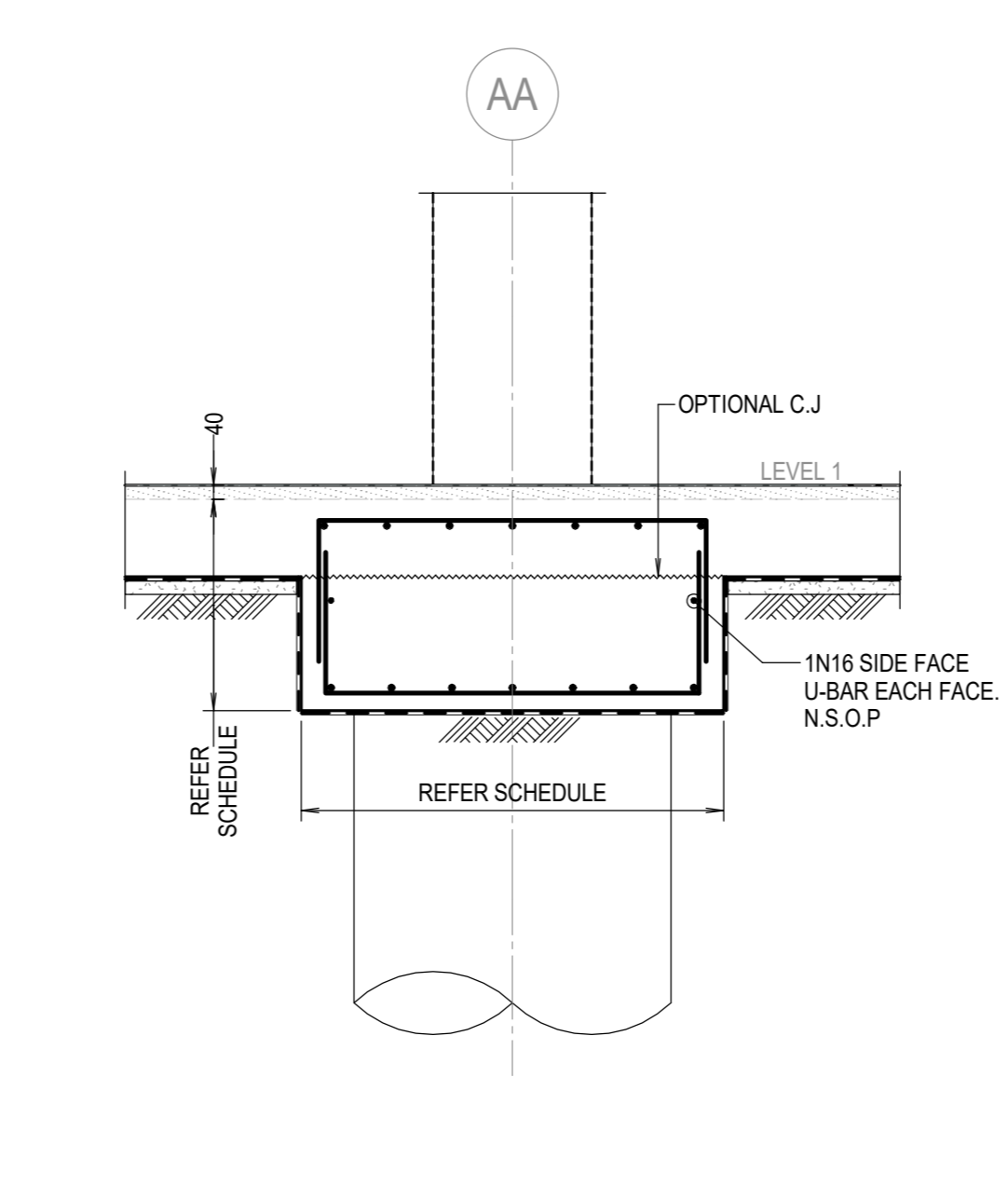
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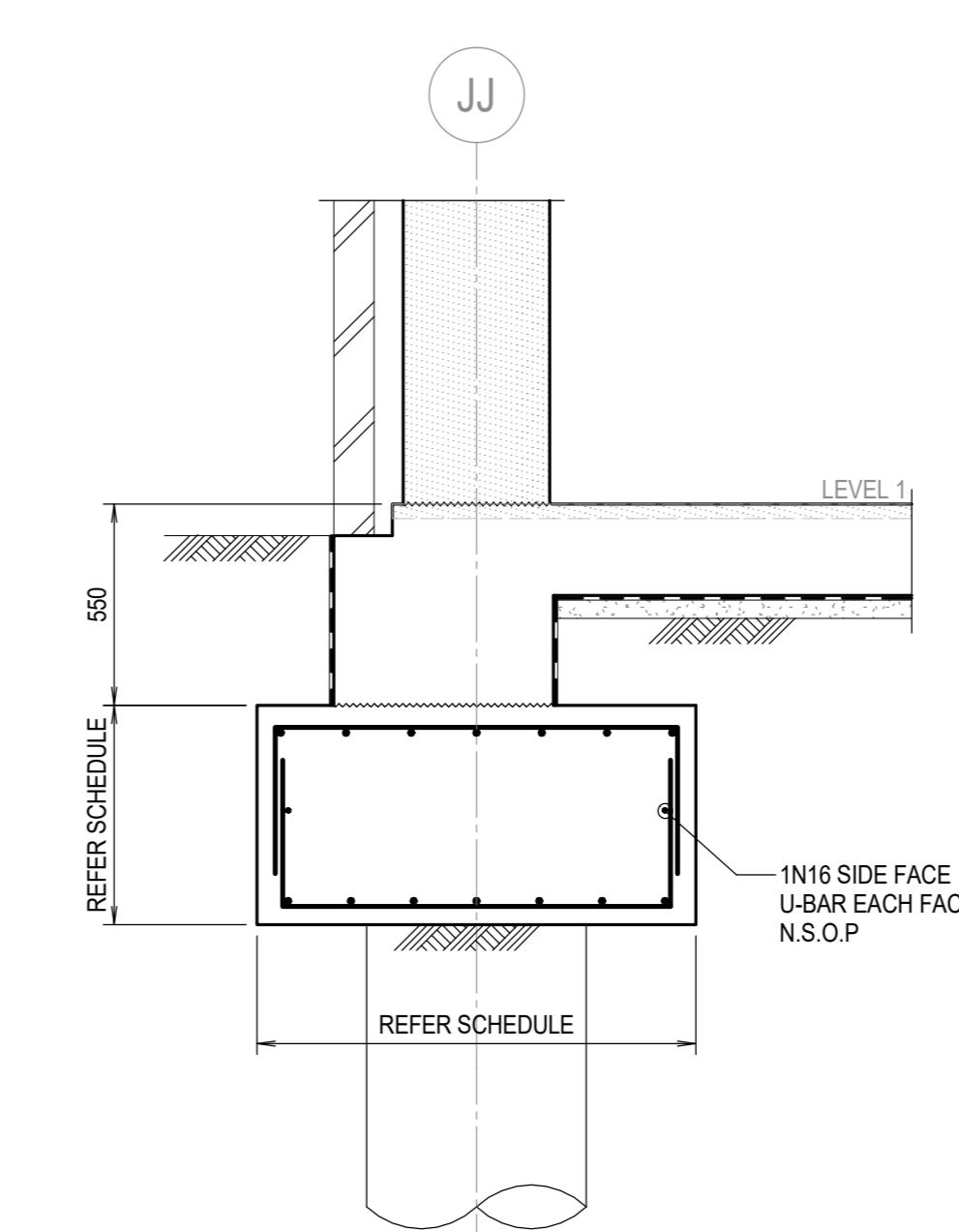
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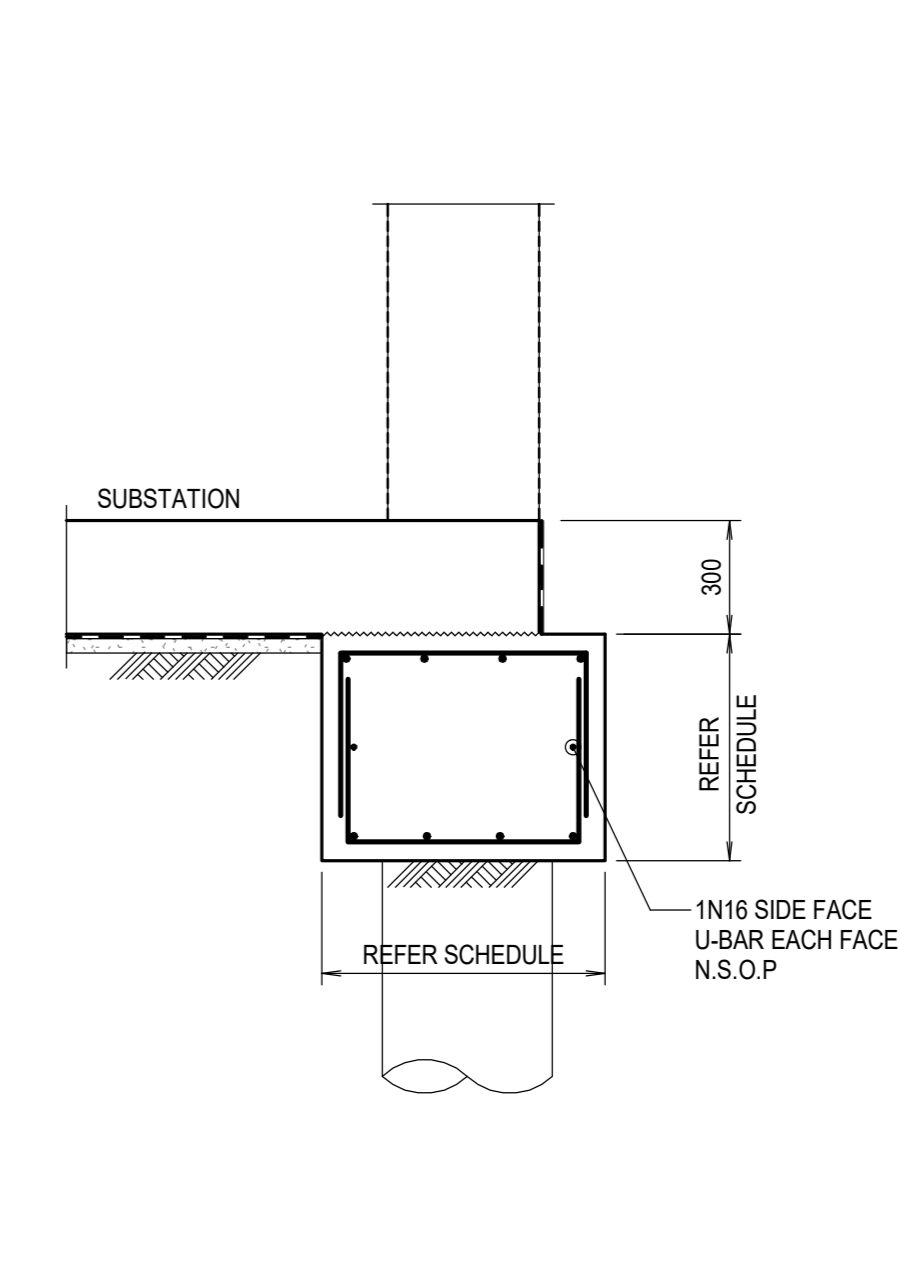
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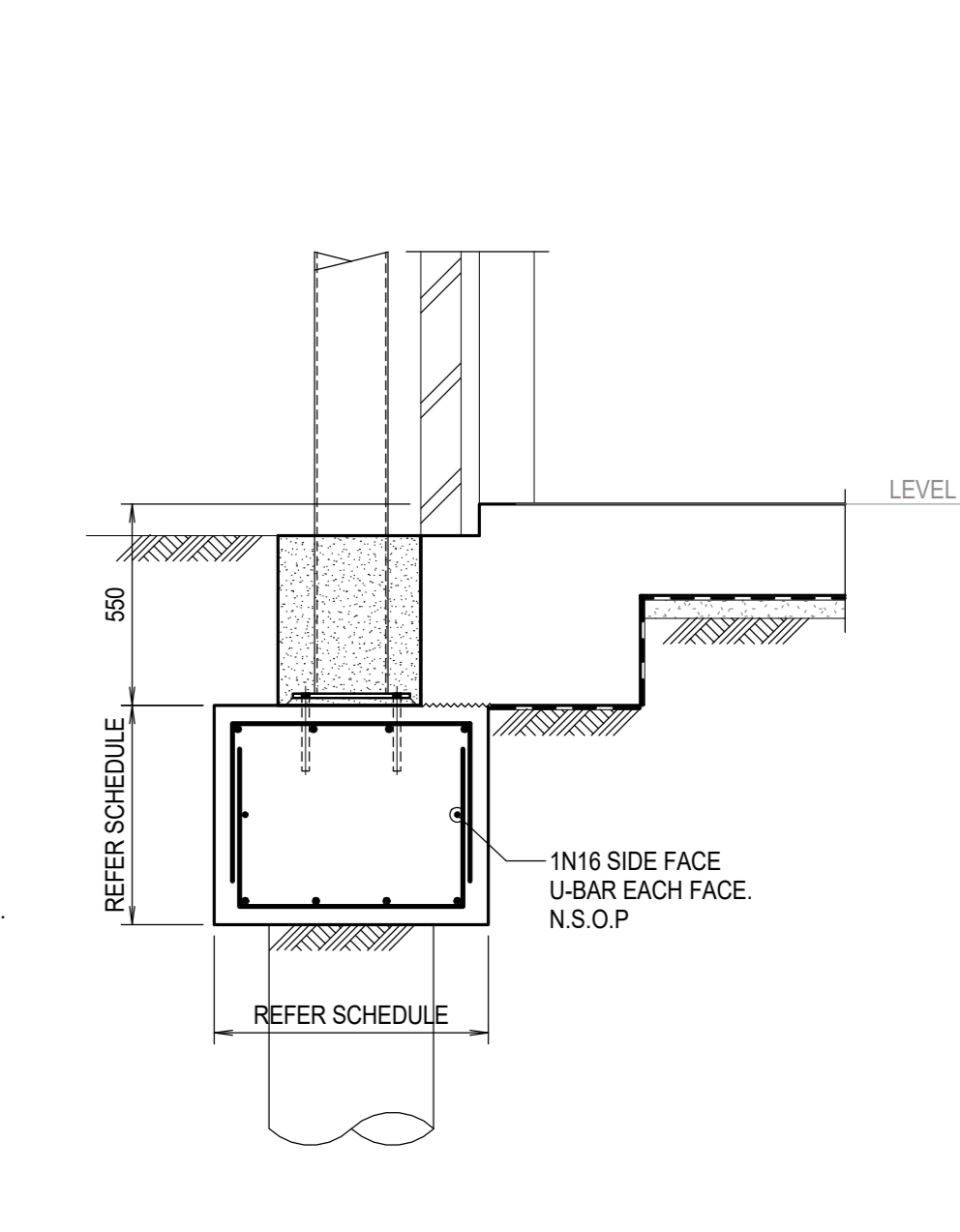
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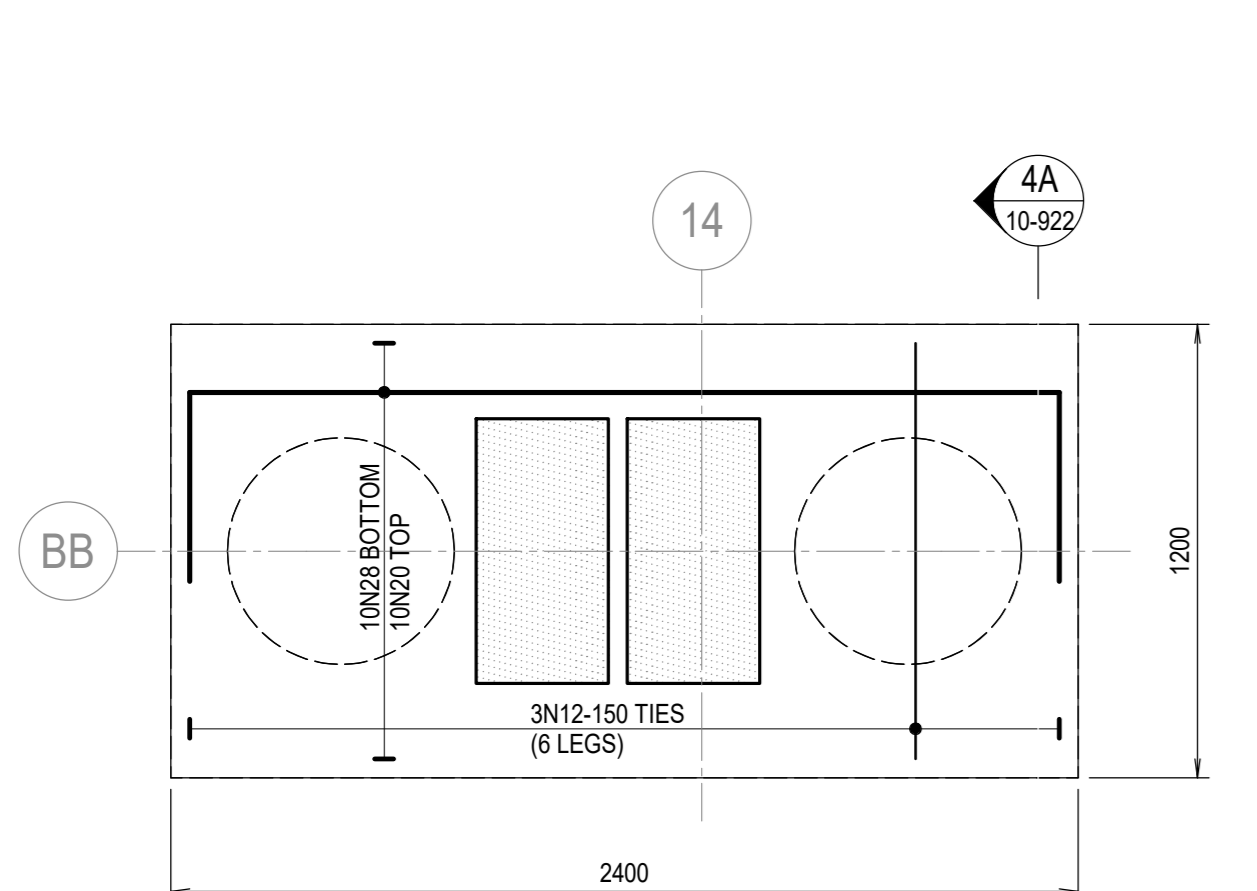
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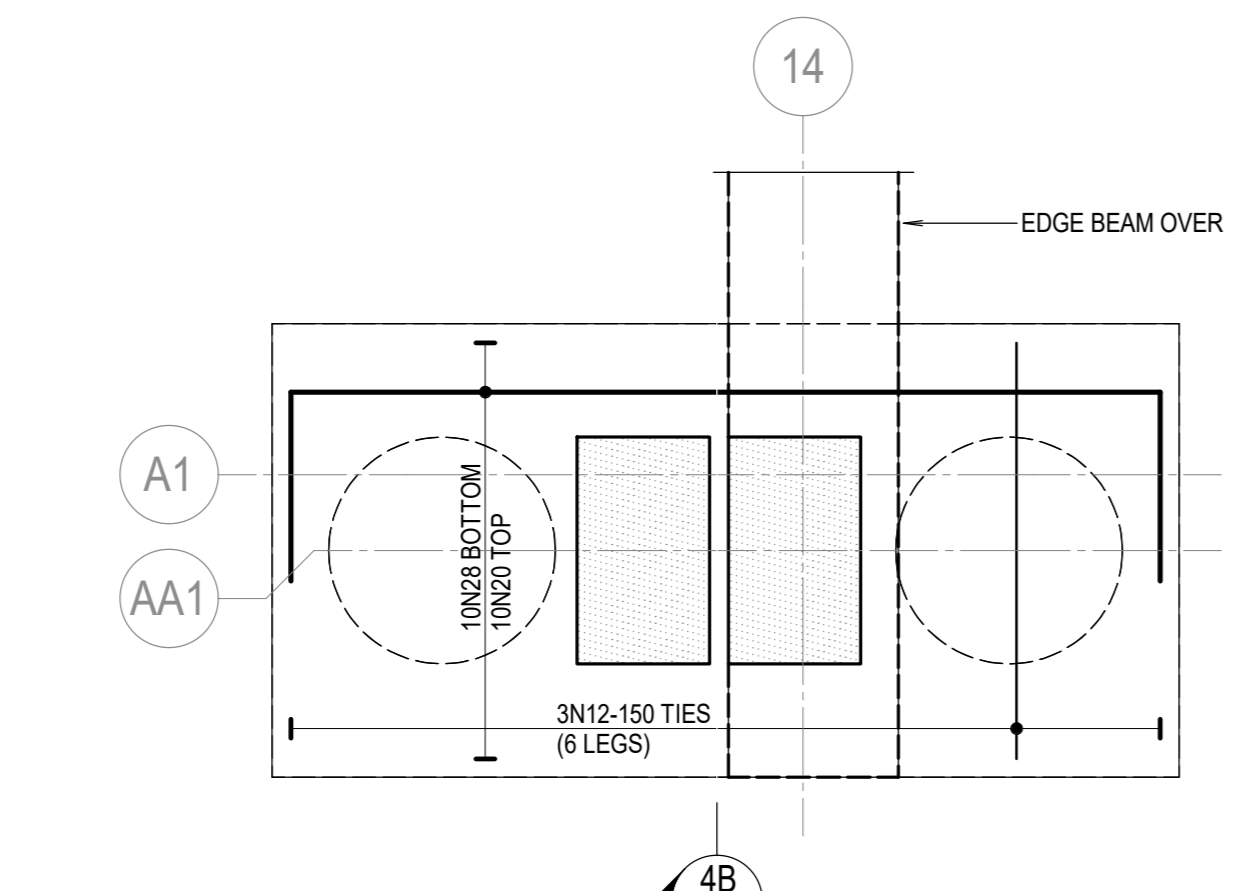
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SECTION 3B
Scale: 1:20

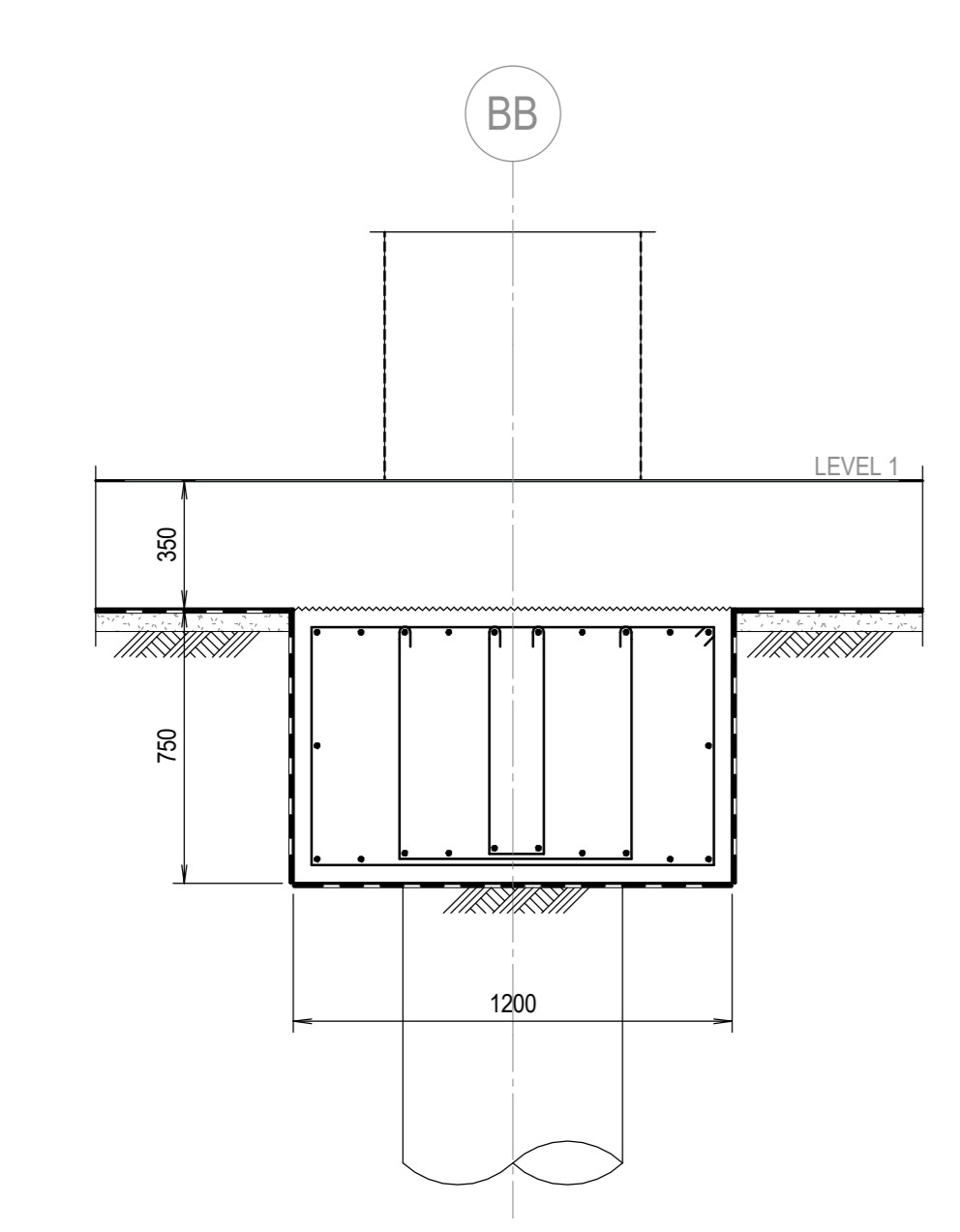


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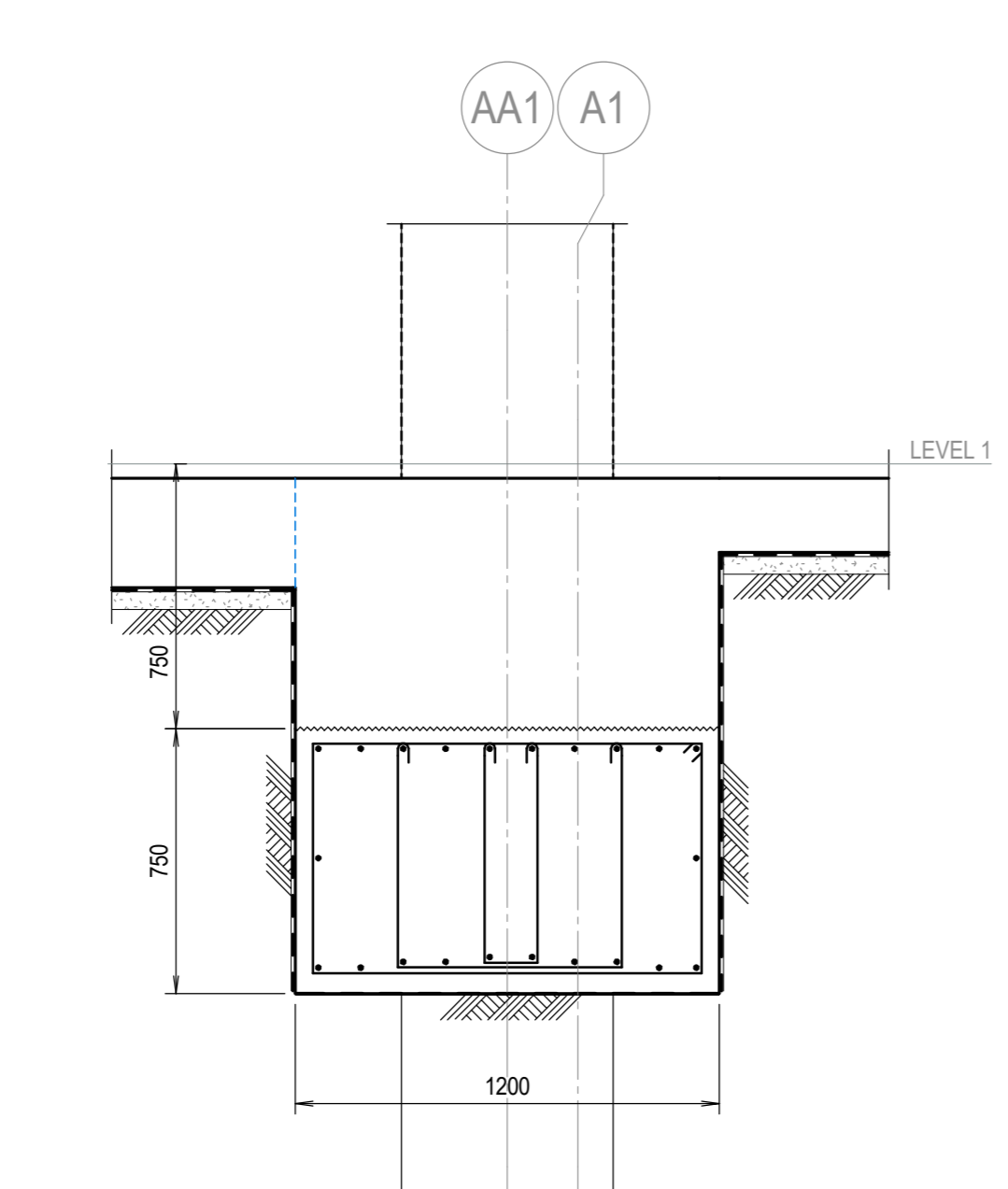


PC4-B
Scale: 1:20

PILE CAP SCHEDULE			
MARK	LENGTH	WIDTH	DEPTH
PC1-A	1050	1050	600
PC1-B	1050	1050	600
PC2-A	1200	1200	600
PC2-B	1200	1200	600
PC2-C	1200	1200	600
PC2-D	1200	1200	600
PC3-A	750	750	600
PC3-B	750	750	600
PC4-A	2400	1200	750
PC4-B	2400	1200	750
PC5-A	2925	1200	1000
PC5-B	2925	1200	1000
PC5-C	2925	1200	1000
PC6-A	900	900	600
PC6-B	900	900	600
PC6-C	900	900	600
PC6-D	900	900	600



SECTION 4A
Scale: 1:20



SECTION 4B
Scale: 1:20

FOR CONSTRUCTION

A ISSUED FOR CONSTRUCTION M.R. 28.06.19

Rev Description Eng Draft Date

Builder Level 10, 155 Clarence Street Sydney NSW 2000

Architect **WATPAC** SILVER THOMAS HANLEY
3 Glenara Road Glen Iris Victoria 3146

Client

NSW GOVERNMENT Health Infrastructure
Level 8, 77 Pacific Highway, North Sydney NSW 2060

Project **HORNSBY KU-RING-GAI HOSPITAL - STAGE 2**
Palmerston Road, Hornsby NSW 2077

Sheet Subject **FOOTING DETAILS - SHEET 2**

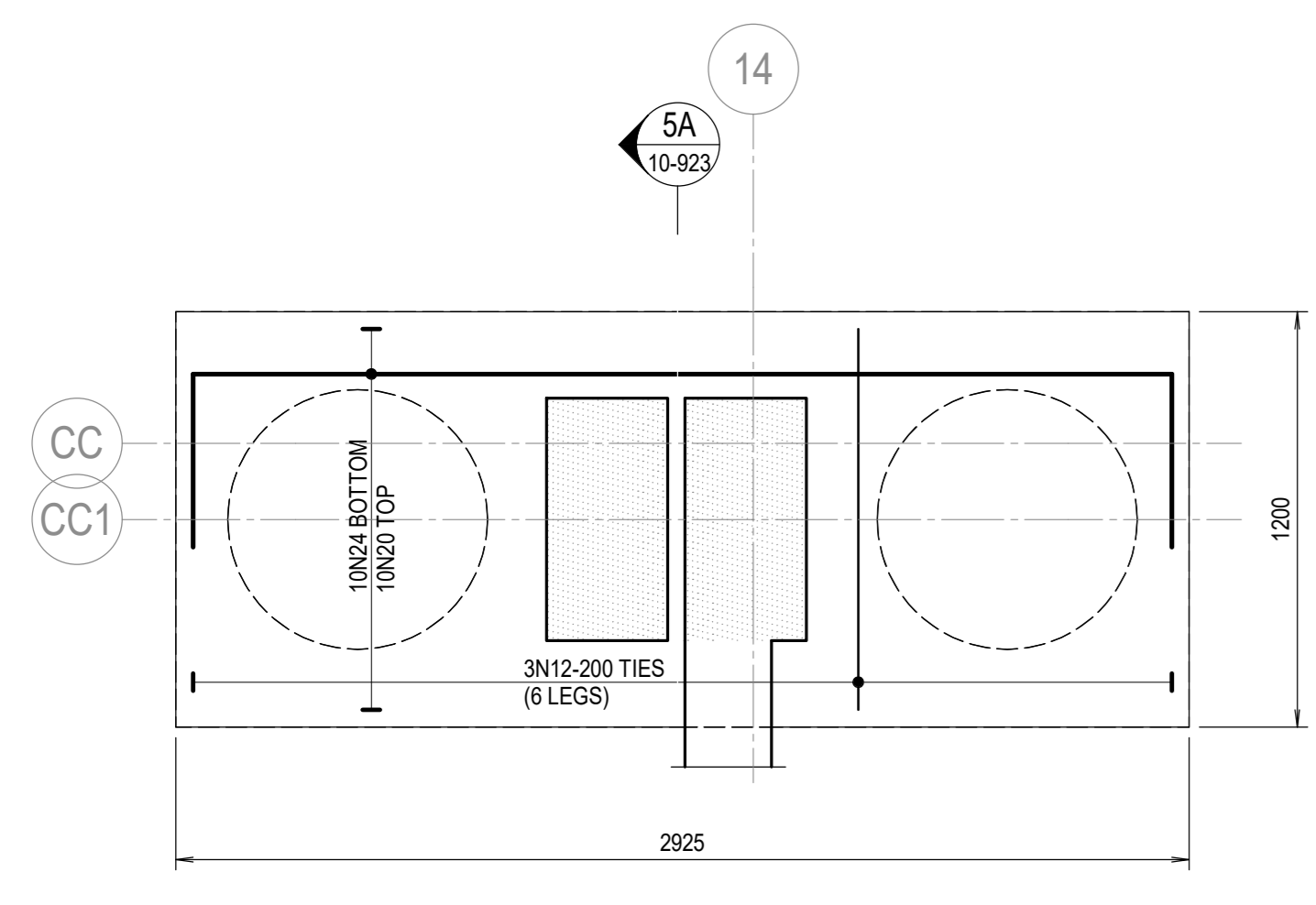
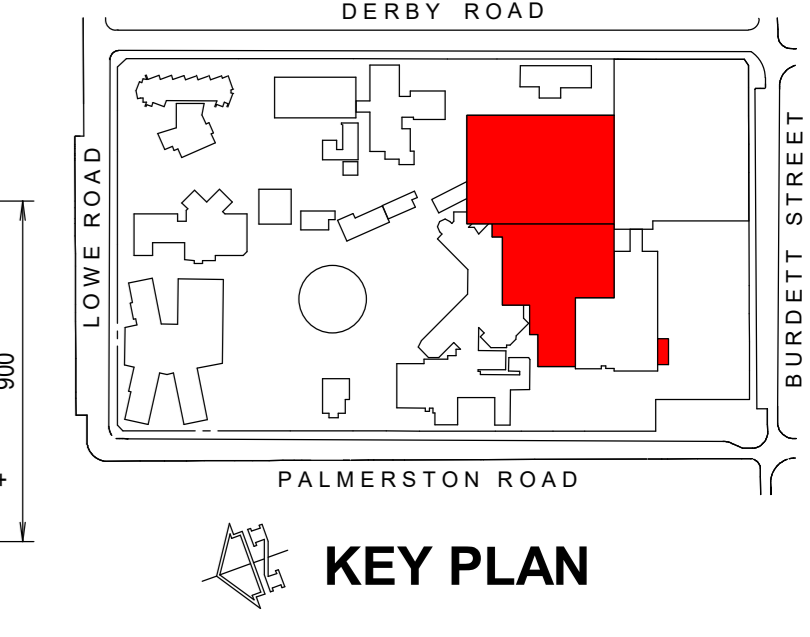
Structural Engineer **TTW Taylor Thomson Whitting**

612 9439 7288 | 48 Chandos Street St Leonards NSW 2065

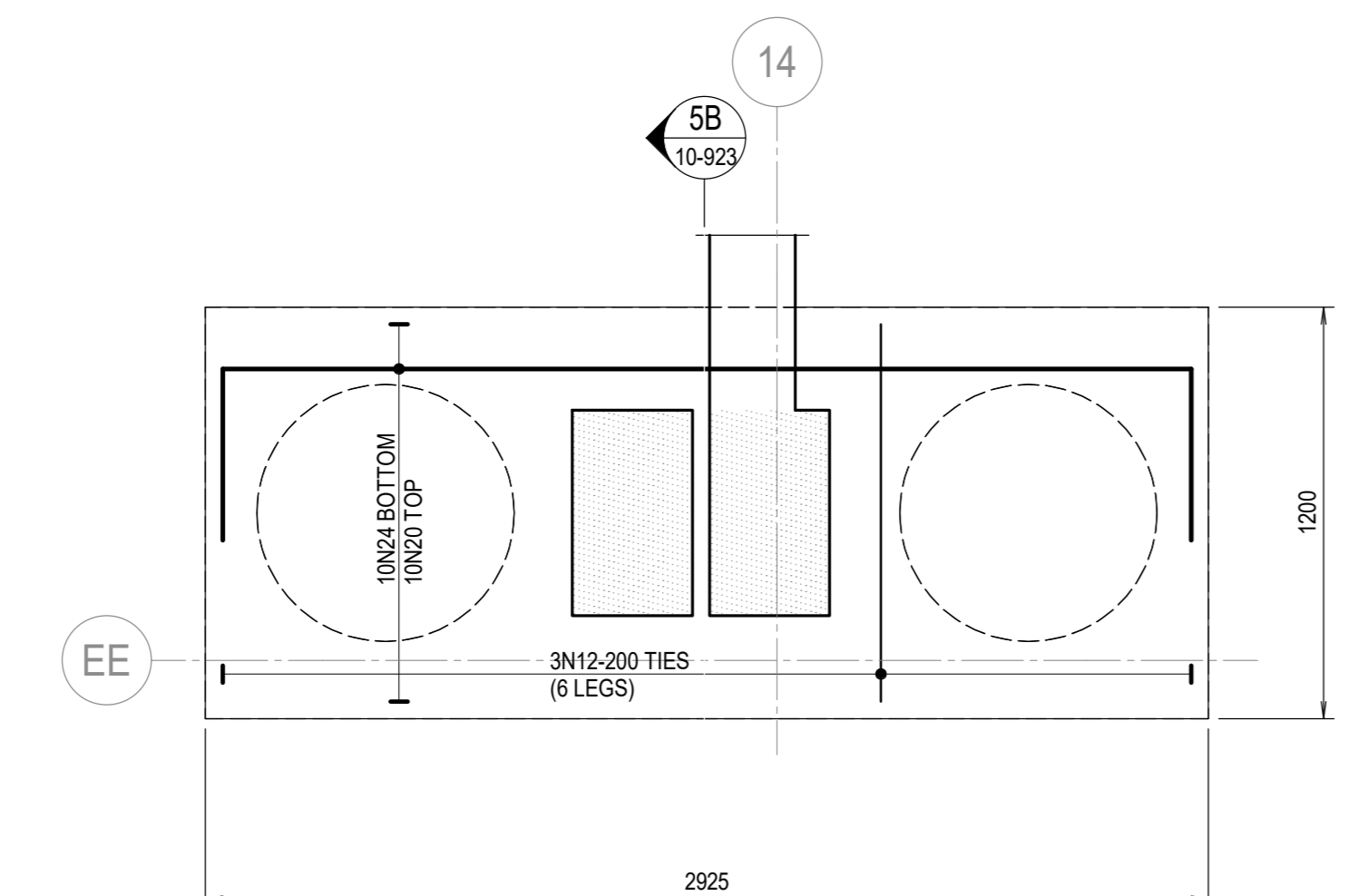
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TTW Job Number Drawing No. Revision
161607 STR-DNG-10-922 A

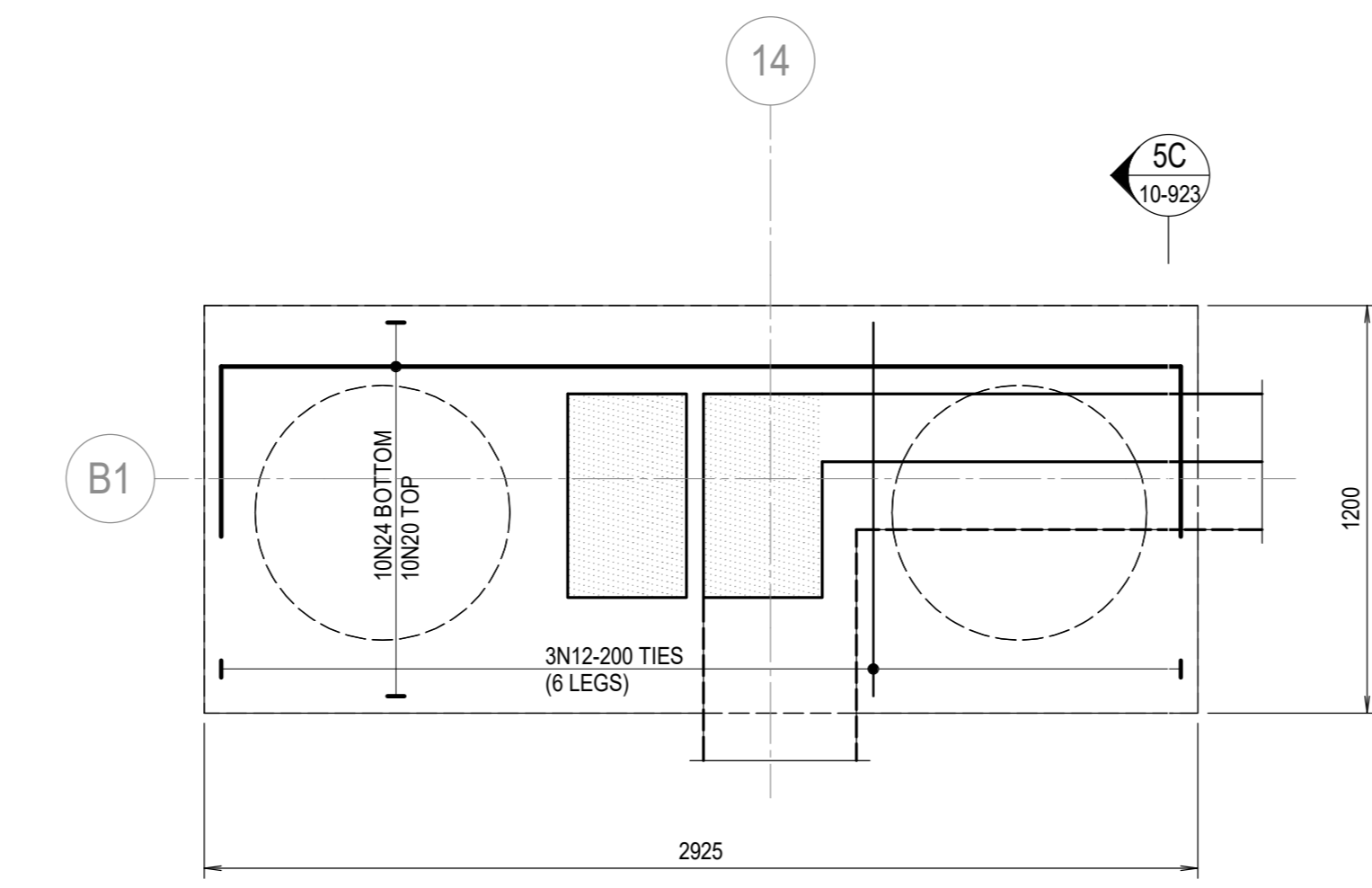
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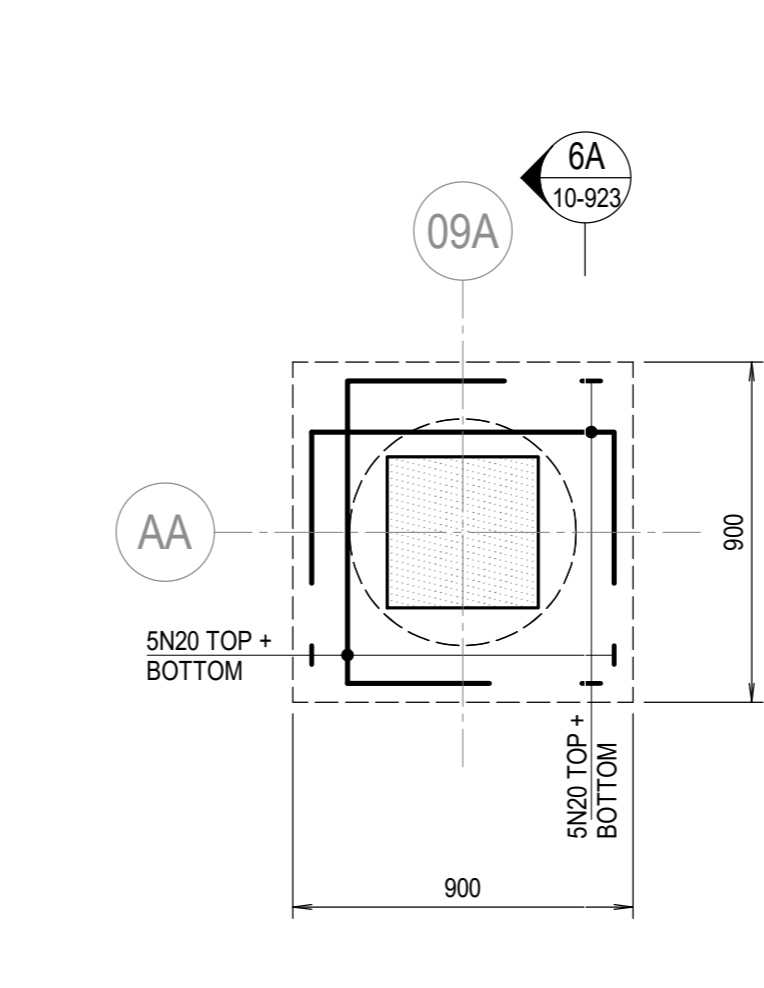
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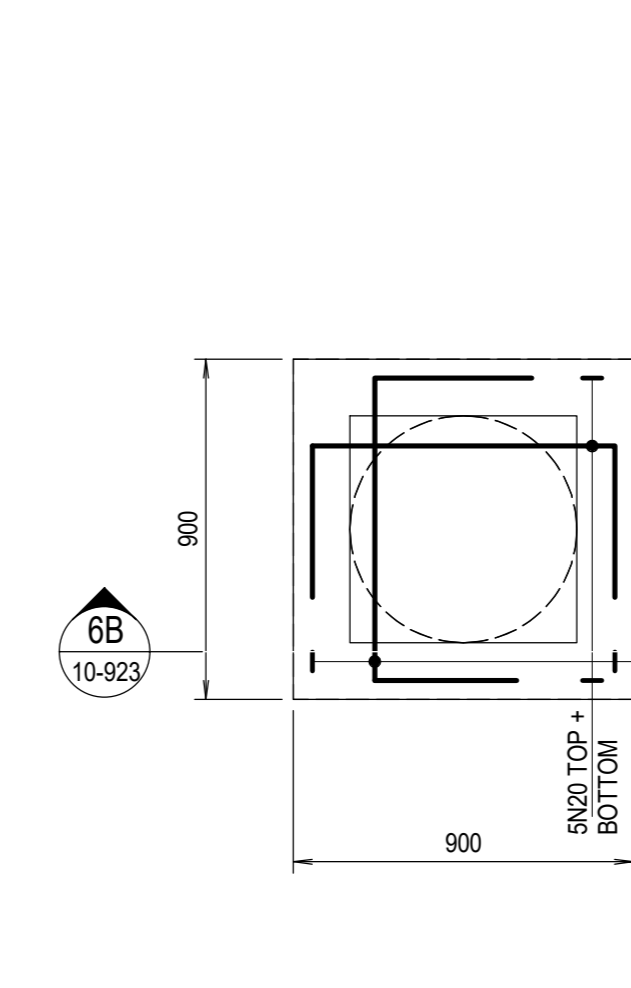
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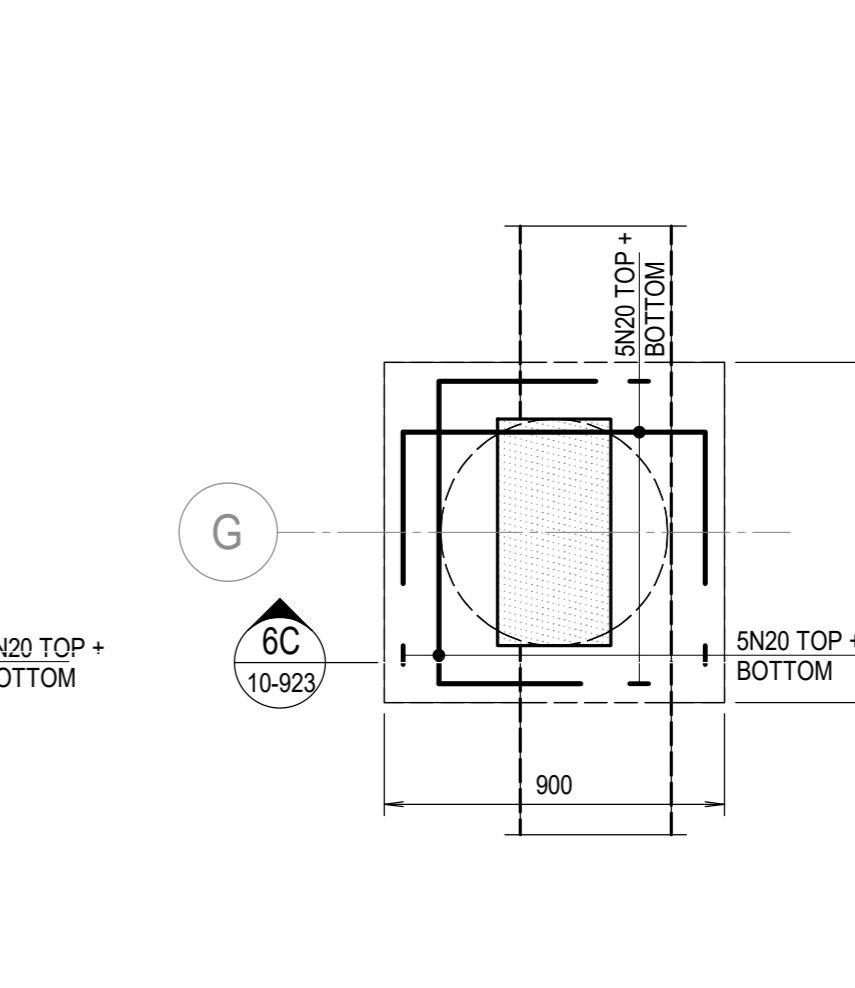
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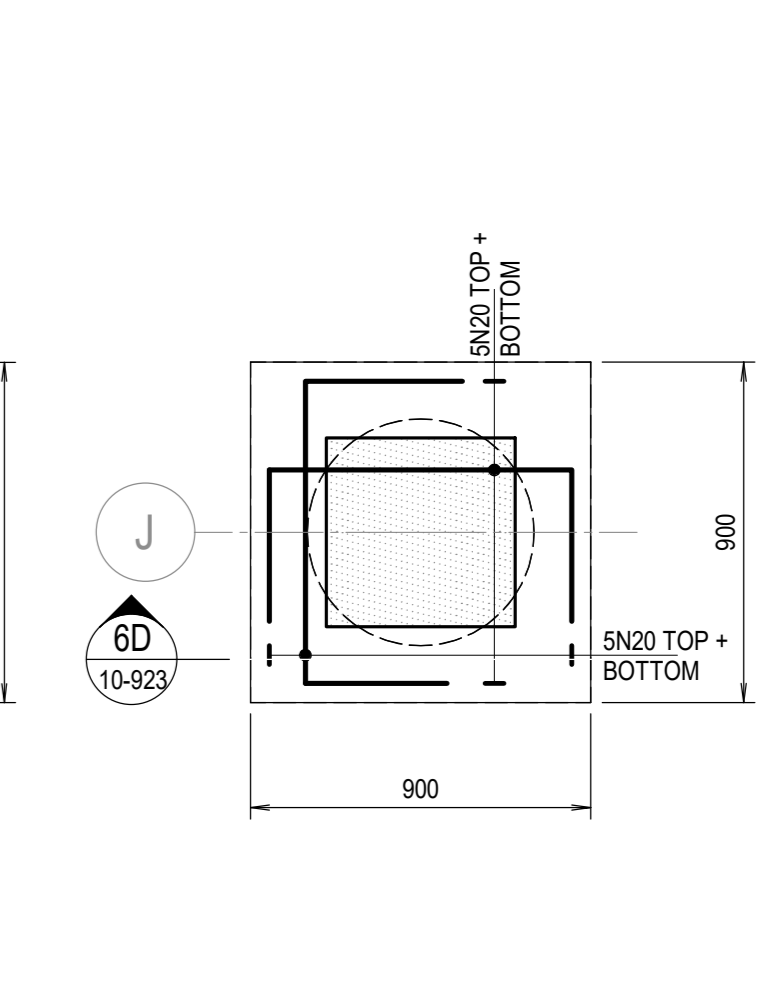
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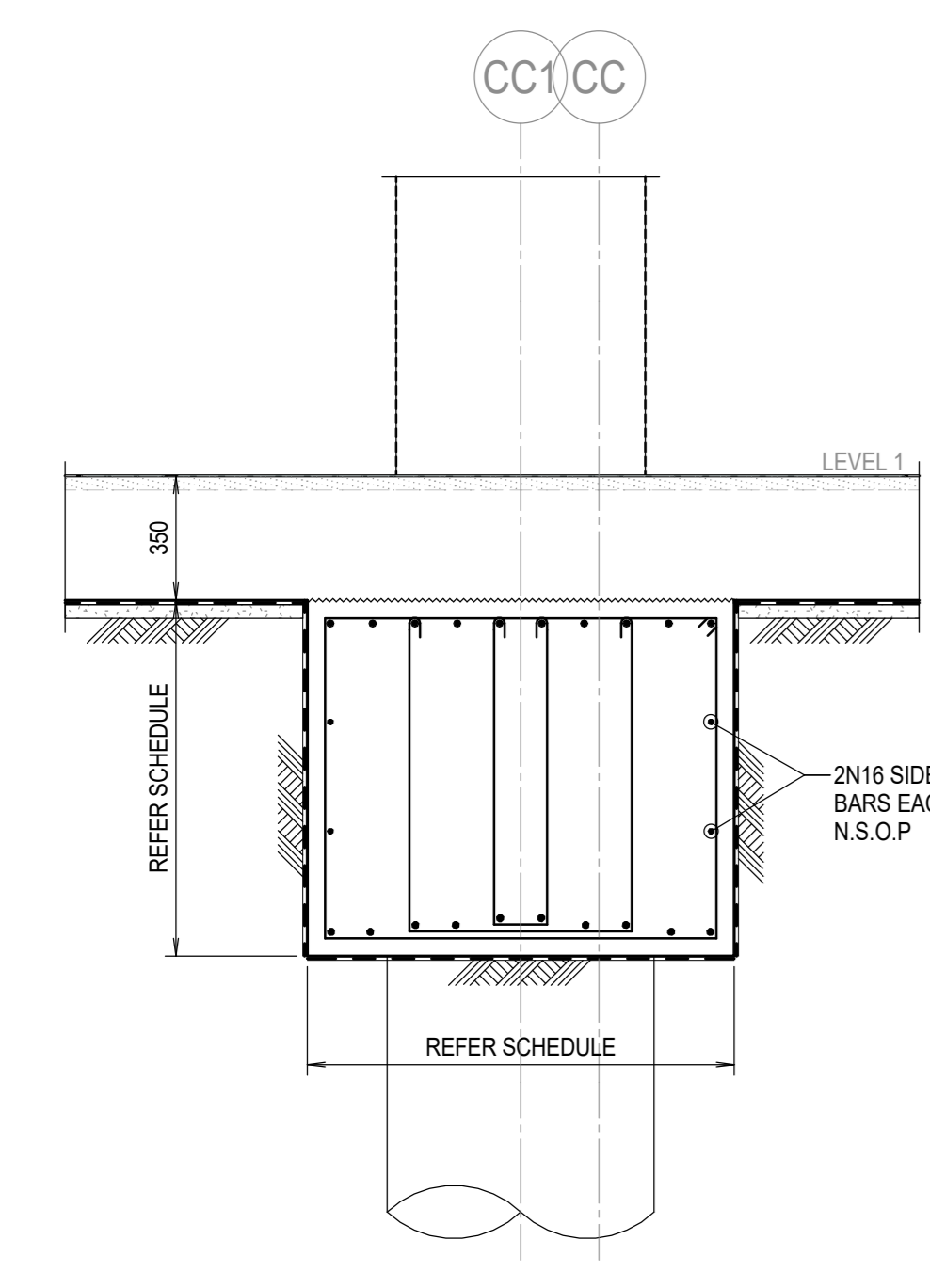
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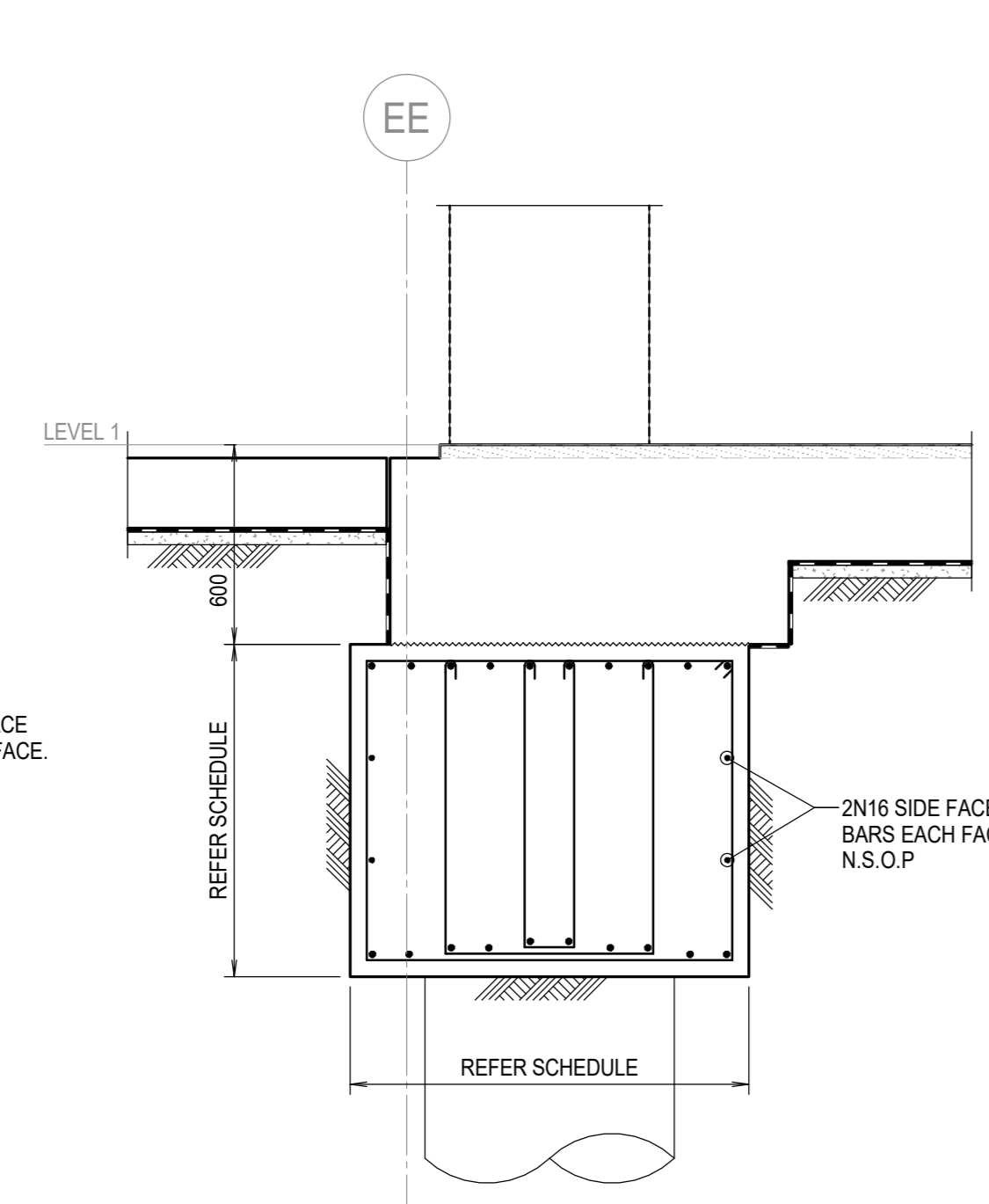
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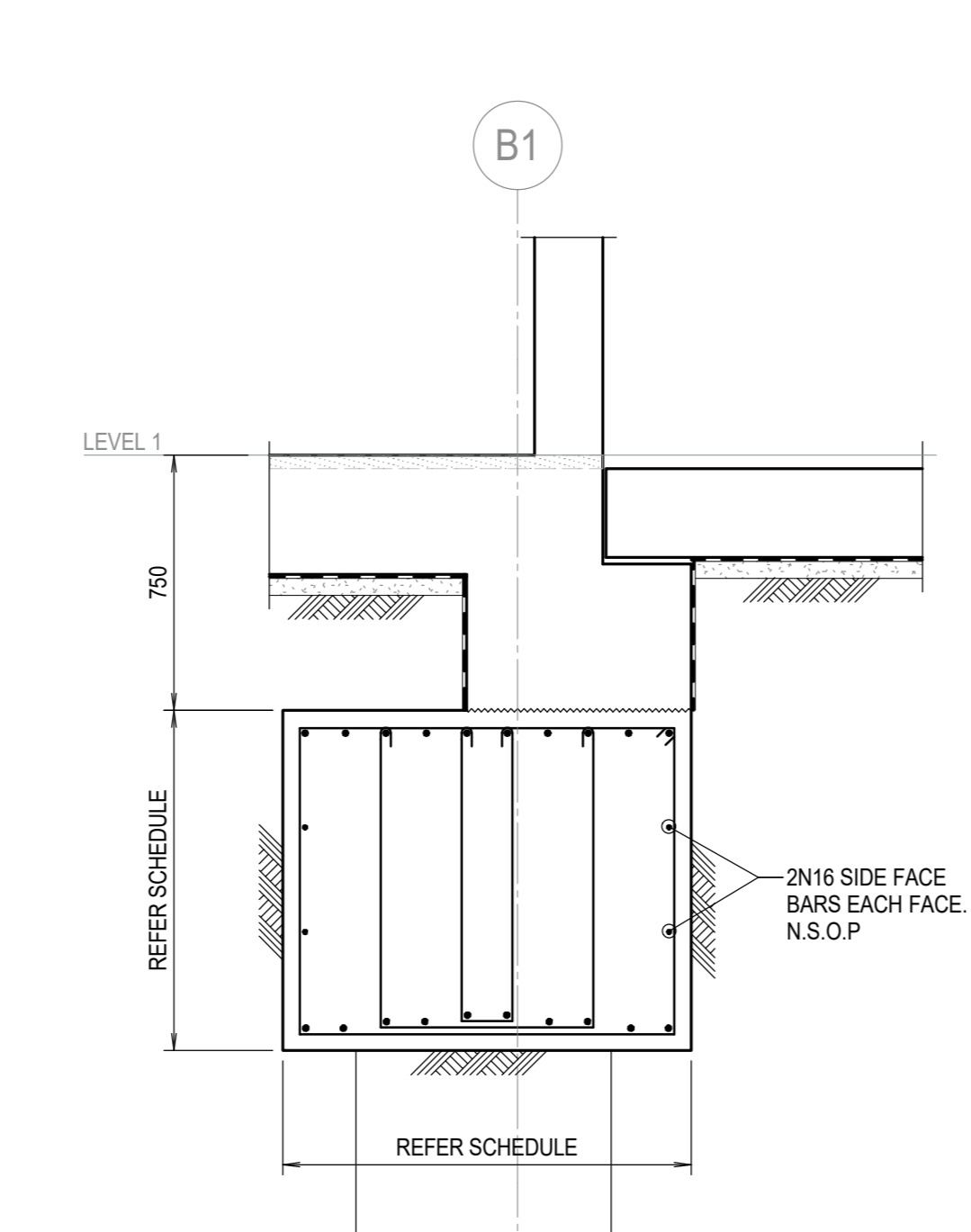
PC6-D
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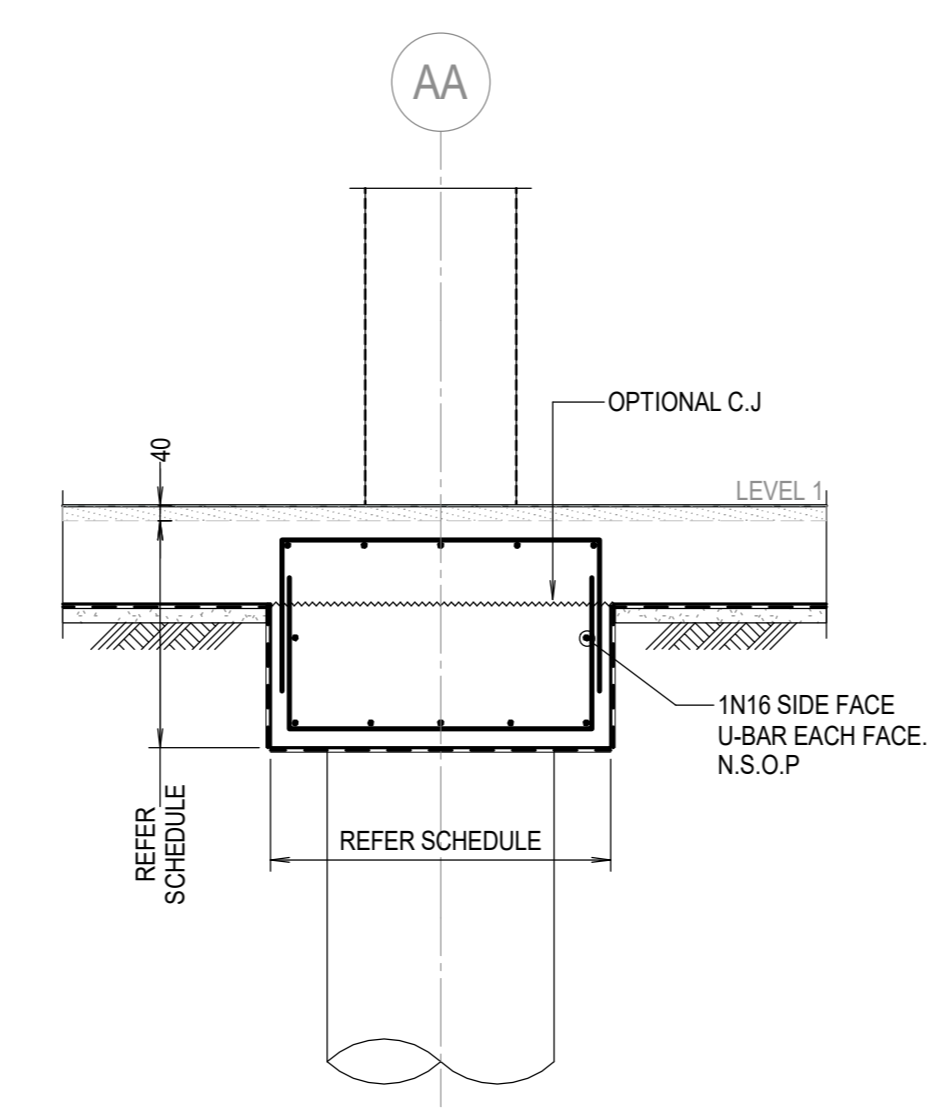
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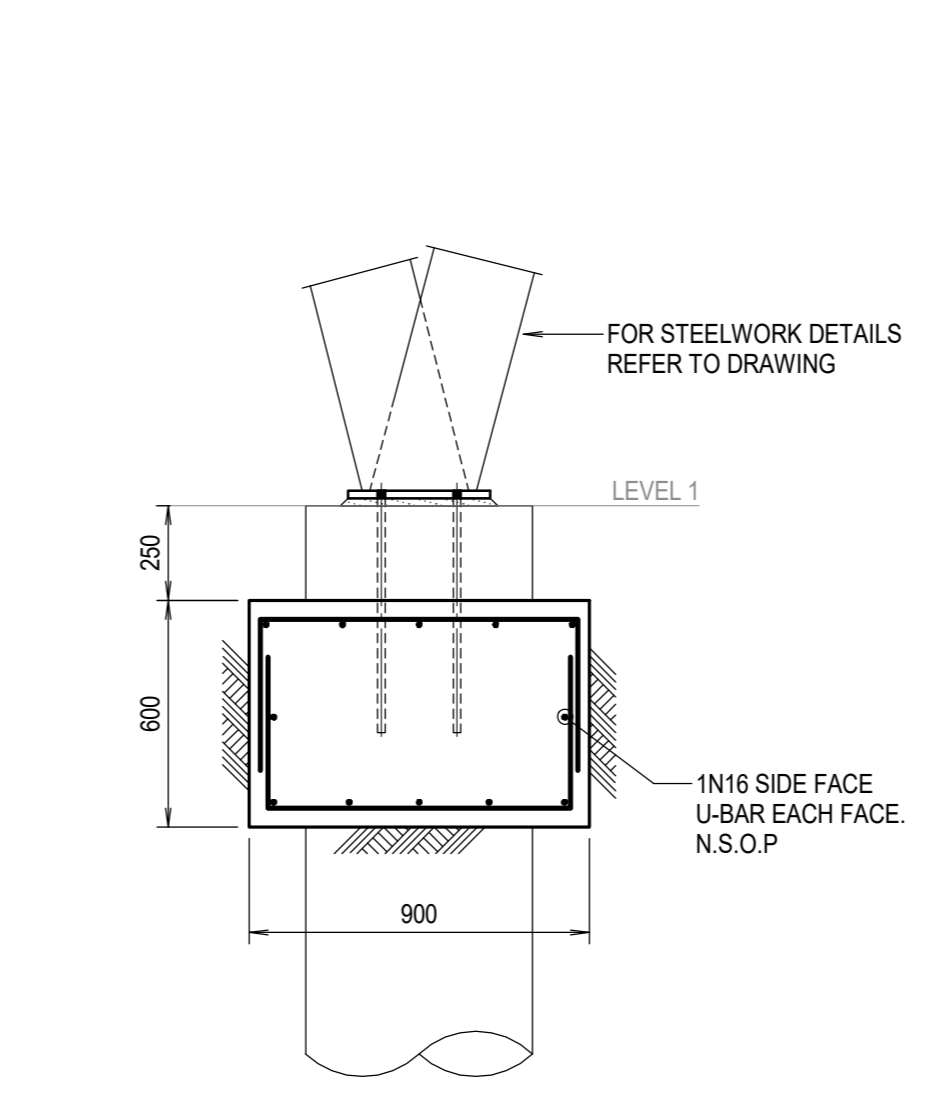
SECTION 5B
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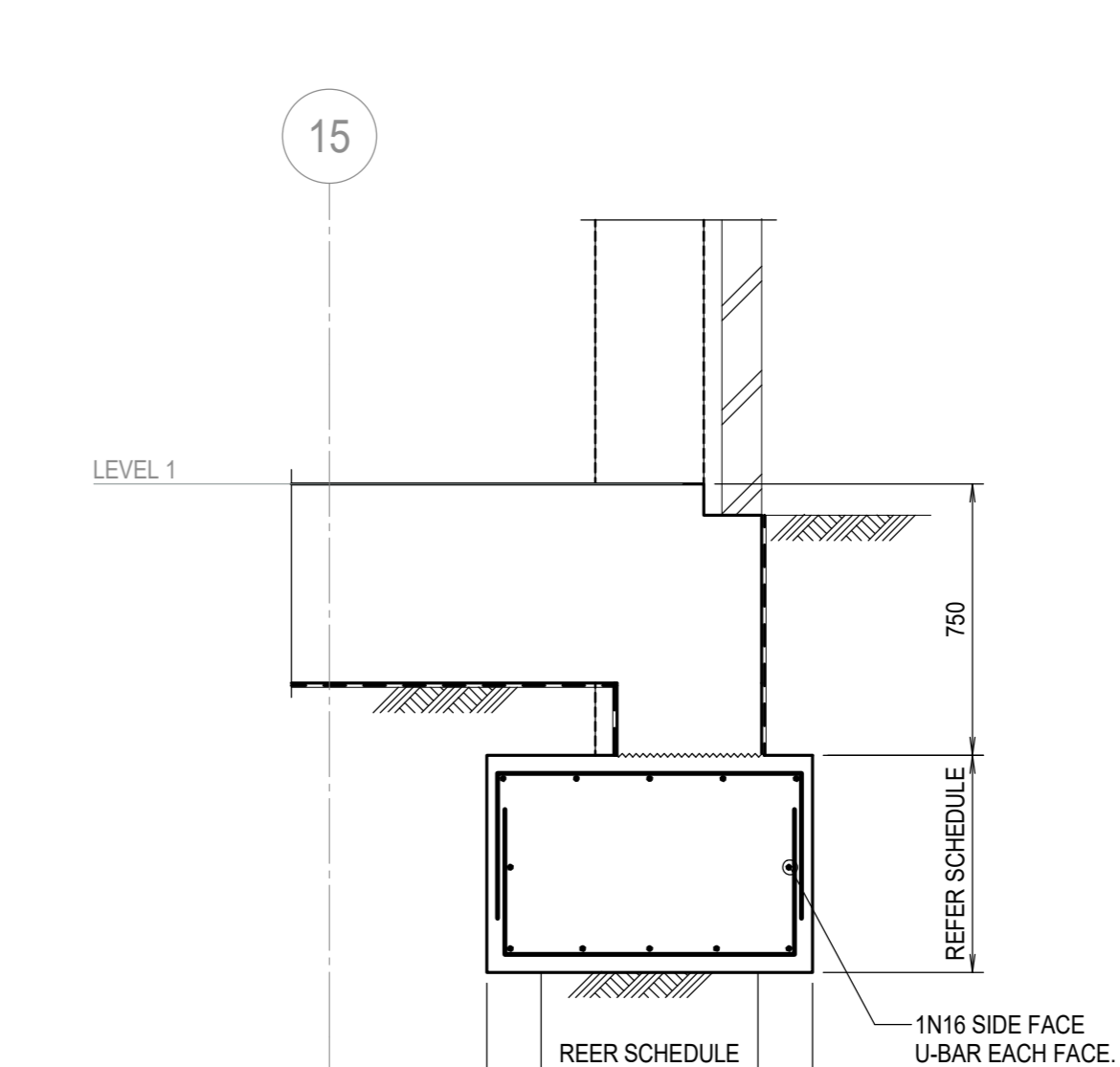
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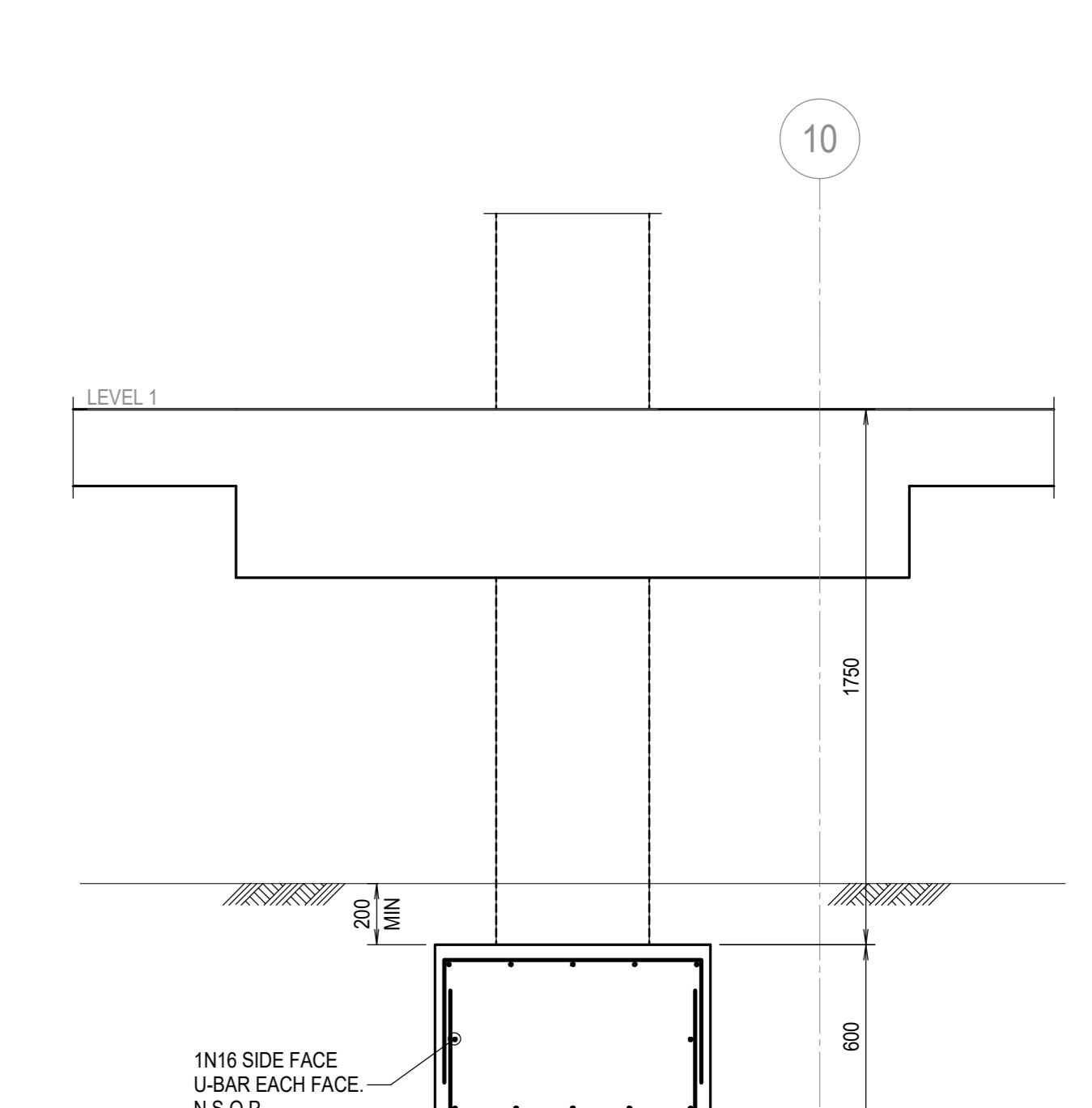
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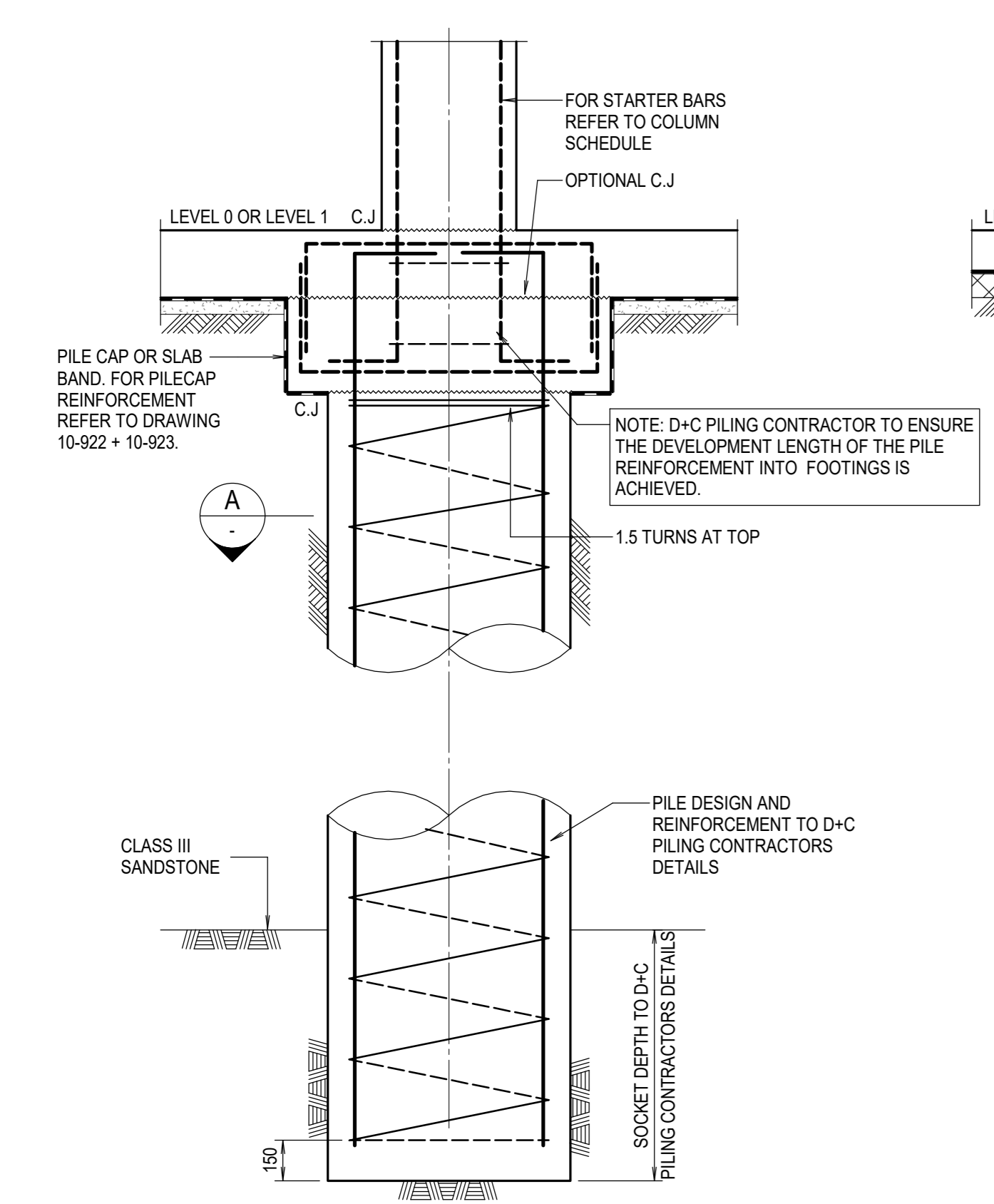
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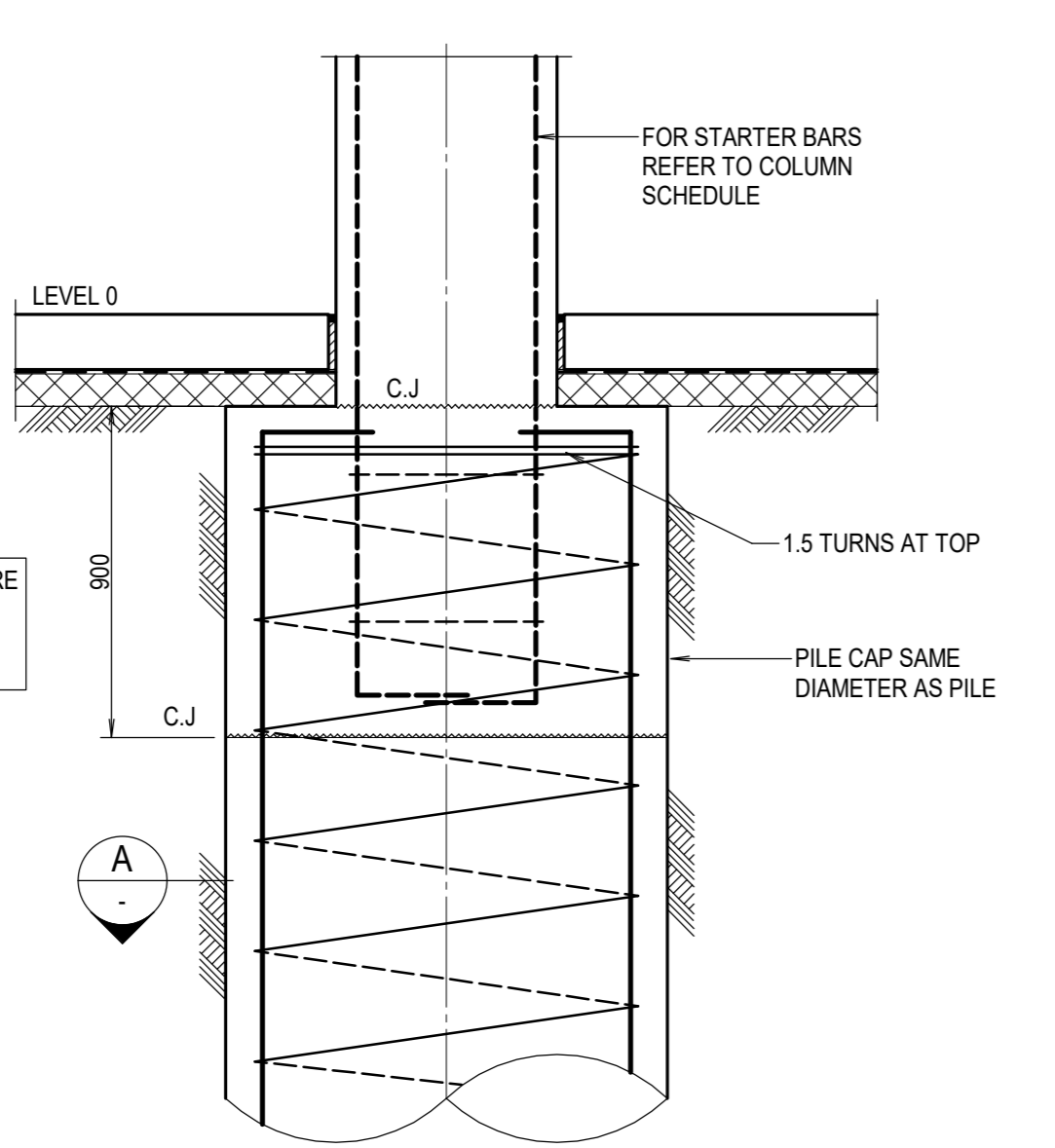
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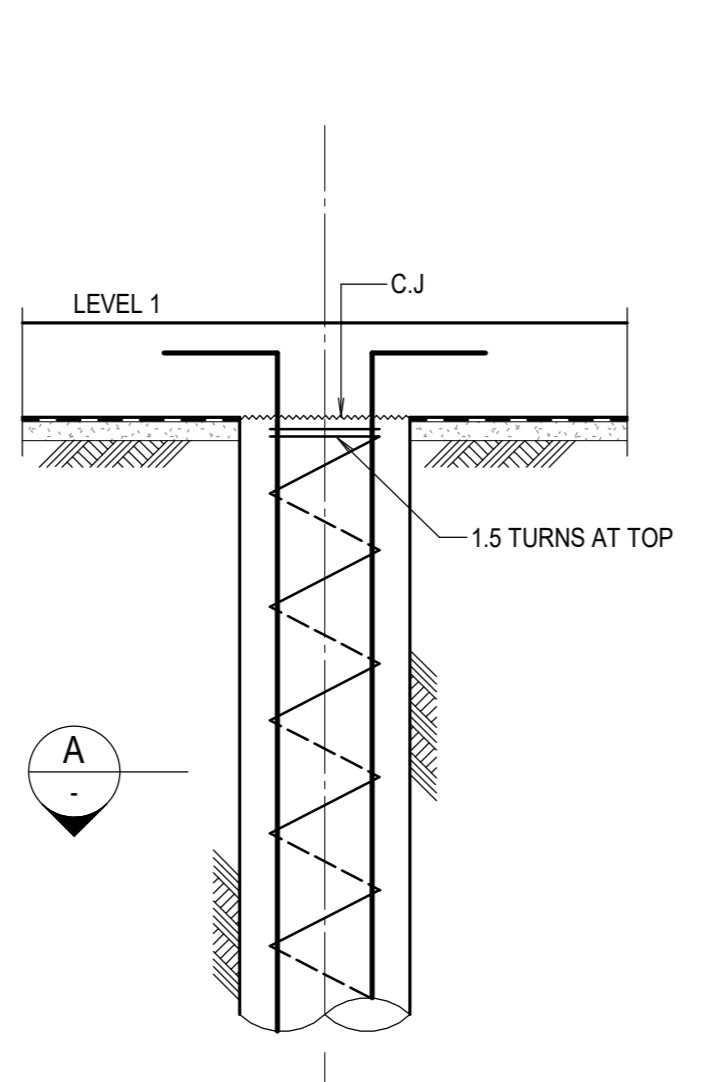
SECTION 6D
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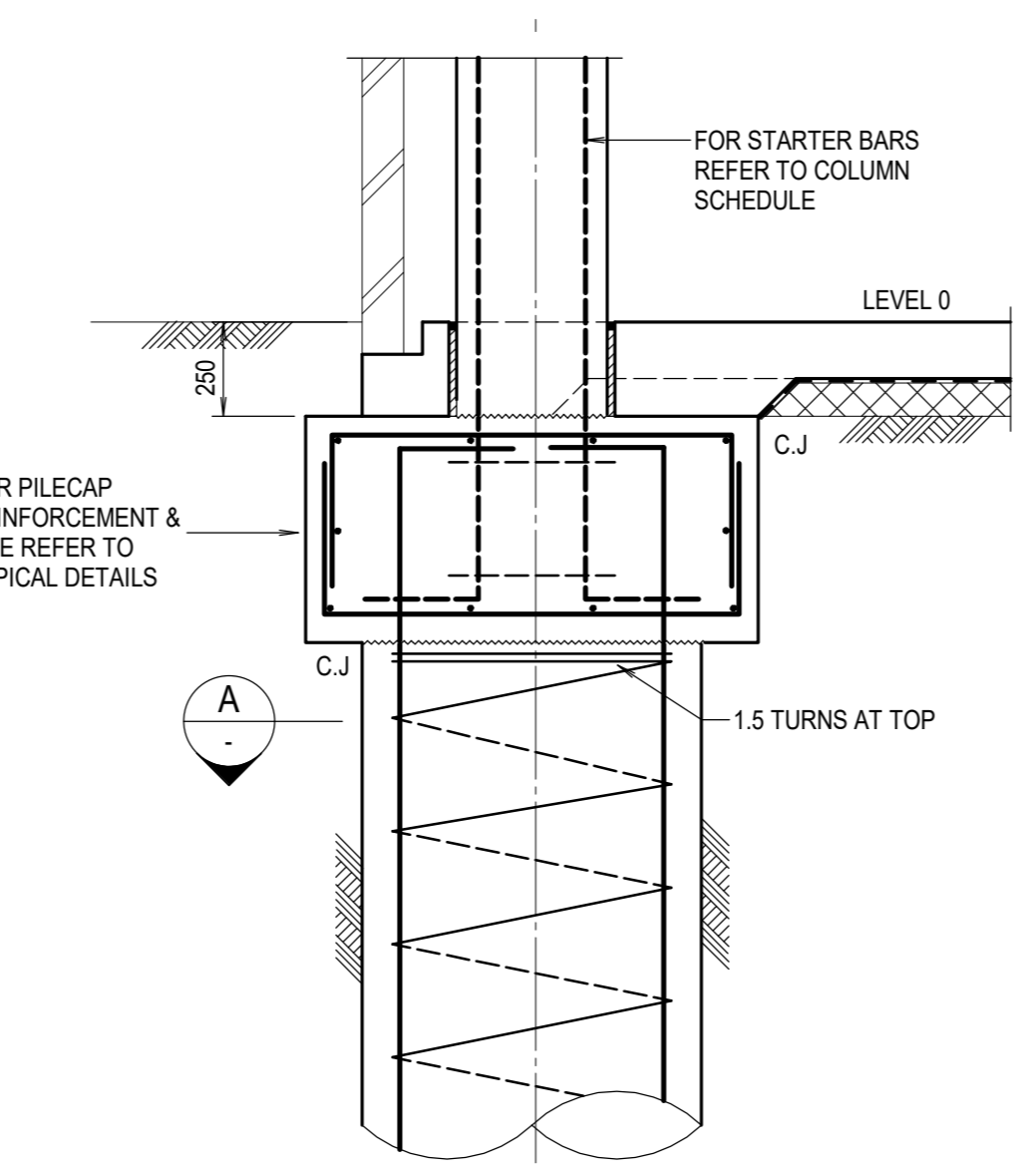
PILE DETAIL - PILECAP INTEGRAL WITH SLAB
SCALE 1:20



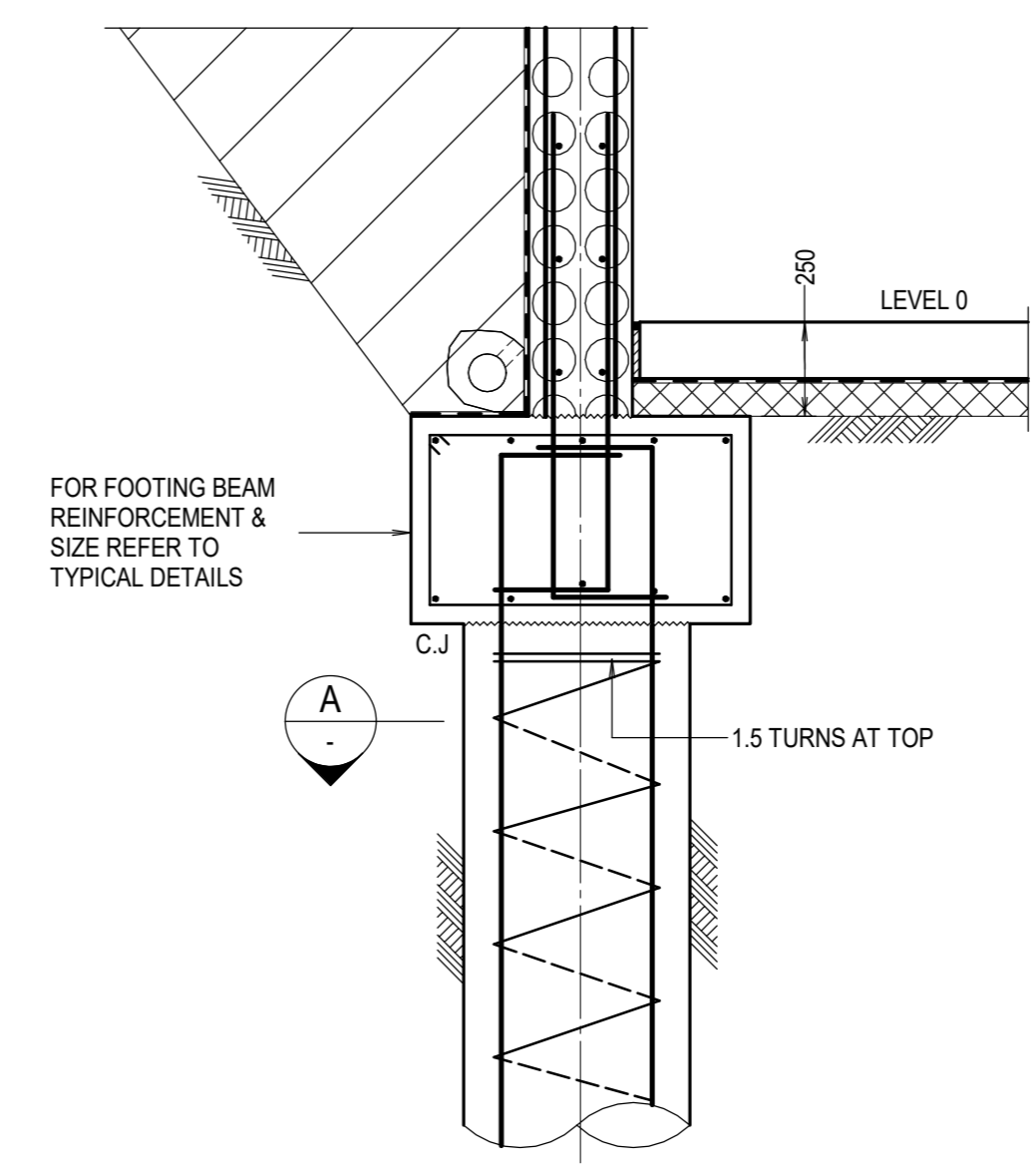
PILE DETAIL - PILECAP WITHIN PILE
SCALE 1:20



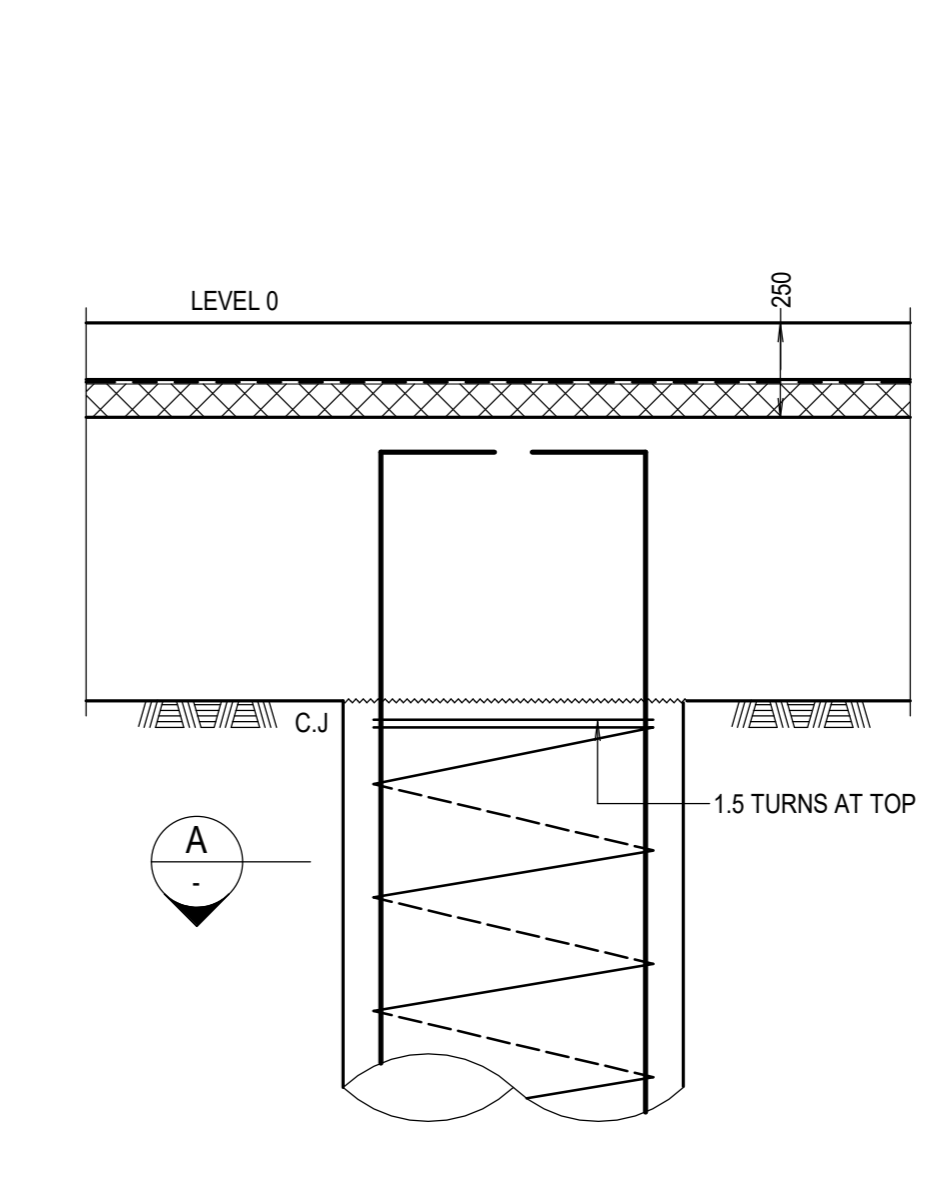
PILE DETAIL - PILE TO UNDERSIDE OF SLAB OR SLAB BAND
SCALE 1:20



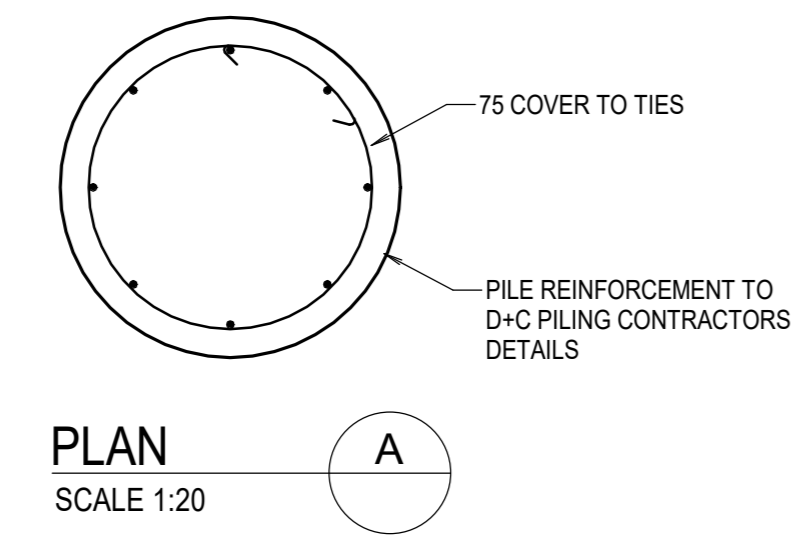
PILE DETAIL - PILECAP UNDER SLAB
SCALE 1:20



PILE DETAIL - PILECAP TO UNDERSIDE OF FOOTING BEAM
SCALE 1:20



PILE DETAIL - PILE TO UNDERSIDE OF LIFT PIT OR STAIR BASE
SCALE 1:20



PLAN
SCALE 1:20

TYPICAL PILE DETAILS
Scale: 1:20

PILE CAP SCHEDULE			
MARK	LENGTH	WIDTH	DEPTH
PC1-A	1050	1050	600
PC1-B	1050	1050	600
PC2-A	1200	1200	600
PC2-B	1200	1200	600
PC2-C	1200	1200	600
PC2-D	1200	1200	600
PC3-A	750	750	600
PC3-B	750	750	600
PC4-A	2400	1200	750
PC4-B	2400	1200	750
PC5-A	2925	1200	1000
PC5-B	2925	1200	1000
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PC6-B	900	900	600
PC6-C	900	900	600
PC6-D	900	900	600

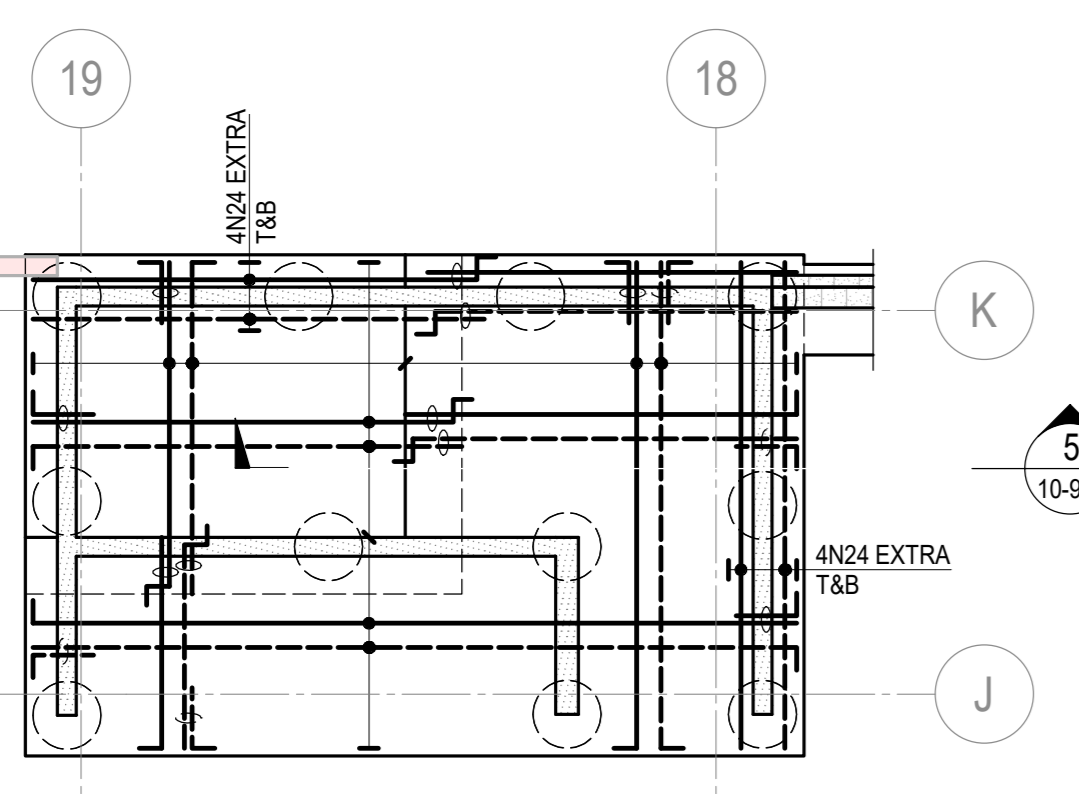
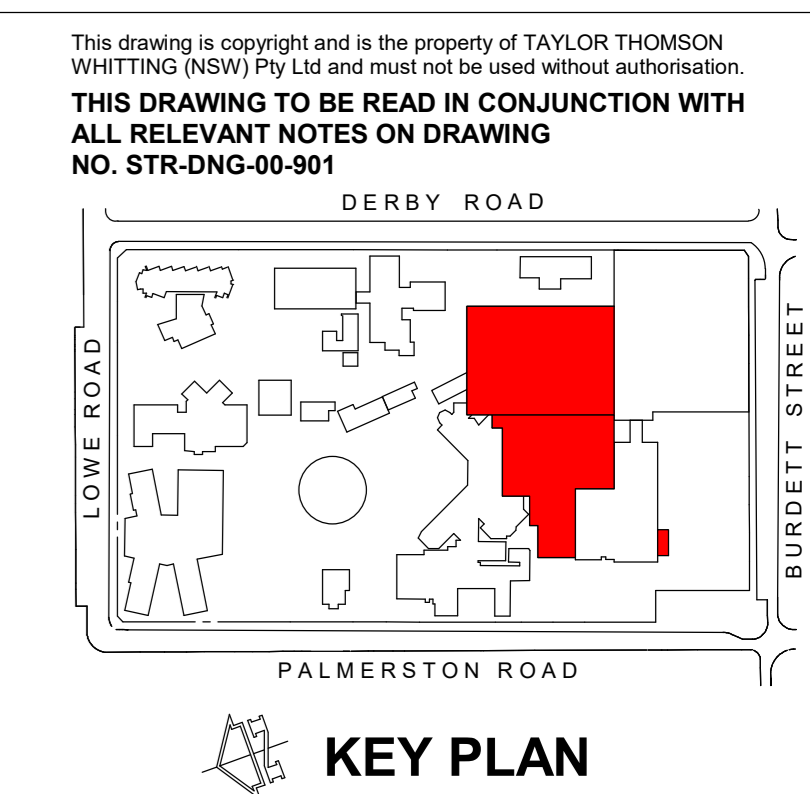
FOR CONSTRUCTION

ISSUED FOR CONSTRUCTION M.R. 28.06.18
 Rev Description Eng Draft Date
 Builder
WATPAC 15 Claremont Street Sydney NSW 2000
STH SILVER THOMAS HANLEY 3 Glenaire Road Glen Iris Victoria 3146

NSW GOVERNMENT Health Infrastructure
 Level 8, 77 Pacific Highway, North Sydney NSW 2060

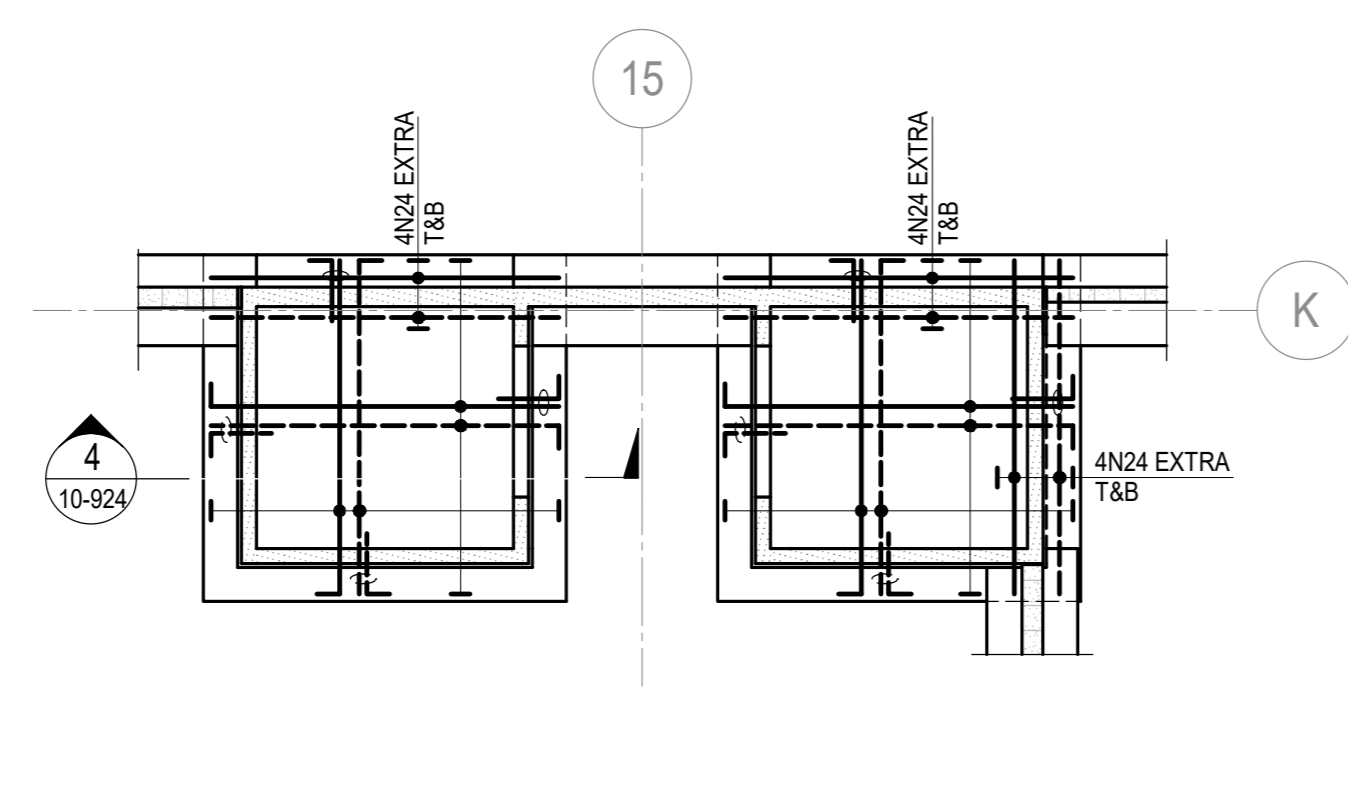
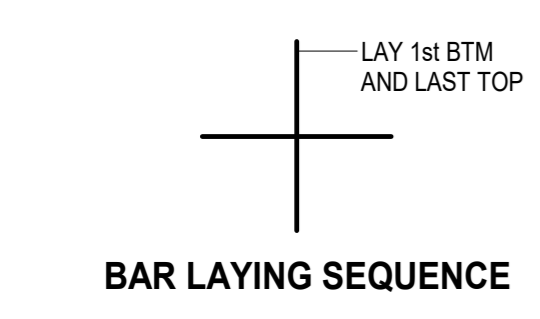
Project: **HORNSBY KU-RING-GAI HOSPITAL - STAGE 2**
 Palmerston Road, Hornsby NSW 2077
 Sheet Subject: **FOOTING DETAILS - SHEET 3**

Structural Engineer: **TTW Taylor Thomson Whitting**
 612 9439 7288 | 48 Chandos Street St Leonards NSW 2065
 Scale: A0 Drawn: Authorised
 1:20 Drawing No: D.J.
 TTW Job Number: 161607 STR-DNG-10-923 A
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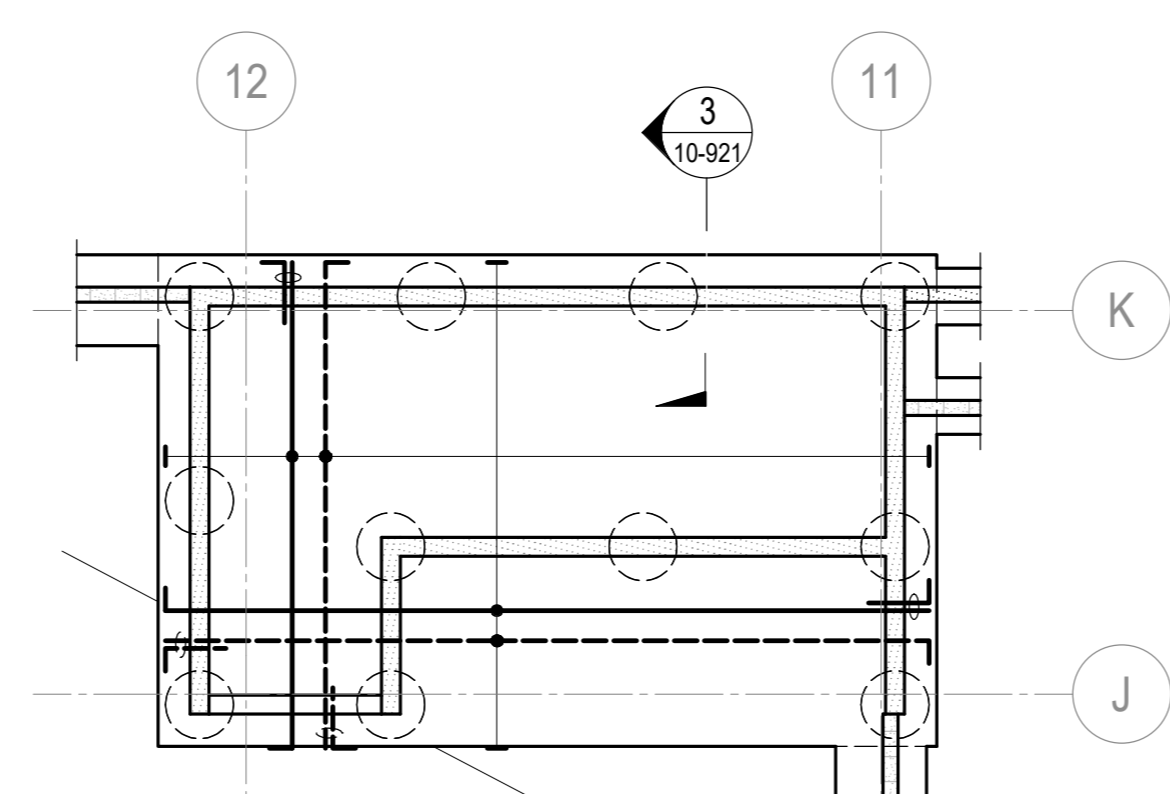
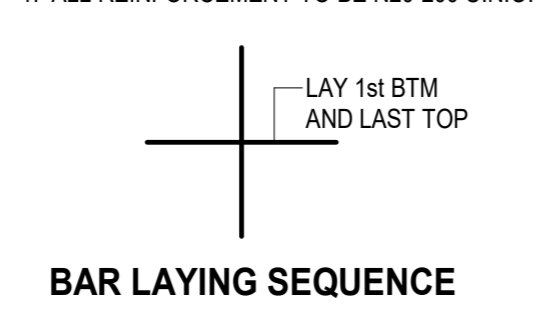
STAIR BASE PLAN - FIRE STAIR 1
SCALE 1:100

1. ALL REINFORCEMENT TO BE N20-200 U.N.O.



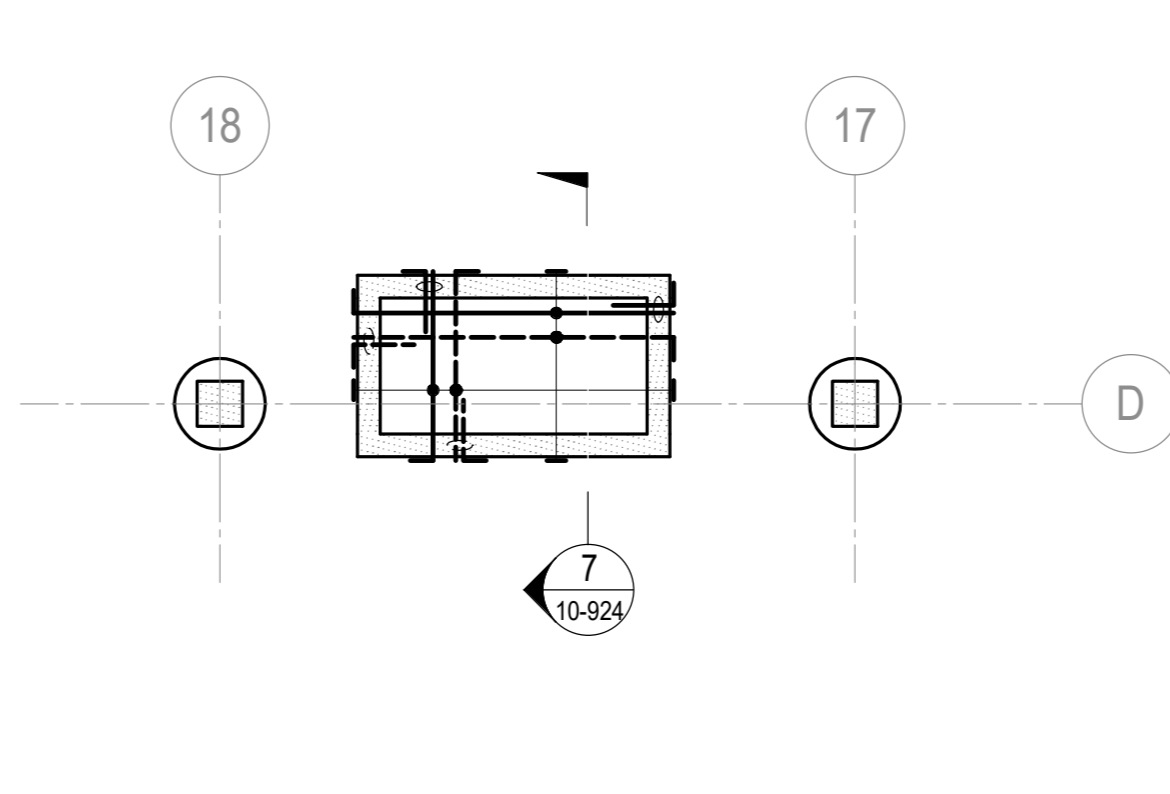
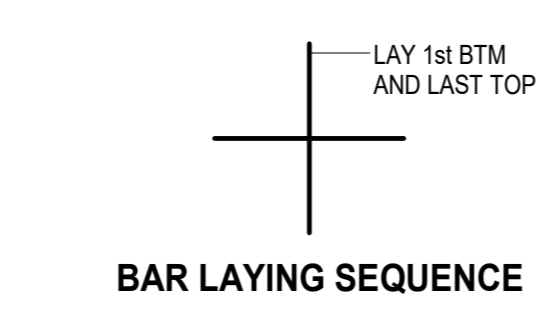
LIFT PIT BASE PLAN - LIFTS 2 + 3
SCALE 1:100

1. ALL REINFORCEMENT TO BE N20-200 U.N.O.



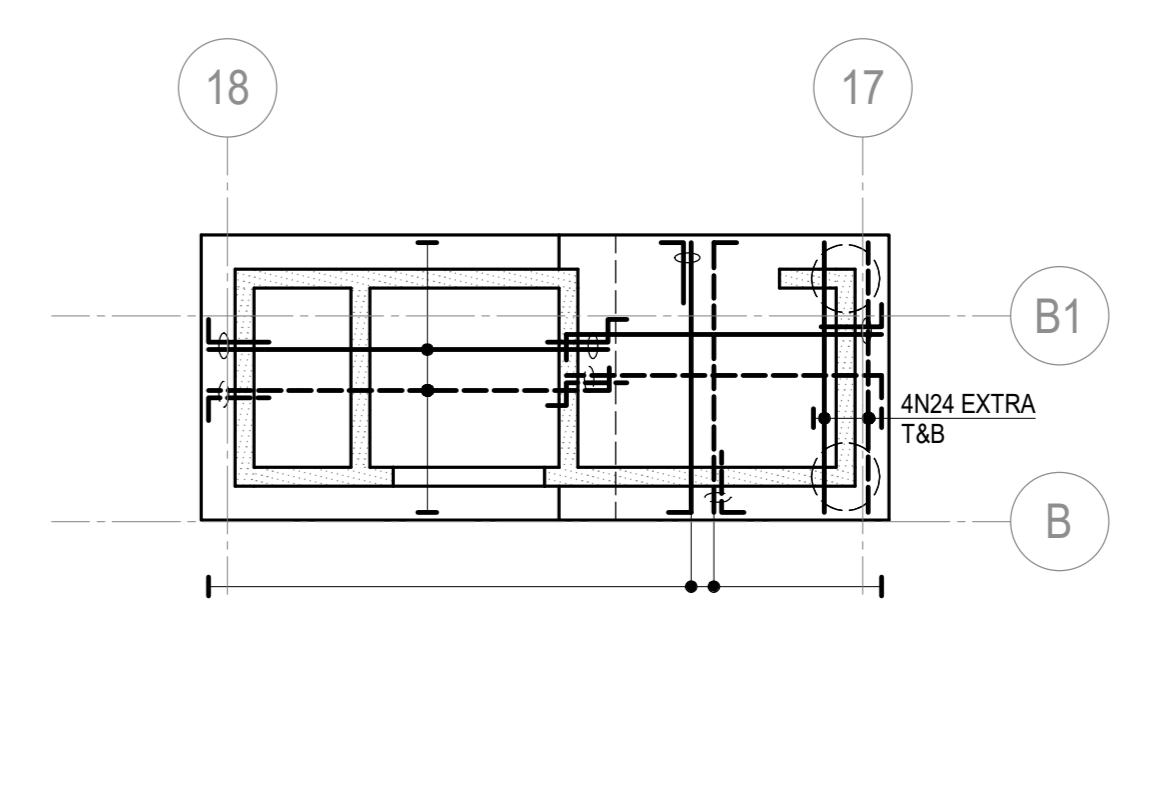
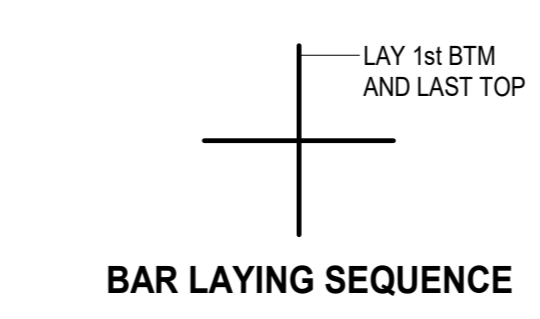
STAIR BASE PLAN - FIRE STAIR 2
SCALE 1:100

1. ALL REINFORCEMENT TO BE N20-200.



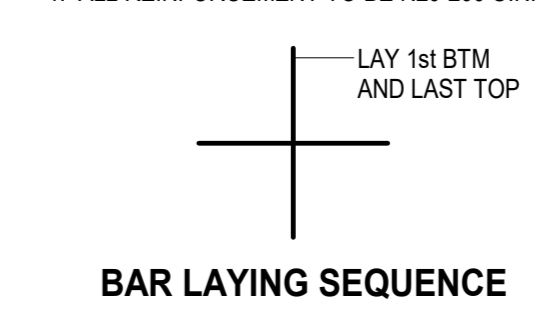
STORE ROOM BASE PLAN
SCALE 1:100

1. ALL REINFORCEMENT TO BE N16-200 U.N.O.



LIFT PIT BASE PLAN - LIFT 5
SCALE 1:100

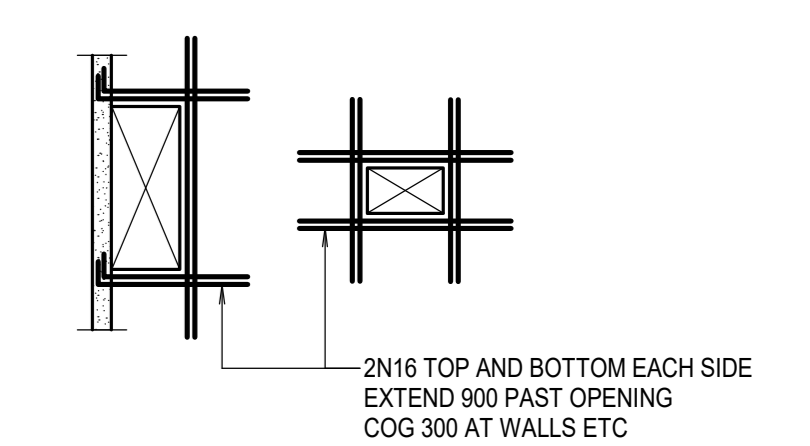
1. ALL REINFORCEMENT TO BE N20-200 U.N.O.



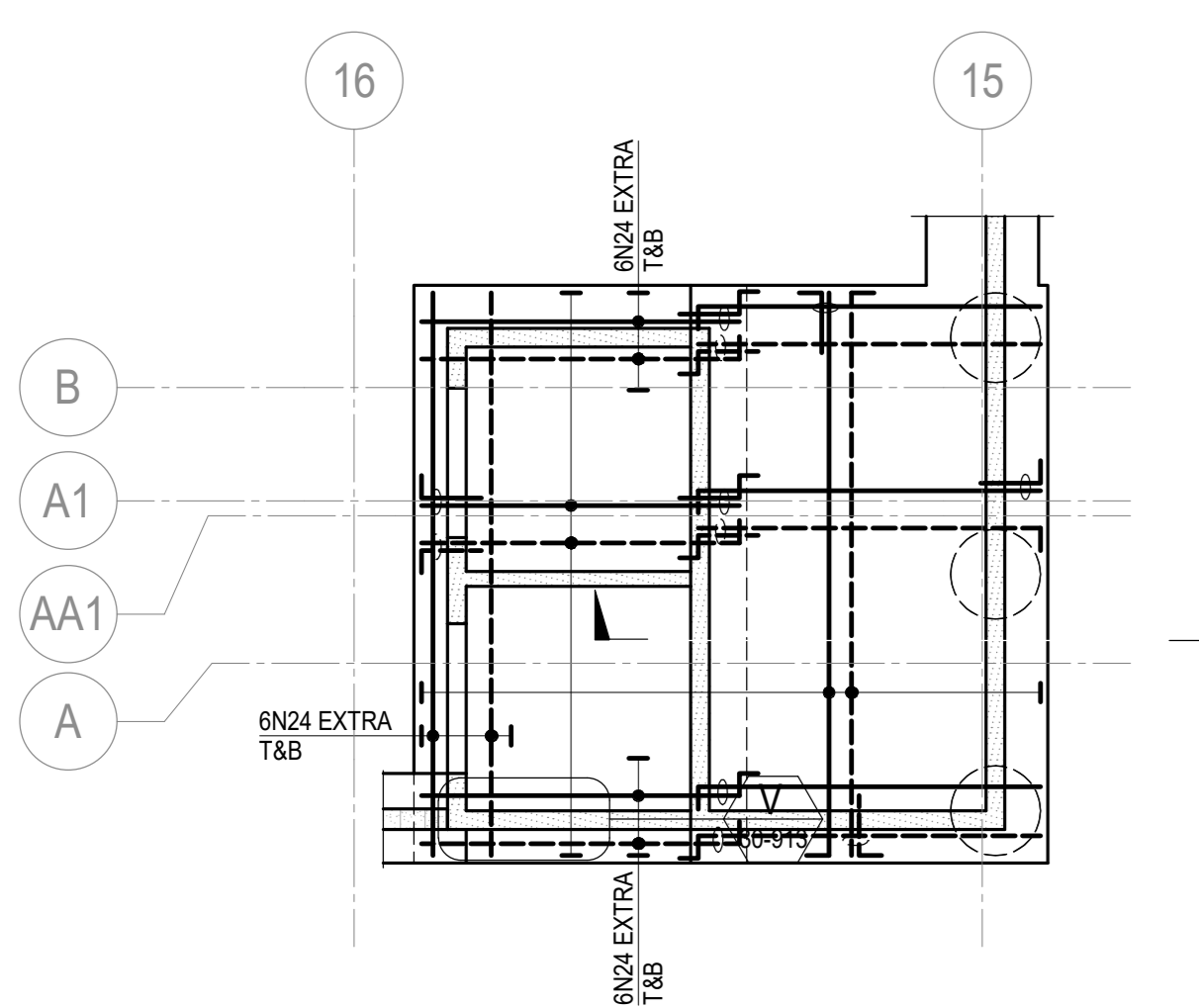
REINFORCEMENT LEGEND - FOOTINGS

- Denotes the extent of area covered by bars.
- Denotes a change in bar shape and/or length.
- Indicates to repeat bars tagged thus etc. LAY BARS IN DIRECTION INDICATED BY ARROW.
- Bars shown staggered on plan are to be placed alternately.
- ALT. denotes bars of different length and/or shape to be laid alternately.
- Indicates 10 bars at 250 centres plus 3 bars placed one per space centrally over column.
- Indicates Bottom Reinforcement.
- Indicates Top Reinforcement.

ABBREVIATIONS USED ON DRAWINGS:
 U.N.O. - Unless Noted Otherwise
 N.S.O.P. - Not Shown On Plan
 N.S.O.E. - Not Shown On Elevation
 L.V. - Bar Lengths Vary
 N.T.S. - Not To Scale
 E.W. - Each Way
 E.F. - Each Face
 N.F. - Near Face
 F.F. - Far Face

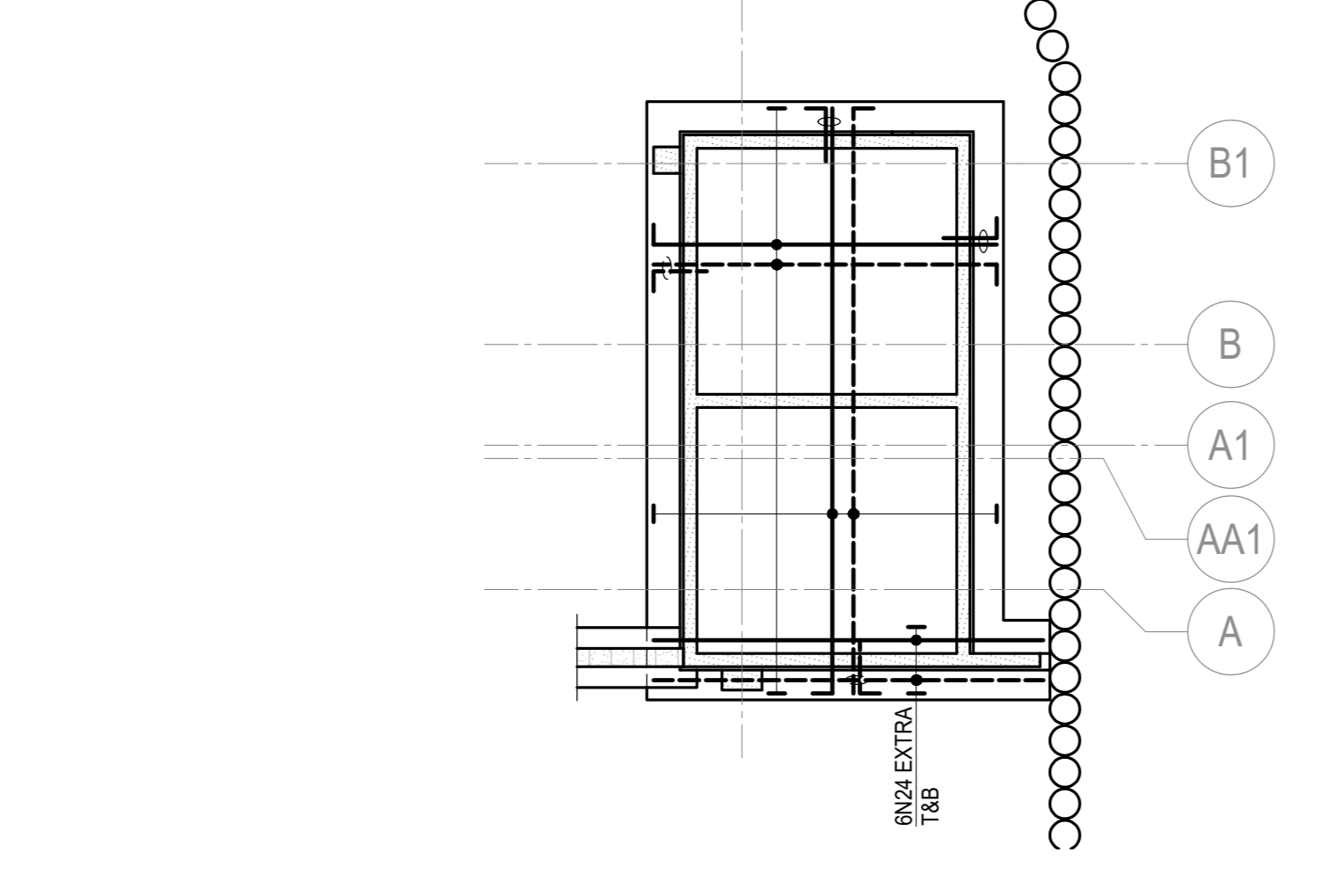
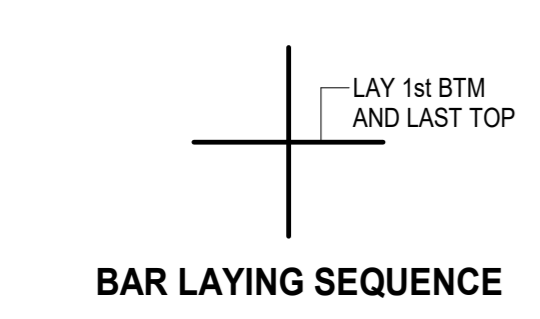


TYPICAL TRIMMER DETAIL
PROVIDE TRIMMERS AT ALL PENETRATIONS, PITS, ETC



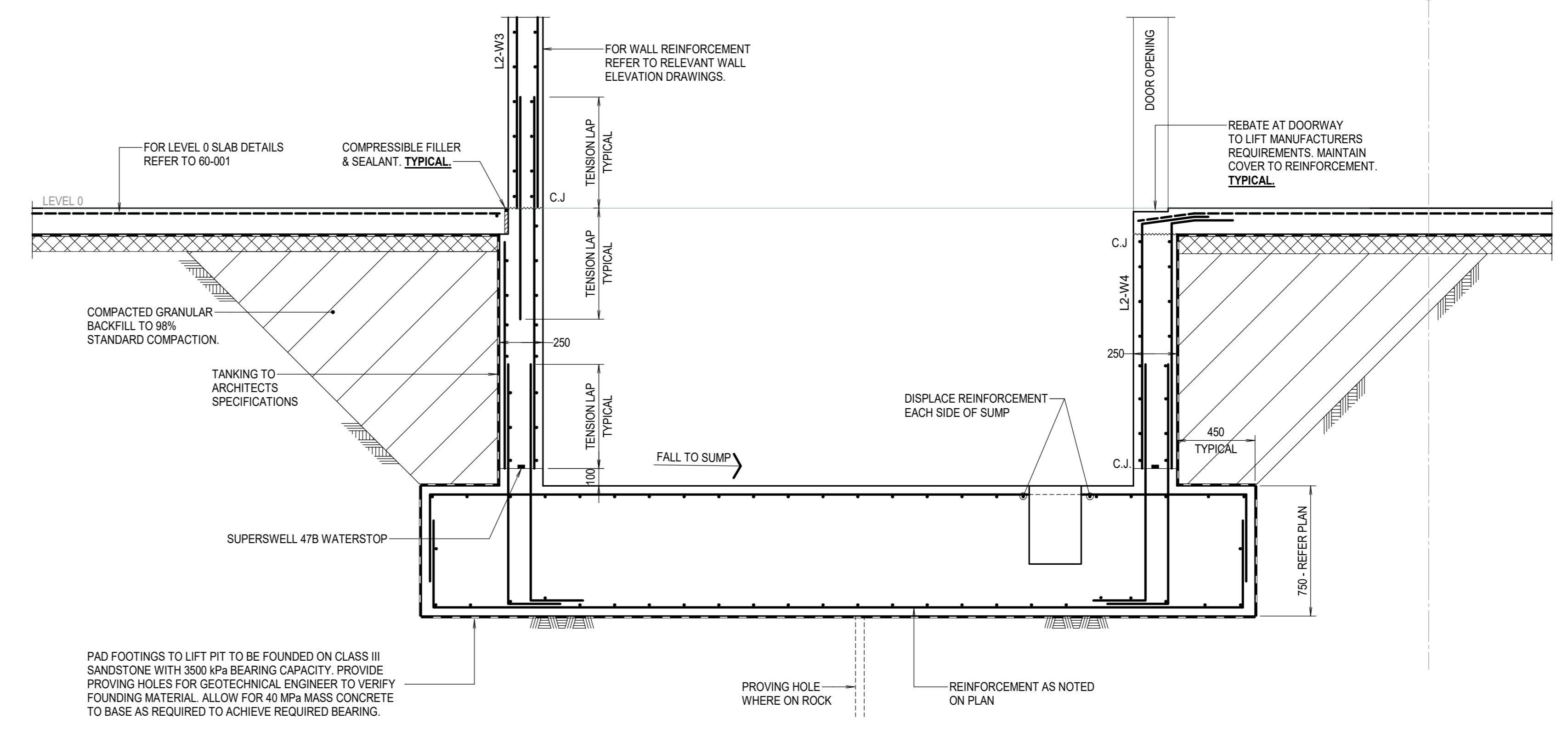
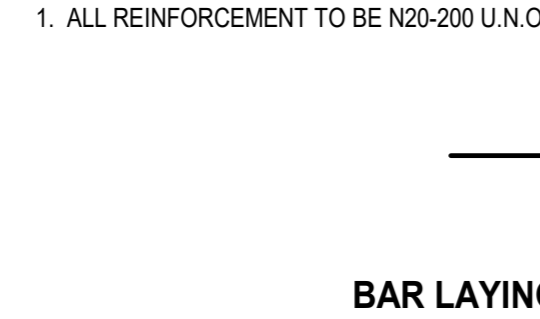
LIFT PIT BASE PLAN - LIFT 1
SCALE 1:100

1. ALL REINFORCEMENT TO BE N20-200 U.N.O.



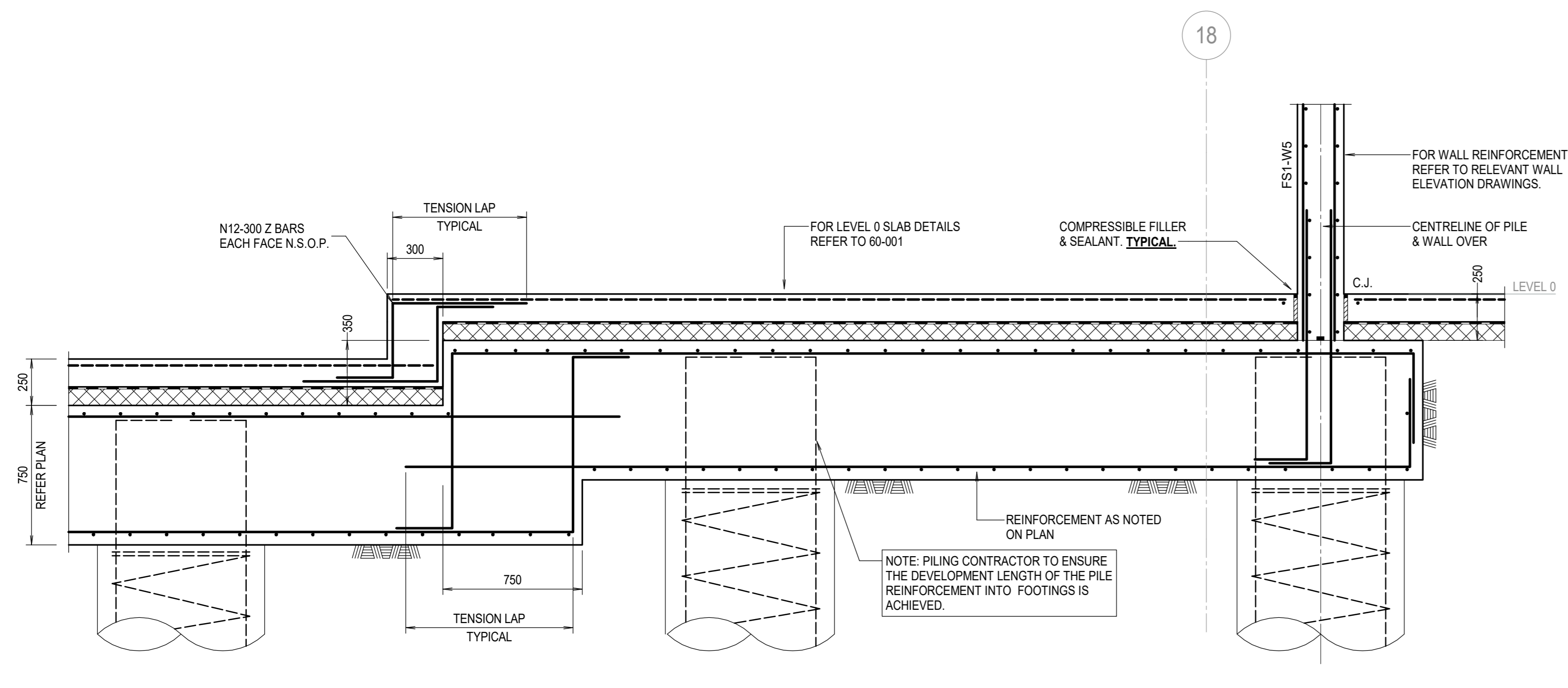
LIFT PIT & STAIR BASE PLAN - LIFT 4 + FIRE STAIR 3
SCALE 1:100

1. ALL REINFORCEMENT TO BE N20-200 U.N.O.



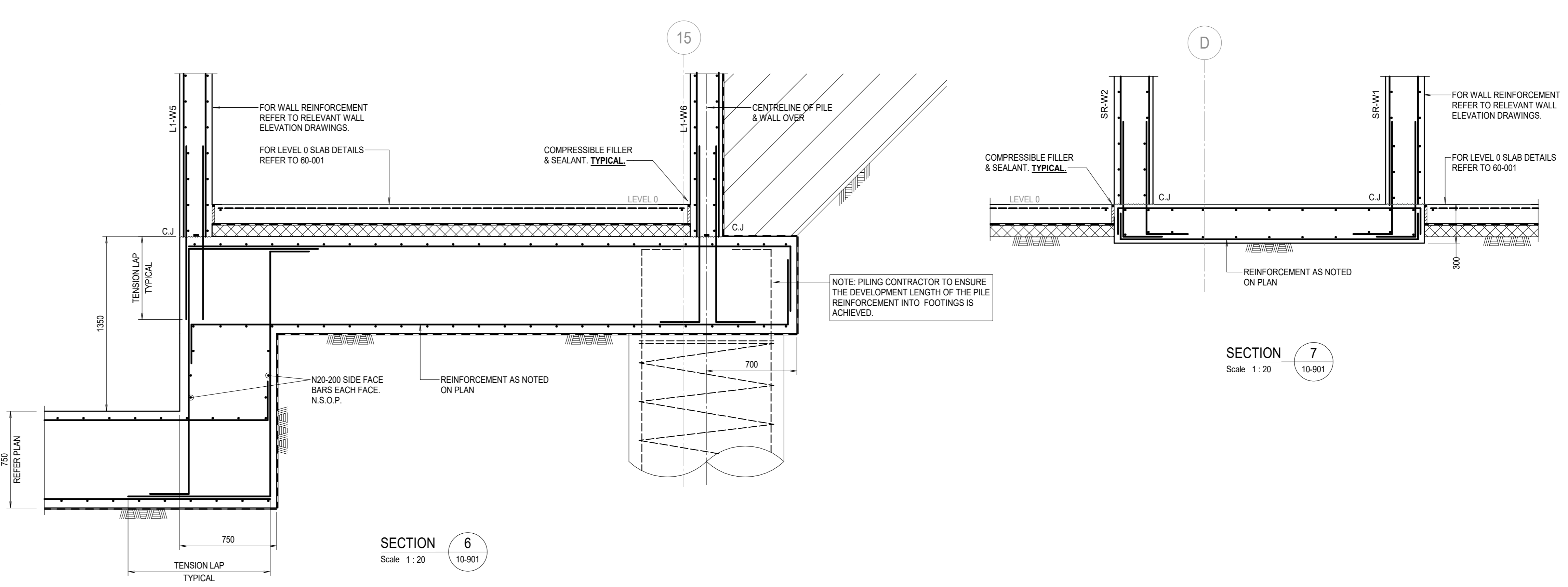
TYPICAL LIFT PIT BASE

SECTION 4
Scale 1:20



TYPICAL STAIR BASE DETAIL

SECTION 5
Scale 1:20



SECTION 6
Scale 1:20

SECTION 7
Scale 1:20

FOR CONSTRUCTION

Rev	Description	M.R.	28.06.18
1	ISSUED FOR CONSTRUCTION	M.R.	28.06.18

WATPAC Level 10, 155 Clarence Street Sydney NSW 2000
STH SILVER THOMAS HANLEY 3 Clarence Road Glen Iris Victoria 3146

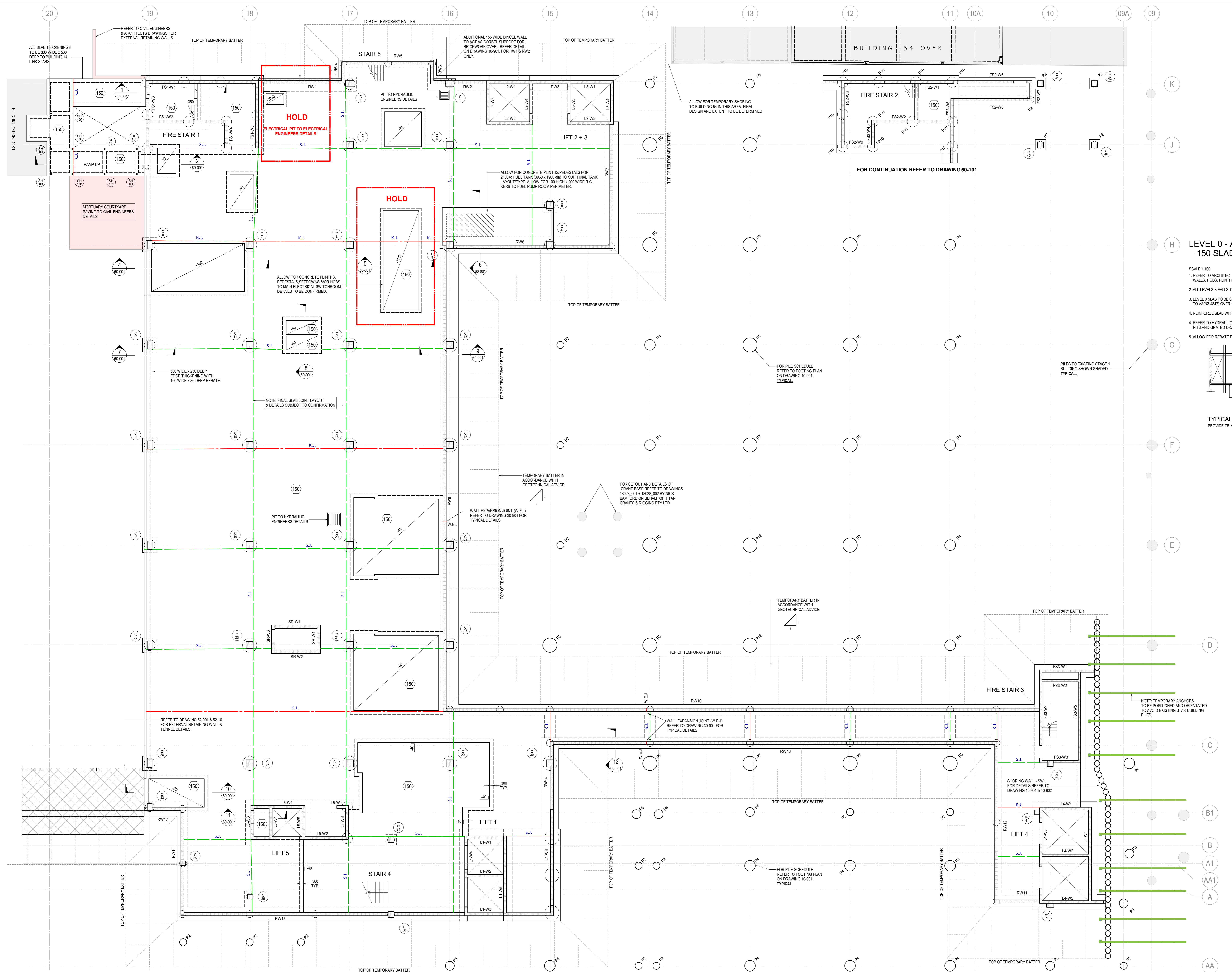
NSW Health Infrastructure
 Level 8, 77 Pacific Highway, North Sydney NSW 2060

Project: **HORNSBY KU-RING-GAI HOSPITAL - STAGE 2**
 Palmerston Road, Hornsby NSW 2077
 Sheet Subject: **FOOTING DETAILS - SHEET 4**

Structural Engineer: **TTW Taylor Thomson Whitting**

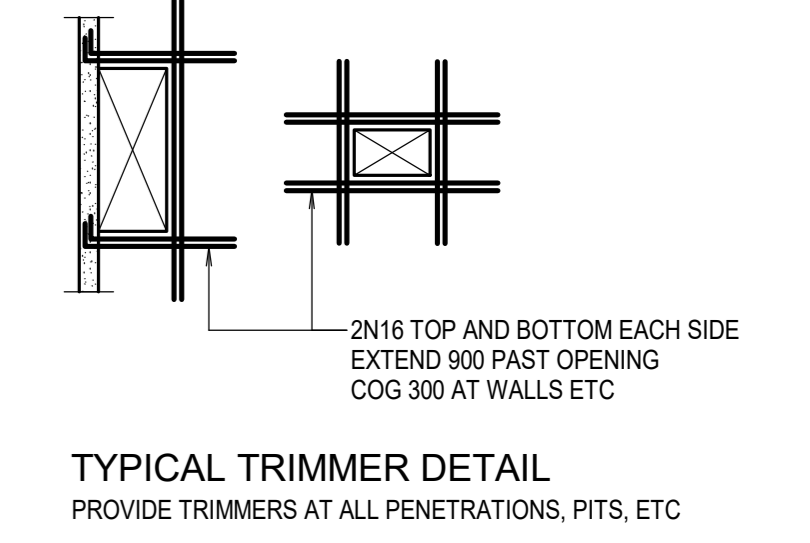
612 9439 7288 | 48 Chandos Street St Leonards NSW 2065
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 As indicated: D.J.
 TTW Job Number: Drawing No: Revision
161607 STR-DNG-10-924 A
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LEVEL 0 - AREA 1 - OUTLINE PLAN - 150 SLAB ON GROUND U.N.O

- SCALE 1:100
- REFER TO ARCHITECTS DRAWINGS FOR LOCATION & SET OUT OF ALL COLUMNS, WALLS, HOBS, PLINTHS & SETDOWNS.
 - ALL LEVELS & FALLS TO ARCHITECTS DETAILS.
 - LEVEL 0 SLAB TO BE CAST ON A POLYMERIC (0.2mm HIGH IMPACT RESISTANCE FILM TO AS/NZ 4347) OVER 100 BASE COURSE.
 - REINFORCE SLAB WITH S192 FABRIC, 30 TOP COVER THROUGHOUT U.N.O.
 - REFER TO HYDRAULIC CONSULTANTS DRAWINGS FOR ALL SUBSOIL DRAINAGE, SUMPS, PITS AND GRATED DRAIN DETAILS.
 - ALLOW FOR REBATE FOR LATHAM TYPE FLOOR JOINT AT ALL KEYED JOINT LOCATIONS.



FOR CONSTRUCTION

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A	ISSUED FOR CONSTRUCTION				28.06.18

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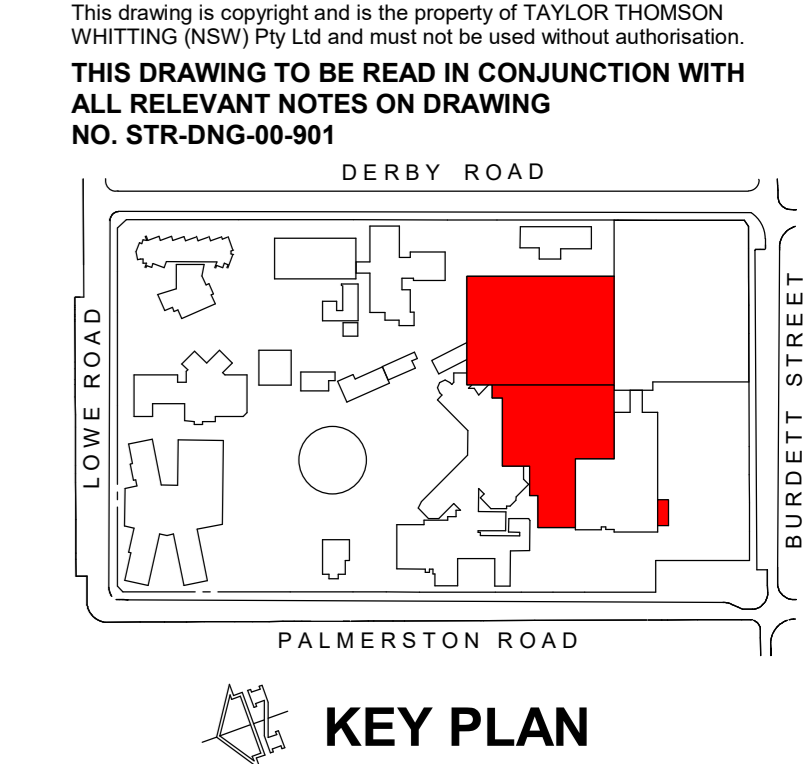
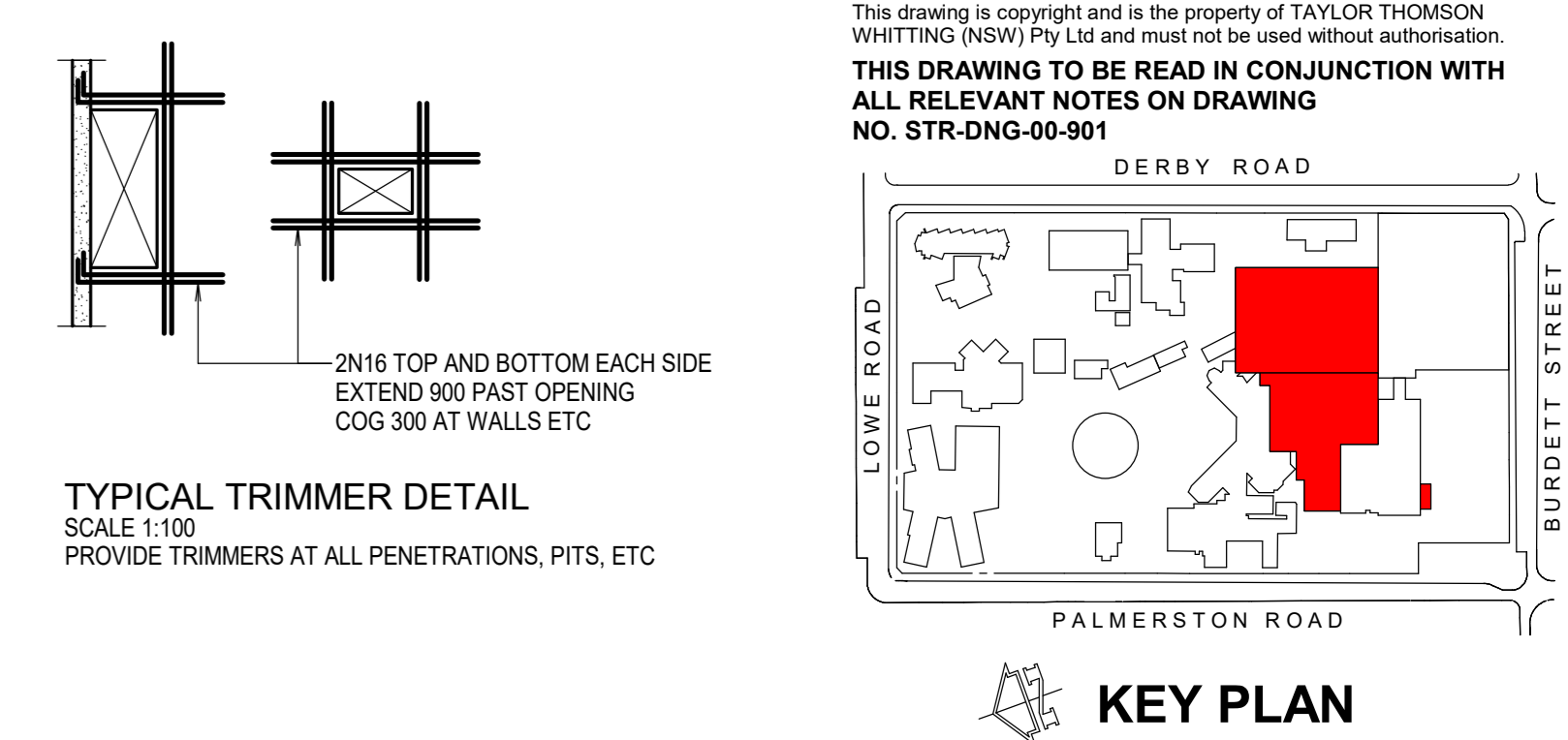
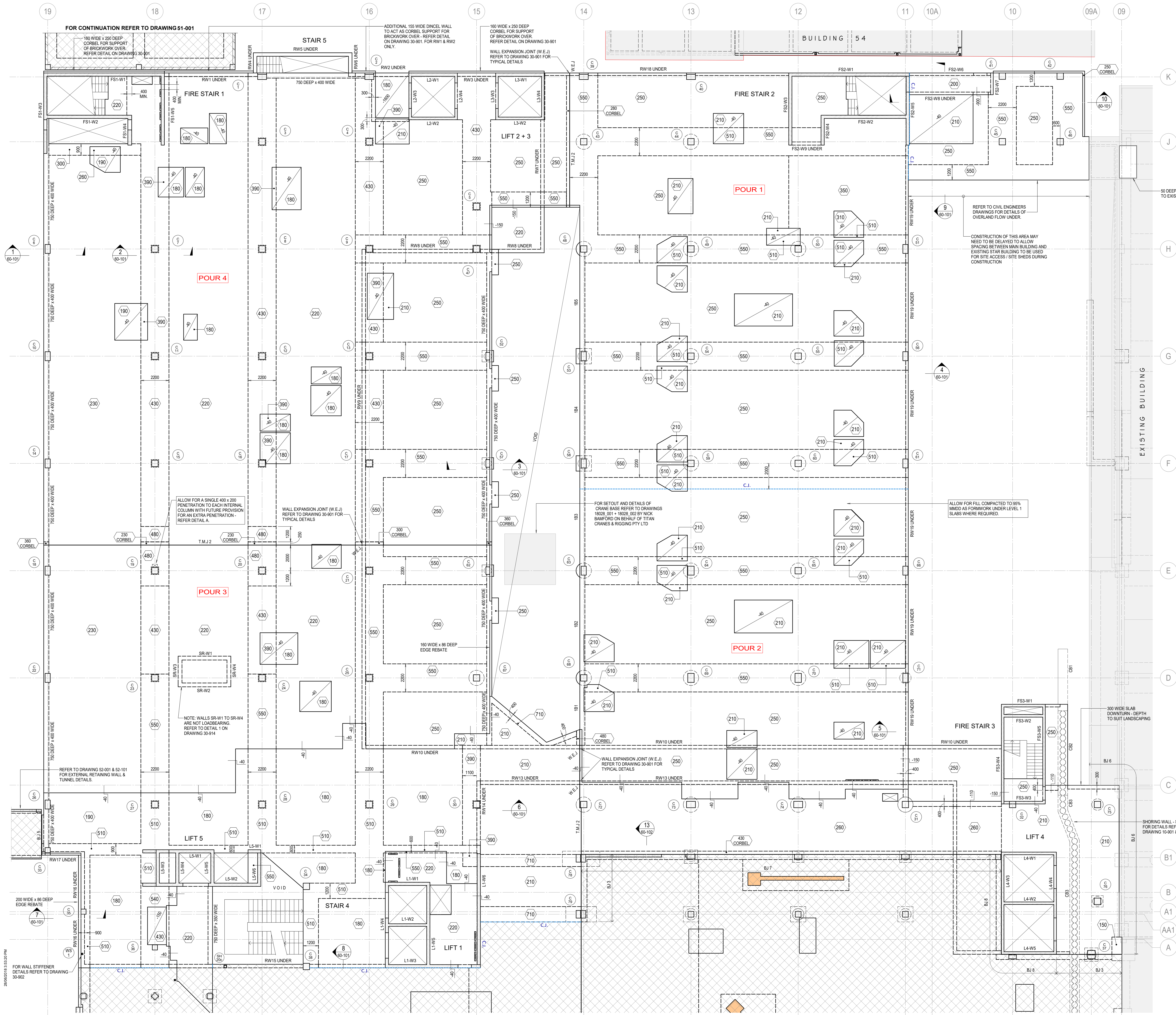
STH SILVER THOMAS HANLEY, 5 Gomers Road, Glen Iris Victoria 3146

NSW GOVERNMENT Health Infrastructure
Level 8, 77 Pacific Highway, North Sydney NSW 2060

Project: **HORNSBY KU-RING-GAI HOSPITAL - STAGE 2**
Palmerston Road, Hornsby NSW 2077
Sheet Subject: **LEVEL 0 - OUTLINE PLAN**

Structural Engineer: **TTW Taylor Thomson Whitting**
612 9439 7288 | 48 Chandos Street St Leonards NSW 2065
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TTW Job Number: Drawing No: 161607 STR-DNG-50-001 A
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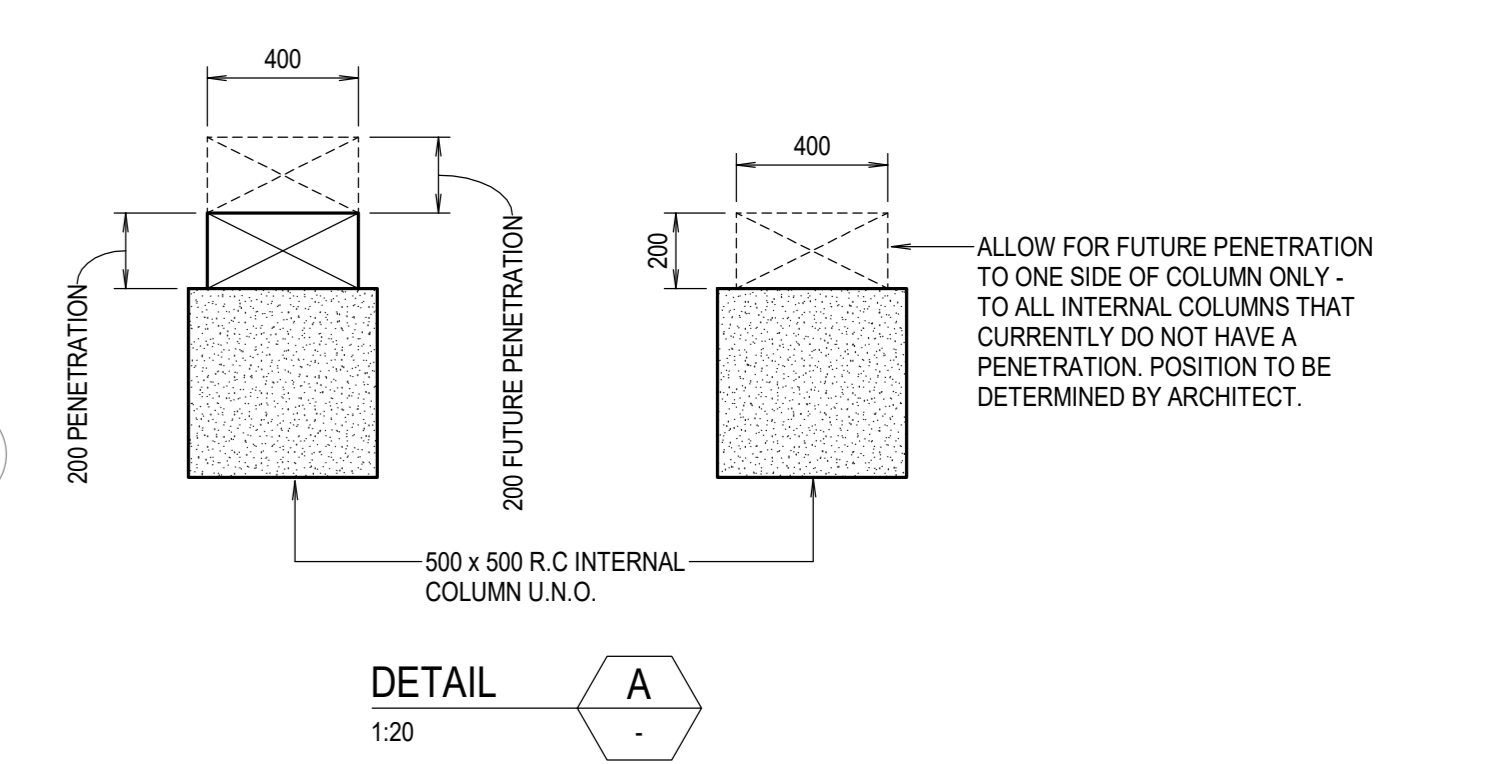
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LEVEL 1 - AREA 1 - OUTLINE PLAN - 220 SLAB U.N.O
SCALE 1:100

- REFER TO ARCHITECTS DRAWINGS FOR LOCATION & SET OUT OF ALL COLUMNS, WALLS, HOBS, PLINTHS & SETDOWNS.
- ALL LEVELS, FALLS & WATERPROOF MEMBRANES TO ARCHITECTS DETAILS.
- ANY PENETRATIONS NOT SHOWN ON STRUCTURAL DRAWINGS ARE TO BE SUBMITTED TO THE PRINCIPAL PRIOR TO CASTING CONCRETE. ALL HYDRAULIC SERVICES ARE TO BE PLACED PRIOR TO CASTING CONCRETE. NO CORING THROUGH CONCRETE IS PERMITTED.
- ALL SLAB, BAND AND BEAM THICKNESSES AT FLOOR LEVEL ARE INCLUSIVE OF 40mm INCREASED COVER ZONE IN ADDITION TO THE MINIMUM COVERS AS NOTED ON DRAWING 00-901. INCREASED COVER IS NOT REQUIRED AT DOCUMENTED SETDOWNS, STAIRS AND LIFT CORE ROOFS.
- SUSPENDED SLAB ON GROUND IS TO BE CAST OVER A POLYMERIC (0.2mm HIGH IMPACT RESISTANT FILM TO ASNS 4347) OVER 50 SAND.
- REFER TO HYDRAULIC CONSULTANTS DRAWINGS FOR ALL SUBSOIL DRAINAGE, SLUMPS, PIT AND GRATED DRAIN DETAILS.
- 1.B1, 1.B2, ETC. INDICATES REINFORCED CONCRETE BEAMS - REFER TO BEAM ELEVATIONS ON DRAWING 70-101.

LOCATION AND SIZE OF ALL PENETRATIONS STILL TO BE CONFIRMED BY THE SERVICES CONTRACTORS



BUILDING JOINT LEGEND

- | | |
|-------|---|
| BJ 1 | 60mm GAP + HERCULES HSC / 2 / 200 / 50-50 CUSTOM |
| BJ 2 | 50mm GAP |
| BJ 3 | 10mm GAP + ANCON ESDQ15 AT 800 CENTRES |
| BJ 4 | 20mm COMPRESSIBLE FILLER AND SEALANT |
| BJ 5 | 50mm GAP + 300 x 200 x 10 FABRICATED SHELF ANGLE (FIRE RATED) + HERCULES HSC / 1 / 150 / 50-50 CUSTOM |
| BJ 6 | 10mm GAP + GALVANISED DOWEL |
| BJ 7 | 10mm GAP + HERCULES HSC / 1 / 150 / 20 |
| BJ 8 | 10mm COMPRESSIBLE FILLER AND SEALANT |
| TMJ 1 | 10mm GAP + ANCON LOCKING PINS |
| TMJ 2 | 10mm GAP + SLEEVED DOWEL |
- TMJ = TEMPORARY MOVEMENT JOINT
 - BJ = BUILDING JOINT
 - REFER TO DRAWINGS 60-901 & 60-902 FOR TYPICAL JOINT DETAILS

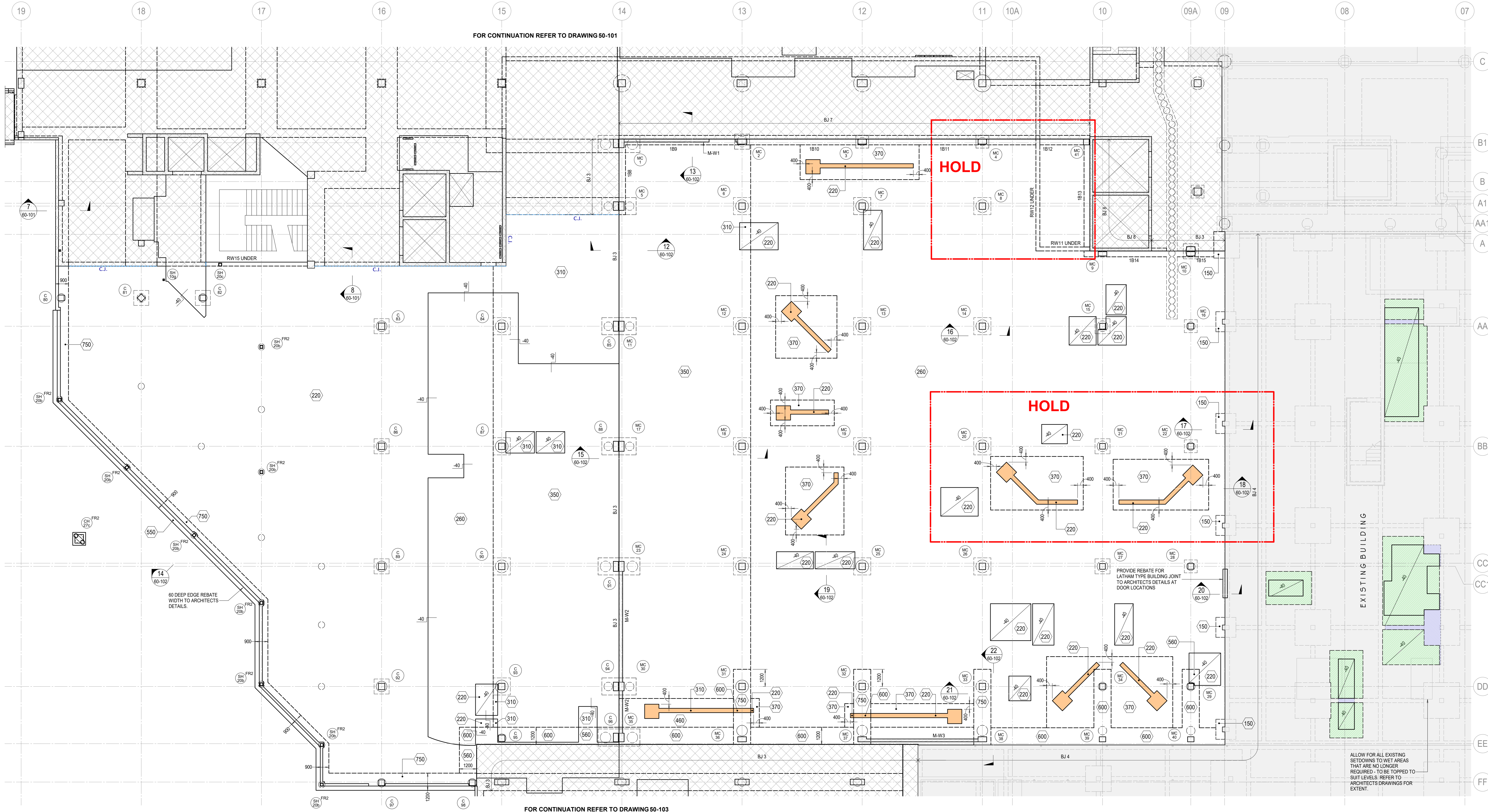
FOR CONSTRUCTION

ISSUED FOR CONSTRUCTION	M.R.	28.06.18
Rev	Description	Eng
Author	155 Clarence Street Sydney NSW 2000	
Client	SILVER THOMAS HANLEY 3 Clarence Road Glen Iris Victoria 3146	



Project
HORNSBY KU-RING-GAI HOSPITAL - STAGE 2
Palmerston Road, Hornsby NSW 2077
Sheet Subject
LEVEL 1 - AREA 1 - OUTLINE PLAN

Structural Engineer
TTW Taylor Thomson Whitting
612 9439 7288 | 48 Chandos Street St Leonards NSW 2065
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TTW Job Number: Drawing No: 161607 STR-DNG-50-101 A
28/06/2018 3:53:20 PM



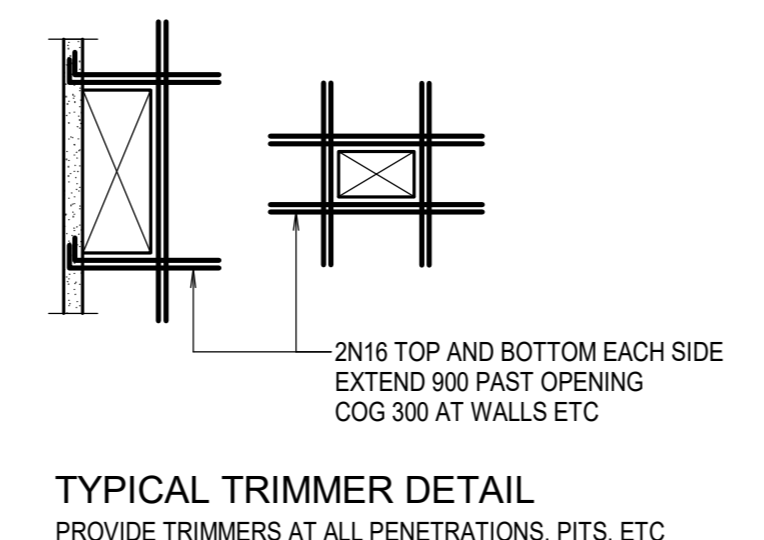
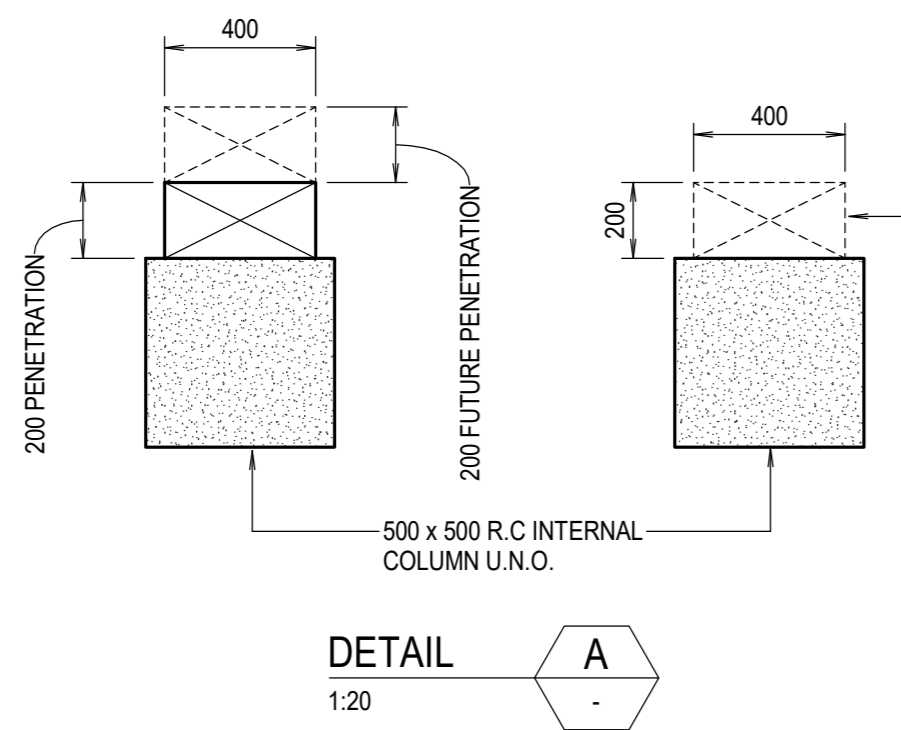
FOR CONTINUATION REFER TO DRAWING 50-101

FOR CONTINUATION REFER TO DRAWING 50-103

LEVEL 1 - AREA 2 - OUTLINE PLAN - 260 SLAB U.N.O
 SCALE 1:100

- REFER TO ARCHITECTS DRAWINGS FOR LOCATION & SET OUT OF ALL COLUMNS, WALLS, HOBS, PLINTHS & SETDOWNS.
- ALL LEVELS, FALLS & WATERPROOF MEMBRANES TO ARCHITECTS DETAILS.
- ANY PENETRATIONS NOT SHOWN ON STRUCTURAL DRAWINGS ARE TO BE SUBMITTED TO THE PRINCIPAL PRIOR TO CASTING CONCRETE. ALL HYDRAULIC SERVICES ARE TO BE PLACED PRIOR TO CASTING CONCRETE. NO CORING THROUGH CONCRETE IS PERMITTED.
- ALL SLAB, BAND AND BEAM THICKNESSES AT FLOOR LEVEL ARE INCLUSIVE OF 40mm INCREASED COVER ZONE IN ADDITION TO THE MINIMUM COVERS AS NOTED ON DRAWING 50-901. INCREASED COVER IS NOT REQUIRED AT DOCUMENTED SETDOWNS, STAIRS AND LIFT CORE ROOFS.
- SUSPENDED SLAB ON GROUND IS TO BE CAST OVER A POLYMERIC (0.2mm HIGH IMPACT RESISTANT FILM TO AS/NZS 4347) OVER 50 SAND.
- REFER TO HYDRAULIC CONSULTANTS DRAWINGS FOR ALL SUBSOIL DRAINAGE, SUMP, PIT AND GRATED DRAIN DETAILS.
- INDICATES 150 SET DOWN FOR MEDICAL IMAGING EQUIPMENT.
- 1B1, 1B2 ETC.....INDICATES R.C. BEAMS - REFER TO DRAWING 70-101 FOR BEAM ELEVATIONS.

LOCATION AND SIZE OF ALL PENETRATIONS STILL TO BE CONFIRMED BY THE SERVICES CONTRACTORS



BUILDING JOINT LEGEND

BJ 1	..... 80mm GAP + HERCULES HSC / 2 / 200 / 50-50 CUSTOM
BJ 2	..... 50mm GAP
BJ 3	..... 10mm GAP + ANCON ESDQ15 AT 500 CENTRES
BJ 4	..... 20mm COMPRESSIBLE FILLER AND SEALANT
BJ 5	..... 50mm GAP + 300 x 200 x 10 FABRICATED SHELF ANGLE (FIRE RATED) + HERCULES HSC / 1 / 150 / 50-50 CUSTOM
BJ 6	..... 10mm GAP + GALVANISED DOWEL
BJ 7	..... 10mm GAP + HERCULES HSC / 1 / 150 / 20
BJ 8	..... 10mm COMPRESSIBLE FILLER AND SEALANT
TMJ 1	..... 10mm GAP + ANCON LOCKING PINS
TMJ 2	..... 10mm GAP + SLEEVED DOWEL

1. TMJ = TEMPORARY MOVEMENT JOINT
 2. BJ = BUILDING JOINT
 3. REFER TO DRAWINGS 60-901 & 60-902 FOR TYPICAL JOINT DETAILS

WET AREA SLAB REPAIR LEGEND

-
- INDICATES EXTENT OF EXISTING SLAB TO BE DEMOLISHED & REPLACED WITH 100 THICK SLAB. REINFORCE WITH SL22 FABRIC. 30 TOP COVER THROUGHOUT OVER SAND LEVELLING BED TO MATCH EXISTING. EXISTING SLAB TO BE OVERCUT 60mm WHERE POSSIBLE TO ALLOW FOR FOLD TO SETDOWN. ALL SIDES OF NEW SLAB TO BE FULLY DOWELED INTO EXISTING SLAB - REFER TYPICAL DETAILS ON DRAWING 60-103.
-
- INDICATES EXTENT OF DESIGNATED WET AREA THAT CANNOT BE DEMOLISHED. NO CUTS OR VERTICAL PENETRATIONS ARE TO BE MADE TO EXISTING GROUND BEAMS AND PAD FOOTINGS. SOME HORIZONTAL PENETRATIONS FOR NEW HYDRAULIC PIPES MAY BE ALLOWED THROUGH EXISTING BEAMS ONLY WHERE DEPTH PERMITS - REFER TYPICAL DETAILS ON DRAWING 60-103.
- ALLOW FOR ALL EXISTING WET AREA SETDOWNS THAT WILL NO LONGER BE REQUIRED TO BE TOPPED. TOPPING COMPOUND, SCABBING AND JOINTS ETC TO BE DETERMINED BY CONTRACTOR AND APPROVED BY ENGINEER PRIOR TO CONSTRUCTION.
 - ALLOW FOR CONNECTION OF EXISTING HYDRAULIC SERVICES TO NEW WET AREAS UTILISING EXISTING SERVICES WHERE POSSIBLE. REFER TO DRAWING 60-103 FOR TYPICAL SLAB REPAIR DETAILS.

ALLOW FOR ALL EXISTING SETDOWNS TO WET AREAS THAT ARE NO LONGER REQUIRED - TO BE TOPPED TO SUIT LEVELS. REFER TO ARCHITECTS DRAWINGS FOR EXTENT.

FOR CONSTRUCTION

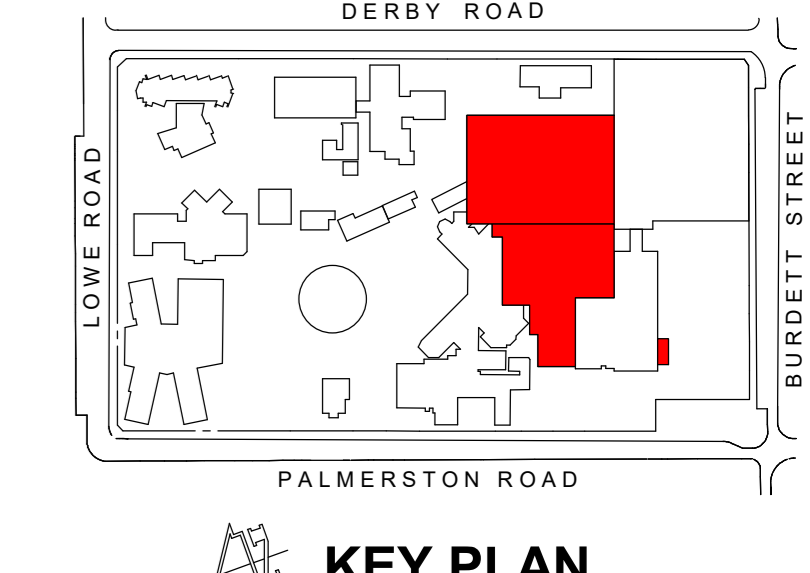
ISSUED FOR CONSTRUCTION	M.R.	28.06.18
Rev	Description	Eng Draft Date
1	Level 10, 155 Clarence Street Sydney NSW 2000	

WATPAC
 SILVER THOMAS HANLEY
 3 Glemore Road
 Glen Iris Victoria 3146

Client
NSW GOVERNMENT Health Infrastructure
 Level 8, 77 Pacific Highway, North Sydney NSW 2060

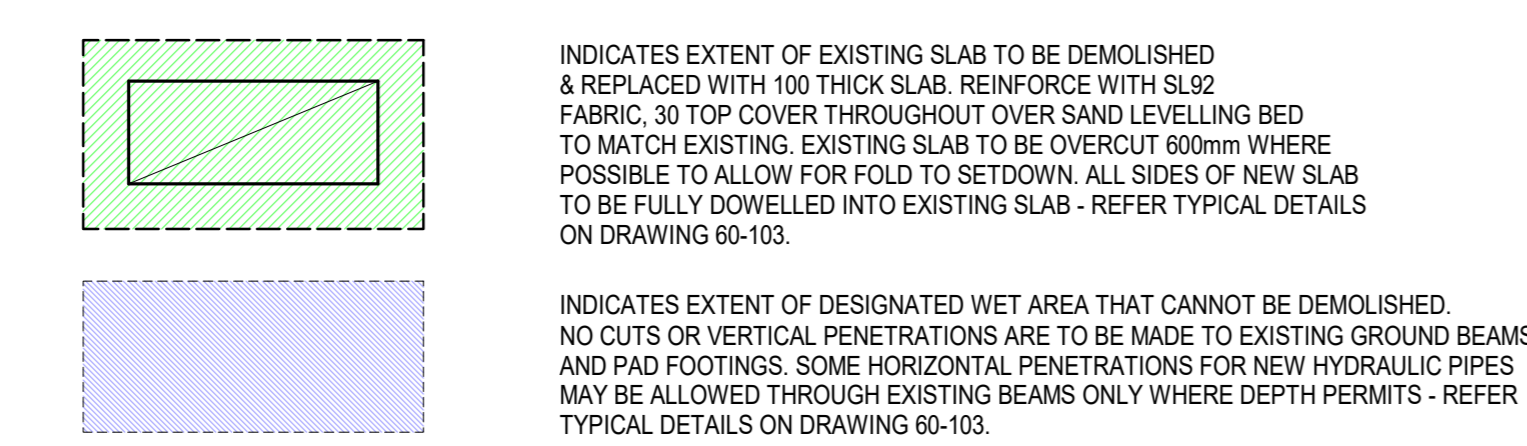
Project
HORNSBY KU-RING-GAI HOSPITAL - STAGE 2
 Palmerston Road, Hornsby NSW 2077
 Sheet Subject
LEVEL 1 - AREA 2 - OUTLINE PLAN

Structural Engineer
TTW Taylor Thomson Whitting
 612 9439 7288 | 48 Chandos Street St Leonards NSW 2065
 Scale: A0 Drawn: Authorised
 As indicated D.J.
 TTW Job Number Drawing No. Revision
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KEY PLAN

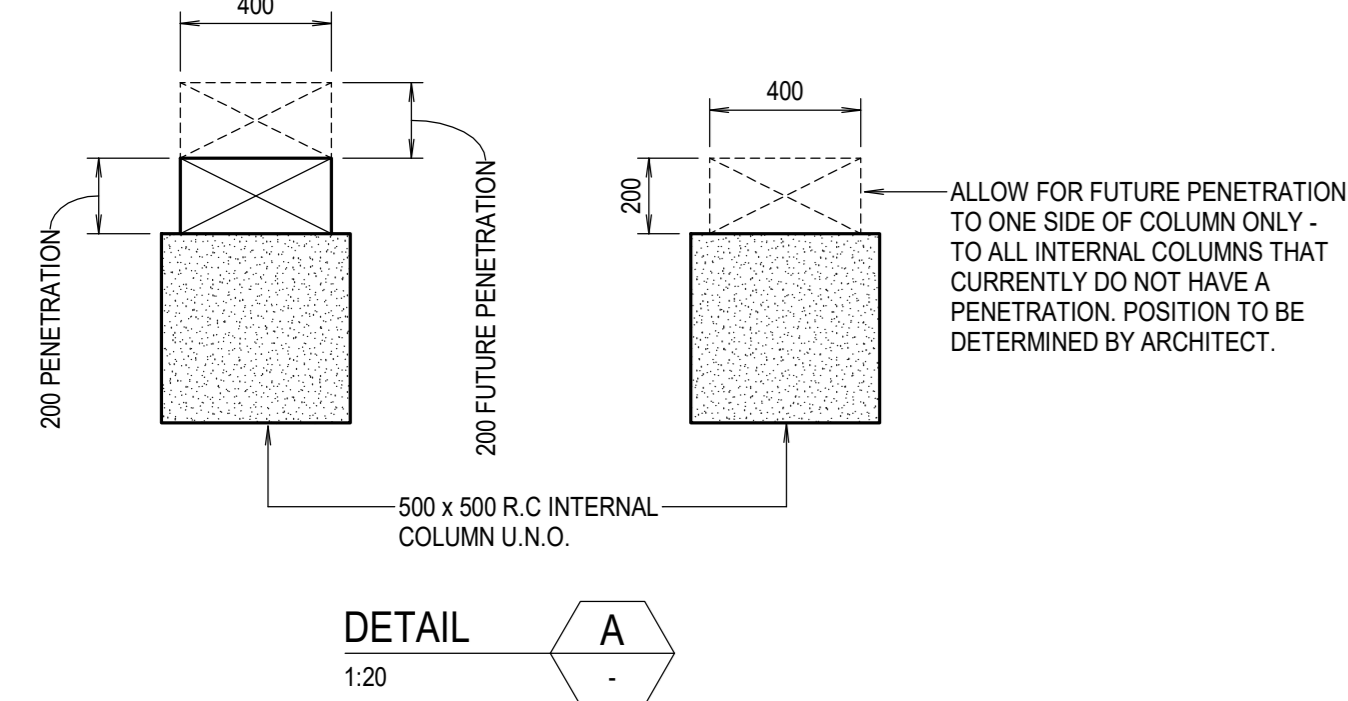
WET AREA SLAB REPAIR LEGEND



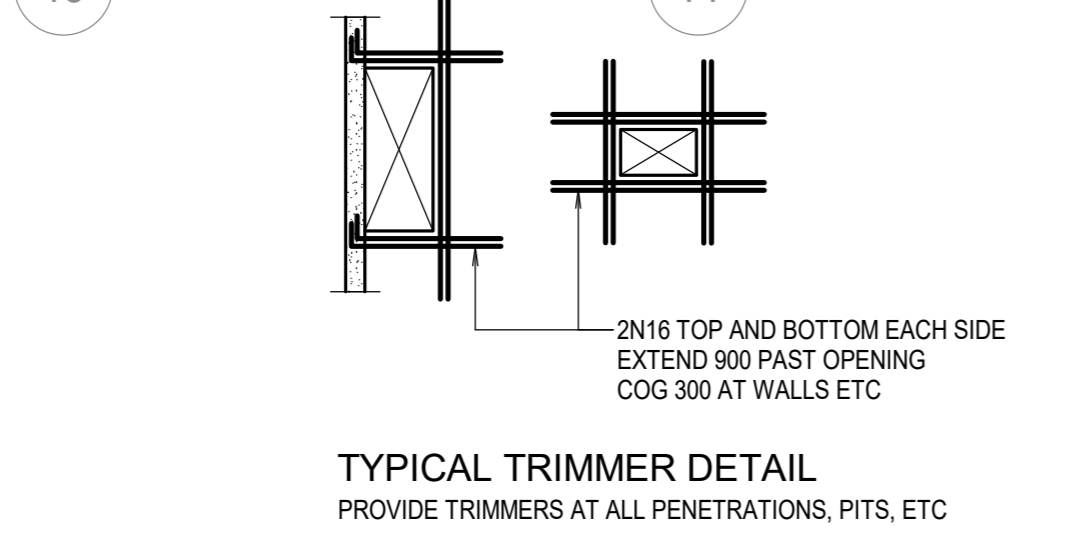
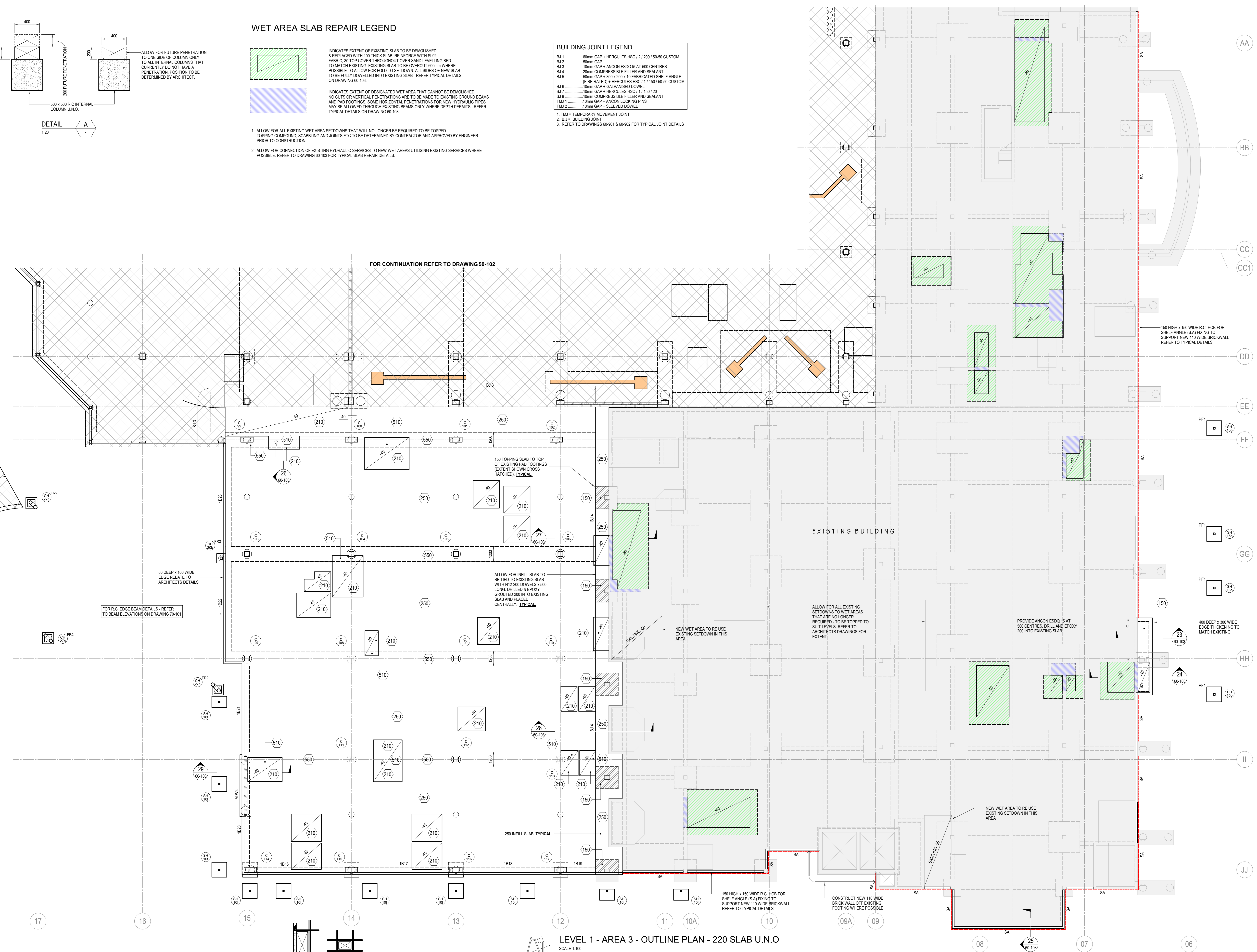
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2. ALLOW FOR CONNECTION OF EXISTING HYDRAULIC SERVICES TO NEW WET AREAS UTILISING EXISTING SERVICES WHERE POSSIBLE. REFER TO DRAWING 60-103 FOR TYPICAL SLAB REPAIR DETAILS.

BUILDING JOINT LEGEND	
BJ 1	60mm GAP + HERCULES HSC 2 / 200 / 50-50 CUSTOM
BJ 2	50mm GAP
BJ 3	10mm GAP + ANCON ESDQ15 AT 500 CENTRES
BJ 4	20mm COMPRESSIBLE FILLER AND SEALANT
BJ 5	50mm GAP + 200 x 200 x 10 FABRICATED SHELF ANGLE (FIRE RATED) + HERCULES HSC 1 / 150 / 50-50 CUSTOM
BJ 6	10mm GAP + GALVANISED DOWEL
BJ 7	10mm GAP + HERCULES HSC 2 / 1 / 150 / 20
BJ 8	10mm COMPRESSIBLE FILLER AND SEALANT
TMJ 1	10mm GAP + ANCON LOCKING PINS
TMJ 2	10mm GAP + SLEEVED DOWEL

1. TMJ = TEMPORARY MOVEMENT JOINT
2. B.J = BUILDING JOINT
3. REFER TO DRAWINGS 60-901 & 60-902 FOR TYPICAL JOINT DETAILS



FOR CONTINUATION REFER TO DRAWING 50-104



LOCATION AND SIZE OF ALL PENETRATIONS STILL TO BE CONFIRMED BY THE SERVICES CONTRACTORS

LEVEL 1 - AREA 3 - OUTLINE PLAN - 220 SLAB U.N.O

SCALE 1:100

1. REFER TO ARCHITECTS DRAWINGS FOR LOCATION & SET OUT OF ALL COLUMNS, WALLS, HOB'S, PLINTHS & SETDOWNS.
2. ALL LEVELS, FALLS & WATERPROOF MEMBRANES TO ARCHITECTS DETAILS.
3. ANY PENETRATIONS NOT SHOWN ON STRUCTURAL DRAWINGS ARE TO BE SUBMITTED TO THE PRINCIPAL PRIOR TO CASTING CONCRETE. ALL HYDRAULIC SERVICES ARE TO BE PLACED PRIOR TO CASTING CONCRETE. NO CORING THROUGH CONCRETE IS PERMITTED.
4. ALL SLAB, BAND AND BEAM THICKNESSES AT FLOOR LEVEL ARE INCLUSIVE OF 40mm INCREASED COVER ZONE IN ADDITION TO THE MINIMUM COVERS AS NOTED ON DRAWING 00-901. INCREASED COVER IS NOT REQUIRED AT DOCUMENTED SETDOWNS, STAIRS AND LIFT CORE ROOFS.
5. - - - - - INDICATES PROPRIETARY SHELF ANGLE BY ANCON CCL OR EQUIVALENT. MAXIMUM WEIGHT OF BRICKWORK WITHOUT VERTICAL SUPPORT IS 2 STOREYS - REFER TO ARCHITECTS DRAWINGS FOR LOCATIONS.
6. SUSPENDED SLAB ON GROUND IS TO BE CAST OVER A POLYMERIC (0.2mm HIGH IMPACT RESISTANT FILM TO ASNS 4347) OVER 50 SAND.
7. REFER TO HYDRAULIC CONSULTANTS DRAWINGS FOR ALL SUBSOIL DRAINAGE, SUMPS, PIT AND GRATED DRAIN DETAILS.

FOR CONSTRUCTION

Rev.	Description	Eng.	Draft.	Date
A	ISSUED FOR CONSTRUCTION	M.R.		28.06.18

Project: **WATPAC** Level 10, 155 Clarence Street, Sydney NSW 2000

Architect: **STH** SILVER THOMAS HANLEY, 3 Gnam Road, Glen Iris Victoria 3146

Client: **NSW Health Infrastructure**
Level 8, 77 Pacific Highway, North Sydney NSW 2060

Project: **HORNSBY KU-RING-GAI HOSPITAL - STAGE 2**
Palmerston Road, Hornsby NSW 2077

Sheet Subject: **LEVEL 1 - AREA 3 - OUTLINE PLAN**

Structural Engineer: **TTW Taylor Thomson Whitting**
612 9439 7288 | 48 Chandos Street St Leonards NSW 2065

Scale: AD Drawn: Authorised
As Indicated D.J.

TTW Job Number: Drawing No. Revision
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MANAGING DIRECTORS

MATTHEW PALAVIDIS
VICTOR FATTORETTO

DIRECTORS

MATTHEW SHIELDS
BEN WHITE



20180872.2/0628A/R0/TT

28/6/2018

Watpac

Att: Pamela Degabriele

Hornsby Ku-ring-gai Hospital Stage 2 Redevelopment – Condition of Consent B14

This letter has been prepared to address condition of consent B14.

Condition B14 states:

Prior to commencement of works, the Applicant must incorporate all relevant noise mitigation recommendations in the letter Hornsby Ku-ring-gai Hospital Stage 2 Redevelopment – Response to Panning NSW Queries prepared by Acoustic Logic dated 26 April 2018 in the detailed design drawings and submit for the approval of the Certifying Authority. These drawings must demonstrate that the noise impact have been adequately mitigated to not exceed the project specific criteria identified in condition E2.

The project specific criteria in condition E2 are as follows:

- 40dBA) $L_{eq(15min)}$ at a residential property boundary on Burdett Street.
- 35dBA) $L_{eq(15min)}$ at a residential property boundary on Derby Street.
- 39dBA) $L_{eq(15min)}$ at a residential property boundary on Palmerston Road.

The following acoustic treatments are to be incorporated in mechanical services design drawings:

SYDNEY
A: 9 Sarah St Mascot NSW 2020
T: (02) 8339 8000
F: (02) 8338 8399

SYDNEY MELBOURNE BRISBANE CANBERRA
LONDON DUBAI SINGAPORE GREECE

ABN: 11 068 954 343

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New Diesel Generators

Two new diesel generators are to be located in the Level 6 plant room of the Stage 2 Main Building. Final design of whether the generators have a proprietary acoustic enclosure is to be determined, however:

- Diesel generators *without* proprietary acoustic enclosures:
 - These typically have a sound power level of approximately 125dB(A).
 - Acoustic treatment to air intake and discharge openings to the plant room typically require acoustic attenuators of 2700mm long, 40% free area (Noise Control attenuators or equal).
 - In addition, generators without proprietary enclosures need to have partitions constructed around them, separating them from other areas of the plant room (in order to control noise breaking out through louvres from the remainder of the plant room).
 - The bounding partitions to the generator area are to be either concrete block (min 90mm) or an insulated stud wall construction (9mm fc sheet to each side of studwork with 75mm thick 11kg/m³ insulation to the cavity).
- Diesel generators that *do* have proprietary acoustic enclosures:
 - Generator with enclosure noise level should not exceed 75dB(A) at 7 metres distance.
 - Any air intake or discharge to the plant room housing the generator with an enclosure would typically require 600mm deep acoustic louvres.

In addition (regardless of generator/enclosure type) any gas muffler is to be selected such that the resultant noise level at one metre from the exhaust gas discharge point is no more 75dB(A) (the discharge being directed away from the residents to the south and east).

Level 6 plant room.

- Plant room is such that it is primarily air handling units and return air fans that are located adjacent to the eastern louvres.
- The eastern louvres of the plant room is likely to need to be blanked off (6mm fc sheeting or 1mm steel sheet) to ensure noise emitted is compliant with the 35dB(A) noise target for Derby Street.
- Outside air intakes for the air-handling units would be ducted from the unit to the façade penetrating the blanking sheeting (to enable air intake without other plant room noise escaping). This outside air ductwork would need to be internally lined (indicatively 50mm thick) to ensure that the outside air ducting itself is not an excessive noise source. The design of this ductwork will be such that the 35dB(A) noise limit at the Derby Street residences is achieved.
- The need for blanking off of louvres on the eastern façade of the plant room can potentially be removed following final equipment selection, however this can only be determined following acoustic review of final equipment selections.

Cooling towers.

- Two cooling towers are located in an external area on level 6 of the development (away from the eastern façade/Derby Street residences).
- Given the distance between the cooling towers and the surroundings residents and shielding provided by the hospital building structure, the proposed cooling towers will comply with the noise emission requirements.
- Cooling tower sound power is not to exceed 95dB(A).
- Cooling towers are to be fitted with variable speed drives (to allow for reduced fan speed during periods of low load) are required. A fan speed of no more than 50% would be expected at night time is required.
- In the event that significantly louder cooling towers are ultimately selected (over 95dB(A)) *and* the hospital building shell does *not* provide a noise screen to the east and south of the towers (ie – the sides facing the Derby and Burdett Street residences) a dedicated noise screen or acoustic louvre around the cooling tower is likely to be required. Alternatively, dedicated air intake and discharge attenuators to the cooling towers may be required.

Chillers.

- Three chillers are proposed to be located within the Level 6 plant room.
- The plant rooms housing the chillers should not have any external ventilation opening/louvre (unless that opening is acoustically treated with 300mm deep acoustic louvre).
- The chillers are to have partitions constructed around them, separating them from other areas of the plant room (in order to control noise breaking out through louvres from the remainder of the plant room). The bounding partitions to the generator area will typically need to be either concrete block (min 90mm) or an insulated stud wall construction (9mm fc sheet to each side of studwork with 75mm thick 11kg/m³ insulation to the cavity).
- Light weight cladding to external plant room walls and ceiling will potentially require internal plasterboard sheeting to ensure acceptable noise breakout through wall/roof to nearby receivers, depending on final equipment selection.
- Typical vibration isolation would consist of 25mm static deflection springs sitting on a concrete plinth isolated from the structural slab using 10mm rubber matting.

Major fan units (e.g. air handling units, kitchen and toilet exhaust fans)

- Acoustic treatment will be needed for any fan ducted to atmosphere what has a sound power level of more than 70dB(A). The precise extent of in-duct treatment will depend on the sound power of a given fan and the external grill location (its orientation relative to Derby Street).
- Suitable noise emissions will be achieved through internal lining of ductwork to atmosphere, although acoustic attenuators are potentially required for fans with sound powers exceeding 80dB(A) or when the duct runs are very short.

Closure

With the above treatments, cumulative noise levels complying with the nearest 35dB(A) noise limit on Derby Street (the nearest residence) and the other residences on Burdett Street (40dB(A)) and Palmerston Road (39dB(A)) will be achieved.

Please contact us should you have any further queries.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'T. Taylor', written in a cursive style.

Acoustic Logic Consultancy Pty Ltd
Thomas Taylor

Preliminary Construction Traffic Management Plan

Hornsby Ku-ring-gai Hospital Stage 2

Prepared for Health Infrastructure / 8 / September / 2017

161607 - TADD

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Revision Register

Rev	Date	Prepared By	Approved By	Remarks
0	28/07/17	GC	JS	Preliminary Draft
0.1	23/08/17	GC	JS	Final Draft following issue of SEARs
0.2	08/09/17	GC	JS	Final Draft for review

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1.0 Preliminary Information

This Preliminary Construction Traffic Management Plan (CTMP) addresses the construction of the Stage 2 Redevelopment of Hornsby Ku-ring-gai Hospital (Hospital) occurring at the existing Hospital. It discusses the management of local traffic and construction vehicles related to the project. A Preliminary CTMP is required for this site as part of the Secretary's Environmental Assessment Requirements.

A detailed CTMP cannot be developed without the involvement of a contractor and consideration of all final design selections. This Preliminary CRMP is intended to provide a framework within which a future CTMP can be developed and implemented and to demonstrate the potential operation of the construction site.

A finalised CTMP will need to be prepared and approved prior to construction once a Contractor has been appointed and details are known about the staging of works.

A CTMP is developed to satisfy the duties of various work health and safety legislation, regulations, and codes of practice. Traffic Control Plans (TCPs) will also need to be developed for the future site to demonstrate the traffic control procedures to be implemented. These must be in accordance with RMS and Australian Standards requirements.

The contractor shall be responsible for acquiring the necessary certificates, licences, consents, permits and approvals relevant to the construction on this site.

2.0 Introduction

2.1 Site Location

The site of the proposed Hornsby Ku-ring-gai Hospital Stage 2 Redevelopment is located within the bounds of the existing Hornsby Ku-ring-gai Hospital. The Hospital is bound by Lowe Road to the north, Burdett Street to the south, Derby Road to the east and Palmerston Road to the west.

The site lies within the southern half of the Hospital, north of the already constructed STAR Building (completed as part of Stage 1 of the Redevelopment) and the future Medical Imaging and Paediatrics Building.

Refer to Figure 1 for the location of the site within the Hospital.

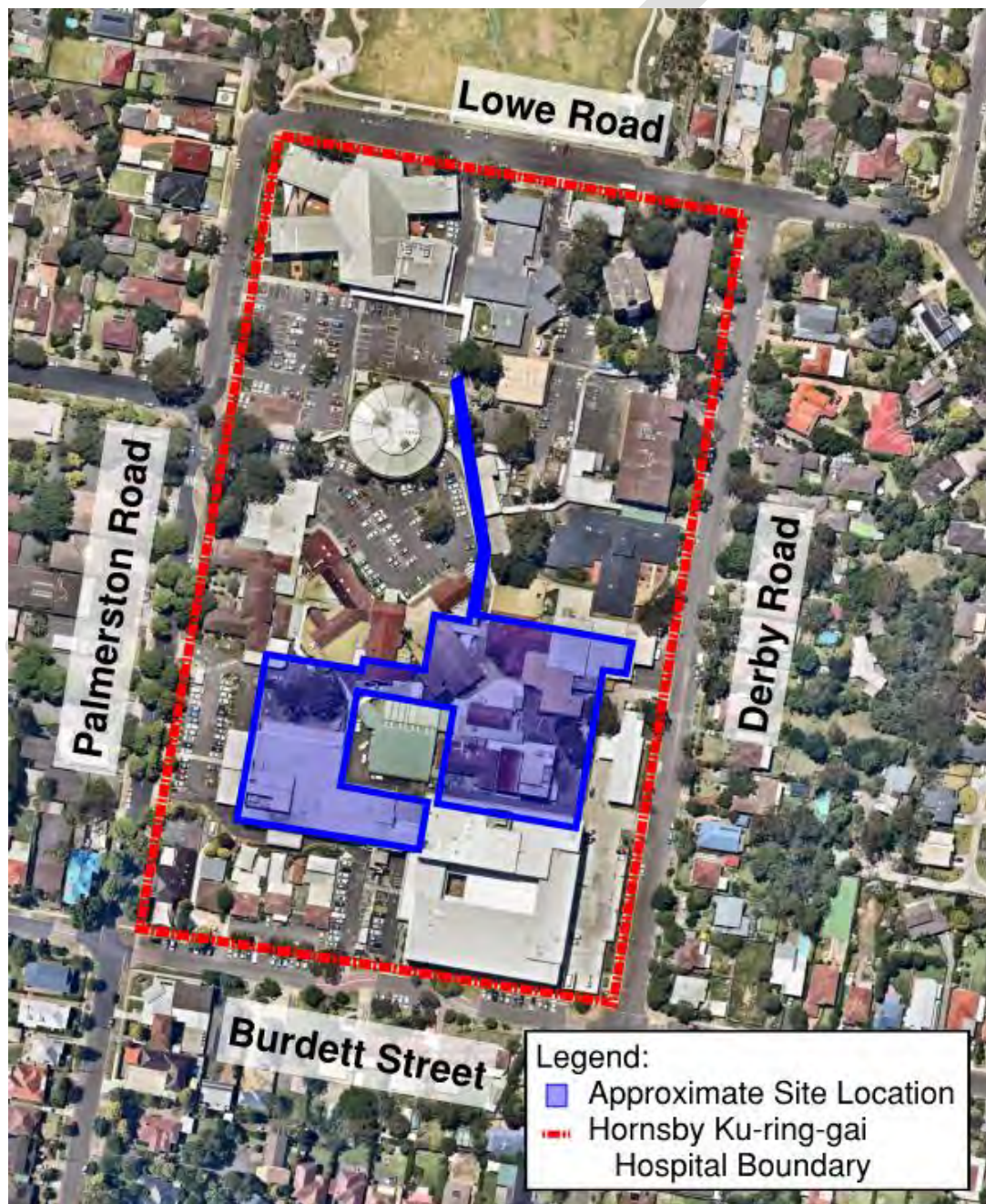


Figure 1: Site Location of the Stage 2 Redevelopment

2.2 Scope of Works

The existing site is currently occupied by existing buildings and a temporary carpark. Existing facilities within the site will be demolished, excluding those areas that will be refurbished. Construction activities will include the following:

- A new building constructed adjacent to the recently completed Stage 1 development and the yet to be completed Medical Imaging/Paediatrics building.
- An extension to the emergency department and associated refurbishment of the emergency department within the Hope Building.
- A new main entry to the Hospital adjacent to the medical imaging facility and new multi-storey carpark.
- Demolition of existing buildings including the Lumby Building and Intensive Care Unit.

2.3 Construction Activities

The proposed works are anticipated to be undertaken from early 2018 and to be completed over a timeframe of 18 to 24 months. This construction timeline will need to be confirmed once a Contractor has been appointed.

2.4 Hours of Operation

It is anticipated that the site works will be undertaken during standard hours of operation as follows:

- | | |
|-------------------------------|-------------|
| ▪ Monday to Friday | 7am to 5pm |
| ▪ Saturdays | 8am to 12pm |
| ▪ Sundays and Public Holidays | None |

Note that these hours have been approximated and are subject to Hornsby Shire Council's approval. Any works outside of these hours will require approval from Hornsby Shire Council.

3.0 Traffic Environment

3.1 Road Network

Palmerston Road is a four lane undivided carriageway with a parking lane along each side. A section of the road is one-way (north direction) between Burdett Street and Northcote Road.

Derby Road has angled parking on its western side and has a carriageway with two travel lanes and parking on each side.

Burdett Street is treated with a traffic calming scheme and provides two travel lanes with angled parking.

Edgeworth David Avenue is a regional road under the jurisdiction of Hornsby Shire Council.

Sherbrook Road is a regional road under the jurisdiction of Hornsby Shire Council.

The Pacific Highway is a state road under the jurisdiction of the RMS.

Jersey Street North is a state road under the jurisdiction of the RMS.

A number of other minor local roads are situated in the nearby area however these will not be subject to any construction traffic or operational changes.

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3.2 Transport Facilities

3.2.1 Public Transport

The Hospital is connected to the public transport network via buses and trains.



Figure 2: Public Transport in the Vicinity of the Hospital

The nearest railway stations to the site are Waitara (roughly 950 metres away) and Hornsby (roughly 1.2 kilometres away).

Hornsby Station is wheelchair accessible and staffed from the first to the last train service. It is roughly 20 minutes' walk to the Hospital, however the walk features steep grades. The station is serviced by three lines:

- The North Shore Line: Services between Berowra and Parramatta with extensions to Wyong and Springwood in peak times. Services operate to the City via Gordon with some services only going as far as Chatswood during the off peak daytime hours. Around half of the services terminate or begin at Hornsby and do not extend to Berowra;
- The Northern Line: Services Epping and Hornsby to the City. The trains operate from Hornsby to the City via Macquarie Park or Epping; and
- The Newcastle and Central Coast Line: Connects Newcastle and Central. Some services only extend as far north as Wyong or Gosford.

Waitara Station is located on Alexandria Parade, Waitara. The station is not wheelchair

accessible and is serviced by the North Shore Line only. It is roughly a 17 minute walk from the Hospital.

The 575 bus route travels via the Hospital. This service is operated by Transdev and connects to Macquarie University, Gordon, Turrumurra Station, Wahroonga, Waitara and Hornsby Station. Travel time via bus from Hornsby Station to the Hospital is approximately five minutes. The frequency of this service is every 20 minutes during the peak hour and every 30 minutes otherwise.

There are no bus services to the Hospital available from Waitara Station.

3.2.2 Cycling Facilities

Surrounding streets around the Hospital are largely cycle friendly, with 50 kilometres per hour speed limits and wide roads. This encourages shared use by cyclists and vehicles.

There are no identified separated cycleways or dedicated cycling lanes near to the Hospital as identified on Hornsby Shire Council's Bike Map or Sydney Cycleways.

3.2.3 Pedestrian Movements

Currently pedestrian facilities such as covered walkways and marked foot crossings are provided at certain locations within the Hospital. These are mainly located between carparking and main activity areas.

The Hospital is well serviced by pedestrian footpaths and facilities along the surrounding streets.

There is a pedestrian zebra crossing along Palmerston Road and various kerb ramps along the perimeter of the Hospital.

3.3 Carparking

3.3.1 Off Street Parking

Post completion of the multi-storey carpark and completion of the Stage 2 Redevelopment, there will be 731 total spaces within the Hospital at locations shown in Figure 3.

Access to these carparks occurs via the perimeter of the Hospital including Palmerston Road, Lowe Road, Derby Road and Burdett Street.

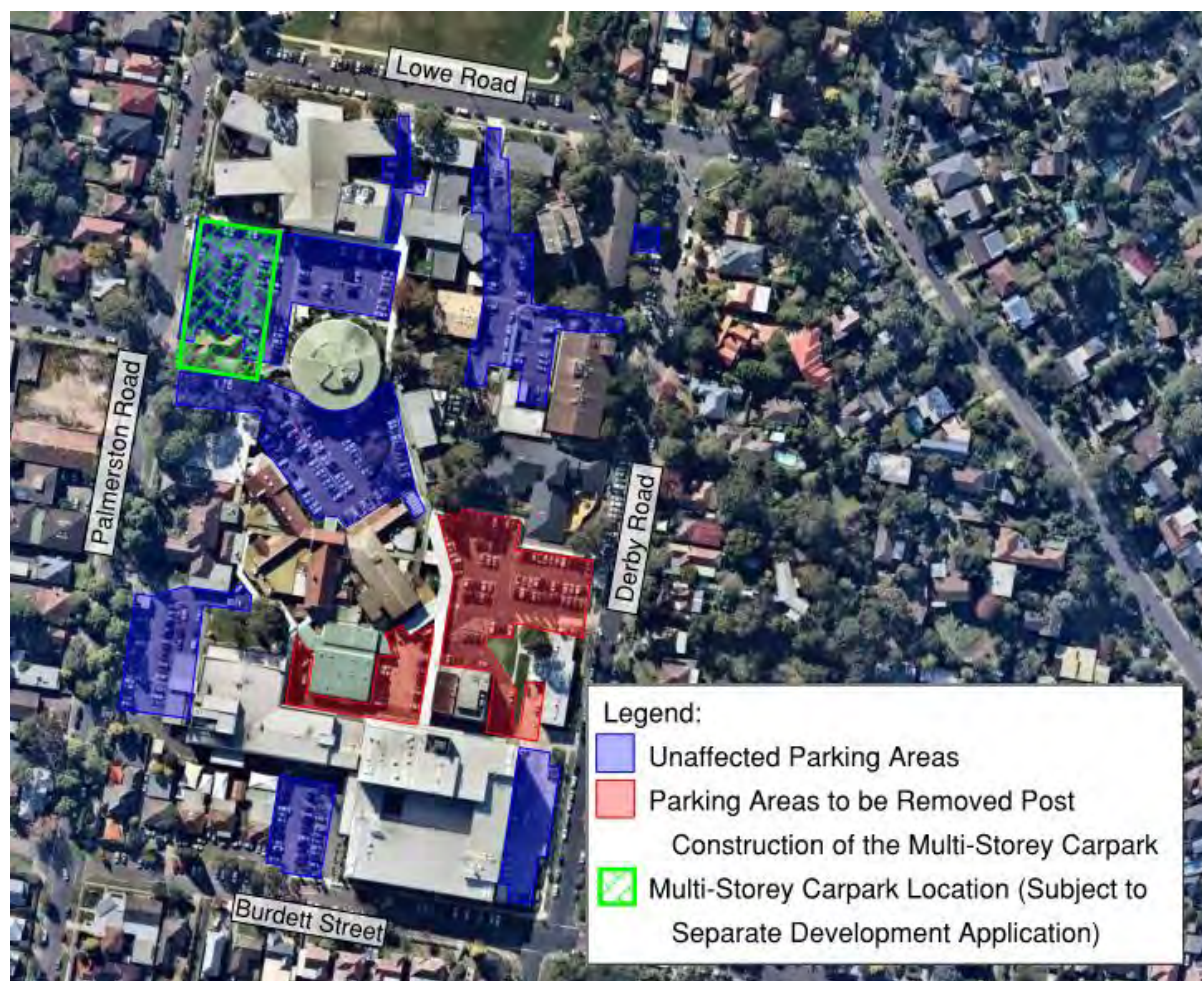


Figure 3: Off Street Parking Locations Post Completion

3.3.2 On Street Parking

The majority of the surrounding area in the near vicinity of the Hospital is typically low density residential. The exceptions are the northern side of Lowe Street and the western side of Palmerston Road from Northcote Road to Burdett Street. These areas are occupied by a recreational park spanning the majority of the block opposite the Hospital and various medical service providers respectively.

Palmerston Road from Burdett Street to Northcote Road has a 2 hour parking restriction (Monday to Friday 8:30am to 6pm and Saturday 8:30am to 12:00pm) on both sides of the road. This 2 hour parking restriction continues roughly 120 metres onto the southern section of Palmerston Road after Burdett Street. There are also bus, mail, no parking and no stopping zones along this section of Palmerston Road. Additionally there are many large trees which may restrict larger vehicles from parking in some locations.

Derby Road from Burdett Street to opposite the Palmerston Building has a 2 hour parking restriction along the western kerbline. Other surrounding streets generally have unrestricted parking. The locations of these on street parking restrictions are as shown in Figure 4.

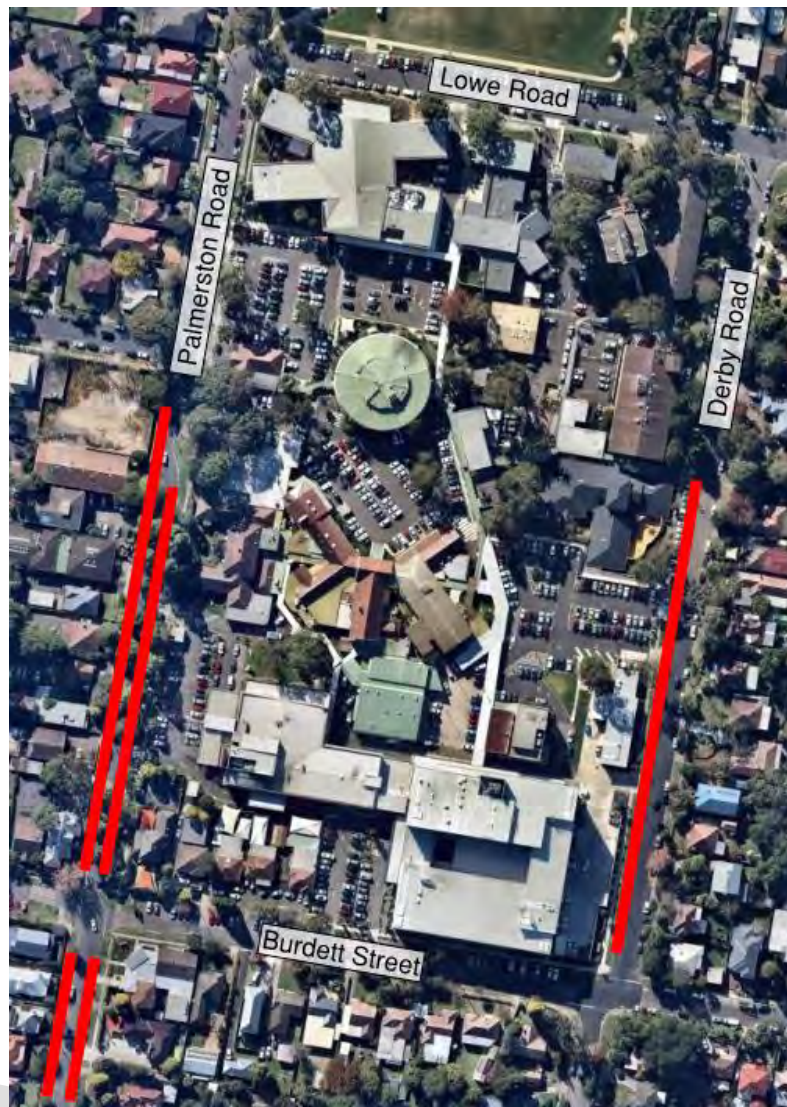


Figure 4: On Street 2 Hour Parking Restrictions

4.0 Management of Construction Vehicles

4.1 Truck Routes to/from Site

It is likely that site access will occur from Derby Road. This will need to be confirmed once a Contractor has been appointed. Following this, access to the site will be via the following routes (refer to Figure 5):

From/To the North

- From the Pacific Highway
- Left onto Jersey Street North
- Left onto Bridge Road
- Right onto Sherbrook Road
- Left onto Northcote Road
- Left onto Palmerston Road
- Right onto Lowe Road

- Right onto Derby Road
- Enter/Exit the site in a forward direction
- Left onto Derby Road
- Left onto Lowe Road
- Left onto Palmerston Road
- Right onto Northcote Road
- Right onto Sherbrook Road
- Left onto Bridge Road
- Right onto Jersey Street North
- Right onto the Pacific Highway

From/To the South

- From the Pacific Highway
- Right onto Edgeworth David Avenue
- Left onto Sherbrook Road
- Right onto Northcote Road
- Left onto Palmerston Road
- Right onto Lowe Road
- Right onto Derby Road
- Enter/Exit site in a forward direction
- Left onto Derby Road
- Left onto Lowe Road
- Left onto Palmerston Road
- Right onto Northcote Road
- Left onto Sherbrook Road
- Right onto Edgeworth David Avenue
- Left onto Pacific Highway

Signalised intersections control turning movements at the following intersections:

- Pacific Highway & Jersey Street North
- Jersey Street North & Bridge Road
- Pacific Highway & Edgeworth David Avenue
- Edgeworth David Avenue & Sherbrook Road

Mountable roundabouts are located at the following intersections:

- Bridge Road & Sherbrook Road
- Sherbrook Road & Northcote Road

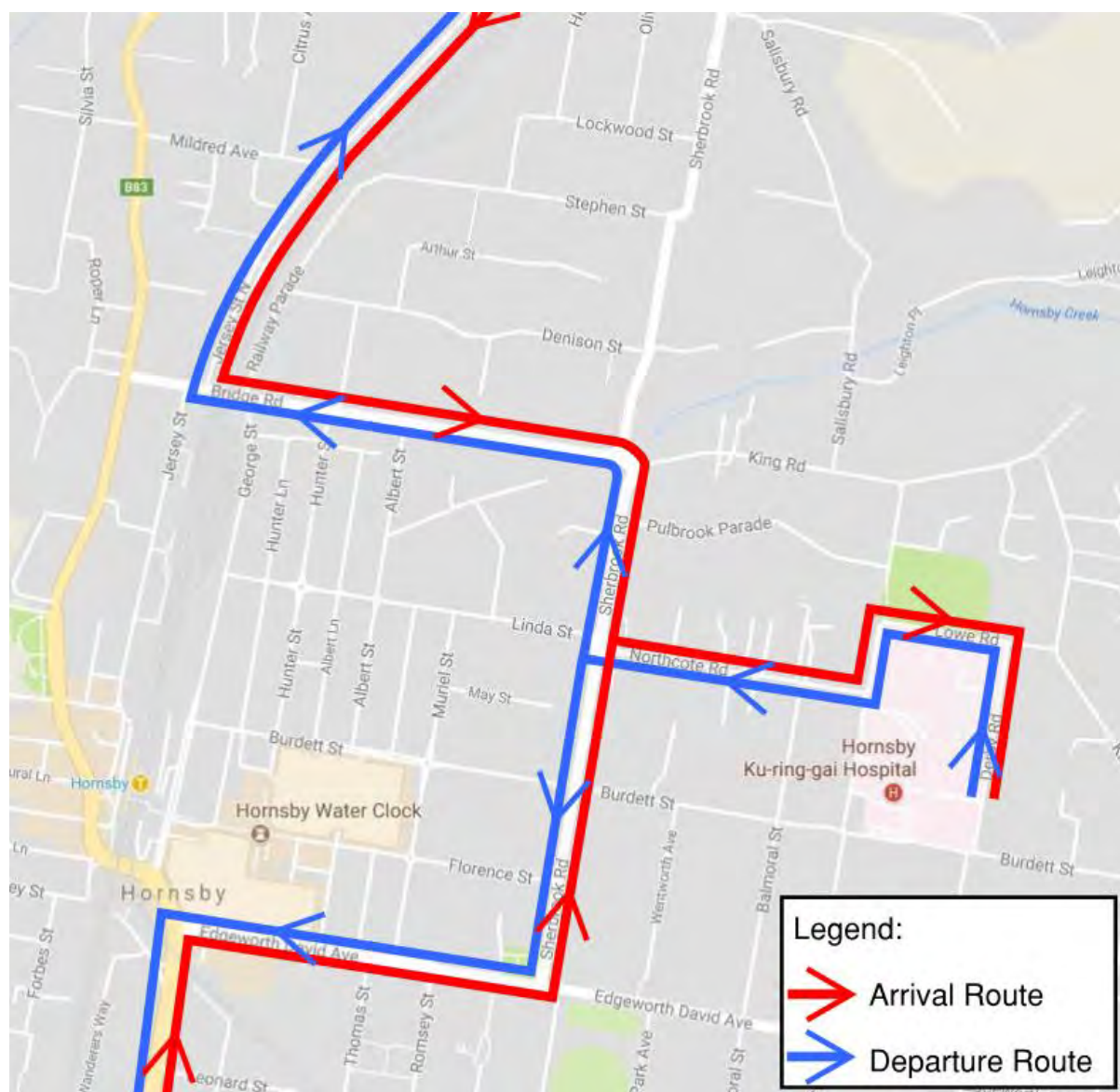


Figure 5: Construction Vehicle Access Routes

These construction routes have been chosen to avoid, where possible, high pedestrian activity at the nearby medical centre and childcare facilities located along Palmerston Road. The school zone located near the intersection of Edgeworth David Avenue, Myra Street and Palmerston Road has been avoided for safety reasons.

4.2 Construction Vehicles

Proposed truck types to be used during the works are expected to be various small delivery trucks, concrete trucks, truck and trailers, and semi-trailers. It is anticipated that the majority of construction vehicles will be 12.5m heavy rigid vehicles (HRV) with 19m semi-trailers required for larger deliveries. These vehicle sizes will need to be confirmed and finalised once a Contractor has been appointed.

During days of high estimated vehicle movements it is expected that communication between the site, concrete batching plant and/or vehicles will be maintained to stagger vehicle arrivals. This will allow for vehicles to be accommodated within the worksite and for traffic disruptions to be minimised.

Truck loading and unloading shall occur wholly within the site. All deliveries will be made

within the approved work hours, with emphasis made on deliveries outside of peak periods where possible to reduce impact on traffic flows.

4.3 Site Layout

The site layout will need to be finalised once a Contractor has been appointed.

4.4 Site Movements

Vehicles will likely enter the site from the existing access driveways on Derby Road adjacent to the works.

Construction vehicle movements and turning paths within the site should be investigated once a Contractor has been appointed and the staging of works finalised.

4.5 Work Zones

It is not anticipated that a Work Zone will be required for this site as all deliveries should be accommodated within the site boundary. However, this will be finalised once a Contractor has been appointed.

5.0 Impact of the Redevelopment

5.1 Local Traffic

5.1.1 Traffic Flow

Traffic impacts from the construction works are expected to be limited to the truck routes detailed in this report. These routes are likely to experience only minor impacts due to the presence of additional truck movements. These truck movements are not expected to cause delays on local roads, or create flow-on impacts to other streets.

Local traffic patterns during construction are expected to remain consistent with the existing conditions.

All deliveries and construction works are likely to take place on site, with no Works Zone, lane closures or other traffic impacts. Traffic will flow as per the existing scenario, with all lanes generally operating at full capacity.

Traffic impacts from the construction works are expected to be limited to the volume of construction vehicles only. The number of daily vehicles is expected to be minimal in comparison to the total volumes of daily traffic on local roads.

It is unlikely that there will be changes to local public transport routes and services as a result of this construction.

Access to all adjoining properties will be maintained throughout the works.

5.1.2 Parking Impacts

As the works will likely use existing site access driveways, it is not anticipated that on street parking will be lost as a result of the works.

There may be an increase in local parking congestion during construction as a result of construction workers accessing the site. These workers will be encouraged to carpool or use more sustainable methods of transport to decrease reliance on single occupancy private vehicle trips.

The site workers will be encouraged to utilise carpooling to decrease the number of

employee vehicles. Site employees will be encouraged to make use of carpooling options and nearby public transport facilities as part of being inducted into the site to minimise the impact of construction employee vehicles.

During the site induction these employees will be instructed not to park within off street facilities at the Hospital and will be advised of the public transport options.

5.1.3 Traffic Safety

As all construction works and operations are expected to be contained within the site, there shall be no safety concerns for passing traffic adjacent to the site.

Manoeuvring and merging of heavy vehicles exiting the site is to be managed carefully such that traffic safety is maintained. Due to the relatively quiet nature of the streets surrounding the Hospital, it is expected that vehicles exiting the site will be able to use suitable gaps in traffic.

5.1.4 Communication of Works

Prior to any site works taking place, notification of commencement of the works shall be distributed to the neighbourhood. Notification is to include information on the type of works, hours of operation and contact numbers for further information or comment. Community notification will be undertaken as per a Construction Management Plan that will be prepared once the Contractor has been appointed.

Traffic control advance warning signage in accordance with Roads and Maritime Services guidelines and Australian Standards is to be in place to notify motorists of roadwork and when traffic controllers are present. Sign size is to be size "A" and is to be monitored throughout the works to ensure they are clearly visible.

As part of the site induction procedures, all contractors will be made aware of the finalised Construction Traffic Management Plan, the Traffic Control Plans and their responsibility to adhere to these plans.

5.1.5 Public Infrastructure Impacts

While it is anticipated that the site will utilise permanent driveway crossovers, it is possible that some mounting or crossing of adjacent kerbs may be necessary. The builder will be required to repair any damage to this infrastructure as a result of vehicles driving over kerbs.

The developer may be held liable for any damage to public infrastructure in the vicinity of the site occurring as a result of the construction works.

5.1.6 Cumulative Local Impacts

According to NSW Major Projects, there two nearby State Significant Developments (SSD) or Infrastructure (SSI) that would impact the construction of the site including works occurring at the Hornsby Quarry (SSI 7066) and the proposed redevelopment at Waitara Public School (SSD 8574).

Upon review of the Hornsby Quarry development, it is likely that construction vehicles will overlap construction routes at Jersey Street North, Pacific Highway and Bridge Road. Once construction phasing has been determined further investigation on the cumulative impact of this development should be investigated, noting that these works are expected to occur over a near three year period up to late 2018.

The development at Waitara Public School has not currently provided a response to their Secretary's Environmental Assessment Requirements and therefore the construction phasing and routes are unknown.

It is noted that a redevelopment of the existing single storey SAN Day Surgery at 1A

Northcote Road has been approved by the Department of Planning and Environment since January 2011. The construction timing and routes of this development are unknown at this time.

Once the construction phasing has been finalised and during the preparation of the finalised Construction Traffic Management Plan, review of any development applications near to the site should be conducted to determine if any other local developments may have an impact.

5.2 Pedestrians

Public pedestrian movements through the site shall be prohibited at all times during construction. The site will need to be secured from pedestrian access with site fencing.

Appropriate pedestrian traffic measures will be in place such as signage, traffic controllers and barriers to control access. This will be detailed in a Traffic Control Plan that will be prepared for the site once a Contractor has been appointed.

It is anticipated that pedestrian access to the site will be restricted by site fencing and boarding. Directional signage will be provided to guide pedestrians around the site and access will be maintained to adjacent operational buildings. Designated access points will be further discussed and reviewed by the Hospital during development of the finalised Construction Traffic Management Plan.

5.3 Cyclists

No dedicated cycleways are present in the vicinity of the site and cycling activity is expected to be limited. Any cyclists on the roadway will continue to follow the same routes.

5.4 Emergency Services

Emergency access to the Hospital will be maintained during the works.

Emergency services access to all local properties will be retained, with no road closures or major lane changes expected.

5.5 Construction Workers Transport

The number of daily construction workers will be finalised once a Contractor has been appointed.

Due to site constraints, it is expected that there will be no provision of parking within the site. To minimise required parking contractors will be encouraged to assist in the transportation of workers to the site.

6.0 Construction Requirements

6.1 Cranes

It is expected that cranes will be required to facilitate construction. This will be further developed once a Contractor has been appointed.

6.2 Traffic Control Plans and Signage

Temporary construction traffic related signposting will need to be developed in accordance with AS 1742.3 – Traffic Control Devices for Works on Roads. These Traffic Control Plans will need to be developed once a Contractor has been appointed and further construction details are known.

During construction the contractor shall each morning, prior to work commencing, ensure all signage is erected in accordance with the TCP and is clearly visible. Each evening, upon completion of work, the contractor is to ensure relevant signage is removed as required. A review of the TCPs can be undertaken as required to determine any need for future amendments.

6.3 Certificates and Approvals

Approval may need to be obtained from Roads and Maritime Services, Hornsby Shire Council and other relevant authorities. Approval may be required for items including, but not limited to:

- Road occupancy approvals
- Hoarding/fencing approvals
- Oversized vehicle use on local roads

Only certified personnel will be used on site to implement, monitor and carry out the Traffic Control Plan.

Responsibility for acquiring the necessary certificates, permits and/or approvals rests with the Contractor and must be completed prior to commencement of the associated works.

6.4 Environmental Control

Vehicle inspection and wash areas in accordance with industry standards will be provided. Construction vehicle wheels shall be cleaned prior to leaving the site to prevent transport of dust, dirt or gravel from the worksite onto the road network or pedestrian footpaths.

All loads are to be sealed or covered when entering or leaving the site. Loading of disposable material into vehicles leaving the site is to occur only within the site.

A suitable location for a material lay-down and spoil storage will be contained near the site amenities and around the buildings.

7.0 Further Information

7.1 Construction Traffic Management Plan

Once a Contractor has been engaged a finalised Construction Traffic Management Plan shall be prepared. This will include, but is not limited to, the following:

- Details on the construction staging and the length of each stage.
- Expected vehicle volumes during each stage of works.
- Expected number of workers during each construction stage.
- Site establishment plan showing vehicle entry and exit points and any areas for manoeuvring.
- Traffic control plans.

7.2 Emergency Services

In the event of an incident related to construction traffic on the public road network it will be the responsibility of the Site Manager to ensure that emergency services are notified. Contact "000" in cases of emergency to advise the relevant emergency service.

Furthermore, it is the responsibility of the Site Manager to advise the emergency services of

any restriction of vehicular access to the public and private areas a minimum of one week prior to its implementation.

7.3 Responsibilities

The Site Manager is responsible for, but not limited to:

- Implementing the Construction Traffic Management Plan and TCPs
- Informing contractors of the requirements of the Construction Traffic Management Plan
- Undertaking site inspections to ensure all signage is clearly visible and not damaged
- Monitoring the Construction Traffic Management Plan
- Reporting on incidents
- Obtaining permits

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Project Environmental Management Plan (PEMP)

Project No. N206
Contract No. HI17381

Hornsby Ku-ring-gai
Hospital Stage 2 and
Medical Imaging Building

June 2018

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State Significant Development (SSD) Checklist

Requirements of Crown Certifier (SSD)		Corresponding section(s) of the PEMP
i)	Hours of work	Aspect 4.1
ii)	24-hour contact details of site-manager	Aspect 1.5
iii)	Traffic management, in consultation with Council and TfNSW	Aspect 5.7
iv)	Construction noise and vibration management, prepared by a suitably qualified person	Aspect 5.3 To be provided separately (Acoustic Logic)
v)	Management of dust and odour to protect the amenity of the neighbourhood	Aspect 5.5
vi)	Erosion and sediment control	Aspect 5.1
vii)	Stormwater control and discharge	Aspect 5.1, 6.2 Environmental Risk Assessment (2.1 – 2.3)
viii)	Measures to ensure that sediment and other materials are not tracked onto the roadway by vehicles leaving the subject site	Aspect 5.7
ix)	Procedure for encountering groundwater during construction works	Aspect 5.22
x)	External lighting in compliance with AS4282:1997 Control of the Obstructive Effects of Outdoor Lighting	Aspect 5.23
xi)	A protocol detailing appropriate procedures for identifying and dealing with unexpected finds of site contamination (including asbestos materials, polycyclic aromatic hydrocarbons (PAHs), total recoverable hydrocarbons (TRH) and lead-based paint)	Aspect 5.22, Appendix 6.8
xii)	A protocol detailing appropriate procedures for identifying and dealing with unexpected finds of archaeological heritage	Aspect 5.9
xiii)	Waste classification (for materials to be removed) and validation (for materials to remain) be undertaken to confirm the contamination status in these areas of the site	Aspect 5.22
xiv)	Waste storage, recycling and litter control	Aspect 5.11

Revision History

Issue	Date	Revision Description	Authorised by
1	March 2018	Contract Issue	Tim Williams (Construction Manager)
2	25 June 2018	SSD	Nick Limbrey

Abbreviations

Abbreviation	Meaning
AASS	Actual Acid Sulfate Soil
ARMP	Approved Risk Management Plan
ASS	Acid Sulfate Soil
CAR	Corrective Action Request
CEMP	Construction Environmental Management Plan
CMS	Construction Management System
DAF	Department of Agriculture and Fisheries
DEHP	Department of Environment and Heritage Protection
ECC	Environmental Clearance Certificate
EMS	Environmental Management System
EPA	Environmental Protection Act
EPBC	Environmental Protection Biodiversity Conservation Act
ESC	Erosion and Sediment Control
ESCP	Erosion and Sediment Control Plan
ESD	Ecologically Sustainable Development
FOD	Falling Object Debris
HMP	Heritage Management Plan
HOTO	Handover Takeover
IECA	International Erosion Control Association
MSDS	Material Safety Data Sheet
NCR	Non-conformance Report
NEPM	National Environmental Protection Measure
NGER	National Greenhouse and Energy Reporting
NPI	National Pollutant Inventory
NSMS	National Safety Management System
PASS	Potential Acid Sulfate Soil
PERP	Project Emergency Response Plan
PFC	Perfluorinated Compound
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane Sulfonate
PPE	Personal Protective Equipment
QMS	Quality Management System
RDO	Rostered Day Off
RI	Restricted Items
RIFA	Red Imported Fire Ant
UXO	Unexploded Ordnance
WOL	Whole Of Life

1. System Application and Authorisation

1.1. Planning Environmental Management

Watpac is committed to safely construct the project, on time and on budget, without harm to the environment.

In particular Watpac will:

- Comply with the ESD and environmental requirements of the Contract and Contract Specifications
- Comply with all relevant regulatory and legislative requirements governing the protection of the environment
- Identify environmental issues, opportunities and potential adverse impacts arising from the project and identify appropriate prevention and or mitigation measures that will be applied to minimise any adverse effects
- Ensure all personnel who work on the project receive an environmental induction

Watpac also commits to managing the construction of the project in conformance with the Company's broader environmental vision, goals and objectives as documented in the Watpac Environmental Policy.

Specific project performance targets have been documented for each of the key environmental aspects in Section 5 of this Project Environmental Management Plan (PEMP).

1.2. Principal Requirements

The Principal requirements of environmental management for the construction phase of this project are as set out in the Contract documents, various development consents and specifications.

The Principal's Environmental objectives expressed in the Conditions of Contract have been addressed within this PEMP.

The Principal's requirements regarding notification of disruptive works have also been addressed; the notification procedure and templates for the Disruptive Works Notice (DWN) and Watpac's register of DWNs are provided in Appendix 6.7.

1.3. Application

This Project Environmental Management Plan has been prepared by the Watpac Project Team for the project, in conjunction with the Watpac Quality and Environment Manager, to document the company's environmental commitments, objectives and procedures for the project.

The PEMP has been developed to conform with and satisfy the requirements of:

- AS/NZS ISO 14001: 2004 - Environmental Management Systems
- The environmental performance requirements of the Principal as set out in the Contract and Contract specifications
- The Watpac Environment Management System
- NSW Government Environmental Management System Guidelines (2009), Part 3
- Applicable legal and other requirements
- The broader community's general expectations of an environmentally responsible organisation.
- The Review of Environmental Factors (dated 11 December 2017) prepared by APP for the Medical Imaging Building
- Note: Development Consent under the SSD application for the Stage 2 Redevelopment (main works) is pending, and its provisions will be incorporated into the PEMP upon receipt.

It is intended for use on the project and is based on the management systems and procedures currently in operation within Watpac.

This PEMP applies to all Watpac Construction personnel, visitors, subcontractors, consultants, Principal representatives, authority representatives and suppliers involved in the project.

1.4. Scope of Works

The Stage 2 Redevelopment project will deliver the following:

- A new 5-storey building, including:
 - Combined Intensive Care and High Dependency Unit
 - Combined Coronary Care and Cardiac Investigations Unit
 - Cardiorespiratory Inpatient Unit
 - Medical Inpatient Unit (including Dementia / Delirium and Stroke Beds)
 - Rehabilitation Inpatient Units (cold shell). Fit out of each IPU (option).
 - Ambulatory Care Centre providing a centralised location for all Ambulatory Care services
 - Combined Education space with the University of Sydney
 - Main Entry with Retail and Front of House (FoH) area located adjacent to the high-traffic Ambulatory Care Centre and the main Hospital Street.
- A refurbished and expanded Emergency Department within the HOPE Building
- PECC Refurbishment to be tendered as an option.
- Demolition of PECC as a tendered option which may be exercised.
- Fit-out of the co-located Paediatrics Inpatient Unit and Paediatric Allied Health clinics on the second floor of the new Medical Imaging building
- Associated civil and landscaping works throughout the campus

The Hornsby Ku-ring-gai Hospital is located about 25 kilometres north-west of the Sydney CBD. The hospital is within the local government area of Hornsby Shire and is bounded by Palmerston Road to the west, Burdett Street to the south, Derby Road to the east and Lowe Road to the north.

The hospital campus comprises of Lot 2 in DP14774, Lot 3 in DP14774, Lot B in DP363790, Lot 23 in DP814181, Lot 1 in DP232290 and Lot 189 in DP752053.

Refer to the overarching Project Management Plan for more information.

1.5. Site Contact

Craig Scott (Site Manager)	
Mobile Phone	0431 308 944
Work Phone	02 6561 3301
Email	cscott@watpac.com.au

1.6. Environmental Risk Assessment Process

As a policy, Watpac implements the following systems on all projects:

- Watpac Quality Management System (QMS)
- Watpac National Safety Management System (NSMS)
- Watpac Environmental Management System (EMS)

This PEMP is consistent with and where applicable directly references Watpac Quality, Environmental and OH&S Procedures.

As documented in its Environment Management System, Watpac adopts a systematic approach to environmental management that is designed to ensure potential environmental risks through all phases of project delivery are:

- Identified
- Evaluated and ranked
- Mitigated and controlled
- Subject to ongoing review and assessment.

Following award of the Contract, Watpac has conducted a comprehensive review of Contractual Conditions; Permit conditions; applicable environmental laws and regulations; Contract Specifications; and site conditions.

Our project team has conducted a number of pre-start Quality, Environment and Safety meetings and have undertaken full environmental and safety Risk and Opportunity Assessments for the project. The Risk and Opportunity Assessment process incorporates the development of risk profiles, Risk and Opportunity Assessment, mitigation strategies, the identification of opportunities and the development of project specific procedures.

The Watpac Management Plans are dynamic documents that will be reviewed and revised as warranted to ensure they remain current throughout all phases of the project.

Environmental elements have been integrated where applicable into project documents including:

- Site specific inductions
- Safety Plan
- Quality Plan
- Emergency Plan

Our comprehensive and systematic approach will ensure the Principal and community that Watpac will:

- Employ best environmental practice
- Harmonise safety and environment in planning work
- Exceed required quality and performance criteria without compromising the environment
- Satisfy ESD and environmental objectives

1.7. System Description

Watpac's Environmental Management System (EMS) has maintained third party Certification status for over 20 years, embracing the current Environment Management Standard AS/NZS ISO 14001:2004 without exception. The system has successfully been applied across a variety of projects with no limit as to the value and variability of the project. Our Environmental Management System has delivered high quality projects across diverse ranges of work including: multi-residential, commercial, industrial, infrastructural, medical, Defence, and refurbishment projects.

Significant aspects embraced within Watpac's Environment System that will be applied on this project will include:

- Scheduled inspections, monitoring and maintenance
- Auditing
- Education, training and awareness
- Feedback loop of environmental legislation and continual improvement
- Community Consultation
- GCAPL feedback

Watpac's core business is separated into modules into which each relevant procedure or form is grouped:

Module	Description
Pre-Contracts	Principal relations, tender opportunities, scoping and pricing tenders
Project Start-Up	Effective planning and coordination
Procurement	Subcontractor assessment for effective safety and quality capabilities
Administration	Financial administration of the project, EOT's, RFI's
Control	Control of the project encompassing quality, environment requirements
Project Completion	Defect management, commissioning, certification and handover
Quality	QMS procedures including document control, record management, audit
Environment	EMS procedures including Aspects, Risk Assessment, Compliance

All elements of AS/NZS ISO 14001 will be required, without exception, in the delivery of our projects and services. Our system is managed into tiers, which inform our integrated approach:

Tier	Type	Description
01	Environmental Policy	Watpac's policy on Environmental Management informs our approach when documenting procedures.
02	Environmental Management System Manual	Outlines Watpac's structure and general principles of the Environmental Management System.
03	Environmental Procedures	These procedures describe how activities within the company are performed. Each Environmental Procedure includes what, how, and when steps are performed; what materials, equipment and documentation are used and, where applicable, how processes are controlled.
04	Environmental Documentation and Records (forms, registers)	These documents prompt the detailed information, work, inspection and review processes. Changes are accommodated with reference to the correct Control of Documents and Data procedures. They will also act as records to document that all due diligence was performed.

1.8. Confidentiality

This PEMP and any attachments shall not be copied or reproduced without the express written permission of the Watpac's Quality and Environment Manager.

1.9. Authorisation

The issue and use of this PEMP is approved in accordance with the revision history table at the front of this document.

Commitment to implement Watpac's EMS as per this PEMP and internal procedures is made by the **Project Manager**.

Approved by  Date 27 June 2018

1.10. Precedence

Where an ambiguity is detected between the PEMP and the procedures in the Watpac Environmental Management System Manual, the procedures in the Project Environmental Plan shall take precedence.

1.11. Specific Exclusions

Any specific exclusions relative to the requirements of ISO 14001 will be noted in the relevant sections of this PEMP. The works covered by this PEMP are limited to the scope of work as defined by the Contract, drawings, and specification.

1.12. Validity

The currency of this PEMP remains valid from the date of issue until Practical Completion or approved revision and amendment.

2. Project Environmental Objectives

2.1. Watpac Environment Objectives

The objective of Watpac's Environmental Management is to undertake these activities in full consideration of Environmental requirements of Contracts, applicable legislation and as an environmentally responsible organisation of the broader community.

To this end Watpac has established and maintains an Environmental Management System planned and developed with all management functions in accordance with AS/NZS ISO 14001: 2004- Environmental Management Systems to control and minimise environmental impacts and preserve the environment through the following:-

- The control and minimisation of contaminate discharges or disturbances to air, land and water
- The control and minimisation of waste
- To review and re-source component materials, as opportunity presents
- Undertake regular review of the documented Environmental Management System against performance targets with the view toward continual improvement and the prevention of pollution.

Proper adherence to the Environmental Management System and active participation in environmental issues pertinent to Watpac's activities is a requirement of all Watpac personnel and those entities engaged by Watpac in the delivery of projects.

2.2. Project Environment Commitment

The Watpac Project Team is committed to the implementation of a comprehensive and effective EMS for the design and construction of this project.

Our Project Environmental Management Plan will comply with all elements of the Watpac Environmental System, certified to ISO 14001. It will embrace all elements of managing the design and construction of the Project to ensure full compliance with the requirements of the current legislation and expectations of the Principal and neighbouring community.

The Project Environmental Management Plan and its application will be continuously assessed and improved through processes of review and audit.

All participants in the project are responsible for implementing the PEMP and contributing to its improvement in order to ensure we meet our objective of providing a project which meets agreed requirements in terms of its construction and operational performance.

2.3. Key Performance Indicators

Policy	Objective	Measurement Basis	Target	Responsibility
Minimise Impacts	Minimise the impact of the site works to the receiving environment	Internal audits conducted by Management	No more than 5 environmental Corrective Action items issued to a single project from an internal audit.	Project Manager
			Zero Non-Conformances issued to a single project from an internal audit.	Project Manager
			Project is audited within 6 months of being established on site.	Project Manager
			Receipt of written positive feedback form local stakeholders etc. regarding environmental performance or positive experience.	Project Manager
			No major negative formal complaints received pertaining to poor environmental management or performance.	Project Manager
Compliance	Comply with all Statutory Requirements	Commonwealth, State and Local Council regulation	Zero Penalty Infringement Notices issued by Local Council or State EPA	Project Manager
			Zero Prosecutions issued by Local Council or State EPA	Project Manager

3. Project Organisation

3.1. Project Organisation Chart

Refer to Appendix B of the overarching *Project Management Plan*.

3.2. Roles and Responsibilities

3.2.1. Construction/Operations Manager

The Construction/Operations Manager has responsibility to:

- Ensure construction activities are undertaken in accordance with Watpac's Environmental Policy and the objectives and provisions of the PEMP
- Ensure all staff carrying out functions which may create a significant impact on the environment are appropriately trained to a level commensurate with their role and responsibilities in the project.

3.2.2. Quality and Environment Manager

The Quality and Environment Manager is responsible for establishing and maintaining the Company's Environment Management System and represents Watpac on all environmental matters pertinent to the EMS.

The Quality and Environment Manager is responsible for:

- Assisting the Project Manager with the implementation of the PEMP
- Providing support and technical assistance to the Project Environmental Coordinator
- Monitoring the effectiveness of the Environmental Management System.

The Quality and Environment Manager is authorised to require all employees to comply with the provisions of the documented Environmental Management System and may issue directions to that effect.

3.2.3. Project Manager

The Project Manager is responsible to the State Manager through the Construction Manager to ensure effective environmental controls are implemented for the duration of the project.

Specifically, the Project Manager shall be responsible for the:

- Implementing and maintaining the PEMP
- Reviewing the environmental aspects at project start-up and ensuring the PEMP addresses all requirements
- Providing guidance, motivation and resources to achieve the provisions of the PEMP
- Ensuring that subcontractors and suppliers are aware of Watpac's environmental policy and objectives, through conditions of contract, tender interviews, scopes of work and site environmental inductions as applicable
- Establishing monitoring records and ensuring the scope and frequency of monitoring activities satisfies the requirements of the PEMP

The Project Manager shall have sufficient authority and independence to:

- Identify and record any environmental problems
- Initiate solutions to the environmental problem
- Stop the works, if such a decision becomes necessary, in order to prevent or mitigate adverse environmental conditions, or if corrective measures recommended are not being carried out
- Provide recommendations for EMS and operational improvements to the Quality and Environment Manager

3.2.4. Project Environmental Coordinator

The Project Environmental Coordinator is responsible to the Project Manager for the maintenance of the Project Environmental Management system.

The Project Environmental Coordinator is the document controller for the PEMP and shall prepare/compile registers, records, plans and forms necessary for the implementation of environmental controls. The Project Environmental Coordinator shall review these as necessary and ensure timely distribution to all relevant parties in the Project.

Responsibilities of the Project Environmental Coordinator shall include:

- Monitor the construction processes to ensure that appropriate environmental protection/procedures are in place
- Identify and record any environmental issues
- Recommend and initiate solutions to environmental problems and verify the implementation of solutions
- Investigate all environmental complaints (which shall be recorded on the project records)
- Control and maintain project environmental records, including indexing records, prior to archiving
- Implement any environmental checklists, field records and procedures as applicable to the works
- Maintenance the PEMP and control of distribution
- Provide recommendations to the Quality and Environment Manager for EMS and operational improvements.

3.2.5. Independent Verification Staff

Individual employees or consultants may be appointed to assist the Project Manager to carry out environmental testing and inspection duties. This testing and inspection may be in addition to and separate from any testing and inspection required for Environmental Management purposes.

Independent Verification staff will not be drawn from personnel who are performing or directly supervising the activities being inspected.

3.2.6. Site Manager

The Site Manager is responsible to the Project Manager to:

- Ensure all work under the Site Manager's control is undertaken in accordance with statutory environmental requirements and the PEMP.
- Identify, recommend and initiate solutions to any project environmental issues
- Ensure all workers and subcontractors under the Site Manager's control are properly inducted in the requirements of the Watpac Environmental Policy and objectives and PEMP, and instructed in the following:
 - The role and environmental responsibilities of the project/works for which they are engaged
 - The use and understanding of any environmental documentation for the work
 - Specific environmental procedures for the project/works.

3.2.7. Foremen

The Foremen are responsible to the Site Manager to:

- Ensure all work under the Foreman's control is undertaken in accordance with statutory environmental requirements and the PEMP
- Identify, recommend and initiate solutions to any project environmental problem.

3.2.8. Contract Administrator

The Contract Administrator shall be responsible to the Project Manager for:

- Ensuring proper procedures are followed for the procurement of goods and services to ensure that Watpac's environmental policy and objectives and the requirements of the PEMP are achieved.

3.2.9. Direct Labour

Each tradesperson, trades assistant, operator and employee shall be responsible for carrying out their work in accordance with Watpac's stated Environmental Policy and objectives, the PEMP and as instructed by their supervisor.

3.2.10. Subcontractors and Suppliers

Watpac will ensure all subcontractors and suppliers are responsible for conducting their activities in an environmentally sensitive manner and in compliance with the requirements of this PEMP; ISO 14001 and any works environment management plans.

Site inductions will include detailed and site specific environmental information. Any trade likely to have a high impact on the environment is required to submit an EMP, which is assessed using the "Subcontractor EMP assessment checklist" to ensure it is comprehensive.

All personnel shall notify the Watpac Site Manager of any activity or incident, or any deviations from work place practices and procedures set out in this PEMP.

Subcontractor audits can be conducted. The standard audit checklist on the intranet contains environmental criteria which can be adapted to the nature of the trade work.

Contractors shall ensure their personnel working at the site:

- Have the appropriate environmental awareness training and / or qualification for the task undertaken
- Are aware of the potential environmental impacts of their activities on the site and the procedures by which such impacts are to be minimised or prevented.

4. Implementation

4.1. Legal and Other Requirements

All construction activities will be undertaken in accordance with the provisions of relevant laws and statutes, including but not limited to: the Environmental Planning and Assessment Act 1979 (NSW), the Protection of the Environment Operations Act 1997 (NSW), the Environmental Planning and Assessment Regulation 2000, State Environmental Planning Policy (Infrastructure) 2007, State Environmental Planning Policy (State and Regional Development) 2011, and Hornsby Local Environmental Plan 2013.

The development will be carried out in accordance with the provisions of the Building and Construction Industry Long Service Payments Act 1986 (NSW) and the Building and Construction Industry Long Service Payments Regulation 2017 (NSW).

The development will be undertaken in accordance with the Building Code of Australia and relevant Australian Standards, and in accordance with the Review of Environmental Factors (11 December 2017, prepared by APP) and contract plans and documentation noted therein. Pursuant to Section 22 of the Review of Environmental Factors (11/12/2017), the hours of work shall be:

- Monday to Friday (inclusive): 7.00am to 6.00pm;
- Saturdays: 8.00am to 1.00pm;
- Sundays and Public Holidays: No work permitted.

Additionally, all noisy works such as rock breaking, rock hammering, sheet piling and pile driving will only be carried out between the following hours:

- Monday to Friday (inclusive): 9.00am to 12.00pm, 2.00pm to 5.00pm;
- Saturdays: 9.00am to 12.00pm
- Sundays and Public Holidays: No work permitted

A Crown Certificate under Section 109R of the Environmental Planning and Assessment Act 1979 will be obtained prior to the commencement of works. At this stage, no further State Government licensing arrangements, control approvals or permits for environmental protection have been identified as necessary for construction activities to take place. Copies of any Commonwealth, State or Council approvals for the development will be kept on site.

The Quality and Environment Manager is responsible for identifying and assessing amendments to statutory and regulatory requirements potentially applicable to the project (such as State Government licensing arrangements, control approvals or permits for environmental protection) and initiating a review of the PEMP as warranted.

4.2. Monitoring

The responsibility for general environmental monitoring rests with all personnel engaged in the project.

More specifically the Project Environmental Coordinator shall:

- Monitor each element of the construction process to ensure that appropriate environmental protection/procedures are in place
- Undertake daily monitoring of the implementation and effectiveness of environmental controls
- Conduct and record weekly site inspections of environmental controls and direct such action as may be considered necessary to protect, minimise or rectify any environmental concerns.

The Project team shall undertake random site inspections and direct such action as may be considered necessary to protect, minimise or rectify any environmental concerns.

Before the commencement of works and at the conclusion of works, dilapidation reports shall be undertaken of areas adjacent to the works that may be affected by the works. Such areas may include public roads, internal roads, the exterior of hospital buildings, and the interior of hospital buildings.

4.3. Consultation

Watpac undertakes to advise adjacent property owners/managers of the timing and duration of activities likely to give rise to environmental concerns e.g. ground works or proposed out of normal hours activities.

Where applicable a list of adjoining building managers with their business and out-of-hours contact numbers will be maintained on the project records together with notations of pertinent advices.

4.4. Environmental Complaints

The Project Manager and/or the Project Environmental Coordinator will investigate all environmental complaints. Details of complaints and the remedial action taken will be recorded in the project records.

Watpac will notify the Principal of all applicable complaints received.

Any complaints received by the Principal will be investigated and recorded by Watpac as appropriate.

4.5. Environmental Incidents

Should an environmental incident occur during the course of the works, Watpac shall take prompt action to minimise any impact and inform the Principal or the Principal's Representative accordingly in accordance with the HI Stakeholder Management Procedure. Procedures to respond to an emergency incident have been documented in the Project Emergency Plan.

Subcontractors who become aware of an environmental incident shall report the matter immediately to the Site Manager.

All incidents will be:

- Addressed as expeditiously as possible to minimise the potential environmental impacts
- Investigated; where necessary Watpac will seek the advice of relevant Authorities and comply with their instructions
- Recorded in the project records.

If environmental harm is observed, there is a legal obligation to notify the State based environmental protection authority. As with any environmental incident, the following process should be followed:

- Complete the Environmental Complaint and Incident Report Form (C-FRM-060).
- Send report to your State Environmental Manager.
- Environmental Manager will advise if the incident is indeed a notifiable event, at which point the report form should be issued to the Principal with the recommendation that the incident be reported to the State Environmental Protection Agency.

4.6. Reporting

The Client will be notified of applicable environmental incidents and complaints, as soon as possible thereafter, including notification of the proposed corrective action.

Project Reports submitted to the Client will report on all applicable environmental matters including environmental incidents, non-conformances, complaints, performance and the implementation and effectiveness of the PEMP.

All communication of information concerning the project environmental performance, internally and externally, shall be in compliance with Watpac 'Environmental Communication' procedure.

4.7. Notifiable Events – Duty to Notify

The duty to notify is set out in Protection of the Environment Operations Act 1997 (NSW).

The duty to notify of environmental harm is a legal requirement that ensures that the administering authority and other relevant persons are made aware of incidents that may have caused or threaten serious environmental harm or material environmental harm, and that appropriate action can be taken to minimise the extent of environmental harm caused.

In addition to the duty to notify the administering authority of incidents that cause or threaten serious or material environmental harm, there is a specific duty to notify for anyone carrying out a resource activity other than mining (i.e. a petroleum, gas, geothermal or greenhouse gas activity licensed by an environmental authority) where the activity:

- Causes or threatens a negative impact on the water quality of an aquifer that is not authorised under the Act; or
- Causes the connection of two or more aquifers that is not authorised under the Act.

Incidents that will require notification under the duty to notify will be referred to as 'notifiable events'.

Under the Act, Watpac is classified an employee, contractor, or agent, who causes or becomes aware of a notifiable event, must notify the person who employs them or engaged them as a contractor or agent (i.e. the Principal) within 24 hours of becoming aware of the event.

The notice must contain sufficient details to provide notice of the event, its nature, and the circumstances in which it happened (for simplicity referred to as the details of the event). Watpac must always keep a record of when and to whom they gave notice of a notifiable event.

If the Principal cannot be contacted, then Watpac must give the administering authority (the State Environmental Authority) written notice with details of the event no later than 24 hours after first becoming aware of the event.

The Principal has a duty to give written notice with details of the event to the administering authority no later than 24 hours after becoming aware of the event.

As soon as possible Watpac must also either:

- Give written notice with details of the event to any combination of the occupiers or registered owners of affected land; or
- Give public notice of the details of the event.

Public notice could be by radio or television announcement or the erection of appropriately sized signs in the vicinity of the affected land.

The Environmental Complaint or Incident Report (C-FRM-060) can be used to notify the department (as administering authority) about notifiable events.

In addition to the written notice, if a person becomes aware of a notifiable event, the person should immediately call the State Environmental Protection Authority and report the matter.

In addition to notifying the department, it is considered best practice to notify the council for the local government area.

4.8. Emergency Response Plan

Actions to respond to foreseeable environmental emergencies are detailed in aspect 5.19 in the aspects section (Section 5.0).

The response procedures, emergency contact numbers, responsibilities and required actions for responding to environmental emergencies have been integrated into the Project Emergency Plan.

4.9. Environmental Training

As part of their site environmental induction/training all personnel engaged in the works shall be made aware of the provisions of this Project Environmental Management Plan in order to promote a general awareness of the environment and to minimise any potential impact upon it.

Environmental induction and training will be appropriately commensurate with their roles and environmental responsibilities in the project.

Evidence of environmental induction and training of personnel for this project shall be maintained on the project records.

Contractors shall be responsible for providing evidence to Watpac, as applicable, prior to commencing work that:

- Environmental training needs of their personnel working at the site been assessed and satisfied

- Contractor personnel have received the appropriate environmental awareness training and / or qualification for the task to be undertaken.

Training requirements for Watpac personnel are identified and planned on appointment to their role, and for each project. The Project Manager will monitor the skills required by Watpac personnel and contractors to effectively implement the PEMP and its procedures on site. Any further training needs will be identified, implemented and recorded in the project records.

4.10. Auditing

The Site Manager and the Watpac Quality and Environment Manager will conduct regular evaluations of the implementation and effectiveness of the PEMP on site.

In addition to the regular reviews, the Quality and Environmental Manager will conduct periodic environment audits including an audit of the implementation and effectiveness of this PEMP.

The audit will identify any deficiencies in the implementation and effectiveness of environmental management practices at the site. The Quality and Environment Manager will issue Non-conformance Reports (NCRs) or Corrective Action Requests (CARs) as applicable.

4.11. Environmental Non-Conformances, Corrective and Preventive Actions

Watpac will identify and evaluate all non-conformances with legal requirements; applicable permits; specifications and the requirements with this PEMP.

Non-conformance Reports shall be raised as appropriate to clearly identify the nature of the non-conformance and document the proposed remedial action and the person responsible.

The Site Manager will verify follow-up action is implemented and effective. Reports will be filed in the project records.

Corrective and Preventive Action Requests will be raised, where appropriate, as a result of complaints, incidents, non-conformances and deficiencies identified in the implementation of environmental practices and procedures. Corrective and Preventive Action Requests shall be raised, where appropriate, to correct and/or prevent non-conformances in construction activities and in the operation of the Environmental Management System.

Actions as a result of Corrective and Preventive Action requests will be implemented, followed-up and recorded in the Project records.

4.12. Project Environmental Records

The following documents are to be retained in the project records:

- Weekly Environmental Inspection Reports
- Environmental Incident and Complaint Reports
- Environmental Non-conformance Reports
- Environmental Corrective and Preventive Action Requests
- Environmental Reports
- Copies of all applicable Environmental Permits
- Environmental Monitoring Records
- Environmental Induction and Training Records
- Environmental Audit Reports
- Project Environmental Aspects and Risk Assessment
- Any correspondence regarding environmental issues relating to the site.

4.13. Issue and Control of the Project Environmental Management Plan

The Controlled copy of this PEMP is located in the project's environmental folder on the shared network drive. All hard copies of this document are uncontrolled.

The Project Manager is responsible for the issue of the PEMP. Copies of the PEMP shall be distributed electronically via Aconex. The distribution list shall be maintained within Aconex and is available from the Project Document Controller.

The PEMP is to be revised with any applicable changes to the environmental requirements for this project.

4.14. Environmental Procedures

The Watpac Environmental Management System includes, but is not limited to, written procedures for controlling the following:

Internal Procedure Number	Description
C-PRO-003	Project Start-Up – Environment
C-PRO-004	Project Start-Up – Emergency Planning
C-PRO-014	Control of Non-Conformances
C-PRO-017	Environmental Control
C-PRO-021	Internal Audit
C-PRO-023	Control of Monitoring and Measuring Devices
C-PRO-028	Corrective and Preventive Action
C-PRO-030	Competence, Training and Awareness
C-PRO-031	Evaluation of Compliance
C-PRO-032	Aspects and Risk Assessment
C-PRO-033	Legal, Statutory and Other Requirements
C-PRO-034	Complaint and Incident Management
C-PRO-036	Environmental Responsibilities

5. Aspects Management

5.1. Environmental Risk Assessment

Refer to Appendix 6.2

5.2. Aspects

The Project Team in conjunction with the HSE Manager have identified and addressed the environmental aspects associated with this project. They have:

- Reviewed the environmental requirements of the Contract and Contract Specifications
- Reviewed all environmental consent conditions including permit and development consent conditions and pollution control approvals applicable to the project
- Reviewed the site conditions and proposed construction activities
- Reviewed the Watpac Environmental Aspects Register
- Reviewed the Watpac Register of Statutory and Environmental Reference Documents to identify applicable legal and other statutory requirements
- Identified for each activity, the environmental aspects and associated actual and potential environmental impacts and opportunities for normal and uncommon circumstances
- Assessed the inherent and residual significance of each identified environmental risk and opportunity using the probability of occurrence of the impact and the severity of the impact.
- Documented within this PEMP project specific action plans and control measures to manage each identified environmental aspect, risk and opportunity.

5.3. Action Plans and Control Measures for Identified Environmental Aspects

Environmental Action Plans have been developed to manage each environmental aspect pertinent to this project, as identified in the Environmental Risk Assessment.

These action plans document the objective, strategy, action plan, control measures and performance targets for each identified aspect. Each Environmental Aspects are addressed separately under sub-headings in the pages hereafter.

Aspect 5.1	
Erosion and Sediment Control (Water Quality Control)	
Objective	Maintain the health of any impacted nearby waterbodies.
Management Strategy	Site environmental induction to address: <ul style="list-style-type: none"> • The issues concerned with the conservation of water usage in construction activities. • The issue of water quality and protective measures to prevent avoidable discharge into, or contamination of, waterways or established drainage systems.
Action	Project Manager shall ensure: <ul style="list-style-type: none"> • Any water leaving the site must be compliant with the following discharge limits: • Less than 50mg/L Turbidity, or 50 NTU, or less than 10% of the receiving environment (to IECA guidelines). • pH must be between 6.5 and 8.5 • Dissolved Oxygen must be greater than 6 mg/L or 80% saturation level for a normal 24 hr period; and • Temperature of the receiving waters must not rise more than 2°C above seasonal mean temperature. • Zero oils, hydrocarbons, coarse material, cement or other chemicals can be present in discharge. • Wet discharge must be managed. This includes designated areas for washing out of concrete trucks, concrete pumps, paint, masonry cutting, and plaster. Refer to C-PLA-014 for more information. • Painter to supply own environmental washup facility • Use of water for wet trades' clean-up is minimal. • Paint, solvents, oils etc. are correctly stored. • Stockpiles of bulk materials are located well clear of any waterway or drainage systems, protected by sediment fences, and covered by tarp, seed, mulch or chemical binder. • Where available, a recycled water source will be used for dust suppression. • Where water discharge compliance can't be achieved, contaminated wastewater is to be disposed to sewer under a Trade Waste Agreement, or collected by a licenced contractor to a licenced facility. • Roadways can be swept, not washed down. Machine operated street sweepers shall be used to ensure spoil and debris does not get tracked onto Council or RMS Roads. The frequency of use shall be increased during periods of unfavourable weather • Work in or around watercourses should be managed to minimise impact in accordance with Watpac plan C-PLA-014. • Sediment basins: Refer to C-PLA-014 for establishing, managing and servicing sediment basins. • During bulk excavation, truck shakers shall be installed at all exit points to manage spoil within the site. These shall be at least 6m in length
Performance Indicators	<ul style="list-style-type: none"> • No incidents of inadvertent waste of water. • No run-off of sediment • No pollution or contamination of waterways.
Reporting	<ul style="list-style-type: none"> • Daily monitoring reflected in daily site diary entries when required • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form
Applicable Permits	<ul style="list-style-type: none"> • Trade Waste Permit if required to use Council stormwater/sewer infrastructure
Reference	<ul style="list-style-type: none"> • Managing Urban Stormwater: Soils and Construction. Volume 1, 4th Edition. Blue Book. • NSW EPA Approved Methods for the Sampling and Analysis of Water Pollutants in NSW • Protection of the Environment Operations Act 1997 (NSW), Section 120 • Standard Methods for the Examination of Water and Wastewater, 20th Edition (APHA). • Water Act 1912 (NSW) • Water Management Act 2000 (NSW) and Amendment Act 2010 • Water NSW Act 2014 • Water Management (General) Regulation 2011 (NSW)

Aspect 5.2	
Protection of Existing Trees	
Objective	Protect existing trees from damage and maintain them in their condition as found at time of contractor site possession.
Management Strategy	<ul style="list-style-type: none"> Site environmental induction to address the issue of tree protection to prevent damage caused by construction activities. Establishment of tree protection zones (in accordance with AS4970-2009) around trees identified as significant or otherwise worthy of retention in the Arboricultural Development Assessment Report (<i>Moore Trees Arborist Report, Hornsby Ku-ring-gai Hospital S2 24/10/2017, Appendix K of SSD Application 17_8647</i>)
Action	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> Tree Protection Zones (TPZs) are established around trees identified as significant or otherwise worthy of retention in the Arboricultural Development Assessment Report, and access is restricted to TPZs by the use of protective fencing which is maintained and regularly checked. If fencing cannot be installed, or must be temporarily removed, other tree protection measures must be used such as: signage, trunk and branch protection, ground protection, root protection during works within the TPZ, scaffolding. <p>All subcontractors engaged by Watpac are to ensure:</p> <ul style="list-style-type: none"> Protective measures (i.e. fencing) around TPZs are not disturbed without express written permission from Watpac site management. Works including but not limited to the following are not undertaken within TPZs: machine excavation including trenching, excavation for silt fencing, removal of turf and topsoil, storage/stacking of items, preparation of chemicals (including cement products), vehicle and plant parking, refuelling, dumping of waste, washing and cleaning of equipment, placement of fill, lighting of fires, changing of soil levels, temporary or permanent installation of utilities and signs, physical damage to the tree.
Performance Indicators	<ul style="list-style-type: none"> No damage to protected trees.
Reporting	<ul style="list-style-type: none"> Daily monitoring reflected in daily site diary entries when required Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form
Reference	<ul style="list-style-type: none"> Australian Standards 4970-2009: Protection of trees on development sites Contract Specifications Arboricultural Development Assessment Report (<i>Moore Trees Arborist Report, Hornsby Ku-ring-gai Hospital S2 24/10/2017, Appendix K of SSD Application 17_8647</i>)

Aspect 5.3	
Noise and Vibration Management	
Objective	Control, minimise or avoid environmental nuisance caused by ‘unreasonable’ levels of noise or vibration in ground works or other structural activities.
Management Strategy	<ul style="list-style-type: none"> • Engage expert consultant Acoustic Logic to prepare Noise and Vibration Management Plan • Site environmental induction to address the issue of noise and protective measures to prevent ‘unreasonable’ noise caused by construction activities. • Site environmental induction to address the issue of vibration and protective measures to prevent disturbance/incidents caused by vibration. • Identify works likely to cause high vibration—communicate this to the Principal and to neighbours.
Action	All subcontractors engaged by Watpac are to ensure: <ul style="list-style-type: none"> • Works are carried out in accordance with the Noise and Vibration Management Plan prepared by expert consultant Acoustic Logic
Performance Indicators	<ul style="list-style-type: none"> • No complaints concerning noise nuisance. • No fines received.
Reporting	<ul style="list-style-type: none"> • Daily monitoring reflected in daily site diary entries when required • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form
Reference	<ul style="list-style-type: none"> • Protection of the Environment Operations Act 1997 (NSW) • Protection of the Environment Operations (Noise Control) Regulation 2008 (NSW) • Contract Specifications • Australian Standard 2436-1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites • Protection of the Environment Operations Act 1997 (NSW) • Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth), s12, 15B, 16, 18, 20, 21, 23, 24B, 24D

Aspect 5.4	
Dust, fumes & air quality control	
Objective	Avoid, control or minimise contaminant emissions to the atmosphere caused by rising dust, vehicle/plant emissions, noxious fumes/odours, or paint spraying activities.
Management Strategy	<ul style="list-style-type: none"> • Site environmental induction to address the issue of air quality and protective measures to prevent avoidable discharge of contaminant to the atmosphere • Implement measures for control and suppression of dust
Action	<p>All subcontractors engaged by Watpac are to ensure:</p> <ul style="list-style-type: none"> • Dust is minimised throughout work areas. During the demolition phase dust will be minimised by heavy duty shade cloth, water suppression and demolition strategy. • Materials deliveries such as fill, soil, sand, gravel, landscaping supplies etc, are transported to the site under covered loads. • Stockpiles are dampened down or covered as necessary. • Trucks are not overloaded and load covers are used when excavated material is transported from site. • Plant and equipment is operated and maintained in accordance with acceptable industry standards and will be turned off when not in use. • Putrescible waste is regularly removed from site. • Site conditions are regularly inspected and hand held sprinklers and/or water cart are used as required to minimise dust. • On-site speed restrictions and the need to control dust are formally discussed during site inductions. • Roads bordering the site kept free of dust and mud (regular mechanical and manual sweeping as required). • External paint spraying activities are undertaken in accordance with local authority requirements and not carried out during adverse weather conditions. • Refer Appendix 6.2 • Access roads and materials handling areas to be swept regularly.
Performance Indicators	<ul style="list-style-type: none"> • Visual observance of dusts levels; vehicle and plant emissions • No dust complaints
Reporting	<ul style="list-style-type: none"> • Daily monitoring reflected in daily site diary entries when required • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form
Reference	<ul style="list-style-type: none"> • Protection of the Environment Operations Act 1997 (NSW) • Protection of the Environment Operations (Clean Air) Regulation 2010 (NSW) • National Greenhouse and Energy Reporting Act 2007 (NGER Act) • National Environmental Protection Measure (NEPM) for Ambient Air Quality • Contaminated Land Management Act 1997 (NSW)

Aspect 5.5	
Retention of the Timber of Angophora Trees for Use by the Public Artist	
Objective	Avoid, control, or minimise damage to nominated Angophora trees during removal and temporary on-site storage prior to handover to artist engaged by client.
Management Strategy	<ul style="list-style-type: none"> • SWMS for demolition and landscaping contractors to address specific methods of removal and careful handling of nominated trees in consultation with a qualified arborist. • Tree Protection Zones (TPZs) to be maintained with protective fencing (see Aspect 5.2 above for further details) around nominated trees until removal is required. • Protected on-site storage to be provided for up to 72 hours, during which the timber is to be collected by the artist engaged by the client or another authorised client’s representative.
Action	<p>All subcontractors engaged by Watpac are to ensure:</p> <ul style="list-style-type: none"> • Trees where timber is nominated for retention are felled as cleanly and neatly as possible. • Timber is transported carefully to on-site storage area. • Tree-felling work is undertaken safely and in accordance with the provisions of <i>Guide to Managing Risks of Tree Trimming and Removal Work</i> (Safework NSW, July 2016). <p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> • TPZs are maintained around the nominated trees until removal work is to be undertaken. • Adequate storage is provided to reasonably protect the timber from damage by both human and natural causes.
Performance Indicators	<ul style="list-style-type: none"> • Visual observance of timber condition before and after felling. • Acceptance by the artist engaged by the client or another authorised client’s representative.
Reporting	<ul style="list-style-type: none"> • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form, in accordance with Aspect 5.2 above.
Reference	<ul style="list-style-type: none"> • Guide to Managing Risks of Tree Trimming and Removal Work, Safework NSW, July 2016

Aspect 5.6	
Vehicular and Pedestrian Traffic Management	
Objective	Avoid interference of, or obstruction to, roadways, footways or access points by the use of appropriate traffic control measures.
Management Strategy	<ul style="list-style-type: none"> • Site environmental induction to address the issues of access and delivery arrangements for materials including timing and unloading of materials. • Coordinate construction programme and delivery times to avoid hold-ups and traffic congestion. • Provide appropriate fencing/hoardings and protection for the public.
Access	<ul style="list-style-type: none"> • Access to the site will be determined to minimise impact.
Action	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> • Controls documented in the approved Traffic Management Plan are implemented • Vehicle entry/exits with shakedown grids will be established to remove the potential for vehicles departing the site to deposit debris on the roads. Watpac will deploy street sweepers as required. • Site fencing/hoarding is properly secured and lockable; access points are clearly designated and appropriate signage erected. • Materials set-down areas are established. • All required Approvals are obtained and Traffic Controllers are engaged as necessary when temporary road closures are required. • Traffic management controls are monitored • Construction program and delivery times are coordinated to avoid delays and possible traffic congestion. • Access points for each stage of construction are unobstructed to facilitate prompt service to set-down areas within the site. • Materials handling is managed to cause least disruption to traffic and local amenity. • Traffic Controllers are RMS accredited • There shall be no trucks permitted to queue on local roads. All trucks will be required to queue on state roads until they can be wholly accommodated within the site or within an approved work zone. Two-way radios and/or mobile phones shall be used to manage this condition. • Where required, all pedestrians shall be escorted across the site by RMS accredited Traffic Controllers.
Performance Indicators	<ul style="list-style-type: none"> • Reports or complaints of interruption or interference with pedestrian or vehicular traffic movement around the site.
Reporting	<ul style="list-style-type: none"> • Daily monitoring reflected in daily site diary entries • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form
Applicable Permits	<ul style="list-style-type: none"> • Road Corridor Permit • Traffic Control Permit
Reference	<ul style="list-style-type: none"> • Public Health Act 2010 (NSW) • Road Transport Act 2013 (NSW) • Road Transport (General) Regulation 2013 (NSW) • Roads Act 1993 (NSW)

Aspect 5.7	
Commuting Mass Transport & Local Car Parking	
Objective	Encourage commuting mass transport on site and minimise impact to local neighbourhood associated with car parking congestion.
Management Strategy	Inform and promote alternative transports options on site.
Action	Project Manager shall ensure that:- <ul style="list-style-type: none"> • Inductions and Safety Meetings address and promote carpooling, company buses, or public transport options. • Nearby public transport hubs should be identified during inductions. • Provide shuttle bus service during peak morning and afternoon times to/from site to local public transport hub/exchange.
Performance Indicators	<ul style="list-style-type: none"> • Site personnel are using alternative means of transport.
Reporting	<ul style="list-style-type: none"> • Performance to be noted in monthly PCG report.
Reference	<ul style="list-style-type: none"> • None

Aspect 5.8	
Accidental Discovery of Artefacts	
Objective	Avoid damage or disturbance to archaeological/cultural artefacts including skeletal remains, shell middens or other cultural artefacts.
Management Strategy	<ul style="list-style-type: none"> Conduct a historical investigation of the site to establish, as far as practical, the likelihood of existence of archaeological/cultural artefacts. Site environmental induction to address possibility of discovery of archaeological/cultural artefacts. Excavation personnel to remain vigilant over ground penetration points.
Action	Project Manager shall ensure: <ul style="list-style-type: none"> Where archaeological/cultural artefacts are discovered, personnel cease work in the subject area and effect practical protection measures. The Client and the EPA is promptly advised of significant discoveries. Directions from the EPA are followed If suspected human remains are discovered that work is ceased and the Superintendent, Police and State Coroner’s Office are contacted, and if applicable, the Department of Aboriginal Affairs
Performance Indicators	<ul style="list-style-type: none"> No damage, or minimal disturbance, to any archaeological/cultural artefacts discovered.
Reporting	<ul style="list-style-type: none"> Superintendent is immediately notified of any discovery Daily monitoring reflected in daily site diary entries Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form
Reference	<ul style="list-style-type: none"> Environment Protection and Biodiversity Conservation Act 1999. Aboriginal Cultural Heritage Act 2003, s 23-26; Torres Strait Islander Cultural Heritage Act 2003, s 23-26

Aspect 5.9	
Demolition Works	
Objective	Avoid, control, or minimise disruptive or damaging environmental effects of demolition works.
Management Strategy	<ul style="list-style-type: none"> • Site environmental induction to address issues of air quality, noise, vibration and vermin/pests, and relevant protective measures. • Implement site-wide measures for control and minimisation of dust, odours, fumes, noise, vibration, and vermin/pests.
Action	<p>All subcontractors engaged by Watpac are to ensure:</p> <ul style="list-style-type: none"> • All demolition work is undertaken in accordance with AS2601-2001: Demolition of Structures. • Dust is minimised throughout work areas. During the demolition phase dust will be minimised by heavy duty shade cloth, water suppression and demolition strategy. • Plant and equipment is operated and maintained in accordance with acceptable industry standards and will be turned off when not in use. • Trucks are not overloaded and load covers are used when demolished material is transported from site. • All construction activities will be undertaken mindful of the provisions of AS 2436:1981 - Guide to Noise Control on Construction & Demolition Sites. • Each item of plant is fitted with effective noise suppression devices (generally exhaust mufflers) as applicable. • All plant, equipment and machinery is operated and maintained in accordance with acceptable industry standards and turned off when not in use. • Vibration is controlled in accordance with AS 2670.2. • Six weeks prior to the commencement of any demolition, individual blocks, properties and the surrounding area should be inspected in order to identify the presence and extent of any infestations. Where infestations are identified, appropriate treatments must be implemented by licenced Pest Control Contractors to eliminate infestation before demolition.
Performance Indicators	<ul style="list-style-type: none"> • Visual observance of timber condition before and after felling. • Acceptance by the artist engaged by the client or another authorised client’s representative.
Reporting	<ul style="list-style-type: none"> • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form, in accordance with Aspect 5.2 above.
Reference	<ul style="list-style-type: none"> • Australian Standard 2601-2001: Demolition of Structures • Australian Standard 2436-1981: Guide to Noise Control on Construction, Maintenance and Demolition Sites

Aspect 5.10	
Waste Management	
Objective	To control the disposal of waste generated from construction activities.
Management Strategy	<ul style="list-style-type: none"> • Site environmental induction to address the issue of waste management and protective measures to prevent environmental incidents caused by inappropriate methods of disposal of waste. • Designated bin storage locations (for both Wheelie bins & skips), and an appropriate regime for clearance.
Action	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> • A Waste Management Plan is developed and implemented to ensure at least 80% of waste generated during demolition and construction by weight is reused or recycled. • The SDS of Chemicals and Hazardous Substances should be consulted before disposal instructions, which will usually involve dropping of containers to Chemical Waste/Hazardous Collection stations. Containers must not be washed out and disposed of as normal. • Waste is minimised through the use of detailed measurement and conservative ordering to prevent oversupply of materials. • All waste will be sorted (including that from clearing, demolition, off cuts, etc.) into appropriate categories for recycling or disposal. • Watpac will ensure that all recyclables are placed into appropriate recycling processes and uses (e.g. scrap metal, mulch, road base) and that wastes are safely disposed of. • Work with the waste contractor engaged for the project to ensure that all practicable initiatives to minimise, segregate, re-use and recycle construction waste are identified and implemented. • “Ship to point of use” techniques will be deployed where practical to minimise protective wrappings or enclosures. • Waste skips/bins are covered and located to be easily accessible and protected from weather. • A recycling bin will be provided separately to the bin for Construction waste material and general waste (food scraps, cans, etc). Recyclable materials will include cardboard, glass, and plastics. • Paper and toner waste will be collected and recycled in specific office bins. • The construction site is kept free from build-up of waste materials by directing regular clean-ups by subcontractors. • No burning of waste takes place on-site. • Concrete washouts will be provided on site, allowing evaporation of slurry water. Refer to C-PLA-014 for more info on correct establishment. • Paint washouts will be provided and when full will be taken off-site to be filtered before discharging. • Neither Watpac nor any subcontractor will discharge or dump any deleterious materials into the drainage system, onto any roads or at any locations that have not been reviewed and approved by the Principal. • Any liquid waste, including backwash of wet trades, should be collected by a licensed liquid waste collection contractor (look for ‘Waste Reduction and Disposal Services’)
Performance Indicators	<ul style="list-style-type: none"> • No incidents arising from the disposal of end waste.
Reporting	<ul style="list-style-type: none"> • Waste Reports including details of the percentage of waste diverted from landfill, to be maintained, where applicable • Daily monitoring of waste facilities reflected in daily site diary entries • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection
Reference	<ul style="list-style-type: none"> • Waste Avoidance and Resource Recovery Act 2001 (NSW) • Protection of the Environment Operations (Waste) Regulation 2014 (NSW) • National Environment Protection (Movement of Controlled Waste between States and Territories) Measure. • Protection of the Environment Operations Act 1997 (NSW)

Aspect 5.11	
Hazardous Substances and Dangerous Goods	
Objective	To avoid contamination of the environment or risk to human health To appropriately manage the discovery of Hazardous Materials on site
Management Strategy	<p>Site environmental induction to make personnel aware of the project handling and storage procedures to manage Hazardous Substances and Dangerous Goods</p> <ul style="list-style-type: none"> • All hazardous materials introduced onto site must be accompanied by a MSDS and the material entered onto the project register. • All hazardous materials must be stored in compliance with the manufacturer's recommendations and in accordance with Australian Standards • No bulk fuels are to be retained on site. Refuelling of plant is to be undertaken on a just-in-time basis and only within a prepared designated area. • Any discovery of a hazardous material is immediately reported to the client.
Action	<p>All subcontractors engaged by Watpac are to ensure:</p> <ul style="list-style-type: none"> • The quantities of Hazardous Substances and Dangerous Goods on site are minimised • Fuelling and maintenance of vehicles and equipment on site is avoided. Where refuelling is unavoidable, the location and procedures will be strictly controlled. • Subcontractors advise the Site Manager of the type of material, location, volume and any special handling / storing precautions in relation to any dangerous gases or flammable materials that are proposed to be brought on site. • Subcontractors do not use any materials which are classified as Hazardous in or adjacent to occupied areas without the prior approval of the Site Manager. • Subcontractors provide a current MSDS for all Hazardous Substances and Dangerous Goods proposed to be brought onto site. • A Site MSDS Register is developed and maintained. • Storage and handling of hazardous materials is monitored daily. • A Spill Kit and Site Emergency Plan are readily accessible. • Clean up materials are disposed of in compliance with regulatory requirements. • All oxygen and acetylene cylinders are properly stored in an upright position and adequately restrained away from heat sources.
Performance Indicators	<ul style="list-style-type: none"> • No spillages, incidents or complaints
Reporting	<ul style="list-style-type: none"> • Licenced removal contractor to provide site safety clearance certificate and documented evidence of proper disposal. • Health Infrastructure must be notified in accordance with the HI Stakeholder Management Plan Process. Refer to Appendix 6.1
Reference	<ul style="list-style-type: none"> • Work Health and Safety Regulation 2011 (NSW), s 357 • National Code of Practice for the Storage and Handling of Workplace Dangerous Goods [NOHSC: 2017 (2001)]. • Environmentally Hazardous Chemicals Act 1985 (NSW)

Aspect 5.12	
Spill Management and Response	
Objective	Control, minimise or avoid spillage of hazardous or prohibited substances, and react quickly to contain spills in the event they occur.
Management Strategy	<ul style="list-style-type: none"> • Induct all personnel to handle chemicals with care. • Provide spill kits to all sites.
Action	<p>In event of spill:</p> <ul style="list-style-type: none"> • Assess: Evaluate the spill to determine if it can be dealt with by an individual, the spill response team or if outside assistance is required i.e. hazchem, police, fire brigade, specialist spill response company. • Secure: Make the site safe for all personnel and the general public. • Contain: Spill response equipment such as spill booms, drain covers or bunding can be used to contain the spill. For solids, tarps may be used to cover and prevent dampness to granules or possible dispersion by wind. • PPE: Identify the liquid and check the MSDS to ascertain the required PPE. • Absorb: Once the liquid is contained, it will need to be converted to a solid by absorption. Use the appropriate absorbing pads or absorbent (according to the type of material spilled) to soak up the spill by placing them over the liquid. Remove the saturated pads and replace as necessary. On porous surfaces, sprinkle loose absorbent over the spill and broom through until surface appears dry. • Dispose: Place the spent absorbent in the disposal bags. Correctly dispose of contaminants off site using a licensed contaminated waste disposal contractor. • Report: Document the incident and include what happened, when it happened, where it happened; and what was done to eliminate or minimise the impact. • Restock: Order and replace used up PPE and absorption materials. <p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> • Spill containment and treatment equipment and materials will be available near storage areas of hazardous materials. Spill kits and other suitable incident response equipment will also be located at other key points around the site and maintained ready for use. • Subcontractors will be required to maintain their own spill kits where required. • Spills of hazardous materials will be collected by licensed contractor and collected for treatment at a licensed waste disposal facility. • All regulated waste will be tracked as per the Environmental Protection (Waste) Policy 2000 • Contaminated ground is made good and contaminated material that is to be removed from site is disposed of in an approved manner. • SWMS must be submitted and approved for the handling and use of hazardous chemicals. • Any waste oils, lubricants and contaminated cloths, resulting from maintenance of plant on-site, are placed in suitable containers prior to removal and disposal at an approved waste receiving facility. • Project Environment Consultant to prepare a Remediation Plan for the management of all contaminated soil. The Remediation Plan shall be submitted to Principal for approval.
Performance Indicators	<ul style="list-style-type: none"> • No spillages. • Spill kits readily accessible.
Reporting	<ul style="list-style-type: none"> • Daily monitoring reflected in daily site diary entries when required • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form • Health Infrastructure must be notified in accordance with the HI Stakeholder Management Plan Process. Refer to Appendix 6.1
Reference	<ul style="list-style-type: none"> • Work Health and Safety Regulation 2011 (NSW), s 357 • Protection of the Environment Operations Act 1997 (NSW), Section 120 • National Code of Practice for the Storage and Handling of Workplace Dangerous Goods [NOHSC: 2017 (2001)].

Aspect 5.13	
Management of Radiation and Radioactive Material	
Objective	To avoid contamination of the environment or risk to human health during demolition, construction, commissioning and post-handover operation.
Management Strategy	<p>Site induction to make personnel aware of the radiation-specific design and construction requirements of the Medical Imaging building and any other location where radiation-related activities will be required during operation of the facility.</p> <p>Certification of compliance with the <i>Radiation Control Act 1990</i> and <i>Radiation Control Regulation 2013</i> before commencement of construction works and again before commencement of hospital operation by a suitably qualified radiation consultant.</p>
Action	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> • Site induction makes personnel aware of the radiation-specific design and construction requirements of the Medical Imaging building and any other location where radiation-related activities will be required during operation of the facility. • Prior to the release of the certificate under Section 109R of the EP&A Act 1979, certification of design compliance with the <i>Radiation Control Act 1990</i> and <i>Radiation Control Regulation 2013</i> is provided to the certifying authority. • Construction works are undertaken in accordance with the Radiation Shielding Assessment Report (dated 22/04/2016 by Radiation Services Group, received as part of the tender documentation). • Prior to commencement of hospital operation, certification from a suitably qualified radiation consultant is provided to verify that the construction of the work satisfies all relevant requirements. <p>All subcontractors engaged by Watpac are to ensure:</p> <ul style="list-style-type: none"> • They are aware of the radiation-specific design and construction requirements of the Medical Imaging building and any other location where radiation-related activities will be required during operation of the facility as detailed in the site induction. • Their works are undertaken in accordance with the Radiation Shielding Assessment Report (dated 22/04/2016 by Radiation Services Group, received as part of the tender documentation), as well as the <i>Radiation Control Act 1990</i> and <i>Radiation Control Regulation 2013</i>.
Performance Indicators	<ul style="list-style-type: none"> • Certifications of compliance received. • No incidents or complaints.
Reporting	<ul style="list-style-type: none"> • Works to be certified by a suitably qualified radiation consultant; certifications to be provided to the Principal.
Reference	<ul style="list-style-type: none"> • Work Health and Safety Regulation 2011 (NSW) • Radiation Control Act 1990 • Radiation Control Regulation 2013 • Radiation Shielding Assessment Report (dated 22/04/2016 by Radiation Services Group, received as part of the tender documentation)

Aspect 5.14	
Landscape Maintenance	
Objective	Avoid, control, or minimise damage to landscaped areas within the contractor’s site boundary and associated loss of amenity for hospital users/stakeholders.
Management Strategy	<ul style="list-style-type: none"> • Site environmental induction to address preservation of landscaped areas that are within the contractor’s site boundary but are not targeted for construction/demolition works. • Allow for landscaping subcontractor to make good any damaged landscaped areas that are not included with the scope of works for new landscaping.
Action	All subcontractors engaged by Watpac are to ensure: <ul style="list-style-type: none"> • Vehicles are not driven or parked on landscaped areas. • Landscaped areas are not used as materials storage areas.
Performance Indicators	<ul style="list-style-type: none"> • Visual observance of landscaped areas.
Reporting	<ul style="list-style-type: none"> • Daily monitoring reflected in daily site diary entries when required. • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form, in accordance with Aspect 5.2 above.
Reference	<ul style="list-style-type: none"> • Protection of the Environment Operations Act 1997 (NSW) • Environmental Planning and Assessment Act 1979 (NSW) • Native Vegetation Act 2003 (NSW)

Aspect 5.15	
Construction Site Management	
Objective	To avoid nuisance, disruption or danger to local residents and hospital staff, patients and visitors.
Management Strategy	Site induction to make personnel aware of the rules and requirements of the site, and relevant workplace safety legislation and principles. Vigilant monitoring of site conditions and subcontractor behaviour by Watpac staff.
Action	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> • Site induction makes personnel aware of the rules and requirements of the site, and relevant workplace safety legislation and principles. • Construction fencing is installed and maintained along the site boundary, and around any zones of work that are required outside of the established boundary. Vehicle and workforce access points and roads to the construction compounds are clearly designated and controlled for authorised access only. • The worksite is left tidy and free of rubbish each day prior to leaving the site and at the completion of works. • No hazardous materials or dangerous goods are used or stored on site. • Suitable arrangements are made for temporary parking for hospital staff, visitors, patients and construction workers for the duration of the construction program. • All materials on-site or being delivered to the site are wholly contained within the site. The requirements of the <i>Protection of the Environment Operations Act 1997</i> are to be complied with when placing/stockpiling loose material or when disposing of waste products or during any other activities likely to pollute drains or watercourses. • The public roadway and internal roadway are not obstructed by any materials, vehicles, refuse, skips or the like, under any circumstances, except without prior approval of the road authority under the <i>Roads Act 1993</i>. • A copy of the approved and certified plans, specifications and documentation shall be kept on site at all times and shall be available for perusal. • Any contractor(s) meets all workplace safety legislation and requirements. • Any loose material stockpiles are stored within the temporary construction compound(s) and are protected from possible erosion.
Performance Indicators	<ul style="list-style-type: none"> • No incidents or complaints.
Reporting	<ul style="list-style-type: none"> • Daily monitoring reflected in daily site diary entries when required. • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form.
Reference	<ul style="list-style-type: none"> • Work Health and Safety Regulation 2011 (NSW) • Protection of the Environment Operations Act 1997 (NSW) • Environmental Planning and Assessment Act 1979 (NSW)

Aspect 5.16	
Site Accommodation	
Objective	<ul style="list-style-type: none"> Control, minimise or avoid contamination or spoiling of areas in the establishment, operation and disestablishment of temporary site accommodation facilities.
Management Strategy	<ul style="list-style-type: none"> Establish temporary site offices, amenities and ablution facilities, including provision for sanitary waste, in accordance with the requirements of the relevant local authority, all relevant Acts and Regulations and industry best practice. Remove all temporary buildings and facilities from site when no longer needed and make good all disturbed areas, including landscaping where required.
Action	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> Site offices, amenities and ablution facilities are located and operated in such a manner as not to cause environmental concern Site offices, hoarding, crossovers and fencing complies with the approved Site Plan or approved revision The site is made good upon disestablishment of the site accommodation facilities. Adequate firefighting equipment is provided and maintained for the works Required permits and approvals are received prior to commencing works Install automatic shut-off taps to water points and utilise low voltage luminaries to site facilities No trees or vegetation is damaged or removed for site accommodation facilities. Adequate tree protection will be provided. The Contractor must ensure that construction routes are cleaned regularly at weekly intervals or as required. The hours of work for the project are: <ul style="list-style-type: none"> Monday to Friday 7:00am – 6:00pm Saturday 8:00am – 1:00pm Excluding Public Holidays No work is undertaken outside the specified Hours of Work without Contract Administrator approval
Performance Indicators	<ul style="list-style-type: none"> Appropriate location and operation of all facilities. Site reinstated upon completion of project.
Reporting	<ul style="list-style-type: none"> Daily monitoring reflected in daily site diary entries when required Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form
Reference	<ul style="list-style-type: none"> Approved Site Plan Australian Standard 2436-1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites Hornsby Shire Council Local Environment Plan Environmental Planning and Assessment Act 1979 (NSW) Native Vegetation Act 2003 (NSW) Protection of the Environment Operations (Noise Control) Regulation 2008 (NSW)

Aspect 5.17	
Site Amenities	
Objective	Maintain hygiene and reduce nuisance created by site accommodation.
Management Strategy	<ul style="list-style-type: none"> Keep site clean and tidy Monitor area
Action	<p>Project Manager shall ensure that:-</p> <ul style="list-style-type: none"> Septic waste issues from overflowing portable toilets and unaccounted sewerage pipe burst is avoided. Adequate lavatory systems are provided within reasonable proximity of working areas Septic waste removal service is scheduled Toilet facilities are well maintained Clean up procedures are included in induction There is bunting around temporary septic systems There is a suitable and adequate amount of signage Site induction demonstrate proper site behaviour Waste paper waste from site office is collected in paper recycling bins and regularly collected. Cardboard waste bin is provided on site. All putrescible waste is stored in secure containers until removal and disposal off site. A daily 'sweep' of the entire area is done to remove any stray/windblown litter. Designate specific areas on site for the temporary management of waste; i.e. general domestic waste, works waste and contaminated waste. Waste streams will be segregated to enhance recycling opportunities where practicable i.e. general domestic waste, works waste and contaminated waste. All domestic and industrial waste to be disposed of in dedicated industrial bins. Waste bin lids to be closed at all times to avoid, littering, access by birds and scavenging by vermin, birds or native wildlife. Waste oils to be recycled where practicable. No waste will be burnt on site.
Performance Indicators	<ul style="list-style-type: none"> No odour or vermin present
Reporting	<ul style="list-style-type: none"> None
Reference	<ul style="list-style-type: none"> None

Aspect 5.18	
Identification and Protection of Existing Utility Services	
Objective	Avoid damage to, or unplanned interruption of, utility services.
Management Strategy	<ul style="list-style-type: none"> • Site environmental induction to address location of and protective measures for utility services. • Identify, mark and protect utility services (electricity, water, gas etc.). • Ensure all necessary interruptions to utility services are planned and communicated to all relevant persons and Authorities.
Action	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> • Existing services plans will be studied and services will be located and marked prior to commencing any works. • Comprehensive “consolidated services plans” will be procured and prepared for all works areas including type, location, depth etc. of all known or identifiable services (to be prepared by surveyor). • Services Detection will be undertaken wherever services are likely to be encountered. • Contact telephone numbers for emergency services for utilities are established and readily available in the Site Emergency Plan • Storage areas are located remote from utility services. • Access ways, haul roads and turning points are arranged to avoid possible clashes with utility services. • Overhead protection/warning is provided for high loads, vehicles, cranes etc. • Spotters are provided when work is undertaken beneath overhead power lines. • Where it is found necessary to temporarily interrupt, remove, divert or make connection to an existing service or other existing work beyond the control of the Watpac, written approval from the Principal will be sought prior to undertaking Works.
Performance Indicators	<ul style="list-style-type: none"> • No unplanned interruptions to any utility service.
Reporting	<ul style="list-style-type: none"> • Health Infrastructure must be notified in accordance with the HI Stakeholder Management Plan Process. Refer to Appendix 6.1 • Notification to relevant authorities • Daily monitoring reflected in daily site diary entries • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form
Applicable Permits	<ul style="list-style-type: none"> • Dial Before You Dig • Permit to Dig (Watpac NSMS Form)
Reference	<ul style="list-style-type: none"> • Work Health and Safety Act 2011 • Energy and Utilities Administration Act 1987 (NSW)

Aspect 5.19	
Vermin and Pest Control	
Objective	Minimise the possibility of infestation from rats, mice, insects, bats, possums etc.
Management Strategy	<ul style="list-style-type: none"> • Keep site clean and tidy • Monitor area for infestation • Consult Pest Management Contractor if required
Action	<p>Project Manager shall ensure that:-</p> <ul style="list-style-type: none"> • Keep site clean and tidy with daily clean-ups. • Ensure all putrescible waste is disposed of in an appropriately sealed receptacle. • Six weeks prior to the commencement of any demolition, individual blocks, properties and the surrounding area should be inspected in order to identify the presence and extent of any infestations. Where infestations are identified, appropriate treatments must be implemented by licenced Pest Control Contractors to eliminate infestation before demolition. • Minimise ponding and exposed water sources to prevent mosquitos and midgeys. • Ideally, licenced Pest Control Contractors should be consulted for management strategies after the substructure is completed. Frequently the dark cold environment can be a pest habitat which presents an unacceptable working environment. • To prevent rat egress from live drains and sewers to new systems, the live systems should be temporarily sealed off with expanding drainage stoppers until connection to new drainage is completed. • Where vermin presents itself as a problem on site, consult a Pest Control company for advice. Do not attempt to address the problem internally.
Performance Indicators	<ul style="list-style-type: none"> • No infestations.
Reporting	<ul style="list-style-type: none"> • None
Reference	<ul style="list-style-type: none"> • Work Health and Safety Regulation 2011

Aspect 5.20	
Environmental Emergency Plans	
Objective	<p>The Project Manager shall ensure that:-</p> <ul style="list-style-type: none"> • A Spill kit is available on site at all times • All reasonable measures are taken to prevent environmental emergencies • The Project Emergency Plan is readily accessible to all site personnel • Emergency Plans are part of site Inductions
Reporting	<ul style="list-style-type: none"> • Health Infrastructure must be notified in accordance with the HI Stakeholder Management Plan Process. Refer to Appendix 6.1 • All emergency situations to be reported, investigated and recorded
In the event of an environmental incident	<ul style="list-style-type: none"> • Stop work and secure the area if safe to do so • Initiate the Project Crisis Checklist • Prevent the incident from escalating • Notify applicable management, emergency services and authorities • Clean up the affected area. Engage specialist help if required • Investigate the circumstances • Record the incident • Implement actions to prevent a recurrence • Follow-up to ensure the actions were correctly implemented and effective
In the event of an incident involving a dangerous goods spill or leak	<p>In event of spill:</p> <ul style="list-style-type: none"> • Assess: Evaluate the spill to determine if it can be dealt with by an individual, the spill response team or if outside assistance is required. • Secure: Make the site safe for all personnel and the general public. • Contain: Spill response equipment such as spill booms, drain covers or bunding can be used to contain the spill. For solids, tarps may be used to cover and prevent dampness to granules or possible dispersion by wind. • PPE: Identify the liquid and check the MSDS to ascertain the required PPE. • Absorb: Once the liquid is contained, it will need to be converted to a solid by absorption. Use the appropriate absorbing pads or absorbent to soak up the spill by placing them over the liquid. Remove the saturated pads and replace as necessary. On porous surfaces, sprinkle loose absorbent over the spill and broom through until surface appears dry. • Dispose: Place the spent absorbent in the disposal bags. Correctly dispose of contaminants off site using a licensed contaminated waste disposal contractor. • Report: Document the incident and include what happened, when it happened, where it happened; and what was done to eliminate or minimise the impact. • Restock: Order and replace used up PPE and absorption materials.
Extreme Wet Weather	<ul style="list-style-type: none"> • Alert site personnel and stop all external work on if applicable • Check site for plant, equipment and materials and secure anything not in immediate use • Check water outlets, water catchments, stormwater and sedimentation controls
Unplanned Interruptions to Existing Services	<ul style="list-style-type: none"> • Shut down and isolate plant if safe to do so • Immediately notify relevant emergency services and service providers • Secure the area and erect hazard markers as required • Protect stormwater outlets, implement controls if required. • Do not recommence work until approved by the relevant authority
High Wind Warning	<ul style="list-style-type: none"> • Alert outdoor workers of potential dangers and stop all external work • Secure any loose object that could become missiles
Discharge to Trade Waste	<ul style="list-style-type: none"> • Immediately notify relevant authorities of any event relating to a discharge to sewer that may: cause a breach of the trade waste agreement; endanger the life or compromise the safety of water authority workers; prevent or disrupt the operation of any sewerage; treatment plant; detrimentally affect any aspect of the environment

Aspect 5.21	
Earthworks and Groundwater Contamination	
Objective	<p>To detect and manage contaminated land, prevent leaching of contaminated materials or groundwater infiltration during earthworks, and detect services prior to commencement</p> <p>Mitigate potential environmental and operational consequences of encountering groundwater during excavation and piling.</p> <p>Avoid or minimise contamination of land caused by the use of imported materials, or by spillage of fuels, paint, form oil, chemicals etc.</p>
Management Strategy	<ul style="list-style-type: none"> • Expert consultants are engaged to investigate project site geotechnical conditions and provide a detailed assessment of the quality of the earth, and existence of groundwater table, before earthworks begin. • Services will be identified before earthworks commences • Controls are in place and established with relevant subcontractors to capture and treat tainted water and earth • An ‘unexpected finds protocol’ would be prepared and included to assist with the identification, assessment, management, health and safety implications, remediation and/or disposal (at an appropriately licenced facility) of any potentially contaminated soil and/or water. • If dewatering is required during construction, the water would be tested (and treated if necessary) prior to re-use, discharge or disposal.
Action	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> • Investigations of groundwater (including water quality) prior to construction – particularly in areas of cut. • Undertake progressive soil testing of the proposal area during excavation works. Tests would confirm the presence and type of any contaminants, and classify the soil for the purpose of spoil management and removal. • Hoarding is in place prior to any excavations being undertaken on-site. • Dial Before You Dig permits will be obtained before earthworks commence. • All materials on-site or being delivered to the site shall be contained within the site. The requirements of the Protection of the Environment Operations Act 1997 shall be complied with when placing/stockpiling loose material or when disposing of waste products or during any other activities likely to pollute drains or watercourses. • Cease work in the immediate vicinity of any areas of suspected contamination that are identified prior to or during work. Ensure that these areas are not disturbed and are cordoned off as a safety risk. • In the event that indicators of contamination are encountered during construction (e.g. odours or visually contaminated materials), work in the area will cease until an occupational hygienist can advise on the need for remediation or other action. • If remediation is required then a Remedial Action Plan is to be prepared and remediation works are to be carried out in accordance with State Environmental Planning Policy No. 55 – Remediation of Land. • Plant and equipment to be inspected prior to start up. Any defects that may result in an environmental incident (spills, leaks, etc.) are to be repaired prior to operation. <ul style="list-style-type: none"> - Check machinery daily for oil, fuel or other liquid leaks. - No water used or generated by machinery or equipment is to be discharged to stormwater, drainage lines, water course/bodies, or the sewage system unless a permit/license is acquired. • Where reasonably practicable, contingent timing of earthworks when water levels are low, that is, avoiding periods of heavy rain to avoid extensive soil saturation. • Remediation plans will be developed if required. This will either involve off-site disposal or on-site remediation, which may be stockpiling and treating. <ul style="list-style-type: none"> - If disposal, a permit for removal and disposal of contaminated soil will be required • Imported materials will be certified as being as per the specifications and free from deleterious organic matter. <ul style="list-style-type: none"> - All imported materials are procured from known sources and must be validated to ensure it is suitable for the proposed land use from a contamination perspective

	<p>in accordance with National Environment Protection Measure (NEPM: Assessment of Site Contamination) measure which defines criteria for different land uses.</p> <ul style="list-style-type: none"> - Validation as suitable clean fill must either be in the form of suitable documentation from the supplier or by sampling and analysis in accordance with relevant legislative requirements <ul style="list-style-type: none"> • Manage stockpiles by implementing sediment and erosion control devices in accordance with Managing Urban Stormwater, Soils & Construction, Volume 1 (Landcom, 2004). <ul style="list-style-type: none"> - Stockpiling will be in approved locations, and tested for contamination/suitability before being re-used on site - Stockpiles will be surrounded by sediment fences/screens and covered to prevent weather effects. - Any proposed re-use on site to be considered in accordance with NEPM (Assessment of Site Contamination) • Stabilisation of any excavated areas occurs as soon as reasonably practicable. <ul style="list-style-type: none"> - Sediment traps and cut-off drains are provided to control surface drainage. • Any contamination caused by construction related activities must be notified to the PM/CA in accordance with the environmental incident report outlined in this PEMP and fully remediated to satisfaction. All contaminated material to be managed in strict compliance with the approved remediation plan. • All waste generated from earthworks/civil works will be classified and immobilised as per EPA Waste Classification Guidelines. • If Asbestos or other extremely hazardous material (PAHs,TRHs and leads) are encountered, a hygienist will be engaged to develop a Remediation Plan. Certified asbestos removalists will be engaged and monitored by the Hygienist. <ul style="list-style-type: none"> - Asbestos removal and management in NSW is regulated under the WHS Act 2011 and WHS Regulation 2011. The handling of asbestos and asbestos work will be carried out in accordance with relevant codes/guides including, but not limited to, Code of Practice: How to Safely Remove Asbestos (Safe Work Australia, 2016) and Code of Practice for the Safe Removal of Asbestos 2nd Edition (NOHSC: 2002 (2005)). - If leads, fuels or other NPI trackable substances that do not present an immediate extreme danger are encountered, soil is to be stockpiled and the civil engineer or geotechnical engineer consulted for treatment purposes. • If any suspicious material is encountered the 'Unexpected find checklist' is followed and completed (see appendix 6.8)
Performance Indicators	<ul style="list-style-type: none"> • No pollution or contamination of waterways • No release of contaminated materials or compromised water from the site • Zero harm – no harm to anyone (worker/PCBU/hospital staff or patrons/public)
Reporting	<ul style="list-style-type: none"> • All spillages and discovery of contaminated material to be reported to the Project Manager or Contract Administrator • Daily monitoring during associated works, reflected in daily site diaries when required • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form
Applicable Permits	<ul style="list-style-type: none"> • Permits for removal and disposal of contaminated soil
Reference	<ul style="list-style-type: none"> • NSW State Groundwater Quality Protection Policy (Department of Land & Water Conservation 1998) • Environmental Planning and Assessment Act 1979 • Protection of the Environment Operations Act 1997 • State Environmental Planning Policy No. 55 – Remediation of Land (July, 2014) • Managing Urban Stormwater, Soils & Construction, Volume 1 (Landcom, 2004) • EPA Waste Classification Guidelines (2014) • Workplace Health and Safety (WHS) Act 2011 • Workplace Health and Safety (WHS) Regulation 2011 • Code of Practice: How to Safely Remove Asbestos (Safe Work Australia, 2016) • Code of Practice for the Safe Removal of Asbestos 2nd Edition (NOHSC: 2002 (2005))

Aspect 5.22	
External Lighting	
Objective	Control or minimize the obtrusive effects of outdoor lighting used on the project site for works, safety and/or security.
Management Strategy	Outdoor/external lighting designed and implemented in accordance with AS4282 - 1997 Control of the Obtrusive Effects of Outdoor Lighting
Action	<p>Project Manager shall ensure:</p> <p>Outdoor lighting is controlled in accordance with AS4282 - 1997.</p> <p>External lighting principles, as described in Appendix A - AS4282, are adhered to where reasonably practicable:</p> <ul style="list-style-type: none"> - Switch off lights when not required for safety, security or enhancement of the night-time scene. (In this respect, one can introduce the concept of a curfew with further limitations on lighting levels between agreed hours, e.g. the reduction or switching of advertising and decorative floodlighting between 11pm and dawn. - Whenever possible, direct light downwards, not upwards, to illuminate the target area. If there is no alternative to up-lighting, then the use of shield and baffles will help reduce spill light to a minimum. - Use specifically designed lighting equipment that, once installed, minimises the spread of light near to, or above, the horizontal. - Do not 'over' light. It is a cause of light pollution and a waste of money. Recommended light levels exist for some applications – see relevant standards. - To keep glare to a minimum, ensure that the main beam angle of all lights directed towards any potential observer is kept below 70°. It should be noted that the higher the mounting height, the lower can be the main beam angle. In places with low ambient light, glare can be very obtrusive and extra care should be taken in positioning and aiming. - Wherever possible use floodlights with asymmetric beams that permit the front glazing to be kept at or near parallel to the surface being lit. <p>Lighting that efficiently directs the light into the area required, thereby minimising the energy consumption and waste light.</p> <p>Illuminance calculated as per Section 5 <i>Calculation of Light Technical Parameters</i>, AS4282.</p> <p>A survey of properties in the immediate precinct of the site is undertaken and notes made, particularly on buildings within the hospital grounds and residential buildings along Derby Road.</p> <p>Lighting is sufficient to safely carry out any works required in any given area</p>
Performance Indicators	No disturbances/incidents or complaints.
Reporting	<p>Monitoring records to be maintained during any activities with potential to generate obtrusive light infliction on local environment.</p> <p>Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form</p>
Reference	AS4282 - 1997 Control of the Obtrusive Effects of Outdoor Lighting

6. Appendices

6.1. HI Incident Stakeholder Management Plan

Contents

1. Overview
2. Links to other policies and plans
3. Incident Management Framework
4. Incident Management Team
5. Stakeholder relationship managers
6. Incident Checklist
7. Communications Tools
8. Draft Key Message guide
9. Media holding statement template

Appendix 1

Incident Media Response Protocols – for communications staff liaison with Minister’s Office and Local Health Districts

Version Control					
Version	Date	Document Author	Reviewed	Endorsed By	Document owner
1.0	02/05/16	HI Communications team	Martin Cook, Executive Director Delivery	Sam Sangster, Chief Executive	Martin Cook, Executive Director Delivery
	September 2016	HI Communications team	HI Board	Sam Sangster, Chief Executive	

1. Overview

Health Infrastructure is the NSW Government's dedicated health capital works arm, with the overarching responsibility for the planning, design and delivery of hospitals and associated facilities in metropolitan, regional and rural New South Wales.

The organisation is, as at early 2016, planning or delivering more than 80 hospitals, ambulance stations, multipurpose services and other health related infrastructure across the state. Of the \$5 billion investment allocated to the health portfolio in the current term of government, Health Infrastructure is delivering projects with a capital value of around \$1.4 billion in 2015-16, which is around 11 per cent of the State's total capital works program.

Health Infrastructure's projects include major civil works at hospitals, including brownfield projects where entire hospital campuses are reconfigured and redeveloped, extensive refurbishments to existing civil structures, and greenfield developments involving the construction of entirely new major structures.

While the organisation co-ordinates and manages the health capital works program, on the ground, all Health Infrastructure projects are delivered by the market, via competitively tendered contracts, with the aim of engaging suitably qualified and capable construction firms to undertake the physical work. Projects are delivered through contractors and sub-contractors who engage their own staff.

As the co-ordinating body for the health capital works program, with direct reporting lines to the NSW Government and day-to-day responsibility for high level stakeholder management and public communications, Health Infrastructure reinforces with its contractors the importance of safety on projects – safety for construction workers, safety for employees on 'live' hospital sites, and safety for local communities and the environment near our projects.

As such, Health Infrastructure has developed this Incident Communications & Stakeholder Management Plan, to be deployed in the event of safety or other incidents at our sites. The plan establishes an Incident Management Framework (Section 2), to be put into action in the event of incidents on our projects. It also includes a high-level overview of incident management response management (Section 3), stakeholder relationship managers (Section 4), an incident checklist (Section 5), a list of communications tools (Section 6), a key message guide (Section 7) and a template media holding statement (Section 8). Incident media response protocols are enclosed.

While a major driver for the development of this plan is project safety, key aspects of the plan can also be adapted and deployed in the event of major non-safety related incidents, for example, incidents with the potential for severe corporate reputational impacts.

The protocols and tools contained in this plan will be deployed, in the case of Critical and Major Incidents, when the Chief Executive declares an incident to have taken place. This plan is a 'living document' and will be reviewed and updated at frequent intervals over time to ensure it remains current and up-to-date.

2. Links to other policies and plans

NSW Health Incident Management Policy

This Health Infrastructure Incident Communications & Stakeholder Management Plan has been developed for the purposes of providing an incident-specific, proactive framework for the management of incidents and issues with the potential to arise in the construction of major capital works. Health Infrastructure, as the dedicated planning and delivery arm of NSW Health, is also subject to the policies and procedures developed and implemented from time to time by the Ministry of Health.

As such, this plan underpins Ministry of Health policy directive PD2014_004 – Incident Management Policy – as published by the Ministry in February 2014. This policy directive sets out the Ministry’s incident management protocols, reporting requirements and evaluation and review processes in dealing with clinical, operational and corporate issues and incidents.

As the Ministry’s Incident Management Policy is focused primarily on, and tailored to meet the needs of Local Health Districts or respond to high-level corporate issues at the Ministry level, Health Infrastructure has developed this plan to ensure an incident response process is in place specific to the needs of potential incidents likely to impact the construction/infrastructure sector and projects. These may include incidents during the planning phase of hospital redevelopments (eg. discovery of hazardous materials on work sites) and incidents during the delivery phase (eg. incidents or accidents that may pose a risk to life or property).

To the extent that there are inconsistencies between the Ministry’s Incident Management Policy and HI’s Incident Communications & Stakeholder Management Plan, the provisions contained within the Ministry’s policy will prevail.

Trigger Action Response Plans

The Ministry of Health has requested that, for certain critical issues which require a longer term risk / incident management approach, agencies in the Health portfolio should consider the development of Targeted Action Response Plans (TARPs). TARPs should take the form of a useful escalation tool that can be quickly referenced by staff and contractors in the field including specific information on who to contact in the event of issues and incidents.

The Ministry has advised that the precise form of TARPs may be tailored to suit the business model of the agency. Health Infrastructure considers that the Incident Management Framework on page five of this document meets the requirements of the TARP escalation, notification and incident response / management process, on a whole-of-organisation basis. Given this, specific TARPs developed for the management of individual likely risks and issues may also be developed, and would underpin the overall plan.

3. Incident Management Framework

Category 1 – Critical Incident Trigger: Incident involving fatality or severe injury or incident resulting in potential severe corporate reputational damage, or major impact to critical hospital operations.	Category 2 – Significant Incident Trigger: Incident involving major detrimental impact to project, including damage to civil structures, extreme weather impacts, and threats to life or property or major environmental impact, or significant impact to critical hospital operations.	Category 3 – Minor Incident Trigger: Incident involving impact on project delivery which may involve regulatory investigation eg. injury resulting in LTI, minor environmental impact, or significant near miss.	Category 4 – Local Incident Trigger: Minor incident on worksite, eg. medical treatment not likely to lead to an LTI.
Step 1 – Immediate Contractor informs: Project Manager Regulators HI Senior Project Directors	Step 1 – Immediate Contractor informs: Project Manager Regulators HI Senior Project Directors	Step 1 – Within 1 hour Contractor informs: Project Manager Regulators HI Senior Project Director	Step 1 – Within 4 hours Contractor informs: Project Manager HI Project Directors
Step 2 – Immediate Senior Project Director informs: HI Chief Executive Executive Director Delivery	Step 2 – Immediate Senior Project Director informs: HI Chief Executive Executive Director Delivery	Step 2 – Within 1 hour Senior Project Director / Project Director and Inform Minister, Ministry, Local Health District/s engage with Director Communications and Engagement	Step 2 – Within 8 hours Project Director: Engage with HI Communications as required
Step 3 – Immediate Chief Executive and Executive Director: Inform Minister, Ministry, Local Health District/s Informs the HI Board Chair Engage with Director Communications and Engagement	Step 3 – Immediate Chief Executive and Executive Director: Inform Minister, Ministry, Local Health District/s Informs the HI Board Chair Engage with Director Communications and Engagement	Step 3 – Within 4 hours HI Communications: Deploy communications strategy as required	Notes: Incident Management Team not required – managed through routine project governance and reporting
Step 4 – Immediate HI Chief Executive / Executive Director Delivery officially declare incident	Step 4 – Immediate HI Chief Executive / Executive Director Delivery officially declare incident	Step 4 – If required Incident Management Team not required Managed through routine project governance and reporting Employee status monitored and incident escalated if condition becomes serious	
Step 5 – Within 1 hour Upon CE / ED officially declaring incident, a HI Incident Management Team is formed – see Section 2 below	Step 5 – Within 1 hour Upon CE / ED officially declaring incident, a HI Incident Management Team is formed – see Section 2 below		
Step 6 – Ongoing Incident Management Team assumes control of incident response Media and stakeholder communication managed in line with Section 3 – Stakeholder Relationship Managers and Appendix 1 – Incident Media Protocols	Step 6 – Ongoing Incident Management Team assumes control of incident response Media and stakeholder communication managed in line with Section 3 – Stakeholder Relationship Managers and Appendix 1 – Incident Media Protocols		

4. Incident Management Team

In accordance with the Incident Management Framework in Section 2 (on page 5 above), the Chief Executive of Health Infrastructure may declare an incident meeting the criteria for category 1 or 2 incidents, as either 'Critical Incidents' or 'Major Incidents' respectively.

In the event such a declaration is made, Health Infrastructure will then manage the incident via a dedicated 'offline' Incident Management Team, until such time the Chief Executive declares the incident closed.

The Incident Management Team will have a dedicated workspace made available in Health Infrastructure's office at North Sydney. The team will comprise of five senior staff, acting in the following capacities:

Role	Responsibility	HI Equivalent
Incident Controller	Ultimate responsibility for control of incident response	Chief Executive / Executive Director Delivery
Incident Technical Manager	To provide engineering and technical advice	Executive Director Delivery / Senior Project Director
Incident Planning Manager	To co-ordinate response planning	Senior Project Director
Incident Logistics Manager	To provide logistical support to the response and to ensure the response is being managed in line with HI's policies and procedures	Project Director
Incident Communications Manager	To act as a dedicated resource on all communications issues during the life of the incident	Director Communications and Engagement

The Health Infrastructure Chief Executive will have ultimate responsibility for the management of the incident response. The Chief Executive and Executive Director Delivery will also have responsibility for ensuring:

- Staff engaged on the Incident Management Team during the course of an incident, will disengage from their day-to-day duties, to ensure a focused response to the incident
- Project Directors will be allocated from within Health Infrastructure to ensure projects whose staff are temporarily deployed in the Incident Management Team are appropriately resourced on an interim basis
- If an incident is expected to continue for several days and may require overnight resources, members of the Incident Management Team will be provided with adequate breaks and rest periods, with 'alternate' team members replacing them at regular intervals.

5. Stakeholder Relationship Managers

While the Chief Executive of Health Infrastructure is ultimately responsible for stakeholder management and liaison during the course of managing an incident, on-going communication with key stakeholders will be assigned to dedicated officers at Health Infrastructure. See below a stakeholder relationship framework, to be used as a guide in assigning relationship management for individual stakeholders during the course of an incident. This guide is most relevant to Critical Incidents and Major Incidents.

Stakeholder	Primary contact	Secondary contact
NSW Premier	Chief Executive	NA
NSW Minister for Health	Chief Executive	NA
Minister's Chief of Staff	Chief Executive	Director Communications and Engagement
Minister's Office (staff)	Director Communications and Engagement	Chief Executive
HI Board Chair	Chief Executive	Executive Director Delivery
NSW Health Secretary	Chief Executive	Executive Director Delivery
Ministry of Health (Dep Secs)	Chief Executive	Executive Director Delivery
Ministry of Health (staff)	Executive Director Delivery / Senior Project Director	Director Communications and Engagement
Ministry of Health Communications and Media teams	Director Communications and Engagement	NA
Local Health District Boards	Chief Executive	Executive Director Delivery
Local Health District Staff	Senior Project Director	Project Director
Local Health District Communications and Media	Director Communications and Engagement	Senior Project Director
Hospital GM / Management	Chief Executive	Senior Project Director
Hospital staff	Senior Project Director	Project Director
Local Councils	Senior Project Director	Director Communications and Engagement
Local Member of Parliament	Senior Project Director	Director Communications and Engagement
Project Manager	Senior Project Director	Project Director
Lead Contractor	Senior Project Director	Project Director
Health Infrastructure Staff	CE / EDD / DC&E	NA
Regulators	EDD	Senior Project Director
Emergency Services	Senior Project Director	Project Director
Local community	Director Communications and Engagement	Local project / LHD comms resource
General public	Director Communications and Engagement	Local project / LHD comms resource
General media (interviews and inquiries)	Chief Executive	Director Communications and Engagement

6. Incident Checklist

The checklist below has been developed as a guide for the Health Infrastructure Incident Controller, Health Infrastructure Incident Management Team and Health Infrastructure Project Directors to ensure appropriate steps are taken and relevant stakeholders are informed at the appropriate time in the event of a critical incident. The checklist is a useful guide to ensure a number of significant steps are followed during the incident response, but it in no way limits the response actions available to the Incident Controller and Incident Management Team.

Task	Responsibility	Completed
Incident Controller appointed	Chief Executive	<input type="checkbox"/>
Engage immediately with lead contractor and establish points of contact	Chief Executive, Executive Director Delivery, Senior Project Director	<input type="checkbox"/>
Advise contractors / project managers of media protocols – all media inquiries directed to HI	Senior Project Director	<input type="checkbox"/>
Declaration of critical incident once facts are known (under categories 1 and 2)	Chief Executive	<input type="checkbox"/>
Incident Management Team selected	Chief Executive, Executive Director Delivery	<input type="checkbox"/>
Text message to relevant project staff to advise an incident is declared	Senior Project Director / Project Director	<input type="checkbox"/>
Establish incident co-ordination centre	Executive Director Delivery	<input type="checkbox"/>
Appoint incident contact at project site	Senior Project Director / Project Director	<input type="checkbox"/>
Establish contact point with key authorities / emergency services	Senior Project Director / Project Director	<input type="checkbox"/>
Inform Minister's Office / Ministry within an hour of declaration of Category 1 or 2 incident	Chief Executive / Director Communications and Engagement	<input type="checkbox"/>
Appoint media spokesperson and develop immediate key messages and media statement	Chief Executive / Director Communications and Engagement	<input type="checkbox"/>
Inform HI staff of incident by 8am on the next working day	Chief Executive / Director Communications and Engagement	<input type="checkbox"/>
Continue to engage with contractor and any external specialists required to manage response	Executive Director, Delivery / Senior Project Director / Project Director	<input type="checkbox"/>
Monitor stakeholder and media response during deployment of incident management measures	Communications Lead	<input type="checkbox"/>

7. Communications Tools

During a critical incident, the Health Infrastructure Communications Lead on the incident management team, working in conjunction with the Chief Executive and team members, will be solely responsible for communications activities relating to the incident and will be 'offline' from any other HI communications tasks.

See below a list of proactive communications tools that should be deployed when an incident is declared. These tools are available for use across any Health Infrastructure incidents, although they are particularly relevant to category 1 and 2 incidents:

- Key messages – developed immediately and continuously updated
- Media Holding Statement (early stage when detail is limited)
- Media Release (once more information is known)
- Direct contact with Minister / NSW Health Secretary
- Regular formal briefing notes to the Minister and Ministry
- Regular updates to Minister's staff
- Automated text message to internal staff
- All Health Infrastructure staff email/s throughout incident response
- Liaison with local media re: site safety, security
- Hourly Situation Reports (generated by incident management team)
- Media conference on site by Chief Executive
- Direct communication with families of injured / deceased workers
- Door-knocking local community if threat to life / property
- Monitoring media and stakeholder public response
- Proactive / reactive interviews with media
- Use of social media channels (eg. Twitter) to disseminate information
- Project website to provide updates

8. Draft Key Message Guide

At the onset of an incident being declared, the Incident Management Team will develop an immediate set of key messages about the nature of the incident, based on information that has been received and is verifiable. In the early stages of a major incident, it is very common that information received is later found to be incorrect or missing key elements.

It is therefore crucial that the early key messages only include verified information – it is often better to provide more details to the media and public as an incident unfolds, rather than providing detail later found to be inaccurate early in the incident. See below a list of initial details to be included, if possible, in the initial key messages.

Key message guide:

- Time of incident
- Location / name of hospital
- Basic description of what occurred
- HI initial steps to manage incident
- Initial lines of communication established between Health Infrastructure, contractors and authorities
- What HI will do over the initial hours
- Assurance HI will keep community, staff, families of those impacted informed as more detail is known

9. Draft Holding Statement

See below a template media holding statement for the initial response to a critical incident (categories 1 and 2). This is a guide only and will be tailored for the individual circumstances of incidents.

Date

TITLE

At [time] Health Infrastructure became aware of a serious incident at [project / location].

The initial reports received by Health Infrastructure indicate [details of incident].

Health Infrastructure has declared this to be a critical incident, and a comprehensive incident management plan has been put in place.

Safety is Health Infrastructure's highest priority and we are working with the principal contractor for the project [contractor name] to address immediate issues including [eg. contacting relatives of injured worker, securing the site, setting up exclusion zone etc].

Health Infrastructure and [contractor] have been in immediate contact with the [relevant authorities eg. NSW Emergency Services authorities, NSW Police, NSW Fire Brigade etc] to ensure the area is safe. Health Infrastructure has also notified the appropriate safety [or other eg EPA] regulators.

HI's immediate concern is the wellbeing of the [impacted worker/s, staff, local community etc].

[Any other steps Health Infrastructure has taken immediately].

Detailed investigations will take place into this incident in due course. In the immediate future, however, Health Infrastructure's priority is to work with the contractor and authorities to ensure the site is safe and secure. No work will take place on the project until it can be certain that it is safe to do so.

Health Infrastructure will continue to keep the [public / local community] informed as the incident management plan is put in place and further details become known.

[Contact / communication channels]

APPENDIX 1

PROJECT INCIDENT MEDIA RESPONSE PROTOCOLS

All media enquiries in regard to project incidents should be referred to HI Communications in the first instance. HI Communications will then discuss the enquiry with the Senior Project Director / Project Director, to determine a response strategy, while keeping key stakeholders informed. Relevant parties may approve responses, including the Ministry of Health, LHD, and the Minister's Office.

Project Directors, LHDs, hospitals, contractors and project managers are required to refer all project incident-related media enquiries to HI Communications as soon as possible after the incident occurs. The overarching management of project incidents will be in accordance with the *HI Incident Management Communications & Stakeholder Management Plan* and *Incident Management Framework*.

ROLE OF HI COMMUNICATIONS

HI Communications takes the lead on all project incident media enquiries related to HI hospital redevelopments, Multipurpose Services, Primary and Integrated Care and ambulance station upgrade projects. This includes print, radio, television and online media. HI Communications will liaise with the Project Director/s and Local Health Districts and hospitals as required, in the development of media responses. HI Communications will liaise with the Minister's Office / Ministry of Health, to ensure a co-ordinated response.

ROLE OF CONTRACTORS / PROJECT MANAGERS

Contractors, project managers and their staff at work **sites must not comment to the media on any issues, under any circumstances**. All media requests or enquiries, including journalists approaching staff on work sites or filming nearby, should be referred to the HI Project Director/s, who will in turn alert HI Communications.

ROLE OF PROJECT DIRECTOR/S

For non-critical incidents (categories 3 and 4 in the *Incident Communications & Stakeholder Management Plan*), HI Project Directors have over-arching responsibility for incident media response material issued by HI Communications in consultation with LHDs / hospitals.

For matters declared by the Chief Executive or Executive Director Delivery as critical or significant incidents (categories 1 and 2 in the *Incident Communications & Stakeholder Management Plan*), the HI Executive will take the lead in managing incident media responses.

ROLE OF HI EXECUTIVE – CRITICAL OR SIGNIFICANT INCIDENTS

Certain major incidents, involving potential threat to life or major damage to property, may be declared **critical or significant incidents** by the HI Chief Executive and Executive Directors, hereafter referred to as ‘the Executive’. In this case, the Executive assumes overall control and approvals of incident response and media strategy. Critical or significant incident responses will be developed by the Incident Management Team formed as per Section 3 of the *Incident Communications & Stakeholder Management Plan*.

ROLE OF LHDS / HOSPITALS / PROACTIVE PROJECT COMMUNICATIONS LEADS

In the event of an incident relating to a HI capital works project, HI assumes overall responsibility for responding to media enquiries. HI will consult with LHDS and hospitals in formulating a response.

The LHD media teams and hospital General Managers remain responsible for media enquiries on operational matters and are authorised to provide comment on the on-going operational status of a hospital in the event of an incident (eg. hospital remaining open, certain wards closed, patient and staff relocations and impacts etc).

The LHDS and individual health facilities will also act in compliance with relevant policy directives and their local incident management processes. Project Communications Resources should familiarise themselves with such local processes so they can provide appropriate advice and coordination across Health Infrastructure, the LHDS and hospitals.

HI project communications leads, working with LHDS or at hospitals, are generally responsible for proactive, non-incident communications, and should refer all enquiries to HI. After hours media enquiries can be referred to the HI Communications after hours contact phone number.

**[After hours contact - Kara Giltinan, Director Communications and Engagement:
0411 897 570]**

Diagram 1 – HI Non-Critical Incident Media Approvals Process

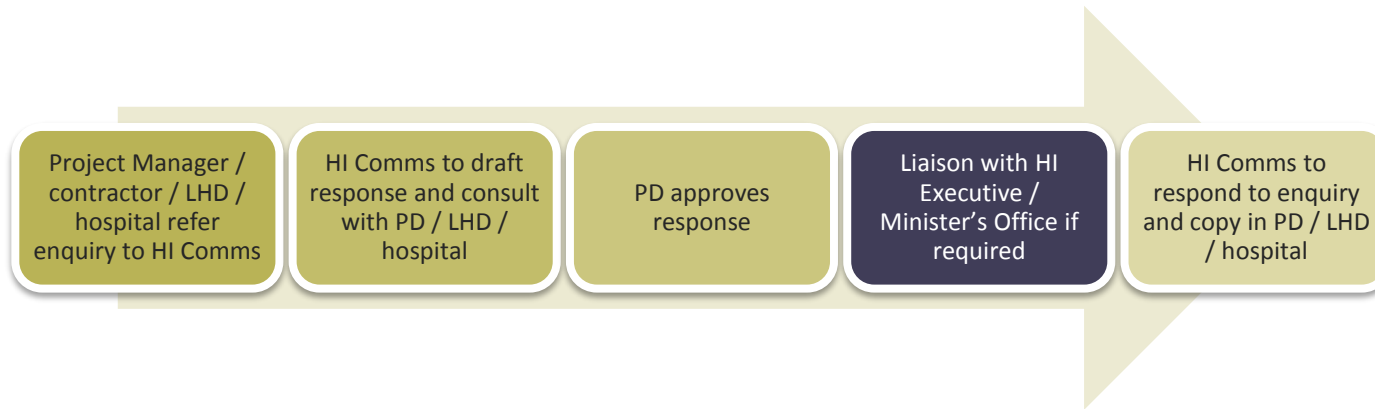
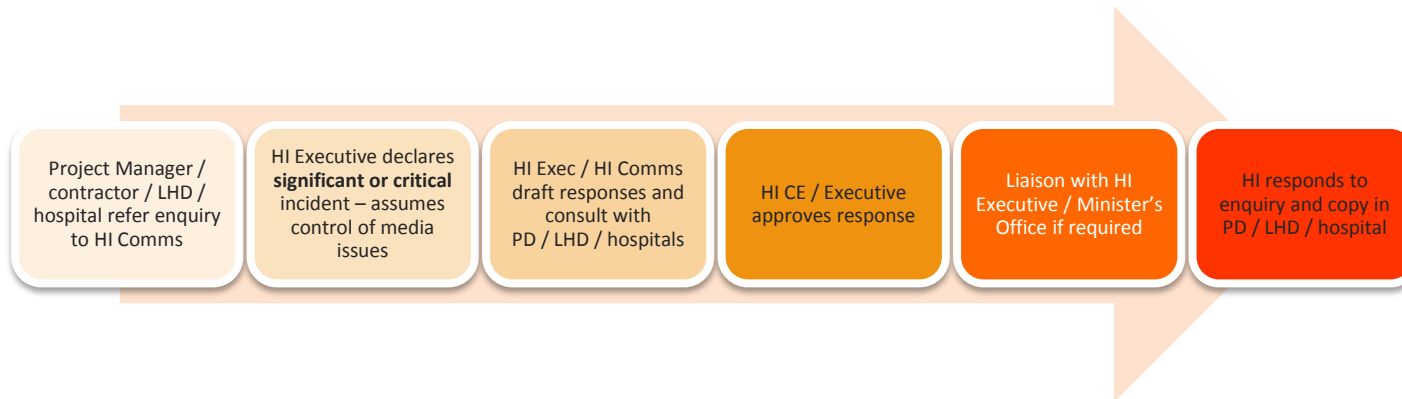


Diagram 2 – HI **Critical or Significant** Incident Media Approvals Process



6.2. Environmental Risk Assessment

- | | |
|---|---|
| 1 Emissions to Air | 5 Community and Neighbours |
| 2 Releases to Water | 6 Flora and Fauna |
| 3 Releases to Land | 7 Heritage and Cultural |
| 4 Use of Raw Materials, Natural Resources | 8 Hazardous Substances including Asbestos |

				INHERENT RISK		RESIDUAL RISK		
1 EMISSIONS TO AIR				Likelihood	Consequence	Risk	Likelihood	Risk
				Possible	Minor	Medium	Unlikely	Low
Environmental ASPECT	Associated IMPACT	LEGAL & OTHER REQUIREMENT Relevant Document Title/Section/Clause	CONTROLS	COMPLIANCE	VERIFICATION/RECORD			
1.1 Exhaust Fumes	Air Pollution Annoyance Nuisance	Protection of the Environment Operations (Clean Air) Regulation, 2010 Part 4 Div 2 (cl 15 and 165) - Part 4, Div 4 (cl 21 and 22) Protection of the Environment Act, 1997 Part 5.4 Div 1 - (Cl 124 -132)	Ensure vehicles, plant & equipment are regularly maintained and assess if an air pollution device is required to be fitted. Air quality monitor to be used when deemed necessary. Switch off engines when not in use. Do not operate a motor vehicle which emits visible emissions for more than 10 seconds after start-up Do not cause air pollution by failing to maintain and operate plant, or carry out maintenance work on plant, in a proper and efficient manner	Check trucks / plant on arrival to site for defects to exhausts and mufflers. Check service records to ensure machines/trucks are regularly maintained. Ensure pre-start plant inspections	Plant and Equipment induction records Site Diary Environment Inspection Records Project Induction Records			
1.2 Excavation Dust Demolition Dust Construction Dust	Air Pollution Annoyance Nuisance	Protection of the Environment Operations Act 1997 - Part 5, Div 1, (Cl 124&125), Part 5.4 Div 1 (Cl 126) Protection of the Environment Operations (Clean Air) Regulation, 2010 Part 5 Div 2&3 (cl32-46) Protection of the Environment Operations (General) Regulation 2009 (Schedule 6 - 123-124 and 126) Protection Environmental Legislation Environmental Amendment Act 2011 Cl148	Implement dust suppression methods: • barriers to prevent the spread of dust • cover loads, restrict vehicle speeds • minimise areas being worked • use water cart and water sprays Do not pollute the atmosphere so that it becomes potentially harmful to the health, welfare, safety or property of people; detrimental to any beneficial use. Notify parties potentially impacted by activities Cease activities if dust is not controlled. under Amendment act report immediately instead of as soon as reasonable practicable	Monitor site conditions Conduct site inspections Penalties not incurred as per the POEO General Regs	Plant and Equipment induction records Site Diary Environment Inspection Records Project Induction Records			
1.3 Chemical Fumes and odours from products or excavation of contaminated soils	Air Pollution Annoyance Nuisance	Protection of the Environment Operations (Clean Air) Regulation, 2010 Part 5 Division 2 (Cl 36,28,39,40,42.) , Division 5 (cl 55) Div 2 60&61	Use low VOC products such as paints, waterproofing and adhesives. Provide correct waste containers for disposal. Do not allow any odours to be emitted which may be offensive to the sense of human beings or a nuisance to any persons beyond the boundary of the premises.	Monitor site conditions Conduct site inspections	Plant and Equipment induction records Site Diary Environment Inspection Records Project Induction Records			
1.4 Environmental Emergency (Fire, Explosion, Chemical Spill)	Air Pollution Annoyance Nuisance	Protection of the Environment Act,1997 (Cl91,284)	Minimise volumes of materials stored on site Provide initial-response fire fighting equipment and appropriate spill kits.	Induct staff and subcontractors in Emergency Preparedness and Response. And ensure are adequately trained in site procedures.	Plant and Equipment induction records Site Diary Environment Inspection Records Project Induction Records			

2 RELEASES TO WATER:				INHERENT RISK		RESIDUAL RISK		
				Likelihood	Consequence	Risk	Likelihood	Risk
				Possible	Minor	Medium	Unlikely	Low
Environmental ASPECT	Associated IMPACT	LEGAL & OTHER REQUIREMENT Relevant Document Title/Section/Clause	CONTROLS	COMPLIANCE	VERIFICATION/RECORD			
2.1	Potential Spills - General spills - Leaks from plant and equipment - Refuelling spills	Stormwater and / or groundwater pollution	Protection of the Environment Act, 1997 Part 5.3 (cl120,121,123,125) Environmentally Hazardous Chemical Act 1985, part 3, Div 2&3 (Cl 10,11,13)	<ul style="list-style-type: none"> Ensure all liquids are stored in appropriate containers. Ensure availability of appropriate spill kits and conduct induction / training in their use. Maintain an MSDS register for all products on site Locate chemicals away from water courses and protect waterways in the event of a spill Store minimal amounts on site Clean up spills immediately Contain any spills on site Do not cause water pollution (other than to a sewer), except in accordance with the conditions of any EPA licence Ensure that in each area of the premises where dangerous goods are stored or handled, provision is made for spill containment that will so far as is practicable, contain the spill within the premises.	Induct staff and subcontractors in Emergency Preparedness and Response.	Induction Records Environmental Inspection Records SDS Register Site Diary Trade Waste Agreement and discharge records (where applicable)		
2.2	Pollutants entering the Stormwater System • litter • sediment from contaminated runoff • water from wash-down • wash out of concrete trucks and pumps • brick and paver cutting	Stormwater Pollution	Project Sedimentation and Stormwater Management Plan and Project Environmental Management Plan Protection of the Environment Act 1997 (cl 120-123) - Water Management Act, 2000, Div 7 (cl 34) Protection of the Environment Operations (General) Regulation 2009 Chapter 3 Part 1 (cl 56,59)	Implement a Sediment and Erosion Management Plan <ul style="list-style-type: none"> Minimise and control all stormwater run-off from site Identify and protect stormwater outlets using geo-fabric, gravel saudades and silt fences Plan and protect stockpiles and locate away from stormwater drains and low points Establish hard stand haul roads and site entrance/exit Contaminated waste water to be disposed of to sewer in compliance with a Trade Waste Agreement or by licensed contractor to a licensed facility Establish designated areas for washdown of concrete chutes etc. and for wet trades Plan and protect stockpiles. Locate away from stormwater drains and low points Establish stormwater connections as soon as practicable Control water from wheel wash, rumble strip and road cleaning No washing of roadways into unprotected drains All stormwater discharges to be in accordance with regulatory requirements Ensure that discharges to stormwater drains, surface waters and groundwater do not put at risk any beneficial use of these waters.	Induct staff and subcontractors in Stormwater and Erosion Management Daily monitoring of site conditions Weekly inspection to be undertaken and recorded Controls inspected before, during and after storm events. All incidents and non-compliance with controls to be reported, investigated and recorded	Induction Records Environmental Inspection Records SDS Register Site Diary Trade Waste Agreement and discharge records (where applicable)		
2.3	Environmental Emergency (Fire, Explosion, Chemical Spill)	Stormwater Pollution	Water Management Act, 2000 Div 7 (cl 34) Protection of the Environment Act 1997 (cl 120-123)	Provision of initial response fire fighting equipment and appropriate spill kits. Induction and training staff of staff/Subcontractors in Emergency Preparedness and Response. Manage construction work to minimise land disturbance, soil erosion and discharge of sediments and other pollutants to surface waters Do not pollute any waters so they become poisonous, harmful or potentially harmful to animals, vegetation or to the detriment of any beneficial use made of those waters. Do not place waste in a position where it might reasonably be expected to pollute surface water or groundwater, or where it does not comply with any prescribed standard. Take all practicable measures to prevent the pollution of groundwater. Do not cause or permit anything other than sewerage or trade waste discharged in accordance with a Trade Waste Agreement to be discharged into the sewerage system.	Induction of staff subcontractors in Emergency Preparedness and Response.	Induction Records Environmental Inspection Records SDS Register Site Diary Trade Waste Agreement and discharge records (where applicable)		

3 RELEASES TO LAND:				INHERENT RISK		RESIDUAL RISK		
				Likelihood	Consequence	Risk	Likelihood	Risk
				Possible	Minor	Medium	Unlikely	Low
Environmental ASPECT	Associated IMPACT	LEGAL & OTHER REQUIREMENT Relevant Document Title/Section/Clause	CONTROLS	COMPLIANCE	VERIFICATION/RECORD			
3.1	Construction activities	Significant impacts	Environment Protection and Biodiversity Conservation Act 1999 s26, 27, 29	Receive approval from the Environmental Minister before work commences	Do not take an action on Commonwealth land that could have a significant impact on the environment without approval from the Commonwealth Environment Minister.	Environmental Inspection Records Audit PEMP		
3.2	Site accommodation and setup	Significant impacts	Environment Protection and Biodiversity Conservation Act 1999 s26, 27, 29 Client Specifications	Contain works to approved Site Plan. Remediate the site on removal of the site sheds. If assessing site contamination, ensure samples are taken and analysed.	Any significant spill event is immediately reported, investigated and prevented from recurring.	Approved Site Plan Environmental Inspection Records		
3.3	Contamination on site through relocation or import of contaminated material	Significant impacts	Protection of the Environment Act 1997 Part 5.6 Divisions 1,2,3 - Part 5.7 and 5.7A	Engage Environment Specialist to assess, test and classify excavated material to be transported off-site. No contaminated material to be reused on site without the written approval of the Client. Do not transport prescribed industrial waste except to a licensed receiver without EPA approval.	Nil non conformances of fines by EPA	Environment Inspection records Environmental Audits		
3.4	Transport and disposal of contaminated material offsite	Significant impacts		All excavated materials transported off-site to be disposed of in compliance with EPA regulations. Do not transport prescribed industrial waste except to a licensed receiver without EPA approval. Do not transport prescribed industrial waste except to a licensed receiver without EPA approval. Take reasonable steps to ensure receiver of prescribed industrial waste is licenced.	Nil non conformances of fines by EPA	Environment Inspection records Environmental Audits		
3.5	Weed control	Significant impacts	Environment Protection and Biodiversity Conservation Act 1999 s26, 27, 29 Client Specifications	Strictly maintain vehicle hygiene to prevent weed transfer. Imported materials, particularly landscape supplies to be certified to be weed free, of local provenance and drawn from known sources. Do not remove machinery or other equipment from land onto a road without first taking reasonable precautions to ensure that the equipment is free from noxious weeds and the seeds of noxious weeds.	Nil non conformances of fines by EPA	Environment Inspection records Environmental Audits		
3.6	Spill of dangerous goods or hazardous substance	Significant impacts	Waste Avoidance and Resource Recovery Act, 2001	Do not dilute, mix or treat prescribed industrial waste without approval. Ensure that in each area where dangerous goods are stored or handled, provision is made for spill containment that will eliminate/reduce as far as is practicable, the risk of any spill.	Nil Incident	Environment Inspection records Environmental Audits		

4 USE OF RAW MATERIALS, NATURAL RESOURCES				INHERENT RISK		RESIDUAL RISK		
				Likelihood	Consequence	Risk	Likelihood	Risk
				Possible	Minor	Medium	Unlikely	Low
Environmental ASPECT	Associated IMPACT	LEGAL & OTHER REQUIREMENT Relevant Document Title/Section/Clause	CONTROLS	COMPLIANCE	VERIFICATION/RECORD			
4.1	Water	Unnecessary use and waste of natural resource	Protection of the Environment Operations (General) Regulation, 2009 Chapter 3 (cl 56-59)	<ul style="list-style-type: none"> Comply with any water restrictions and exemptions granted by the relevant water authority. Use water saving taps and devices during construction. Use captured water for irrigation, wash down and dust suppression. Ensure all hoses/pipework is watertight / leaks free. Reuse topsoil, excavated material and green waste 	complying with standards set by the relevant authorities and audits to PEMP	Induction Records Environmental Inspection Records MSDS Register Site Diary Plant Induction Records		
4.2	Fossil Fuels	Use of non-renewable resource	Project PEMP	Vehicles and plant & equipment to be regularly maintained. Engines to be switched off when not in use. As a land owner or occupier, take reasonable steps to: <ul style="list-style-type: none"> Avoid causing or contributing to land degradation which causes or may cause damage to the land of another land owner conserve soil protect water resources 	complying with standards set by the relevant authorities and audits to PEMP	Induction Records Environmental Inspection Records MSDS Register Site Diary Plant Induction Records		
4.3	Electricity	Non-Renewable Resource Greenhouse Gas Emission	Project PEMP	Promote water and energy savings. <ul style="list-style-type: none"> Use energy efficient electrical installations with sensor switching. Use timer switches for high voltage security lighting. Use natural lighting where practicable. Switch off all stand-by equipment and office lighting at the end of each day. 	Office monitoring	Office Inspections		
4.4	Material selection	Reduced use of natural resources	Protection of the Environment Operations (Waste) Regulation 2014Part 8	Use products made from recycled materials Recycle office, construction and demolition waste	Selection of materials	verification that a recycled product has been used		
4.5	Excavated Materials	Use of Landfill	Environment Protection & Biodiversity Conservation Regulation, 2000 Subdivision 12.2.2—General offences 12.11	All practicable measures taken to recycle/re-use excavated materials transported from site as clean fill Minimise amount of material being sent to landfill		Civil subcontractor to supply monthly recycling report for all spoil removed from site.		
4.6	Construction Waste	Use of Landfill	Environment Protection & Biodiversity Conservation Regulation, 2000 Subdivision 12.2.2—General offences 12.14	Waste contractor engaged to segregate materials offsite for recycling. Agreement with suppliers and subcontractors to where practicable minimise packaging or to return packaging to manufacturing plant/factory for re-use. Provision of and regular emptying of readily accessible waste containers.Minimise amount of material being sent to landfill	Waste contractor to provide monthly waste reports documenting waste and recycling volumes.	Waste recycling subcontractor to supply monthly recycling report for all construction waste removed from site.		

5 COMMUNITY & NEIGHBOURS:				INHERENT RISK		RESIDUAL RISK		
				Likelihood	Consequence	Risk	Likelihood	Risk
				Likely	Moderate	High	Unlikely	Moderate
Environmental ASPECT	Associated IMPACT	LEGAL & OTHER REQUIREMENT Relevant Document Title/Section/Clause	CONTROLS	COMPLIANCE	VERIFICATION/RECORD			
5.1	Noise	Disturbance to nearby residents	Protection of the Environment Act, 1997 - Part 55 (C136-141) Protection of the Environment Operations (Noise Control) Regulation, 2008 Part 4 - Subdivision 1 (c136&37), Subdivision 3 (c144,46&47) Part 5, Schedule 1 and 2 Contract Specifications	Comply with specified operating hours. Maintain noise suppression devices on all applicable plant and equipment. Advise neighbours of planned noisy activities and duration. Do not emit unreasonable noise (having regard to its volume, intensity, duration). Construction equipment cannot be operated outside of 7am - 10pm M-F and 9 to 10 weekends and public holidays (depending on project, location and contract specifications)	Monitor noise levels. Record and address all complaints.	Dilapidation survey.		
5.2	Dust	Disturbance to nearby residents	Protection of the Environment Act, 1997-part 5.4 Division 1 (c126) Protection of the Environment (clean air) Regulation 2010 Contract Specifications	Use dust suppression/control techniques by: - wetting down floors; - use wet cutting of stone & tiles; - use vacuum attachments to drilling/cutting tools; - isolate areas where possible; and - use barriers to prevent spread of dust. Do not allow dust, water, mud/silt, paint, oil or other chemicals to be blown, deposited or discharged into a public place.	Monitor activities and control all dust. Cease works if dust is not controlled.	Dilapidation survey.		
5.3	Vibration	Disturbance to nearby residents. Damage to physical assets	Contract Specifications	Minimise inconvenience to adjoining property owners. Conduct a dilapidation survey prior to commencing works. Monitor and control vibration levels. Avoid disturbance caused by vibration.	Carry out surveys and monitoring as required	Dilapidation survey.		
5.4	Traffic and pedestrian management	Disturbance to nearby residents, road users and pedestrians	ROADS ACT 1993 -PART 4 ROADS REGULATION 2008 - PART 2 - DIV 4 Contract Specifications	Comply with approved Traffic Management Plan • Vehicle wheels to be checked and cleaned before leaving site. • Use street sweeper if required • Do not overload vehicles. Cover applicable loads to and from site • Provide signage, traffic controllers in conformance with the TMP The wheels and undercarriage of vehicles driven onto public roads must be free of earth, clay and refuse. Do not allow dust, water, mud/silt, paint, oil or other chemicals to be blown, deposited or discharged into a public place.	Monitor compliance with approved Traffic Management Plan. Record and address all complaints.	Inspections to confirm compliance		
5.5	Protection of Existing Services	Interruption of services to other users	WHS Regulation 2011 - Part 3 .1 (c132-38) Part 6.2 Div 3 Div 7 (c1 166) CoP Excavation Work 2014 3.5 Contract Specifications	Identify and protect overhead and inground services. Contact Dial-before-you-dig and client records. Ensure service authority requirements are met. Notify Client prior to planned interruptions to services. Project Emergency Plan in place with correct emergency contact numbers on display. Excavation Permits approved before commencing excavations.	Monitor activities, implementation of site identification and protection, compliance with Excavation Permits.	Excavation Permits. Notifications to Client of planned interruptions Project Emergency Plan Dial-before-you-dig Records		

6 FLORA & FAUNA:				INHERENT RISK		RESIDUAL RISK			
				Likelihood	Consequence	Risk	Likelihood	Risk	
				Possible	Moderate	High	Unlikely	Low	
Environmental ASPECT	Associated IMPACT	LEGAL & OTHER REQUIREMENT Relevant Document Title/Section/Clause	CONTROLS	COMPLIANCE	VERIFICATION/RECORD				
6.1	Destruction/Removal of Habitat	Loss Of Habitat	Native Vegetation Act 2003 Part 3 Native Vegetation Regulation 2013 Part 2 National Parks and Wildlife Act, 1974 PART 7	Site clearance to comply with approved Site Plan. Trees to be removed to be marked. Site inspection to be conducted with Client prior to felling. Tree protection zones to be established as required at the drip line of trees to be retained. Where practicable, topsoil to be stripped and retained for reuse on site. Site induction to address awareness of Base Flora and Fauna Management Strategy If planning to do works or other activities which might kill, injure or disturb protected native plants, obtain a permit under the	Monitor damage to Flora and Fauna and contact WIRES or the EPA for any toher requirements.	Site Induction Environmental Inspections Environmental Audits			

7 HERITAGE & CULTURAL:				INHERENT RISK		RESIDUAL RISK			
				Likelihood	Consequence	Risk	Likelihood	Risk	
				Possible	Minor	Medium	Unlikely	Low	
Environmental ASPECT	Associated IMPACT	LEGAL & OTHER REQUIREMENT Relevant Document Title/Section/Clause	CONTROLS	COMPLIANCE	VERIFICATION/RECORD				
7.1	Discovery of Aboriginal and or Cultural Objects	Loss of cultural history	Aboriginal and Torres Strait Islander Heritage Protection Act, 1984 - National Parks and Wildlife Act, 1974 PART 6	Cease works in the event that artefacts believed to be of Aboriginal culture are discovered. Client to be immediately advised and instructions to be followed. Do not disturb or damage an Aboriginal place, object or relic without the consent or authorisation. Notify within reasonable time of becoming aware of the location or discovery of certain Aboriginal objects and relics Ensure that objects and areas with significance to Aboriginals are treated in accordance with Aboriginal tradition and are preserved and protected from injury and desecration. Do not fail to report to the Minister the discovery of remains which are believed to be Aboriginal remains. Report the discovery to the DVC as soon as practicable.	Generate procedures identifying action to be taken on discovery of artefacts/remains.	Environmental inspections			

8 HAZARDOUS SUBSTANCES INCLUDING ASBESTOS				INHERENT RISK		RESIDUAL RISK			
				Likelihood	Consequence	Risk	Likelihood	Risk	
				Possible	Catastrophic	Extreme	Unlikely	High	
Environmental ASPECT	Associated IMPACT	LEGAL & OTHER REQUIREMENT Relevant Document Title/Section/Clause	CONTROLS	COMPLIANCE	VERIFICATION/RECORD				
8.1	Asbestos		WHS Regulations 2011 Chapter 8 - Asbestos CoP how to manage and control asbestos in the workplace 2011 Protection of the Environment Operations (Waste) Regulation 2014 Part 7 Transportation and management of asbestos waste	Review the Asbestos Register. If asbestos is located on site, engage the project Hygienist and licensed asbestos contractor to conduct Risk Assessment, develop an Asbestos Management Plan and to remove and dispose of all asbestos. Site induction to make personnel aware of the potential presence of asbestos contaminated materials and the procedures of its identification and removal. Ensure that waste asbestos is only removed by a person holding an asbestos removal licence; contained to prevent the release of airborne asbestos fibres; transported in an EPA permitted vehicle; and disposed of as soon as practicable at a site licensed by the EPA		When applicable: • Asbestos Management Plan • Clearance Certificates			

6.3. Weekly Environmental Inspection Checklist

Project Name: Hornsby Ku-ring-gai Hospital Stage 2

Project No: N206

Reviewed By: _____

Date: _____

Additional Attendees: _____

Condition or Practice		Status ✓/*/NA	Comments
Site Accommodation			
1	Spill kit(s) accessible		
2	Hazardous substance storage areas defined, impervious, containment volume is 110% of total stored substances		
3	Lunch Room and amenities kept clean and tidy		
4	Skips protected from weather dispersal		
5	Site and surrounding area is clean, tidy		
6	Noise levels are acceptable		
Water Discharge			
7	Concrete washout lined, no leakage, not overfull		
8	Concrete/masonry cutting and grinding controlled; no slurry run-off escaping		
9	Paint and Plaster washout functional, not discharging unclean water		
10	No visible leakages on site		
Erosion and Sediment Control			
11	Sediment fences as per ESC plans, no breaks or failures		
12	No visible erosion caused by run-off		
13	Stormwater inlets protected with sediment traps and filter fabric, clean		
14	Stockpiles effectively protected from weather, banded with sediment fencing		
15	Sediment basin functional and unrefined run-off is not escaping site; not overfull		
16	Dewatering events monitored for acceptable discharge		
17	Site entry/exit functional; surrounding roads are clean		
18	Wash down bays isolated from stormwater and prevented from seepage and leakage		
19	No significant weed colonies detected (herbicide may be required)		
Air Quality Management			
20	Dust levels are acceptable		
21	Plant emissions are acceptable		
22	There are no noticeable odours		
Protection of Flora and Fauna			
23	Tree Protection Zones clearly established		
24	Stockpiling of materials are kept clear of trees		

Condition or Practice		Status ✓/✗/NA	Comments
25	No clearing taking place without arborist supervision, pre-inspection for wildlife		
Other			
26	Site compliant to section 5.0 of the PEMP		
27	Other monitoring continuing (water quality, dust, vibration etc)		
28	Fire Ant inspections maintained and recorded		
DISTRIBUTION: Project Records		SIGNATURE OF REVIEWER:	

Comments and Action Plan

6.4. Project Complaint and Incident Register



Project Complaint and Incident Register

C-FRM-061

Project: Hornsby Ku-ring-gai Hospital Stage 2 Redevelopment & Medical Imaging Building

PROJECT COMPLAINT AND INCIDENT REGISTER							
Date	Complaint/Incident Description	Source / Contact	Action / Rectification	Client Advised	CAR Req'd	CAR Closed	Recorded By

6.5. Complaint and Incident Report Form

Project Number: N206 Incident Report #: _____Project Name: Hornsby Ku-ring-gai Hospital Stage 2 Redevelopment & Medical Imaging Building **1 Brief description of incident or complaint****2 Time and date of incident****3 Details of incident****4 Location of incident****5 Did the incident cause evident harm to the receiving environment? If so, please describe:****6 Did any discharge escape from the site boundary in any way? If so, please describe:****7 Activity being performed at the time of incident****8 Organisations involved/responsible**

9 Root cause of incident**10 Immediate actions taken****11 Restorative actions taken, if any****12 Corrective actions taken to prevent future recurrence****13 Were emergency services required?****Yes / No****14 Details of person submitting this form:**

Name: _____

Position/Title: _____

Contact Telephone No: _____

Date: _____

15 Communication

Client Advised:

Yes / No

Project Manager Advised

Yes / No

Quality and Environment Manager Advised:

Yes / No

6.6. Environmental Legal and Statutory Requirements Register

Item	Description	Executor	Access	Last Updated	Extracted Legal Requirements
1 General Environmental Duties					
1.1	Protection of the Environment Operations Act 1997 (NSW)	State of NSW	Link	Mar-14	The Regulation contains provisions relating to: <ul style="list-style-type: none"> • environment protection licences, including the calculation of administrative and load-based licence fees, • the definition of water pollution and exemptions from the offence of polluting waters under the Act, • compliance with the National Environment Protection (National Pollutant Inventory) Measure made under the National Environment Protection Council Act 1994 (Cth), • vehicle testing and inspection requirements in accordance with a notice given under s207 of the Act, • the issuing of penalty notices under the Act and certain related environmental legislation, • the appropriate regulatory authority for certain type of activities, • exemptions from certain provisions of the Act, • the prohibition on the burning of native forest bio-material in electricity generating works, • fees for environmental protection notices, • notification of pollution incidents, • forms for police warrants of entry to premises concerning noise, • time for making an appeal against a control notice relating to the keeping of animals, • the evaluation of green offset schemes or green offset works, • restrictions on requirements for financial assurances, and • matters to be included in the public register kept under s308 of the Act.
1.2	Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)	Commonwealth	Link	Oct-13	Biodiversity Conservation: If undertaking development or other activities that may have a significant impact on matters of national environmental significance, comply with the Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth). Do not take an action on Commonwealth land that could have a significant impact on the environment (or on land outside Commonwealth areas where the significant impact would be on Commonwealth land), without approval from the Commonwealth Environment Minister (or State Government if a relevant bilateral agreement is in place). Note that further obligations apply to work in Commonwealth Reserves. Offences for breaching the EPBC Act: Action that is likely to have a significant impact on a matter of national significance, without first obtaining approval - Civil Penalty of up to \$550,000 to individual, Up to \$5.5m to body corporate; Criminal Penalty of Up to 7 years jail and/or \$46,200. Action that is likely to have a significant impact on Commonwealth land, without first obtaining approval - Civil Penalty of up to \$110,000 to individual, up to \$1.1m to body corporate; Criminal Penalty of up to 2 years jail and/or \$13,200. A person who takes, or fails to take, an action that results in contravening a condition of their approval - Civil Penalty of up to \$110,000 to individual, up to \$1m to body corporate; Criminal Penalty of up to 2 years jail and/or \$13,200. A person who provides false or misleading information to obtain approval or permit - Criminal Penalty of up to 2 years jail and/or \$13,200.
1.3	Native Vegetation Act 2003 (NSW)	State of NSW	Link	Mar-14	Do not take, use, keep or interfere with a cultural or natural resource of a protected area, unless under a management intent, a conservation agreement, or a lease, agreement, licence, permit or other authority under an Act; or a licence, permit or other authority issued under a regulation; or if the area is a conservation park, resources reserve, nature refuge, coordinated conservation area, wilderness area, World Heritage management area or international agreement area - an exemption under a regulation.
1.4	Environmental Planning and Assessment Act 1979	State of NSW	Link	Mar-14	Obtain a development permit before carrying out assessable development. When seeking approval, be aware of the requirements for code assessment that may apply to the application for a development permit. Be aware that prescribed matters may also be made by the Authority. For development requiring compliance assessment, obtain a compliance permit before carrying out the development. If the holder of a development permit, obtain a new development permit before making any alteration to plant, equipment or premises if the changes will result in a material increase in the intensity or scale of the activity. See material change of use.
2 Emissions to Air					
2.1	Protection of the Environment Operations (Clean Air) Regulation 2010	State of NSW	Link	Mar-14	The Regulation deals with the sale of domestic solid fuel heaters (generally wood heaters) and requires the heaters to be certified as complying with emission limits set out in the relevant Australian Standard. It also prohibits tampering with such heaters. In relation to motor vehicles and motor vehicle fuels, the Regulation deals with the following matters: <ul style="list-style-type: none"> • the emission of air impurities, including excessive smoke from motor vehicles; • the compulsory fitting and maintenance of anti-pollution devices, and exemptions from these requirements; and • the method of transfer of petrol into a vehicle's fuel tank; • the volatility of petrol; and • vapour recovery at petrol service stations. In relation to industry, the Regulation: <ul style="list-style-type: none"> • sets maximum limits on emissions from activities and plant for a number of substances, including chlorine, dioxins, furans, smoke, solid particles and sulphur; • deals with the transport and storage of volatile organic liquids; • restricts the use of high sulphur liquid fuel; • imposes operational requirements for certain afterburners, flares, vapour recovery units and other treatment plant. In relation to household burning, the Regulation: <ul style="list-style-type: none"> • controls burning in the open or in incinerators in local government areas; • allows the OEH or local councils to grant approvals for burning in the open or in an incinerator in certain circumstances; • prohibits the burning of certain articles (including tyres, paint and solvent containers, and certain treated timbers); • imposes a general duty on persons to prevent or minimise air pollution when burning in the open or in an incinerator; and • allows the OEH to grant a written exemption to a public authority in certain circumstances

Item	Description	Executor	Access	Last Updated	Extracted Legal Requirements
2.2	National Environment Protection (Diesel Vehicle Emissions) Measure 2001	Commonwealth	Link	Sep-13	Ensure emission from all internal combustion engines including diesel engines are not visible for a continuous period of 10 or more seconds. Otherwise the vehicle must not be used until serviced.
2.3	Ozone Protection and Synthetic Greenhouse Gas Management Act 1989 and Regulations 1995 (Commonwealth)	Commonwealth	Link	Sep-13	Do not allow an ODS or SGG to be discharged to the atmosphere. Ozone Depleting Substances include: - Chlorofluorocarbons (CFCs) - Halon - Carbon tetrachloride (CCl4) - Methyl chloroform (CH3CCl3) - Hydrobromofluorocarbons (HBFCs) - Hydrochlorofluorocarbons (HCFCs) - Methyl bromide (CH3Br) - Bromochloromethane (CH2BrCl) SGG or synthetic greenhouse gas means an HFC, a PFC, or sulfur hexafluoride (SF6).
2.4	Greenhouse and Energy Minimum Standards Act 2012 (Commonwealth)	Commonwealth	Link	Sep-13	Ensure all appliances, electronics, Refrigeration and Air Conditioning units (RAC), lighting, and power units are certified energy efficient.
3 Releases to Water					
3.1	Protection of the Environment Operations Act 1997 (NSW)	State of NSW	Link	Sep-13	Do not deposit prescribed water contaminants in a roadside gutter, stormwater drain or waterway. Do not store material where environmental harm could result from pollution of water. Water contaminants include: 1 a chemical, or chemical waste containing a chemical (e.g. biocide, including herbicide, fungicide and pesticide chemical that causes biochemical or chemical oxygen demand, chemical toxicant for which guidelines are prescribed in the document 'Australian and New Zealand guidelines for fresh and marine water quality', degreasing agent) 2 a gas other than oxygen 3 a liquid containing suspended or dissolved solids 4 a liquid that has a temperature different by more than 2°C from ambient water temperature 5 animal matter, including dead animals, animal remains and animal excreta, and water used to clean animals, animal enclosures or vehicles used for transporting animals 6 ashes, clay, gravel, sediment, stones and similar organic or inorganic matter 7 a substance that has a pH outside the range 6.5 to 8.5 8 building and construction materials, including bitumen, brick, cement, concrete and plaster 9 building, construction and demolition waste, including bitumen, brick, concrete cuttings, plaster and waste water generated by building, construction or demolition 10 clinical waste 11 glass, metal parts, paper, piping, plastic and scrap metal 12 industrial waste 13 oil, including, for example, petroleum or vegetable based oil 14 paint, paint scrapings or residues, paint sludge, water used for diluting paint or washing painting utensils, and waste from paint stripping 15 plant matter, including, for example, bark, lawn clippings, leaves, mulch, pruning waste, sawdust, shavings, woodchip and other waste from forest products 16 putrescible waste, including, for example, food scraps 17 sewage and sewage residues, whether treated or untreated, and any other matter containing faecal coliforms or faecal streptococci, including, for example, waste water pumped out from a septic tank 18 vehicles and components of vehicles, including, for example, batteries and tyres 19 waste and waste water, generated from indoor cleaning, including, for example, waste from carpet or upholstery cleaning and steam cleaning 20 waste and waste water, generated from outdoor cleaning, including, for example, waste generated from high pressure water blasting of commercial or industrial premises, fuel dispensing areas, plant or equipment, roofs, streets, vehicles and wharves 21 waste generated from repairing or servicing motor vehicles, including, for example, engine coolant, grease, lubricants and oil 22 waste water, including backwash from swimming pools, condensate from compressors, water from air-conditioning or cooling systems and waste water from grease traps
3.4	Water Efficiency Labelling and Standards (New South Wales) Act 2005	State of NSW	Link	Mar-14	Specify, procure and install WELS certified water efficient hydraulic fixtures where possible.
3.5	Water Management Act 2000	State of NSW	Link	Sep-14	To the extent it is reasonable to do so, release of waste water or contaminants to waters must be dealt with using the following hierarchy of preferred procedures— (a) step 1—evaluate water conservation measures to reduce the use of water and the production of waste water or contaminants; (b) step 2—evaluate waste prevention options and implement appropriate waste prevention measures; (c) step 3—if waste prevention does not, or is not likely to, eliminate the release of waste water or contaminants to waters, evaluate treatment and recycling options and implement appropriate treatment and recycling; (d) step 4—if treatment and recycling does not, or is not likely to, eliminate the release of waste water or contaminants to waters, evaluate the following options for waste water or contaminants, in the order in which they are listed— (i) appropriate treatment and release to a waste facility or sewer; (ii) appropriate treatment and release to land; (iii) appropriate treatment and release to surface waters or ground waters.
4 Releases to Land					
4.1	Protection of the Environment Operations Act 1997 (NSW)	State of NSW	Link	Mar-14	Do not release a contaminant where it could cause serious or material environmental harm or an environmental nuisance. Advise the Department of Environment and Heritage Protection (EHP) if an activity listed in Schedule 3 to the Act is carried out, or if the land has been or is being contaminated by a hazardous contaminant, within 22 business days Comply with a notice to prepare or commission a site management plan for a contaminated site unless a waiver is received from the Department of Environment and Heritage Protection (EHP).
4.2	Environmental Planning and Assessment Act 1979	State of NSW	Link	Dec-14	Obtain development approval before undertaking development on land wholly or partly in a coastal management control district, as defined under the Coastal Protection and Management Act, other than an area declared as a coastal district under section 54(2) of that Act. The objective of the amending Act (December 2014) is to substantially increase the maximum penalties for offences against the Environmental Planning and Assessment Act 1979 and the Environmental Planning and Assessment Regulation 2000, including to prescribe a maximum penalty of \$5 million in the case of a corporation or \$1 million in the case of an individual, and additional daily penalties, for an intentional offence that caused, or was likely to cause, significant harm to the environment, or the death of or serious injury or illness to a person.

Item	Description	Executor	Access	Last Updated	Extracted Legal Requirements
4.3	Native Vegetation Act 2003 (NSW)	State of NSW	Link	Oct-13	Do not destroy vegetation within an area of declared high nature conservation value or declared vulnerability to land degradation. Do not clear vegetation in an area where an area management plan is in force for specified activities without giving notification of your intention, in the approved form, to the Department of Environment and Heritage Protection (EHP). Do not unlawfully destroy vegetation, excavate or place fill in a watercourse, lake or spring. A permit may be sought under section 269 of the Water Act 2000. Lawfully permitted exemptions are in the regulation. Do not destroy a forest product, construct a road or carry out excavation works on land within the Wet Tropics Area without a licence issued by the Authority or issued under other legislation. Comply with the list of prohibited activities in the Wet Tropics Area.
4.5	National Parks and Wildlife Act 1974 (NSW)	State of NSW	Link	Oct-13	Identifies forest reserves.
5 Cultural and Heritage					
5.1	Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth)	Commonwealth	Link	Oct-13	Do not fail to report (to the Minister) the discovery of remains which are believed to be Aboriginal remains. Details of the remains and their location must be given. Do not engage in conduct which contravenes the terms of a declaration relating to an Aboriginal place or object. Do not (without consent) do any act which is likely to endanger, cause damage to, deface or interfere with an Aboriginal object or place. Protection of Areas and Objects: Ensure that objects and areas with significance to Aboriginals are treated in accordance with Aboriginal tradition and are preserved and protected from injury and desecration. Comply with any declaration made by the Commonwealth Minister in relation to a particular area to protect or preserve Aboriginal heritage. Declarations are published in the Government Gazette and local newspapers, and a register of declarations is kept in the library of the Australian Institute of Aboriginal Studies.
5.2	Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Cth)	Commonwealth	Link	Mar-14	Cultural Heritage Management Plan A cultural heritage management plan may be developed voluntarily, however it is mandatory if: a. a lease, licence, permit, approval or other authority is required for the project, and an EIS or any other environmental assessment is required for the project; or b. a development application is made relating to the project, and the chief executive is a concurrence agency for the application; or c. Prescribed by any legislation. Ensure that: • all reasonable and practicable measures are taken to ensure an activity does not harm Aboriginal cultural heritage; • Aboriginal cultural heritage is not harmed; • Aboriginal cultural heritage is not excavated, relocated or taken away; and • an object that is Aboriginal cultural heritage is not in your possession. It is a defence to prove that at the time of the alleged offence the defendant could not be reasonably expected to know that the thing to which the charge relates is Aboriginal cultural heritage.
5.3	Australian Heritage Council Act 2003 (Cth)	Commonwealth	Link	Mar-14	Report the discovery of any archaeological artefact that is an important source of information about an aspect of Queensland's history to the chief executive. Do not interfere with an artefact about which notice has been given for at least 20 business days Obtain a development permit before commencing work at a place listed in the heritage register, unless an exemption certificate has been obtained from the chief executive. An exemption certificate can be issued for development that: • is permitted under a heritage agreement for the place; or • will not have a detrimental impact on the cultural heritage significance of the place.
5.4	Environmental Planning and Assessment Act 1979	State of NSW	Link	Mar-14	Work at a Heritage Registered Place Obtain a development permit before commencing work at a place listed in the heritage register, unless an exemption certificate has been obtained from the chief executive. An exemption certificate can be issued for development that: • is permitted under a heritage agreement for the place; or • will not have a detrimental impact on the cultural heritage significance of the place.
6 Flora and Fauna					
6.1	Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)	Commonwealth	Link	Oct-13	Damage to Sensitive Environments: Do not take an action that may: • result in the death, injury, taking, trading, keeping or moving of a member of a listed threatened species or ecological community • result in the death, injury, taking, trading, keeping or moving of a member of a listed migratory species • knowingly cause significant damage to critical habitat of a listed threatened species or ecological community • result in the death, injury, taking, trading, keeping, moving of, or interfering with, a cetacean (eg whales, dolphins, porpoises, narwhals) • result in the death, injury, taking, trading, keeping or moving of a member of a listed marine species • result in a significant ecological impact on a relevant wetland. Ensure that the Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) is notified within 7 days if an action results in the death, injury, taking, trading, keeping, moving of, or interfering with: • a listed threatened species or ecological community • a member of a listed migratory species • a cetacean • a listed marine species.
6.3	Threatened Species Conservation Act 1995 (NSW)	State of NSW	Link	Oct-13	Do not take a protected plant unless as specified in Section 89 of the Nature Conservation Act 1992. Do not take a protected animal unless the taking is authorised under the Nature Conservation Act 1992. Restriction on Taking Native Wildlife in Areas of Major Interest and Critical Habitats Do not take, use, keep or interfere with native wildlife in an area of major interest or critical habitat (as identified in a conservation plan), unless permitted under a conservation plan; or a licence, permit or other authority issued under a regulation

Item	Description	Executor	Access	Last Updated	Extracted Legal Requirements
6.5	Soil Conservation Act 1938 (NSW)	State of NSW	Link	Mar-14	<p>Land Conservation Do not destroy vegetation within an area of declared high nature conservation value or declared vulnerability to land degradation.</p> <p>Do not clear vegetation in an area where an area management plan is in force for specified activities without giving notification of your intention, in the approved form, to the Department of Environment and Heritage Protection (EHP).</p> <p>Do not unlawfully destroy vegetation, excavate or place fill in a watercourse, lake or spring. A permit may be sought under section 269 of the Water Act 2000. Lawfully permitted exemptions are in the regulation.</p> <p>Do not destroy a forest product, construct a road or carry out excavation works on land within the Wet Tropics Area without a licence issued by the Authority or issued under other legislation. Comply with the list of prohibited activities in the Wet Tropics Area.</p>
7 Waste Management					
7.1	Protection of the Environment Operations (Waste) Regulation 2005	State of NSW	Link	Mar-14	<p>This Regulation:</p> <ul style="list-style-type: none"> • makes requirements relating to non-licensed landfill sites, non-licensed waste activities and non-licensed waste transporting, for e.g. the way in which waste must be stored or transported, reporting and record-keeping requirements; • provides for the contributions to be paid by the occupiers of scheduled waste facilities for each tonne of waste received at the facility or generated in a particular area; • exempts certain occupiers or types of waste from these contributions; • allows rebates to be claimed in relation to certain types of waste; • provides for certain reporting and record-keeping requirements in relation to scheduled waste facilities and scheduled landfill sites; <ul style="list-style-type: none"> • exempts certain waste streams from the full waste tracking and recordkeeping requirements; • makes requirements relating to the transport of controlled waste to interstate destinations; • allows the OEH to approve the immobilisation of contaminants in waste; • makes special requirements relating to asbestos and clinical waste; and • makes it an offence to apply, or to cause or permit the application of, residue waste to land that is used for the purpose of growing vegetation, subject to any exemptions <p>Do not deposit litter or conduct dangerous littering at a place. For places other than a road, exemptions apply for littering. Do not litter from a vehicle.</p> <p>Dumping of Waste Do not dump 200L or more of waste at a place or from a vehicle. Dumping of waste at a place other than a road is exempted if:</p> <ul style="list-style-type: none"> • done by the occupier of the place, or • with the consent of the occupier, or • to a litter bin or other container provided <p>Ensure waste is managed in accordance with the waste and resource management hierarchy and principles and any State waste management strategy.</p>
7.3	Waste Avoidance and Resource Recovery Act 2001 (NSW)	State of NSW	Link	Mar-14	<p>An Act which promotes waste avoidance and resource recovery and establishes a scheme to promote extended producer responsibility in place of industry waste reduction plans.</p>
8 Nuisance					
8.1	Protection of the Environment Operations (Noise Control) Regulation 2008	State of NSW	Link	Mar-14	<p>This Regulation repeals and remakes, with minor amendments, the provisions of the Protection of the Environment Operations (Noise Control) Regulation 2000. The Regulation makes provision with respect to the following:</p> <ul style="list-style-type: none"> • the selling or using of motor vehicles with a temporary noise reduction device or with temporary noise reduction packing and the modification or repair of a vehicle to include any such device or packing • the selling or using of certain classes of motor vehicles and motor vehicle accessories that are capable of emitting noise levels above a prescribed level, • the use of motor vehicle horns and motor vehicle intruder alarms, • the times during which it is not permissible to use certain motor vehicles if they emit noise that can be heard in other residential premises, <ul style="list-style-type: none"> • the sounding of sirens and similar devices and the use of sound systems on vessels, • the emission of noise from the engines or exhausts of motor vehicles and vessels, • the maintenance of noise control equipment on motor vehicles and vessels, • the issue of defective vehicle notices and defective vessel notices, • the prohibition on selling certain articles that are capable of emitting noise levels above a prescribed level, • the obligation to label certain articles, • the times during which it is not permissible to use certain articles (including musical instruments) if they emit noise that can be heard in any residential premises, • the inspection and testing procedures for the purpose of determining noise emission levels of certain motor vehicles, motor vehicle accessories, vessels, articles or equipment.

6.7. Disruptive Works Notices – Process and Templates

a) Disruptive Works Notices Process

For the construction of Hornsby Ku-ring-gai Stage 2 Redevelopment and Medical Imaging Building, Watpac proposes to implement a full and partial DWN system, whereby a full DWN would be submitted for works directly affecting the NSLHD interfaces and a partial DWN as a courtesy notice for works where a Contractor may be outside the site undertaking minor works or when works are undertaken within the site that may be perceived as out of the ordinary, such as additional hours on site (if approved by the relevant authority) or increased noise or vibration.

The procedures and process for both full and partial DWN's will be consistent with the following steps undertaken:

STEP 1: PRE-PLANNING OF WORKS

- Works will be assessed with the following items considered and documented within the DWN form
 - Durations of works
 - Sequencing of works
 - – Stakeholders affected
 - – Disruptions with services shutdowns and reconnections
 - – Impacts to access and egress
 - – Temporary signage
 - – Traffic Management
 - – Potential Industrial Relations issues and sensitive matters
 - – Environmental impact
- Drawings to be provided to articulate intent of works with sequencing where required.
- DWN form to be reviewed and approved internally prior to submission to Health Infrastructure and APP

STEP 2: DRAFT DWN SUBMITTED

- Watpac will submit the DWN form to APP for review, discussion and approval
- Should any amendments be required Watpac will update the form accordingly and re-submit

STEP 3: SUBMIT DWN FORM TO APP / STAKEHOLDER

- APP will submit the DWN to the relevant stakeholder.
- If required APP will arrange a meeting with the stakeholders to discuss the works in more detail. Watpac will facilitate the meeting and incorporate any amendment to the DWN before resubmitting for final approval

STEP 4: PRIOR TO WORKS COMMENCING

- Subcontractors and direct employees involved in the works will be required to participate in a Tool Box Talk to review the proposed risk control measures and to confirm the control measures are appropriate before works proceed. A copy of the Notice of Disruptive Works Form will be attached to the Tool Box Talk.
- 24 hours prior to the work commencing Watpac will send a notice to APP confirming works will proceed as scheduled.

STEP 5: WORKS UNDERTAKEN

- Works will be undertaken in line with DWN. If these works are scheduled over a long duration Watpac will provide APP with status updates to ensure works as progressing as scheduled.

STEP 6: COMPLETION OF WORKS

- Upon completion of the works subcontractors and direct employees involved will sign off the DWN form to confirm all works are complete.
- When works are completed Watpac will send APP a notification identifying all works have ceased and confirm the area of work has been re-instated to its original condition or to the agreed condition endorsed within the DWN.

Coordination of Services Shutdowns, Diversions and Reconnection

Watpac recognises the importance of full coordination and planning when undertaking services shutdown, diversions and reconnections in order to maintain stakeholders, LHD staff and public safety at all times and minimise disruption to surrounding operational buildings business continuity. For a successful outcome all activities must be appropriately managed through open communication and collaboration with the relevant stakeholders and staff during all stages of the process.

Watpac personnel have extensive experience with undertaking an array of different types of shutdowns, diversions and reconnection successfully on health and science projects and provide the following key principles and methodologies that apply to all situations.

Planning for the Works

When planning shutdowns, diversions and reconnections the involvement of all key stakeholders in the development of the plan facilitates a collaborative approach, avoids incorrect assumptions being made and promotes a streamlined process by reducing the production of unnecessarily documents.

Early Warning

When undertaking shutdowns, diversions and reconnections stakeholders and LHD staff will require sufficient time to coordinate and communicate the proposed activities to the relevant people affected by the works. Depending on the complexity of works several meetings may be required to confirm activities. Engineering may require a supplier / vendor / authority to undertake pre works, checks and balances prior to the commencement of the shutdown, diversion and reconnection, or supplier / vendor / authority may be required on site during the works.

Timing

Depending on the type of shutdown, diversion, and reconnection stakeholders and LHD staff may request the works are undertaken on certain days that are quieter, days when particular staff are rostered on or when case lists are not scheduled.

Open communication

Maintaining open communication channels throughout the entire process is paramount. Shutdowns, diversions, and reconnections often require real time communication on the day to coordinate the exact timing and ensure all parties aware of the situation.

Delaying or Postponing Works

If the shutdown, diversion, and reconnection affecting critical areas works may need to be delayed or postponed if for some reason there is an issue relating to safety. Typically these type of issues will normally not be known until a few minutes prior to the agreed time. Should this occur, all parties must be patient and understanding, as works must only be carried out if all parties agree it is safe to continue. While Watpac acknowledge most shutdowns, diversions and reconnection have specific methodologies and or processes to implement, the following steps outline the overarching principles for works to be implemented.

b) Disruptive Works Notice Template

DISRUPTIVE WORKS NOTICE (DWN)
HORNSBY KU-RING-GAI HOSPITAL
STAGE 2 & MEDICAL IMAGING BUILDING



A minimum 14 days' notice is to be given for any works that may interfere with hospital operation

TO	COMPANY	
Stuart Diver	APP	
Samuel Jeffrey	APP	

DWN (Number & Description)

DWN DESCRIPTION

Date of DWN Issue:	Start Date / Time:
Required date of approval:	Finish Date / Time:
Marked-up Plan attached: <i>(Yes/No)</i>	Duration in Days:
Reason for Works:	
Description of Activity to Occur:	
Anticipated Disruption:	
List any control measures, precautions, monitoring reporting, to be undertaken:	

AUTHORITIES

AUTHORITIES TO BE NOTIFIED	DATE ISSUED	DATE APPROVED

ENVIRONMENTAL

ENVIRONMENTAL EFFECT	YES	NO	IMPACT	MITIGATION
NOISE				
VIBRATION				
DUST				
FUMES				
TRAFFIC INTERRUPTION				
PEDESTRIAN ACCESS INTERRUPTION				
Other				

APP RECOMMENDED

SIGNED	DATE
Stuart Diver:	
Comments:	

HINSW APPROVAL

SIGNED	DATE
Name:	
Comments:	

c) Disruptive Works Notices Register Template

DISRUPTIVE WORKS NOTICES REGISTER

Project: Hornsby Ku-ring-gai Hospital - Stage 2 and Medical Imaging Building



#	TITLE	DESCRIPTION	ISSUED TO	SUBMISSION (ACONEX)	DATE ISSUED	APPROVAL (ACONEX)	DATE APPROVED	PROPOSED COMMENCEMENT DATE	ACTUAL COMMENCEMENT DATE	PROPOSED COMPLETION DATE	ACTUAL COMPLETION DATE	STATUS	COMMENTS
1												Complete	Conditional Approval - See Aconex correspondance for details
2													
3													
4													
5													
6													
7													
8													
9													
10													
FORECAST DWN WORKS													
A													
B													
C													
D													
E													
F													
G													
H													
I													
J													

6.8. Unexpected Finds Checklist

Unexpected Finds Checklist

Business Unit Details

Business Unit Name: Watpac Construction **State :** 27T

Project No: _____ **Project Name:** _____

Location of Project: _____

Watpac Representative Name: _____ **Date:** _____

Subcontracting Business Name: _____ **Time:** _____

Subcontractor Representative Name: _____ **Mobile:** _____

UNEXPECTED FIND CHECKLIST

Location on Project: _____

Specific works being carried out: _____

Details of work crew and equipment being used: _____

Suspected Material identified: _____

Weather conditions at the time: _____

Was direct contact made with the material by the workers and equipment? Yes No Unknown

What actions were taken: _____

What actions were made to make area safe: _____

Name of OH/LAA*/ Environmental Consultant contacted: _____ **Date Contacted:** _____ / _____ / _____

Date OH/LAA*/ Environmental Consultant arrived on site: _____ / _____ / _____ **Time On-Site:** _____ : _____ AM PM

Samples taken? Yes No

Was any specialist advice provided? _____

Was any risk to worker health or environment identified? _____

Action to be taken _____

Actions taken to remediate contamination or mitigate risk during works _____

Work recommencement date: _____ / _____ / _____

Other Comments: _____

*OH/LAA (Occupational Hygienist / Licensed Asbestos Assessor)

MANAGING DIRECTORS

MATTHEW PALAVIDIS
VICTOR FATTORETTO

DIRECTORS

MATTHEW SHIELDS
BEN WHITE



Hornsby Ku-ring-gai Hospital Stage 2 Redevelopment

Construction Noise and Vibration Management Plan

SYDNEY

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SYDNEY MELBOURNE BRISBANE CANBERRA
LONDON DUBAI SINGAPORE GREECE

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DOCUMENT CONTROL REGISTER

Project Number	20180872.1
Project Name	Hornsby Ku-ring-gai Hospital Stage 2 Redevelopment
Document Title	Construction Noise and Vibration Management Plan
Document Reference	20180872.1/0624A/R0/TT
Issue Type	Email
Attention To	Watpac

Revision	Date	Document Reference	Prepared By	Checked By	Approved By
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1 INTRODUCTION

Acoustic Logic Consultancy has been engaged to prepare a Noise and Vibration Management Plan for Stage 2 works at the of the Hornsby Ku-ring-gai Hospital Redevelopment project to satisfy conditions of consent B24 of SSD 8647 (Main Stage 2 Building) and condition 16 and 23 of REF 037-2017 (Medical Imaging Building).

The issues which will be addressed in this report are:

- Identification of the noise and vibration standards which will be applicable to this project.
- Identification of potentially impacted nearby development.
- Identify likely sources of noise and vibration generation and predicted noise levels at nearby development.
- Formulation of a strategy to comply with the standards identified and mitigation treatments in the event that compliance is not achievable.

2 SITE DESCRIPTION AND PROPOSED WORKS

The Hornsby Ku-ring-gai Hospital precinct is bounded to the north by Lowe Road, to the west by Palmerston Road, to the east by Derby Road and to the south by Burdett Street.

The proposed Stage 2 redevelopment of the Hornsby Ku-ring-gai Hospital involves,

- Demolition works (buildings 15, 21, 31, 34, 47, 93, 95 and 97).
- Construction of a new Main Building and a Medical Imaging Building, building located towards the southern half of the hospital precinct (wrapping around the existing Star building).

The hospital precinct is generally surrounded by residential properties with local road networks carrying low to medium volumes of traffic.

In addition to existing hospital buildings within the Hornsby Ku-ring-gai Hospital precinct, the surrounding potentially affected receivers as a result of the proposed Stage 2 redevelopment project are as follows:

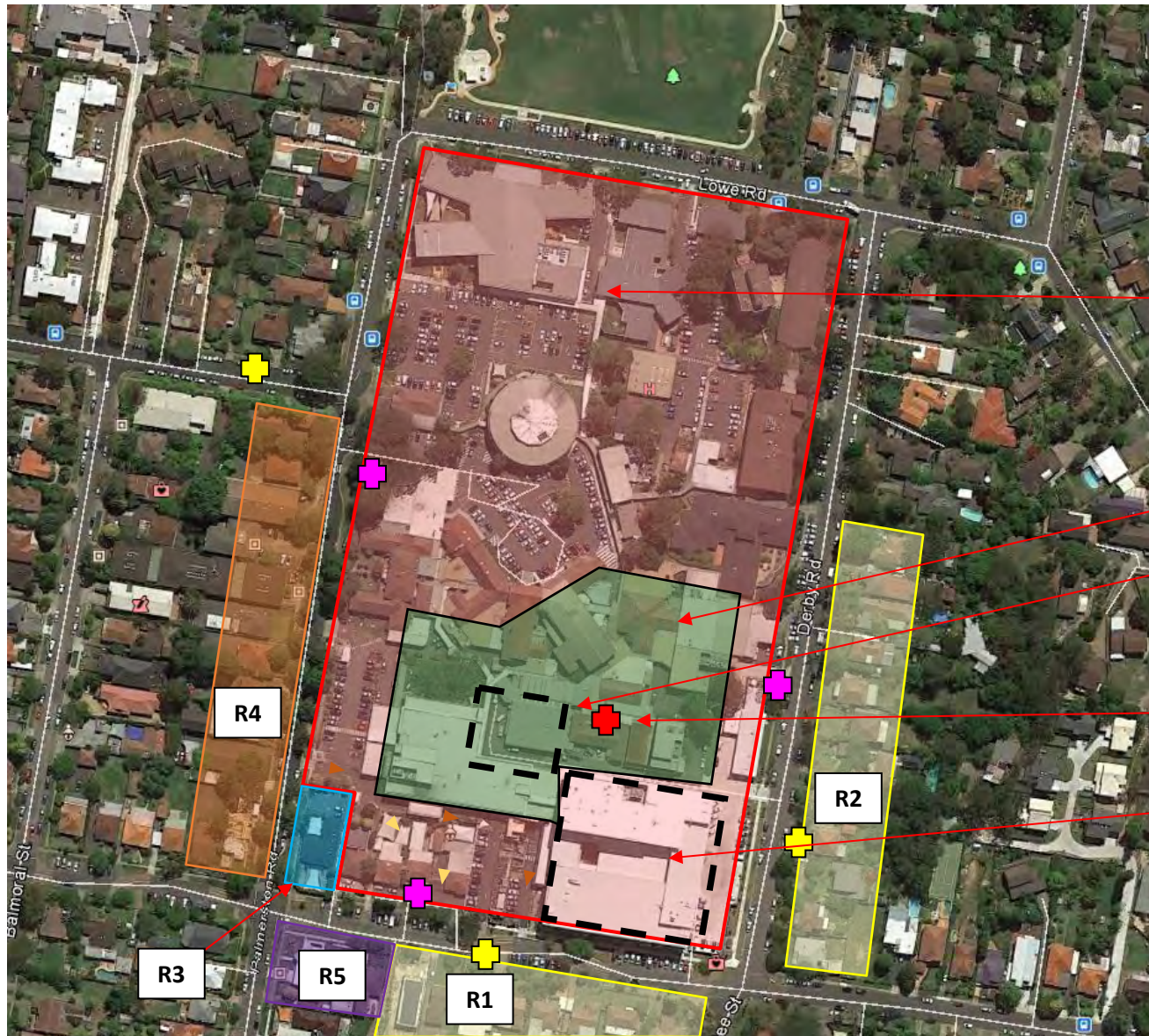
- Receiver 1: Residential development located to the south of the site across Burdett Street;
- Receiver 2: Residential development located to the east of the site across Derby Street;
- Receiver 3: Childcare centre located to the immediate south-west of the site;
- Receiver 4: Commercial development located to the west of the site across Palmerston Road;
- Receiver 5: Waitara Anglican Church located to the south of the site across Burdett Street.
- Receiver 6 – Star Building (within Hospital Precinct).

Figure 2 below illustrates location of surrounding sensitive land uses.

- Stage 2 Redevelopment
- Residential Receivers
- Childcare Centre
- Commercial Receivers
- Place of Worship
- Unattended Noise Monitor Locations
- Attended Measurement Locations



Attended Measurement of Existing Generator



- Hospital Precinct
- Stage 2 Works
- Medical Imaging Building
- Proposed Crane Location
- "Star Building"

Figure 1 – Site Photo (Google Earth)

3 CONSENT CONDITIONS

3.1 MAIN WORKS (STATE SIGNIFICANT DEVELOPMENT 8647)

3.1.1 Condition B24 – Construction Noise Management Plan

The requirement for the preparation of a construction noise management plan is set out in condition B24.

B24.

- a) Prior to the commencement of works, a **Construction Noise and Vibration Management Plan (CNVMP)** must be submitted for the approval of the Certifying Authority. The CNVMP must address, but not be limited to, the following matters:
 - i) be prepared by a suitably qualified expert;
 - ii) be prepared in consultation with Council and all adjoining noise sensitive receivers where noise levels exceed the construction noise management levels, in accordance with EPA guidelines;
 - iii) describe the measures that would be implemented to ensure:
 - i. best management practice is being employed;
 - ii. compliance with the relevant conditions of this consent;
 - iv) describe the proposed noise and vibration management measures in detail;
 - v) include strategies that have been developed to address impacts to noise sensitive receivers where noise levels exceed the construction noise management level, for managing high noise generating works;
 - vi) describe the consultation undertaken to develop the strategies in v) above;
 - vii) evaluate and reports on the effectiveness of the noise and vibration management measures; and
 - viii) include a complaints management system that would be implemented for the duration of the construction works.
- b) The Applicant must submit a copy of the CNVMP to the Department and Council prior to commencement of work.

Condition B24 requires preparation of a Construction Noise and Vibration Management Plan (CNVMP) in accordance with EPA guidelines. The applicable guidelines are:

- The NSW EPA Interim Construction Noise Guideline (ICNG),
- Assessing Vibration: A Technical Guideline 2006 and Australian Standard AS2436 (referenced in the ICNG).

3.1.2 Related Construction Noise Conditions of Consent (C3-C11)

Other conditions of consent relating to construction noise are presented below:

- C3. Rock breaking, rock hammering, sheet piling, pile driving and other noisy works may only be carried out between the following hours:
- 9 am to 12 pm, Monday to Friday;
 - 2 pm to 5 pm Monday to Friday; and
 - 9 am to 12 pm, Saturday.

Construction Noise Management

- C4. The development must be constructed with the aim of achieving the construction noise management levels detailed in the *Interim Construction Noise Guideline* (Department of Environment and Climate Change, 2009). All feasible and reasonable noise mitigation measures must be implemented and any activities that could exceed the construction noise management levels must be identified and managed in accordance with the CNVMP required under condition B25.
- C5. If the noise from a construction activity is substantially tonal or impulsive in nature (as described in Chapter 4 of the *Noise Policy for Industry*, 5 dB(A) must be added to the measured construction noise level when comparing the measured noise with the construction noise management levels.
- C6. The Applicant must ensure construction vehicles do not arrive at the Subject Site or surrounding residential precincts outside of the construction hours of work outlined under condition C2.
- C7. The Applicant must schedule intra-day 'respite periods' for construction activities identified in the *Interim Construction Noise Guideline* (Department of Environment and Climate Change, 2009) as being particularly annoying or intrusive to noise sensitive receivers, including surrounding residents and nearby hospital buildings. These activities are to be carried out after 8 am only and over continuous periods not exceeding three hours (with at least a one hour respite every three hours).
- C8. Wherever practical, and where sensitive receivers may be affected, piling activities are completed using bored piles. If driven piles are required they must only be installed where outlined in a CNVMP required under condition B25.
- C9. The Applicant must implement, where practicable and without compromising the safety of construction staff or members of the public, the use of audible movement alarms of a type that would minimise noise impacts on surrounding noise sensitive receivers.
- C10. Any noise generated during construction of the development must not be offensive noise within the meaning of the *Protection of the Environment Operations Act 1997* or exceed approved noise limits for the Subject Site.

Vibration Criteria

- C11. Vibration caused by the construction works at any residence or structure outside the Subject Site must be limited to:
- for structural damage vibration, German Standard *DIN 4150 Part 3 Structural Vibration in Buildings. Effects on Structures*;
 - for human exposure to vibration, the evaluation criteria presented in British Standard *BS 6841 – Guide to Evaluate Human Exposure to Vibration in Buildings* (1 Hz to 80 Hz) for low probability of adverse comment;
 - vibratory compactors must not be used closer than 30 metres from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified above; and
 - these limits apply unless otherwise outlined in the CNVMP required under condition B25 and submitted for the approval of the Certifying Authority.

Vibration limits as per Condition 15 are set out in section 5.2.

3.2 MEDICAL IMAGING BUILDING (REF 037/2017)

Consent conditions relevant to the Medical Imaging Building are as follows:

16 Noise and Vibration Measures

- 16.1 During preparation of the construction program, consult with the Hornsby Ku-ring- gai Hospital to determine what areas of the hospital are particularly noise- sensitive, and at what time (ward rooms, operating theatres, etc.).
- 16.2 For those activities likely to generate high noise levels, timing of these activities should be undertaken outside of highly sensitive times for the operation of the hospital if required.
- 16.3 Identify feasible acoustic controls or management techniques (use of screens, scheduling of noisy works, notification of adjoining land users, respite periods) when excessive levels may occur.
- 16.4 For activities where acoustic controls and management techniques still cannot guarantee compliant noise levels, implement a notification process whereby nearby development is made aware of the time and duration of noise intensive construction processes.
- 16.5 Provisions for the screening of rooftop plant and equipment are to be documented on the detailed design plans and submitted to the Crown certifying Authority prior to the release of a certificate issued under Section 109R of the EP&A Act 1979.

23 Noise and Vibration Management

- 23.1 Contractors are to implement the requirements of the DECCW "Interim Construction Noise Guideline (July 2009)" as far as practicable.
- 23.2 All reasonable, practicable steps are to be undertaken to reduce noise and vibration from the site.
- 23.3 Where practicable, demolition noise is to be attenuated with the use of screening, acoustic enclosures, engine silencing and substitution by alternative processes to reduce noise emission levels from typical demolition equipment.
- 23.4 Plant and equipment is to be maintained, checked and calibrated in accordance with the appropriate design requirements.
- 23.5 Any equipment not used for extended periods is to be switched off.

3.3 PERMITTED HOURS OF WORK - CONDITION C2 (SSD APPROVAL)

In accordance with Condition C2, hours work (including the delivery of materials to and from the subject site) are as follows:

- Monday to Friday: 7am – 6pm.
- Saturday: 8:00am – 1:00pm.
- Sunday or Public Holidays: No work.

4 BACKGROUND NOISE SURVEY

A detailed background noise survey at the site was conducted as part of the SSD reporting for the project (Acoustic Logic report *Hornsby Ku-ring-gai Hospital Stage 2 Development-SSD Acoustic Assessment*, ref 20170560.1/2803A/R4/JL dated 28 March 2018).

The survey involved long term and attended measurements of ambient noise conditions at the development in the vicinity of the site.

As the proposed works are to be conducted during daytime periods only (7am-6pm), only the daytime background noise level are presented below:

Table 1 – Background Noise Survey Results

Location	Time of Day	Rating Background Noise Level dB(A)_{L90}
Residences located to the south of the site along Burdett Street (R1)	Day Time (7am - 6pm)	44
Residences located to the east of the site along Derby Street (R2)	Day Time (7am - 6pm)	42

5 NOISE AND VIBRATION CRITERIA

5.1 EPA INTERIM CONSTRUCTION NOISE GUIDELINE

The EPA Interim Construction Noise Guideline (ICNG) assessment requires:

- Determination of noise generation goals (based on ambient noise monitoring).
- Review of operational noise levels at nearby development.
- If necessary, recommendation of noise controls strategies in the event that compliance with noise emission goals is not possible.

EPA guidelines adopt differing strategies for noise control depending on the predicted noise level at the nearest residences:

- *“Noise affected” level.* Where construction noise is predicted to exceed the “noise effected” level at a nearby residence, the proponent should take reasonable/feasible work practices to ensure compliance with the “noise effected level”. For residential properties, the “noise effected” level occurs when construction noise exceeds ambient levels by more than 10dB(A)_{Leq(15min)}.
- *“Highly noise affected level”.* Where noise emissions are such that nearby properties are “highly noise effected”, noise controls such as respite periods should be considered. For residential properties, the “highly noise effected” level occurs when construction noise exceeds 75dB(A)_{Leq(15min)} at nearby residences.

In addition to the above goals for residential receivers, the ICNG nominates a Management Level of 45dB(A) _{Leq(15min)} internally for School Classrooms (if occupied) and 70dB(A) _{Leq(15min)} at commercial receptor facades (typical office, retail).

A summary is presented below.

Table 1 – Noise Management Levels - Residential

Location	“Noise Affected” Level - dB(A) _{Leq(15min)}	“Highly Noise Affected” Level - dB(A) _{Leq(15min)}
Residences located to the south of the site along Burdett Street (R1)	44	54
Residences located to the east of the site along Derby Street (R2)	42	52

Table 2 – Noise Management Levels – Other Receivers

Location	Noise Management Level - dB(A)_{Leq(15min)}
Waitara Anglican Church	45 internally
Commercial Receivers	70 at façade
Child Care Centre Outdoor Areas	65 (based on management level for Active Recreation Areas of ICGN)
Ward Rooms	45 internally

If noise levels exceed the criteria identified in the tables above, reasonable and feasible noise management techniques will be reviewed.

5.2 VIBRATION

Vibration caused by construction at any residence or structure outside the subject site must be limited to:

- For structural damage vibration, German Standard DIN 4150-3 *Structural Vibration: Effects of Vibration on Structures*; and
- For human exposure to vibration, the evaluation criteria presented in the British Standard BS 6472:1992 *Guide to Evaluate Human Exposure to Vibration in Buildings (1Hz to 80Hz)* for low probability of adverse comment.

5.2.1 Structure Borne Vibrations (Building Damage Criteria)

German Standard DIN 4150-3 (1999-02) provides vibration velocity guideline levels for use in evaluating the effects of vibration on structures. The criteria presented in DIN 4150-3 (1999-02) are presented in Table 4.

It is noted that the peak velocity is the value of the maximum of any of the three orthogonal component particle velocities as measured at the foundation, and the maximum levels measured in the x- and y-horizontal directions in the plane of the floor of the uppermost storey.

Table 3 – DIN 4150-3 (1999-02) Safe Limits for Building Vibration

TYPE OF STRUCTURE		PEAK PARTICLE VELOCITY (mms ⁻¹)			
		At Foundation at a Frequency of			Plane of Floor of Uppermost Storey
		< 10Hz	10Hz to 50Hz	50Hz to 100Hz	All Frequencies
1	Buildings used in commercial purposes, industrial buildings and buildings of similar design	20	20 to 40	40 to 50	40
2	Dwellings and buildings of similar design and/or use	5	5 to 15	15 to 20	15
3	Structures that because of their particular sensitivity to vibration, do not correspond to those listed in Lines 1 or 2 and have intrinsic value (e.g. buildings that are under a preservation order)	3	3 to 8	8 to 10	8

The surrounding commercial and residential buildings would be considered a Type 1 structure, whilst the heritage buildings would be considered a Type 3 structure.

5.2.2 Assessing Amenity

Table 2.2 of EPA “*Assessing Vibration: A technical guideline*” specifies the following vibration criteria for the protection of human comfort:

Table 5 – Construction Vibration Goals

Location	Time	Peak velocity (mm/s)	
		Preferred	Maximum
Continuous Vibration			
Residences	Daytime	0.28	0.56
Offices	When in use	0.56	1.1
Critical Working Areas (e.g. Hospital Operating Theatres)	Day or Night Time	0.14	0.28
Impulsive Vibration			
Residences	Daytime	8.6	17
Offices	When in use	18	36
Critical Working Areas (e.g. Hospital Operating Theatres)	Day or Night Time	0.14	0.28

6 ACTIVITIES TO BE CONDUCTED AND THE ASSOCIATED NOISE SOURCES

Typically, the most significant sources of noise or vibration generated during a construction project will be demolition, excavation, civil works (compaction, asphaltting) and piling.

Table 6 - Sound Power Levels of the Proposed Equipment

EQUIPMENT /PROCESS	SOUND POWER LEVEL dB(A)*
12T Truck	110
Excavator with bucket	110
Excavator with hydraulic hammer	120
Asphaltting	110
Compactor (Vibratory)	110
Compactor (Roller)	105
Bobcat	100
Crane (Diesel)	105
Concrete Pump	105
Powered Hand Tools	95-100

*The nominated Sound Power Levels take into account modifying factors as applicable under the NSW Industrial Noise Policy.

The noise levels presented in the above table are derived from the following sources, namely:

- Table A1 of Australian Standard 2436-2010.
- Data held by this office from other similar studies.

Noise levels take into account correction factors (for tonality, intermittency where necessary).

7 CONSTRUCTION NOISE ASSESSMENT

The predicted noise levels during demolition/construction will depend on:

- The activity undertaken.
- The distance between the work site and the receiver. For many of the work areas, the distance between the noise source and the receiver will vary depending on which end of the site the work is undertaken. For this reason, the predicted noise levels will be presented as a range.

Predicted noise levels are presented below. Predictions take into account the following:

- Noise reduction as a result of distance.
- Depending on the criteria adopted, noise emission are predicted to either external areas (property boundaries/building facades) or internal areas. Where noise levels are predicted to internal areas, a loss of 25dB(A) through the commercial/hospital building façade into the room is assumed. A reduction of 15dB(A) as assumed for the Waitara Anglican Church (which is likely to have windows open).

All predictions are made on the assumption that the noise management controls identified in section 7 are adopted.

Table 7 – Predicted Noise Generation – Noise to R1 (Burdett Street Residences)

Activity	Predicted Level – dB(A)_{Leq(15min)} (External Areas)	Comment
Excavator with Bucket (Demolition, Excavation in Soil)	60-65dB(A)	Exceeds BG+10 Noise Management Level. Does not exceed 75dB(A) Highly Noise Effected Level.
Excavator with Hammer (Excavation in Rock, Ground Slab Demo)	65-70dB(A)	Exceeds BG+10 Noise Management Level. Does not exceed 75dB(A) Highly Noise Effected Level.
Compaction - Vibratory	60-65dB(A)	Exceeds BG+10 Noise Management Level. Does not exceed 75dB(A) Highly Noise Effected Level.
Compaction - Roller	55-60dB(A)	Exceeds BG+10 Noise Management Level. Does not exceed 75dB(A) Highly Noise Effected Level.
Asphalting	60-66dB(A)	Exceeds BG+10 Noise Management Level. Does not exceed 75dB(A) Highly Noise Effected Level.
Bobcat	50-55dB(A)	Marginal intermittent exceedance of BG+10 Noise Management Level.
Crane	55dB(A)	Marginal intermittent exceedance of BG+10 Noise Management Level (during lifting).
Concrete Pump	58dB(A)	Marginal intermittent exceedance of BG+10 Noise Management Level.
Hand tools - externally	50-55dB(A)	Compliant/marginal exceedance of BG+10 Noise Management Level.
Hand tools - internally	<40dB(A)	Compliant with BG+10 Noise Management Level

Table 8 – Predicted Noise Generation – Noise to R2 (Derby Street Residences)

Activity	Predicted Level – dB(A)_{Leq(15min)} (External Areas)	Comment
Excavator with Bucket (Demolition, Excavation in Soil)	60-60dB(A)	Exceeds BG+10 Noise Management Level. Does not exceed 75dB(A) Highly Noise Effected Level.
Excavator with Hammer (Excavation in Rock, Ground Slab Demo)	65-75dB(A)	Exceeds BG+10 Noise Management Level. Does not exceed 75dB(A) Highly Noise Effected Level.
Compaction - Vibratory	60-70dB(A)	Exceeds BG+10 Noise Management Level. Does not exceed 75dB(A) Highly Noise Effected Level.
Compaction - Roller	55-65dB(A)	Exceeds BG+10 Noise Management Level. Does not exceed 75dB(A) Highly Noise Effected Level.
Asphalting	60-70dB(A)	Exceeds BG+10 Noise Management Level. Does not exceed 75dB(A) Highly Noise Effected Level.
Bobcat	50-60dB(A)	Intermittent exceedance of BG+10 Noise Management Level when working on eastern boundary.
Crane	55dB(A)	Marginal intermittent exceedance of BG+10 Noise Management Level (during lifting).
Concrete Pump	58dB(A)	Marginal intermittent exceedance of BG+10 Noise Management Level.
Hand tools - externally	50-60dB(A)	Intermittent exceedance of BG+10 Noise Management Level when working on eastern boundary.
Hand tools - internally	<40dB(A)	Compliant with BG+10 Noise Management Level

We note that there is a solid lapped and capped timber fence (1.8m high) around the perimeter of the Child Care Centre, which provides some noise screening from activities conducted at ground floor level.

Table 9 – Predicted Noise Generation – Noise to R3 (Child Care Centre South-West of Site)

Activity	Predicted Level – dB(A)_{Leq(15min)} (External Areas)	Comment
Excavator with Bucket (Demolition, Excavation in Soil)	50-70dB(A)	Intermittent exceedance of 65dB(A) noise goal (working near south-western boundary).
Excavator with Hammer (Excavation in Rock, Ground Slab Demo)	60-75dB(A)	Intermittent exceedance of 65dB(A) noise goal (working near south-western boundary).
Compaction - Vibratory	50-70dB(A)	Intermittent exceedance of 65dB(A) noise goal (working near south-western boundary).
Compaction - Roller	45-65dB(A)	Complies with 65dB(A) Noise Management Level.
Asphalting	50-70dB(A)	Intermittent exceedance of 65dB(A) noise goal (working near south-western boundary).
Bobcat	40-60dB(A)	Complies with 65dB(A) Noise Management Level.
Crane	55dB(A)	Complies with 65dB(A) Noise Management Level.
Concrete Pump	58dB(A)	Marginal intermittent exceedance of BG+10 Noise Management Level.
Hand tools - externally	50-70dB(A)	Intermittent exceedance of 65dB(A) noise goal (working near south-western boundary).
Hand tools - internally	<45dB(A)	Complies with 65dB(A) Noise Management Level.

**Table 10 – Predicted Noise Generation – Noise to R4
(Commercial Development -West of Site)**

Activity	Predicted Level – dB(A)_{Leq(15min)} (External Areas)	Comment
Excavator with Bucket (Demolition, Excavation in Soil)	55-70dB(A)	Complies – 70dB(A) Noise Management Level
Excavator with Hammer (Excavation in Rock, Ground Slab Demo)	60-75dB(A)	Intermittent exceedance of 70dB(A) noise goal (working near western boundary).
Compaction - Vibratory	55-70dB(A)	Complies – 70dB(A) Noise Management Level
Compaction - Roller	50-65dB(A)	Complies – 70dB(A) Noise Management Level
Asphalting	55-70dB(A)	Complies – 70dB(A) Noise Management Level
Bobcat	45-60dB(A)	Complies – 70dB(A) Noise Management Level
Crane	50dB(A)	Complies – 70dB(A) Noise Management Level
Concrete Pump	55dB(A)	Complies – 70dB(A) Noise Management Level
Hand tools - externally	50-60dB(A)	Complies – 70dB(A) Noise Management Level
Hand tools - internally	<45dB(A)	Complies – 70dB(A) Noise Management Level

**Table 11 – Predicted Noise Generation – Noise to R5
(Waitara Anglican Church – Internal Noise Level)**

Activity	Predicted Level – dB(A)_{Leq(15min)} (Internal Areas)	Comment
Excavator with Bucket (Demolition, Excavation in Soil)	45-50dB(A)	Intermittent minor exceedance of 45dB(A) goal when working on southern boundary.
Excavator with Hammer (Excavation in Rock, Ground Slab Demo)	50-55dB(A)	Intermittent exceedance of 45dB(A) goal when working on southern boundary.
Compaction - Vibratory	45-50dB(A)	Intermittent minor exceedance of 45dB(A) goal when working on southern boundary.
Compaction - Roller	40-45dB(A)	Complies with 45dB(A) Noise Goal.
Asphalting	45-50dB(A)	Intermittent minor exceedance of 45dB(A) goal when working on southern boundary.
Bobcat	35-40dB(A)	Complies with 45dB(A) Noise Goal.
Crane	<40dB(A)	Complies with 45dB(A) Noise Goal.
Concrete Pump	<40dB(A)	Complies with 45dB(A) Noise Goal.
Hand tools - externally	35-40dB(A)	Complies with 45dB(A) Noise Goal.
Hand tools - internally	<35dB(A)	Complies with 45dB(A) Noise Goal.

Table 12 – Predicted Noise Generation – Noise to R6 (Star Building – Internal Noise Level)

Activity	Predicted Level – dB(A)_{Leq(15min)} (Internal Areas)	Comment
Excavator with Bucket (Demolition, Excavation in Soil)	25-50dB(A)	Intermittent exceedance of 45dB(A) noise goal (working near north/western facades of Star).
Excavator with Hammer (Excavation in Rock, Ground Slab Demo)	30-55dB(A)	Intermittent exceedance of 45dB(A) noise goal (working near north/western facades of Star).
Compaction - Vibratory	25-50dB(A)	Intermittent exceedance of 45dB(A) noise goal (working near north/western facades of Star).
Compaction - Roller	25--45dB(A)	Complies with 45dB(A) noise goal.
Asphalting	25-50dB(A)	Intermittent exceedance of 45dB(A) noise goal (working near north/western facades of Star).
Bobcat	<45dB(A)	Complies with 45dB(A) noise goal.
Crane	<45dB(A)	Complies with 45dB(A) noise goal.
Concrete Pump	<45dB(A)	Complies with 45dB(A) noise goal.
Hand tools - externally	<45dB(A)	Complies with 45dB(A) noise goal.
Hand tools - internally	<45dB(A)	Complies with 45dB(A) noise goal.

7.1 DISCUSSION - CONSTRUCTION IMPACTS

The most significant construction noise impacts are as follows:

- Demolition, construction, compaction, asphaltting works in the south-western corner of the site (potential impact on child care centre, and to a lesser degree on Burdett Street residences and Waitara Church).
- Demolition, construction, compaction on the eastern of the site (potential impact on Derby Street residences). We note, however that an exceedance of the 75dB(A) Highly Noise Impacted Level is not predicted.
- Demolition, construction, compaction on the northern and eastern facades of the Star site.

7.2 DISCUSSION - VIBRATION

Typically, excavation using a hydraulic hammer and vibratory compaction are the activities with the greatest potential for generation of vibration.

Use of a vibratory compactor and hydraulic hammers to demolish any slab on ground in close proximity to the Star building or Child Care Centre creates a potential for exceedance of the criteria in section 5.2. Vibration monitoring of these activities is recommended.

7.3 RECOMMENDATIONS

Noise impacts within the Hospital Precinct will typically be managed by internal noise management protocols.

Existing lapped and capped timber fencing around the perimeter of the Little Learning School child care centre must be retained during construction works.

However, in light of the above, we recommend:

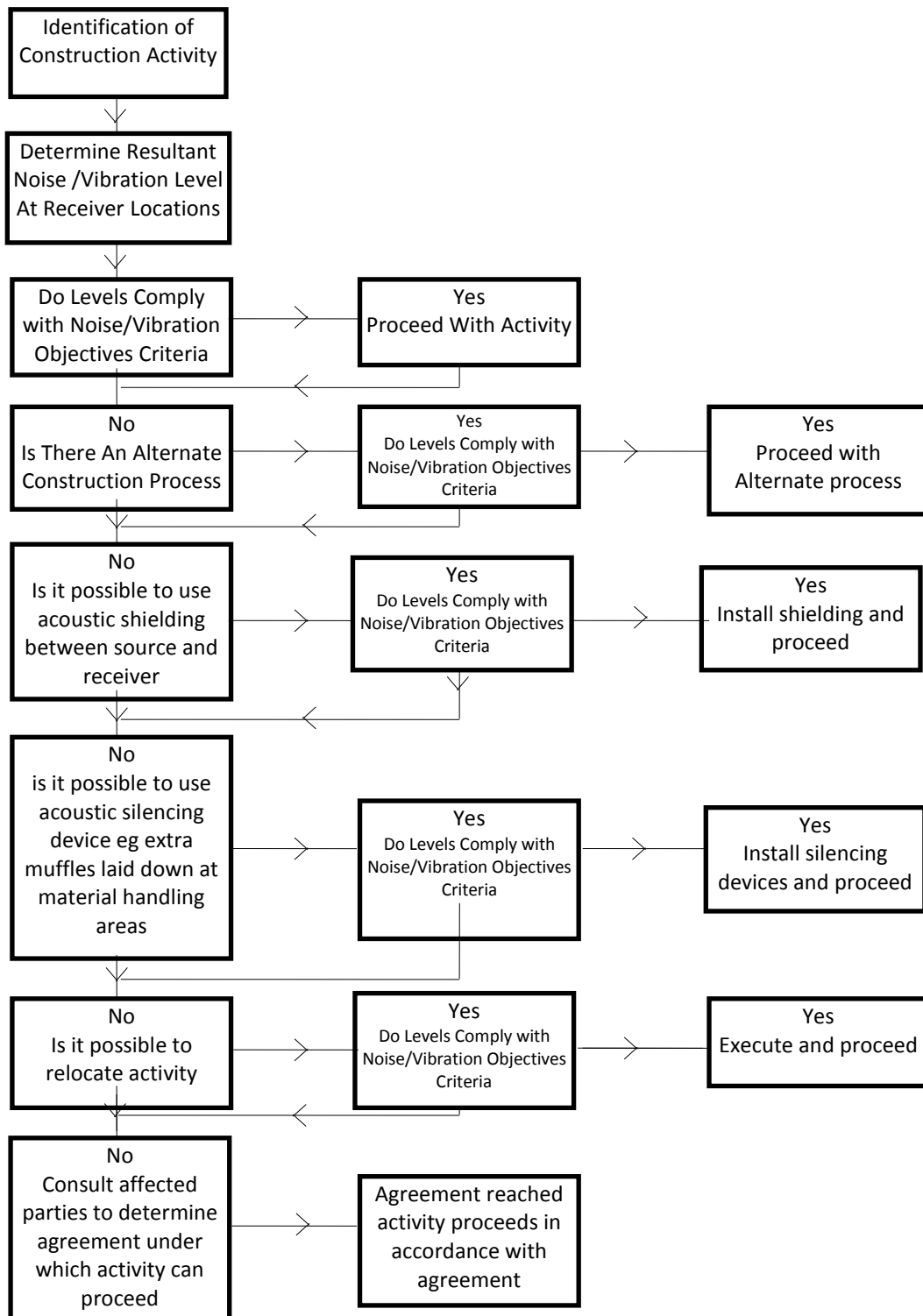
- Any proposed use of hydraulic hammers, rock saws or rippers should be subject to the respite period restriction requirements of condition of consent C3.
- Community consultation/notification:
 - Notification (leaflet or similar) of nearby commercial development (Little Learning School Child Care Centre), Waitara Anglican Church and Burdett Street residences prior to any excavation, demolition, compaction or asphaltting works within 60m of their property boundary. In the event of usage of hydraulic hammers within 60m of the Little Learning School, it is recommended that they be advised of the proposed respite hours for the work to enable management of use of outdoor spaces within the centre.
 - Notification (leaflet or similar) of nearby Derby Street residences prior to any excavation, demolition, compaction or asphaltting works within 40m of their property boundary.
 - Notification with Star management of any demolition works within 20m of the northern or western facades of the Star Building.

Any notification advice should advise estimated start and finish dates of the construction activities identified above.

- Use of percussive equipment for bulk excavation or demolition should not be conducted on the eastern boundary of the site (nearest the Derby Street residences) prior to 8.00am.
- Vehicles are not to arrive on site prior to 7am, and should turn off their engines when idling.
- During ground works, bored piles should be used as opposed to vibrated or driven piles whenever feasible.
- Concrete pump truck – avoid locating on Derby Street immediately in front of the residential building if feasible. If this is not feasible, the residents should be notified in advance of days when pours are proposed.
- Crane is proposed be located centrally within the development, maximising distance to nearby development.
- Materials handling/vehicles:
 - Trucks and bobcats to use a non-tonal reversing beacon (subject to OH&S requirements) to minimise potential disturbance of neighbours.
 - Avoid careless dropping of construction materials into empty trucks.
 - Trucks, trailers and concrete trucks (if feasible) should turn off their engines during idling to reduce noise impacts (unless truck ignition needs to remain on during concrete pumping).
- Complaints handling - In the event of complaint, the procedures outlined in Section 8 and 10 should be adopted.
- Vibration monitoring .
 - Unattended vibration monitoring on the northern/western façade of the Star building is recommended during demolition work and compaction work.
 - The proposed vibration monitoring equipment is a TEXCEL type monitor with externally mounted tri-axial geophone.
 - The monitors are proposed to be fitted with GSM modems and will remotely signal up to five mobile phones indicating any exceedence of the prescribed vibration criteria.
 - At least initially, SMS warning trigger to be set at 1mm/s.

8 CONTROL OF CONSTRUCTION NOISE AND VIBRATION – PROCEDURAL STEPS

The flow chart presented below illustrates the process that will be followed in assessing construction activities.



9 ADDITIONAL NOISE AND VIBRATION CONTROL METHODS

In the event of complaints, there are a number of noise mitigation strategies available which can be considered.

The determination of appropriate noise control measures will be dependent on the particular activities and construction appliances. This section provides an outline of available methods.

9.1 SELECTION OF ALTERNATE APPLIANCE OR PROCESS

Where a particular activity or construction appliance is found to generate excessive noise levels, it may be possible to select an alternative approach or appliance. For example; the use of a hydraulic hammer on certain areas of the site may potentially generate high levels of noise. Undertaking this activity using bulldozers, ripping and/or milling machines will result in lower noise levels.

9.2 ACOUSTIC BARRIER

Given the position of adjacent development, it is unlikely that noise screens will provide significant acoustic benefit for commercial or residential receivers, but will provide noticeable improvement for those on ground level.

The placement of barriers at the source is generally only effective for static plant. Equipment which is on the move or working in rough or undulating terrain cannot be effectively attenuated by placing barriers at the source.

Barriers can also be placed between the source and the receiver.

The degree of noise reduction provided by barriers is dependent on the amount by which line of sight can be blocked by the barrier. If the receiver is totally shielded from the noise source reductions of up to 15dB(A) can be effected. Where only partial obstruction of line of sight occurs, noise reductions of 5 to 8dB(A) may be achieved. Where no line of sight is obstructed by the barrier, generally no noise reduction will occur.

As barriers are used to provide shielding and do not act as an enclosure, the material they are constructed from should have a noise reduction performance that is approximately 10dB(A) greater than the maximum reduction provided by the barrier. In this case the use of a material such as 10mm or 15mm thick plywood (radiata plywood) would be acceptable for the barriers.

9.3 MATERIAL HANDLING

The installation of rubber matting over material handling areas can reduce the sound of impacts due to material being dropped by up to 20dB(A).

9.4 TREATMENT OF SPECIFIC EQUIPMENT

In certain cases it may be possible to specially treat a piece of equipment to dramatically reduce the sound levels emitted.

9.5 ESTABLISHMENT OF SITE PRACTICES

This involves the formulation of work practices to reduce noise generation. A more detailed management plan will be developed for this project in accordance to the construction methodology outlining work procedures and methods for minimising noise.

9.6 COMBINATION OF METHODS

In some cases it may be necessary that two or more control measures be implemented to minimise noise.

10 DEALING WITH COMPLAINTS

Should ongoing complaints of excessive noise or vibration criteria occur immediate measures shall be undertaken to investigate the complaint, the cause of the exceedances and identify the required changes to work practices.

If a noise complaint is received the complaint should be recorded. Any complaint form should list:

- The name and address of the complainant (if provided);
- The time and date the complaint was received;
- The nature of the complaint and the time and date the noise was heard;
- The name of the employee who received the complaint;
- Actions taken to investigate the complaint, and a summary of the results of the investigation;
- Required remedial action, if required;
- Validation of the remedial action; and
- Summary of feedback to the complainant.

A permanent register of complaints should be held.

11 CONCLUSION

A noise and vibration assessment has been undertaken of the proposed construction works to be undertaken at the Hornsby Ku-ring-gai Hospital Stage 2 redevelopment works.

Potential noise and vibration impacts on nearby development have been assessed.

Provided that the mitigation techniques and the vibration monitoring as recommended in sections 7.3, 8, 9 and 10 of this report are adopted, noise and vibration impacts on the adjacent buildings are expected to be acceptable.

This report has been prepared in order to satisfy conditions of consent B24 of SSD 8647 (Main Stage 2 Building) and condition 16 and 23 of REF 037-2017 (Medical Imaging Building).

Please contact us if you have any queries.

Yours faithfully,



Acoustic Logic Consultancy Pty Ltd
Thomas Taylor



Waste Management Plan

Project No: N206

**Hornsby Ku-Ring-Gai Hospital
Stage 2**

June 2018

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Revision History

Issue	Date	Revision Description	Authorised by
01	27 June 2018	Contract Issue	Nick Limbrey

1. Purpose

To minimise the amount of construction waste generated on this project by avoiding waste generation and implementing practicable and efficient re-use and recycling procedures for all residual materials.

1.1. Project Goal

The project's target is to re-use or recycle a minimum of 80% of construction waste by weight.

1.1.1. Responsibilities

Watpac will:

- Allocate clear responsibilities to subcontractors, suppliers and Waste Contractor - Grasshopper Environmental Pty Ltd
- Provide optimum product specification, sizing and packaging information to the Client
- Select materials with a high recycled content where appropriate
- Direct materials that can be reused back into off-site manufacturing processes
- Direct materials that can be recycled to an appropriate facility
- Provide clear signage of acceptable materials for each bin and monitor contents to prevent contamination
- Provide regular waste reports to the Client and site personnel

Subcontractors will:

- Provide advice to Watpac on optimum product specification, sizing and packaging
- Offer alternative products containing recycled materials which conform to specified requirements
- Order the correct quantity of materials and prefabricate off-site where possible
- Implement measures to prevent surplus materials and packaging from entering the site
- Manage wastes resulting from their work to maximise material re-use and recycling
- Clean their respective work areas daily and place wastes in the nominated waste bins

Waste Contractor - Grasshopper Environmental Pty Ltd will:

- Provide advice on optimum resource recovery options
- Provide waste bins and off-site segregation facilities
- Coordinate the timely emptying / removal of bins from site
- Deliver materials to reuse and recycling facilities
- Provide receipts, records and Waste Reports for all waste

1.2. Planning and operation

The Watpac Project Team will strategically plan waste minimisation measures for each phase of the project based on the timing and sequence of construction activities.

The project has appointed waste contractor Grasshopper Pty Ltd during the early stage of the project. The Waste Management Contractor will collaborate with Watpac to ensure effective waste recycling, measurement, recovery and disposal is implemented through each phase of the project.

Watpac personnel in conjunction with subcontractors and the Project Waste Contractor will:

- Identify the type, volume and location of construction waste anticipated at each stage of the project
- Investigate the potential use of materials with a high recycled content
- Assess options for material sizing, packaging and off-site fabrication

- Review procedures for on-site segregation, off-site segregation and the return of products and packaging to suppliers

1.3. Training

Watpac personnel will reinforce waste minimisation responsibilities and awareness during site inductions, tool-box and pre-commencement meetings.

1.4. Monitoring, Measuring and Reporting

The Project Environmental Officer will monitor site waste handling practices and regularly inspect the contents of bins.

The Waste Management Contractor will provide monthly Waste Reports that detail the tonnage and volume of waste generated and the total recycled by waste category.

The Project Manager will provide regular status reports to the Client and Senior Management.

1.5. Corrective Actions

Watpac personnel will monitor the waste management practices of subcontractors on site. Where a subcontractor fails to comply with the project's waste management procedures, the Site Manager will be advised and a non-conformance raised. Corrective actions taken by the subcontractor shall be reviewed and approved prior to the non-conformance being closed out.

1.6. Waste segregation

Waste reuse and recycling will be achieved through on-site and off-site segregation of materials. Materials segregated for recycling will include:

<input type="checkbox"/> Glass	<input type="checkbox"/> Concrete	<input type="checkbox"/> Bricks and tiles	<input type="checkbox"/> Asphalt
<input type="checkbox"/> Timber	<input type="checkbox"/> Aluminium	<input type="checkbox"/> Plastic	<input type="checkbox"/> Paper and cardboard
<input type="checkbox"/> Plasterboard	<input type="checkbox"/> Polystyrene	<input type="checkbox"/> Insulation	<input type="checkbox"/> Steel and other metals
<input type="checkbox"/> Clean Fill	<input type="checkbox"/> Green Waste		

Waste Materials		Resource Recovered		Product
Mixed general waste (heavy)	➔	Excavated material Brick/Concrete Light waste	➞	Landscape Supplies Recycled aggregates Paper, plastic, insulation products
Mixed general waste (light)	➔	Cardboard, paper Plastic Metal, steel Timber Gyprock	➞	Paper, cardboard products Plastics, insulation materials Ferrous and nonferrous products Shredded chipboard products Plasterboard, gypsum products
Metals	➔	Metal offcuts	➞	Ferrous and nonferrous products
Bricks	➔	Brick offcuts	➞	Recycled aggregates
Concrete Excess concrete returned for re-use / recycling	➔	Pump washout	➞	Recycled aggregates
Timber	➔	Timber offcuts	➞	Shredded chipboard products
Excavated material	➔	Soil, rock, clays	➞	Fill material

Waste Materials		Resource Recovered		Product
Green waste	➔	Green waste	⇨	Mulch

1.7. Waste Disposal

Waste disposal will be in strict compliance with regulatory requirements. Hazardous wastes will be transported to facilities licensed by EPA. Records of disposal shall be kept.

Disposal of non-hazardous wastes to landfill will be as a last resort only.

1.8. Hazardous Waste

1.8.1. Asbestos Identification and Management

Asbestos management will be handled in conjunction with Watpac’s Asbestos Identification and Management procedure (S08-04-70: Appendix 2.1) that incorporates all legislative codes and requirements. As per clause 445 and 480 of WHS Regulation 2011, Watpac will ensure that training and certain information is provided to a worker carrying out work or business if the worker is carrying out asbestos-related work. Inclusive of the identification, safe handling and suitable control measures for asbestos containing materials (ACM) and the provision of information relating to the health risks and health effects associated with exposure to asbestos and the need for health monitoring.

Relative to project site, asbestos has been identified throughout existing buildings. An asbestos register (Appendix 2.2) has been provided, clearly indicating and labelling identified asbestos and precise locations with requirements meeting clause 425 of WHS Regulation 2011. Additionally, an asbestos management plan will be performed relative to the requirements set out in clause 429 of the WHS Regulation 2011. Both the asbestos register and management plan will be made readily accessible to workers, HSRs (relevant persons) or, PCBU carrying out or intending to carry out work at the workplace or a PCBU that requires work to be carried out and if there is a risk of exposure to airborne asbestos, Watpac must ensure that the relevant persons are provided a copy of the asbestos register. This register may be updated and reviewed as per those items outlined in Watpac’s Asbestos Identification and Management procedure, contingent on administrative/annual review, further ACM identification, and ACM removal/disturbance/isolation during works or demolition.

Due to the register identifying high-risk friable asbestos contaminated materials, the removalist requires Class A asbestos removal licensing. Further, air monitoring is a requirement that is to commence prior to removal and is to be carried out by a certified contractor independent of the asbestos removalist, and therefore engaged directly by Watpac. Results of the monitoring must be given to the asbestos removalist, workers, HSRs, PCBUs and other persons at the workplace.

1.8.2. Asbestos Containment and Control

When undertaking asbestos related work, Watpac will ensure that the asbestos related work area is separated from other work areas (or occupied areas), and signage and barricading is installed to alert persons to the presence of asbestos related work being carried out.

Watpac will not direct or allow a worker to use power tools, brooms or any other implements that cause the release of ACM into the air, unless it is controlled, as set out in clause 446(4) of the WHS Regulation 2011. Additionally, compressed air and high pressure water sprays will not be used on asbestos contaminated materials. Decontamination facilities will be made available as to any plant used in the asbestos related work area and workers carrying out the asbestos related work. Everything contaminated with ACM will strictly only be removed if contained and labelled in accordance with the Globally Harmonised System of Classification and Labelling of Chemicals and is then disposed of at a site licensed by the EPA to accept asbestos waste.

1.9. Waste Transport

The following facilities have been nominated by Grasshopper Pty Ltd for waste disposal:

- Bingo, Auburn (EPL: 10935)
- Bingo, St Marys (EPL: 20621)
- Benedict, Belrose (EPL: 4504)
- KLF Recycling, Asquith (EPL: 20582)

- KLF Recycling, Camellia (EPL: 12700)
- Dial a Dump, Eastern Creek (EPL: 20121)
- Concrete Recyclers, Camellia (EPL: 6664)

Further, Grasshopper Pty Ltd has nominated the routes to each respective facility and is attached in Appendix 3.

2. Appendices

2.1. Appendix 1 - Asbestos Identification and Management (Procedural Document S08-04-70)

ASBESTOS IDENTIFICATION AND MANAGEMENT

INTRODUCTION

Asbestos is the name given to a group of fibrous silicate minerals that occur naturally in the environment. The three main types of asbestos are: chrysotile (often called white asbestos); crocidolite (often called blue asbestos) and amosite (often called brown asbestos).

Asbestos is a hazardous material that poses a risk to health if its fibres are inhaled.

Asbestos and Asbestos Containing Materials (**ACM**) were used extensively in Australian buildings, structures, plant, ships, trains and motor vehicles in the 1950s, 1960s and 1970s.

Because of its wide use over a long period, ACM are likely to be used in buildings or structures encountered during work on projects.

Work Health & Safety legislation (**the legislation**) generally prohibits a person conducting a business or undertaking (**PCBU**) from carrying out work involving asbestos or allowing a worker to carry out work involving ACM, unless strict requirements are satisfied.

ACM removal should only be undertaken by a qualified removalist.

Due to the inherent dangers associated with work involving ACM, it is critical ACM on all Watpac sites is identified and managed in a way that eliminates or otherwise minimises the risks of exposure to asbestos fibres.

PURPOSE AND SCOPE

The purpose of this procedure is to set out a method to manage the risks associated with ACM.

This procedure does not apply to ACM Removal, as this work is to be subcontracted and not performed by Watpac. However, due to the inherent dangers involved in ACM Removal it is critical that effective management of ACM risks are known and managed on all Watpac sites.

This procedure applies to all Watpac projects unless the Project Safety Management Plan for a project specifically excludes it.

DEFINITIONS

ACM (asbestos Containing materials):	Asbestos or any material or thing that, as part of its design, contains asbestos.
asbestos-contaminated dust or debris (ACD):	means dust or debris that has settled within a workplace and is, or is assumed to be, contaminated with asbestos.
asbestos register:	A register recording any asbestos or ACM (material) identified in a place or likely to be present in a place and particulars relevant to this material including the date on which the material was identified and the location, type and condition of the material.
asbestos removalist:	means a person conducting a business or undertaking who carries out asbestos removal work.
asbestos removal work:	means work involving the removal of asbestos containing material or asbestos contaminated material.

ASBESTOS IDENTIFICATION AND MANAGEMENT

asbestos removal licence:	means a licence that has been issued to an organisation or business from the regulator that permits
	<p>Class A Can remove any amount or quantity of asbestos or ACM, including:</p> <ul style="list-style-type: none"> any amount of friable asbestos or ACM; any amount of ACD; any amount of non-friable asbestos or ACM. <p>Class B Can remove:</p> <ul style="list-style-type: none"> any amount of non-friable asbestos or ACM; <i>Note: A Class B licence is required for removal of more than 10 m² (square metres) of non friable asbestos or ACM but the licence holder can also remove up to 10 m² of non-friable asbestos or ACM.</i> ACD associated with the removal of non-friable asbestos or ACM. <i>Note: A Class B licence is required for removal of ACD associated with the removal of more than 10 m² of non-friable asbestos or ACM but the licence holder can also remove ACD associated with removal of up to 10m² of non friable asbestos or ACM.</i>
asbestos removal supervisor:	means a person that has nominated by the asbestos removalist to supervise the asbestos removal process conducted by the the asbestos removal workers.
asbestos removal worker:	means a worker who hold the appropriate certificate of competency for the class of asbestos removal work being carried out.
asbestos related work	means where there may be a significant risk of exposure to asbestos fibres, not associated with the removal process e.g. undertaking site investigating works, setting up exclusion zones, undertaking a destructive survey.
asbestos waste:	means asbestos or ACM removed and disposable items used during asbestos removal work including plastic sheeting and disposable tools.
Exposure:	The exposure of people to airborne asbestos fibres.
HSR:	Health and Safety Representatives
Occupational hygienist (OH)	means a person who has acquired through training or experience the knowledge and skills of relevant asbestos removal industry practice and holds a certification in relation to the specified VET course for asbestos assessor work or a tertiary qualification in occupational health and safety, occupational hygiene, science, building, construction or environmental health, who can identify asbestos in workplaces, sample asbestos containing material in accordance in a NATA laboratory, develop asbestos registers, develop asbestos management plans, conduct para occupational monitoring and conduct clearance inspections
Licensed asbestos assessor (LAA)	A LAA must be licensed by the Work Health and Safety State Regulator (subject to transitional arrangements in each State or Territory).
Person Conducting a Business or Undertaking (PCBU):	A person conducting a business or undertaking at Watpac alone or with others, whether or not for profit or gain. A PCBU may be a sole trader, a partnership, company, unincorporated association or government department of public authority

ASBESTOS IDENTIFICATION AND MANAGEMENT

Subcontractor:	A person is a subcontractor if they carry out work for a person conducting a business or undertaking. This includes work as a contractor or subcontractor, an employee of a contractor or subcontractor, an employee of a labour hire company, an outworker, an apprentice or trainee, a student gaining work experience, a volunteer or a person of a prescribed class
Work:	Work on a project including demolition and refurbishment not including construction work.
Worker:	A person is a worker if the person carries out work in any capacity for a person conducting a business or undertaking, including work as an employee; a contractor or subcontractor; an employee of a contractor or subcontractor; an employee of a labour hire company; an outworker, an apprentice or trainee; a student gaining work experience; a volunteer or a person of a prescribed class. <u>Note:</u> This definition includes engineers, architects, consultants, managers, sales persons, etc.
Workplace:	A place where work is carried out for a business or undertaking and includes any place where a worker goes, or is likely to go in the course of their work

PROCEDURE

The typical hazards associated with works addressed in this procedure include:

HAZARDS	RISK (Potential)
<ul style="list-style-type: none"> Release of asbestos fibres into the atmosphere Unexpected finds of asbestos 	High

Therefore, Watpac and subcontracted personnel are required to comply with the relevant provisions described in this procedure (and references).

The Watpac project management team must ensure where asbestos has been identified that no work is to occur in the relevant area until an Asbestos Register and management plan has been completed.

To demonstrate and assist in the implementation of this procedure the form S08-04-70.1 Asbestos removal checklist must be completed by the Site Manager / Foreman

TRAINING & INFORMATION

Reference is made to Procedure S04-02 Training.

Clauses 445 and 480 of the Work Health and Safety Regulation 2011 (WHS Regulation) require Watpac to ensure that training and certain information is provided to a worker carrying out work for the business or undertaking if the worker is carrying out asbestos-related work, on the identification and safe handling of, and suitable control measures for ACM and the provision of information relating to the health risks and health effects associated with exposure to asbestos and the need for health monitoring.

IDENTIFICATION OF ACM, THE ASBESTOS REGISTER AND THE ASBESTOS MANAGEMENT PLAN

1. Watpac must ensure, as far as is reasonably practicable, that all ACM is identified at a workplace by an OH/LAA. To this end, Watpac needs to ensure that there is an accurate asbestos register which identifies ACM is kept at the workplace.
2. The Project Manager needs to ensure that all ACM listed on the asbestos register is clearly indicated and labelled where reasonably practicable.

ASBESTOS IDENTIFICATION AND MANAGEMENT

3. The Project Manager must review any existing asbestos register and asbestos management plan and assess their adequacy to ascertain whether it is necessary to arrange an inspection of the workplace by an OH/LAA. The asbestos register's requirements are set out within clause 425 of the WHS Regulation and the asbestos management plan's requirements are set out in clause 429 of the WHS Regulation.
4. If the building owner does not provide an asbestos register or asbestos management plan or if there is no adequate asbestos register or asbestos management plan, the Project Manager is to arrange for an OH/LAA to conduct an inspection of the workplace including taking a sample to determine whether ACM is present. Where asbestos is found to be present or there is uncertainty the hygienist is to prepare an asbestos register and/or asbestos management plan.
5. The OH/LAA, should provide a written report recording the results of the inspection. The inspection report should specifically identify:
 - 5.1. areas that were not able to be accessed during the inspection;
 - 5.2. structure or plant (or parts of) that are inaccessible and likely to be disturbed by the works;
 - 5.3. Whether the OH/LAA is uncertain as to whether or not asbestos is fixed to or installed in the structure or plant.
6. The Project Manager must assume that asbestos is present in the areas specified above and must inform any other person who has management or control of the workplace.
7. If ACM is determined or assumed to be fixed or installed in a structure or plant, Watpac must inform the person with management or control of the workplace (if other than Watpac).
8. The asbestos register and any asbestos management plan must be readily accessible to workers, HSRs (relevant persons) or, PCBU carrying out or intending to carrying out work at the workplace or a PCBU that requires work to be carried out and if there is a risk of exposure to airborne asbestos, Watpac must ensure that the relevant persons are provided a copy of the asbestos register.
9. The asbestos register should be reviewed and updated:
 - 9.1. if the asbestos management plan is reviewed;
 - 9.2. if a risk assessment indicates the need for reassessment;
 - 9.3. if further ACM is identified at the workplace;
 - 9.4. if asbestos is removed from, disturbed, sealed or enclosed at the workplace; or
 - 9.5. if demolition or refurbishment is carried out at the workplace; and
 - 9.6. reviewed every 12 months or earlier (where necessary)
10. The asbestos management plan should be reviewed and updated:
 - 10.1. if there is a review of the asbestos register or a control measure;
 - 10.2. if the plan is no longer adequate for managing asbestos or ACM at the workplace;
 - 10.3. if HSR requests a review; or
 - 10.4. if asbestos is removed from, disturbed, sealed or enclosed at the workplace; and
 - 10.5. at least once every 5 years.
11. If Watpac relinquishes management or control of the workplace it must ensure, so far as is reasonably practicable that the asbestos register is given to the person assuming management or control of the workplace.
12. Where required a destructive survey must be undertaken in accordance with AS 2601 The Demolition of Structures (2001).
13. Watpac must ensure where reasonably practical that the asbestos management plan is adequate, i.e. ACM is properly identified, safe work method statements have been developed and control measures are in place and procedures for detailing incidents or emergencies involving ACM at the workplace are included.

ASBESTOS IDENTIFICATION AND MANAGEMENT

REMOVAL OF ASBESTOS

11. Assuming that an asbestos register and asbestos management plan is in place (as outlined in clause 4 of this procedure), prior to any demolition or refurbishment, Watpac must ensure that all asbestos likely to be disturbed is identified and so far as is reasonably practicable, the asbestos is removed. A procedure must be developed (taking into account the asbestos register) which will, in so far as is reasonably practicable, reduce the risk of exposure to workers and people in the vicinity of the work.
12. For the removal of ACM, Watpac will engage an appropriately qualified and licensed asbestos removalist (**asbestos removalist**). Watpac is required to provide the asbestos removalist with the asbestos register. The asbestos removalist will devise a Safe Work Method Statement for the prescribed activity of ACM removal (the removal) and an Asbestos Removal Control Plan. The Asbestos Removal Plan's requirements are set out in clause 464 of the WHS Regulation. These documents must be submitted to Watpac Project Management team for review prior to the removal commencing.
13. The asbestos removalist must determine and document the necessary supervision, labour and tool requirements necessary for the removal.
14. The asbestos removalist must inform Watpac in advance of the date when removal will commence. Watpac must then take reasonable steps to ensure, that all workers and PCBU's or anyone occupying the premises in the immediate vicinity of the workplace are informed of the removal and the date of commencement.
15. Before demolition is commenced, all ACM and associated dust is to be removed from the building or structure by a certified asbestos removalist.
16. The asbestos removalist is required to provide signs alerting people to the presence of ACM. Watpac is required to ensure that no persons other than the asbestos removalist are to have access to the removal area.
17. The Project needs to engage an independent OH/LAA who is independent of the removal to determine any necessary air monitoring requirements arising from the removal and of whom will undertake the air monitoring, such as Class A removal. If Class A, air monitoring is required, it is required to commence prior to removal and the results of the monitoring must be given to the asbestos removalist, workers, HSRs, PCBU's and other persons at the workplace.
18. Engagement of an independent OH/LAA and deciding on the air monitoring requirements must occur before removal work commences. The independent OH/LAA may be engaged by Watpac Project Management instead of the asbestos removalist.
19. If a person commissions licensed asbestos removal work at a workplace they must ensure that a clearance inspection of the asbestos work area is carried out by an independent OH/LAA in the case of Class A asbestos removal (friable) or in any other case. The clearance inspection must include a visual inspection and may include air monitoring, however the Code of Practice: How to Safely Remove Asbestos, SafeWork Australia (2011) states that air monitoring must be carried out as part of the clearance inspection in relation to Class A (friable) removal works. The clearance certificate must be issued before the removal area is reoccupied.

Health Surveillance during the removal

20. Clause 435 of the WHS Regulation stipulates that Watpac as PCBU must ensure that health monitoring is provided to a worker carrying out work for the business or undertaking if the worker is carrying out asbestos-related work and is at risk of exposure to asbestos when carrying out the work. Disturbance of asbestos or ACM is defined in Clause 419(2) of the WHS Regulation as asbestos-related work.
21. Where Watpac is responsible for organising health surveillance for Watpac employees involved in the asbestos removal works is required to provide a copy of the monitoring report to the worker or workers as soon as practicable after obtaining the report and other parties (if necessary). Watpac will include a contractual requirement in all its asbestos removal contracts and OH/LAA contracts that the subcontractors have to provide health surveillance to its workers. It is at Watpac Project Management discretion as to whether it requests from the subcontractor evidence that health surveillance is provided.

ASBESTOS IDENTIFICATION AND MANAGEMENT

22. Refer to Part 8.5, Division 1 of the WHS Regulation, and S09-05 Health Surveillance for full details of requirements.

MANAGEMENT OF ACM RELATED WORKS

23. When undertaking asbestos related work, as distinct to asbestos removal, Watpac is required to engage an OH/LAA to undertake air monitoring of the work area where asbestos related work is carried out, if there is uncertainty as to whether the exposure standard is likely to be exceeded.
24. If the OH/LAA determines that the exposure standard has been exceeded Watpac must so far as it is reasonably practicable, determine which workers and other persons were working in the work area at the time, warn them of the possible exposure and provide them with the results of the air monitoring.
25. When undertaking asbestos related work, Watpac is required to ensure that the asbestos related work area is separated from other work areas, and that signage and barricading is installed to alert persons to the presence of asbestos related work being carried out. Watpac must also ensure that its workers do not use compressed air or high pressure water spray on ACM.
26. Watpac must not direct or allow a worker to use power tools, brooms or any other implements that cause the release of ACM into the air, unless it is controlled, as set out in clause 446(4) of the Work Health and Safety Regulation 2011.
27. Watpac will ensure that there are facilities to decontaminate the asbestos related work area, any plant used in the asbestos related work area and workers carrying out the asbestos related work.
28. Watpac must also ensure that nothing contaminated with ACM is removed from the asbestos related work area, unless contained and labelled in accordance with the Globally Harmonised System of Classification and Labelling of Chemicals and is then disposed of at a site authorised to accept asbestos waste. In the instance of personal protective equipment, if it can not be disposed of, it should be laundered at a laundry equipped to launder asbestos clothing.

UNEXPECTED FINDS OF MATERIAL NOT IDENTIFIED ON THE ASBESTOS REGISTER

29. In the event that that material suspected to be ACM is discovered but has not been identified on the asbestos register, the following procedure should apply:
 - 29.1. All work is to cease in the area where the material suspected to be ACM is identified;
 - 29.2. Watpac is required to notify an OH, who is a LAA;
 - 29.3. The OH/LAA will advise Watpac on whether the material is ACM and what further steps are required, such as whether Watpac workers are permitted to do such measures as isolating and barricading, wetting down the area, installing of signage, decontamination, etc.
 - 29.4. If Watpac is concerned that any workers have been exposed to ACM, they are to remove contaminated clothing in an isolated area and the clothing is to be contained and labelled accordingly.

Under NO circumstances are workers to enter the amenities areas or leave site with asbestos contaminated clothing, tools or equipment.

30. Notify Watpac OHS Manager or in their absence the Construction Manager/Operations Manager.
31. An OH/LAA, needs to attend the site who will undertake whatever analysis is required.
32. If asbestos is identified, Watpac will engage a licensed asbestos removalist, and notify the Regulator as advised by the OH/LAA.
33. The OH/LAA will review and revise the asbestos management plan for the asbestos removal.
34. The asbestos removalist will use the asbestos management plan to develop the Asbestos Removal Control Plan.

ASBESTOS IDENTIFICATION AND MANAGEMENT

35. The asbestos removalist will work under the direction of the Watpac nominated project OH/LAA.
36. If any earthmoving plant is to be used for removal work (e.g. excavator) the operator must be an employee of the asbestos removalist, trained in asbestos removal.
37. The project independent OH/LAA, will determine the need to provide air monitoring during all asbestos removal works.
38. If asbestos contamination is widely spread through other materials such as soil or demolition rubble, the bulk material may need to be disposed of as Asbestos Contaminated Waste. This is required to be removed by a licensed asbestos removalist and is to be transported and disposed of in compliance with EPA regulations.

STATE SPECIFIC REQUIREMENTS

- NIL

REFERENCES

Document Title	Standard / Section No.
Work Health and Safety Act 2011 (Commonwealth, ACT, NSW, QLD, NT)	
Work Health and Safety Regulation 2011 (Commonwealth, ACT, NSW, QLD, NT)	Clauses 419 – 430, 435 – 458, 463, 468, 470, 473 – 476, 479 - 484
Code of Practice: How to manage and control asbestos in the workplace	
Code of Practice: How to safely remove asbestos	

DOCUMENTATION REQUIRED

- S08-04-70.01 Asbestos removal checklist
- S08-04-70.02 Unexpected Finds checklist
- Asbestos Register
- Asbestos Management Plan
- Asbestos Removal Control Plan
- Asbestos Removalist Safe Work Method Statements.
- Clearance inspection reports from Occupational Hygienist Asbestos Assessor .
- Air monitoring reports
- Health Surveillance monitoring report

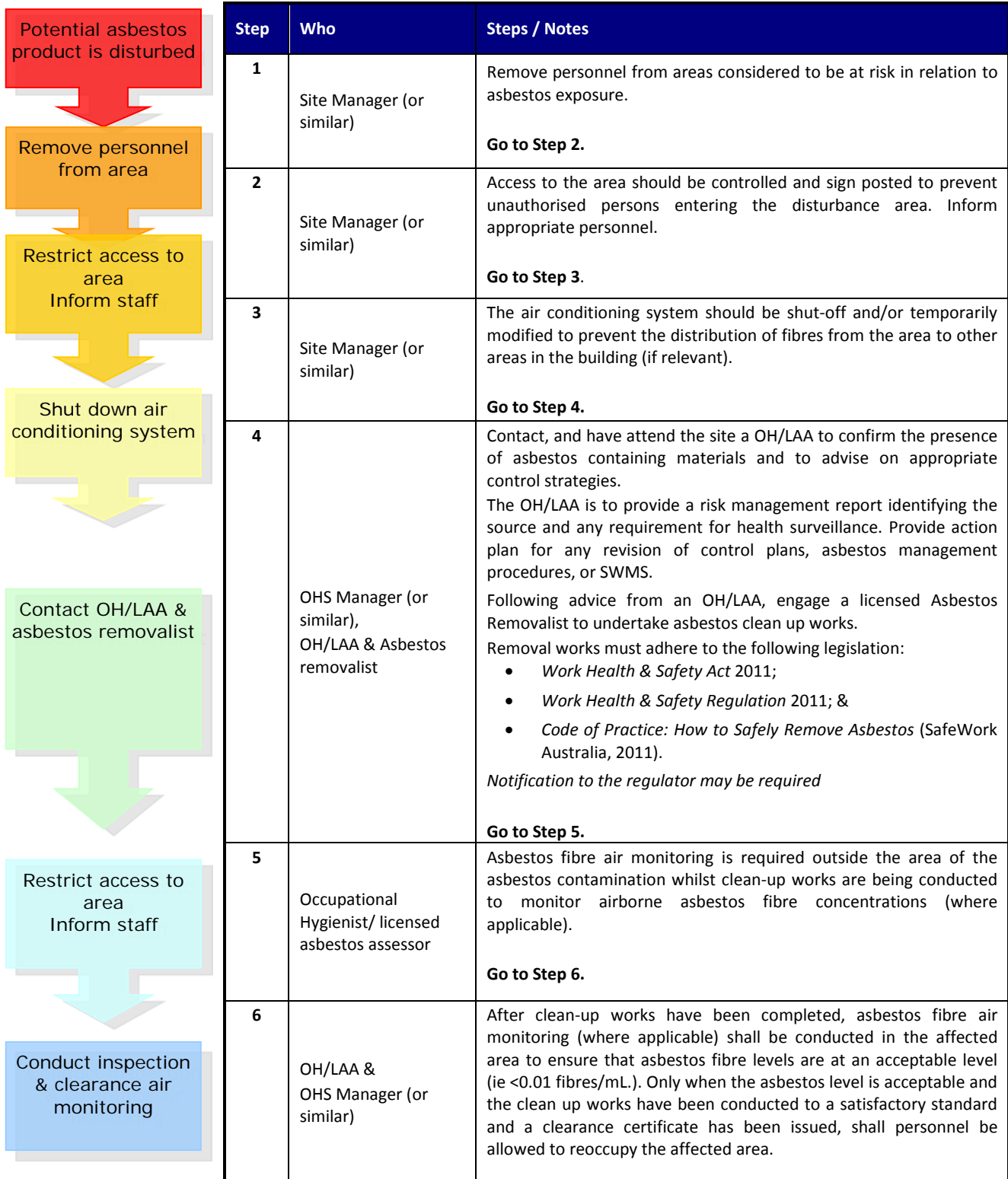
DOCUMENT CONTROL

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ASBESTOS IDENTIFICATION AND MANAGEMENT

ACCIDENTAL EXPOSURE TO ASBESTOS FLOWCHART

In the event that an activity causes the accidental disturbance of asbestos materials (i.e. an unplanned disturbance), the following steps should be followed:



2.2. Appendix 2 – Asbestos Register

Building 1 - Old Emergency Building, Pharmacy and Kiosk

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Friability	Consequence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor
8538.08.0001	1	Exterior	Adjacent east of Kiosk - Storage Shed - Internal walls and ceiling	Fibre Cement Sheeting	Assumed Negative	-	-	-	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0002	2	Exterior	Adjacent Pharmacy - Pipe work - Pipe lagging	Pipe Lagging	Positive	80			Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	2 lineal metres	Poor	Friable	High	Medium	High	Feb 2015	-	-	Pipe has been cut and has exposed asbestos lagged piping in poor condition.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0003	3	Exterior	Cardiology - Entrance Awning - Bituminous membrane on upper surface of awning	Bituminous Membrane	Assumed Positive	45			Confirm status and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-2m²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	Not sampled due to membrane being used as waterproofing.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0004	4	Exterior	Corridor between Building 1 and Building 2 - Eaves	Asbestos Cement Sheeting	Positive	31			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-5m²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0005	5	Exterior	Courtyard adjacent east of Kiosk - Eastern wall panels	Asbestos Cement Sheeting	Assumed Positive	30			Confirm status and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-4m²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0006	6	Exterior	Eaves - Southern half of Building 1	Timber	Negative	2		-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0007	7	Exterior	Kiosk - Window infill panels	Fibre Cement Sheeting	Negative	9		-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0008	8	Exterior	Manhole adjacent EMU - Extending along corridor - Pipe work - Pipe lagging	Pipe Lagging	Positive	-	-		Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	>50 lineal metres	Poor	Friable	High	Low	High	Feb 2015	-	-	Not located at time of 2014 re-inspection.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0009	9	Exterior	Northern end of Building 1 - Eaves & awning	Asbestos Cement Sheeting	Positive	11 & 12			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-100m²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0010	10	Exterior	Outside Kiosk - Gutters & downpipes	Asbestos Cement Moulding	Positive	5 & 76			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-15m²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0011	11	Exterior	Outside Kiosk - Southern and western eaves and eaves and panel work above Kiosk southern staff entrance door	Asbestos Cement Sheeting	Positive	7 & 8			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-20m²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0012	12	Exterior	Pharmacy adjacent east of Kiosk - Window infill panels	Fibre Cement Sheeting	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0013	13	Exterior	Shed adjacent west of Kiosk - Exterior wall lining	Asbestos Cement Sheeting	Positive	10			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-16m²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	16/10/2014	Michael Tierney & Lee Hands

Building 1 - Old Emergency Building, Pharmacy and Kiosk

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condit-ion	Friability	Conse-quence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor
8538.08.0014	14	Exterior	South of Kiosk - Staff Rehabilitation Building - Southern & eastern walls & Eaves boards	Asbestos Cement Sheeting	Assumed Positive	6		P3	Confirm Status, label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	25m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0015	15	Exterior	Surrounding - Brick work - Expansion joints	Bituminous Lining	Negative	29		3 -	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0016	16	Exterior	Throughout the Building - Steel and aluminium frame windows - Putty within the beading	Putty	Suspected Positive	43		P3	Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-	Good	Non-Friable	Low	Low	Low	Oct 2017			Putty may be found inside the window frame and used to secure the glass pane. Requires qualified glazier to open the window frame.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0017	17	Exterior	Walkway between Building 1 & 2 - Adjacent Kiosk - Ceiling	Asbestos Cement Sheeting	Positive	-	-	P3	Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-50m ²	Good	Non-Friable	Low	Low	Low	Oct 2017			Not located at time of 2014 re-inspection.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0018	18	Exterior	Western Side of Building - Awnings adjacent Main entrance, Pathology Collection and Cardiology - Ceiling	Asbestos Cement Sheeting	Assumed Positive	3 & 4		P3	Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	12m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0019	19	Exterior - Level 1	Corridor between Building 1 and Building 2 - Rooftop - Green AC unit	Sealant	Suspected Positive	28		P3	Confirm status and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	1 Unit	Good	Non-Friable	Low	Low	Low	Oct 2017			Not sampled. Inaccessible due to height.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0020	20	Exterior - Level 1	Northern Meeting Room - Wall cladding	Asbestos Cement Moulding	Positive	42 & 44		P3	Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-15m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0021	21	Exterior - Rooftop	Above Level 1 - Central area - Pipe work	Asbestos Cement Piping	Positive	56		P3	Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	1 lineal metre	Good	Non-Friable	Low	Low	Low	Oct 2017			Continuation of asbestos pipe work within Level 1 Ceiling Cavities (Refer to Entry ID#77).	16/10/2014	Michael Tierney & Lee Hands
8538.08.0022	22	Interior - Ground Level	Acute Assessment Unit - Ceiling Cavity Space - Throughout	Various	Negative	-	-	3 -	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0023	23	Interior - Ground Level	Acute Assessment Unit - Equipment Store - Ceiling Cavity Space - Pipe work - Concrete render sprayed on pipes	Concrete Render	Negative	40		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0024	24	Interior - Ground Level	Acute Assessment Unit - Equipment Store - Ceiling Cavity Space - Upper ceiling surfaces - Concrete render debris	Concrete Render	Negative	40		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0025	25	Interior - Ground Level	Acute Assessment Unit - Equipment Store - Floor cover	Seamless Vinyl	Assumed Negative	39		-	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0026	26	Interior - Ground Level	Acute Assessment Unit - Equipment Store - Machine cupboard located in south-east corner of Equipment store	Not Accessed	Not Determined	41		-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	Oct 2015			No access due to door being locked at time of the survey.	16/10/2014	Michael Tierney & Lee Hands

Building 1 - Old Emergency Building, Pharmacy and Kiosk

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condit-ion	Friability	Conse-quence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor
8538.08.0027	27	Interior - Ground Level	Acute Assessment Unit - Floor cover - Cream vinyl	Seamless Vinyl	Assumed Negative	36		-	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0028	28	Interior - Ground Level	Acute Assessment Unit - Floor cover - Green mottled vinyl	Seamless Vinyl	Assumed Negative	38		-	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0029	29	Interior - Ground Level	Acute Assessment Unit - Floor cover - Green vinyl	Seamless Vinyl	Assumed Negative	37		-	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0030	30	Interior - Ground Level	Adjacent south of Kiosk - Staff Rehab and EOP 'A Block' - Floor cover - Blue vinyl	Seamless Vinyl	Assumed Negative	69		-	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0031	31	Interior - Ground Level	Adjacent south of Kiosk - Staff Rehab and EOP 'A Block' - Steel frame windows - Throughout - Putty within beading	Putty	Suspected Positive	67 & 70		P2	Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	4 linear metres per window	Good	Non-Friable	Low	Low	Medium	Oct 2015			Putty may be found inside the window frame and used to secure the glass pane. Requires qualified glazier to open the window frame.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0032	32	Interior - Ground Level	Boiler Room - Ceiling	Fibre Cement Sheeting	Negative	71		2	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0033	33	Interior - Ground Level	Cardiology Department and Corridor adjacent to ADAC Treatment Room - Flooring - Green vinyl	Seamless Vinyl	Assumed Negative	20 & 21		-	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0034	34	Interior - Ground Level	Ceiling Tiles - Throughout	Ceiling Tile	Negative	19		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0035	35	Interior - Ground Level	Corridor - adjacent north-east of Reception - Floor - Mottled brown vinyl below green vinyl	Seamless Vinyl	Negative	22		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0036	36	Interior - Ground Level	Corridor between Building 1 and Building 2 - Floor cover	Seamless Vinyl	Negative	27		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0037	37	Interior - Ground Level	Corridor between Building 1 and Building 2 - Opposite Kiosk - Upper wall panels	Fibre Cement Sheeting	Negative	25		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0038	38	Interior - Ground Level	Corridor between Reception and Pharmacy - Northern cupboard - Electrical backing board	Electrical Backing Board	Assumed Positive	14		P3	Confirm status and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	2 units	Good	Non-Friable	Low	Low	Low	Oct 2017			Not sampled due to electrical hazard.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0039	39	Interior - Ground Level	Disposal Room - Flooring - Cream vinyl	Seamless Vinyl	Assumed Negative	23		3	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands

Building 1 - Old Emergency Building, Pharmacy and Kiosk

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8538.08.0040	40	Interior - Ground Level	Fire doors - Throughout	Core Insulation	Suspected Negative	-	-	-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-			Suspected negative due to installation date.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0041	41	Interior - Ground Level	Kiosk - Staff area - Ceiling - Throughout	Asbestos Cement Sheetting	Positive	63			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~40m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0042	42	Interior - Ground Level	Kiosk - Staff area throughout and surrounding servery - Floor cover - Green mottled vinyl	Seamless Vinyl	Negative	62		3	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0043	43	Interior - Ground Level	Kiosk - Dining Room - Ceiling tiles	Ceiling Tile	Negative	61		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0044	44	Interior - Ground Level	Kiosk - Staff area - Electrical equipment box	Electrical Backing Board	Suspected Positive	64			Confirm status and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	1 unit	Good	Non-Friable	Low	Low	Low	Oct 2017			No sample possible. Live electrical hazard.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0045	45	Interior - Ground Level	Offices east of Reception - Kitchen - Floor cover	Seamless Vinyl	Assumed Negative	24		3	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0046	46	Interior - Ground Level	Opposite ECG Electrical Cupboard Electrical backing board (No access at time of inspection)	Electrical Backing Board	Suspected Positive	-	-		Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~2m ²	Good	Non-Friable	Low	Low	Low	Oct 2017			Not located at the 2014 re-inspection. The material is presumed to still be present unless proven otherwise.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0047	47	Interior - Ground Level	Pathology Clinic - Bathroom - Floor cover	Seamless Vinyl	Assumed Negative	34		3	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0048	48	Interior - Ground Level	Pathology Clinic - Office - Mottled cream floor cover below carpet	Seamless Vinyl	Negative	32		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0049	49	Interior - Ground Level	Pathology Clinic - Office adjacent to Server Room - Floor cover	Seamless Vinyl	Assumed Negative	35		-	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0050	50	Interior - Ground Level	Pathology Clinic - Server Room	Various	Negative	-	-	-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0051	51	Interior - Ground Level	Pharmacy - Dangerous Drugs Room - Flooring - Black bituminous & amber adhesive material attached to underside of Green vinyl floor tiles	Adhesive	Negative	-	-	-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0052	52	Interior - Ground Level	Pharmacy - Dangerous Drugs Room - Flooring - Green vinyl floor tiles	Vinyl Tile	Positive	13			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~5m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands

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8538.08.0053	53	Interior - Ground Level	Pharmacy - North-western Pharmacy Office - Flooring - Green floor tiles under carpet	Vinyl Tile	Positive	-		P3	Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~10m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0054	54	Interior - Ground Level	Pharmacy - All rooms except Dangerous Goods Store and north-western Office - Flooring - Cream vinyl floor tiles and associated adhesive	Vinyl Tile & Adhesive	Negative	15		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0055	55	Interior - Ground Level	Pump Room 01-01-1078 - adjacent west Acute Assessment Unit	Various	Negative	-		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0056	56	Interior - Ground Level	Reception - Flooring - Brown mottled vinyl under carpet	Seamless Vinyl	Negative	17		-	-	-	-	-	-	-	-	-			No Access at time of 2014 re-inspection.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0057	57	Interior - Ground Level	Reception - Riser adjacent Public Health Unit stairs - Pipe work - Pipe lagging	Pipe Lagging	Positive	77		P1	Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removallist as soon as practicable.	~4 lineal metres	Poor	Friable	High	Low	High	Feb 2015			Lagged pipes observed behind the wall panel connecting the ceiling cavity to the subfloor.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0058	58	Interior - Ground Level	Reception Area - Electrical distribution cupboards - Floor cover	Seamless Vinyl	Assumed Negative	18		-	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0059	59	Interior - Ground Level	Staff Rehabilitation Building - Bathroom wall - Flue	Asbestos Cement Moulding	Assumed Positive	68		Remediated	-	<1m ²	Moderate	Non-Friable	Medium	Low	-	-	Material has been removed. No documentation of the removal was available, removal.			16/10/2014	Michael Tierney & Lee Hands
8538.08.0060	60	Interior - Ground Level	Staff Rehabilitation Building - Kitchen wall - Electrical switch panel - Electrical backing board (No sample taken due to live electricity)	Electrical Backing Board	Suspected Positive	-		P3	Confirm status, label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	1 unit	Good	Non-Friable	Low	Low	Low	Oct 2017			Suspected removed, however material is presumed to still be present unless proven otherwise. No documentation of the removal was available at the time of re-inspection.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0061	61	Interior - Ground Level	Timber window frames - Throughout - Sealant between frame and glass pane	Sealant	Negative	33		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0062	62	Interior - Ground Level	Walkway between Buildings 1 & 2 - Ceiling	Fibre Cement Sheeting	Negative	26		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0063	63	Interior - Level 1	Ceiling Tiles - Throughout	Ceiling Tile	Negative	19		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0064	64	Interior - Level 1	Infectious Disease Office - Former Shower Room - Walls and ceiling - Throughout	Asbestos Cement Sheeting	Positive	59		P3	Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~20m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands

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Building 1 - Old Emergency Building, Pharmacy and Kiosk

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8538.08.0065	65	Interior - Level 1	Infectious Disease Office - Walls and ceiling - Throughout	Masonite	Negative	58		-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0066	66	Interior - Level 1	Kitchen - Floor cover - Blue vinyl	Seamless Vinyl	Assumed Negative	57		-	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0067	67	Interior - Level 1	Kitchen - Wall cover - Grey vinyl	Seamless Vinyl	Assumed Negative	57		-	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0068	68	Interior - Level 1	Northern Meeting Room - Eastern Store Room - Throughout	Various	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0069	69	Interior - Level 1	Northern Meeting Room - Electrical distribution board - Electrical backing board	Electrical Backing Board	Suspected Positive	47			Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	1 unit	Good	Non-Friable	Low	Low	Low	Low	Oct 2017	-	Not sampled due to live electricity.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0070	70	Interior - Level 1	Northern Meeting Room - Western Store Room - Floor cover - Cream vinyl tiles	Vinyl Tile	Positive	46			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~12m ²	Good	Non-Friable	Low	Low	Low	Low	Oct 2017	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0071	71	Interior - Level 1	Northern Meeting Room - Western Store Room - Floor cover - Grey vinyl tiles	Vinyl Tile	Positive	46			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~1m ²	Good	Non-Friable	Low	Low	Low	Low	Oct 2017	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0072	72	Interior - Level 1	Northern Meeting Room - Western Store Room - Floor cover - Grey vinyl tiles - Adhesive	Adhesive	Negative	46		3	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0073	73	Interior - Level 1	Southern Room - Walls and ceiling - Throughout	Masonite	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0074	74	Ceiling Cavity Space - Adjacent To Level 1	Northern cavity space - Upper ceiling surfaces of original ceiling above false ceiling	Fibre Cement Sheeting	Negative	48 & 55		-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0075	75	Ceiling Cavity Space - Adjacent To Level 1	Southern cavity space - Pipe work - Lagging	Pipe Lagging	Positive	49, 50 & 51			Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	50 linear metres	Moderate	Friable	High	Low	Medium	Oct 2015	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0076	76	Ceiling Cavity Space - Above Level 1	Above Northern Meeting Room - Pipe work - Pipe lagging	Pipe Lagging	Positive	53			Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	50 linear metres	Moderate	Friable	High	Low	Medium	Oct 2015	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0077	77	Ceiling Cavity Space - Above Level 1	Ceiling/Roof Space - Central area - Pipe work	Asbestos Cement Piping	Positive	56			Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A or Class B asbestos contractors soon as practicable.	~12m ²	Moderate	Non-Friable	Medium	Low	Medium	Oct 2015	-	Photo shows the top of the pipe extending from the roof.	16/10/2014	Michael Tierney & Lee Hands	

Building 1 - Old Emergency Building, Pharmacy and Kiosk

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condit-ion	Friability	Conse-quence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor
8538.08.0076	78	Ceiling Cavity Space - Above Level 1	Ceiling/Roof space - Pipe work - Pipe lagging	Pipe Lagging	Positive	52 & 53			Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	~25 lineal metres	Poor	Friable	High	Low	High	Feb 2015				16/10/2014	Michael Tierney & Lee Hands
8538.08.0079	79	Ceiling Cavity Space - Above Level 1	Loose overalls hanging on pipe work and in black garbage bags on upper ceiling surface	Discarded PPE	Positive	60			Remove by a licensed Class A Asbestos Removalist as soon as practicable.	~12m²	Poor	Friable	High	Medium	Medium	Oct 2015				16/10/2014	Michael Tierney & Lee Hands
8538.08.0080	80	Ceiling Cavity Space - Above Level 1	Northern Meeting Room - Ceiling Cavity Space - Throughout	Pipe Lagging Debris	Positive	-			Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	~50m²	Poor	Friable	High	Low	High	Feb 2015			The Ceiling Cavity Space above the Northern Meeting Room is not sealed to the central Ceiling Cavity Space which contains friable asbestos. The space is therefore presumed to be contaminated unless proven otherwise.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0081	81	Ceiling Cavity Space - Above Level 1	Upper surfaces of the ceiling panels - Pipe lagging debris	Pipe Lagging Debris	Positive	54			Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	~50m²	Poor	Friable	High	Low	High	Feb 2015				16/10/2014	Michael Tierney & Lee Hands
8538.08.0082	82	Subfloor	Area below Pharmacy and extending along corridor north of Pharmacy and area below Reception - Pipe work - Pipe lagging	Pipe Lagging & Pipe Lagging Debris	Positive	72, 78 & 79			Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	~200m²	Poor	Friable	High	Low	High	Feb 2015			Subfloor contains asbestos pipe lagging debris throughout. Seal lock and sign all penetrations to the subfloor.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0083	83	Subfloor	Area under Computer Room - Pipe work - Pipe lagging	Pipe Lagging	Positive	-			Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	~10 lineal metres	Poor	Friable	High	Low	High	Feb 2015				16/10/2014	Michael Tierney & Lee Hands
8538.08.0084	84	Subfloor	Boiler Room - Western wall - Access point to Subfloor - Ground Surface - Pipe lagging debris	Pipe Lagging Debris	Positive	73, 74 & 75			Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	~200m²	Poor	Friable	High	Low	High	Feb 2015				16/10/2014	Michael Tierney & Lee Hands
8538.08.0085	85	Subfloor	Boiler Room - Western wall - Access point to Subfloor - Pipe work - Pipe lagging	Pipe Lagging	Positive	73, 74 & 75			Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	~30m lineal metres	Poor	Friable	High	Medium	High	Feb 2015				16/10/2014	Michael Tierney & Lee Hands
8538.08.0086	86	Subfloor	Boiler Room - Western wall - Access point to Subfloor - Pipe work - Pipe lagging	Pipe Lagging Debris	Positive	73, 74 & 75			Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	~60m²	Poor	Friable	High	Low	High	Feb 2015				16/10/2014	Michael Tierney & Lee Hands
8538.08.0087	87	Subfloor	Reception Area - Debris on ground surface below subfloor access hatch	Asbestos Cement Sheetting	Assumed Positive	79			Confirm Status. Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A or Class B asbestos contractors soon as practicable.	Suspected throughout	Moderate	Non-Friable	Medium	Low	Medium	Oct 2015			Pipe work with asbestos pipe lagging is suspected to be near to the access hatch. Full access to subfloor not possible during time of 2014 re-inspection.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0088	88	Subfloor	Storage cupboard adjacent east of Pharmacy customer service counter - Unsealed penetrations to subfloor	Pipe Lagging	Positive	16			Restrict access to the subfloor, label and erect signage at entrances to the area. Seal all penetrations such as this one. Remove pipe lagging debris from the subfloor by a licensed Class A Asbestos Removalist as soon as practicable.	-	Moderate	Friable	High	Medium	Medium	Oct 2015			Subfloor contains asbestos pipe lagging debris throughout. Seal lock and sign all penetrations to the subfloor.	16/10/2014	Michael Tierney & Lee Hands

Building 1 - Old Emergency Building, Pharmacy and Kiosk

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Friability	Consequence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor
8538.08.0089	89	Subfloor	Subfloor cavity space beneath Acute Assessment Unit	Various	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	Further investigation of the Acute Assessment Unit subfloor is required to determine the extent of contamination from adjacent areas. As a precaution, seal all penetrations and treat area as per Entry ID # 88.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0090	90	Subfloor	Subfloor cavity space beneath Cardiology - Ground surface - Debris	Asbestos Cement Sheetting	Positive	65 & 66			Restrict access. Erect signage at entrances to the area. Remove by a licensed Class A or Class B asbestos contractors soon as practicable.	~15m ²	Poor	Non-Friable	High	Low	Medium	Oct 2015				16/10/2014	Michael Tierney & Lee Hands

Buildings 2 & 3 - Radiology, ICU & Rofe Ward

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Friability	Consequence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor	
8538.08.0091	91	Exterior	A&E Ambulance entrance Fire door - Core insulation	Fire Door Insulation	Negative	-		-	-	-	-	-	-	-	-	-	-	-	-	Modern fire doors.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0092	92	Exterior	Courtyard - Timber effect wall panels	Fibre Cement Sheeting	Negative	120		-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0093	93	Exterior	Courtyard - Timber effect wall panels	Fibre Cement Sheeting	Negative	-		-	-	-	-	-	-	-	-	-	-	-	-	This material was re-sampled by Getex due to similar material found to be positive within Building 3. Refer to Entry ID# REVWEW.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0094	94	Exterior	Courtyard between Building 1 & Building 2 - Northern Area - Eaves boards to the ICU	Asbestos Cement Sheeting	Positive	94			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~20m ²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	16/10/2014	Michael Tierney & Lee Hands	
8538.08.0095	95	Exterior	Courtyard between Building 1 & Building 2 - Walls to the ICU	Fibre Cement Sheeting	Negative	95		-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0096	96	Exterior	Courtyard between Radiology & Library Wing - Manhole covers	Fibre Cement Sheeting	Negative	121		-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0097	97	Exterior	Courtyard between Radiology & Library Wing - Northern section of courtyard - Services shaft - Western wall	Fibre Cement Sheeting	Assumed Negative	152		-	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0098	98	Exterior	EMX - Wall lining - Asbestos cement sheeting	Asbestos Cement Sheeting	Positive	122			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~20m ²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	16/10/2014	Michael Tierney & Lee Hands	
8538.08.0099	99	Exterior	Enclosed area between ICU and the corridor from Building 1 to Building 2 - Eaves	Asbestos Cement Sheeting	Positive	104			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~20m ²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	16/10/2014	Michael Tierney & Lee Hands	
8538.08.0100	100	Exterior	Enclosed area between ICU and the corridor from Building 1 to Building 2 - Infill panels surrounding the Dorr to the ICU Store	Fibre Cement Sheeting	Negative	-		-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0101	101	Exterior	Ferant Ward - Eastern Fire Escape - Fire Door	Fire Door Core	Positive	130			Restrict access and label. Maintain encapsulation of the material in good condition and inspect annually. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	1 unit	Good	Friable	Low	Low	Low	Oct 2017	-	-	-	16/10/2014	Michael Tierney & Lee Hands	
8538.08.0102	102	Exterior	ICU - Eastern facing gable over entrance	Asbestos Cement Sheeting	Positive	96			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~5m ²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	Not sampled due to height restriction.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0103	103	Exterior	ICU Offices - Southern and western walls - Timber effect wall panels	Asbestos Cement Sheeting	Positive	151			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~25m ²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	16/10/2014	Michael Tierney & Lee Hands	

Buildings 2 & 3 - Radiology, ICU & Rofe Ward

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Friability	Consequence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor	
8538.08.0104	104	Exterior	Old Main Entrance - Awning	Asbestos Cement Sheeting	Positive	82			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~30m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands	
8538.08.0105	105	Exterior	Old Main Entrance Step - Black vinyl floor tiles	Vinyl Tile	Negative	83															16/10/2014	Michael Tierney & Lee Hands
8538.08.0106	106	Exterior	Rofe Ward - Solarium - Steel framed windows - Putty within the beading	Putty	Positive	150			Maintain encapsulation of the putty in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~3 large bay windows	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands	
8538.08.0107	107	Exterior	Rofe Ward - Bathroom/Laundry Complex - Cupboard on the western wall	Not Accessed	Not Determined	148			Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.							Oct 2015			No Access at time of 2014 re inspection.	16/10/2014	Michael Tierney & Lee Hands	
8538.08.0108	108	Exterior	Rofe Ward - Concrete ramp to Bathroom/Lunch complex - Formwork fragments attached to underside	Asbestos Cement Sheeting	Positive	149				~0.2m ²	Moderate	Non-Friable	Medium	Low	Medium	Oct 2015	Removed by Getex in the 2014 re-inspection, 3 fragments only.			16/10/2014	Michael Tierney & Lee Hands	
8538.08.0109	109	Exterior	Rofe Ward - In-fill panels above & below windows	Fibre Cement Sheeting	Negative	118 & 119														16/10/2014	Michael Tierney & Lee Hands	
8538.08.0110	110	Exterior	Roof Level - Eastern end of Radiology - AC ductwork - Sealant between the joints	Sealant	Positive	107			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	30 lineal metres of ductwork.	Good	Non-Friable	Low	Low	Low	Oct 2017			Not accessed due to height restriction.	16/10/2014	Michael Tierney & Lee Hands	
8538.08.0111	111	Exterior	Spacers between sections of brick wall - Throughout	Rubber Membrane	Negative	152														16/10/2014	Michael Tierney & Lee Hands	
8538.08.0112	112	Exterior	Surrounding - Brick work - Expansion joints - Bituminous lining	Bituminous Lining	Negative	84														16/10/2014	Michael Tierney & Lee Hands	
8538.08.0113	113	Exterior	Upper & Lower eaves throughout	Asbestos Cement Sheeting	Assumed Positive	123 & 124			Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	>100m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands	
8538.08.0114	114	Exterior	Walkway to EMU - Ceiling - Corrugated Roof	Asbestos Cement Sheeting	Positive	85 & 86			Restrict access, label and erect signage at entrances to the area. Seal all broken edges. Remove by a licensed Class A or Class B asbestos contractors soon as practicable.	~24m ²	Moderate	Non-Friable	Medium	Low	Medium	Oct 2015			Roof is in moderate condition and is producing friable material in the adjacent garden bed - recommend removal to avoid further contamination.	16/10/2014	Michael Tierney & Lee Hands	
8538.08.0115	115	Exterior	Walkway to EMU - Ceiling - Soil within the garden beds adjacent to the Corrugated Roof	Asbestos Fibres within the Soil	Positive	86			Restrict access, label and erect signage at entrances to the area. Scrape topsoil down a minimum of 50mm by a licensed Class A Asbestos Removallist as soon as practicable and re-sample.	~12m ²	Poor	Friable	High	Low	High	Feb 2015			Contamination is associated with the adjacent asbestos corrugated roof noted to be in moderate condition. It is recommended this roof be removed in addition to the soil material.	16/10/2014	Michael Tierney & Lee Hands	
8538.08.0116	116	Exterior	Walkway to EMU - Gutter adjacent to the Corrugated Roof - Asbestos fibres within the gutter detritus	Gutter Detritus	Positive	87			Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removallist as soon as practicable.	~12 lineal metres	Poor	Friable	High	Low	High	Feb 2015				16/10/2014	Michael Tierney & Lee Hands	

Buildings 2 & 3 - Radiology, ICU & Rofe Ward

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8538.08.0117	117	Exterior	Walkway to Operating - Theatres and Recovery Unit - Awning and eaves	Asbestos Cement Sheeting	Positive	-	-	P3	Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~10m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0118	118	Exterior	Western side of Building 5 - Pebble coated upper fascia panelling	Asbestos Cement Sheeting	Assumed Positive	-	-	P3	Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~40m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0119	119	Interior - Ground Level - Intensive Care Unit (ICU)	Cleaners Store - Southern & eastern wall	Fibre Cement Sheeting	Negative	102		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0120	120	Interior - Ground Level - Intensive Care Unit (ICU)	Electrical Box marked 'Essential Supply 2'	Not Accessed	Not Determined	101		-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	Oct 2015			No access available at the time of re-inspection.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0121	121	Interior - Ground Level - Intensive Care Unit (ICU)	Store Room adjacent to the Nursing Unit Managers Office - Speckled Brown Vinyl	Seamless Vinyl	Negative	103		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0122	122	Interior - Ground Level - Intensive Care Unit (ICU)	Store Room adjacent to the Nursing Unit Managers Office - Speckled Brown Vinyl - Adhesive	Adhesive	Negative	103		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0123	123	Interior - Ground Level - Intensive Care Unit (ICU)	Ward & Offices Throughout	Various	Negative	-	-	-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0124	124	Interior - Ground Level - Library Entry	Stairwell and Walkway adjacent to the Library Entry - Ceiling - Vermiculite	Vermiculite	Negative	-	-	-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0125	125	Interior - Ground Level - Library Wing	Ceiling Cavity	Various	Negative	-	-	-	-	-	-	-	-	-	-	-			No asbestos detected at the time of inspection.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0126	126	Interior - Ground Level - Library Wing	Store Room, Meeting Room & Toilet adjacent south of Beverage Room - Steel framed windows - Putty within the beading	Putty	Assumed Positive	139		P3	Confirm status and maintain encapsulation of the putty in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	6 windows	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0127	127	Interior - Ground Level - Main Corridor	Cream vinyl floor cover	Seamless Vinyl	Negative	105		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0128	128	Interior - Ground Level - Main Corridor	Cream vinyl floor cover - Adhesive	Adhesive	Negative	105		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0129	129	Interior - Ground Level - Main Corridor	Electrical equipment cupboard adjacent to the Library Wing	Not Accessed	Not Determined	140		-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	Oct 2015			No access available at the time of re-inspection.	16/10/2014	Michael Tierney & Lee Hands

Buildings 2 & 3 - Radiology, ICU & Rofe Ward

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8538.08.0130	130	Interior - Ground Level - Main Corridor	Electrical equipment and Essential Supplies boxes adjacent to the Rofe Ward	Not Accessed	Suspected Positive	148		-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	Oct 2015			No access available at the time of re-inspection. Cupboards and boxes are assumed to contain asbestos in the electrical backing boards.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0131	131	Interior - Ground Level - Main Corridor	Patient Representative Office - Eastern wall - In-fill panel	Asbestos Cement Sheeting	Positive	106			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~4m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0132	132	Interior - Ground Level - Main Corridor	Three toilet rooms - Throughout	Various	Negative	-	-	-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0133	133	Interior - Ground Level - Radiology	Access points and penetrations to the sub/floor - Pipe lagging debris on the ground surfaces	Pipe Lagging Debris	Positive	115, 116 & 117			Restrict access to the sub/floor entirely and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	Potentially the entire Building 2 & 3 sub/floor	Poor	Friable	High	Low	High	Feb 2015			Material is in very poor condition and may have contaminated adjacent sub/floor areas.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0134	134	Interior - Ground Level - Radiology	Corridor adjacent to Building 1 - Electrical Cupboard	Not Accessed	Not Determined	100		-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	Oct 2015			No access available at the time of re-inspection.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0135	135	Interior - Ground Level - Radiology	Electrical Cupboard adjacent to Ultrasound Room	Not Accessed	Not Determined	-	-	-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	Oct 2015			No access available at the time of re-inspection.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0136	136	Interior - Ground Level - Radiology	Flooring - Original Cream vinyl sheeting beneath the newer vinyl throughout	Seamless Vinyl	Negative	129		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0137	137	Interior - Ground Level - Radiology	Flooring - Original Cream vinyl sheeting beneath the newer vinyl throughout - Millboard Backing	Millboard	Positive	129			Restrict access to all damaged areas, label flooring throughout as having asbestos materials beneath the flooring. Encapsulate all damaged areas with new flooring cover. Remove by a licensed Class A Asbestos Removalist as soon as practicable and prior to any refurbishment/demolition activities.	>300m ²	Good/Minor Damage	Friable	Medium	Low	Medium	Oct 2015				16/10/2014	Michael Tierney & Lee Hands
8538.08.0138	138	Interior - Ground Level - Radiology	Lobby - Floor beneath stairs - Beige vinyl Floor cover	Seamless Vinyl	Negative	-	-	-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0139	139	Interior - Ground Level - Radiology	Reception - Floor - Beige vinyl floor cover beneath the blue vinyl floor cover	Seamless Vinyl	Negative	98 & 99		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0140	140	Interior - Ground Level - Radiology	Reception - Floor - Beige vinyl floor cover beneath the blue vinyl floor cover - Backing layer	Adhesive	Negative	98 & 99		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0141	141	Interior - Ground Level - Radiology	Reception - Floor - Beige vinyl floor cover beneath the blue vinyl floor cover - Backing layer	Millboard	Positive	98 & 99			Seal all damaged and exposed sections of vinyl and around penetrations to the floor. Do not disturb the materials and maintain the encapsulation in good condition. Remove by a licensed Class A Asbestos Removalist as soon as practicable and prior to any refurbishment/demolition activities.	>100m ²	Good/Minor Damage	Friable	Medium	Low	Medium	Oct 2015				16/10/2014	

Buildings 2 & 3 - Radiology, ICU & Rofe Ward

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Friability	Consequence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor
8538.08.0142	142	Interior - Ground Level - Radiology	Reception - Floor - Blue vinyl floor cover	Seamless Vinyl	Negative	98 & 99		-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0143	143	Interior - Ground Level - Radiology	Reception - Office between Radiologist Reporting Room & Reception - Ceiling - Pipe work - Pipe lagging	Pipe Lagging	Positive	113		P2	Restrict access. Maintain encapsulation of the material in good condition and inspect annually. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	2.5 lineal metres	Good	Friable	Low	Low	Medium	Oct 2015	-	-	Pipe lagging extends into the adjacent rooms.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0144	144	Interior - Ground Level - Radiology	Reception Office - Electrical Distribution Board - Electrical backing board	Electrical Backing Board	Positive	133		P3	Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	1 unit	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	Not sampled due to live electricity.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0145	145	Interior - Ground Level - Radiology	Room 1 (Patient Change Room) - Partition wall	Asbestos Cement Sheeting	Positive	114		P3	Seal exposed edges. Label and maintain in good condition. Remove by a contractor prior to licensed asbestos refurbishment/ demolition works.	~4m ²	Good/ Minor Damage	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0146	146	Interior - Ground Level - Radiology	Southern stairs (Access to the Ferranti ward) - Bituminous layer beneath the brown vinyl tiles on the steps	Bituminous Membrane	Negative	97		-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0147	147	Interior - Ground Level - Radiology	Southern stairs (Access to the Ferranti ward) - Brown vinyl tiles on the steps	Vinyl Tile	Positive	97		P3	Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~20m ²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0148	148	Interior - Ground Level - Radiology	Southern stairs (Access to the Ferranti ward) - Brown vinyl tiles on the steps - Adhesive to the tiles	Adhesive	Negative	97		-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0149	149	Interior - Ground Level - Radiology	Southern stairs (Access to the Ferranti ward) - Brown vinyl tiles on the steps - Underlay	Underlay	Negative	97		-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0150	150	Interior - Ground Level - Radiology	Stairwell to Infection Control - Floor Cover - Cream seamless vinyl	Seamless Vinyl	Assumed Negative	-	-	-	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0151	151	Interior - Ground Level - Radiology	Stairwell to Infection Control - Flooring - Millboard backing attached to the underside of sample 36030-29A	Millboard	Assumed Positive	-	-	P3	Confirm status. Restrict access and label. Maintain encapsulation of the material in good condition and inspect annually. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	~15 m ²	Good	Friable	Low	Low	Low	Oct 2017	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0152	152	Interior - Ground Level - Radiology	Store Room opposite Rooms 2 & 3 Pipe work - Pipe lagging adjacent to the northern wall	Pipe Lagging	Positive	112		P2	Restrict access. Maintain encapsulation of the material in good condition and inspect annually. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	6 lineal metres	Good	Friable	Low	Medium	Medium	Oct 2015	-	-	Pipe lagging extends into the adjacent ceiling cavity & cupboard.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0153	153	Interior - Ground Level - Radiology	Throughout - Beige vinyl floor cover beneath the blue vinyl floor cover - White millboard backing	Millboard	Positive	88, 89 & 90		P3	Seal any damaged sections and maintain encapsulation of the material in good condition and inspect annually. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	>200m ²	Good/ Minor Damage	Friable	Low	Low	Low	Oct 2017	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0154	154	Interior - Ground Level - Rofe Ward	Annex - Bed 10 - Ceiling	Fibre Cement Sheeting	Negative	135		-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands

Buildings 2 & 3 - Radiology, ICU & Rofe Ward

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8538.08.0155	155	Interior - Ground Level - Rofe Ward	Annex - Bed 10 - Southern wall panels	Fibre Cement Sheeting	Negative	134		-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0156	156	Interior - Ground Level - Rofe Ward	Annex - Ceiling	Asbestos Cement Sheeting	Positive	131			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~50m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0157	157	Interior - Ground Level - Rofe Ward	Annex - Infill panels below windows	Fibre Cement Sheeting	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0158	158	Interior - Ground Level - Rofe Ward	Annex - Northern Wall	Asbestos Cement Sheeting	Positive	132			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~10m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0159	159	Interior - Ground Level - Rofe Ward	Annex - Western wall	Fibre Cement Sheeting	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0160	160	Interior - Ground Level - Rofe Ward	Fire door to Main Corridor	Fire Door Core	Negative	146 & 147		-	-	-	-	-	-	-	-	-	-	-	Modern fire door.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0161	161	Interior - Ground Level - Rofe Ward	Laundry/Bath complex - Ceiling panels	Asbestos Cement Sheeting	Positive	138			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~100m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0162	162	Interior - Ground Level - Rofe Ward	Main Ward - Floor - Linoleum	Linoleum	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0163	163	Interior - Ground Level - Rofe Ward	Main Ward Area - Ceilings	Plaster Board	Positive	137			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~20m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0164	164	Interior - Ground Level - Rofe Ward	Solarium - Ceiling	Plaster Board	Positive	136			Seal exposed edges. Label and maintain in good condition. Remove by a contractor prior to licensed asbestos refurbishment/ demolition works.	~10m ²	Good/ Minor Damage	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0165	165	Interior - Ground Level - Rofe Ward	Solarium - Wall panels above windows	Plaster Board	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0166	166	Interior - Ground Level - Rofe Ward	Staff Room - Kitchenette & adjacent office - Ceiling	Asbestos Cement Sheeting	Positive	125 & 126			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~15m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0167	167	Interior - Ground Level - Rofe Ward	Staff Specialist Office - Throughout	Various	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands

Buildings 2 & 3 - Radiology, ICU & Rofe Ward

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8538.08.0168	168	Interior - Ground Level - Rofe Ward	Staffroom - Kitchenette - Western Wall	Fibre Cement Sheeting	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0169	169	Interior - Ground Level - X-Ray Department	Room 2 - Electrical Distribution Panel - Electrical backing board (Not sampled due to live electricity)	Electrical Backing Board	Positive	91			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-2m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0170	170	Interior - Ground Level - X-Ray Department	Room 3 - Electrical Distribution Panel - Electrical backing board (Not sampled due to live electricity)	Electrical Backing Board	Positive	-	-		-	-2m ²	Good	Non-Friable	Low	Low	Low	Oct 2017	Not present at the 2014 re-inspection. Suspected removed during renovations to		Suspected removed, however material is presumed to still be present unless proven otherwise.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0171	171	Interior - Ground Level - X-Ray Department	Room 3 - Sink pad - Bituminous lining	Bituminous Lining	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0172	172	Interior - Level 1 - Feranti Ward	Annex - Kitchen & Laundry - Ceiling tiles	Fibre Cement Sheeting	Negative	141		-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0173	173	Interior - Level 1 - Feranti Ward	Annex - South-east Fire Exit - Infill panels above and below windows	Asbestos Cement Sheeting	Positive	108			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0174	174	Interior - Level 1 - Feranti Ward	Bathroom adjacent Southern stairs to Radiology - Beige vinyl floor cover beneath the blue vinyl floor cover	Seamless Vinyl	Negative	111		-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0175	175	Interior - Level 1 - Feranti Ward	Bathroom adjacent Southern stairs to Radiology - Beige vinyl floor cover beneath the blue vinyl floor cover - Backing Layer	Millboard	Positive	111			Seal any damaged sections and maintain encapsulation of the material in good condition and inspect annually. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	-25m ²	Good	Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0176	176	Interior - Level 1 - Feranti Ward	Bathroom adjacent Southern stairs to Radiology - Blue Vinyl Floor cover	Seamless Vinyl	Negative	110		-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0177	177	Interior - Level 1 - Feranti Ward	Bathroom adjacent Southern stairs to Radiology - Ceiling	Asbestos Cement Sheeting	Positive	-	-		Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-25m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0178	178	Interior - Level 1 - Feranti Ward	Ceiling space - Throughout	Various	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0179	179	Interior - Level 1 - Feranti Ward	Chest Clinic	Various	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0180	180	Interior - Level 1 - Feranti Ward	Conference Room 1 - Infill panels above the windows	Asbestos Cement Sheeting	Positive	142			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-12m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands

Buildings 2 & 3 - Radiology, ICU & Rofe Ward

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8538.08.0181	181	Interior - Level 1 - Feranti Ward	Conference Room 1 - Infill panels below the windows	Plaster Board & Timber	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0182	182	Interior - Level 1 - Feranti Ward	Conference Room 2 - Infill panels above the windows	Asbestos Cement Sheeting	Positive	143			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-6m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0183	183	Interior - Level 1 - Feranti Ward	Conference Room 3 - Infill Panels above the windows presumed to contain asbestos as in adjacent rooms	Not Accessed	Assumed Positive	-	-		Confirm status of infill panels. Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works. Investigate the room prior to any refurbishment/demolition works.	-4m ²	Good	Non-Friable	Low	Low	Low	Oct 2017			No access at the time of re-inspection. The room is presumed to contain asbestos panels above the windows as in adjacent rooms.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0184	184	Interior - Level 1 - Feranti Ward	Conference Room 4 - Infill panels above windows	Asbestos Cement Sheeting	Positive	144			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-4m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0185	185	Interior - Level 1 - Feranti Ward	EEG Room - Throughout	Various	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0186	186	Interior - Level 1 - Feranti Ward	HKHS - Simulation & Skills Training Centre - Infill Panels above the windows presumed to contain asbestos as in adjacent rooms	Not Accessed	Assumed Positive	-	-		Confirm status of infill panels. Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works. Investigate the room prior to any refurbishment/demolition works.	-4m ²	Good	Non-Friable	Low	Low	Low	Oct 2017			No access at the time of re-inspection. The room is presumed to contain asbestos panels above the windows as in adjacent rooms.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0187	187	Interior - Level 1 - Feranti Ward	MACARF Room	Not Accessed	Not Determined	110		-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	Oct 2015			No access available at the time of re-inspection.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0188	188	Interior - Level 1 - Feranti Ward	Occupational Staff Health Clinic	Various	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0189	189	Interior - Level 1 - Feranti Ward	Parents Room - Toilets Wall lining	Fibre Cement Sheeting	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0190	190	Interior - Level 1 - Feranti Ward	Reception - Ceiling	Asbestos Cement Sheeting	Positive	109			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-6m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0191	191	Interior - Level 1 - Feranti Ward	Room 5 - Throughout	Various	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0192	192	Interior - Level 1 - Feranti Ward	Room opposite Room 5	Various	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16/10/2014	Michael Tierney & Lee Hands
8538.08.0193	193	Interior - Level 1 - Feranti Ward	Service Room adjacent to the Breast Care Nurses Office	Not Accessed	Not Determined	-	-	-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	Oct 2015			No access available at the time of re-inspection.	16/10/2014	Michael Tierney & Lee Hands

Buildings 2 & 3 - Radiology, ICU & Rofe Ward

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8538.08.0194	194	Interior - Level 1 - Feranti Ward	Staff Development Educators Office (2 Rooms) - Infill Panels above the windows	Asbestos Cement Sheeting	Positive	-	-	P3	Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~6m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0195	195	Interior - Level 1 - Feranti Ward	Staff Kitchen - Infill panels above the windows	Asbestos Cement Sheeting	Positive	145		P3	Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~4m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0196	196	Interior - Level 1 - Feranti Ward	Stairs adjacent Diabetics & Education - Flooring - Adhesive and brown fibrous sheet material attached to underside of Beige vinyl floor tiles	Adhesive	Negative	127 & 128		-	-	-	-	-	-	-	-	-				16/10/2014	Michael Tierney & Lee Hands
8538.08.0197	197	Interior - Level 1 - Feranti Ward	Stairs adjacent Diabetics & Education - Flooring - Beige vinyl floor tiles	Vinyl Tile	Positive	127 & 128		P3	Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~40m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				16/10/2014	Michael Tierney & Lee Hands
8538.08.0198	198	Interior - Level 1 - Feranti Ward	Stomal Therapist Rooms - Infill Panels above the windows presumed to contain asbestos as in adjacent rooms	Not Accessed	Assumed Positive	-	-	P3	Confirm status of infill panels. Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works. Investigate the room prior to any refurbishment/demolition works.	~4m ²	Good	Non-Friable	Low	Low	Low	Oct 2017			No access at the time of re-inspection. The room is presumed to contain asbestos panels above the windows as in adjacent rooms.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0199	199	Subfloor	Beneath Children's Ward - Pipe work - Pipe lagging	Pipe Lagging	Positive	-	-		-	-	-	-	-	-	-	-	Removed by Airsafe. Document sited by NAA Ref 08832 (Mar 2007)			16/10/2014	Michael Tierney & Lee Hands
8538.08.0200	200	Subfloor	Corridor between X-Ray & Nuclear Medicine - Subfloor hatch - Pipe work - Pipe lagging	Pipe Lagging	Positive	-	-		-	-	Friable	-	Low	Low	Low	Oct 2017	Removed by Airsafe. Document sited by NAA Ref 08832 (Mar 2007)			16/10/2014	Michael Tierney & Lee Hands
8538.08.0201	201	Subfloor	X-Ray Department - Room 3 - Asbestos cement sheeting debris in cement	Asbestos Cement Sheeting Debris	Positive	92 & 93		P2	Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A or Class B asbestos contractors soon as practicable.	<1m ²	Poor	Non-Friable	High	Low	Medium	Oct 2015				16/10/2014	Michael Tierney & Lee Hands
8538.08.0202	202	Subfloor	X-Ray Department - Room 3 - Pipe work - Pipe lagging	Pipe Lagging	Positive	-	-	P1	Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	>50 lineal metres	poor	Friable	High	Low	High	Feb 2015			Material not located at the 2014 re-inspection due to new hatch location within Room 3 - the material is presumed to still be present unless proven otherwise.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0203	203	Subfloor	X-Ray Department - Room 3 - Subfloor hatch	Asbestos Cement Sheeting	Positive	-	-	P3	Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	<1m ²	Good	Non-Friable	Low	Low	Low	Oct 2017			Material not located at the 2014 re-inspection due to new hatch location within Room 3 - the material is presumed to still be present beneath the installed seamless vinyl.	16/10/2014	Michael Tierney & Lee Hands
8538.08.0204	204	Subfloor	X-Ray Department - Room 3 - Throughout - Pipe insulation debris	Pipe Lagging Debris	Assumed Positive	-	-	P1	Confirm status. Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	-	Poor	Friable	High	Medium	High	Feb 2015			Not located at the 2014 re-inspection due to a reconfiguration of the floor, however presumed to be present unless proven otherwise.	7/10/2014	Michael Tierney & Lee Hands

Building 5 - George Lumby Unit

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8538.08.0205	205	Exterior	All Levels - Between Eaves and fascia panelling - Construction joint	Mastic	Negative	156		-	-	-	-	-	-	-	-	-				7/10/2014	Michael Tierney & Lee Hands
8538.08.0206	206	Exterior	All Levels - Surrounding perimeter - Eaves	Asbestos Cement Sheeting	Positive	154			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	>500m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				7/10/2014	Michael Tierney & Lee Hands
8538.08.0207	207	Exterior	All Levels - Surrounding perimeter - Pebble coated fascia panelling	Asbestos Cement Sheeting	Positive	155			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	>500m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				7/10/2014	Michael Tierney & Lee Hands
8538.08.0208	208	Exterior	Eastern walkway to Building - Ceiling	Asbestos Cement Sheeting	Assumed Positive	160			Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~200m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				7/10/2014	Michael Tierney & Lee Hands
8538.08.0209	209	Exterior	Eastern walkway to Building - Floor cover	Bituminous Membrane	Negative	162		-	-	-	-	-	-	-	-	-				7/10/2014	Michael Tierney & Lee Hands
8538.08.0210	210	Exterior	Eastern walkway to Building - Pebble coated upper fascia panelling	Asbestos Cement Sheeting	Assumed Positive	159			Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~100m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				7/10/2014	Michael Tierney & Lee Hands
8538.08.0211	211	Exterior	Eastern walkway to Building - Window beading	Mastic	Negative	161		-	-	-	-	-	-	-	-	-				7/10/2014	Michael Tierney & Lee Hands
8538.08.0212	212	Exterior	Maternity/Lumby Change Over Panel - Electrical switchbox	Not Accessed	Not Determined	158		-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	Oct 2015		Panel locked at time of 2014 re-inspection.	7/10/2014	Michael Tierney & Lee Hands	
8538.08.0213	213	Exterior	Roof - Throughout	Various	Negative	204		-	-	-	-	-	-	-	-	-				7/10/2014	Michael Tierney & Lee Hands
8538.08.0214	214	Exterior	Rooftop - Guttering joints	Mastic	Assumed Negative	157		-	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-				7/10/2014	Michael Tierney & Lee Hands
8538.08.0215	215	Interior - All Levels	Ceiling space - Pipe work - Pipe lagging	Pipe Lagging	Positive	184			Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	>100 lineal metres	Moderate	Friable	High	Low	Medium	Oct 2015				7/10/2014	Michael Tierney & Lee Hands
8538.08.0216	216	Interior - All Levels	Northern & Southern fire stairs - Flooring - Blue seamless vinyl	Seamless Vinyl	Negative	180		-	-	-	-	-	-	-	-	-				7/10/2014	Michael Tierney & Lee Hands
8538.08.0217	217	Interior - Ground Level	Adjacent to cashier desk - Unsealed penetration to the ceiling cavity	Various	Positive	163			Friable asbestos exists within the ceiling cavity. Seal all penetrations to the ceiling cavity	-	Moderate	Friable	High	Low	Medium	Oct 2015				7/10/2014	Michael Tierney & Lee Hands

Building 5 - George Lumby Unit

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Friability	Consequence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor
8538.08.0218	218	Interior - Ground Level	Central Corridor - Adjacent west of Dumb Waiter - Cleaner cupboard - Floor cover - Blue vinyl	Seamless Vinyl	Negative	167		-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0219	219	Interior - Ground Level	Central Corridor - Adjacent west of Dumb Waiter - Cleaner cupboard - Pipe work lagging	Pipe Lagging	Positive	166	 	P3	Maintain encapsulation of the material in good condition and inspect annually. Remove by a licensed Class A Asbestos Removallist as soon as practicable.	4 lineal metres	Good	Friable	Low	Low	Low	Oct 2017				7/10/2014	Michael Tierney & Lee Hands
8538.08.0220	220	Interior - Ground Level	Central Corridor - Laundry chute room - Fire Doors - Core insulation	Fire Door	Negative	169 & 170		-	-	-	-	-	-	-	-	-	-	-	Identification plate states Fires Doors were manufactured in 2000. Getex was advised by the Fire Office for the Hospital that all Fire Doors throughout the Site do not	7/10/2014	Michael Tierney & Lee Hands
8538.08.0221	221	Interior - Ground Level	Central Corridor - Laundry chute room - Floor Covering - Blue vinyl	Seamless Vinyl	Negative	168		-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0222	222	Interior - Ground Level	Central Corridor - Main Switchboard cupboard	Not Accessed	Not Determined	164		-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	Oct 2015			The Main Switchboard cupboard was locked at the time of the 2014 re-inspection.	7/10/2014	Michael Tierney & Lee Hands
8538.08.0223	223	Interior - Ground Level	Central Corridor - Opposite Main Switchboard cupboard - Electrical equipment box	Not Accessed	Not Determined	165		-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	Oct 2015			Electrical equipment box was locked at the time of 2014 re-inspection.	7/10/2014	Michael Tierney & Lee Hands
8538.08.0224	224	Interior - Ground Level	Corridors - Floor cover - Throughout - Multi tone blue vinyl	Seamless Vinyl	Assumed Negative	176		-	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0225	225	Interior - Ground Level	Female Locker Room - Floor cover - Blue vinyl	Seamless Vinyl	Negative	172		-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0226	226	Interior - Ground Level	Lower half of walls - Throughout - Brown mottled vinyl	Seamless Vinyl	Negative	175		-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0227	227	Interior - Ground Level	Male Locker Room - Ceiling cavity	Various	Negative	173		-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0228	228	Interior - Ground Level	Male Locker Room - Floor cover - Blue vinyl	Seamless Vinyl	Negative	174		-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0229	229	Interior - Ground Level	Offices - Throughout - Small square ceiling tiles	Ceiling Tile	Negative	177		-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0230	230	Interior - Ground Level	Resident Support Unit office - Server Room - Ceiling cavity - Pipe work lagging	Pipe Lagging	Assumed Positive	178	 	P3	Confirm status. Restrict access and label. Maintain encapsulation of the material in good condition and inspect annually. Remove by a licensed Class A Asbestos Removallist as soon as practicable.	unknown	Good	Friable	Low	Low	Low	Oct 2017			Pipe work was inaccessible due to large amounts of electrical wire within the ceiling cavity.	7/10/2014	Michael Tierney & Lee Hands






Building 5 - George Lumby Unit

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Friability	Consequence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor	
8538.08.0231	231	Interior - Ground Level	Resident Support Unit office - Server Room - Floor cover below carpet tiles	Seamless Vinyl	Negative	179		-	-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0232	232	Interior - Ground Level	Service duct Room - Pipe work - Insulation	Woven Rope Insulation	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0233	233	Interior - Ground Level	Service Shaft - Pipe work - Gaskets between flanges	Gasket	Negative	171		-	-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0234	234	Interior - Level 1	Central Riser Plant Room - Electrical Distribution Panel - Electrical backing board	Electrical Backing Board	Positive	183			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	1 unit	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	7/10/2014	Michael Tierney & Lee Hands	
8538.08.0235	235	Interior - Level 1	Corridors - Throughout - Floor cover - Cream mottled vinyl	Seamless Vinyl	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0236	236	Interior - Level 1	Lower half of walls - Throughout - Cream mottled vinyl	Seamless Vinyl	Negative	187		-	-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0237	237	Interior - Level 1	Patients northern Shower Room - Floor cover - Throughout - Vinyl	Seamless Vinyl	Suspected Negative	182		-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-	-	-	-	Confirm status prior to refurbishment/demolition works and maintain in good condition.	7/10/2014	Michael Tierney & Lee Hands
8538.08.0238	238	Interior - Level 1	Patients northern Shower Room - Walls - Throughout - Vinyl	Seamless Vinyl	Negative	181		-	-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0239	239	Interior - Level 1	Room 8/Beds 5-6 - Throughout	Various	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	All rooms and offices throughout were assessed to be similar to Rom 8/Bed 5-6.	7/10/2014	Michael Tierney & Lee Hands
8538.08.0240	240	Interior - Level 1	Staff Room - Ceiling - Small square ceiling tiles	Ceiling Tile	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0241	241	Interior - Level 1	Treatment Room 1 - Riser Cupboard - Pipe work - Woven rope insulation	Woven Rope Insulation	Positive	-	-		Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	>3m	Moderate	Friable	High	Low	Medium	Oct 2015	-	-	Not located at the time of the 2014 re-inspection. Presumed to be still present.	7/10/2014	Michael Tierney & Lee Hands	
8538.08.0242	242	Interior - Level 2	Central Corridor - Fire Doors	Fire Door	Negative	190		-	-	-	-	-	-	-	-	-	-	-	-	Getex was advised by the Fire Office for the Hospital that all Fire Doors throughout the Site do not contain asbestos.	7/10/2014	Michael Tierney & Lee Hands
8538.08.0243	243	Interior - Level 2	Central Riser Plant Room - Electrical Distribution Panel - Electrical backing board	Electrical Backing Board	Positive	189			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	1 unit	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	7/10/2014	Michael Tierney & Lee Hands	

Building 5 - George Lumby Unit

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Friability	Consequence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor
8538.08.0244	244	Interior - Level 2	Corridors - Throughout - Floor cover - Brown matted vinyl	Seamless Vinyl	Negative	185 & 186		-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0245	245	Interior - Level 2	Staff Room - Ceiling - Small square ceiling tiles	Ceiling Tile	Negative	188		-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0246	246	Interior - Level 2	Vases Room - Floor cover - Brown square pattered vinyl	Seamless Vinyl	Suspected Positive	191			Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	12	Good	Non-Friable	Low	Low	Low	Oct 2017			Not sampled due to material being used as waterproofing.	7/10/2014	Michael Tierney & Lee Hands
8538.08.0247	247	Interior - Roof Level	Behind door opposite top of Fire Stairs - Outer door - Bottom Panel	Asbestos Cement Sheeting	Positive	192			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~1m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				7/10/2014	Michael Tierney & Lee Hands
8538.08.0248	248	Interior - Roof Level	Lift Motor Room - Interior - Lower wall panels	Plaster Board	Negative	203		-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0249	249	Interior - Roof Level	Lift Motor Room - Interior - Western wall panel	Fibre Cement Sheeting	Assumed Negative	202		-	Confirm status by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0250	250	Interior - Roof Level	Lift Motor Room - Lift Motors - Brake Pads	Brake Pads	Suspected Positive	200			Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	2 brake pads	Good	Non-Friable	Low	Low	Low	Oct 2017			Not sampled due to machine in operation at time of 2014 re-inspection.	7/10/2014	Michael Tierney & Lee Hands
8538.08.0251	251	Interior - Roof Level	Lift Motor Room - Lift Motors - Gaskets	Gasket	Assumed Positive	201			Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	2 Gaskets	Good	Non-Friable	Low	Low	Low	Oct 2017			Not sampled due to machine in operation at time of 2014 re-inspection.	7/10/2014	Michael Tierney & Lee Hands
8538.08.0252	252	Interior - Roof Level	Main Plant Room - Hot water units - Packing material under boiler	Fibre Cement Sheeting	Negative	199		-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0253	253	Interior - Roof Level	Main Plant Room - South-eastern corner - AC Plant 1 control box	Electrical Backing Board	Assumed Positive	197			Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~2m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				7/10/2014	Michael Tierney & Lee Hands
8538.08.0254	254	Interior - Roof Level	Main Plant Room - South-eastern corner - Roof cavity space - Floor surfaces - Behind boilers - Debris	Fibre Cement Sheeting	Negative	198		-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0255	255	Interior - Roof Level	North-western Plant Room - Compressor Unit - Pipe work lagging	Bituminous Lagging	Negative	194 & 195		-	-	-	-	-	-	-	-	-	-	-	-	7/10/2014	Michael Tierney & Lee Hands
8538.08.0256	256	Interior - Roof Level	Plant Room - Disused boiler - Flange sealant	Gasket	Positive	-	-		Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	1 unit	Good	Non-Friable	Low	Low	Low	Oct 2017			Not found at the time of the 2014 reinspection. Presumed to be removed.	7/10/2014	Michael Tierney & Lee Hands



Building 5 - George Lumby Unit

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Friability	Consequence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor		
8538.08.0257	257	Interior - Roof Level	Plant Room - Disused boiler - Packing material	Fibre Cement Sheeting	Negative	-		-	-	-	-	-	-	-	-	-	-	-	-	Not found at time of 2014 re-inspection.	7/10/2014	Michael Tierney & Lee Hands	
8538.08.0258	258	Interior - Roof Level	Plant Room - Floor panel 4 meters south of north-east door	Asbestos Cement Sheeting	Positive	196			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~1m ²	Good	Non-Friable	Low	Low	Medium	Oct 2015					7/10/2014	Michael Tierney & Lee Hands	
8538.08.0259	259	Interior - Roof Level	Plant Room - Lift Motor Room door - Exterior wall panels	Asbestos Cement Sheeting	Positive	193			Label, seal exposed edges and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~50m ²	Good/ Minor Damage	Non-Friable	Low	Low	Low	Nov 2017						7/10/2014	Michael Tierney & Lee Hands

Building 13 - Florist Shop, HR & Main Electrical Switch Room

Getex Entry #	Register Entry	Area Referen	Location	Material Type	Status	Photo No.	Photo	Control Prio	Control Recommendation	Extent	Condition	Friability	Consequence	Disturb. Poten	Risk Stat	Re-inspec 1 By	Remediated (Date/Co)	Accessed by/on:	Comments	Date Inspected	Inspected By
8538.08.0303	303	Exterior	Walkway west of Building - Ceiling - Textured fibre cement sheeting	Fibre Cement Sheeting	Negative	225		-	-	-	-	-	-	-	-	-	-	-	-	17/10/2014	Peter Fox & Jeremy Manion
8538.08.0304	304	Exterior	Walkway between Building 13 & Building 43 - Ceiling	Asbestos Cement Sheet	Positive	226		1	Label and maintain in good condition. Remove by a licensed asbestos contractor prior to refurbishment/demolition.	-20 m ²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	17/10/2014	Peter Fox & Jeremy Manion
8538.08.0305	305	Exterior	Walkway adjacent Building 43 & Building 13 - Eaves	Asbestos Cement Sheet	Assumed Positive	227		1	Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-20 m ²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	17/10/2014	-
8538.08.0306	306	Exterior	Outside walkway - Adjacent Florist and Car Park - Eaves and pebble coated upper fascia beneath metal panelling	Asbestos Cement Sheet	Positive	228		1	Label and maintain in good condition. Remove by a licensed asbestos contractor prior to refurbishment/demolition.	-20 m ²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	Pebble coated fascia has since been removed or covered by metal panelling.	17/10/2014	Peter Fox & Jeremy Manion
8538.08.0307	307	Exterior	Eastern side of building behind volunteer services - 2 doors (Inaccessible)	Not Accessed	Not Determined	-	-	-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	3	-	-	-	-	Oct 2017	-	-	No access available behind two doors at the time of inspection.	17/10/2014	Peter Fox & Jeremy Manion
8538.08.0308	308	Exterior	Aluminium windows throughout - Beading	Putty	Suspected Positive	232		1	Confirm status and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-30 m ²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	17/10/2014	Peter Fox & Jeremy Manion
8538.08.0309	309	Interior - Ground Level	Stairwell to Workforce Service - Flooring - Beige floor cover	Seamless Vinyl	Negative	229		-	-	-	-	-	-	-	-	-	-	-	-	17/10/2014	Peter Fox & Jeremy Manion
8538.08.0310	310	Interior - Ground Level	Stairwell to Workforce Service - Flooring - Grey millboard backing attached to the underside of Beige vinyl sheeting	Millboard	Assumed Positive	229		1	Confirm status. Restrict access and label. Maintain encapsulation of the material in good condition and inspect annually. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	-10 m ²	Good	Friable	Low	Low	Low	Oct 2017	-	-	-	17/10/2014	Peter Fox & Jeremy Manion
8538.08.0311	311	Interior - Ground Level	Stairwell to Workforce Service - Flooring - Amber adhesive attached to the underside of Beige vinyl sheeting	Adhesive	Negative	229		-	-	-	3	-	-	-	-	-	-	-	-	17/10/2014	Peter Fox & Jeremy Manion
8538.08.0312	312	Interior - Ground Level	Volunteer services store room/boot store - Eastern and southern walls	Asbestos Cement Sheet	Positive	230		1	Label and maintain in good condition. Remove by a licensed asbestos contractor prior to refurbishment/demolition works.	-20 m ²	Good	Non-Friable	Low	Low	Low	Oct 2017	-	-	-	17/10/2014	Peter Fox & Jeremy Manion
8538.08.0313	313	Interior - Ground Level	Hairdressers (No asbestos containing materials identified at time of inspection)	Various	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17/10/2014	Peter Fox & Jeremy Manion
8538.08.0314	314	Interior - Ground Level	Volunteer Service Office (No asbestos containing materials identified at time of inspection)	Various	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17/10/2014	Peter Fox & Jeremy Manion

Building 13 - Florist Shop, HR & Main Electrical Switch Room

Getex Entry #	Register Entry	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Point	Control Recommendation	Extent	Condition	Frailibility	Consequence	Distribution Potential	Risk Status	Re-inspect By	Remediated (Date/Co)	Accessed by/on:	Control	Date Inspected	Inspected By (qualify)	
8538.08.0315	315	Interior - Ground Level	RMO Lounge - Storeroom	Asbestos Cement Sheeting	Positive	234			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~ 7 m ²	Good	Non-Friable	Low	Low	Low	Oct 2017					17/10/2014	Peter Fox & Jeremy Manion

Building 13 - Florist Shop, HR & Main Electrical Switch Room

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Fraility	Consequence Rating	Disturb Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comment	Date Inspected	Inspected By qualified Assessor	
8538.08.0316	316	Interior - Ground Level	RMO Lounge - Ceiling tiles	Ceiling Tiles	Negative	235		-	-	-	-	-	-	-	-	-	-	-	-	-	17/10/2014	Peter Fox & Jeremy Manion
8538.08.0317	317	Interior - Level 1	HR Department - Offices (No asbestos containing materials identified at time of inspection)	Various	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	17/10/2014	Peter Fox & Jeremy Manion
8538.08.0318	318	Interior - Level 1	Volunteer Services - Store room - Switchboard - Internal electrical backing board (not accessible)	Electrical Backing Board	Assumed Positive	231			Confirm status and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-0.5 m ²	Good	Non-Frangible	Low	Low	Low	Oct 2017	-	-	-	17/10/2014	Peter Fox & Jeremy Manion	
8538.08.0319	319	Interior - Level 1	Work Services - Kitchen - Switch board - Internal electrical backing board (not accessible)	Electrical Backing Board	Assumed Positive	233			Confirm status and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	-0.5 m ²	Good	Non-Frangible	Low	Low	Low	Oct 2017	-	-	-	17/10/2014	Peter Fox & Jeremy Manion	
8538.08.0320	320	Main Switch Room (Behind Florist)	Exterior - Roof	Fibre Cement Sheeting	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17/10/2014	Peter Fox & Jeremy Manion
8538.08.0321	321	Main Switch Room (Behind Florist)	Interior - Ceiling	Fibre Cement Sheeting	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17/10/2014	Peter Fox & Jeremy Manion

Building 17 - Palmerston Building

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Friability	Consequence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor
8538.08.0358	358	Exterior	Surrounding Building - Eaves boards (Not sampled due to height restrictions)	Asbestos Cement Sheeting	Suspected Positive	270			Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~1m ²	Good	Non-Friable	Low	Low	Low	Nov 2017				13/11/2014	Lee Hands & Jeremy Manion
8538.08.0359	359	Exterior	Walkway awning between Building 17 & 8 - Ceiling	Asbestos Cement Sheeting	Positive	272			Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A or Class B asbestos contractors soon as practicable.	~150m ²	Moderate	Non-Friable	Medium	Low	Medium	Nov 2015				13/11/2014	Lee Hands & Jeremy Manion
8538.08.0360	360	Exterior	Surrounding Building - Pebble coated fascia panelling	Asbestos Cement Sheeting	Positive	271			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	>300m ²	Good	Non-Friable	Low	Low	Low	Nov 2017				13/11/2014	Lee Hands & Jeremy Manion
8538.08.0361	361	Exterior	Eastern side of the building - Northern corner - Fire door exit (beside Gate 6 Sign) - Ceiling	Asbestos Cement Sheeting	Positive	273			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~1m ²	Good	Non-Friable	Low	Low	Low	Nov 2017				13/11/2014	Lee Hands & Jeremy Manion
8538.08.0362	362	Exterior - Level 1	Servery - Southern wall lining (lower portion)	Fibre Cement Sheeting	Negative	-	-	-	-	-	-	-	-	-	-	-				13/11/2014	Lee Hands & Jeremy Manion
8538.08.0363	363	Interior - All Levels	Northern and Southern fire stairs - Ceiling	Vermiculite	Negative	-	-	-	-	-	-	-	-	-	-	-				13/11/2014	Lee Hands & Jeremy Manion
8538.08.0364	364	Interior - All Levels	Northern and Southern fire stairs - Floor cover - Grey mottled vinyl	Seamless Vinyl	Negative	-	-	-	-	-	-	-	-	-	-	-				13/11/2014	Lee Hands & Jeremy Manion
8538.08.0365	365	Interior - Level 1	Floor cover - Grey mottled vinyl - Throughout	Seamless Vinyl	Negative	262		-	-	-	-	-	-	-	-	-				13/11/2014	Lee Hands & Jeremy Manion
8538.08.0366	366	Interior - Level 1	Northern end of Level 1 - Electrical Equipment cupboard	Not Accessed	Not Determined	263		-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	Nov 2015			No access to the Electrical Equipment cupboard at time of the 2014re-inspection.	13/11/2014	Lee Hands & Jeremy Manion
8538.08.0367	367	Interior - Level 1	Rooms not Accessed - 17-1-16	Not Accessed	Not Determined	-	-	-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	Nov 2015			No Access was available to this Room at the time of the 2014 re-inspection.	13/11/2014	Lee Hands & Jeremy Manion
8538.08.0368	368	Interior - Level 2	Ceiling Tiles - Paint coating - Throughout	Paint	Negative	-	-	-	-	-	-	-	-	-	-	-				13/11/2014	Lee Hands & Jeremy Manion
8538.08.0369	369	Interior - Level 2	Corridors and Staff Room - Grey mottled vinyl	Seamless Vinyl	Negative	-	-	-	-	-	-	-	-	-	-	-			The underlay to the vinyl however contains asbestos - refer to Entry ID#368.	13/11/2014	Lee Hands & Jeremy Manion
8538.08.0370	370	Interior - Level 2	Corridors and Staff Room - Grey mottled vinyl - Underlay	Millboard	Positive	-	-		Maintain encapsulation of the material in good condition and inspect annually. Remove by a licensed Class A Asbestos Removalist as soon as practicable and prior to any refurbishment/demolition works.	~200m ²	Good	Friable	Low	Low	Low	Nov 2017				13/11/2014	Lee Hands & Jeremy Manion

Building 17 - Palmerston Building

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Friability	Consequence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor
8538.08.0371	371	Interior - Level 2	Corridors and Staff Room - Grey mottled vinyl - Underlay - Adhesive to the underlay	Adhesive	Negative	-	-	-	If the underlay cannot be separated from the adhesive cleanly, all glue materials are to be removed in addition to the felt underlay during removal works.	-	-	-	-	-	-	-	-	-	Refer to Entry ID#368.	13/11/2014	Lee Hands & Jeremy Manion
8538.08.0372	372	Interior - Level 2	Large Acute Room - Electrical Equipment box (BD2)	Not Accessed	Not Determined	260		-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	Nov 2015	-	-	No Access to the Electrical Equipment box DB2 at time of 2014 re-inspection.	13/11/2014	Lee Hands & Jeremy Manion
8538.08.0373	373	Interior - Level 2	Opposite Staff Room - Fire Hydrant and Hose Reel cupboard - Sealant around equipment penetrating the walls and ceiling	Mastic	Negative	261		-	-	-	-	-	-	-	-	-	-	-	-	13/11/2014	Lee Hands & Jeremy Manion
8538.08.0374	374	Interior - Level 2	Rooms not Accessed - 17-2-13, 5-2-30, 5-2-24, 17-2-20A	Not Accessed	Not Determined	-	-	-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	Nov 2015	-	-	No Access was available to these Rooms at the time of the 2014 re-inspection.	13/11/2014	Lee Hands & Jeremy Manion
8538.08.0375	375	Interior - Level 3	Wall partitions of all Central Offices and Rooms - Wall lining	Fibre Cement Sheeting	Negative	264		-	-	-	-	-	-	-	-	-	-	-	-	13/11/2014	Lee Hands & Jeremy Manion
8538.08.0376	376	Interior - Level 3	Electrical Equipment cupboard and fuse cupboard	Various	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13/11/2014	Lee Hands & Jeremy Manion
8538.08.0377	377	Interior - Level 3	Rooms not Accessed - Thermostatic Mining Valves cupboard	Not Accessed	Not Determined	-	-	-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	Oct 2015	-	-	No Access was available to this Room at the time of the 2014 re-inspection.	13/11/2014	Lee Hands & Jeremy Manion
8538.08.0378	378	Interior - Lift Motor Room	Lift Motor - Spark arrestors and brake pads (Not sampled due to live equipment)	Spark Arrestors & Brake Pads	Suspected Positive	269			Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	20 units	Good	Non-Friable	Low	Low	Low	Nov 2017	-	-	No access at time of 2014 re-inspection. Assume no change.	13/11/2014	Lee Hands & Jeremy Manion
8538.08.0379	379	Interior - Plant Room	Throughout - Air conditioner duct work - Flanges - Sealant between flange	Mastic	Positive	265 & 266			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	>10m	Good	Non-Friable	Low	Low	Low	Nov 2017	-	-	-	13/11/2014	Lee Hands & Jeremy Manion
8538.08.0380	380	Interior - Plant Room	Southern Room - Centrally located on the floor - Pipe work lagging	Woven Rope Insulation	Negative	268		-	-	-	-	-	-	-	-	-	-	-	-	13/11/2014	Lee Hands & Jeremy Manion
8538.08.0381	381	Interior - Plant Room	Southern Room - Hot water pipe work - Pipe lagging	Woven Rope Insulation	Positive	267			Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A Asbestos Removalist as soon as practicable.	~2m	Moderate	Friable	High	Low	Medium	Nov 2015	-	-	-	13/11/2014	Lee Hands & Jeremy Manion
8538.08.0382	382	Interior - Plant Room	Reheating Pump Flanges - Gasket	Gasket	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13/11/2014	Lee Hands & Jeremy Manion
8538.08.0383	383	Interior - All Levels	Windows and doors at north and south ends of the Building - In-fill panels above	Plaster Board	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13/11/2014	Lee Hands & Jeremy Manion



Building 31 - Audiology

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Friability	Consequence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor
8538.08.0490	480	Exterior	Eastern, southern and western walls of brick building - Eaves	Asbestos Cement Sheeting	Positive	344			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~25m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				29/10/2014	Lee Hands
8538.08.0491	481	Exterior	North side of Building at location of former Sunroom - New prefabricated building	Various	Negative	347		-	-	-	-	-	-	-	-	-			Build Plate shows date of 01 12 and building complies Building Code of Australia 2010.	29/10/2014	Lee Hands
8538.08.0482	482	Exterior	Sunroom - Wall linings	Asbestos Cement Sheeting	Positive	346		-	Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~20 m ²	Good	Non-Friable	Low	Low	Low	Oct 2017			Not located at time of 2014 re-inspection. Sunroom appears to have been demolished and replaced with a new building.	29/10/2014	Lee Hands
8538.08.0483	483	Exterior	Veranda - Electrical switchboard	Electrical Backing Board	Positive	345			Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~0.5m ²	Good	Non-Friable	Low	Low	Low	Oct 2017				29/10/2014	Lee Hands
8538.08.0484	484	Exterior	Veranda - Window infill panels	Compressed Timber	Negative	-	-	-	-	-	-	-	-	-	-	-				29/10/2014	Lee Hands
8538.08.0485	485	Interior	Ground Level - Rear Sunroom - Walls and ceiling	Asbestos Cement Sheeting	Assumed Positive	-	-	-	Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~20 m ²	Good	Non-Friable	Low	Low	Low	Oct 2017			Not located at time of 2014 re-inspection. Sunroom appears to have been demolished and replaced with a new building.	29/10/2014	Lee Hands
8538.08.0486	486	Interior	Throughout (Except for Entry ID #486relating to the Sunroom)	Various	Negative	-	-	-	-	-	-	-	-	-	-	-				29/10/2014	Lee Hands
8538.08.0487	487	Ceiling Cavity Space	Throughout	Various	Negative	-	-	-	-	-	-	-	-	-	-	-				29/10/2014	Lee Hands
8538.08.0488	488	Subfloor	Throughout	Not Accessed	Not Determined	349		-	Inspect by a suitably qualified occupational hygienist prior to refurbishment/demolition activities.	-	-	-	-	-	-	Oct 2015			No access to the Subfloor cavity at time of 2014 re-inspection.	29/10/2014	Lee Hands & Peter Fox

Building 43 - O.T. Student Unit

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Friability	Consequence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor
8538.08.0503	503	Exterior	Entrance Annex - Wall and ceiling lining	Asbestos Cement Sheeting	Positive	368 & 369		P3	Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~20m ²	Good	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Michael Tierney & Lee Hands
8538.08.0504	504	Exterior	Surrounding Building - Wall lining	Asbestos Cement Sheeting	Positive	370		P3	Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~300m ²	Good	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0505	505	Interior	Playroom - Western, eastern and southern walls - Infill panels	Asbestos Cement Sheeting	Positive	363		P3	Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~40m ²	Good	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0506	506	Interior	Main Office - Northern and eastern walls	Asbestos Cement Sheeting	Positive	365		P3	Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~40m ²	Good	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0507	507	Interior	Playroom - Western wall - Adjacent above and south of entrance door - Infill panels	Asbestos Cement Sheeting	Positive	371		P3	Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~4m ²	Good	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0508	508	Interior	Small Office - Western wall	Asbestos Cement Sheeting	Positive	364		P3	Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~6m ²	Good	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0509	509	Interior	Small Storeroom - Northern and western wall	Asbestos Cement Sheeting	Positive	366		P3	Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~12m ²	Good	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0510	510	Interior	Toilets - Dividing wall between Toilets	Plaster Board	Negative	-		-	-	-	-	-	-	-	-	-				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0511	511	Interior	Toilets - Hall and Toilets (x2) outer walls - Wall lining	Fibre Cement Sheeting	Negative	367		-	-	-	-	-	-	-	-	-				12/11/2014	Lee Hands & Jeremy Manion

Building 45 - CSSD Plant Room

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Friability	Consequence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor	
8538.08.0512	512	Exterior	Surrounding Building - Eaves and awning	Asbestos Cement Sheeting	Negative	373		-	-	-	-	-	-	-	-	-	-	-	-	-	12/11/2014	Lee Hands & Jeremy Manion
8538.08.0513	513	Interior	Boiler Room - Machinery flanges - White gaskets	Gasket	Positive	374		 P3	Maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	2 units	Good	Non-Friable	Low	Low	Low	Nov 2017	-	-	-	-	12/11/2014	Lee Hands & Jeremy Manion
8538.08.0514	514	Interior	Boiler Room - Machinery flanges - Black gaskets	Gasket	Negative	375		-	-	-	-	-	-	-	-	-	-	-	-	-	12/11/2014	Lee Hands & Jeremy Manion
8538.08.0515	515	Interior	Boiler Room - Machinery flanges - Grey gaskets	Gasket	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Not located at time of 2014 re-inspection.	12/11/2014	Lee Hands & Jeremy Manion
8538.08.0516	516	Interior	Boiler room - Throughout - Pipe work - Pipe lagging	Pipe Lagging	Negative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12/11/2014	Lee Hands & Jeremy Manion
8538.08.0517	517	Interior	Switchboard - Electrical backing board (Not sampled due to live electricity)	Electrical Backing Board	Suspected Positive	-	-	 P3	Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	1 unit	Good	Non-Friable	Low	Low	Low	Nov 2017	-	-	-	Not located at time of 2014 re-inspection.	12/11/2014	Lee Hands & Jeremy Manion

Building 45A - Gardeners Shed

Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Friability	Consequence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor
8538.08.0518	518	Exterior	Southern Store - Wall lining	Asbestos Cement Sheeting	Positive	377 & 378		P3	Label, seal exposed edges and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~40m ²	Good/ Minor Damage	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0519	519	Exterior	Northern wall and northern half of eastern wall - Wall lining	Fibre Cement Sheeting	Negative	379 & 388		-	-	-	-	-	-	-	-	-				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0520	520	Exterior	Surrounding Building - Eaves	Asbestos Cement Sheeting	Assumed Positive	387		P3	Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~20m ²	Good	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0521	521	Exterior	Plant Storage - Drain cover (loose fragments)	Asbestos Cement Sheeting	Assumed Positive	-	-	P2	Confirm Status. Restrict access, label and erect signage at entrances to the area. Remove by a licensed Class A or Class B asbestos contractors soon as practicable.	~1m ²	Poor	Non-Friable	High	Low	Medium	Nov 2015		Not located at time of 2014 re-inspection.	12/11/2014	Lee Hands & Jeremy Manion	
8538.08.0522	522	Interior	Southern Storeroom - Southern, eastern and western walls - Internal surfaces of exterior wall lining	Asbestos Cement Sheeting	Positive	382 & 383		P3	Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~125m ²	Good	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0523	523	Interior	Bathroom - Wall lining - Throughout	Asbestos Cement Sheeting	Positive	380 & 381		P3	Label, seal exposed edges and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~6m ²	Good/ Minor Damage	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0524	524	Interior	Plant - Northern flanges - Gaskets	Gasket	Negative	-	-	-	-	-	-	-	-	-	-	-			Not located at time of 2014 re-inspection.	12/11/2014	Lee Hands & Jeremy Manion
8538.08.0525	525	Interior	Office - Western wall - Wall lining	Masonite	Negative	-	-	-	-	-	-	-	-	-	-	-				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0526	526	Interior	Office - Northern, southern and eastern walls - Wall lining	Fibre Cement Sheeting	Negative	384		-	-	-	-	-	-	-	-	-				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0527	527	Interior	North-western Storeroom - Wall lining - Throughout	Fibre Cement Sheeting	Negative	385		-	-	-	-	-	-	-	-	-				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0528	528	Interior	Hallway - Wall lining - Throughout	Fibre Cement Sheeting	Negative	386		-	-	-	-	-	-	-	-	-				12/11/2014	Lee Hands & Jeremy Manion

Building 93 - Child Care

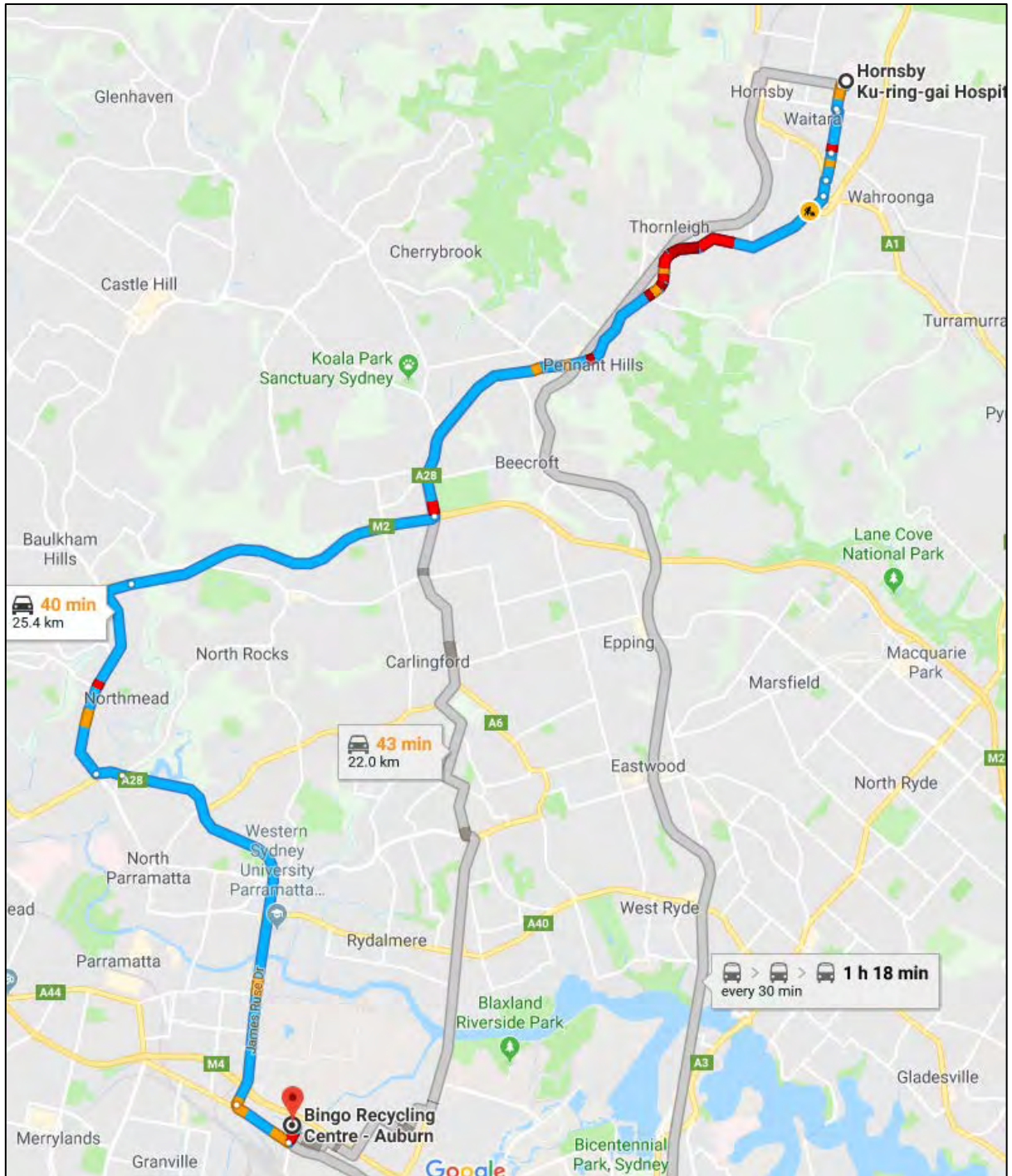
Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Friability	Consequence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor
8538.08.0536	536	Exterior	Northern extension - Corner mouldings - Throughout	Asbestos Cement Sheeting	Positive	407 & 408			Label, seal exposed edges and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	8 linear metres	Good/ Minor Damage	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0537	537	Exterior	Northern extension - Eastern side of the Building - Northern facing wall and wall adjacent to Walkway to Building 95 - Eave boards	Asbestos Cement Sheeting	Positive	413 & 414			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~4m ²	Good	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0538	538	Exterior	Northern extension - Eastern wall - Wall panels - 4 most northern panels and walkway to Building 95	Fibre Cement Sheeting	Negative	410, 411 & 412		-	-	-	-	-	-	-	-	-				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0539	539	Exterior	Northern extension - Eastern wall - Wall panels - Excluding 4 most northern panels and walkway to Building 95	Asbestos Cement Sheeting	Positive	404			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~25m ²	Good	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0540	540	Exterior	Northern extension - Eastern, southern and western sides of the Building - Surrounding brick built section of the Building - Eaves boards	Asbestos Cement Sheeting	Positive	418		-	-	-	-	-	-	-	-	-				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0541	541	Exterior	Northern extension - Northern and western sides throughout and 2 northern most boards on the eastern side - Eaves boards	Fibre Cement Sheeting	Negative	411 & 415		-	-	-	-	-	-	-	-	-			Previously visually assessed by Noel Arnold to be similar to sample 81691-32 and contain asbestos. However direct sampling of the material by Getex has shown the eaves to not contain asbestos.	12/11/2014	Lee Hands & Jeremy Manion
8538.08.0542	542	Exterior	Northern extension - Northern eaves boards	Asbestos Cement Sheeting	Assumed Positive	406			Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~10m ²	Good	Non-Friable	Low	Low	Low	Nov 2017			Asbestos cement sheeting eave boards not identified at 2014 re-inspection. See Entry ID# 537 for further details.	12/11/2014	Lee Hands & Jeremy Manion
8538.08.0543	543	Exterior	Northern extension - Northern wall - Throughout	Fibre Cement Sheeting	Negative	405 & 408		-	-	-	-	-	-	-	-	-				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0544	544	Exterior	Northern extension - Northern wall lining - Throughout	Asbestos Cement Sheeting	Positive	-	-		-	~100m ²	Good	Non-Friable	Low	Low	Low	Nov 2017	Asbestos cement sheeting presumed to be removed.		Asbestos cement sheeting wall not identified at 2014 re-inspection. Refer to Entry ID# 543	12/11/2014	Lee Hands & Jeremy Manion
8538.08.0545	545	Exterior	Northern extension - Western wall - Throughout	Fibre Cement Sheeting	Negative	406 & 409		-	-	-	-	-	-	-	-	-				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0546	546	Exterior	Rear Storage Shed - Eaves	Asbestos Cement Sheeting	Positive	-	-		-	~40m ²	Good	Non-Friable	Low	Low	Low	Nov 2017	Presumed to be removed		Not located at time of 2014 re-inspection. Metal shed located at site of Rear Storage Shed.	12/11/2014	Lee Hands & Jeremy Manion
8538.08.0547	547	Exterior	Rear Storage Shed - Roof	Corrugated Asbestos Cement Sheeting	Positive	-	-		-	~10m ²	Moderate	Non-Friable	Medium	Low	Medium	Nov 2015	Presumed to be removed		Not located at time of 2014 re-inspection. Metal shed located at site of Rear Storage Shed.	12/11/2014	Lee Hands & Jeremy Manion

Building 93 - Child Care

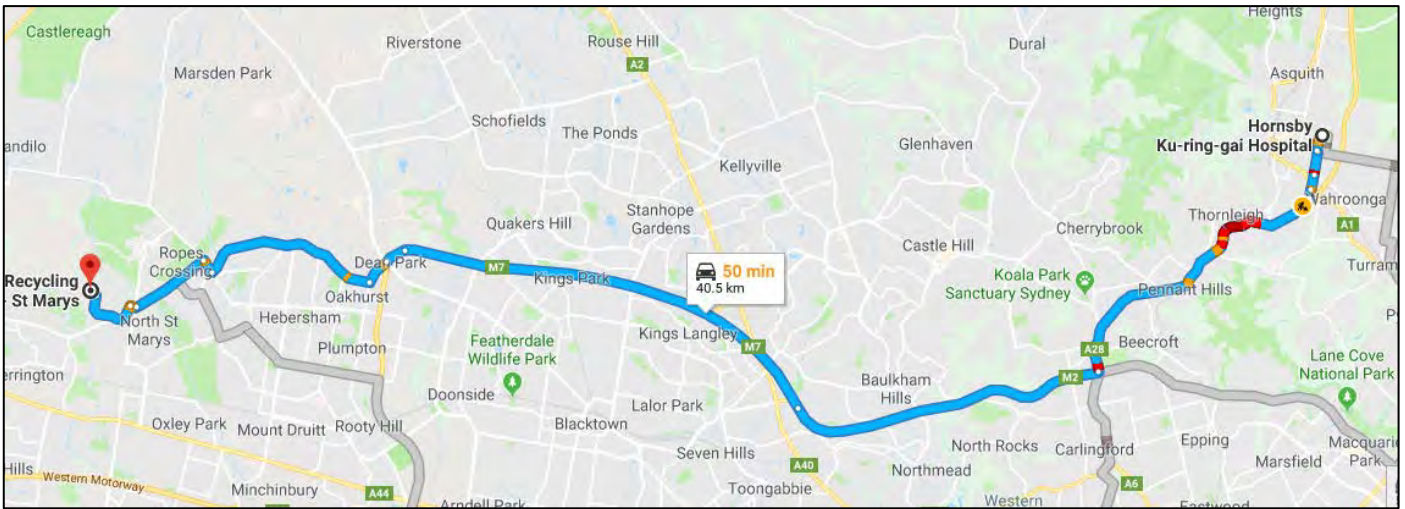
Getex Entry #	Register Entry #	Area Reference	Location	Material Type	Status	Photo No.	Photo	Control Priority	Control Recommendation	Extent	Condition	Friability	Consequence Rating	Disturb. Potential	Risk Status	Re-inspect By Date	Remediated (Date/Comp. Name)	Accessed by/on:	Comments	Date Inspected	Inspected By qualified Assessor
8538.08.0548	548	Exterior	Rear Storage Shed - Wall lining	Asbestos Cement Sheeting	Positive	-		Remediated	-	~50m ²	Moderate	Non-Friable	Medium	Low	Medium	Nov 2015	Presumed to be removed		Not located at time of 2014 re-inspection. Metal shed located at site of Rear Storage Shed.	12/11/2014	Lee Hands & Jeremy Manion
8538.08.0549	549	Exterior	Southern side of the Building - Gable - Wall panels	Asbestos Cement Sheeting	Suspected Positive	412			Confirm status and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~5m ²	Good	Non-Friable	Low	Low	Low	Nov 2017			Not sampled due to height restrictions.	12/11/2014	Lee Hands & Jeremy Manion
8538.08.0550	550	Exterior	Surrounding Building - Wall lining	Fibre Cement Sheeting	Negative	-	-	-	-	-	-	-	-	-	-	-	-			12/11/2014	Lee Hands & Jeremy Manion
8538.08.0551	551	Exterior	Western side of the Building - Adjacent south of northern door - Infill panels	Fibre Cement Sheeting	Negative	-	-	-	-	-	-	-	-	-	-	-	-			12/11/2014	Lee Hands & Jeremy Manion
8538.08.0552	552	Interior	Corridor between houses - Walls and ceiling	Asbestos Cement Sheeting	Positive	416 & 417			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~5m ²	Good	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0553	553	Interior	Kitchen - Ceiling panels	Asbestos Cement Sheeting	Positive	-	-		Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~10m ²	Good	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0554	554	Interior	Main House - Southern Nursery (converted from a veranda) - Ceiling	Asbestos Cement Sheeting	Positive	399			Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	~10m ²	Good	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0555	555	Interior	Main House - Southern Nursery (converted from a veranda) - Eastern wall - Electrical Cupboard - Bottom panel - Dust on upper surface	Dust	Negative	400		-	-	-	-	-	-	-	-	-	-			12/11/2014	Lee Hands & Jeremy Manion
8538.08.0556	556	Interior	Main House - Southern Nursery (converted from a veranda) - Eastern wall - Electrical Cupboard - Electrical backing board (Not sampled due to live electricity)	Electrical Backing Board	Suspected Positive	398			Confirm status. Label and maintain in good condition. Remove by a licensed Class A or Class B asbestos contractor prior to refurbishment/demolition works.	1 unit	Good	Non-Friable	Low	Low	Low	Nov 2017				12/11/2014	Lee Hands & Jeremy Manion
8538.08.0557	557	Interior	Main House - Southern Nursery (converted from a veranda) - Eastern wall - Window infill panels	Timber	Negative	-	-	-	-	-	-	-	-	-	-	-	-			12/11/2014	Lee Hands & Jeremy Manion
8538.08.0558	558	Interior	North-eastern Bathroom - Wall lining	Fibre Cement Sheeting	Negative	-	-	-	-	-	-	-	-	-	-	-	-			12/11/2014	Lee Hands & Jeremy Manion
8538.08.0559	559	Interior	Rear Storage Shed - Interior walls and ceiling	Asbestos Cement Sheeting	Negative	-	-		Remediated	-	-	-	-	-	-	-	Presumed to be removed		Not located at time of 2014 re-inspection. Metal shed located at site of Rear Storage Shed.	12/11/2014	Lee Hands & Jeremy Manion
8538.08.0560	560	Ceiling Cavity Space	Upper ceiling surfaces - White insulation material	Insulation	Negative	401, 402 & 403		-	-	-	-	-	-	-	-	-	-			12/11/2014	Lee Hands & Jeremy Manion

2.3. Appendix 3 – Waste transport routes

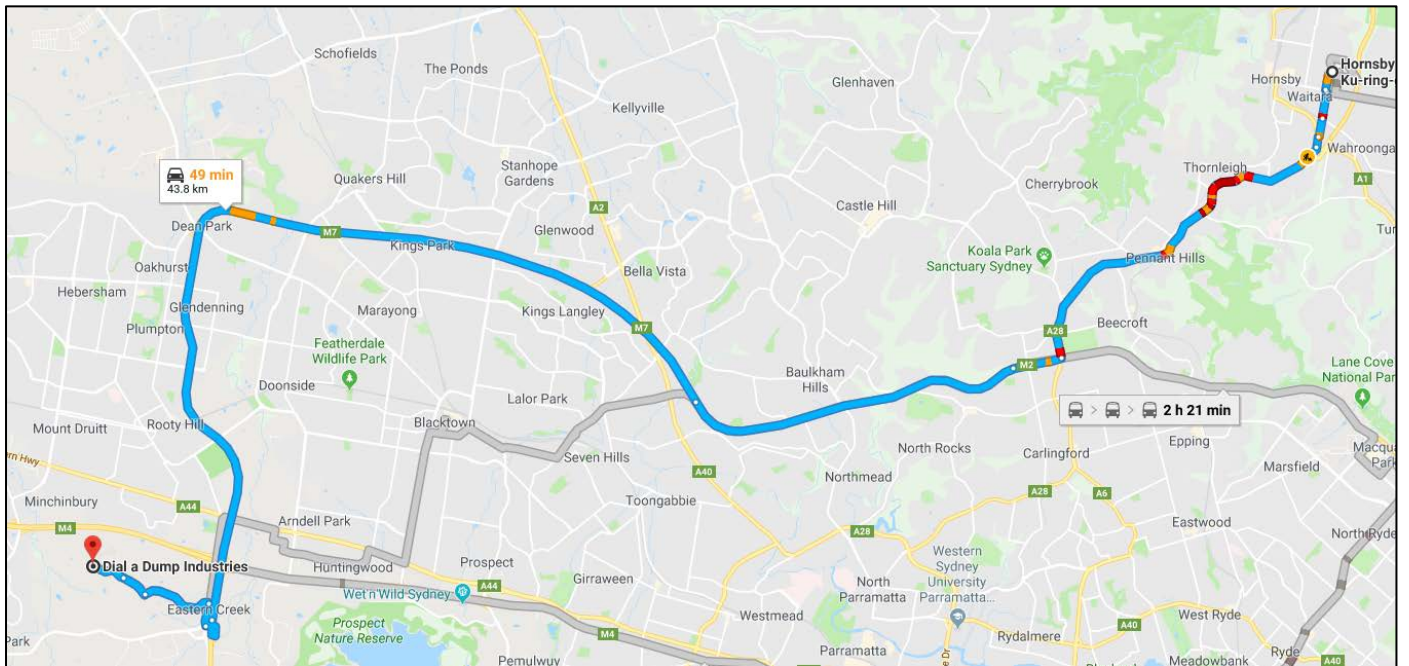
2.3.1. Bingo, Auburn:



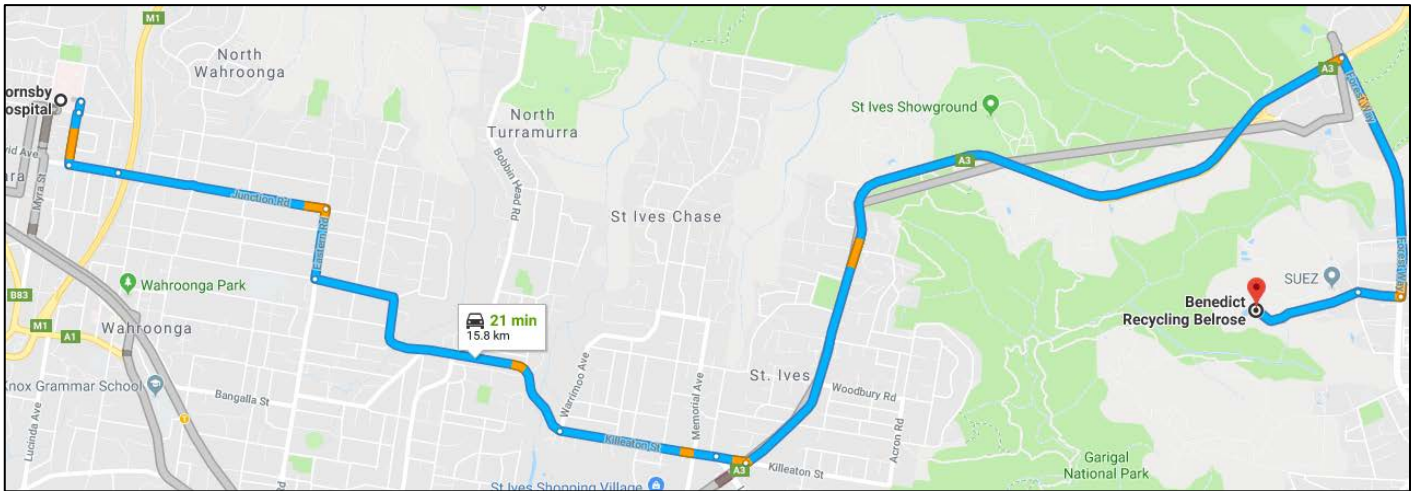
2.3.2. Bingo, St Marys:



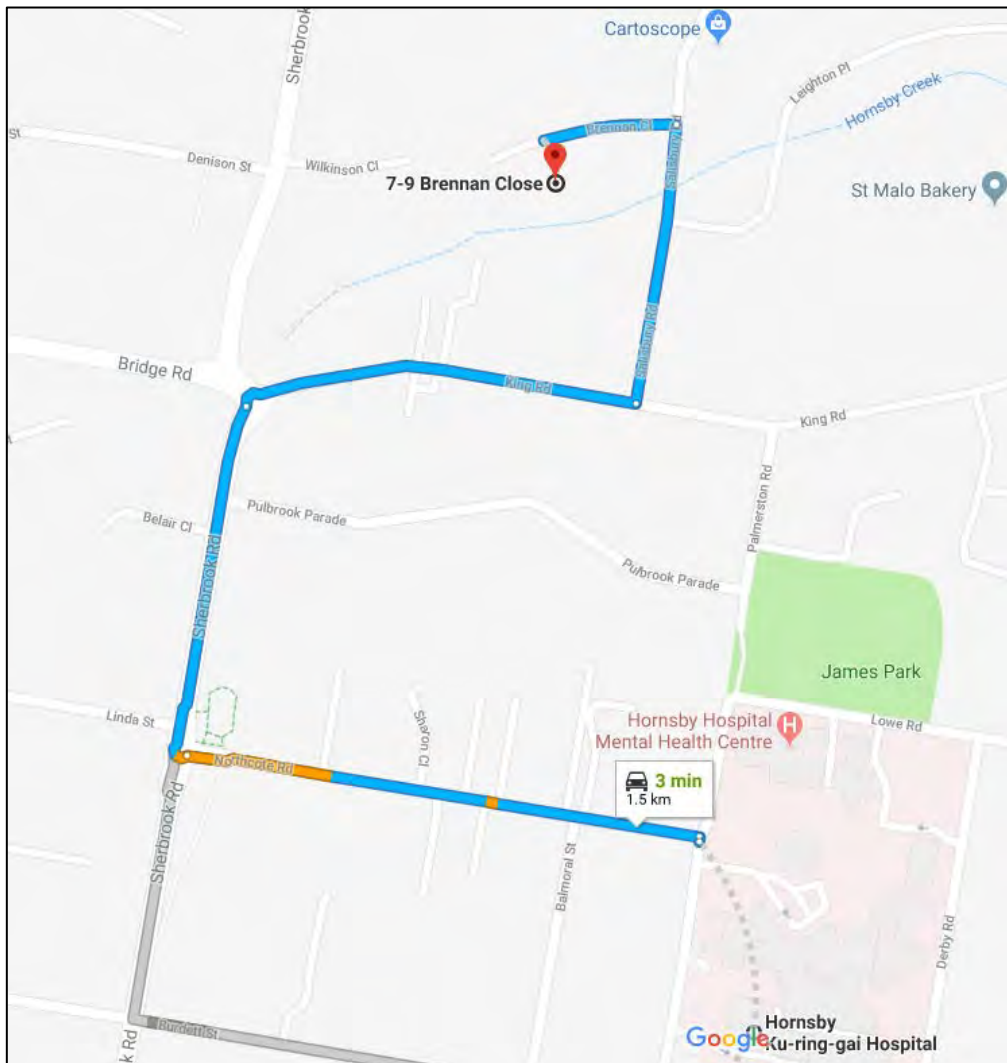
2.3.3. Dial a Dump, Eastern Creek:



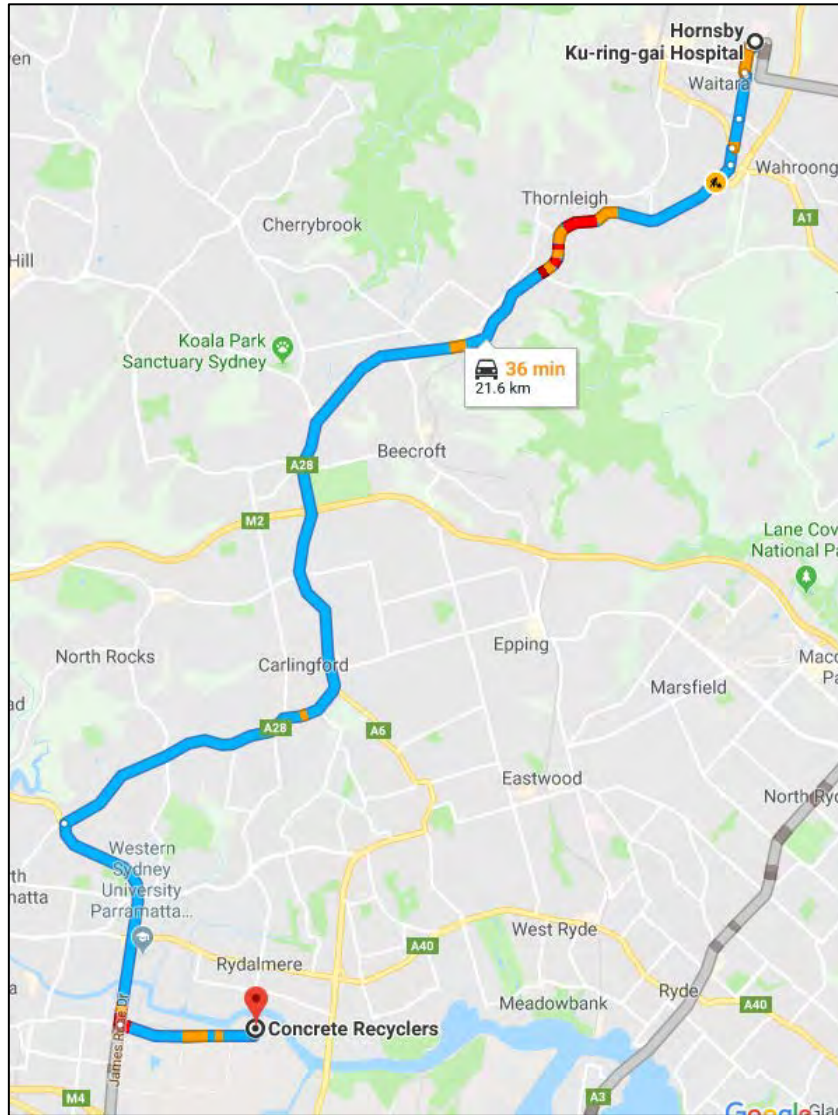
2.3.4. Benedict, Belrose:



2.3.5. KLF, Asquith:



2.3.7. Concrete Recyclers, Camellia:



PROJECT SUBMISSIONS MATRIX [B35 COMPLIANCE REPORT]

*NOTE:
Numerical item numbers have been issued by the Crown Certifier (last updated 08/06/18)
Alphabetical item numbers reference specific SSD Conditions of Consent



UPDATED: Friday, 29 June 2018

CROWN CERTIFIER REQUIREMENT				
ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	REQUIRED ACTION
1	Administrative		Complete and return the attached Crown Certificate application form	CC1
2	Architectural	Requirements split across 2 CC2s	Crown Certificate architectural plans. The plans are to include: Site Plan Floor Plans Elevations Sections Ceiling heights FRL's of building elements	CC2 Requirement to form part of CC2 package
2	Architectural		Crown Certificate architectural plans. Remaining Required Architectural Plans to be issued in CC2 The plans are to include: Demolition Plan Concrete Profile Plans for Levels 0 and 1	CC1 Demolition Plans [5] Issued Site Plan [6] Concrete Profile Plans [rev 3] Issued levels 0 and 1
3			Fire/Smoke compartment plans including: Floor area of each fire and smoke compartment Location of fire and smoke walls Nominated fire ratings of fire/smoke walls Fire/smoke wall details	CC1 Fire Compartment Plans [rev 10-12] issued
4			Architectural drawings to be provided to clearly indicate the location of the various type of external cladding materials for the building. Current Test Reports and product information for all the proposed external cladding materials, including Aluminium Composite Panels (ACP) or 'sandwich' panels will be used in the elevations.	CC2 Requirement to form part of CC2 package
5			Internal wall and ceiling lining materials are to be provided for various locations, primarily the Group Number details for linings in corridors and lobbies and the like.	CC2 Requirement to form part of CC2 package
6			Current Staging plan showing locations of temporary exit and access points.	CC1 Staging Plan issued
7			Confirmation as to whether any primary building elements are proposed to be constructed of timber. If so, method of termite protection is to be specified.	CC1 Included in 5TH Design Certificate, dated 28/06/18
8	Structural	Structural Details B13 Prior to the commencement of works, the Applicant must submit for the approval of the Certifying Authority structural drawings prepared and signed by a suitably qualified practising Structural Engineer that demonstrates compliance with: a) the relevant clauses of the BCA, and b) this development consent.	Design statement from an appropriately qualified structural engineer. The Structural design certificate must include reference to the following: Relevant provisions of the BCA including (but not limited to): - BCA Section B - Nominate the Importance Level (BCA cl. B1.2) - Fire resisting construction (BCA Spec. C1.1) + Relevant Australian Standards + Any applicable Geotechnical Report + Fire Safety Engineering Report (where applicable). Design Certificate to make reference to SSD Condition B13 (see left)	CC1 Level 0 and 1 Structural Documentation Issued
9	Stormwater / Civil		Design statement from an appropriately qualified Civil/Stormwater design consultant certifying that the civil / stormwater design complies with the relevant provisions of the BCA	CC1 Waiting on updated cert from TTW
10	Hydraulic Services		Design statement from an appropriately qualified Hydraulic Services design consultant certifying that the hydraulic design complies with: The relevant provisions of the BCA + Volume 3 of the NCC (Plumbing Code) + Relevant Australian Standards + Fire Safety Engineering Report + BCA Section J	CC1 Certificate dated 21/06/18
11	Electrical Services		Design statement from an appropriately qualified Electrical Services design consultant certifying that the electrical design complies with: + The relevant provisions of the BCA + Relevant Australian Standards + Fire Safety Engineering Report + BCA Section J and/or any relevant Section J or JV3 Report	CC1 Certificate dated 15/06/18
12	Mechanical Services		Design statement from an appropriately qualified Mechanical Services design consultant certifying that the Mechanical design complies with: + The relevant provisions of the BCA + Relevant Australian Standards + Fire Safety Engineering Report + BCA Section J and/or any relevant Section J or JV3 Report	CC1 Certificate dated 16/06/18
13	Fire Services		Design statement from an appropriately qualified Fire Services consultant certifying that the fire services design complies with: The relevant provisions of the BCA Fire Safety Engineering Report	CC1 Certificate dated 19/06/18
14			Fire hydrant plans showing the following: + Fire Hydrant Booster Location + Fire pump location + External and internal fire hydrant locations + Hose layout plans showing how coverage is achieved throughout the building/tenancy	CC1 Hydrants located on Architectural Compartment Plans

ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	REQUIRED ACTION
15			Fire hose coverage plans showing the following: + Fire Hose Reel Locations + Hose layout plans showing how coverage is achieved throughout the building/tenancy. The above details are to be overlaid upon fire compartment plans in order to verify whether a fire hose is being proposed to pass through a fire or smoke door to provide coverage.	CC1 Hose Reels located on Architectural Compartment Plans
16			Sprinkler layout plans	CC2 Requirement to form part of CC2 package
17	Lifts / Vertical Transport		Design certification confirming that the lifts incorporate a Stretcher Facility complying with BCA clause E3.2.	CC2 Requirement to form part of CC2 package
18			Design certification confirming that Emergency Lifts complies with BCA clause E3.4.	CC2 Requirement to form part of CC2 package
19			Design certification to the effect that the lift landing doors have been designed to comply with BCA, AS1530.4-2005 and AS1735.11 to achieve an FRL not less than -/60/-.	CC2 Requirement to form part of CC2 package
20			Certification to the effect that the lift car and controls have been designed to comply with BCA, AS1428.1 and AS1735.12 with respect to access for people with disabilities	CC2 Requirement to form part of CC2 package
21	Fire Safety Engineering		A copy of the final fire engineered Performance Solution Report.	CC2 Requirement to form part of CC2 package
22	Access For People with Disabilities		A copy of the Access Report relating to access for people with disabilities. The report is to address compliance with the BCA and the Disability (Access to Premises - Buildings) Standards.	CC2 Requirement to form part of CC2 package
23	Energy Efficiency		Section J Compliance Report or JV3 Report (where applicable).	CC2 Requirement to form part of CC2 package
			Section J External Glazing Calculators.	CC2 Requirement to form part of CC2 package

A. ADMINISTRATIVE CONDITIONS

ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	REQUIRED ACTION																																																																																																																																																																				
A1	Obligation to Minimise Harm to the Environment	In addition to meeting the specific performance measures and criteria in this consent, all reasonable and feasible measures must be implemented to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction and operation of the development.	-	Formal submission not required																																																																																																																																																																				
A2	Terms of Consent	The development may only be carried out: a) in compliance with the conditions of this consent; b) in accordance with all written directions of the Secretary; c) generally in accordance with the EIS as amended by the RIS and RTS Addendum; and d) in accordance with the assessment table in the table below.	Provide BMG with a copy of the stamped DA drawings	CC2 Requirement to form part of CC2 package																																																																																																																																																																				
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A3		Consistent with the requirements in this consent, the Secretary may make written directions to the Applicant in relation to: a) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this consent, including those that are required to be, and have been, approved by the Secretary; and b) the implementation of any actions or measures contained in any such document referred to in (a) above.	-	Formal submission not required																																																																																																																																																																				
A4		The conditions of this consent and directions of the Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and a document listed in condition A2(c) or A2(d). In the event of an inconsistency, ambiguity or conflict between any of the documents listed in condition A2(c) and A2(d), the most recent document prevails to the extent of the inconsistency, ambiguity or conflict.	-	Formal submission not required																																																																																																																																																																				
A5	Inconsistency between documents	If there is any inconsistency between the plans and documentation referred to above the most recent document shall prevail to the extent of the inconsistency. However, conditions of this consent prevail to the extent of any inconsistency. Where there is an inconsistency between approved elevations and plans, the elevations prevail.	-	Formal submission not required																																																																																																																																																																				
A6	Demolition	No consent is granted for the demolition of the 'Palmerston' building.	Confirmation of the 'Palmerston' building's status.	CC1 Architectural Demolition Plan Issued																																																																																																																																																																				
A7	Evidence of consultation	Where conditions of this consent require consultation with an identified party, the Applicant must: a) consult with the relevant party prior to submitting the subject document for approval; and b) provide details of the consultation undertaken including: i) a description of how matters raised by those consulted have been resolved to the satisfaction of both the Applicant and the party consulted; and ii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.	-	Formal submission not required																																																																																																																																																																				

ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	REQUIRED ACTION
A8	Structural Adequacy	All new buildings and structures, and any alterations or additions to existing buildings and structures, that are part of the development, must be constructed in accordance with the relevant requirements of the BCA.	-	CC1 Refer to TTW Structural design statement
A9	Applicability of Guidelines	References in the conditions of this consent to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, Standards or policies in the form they are in as at the date of this consent.	-	Formal submission not required
A10		However, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary may, when issuing directions under this consent in respect of ongoing monitoring and management obligations, require compliance with an updated or revised version of such a guideline, protocol, Standard or policy, or a replacement of them.	-	Formal submission not required
A11	Monitoring and Environmental Audits	Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification and independent environmental auditing. <i>Note: For the purposes of this condition, as set out in the EP&A Act, "monitoring" is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an "environmental audit" is a periodic or particular documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development.</i>	-	Formal submission not required
A12	Non-Compliance Notification	The Department must be notified in writing to compliance@planning.nsw.gov.au within seven days after the Applicant becomes aware of any non-compliance. The Certifying Authority must also notify the Department in writing to complianceplanning.nsw.clov.au within seven days after they identify any non-compliance.	-	Formal submission not required
A13		The notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.	-	Formal submission not required
A14		A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.	-	Formal submission not required
A15	Revision of Strategies, Plans and Programs	Within three months of: (a) the submission of a compliance report under condition B37; (b) the submission of an incident report under condition A23; (c) the approval of any modification of the conditions of this consent; or (d) the issue of a direction of the Secretary under condition A3 that requires a review the strategies, plans and programs required under this consent must be reviewed, and the Department must be notified in writing that a review is being carried out.	-	Formal submission not required
A16		If necessary to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Secretary. Where revisions are required, the revised document must be submitted to the Planning Secretary for approval within six weeks of the review. <i>Note: This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of the development.</i>	-	Formal submission not required
A17	Operation of Plant and Equipment	All plant and equipment used on site, or to monitor the performance of the development must be (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.	-	Formal submission not required
A18	Lapsing of approval	This consent will lapse five years from the date of consent unless the works associated with the development have physically commenced.	-	Formal submission not required
A19	Prescribed Conditions	The Applicant must comply with all relevant prescribed conditions of development consent under Part 6, Division 8A of the EP&A Regulation.	-	Formal submission not required
A20	Secretary as Moderator	In the event of a dispute between the Applicant and a public authority, in relation to an applicable requirement in this approval or relevant matter relating to the Development, either party may refer the matter to the Secretary for resolution. The Secretary's resolution of the matter shall be binding on the parties.	-	Formal submission not required
A21	Long Service Levy	For work costing \$25,000 or more, a Long Service Levy must be paid. For further information please contact the Long Service Payments Corporation Helpline on 131 441.	Receipt of payment of Long Service Levy is to be provided.	CC2 Receipt to be issued following CC1 submission
A22	Legal Notices	Any advice or notice to the consent authority shall be served on the Secretary.	-	Formal submission not required
A23	Incident Notification, Reporting and Response	The Department must be notified in writing to compliance@planning.gov.au within 24 hours after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one), and set out the location and nature of the incident.	-	Formal submission not required
A24		A written incident notification must also be emailed to the Department at the following address: complianceplanning.nsw.gov.au within seven days after the Applicant becomes aware of an incident. Notification is required to be given under this condition even if the Applicant forms the view that an incident has not occurred. b) Written notification of an incident must i) identify the development and application number; ii) provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident); iii) identify how the incident was detected iv) identify when the Applicant became aware of the incident v) identify any actual or potential non-compliance with the conditions of consent; vi) describe what immediate steps were taken in relation to the incident; vii) identify further action(s) that will be taken in relation to the incident; and viii) identify a project contact for further communication regarding the incident	-	Formal submission not required

ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	REQUIRED ACTION
B. PRIOR TO COMMENCEMENT OF WORKS				
ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	REQUIRED ACTION
B1	Notice of Commencement of Works	The Department, Certifying Authority and Council must be notified in writing of the dates of commencement of physical work and operation at least 48 hours before those dates. If the construction or operation of the development is to be staged, the Department, Certifying Authority and Council must be notified in writing at least 48 hours before the commencement of each stage, of the date of commencement and the development to be carried out in that stage.	-	CC1 BMG to notify Department of Planning, following issuance of Crown Certificate. Notification of Commencement issued to neighbours, per CC1 submission
B2	Certified Plans	<i>Plans certified in accordance with Section 6.28 of the EP&A Act are to be submitted to the Certifying Authority and the Department prior to commencement of each stage of the construction works and must include details as required by any of the following conditions.</i>	Plans illustrating compliance with the requirements of this consent are required prior to the commencement of each stage of works.	CC1
B3	Reflectivity	<i>The building materials used on the facades of the structure must have a maximum normal specular reflectivity of visible light of 20 per cent and must be designed so as not to result in glare that causes any discomfort or threatens the safety of pedestrians or drivers. A statement demonstrating compliance with these requirements or where compliance cannot be met a report that demonstrates that the exceedance would not result in glare that causes any discomfort or threatens the safety of pedestrians or drivers is to be submitted to the satisfaction of the Certifying Authority prior to the commencement of above ground works.</i>	A statement prepared by the architect is to be provided to BM+G verifying that the materials used on the façade of the building have a reflectivity of not more than 20% and do not threaten the safety of pedestrians or drivers.	CC2 Requirement to form part of CC2 package
B4	Outdoor Lighting	All outdoor lighting within the site must comply with, where relevant, AS 1158.3.1:2005 <i>Pedestrian Area (Category P) Lighting</i> and AS 4282:1997 <i>Control of the Obtrusive Effects of Outdoor Lighting</i> . Details demonstrating compliance with these requirements are to be submitted to the satisfaction of the Certifying Authority prior to the commencement of above ground works.	Provide BM+G with verification prepared by a suitably experienced and qualified person that the outdoor lighting complies with AS1158.3.3:2005 and AS4282:1997. "	CC2 Requirement to form part of CC2 package
B5	Hazards	The Applicant must ensure that the design and operation of the hospital's oxygen supply system, including the use of the liquid oxygen bulk storage tanks, any oxygen cylinders connected to the oxygen supply system and any temporary oxygen supply tanks be in accordance with <i>Australian Standards 1894 The storage and handling of non-flammable cryogenic and refrigerated liquids' (AS 1894)</i> .	-	Formal submission not required
B6		The Applicant must ensure that all control measures or safeguards described in the Preliminary Hazard Analysis (PHA, 9 February 2018) will be implemented.	-	Formal submission not required
B7		The Applicant must update as necessary and in accordance with AS 1894, the hospital's emergency plan and emergency procedures to include emergency situations involving the hospital's oxygen supply system, as described in the PHA (9 February 2018).	-	Formal submission not required
B8		If temporary oxygen supply tanks are to be installed prior to demolition of existing liquid oxygen bulk storage tanks for the purpose of hospital oxygen supply prior to commissioning of new tanks, the design and operation of these temporary tanks must be verified with AS 1894 and/or other relevant Australian Standards.	-	Formal submission not required
B9	Access for People with Disabilities	The works that are the subject of this application must be designed and constructed to provide access and facilities for people with a disability in accordance with the BCA. The Certifying Authority must ensure that evidence of compliance with this condition from an appropriately qualified person is provided and that the requirements are referenced on any certified plans.	An access report prepared by iAccess is to be submitted to BM+G and the recommendations of the report are to be shown on the Crown Certificate plans.	CC2 Requirement to form part of CC2 package
B10	Bicycle Parking and End-of-Trip Facilities	<i>Plans demonstrating compliance with the following requirements for bicycle parking shall be submitted to the satisfaction of the Certifying Authority:</i> a) <i>the provision of a minimum of 18 bicycle parking spaces;</i> b) <i>the layout, design and security of bicycle facilities shall comply with the all applicable minimum requirements of AS 2890.3:2015 Parking facilities – Bicycle parking, and be located in secure, convenient and accessible areas close to the main entries and incorporating adequate lighting and opportunities for passive surveillance; and</i> c) <i>the provision of end-of-trip facilities for staff including showers, changeroom and lockers.</i>	Plans demonstrating compliance with the following requirements for bicycle parking are to be submitted to BM+G: A minimum of 18 bicycle spaces The nominated bicycle parking spaces are to comply with AS2890.3:2015 Showers, change room and showers are to be provided to serve the users of the bicycle facilities.	CC2 Requirement to form part of CC2 package
B11	Erosion and Sedimentation Control	Soil erosion and sediment control measures must be designed in accordance with the document <i>Managing Urban Stormwater – Soils & Construction Volume 1</i> (Landcom, 2004). Details are to be submitted to the satisfaction of the Certifying Authority prior to the commencement of any works.	An erosion and sediment control plan prepared by a suitably qualified person is to be provided to BM+G demonstrating compliance with <i>Managing Stormwater-Soils & Construction Volume 1</i> .	CC1 Erosion and Sediment Control, Civil Site Plans and Bulk Earthworks submitted
B12	Pre-Construction Dilapidation Reports	The Applicant is to engage a qualified structural engineer to prepare a Pre-Construction Dilapidation Report detailing the current structural condition of all retained existing and adjoining buildings within the site, infrastructure and roads within the 'zone of influence'. Any entry into private land is subject to the consent of the owner(s) and any inspection of buildings on privately affected land must include details of the whole building where only part of the building falls within the 'zone of influence'. The report must be submitted to the satisfaction of the Certifying Authority prior to the commencement of any works. A copy of the report is to be forwarded to Council.	Provide BM+G with a pre-construction dilapidation report prepared by a suitably qualified and experienced structural engineer. The report is to detail the structural condition of all retained existing and adjoining building within the site, infrastructure and roads within the 'zone of influence'.	CC1 TTW Extent Report dated 18/06/18 issued Dilapidation Reports dated 28/06/18 issued for HOPE building, kindergarten, engineering building, Building 14, Council Assets, Hospital Carparks, Chapel
B13	Structural Details	Prior to the commencement of works, the Applicant must submit for the approval of the Certifying Authority structural drawings prepared and signed by a suitably qualified practicing Structural Engineer that demonstrates compliance with: a) the relevant clauses of the BCA; and b) this development consent.		CC1 Structural Drawings for Level 0 and 1 issued Floor plans, Shoring plans / details and Footing Plans submitted
B14	Noise Management Measures	Prior to commencement of works, the Applicant must incorporate all relevant noise mitigation recommendations in the letter <i>Hornsby Ku-ring-gai Hospital Stage 2 Redevelopment – Response to Planning NSW Queries</i> prepared by Acoustic Logic, dated 26 April 2018, in the detailed design drawings and submit for the approval of the Certifying Authority. These drawings must demonstrate that the noise impacts have been adequately mitigated to not exceed the project specific criteria identified in condition E2	Plans which illustrate the recommendations made in the Hornsby Ku-ring-gai Hospital Stage 2 Redevelopment - Response to Planning NSW Queries (prepared by Acoustic Logic dated 26/04/2018) are to be provided to BM+G in addition to a design certificate which verifies the measures depicted in the above mention plans provide an adequate level of acoustic protection to not exceed the requirements of condition E2 Noise Control – Operation E2. Noise associated with the operation of the site, including any plant, machinery or other equipment, must not exceed: a) 40 dB LA eq (15 minute) when measured at the boundary of any sensitive receiver along Burdett Street, Hornsby; b) 35 dBA LA eq (15 minute) when measured at the boundary of any sensitive receiver along Derby Road, Hornsby; and c) 30 dBA LA eq (15 minute) when measured at the boundary of any sensitive receiver along Palmerston Road, Hornsby. A design certificate prepared by a suitably qualified mechanical engineer is to be supplied to BM+G verifying that the mechanical ventilation system complies with BCA Part F4.5 and AS1668.2-2012.	CC1 Statement from Acoustic Logic dated 29/06/18 issued
B15	Mechanical Ventilation	All mechanical ventilation systems must be installed in accordance with Part F4.5 of the BCA and must comply with the AS 1668.2-2012 The use of ventilation and air-conditioning in buildings – Ventilation design for indoor air containment control and AS 3666.2:2011 Air-handling and water systems of buildings to ensure adequate levels of health and amenity to the occupants of the building and to ensure environment protection. Details must be submitted for the approval of the Certifying Authority prior to the commencement of the relevant works.	A design certificate prepared by a suitably qualified mechanical engineer is to be supplied to BM+G verifying that the mechanical ventilation system complies with BCA Part F4.5 and AS1668.2-2012.	CC1 Refer to Mechanical Design Statement dated 16/06/18

ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	REQUIRED ACTION
B16	Warm Water Systems and Cooling Systems	The installation, operation and maintenance of warm water systems and water cooling systems (as defined under the Public Health Act 2010) must comply with the Public Health Act 2010, Public Health Regulation 2012 and Parts 1 and 2 (or Part 3 if a Performance-based water cooling system) of AS/NZS 3666.2:2011 Air handling and water systems of buildings — Microbial control — Operation and maintenance and the NSW Health Code of Practice for the Control of Legionnaires' Disease.		CC1 Refer to Mechanical Design Statement dated 16/06/18
B17	Storage and Handling of Waste	The building plans and specifications must demonstrate, for the approval of the Certifying Authority, that an appropriate area will be provided within the premises for the storage of garbage bins, recycling containers and all waste and recyclable material generated by the premises. Requirements of these storage areas must: a) ensure all internal walls of the storage area are rendered to a smooth surface, coved at the floor/wall intersection, graded and appropriately drained with a tap in close proximity to facilitate cleaning; b) include provision for the separation and storage, in appropriate categories, of material suitable for recycling; and c) include provision for separate storage and collection of organic/food waste.	Plans illustrating that an appropriate area will be designated for the storage of garbage bins and the like are to be provided to BM+G. Furthermore, the plans or specifications are to detail the following requirements: All internal walls are rendered to a smooth surface, coved at the floor/wall junction graded and appropriately drained with a tap in close proximity. + The separation of different types of waste is to be documented. + The separate storage and collection of organic/food waste is to be documented.	CC2
B18	Public Footpath	The existing concrete footpath along the boundary of the subject site is to be reinstated where impacted by the proposed works to relevant Council specifications and standards.		Formal submission not required
B19	Stormwater and Drainage Works Design	The stormwater drainage system for the development must be designed in accordance with Council's relevant specifications and standards and the following requirements: a) Connected to an existing Council piped drainage system with the following requirements: i) A separate Application must be made to Council for 'Approval To Connect Stormwater Drainage Outlet To Council's System' with all fees paid, prior to connecting to Council's drainage system; ii) The connection to Council's drainage pit or pipeline in accordance with Council's relevant design standard drawing must be inspected by a Council Engineer from Council's Planning Division; Note: An inspection booking can be made by calling Council on 9847 6760 quoting the Application reference number SSD 8647. iii) Connection to Council's drainage system shall include design and construction of Council's standard kerb inlet pit in accordance with Council's Design and Construction Specification 2005. The Applicant's Engineer must prepare the design of system including location of proposed work in the plan. Three (3) copies of the plan shall be submitted with lodgement and payment of the Application; iv) A Traffic Control Plan (TCP) must be prepared by a qualified traffic controller in accordance with the Roads & Traffic Authority's Traffic Control at Worksites Manual 1998 and Australian Standard 1742.3 for all work on a public road. The TCP is to be prepared in consultation with Council and must detail the following: a) Arrangements for public notification of the works; b) Where a drainage connection is proposed within a Classified Road, a copy of the relevant Road Occupation License approved by the Traffic Management Centre with dates and times of proposed Occupations; c) Temporary construction signage; d) Vehicle movement plans; e) Traffic management plans; and f) Pedestrian and cyclist access/safety. v) Where public assets and utilities are impacted by proposed works, the Applicant shall relocate or reconstruct the asset or utility in accordance with the relevant standard at the Applicant's cost; and vi) A Compliance Certificate must be obtained from Council for the connection to Council's drainage system prior to occupation of the development.	Design statement to be provided from a Chartered civil engineer to confirm all requirements of these DA conditions have been included into the stormwater design.	CC1 Design Statement dated 28/06/18 issued
B20	On-Site Stormwater Detention and Water Quality	An on-site stormwater detention system must be designed by a chartered civil engineer and constructed in accordance with the following requirements: a) the developing area of the site shall ensure its 5-year average recurrence interval (ARI) runoff reduced to the pre-development site cover rate. The volume of the on-site detention system shall ensure its capable of detaining the 20-year ARI post-development site cover storm; b) the water quality treatment system shall be designed and constructed to provide water quality outcomes as per Council's HDCP2013 Section 3.C.1.2.1 requirements; c) have a surcharge/inspection grate located directly above the outlet; d) discharge from the detention system must be controlled via 1 metre length of pipe, not less than 50 millimetres diameter or via a stainless plate with sharply drilled orifice bolted over the face of the outlet discharging into a larger diameter pipe capable of carrying the design flow to an approved Council system; e) where above ground and the average depth is greater than 0.3 metres, a 'pool type' safety fence and warning signs must be installed; and f) not be constructed in a location that would impact upon the visual or recreational amenity of residents.	Design statement to be provided from a Chartered civil engineer to confirm all requirements of these DA conditions have been included into the stormwater design. A copy of a compliance certificate to be obtained from Council for connection of stormwater to the street drainage.	CC1 Design Statement dated 28/06/18 issued
B21	Road Works	Kerb and gutter, stormwater drainage, full road width pavement including traffic facilities (vehicle crossings, if applicable) and paved footpaths must be constructed along the area where road works are to be undertaken. In relation to public roads or classified road (as defined under the Roads Act 1993), all roads and traffic facilities must be designed to meet the requirements of Council and RMS (if applicable) and obtain any necessary permits and approvals from the relevant road authority, prior to the commencement of road or pavement construction works.	Note: Evidences to be provided to BMG that 3 copies of a Traffic Control Plan, prepared by a qualified traffic controller, has been submitted to Council.	CC1 TTW Traffic Control Plan dated 08/09/17 issued

ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	REQUIRED ACTION
B22	Construction Environmental Management Plan	<p>a) Prior to the commencement of construction works, a Construction Environmental Management Plan (CEMP) must be submitted for the approval of the Certifying Authority. The CEMP must address, but not be limited to, the following matters where relevant:</p> <ul style="list-style-type: none"> i) hours of work; ii) 24 hour contact details of site manager; iii) traffic management, in consultation with Council and TfNSW; iv) construction noise and vibration management, prepared by a suitable qualified person; v) management of dust and odour to protect the amenity of the neighbourhood; vi) erosion and sediment control; vii) stormwater control and discharge; viii) measures to ensure that sediment and other materials are not tracked onto the roadway by vehicles leaving the Subject Site; ix) procedures for encountering groundwater during construction works; x) external lighting in compliance with AS4282:1997 Control of the Obtrusive Effects of Outdoor Lighting; xi) a protocol detailing appropriate procedures for identifying and dealing with unexpected finds of site contamination (including asbestos containing materials, Polycyclic aromatic hydrocarbons (PAHs), Total recoverable hydrocarbons (TRH) and lead-based paint); xii) a protocol detailing appropriate procedures for identifying and dealing with unexpected finds of archaeological heritage; xiii) waste classification (for materials to be removed) and validation (for materials to remain) be undertaken to confirm the contamination status in these areas of the site; and xiv) waste storage, recycling and litter control; <p>b) The CEMP must not include works that have not been explicitly approved in this development consent. In the event of any inconsistency between the consent and the CEMP, the consent must prevail; and</p> <p>c) The Applicant must submit a copy of the CEMP to the Department and Council prior to commencement of work.</p>	<p>A construction environmental management plan prepared by a suitably qualified person is to be supplied to BM+G which addresses and satisfies the following requirements:</p> <ul style="list-style-type: none"> i) hours of work; ii) 24 hour contact details of site manager; iii) traffic management, in consultation with Council and TfNSW; iv) construction noise and vibration management, prepared by a suitable qualified person; v) management of dust and odour to protect the amenity of the neighbourhood; vi) erosion and sediment control; vii) stormwater control and discharge; viii) measures to ensure that sediment and other materials are not tracked onto the roadway by vehicles leaving the Subject Site; ix) procedures for encountering groundwater during construction works; x) external lighting in compliance with AS4282:1997 Control of the Obtrusive Effects of Outdoor Lighting; xi) a protocol detailing appropriate procedures for identifying and dealing with unexpected finds of site contamination (including asbestos containing materials, Polycyclic aromatic hydrocarbons (PAHs), Total recoverable hydrocarbons (TRH) and lead-based paint); xii) a protocol detailing appropriate procedures for identifying and dealing with unexpected finds of archaeological heritage; xiii) waste classification (for materials to be removed) and validation (for materials to remain) be undertaken to confirm the contamination status in these areas of the site; and xiv) waste storage, recycling and litter control; <p>b) The CEMP must not include works that have not been explicitly approved in this development consent. In the event of any inconsistency between the consent and the CEMP, the consent must prevail; and</p> <p>c) The Applicant must submit a copy of the CEMP to the Department and Council prior to commencement of work.</p>	CC1 Construction Environmental Management Plan issued
B24	Construction Noise and Vibration Management Plan	<p>a) Prior to the commencement of works, a Construction Noise and Vibration Management Plan (CNVMP) must be submitted for the approval of the Certifying Authority. The CNVMP must address, but not be limited to, the following matters: i) be prepared by a suitably qualified expert;</p> <ul style="list-style-type: none"> ii) be prepared in consultation with Council and all adjoining noise sensitive receivers where noise levels exceed the construction noise management levels, in accordance with EPA guidelines; iii) describe the measures that would be implemented to ensure: <ul style="list-style-type: none"> i. best management practice is being employed; ii. compliance with the relevant conditions of this consent; iv) describe the proposed noise and vibration management measures in detail; v) include strategies that have been developed to address impacts to noise sensitive receivers where noise levels exceed the construction noise management level, for managing high noise generating works; vi) describe the consultation undertaken to develop the strategies in v) above; vii) evaluate and reports on the effectiveness of the noise and vibration management measures; and viii) include a complaints management system that would be implemented for the duration of the construction works. <p>b) The Applicant must submit a copy of the CNVMP to the Department and Council prior to commencement of work.</p>	<p>A construction noise and vibration management plan (CNVMP) prepared by a suitably qualified person is to be supplied to BM+G which addresses and satisfies the following requirements:</p> <ul style="list-style-type: none"> a) be prepared in consultation with Council and all adjoining noise sensitive receivers where noise levels exceed the construction noise management levels, in accordance with EPA guidelines; i) describe the measures that would be implemented to ensure: <ul style="list-style-type: none"> i. best management practice is being employed; ii. compliance with the relevant conditions of this consent; iv) describe the proposed noise and vibration management measures in detail; v) include strategies that have been developed to address impacts to noise sensitive receivers where noise levels exceed the construction noise management level, for managing high noise generating works; vi) describe the consultation undertaken to develop the strategies in v) above; vii) evaluate and reports on the effectiveness of the noise and vibration management measures; and viii) include a complaints management system that would be implemented for the duration of the construction works. <p>b) The Applicant must submit a copy of the CNVMP to the Department and Council prior to commencement of work.</p>	CC1 Construction Noise Vibration Management Plan issued
B26	Construction Waste Management Plan	<p>a) Prior to the commencement of works, a Construction Waste Management Plan (CWMP) must be submitted for the approval of the Certifying Authority. The CWMP must address, but not be limited to, the following matters where relevant:</p> <ul style="list-style-type: none"> i) recycling of demolition materials including concrete; and ii) removal of hazardous materials and disposal at an approved waste disposal facility in accordance with the requirements of the relevant legislation, codes, standards and guidelines, prior to the commencement of any building works. <p>b) Details demonstrating compliance with the relevant legislative requirements, associated with the removal of hazardous waste, particularly the method of containment and control of emission of fibres to the air, are to be submitted for the approval of the Certifying Authority prior to the removal of any hazardous materials;</p> <p>c) The Applicant must notify the RMS Traffic Management Centre of the truck route(s) to be followed by trucks transporting waste material from the Subject Site, prior to the commencement of the removal of any waste material from the Subject Site; and</p> <p>d) The Applicant must submit a copy of the plan to the Department and to the Council prior to the commencement of work.</p>	<p>A construction waste management plan prepared by a suitably qualified person is to be supplied to BM+G which addresses and satisfies the following requirements:</p> <ul style="list-style-type: none"> b) Details demonstrating compliance with the relevant legislative requirements, associated with the removal of hazardous waste, particularly the method of containment and control of emission of fibres to the air, are to be submitted for the approval of the Certifying Authority prior to the removal of any hazardous materials; c) The Applicant must notify the RMS Traffic Management Centre of the truck route(s) to be followed by trucks transporting waste material from the Subject Site, prior to the commencement of the removal of any waste material from the Subject Site; and d) The Applicant must submit a copy of the plan to the Department and to the Council prior to the commencement of work. 	CC1 Construction Waste Management Plan issued

ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	REQUIRED ACTION
B28	Construction Traffic and Pedestrian Management Plan	<p>a) Prior to the commencement of construction works, a Construction Traffic and Pedestrian Management Plan (CTPMP) must be prepared in consultation with Council and submitted to the satisfaction of the Certifying Authority. The CPTMP must specify, but not be limited to, the following:</p> <ul style="list-style-type: none"> i) location of proposed work zones; ii) haulage routes; iii) construction vehicle access arrangements; iv) construction hours; v) construction program; vi) predicted construction traffic volumes and vehicle movements, types and routes including any known road closures and consideration of alternate routes; vii) assessment of road safety at key intersections and locations subject to heavy vehicle movements and high pedestrian activity; viii) details of construction vehicle movements including parking, dedicated vehicle turning areas and ingress and egress points; ix) details of anticipated peak hour and daily truck movements to and from the site; x) details of access arrangements for workers to/from the site, emergency vehicles and service vehicle movements; xi) details of temporary cycling and pedestrian access during construction; xii) details of proposed construction vehicle access arrangements at all stages; xiii) loading and unloading; xiv) details of management measures to minimise traffic impacts, including temporary road works and/or implementation of traffic control measures; xv) pedestrian and traffic management methods; xvi) any potential impacts to general traffic, cyclists, pedestrians and bus services within the vicinity of the site from construction vehicles during the works; xvii) consideration of the cumulative construction traffic impacts of surrounding projects under construction, including those within the Hornsby Ku-ring-gal Hospital precinct. Existing CTPMPs for developments within or around the Subject Site should be referenced in the CTPMP to ensure that the coordination of work activities are managed to minimise impacts on the surrounding road network; and xviii) traffic and transport impacts during construction and how these impacts will be mitigated for any associated traffic, pedestrian, cyclists, parking and public transport, which must include vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures for all demolition/construction activities. <p>b) The Applicant must submit a copy of the CTPMP to the Department and to the Council, prior to the commencement of works.</p>	<p>A copy of Council's Approval of a CTPMP (construction traffic and pedestrian plan) prepared by a suitably qualified person is to be supplied to BM+G which addresses and satisfies the following requirements:</p> <ul style="list-style-type: none"> 1) location of proposed work zones; ii) haulage routes; iii) construction vehicle access arrangements; iv) construction hours; v) construction program; vi) predicted construction traffic volumes and vehicle movements, types and routes including any known road closures and consideration of alternate routes; vii) assessment of road safety at key intersections and locations subject to heavy vehicle movements and high pedestrian activity; viii) details of construction vehicle movements including parking, dedicated vehicle turning areas and ingress and egress points; ix) details of anticipated peak hour and daily truck movements to and from the site; x) details of access arrangements for workers to/from the site, emergency vehicles and service vehicle movements; xi) details of temporary cycling and pedestrian access during construction; xii) details of proposed construction vehicle access arrangements at all stages; xiii) loading and unloading; xiv) details of management measures to minimise traffic impacts, including temporary road works and/or implementation of traffic control measures; xv) pedestrian and traffic management methods; xvi) any potential impacts to general traffic, cyclists, pedestrians and bus services within the vicinity of the site from construction vehicles during the works; xvii) consideration of the cumulative construction traffic impacts of surrounding projects under construction, including those within the Hornsby Ku-ring-gal Hospital precinct. Existing CIPMPs for developments within or around the Subject Site should be referenced in the CTPMP to ensure that the coordination of work activities are managed to minimise impacts on the surrounding road network; and xviii) traffic and transport impacts during construction and how these impacts will be mitigated for any associated traffic, pedestrian, cyclists, parking and public transport, which must include vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures for all demolition/construction activities. <p>The Applicant must submit a copy of the CTPMP to the Secretary and Hornsby Council, prior to the commencement of works.</p>	<p>CC1 TTW Traffic Control Plan dated 08/09/17 issued</p>
B29		The CTPMP (as revised from time to time) must be implemented by the Applicant for the duration of the construction works.		Formal submission not required
B30	Complaints and Enquiries Procedure	<p>Prior to the commencement of construction works, or as otherwise agreed by the Secretary, the following must be made available for community enquiries and complaints for the duration of construction:</p> <ul style="list-style-type: none"> a) a toll-free 24-hour telephone number(s) on which complaints and enquiries about the carrying out of any works may be registered; b) a postal address to which written complaints and enquiries may be sent; and c) an email address to which electronic complaints and enquiries may be transmitted. 		Formal submission not required
B31		<p>A Complaints Management System must be prepared prior to the commencement of any construction works and be implemented and maintained for the duration of these works.</p> <p>The Complaints Management System must include a Complaints Register to be maintained recording information on all complaints received about the development during the carrying out of any works associated with the development. The Complaints Register must record the:</p> <ul style="list-style-type: none"> a) number of complaints received; b) number of people affected in relation to a complaint; and c) nature of the complaint and means by which the complaint was addressed and whether resolution was reached, with or without mediation. <p>The Complaints Register must be provided to the Secretary upon request, within the timeframe stated in the request.</p>		Formal submission not required
B32	Utility Services	Prior to the commencement of construction work the Applicant is to negotiate (where necessary) with the utility authorities (e.g. Ausgrid and telecommunication carriers) in connection with the relocation and/or adjustment of the services affected by the construction of the building structure.		Formal submission not required
B33		Prior to the commencement of above ground works written advice must be obtained from the electricity supply authority, an approved telecommunications carrier and an approved gas carrier (where relevant) stating that satisfactory arrangements have been made to ensure provisions of adequate services.		Formal submission not required
B34	External Walls and Cladding	<i>The external walls of all buildings, including additions to existing buildings, must comply with the relevant requirements of the NCC. Prior to commencement of works, the Applicant must provide the Certifying Authority with documented evidence that the products and systems proposed for use external walls, including finishes and claddings such as synthetic or aluminium composite panels, comply with the requirements of the NCC. The Applicant must provide a copy of the documentation given to the Certifying Authority to the Secretary within seven days after the Certifying Authority accepts it.</i>	Provide BM+G with the details of any systems or products proposed to be used on the external wall i.e. finishes or cladding. Note: The applicant must provide the Secretary with the same documentation within 7 days of BM+G formally accepting it.	CC2 Requirement to form part of CC2 package
B35	Compliance Reporting	A Pre-Construction Compliance Report must be prepared for the development, and submitted to the Certifying Authority for approval before the commencement of construction works. A copy of the endorsed compliance report must be provided to the Department at corn.pliance@planning.nsw.gov.au before the commencement of construction works.	A pre-construction compliance report is to be provided to BM+G for approval. The report must detail: how the terms of the development consent that must be addressed before the commencement of construction have been complied; and The expected commencement date of construction.	CC1 Issued as part of submission
B36		The Pre-Construction Compliance Report must include: a) details of how the terms of this consent that must be addressed before the commencement of construction have been complied with; and b) the expected commencement date for construction.	As B35	CC2 Requirement to form part of CC2 package
B37		Construction Compliance Reports must be submitted to the Department at complianceplanning.nsw.gov.au for information every six months from the date of the commencement of construction, for the duration of construction. The Construction Compliance Reports must provide details on the compliance performance of the development for the preceding six months and must be submitted within one month following the end of each six-month period for the duration of construction of the development, or such other timeframe as required by the Secretary.		Formal submission not required

ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	REQUIRED ACTION
B38		The Construction Compliance Reports must include: a) a results summary and analysis of environmental monitoring; b) the number of any complaints received, including a summary of main areas of complaint, action taken, response given and proposed strategies for reducing the recurrence of such complaints; c) details of any review of the CEMP and the Environmental Management Strategy and associated sub-plans as a result of construction carried out during the reporting period; d) a register of any modifications undertaken and their status; e) results of any independent environmental audits and details of any actions taken in response to the recommendations of an audit; f) a summary of all incidents notified in accordance with this consent; and g) any other matter relating to compliance with the terms of this consent or requested by the Secretary.		Formal submission not required
B39	<u>Independent Environmental Audit</u>	No later than one month before the commencement of construction works or within another timeframe agreed with the Secretary, a program of independent environmental audits must be prepared for the development in accordance with the latest version of AS/NZS ISO 19011:2014: Guidelines for Auditing Management Systems (Standards Australia, 2014) and submitted to the Secretary for information. The scope of each audit must be defined in the program. The program must ensure that environmental performance of the development in relation to each compliance requirement that forms the audit scope is assessed at least once in each audit cycle. The environmental audit program prepared and submitted to the Secretary must be implemented and complied with for the duration of the development.		Formal submission not required
B40		All independent environmental audits of the development must be conducted by a suitably qualified, experienced and independent team of experts and be documented in an audit report which: a) assesses the environmental performance of the development, and its effects on the surrounding environment including the community; b) assesses whether the development is complying with the terms of this consent; c) reviews the adequacy of any document required under this consent; and d) recommends measures or actions to improve the environmental performance of the development, and improvements to any document required under this consent.		Formal submission not required
B41		Within three months of commencing an Independent Environmental Audit, or within another timeframe agreed by the Secretary, a copy of the audit report must be submitted to the Secretary, and any other NSW agency that requests it, together with a response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Secretary		Formal submission not required
B42	<u>Tree Protection</u>	Prior to commencement and for the duration of works, the tree protection measures outlined in the Arboricultural Development Assessment Report, prepared by Moore Trees, dated October 2017, are to be implemented and maintained		Formal submission not required
B43		A project arborist with AQF Level 5 qualifications must be appointed to provide monitoring and certification throughout the construction period.		Formal submission not required
B44		Tree protection fencing for the trees to be retained must be erected around trees to be retained at a minimum distance based on the trees structural root zone.		Formal submission not required
B45		To ensure that all tree protection measures are correctly installed, a certificate from the appointed project arborist must be submitted to the Certifying Authority confirming compliance with the tree protection requirements of this consent.	Certification prepared by the project arborist is to be provided to BM+G verifying that the relevant conditions of this consent have been complied with.	CC2 Requirement to form part of CC2 package
B46	<u>Ecologically Sustainable Development</u>	Prior to the commencement of the construction, the Applicant must submit details of all design measures to the Certifying Authority demonstrating that the proposed new buildings incorporate ecologically sustainable development initiatives equivalent to Green Star Health Care 4 star equivalency rating, as outlined within the NSW Health Engineering Services Guideline dated 2016 and Consultant Advice Note - Mechanical and Electrical Environmental Sustainable Design prepared by Steensen Varming and dated 21 Feb 2018.	Provide BM+G with details which verify the proposed development incorporates ecologically sustainable initiatives equivalent to Green Star Health Care 4 star equivalency rating.	CC2 Requirement to form part of CC2 package
C. DURING CONSTRUCTION				
ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	ACTION WITH
C1	<u>Approved Plans to be On-site</u>	A copy of the approved and certified plans, specifications and documents incorporating conditions of approval and certification must be kept on the Subject Site at all times and must be readily available for perusal by any officer of the Department, Council or the Certifying Authority.		No prior to construction requirement
C2	<u>Construction Hours</u>	a) Construction, including the delivery of materials to and from the site, may only be carried out between the following hours: i) between 7 am and 6 pm, Mondays to Fridays inclusive; and ii) between 8 am and 1 pm, Saturdays. b) No work may be carried out on Sundays or public holidays. c) Activities may be undertaken outside of these hours: i) if required by the Police or a public authority for the delivery of vehicles, plant or materials; or ii) if required in an emergency to avoid the loss of life, damage to property or to prevent environmental harm; or iii) works are inaudible at the nearest sensitive receivers; or iv) if a variation is approved in advance in writing by the Secretary or her nominee. d) Notification of any activities undertaken pursuant to condition C2(c) must be given to affected residents before undertaking the activities or as soon as is practical afterwards		No prior to construction requirement
C3		Rock breaking, rock hammering, sheet piling, pile driving and other noisy works may only be carried out between the following hours: a) 9 am to 12 pm, Monday to Friday; b) 2 pm to 5 pm Monday to Friday; and c) 9 am to 12 pm, Saturday.		No prior to construction requirement
C4	<u>Construction Noise Management</u>	The development must be constructed with the aim of achieving the construction noise management levels detailed in the Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009). All feasible and reasonable noise mitigation measures must be implemented and any activities that could exceed the construction noise management levels must be identified and managed in accordance with the CNVMP required under condition B25.		No prior to construction requirement

ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	REQUIRED ACTION
C5		If the noise from a construction activity is substantially tonal or impulsive in nature (as described in Chapter 4 of the Noise Policy for Industry, 5 dB(A) must be added to the measured construction noise level when comparing the measured noise with the construction noise management levels.		No prior to construction requirement
C6		The Applicant must ensure construction vehicles do not arrive at the Subject Site or surrounding residential precincts outside of the construction hours of work outlined under condition C2.		No prior to construction requirement
C7		The Applicant must schedule intra-day 'respite periods' for construction activities identified in the Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009) as being particularly annoying or intrusive to noise sensitive receivers, including surrounding residents and nearby hospital buildings. These activities are to be carried out after 8 am only and over continuous periods not exceeding three hours (with at least a one hour respite every three hours).		No prior to construction requirement
C8		Wherever practical, and where sensitive receivers may be affected, piling activities are completed using bored piles. If driven piles are required they must only be installed where outlined in a CNVMP required under condition B25.		No prior to construction requirement
C9		The Applicant must implement, where practicable and without compromising the safety of construction staff or members of the public, the use of audible movement alarms of a type that would minimise noise impacts on surrounding noise sensitive receivers.		No prior to construction requirement
C10		Any noise generated during construction of the development must not be offensive noise within the meaning of the Protection of the Environment Operations Act 1997 or exceed approved noise limits for the Subject Site.		No prior to construction requirement
C11	Vibration Criteria	Vibration caused by the construction works at any residence or structure outside the Subject Site must be limited to: a) for structural damage vibration, German Standard DIN 4150 Part 3 Structural Vibration in Buildings. Effects on Structures; b) for human exposure to vibration, the evaluation criteria presented in British Standard BS 6472 — Guide to Evaluate Human Exposure to Vibration in Buildings (1 Hz to 80 Hz) for low probability of adverse comment; c) vibratory compactors must not be used closer than 30 metres from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified above; and d) these limits apply unless otherwise outlined in the CNVMP required under condition B25 and submitted for the approval of the Certifying Authority.		No prior to construction requirement
C12	Contamination	Remediation works at the site are to be undertaken in accordance with the recommendations and findings of the Remediation Action Plan prepared by Douglas Partners and dated May 2018.		No prior to construction requirement
C13		Should any new information come to light during construction works which has the potential to alter previous conclusions about contamination, the Certifying Authority must be immediately notified and works must cease in the vicinity of the suspected contamination. The Certifying Authority will determine whether further investigation, or the need for remediation, is required before construction works can recommence.		No prior to construction requirement
C14	Waste	All waste generated during construction must be assessed, classified and managed in accordance with the Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2014).		No prior to construction requirement
C15		The body of any vehicle or trailer used to transport waste or excavation spoil must be covered before leaving the premises to prevent any spillage or escape of any dust, waste of spoil. Mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body of any vehicle, trailer or motorised plant leaving the site must be removed before leaving the premises.		No prior to construction requirement
C16		The Applicant must ensure that concrete waste and rinse water are not disposed of on the Subject Site and are prevented from entering any natural or artificial watercourse.		No prior to construction requirement
C17	Handling of Asbestos	The Applicant is to consult with SafeWork NSW concerning the handling of any asbestos waste that may be encountered during construction. The requirements of the <i>Protection of the Environment Operations (Waste) Regulation 2014 with particular reference to Part 7 — 'Transportation and management of asbestos waste'</i> must also be complied with.		No prior to construction requirement
C18	Unexpected Finds — Non-Aboriginal Heritage	If any unexpected archaeological deposits/relics are discovered during construction, then all works must cease immediately in that area and the OEH Heritage Division contacted in writing. Depending on the possible significance of the discovery, an archaeological assessment and management strategy may be required before further works can continue in that area. Works may only recommence with the written approval of the OEH Heritage Division.		No prior to construction requirement
C19	Erosion and Sediment Control	All erosion and sediment control measures, are to be effectively implemented and maintained at or above design capacity for the duration of the construction works and until such time as all ground disturbed by the works have been stabilised and rehabilitated so that it no longer acts as a source of sediment.		No prior to construction requirement
C20	Disposal of Seepage and Stormwater	Any seepage or rainwater collected on-site during construction or groundwater must not be pumped to the street stormwater system unless separate prior approval is given in writing by the relevant approval authority where necessary		No prior to construction requirement
C21	Construction Vehicles	All construction vehicles associated with the proposed development are to be contained on site, unless otherwise approved through the approval for a construction zone on the Council roadway.		No prior to construction requirement
C22	Demolition	To protect the surrounding environment, all demolition work must be carried out in accordance with "Australian Standard 2601-2001 — The Demolition of Structures" and the following requirements: a) Demolition material must be disposed of to an authorised recycling and/or waste disposal site and/or in accordance with an approved waste management plan; b) Demolition works, where asbestos material is being removed, must be undertaken by a contractor that holds an appropriate licence issued by WorkCover NSW in accordance with Chapter 10 of the Occupational Health and Safety Regulation 2001 and Clause 29 of the Protection of the Environment Operations (Waste) Regulation 2005; and c) On construction sites where any building contain asbestos material, a standard commercially manufactured sign containing the words 'DANGER ASBESTOS REMOVAL IN PROGRESS' and measuring not less than 400mm x 300mm must be displayed in a prominent position visible from the street.		No prior to construction requirement

ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	REQUIRED ACTION
C23	<u>Site Notice</u>	a) A site notice(s) must be prominently displayed at the boundaries of the Subject Site for the purposes of informing the public of project details including, but not limited to the details of the Builder, Certifying Authority and Structural Engineer. b) The site notice(s) is to satisfy all but not be limited to, the following requirements: i) minimum dimensions of the notice are to measure 841 mm x 594 mm (A1) with any text on the notice to be a minimum of 30 point type size; ii) the notice is to be durable and weatherproof and is to be displayed throughout the works period; iii) the approved hours of work, the name of the site/ project manager, the responsible managing company (if any), its address and 24 hour contact phone number for any inquiries, including construction/ noise complaint are to be displayed on the site notice; and iv) the notice(s) is to be mounted at eye level on the perimeter hoardings/fencing and is to state that unauthorised entry to the Subject Site is not permitted.		No prior to construction requirement
C24	<u>Work Cover Requirements</u>	To protect the safety of work personnel and the public, the Subject Site must be adequately secured to prevent access by unauthorised personnel, and work must be conducted at all times in accordance with relevant Work Cover requirements.		No prior to construction requirement
C25	<u>Hoardings/Fencing Requirements</u>	A temporary hoarding, fence or awning must be erected between the work site and adjoining lands before the works begin and must be kept in place until after the completion of the works if the works: a) could cause a danger, obstruction or inconvenience to pedestrian or vehicular traffic; b) could cause damage to adjoining lands by falling objects; and/or c) involve the enclosure of a public place or part of a public place.		No prior to construction requirement
C26		The following hoarding requirements must be complied with: a) no third party advertising is permitted to be displayed on the subject hoarding/ fencing; b) the construction site manager must be responsible for the removal of all graffiti from any construction hoardings or the like within the construction area within 48 hours of its application; and c) the Applicant must submit a hoarding application to Council for the installation of any hoardings over Council footways or road reserve.		No prior to construction requirement
C27	<u>Access to Information</u>	At least 48 hours before the commencement of construction until the completion of all works under this consent, or such other time as agreed by the Secretary, the Applicant must: a) make the following information and documents (as they are prepared, obtained or approved) publicly available on its website: i) the documents referred to in condition A2 of this consent; ii) all current statutory approvals for the development; iii) all approved strategies, plans and programs required under the conditions of this consent; iv) regular reporting on the environmental performance of the development in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent; v) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs; vi) a summary of the current stage and progress of the development; vii) contact details to enquire about the development or to make a complaint; viii) a complaints register, updated monthly; ix) audit reports prepared as part of any independent environmental audit of the development and the Applicant's response to the recommendations in any audit report; x) any other matter required by the Secretary; and b) keep such information up to date, to the satisfaction of the Secretary. <i>Note: This condition does not require any confidential information to be made available to the public.</i>		No prior to construction requirement
C28	<u>Incident Reporting</u>	Within 24 hours of the occurrence of an incident that causes (or may cause) significant harm to the environment, the Applicant must notify the Secretary and any other relevant agencies of the incident in accordance with condition A18.		No prior to construction requirement
C29		Within seven days of the detection of the incident, the Applicant must provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested in accordance with condition A19.		No prior to construction requirement
C30	<u>Compliance Tracking and Reporting</u>	The Applicant must provide regular (six monthly) reporting on any environmental performance required by the development consent for the development on its project website, in accordance with the reporting arrangements in any plans or other documents approved under the conditions of this consent.		No prior to construction requirement
C31	<u>Compliance</u>	The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this consent relevant to activities they carry out in respect of the development.		No prior to construction requirement
C32	<u>Building materials and Site Waste</u>	The filling or stockpiling of building materials, the parking of vehicles or plant, the disposal of cement slurry, waste water or other contaminants must be located outside the tree protection zones as prescribed in the conditions of this consent.		No prior to construction requirement
C33	<u>Council Property</u>	To ensure that the public reserve is kept in a clean, tidy and safe condition during construction works, no building materials, waste, machinery or related matter is to be stored on the road or footpath.		No prior to construction requirement
C34	<u>Excavated Material</u>	All excavated material removed from the site must be classified by a suitably qualified person in accordance with the Department of Environment, Climate Change and Water NSW Waste Classification Guidelines prior to disposal to an approved waste management facility.		No prior to construction requirement
C35	<u>Storage of Flammable and Combustible Goods</u>	Flammable and combustible liquids must be stored in accordance with Australian Standard 1940 — The Storage and Handling of Flammable and Combustible Liquids. A bund wall must be constructed around all work and liquid storage areas to prevent any spillage entering into the stormwater system. The bunded area must provide a volume equal to 110 per cent of the largest container stored and graded to a blind sump so as to facilitate emptying and cleansing.		No prior to construction requirement
C36	<u>Trade Waste</u>	Liquid trade waste generated on the site must be discharged in accordance with a trade waste agreement with Sydney Water and by a licensed liquid trade waste contractor.		No prior to construction requirement
C37	<u>Traffic Control Plan Compliance</u>	The development must be carried out in accordance with the Construction Management Plan prepared under this consent		No prior to construction requirement
D. PRIOR TO OCCUPATION OR COMMENCEMENT OF USE				
ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	ACTION WITH

ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	REQUIRED ACTION
D1	Stormwater Quality Management Plan	A Stormwater Quality Management Plan (SQMP) is to be prepared to ensure proposed stormwater quality measures remain effective. The SQMP must contain the following: a) maintenance schedule of all stormwater quality treatment devices; b) record and reporting details; c) waste management and disposal; d) relevant contact information; e) renewal, decommissioning and replacement timelines and activities of all stormwater quality treatment devices; and f) Work Health and Safety requirements. Details demonstrating compliance are to be submitted for the approval of the Certifying Authority prior to occupation of the building.	A stormwater quality management plan prepared by a suitably qualified and experienced civil engineer is to be provided to BM+G which includes the following: Maintenance schedule of all stormwater quality treatment devices + Record and reporting details + Waste management and disposal + Relevant contact information + Renewal, decommissioning and replacement timelines and activities of all stormwater quality treatment devices ' Work health and safety requirements.	No prior to construction requirement
D2	Mechanical Ventilation	Following completion, installation and testing of all the mechanical ventilation systems, the Applicant must provide evidence for the approval of the Certifying Authority, prior to occupation of the building, that the installation and performance of the mechanical systems complies with: a) the BCA; b) AS 1668.2-2012 The use of airconditioning in buildings — Mechanical ventilation in buildings and other relevant codes; c) the development consent and any relevant modifications; and d) any dispensation granted by the NSW Fire Brigade.	Provide BM+G with a commissioning report and installation certificate verifying that the mechanical ventilation system complies with the following: Relevant clauses of the BCA + AS1668.2-2012 + The development consent and any relevant modifications + Any dispensation granted by NSW Fire Brigade	No prior to construction requirement
D3	Road Damage	The cost of repairing any damage caused to Council or other Public Authority's assets as a result of construction works associated with the approved development is to be met in full by the Applicant prior to occupation of the building.		No prior to construction requirement
D4	Compliance Certificate	A Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained from Sydney Water Corporation and submitted to the Certifying Authority prior to occupation of the building. Application must be made through an authorised Water Servicing Coordinator. Please refer to the "Your Business" section of the web site www.sydneywater.com.au then follow the "e-Developer" icon or telephone 13 20 92 for assistance.	Supply BM+G with a section 73 compliance certificate prepared by Sydney Water Corporation. Application must be made through an authorised water servicing coordinator. Please refer to the "Your Business" section of the website www.sydneywater.com.au.	No prior to construction requirement
D5	Certification of WSUD Facilities	Prior to occupation a certificate from a Civil Engineer is to be obtained stating that the WSUD facilities have been constructed and will meet the water quality targets as specified in the Council's Development Control Plan.	Certification from a Civil Engineer for WSUD facilities compliance with Council's DCP	No prior to construction requirement
D6	Public Domain Works	Prior to the occupation of the building, the Applicant must submit to the Council works-as-executed plans of any public domain works. Prior to occupation of the building, the Applicant must also submit documentation to the Certifying Authority demonstrating that the works have been completed.	Works as executed drawing are to be provided to BM+G verifying that the public domain works have been completed.	No prior to construction requirement
D7	Post-construction Dilapidation Report	Prior to occupation of the building: The Applicant must engage a suitably qualified person to prepare a Post-Construction Dilapidation Report at the completion of the construction works. The report is to ascertain whether the construction works created any structural damage to adjoining buildings or infrastructure. b) The report is to be submitted for the approval of the Certifying Authority. In ascertaining whether adverse structural damage has occurred to adjoining buildings or infrastructure, the Certifying Authority must: i) compare the Post-Construction Dilapidation Report with the Pre-Construction Dilapidation Report required by these conditions; and ii) where relevant, have written confirmation from the relevant authority that there is no adverse structural damage to their infrastructure and roads. c) A copy of this report must be submitted to Council.	A suitably qualified structural engineer is to complete a post construction dilapidation report which identifies if the construction works have created any structural damage to the adjoining buildings or infrastructure.	No prior to construction requirement
D8	Completion of Landscaping	A certificate must be submitted to the Certifying Authority by a practicing landscape architect, horticulturalist or person with similar qualifications and experience certifying that all required landscaping works have been satisfactorily completed in accordance with the approved landscape plans. Note: Advice on suitable species for landscaping can be obtained from Council's planting guide' Indigenous Plants for the Bushland Shire', available at www.hornsby.nsw.gov.au		No prior to construction requirement
D9	Preservation of Survey Marks	A certificate by a Registered Surveyor must be submitted to the Certifying Authority, certifying that there has been no removal, damage, destruction, displacement or defacing of the existing survey marks in the vicinity of the proposed development or otherwise the re-establishment of damaged, removed or displaced survey marks has been undertaken in accordance with the Surveyor General's Direction No.11 — "Preservation of Survey Infrastructure". A certificate by a Registered Surveyor must be submitted to the Certifying Authority	Certification from a practising landscape architect, horticulturalist or the like that the landscaping has been completed in accordance with the approved plans.	No prior to construction requirement
D10	Creation of Restrictions and Positive Covenants	The following matter(s) must be nominated on title under s88E of the Conveyancing Act, 1919; Application to be made to Council for Execution of Legal Documents for the following: a) The creation of an appropriate "Positive Covenant" and "Restriction as to User" over the constructed on-site detention/retention/water quality treatment systems and outlet works, within the lots in favour of Council in accordance with terms available from Council. The position of the on-site detention system(s) is to be clearly indicated on the title with a Surveyor's Sketch to accompany Dealing documentation; b) To register the on-site detention/retention/water quality treatment systems Positive Covenant and restriction on the use of land "works-as-executed" details of the on-site-detention system and water quality treatment system must be submitted verifying that the required storage and discharge rates have been constructed in accordance with the design requirements. The details must show the invert levels of the onsite system together with pipe sizes and grades. The details must be accompanied with electronic copies of all treatment systems' technical specifications and maintenance manuals. Any variations to the approved plans must be shown in red on the "works-as-executed" plan and supported by calculations. Note: Council must be nominated as the authority to release, vary or modify any easement, restriction or covenant.	A certificate prepared by a registered surveyor is to be provided to BM+G verifying that no damage, removal, displacement or the like of existing survey marks in the vicinity of the development	No prior to construction requirement
D11	Car Parking	All car parking must be constructed and operated in accordance with Australian Standard AS/NZS 2890.1:2004 — Off-street car parking, and Australian Standard 2890.2:2002 — Off-street commercial vehicle facilities and the following requirement: a) All parking areas and driveways are to be sealed to an all-weather standard, line marked and signposted. b) Car parking, loading and manoeuvring areas to be used solely for nominated purposes. c) Vehicles awaiting loading, unloading or servicing shall be parked on site and not on adjacent or nearby public roads; and d) All vehicular entry on to the site and egress from the site shall be made in a forward direction.	Confirmation that the relevant Positive covenants have been created.	No prior to construction requirement

ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	REQUIRED ACTION
D12	<u>Remediation</u>	The Applicant must submit to the Certifying Authority a Site Audit Report and Site Audit Statement prepared by an EPA accredited site auditor, prior to occupation of the building. The Site Audit Report and Site Audit Statement must verify that the land is suitable for the uses proposed as part of this consent.	Confirmation from the traffic consultant or civil engineer that all carparking has been constructed in accordance with this condition.	No prior to construction requirement
D13	<u>Fire Safety Certification</u>	Prior to occupation of the building and if required, a Fire Safety Certificate must be obtained for all the Essential Fire or Other Safety Measures forming part of this consent. A copy of the Fire Safety Certificate must be submitted to the relevant authority and Council. The Fire Safety Certificate must be prominently displayed in the building.	Provide a site audit report and statement prepared by an accredited site auditor verifying that the land is suitable for the proposed use.	No prior to construction requirement
D14	<u>Structural Inspection Certificate</u>	A Structural Inspection Certificate or a Compliance Certificate must be submitted for the approval of the Certifying Authority prior to occupation of the building. A copy of the Certificate with an electronic set of final drawings (contact approval authority for specific electronic format) must be submitted to the Secretary and Council after: a) the site has been periodically inspected and the Certifier is satisfied that the structural works are deemed to comply with the final design drawings; and b) the drawings listed on the Inspection Certificate have been checked with those listed on the final Design Certificate/s.		No prior to construction requirement
D15	<u>Signage</u>	Wayfinding signage must be integrated at all entry and exit points and is to be installed prior to occupation of the building.	A structural inspection certificate or compliance certificate is to be supplied to BM*G which verifies that the structural works comply with the final design drawings and the drawings listed on the inspection certificate have been checked with those listed on the final design certificate.	No prior to construction requirement
D16	<u>Surveillance</u>	CCTV and suitable lighting must be provided on the external perimeter of the building prior to occupation of the building.		No prior to construction requirement
D17	<u>External Walls and Cladding</u>	The external walls of the building, including additions to existing buildings, must comply with the relevant requirements of the NCC. Prior to occupation, the Applicant must provide the Certifying Authority with documented evidence that the products and systems used in the construction of external walls, including finishes and claddings such as synthetic or aluminium composite panels, comply with the relevant requirements of the NCC as built. The applicant must provide a copy of the documentation given to the Certifying Authority to the Secretary within seven days after the Certifying Authority accepts it.		No prior to construction requirement
E. POST OCCUPATION				
ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	ACTION WITH
E1	<u>Plant and Equipment</u>	All plant and equipment used on site, or to monitor the performance of the development must be: a) maintained in a proper and efficient condition; and b) operated in a proper and efficient manner.		No prior to construction requirement
E2	<u>Noise Control — Operation</u>	Noise associated with the operation of the site, including any plant, machinery or other equipment, must not exceed: a) 40 dB LA eq (15 minute) when measured at the boundary of any sensitive receiver along Burdett Street, Hornsby; b) 35 dBA LA eq (15 minute) when measured at the boundary of any sensitive receiver along Derby Road, Hornsby; and c) 39 dBA LA eq (15 minute) when measured at the boundary of any sensitive receiver along Palmerston Road, Hornsby.		No prior to construction requirement
E3		The Applicant must undertake noise monitoring of mechanical plant and equipment, to collect valid data and provide a quantitative assessment of operational noise impacts following the occupation of the building. The noise monitoring must be carried out by an appropriately qualified person and a monitoring report must be submitted to the Secretary within three months of full occupation of the Subject Site to verify that operational noise levels comply with condition E2 and incorporate relevant measures as required by condition B15.		No prior to construction requirement
E4		Should the short-term noise monitoring required under condition E3 identify any exceedance of the project specific noise levels in condition E2, the Applicant must implement additional appropriate on-site noise attenuation measures to ensure operational noise levels do not exceed these levels and/or provide noise attenuation measures at the affected noise sensitive receivers. The implementation of noise attenuation measures, either on-site or at the affected receiver(s), must be provided within three months of the completion of the short-term noise monitoring required under condition E3, or other appropriate time period as agreed by the Secretary.		No prior to construction requirement
E5	<u>Green Travel Plan</u>	As part of the ongoing operation of the hospital, the actions and recommendations identified in the Green Travel Plan at Appendix N of the Environmental Impact Statement for Hornsby Ku-ring-gai Hospital Campus Stage 2, prepared by Taylor Thomson Whitting (NSW) Pty Ltd (24 October 2017), must be implemented accordingly and updated on a regular basis.		No prior to construction requirement
E6	<u>Public Way to be Unobstructed</u>	The public way must not be obstructed by any materials, vehicles, refuse, skips or the like under any circumstances.		No prior to construction requirement
E7	<u>Landscape Establishment</u>	The landscape works must be maintained until establishment and successful growth of plant material to meet the intent of the landscape design. This must include but not be limited to watering, weeding, replacement of failed plant material and promoting the growth of plants through standard industry practices.		No prior to construction requirement
E8	<u>External Lighting</u>	External Lighting must comply with AS 4282: 1997 <i>Control of Obtrusive Effects of Outdoor Lighting</i> . Upon installation of lighting, but before it is finally commissioned, the Applicant must submit to the Certifying Authority evidence from a qualified practitioner demonstrating compliance in accordance with this condition.		No prior to construction requirement
E9	<u>Loading and Unloading</u>	All loading and unloading of service vehicles in connection with these premises must be carried out within the designating loading and unloading areas at all times and between 7am and 6pm Monday to Saturday, and 8am and 6pm Sundays and public holidays.	A suitably qualified and experienced person to provide certification that the external lighting complies with AS4282:1997	No prior to construction requirement
ADVISORY NOTES				
ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	ACTION WITH
AN1	<u>Appeals</u>	The Applicant has the right to appeal to the Land and Environment Court in the manner set out in the EP&A Act and the EP&A Regulation (as amended).		No prior to construction requirement
AN2	<u>Other Approvals and Permits</u>	The Applicant must apply to the relevant authority for all necessary permits including crane permits, road opening permits, hoarding or scaffolding permits, footpath occupation permits and/or any other approvals under Section 68 (Approvals) of the <i>Local Government Act 1993</i> or Section 138 of the <i>Roads Act 1993</i> .		No prior to construction requirement

ITEM NO.	HEADING	SSD REQUIREMENT	CROWN CERTIFIER REQUIREMENT	REQUIRED ACTION
AN3	<u>Responsibility for other consents / agreements</u>	The Applicant is solely responsible for ensuring that all additional consents and agreements are obtained from other authorities, as relevant.		No prior to construction requirement
AN4	<u>Use of Mobile Cranes</u>	The Applicant must obtain all necessary permits required for the use of mobile cranes on or surrounding the Subject Site, including from the Civil Aviation Safety Authority, prior to the commencement of works. In particular, the following matters must be complied with: a) For special operations including the delivery of materials, hoisting of plant and equipment and erection and dismantling of on-site tower cranes which warrant the on street use of mobile cranes, permits must be obtained from Council: i) At least 48 hours prior to the works for partial road closures which, in the opinion of Council will create minimal traffic disruptions, and ii) At least four weeks prior to the works for full road closures and partial road closures which, in the opinion of Council, will create significant traffic disruptions. b) The use of mobile cranes must comply with the approved hours of construction and must not be delivered to the site prior to the approved construction hours without the prior approval of Council.		No prior to construction requirement
AN5	<u>Temporary Structures</u>	Unless otherwise declared as exempt development under <i>State Environmental Planning Policy</i> (Educational Establishment and Child Care Facilities) 2017 or <i>State Environmental Planning Policy</i> (Exempt and Complying Development Codes) 2008: a) An approval under <i>State Environmental Planning Policy</i> (Temporary Structures) 2007 must be obtained from the Council for the erection of the temporary structures. The application must be supported by a report detailing compliance with the provisions of the BCA. b) Structural certification from an appropriately qualified practicing structural engineer must be submitted to the Council with the application under <i>State Environmental Planning Policy</i> (Temporary Structures) 2007 to certify the structural adequacy of the design of the temporary structures. c) Should the height of any temporary structure and/or equipment (including mobile cranes) be greater than 45.72 metres above existing ground level, approval must be sought in accordance with the Civil Aviation (Buildings Control) Regulation 1988, prior to the commencement of above ground works.		No prior to construction requirement
AN6	<u>Disability Discrimination Act</u>	This application has been assessed in accordance with the EP&A Act. No guarantee is given that the proposal complies with the Disability Discrimination Act 1992. The Applicant is responsible to ensure compliance with this and other anti-discrimination legislation. The Disability Discrimination Act 1992 covers disabilities not catered for in the minimum standards called up in the BCA which references AS 1428.1 - Design for Access and Mobility. AS1428 Parts 2, 3 & 4 provides the most comprehensive technical guidance under the Disability Discrimination Act 1992 currently available in Australia.		No prior to construction requirement
AN7	<u>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</u>	a) The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) provides that a person must not take an action which has, will have, or is likely to have a significant impact on a matter of national environmental significance matter; or Commonwealth land, without an approval from the Commonwealth Environment Minister b) This application has been assessed in accordance with the EP&A Act. The determination of this assessment has not involved any assessment of the application of the Commonwealth legislation. It is the Applicant's responsibility to consult the Department of Sustainability, Environment, Water, Population and Communities to determine the need or otherwise for Commonwealth approval and you should not construe this grant of approval as notification to you that the EPBC Act does not have application. The EPBC Act may have application and you should obtain advice about this matter. There are severe penalties for non-compliance with the Commonwealth legislation.		No prior to construction requirement
AN8	<u>Asbestos Removal</u>	All excavation and demolition works involving the removal and disposal of asbestos must only be undertaken by contractors who hold a current WorkCover Asbestos or "Demolition Licence" and a current WorkCover "Class 2 (Restricted) Asbestos Licence and removal must be carried out in accordance with NOHSC: "Code of Practice for the Safe Removal of Asbestos".		No prior to construction requirement
AN9	<u>Site contamination issues during construction</u>	Should any new information come to light during demolition or construction works which has the potential to alter previous conclusions about site contamination then the Applicant must be immediately notified and works must cease. Works must not recommence on site until the consultation is made with the Certifying Authority.		No prior to construction requirement