ASN Building Bay 4-5
1-3 Hickson Road, The Rocks

General Notes

G1. These structural drawings shall be read in conjunction with all architectural and other consultants' drawings and specifications and with such other written instructions as may be issued during the course of the contract. Any discrepancy shall be referred to the Structural Engineer before proceeding with the work.

G2. Do not commence construction using these structural drawings until a construction certificate is issued by the principal certifying authority.

G3. All materials and workmanship shall be in accordance with the relevant current Standards Australia Codes and with the Building Code of Australia.

G4. All set out dimensions shown on these structural drawings shall be verified by the builder on site. Do not scale these structural drawings for dimensions.

G5. Unless noted otherwise all levels are in metres and all dimensions are in millimetres.

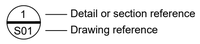
G6. The method of construction and the maintenance of safety during construction are the responsibility of the builder. If any structural element presents difficulty in respect of constructability or safety, the matter shall be referred to the Structural Engineer for resolution before proceeding with the work.

G7. During construction the structure shall be maintained in a stable condition and no part shall be overloaded. The builder shall provide temporary bracing, shoring and propping in order to keep the building works and excavations stable at all times.

G8. The builder is responsible for the adequacy of all temporary works including shoring, propping and bracing and where necessary is to engage a structural engineer to design and certify his temporary works.

G9. If there is a discrepancy in member sizes for any component, assume for pricing purposes only that the larger or more expensive size is correct. Refer to Structural Engineer for decision before detailing or construction.

G10. Detail and section identification



G11. The RLs shown in these drawings are approximate and are for the sole purpose of assisting the structural documentation.
They must not be used for construction.
Refer to the architects drawings for all construction RLs

G12. Unless agreed or specified otherwise, the builder is required to notify and allow time for the Structural Engineer to inspect at the following points: completed erected structural elements prior to covering.

G13. 48 hours notice is required for inspection. All work to be inspected must be completed prior to the time of inspection.

G14. Site inspections do not relieve the builder of responsibility for the completeness and correctness of his work.

G15. Inspections will be periodic and representative and will not necessarily be made of all works. Election to inspect or otherwise will be at the engineer's discretion. The builder is to allow time and provide site access for the inspection to take place and is to have a responsible site foreman available to receive any comment or direction from the engineer.

G16. Where structural elements are designed and certified by other parties, the builder shall obtain written certification, prior to proceeding with any construction which may prevent inspection or remedial works being undertaken to these items.

Concrete

C1. All workmanship and materials shall comply with AS3600 except where varied by the contract documents.

C2. Concrete quality

C2.1 All concrete shall comply with AS1379. No breccia-type aggregate is to be used.

C2.2 Compressive Strength Grades:

Element	Strength Grade (MPa)	Cement Type to AS3972	Slump (mm)	Maximum Aggregate Size (mm)
Columns, Suspended Slabs and Beams	40	SL	80	20
Elsewhere	32	SL	80	20
Mass Concrete	25	GP	80	20

Special class concretes (prefixed 'S' in the table) shall have the properties of normal class concrete with the following special requirements:

Class S
- Shrinkage strain shall not exceed 620 x 10 -6 in accordance with AS1012.
- Cement shall be type SL to AS3972.

C2.3 Project assessment of concrete strength shall be carried out in accordance with AS1379.

C2.4 Project control testing shall be carried out in accordance with AS1379. The minimum frequency of sampling of each type and grade shall be in accordance with the following table:

Number of batches per day	Number of samples 1 sample = 2 cylinders
1	1
2 TO 5	2
6 TO 10	3
11 TO 20	4
For each additional 10	1 additional

C2.5 No admixtures shall be used in concrete unless approved by the engineer in writing.

C3. Concrete Profiles

C3.1 Beam depths are written first and include the slab thickness.

C3.2 Sizes of concrete elements do not include thickness of applied finishes.

C3.3 No holes, chases or embedment of pipes other than shown in the structural drawings shall be made in concrete members without the prior written approval of the Engineer.

C3.4 Cantilevers -provide upward camber in formwork for reinforced concrete cantilevers of l/120, where l is the projection beyond the column or wall face. Maintain the slab and beam depths shown.

C3.5 Provide drip grooves at all exposed edges. Chamfers, drip grooves, reglets etc. To be to architect's details.

C3.6 Construction joints not shown in the structural drawings shall be to the written approval of the Engineer.

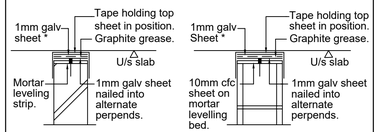
C3.7 Slab symbols

Concrete (cont'd)

C4. Compact all concrete, including footings and slabs on ground, with mechanical vibrators.

C5. Curing of Concrete
Cure all concrete as follows:
- Keep surfaces continuously wet for three days then
- Prevent moisture loss for the next four days using polythene sheeting or wet hessian protected from wind and traffic and then allow gradual drying out.
- Curing compounds may be used provided that they comply with AS3799 and they do not affect floor finishes.
- PVA-based curing compounds are not acceptable.

C6. Slip joints to be used on all load-bearing masonry walls. Use two layers of galvanised flat steel with graphite grease between.



* For external skins use stainless steel or approved non-ferrous slip joints.

Brickwork slip joint detail Blockwork slip joint detail

C7. Bricks used in load-bearing construction should have a minimum compressive strength of 20 MPa as defined in AS4455 and AS4456 and mortar should not be weaker than the following:
1 cement : 1 lime : 6 sand.

C8. Masonry walls must not be constructed on suspended concrete until all temporary supports are removed and all masonry to be laid has been stacked adjacent to proposed position.

Demolition Notes

D1. All demolition activities, including, but not limited to, the protection of the public, the protection of the adjoining premises and tenancies, and demolition methods, are to be carried out by the contractor in strict accordance with the Australian Standard AS2601 - 'The Demolition of Structures' and all relevant Workcover guidelines, codes of practice and requirements and all relevant state and local authorities' regulations, specifications and requirements.

D2. All temporary propping of the existing structure is to be to the Contractor's details and design. All temporary works, including assessment of existing structure to support temporary propping and / or demolition activities and equipment, are the responsibility of the contractor.

D3. The Contractor is to provide to the Superintendent details of the Contractors proposed temporary works and temporary propping for review. The Contractor is to allow 7 days for the review of the proposals. The details of the proposed temporary works and temporary propping are to be certified by the Contractor's Chartered Structural Engineer. These details are to include a work method statement.

D4. Temporary propping of the existing structure, and any necessary temporary works are to remain in place until the Contractors Chartered Structural Engineer approves their removal.

D5. The Contractor is to identify and advise the Superintendent of any pre-existing damage within the existing building structure prior to any demolition taking place.

D6. The Contractor is to identify and advise the Superintendent of any discrepancy between the building structure as encountered on site and these drawings. In the event of any discrepancy the Superintendent is to advise the Contractor of any modifications prior to demolition commencing.

Epoxy Adhesives and Grouts

EAG1:
Where epoxy adhesives or grouts are indicated on the drawings, unless specified otherwise, the contractor is to use a proprietary product supplied by either Ramset, Hilti, Epirez, Sika, MBT or Parbury that is suitable for the purpose. The contractor shall consult with the supplier and refer to their specifications to determining suitability and method of preparation and installation. Unless specified otherwise adhesives and grouts shall be low shrink with a minimum ultimate compressive strength of 60 MPa and shall be suitable for the environment in which they will be used and be compatible with the substrate to which they will be applied.

Reinforcement For Concrete

R1. Reinforcement quality and notation

* R1.1 bar reinforcement

Symbol	Bar Shape	Strength Grade (MPa)	Ductility Class	To comply with Aust. Standard
N	Deformed ribbed bar	500	Normal	AS 4671
R	Plain round bar	250	Normal	AS 4671
*Y	Deformed bar *see note -superseded	400	Normal	AS 1302

All reinforcing bars shall be grade D500N to AS4671 uno.
Reinforcement notation is as follows:
number of bars in group, bar grade, nominal bar size in mm, spacing in mm
e.g. 17 N16-250, where N16 denotes a deformed ribbed bar, of grade 500MPa normal ductility steel, with a nominal 16mm diameter, at 250 spacing.
Note: Y bars may be replaced with N bars of same size, i.e. Deformed ribbed bar of grade 500, normal ductility steel.

* R1.2 Mesh reinforcement

Symbol	Bar Shape	Strength Grade (MPa)	Ductility Class	To comply with Aust. Standard
RL	Rectangular mesh of deformed ribbed bars	500	Low	AS 4671
SL	Square mesh of deformed ribbed bars	500	Low	AS 4671
L...TM	Trench mesh	500	Low	AS 4671
*F	Rectangular or square mesh of plain wire *see note -superseded	450		AS 1304

All mesh shall be grade 500L to AS4671 U.N.O.
The numbers following the symbol denote the product code. For example, SL92 denotes a square mesh of 9mm (nominal diameter) deformed ribbed bars at 200mm centres, of grade 500MPa low ductility steel.
Note: F mesh may be replaced with RL or SL mesh of the same configuration.

R2. Cover to reinforcement
Cover to reinforcement for durability shall be as follows U.N.O.

Condition	Cover (mm)
Surfaces in contact with ground: without membrane	75 mm
with membrane: * slabs	50 mm
* footings	50 mm
Surfaces above ground -interior • slabs & beams	30 mm
• columns	30 mm
Surfaces above ground -exposed • slabs & beams	50 mm
• columns	50 mm

Cover shall not be less than the size of the aggregate or the main bars.
Pipes or conduits shall not be placed within the cover to reinforcement.
Cover may need to be increased to suit fire rating -see drawings.
Support reinforcement on mild steel plastic tipped chairs, plastic chairs or concrete chairs at not greater than 1 metre centres both ways.
In exposure condition B2 or C (to AS3600) use only plastic or concrete chairs.
Tie bars at alternate intersections.

R3. Reinforcement representation
Reinforcement is represented diagrammatically, and not necessarily in true projection.
Bars shown are indicative only and lengths may vary.
Beam elevations take precedence over sections. Slab plans take precedence over sections. Refer to sections for extra bars that may be required.

R4. Reinforcement layers:
B1 denotes bottom bars laid 1st
B2 denotes bottom bars laid 2nd
T1 denotes top bars laid 1st
T2 denotes top bars laid 2nd

R5. Distribution reinforcement
Provide distribution reinforcement or tie bars if not shown. Use N12 at 400, splice 400mm where necessary, and lap 400mm with main bars

R6. Reinforcement lapped splices:
Splices in reinforcement shall be made only in positions shown on the structural drawings or as otherwise approved in writing by the Structural Engineer.
Laps shall be in accordance with AS3600 and not less than the development length for each bar.

Slab and beam reinforcement
Lap splices in slab and beam reinforcement shall comply with the table below:
- unless shown otherwise on the drawings, or
- unless calculated in accordance with AS3600, and approved in writing by the Structural Engineer.

Reinforcement For Concrete (cont'd)

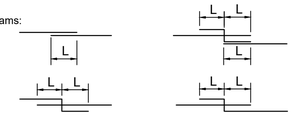
Full strength laps for slab and beam bars

Bar dia.	Length L (mm) - see diagrams below	
	Bar with 300mm or less depth of conc. below the bar	Bar with more than 300mm depth of conc. below the bar
N10	500	700
N12	650	800
N16	900	1100
N20	1100	1500
N24	1400	1800
N28	1700	2200
N32	2100	2600

Lap lengths are to be increased by 30% when slip forms are used

Bars in slabs may be in stock lengths with full strength staggered laps. (subject to approval from the Structural Engineer)

Diagrams:



Columns - compression laps
Unless shown otherwise on the structural drawings:

Bar dia.	Lap length (mm)
N12	500
N16	650
N20	800
N24	1000
N28	1200
N32	1300

Mesh lapped splices
Laps in mesh (fabric) shall comply with AS3600. The two outermost transverse wires of one sheet shall overlap the two outermost transverse wires of the sheet being lapped.

R7. Slab reinforcement at supporting walls
Slab bars shall extend 70mm onto supporting walls, with 50% of bottom bars cogged to achieve anchorage at simply supported ends.
Mesh in slabs shall extend 70mm onto supporting walls with a cross wire.

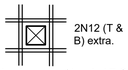
R8. Crank the reinforcement in the beam that is terminating at an intersection under/over the beam that is continuing. Where both beams terminate, consider the shorter span as the terminating beam.

R9. Joggles
Joggles in bars to be 1 bar diameter over a length of 12 bar diameters

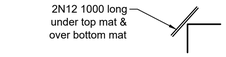
R10. Welding of reinforcement do not weld reinforcement (unless shown on the structural drawings) without written approval from the Structural Engineer. Approval for welding will depend on the type of bar and its location.

R11. Site bending of reinforcement
Site bending of deformed bars (N or Y) shall be done without heating, using mechanical bending tools and a mandrel or former with a diameter of 5 times the bar size.
Heating of N or Y bars reduces their strength.

R12. Trimmer bars
Penetrations (denoted T.P. on plan).
(for penetrations up to 600x600 u.n.o.)

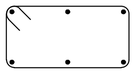


Re-entrant corners (denoted T.C. on plan).



R13. Inspection by Structural Engineer
give at least 24 hours notice to the structural engineer for inspection of reinforcement.
Do not have concrete delivered until final approval is obtained from the Structural Engineer.

R14. All beam ties are to have bar anchorages located on the top face of the beam uno.



NOT FOR CONSTRUCTION

Notes

Key to symbols

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
01	23.03.18	HSW	Issue for Tender	JK	AB
0	26.02.18	HSW	Issue for Tender	JK	AB
P3	31.01.18	RM	Issue for Coordination	AB	-
P2	22.12.17	HSW	Issue for Approval	AB	-
P1	15.12.17	RM	Issue for Information	AB	-

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Client
Property NSW

Title
ASN Building Bay 4-5
1-3 Hickson Road, The Rocks

Cover Sheet & General Notes

Designed	JK	-	Eng check	AB	-
Drawn	RM	-	Coordination	JK	-
Dwg check	DL	-	Approved	GB	-

Scale at A1	Status	Rev	Security
NTS	TEN	01	STD

Drawing Number
MMD-389718-S-DR-00-XX-0001

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Structural Steelwork

S1 All workmanship and material shall be in accordance with AS4100 except when varied by the contract documents.
Fabrication shall be carried out in accordance with section 14 of AS4100.
Erection shall be carried out in accordance with section 15 of AS4100.

S2 Unless noted otherwise all steel shall be of the following grade in accordance with the following Australian Standards

Type of steel	Australian Standard	Grade
Universal beams & columns, parallel flange channels & large angles	AS/NZS 3679.1	300
Welded sections	AS/NZS 3679.2	300
Hot milled plates, flats, floor plates, Small angles and slabs	AS/NZS 3678	250
Hollow sections - square & rectangular	AS 1163	C350 or C450 according to Section designation
Circular hollow sections	AS 1163	C350 or C250 according to Section designation
Cold formed purlins and girts	AS 1397	G450 Z350

Provide certificates of compliance for all steelwork to the Structural Engineer before ordering.

S3 Welding
All welding shall comply with AS1554.
Fillet welds shall be 6mm continuous, category GP using E48XX electrodes or equivalent, unless noted otherwise.
Butt welds shall be complete penetration butt welds category SP to AS 1554.1
Where welds are not otherwise specified they are to achieve the full strength of the members joined.

S4 Weld Testing
The extent of non-destructive weld examination shall be as noted below. Radiographic or ultrasonic examination shall be to AS1554.1, AS2177.1 and AS2207 as appropriate.

Type of weld and Category	Examination Method	Extent (% of total Length of weld type)
Fillet welds, GP+SP	Visual inspection	100%
Butt welds, GP	Visual inspection	100%
Butt welds, SP	Visual inspection	100%
	Radiographic or Ultrasonic Inspection	10%

S5 Bolts shall be M20 unless noted otherwise.
Bolts shall be 8.8/S unless noted otherwise.
All bolts, nuts and washers shall be galvanised to AS1214. Column holding down bolts, cast in place, shall be 4.6/S unless noted otherwise.

Column HD bolt	Embed in concrete	Cog	Concrete edge distance minimum
M16 4.6/S	250	50	160
M20 4.6/S	300	75	200
M24 4.6/S	400	100	260

For drilled-in bolts see S24

S6 Bolts denoted 4.6/S are commercial bolts of strength grade 4.6 to AS1111, snug-tight.

S7 Bolts denoted 8.8/S, 8.8/TF and 8.8/TB are high strength structural bolts of strength grade 8.8 to AS 1252.
- 8.8/S denotes bolts snug-tight
- 8.8/TF and 8.8/TB denotes bolts fully tensioned to AS 4100
- 8.8/TF denotes friction joint
- 8.8/TB denotes bearing joint

S8 Load indicator washers shall be used under the bolt head for all 8.8/TF and 8.8/TB bolts. Provide a 75mm colour flash at these connections.

S9 Bolt holes and washers - typical for up to M24 (unless shown otherwise on drawings)

Structural Steelwork (cont'd)

S9.1 Typical Connections

Connection type	Bolt holes shall be round. Size = bolt diameter plus:	Washers	
		Bolt type	Washers - HD Galvanised to AS1214
Steel to steel	2mm	4.6/S	To AS1111 (37 OD x 3mm thick for M20)
		8.8/S	To AS1252 (39 OD x 4mm nominal thick for M20)
		8.8/TF	To AS1252 (39 OD x 4mm nominal thick for M20)
		8.8/TF	Plus load indicator washers under bolt head
Steel to concrete	4mm		Minimum 4mm thick plate washer
Column baseplates	6mm	M20 4.6/S	45x45x4mm plate washer
		M24 4.6/S	50x50x5mm plate washer

S9.2 Connections to tilt up concrete wall panels
For connections to cast in ferrules in tilt up wall panels, bolt holes shall be 6mm oversize wide x long slotted holes -(unless shown otherwise on drawings).

Bolt	Hole size	Washer - to completely cover slotted hole
M20 8.8/S	26 wide x 50 mm	75 x 75 x 8mm plate washer

S9.3 Slotted holes for steel to steel connections

Type	Hole size		Washers
	Width	Length	
Short slotted holes	2mm oversize	Bolt diameter + 10mm	Provide hardened or plate washer under both bolt & nut
Long slotted holes	2mm oversize	2.5 x bolt diameter	Minimum washer thickness 8mm washer shall completely cover the long slotted hole. Provide washer under both bolt and nut

S9.4 Holes out of position
If holes are out of position, advise engineer before enlarging holes.

S10 Connections
Connection details shown on structural drawings are typical only. Where a detail is not shown the fabricator/shop detailer shall prepare details in accordance with AS4100 and the aisc publications "Design of Structural Connections" and "Standardised Structural Connections". These details shall take due account of architectural and service requirements and shall be submitted to the Engineer for approval. Connections shall have at least two bolts. The Engineer will advise design loads as required. All costs and the implications associated with these works are to be allowed for by the Contractor.

S11 All plates and stiffeners shall be 10mm thick unless noted otherwise.
- Purlin cleats shall be 8mm thick unless noted otherwise
- Girt cleats shall be 10mm thick unless noted otherwise

S12 Co-ordination
The Contractor shall make the necessary allowances for co-ordinating all architectural and structural elements in the preparation of structural steelwork shop drawings and subsequent fabrication and erection.

S13 Provide all necessary purlin, girt and trimming elements as required to support all roof and wall sheeting/cladding edges, valleys, hips and penetrations.

S14 Purlin and girts shall be "Lysaghts" or "Stramit" or approved, installed in accordance with manufacturer's written directions. Use washers under bolt head and nut or specially shaped bolts and nuts. Purlin bolts shall be
- M12 4.6/S for sections up to 250 deep unless noted otherwise
- M16 4.6/S for sections over 250 deep unless noted otherwise

S15 Corrosion Protection
The following are the minimum requirements for protective treatment. Refer to the Architectural specifications for extra finish coats and colours. All coatings to be compatible with applied finishes including top coat and any fire protection coating.
Paint repairs shall be carried out to give the same level of protection as the original treatment. All paint and repairs shall comply with any specified warranty.

Salvaged Cast Iron Collars

SC1 Remove existing paint coatings and corrosion using abrasive grit blasting.

SC2 Inspect cast iron elements for significant defects such as cracks or deep pitting. Advise engineer if significant defects are found.

SC3 Apply a new protective painted coating.
Coating system to be as follows:
1 coat zinc rich primer.
1 coat epoxy base coat.
2 coats urethane finish (colour by architect).
Top coat to be brush applied.

Structural Steelwork (cont'd)

Internal Environments (excluding special environments)

Member	Surface Preparation To AS1627	Primer	Top coat
All U.N.O.	Power Tool Class 1 or Abrasive Blast class 1	Red Oxide Zinc Phosphate 75µm	To Architect's Specifications

Hot-dip galvanising
unless specified otherwise, under all external environments all structural steelwork which is exposed, or is in contact with exposed brickwork, and all lintels shall be hot-dip galvanised after fabrication to AS4680

Member	Hot-dip galvanised to AS4680
All u.n.o.	Normal finish
Entry stairs Banisters	Refer to architectural specification

All bolts, nuts and washers, including holding-down bolts shall be galvanised to AS1214.

S16 Concrete-encased steelwork to be wrapped with F41 mesh having 50mm minimum cover of concrete grade N25 to AS3600.

S17 Location of purlins and girts to be obtained from architect's drawings or Roofing Contractor.

S18 Provide seal plates to ends of all hollow sections (with vent hot-dip holes if to be galvanised.

S19 Gravity and/or gauge lines to intersect, unless noted otherwise.

S20 Roof bracing to be hook bolted to every second purlin, or similar, so that bracing is straight. Bolts for hanging ducts and pipes etc from purlins shall be attached to the web of the purlin, not the flange.

S21 Base plates shall be grouted before member is substantially loaded. Grout shall have minimum strength f'c of 20 MPa and shall be drypack mortar, rammed in or an approved non-shrink grout.

S22 All steelwork is to be temporarily but securely braced until all final bracing, cladding and stabilising brick or blockwork has been completed.

S23 Shop drawings shall be prepared by the fabricator for all structural steelwork. Submit all workshop drawings to Mott MacDonald Australia Pty. Ltd. for structural review at least fourteen days prior to fabrication. Do not fabricate steelwork until workshop drawings are approved. Mott MacDonald's normal practice is to forward stamped copies to the architect for their review and to the fabricator/detailer.

S24 All flashing and waterproofing elements shall be as specified in architectural documents.

S25 Drilled-in Anchors

S25.1 Details
Drilled anchors shall be used where shown on the drawings, or where permitted in writing by the Engineer. Submit details of proposed anchors, before use, in writing, to the Engineer for review. Install anchors in accordance with manufacturer's written directions. Test anchors as specified in 24.4

S25.2 Spacing and edge distances shall be as shown, or in accordance with the manufacturers directions, and shall be appropriate for the load on the anchor. Unless shown otherwise or allowed by the manufacturer, the following minimums shall be used for M20 chemical anchores in concrete: spacing=150mm, edge distance=150mm.

S25.3 For attachment to hollow masonry or concrete panels, use Hilti hit hy20 or equivalent.

S25.4 Holes in steelwork shall be:
- 2mm oversize when the steel is to be used as a drilling template, or
- 6mm maximum oversize where the bolts are installed beforehand.

S25.5 Drilled-in Anchor Testing
Anchor testing
Testing load to be 150% of safe working load or 100% of ultimate load, to manufacturer's product specification. Tests to be carried out by N.A.T.A. Registered Laboratory at the contactor's expense.
Chemical Anchors
Number of chemical anchors to be tested is as follows:
installation from above and side = 20% of total number is to be tested.
Installation from below = 100% of total number is to be tested
Mechanical Anchors
Test 10% of mechanical anchors
Failure
If one anchor in a group fails under testing then all anchors shall be tested, as specified above, at the contractor's expense. All anchors that fail are to be replaced and retested forward certificates of all test results to Mott MacDonald.

Light Timber Framing

T1. All timber design, material and construction to comply with AS1720.1 and AS1720.2.

T2. Softwood to be minimum stress grade F7, joint grade J4 unless noted otherwise. Hardwood to be minimum grade F14, joint grade J3 unless noted otherwise. Submit supplier's certificate as to stress grade of timber members. All timber shall be branded.

T3. External timber shall be either hardwood durability class 1 or class 2 to AS1720.2. Supplementary treatment shall be applied to all cut surfaces. Supply supporting documentation regarding preservation treatment.

T4. All bolts in timber construction to be minimum M16 unless noted otherwise. Bolt holes to be drilled exact bolt size.
- Washers under heads and nuts to be:

Bolt dia.	Washer Thickness	Min. Washer dia.	Min. Side Length for Square Washer
M10	2.5 mm	45 mm	40 mm
M12	3.0 mm	55 mm	50 mm
M16	4.0 mm	65 mm	57 mm
M20	5.0 mm	75 mm	65 mm

T5. Timber tolerances on the finished width and thickness to be in accordance with AS2082, AS1748, AS3519 as appropriate.

T6. All timber joints and notches are to be 100mm minimum away from loose knots, severe sloping grain, gum veins or other minor defects.

T7. All timber to be protected from termite attack by methods approved by the local authority. No timber to be in contact with the ground unless specifically detailed on these drawings.

Structural Timber

ST1 **Definition of timber for the purpose of this project:**
- Existing timber: Existing timbers in the building
- Reinstated timbers: Original timber in White Bay store
- Relocated timbers: Timbers on site removed as needed for the installation of the new Stair 3 from Ground to the First floor and where the services shaft is being formed.
- New timber: Salvaged or seasoned timber

ST2 Construction of the timber structure and floors will be completed using a combination of timber elements (see above). The original structural timber elements will be a principal supplied item; all associated costs for the process of selection, delivery and assembly on site will be borne by the Contractor. Refer to specification, schedule and drawings for sizing's of timber elements required for the construction of Levels 3 & 4 - ASN Building. Typically all columns, beams and primary floor joists to be reinstalled into the building shall be reinstated timber from the original building construction. Floorboards, floor trimmers and framing for secondary structures such false ceilings, false floors and plant platforms shall be new timber. All new timber elements shall be supplied by the principal.

ST3 The Contractor shall allow for all labour, plant and material for the selection process of reinstated timber structural elements. The timber is currently stacked in rows externally and in containers at White Bay. A selection of columns and beams deemed generally suitable for reinstatement have been shortlisted by the client. Refer to the timber specification. The contractor shall confirm the adequacy of these sections prior to use. Suitable plant, with consideration to length and weight, will be required for unstacking for inspection. In conjunction with the client heritage group, the Contractor shall nominate appropriate structural timber elements that are suitable for reinstatement for levels 3 & 4.

ST4 As part of the selection process, The Contractor shall allow for final review of selected reinstated timbers by the structural engineer - Mott MacDonald. In the case of rejected timber elements, the Contractor shall nominate reserves for reuse into the WUC.

ST5 Treatment of Reinstated Timber :
- Remove dirt and debris with water or a soft brush.
- Remove nails, screws and other intrusions.
  Inspect and assess in consultation with heritage consultant before removal.
  Remove large splinters and surface defects.
- All painted areas, signs and paint generally on existing timbers and on salvaged timber is to retained and protected from damage during construction to the approval of the heritage architect.
  These areas are not to be cleaned , sanded and/or treated with preservatives or insecticides where these treatments will damage the historic paint.
  Painted signs are to be conserved and where paint is flaking, these areas are to be consolidated to the approval of the heritage architect. Any original paint, signs, numbers and the like must be retained on the timber surface.
- Apply a borate insecticide (or approved equivalent) to all timber members that are to be re-used.

ST6 Reinstated timber should go typically in the front of the building (western side) and then be supplemented with new structural timber (columns, beams, joists) to reinstate the original structure. Refer to architectural drawings.

ST7 All new timber members should be supplied and delivered to site by the principal. The principal is to provide a methodology to confirm the heritage strategy. Refer to timber specification for quantity of new and salvaged structural timber.

Safety in Design (cont'd)

This design is in accordance with the Model Work Health and Safety (WHS) Act and Safework Australia Model Code of Practice - Safe Design of Structures. The project specific hazards identified below are based on Mott MacDonald's experience on similar projects and do not necessarily account for all construction, operation, maintenance and demolition safety hazards.
The hazards listed below are limited to hazards that are not considered likely to be obvious to a competent contractor, are unusual, difficult to manage, or not normally encountered on projects of a similar nature.
Based on information available to the designers at the time of documentation, Mott MacDonald have attempted to identify safety hazards relating to the construction, operation, maintenance and demolition phases of this project. Inclusion (or not) of any hazard does not reduce or limit the obligations of the contractor, user, maintainer or demolisher to undertake appropriate safety management. These notes are not an admission of responsibility by Mott MacDonald for management of any safety hazards relating to this project.

SD01. **Design and Risk Management:**
A risk management process has been integrated into the design process as follows:
1. Identification of reasonably foreseeable hazards associated with the design of the structure.
2. Assessment of the risks arising from such hazards.
3. Elimination or minimisation of the risk by designing control measures.
4. Review of the control measures.
5. Identification of any residual hazards to be passed onto the contractor within the design documentation or separate Safety in Design documentation.

As part of the risk management process consideration has been given to:
- The purpose for which the structure has been designed.
- The materials used in construction of the structure.
- The likely method of construction, maintenance, repair, operation, modification, refurbishment, demolition or disposal of the structure.
- Legislation, codes of practice and client requirements that are to be considered and complied with.

The client and contractor should ensure that all professional design services engaged for this contract shall comply with the Safe Work Australia Work Health and Safety Act and Code of Practice.

SD03. **Safety in Design Documentation:**
Project specific Safety in Design documentation has been prepared as follows:
- Safety in Design Report, revision ___, dated ___

SD04. **Residual project specific hazards:**
Hazards that have been identified as specific to this design and remain after completion of the design process (DHEMR etc) are listed below:
- ___
- ___

SD05. **Work Health and Safety:**
The contractor shall ensure that the construction of this project is carried out under a site specific work health and safety plan and meets any other applicable safety in the workplace legislation and regulations.

SD06. **High Risk Construction**
The contractor shall identify areas of construction that may be considered high risk, and implement sufficient safety procedures for these tasks. Examples of high risk construction include, but are not limited to:
Work that involves:
- Asbestos
- A risk of falling more than two (2) metres
- Building or demolition work involving structural alterations, or repairs to a structure that requires temporary support to prevent collapse
- The demolition of a load bearing part of a structure or the demolition of any part of a structure that is likely to affect its physical integrity

Work carried out in, on or near any:
- Confined space
- Shaft or trench with an excavated depth of greater than 1.5m or a tunnel
- Energised electrical installations or services
- Areas that may have a contaminated or flammable atmosphere
- Area at a workplace in which there is movement of powered mobile plant

Areas of high risk that have been identified by the designers are marked on the drawings with appropriate danger symbols as follows:

S01 **Description of Residual Hazard**

SD07. **Identify hazards.**
The contractor shall make every effort to ensure all persons who may enter the construction site which includes workers and non workers alike are made aware of the risk of hazards and potential hazards which may include, but are not limited to in-ground holes or obstacles, temporary construction works and overhead activities, noise and welding flashes. Any such hazard shall be isolated and clearly identified with high visibility official signage and high visibility barricades. The correct level of training shall be mandatory before any person enters the construction area. All persons shall wear the appropriate safety protection equipment supplied by the contractor before entering the site. A qualified guide shall accompany all new construction workers during their initiation and all site visitors while on the site.

SD08. **Specialist contractor.**
Activities required to be carried out during the construction which are not considered to be normal building practice and therefore may require engagement of a specialist contractor, include but are not limited to:
- ___
- ___

Notes

Heritage Requirements

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2. All areas of the building, adjacent to heritage fabric and surfaces are to be protected during works in accordance with a heritage construction management plan.
3. The works are not to include any chasing into heritage walls or floor structures. the cutting of heritage walls for new fire doors is as documented.
4. A heritage construction management plan is to be submitted for approval prior to commencement of the works.
5. The proposed fire services system should maintain the reversibility of the existing system such that it is able to be removed without damagZ e to any heritage fabric. The drawings and or specification should include information regarding the reversibility of the design.

Key to symbols

Reference drawings

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Client
Property NSW

Title
ASN Building Bay 4-5
1-3 Hickson Road, The Rocks

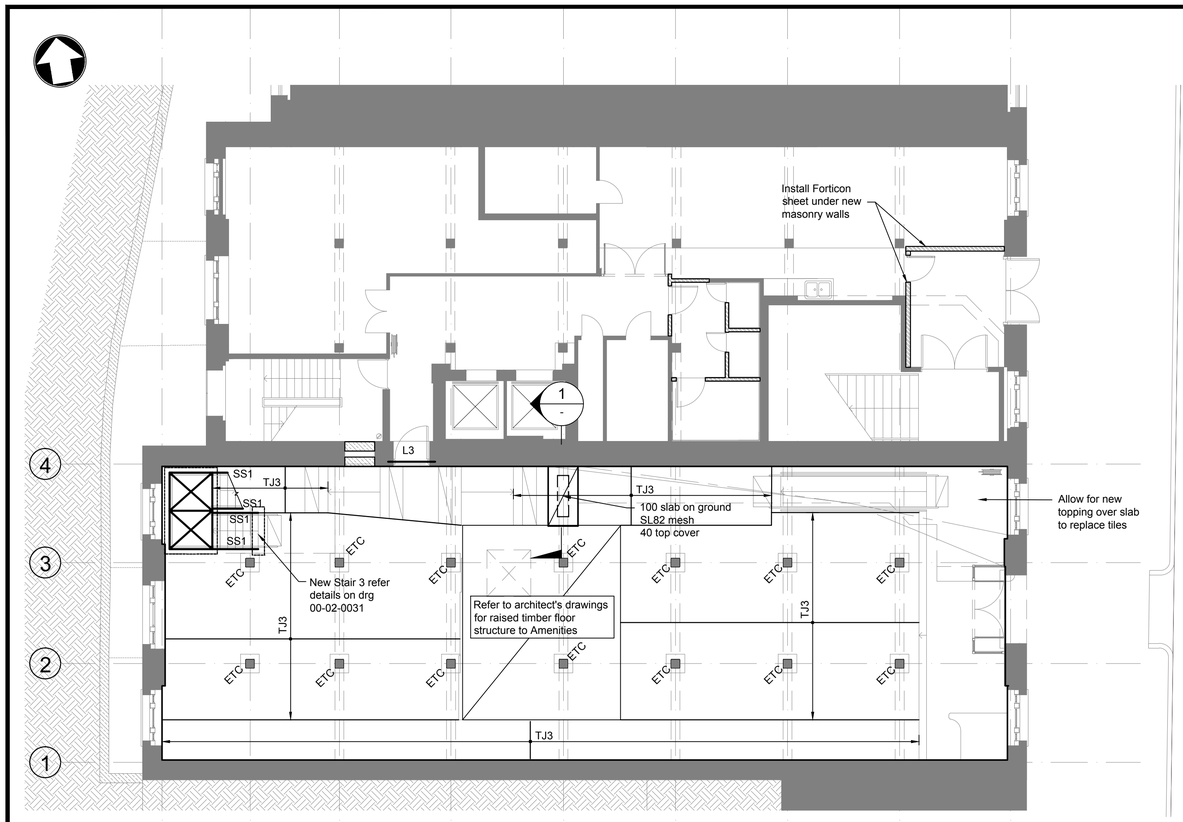
General Notes Sheet 2

Designed	JK	-	Eng check	AB	-
Drawn	RM	-	Coordination	JK	-
Dwg check	DL	-	Approved	GB	-

Scale at A1	Status	Rev	Security
NTS	TEN	02	STD

Drawing Number
MMD-389718-S-DR-00-XX-0002

NOT FOR CONSTRUCTION



Ground Floor Plan

1:100

Member Schedule

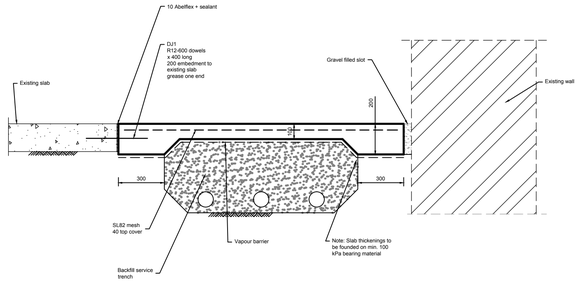
Existing concrete beam	ECB	
Existing timber beam *	ETB	
Existing timber column *	ETC	
Existing timber joist	ETJ	
New concrete beam	CB1	300D x 650W, Refer to Section A1 on drg. XX-0060
	CB2	300D x 400W, Refer to Section 3 on drg. XX-0060
	CB3	630D x 650W, Refer to Section 4 on drg. XX-0060
New timber beam	TB1	310 x 300 hardwood (new or salvaged)
	TB2	
	TB3	190 x 45 F7
	TB4	2 x 280 x 75 hardwood
	TB5	2 x 268 x 75 hardwood + 155BT23
New timber column *	TC1	310 x 300 hardwood (new or salvaged)
	TC2	
New timber joist	TJ1	280 x 75 hardwood (new or salvaged)
	TJ2	
	TJ3	150 x 45 F7 at 450 cts
	J1	140 x 35 F7 at 450 cts
	CJ	140 x 35 F7 treated pine
	PJ	140 x 35 F7 treated pine
	TP	2/140 x 35 F7 treated pine
New timber bearers	B1	190 x 45 F7
Wall	W1	110 brick
	W1A	76 brick on edge
	W2	92mm x 0.75 BMT at 450 cts. Rondo stud wall diagonally braced all sides to inside face with 30mm x 0.8mm galv. strap in each direction. Lined inside and out with Promat to achieve -/120/120 fire rating. Lap studs 900 and screw through where required.
Lintel	L1	110 x 80 Ultralintel
	L2	5 off 110 x 170 Ultralintels
	L3	6 off 110 x 170 Ultralintels
	L4	75 x 8 stainless steel flat bar, 100 bearing each end
Steel Beam	SB1	150 x 100 x 6.0 RHS
	SB2	200UC52.2 hot dip galv.
Steel joists	SJ1	50 x 50 x 5.0 SHS at 450 cts
	SJ2	50 x 50 x 5.0 SHS
Steel Posts	SP1	75 x 75 x 5.0 SHS
	SP2	50 x 50 x 5.0 SHS + 200 square base plate for L2
Stair Stringers	SS1	16 plate formed to Architect's specification
	SS2	25 plate formed to Architect's specification

All suspended slabs to be 180 thick with N12 @ 250 each way top and bottom unless noted otherwise
All softwood members to be H2 treated pine.

All timber joists to be skew nailed to existing timber beams at locations between grids V and C and 1 and 4

* Notation for timber beams and columns:
(u) Column continues below floor level only
(o) Column continues over floor level only
(u + o) Column continues below and over for level.

1:20 0 1000mm 2000mm
1:100 0 5000mm 10000mm



Typical Replacement Slab Detail

Section 1 / 1:20

Notes

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Client
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Title
ASN Building Bay 4-5
1-3 Hickson Road, The Rocks

Ground Floor Plan & Details

Designed	JK	-	Eng check	AB	-
Drawn	RM	-	Coordination	JK	-
Dwg check	DL	-	Approved	GB	-

Scale at A1	Status	Rev	Security
AS SHOWN	TEN	03	STD

Drawing Number
MMD-389718-S-DR-00-01-0010

NOT FOR CONSTRUCTION

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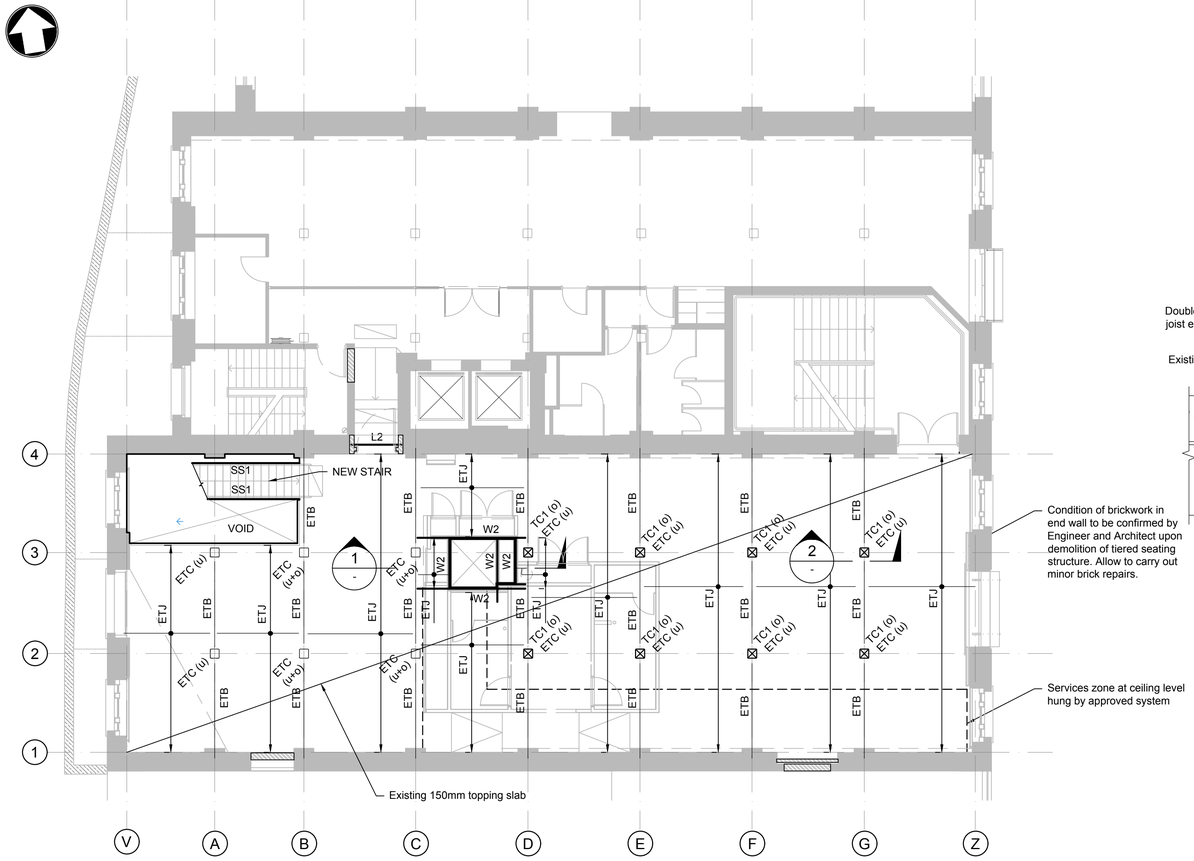

Level 1 Plan

1:100

Member Schedule

Existing concrete beam	ECB	
Existing timber beam *	ETB	
Existing timber column *	ETC	
Existing timber joist	ETJ	
New concrete beam	CB1	300D x 650W, Refer to Section A1 on drg. XX-0060
	CB2	300D x 400W, Refer to Section 3 on drg. XX-0060
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	CJ	140 x 35 F7 treated pine
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	W1A	76 brick on edge
	W2	92mm x 0.75 BMT at 450 cts. Rondo stud wall diagonally braced all sides to inside face with 30mm x 0.8mm galv. strap in each direction. Lined inside and out with Promat to achieve -/120/120 fire rating. Lap studs 900 and screw through where required.
Lintel	L1	110 x 80 Ultralintel
	L2	5 off 110 x 170 Ultralintels
	L3	6 off 110 x 170 Ultralintels
	L4	75 x 8 stainless steel flat bar, 100 bearing each end
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	SJ2	50 x 50 x 5.0 SHS
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* Notation for timber beams and columns:
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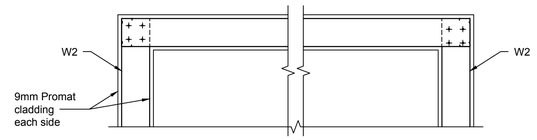
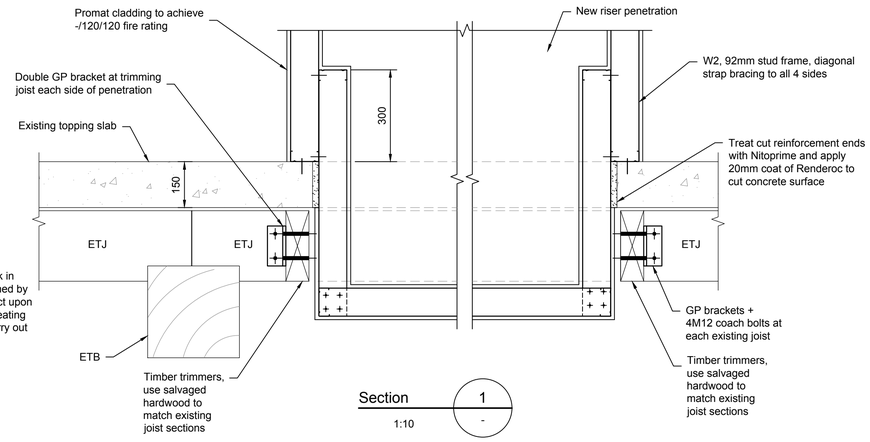
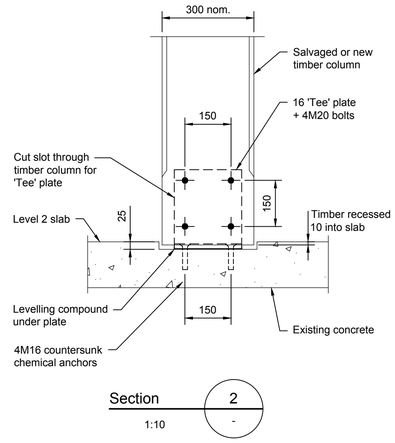


Detail at Top of Riser

1:10



Section 1 / - 1:10



Section 2 / - 1:10

TC1 Column Base Fixing at Level 1

1:10 0 500mm 1000mm

1:100 0 5000mm 10000mm

NOT FOR CONSTRUCTION

Notes

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Title: ASN Building Bay 4-5
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Level 1 Plan & Details

Designed	JK	-	Eng check	AB	-
Drawn	RM	-	Coordination	JK	-
Dwg check	DL	-	Approved	GB	-
Scale at A1	1:100, 10	Status	TEN	Rev	02
Security	STD				

Drawing Number: MMD-389718-S-DR-00- 01-0020

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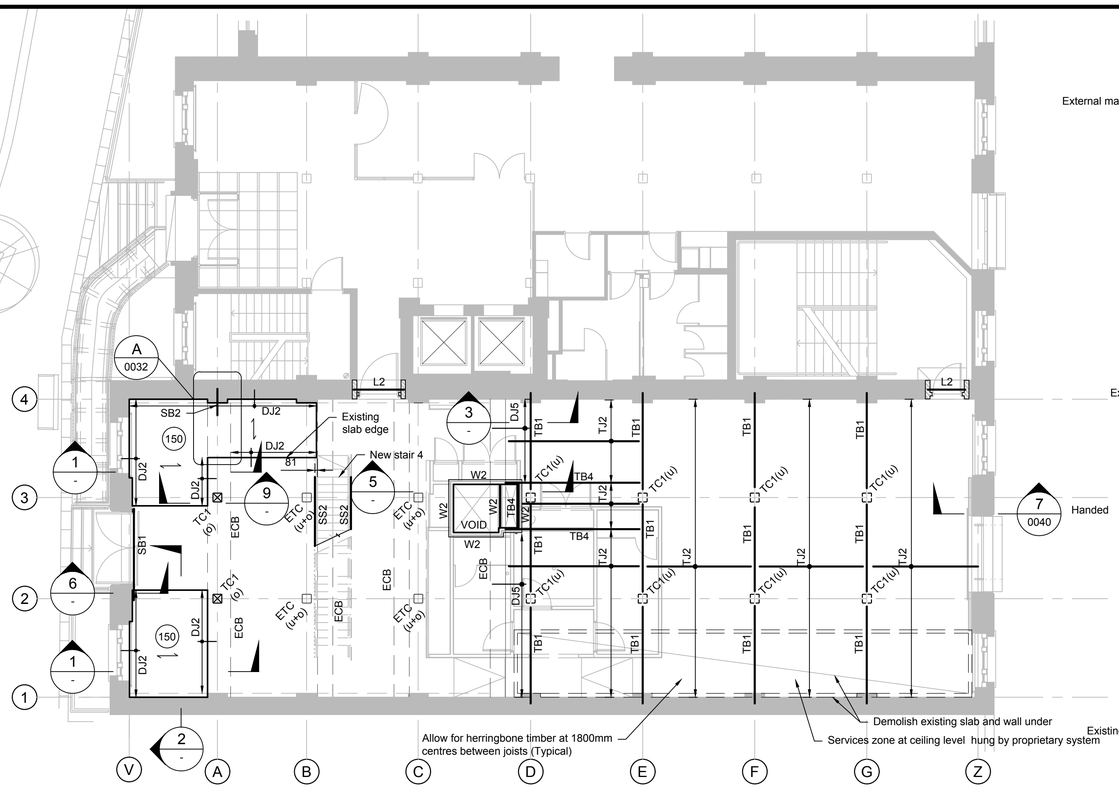
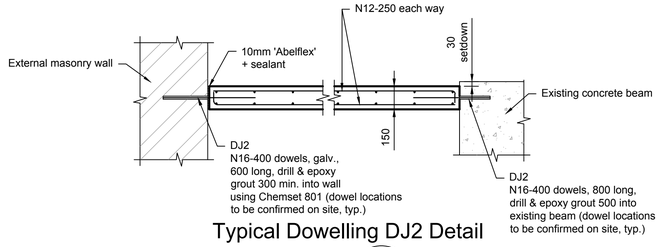


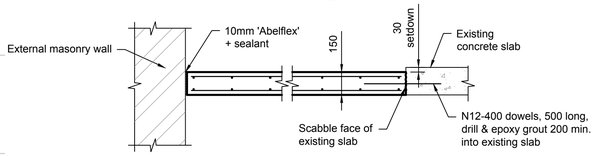
Level 2 Plan

1:100

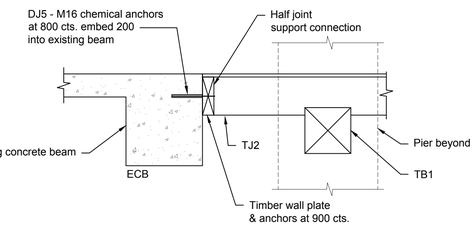


Typical Dowelling DJ2 Detail

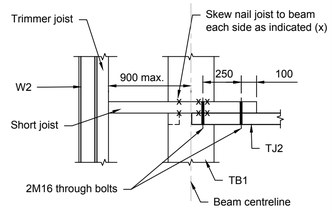
Section 1 / - — 1:20



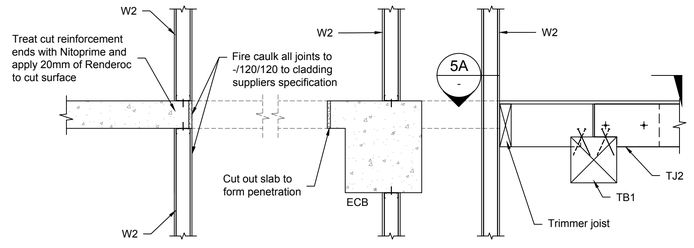
Section 2 / - — 1:20



Section 3 / - — 1:20



Section 5A / - — 1:20



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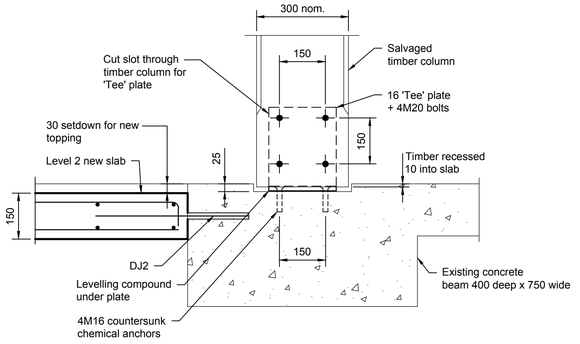
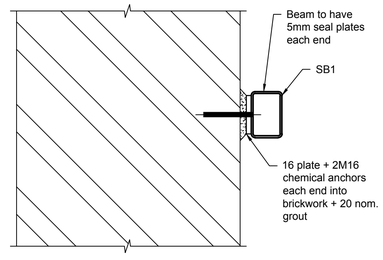


Section 9 / - — 1:10

TC1 Column Base Fixing at Level 2



Door Head Detail

Section 6 / - — 1:10

Member Schedule

Existing concrete beam	ECB		
Existing timber beam *	ETB		
Existing timber column *	ETC		
Existing timber joist	ETJ		
New concrete beam	CB1	300D x 650W, Refer to Section A1 on drg. XX-0060	
	CB2	300D x 400W, Refer to Section 3 on drg. XX-0060	
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1:10 0 500mm 1000mm
1:20 0 1000mm 2000mm
1:100 0 5000mm 10000mm

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P3	31.01.18	RM	Issue for Coordination	AB	-
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Client
Property NSW

Title
ASN Building Bay 4-5
1-3 Hickson Road, The Rocks

Level 2 Plan & Details

Designed	JK	-	Eng check	AB	-
Drawn	RM	-	Coordination	JK	-
Dwg check	DL	-	Approved	GB	-
Scale at A1	1:10, 20,100	Status	TEN	Rev	03
Security	STD				

Drawing Number
MMD-389718-S-DR-00-02-0030

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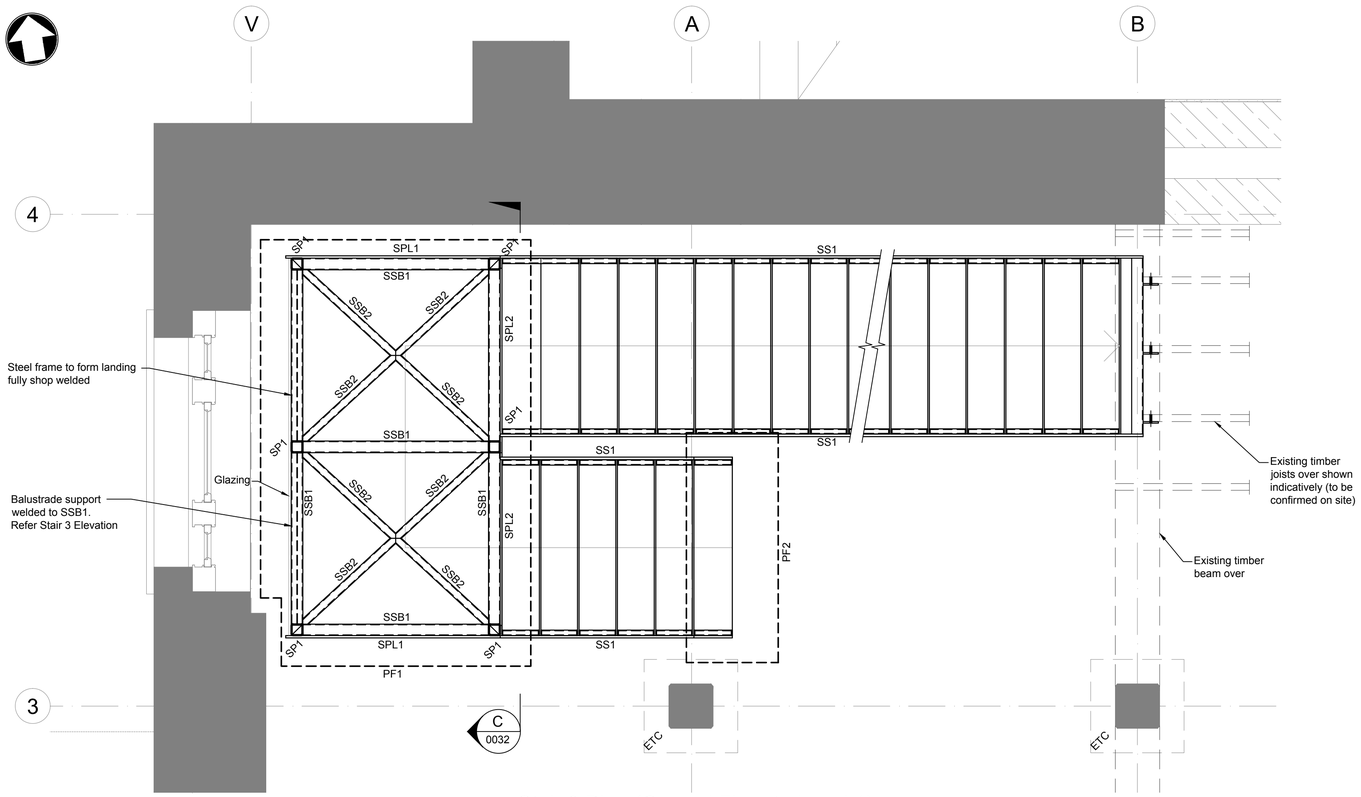
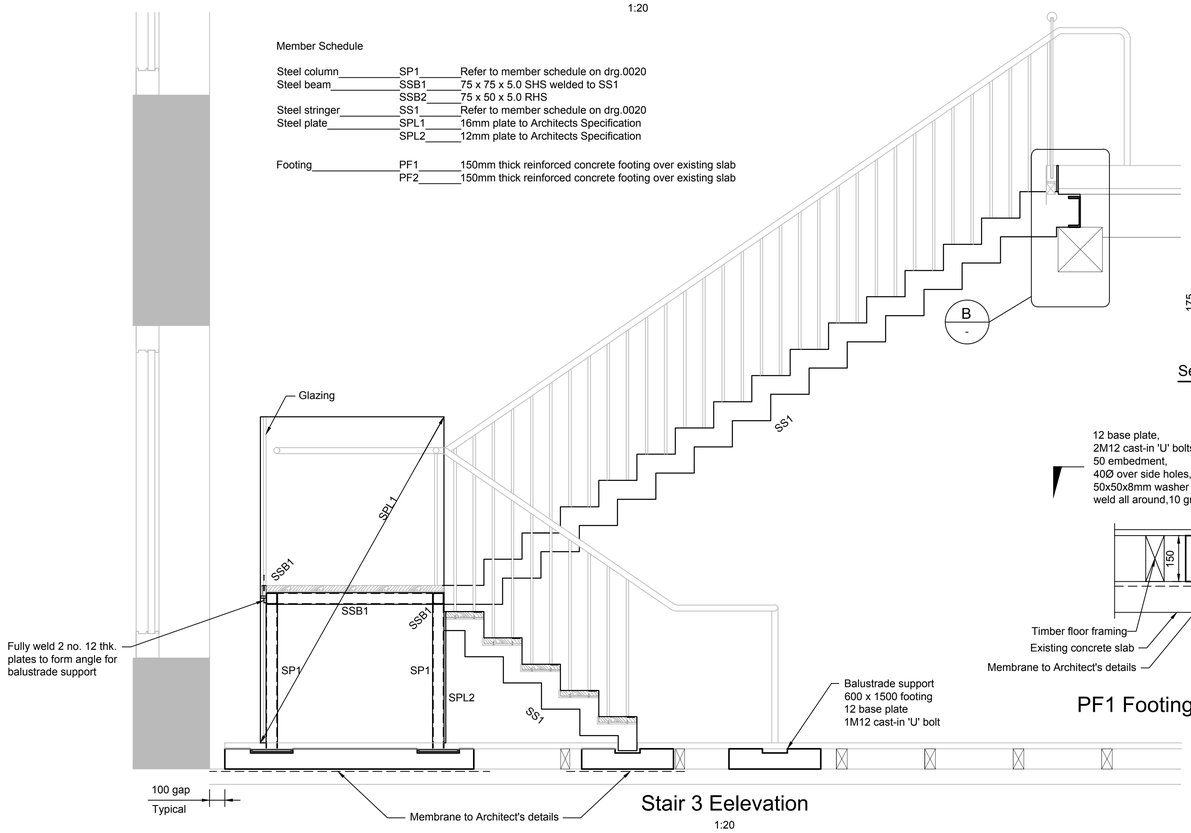


Stair 3 Plan (Ground Floor to Level 1)

1:20

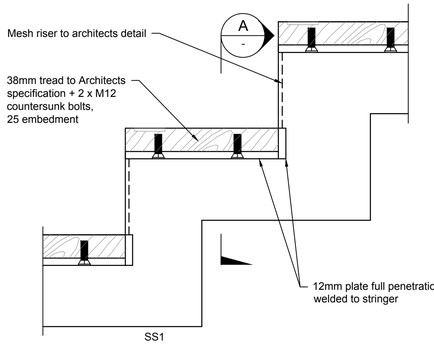
Member Schedule

Steel column	SP1	Refer to member schedule on drg.0020
Steel beam	SSB1	75 x 75 x 5.0 SHS welded to SS1
	SSB2	75 x 50 x 5.0 RHS
Steel stringer	SS1	Refer to member schedule on drg.0020
Steel plate	SPL1	16mm plate to Architects Specification
	SPL2	12mm plate to Architects Specification
Footing	PF1	150mm thick reinforced concrete footing over existing slab
	PF2	150mm thick reinforced concrete footing over existing slab



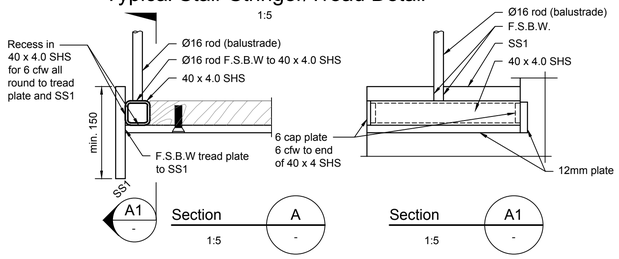
Stair 3 Eelevation

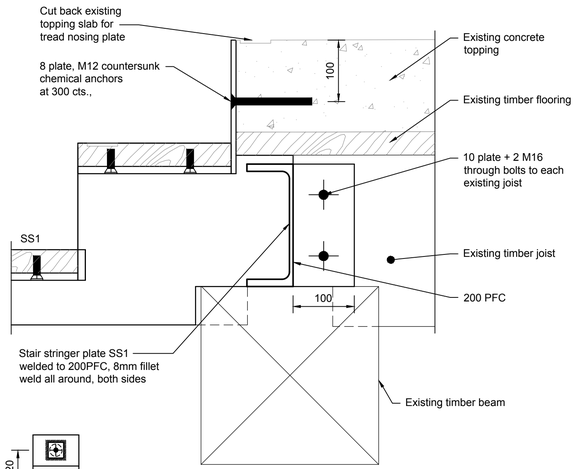
1:20

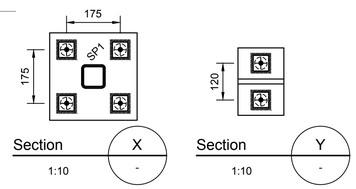


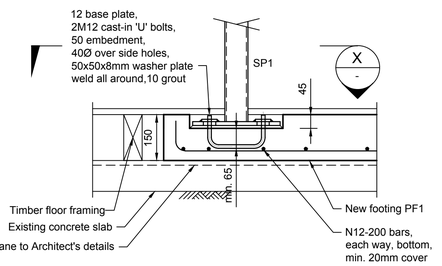
Typical Stair Stringer/Tread Detail

1:5



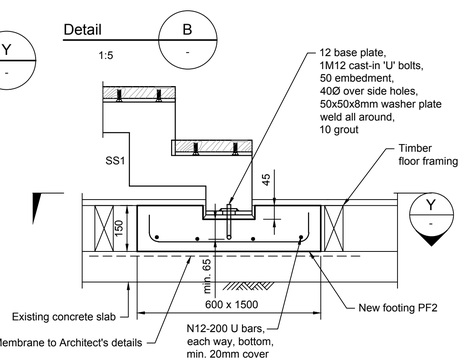






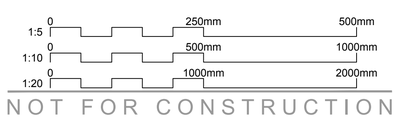
PF1 Footing & SP1 Base Plate Details

1:10



SS1 Base Plate Details

1:10



NOT FOR CONSTRUCTION

Notes

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Key to symbols

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Client
Property NSW

Title
ASN Building Bay 4-5
1-3 Hickson Road, The Rocks

New Stair 3 Plan, Elevation & Details

Designed	JK	-	Eng check	AB	-
Drawn	RM	-	Coordination	JK	-
Dwg check	DL	-	Approved	GB	-
Scale at A1	1:5, 10, 20	Status	TEN	Rev	02
Security	STD				

Drawing Number
MMD-389718-S-DR-00-02-0031

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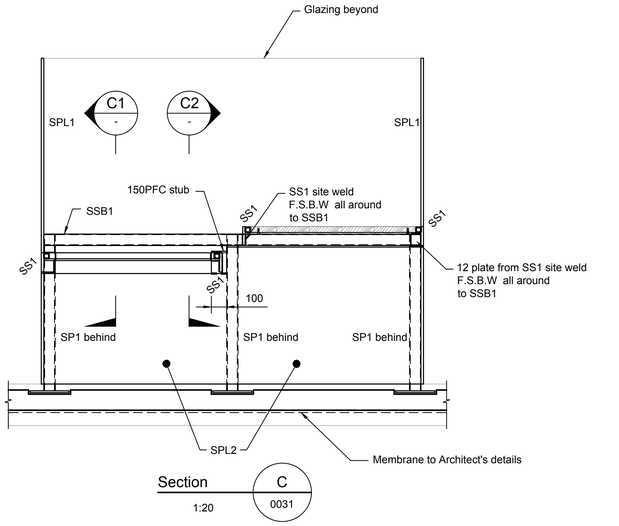
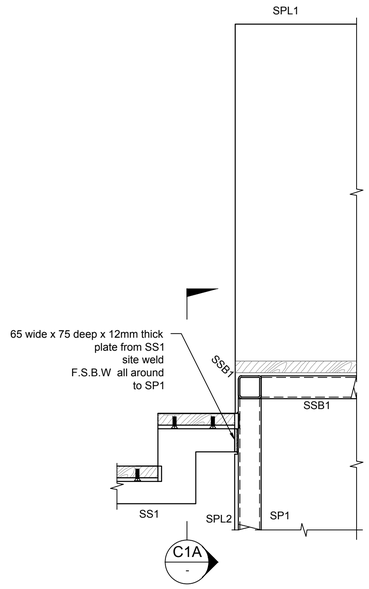


Section C
1:20 0031



Section C1
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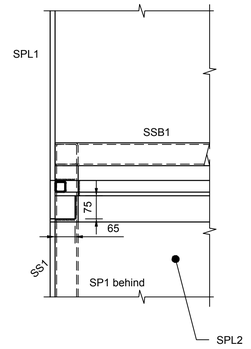

Section C1A
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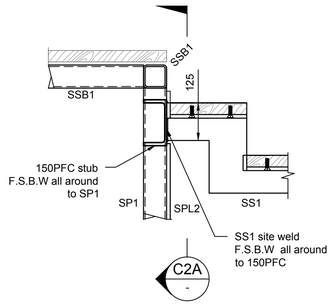
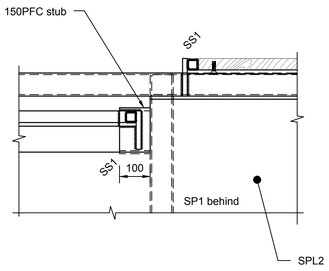


Section C2
1:10 -



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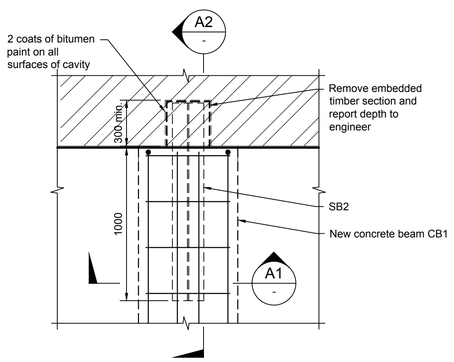
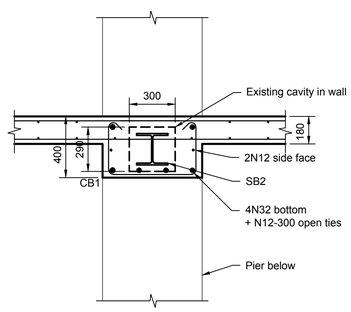
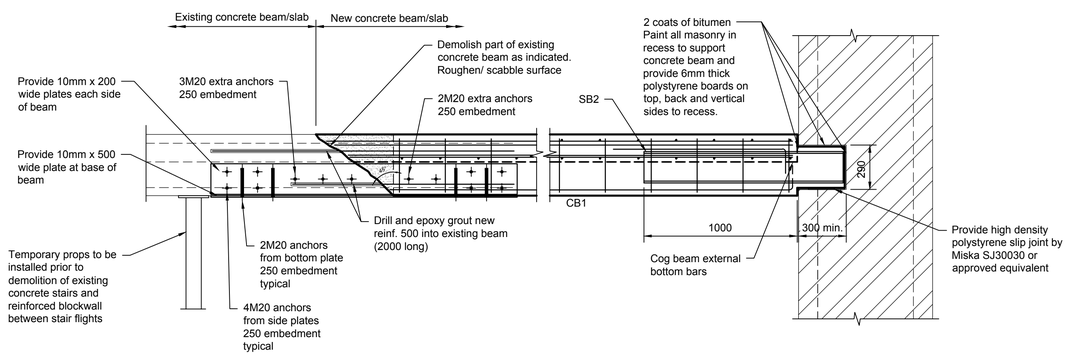


Detail A
1:20 02-0030



Section A1
1:20 -



Section A2
1:20 -

1:10 0 500mm 1000mm
1:20 0 1000mm 2000mm

NOT FOR CONSTRUCTION

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Client
Property NSW

Title
ASN Building Bay 4-5
1-3 Hickson Road, The Rocks

New Stair 3 Sections & Details

Designed	JK	-	Eng check	AB	-
Drawn	RM	-	Coordination	JK	-
Dwg check	DL	-	Approved	GB	-
Scale at A1 1:10, 20	Status TEN		Rev 03	Security STD	

Drawing Number
MMD-389718-S-DR-00-02-0032

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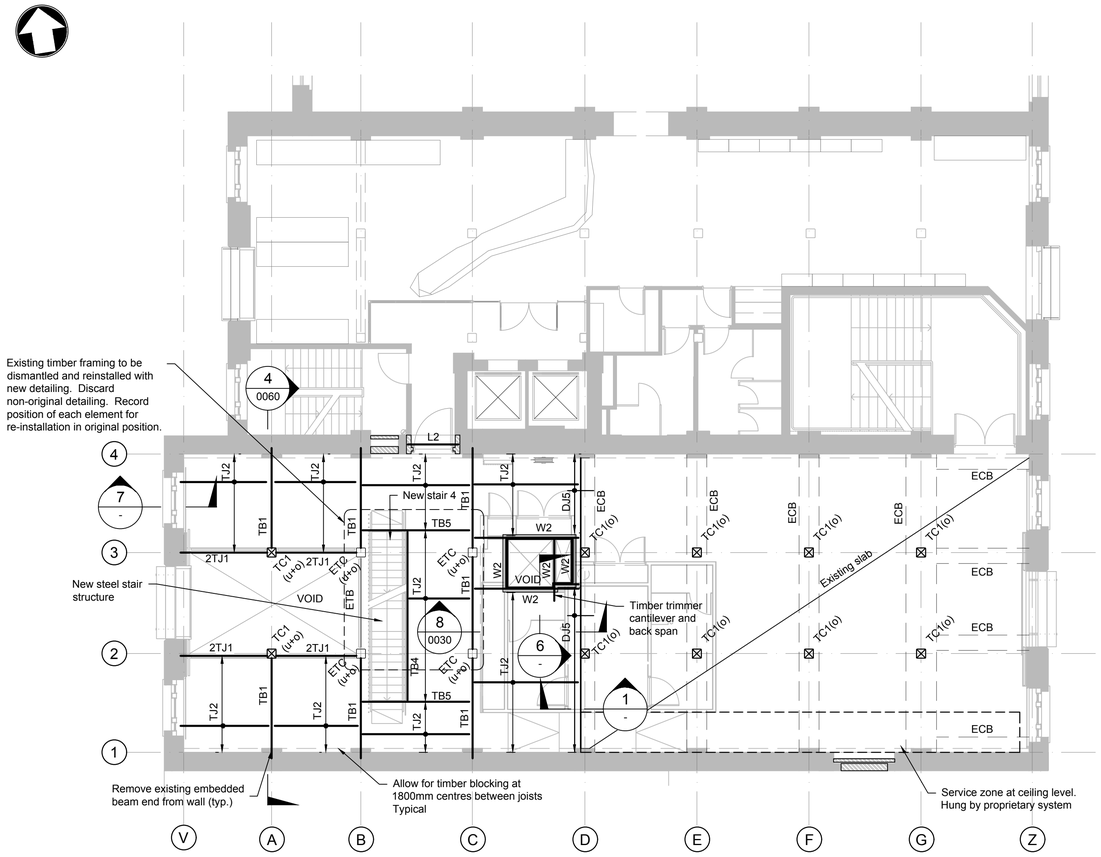


Level 3 Plan

1:100

Member Schedule

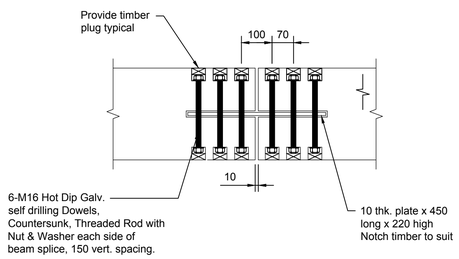
Existing concrete beam	ECB	
Existing timber beam *	ETB	
Existing timber column *	ETC	
Existing timber joist	ETJ	
New concrete beam	CB1	300D x 650W, Refer to Section A1 on drg. XX-0060
	CB2	300D x 400W, Refer to Section 3 on drg. XX-0060
	CB3	630D x 650W, Refer to Section 4 on drg. XX-0060
New timber beam	TB1	310 x 300 hardwood (new or salvaged)
	TB2	
	TB3	190 x 45 F7
	TB4	2 x 280 x 75 hardwood
	TB5	2 x 268 x 75 hardwood + 155BT23
New timber column *	TC1	310 x 300 hardwood (new or salvaged)
	TC2	
New timber joist	TJ1	280 x 75 hardwood (new or salvaged)
	TJ2	
	TJ3	150 x 45 F7 at 450 cts
	J1	140 x 35 F7 at 450 cts
	CJ	140 x 35 F7 treated pine
	PJ	140 x 35 F7 treated pine
	TP	2/140 x 35 F7 treated pine
New timber bearers	B1	190 x 45 F7
Wall	W1	110 brick
	W1A	76 brick on edge
	W2	92mm x 0.75 BMT at 450 cts. Rondo stud wall diagonally braced all sides to inside face with 30mm x 0.8mm galv. strap in each direction. Lined inside and out with Promat to achieve -/120/120 fire rating. Lap studs 900 and screw through where required.
Lintel	L1	110 x 80 Ultralintel
	L2	5 off 110 x 170 Ultralintels
	L3	6 off 110 x 170 Ultralintels
	L4	75 x 8 stainless steel flat bar, 100 bearing each end
Steel Beam	SB1	150 x 100 x 6.0 RHS
	SB2	200UC52.2 hot dip galv.
Steel joists	SJ1	50 x 50 x 5.0 SHS at 450 cts
	SJ2	50 x 50 x 5.0 SHS
Steel Posts	SP1	75 x 75 x 5.0 SHS
	SP2	50 x 50 x 5.0 SHS + 200 square base plate for L2
Stair Stringers	SS1	16 plate formed to Architect's specification
	SS2	25 plate formed to Architect's specification

All suspended slabs to be 180 thick with N12 @ 250 each way top and bottom unless noted otherwise
All softwood members to be H2 treated pine.

All timber joists to be skew nailed to existing timber beams at locations between grids V and C and 1 and 4

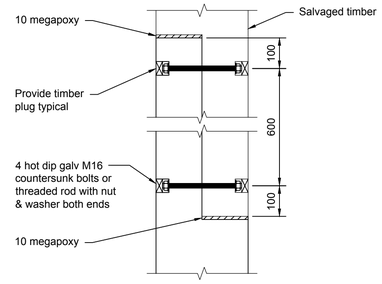
* Notation for timber beams and columns:
(u) Column continues below floor level only
(o) Column continues over floor level only
(u + o) Column continues below and over for level.

1:10 0 500mm 1000mm
1:20 0 1000mm 2000mm
1:100 0 5000mm 10000mm



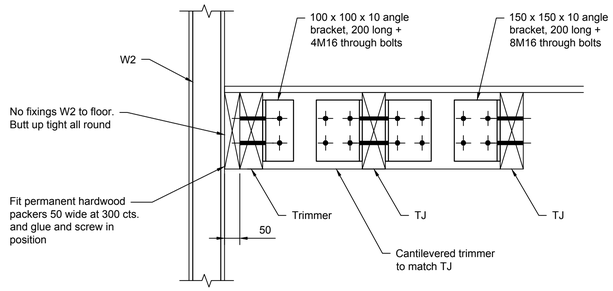
Splice Detail for Timber Beams (if required)

1:10

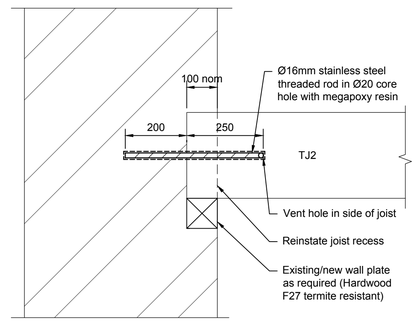


Splice Detail for Timber Columns (if required)

1:10



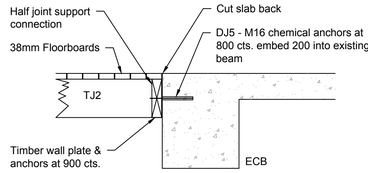
Section 6 - 1:10



Installation Methodology:
1. Drill 1 No. Ø20mm core hole 200mm into brickwork.
2. Drill 1 No. Ø20mm core hole 250mm into timber joist.
3. Fix 1 No. Ø16mm stainless steel threaded rods with megapoxy resin into core hole in brickwork.
4. Fix timber joist to 1 No. Ø16mm stainless steel threaded rod with megapoxy resin.

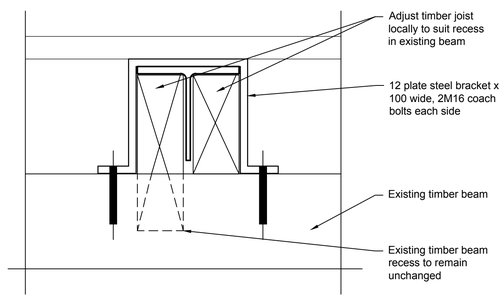
Typical Joist End To Wall Connection

Section 7 - 1:10



Typical Dowelling DJ5 Detail

Section 1 - 1:20



TB5 Connection to Existing Timber Beam

1:5

NOT FOR CONSTRUCTION

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Level 3 Plan & Details

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Drawn	RM	-	Coordination	JK	-
Dwg check	DL	-	Approved	GB	-

Scale at A1	Status	Rev	Security
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Drawing Number
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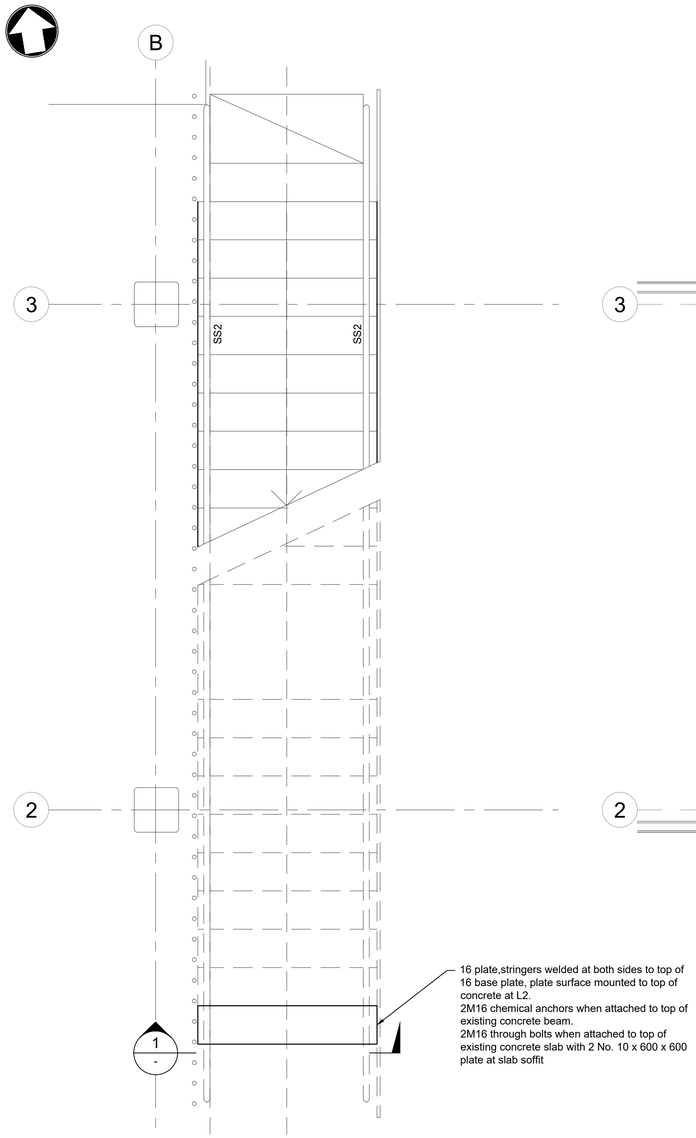


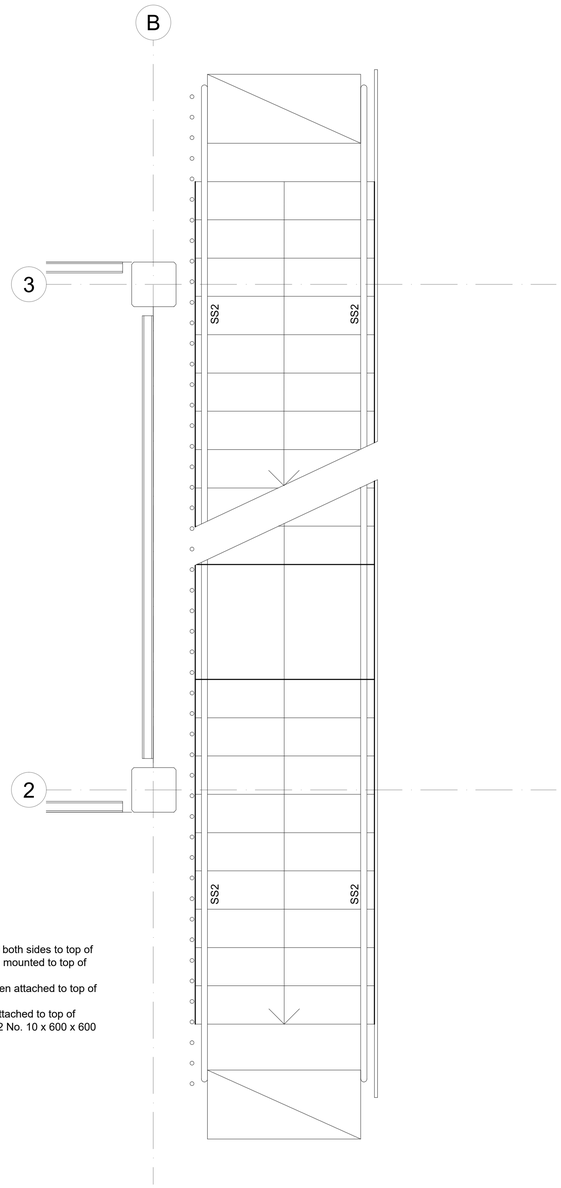
Stair 4 Plan - Flight 4-1 (Level 2 to Level 3)

1:20

Member Schedule

Steel stringer_____SS2_____Refer to Member Schedule on drg. 01-0020

Refer to drg.02-0031 for Typical Stair Stringer/Tread Detail



Stair 4 Plan - Flight 4-2 (Level 3 to Level 4)

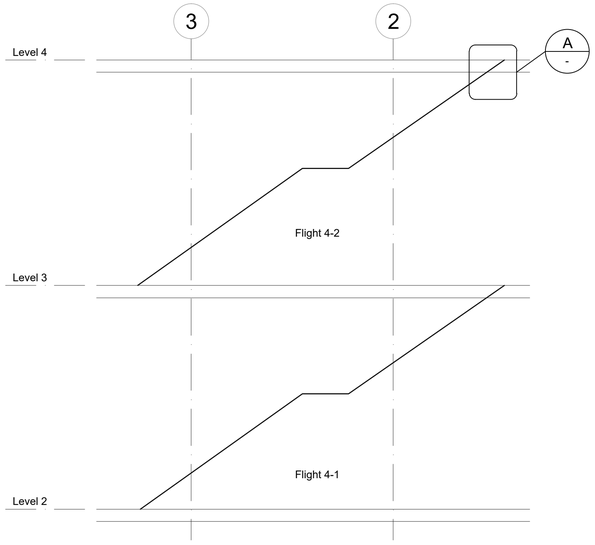
1:20

Stair 4 similar to Stair 3

Refer to drg.02-0031 for Typical Stair Stringer/Tread Detail

Member Schedule

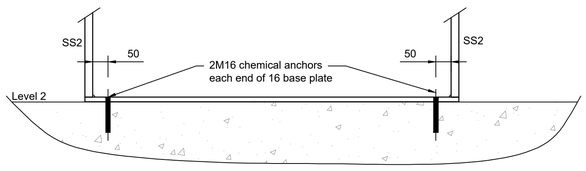
Steel stringer_____SS2_____Refer to Member Schedule on drg. 01-0020



Stair 4 Elevation

1:50

Note:
Connection TB4 to TB5 to be 150 x 150 x 10 angle bracket both sides , 200 long + 8M16 through bolts



Section 1 / 1:10

Level 3 connection similar

Detail A / - 1:5

1:10 0 500mm 1000mm

1:20 0 1000mm 2000mm

1:50 0 2500mm 5000mm

NOT FOR CONSTRUCTION

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New Stair 4 Plans, Elevation & Details

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Drawn	RM	-	Coordination	JK	-
Dwg check	DL	-	Approved	GB	-
Scale at A1 1:10, 20, 50	Status TEN		Rev 02	Security STD	

Drawing Number: MMD-389718-S-DR-00-03-0041

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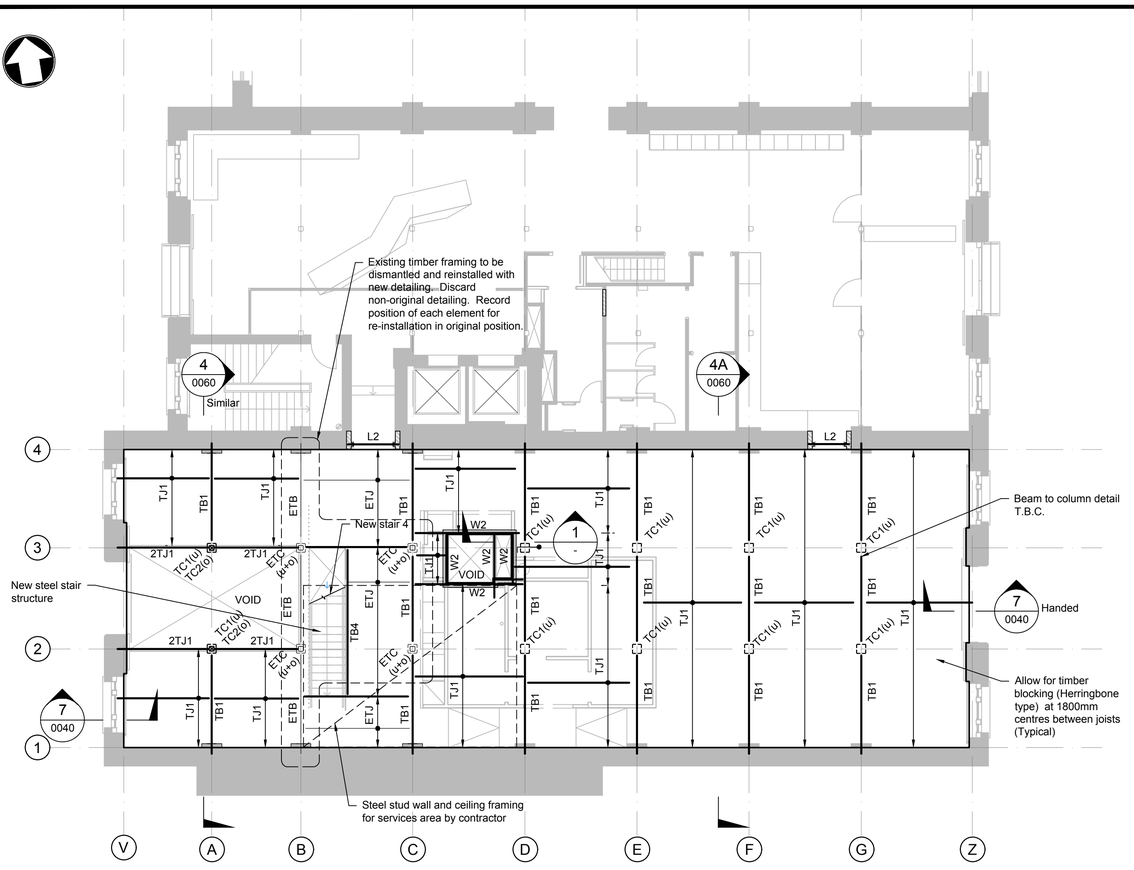

Level 4 Plan

1:100

Member Schedule

Existing concrete beam	ECB		
Existing timber beam *	ETB		
Existing timber column *	ETC		
Existing timber joist	ETJ		
New concrete beam	CB1	300D x 650W, Refer to Section A1 on drg. XX-0060	
	CB2	300D x 400W, Refer to Section 3 on drg. XX-0060	
	CB3	630D x 650W, Refer to Section 4 on drg. XX-0060	
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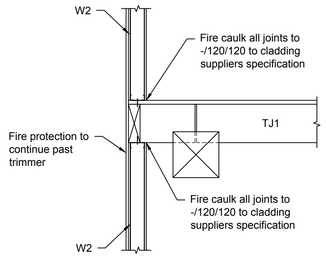
	TB2		
	TB3	190 x 45 F7	
	TB4	2 x 280 x 75 hardwood	
	TB5	2 x 268 x 75 hardwood + 155BT23	
New timber column *	TC1	310 x 300 hardwood (new or salvaged)	
	TC2		
New timber joist	TJ1	280 x 75 hardwood (new or salvaged)	
	TJ2		
	TJ3	150 x 45 F7 at 450 cts	
	J1	140 x 35 F7 at 450 cts	
	CJ	140 x 35 F7 treated pine	
	PJ	140 x 35 F7 treated pine	
	TP	2/140 x 35 F7 treated pine	
New timber bearers	B1	190 x 45 F7	
Wall	W1	110 brick	
	W1A	76 brick on edge	
	W2	92mm x 0.75 BMT at 450 cts. Rondo stud wall diagonally braced all sides to inside face with 30mm x 0.8mm galv. strap in each direction. Lined inside and out with Promat to achieve -/120/120 fire rating. Lap studs 900 and screw through where required.	
Lintel	L1	110 x 80 Ultralintel	
	L2	5 off 110 x 170 Ultralintels	
	L3	6 off 110 x 170 Ultralintels	
	L4	75 x 8 stainless steel flat bar, 100 bearing each end	
Steel Beam	SB1	150 x 100 x 6.0 RHS	
	SB2	200UC52.2 hot dip galv.	
Steel joists	SJ1	50 x 50 x 5.0 SHS at 450 cts	
	SJ2	50 x 50 x 5.0 SHS	
Steel Posts	SP1	75 x 75 x 5.0 SHS	
	SP2	50 x 50 x 5.0 SHS + 200 square base plate for L2	
Stair Stringers	SS1	16 plate formed to Architect's specification	
	SS2	25 plate formed to Architect's specification	

All suspended slabs to be 180 thick with N12 @ 250 each way top and bottom unless noted otherwise
All softwood members to be H2 treated pine.

All timber joists to be skew nailed to existing timber beams at locations between grids V and C and 1 and 4

* Notation for timber beams and columns:
(u) Column continues below floor level only
(o) Column continues over floor level only
(u + o) Column continues below and over for level.

1:10 0 500mm 1000mm
1:20 0 1000mm 2000mm
1:100 0 5000mm 10000mm



Section 1
1:20 -

NOT FOR CONSTRUCTION

Notes

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Client
Property NSW

Title
ASN Building Bay 4-5
1-3 Hickson Road, The Rocks

Level 4 Plan & Details

Designed	JK	-	Eng check	AB	-
Drawn	RM	-	Coordination	JK	-
Dwg check	DL	-	Approved	GB	-

Scale at A1	Status	Rev	Security
1:100,20,10	TEN	02	STD

Drawing Number
MMD-389718-S-DR-00-04-0050

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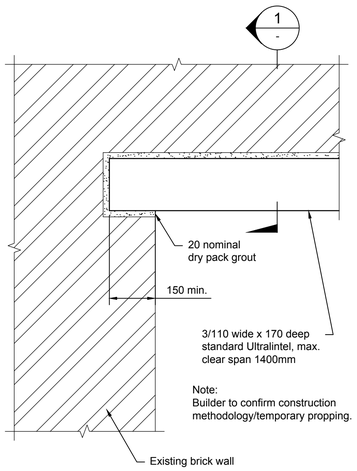
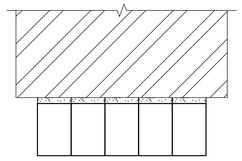
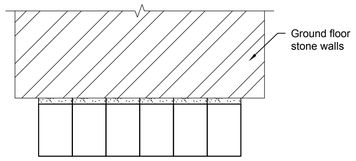


Typical L2/L3 Lintel Detail

1:10

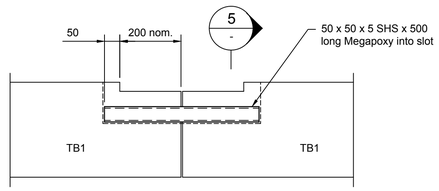


L2 Detail



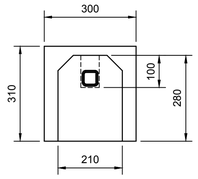
L3 Detail

Section 1 / - / 1:10

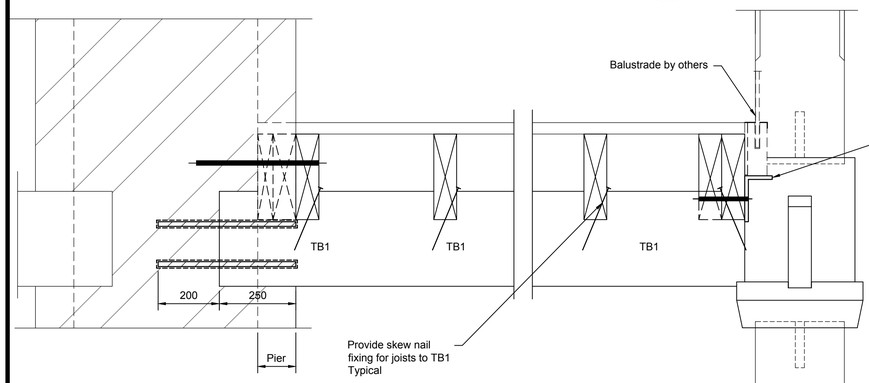


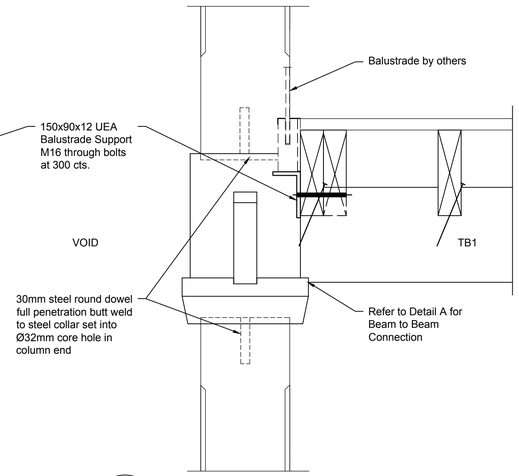
Typical TB1 to TB1Connection Detail

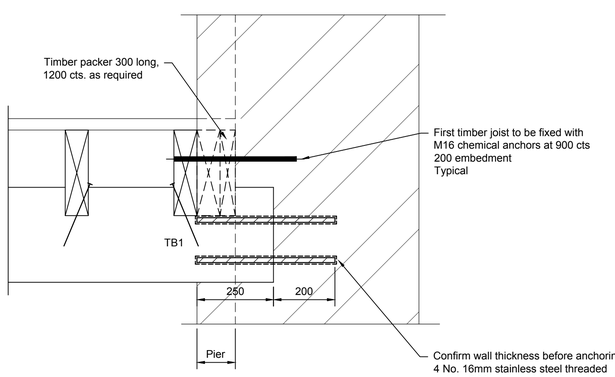
Detail A / - / 1:10



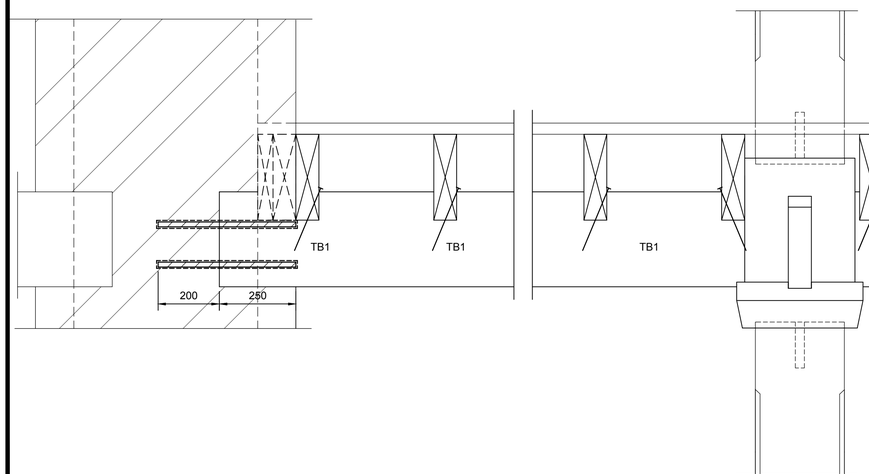
Section 5 / - / 1:10

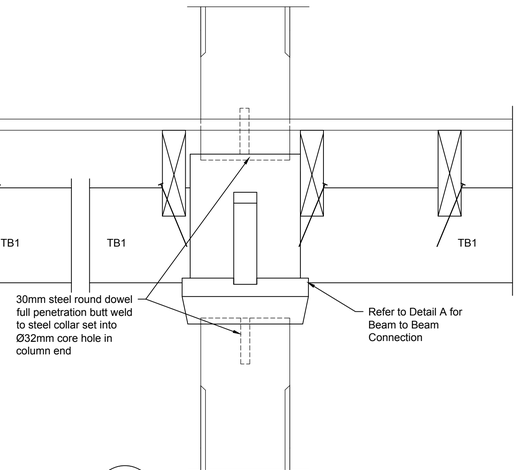


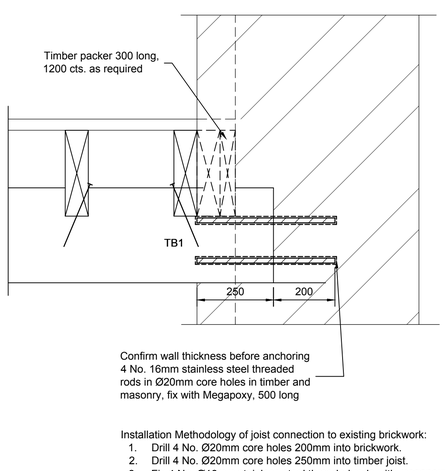




Section 4 / 0040 / 1:10







Section 4A / 0050 / 1:10

Installation Methodology of joist connection to existing brickwork:

1. Drill 4 No. Ø20mm core holes 200mm into brickwork.
2. Drill 4 No. Ø20mm core holes 250mm into timber joist.
3. Fix 4 No. Ø16mm stainless steel threaded rods with megapoxy resin into core holes in brickwork.
4. Fix timber joist to 4 No. Ø16mm stainless steel threaded rods with megapoxy resin.

1:10 0 500mm 1000mm

NOT FOR CONSTRUCTION

Notes

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Key to symbols

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Client

Property NSW

Title

ASN Building Bay 4-5
1-3 Hickson Road, The Rocks

Details Sheet 1

Designed	JK	-	Eng check	AB	-
Drawn	RM	-	Coordination	JK	-
Dwg check	DL	-	Approved	GB	-

Scale at A1	Status	Rev	Security
1:10	TEN	03	STD

Drawing Number

MMD-389718-S-DR-00-XX-0060

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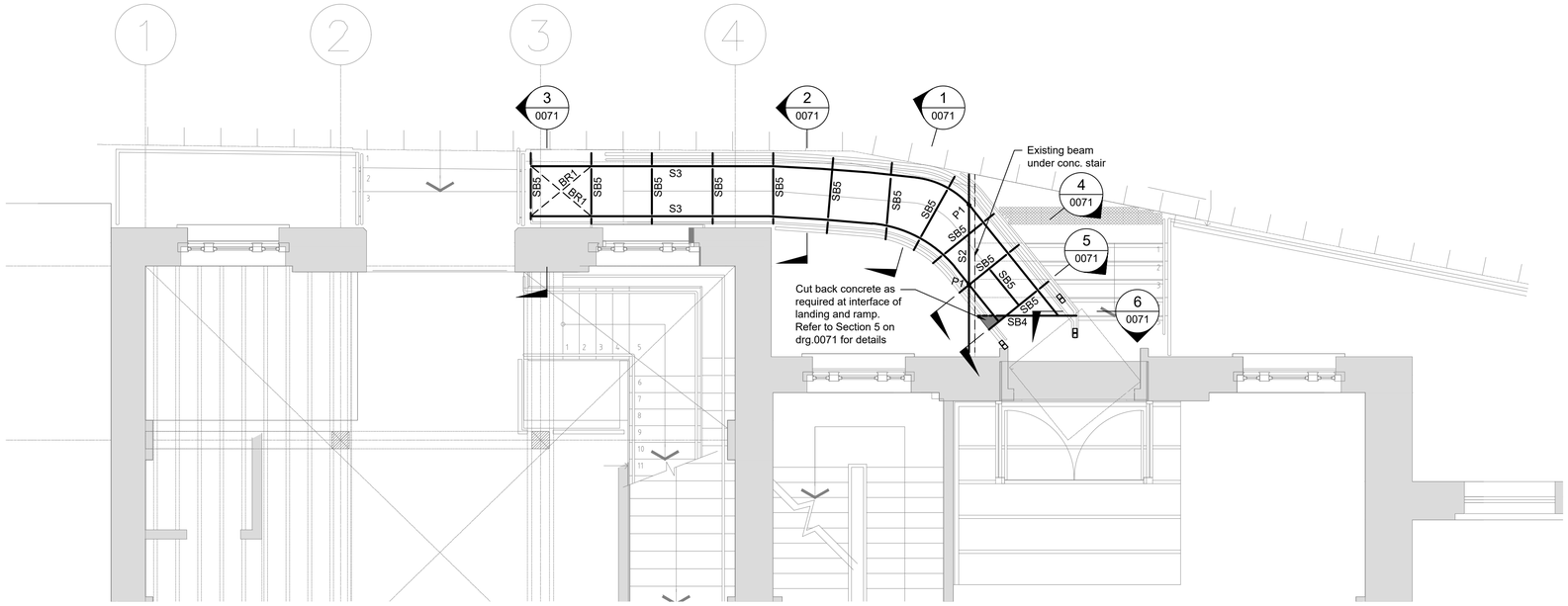

Access Ramp Plan

1:50

Member Schedule

Stringers	S2	230 PFC
	S3	150 x 100 x 9 RHS
Steel beams	SB4	75 x 75 x 10 EA
	SB5	100BT14.9 at location of uprights
Upright	U1	2/50 x 10mm plates at max. 1000mm cts.
Struts	ST1	65 x 65 x 4 SHS
	ST2	100 x 100 x 9 SHS
Stud post	P1	40 x 40 x 2.5 SHS
Infill plates	PL1	50 x 12mm steel plate
	PL2	Heelguard panel 50 thick (typ.), 30 thick on last rise
Bracing	BR1	Ø12 rod

1:50 0 2500mm 5000mm

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External Access Ramp Framing Plan

Designed	JK	-	Eng check	AB	-
Drawn	RM	-	Coordination	JK	-
Dwg check	DL	-	Approved	GB	-

Scale at A1	Status	Rev	Security
1:50	TEN	02	STD

Drawing Number
MMD-389718-S-DR-00-XX-0070

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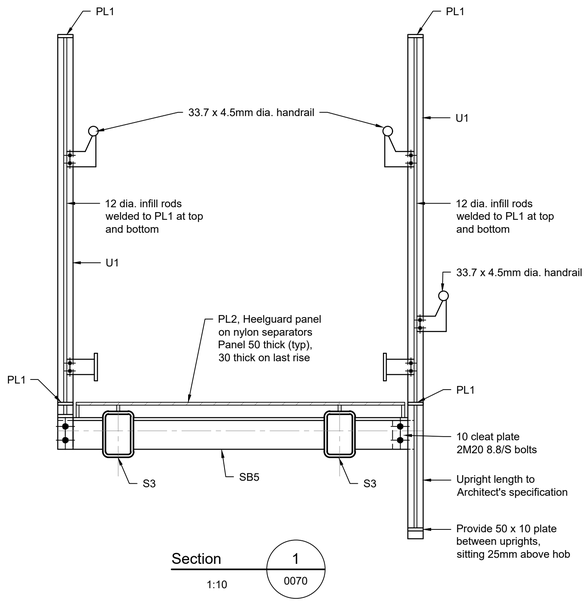
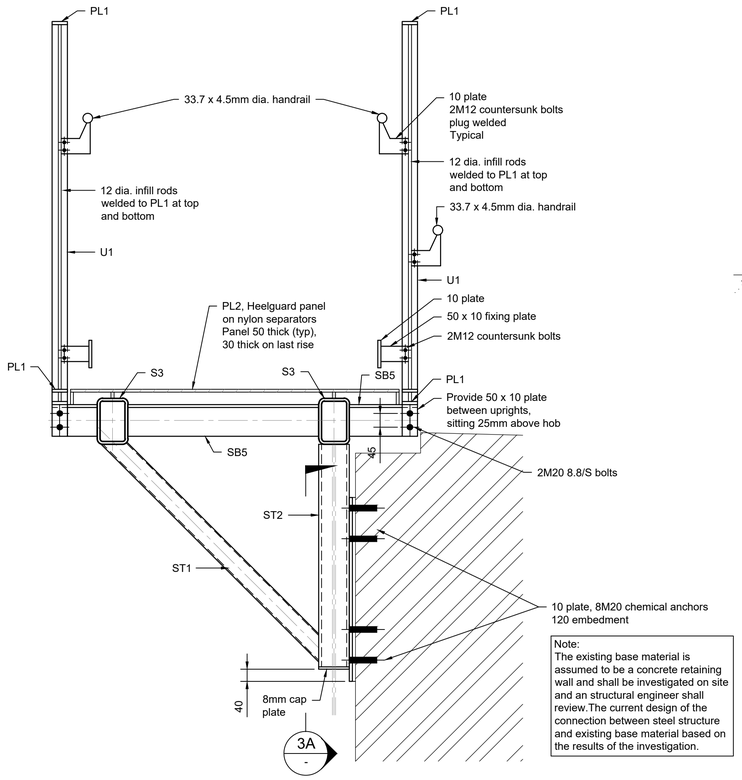


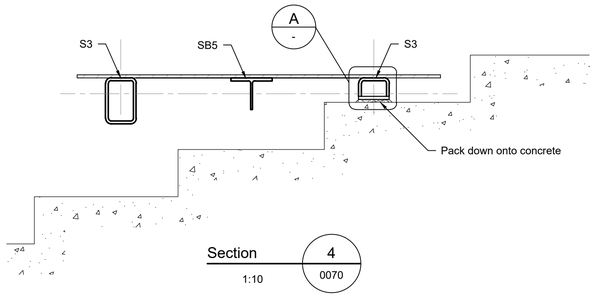
Section 1 / 0070 — 1:10



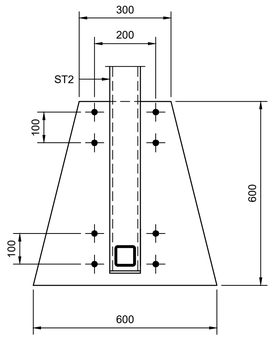
Note:
The existing base material is assumed to be a concrete retaining wall and shall be investigated on site and an structural engineer shall review.The current design of the connection between steel structure and existing base material based on the results of the investigation.

Section 3 / 0070 — 1:10

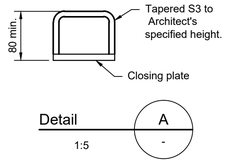
Section 2 / 0070 — Similar



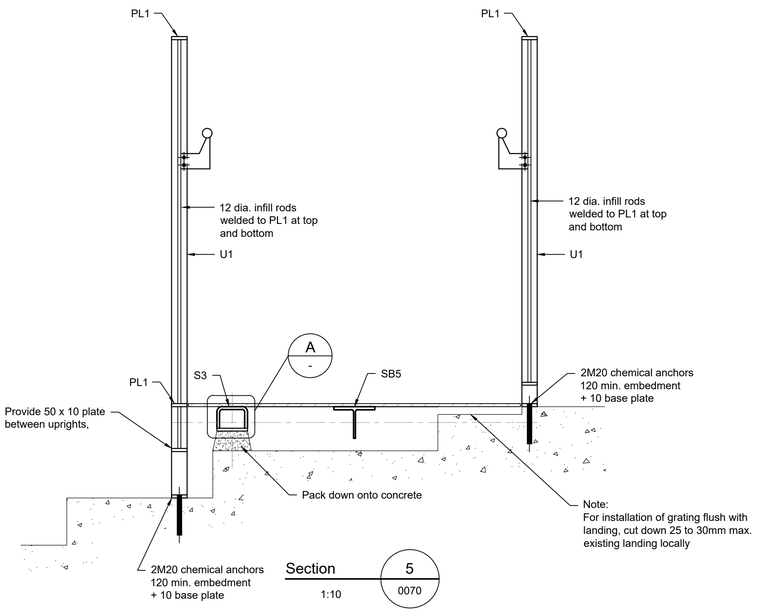
Section 4 / 0070 — 1:10



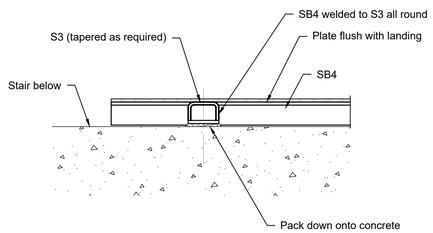
Section 3A / 0070 — 1:10



Detail A / - — 1:5



Section 5 / 0070 — 1:10



Section 6 / 0070 — 1:10

1:5 — 0 — 250mm — 500mm

1:10 — 0 — 500mm — 1000mm

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Client: Property NSW

Title: ASN Building Bay 4-5
1-3 Hickson Road, The Rocks

External Access Ramp Details

Designed	JK	-	Eng check	AB	-
Drawn	RM	-	Coordination	JK	-
Dwg check	DL	-	Approved	GB	-

Scale at A1	Status	Rev	Security
1:10,5	TEN	03	STD

Drawing Number: MMD-389718-S-DR-00-XX-0071

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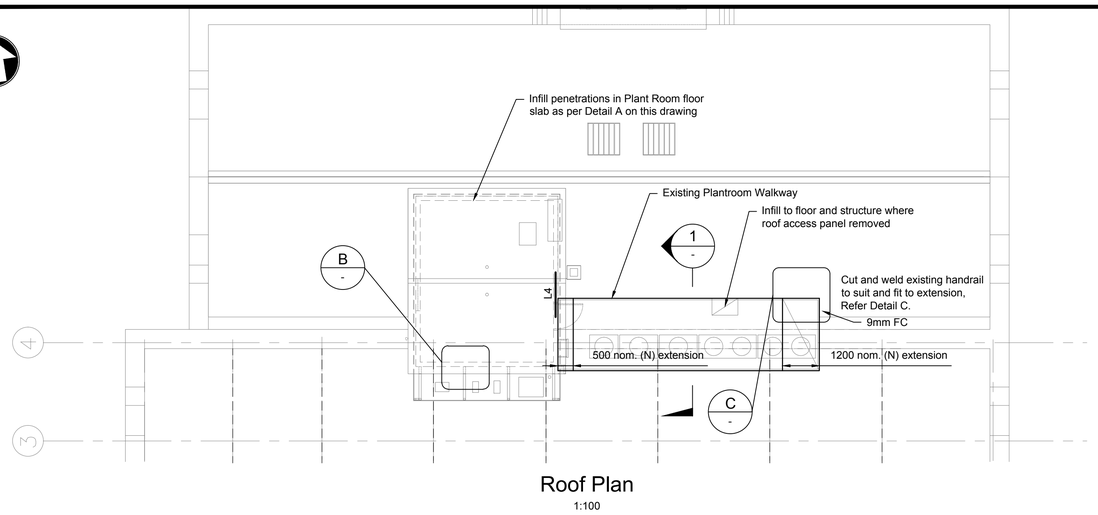
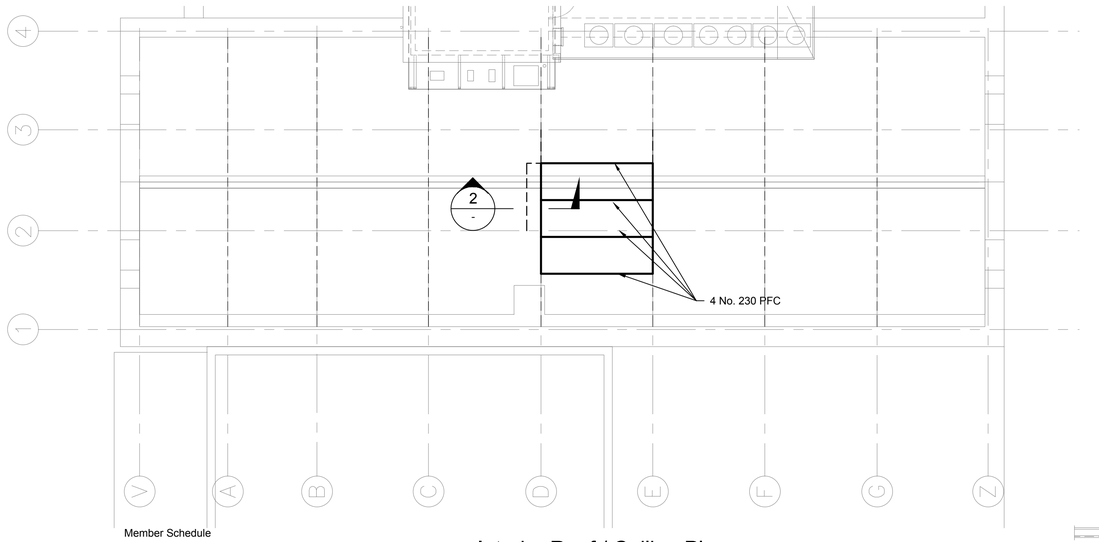


Roof Plan

1:100



Interior Roof / Ceiling Plan

1:100

Member Schedule

Existing concrete beam	ECB	
Existing timber beam *	ETB	
Existing timber column *	ETC	
Existing timber joist	ETJ	
New concrete beam	CB1	300D x 650W, Refer to Section A1 on drg. XX-0060
	CB2	300D x 400W, Refer to Section 3 on drg. XX-0060
	CB3	630D x 650W, Refer to Section 4 on drg. XX-0060
New timber beam	TB1	310 x 300 hardwood (new or salvaged)
	TB2	
	TB3	190 x 45 F7
	TB4	2 x 280 x 75 hardwood
	TB5	2 x 268 x 75 hardwood + 155BT23
New timber column *	TC1	310 x 300 hardwood (new or salvaged)
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	CJ	140 x 35 F7 treated pine
	PJ	140 x 35 F7 treated pine
	TP	2/140 x 35 F7 treated pine
New timber bearers	B1	190 x 45 F7
Wall	W1	110 brick
	W1A	76 brick on edge
	W2	92mm x 0.75 BMT at 450 cts. Rondo stud wall diagonally braced all sides to inside face with 30mm x 0.8mm galv. strap in each direction. Lined inside and out with Promat to achieve -/120/120 fire rating. Lap studs 900 and screw through where required.
Lintel	L1	110 x 80 Ultralintel
	L2	5 off 110 x 170 Ultralintels
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Steel Posts	SP1	75 x 75 x 5.0 SHS
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Stair Stringers	SS1	16 plate formed to Architect's specification
	SS2	25 plate formed to Architect's specification

All suspended slabs to be 180 thick with N12 @ 250 each way top and bottom unless noted otherwise
All softwood members to be H2 treated pine.

All timber joists to be skew nailed to existing timber beams at locations between grids V and C and 1 and 4

Notation for timber beams and columns:
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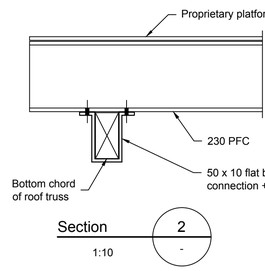
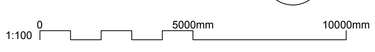
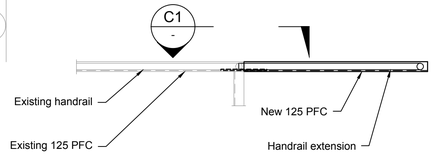
(d) Column continues over floor level only
(u + o) Column continues below and over for level

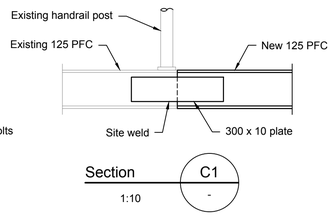


Section 2
1:10

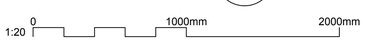


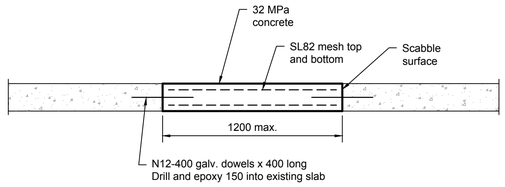


Detail C
1:20



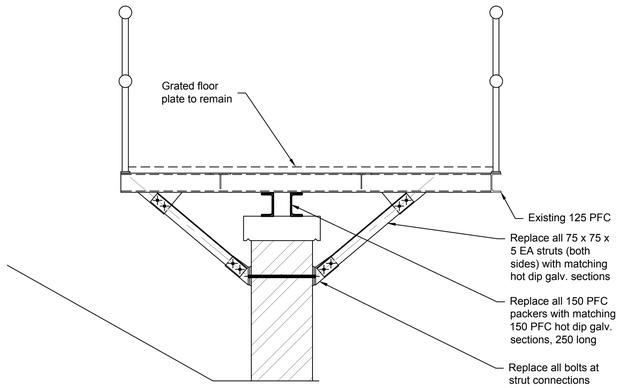
Section C1
1:10





Penetration Infill Detail
Typical Dowelling DJ5 Detail

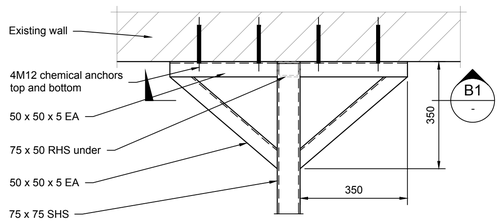
Detail A
1:20



All structural steel to remain to be treated as follows:

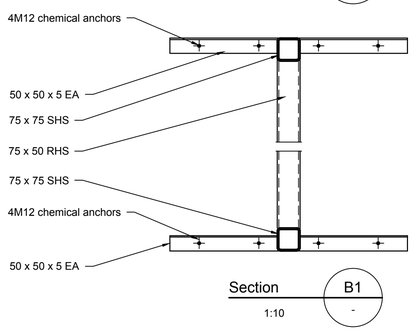
1. Power wire brush all surfaces. Remove any corrosion.
2. Apply new protective coating to accessible surfaces.

Section 1
1:20



Plan

Detail B
1:10



Section B1
1:10

NOT FOR CONSTRUCTION

Notes

Heritage Requirements

1. The proposed works will be located within a state significant heritage building.
2. All areas of the building, adjacent to heritage fabric and surfaces are to be protected during works in accordance with a heritage construction management plan.
3. The works are not to include any chasing into heritage walls or floor structures. the cutting of heritage walls for new fire doors is as documented.
4. A heritage construction management plan is to be submitted for approval prior to commencement of the works.
5. The proposed fire services system should maintain the reversibility of the existing system such that it is able to be removed without damagZ e to any heritage fabric. The drawings and or specification should include information regarding the reversibility of the design.

Key to symbols

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
02	28.03.18	JMC	Issue for Tender	JK	AB
01	23.03.18	HSW	Issue for Tender	JK	AB
0	26.02.18	HSW	Issue for Tender	JK	AB
P3	31.01.18	RM	Issue for Coordination	AB	-
P2	22.12.17	HS	Issue for Information	AB	-
P1	15.12.17	RM	Issue for Information	AB	-

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Client
Property NSW

Title
ASN Building Bay 4-5
1-3 Hickson Road, The Rocks

Roof Plan & Details

Designed	JK	-	Eng check	AB	-
Drawn	RM	-	Coordination	JK	-
Dwg check	DL	-	Approved	GB	-

Scale at A1	Status	Rev	Security
1:10, 20,100	TEN	02	STD

Drawing Number
MMD-389718-S-DR-00-RP-0080

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