Robert Bird Group
Member of the Surbana Jurong Group

SYDNEY OFFICE

Robert Bird Group Pty Ltd
ABN 67 010 580 248 ACN 010 580 248
Level 11, 151 Castlereagh Street, Sydney NSW 2000
PO Box A2309, Sydney South NSW 1235 Australia
p: +61 (0) 2 8246 3200 | f: +61 (0) 2 8246 3201
www.robertbird.com

Reference: MH:CS LTR/S 18295

19th December 2018

Yuhu Sydney One Pty Ltd
Level 15, 201 Miller Street
North Sydney NSW 2060

Attention: Rain Li

Dear Rain

RE: Yuhu Sydney One – Structural Design

Robert Bird Group (RBG) have been engaged by Yuhu Sydney One Pty Ltd to provide Structural Engineering consultancy services for the proposed Tower A and Tower B at 1 Alfred St, Sydney.

We have provided structural advice throughout the development of the updated Architectural design drawings to be submitted for the S4.55 submission in January 2019. The building design submitted as part of this application is generally in accordance with the relevant Australian Standards and all other statutory conditions relevant to the structure of the project for this stage of design development.

Yours faithfully
ROBERT BIRD GROUP PTY LTD

MATT HARDING
Principal

Robert Bird Group

Assessment for CBDRL Easement

Yuhu Sydney One

Issue: B – For S4.55 submission

16 January 2019

Prepared For: Yuhu Sydney One Pty Ltd

Project No.: 18295

bsi. ISO 9001 Quality Management

Report Amendment Register

Issue	Section & Page No.	Issue / Amendment Details	Author	Reviewer	Date
A	All	For S4.55 submission	Vu Ho	Matt Harding	19/12/2018
B	Section 1.2 Updated	For S4.55 submission	Vu Ho	Matt Harding	16/01/2019

ISSUE / AMENDMENT AUTHOR:

……..

VU HO
Signing for and on behalf of
Robert Bird Group Pty Ltd

REVIEWER:

……..

MATT HARDING
Signing for and on behalf of
Robert Bird Group Pty Ltd

Table of Contents

1.1 Purpose of the Report

The purpose of this report is to describe the anticipated structural loads and locality of the proposed 1 Alfred Street development to the vicinity of the CBD Rail Link easement.

Yuhu Sydney One Pty Ltd is in the process of applying for a section S4.55 submission. This document is intended to inform TfNSW of the structural intended future design and coordination activities to ensure compliance with TfNSW's easement deeds for the proposed CBD Rail Link alignment.

This document should be read in conjunction with the report prepared by Arup Geotechnics, as many of the structural issues are related to the geotechnical performance and Structural Sketches AP-ST-AA-05-0001-00 and AP-ST-AA-05-0002-00.

It is assumed in this report that the Yuhu Sydney One development will occur prior to the mining of the CBD Rail Link tunnels.

REFER TO D2015/1049 Condition 36 – Sydney Trains Conditions

1.2 Development Description

1 Alfred Street lies at the corner of George and Alfred Street. The project consists of the construction of a 61 storey residential building (Tower A) and an adjacent, but separate 26 storey hotel structure (Tower B) with common parking basements with six levels.

The north east corner of the combined site is partially overlying the CBDRL easement down to basement B2 level. Below basement B2 down to basement B6 the site will be excavated immediately adjacent to the CBDRL easement.

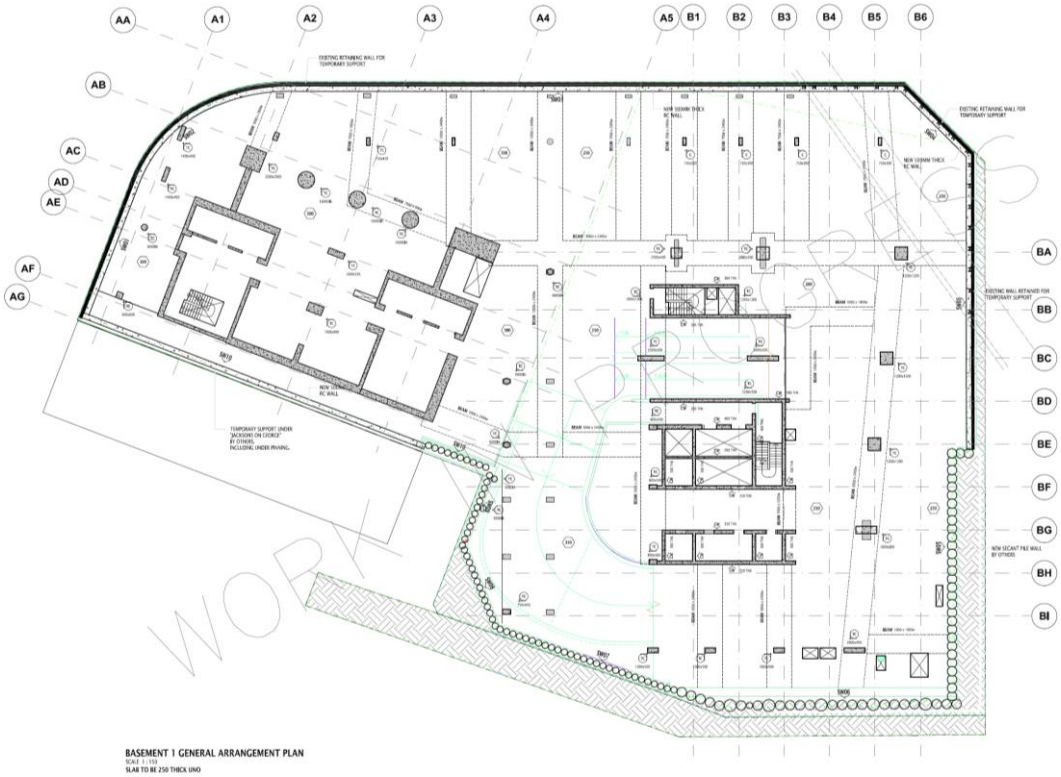


Figure 1: Overall site at B1 level

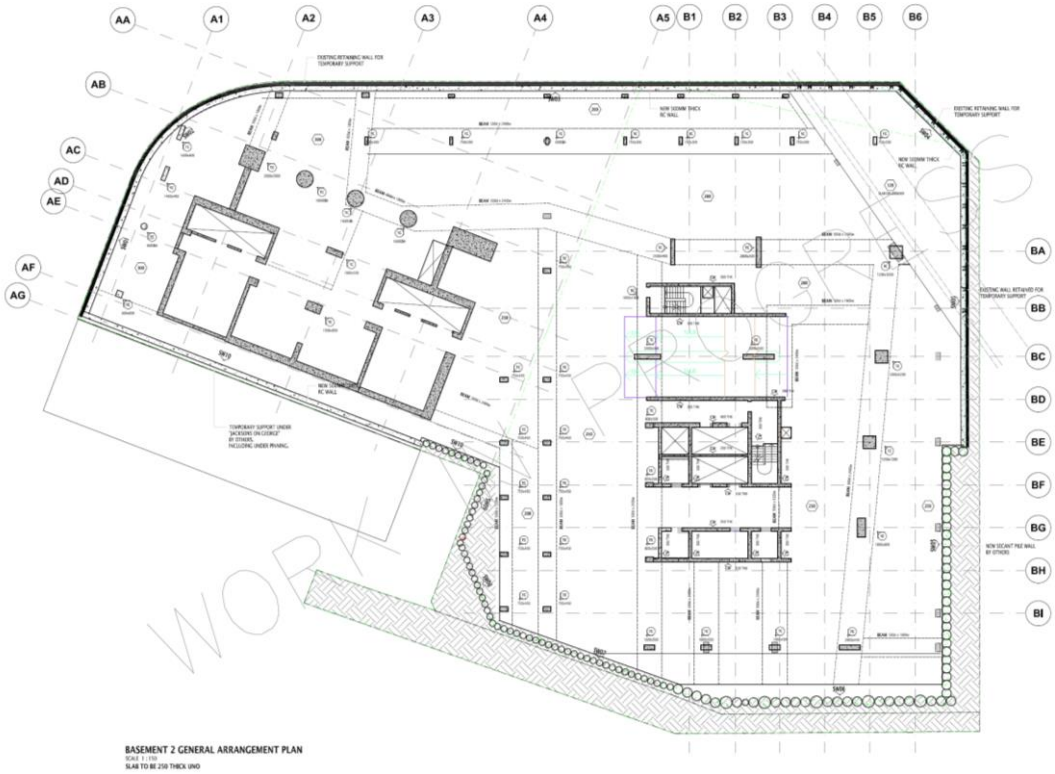


Figure 2: Overall site at B2 level

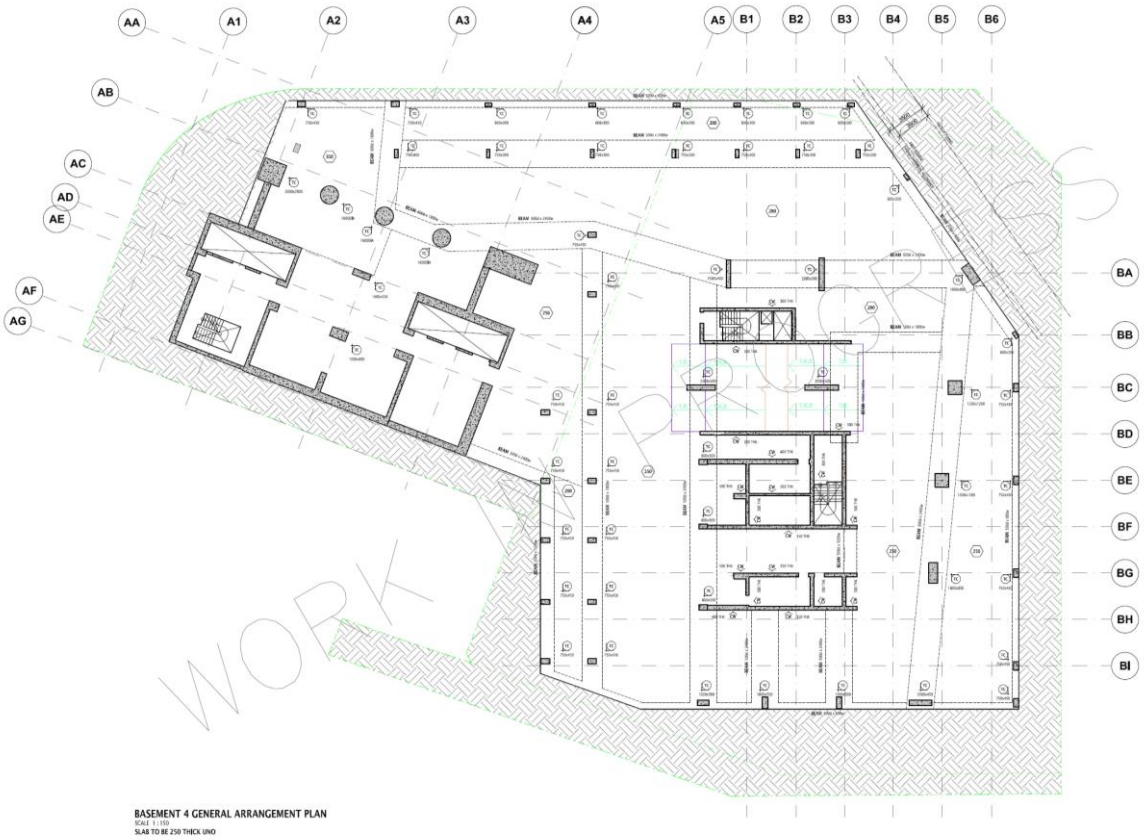


Figure 3: Overall site at B3-B6 level.

The site, at the north east corner, was previously occupied by Goldfields House, a steel and concrete office tower. The existing two storey basement wall structure at the site boundary is being retained during the demolition to minimize the impacts on Pitt street and Alfred street and the immediately adjacent Tank Stream structure. Below the existing concrete retaining wall the sandstone will be benched horizontally over the CBDRL easement and then cut vertically outside of the 1st reserve. The sandstone is expected to be left exposed, secured by rock bolts as necessary.

The basement is designed to cut off any perched water table and allowed to drain any residual water ingress through the exposed rock. Based on the Coffey Geotechnics investigations, it is expected that limited water ingress is expected will flow through the rock. If significant inflow is experienced grouting of the joints/beds will be completed.

1.3 Building Proximity to CBDRL

An assumed track and station alignment for the Macquarie Place Station has been provided by CH2M (TTSRCP-030 R6). This document outlines the location of the station and in conjunction with Sections (TTSRCP-031 R4) and loading requirements (TTSRCP-032 R7A) have informed the basement geometry of the 1 Alfred Street building. Geotechnical information at the location of the easement is currently based upon the desktop study completed by Arup Geotechnics completed in July 2016 and represents a continuation of the advice previously provided to TfNSW by Coffey. This desktop study anticipates approximately 2-3m metres of residual soil and fill, overlaying a 3-5m band of Class IV/V sandstone, which overlays Class I/II sandstone.

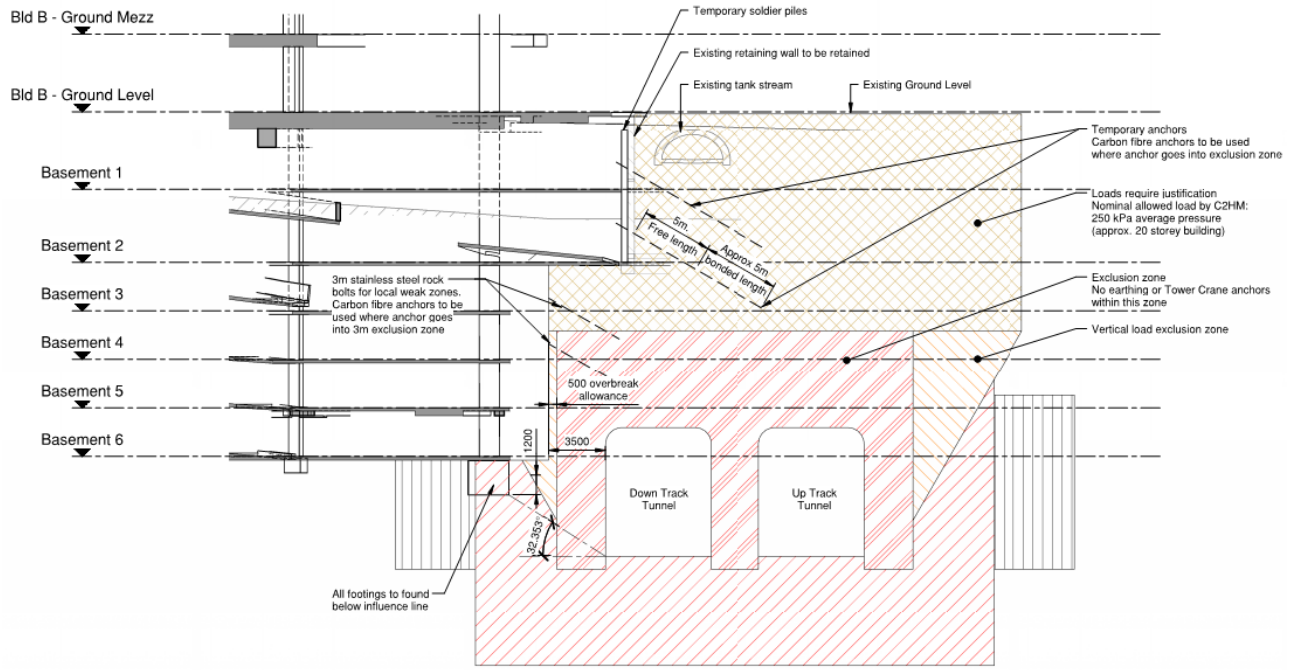


Figure 4 Tunnel Proximity – Section 1

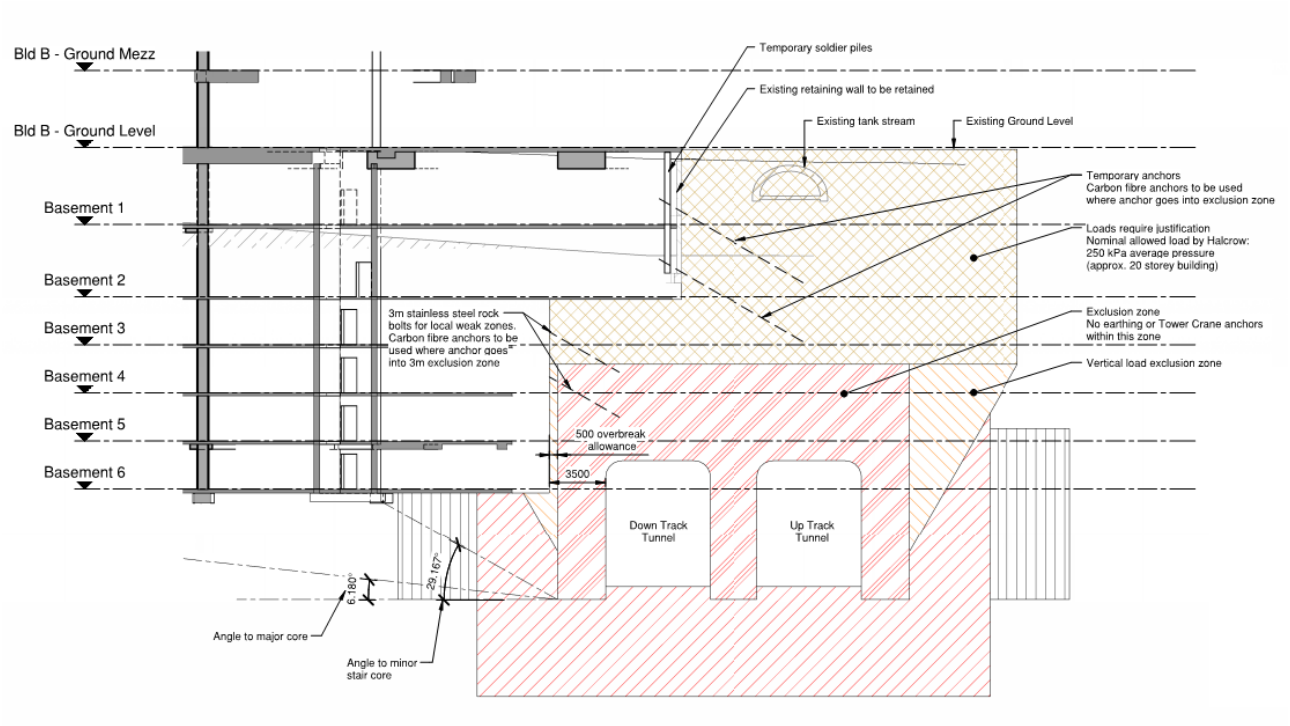


Figure 5 Tunnel Proximity – Section 2

The design has attempted to mitigate any effects the development may have on the tunnels by:

- Keeping a significant distance from the tunnel crown to overhead structure (approximately 11m). This distance provides approximately 9m of Class I/II sandstone above the tunnel. TTSRCP-032 suggests an average working pressure of 250kPa from overhead structures founded at this height;
- Keeping the basement structure adjacent to the tunnel a minimum of 3.5m from the CBDRL excavation. This distance is a nominal 3m rock allowance (1st reserve) and 0.5m for potential over-excavation;
- Minimization of load above the easement.

The structural section of the proximity is shown in Figure 4-5.

1.4 Building Loads

1.4.1 Vertical Loads

The current structural design has only one columns above the subterranean easement. This column will have a working load less than 2000kN, carrying load from the ground plane podium and B1 structure only. This column will be founded on pad footings supported by sandstone with a limit of 3MPa bearing (as suggested on TTSRCP-032) resulting in a circa 1.0x.1.0m footings. Over a conservative tributary area of 25m2, the resulting average pressure is less than 80kPa, approximately a third of that suggested by RRSRCP-032.

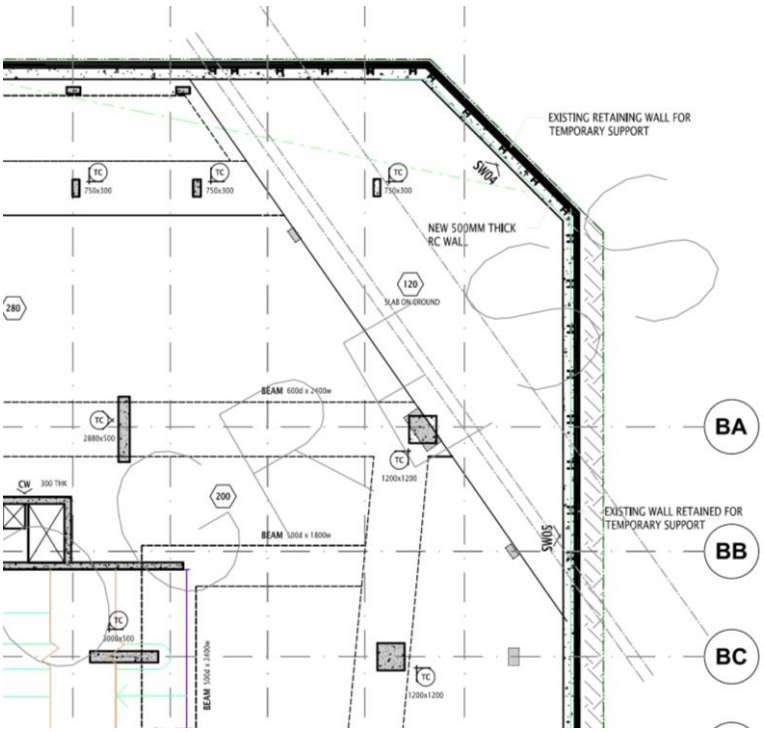


Figure 6: Basement 2 Plan showing columns over easement

The larger tower columns shown in Figure 6 will found at B6 and will be oriented to ensure it does not effect the CBDRL easement and falls below the influence line of the tunnel and adjacent to the exclusion boundary (TTSRCP-032 R7A).

There will be a new reinforced concrete retaining wall built in front of the existing Goldfields retaining wall as the existing wall is likely to not remain serviceable for the design life of the building. This wall will bear onto rock at B2 level and will have a working load of less than 200KN/m

1.4.2 Lateral Loads

The lateral load resisting core for the taller residential tower is approximately 40m from the tunnel. Although there will be a large lateral load resisted by the core, approximately 12000kN, it is intended that this load will be delivered to the rock mass 5m above the rail level.

There is the likelihood that due to compatibility of deformations, that some of this load will be thrust against the soil at or near ground level where the existing basement wall is being retained. However this location is far above the rail tunnel and should be of little concern.

At the level of the rail tunnels, it is intended that there be no structure abutting the rock face, thus eliminating lateral thrusting at the level of the tunnel. There may be minor local exceptions to stabilize local rock wedges, should they be encountered.

The shorter 26 storey hotel building core is approximately 16m from the rail easement. This load is imparted to the rock at a level approximately 5m above the rail.

Thus it is expected that this smaller lateral load, approximately 8000kN, at such a distance will not influence the tunnel design. This needs further validation during detailed design in consultation with the geotechnical models described elsewhere.

1.5 Potential Movements

1.5.1 4.1 Tank Stream

The Tank Stream is in the ownership of Sydney Water, and is listed on its Section 170 Heritage and Conservation Register. Any works that would affect the Tank Stream would need to meet the requirements of Sydney Water, including its heritage requirements.
To mitigate the risk of damage to the heritage structure the following procedure is intended:

- Retention of the existing reinforced concrete basement retaining wall along the Pitt Street frontage, adjacent to the Tank Stream.
- Installation of temporary restraints to the retaining wall prior to the removal of the existing basement floor slabs. These will comprise soldier piles or steel beams, with post-tensioned ground anchors fixing the soldiers in place through the existing walls.
- A jacking system to load the soldiers and existing walls when de-stressing the existing floor slabs to minimize movement.
- Rock bolting and shotcreting of the face of the exposed rock for the new excavation below the existing basement level, in the event that local areas of weak or jointed rock are encountered during the works.
- Monitoring of the Tank Stream during basement excavation.

Any potential movement of this structure is not exacerbated by the proposed development when tunnelling.

These temporary works may result in isolated temporary anchors within the exclusion zone with GFRC anchors where penetrating with 6m of the tunnel crown.

The Shoring design along Pitt street is currently being designed by Delta Group and Coffey Geotechnics. The first coordination meeting with Sydney water occurred 18 December 2018.

1.5.2 4.2 Vibration and Stray Currents

The design train vibration spectrum has been provided and the impact on habitable floors is covered in a separate File Note included in this submission.
The effect of stray currents on the durability of the structure is addressed in an attached Technical Note TN001.

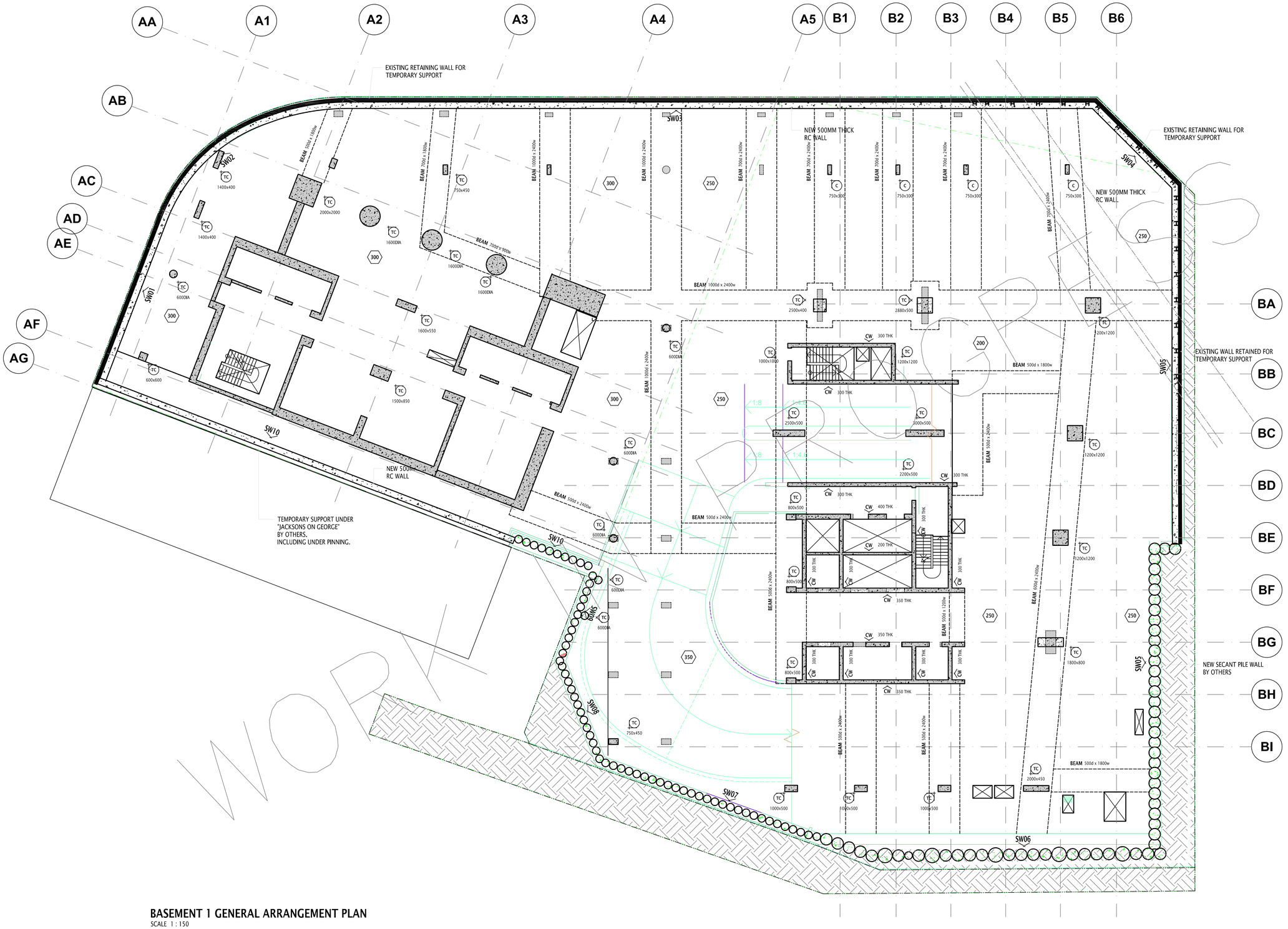
1.6 Diesel Tanks

Diesel tanks and other tanks of hazardous material shall be bunded in concrete liners with monitoring for spills.

1.7 Coordination with Geotechnical Studies and TfNSW

Further geotechnical investigations and modelling is required to assess the impact of the imposed vertical and gravity loads above the easement. These studies will need to address the magnitude of stress induced by our loads, any rock stress re-distributions, associated load re-distributions, rock movements, other geological events and draw down of the water table.
A fuller description can be found in the accompanying document prepared by Arup Geotechnics.
Arup and TfNSW will coordinate throughout subsequent design phases to ensure a compliant design.

Appendix



BASEMENT 1 GENERAL ARRANGEMENT PLAN

SCALE 1 : 150

SLAB TO BE 250 THICK UNO

GENERAL ARRANGEMENT LEGEND:

- DENOTES INSITU CONCRETE ELEMENT OVER
- DENOTES LOAD BEARING ELEMENT UNDER
- DENOTES LOAD BEARING ELEMENT UNDER AND INSITU CONCRETE ELEMENT OVER
- DENOTES PRECAST ELEMENT OVER
- RB? (LB) DENOTES BLOCKWORK AND TYPE REFER S77.27 SERIES
- RB? (NLB) DRAWINGS FOR SCHEDULE AND TYPICAL DETAILS
- DENOTES 20mm WET AREA SET DOWN
- DENOTES PENETRATION
- DENOTES SUMP
- STEP DENOTES SLAB STEP
- THK DENOTES SLAB THICKNESS
- TAG SIZE DENOTES COLUMN NUMBER AND SIZE
- W? DENOTES WALL NUMBER & DIRECTION ELEVATION IS VIEWED
- DENOTES SPAN DIRECTION
- S.J. DENOTES SAWN JOINT
- T.J. DENOTES TOOLED JOINT
- K.J. DENOTES KEYED JOINT
- D.J. DENOTES DOWELLED JOINT
- C.J. DENOTES CONSTRUCTION JOINT
- E.J. DENOTES EXPANSION JOINT

NOTE: REFER ARCHITECTS DRAWINGS FOR ALL STEPS AND FALLS IN SLABS

CONCRETE NOTES :

-REFER NOTES ON COVER SHEET
-MIN CONC. STRENGTH AT 28 DAYS

LOCATION	f'c
COLUMNS	S60
WALLS	S40
BEAMS & SLABS	S40

Rev	Revision Description	By	App	Date
Scale	1 2 3 4 5 6 7 8			

DO NOT SCALE DRAWINGS, USE FIGURED DIMENSIONS
REFER TO GENERAL NOTES UNLESS NOTED OTHERWISE

Structural, Civil & Construction Engineering Consultant

RobertBirdGroup
Member of the Surbana Jurong Group

SYDNEY OFFICE
Robert Bird Group Pty Ltd
PO Box A2309
Sydney South, NSW 1235
Level 11, 151 Castlereagh St
Sydney NSW 2000
Ph: (02) 8246 3200
Fax: (02) 8246 3201
Email: sydney@robertbird.com.au
Web: www.robertbird.com
ACN 010 580 248

Client
YUHU GROUP

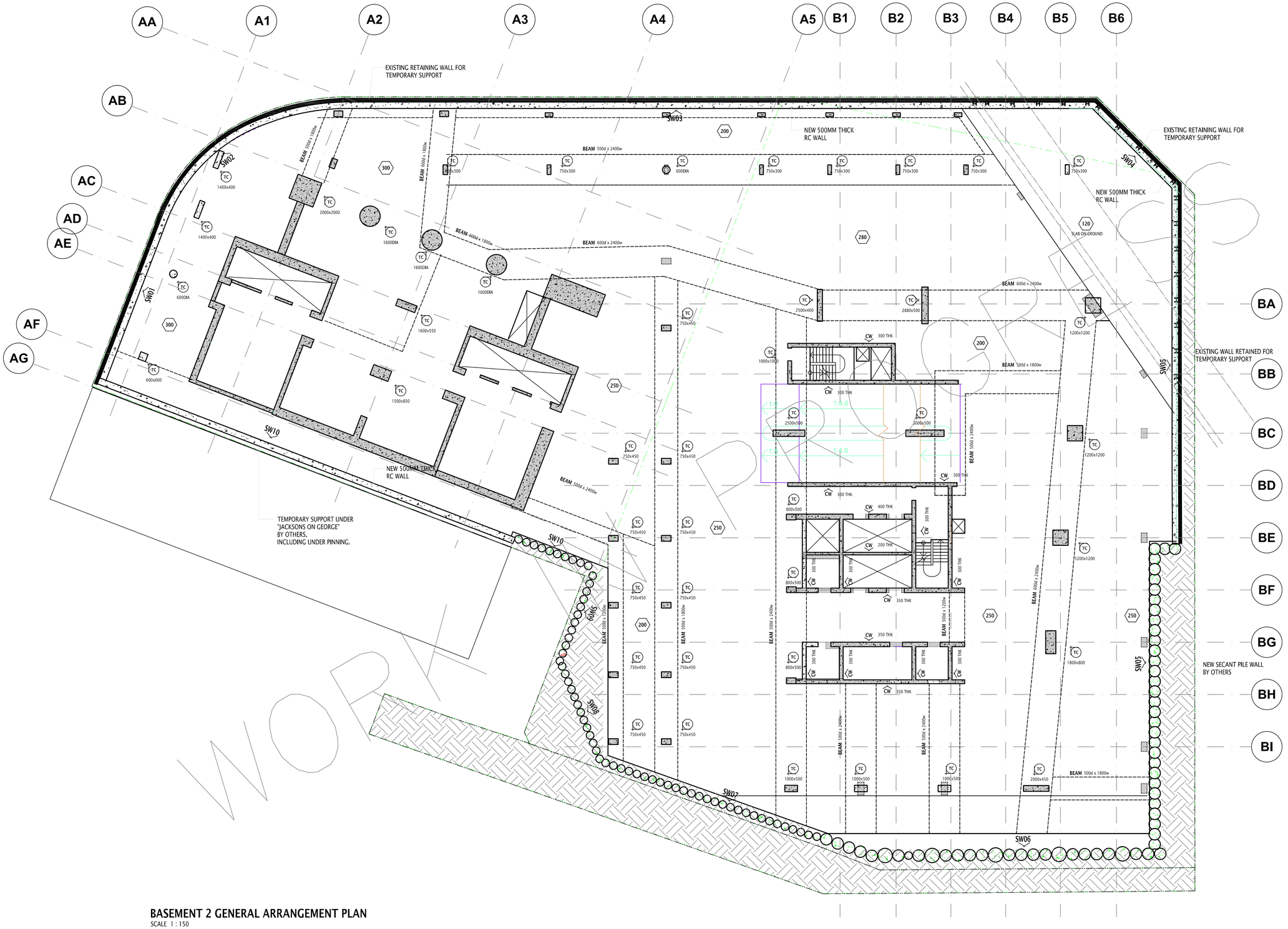
Project
YUHU SYDNEY ONE
1 Alfred Street Sydney NSW 2000

Title
BASEMENT 1
GENERAL ARRANGEMENT PLAN

Date 26/10/2018	Drawn –
Scale at A1	Designer –
	Design Checker –
Job Number 18295	Approved –

NOT FOR CONSTRUCTION

Drawing Number –
Revision –



BASEMENT 2 GENERAL ARRANGEMENT PLAN

SCALE 1 : 150

SLAB TO BE 250 THICK UNO

GENERAL ARRANGEMENT LEGEND:

- DENOTES INSITU CONCRETE ELEMENT OVER
- DENOTES LOAD BEARING ELEMENT UNDER
- DENOTES LOAD BEARING ELEMENT UNDER AND INSITU CONCRETE ELEMENT OVER
- DENOTES PRECAST ELEMENT OVER
- RB? (LB) DENOTES BLOCKWORK AND TYPE REFER S77.27 SERIES
- RB? (NLB) DRAWINGS FOR SCHEDULE AND TYPICAL DETAILS
- DENOTES 20mm WET AREA SET DOWN
- DENOTES PENETRATION
- DENOTES SUMP
- STEP DENOTES SLAB STEP
- THK DENOTES SLAB THICKNESS
- TAG SIZE DENOTES COLUMN NUMBER AND SIZE
- W? DENOTES WALL NUMBER & DIRECTION ELEVATION IS VIEWED
- DENOTES SPAN DIRECTION
- S.J. DENOTES SAWN JOINT
- T.J. DENOTES TOOLED JOINT
- K.J. DENOTES KEYED JOINT
- D.J. DENOTES DOWELLED JOINT
- C.J. DENOTES CONSTRUCTION JOINT
- E.J. DENOTES EXPANSION JOINT

NOTE: REFER ARCHITECTS DRAWINGS FOR ALL STEPS AND FALLS IN SLABS

CONCRETE NOTES :

-REFER NOTES ON COVER SHEET
-MIN CONC. STRENGTH AT 28 DAYS

LOCATION	f'c
COLUMNS	S60
WALLS	S40
BEAMS & SLABS	S40

Rev	Revision Description	By	App	Date
Scale	1 2 3 4 5 6 7 8			

DO NOT SCALE DRAWINGS, USE FIGURED DIMENSIONS
REFER TO GENERAL NOTES UNLESS NOTED OTHERWISE

Structural, Civil & Construction Engineering Consultant

RobertBirdGroup
Member of the Surbana Jurong Group

SYDNEY OFFICE
Robert Bird Group Pty Ltd
PO Box A2309
Sydney South, NSW 1235
Level 11, 151 Castlereagh St
Sydney NSW 2000
Ph: (02) 8246 3200
Fax: (02) 8246 3201
Email: sydney@robertbird.com.au
Web: www.robertbird.com
ACN 010 580 248

Client
YUHU GROUP

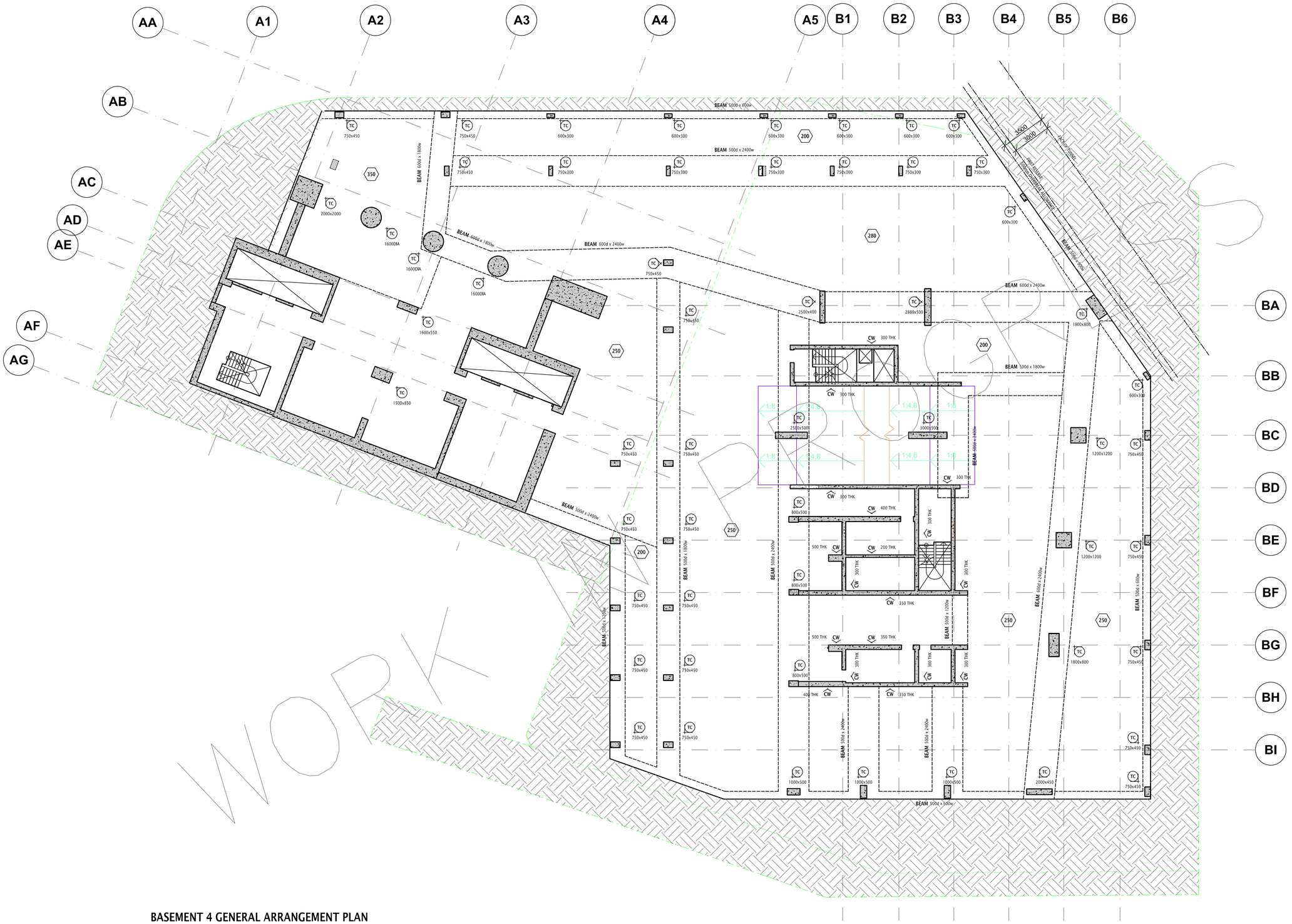
Project
YUHU SYDNEY ONE
1 Alfred Street Sydney NSW 2000

Title
BASEMENT 2
GENERAL ARRANGEMENT PLAN

Date 26/10/2018	Drawn –
Scale at A1	Designer –
	Design Checker –
Job Number 18295	Approved –

NOT FOR CONSTRUCTION

Drawing Number –
Revision –



BASEMENT 4 GENERAL ARRANGEMENT PLAN

SCALE 1 : 150

SLAB TO BE 250 THICK UNO

GENERAL ARRANGEMENT LEGEND:

- DENOTES INSITU CONCRETE ELEMENT OVER
- DENOTES LOAD BEARING ELEMENT UNDER
- DENOTES LOAD BEARING ELEMENT UNDER AND INSITU CONCRETE ELEMENT OVER
- DENOTES PRECAST ELEMENT OVER
- RB? (LB) DENOTES BLOCKWORK AND TYPE REFER S77.27 SERIES
- RB? (NLB) DRAWINGS FOR SCHEDULE AND TYPICAL DETAILS
- DENOTES 20mm WET AREA SET DOWN
- DENOTES PENETRATION
- DENOTES SUMP
- STEP DENOTES SLAB STEP
- THK DENOTES SLAB THICKNESS
- TAG SIZE DENOTES COLUMN NUMBER AND SIZE
- W? DENOTES WALL NUMBER & DIRECTION ELEVATION IS VIEWED
- DENOTES SPAN DIRECTION
- S.J. DENOTES SAWN JOINT
- T.J. DENOTES TOOLED JOINT
- K.J. DENOTES KEYED JOINT
- D.J. DENOTES DOWELLED JOINT
- C.J. DENOTES CONSTRUCTION JOINT
- E.J. DENOTES EXPANSION JOINT

NOTE: REFER ARCHITECTS DRAWINGS FOR ALL STEPS AND FALLS IN SLABS

CONCRETE NOTES :

-REFER NOTES ON COVER SHEET
-MIN CONC. STRENGTH AT 28 DAYS

LOCATION	f'c
COLUMNS	S60
WALLS	S40
BEAMS & SLABS	S40

Rev	Revision Description	By	App	Date
Scale	1 2 3 4 5 6 7 8			

DO NOT SCALE DRAWINGS, USE FIGURED DIMENSIONS
REFER TO GENERAL NOTES UNLESS NOTED OTHERWISE

Structural, Civil & Construction Engineering Consultant

RobertBirdGroup
Member of the Surbana Jurong Group

SYDNEY OFFICE
Robert Bird Group Pty Ltd
PO Box A2309
Sydney South, NSW 1235
Level 11, 151 Castlereagh St
Sydney NSW 2000

Ph: (02) 8246 3200
Fax: (02) 8246 3201
Email: sydney@robertbird.com.au
Web: www.robertbird.com
ACN 010 580 248

Client
YUHU GROUP

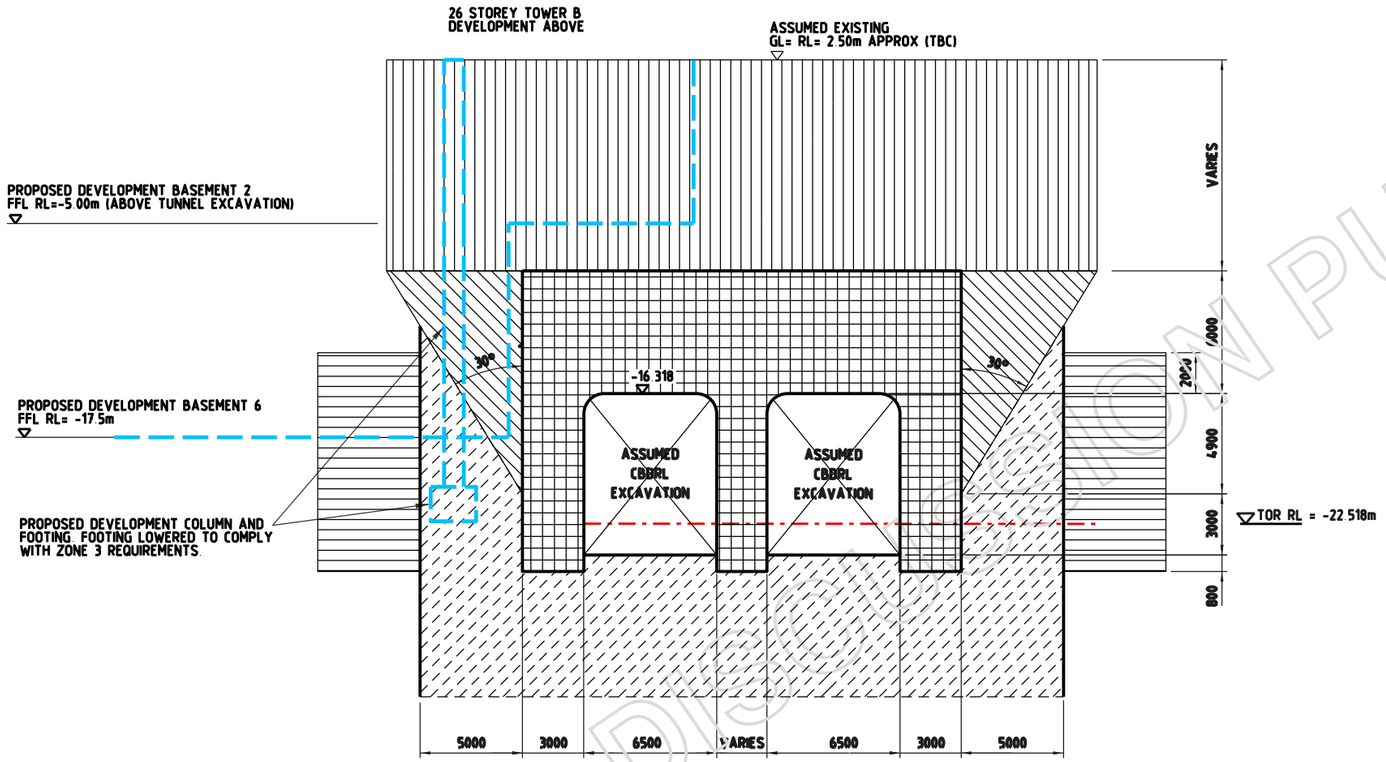
Project
YUHU SYDNEY ONE
1 Alfred Street Sydney NSW 2000

Title
BASEMENT 4
GENERAL ARRANGEMENT PLAN

Date 26/10/2018	Drawn –
Scale at A1	Designer –
	Design Checker –
Job Number 18295	Approved –

NOT FOR CONSTRUCTION

Drawing Number –
Revision



SECTION A-A

KEY:

STRUCTURE EXCLUSION ZONES:

ASSUMED CBDRL TUNNEL EXCAVATION ZONE

TYPE 1 ZONE — EXCAVATION, STRUCTURES, OR STRUCTURES APPLYING LOADING DIRECTLY TO ROCK MASS ARE NOT PERMITTED IN THIS ZONE. HORIZONTAL LOADING EFFECTS EITHER FROM STRUCTURES AND FOUNDATIONS BEARING DIRECTLY ON ZONE 1 OR FOUNDATIONS OUTSIDE ZONE 1 AND ACTING THROUGH THE GROUND SHALL NOT CAUSE SIGNIFICANT HORIZONTAL LOADING TO ACT ON ZONE 1 BELOW OR WITHIN 2m OF THE TUNNEL CROWN LEVEL.

TYPE 2 ZONE — FOUNDATIONS APPLYING VERTICAL LOADING DIRECTLY TO ROCK MASS ARE NOT PERMITTED IN THIS ZONE EXCEPT FOR TRANSFER STRUCTURES AND GROUND ANCHORS APPLYING LOADS GENERALLY AWAY FROM THE TUNNEL.
EXCAVATION AND CONSTRUCTION OF STRUCTURES PERMITTED BUT MUST AVOID DETERIORATION OF ROCK STRUCTURE IN ADJACENT ROCK MASS.

TYPE 3 ZONE — VERTICAL DOWNWARDS LOADS FROM STRUCTURES PERMITTED.
VERTICAL UPWARDS LOADS (AND COMPONENTS THEREOF) TO BE DESIGNED TO ALLOW FOR REMOVAL OF ROCK MASS IN ASSUMED TUNNEL ZONE.
HORIZONTAL LOADS PERMITTED BELOW LEVEL OF TUNNEL INVERT.
LOADING TO BE VERIFIED AND SHALL ALLOW FOR ASSUMED TUNNEL EXCAVATION.

TYPE 4 ZONE — SUM OF VERTICAL DOWNWARDS LOADING TO BE LIMITED TO 3000kN/m² ON 2.0mX2.0m AREAS AND AN AVERAGE OF 250 kN/m² ON ANY 10mX10m AREA (WHICH EVER IS THE MOST ONEROUS CONDITION)
FOUNDATIONS AND SUPPORTING STRUCTURE TO BE DESIGNED TO ACCOMMODATE MOVEMENTS DUE TO FUTURE CBDRL WORKS. NOTE 10 APPLIES.

SIGNIFICANT HORIZONTAL LOADING TOWARDS THE PROPOSED CBDRL TUNNEL IS NOT PERMITTED. (REFER TO ZONE 1 NOTES)

GENERAL NOTES:

G1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED
G2. ALL LEVELS ARE IN METRES TO A.H.D UNLESS OTHERWISE NOTED
G3. DRAWINGS TTSRCP030, 031 & 032 TO BE READ TOGETHER.
G4. FOR DETAILS OF ASSUMED RAIL TUNNEL EXCAVATION REFER TO DRAWINGS TTSRCP030 & 031.

NOTES:

1. INDICATIVE LOADS ARE UNFACTORED WORKING LOADS. (TYPE 4 ZONE)
2. SUPPORT OF LOADS FROM PROPERTY FOUNDATIONS TO ALLOW FOR ASSUMED TUNNEL EXCAVATION. LOADS OF A DYNAMIC NATURE (SUCH AS FROM WIND) ARE NOT TO HAVE A NEGATIVE IMPACT ON THE TUNNEL SUPPORT INCLUDING SANDSTONE BEDDING PLANES AND ROCK BOLT DESIGN.
3. LOADING REQUIREMENTS FOR ZONE 4 ARE INDICATIVE ONLY AND ARE TO BE DETERMINED.
4. EXCAVATION FACE TO BE INSPECTED AND MAPPED PRIOR TO COVERING BY PROPERTY DEVELOPER.
5. SITE INVESTIGATION OF GROUND CONDITIONS SHALL BE UNDERTAKEN AND RECORDED.
6. REQUIREMENTS ARE BASED ON DEVELOPMENT APPLICATION No ????.
7. LOADING REQUIREMENTS ARE BASED UPON ASSUMPTION THAT ZONE 1 IS FAVOURABLE ROCK CONDITIONS WHICH IS DEFINED AS CLASS 1 OR 2 SYDNEY SANDSTONE.
8. CONSTRUCTION METHOD SHALL AVOID DETERIORATION OF ROCK STRUCTURE IN ZONE 1.
9. ALLOWANCE SHALL BE MADE IN THE ASSUMED TUNNEL EXCAVATION FOR POSSIBLE OVERBREAK DURING CONSTRUCTION OF THE TUNNEL. THE PROPERTY DEVELOPER SHALL MAKE IT'S OWN DETERMINATION IN THIS REGARD BUT SHALL ALLOW FOR POSSIBLE OVERBREAK OF BLOCKS AT LEAST 1m DEEP IN THE TUNNEL CROWN OR 1m WIDE IN THE TUNNEL SIDE WALL.
10. FOUNDATION LOADS IN ZONE 4 ARE ONLY PERMITTED IF GOOD QUALITY ROCK EXISTS BETWEEN FOUNDATIONS AND THE ASSUMED TUNNEL AND IT IS DEMONSTRATED THAT A NEGLIGBLE OR LOWER RISK EXISTS OF PERSISTENT SUB-VERTICAL JOINTING BEING PRESENT WHICH WOULD POTENTIALLY CAUSE INSTABILITY OF THE TUNNEL EXTRADOS.
11. MINIMUM DIMENSION OF ROCK BETWEEN ASSUMED STATION EXCAVATION AND PROPERTY BASEMENT TO BE DETERMINED BY ASSESSMENT OF HYDROGEOLOGY AND ANY MITIGATION MEASURES PROPOSED BY THE DEVELOPER TO ENSURE WATER INGRESS INTO THE STATION CAVERN CAN BE CONTROLLED WITHIN REASONABLE LIMITS.

NOT FOR CONSTRUCTION

Issue	Revision - Revise on CAD do not amend by hand	Chk'd	App'd	Date
8	FOR TfNSW DEED ISSUE	IM		19.10.16
7	FOR DISCUSSION PURPOSES	RH		02.06.15
6	DRAFT	RH		12.05.11

ch2m.
Halcrow Pacific Pty Ltd
ABN 45 061 920 849
Level 7, 9 Help Street
Chatswood 2067, NSW, Australia
Tel: +61 2 9950 0200
Fax: +61 2 9950 0600
www.ch2m.com

Project: FUTURE RAIL CORRIDOR PROTECTION

NSW GOVERNMENT Transport for NSW

Title: 1 ALFRED STREET SYDNEY CBD RAIL LINK (CBDRL) LOADING REQUIREMENTS

Drg No: TTSRCP-032

Version: 8

Sydney Office

Robert Bird Group Pty Ltd
ABN 67 010 580 248 ACN 010 580 248

Level 11, 151 Castlereagh Street
Sydney NSW 2000
PO Box A2309
Sydney South NSW 1235
Australia

P: +61 (0) 2 8246 3200
F: +61 (0) 2 8246 3201