

Lend Lease Circular Quay

**Lend Lease Circular Quay 174-182
George Street, 33-35 Pitt Street
Development**

Assessment of Interim CBD Rail
Link (CBDRL) Corridor

Final Issue | October 2015

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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Appendix A

Information received from TfNSW regarding Structural Influence Zones and other Compliance Requirements.

Appendix B

The SEPP (State Environmental Planning Policy (Infrastructure) 2007

1 Introduction

Lend Lease Development P/L (Lend Lease) has engaged ARUP to assess the proposed Lend Lease Circular Quay (LLCQ) development located at 174-182 George Street, 33-35 Pitt Street, Sydney in the context of the Interim CBD Rail Link (CBDRL) Corridor contemplated under State Environmental Planning Policy (Infrastructure) 2007. More details about the SEPP can be found in Section 2 and Appendix B.

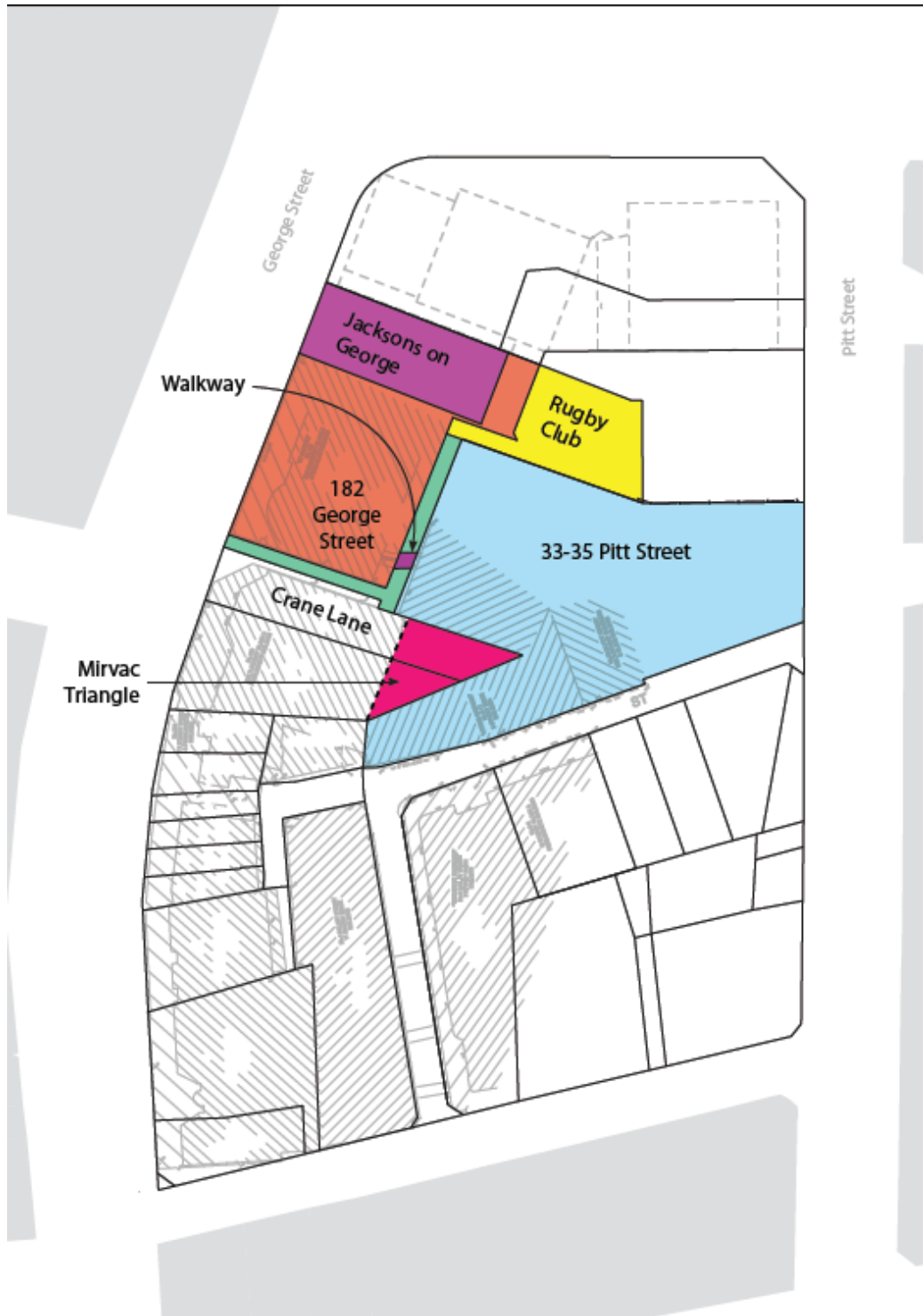
The purpose of this report is to provide information to the City of Sydney and RailCorp regarding the LLCQ development and how that development may have the potential to impact upon the protected CBDRL Corridor and vice versa.

Land to which the LLCQ Proposal Relates

Land parcels covered by the Proposal (Also refer attached diagram)

Informal title	Address	Lot and DP	Ownership
The Pitt Street property	33-35 Pitt Street	Lot 7 DP 629694	LendLease (Circular Quay) Pty Ltd
The George Street Property	182 George Street	Lot 182 DP 606865	LendLease (Circular Quay) Pty Ltd
Jacksons on George	174-176A George Street	Lot 181 DP 606865	Lend Lease Development P/L
Mirvac Triangle	Part of 200 George Street development site	Lot 1 in DP 69466 and Lot 4 in DP 57434 The part of the above Lots to which the PP relates is referred to as Lot 2 in the draft plan of subdivision Nov 13, 2012 (Issue 7) contained in the executed VPA between the City of Sydney and Mirvac	Mirvac owns the land. Mirvac will transfer the new Lot 2 to the City of Sydney who will then transfer to LL in return for an equivalent area of completed public realm
Crane Lane including walkway (aerial bridge)	Crane Lane extending east from George St, then north to Rugby Place	Lot 1 and 2 in DP 880891. Lot 1 is in stratum above Lot 2.	City of Sydney
Rugby Club (Optional Site)	Rugby Place	Lot 180 DP 606866	Wanda "One" Sydney Pty Ltd

The Land parcels that make up the LLCQ development Site are as indicated on the figure below.



The location of the Interim CBD Rail Link (CBDRL) corridor and the LLCQ development Site is shown on the attached figures.

Figure 1 shows the location of the Interim CBD Rail Link (CBDRL) corridor and the LLCQ development Site. Figure 2 shows a detailed view of the future Interim CBD Rail Link (CBDRL) Macquarie Place Station and the site.

Figure 3 shows a section through the LLCQ Site at its closest proximity to the Interim CBD Rail Link (CBDRL) corridor. It shows estimates of the ground conditions and the indicative proposed LLCQ development basement depth.

ARUP have consulted Mr John Bryan, Coordinator, Future Rail Corridors Protection, Transport & Land Use Planning, Transport for NSW who has advised that the issues that will need to be assessed and addressed as part of the LLCQ proposal are those that have the potential to adversely impact the proposed LLCQ development due to the future construction and operation of the CBDRL.

These issues are summarised below:-

- Impact upon the LLCQ development building structure by the construction and operation of the CBDRL.
- Impact of Noise and Vibration on the final occupants of the LLCQ development by the construction and operation of the CBDRL.
- Stray Currents and Electromagnetic Effects.

In addition, John Bryan has requested that the following potential adverse impact of the LLCQ proposal on the future CBDRL corridor also be assessed:

- The risk of Diesel and other Contamination of the ground and ground water surrounding the Interim CBD Rail Link (CBDRL) corridor arising from potential leakage from storage tanks. proposed in the basement of the LLCQ development

2 NSW Statutory Requirements

Development of land adjacent a Rail Corridor is subject to the requirements of the SEPP (State Environmental Planning Policy (Infrastructure) 2007). While this is a fairly extensive SEPP, the clauses that affect development adjacent a rail corridor are minimal but are broad in their implication. The clauses are shown in Appendix B but their requirements (extracted from the SEPP) are summarised below:-

Development is affected by the SEPP if the following occurs or is affected:-

- (a) is likely to have an adverse effect on rail safety, or
- (b) involves the placing of a metal finish on a structure and the rail corridor concerned is used by electric trains, or
- (c) involves the use of a crane in air space above any rail corridor
- (i) the safety or structural integrity of existing or proposed rail infrastructure facilities in the rail corridor, and
- (ii) the safe and effective operation of existing or proposed rail infrastructure facilities in the rail corridor, and
- (b) what measures are proposed, or could reasonably be taken, to avoid or minimise those potential effects.
- (a) the practicability and cost of carrying out rail expansion projects on the land in the future, and

- (b) without limiting paragraph (a), the structural integrity or safety of, or ability to operate, such a project, and
- (c) without limiting paragraph (a), the land acquisition costs and the costs of construction, operation or maintenance of such a project.

The Coordinator, Future Rail Corridors Protection, Transport & Land Use Planning, Transport for NSW, Mr John Bryan has reviewed the above broad requirements of the SEPP and has identified for the proposed LLCQ development the key issues to be assessed as summarised in Section 1, Introduction.

ARUP's assessment of these nominated issues are contained in the following sections of this report.

3 Proposed Building Description

The LLCQ development scheme contemplates:

- Demolition of existing commercial office buildings at both 182 George Street and 33-35 Pitt Street (and possibly Rugby Club) including the removal and disposal of hazardous materials (where relevant).
- The retention, modification and adaptive reuse of Jacksons on George,
- Site preparatory works including (where relevant):
 - the erection of hoardings and overhead protection structures;
 - remediation of contamination;
 - undertaking of archaeological investigation and protection works; and
 - augmentation and diversion of existing infrastructure services.
- The excavation and construction of a basement structure of up to 4 levels depth predominately on the site of 33-35 Pitt Street
- The erection of a commercial office tower up to 248m in height and up to 70,000 sq m of GFA.
- Delivery of new public realm consisting of a public plaza on George Street and new interconnecting laneway extensions between Underwood Street and Rugby Place.
- The construction of shared laneway and plaza retail for the purpose of activating the new public realm.
- Internal traffic amendments to Rugby Place.

The building is proposed to have up to four basement levels with the lowest level being approximately RL-11m (subject to further scheme design development).

4 Ground Conditions

Arup have had involvement in a number of projects in this part of the city including adjacent sites at 1 Alfred Street and 200 George Street. From that involvement and knowledge of the cities geology an estimation of the ground conditions in Pitt Street has been developed and is shown on figure 2. Essential

the area is underlaid by class I-II sandstone at an approximate depth of about 12m. Above this are more highly weathered sandstones, alluvial and marine deposits and fill.

5 Building Structure Foundations

Support for the building structures will involve pad or pile foundations to the class I-II sandstone located in the vicinity on the lower basement level. Similarly, the basement retention system is expected to consist of a perimeter secant pile wall socketed into class I-II sandstone and supported by temporary ground anchors. The existing bedrock material has a very high bearing capacity and can readily support this proposed building with minimal movements or displacements.

ARUP is therefore satisfied that the quality of sandstone bedrock supporting the proposed tower is such that any impacts upon the LLCQ development building structure by the subsequent or prior construction and operation of the CBDRL can be readily managed utilising industry standard design and construction structural engineering techniques

6 Impact of any future CBDRL Construction on the Lend Lease Circular Quay development

ARUP have considered whether the building of the proposed CBD RL in the nominated corridor location at some time in the future has the potential to detrimentally impact the completed LLCQ development.

In order to minimise the impact of the future CBDRL, development is restricted in nominated influence zones in close proximity to the future rail corridor alignment. These zones and commensurate restrictions are published by TfNSW. The exclusion zones relevant to the LLCQ project were obtained through consultation with Mr John Bryan, Coordinator, Future Rail Corridors Protection, Transport & Land Use Planning, Transport for NSW. TfNSW's response is exhibited in Appendix A. The exclusion zones are shown in their drawing 469068-22 which has been used to develop Figure 2.

It can be seen from Figure 2 that the proposed LLCQ development is well outside the Structural Exclusion Zones as nominated by TfNSW. ARUP have concluded from both assessment of the exclusion zones depicted on drawing 469068-22 and also from ARUP's understanding of the competent nature of the sandstone bedrock material into which both projects are constructed, that the future construction of the CBDRL is far enough away such that it would have no significant impact on the development at 33-35 Pitt Street.

7 Rail Noise and Vibration

Based on our involvement with other buildings in the Sydney CBD adjacent to existing and future rail lines, the following strategy is likely required to meet the Rail Authority's requirements with respect to rail noise and vibration.

As required in the Infrastructure SEPP, the developer/owner (in this case Lend Lease Development P/L) should engage a qualified acoustic consultant to undertake a Rail Noise & Vibration Assessment.

For the LLCQ development, we understand that Lend Lease Development P/L have engaged Renzo Tonin and Associates for the purpose of undertaking a Rail Noise & Vibration Assessment.

The Rail Noise & Vibration Assessment would determine the potential impacts of ground borne noise and vibration from the future underground railway.

This assessment would include:

- A review of noise and vibration impact reports prepared by TfNSW for the Interim CBD Rail Line (CBDRL) corridor to ascertain expected noise and vibration levels on the site.
- A review proposed LLCQ architectural and structural design.
- Development of noise and vibration criteria for the project.
- Predictions of structure borne noise propagation into the LLCQ building, and compare these results against project criteria.
- Development of preliminary mitigation measures if required.
- Provide a technical note summarising the outcomes of the assessment

The proposed development is consistent with the existing surrounding land use in the locality, which is predominately commercial office and retail. The LLCQ development does not propose an amendment of land use to a more sensitive receptor such as residential as is the case at the adjacent sites at 1 Alfred Street and 19 Pitt Street.

Renzo Tonin will ultimately determine the impact of noise & vibration from the rail line in their Rail Noise & Vibration Assessment. However, based on previous experience, the land use, distance between the rail line and the development, and standard modern day vibro acoustic track form design, we expect that there will be no significant impacts to the development.

Arup also considers that any requirements for noise and vibration mitigation are best able to be addressed at the source, by TfNSW.

8 Stray Currents and Electromagnetic Effects

Stray currents can cause durability issues to existing and proposed structures along the route of a rail line. There are industry standard mitigation measures that can be implemented in the construction of the rail infrastructure to reduce and adequately manage the impact of this corrosion and durability hazard to adjacent developments (both existing and proposed).

These measures would be further assessed and addressed during the detailed design and construction phase of the CBD Rail Line (CBDRL) project.

Shielding from stray currents and electromagnetic effects can be adopted during detailed design if further analysis shows that this is a risk to proposed and existing developments in the proximity of the CBD Rail Line (CBDRL) corridor.

ARUP's preliminary assessment based on similar rail projects within the Sydney CBD is that there are proven standard building industry design and construction approaches available to adequately address these issues where relevant.

Arup considers that any requirements to address stray currents and electromagnetic effects are best able to be addressed at the source, by TfNSW.

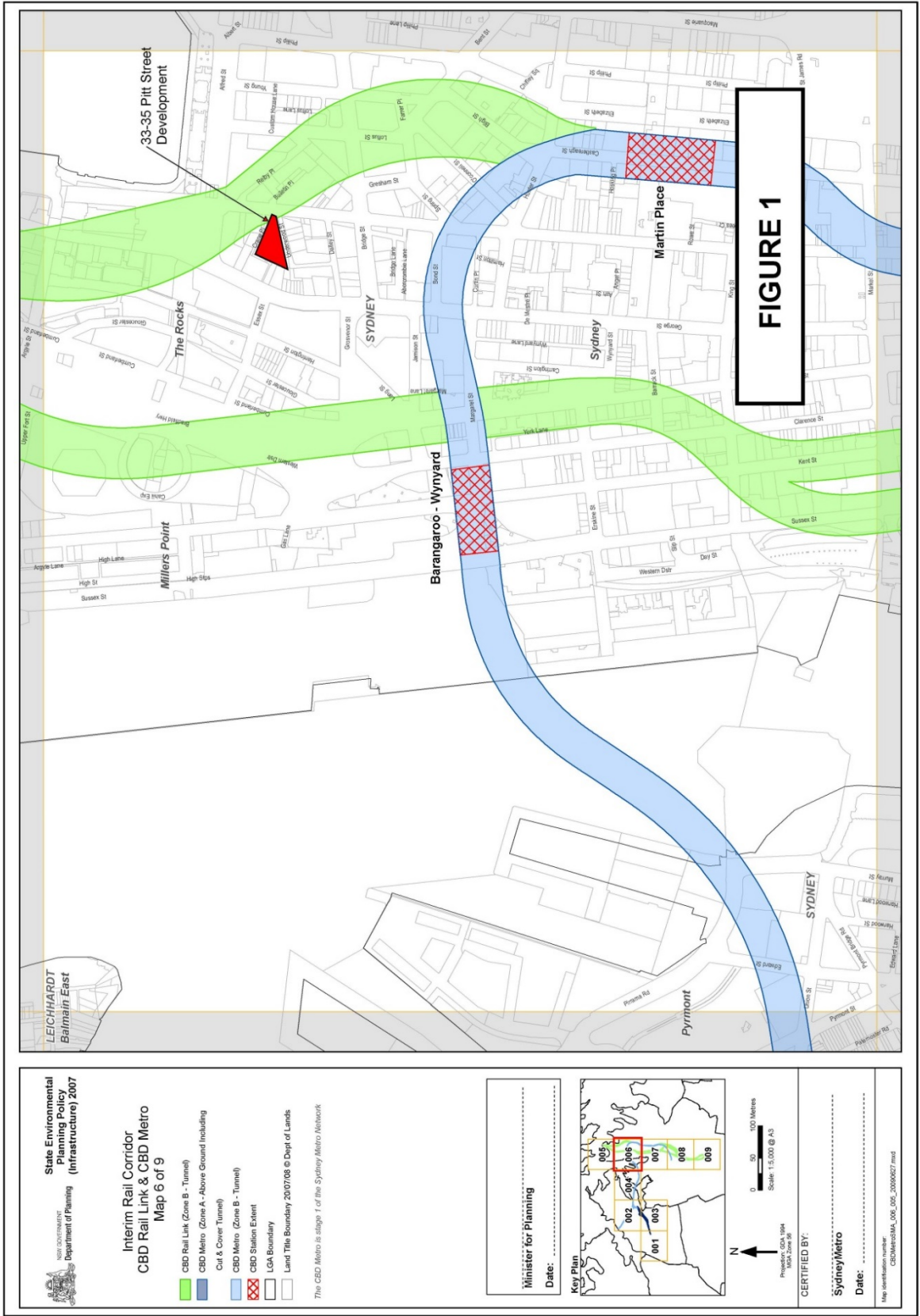
9 Potential impact from LLCQ on future CBDRL Corridor

TfNSW have raised the potential for the LLCQ development to adversely impact upon the future CBDRL corridor through spoil and groundwater contamination arising from storage tank infrastructure within the proposed development: ARUP have assessed this risk further below.

10 Diesel Contamination of the Ground.

The LLCQ development has the potential to incorporate diesel and other above and underground storage tanks to service standby generation and other equipment in the basement. There is the potential for diesel leaking from in ground storage tanks into the surrounding ground material that could impact upon the Interim CBD Rail Link (CBDRL) corridor.

Diesel and other tanks for this development will typically not be inground tanks. The tanks will be typically modular or fabricated steel tanks, constructed above ground and visible for regular inspection and maintenance. The tanks will typically be housed in a fully lined and bunded tank room with leakage monitoring incorporated into the room. This will ensure that no diesel can escape beyond the building into the surrounding soil or rock.



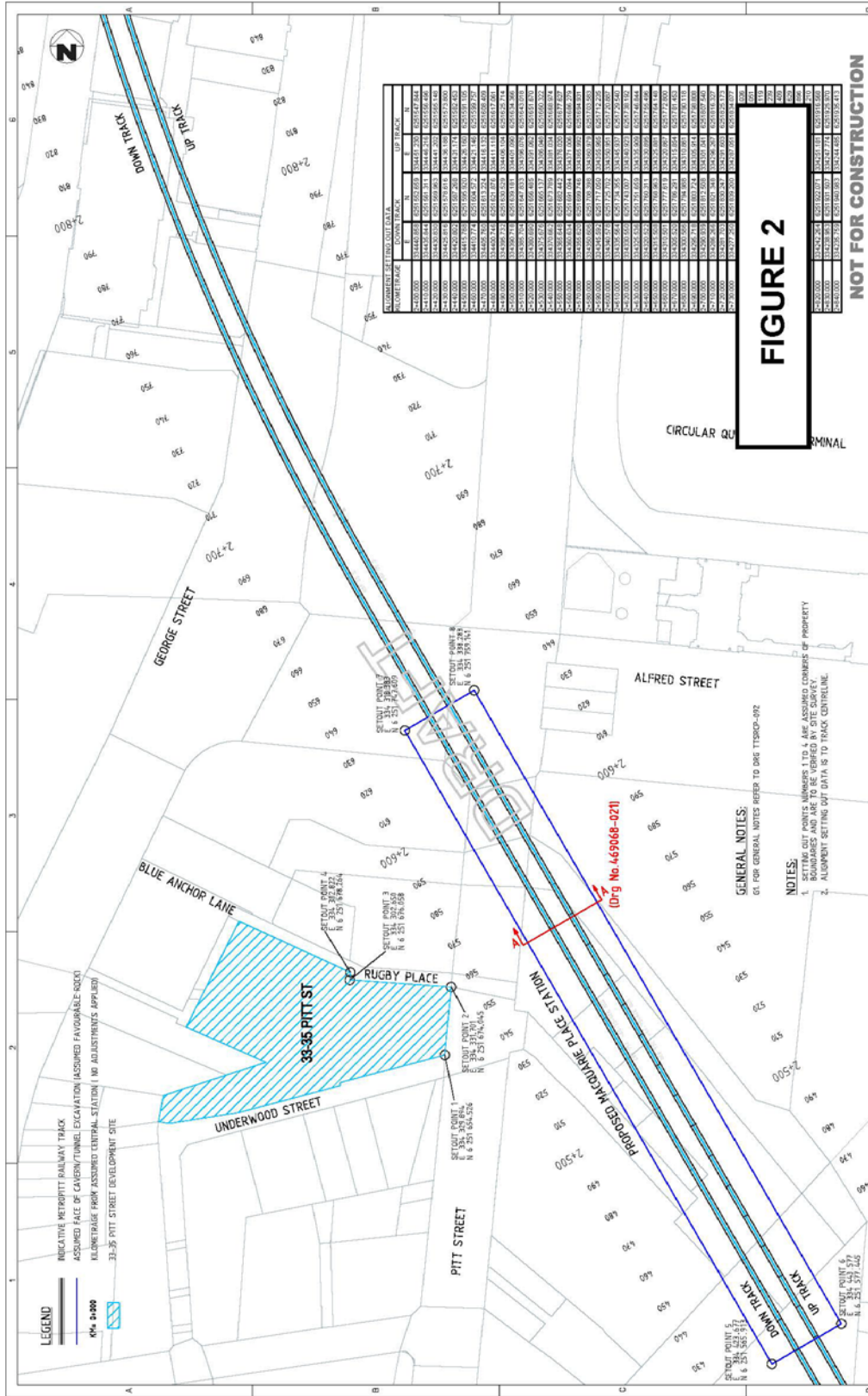


FIGURE 2

NOT FOR CONSTRUCTION

CH2MHILL. Halcrow Pacific Pty Ltd ABN 45 081 920 849 Level 7, 9 Help Street Chaswood 2057, NSW, Australia Tel: +61 2 9650 0200 Fax: +61 2 9650 0000 www.ch2mhill.com		Project: CORRIDOR PROTECTION ENGINEERING SERVICES Title: 33-35 PITT ST, SYDNEY CBD RAIL LINK (CBDRL) ASSUMED TRACK AND STATION ALIGNMENT Dwg No: 469068-020 Version: 1	
1 DRAFT FOR TENDR COMMENT R/H: 06.11.13 Date: 06/11/13	This document is not to be used for construction purposes unless it is accompanied and controlled with the 'Range of Engagement' for the construction of this station in a way that is consistent with the 'Range of Engagement' for the construction.		

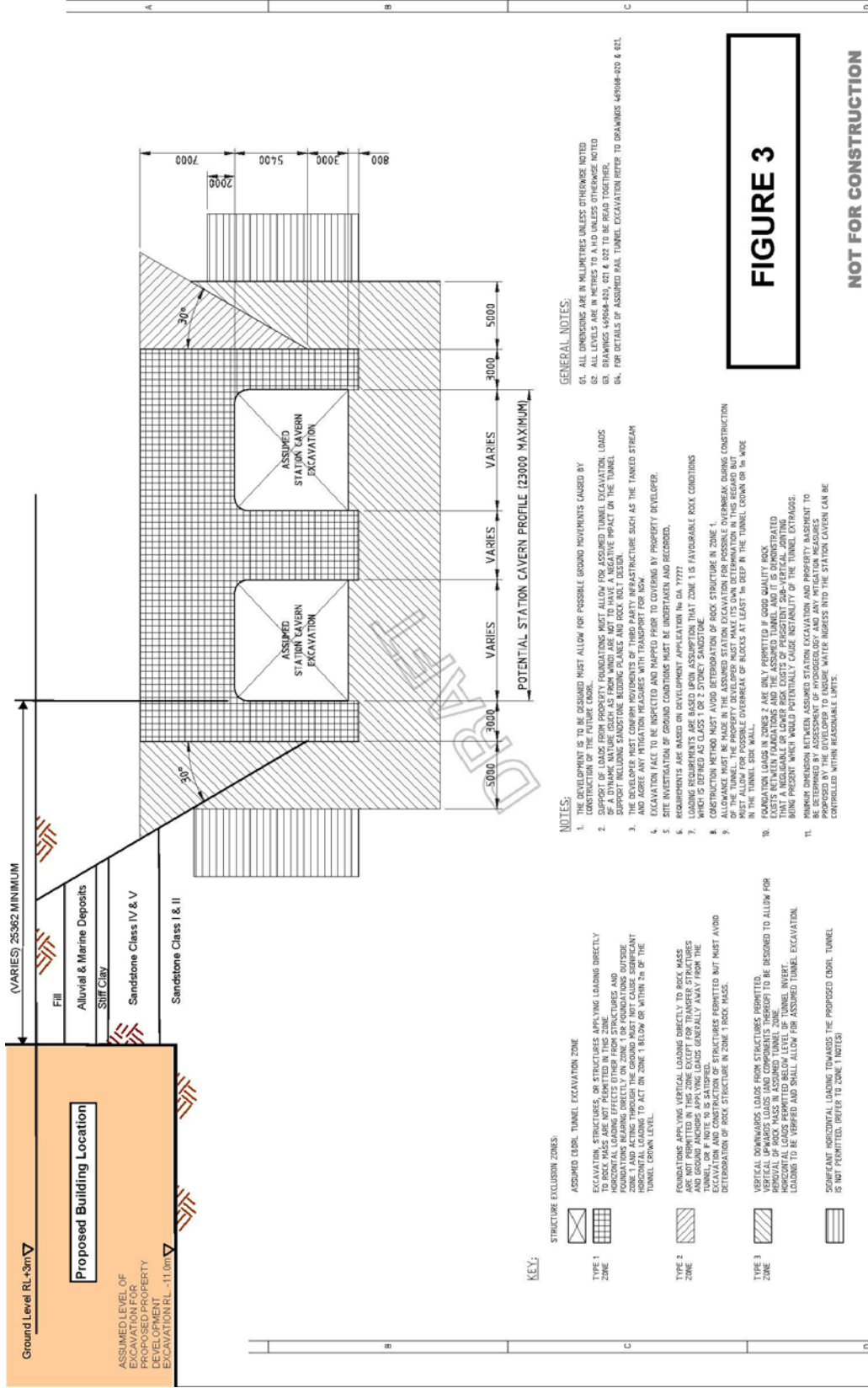


FIGURE 3
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- GENERAL NOTES:**
1. THE DEVELOPMENT IS TO BE DESIGNED TO ALLOW FOR POSSIBLE GROUND MOVEMENTS CAUSED BY CONSTRUCTION OF THE FUTURE COOL.
 2. SUPPORT OF LOADS FROM PROPOSED STRUCTURES MUST ALLOW FOR ASSUMED TUNNEL EXCAVATION LOADS INCLUDING SHANTONE BEDDING PLANES AND ROCK BOLT DESIGN.
 3. THE DEVELOPER MUST CONSIDER MOVEMENTS OF THIRD PARTY INFRASTRUCTURE SUCH AS THE TANKED STREAM AND ASSESS ANY MITIGATION MEASURES WITH TRANSPORT FOR NSW.
 4. EXCAVATION FACE TO BE INSPECTED AND SHIPPED PRIOR TO COVERING BY PROPERTY DEVELOPER.
 5. SITE INVESTIGATION OF GROUND CONDITIONS MUST BE UNDERPAKED AND RECORDED.
 6. FOUNDATIONS MUST BE DESIGNED TO ALLOW FOR ASSUMED TUNNEL EXCAVATION LOADS INCLUDING SHANTONE BEDDING PLANES AND ROCK BOLT DESIGN.
 7. LOADS DEFINED AS CLASS 1 OR 2 SYDNEY SANDSTONE.
 8. CONSTRUCTION METHOD MUST AVOID DEGRADATION OF ROCK STRUCTURE IN ZONE 1.
 9. ALLOWANCE MUST BE MADE IN THE ASSUMED STATION EXCAVATION FOR POSSIBLE OVERBREAK DURING CONSTRUCTION OF THE TUNNEL. THE ASSUMED STATION EXCAVATION MUST ALLOW FOR POSSIBLE OVERBREAK OF ROCKS AT LEAST 1m DEEP IN THE TUNNEL CORON OR 1m WIDE IN THE TUNNEL SIDE WALL.
 10. EXCAVATION LOADS IN ZONES 2 ARE ONLY PERMITTED IF GOOD QUALITY ROCK IS PRESENT AND THE EXCAVATION IS DESIGNED TO ALLOW FOR POSSIBLE OVERBREAK DURING CONSTRUCTION. A NEGLIGIBLE OR LOWER ROCK EXISTS OR PRESENT SUB-EQUENTIAL JOINTING BEING PRESENT WHICH WOULD POTENTIALLY CAUSE INSTABILITY OF THE TUNNEL EXTRASIS.
 11. MINIMUM DIMENSION BETWEEN ASSUMED STATION EXCAVATION AND PROPERTY BASHMENT TO BE DETERMINED BY ASSESSMENT OF HYDROGEOLOGY AND ANY INVESTIGATION INSURANCES. ANY WATER INFILTRATION INTO THE STATION CAVERN CAN BE CONTROLLED WITHIN REASONABLE LIMITS.

- NOTES:**
1. THE DEVELOPMENT IS TO BE DESIGNED TO ALLOW FOR POSSIBLE GROUND MOVEMENTS CAUSED BY CONSTRUCTION OF THE FUTURE COOL.
 2. SUPPORT OF LOADS FROM PROPOSED STRUCTURES MUST ALLOW FOR ASSUMED TUNNEL EXCAVATION LOADS INCLUDING SHANTONE BEDDING PLANES AND ROCK BOLT DESIGN.
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 11. MINIMUM DIMENSION BETWEEN ASSUMED STATION EXCAVATION AND PROPERTY BASHMENT TO BE DETERMINED BY ASSESSMENT OF HYDROGEOLOGY AND ANY INVESTIGATION INSURANCES. ANY WATER INFILTRATION INTO THE STATION CAVERN CAN BE CONTROLLED WITHIN REASONABLE LIMITS.

- STRUCTURE EXCLUSION ZONES:**
- ASSUMED COOL TUNNEL EXCAVATION ZONE
 - EXCAVATION STRUCTURES OR STRUCTURES APPLYING LOADS DIRECTLY TO ROCK MASS ARE NOT PERMITTED IN THIS ZONE.
 - FOUNDATIONS BEARING DIRECTLY ON THE GROUND OR FOUNDATIONS OFFSHORE ZONE 1 AND ACTING THROUGH THE GROUND MUST NOT CAUSE SIGNIFICANT HORIZONTAL LOADS TO ACT ON ZONE 1 BELOW OR WITHIN 2m OF THE TUNNEL CORON LEVEL.
 - FOUNDATIONS APPLYING VERTICAL LOADS 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 DEGRADATION OF ROCK STRUCTURE IN ZONE 1 ROCK MASS.
 - 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.
 - LOADS TO BE VERIFIED AND SHALL ALLOW FOR ASSUMED TUNNEL EXCAVATION.
 - SIGNIFICANT HORIZONTAL LOADS TOWARDS THE PROPOSED COOL TUNNEL IS NOT PERMITTED (REFER TO ZONE 1 NOTES)

- KEY:**
- TYPE 1 ZONE
 - TYPE 2 ZONE
 - TYPE 3 ZONE

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Revision: 1

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Title: 33-35 PITT ST, SYDNEY
CBD RAIL LINK (CBDRL)
LOADING REQUIREMENTS
Fig No: 4690668-022
Version: 1

11 Conclusion.

Lend Lease Development P/L (Lend Lease) has engaged ARUP to assess the proposed Lend Lease Circular Quay (LLCQ) development located at 174-182 George Street and 33-35 Pitt Street, Sydney in the context of the Interim CBD Rail Link (CBDRL) Corridor contemplated under State Environmental Planning Policy (Infrastructure) 2007.

Following consultation with Mr John Bryan, Coordinator, Future Rail Corridors Protection, Transport & Land Use Planning, Transport for NSW, ARUP have assessed

- Impact upon the LLCQ development building structure by the construction and operation of the CBDRL.
- Impact of Noise and Vibration on the final occupants of the LLCQ development by the construction and operation of the CBDRL.
- Stray Currents and Electromagnetic Effects.
- The risk of Diesel and other Contamination of the ground and ground water surrounding the Interim CBD Rail Link (CBDRL) corridor arising from potential leakage from storage tanks. proposed in the basement of the LLCQ development

ARUP have completed the assessment of the Interim CBD Rail Link (CBDRL) Corridor in the context of LLCQ and concluded that on the basis that recommended industry standard design and construction practices outlined in this assessment are implemented, that impacts arising from both the proposed LLCQ development and CBD Rail Link (CBDRL) Corridor can be adequately managed within acceptable limits.

Appendix A

Information received from TfNSW regarding Structural Influence Zones and other Compliance Requirements.

A1 Information Received from TfNSW Regarding Structural Influence Zones and Other Compliance Requirements

Email Response from TfNSW to the question of Rail Easement affecting the Development Site-

Robert

Further to your emails and our discussions about the proposed development, below are comments prepared on the basis of the information provided. Also attached are drawings prepared by Halcrow showing the relative position of the proposed development to the CBD Rail Link (CBDRL) alignment. The lower basement level of RL-11.0 has been used.

The site is within the CBDRL corridor protected under the Infrastructure SEPP (ISEPP). The developer needs to address this in the development application as it will be referred by the City of Sydney for concurrence by RailCorp under the ISEPP. I suggest that a separate report dealing with the interface with the CBDRL be included part of the DA documentation. This streamlines the concurrence process.

The closest point of the proposed basement is about 25m from the side of an assumed station cavern excavation for CBDRL. The proposed basement (RL-11.0m) is about 4m above the assumed level of the crown of a CBDRL station cavern (RL-15.3m).

There should be consideration of environmental aspects associated with the interface with CBDRL, including noise and vibration and electromagnetic effects and stray current protection. Confirmation that the proposed development will not impact CBDRL is required.

Water and diesel tanks are proposed in the basement of the development, the risk of future contamination of the ground affecting the CBDRL needs to be addressed. The proposed substation. Is not expected to impact the CBDRL, but this would need to be confirmed.

If there are any significant changes to the proposed design, the above comments would need to be reviewed.

A meeting can be organised if it would assist the preparation of information for inclusion with the DA documents. I am going on leave, so if you wish to discuss the above, please contact Michael Gheorghiu by email or on 0419 265 659.

Regards

John Bryan

Coordinator, Future Rail Corridors Protection
Transport & Land Use Planning | **Transport for NSW**

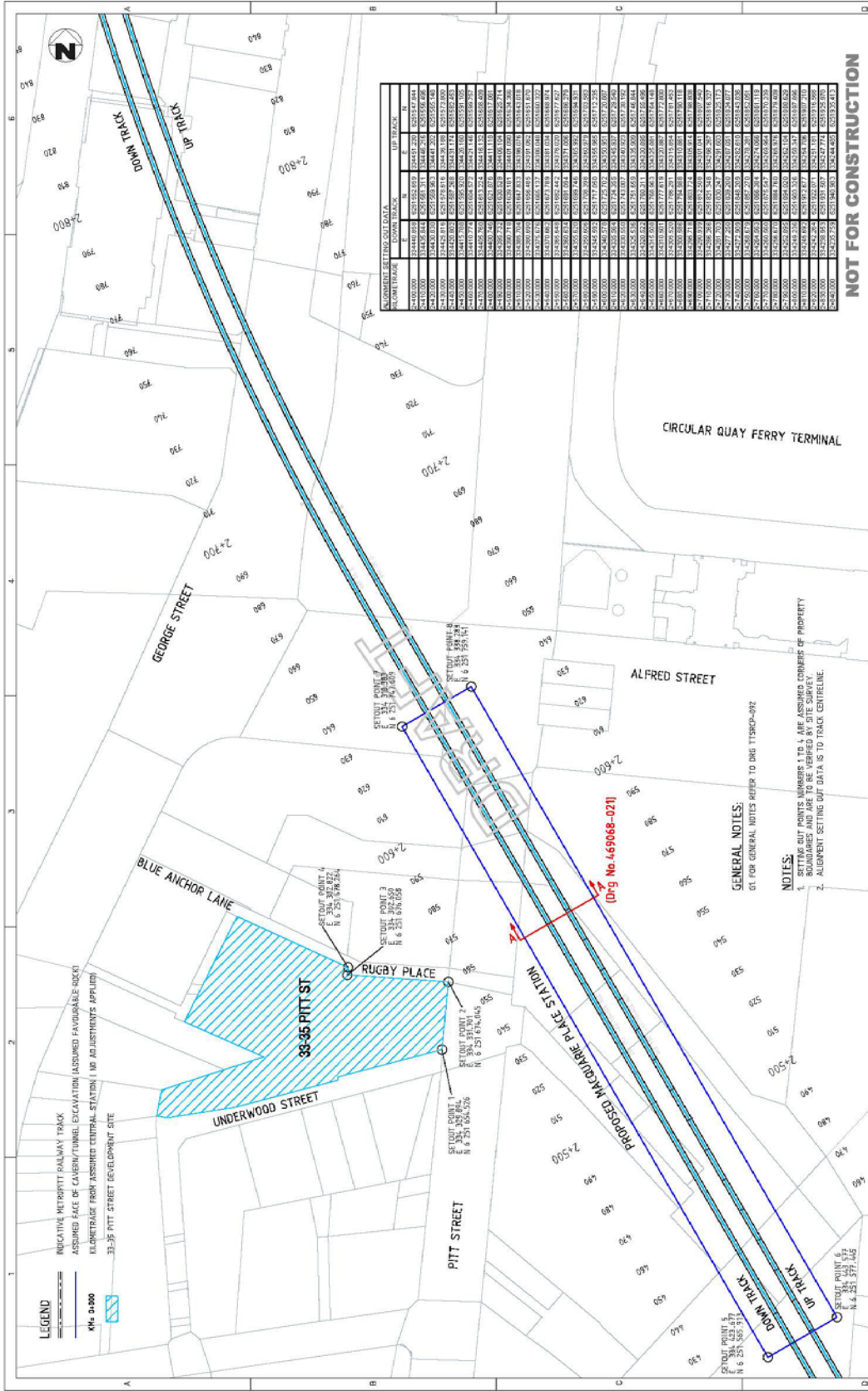
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ALIGNMENT SETTING OUT DATA

Station	E	N	E	N
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24730.000	24774.851	6201.522	24749.232	6202.474
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24800.000	24844.851	6201.522	24819.232	6202.474
24810.000	24854.851	6201.522	24829.232	6202.474
24820.000	24864.851	6201.522	24839.232	6202.474
24830.000	24874.851	6201.522	24849.232	6202.474
24840.000	24884.851	6201.522	24859.232	6202.474
24850.000	24894.851	6201.522	24869.232	6202.474
24860.000	24904.851	6201.522	24879.232	6202.474
24870.000	24914.851	6201.522	24889.232	6202.474
24880.000	24924.851	6201.522	24899.232	6202.474
24890.000	24934.851	6201.522	24909.232	6202.474
24900.000	24944.851	6201.522	24919.232	6202.474
24910.000	24954.851	6201.522	24929.232	6202.474
24920.000	24964.851	6201.522	24939.232	6202.474
24930.000	24974.851	6201.522	24949.232	6202.474
24940.000	24984.851	6201.522	24959.232	6202.474
24950.000	24994.851	6201.522	24969.232	6202.474
24960.000	25004.851	6201.522	24979.232	6202.474
24970.000	25014.851	6201.522	24989.232	6202.474
24980.000	25024.851	6201.522	24999.232	6202.474
24990.000	25034.851	6201.522	25009.232	6202.474
25000.000	25044.851	6201.522	25019.232	6202.474

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Title: **33-35 PITT ST., SYDNEY
CBD RAIL LINK (CBRL)
ASSUMED TRACK AND STATION ALIGNMENT**

Proj. No: **469068-020**

Version: **1**

Project: **CORRIDOR PROTECTION ENGINEERING SERVICES**

Client: **Transport for NSW**

NSW GOVERNMENT

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NO.	DESCRIPTION	DATE
1	DRAFT FOR TENDERS COMMENT	06.11.13

Issue: **1**

Revised: **None**

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Approved: **None**

Author: **None**

Discipline: **None**

Drawn by: **None**

Checked by: **None**

Approved by: **None**

Author: **None**

Discipline: **None**

GENERAL NOTES:
1. SETTING OUT POINTS NUMBERS 1 TO 4, ARE ASSUMED CORNERS OF PROPERTY BOUNDARIES AND ARE TO BE VERIFIED BY SITE SURVEY.
2. ALIGNMENT SETTING OUT DATA IS TO TRACK CENTRELINE.

NOTES:
1. SETTING OUT POINTS NUMBERS 1 TO 4, ARE ASSUMED CORNERS OF PROPERTY BOUNDARIES AND ARE TO BE VERIFIED BY SITE SURVEY.
2. ALIGNMENT SETTING OUT DATA IS TO TRACK CENTRELINE.

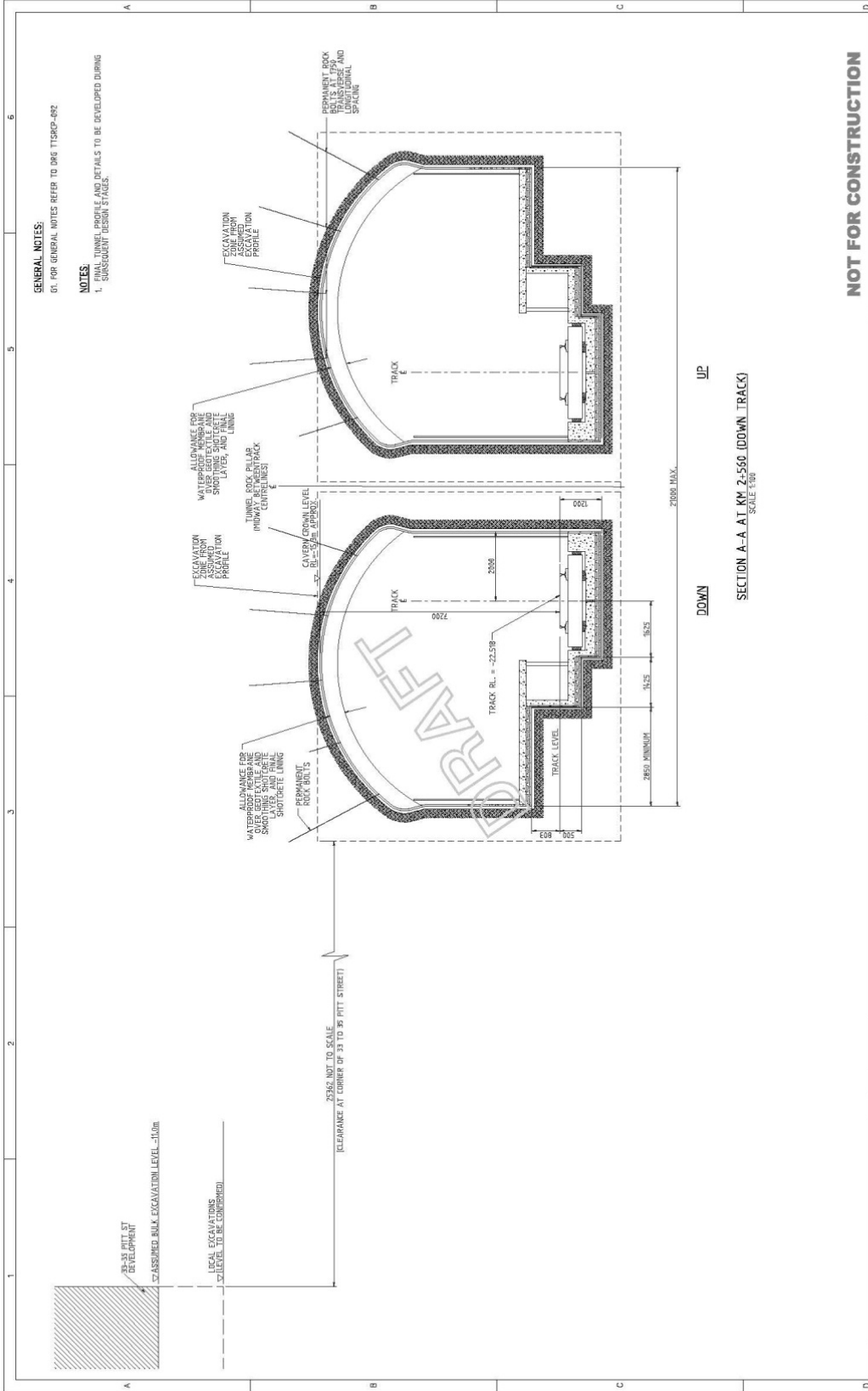
LEGEND

INDICATIVE METROPOLITAN RAILWAY TRACK

ASSUMED FACE OF GAVEN/TUNNELL EXCAVATION (ASSUMED FAVOURABLE: 0:00)

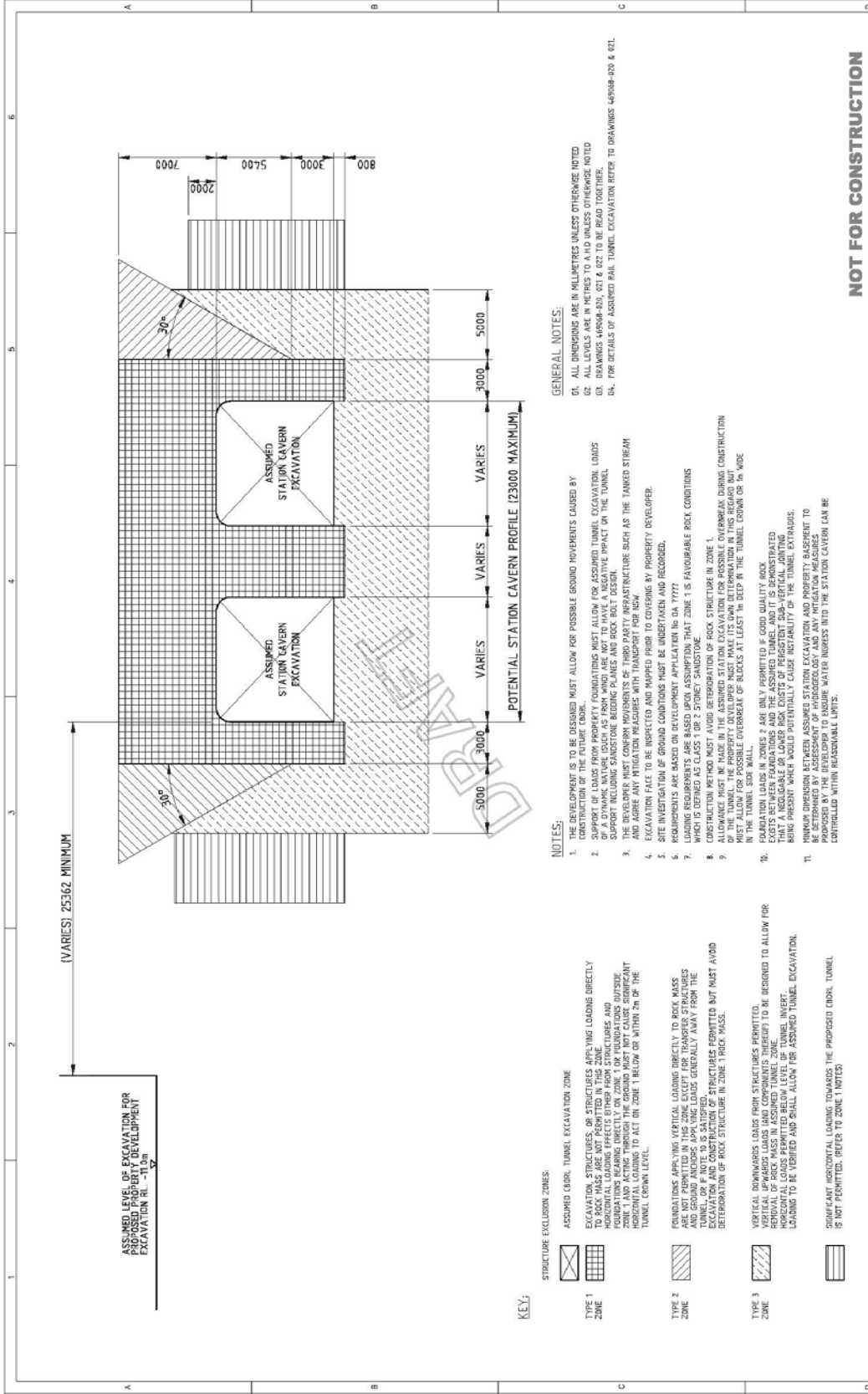
KILOMETRAGE FROM ASSUMED CENTRAL STATION (NO ADJUSTMENTS APPLIED)

33-35 PITT STREET DEVELOPMENT SITE



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<p>CH2MHILL Halcrow Pacific Pty Ltd ABN 45 061 320 849 Level 7, 9 High Street Chatswood 2067, NSW, Australia</p>	<p>Project: CORRIDOR PROTECTION ENGINEERING SERVICES The 33-35 PITT ST, SYDNEY CBD RAIL LINK (CBRL) ASSUMED TUNNEL / STATION EXCAVATION</p>	<p>Version 1 469068-021</p>
<p>Issue 1 Issue Date 05/11/13 Issue By R.H. Issue For CIVIL - AUGUST DATE</p> <p><small>DRAFT FOR TNSW COMMENT</small> Revision - Review on CAD (to not exceed by hand) This document is and shall remain the property of CH2MHILL. The document may not be used for the purposes for which it was commissioned and in accordance with the terms of engagement for the services. CH2MHILL and its employees shall not be held liable for any errors or omissions in this document.</p>	<p>NSW GOVERNMENT Transport for NSW</p> <p>Tel: +61 2 9550 0700 Fax: +61 2 9550 0600 www.ctmhill.com</p>	



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		The 33-35 PITT ST, SYDNEY CBD RAIL LINK (CBDRL) LOADING REQUIREMENTS	
1 DRAFT FOR TENDR COMMENT Date: 06/11/13 Drawn: [] Checked: [] Approved: [] Copyright: []		Version: 1	
1 DRAFT FOR TENDR COMMENT Date: 06/11/13 Drawn: [] Checked: [] Approved: [] Copyright: []		Project No: 469068-022	

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Appendix B

The SEPP (State Environmental
Planning Policy (Infrastructure)
2007

B1 Appendix -The SEPP (State Environmental Planning Policy (Infrastructure) 2007

The SEPP is available at the following site:-

<http://www.legislation.nsw.gov.au/maintop/view/inforce/epi+641+2007+FIRST+0+N/>

A guideline publication is at

http://www.planning.nsw.gov.au/planningsystem/pdf/guide_infra_devtrailroadcorridors_interim.pdf

The specific clauses of the SEPP that affect Development in a Rail Corridor are:-

Part 3 Division 15 Railways

Subdivision 2 Development in rail corridors

85 Development immediately adjacent to rail corridors

(1) This clause applies to development on land that is in or immediately adjacent to a rail corridor, if the development:

- (a) is likely to have an adverse effect on rail safety, or
- (b) involves the placing of a metal finish on a structure and the rail corridor concerned is used by electric trains, or
- (c) involves the use of a crane in air space above any rail corridor.

(2) Before determining a development application for development to which this clause applies, the consent authority must:

- (a) within 7 days after the application is made, give written notice of the application to the chief executive officer of the rail authority for the rail corridor, and
- (b) take into consideration:
 - (i) any response to the notice that is received within 21 days after the notice is given, and
 - (ii) any guidelines that are issued by the Director-General for the purposes of this clause and published in the Gazette.

86 Excavation in, above or adjacent to rail corridors

(1) This clause applies to development (other than development to which clause 88 applies) that involves the penetration of ground to a depth of at least 2m below ground level (existing) on land:

(a) within or above a rail corridor, or

(b) within 25m (measured horizontally) of a rail corridor, or

(c) within 25m (measured horizontally) of the ground directly above an underground rail corridor.

(2) Before determining a development application for development to which this clause applies, the consent authority must:

(a) within 7 days after the application is made, give written notice of the application to the chief executive officer of the rail authority for the rail corridor, and

(b) take into consideration:

(i) any response to the notice that is received within 21 days after the notice is given, and

(ii) any guidelines issued by the Director-General for the purposes of this clause and published in the Gazette.

(3) Subject to subclause (4), the consent authority must not grant consent to development to which this clause applies without the concurrence of the chief executive officer of the rail authority for the rail corridor to which the development application relates, unless that rail authority is ARTC.

(4) In deciding whether to provide concurrence, the chief executive officer must take into account:

(a) the potential effects of the development (whether alone or cumulatively with other development or proposed development) on:

(i) the safety or structural integrity of existing or proposed rail infrastructure facilities in the rail corridor, and

(ii) the safe and effective operation of existing or proposed rail infrastructure facilities in the rail corridor, and

(b) what measures are proposed, or could reasonably be taken, to avoid or minimise those potential effects.

(5) The consent authority may grant consent to development to which this clause applies without the concurrence of the chief executive officer of the rail authority for the rail corridor if:

(a) the consent authority has given the chief executive officer notice of the development application, and

(b) 21 days have passed since giving the notice and the chief executive officer has not granted or refused to grant concurrence.

88 Development within or adjacent to interim rail corridor

(1) This clause applies to development that is:

(a) in the area marked “Zone A” on a rail corridors map and has a capital investment value of more than \$200,000, or

(b) in the area marked “Zone B” on a rail corridors map and:

(i) involves the penetration of ground to a depth of at least 2m below ground level (existing), or

(ii) has a capital investment value of more than \$200,000 and involves the erection of a structure that is 10 or more metres high or an increase in the height of a structure so that it is more than 10m.

(2) This clause also applies to development on land within 25 metres of that part of the Interim Rail Link Corridor shown on the map marked “State Environmental Planning Policy (Infrastructure) 2007—Interim Rail Corridor—South West Rail Link”, but only in relation to a development application lodged before 31 December 2010.

(3) Before determining a development application to which this clause applies, the consent authority must give written notice of the application to the rail authority for the interim rail corridor in which the development is to be carried out (the relevant rail authority) within 7 days after the application is made.

(4) Except as provided by subclause (6), consent must not be granted to development to which this clause applies without the concurrence of the chief executive officer of the relevant rail authority.

(5) In determining whether to provide concurrence, the chief executive officer of the relevant rail authority is to take into account the likely effect of the development on:

(a) the practicability and cost of carrying out rail expansion projects on the land in the future, and

(b) without limiting paragraph (a), the structural integrity or safety of, or ability to operate, such a project, and

(c) without limiting paragraph (a), the land acquisition costs and the costs of construction, operation or maintenance of such a project.

(6) The consent authority may grant consent to development to which this clause applies without the concurrence of the chief executive officer of the relevant rail authority if:

(a) the consent authority has given the chief executive officer notice of the development application, and

(b) 21 days have passed since that notice was given and the chief executive officer has not granted or refused to grant concurrence.

(7) The consent authority must provide the relevant rail authority with a copy of the determination of the application within 7 days after the determination is made.

88A, 88B and 88C are for the Metro Corridor and are not applicable to the 33-35 Pitt Street Site.

89 Review of land within interim rail corridors

The Minister must, in consultation with the Minister for Transport, as soon as practicable after 17 February 2010 and every 2 years after that, review the interim rail corridors to determine whether any of the land included in a corridor should be excluded from the operation of this Policy on the basis that the land is no longer required for railway purposes.