

Updated Preferred Project Report Project Application



45-47 Macquarie Street and 134 - 140 Marsden Street,
Parramatta

Submitted to Department of Planning and Infrastructure
On Behalf of Crown International Holdings Group

Volume 1 of 1

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1.0 Introduction

This Updated Preferred Project Report (Updated PPR) is submitted to the Minister for Planning pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act). It relates to MP09_0167 for a mixed use development at 45-47 Macquarie Street and 134-140 Marsden Street, Parramatta otherwise known as 45 Macquarie Street (the site), and has been prepared on behalf of the Proponent for the project, Crown International Holding Group.

In February 2011, a PPR was submitted to the Department of Planning and Infrastructure (Department) which addressed outstanding issues that arose from the exhibition of Project Application (PA) for MP09_0167, as well as issues raised by the Design Review Panel (the Panel) for the project.

Following submission of the PPR, the Panel issued its final comments on the project. The main outstanding issue relates to the compliance of the project with the amenity Rules-of-Thumb (specifically day light access and natural ventilation) in the Residential Flat Design Code (RFDC).

In response to the Panel's outstanding concerns, amendments have been made to the design of the project (see revised Architectural Plans at **Appendix A**), and a revised Direct Solar Access Analysis and Natural Ventilation Study (**Appendix B** and **Appendix C** respectively) have been prepared by Windtech. The changes to the design have resulted in a significant improvement to the overall amenity within the residential component of the proposed development, and full compliance with the day light access and natural ventilation Rules-of-Thumb is now achieved.

This Updated PPR also addresses other outstanding issues raised by the Panel.

1.1 Background

The Environmental Assessment Report (EAR) for MP09_0167 was lodged with the Department in March 2010 and was exhibited between May and June 2010. Prior to lodgement of the PA, five meetings were held with the Design Review Panel to refine the design of the development, and a sixth meeting was held following the exhibition of the PA.

A number of submissions were received from public agencies and two public submissions were received (one of which was not an objection). Notably, the submission from the Heritage Office noted its view that the Statement of Commitments, if implemented, would adequately protect the archaeological heritage of the site. In addition, Parramatta City Council (Council) indicated its support for the proposal particularly the proposed built form and scale of the development.

On 18 August 2010, the Department sent a letter to the applicant which outlined the outstanding issues relating the project, and requested that a PPR be lodged addressing these issues. The main issue raised in the DPI's correspondence related to the proposal's compliance with *State Environmental Planning Policy 65 – Design Quality of Residential Flat Development* (SEPP 65) and the RFDC, particularly in relation to internal amenity within the residential component of the development. The letter also requested that some additional reports/plans be submitted with the PPR to assist the Departments in finalising its assessment of the project.

Attached to the Department's letter was a report (Report Five) from the Panel which outlined twelve outstanding design issues for the development. There were some overlaps between the issues raised by the Panel, and those highlighted by the Department in relation to compliance with SEPP 65 and the RFDC.

On 8 September 2010, a meeting was held with the Department to discuss outstanding issues relating to the project.

Amended plans, as well as updated consultant reports were submitted with the PPR in February 2011.

On 11 April 2011, the Panel issues its final report (Report 6) on the project in which it raised four outstanding concerns. These outstanding concerns are addressed in this Updated PPR and are outlined in detail below.

The applicant has had ongoing consultation meetings with the Mayor and Director of Planning at Council to keep them informed about the status and design changes to the project. Council has indicated that its strong support for the proposed development

1.2 Legislation Changes

The Environmental Planning and Assessment Amendment (Part 3A Repeal) Bill 2011 (the Bill) received assent on 27 June 2011. The Bill (once enacted) will repeal Part 3A of the EP&A Act and will introduce two new development assessment streams in place of the former Part 3A provisions. It is expected that the amendments to the EP&A Act will commence at the end of July.

The Bill established transitional arrangements for existing Part 3A projects that are currently being assessed under Part 3A. As such, the PA for MP09_0167 will continue to be dealt with in accordance with the Part 3A provisions of the EP&A Act.

2.0 Outstanding issue raised by the Panel

As detailed above, Report Five issued by the Panel following exhibition of the EAR for the project outlined twelve outstanding concerns about the proposed development. Following submission of the PPR in February, and consideration by the Panel, these concerns were narrowed down to only four outstanding issues which are set out in Report Six issued by the Panel on 11 April 2011.

The outstanding issues are summarised below.

2.1 Building depth, apartment depth, day lighting and cross ventilation

The Panel noted the RFDC Rules-of-Thumb which recommend that:

- a maximum building depth of 18 metres be applied in residential developments;
- 60% of apartments within the development be naturally cross-ventilated; and
- single aspect apartments be limited in depth to 8 metres.

In accordance with the RFDC, developments which seek to vary from these standards, must demonstrate how appropriate natural ventilation can be achieved. The Panel raised concerns about the efficacy of the slots in achieving natural ventilation within the proposed apartments, and suggested that the provisions of SEPP 65 and the requirements of the RFDC had not been appropriately addressed in this respect.

2.2 Building height

The Panel raised concerns regarding the proposed street wall heights of the proposed development suggesting that they were inconsistent with the design requirements in the Parramatta City Centre Development Control Plan 2007 (City Centre DCP). It also noted that the proposed maximum building height exceeded the City Centre LEP height control and suggested that 'a compelling logic and rationale for deviation from these standards' should be provided.

2.3 Built form

The Panel noted that a number of amenity issues relate to the deep floor plate of Blocks A, B and C, as well as the proposed GFA of the development which it suggested is 'bulky in the context of Parramatta'.

2.4 Archaeology

The Panel suggested that the archaeology needs to be a key feature of the development and that a package for its long term conservation with public access, interpretation, appreciation and understanding needs to be provided.

The Panel's outstanding issues in relation to SEPP 65 and the RFDC have been addressed through amendments made to the design. All other issues are addressed in the Updated PPR below. See Section 4.0 below for details.

3.0 Project Description

The Updated PPR seeks approval for the construction of a mixed use development consisting of:

- six levels of basement carpark;
- a five storey podium consisting of:
 - ground floor retail/restaurant at the street frontages;
 - three levels of commercial above with residential units located behind the commercial street frontage at level 3;
 - communal residential amenities including a gym and pool at the rear of level 2;
 - loading docks and vehicle circulation space at the ground floor.
- residential towers above the podium consisting of:
 - Block A – twenty-two storey residential tower
 - Block B – twenty-one storey residential tower
 - Block C – seventeen storey residential tower with roof garden above
 - Block D – seven storey residential tower with a roof garden above
- a public plaza at the ground floor in the north of the site accommodating public open space and archaeological display area surrounded by café/retail space with an archaeological interpretation space to the west of the pavilion.

The revised design is based on the following key drawings:

- Architectural drawings prepared by AJC and dated 4 July 2011;
- Photomontages prepared by Lucid Metal;
- Traffic Noise Impact Assessment Report and Building Services Acoustic Assessment prepared by VDM Consulting and dated March 2010;
- Revised Acoustic Treatment Plans prepared by VDM Consulting and dated 19 November 2010;
- Landscape plans prepared by Taylor Brammer Landscape Architects and dated 17 January 2011; and
- Stormwater Report and Plans (includes Erosion and Sediment Control Plan) prepared by Harris Page and dated February 2010;
- Archaeological Conservation and Heritage Interpretation Plan prepared by Graham Brooks and Associates and dated December 2010;
- BCA Assessment Report prepared by BCA Logic and dated 23 December 2010;
- Revised Traffic Report prepared by Colston Budd Hunt and Kafes and dated 1 February 2011;
- Accessibility Statement prepared by Morris Goding Access Consulting and dated 24 January 2011;
- BASIX Certificates prepared by Built Ecology and dated 20 April 2010;
- Letter from BASIX consultant prepared by Built Ecology and dated 14 January 2011;
- SEPP 65 Architectural Design Statement prepared by Allen Jack and Cottier and dated 22 December 2010;
- Revised Shadow Diagrams prepared by Allen Jack and Cottier;

- Spreadsheet of Residential Storage prepared by Allen Jack and Cottier;
- Engineering Statement prepared by VDM Consulting and dated 9 March 2011;
- Environmental Wind Effects Report prepared by Windtech and dated 28 January 2010;
- Quantity Surveyor's Report prepared by Newton Fisher and Associates and dated 22 April 2010;
- Staging Plan prepared by Bates Smart Architects and dated 5 March 2010;
- Sustainability Strategy prepared by Advanced Environmental and dated December 2009;
- Preliminary Report on Geotechnical Investigation prepared by Douglas Partners and dated March 2010;
- Recommendations for Protection of Archaeological Remains during Construction prepared by International Conservation Specialists and dated March 2010;
- Report on Investigation of Aboriginal Heritage Aspects prepared by Laila Haglund and dated March 2006;
- Environmental Soil Report prepared by Douglas Partners and dated 28 April 2005;
- Security Design Report prepared by Harris Crime Prevention Services and dated 12 March 2010; and
- Access Report prepared by Morris Golding Accessibility Consultants and dated 12 March 2010.

3.1 Key Changes to Project

The following key changes have been made to the design of the project as part of the revised design process for the Updated PPR:

- The whole development has been rotated 2.5 degrees to the west to improve solar access;
- The apartments at the eastern elevation have been redesigned to locate the living rooms at the front (eastern façade) to improve solar access;
- Minor reconfiguration of internal layouts to improve natural ventilation;
- Minor adjustments to the size and configuration of ground floor retail/restaurant tenancies. No change to the number of tenancies or location of the tenancies is proposed;
- Minor changes to the configuration of the commercial floor plates at levels 1, 2 and 3 including a change to the size of the central void at level 1 which is located over the Marsden Street residential lobby below;
- Minor reconfiguration of the internal residential amenities area at level 1;
- Inclusion of additional split-level apartments at levels 9 and 10; and
- Inclusion of stacked parking spaces at basement levels B2 to B6.
- Reconfiguration of the units facing on to the slot between Blocks C and D (at the eastern façade) to improve natural ventilation but preserve privacy to these units.

3.2 Key Development Statistics

The key development statistics of the revised proposal (compared to the original design and original PPR) are summarised in **Table 1** below:

Table 1 – Key development statistics for the project

Key Development Statistic	Original scheme	PPR	Updated PPR
Site area	4,898sqm		
GFA	40,307sqm (<i>Parramatta City Centre Local Environmental Plan</i> (City Centre LEP)) 41,362sqm (<i>Sydney Regional Environmental Plan 28 – Parramatta</i> (SREP 28))¹	3,9825.7sqm (City Centre LEP) 41,331.6sqm (SREP 28)	40,522.4sqm (City Centre LEP) 41,336.5sqm (SREP 28)
FSR	8.23:1 (City Centre LEP) 8.44:1 (SREP 28)	8.14:1 (City Centre LEP) 8.44:1 (SREP 28)	8.27:1 (City Centre LEP) 8.44:1 (SREP 28)
Maximum building height	RL 94.50 (to top of plant but excluding architectural roof feature) or 84.6m to the Macquarie Street ground level at its topmost point.	Slight increase in height of 600mm due to increase in floor-to-ceiling heights of commercial tenancies from 300mm to 600mm.	Consistent with original scheme. RL 94.50 (to top of plant but excluding architectural roof feature) or RL91.40 to top of level 25 apartment (approximately 84.6m to the Macquarie Street ground level at its topmost point).
Unit mix	89 studio and one-bedroom units (26%) 193 two-bed units (57%) 57 three-bed units (17%) Total – 339 units	115 one-bedroom units (31%) 204 two-bed units (55%) 48 three-bed units (14%) Total – 367 units	115 one-bedroom units (31%) 204 two-bed units (55%) 48 three-bed units (14%) Total – 367 units
Car parking	506 basement car parking spaces, including 29 accessible spaces 48 bicycle parking	508 basement car parking space including 34 accessible spaces	535 basement parking spaces including 30 stacked spaces and 39 accessible

¹ The Panel requested that the GFA and FSR for the site be calculated in accordance with the definition for GFA under SREP 28. This will ensure that the proposed development is consistent with the 2006 approval (as amended) for construction of a mixed use retail and commercial development on the site (DA470/2006)

Key Development Statistic	Original scheme	PPR	Updated PPR
	spaces ▪ 10 motorcycle parking spaces	▪ 68 bicycle parking spaces ▪ 4 motorcycle spaces	spaces ▪ 86 bicycle parking spaces ▪ 4 motorcycle spaces
Communal private open space	▪ 756sqm (15% of site area)	▪ 1,571.4sqm (32.4% of site area)	▪ 1,571.4sqm (32.4% of site area)

3.3 Implications of Design Change

3.3.1 Rotation of building and redesign at eastern elevation

As detailed above, the key design change to the proposed mixed use building is the rotation of the building by 2.5 degrees to the east, and re-arrangement of the internal unit layouts at the eastern elevation to locate the living rooms at the front (eastern) façade. A Direct Solar Access Analysis (**Appendix B**) has been prepared for the revised design which concludes that 74% of the residential units in the proposed development will receive a minimum of 2 hours of a solar access to living rooms and private open space between 9am and 3pm in midwinter. This exceeds the minimum requirements in the RFDC.

See discussion in Section 4.1 below.

3.3.2 Reduction in the number of air shafts

Due to the Panel's concerns about the reliability of the proposed air shafts in achieving natural ventilation, the layouts of units have been amended to improve natural ventilation without relying on the use of air shafts.

The Natural Ventilation Study (**Appendix C**) prepared for the revised design concludes that, without the inclusion of any of the ventilation air shaft being considered, 65% of the units will satisfy the requirements for natural ventilation. This exceeds the minimum requirements in the RFDC.

See discussion in Section 4.1 below

3.3.3 Increase in parking numbers

The proposed design changes include a revised layout to the basement parking at basement levels B2 to B6 and inclusion of 30 stacked parking spaces across these levels. This has been included in the Revised Statement of Commitments at Section 5.0 below.

The *Parramatta City Centre Local Environmental Plan 2007* (City Centre LEP) sets maximum parking rates for new development in the Parramatta City Centre. The relevant parking rates are as follows:

- Commercial premises – 1 space per 100sqm GFA
- Retail premises – 1 space per 30sqm

- Restaurants – 1 space per 10sqm or 1 space per 4 seats (whichever is the lesser)²
- Residential – 1 space per unit plus 1 visitor space per 5 units

According to the above rates, a maximum parking provision of 559 parking spaces will apply to the proposed development. In total, 535 parking spaces are proposed for the development which is below the maximum specified under the City Centre LEP.

There is no change to the provision of bicycle parking and motorcycle parking on the site, and the provision of accessible parking spaces exceeds that proposed in the original PPR design.

² As the seating arrangements for the proposed restaurant have not yet been established, car parking rates for the proposed restaurant have been calculated according to the rate per sqm.

4.0 Response to Panel Issues

The Panel's outstanding issues are addressed in detail below.

4.1 Building depth, apartment depth, day lighting and cross ventilation

The Panel suggested that a number of amenity issues arose from the proposed development's non-compliance with the RFDC recommended building depth control.

The RFDC's Rule-of-Thumb in relation to 'Building Depth' states as follows:

*In general, an apartment building depth of 10-18 metres is appropriate. Developments that propose wider than 18 metres must **demonstrate how satisfactory daylighting and natural ventilation are to be achieved.***

Notably, the RFDC does not differentiate between residential buildings with single-loaded and double-loaded corridors in applying the Rule-of-Thumb for building depth. It is considered appropriate to permit a wider building depth in residential developments with double-loaded corridor where, as is the case for the proposed development, appropriate amenity to the internal corridors is provided.

As the proposed development will have building depths in excess of 18 metres, a key focus of the development design has been on ensuring appropriate levels of daylight access and natural ventilation are provided to the units.

In this respect the RFDC sets out the following Rules-of-Thumb for natural ventilation:

- A minimum of 60% of apartments within a residential development to be naturally cross-ventilated; and

The design for the development submitted for the PPR in February 2011, relied on the use of air shafts to achieve appropriate levels of natural ventilation within the proposed residential apartments. The Panel raised a concern about the efficacy of these air shafts in providing natural ventilation to these units.

As a result, internal layouts have been amended and a revised Natural Ventilation Study has been prepared for the project (see **Appendix C**) which assesses the natural ventilation performance of the residential component of the development without the air shafts. It concludes that 65% of the units within the proposed development will be naturally cross-ventilated.

In relation to daylight access, the RFDC sets out the following Rules-of-Thumb:

- *Living rooms and private open spaces for at least 70 percent of apartments in a development should receive a minimum of three hours direct sunlight between 9 am and 3 pm in mid winter. In dense urban areas a minimum of two hours may be acceptable.*
- *Limit the number of single-aspect apartments with a southerly aspect (SW-SE) to a maximum of 10 percent of the total units proposed.*

The PPR submitted in February 2011, measured the sunlight access to the proposed apartments between 8am and 4pm in midwinter. Both the Panel and the Department raised concerns about the proposed measurement suggesting that solar access be measured in accordance with the RFDC (ie. between 9am and 3pm in midwinter). However, no issue was raised with assessing the development as being within a dense urban area (ie. 2 hours of solar access required) as it is located within the Parramatta City Centre.

To achieve compliance with the RFDC Rule-of-Thumb for solar access, key changes have been made to the design of the development, namely:

- Rotation of the development by 2.5 degrees to the east; and
- Redesign of the internal unit layouts at the eastern elevation to locate the living rooms at the eastern façade.

As a result on these changes, 74% of the apartments within the residential component of the development receive 2 hours of direct solar access to their living rooms and private open space in mid-winter (see Direct Solar Access Analysis at **Appendix A**). In addition, only 9% (or 32 out of 367 apartments) will have living room windows with a southerly aspect only.

The building depth Rule-of-Thumb is a general guide only, and the RFDC specifically notes that, where a maximum building depth of 18 metres cannot be achieved, it should be demonstrated that appropriate levels of daylight access and natural cross ventilation can be achieved. As the proposed development will exceed the minimum requirements under the RFDC's Rules-of-Thumb for daylight access and natural ventilation, the proposed building depth is considered acceptable.

This outstanding issue is now considered resolved.

4.2 Building height

In Report Six, the Panel raised concerns regarding the proposed street wall heights of the proposed development, as well as the proposed height of the building.

The Panel raised concerns regarding the proposed street wall heights and overall building height of the proposed development in all of its reports prior to exhibition of the EAR for the project.

In response, an additional level of commercial floor area was added in the podium to increase the street wall height at the Marsden Street frontage. The EAR submission also included a 'Future Context Analysis' (as requested by the Panel) which described the proposed development in the context of existing and future development in the City Centre. The Future Context Analysis demonstrated that the proposed street wall heights, as well as overall building heights were appropriate in the context.

Notably, the Panel did not raise the proposed street wall heights or overall building height as issues in Report Five which was prepared following exhibition of the EAR. Thus, it was assumed, that the design of the development and details submitted with the EAR appropriately addressed any outstanding concerns in this regard. The Panel's reason for raising this issue again at this late stage (following submission of the PPR) is unclear. The analysis and justification put forward in the EAR for the proposed height and street wall heights are still considered relevant as the proposed height and street walls heights have not changed.

Height

A maximum building height of 54 metres applies to the site with a 10% concession permitted subject to compliance with the Design Competition requirements of the City Centre LEP. Although a Design Competition was not held for the project, a Design Review Panel process was undertaken which was designed to achieve the same level of design excellence.

The proposed development will have a staggered building height. Block D will have a height of only 35 metres and will occupy approximately 10% of the building

footprint. Block C will have an approximate height of 68.7 metres and will occupy approximately 40% of the building footprint.

Block B will have an approximate height of 81 metres and will take up approximately 40% of the building footprint, whilst Block A will have a maximum height of 84 metres and will occupy less than 10% of the building footprint.

A concession from the maximum height controls was granted for the approved commercial development application (DA470/2006) based on the significant public benefit provided by the preservation and display of archaeological heritage items on the site. This same concession has been sought for the subject proposal.

The commercial DA for the site was approved with a maximum height limit of RL75.30 (approximately 66 metres). Block D is well below this approved maximum height and Block C is approximately equivalent to this approved maximum height. Thus, 50% of the building footprint will be generally consistent with the maximum height already approved for the site.

The majority of the building height for the proposed development has been concentrated over the northern part of the site. This part of site lies opposite to the Jesse Centre (on the northern side of Macquarie Street) which has a building height of some 80 metres. In this context the proposed height at the northern edge of the site is considered appropriate.

A detailed Comparable Height Study and a Future Context Analysis was included in the Architectural Design Report submitted with the EAR, which describes how the proposed height of the development will integrate with existing and future development in the vicinity of the site and surrounding area.

Street Frontage Heights

The proposal will generally comply with the street frontage and setback controls for Macquarie Street outlined in the City Centre DCP, and the Design Review Panel has noted its support for the proposed street frontage height to Macquarie Street (see the Panel's Report Two).

As detailed above, in response to the issues raised by the Panel prior to exhibition of the EAR, an additional commercial level was included in the podium to increase the street wall height at the Marsden Street frontage. An architectural podium feature is included at this frontage so that the perceived street frontage height is approximately 22.4 metres which is only slightly below the street frontage height recommended in the City Centre DCP (26 metres to 30 metres).

Due to the irregular allotment shape and design of the proposed development it is considered unreasonable to require compliance with the street frontage height at the Hunter Street frontage. Block D (which is located at this frontage) does not achieve the maximum height permitted on the site. Therefore providing a street frontage wall and setback at this frontage would result in an inappropriate urban design outcome along the street.

Street frontage heights have been the subject of detailed discussions with the Panel. The Architectural Plans submitted with the EAR noted the street frontage height and setback requirements of the City Centre DCP to allow an easy comparison against the proposed design. In addition, the Future Context Analysis (submitted with the EAR) provided an analysis of the expected building heights, as well as street frontage heights for sites surrounding the site which demonstrates that the proposed street frontage heights (and setbacks) for the development will integrate with the expected development pattern in the surrounding area.

Notably, Council has indicated its support for the proposed height and street wall heights of the development and has raised no issue with any non-compliance with its local planning controls.

This outstanding issue is considered resolved.

4.3 Built form

The Panel noted that a number of amenity issues relate to the deep floor plate of Blocks A, B and C and the proposed GFA of the development which it suggested is 'bulky in the context of Parramatta'.

Floor Plate

As detailed in Section 4.1 above, the proposed building depth (and therefore the floor plate) will not result in a development that does not comply with the amenity controls in the RFDC. The proposed development will exceed the minimum RFDC standards for light access and natural ventilation. Therefore, the proposed floor plate for Blocks A, B and C does not result in any unacceptable amenity issues.

Proposed GFA

In its Report One (Part B), the Panel noted its agreement that the GFA for the proposed development should not exceed the GFA of the previously-approved commercial DA when measured under the planning instrument applicable at that time (ie. SREP 28). As a result, the proposed GFA for the mixed use development on the site has been measured in accordance with the definition for GFA under SREP 28, and the development has been designed to not exceed the maximum FSR approved for the commercial DA on the site (ie. 8.44:1).

The commercial DA provided for a relatively squat and bulky commercial built form on the site, whereas the proposed mixed use development incorporates a commercial/retail podium with slimline residential towers above. The mixed use design is less bulky than the commercial proposal and provides an improved visual impact than the previously-approved commercial design.

The above issue is considered resolved.

Archaeology

The Panel suggested that the archaeology needs to be a key feature of the development and that a package for its long term conservation with public access, interpretation, appreciation and understanding needs to be provided.

The entire development has been designed around providing an appropriate archaeological pavilion in the northern section of the site that will not only ensure that the significant archaeological relics can be conserved in situ, but that an appropriate display area can be provided which will provide public access for viewing of the relics. An Interpretation Centre has also been provided and the Revised Statement of Commitments (see Section 5.0 below) includes specific mechanisms to ensure the ongoing maintenance of the archaeology display area.

An Archaeological Conservation and Heritage Interpretation Plan and Recommendations for Protection of Archaeological Remains during Construction were submitted with the EAR which addressed all aspects of the long term conservation, public access, and display of the archaeological relics.

In response to the exhibition of the EAR, the Heritage Office indicated its support for the proposed management, display and conservation of the archaeological heritage items proposed as part of the project (subject to imposition of a number

of conditions of approval). These conditions have been included in the Revised Statement of Commitments.

The Heritage Office is the authority which controls the conservation and protection of heritage items in NSW. As the Heritage Office has indicated its support for the proposal, all issues relating to archaeology on the site are considered resolved.

5.0 Revised Statement of Commitments

The Revised Statement of Commitments includes new or amended commitments which are underlined.

Table 2 – Revised Statement of Commitments

Subject	Commitments	Timing
Developer contribution	A total monetary contribution comprising \$1,500,000 is payable to Parramatta City Council pursuant to Section 94A of the Environmental Planning and Assessment Act, 1979 and the Parramatta City Centre Civic Improvement Plan. Payment must be by cash, EFTPOS, bank cheque or credit card only. Staged contributions are to be paid to Council prior to the issue of the occupation certificate for each completed stage of the development. The staged contributions will be calculated according to the proportional value of the work stage that has been completed. At the time of payment, the contribution levy will be indexed quarterly in accordance with movements in the Consumer Price Index (All Groups Index) for Sydney issued by the Australian Statistician.	Prior to final occupation certificate being issued.
Contamination	A preliminary Site Investigation Report and (if required) a Remedial Action Plan (RAP) will be prepared for the site. If required remediation activities will be carried out in accordance with the RAP and a Site Audit Statement will be prepared for the site.	Prior to the construction certificate being issued.
Traffic Noise	▪ Traffic noise impacted apartments will be designed as per the requirements of AS3671-1989 to comply with internal noise levels specified in AS2107-2000. ▪ Levels 3 to 9 facing Marsden Street (the eastern facade) will be constructed with standard block construction in a reinforced concrete frame to provide a high level of traffic noise reduction without the need for any additional insulation. ▪ Standard concrete block construction for external walls and upgraded glazing to a thickness of 7.78mm laminated glass will be used. ▪ Mechanical ventilation (air conditioning) complying the BCA requirements will be provided in the traffic noise affected apartments. ▪ Recommended glazing thickness for windows/ sliding doors to prevent traffic noise intrusion presented in the table below will be implemented during construction:	Detailed design and construction

Subject	Commitments	Timing																																																																																								
Traffic Noise	Table 4.1 - Required R_w Ratings for Glazing Macquarie Place – North Facade – Facing Macquarie Street Calculated Glazing R_w Values <table><tr><th>Location</th><th>Level 3 – 9 Inclusive</th><th>Level 10 – 13 Inclusive</th><th>Level 14 – 17 Inclusive</th><th>Level 18 & Above</th></tr><tr><td>Bedroom</td><td>28</td><td>26</td><td>25</td><td>24</td></tr><tr><td>Living Room</td><td>26</td><td>23</td><td>22</td><td>21</td></tr><tr><td>Ensuite</td><td>27</td><td>25</td><td>24</td><td>23</td></tr></table> Macquarie Place – South Facade – Facing Hunter Street Calculated Glazing R_w Values <table><tr><th>Location</th><th>Level 3 – 9 Inclusive</th><th>Level 10 – 13 Inclusive</th><th>Level 14 – 17 Inclusive</th><th>Level 18 & Above</th></tr><tr><td>Bedroom</td><td>30</td><td>26</td><td>25</td><td>24</td></tr><tr><td>Living Room</td><td>28</td><td>26</td><td>22</td><td>21</td></tr><tr><td>Ensuite</td><td>29</td><td>25</td><td>24</td><td>23</td></tr></table> Macquarie Place – East Facade – Facing Marsden Street Calculated Glazing R_w Values <table><tr><th>Location</th><th>Level 3 – 9 Inclusive</th><th>Level 10 – 13 Inclusive</th><th>Level 14 – 17 Inclusive</th><th>Level 18 & Above</th></tr><tr><td>Bedroom</td><td>33</td><td>33</td><td>31</td><td>30</td></tr><tr><td>Living Room</td><td>30</td><td>30</td><td>28</td><td>26</td></tr><tr><td>Ensuite</td><td>32</td><td>32</td><td>30</td><td>28</td></tr></table> Macquarie Place – West Facade Calculated Glazing R_w Values <table><tr><th>Location</th><th>Level 3 – 9 Inclusive</th><th>Level 10 – 13 Inclusive</th><th>Level 14 – 17 Inclusive</th><th>Level 18 & Above</th></tr><tr><td>Bedroom</td><td>21</td><td>20</td><td>20</td><td>20</td></tr><tr><td>Living Room</td><td>16</td><td>17</td><td>17</td><td>17</td></tr><tr><td>Ensuite</td><td>18</td><td>19</td><td>19</td><td>19</td></tr></table> <table><tr><th>R_w Value</th><th>GLAZING TYPES</th></tr><tr><td>26 or less</td><td>Standard window frame and glazing</td></tr><tr><td>27 to 30 Inclusive)</td><td>6.38mm laminated safety glass in an acoustically sealed frame</td></tr><tr><td>31 or more</td><td>6.78mm laminated safety glass in an acoustically sealed frame</td></tr></table>	Location	Level 3 – 9 Inclusive	Level 10 – 13 Inclusive	Level 14 – 17 Inclusive	Level 18 & Above	Bedroom	28	26	25	24	Living Room	26	23	22	21	Ensuite	27	25	24	23	Location	Level 3 – 9 Inclusive	Level 10 – 13 Inclusive	Level 14 – 17 Inclusive	Level 18 & Above	Bedroom	30	26	25	24	Living Room	28	26	22	21	Ensuite	29	25	24	23	Location	Level 3 – 9 Inclusive	Level 10 – 13 Inclusive	Level 14 – 17 Inclusive	Level 18 & Above	Bedroom	33	33	31	30	Living Room	30	30	28	26	Ensuite	32	32	30	28	Location	Level 3 – 9 Inclusive	Level 10 – 13 Inclusive	Level 14 – 17 Inclusive	Level 18 & Above	Bedroom	21	20	20	20	Living Room	16	17	17	17	Ensuite	18	19	19	19	R_w Value	GLAZING TYPES	26 or less	Standard window frame and glazing	27 to 30 Inclusive)	6.38mm laminated safety glass in an acoustically sealed frame	31 or more	6.78mm laminated safety glass in an acoustically sealed frame	Detailed design and construction
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Subject	Commitments	Timing
Internal noise mitigation measures	■ The recommended treatments detailed in the Building Services Acoustic Report prepared by VDM Consulting and dated 9 March 2010 will be incorporated into the design and construction of the proposal. ■ This is supplemented by additional recommendations provided in response to the revised design. Partition walls should be constructed according to the following standards (refer to Appendix B of PPR for plans): - Wall Type 'Yellow' Wall type 'Yellow' must have an Rw+Ctr (airborne) rating of not less than 50 and be of discontinuous construction. Discontinuous construction meaning that the wall provides for a minimum 20mm cavity between two separate leaves. - Wall Type 'Red' Wall type 'Red' must have an Rw + Ctr rating of not less than 50. - Wall Type 'Green' Wall type 'Green' must have an Rw rating of not less than 50. - Wall Type 'Blue' Wall type 'Red' must have an Rw + Ctr rating of not less than 40. - Wall Type 'Pink' Wall type 'Red' must have an Rw + Ctr rating of not less than 25. ■ Services must not be chased into the concrete element of the wall. If a services cavity is required the wall should include: - Furring channels not less than 28mm deep fixed to concrete element; - Cavity filled with fibreglass insulation; and - One layer 16mm plasterboard (waterproof material for wet areas) fixed to furring channels.	Detailed design and construction

	All fixed to both sides of the concrete element.	
Subject	Commitments	Timing
Environmentally Sustainable Design	The minimum 40% BASIX water efficiency requirements will be achieved with: ▪ Efficient fixtures – 4 star ELS rated toilet, taps and dishwashers, 3 star showers ▪ Shaded swimming pool ▪ Rainwater or stormwater collection into a 50kL tank to provide water for irrigation and some toilets The minimum 20% BASIX energy efficiency requirements will be achieved with: ▪ passive design principles including shading, natural ventilation, natural daylight and insulation ▪ Gas cook tops and electric ovens, ventilated fridge spaces ▪ Compact fluorescent lighting ▪ Heat pump hot water with gas boost ▪ Timer switches, motion sensors and/or daylight sensors for all common area ventilation and lighting ▪ Naturally ventilated lobby and corridor areas ▪ Air conditioning to all units, 3-3.5 EER efficiency ▪ Swimming pool with heat pump water heating Health wellbeing and amenity will be achieved by complying with SEPP 65, BASIX requirements for thermal comfort and BCA Section J thermal requirements including the following: ▪ Dual aspect for 60-70% of dwellings ▪ Natural ventilation to 25% of kitchens ▪ 2 hours of sunlight to 70% of all living areas ▪ Low VOC paints, adhesives, sealants and carpets ▪ Low formaldehyde composite wood ▪ Roof insulation to minimum R3.2 ▪ Wall insulation to minimum R1.7	<u>Detailed design and construction</u>
Aboriginal heritage	The Department of Climate Change and Water (DECCW) will be notified immediately should an aboriginal object be uncovered during excavation or construction. Stop work procedures and management of objects during the construction phase of a development will be consistent with the provisions of Part 3A of the EP&A Act. All new	<u>During excavation and construction</u>

	Aboriginal objects will be registered with the DECCW in accordance with s91 of the NPW Act.	
Subject	Commitments	Timing
Corridor Lighting Strategy	Lighting controls to be included to ensure artificial lighting is not used when sufficient daylight is available. These controls will include: ▪ Daylight sensors to switch off unnecessary lighting when sufficient daylight is available; or ▪ Timer switches to switch off superfluous lights during daylight hours; and ▪ Separate lighting wiring so that lights that are required during daylight hours can be left on while superfluous lighting is switched off.	Detailed design and construction
Site Remediation Works	Excavation procedures will be carried out generally in accordance with the recommendations in the Preliminary Report on Geotechnical Investigations prepared by Douglas Partners and dated March 2010 (Appendix P of EAR). Where the specific recommendations are considered inappropriate, alternative solutions will be provided.	Excavation and construction
Acid Sulphate Soils	Additional investigation into Acid Sulphate Soils onsite will be undertaken during the excavation phase of the project to determine which soils will need to be treated before disposal and the extent of the treatment. Douglas Partners assume that 25% of soils will need to be treated and disposed of as general soil waste.	Excavation and construction
Security	The following security management actions will be undertaken: ▪ Consultation with local police, Parramatta City Council, Chamber of Commerce and Heritage Council representatives will be undertaken to ensure that the proposal converges with similar security and crime prevention initiatives in place throughout the Parramatta City Centre. ▪ Carefully managed 24 hour 7 days a week limited and secure access will be implemented to the development to achieve desirable crime prevention outcomes. ▪ Lighting design will incorporate down lighting where appropriate to maximise surveillance opportunities. ▪ Signage will be directional and controlling. ▪ CCTV technology will be utilised for the development and cameras will be located in key areas, such as the Macquarie Street frontage, main entry and heritage area, pedestrian points in Marsden and Hunter Streets, reception foyers, lift lobbies, building perimeters, vehicle entry and loading points and vehicle parking areas.	Construction and operation
Archaeological heritage conservation, interpretation and display	The process of sorting and culling the collection into three categories - display, research and public distribution - will be undertaken with NSW Heritage Branch approval.	Detailed design

Subject	Commitments	Timing
Further archaeological excavation	Further archaeological excavation will be undertaken in the following locations: ▪ The well on Allotment 16 was only partially excavated. The remainder of the well shaft remains unexcavated and has the potential to provide well preserved artefacts, relating to the occupation of 1830s cottage. ▪ Within the concrete footings of the 1890s house on Allotment 17 are the only surviving remains of the house shown on this allotment in 1823. The building survived until at least 1854. Further archaeological investigation may reveal whether this building was originally a 'convict hut'. This additional archaeological excavation work will be undertaken at the same time as the excavation for the basement carpark.	Excavation
Performance Requirements for Conservation of Archaeological Remains	The following performance requirements will be met to ensure ongoing conservation of archaeological remains. <i>Ground Moisture, Run-off and Flooding</i> 1. Prevention of overland flow of floodwater. 2. Maintenance of ground water table level no higher than a level to be determined at detailed design stage below the current surface profile of the soil. 3. Management of soil moisture content at a level to be determined at detailed design stage, but generally high. 4. Prevention of rainfall directly onto the remains. 5. Prevention of run-off from the roof, façade and plaza flowing onto the remains. 6. Management of moisture content of masonry at a level to be determined at detailed design stage. 7. Management of moisture content of exposed timber floorboards at a level to be determined at detailed design stage. <i>Biological Growth</i> 8. Allowance for active management of all forms of biological growth (mould, fungi, cyanobacteria, algae, higher plants). <i>Ambient Air</i> 9. Management of air above the remains (and possibly air flow) in order to control air flow, moisture content and temperature. 10. Facilitation of a mechanism to “buffer” the archaeological remains from extreme fluctuations in air qualities	Detailed design, construction and operation.

	(temperature, moisture level, flow etc).	
Subject	Commitments	Timing
Performance Requirements for Conservation of Archaeological Remains	<i>Temperature</i> 11. Provisions to be made to manage fluctuation in temperature around the remains so as to minimise thermal cycling of the archaeological materials. 12. Maintenance of the temperature as low as possible to limit the rate of evaporation of moisture from the materials. <i>Access</i> 13. Prevention of public access directly onto the remains. 14. Provision for safe maintenance access to all areas of exposed (ie. not buried) remains. 15. Implementation of mechanism to ensure that the exposed remains are secure and safe from vandalism. 16. Provision of good visual access to the public in a safe manner <i>Maintenance and Longer-term Considerations</i> 17. Allowance for active management (including on-going maintenance) of the in situ remains. 18. Monitoring the behaviour of the remains over time to confirm performance against established performance requirements. 19. Allowance for periodic review of the effectiveness of implemented preservation solutions.	Detailed design, construction and operation.
Ongoing conservation (operation)	An appropriate legal mechanism for managing the financial contributions and maintenance program associated with the ongoing conservation of the archaeological remains will be established.	Prior to the final Occupation Certificate
Schedule of Conservation Works	Geotechnical advice on the likely impact of surrounding piling and other ground works on water table levels will be sought.	Detailed design
	Analysis of predicted wind patterns to be carried out within the plaza area to understand the extent to which prevailing winds will access the remains below the deck.	Detailed design
	Investigation of optimum size and orientation of openings in plaza deck to give best balance between visibility of the remains and stability of the microclimate around the remains to be undertaken.	Detailed design
	Detailed design to be prepared for surrounding deck to prevent water ingress.	Detailed design

	Allowance for future make-up or draw-down options for ground water table below remains to be made.	Detailed design and construction
Subject	Commitments	Timing
Schedule of Conservation Works	Possible options to facilitate managing soil moisture to be documented and incorporated into current design details. Concepts discussed include gravel surface treatment to ground, spray or drip irrigation systems, below grade sump pumps.	Detailed design and construction
	Protection of the archaeological remains during construction to be documented including a methodology and implementation strategy.	Detailed design, construction and operation
	Environmental control devices (and provision for future devices if required) to be designed and documented.	Detailed design and construction
	Condition of remains to be assessed– analysis and recommendations for any remediation works to be made.	Detailed design and construction
	Ground moisture content to be managed	Construction and operation
	Condition of remains to be monitored, observed and recorded	Construction and operation
	Biological growth to be managed.	Construction and operation
	Higher plant material to be removed.	Construction and operation
	Temporary structural stabilisation of remains during construction to be implemented and to be monitored during construction Protection to be removed after construction	Construction and post-construction
	Remnants of the following to be cleaned up: ■ Biological growth ■ Mud	Construction and post-construction
	Fabric of remains to be consolidated e.g. timber, mortar, brick, stone	Construction

	Elements with original materials to be reinstated/repared in relation to the following: ▪ Brick ▪ Stone ▪ Timber	Construction
Subject	Commitments	Timing
Schedule of Conservation Works	Where relevant elements of the following to be reconstructed: ▪ Brick ▪ Stone ▪ Timber	Construction
	Access to remains to be designed and documented for the following purposes: ▪ Maintenance ▪ Interpretation	Construction and post-construction
	Long term structural stabilisation of remains to be carried out, including: ▪ Foundations ▪ Reconstruction of footings ▪ Pinning of cracked elements ▪ Mortar joints	Construction
	Desalination of porous masonry elements to be undertaken if required	Construction
	Biological growth control programme to be developed	Post-construction
	Environmental control devices to be installed, such as: ▪ Monitors ▪ Sprinklers / drippers ▪ Heater / AC	Construction
	Surface finishes around remains to be installed	Construction

	Interpretive elements to be installed including: ■ Signs ■ Lights ■ Other	Construction
	Monitoring and maintenance manual including schedule programme and procedures to be prepared.	Prior to occupation certificate
Subject	Commitments	Timing
Schedule of Conservation Works	Ongoing cleaning of remains to be undertaken, including: ■ Dust ■ Litter ■ Biological growth ■ Access traces	Operation
	Monitoring and maintenance manual to reviewed on a regular basis	Long Term
	Biological growth control program to be operated	Operation
Protection of archaeological relics during construction	Phase 1 - Project Planning <i>Site Induction/Access Management</i> The following measures will be carried out to limit access to the remains and impact on the archaeological remains: ■ Arrange and attend site orientation meeting with the Contractor and all ground works subcontractors, archaeologist and archaeological conservator to discuss significance of remains and required work methods to prevent impact on remains (pre and post contract works). ■ Mandatory site inductions for all personnel who enter the site to be provided. Induction will address significance of remains and required work methods to prevent impact on remains. ■ Control site access to authorised personnel only. ■ Provide secure hoarding around perimeter of site. ■ Ensure all visitors to the site are accompanied by certified site personnel (pre and post contract works). <i>Cranes</i> The use of cranes during construction will consider the following guidelines:	Detailed Design and Construction

	▪ Do not erect or mount a crane within either of the archaeological conservation zones. ▪ Avoid placing crane in areas where there are exposed archaeological remains between or around conservation zones. ▪ If tower crane is required, position structure on the site of the future building or on adjacent street. Do not position crane on areas where there are unexcavated or reburied archaeological remains. ▪ Use mobile cranes situated on adjacent streets or on the site of the future building wherever possible. ▪ Mobile cranes will not be moved or placed within 10m of the archaeological remains. ▪ Crane loads will be placed only on areas away from archaeological remains or on areas that have been otherwise appropriately protected.	
Subject	Commitments	Timing
Protection of archaeological relics during construction	<i>Heavy Machinery</i> Planning for heavy machinery use on a site with in situ archaeological relics will consider the following: ▪ Use heavy machinery on the site of the future building or on adjacent street. ▪ Heavy machinery will not be moved or placed within 10m of the excavated archaeological remains. ▪ Limited heavy machinery will be used over unexcavated or reburied archaeological remains. <i>Excavation</i> Excavation during construction will be carefully planned and consider the following: ▪ In areas that are designated as being “unexcavated”: - Apply for relevant archaeological permits (where required) - Undertake on-going monitoring by archaeologist during excavation ▪ In areas where excavation is occurring adjacent to exposed archaeological remains: - Minimise area of excavation; - Ensure adjacent excavation does not destabilise any retaining features or cause collapse of the sides of excavations. - Use handheld equipment before mobile excavators - Use small light excavators or drill rigs as a last resort	Detailed Design and Construction

	Install protective work platforms to prevent access directly on remains <i>Work Methodologies</i> All work on or around the archaeological remains will be thoroughly planned and include the following: ■ Preparation of Work Method Statement (WMS) for all actions around and within the conservation areas with a focus on methodology and sequencing to minimise time and impact on site. ■ Preparation of Work Method Statement (WMS) for all works around and within the unexcavated and/or reburied areas with a focus on minimising surface and subsurface disturbance. ■ Review of WMS by archaeological conservator and archaeologist prior to commencement on site. Sign off of WMS by all site contractors involved with specific works will be mandatory.	
Subject	Commitments	Timing
Protection of archaeological relics during construction	Phase 2- Site Preparation <i>Site Preparation</i> Site preparation will include works to “unclutter” the site and facilitate viewing of the archaeological remains, namely: ■ Weedicide Application - Spray leaves of higher plants with weedicide (product containing glyphosphate such as Round-Up). - Leave plants for 1-2months until plants have wilted and died. ■ Plant Removal - Cut back the higher plants as far down the stalk as possible to remove the bulk of the foliage and stalk. - Do not remove/pull up roots from ground or from within archaeological features. This may disturb subsurface features or damage features. <i>Stabilisation works</i> A detailed installation methodology will be developed once the site has been cleared of biological growth and the full condition of the site has been ascertained. The stabilisation strategy will be based on ICS's recommended stabilisation strategy in the report titled <i>Recommendations for Protection of Archaeological Remains during Construction</i> prepared by ICS and dated March 2010.	Detailed Design and Construction

	Phase 3 - Initial Structural Works <i>General Guidelines</i> ▪ In all instances, minimise the area of disturbance (“disturbance zone”) resulting from construction works. ▪ Consult archaeological site conservator immediately should any unexpected slippage, slumping or site disturbance occur (pre and post contract works). ▪ Immediately document (with both photographs and theodolite points) any unexpected slippage, slumping or site disturbance (pre and post contract works). ▪ Any disturbance or unforeseen disruption to the site (ie. including “disturbance zones” as a result of excavation) will be reinstated in a way sensitive to the original archaeological remains and in a way that interprets the original historical scheme; plans for reinstatement should be reviewed by the archaeologist and archaeological site conservator prior to commencement.	
Subject	Commitments	Timing
Protection of archaeological relics during construction	<i>Structural columns</i> ▪ Provide Work Method Statements (WMS) for installation methodologies prior to carrying out works; WMS should be reviewed by archaeologist and conservator. ▪ Monitor the zone during all excavation and piling for evidence of disturbance or ground heaving. ▪ Minimise vibrations during installation. ▪ Use auger excavation as a priority, particularly for first 2-5m; minimise use of pounding or other machine generated vibrations. ▪ Remove backfill immediately from the area; do not load the zone with backfill. ▪ Heavy machinery used for pile excavation/installation should be established and used outside of the zone wherever possible. <i>Sheet piling</i> ▪ Provide Work Method Statements (WMS) for installation methodologies prior to carrying out works; WMS should be reviewed by archaeologist and conservator. ▪ Use combination of excavation and sheet piles to minimize site disturbance. ▪ Minimise pounding and other machine generated vibrations. ▪ Excavate small amounts just inside sheet piling if required to minimise heaving.	Detailed Design and Construction

	- Progress work at a careful and steady pace. - Minimise vibrations during installation. - Monitor the zone during all excavation and piling for evidence of disturbance or ground heaving. - Stop work immediately if heaving or other disturbance is evident; Consult archaeological conservator and structural engineer immediately.	
Subject	Commitments	Timing
Protection of archaeological relics during construction	<i>Reinforced concrete walls</i> - Provide Work Method Statements (WMS) for installation methodologies prior to carrying out works; WMS should be reviewed by archaeologist and conservator. - Minimise size of excavation wherever possible, particularly on the Conservation Zone side of the walls. - Monitor the zone during all excavation and piling for evidence of disturbance or ground heaving. - Minimise vibrations during installation. - Use hand excavation as a priority, particularly for first 600-900mm of depth; minimise use of pounding or other machine generated vibrations. - Remove backfill immediately from the area; do not load the zone with backfill. - Heavy machinery used for footing excavation/installation should be established and used outside of the zone wherever possible. Phase 4 - During Construction <i>Protection Options - Raised Deck</i> Install a waterproof raised deck with perimeter drainage over all areas of exposed archaeological remains. <i>Infill Panels</i> If additional site storage / shedding space is required, consideration could be given to installing structural infill panels to the openings in the public deck over the Conservation Zones. <i>Monitoring Inspection</i> In all instances, Monitoring inspections should be carried out: - Weekly, by the contractor's site foreman / engineer	Detailed Design and Construction

	▪ Monthly, in conjunction with the archaeological conservator ▪ As required following any incidents involving impact or spillage on the protection system.	
Subject	Commitments	Timing
Heritage Branch of the Department of Planning conditions	▪ A specialist heritage manager or heritage consultant shall be nominated for the works which affect the archaeological heritage of the site. The consultant shall have appropriate qualifications and experience commensurate with the significance of the site and the scope of the Major Project works. The name and experience of this consultant shall be submitted to the Director, Heritage Branch, for approval prior to commencement of works. The heritage consultant shall advise on the detail design resolution of new works, undertake on site heritage inductions, and shall inspect new works, design and installation of services (to minimise impacts on significant fabric) and manage the implementation of the conditions of approval for the Project. A report by the heritage consultant (illustrated by works' photographs) shall be submitted to the Director, Heritage Branch, for approval within 6 months of the completion of the works which describes the work, any impacts/damage and corrective works carried out. ▪ All construction contractors, subcontractors and personnel are to be inducted and informed by the nominated heritage consultant prior to commencing work on site as to their obligations and requirements in relation to historical archaeological sites and 'relics' in accordance with guidelines issued by the Heritage Council of NSW. ▪ Significant archaeological heritage items and remnant built fabric elements are to be adequately protected during the works from potential damage. Protection systems shall ensure historic fabric is not damaged or removed. ▪ All affected areas within the site which are of historical archaeological significance and will be affected by the construction works shall be subject to professional archaeological excavation and/or recording. A Research Design including an Archaeological Excavation Methodology shall be prepared in accordance with Heritage Council guidelines for each site which is to be excavated. Those documents should be prepared for the approval of the Director, Heritage Branch, Department of Planning. ▪ After archaeological works are undertaken, a copy of the final excavation report(s) shall be prepared and	Prior to, during and following construction

	lodged with the Heritage Council of NSW, the Local Studies Library and the Local Historical Society in the Parramatta Local Government area. The proponent shall also be required to nominate a repository for the relics salvaged from any further historical archaeological excavations. The information within the final excavation report shall be required to include the following: - An executive summary of the archaeological programme; - Due credit to the client paying for the excavation, on the title page;	
Subject	Commitments	Timing
Heritage Branch of the Department of Planning conditions	- An accurate site location and site plan (with scale and north arrow); - Historical research, references, and bibliography; - Detailed information on the excavation including the aim, the context for the excavation, procedures, treatment of artefacts (cleaning, conserving, sorting, cataloguing, labelling, scale photographs and/or drawings, location of repository) and analysis of the information retrieved; - Nominated repository for the items; - Detailed response to research questions (at minimum those stated in the Department of Planning approved Research Design); - Conclusions from the archaeological programme; and - Details of how this information about the excavations has been publicly disseminated (for example, include copies of press releases, public brochures and information signs produced to explain the archaeological significance of the sites). ■ After the completion of the additional archaeological fieldwork the previously prepared Appendix S of EAR - Heritage Interpretation Plan shall be revised and updated to incorporate the findings from the archaeological works and the detailed design development phase. An updated final Interpretation Plan which includes specific detail regarding the design, locations; media; devices and messages which are proposed to be used at the site shall be submitted for the approval of the Director, Heritage Branch, prior to the occupation of the new development. The Plan shall be prepared in consultation with a materials conservator and an archaeologist in order to ensure that physical conservation needs of the archaeology are adequately	Prior to, during and following construction

	reflected in final proposals. ▪ The previously prepared Appendix T of EAR - Recommendations for protection of Archaeological Remains during Construction, shall be supplemented by an additional document which provides specific detail regarding the long-term maintenance needs of the retained physical archaeological 'relics' and associated artefact displays. A Monitoring and Maintenance Plan to address these aspects with designated schedules, programs and cycles for maintenance shall be prepared by a materials conservator. The Plan shall be submitted for the approval of the Director, Heritage Branch, prior to the occupation of the new development.	
Subject	Commitments	Timing
Disabled Access	Macquarie Street Entry Plaza ▪ Provide a minimum internal latch-side clearance of 145mm over a minimum depth of 1040mm at the main entry gate at the bottom of the main 1:14 entry ramp, compliant with AS 1428.1. ▪ Provide handrails compliant with AS 1428.1 on either side of the Marsden Street main entry ramp and on either side of each the Macquarie Street and Marsden Street main entry stairways Residential Main Entrances ▪ Provide handrails compliant with AS 1428.1 on either side of the Hunter Street residential main entry stairway and on either side of the 1:14 ramp within the residential lobby at grid reference N.5. ▪ Provide handrails compliant with AS 1428.1 on either side of the Hunter Street residential main entry stairway and on either side of the 1:14 ramp within the residential lobby at grid reference N.5. Commercial Main Entrance (Marsden Street) ▪ Provide a direct continuous accessible path of travel from street frontage to the commercial main entry lobby. The provision of a low-rise platform lift compliant with AS 1735.14 is recommended. Ensure the low-rise platform lift is installed in a sheltered location. ▪ Provide handrails compliant with AS 1428.1 on either side of the commercial main entry stairway. Retail and Cafe Tenancy Main Entrances ▪ Ensure at least one leaf of each of the dual-leaf rear entry doorways at each of the ground level retail tenancies has a minimum clear width of 850mm (920mm door leaf). A minimum clear width of 850mm is preferred at both leaves. ▪ Provide a level landing a minimum of 1350mm in depth respectively at the top of the 1:14 ramp at grid	Detailed Design and Construction

	reference O.14 and at the bottom of the 1:14 ramp at grid reference N.14. ▪ Provide handrails compliant with AS 1428.1 on either side of each of the rear 1:14 ramps which lead to the retail tenancies. ▪ Ensure the back-of-house retail entries are re-designated as front-of-house main entries. Ensure the rear entries are designed to an aesthetic standard which is equivalent to that of the main entries at street frontage. ▪ Provide a vertical platform lift compliant with AS 1735.14 at the main entrance into the Hunter Street retail tenancy at grid reference F.11. In the alternative, provide a 1:14 ramp at the Hunter Street residential main entrance and a new retail main entrance at the top of the ramp into the F.11 retail tenancy. Ensure the entry ramp is publicly accessible – that is, not security-controlled for residents only. Note that the latter option affords the opportunity to ensure the Hunter Street residential main entrance is accessible. ▪ Provide a comprehensive system of way-finding signage directing users to the location of the rear retail main entries.	
Subject	Commitments	Timing
Disabled Access	Emergency Egress ▪ Consideration to be given to ensuring that each doorway connecting to emergency egress stairways has a minimum clear width of 850mm (920mm door leaf), so as to allow a wheelchair user some measure of protection in the event of an emergency. ▪ Where emergency warning systems are to be provided in the present development, consideration to be given to providing an emergency warning system with both visual and audio capabilities. Archaeological Centre ▪ Provide handrails compliant with AS 1428.1 on both sides of the Archaeology Centre entry lobby stairway. Commercial Office Tenancies ▪ Ensure the main entry doorway to each of the commercial office tenancies on levels 1, 2, and 3, has a minimum clear width of 850mm (920mm door leaf). ▪ Provide a minimum internal latch-side clearance of 460mm at the main entry doorway to the commercial tenancy at grid reference N.5 on level 1. Commercial and Archaeology Centre Passenger Lifts ▪ Ensure that components in the lift 7 and 8 lift cars (control panels, audio/visual indicators, handrails and light	Detailed Design and Construction

	levels) comply with AS 1735.12. Commercial Sanitary Facilities (Levels 1 and 3) - Provide a minimum clear width of 850mm (920mm door leaf) at the entry doorway of the unisex accessible toilets on levels 1 and 3 and the basement level 1 accessible shower room. - In accordance with Parramatta City Centre DCP, ensure the commercial accessible toilets on levels 1 and 3 each comply with AS 1428.2. That is, provide a minimum circulation area of 2300mm x 1900mm around the pan, with the washbasin to sit outside this area. Passenger Lifts - Ensure that components in all lift cars (control panels, audio/visual indicators, handrails and light levels) comply with AS 1735.12. - There is a commercial passenger lift at grid references N.5. There are a total of 4 residential passenger lifts at grid reference F.7. There is a residential passenger lift at grid reference F.10. Ensure each of the above lift cars has minimum internal floor dimensions of 1400mm (width) x 1600mm (length), compliant with DDA Access Code 2010 Table E3.6. Adaptable Units: Design - Provide an 800mm-long bench adjacent to the sink, cooktop and wall-mounted oven unit designs 305 and 512 respectively.	
Subject	Commitments	Timing
Disabled Access	Residential Common Facilities - Ensure at least one leaf of the double doors at the main entries to the cinema and the library respectively on level 1 has a minimum clear width of 850mm (920mm door leaf). Currently, each leaf of the above double doors has a clear width of 750mm. - Provide one wheelchair seating space in the cinema on level 1. Where provided, ensure the wheelchair seating space minimum internal dimensions of 1300mm (length) x 800mm (width). A cinema seat which is designed so as to be readily removable if and when required will satisfy this requirement. Provide an unobstructed circulation area a minimum of 1550mm adjacent to the wheelchair seating space. Ensure the wheelchair seating space is located adjacent to a seat for a carer. - Ensure there is an appropriate unobstructed circulation space (1550mm in diameter) in front of each bank of residential letter boxes, compliant with AS1428.2.	Detailed Design and Construction

	- Provide a minimum clear width of 850mm (920mm door leaf) and a minimum internal latch-side clearance of 460mm at the entry doorways of the garbage rooms on each residential level. - Consideration to be given for future provision of sling-style swimming pool lift at the pool. Residential Common-Use Accessible Toilets (Level 1) - Provide a minimum clear width of 850mm (920mm door leaf) at the entry doorway to the residential common use accessible toilet on level 1. - Provide a circulation area of 2300mm x 1900mm around the pan. The washbasin is to sit outside this area. This is achievable through the relocation of the washbasin. Ingress and Egress - Define a continuous accessible path of travel from street frontage to each of the following: - To the main residential entry lobby at grid reference J.8 on ground level (currently, there is a step up from RL9.80 at the footpath to RL10.60 in the lobby). - To the commercial main entry doorway at grid reference N.4 on ground level (currently, here is a step up from RL9.50 at the footpath to RL10.60 at the landing in front of the main entry doorway). - Into each of the two retail tenancies that front Hunter Street on ground level (currently, there is a step up from RL10.50 to RL11.00) - Provide handrails compliant with AS 1428.1(2009) on either side of each of the following: - main residential entry ramp at grid reference G.12 fronting Hunter Street. - main residential entry stairway at grid reference G.12 fronting Hunter Street - main entry stairway fronting Macquarie Street	
Subject	Commitments	Timing
Disabled Access	- Currently, the bottom riser of the Macquarie Street main entry stairway is set back approximately 450mm from the allotment boundary. As it stands, the provision of TGSIs compliant with AS 1428.4.1 at the bottom of the above stairway will necessarily result in encroachment over the allotment boundary. As this is an undesirable result, adopt one of the following options: - Ensure the main entry stairway which fronts Macquarie Street is set back 900mm from the Macquarie Street footpath; or	Detailed Design and Construction

	- Extend the adjacent café terrace eastward such that the current bottom riser is deleted. Paths of Travel: Commercial ■ Provide handrails compliant with AS 1428.1(2009) on either side of the common-use commercial stairway at grid reference G.4 which connects levels 1, 2, and 3. ■ Provide a minimum clear width of 850mm (920mm door leaf) at the each of the following doorways: - All of the commercial office tenancy main entry doorway on levels 1, 2 and 3 - All of the commercial meeting room entry doorways on levels 1, 2, and 3 - Commercial amenities and commercial gym on level 1 ■ Provide a minimum external latch-side clearance of 510mm at the main entry doorway of the commercial tenancy at grid reference H.10 on level 1. Paths of Travel: Residential ■ Provide handrails compliant with AS 1428.1(2009) on either side of each of the following: - the stairway in the southern residential entry lobby on ground level at grid reference G.10 - the ramp in the southern residential entry lobby on ground level at grid reference G.10. ■ Provide a path of travel with a minimum clear width of 1000mm throughout to the residential letterboxes at grid reference F.8 on ground level. ■ Provide a minimum clear width of 850mm (920mm door leaf) at the entry doorway of the following residential common facilities rooms/areas, all of which are located on level 1: - Residential common amenities suite - Residential cinema - Residential gym ■ Conference/dining room – both the dual-leaf and single-leaf entry doorways ■ Define a continuous accessible path of travel from the internal areas to the external swimming pool and garden area on level 1.	
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Subject	Commitments	Timing
Disabled Access	■ Provide a minimum clear width of 850mm (920mm door leaf) and a minimum internal and external latch-side clearance of 510mm at the main entry doorway to the office adjacent to the concierge desk on ground level at grid reference G.7, compliant with AS1428.1. Common-Use Accessible Toilets ■ Provide one unisex accessible toilet compliant with AS 1428.1(2009) at the following locations, compliant with DDA Access Code 2010 Table F2.4(a): - adjacent to each bank of commercial toilets on levels 2 and 3. - within the residential amenities suite on level 1 ■ It is assumed that toilets will be provided within the change-room suite adjacent to the commercial gym. Accordingly, provide a unisex accessible toilet compliant with AS1428.1(2009) within the above change-room suite. ■ Provide a minimum pan circulation area of 2300mm (length) x 1900mm (width) at the commercial unisex accessible toilet on level 1 at grid reference G.8, with the washbasin to sit outside this area, compliant with AS 1428.1(2009). Currently, the washbasin sits within this area. Residential Accommodation ■ The provision of pre- and post-adaptation drawings of the adaptable units will be required, compliant with AS4299(1995) clause 2.3. Currently, the drawings show the adaptable units in their post-adaptation state configuration only. ■ Parramatta City Centre DCP clause 4.1(c) requires the provision of 'barrier-free' access to a minimum of 20% of all residential units. This is taken to mean the provision of 20% 'visitable' units, as defined under AS 4299. Ensure a minimum 20% of all units possess all of the following: - A minimum clear width of 850mm (920mm door leaf) at the main entry doorway; - A path of travel with a minimum clear width of 1000mm throughout from the unit main entry doorway to the living area; - A minimum clear width of 850mm (920mm door leaf) at the main entry doorway of at least one bathroom; and	Detailed Design and Construction

	▪ A minimum clearance of 1250mm (length) x 900mm (width) in front of the pan within the same bathroom, with no door swing or basin to encroach onto this space.	
Subject	Commitments	Timing
Disabled Access	Adaptable Units ▪ Provide a minimum clear width of 820mm at each doorway connecting to the unit balconies. ▪ Ensure the bedroom has internal dimensions which will accommodate a queen-size bed, a clearance of 1000mm on either side of the bed, a clearance of 1200mm at the foot of the bed, and a circulation area a minimum of 1550mm in diameter, preferably near the bedroom entry doorway. The wardrobe is to sit outside this area. ▪ There is one post-adaption bathroom design which is common to all of the adaptable units in the development. Where it is anticipated that construction certificate for this development will occur before 1 May 2011, it is confirmed that the bathroom set-out is suitable for compliance with AS 1428.1(2001). However, where it is anticipated that construction certificate for this development will occur on or after 1 May 2011, the pan circulation will need to increase to 2300mm (length) x 1900mm (width), with the washbasin sitting outside this area, compliant with AS 1428.1(2009). Currently, the washbasin sits within this area. ▪ Provide separate cook top and oven. Provide a work bench space (800mm in width) adjacent to cook top, oven and sink. Car Parking ▪ Ensure 1% of all commercial and 1% of all retail car parking is accessible, compliant with DDA Access Code 2010 Table D3.5. ▪ Where it is anticipated that construction certificate will occur on or after 1 May 2011, ensure all commercial and retail accessible car parking is designed in accordance with AS2890.6(2009). That is, ensure each accessible car parking has minimum internal dimensions of 2.4m (width) x 5.4m (length). Provide, in addition, a hatched shared area adjacent to each accessible car parking, also with internal dimensions of 2.4m (width) x 5.4m (length). ▪ Provide 1 adaptable unit car parking bay for each adaptable unit, compliant with AS4299 clause 3.7.3. Ensure each adaptable unit car parking bay has a minimum clear width of 3.8m. ▪ Ensure all adaptable unit and accessible car parking bays are located as close as possible to the relevant	Detailed Design and Construction

	passenger lift. ▪ Provide a minimum vertical clearance of 2500mm over each over each accessible car parking bay, compliant with AS 2890.6(2009). ▪ Consideration to be given providing a minimum vertical clearance of 2500mm over each over each adaptable unit parking bay, compliant with AS 4299. ▪ Provide a minimum vertical clearance of 2200mm over the vehicular path of travel from the vehicular entrance to each adaptable-unit and each accessible car parking bay.	
Subject	Commitments	Timing
Disabled Access	Miscellaneous ▪ There is a residential common-use cinema and a conference room on level 1. Given that the above cinema and conference room each have a floor area which is less than 10% of the overall floor area of the storey, it is assumed that they are classified as a class 2 buildings rather than a class 9b building. Confirmation should nevertheless be sought from the project certifier that this assumption is correct. ▪ Consideration to be given to providing a system of hearing augmentation within the cinema. Where an inbuilt amplification system has been provided in the conference room, consideration to be given to providing a system of hearing augmentation.	Detailed Design and Construction
Wind amelioration	The following wind mitigation measures to be implemented: ▪ A strategic layout of densely foliating evergreen trees, capable of growing to a height of 5m with a 4m wide canopy, for the ground level areas within an around the development site. ▪ 3m high impermeable screens along the perimeter of the Level 1 Podium terrace areas. ▪ A combination of 2m and 3m high impermeable screens along the perimeter of the level 22 private roof terrace areas. ▪ 1m high impermeable balustrades be included along the perimeter of the private balconies of residential units 2110 to 2113 on Level 21, and residential units 2301 to 2303 and 2307 to 2309 on Level 23.	Detailed design and construction.
Reflectivity	▪ The reflectivity of glass of the facade for the 015° aspect of the proposed development up to and including level 4, including 015° aspect of the north-east most cafe/retail area will not exceed a normal spectral reflectivity of light value of 15%; or ▪ Vertical mullions external to the glass line of the 015° aspect that can block solar reflections up to 8 degrees	Detailed design and construction.

	from the centre of the glass to be installed. ■ All other areas of the facade of the proposed development will have a maximum normal specular reflectivity of visible light of 20 percent.	
Loading dock arrangements	Warning lights and signage will be provided to advise tenants entering and departing the site when a truck is reversing into the dock. Minor modifications will be made to the layout of the loading dock (splaying of garbage room and relocation of column to south dock by about a metre) to allow access by an MRV.	
Subject	Commitments	Timing
Construction and Traffic Management Plan (Council recommended condition)	Prior to the commencement of any works on the site the applicant must prepare a Construction and Traffic Management Plan. The following matters must be specifically addressed in the plan: ■ Construction Management Plan for the Site; ■ A plan view of the entire site and frontage roadways indicating: - Dedicated construction site entrances and exits, controlled by a certified traffic controller, to safely manage pedestrians and construction related vehicles in the frontage roadways; - Turning areas within the site for construction and spoil; - Removal vehicles, allowing a forward egress for all construction vehicles on the site; - The locations of proposed Work Zones in the egress frontage roadways; - Location of any proposed crane standing areas; - A dedicated unloading and loading point within the site for all construction vehicles, plant and deliveries; - Material, plant and spoil bin storage areas within the site, where all materials are to be dropped off and collected; and - The provisions of an on-site parking area for employees, tradesperson and construction vehicles as far as possible. ■ Traffic Control Plan(s) for the site: - All traffic control devices installed in the road reserve shall be in accordance with the Roads and Traffic Authority, NSW (RTA) publication 'Traffic Control Worksite Manual' and be designed by a person	Prior to construction

	licensed to do so (minimum RTA 'red card' qualification). The main stages of the development requiring specific construction management measures are to be identified and specific traffic control measures identified for each, - Approval shall be obtained from Parramatta City Council for any temporary road closures or crane use from public property. ■ A detailed description and route map of the proposed route for vehicles involved in spoil removal, material delivery and machine floatage must be provided and a copy of this route is to be made available to all contractors. Where applicable, the plan must address the following: ■ Evidence of RTA concurrence where construction access is provided directly or within 20m of an Arterial Road;	
Subject	Commitments	Timing
Construction and Traffic Management Plan (Council recommended condition)	■ A schedule of site inductions shall be held on regular occasions and as determined necessary to ensure all new employees are aware of the construction management obligations; ■ Minimising construction related traffic movements during school peak periods; The Construction and Traffic Management Plan shall be prepared by a suitably qualified and experienced traffic consultant and be certified by this person as being in accordance with the requirements of the abovementioned documents and the requirements of this condition.	Prior to construction
Driveway Crossing Application (Council recommended condition)	Prior to any work occurring on the driveway crossings within Council's road reserve, an application is required for any new, reconstructed or extended sections of driveway crossings between the property boundary and road alignment which must be obtained from Parramatta City Council. All footpath crossings, laybacks and driveways are to be constructed according to Council's Specification for Construction or Reconstruction of Standard Footpath Crossings and in compliance with Standard Drawings DS1 (Kerbs & Laybacks); DS7 (Standard Passenger Car Clearance Profile); DS8 (Standard Vehicular Crossing); DS9 (Heavy Duty Vehicular Crossing) and DS10 (Vehicular Crossing Profiles). In order to apply for a driveway crossing, you are required to complete the relevant application form with	Prior to construction

	supporting plans, levels and specifications and pay the appropriate fee of \$166.30 Note: This development consent is for works wholly within the property. Development consent does not imply approval of the footpath or driveway levels, materials or location within the road reserve, regardless of whether the information is shown on the development application plans.	
Damage to public infrastructure (Council recommended condition)	Prior to commencement of works the applicant shall advise Council in writing, of any existing damage to Council property. A dilapidation survey of Council's assets, including photographs and written record, must be prepared and submitted to the Principal Certifying Authority and Council (if Council is not the PCA) prior to the commencement of works; failure to identify any damage to Council's assets will render the applicant liable for the costs associated with any necessary repairs.	Prior to construction
Road Opening Permits (Council recommended condition)	The applicant shall apply for a road-opening permit where a new pipeline is proposed to be constructed within or across the footpath. Additional road opening permits and fees may be necessary where there are connections to public utility services (e.g. telephone, electricity, sewer, water or gas) are required within the road reserve. No drainage work shall be carried out on the footpath without this permit being paid and a copy kept on site.	Prior to construction
Subject	Commitments	Timing
Work hours (Council recommended condition)	All work including building, demolition and excavation work; and activities in the vicinity of the site generating noise associated with preparation for the commencement of work (eg. loading and unloading of goods, transferring tools etc) in connection with the proposed development must only be carried out between the hours of 7.00am and 5.00pm on Monday to Fridays inclusive, and 7.00am to 5.00pm on Saturday. No work is to be carried out on Sunday or public holidays. Note - Council may allow extended work hours for properties located on land affected by Parramatta City Centre LEP 2007 in limited circumstances and upon written application and approval being given by Parramatta City Council at least 30 days in advance. Such circumstances where extended hours may be permitted include: ▪ Delivery of cranes required to the site outside of normal business hours; ▪ Site is not located in close proximity to residential use or sensitive land uses;	During construction

	Internal fit out work.	
Footpath construction (Council recommended condition)	Footpath paving will be in accordance with the approved landscape plans for the development which have been prepared in accordance with Council requirements. Details of the proposed footpath works shall be submitted to and approved by Council prior to commencement of footpath works. Proof of completion of construction work shall be submitted to the satisfaction of Council prior to release of the Occupation Certificate. All costs are to be borne by the applicant.	Prior to and during construction
Post-construction dilapidation report (Council recommended condition)	The applicant shall engage a suitably qualified person to prepare a post construction dilapidation report at the completion of the construction works. This report is to ascertain whether the construction works created any structural damage to adjoining buildings, infrastructure and roads. The report is to be submitted to Parramatta City Council. In ascertaining whether adverse structural damage has occurred to adjoining buildings, infrastructure and roads, the proponent must: compare the post-construction dilapidation report with the preconstruction dilapidation report, and have written confirmation from the relevant authority that there is no adverse structural damage to their infrastructure and roads	After completion of construction
Subject	Commitments	Timing
Public Domain/Alignment Plan (Council recommended condition)	Prior to the commencement of works a Public Domain/Alignment Plan shall be submitted and approved by Councils Senior Project officer Urban Design.	Prior to construction
Sydney Water conditions	A Section 73 Certificate will be obtained prior to construction.	Prior to construction
Dilapidation Report for No 41 Hunter Street	A dilapidation report shall be prepared for No 41 Hunter Street and copies of all relevant reports shall be provided to the owner of No 41 Hunter Street.	Prior to construction

Subject	Commitments	Timing																																																																																				
Essential Fire Safety Measures	The following Essential Fire Safety Measures shall be installed: <table border="1"> <thead> <tr> <th>Item No.</th><th>Proposed Essential Fire Safety Measure</th><th>Minimum Standard of Performance</th></tr> </thead> <tbody> <tr><td>1.</td><td>Access panels, doors and hoppers to fire resisting shafts</td><td>BCA2010 Clause C3.13</td></tr> <tr><td>2.</td><td>Automatic fail safe devices</td><td>Manufacturer's Specification</td></tr> <tr><td>3.</td><td>Automatic fire detection and alarm system</td><td>BCA2010 Clause E2.2a, AS3786-1993</td></tr> <tr><td>4.</td><td>Automatic fire suppression system (sprinkler system)</td><td>BCA2010 Clause E1.5, AS2118.1-1999</td></tr> <tr><td>5.</td><td>Emergency lighting</td><td>BCA2010 Clauses E4.2 & E4.4, AS2293.1-2005</td></tr> <tr><td>6.</td><td>Emergency lifts</td><td>BCA2010 Clause E3.4, AS1735.2-2001</td></tr> <tr><td>7.</td><td>Exit signs</td><td>BCA2010 Clauses E4.5, E4.6 & E4.8, AS2293.1-2005</td></tr> <tr><td>8.</td><td>Fire control room</td><td>BCA2010 Clause E1.8</td></tr> <tr><td>9.</td><td>Fire dampers</td><td>AS/NZS1668.1-1998</td></tr> <tr><td>10.</td><td>Fire doors</td><td>BCA2010 Spec C3.4, AS1905.1-2005</td></tr> <tr><td>11.</td><td>Fire hose reel system</td><td>BCA2010 Clause E1.4, AS2441-2005</td></tr> <tr><td>12.</td><td>Fire hydrant system</td><td>BCA2010 Clause E1.3, AS2419.1-2005</td></tr> <tr><td>13.</td><td>Fire seals protecting openings in fire resisting components of the building</td><td>BCA2010 Clause C3.15, Manufacturer's Specification</td></tr> <tr><td>14.</td><td>Fire shutters</td><td>BCA2010 Spec C3.4, AS1905.2-2005</td></tr> <tr><td>15.</td><td>Fire windows</td><td>BCA2010 Spec C3.4</td></tr> <tr><td>16.</td><td>Lightweight construction</td><td>Manufacturer's Specification</td></tr> <tr><td>17.</td><td>Mechanical air handling systems</td><td>AS/NZS1668.1-1998</td></tr> <tr><td>18.</td><td>Paths of travel, stairways, passageways or ramps</td><td>BCA2010 Section D</td></tr> <tr><td>19.</td><td>Portable fire extinguishers</td><td>BCA2010 Clause E1.6, AS2444-2001</td></tr> <tr><td>20.</td><td>Pressurisation system</td><td>AS/NZS1668.1-1998</td></tr> <tr><td>21.</td><td>Required (automatic) exit doors</td><td>BCA2010 Clause D2.19, AS1670.1-2004</td></tr> <tr><td>22.</td><td>Smoke control system</td><td>BCA2010 Spec E2.2a, BCA Spec E2.2b, AS/NZS1668.1-1998</td></tr> <tr><td>23.</td><td>Smoke dampers</td><td>AS/NZS1668.1-1998</td></tr> <tr><td>24.</td><td>Smoke doors</td><td>BCA2010 Spec C3.4</td></tr> <tr><td>25.</td><td>Sound systems and intercom systems for emergency purposes (formerly EWIS)</td><td>BCA2010 Clause E4.9, AS1670.4-2004</td></tr> <tr><td>26.</td><td>Wall wetting sprinkler and drencher system</td><td>BCA2010 Clause C3.4</td></tr> <tr><td>27.</td><td>Warning and operational signs</td><td>BCA2010 Clause D2.23, EP&A Reg. 2000 Clause 183</td></tr> </tbody> </table>	Item No.	Proposed Essential Fire Safety Measure	Minimum Standard of Performance	1.	Access panels, doors and hoppers to fire resisting shafts	BCA2010 Clause C3.13	2.	Automatic fail safe devices	Manufacturer's Specification	3.	Automatic fire detection and alarm system	BCA2010 Clause E2.2a, AS3786-1993	4.	Automatic fire suppression system (sprinkler system)	BCA2010 Clause E1.5, AS2118.1-1999	5.	Emergency lighting	BCA2010 Clauses E4.2 & E4.4, AS2293.1-2005	6.	Emergency lifts	BCA2010 Clause E3.4, AS1735.2-2001	7.	Exit signs	BCA2010 Clauses E4.5, E4.6 & E4.8, AS2293.1-2005	8.	Fire control room	BCA2010 Clause E1.8	9.	Fire dampers	AS/NZS1668.1-1998	10.	Fire doors	BCA2010 Spec C3.4, AS1905.1-2005	11.	Fire hose reel system	BCA2010 Clause E1.4, AS2441-2005	12.	Fire hydrant system	BCA2010 Clause E1.3, AS2419.1-2005	13.	Fire seals protecting openings in fire resisting components of the building	BCA2010 Clause C3.15, Manufacturer's Specification	14.	Fire shutters	BCA2010 Spec C3.4, AS1905.2-2005	15.	Fire windows	BCA2010 Spec C3.4	16.	Lightweight construction	Manufacturer's Specification	17.	Mechanical air handling systems	AS/NZS1668.1-1998	18.	Paths of travel, stairways, passageways or ramps	BCA2010 Section D	19.	Portable fire extinguishers	BCA2010 Clause E1.6, AS2444-2001	20.	Pressurisation system	AS/NZS1668.1-1998	21.	Required (automatic) exit doors	BCA2010 Clause D2.19, AS1670.1-2004	22.	Smoke control system	BCA2010 Spec E2.2a, BCA Spec E2.2b, AS/NZS1668.1-1998	23.	Smoke dampers	AS/NZS1668.1-1998	24.	Smoke doors	BCA2010 Spec C3.4	25.	Sound systems and intercom systems for emergency purposes (formerly EWIS)	BCA2010 Clause E4.9, AS1670.4-2004	26.	Wall wetting sprinkler and drencher system	BCA2010 Clause C3.4	27.	Warning and operational signs	BCA2010 Clause D2.23, EP&A Reg. 2000 Clause 183	Construction Certificate
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Fire Resistance Levels	The following Fire Resistance Levels (FRLs) shall be applied to various structural elements of the building: <table><tr><th>Item</th><th>Class 2</th><th>Class 5, 7a or 9b</th><th>Class 6</th></tr><tr><td>Loadbearing External Walls - less than 1.5m to a fire source feature 1.5 – 3m from fire source feature; - more than 3m from a fire source feature. </td><td>90/90/90 90/60/60 90/60/30</td><td>120/120/120 120/90/90 120/60/30</td><td>180/180/180 180/180/120 180/120/90</td></tr><tr><td>Non-Loadbearing External Walls - less than 1.5m to a fire source feature 1.5 – 3m from fire source feature; - more than 3m from a fire source feature. </td><td>-/90/90 -/60/60 -/-/-</td><td>-/120/120 -/90/90 -/-/-</td><td>-/180/180 -/180/120 -/-/-</td></tr><tr><td>External Columns - Less than 3m 3m or more </td><td>90/-/- -/-/-</td><td>120/-/- -/-/-</td><td>180/-/- -/-/-</td></tr><tr><td>Fire Walls</td><td>90/90/90</td><td>120/120/120</td><td>180/180/180</td></tr><tr><td>Stair and Lift Shafts - Loadbearing - Non loadbearing </td><td>90/90/90 -/90/90</td><td>120/120/120 -/120/120</td><td>180/120/120 -/120/120</td></tr><tr><td>Internal walls bounding sole occupancy units - Loadbearing - Non loadbearing </td><td>90/90/90 -/60/60</td><td>120/-/- -/-/-</td><td>180/-/- -/-/-</td></tr><tr><td>Internal walls bounding public corridors, hallways and the like: - Loadbearing - Non loadbearing </td><td>90/90/90 -/60/60</td><td>120/-/- -/-/-</td><td>180/-/- -/-/-</td></tr><tr><td>Ventilating, pipe garbage and the like shafts: - Loadbearing - Non loadbearing </td><td>90/90/90 -/90/90</td><td>120/90/90 -/90/90</td><td>180/120/120 -/120/120</td></tr><tr><td>Other loadbearing internal walls, beams trusses and columns</td><td>90/-/-</td><td>120/-/-</td><td>180/-/-</td></tr><tr><td>Floors</td><td>90/90/90</td><td>120/120/120</td><td>180/180/180</td></tr><tr><td>Roofs</td><td>90/60/30</td><td>120/60/30</td><td>180/60/30</td></tr></table>	Item	Class 2	Class 5, 7a or 9b	Class 6	Loadbearing External Walls - less than 1.5m to a fire source feature 1.5 – 3m from fire source feature; - more than 3m from a fire source feature.	90/90/90 90/60/60 90/60/30	120/120/120 120/90/90 120/60/30	180/180/180 180/180/120 180/120/90	Non-Loadbearing External Walls - less than 1.5m to a fire source feature 1.5 – 3m from fire source feature; - more than 3m from a fire source feature.	-/90/90 -/60/60 -/-/-	-/120/120 -/90/90 -/-/-	-/180/180 -/180/120 -/-/-	External Columns - Less than 3m 3m or more	90/-/- -/-/-	120/-/- -/-/-	180/-/- -/-/-	Fire Walls	90/90/90	120/120/120	180/180/180	Stair and Lift Shafts - Loadbearing - Non loadbearing	90/90/90 -/90/90	120/120/120 -/120/120	180/120/120 -/120/120	Internal walls bounding sole occupancy units - Loadbearing - Non loadbearing	90/90/90 -/60/60	120/-/- -/-/-	180/-/- -/-/-	Internal walls bounding public corridors, hallways and the like: - Loadbearing - Non loadbearing	90/90/90 -/60/60	120/-/- -/-/-	180/-/- -/-/-	Ventilating, pipe garbage and the like shafts: - Loadbearing - Non loadbearing	90/90/90 -/90/90	120/90/90 -/90/90	180/120/120 -/120/120	Other loadbearing internal walls, beams trusses and columns	90/-/-	120/-/-	180/-/-	Floors	90/90/90	120/120/120	180/180/180	Roofs	90/60/30	120/60/30	180/60/30	Construction Certificate
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Subject	Commitments	Timing
BCA Alternate Solutions	Exit Travel Distances Residential Areas – Clause D1.4 Residential units are required to be within 6m of an exit or a point of choice; a number of units, including Units 10.14, 10.15, 12.12, 13.12, 13.13, 21.11 and 21.12, are between 6 and 9m from an exit or point of choice. This increased travel distance is expected to be justifiable under an Alternate Solution at the CC stage. Travel via Fire-Isolated Exits – Clause D1.7 It is not proposed to provide the protection from the building to the discharge path of the northern fire-isolated exit discharge path. This will form part of an alternate solution at the CC stage of the development. Commercial Stairway – Clauses D1.9 The non-fire-isolated stairway to the northern end of the commercial portion of the building is a required stairway connecting three storeys in a sprinkler protected building. The lowest level of connection is Level 1, in lieu of the ground floor. Occupants using the non-fire-isolated stairway access a fire-isolated stairway on Level 1 to complete their egress of the building. This will form part of an alternate solution at the CC stage of the development. Fire Hydrant Booster Location – Clause E1.3 The building is to be provided with fire hydrants in accordance with this clause and AS2419.1. Regarding the location of the fire hydrant booster there is a technical non-compliance that may be resolved at the CC stage with an alternate solution. The non-compliance is that the booster is not 10m from the building (this includes the upper levels) nor is it proposed to have shielding construction for a distance of 2m either side and 3m above the booster assembly. Due to the booster location being more than 10m from the building at the ground floor and the portion of the building that is within 10m being the upper levels which are 5.7m above the ground floor level there is scope for an Alternate Solution at the CC stage of the development.	Construction Certificate

	It is also noted that the proposed hydrant and sprinkler pump room is located on the roof. This is to be confirmed at the CC stage as a compliant location.	
Subject	Commitments	Timing
BCA Alternate Solutions	Atrium – Part G3 The non-fire-isolated stair forms an atrium as it is not a stairwell within a shaft. Further as the void for the stairway connects three storeys in a sprinkler protected building but does not connect to a level with direct egress to a road or open space Part G3 applies. It is proposed that an alternate solution will be used to justify the non-compliances with this Part at the CC stage.	Construction Certificate
BASIX certificate	A BASIX certificate will be prepared for the development prior to the construction certificate being issued for the project.	Prior to issue of construction certificate

6.0 Conclusion

The proposed mixed use development at 45 Macquarie Street, Parramatta has been the subject of an extensive assessment process and detailed and through design review process. This process has resulted in a development that achieves design excellence, as well as a high level of internal amenity for future residents and commercial retail/tenants.

The proposed development will also provide a publicly-accessible archaeological pavilion in the northern section of the site that will ensure that the significant archaeological relics found on the site can be maintained in situ. At the same time it will provide a publicly-accessible plaza where members of the public can view the relics and take part in educational programs in the Interpretation Centre. The plaza is also designed to provide a passive recreational space for dining and recreation within the Parramatta City Centre.

The proposed mixed use development will provide high quality commercial and retail tenancies, as well additional residential accommodation in close proximity to extensive public transport networks. It will contribute to the revitalisation of the Parramatta City Centre and will encourage the development of other sites in the surrounding area

The Panel's remaining outstanding issues have now been appropriately addressed and the Department is requested to issue the project approval as soon as possible.