



# CONSIDERATION OF INTEGRATED BASEMENT

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## 1. INTRODUCTION

As outlined within the Secretary's Environmental Assessment Requirements (SEARs) issued on 30 June 2015 and Condition 33 of the Stage 1 State Significant Development (SSD) Development Application (DA) approved for the for the redevelopment of 1 Alfred Street, 19-31 Pitt Street and 31A Pitt Street, Sydney, (D/2015/1049):

*"Prior to the lodgement of the relevant Stage 2 development application, the applicant is to investigate the potential to integrate the proposed basement and associated vehicle access from Pitt Street with adjoining properties. Investigations are to include consultation with adjoining property owners."*

As part of the design development for the construction of two towers, an integrated basement, and public domain works across the site, the applicant has investigated the potential to integrate basement access for the approved concept development with adjoining properties.

Investigations have included:

- Consultation with the adjoining landowner.
- Engaging relevant consultants to consider potential opportunities to integrate basements and access from the site and adjacent properties.
- Engaging relevant consultants to review two potential opportunities for integrated basements and access presented by the adjoining landowner.
- Internal Wanda operational review of potential opportunities for integrated basements and access presented by the adjoining landowner.
- Investigation of precedents of integrated basements within Wanda developments internationally.

This memo outlines the steps and investigations undertaken by the applicant to consider the reasonable provision of shared basement and access with adjoining properties.

## 2. OBJECTIVES OF INTEGRATION

The APDG Site Urban Design Study (2009), which was used to inform the APDG Block controls contained within the *Sydney Local Environmental Plan 2012 (SLEP 2012)* and the Sydney Development Control Plan 2012 (SDCP), identified in 2009 that the precinct was heavily serviced by multiple loading docks and basement entries from laneways which undermined the amenity of the public domain. This is illustrated in the APDG Site Urban Design Study (2009) extract below.

Figure 1 – Vehicular and pedestrian access



As a result the study recommended that to minimise the impact of basement access and loading docks on the public domain, vehicle and service entry points are to be kept to a minimum and shared access should be provided for adjacent sites. As part of this study, no shared access for Goldfields House (1 Alfred Street), Fairfax House (19-31 Pitt Street), or the Rugby Club (31A Pitt Street) was considered and shared basements/servicing was recommended only for the south eastern portion of the APDG Precinct.

Clause 6.1.7(3) of the SDCP 2012 however states that developments are to “provide shared basement access between developments to minimise vehicular movements on lanes”. Further the provisions and objectives contained within Section 3 General Provisions of the SDCP 2012 highlight a general objective to reduce conflict between vehicles and pedestrian functions, design vehicle access to maximise pedestrian safety and create high quality ground level relationships between buildings and the public domain.

Whilst it is acknowledged that the SDCP 2012 does not apply to this application pursuant to Clause 11 of the *State Environmental Planning Policy (State and Regional Development) 2011* the applicant has acknowledged the City of Sydney’s desire to achieve these objectives and has committed to delivering a high quality public domain for the development across the site.

The investigations undertaken to consider the possibility and reasonableness of providing a shared basement and access with adjoining properties has considered these key objectives and history of the planning controls for the precinct throughout the detailed design.

### 3. DEVELOPMENT CONSENT HISTORY AND WANDA SITE CONSOLIDATION

As outlined within the various DAs relevant to the site, development consent was granted for D/2010/2029 in 2012 for:

*“Integrated Development Application for demolition of the existing building, excavation of 8 basement levels & construction of 2 new mixed-use buildings of 15 and 55 storeys, to accommodate 197 apartments, 924m<sup>2</sup> of retail/commercial floor space, 279 car parking spaces and public domain improvement works”.*

No conditions of consent contained within this DA made reference to the provision of a shared basement or access with adjacent properties, however the Voluntary Planning Agreement (VPA) entered into by the former land owner of 1 Alfred Street, Sydney included the provision for a ‘breakthrough panel’ to the Fairfax House site (19-31 Pitt Street).

This ‘break-through panel’ generally reflected the preferred vehicular access identified within a Stage 1 DA approved for the redevelopment of the Fairfax House site (D/2010/1533). This consent noted that “All reasonable efforts shall be made to achieve this outcome. Should all reasonable effects be made and Option

*A [preferred option] is not attainable, an alternate vehicular access from Rugby Places as shown as Option B [...] may be considered”.*

In 2015 the Wanda Group (Wanda) purchased three sites within the APDG Precinct, being 1 Alfred Street (Goldfields House), 19-31 Pitt Street (Fairfax House), and 31A Pitt Street (Rugby Club). Wanda subsequently submitted a Stage 1 SSD DA (D/2015/1049) for all three sites to propose a development consisting of:

*“Stage 1 application for building envelopes and proposes uses for two mixed use buildings (Tower A and B) above six levels of basement car parking.”*

This Stage 1 SSD DA was approved by the Central Sydney Planning Committee (CSPC) on 10 December 2015. Whilst the proposed vehicular access was not approved as part of this application (typical for Stage 1 DAs), the approved basement envelope reflected a consolidated basement across all three sites, to service two distinct towers. This consent achieved the objectives to consolidate basement and vehicular access and minimise vehicular movements on lanes by proposing a single vehicular entrance point, replacing several across the site.

Regardless, the applicant has considered the potential to integrate further with additional adjoining properties pursuant to the requirements of the SEARs and Condition 33 of D/2015/1049.

## **4. CONSULTATION**

Consultation regarding the possibility of consolidating basements and vehicular access points with the adjoining land owner (Lendlease) has been undertaken prior to and concurrently with the preparation of this Stage 2 SSD DA. Lendlease has expressed a desire to achieve an integrated basement between the Wanda properties and the Lendlease properties, particularly in light of their imminent proposal to construct a 248m commercial tower and community and bicycle hub on the adjacent site.

Consultation between Lendlease and Wanda has occurred in the following manner:

- Meeting held 25 July 2016;
- Various emails throughout September and October 2016;
- Meeting held 28 September 2016;
- Letter from Wanda to Lendlease dated 16 September 2016; and
- Letter from Lendlease to Wanda dated 3 October 2016.

In addition to the items above, each land owner has engaged technical consultants to consider and review opportunities to provide consolidated basements and access between the properties.

## **5. TECHNICAL CHALLENGES**

Wanda as an experienced developer and as supported by their technical advisors and consultants has identified several concerns regarding the possibility to achieve integration between basements across multiple properties at this site. These concerns are generally summarised as:

- Ramp gradients;
- Traffic congestion impacts;
- Flooding risks and associated liability and indemnity concerns;
- Structural challenges;
- Engineering upgrades required;
- Public domain outcomes
- Security; and
- Amenity of security features.

Wanda and Lendlease have worked to overcome these challenges. It is Wanda’s concluded position that following all reasonable investigations of potential design solutions, a consolidated basement between the Wanda properties and adjoining properties owned by Lendlease is not achievable. The basis for this conclusion is outlined in the following sections.

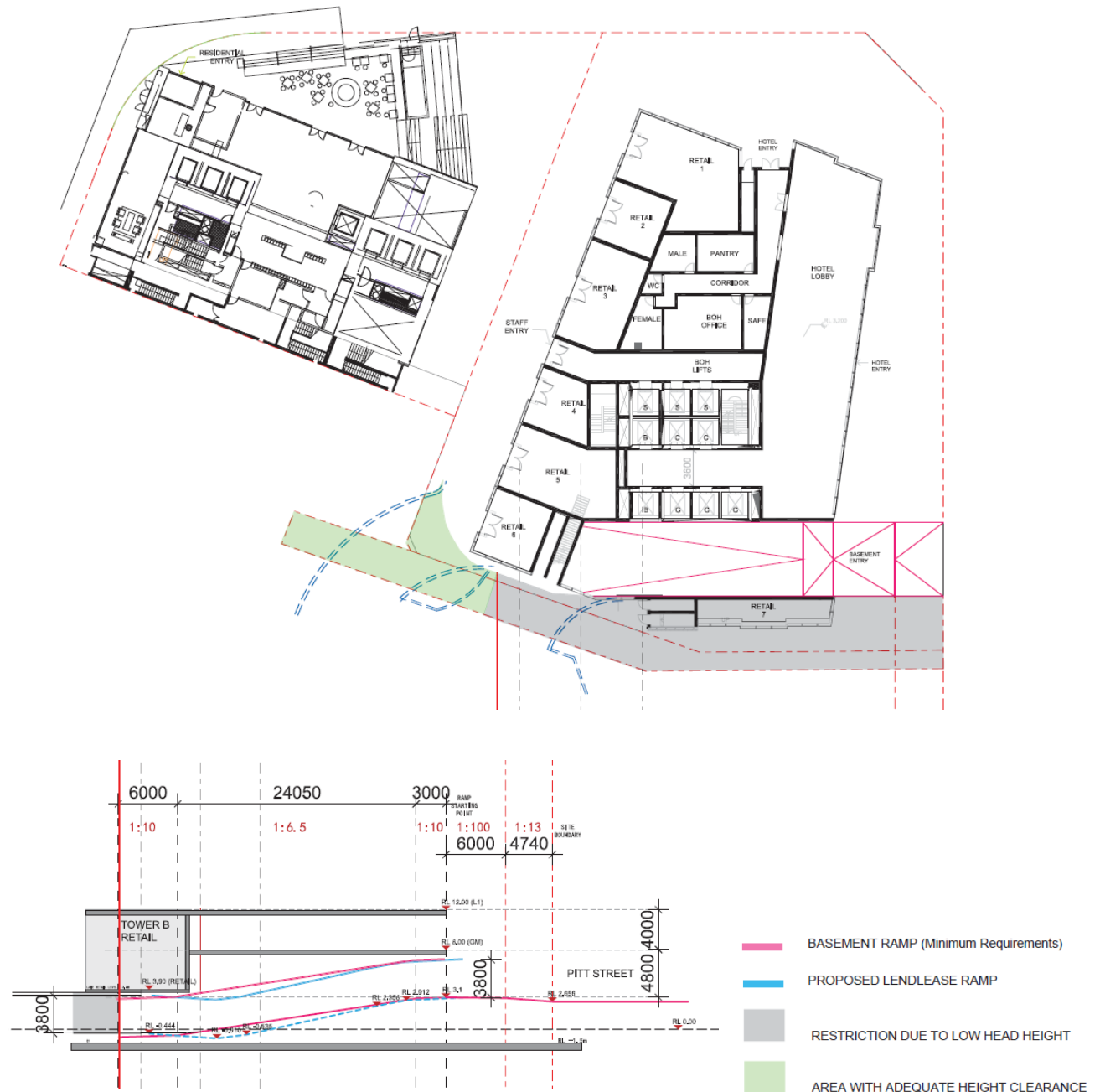
# 5.1 TRAFFIC AND RAMP GRADIENTS

The proposed driveway location has been influenced by a number of factors, including approach from Reiby Place, requirement for a porte cochere on site, required position of the lift core of Tower B, and public domain outcomes identified within the Competitive Design Alternatives Process. Crone, as architects of the Tower B development, has provided the following explanation of design challenges facing the driveway ramp:

- Ramp commencement of the driveway is dictated by the ground floor building line.
- The ramp height is dictated by 'ARUP Flooding', regarding flooding risk and minimizing reliance on blood barriers. The ramp commencement level of RL 3.100 ensures freeboard above a 1 in 20 year flood level.
- Ramp gradients are dictated by 'ARUP Traffic', regarding vehicle types required to suit the development. The ramp gradients commence from ground level at 1:10 for 3 metres, to a maximum of 1:6.5 for the length of ramp, and transition back via a gradient of 1:10 for 6 metres.

A section of the required ramp gradient is provided in the figure below.

Figure 2 – Required ramp gradient and limited potential break-through zone (Source: Crone)



We understand that the above constraints have been provided to Lendlease graphically in both plan and section to highlight the ramps spatial constraints. To date, Wanda has not been provided with a proposal from Lendlease that meets fully meets these geometrical ramp requirements.

The implications of shared basement and vehicular access between the site and adjoining properties have been considered by ARUP within the Transport Impact Statement accompanying this DA. The relevant excerpt of this assessment is provided below.

*“The ability for access into the Lendlease basement has been subject to negotiations between Wanda and Lendlease as adjoining landowners. Two options have been developed by Lendlease to assist in negotiation. Arup has reviewed these options and provided the following advice:*

- *The ramp is still descending at the point which would make an intersection with the Lendlease access in either of their options. A relatively flat gradient would be required at the intersection points to enable vehicles to turn onto the Lendlease ramp section. Introducing a flat section would likely impact on the retail space as this pushes the vertical clearance of portal into the site further.*
- *The intersection may have possibly reduced horizontal and vertical sightlines which will pose potential safety issues. Wider openings and a review of grading will be needed to ensure adequate safe access and this will again likely affect the public space above.*
- *The introduction of additional users will impact on the security measures needed at the site entrance. It also introduces additional conflict points between different vehicle types due to the different building occupants– residents, hotel valet, limousines, service vehicles and commercial tenants.*
- *For both options Lendlease trucks will need to operate with a traffic signal system due to only one truck at a time being able to enter or leave the Lendlease loading dock. This means that Lendlease trucks may need to wait half way down the Sydney One driveway at a red signal if a Lendlease truck is exiting the dock. Trucks waiting will delay all Sydney One traffic on entry.*
- *In Option 1, Lendlease cars exiting will need to give-way to Lendlease trucks first and then Sydney One vehicles. With clear give-way marking and signage and an appropriate loading dock traffic light system, the shared ramp arrangement is acceptable. There will at times be some delay to entering traffic, although this should be minimal”.*

Due to the restricted floor plate of the proposed Lendlease Circular Quay Tower and the existing and proposed site conditions, should an area within the proposed ramp be sufficient to allow for an intersection to occur (which Wanda has not seen any indication that it can), the proposed vehicular ramp may experience queueing as a result of the integration with the adjoining site. This will be particularly pertinent in the short-term where there will be high truck volume during the fit-out phase; and the ongoing operational and maintenance requirements for such a large commercial tower has also not yet been demonstrated which presents a significant risk to Wanda. This result is not only unacceptable to Wanda who will be operating a world-class facility and high end residential development, but it may also create adverse impacts on the functionality of the driveway at Pitt Street.

The site is highly constrained with regards to vehicular access. As a result of the light rail and planned road closures the only feasible vehicular access from the site is via Pitt Street. Pitt Street is also subject to a planned cycleway which is proposed by the City of Sydney on the western side of Pitt Street. The planning of vehicular drop-off for a hotel and the provision of an integrated basement servicing a residential tower and a world-class hotel must therefore be carefully considered.

The risk of queuing on Pitt Street as a result of the integration of basements, particularly given the sensitivities and challenges of Pitt Street as proposed is unacceptable. Whilst the provision of basement access in this location is required for the Wanda site given its context, the increase in vehicle traffic through this driveway and potential delays as a result of service and other vehicles entering into the Lendlease basement is highly undesirable.

## **5.2 FLOODING**

As the City of Sydney is aware, flooding in this location of the Sydney CBD is a design challenge for all new development. As part of the detailed design of the proposal, Wanda has massaged ground levels on the site to suit the Lendlease proposed development, so that flood impacts across the wider precinct are shared and where possible avoided. Wanda has worked in good faith to resolve a solution that best meets each of the relevant parties in this regard.

The proposed driveway on the site will achieve flood resilience in all flood events up to 20 year ARI event for the basement car park entrance. Despite the efforts made by Wanda to raise floor levels and the ground plane to avoid flooding impacts without adversely impacted surrounding properties, the proposed basement access remains affected by flood levels such as the PMF.

As outlined within the Flood Report prepared by ARUP which accompanies this DA, in order to achieve flood immunity for all storm events up to and including the PMF flood level, ARUP have proposed a flood mitigation strategy involving the installation of automated flip-up flood barriers for this entrance. Whilst Wanda is satisfied that the flip up barrier is appropriate, Wanda has not received any certainty that indemnities can be agreed between adjoining land owners.

## 5.3 STRUCTURAL ENGINEERING

ARUP have considered the structural implications of providing a consolidated basement between the adjoining properties and have outlined that the provision of a structural opening in the secant wall at the southern boundary would have the following impacts:

- Reduction in diaphragm strength;
- Increased reliance on the inclined ramp for lateral support of the wall;
- Additional interfaces on the wall within the perched water table increase chance of water ingress; and
- The portal connection to the southern neighbour will require additional works.

Whilst these structural engineering challenges may be resolvable, the design challenges required to be resolved by Wanda is not appropriate given the risk and costs associated with undermining the basement structure.

## 5.4 ENGINEERING UPGRADES

Despite the engineering constraints established throughout this advice, should a consolidated basement be pursued it would also have the following implications on mechanical and electrical planning:

- The increase in traffic through the entry ramps will require larger car park ventilation plant resulting in bigger ducts, risers, louvre and plant room sizes. This will increase the capital cost of the project and require a replanning of the building design.
- The increase in traffic flow in the entry ramp will also increase the operating costs (both running and maintenance costs) of the car park ventilation system.

Further, a shared access basement strategy will have the following implications for fire engineering:

- Reliance on a mechanical fire shutter will increase the risk of a joint basement fire;
- Risk of adequate maintenance of the shutter over its life;
- Increased risk of a vehicle or other obstruction preventing effective operation of the fire shutter;
- Additional storage space would be required for shutter motor /roller;
- Alternative solution may be required to justify the fire separation formed by metal shutter and sprinkler wetting system.

Again, these engineering challenges may be resolvable, however the risk and costs associated with resolving these challenges is not proportionate to any improved public domain or other benefit to the development.

## 5.5 PUBLIC DOMAIN

It is noted that a key objective of the integration of basements of adjacent developments is to improve the public domain and in particular pedestrian amenity. As outlined in Section 3, Wanda is committing to improving the public domain surrounding the site and has done so by providing through-site links, areas for public recreation and footways, activated laneways, and a significant increase in public art contributions compared to the Valad scheme. In addition to this contribution, Wanda has gone above and beyond to provide ground levels to suit proposed surrounding developments, provide high quality public domain in keeping with the City of Sydney standards, and reducing vehicular access points and crossings across the three sites.

It may be argued that the provision of a larger integrated basement across more development sites would result in an even more improved public domain. Whilst in principle this may be true, the proposed location of an integrated basement entrance on Pitt Street is not an appropriate design outcome, as increased traffic will be directed across a separate bicycle lane in immediate proximity to a porte-cochere. It is noted that an alternative vehicular access to the Lendlease development is possible via Underwood Street (as proposed in

the site specific DCP Amendment proposed by Lendlease). It is also noted that integration between the Lendlease site and other adjoining properties may also be possible without resulting in such a significant impact at the northern end of Pitt Street. Splitting traffic along Pitt Street and Underwood Lane would result in a safer environment for pedestrians given the highly sensitive frontage at the Wanda site.

## 5.6 SECURITY

The proposed basement on the site already services two distinct towers, Tower A (residential) and Tower B (hotel). This is considered acceptable as the management and sales of these sites can be controlled by one entity. Further the land uses, whilst different, are considered somewhat analogous as each provides private accommodation for individuals seeking comfort in a high quality environment. It is noted that the proposed hotel branding is suited to high net-wealth individuals and the prominent location of Tower A will attract residents who will be expecting a high quality and high security environment.

The Lendlease Circular Quay Tower, whilst a prestigious office tower, will however be used for commercial land uses which by their nature are much more transient than residential accommodation. Servicing and maintenance requirements are very different between the three land uses. Further security arrangements for the different land uses are inherently different.

Key impacts to protective security as a result of an integrated basement have been identified by ARUP security, and include:

- Increased security risk; a shared entry between the Wanda and Lendlease developments increases the likelihood of security incidents as Risk = Likelihood x Consequence. Any increase in likelihood will have a corresponding increase in risk.
- A shared basement entry severely affects the establishment of a uniformly secure building perimeter. This limits the ability for Wanda to control their perimeter access to only those with a valid Wanda Need-to-Go. This in-turn reduces the effectiveness of Defence in Depth and increases risk.
- The introduction of third parties to the Wanda basement significantly increases the complexity of the security risk environment as individuals in the space cannot be wholly vetted or controlled by Wanda. This increases risk.
- Different building functions attract different users to the spaces, and these inturn require fundamentally different security management strategies to manage risk to within tolerable limits. Increasing the complexity of the risk management strategy increases the likelihood of failure during catastrophe.
- Critical assets within each development are different. The Wanda development is concerned primarily with the protection of VVIPs of high net worth, while the Lendlease development is a commercial office so protecting commercial-in-confidence information is most important. These two asset types have substantially different security requirements. Most importantly, the basement ramp entrance to the hotel and residential tower is a critical point of transit for VVIPs, and the introduction of third party access would significantly increase security risk (particularly kidnap, hostage, robbery and assassination) to these persons.

In consultation, Lendlease has expressed a view that these concerns can be adequately addressed by utilising appropriate security installations and through the implementation of appropriate security management systems and shared building management arrangements (where relevant). Whilst Wanda does note that the Lendlease basement may offer CCTV and other levels of security, Wanda is not convinced that a shared Building Management Statement would be possible to be achieved across the site without increased risk to guests and residents of the Wanda premises.

## 5.7 AMENITY OF SECURITY

The provision of an intersection point on site between the adjoining properties will likely require the need for warning signals, alarms, and large mirrors due to reduced horizontal and vertical sightlines. These safety and security features are not desired by the Wanda Vista luxury hotel brand as it derogates from a premium place of residence in which calm and quiet enjoyment is a primary feature. The alternative of wider openings to improve sightlines is not possible due to the required ramp grading and public domain levels.

## 6. CONCLUSION

In undertaking detailed design development, Wanda has investigated the opportunities to share vehicular access with the adjoining properties. Whilst Wanda supports the objectives of an improved public domain for

pedestrians around the site, in this instance integrated basement access is not attainable between the Wanda properties and the adjoining properties as:

- Engineering challenges relating to ramp gradients, traffic queueing and structural design render the integration of basements largely unfeasible.
- Flooding challenges on the site increase risk associated to the basement, and this risk should be avoided where possible to adjoining properties, especially where indemnities are not certain.
- Wanda is not able to demonstrate, or has not been demonstrated to, that adequate security arrangements will be available or possible with an integrated basement between separate developments.
- From a marketing and brand perspective the provision of a shared basement with adjacent development, particularly commercial and public uses, is not considered acceptable to the clientele of the Wanda Vista and high-end residential development.
- Adequate alternatives to providing an integrated basement between the Wanda and Lendlease sites, as suggested within the SDCP 2012 or could be possible with properties at the south eastern corner of the precinct as originally envisaged in 2009 could still be pursued which would likely result in a better public domain outcome that increasing traffic at the northern end of Pitt Street adjacent to a porte cochere and cycleway.

As such the proposed Stage 2 SSD DA for Tower B and the integrated basement across the site does not proposed to provide for a break-through or provision of shared access to the adjacent properties.