

Civil Engineering Preliminary Review

150 Day Street, Darling Harbour

Prepared for **UOL** / 27th November 2024

221199

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1.0 Executive Summary

This report has been prepared by Taylor Thomson Whitting (TTW) for UOL in relation to the Park Royal Hotel located at 150 Day Street, Darling Harbour (Allotment DP1046870).

The planning proposal for the existing Park Royal Hotel at 150 Day Street, Sydney (the site), involves an ambitious upgrade and expansion of the existing hotel. This project aims to enhance the existing hotel offering while introducing a new, distinct hotel experience above the current structure, enabling the coexistence of the existing Park Royal and a new Pan Pacific Hotel on the same site. Strategically positioned at the edge of the City of Sydney, the development reinforces the city's entry into Darling Harbour by maintaining and emphasising the city wall characteristic of this prominent location.

The project is defined by 3 key principles – maximising adaptive reuse (setting a benchmark for future developments in Sydney), energising the Sydney visitor economy, and significantly enhancing the greening of both the public realm and the skyline, in alignment with the City of Sydney's sustainability goals. Achieving this vision involves expanding the existing core to support the new hotel above, employing a 'strip to structure' approach from ground to Level 02 to facilitate amenity upgrades, lightly refurbishing existing hotel rooms, and comprehensively upgrading all building services. This initiative aims to establish a contemporary hotel destination while setting a new standard for sustainable urban redevelopment.

To achieve the intended outcomes, this planning proposal seeks to amend the *Sydney Local Environmental Plan 2012* (the **LEP**) by inserting a new site-specific clause for the subject site under Part 6 Division 5 Site specific provisions to:

- allow a maximum building height of 85 metres,
- permit a maximum floor space ratio of 13.5:1 for hotel and associated land uses,
- restrict use to employment/hotel use and not residential accommodation or serviced apartments.

The Planning Proposal is supported by a site-specific Development Control Plan (**DCP**) and reference design scheme, prepared by Hassell. Key elements of the site specific DCP and reference design include:

- Renovation of existing 2 level basement and existing 11 storey hotel, with the addition of a new 11 storey hotel above (including a transfer floor between the two structures), and a rooftop plant floor resulting:
 - Two hotel brand offerings – Park Royal Hotel (3.5 star) and Pan Pacific Hotel (5 star)
 - 490-540 hotel keys with gross floor area of ~30,000m²
 - Upgrade existing infrastructure and services (including new lift core),
 - New and upgraded hotel facilities (including lobby, dining areas, meeting rooms, ball room, gymnasium, bar and restaurants, and pool).
 - Removal existing Porte Cochere and exit ramp resulting in single vehicle entry/exit ramp from Day Street to be used by valet only.
- Ground floor public domain, public art and landscaping design, and
- Significant greening and landscaping of western façade.

The document will cover the below items as part of an initial review of the existing and proposed site:

- Existing site conditions BYDA constraints
- Stormwater design parameters
- Public Domain constraints
- Survey requirements
- Geotechnical Investigation requirements

2.0 BYDA Findings

2.1 Site Location

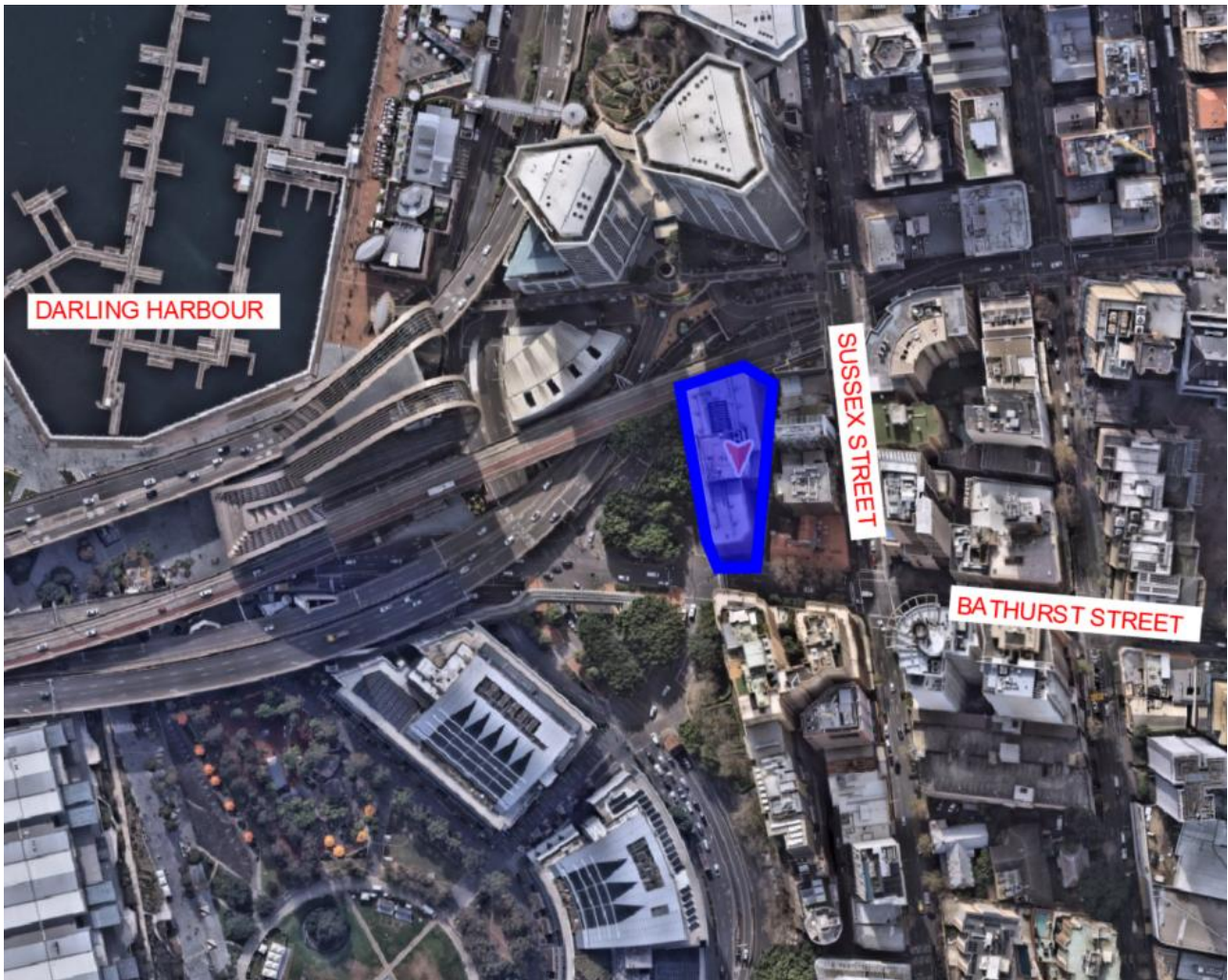


Figure 2-1: Site location

The drawing is a technical schematic of a water distribution system, likely for a fire department. It is divided into two main sections, labeled 1 and 2. Section 1 (top) shows a network of pipes with various valves (P100-T-10, P100-T-11, etc.) and hydrants (H100-1, H100-2, etc.). Section 2 (bottom) shows a similar network, but with different valve and hydrant locations. The drawing includes a legend for symbols and a title block.

Legend:

- Valve (P100-T-10, P100-T-11, etc.)
- Hydrant (H100-1, H100-2, etc.)
- Water Main (10" Water Main, 8" Water Main, etc.)
- Fire Hydrant (Fire Hydrant, etc.)
- Valve (Valve, etc.)
- Hydrant (Hydrant, etc.)
- Water Main (Water Main, etc.)
- Fire Hydrant (Fire Hydrant, etc.)

Title Block:

Water Distribution System
 Section 1
 Section 2

Figure 2-2: NBN Co BYDA Results

2.3 Ausgrid

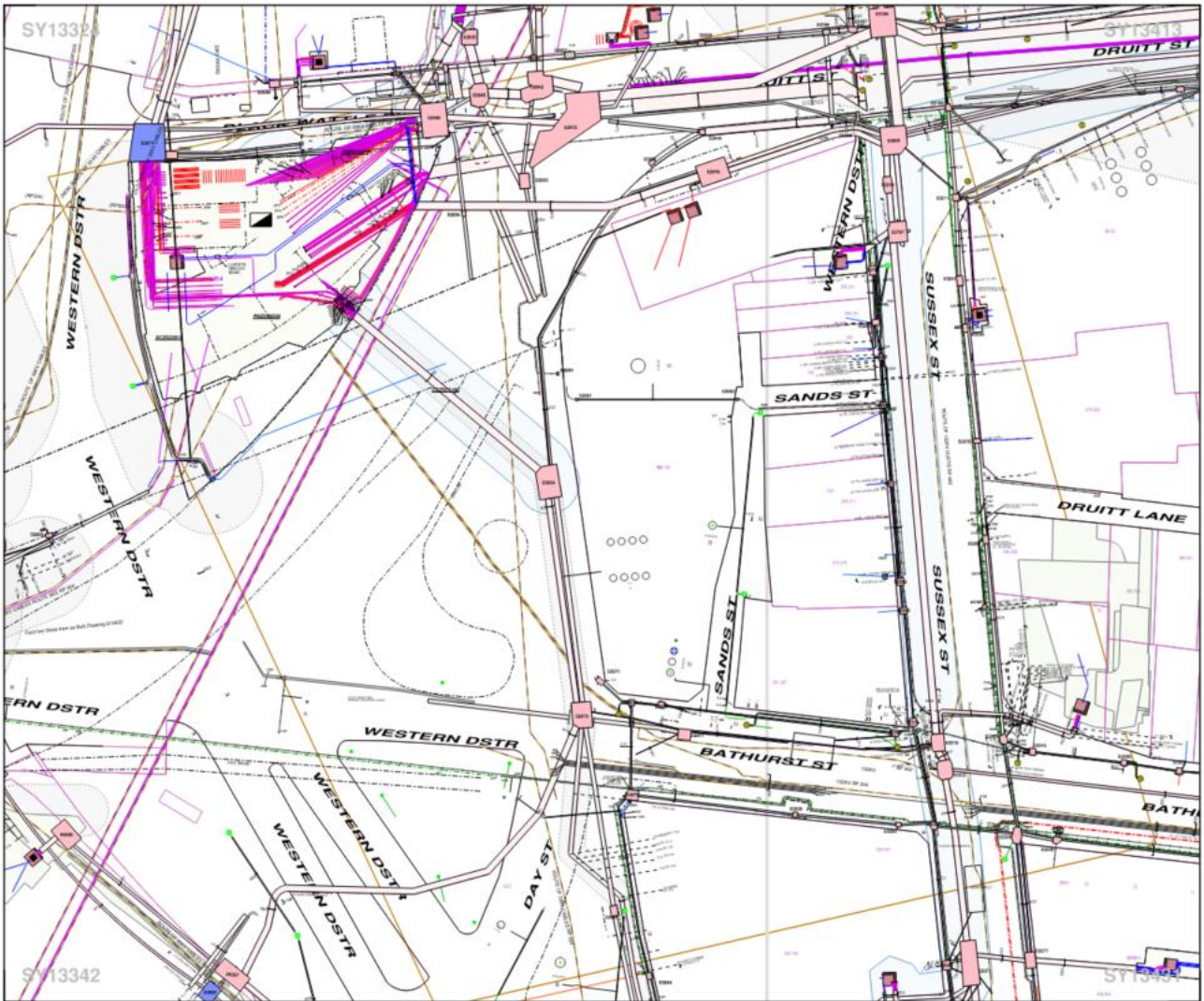


Figure 2-3: Ausgrid BYDA Results

Figure 2-4: Ausgrid BYDA Results

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2.6 City of Sydney



Figure 2-6: City of Sydney BYDA Results

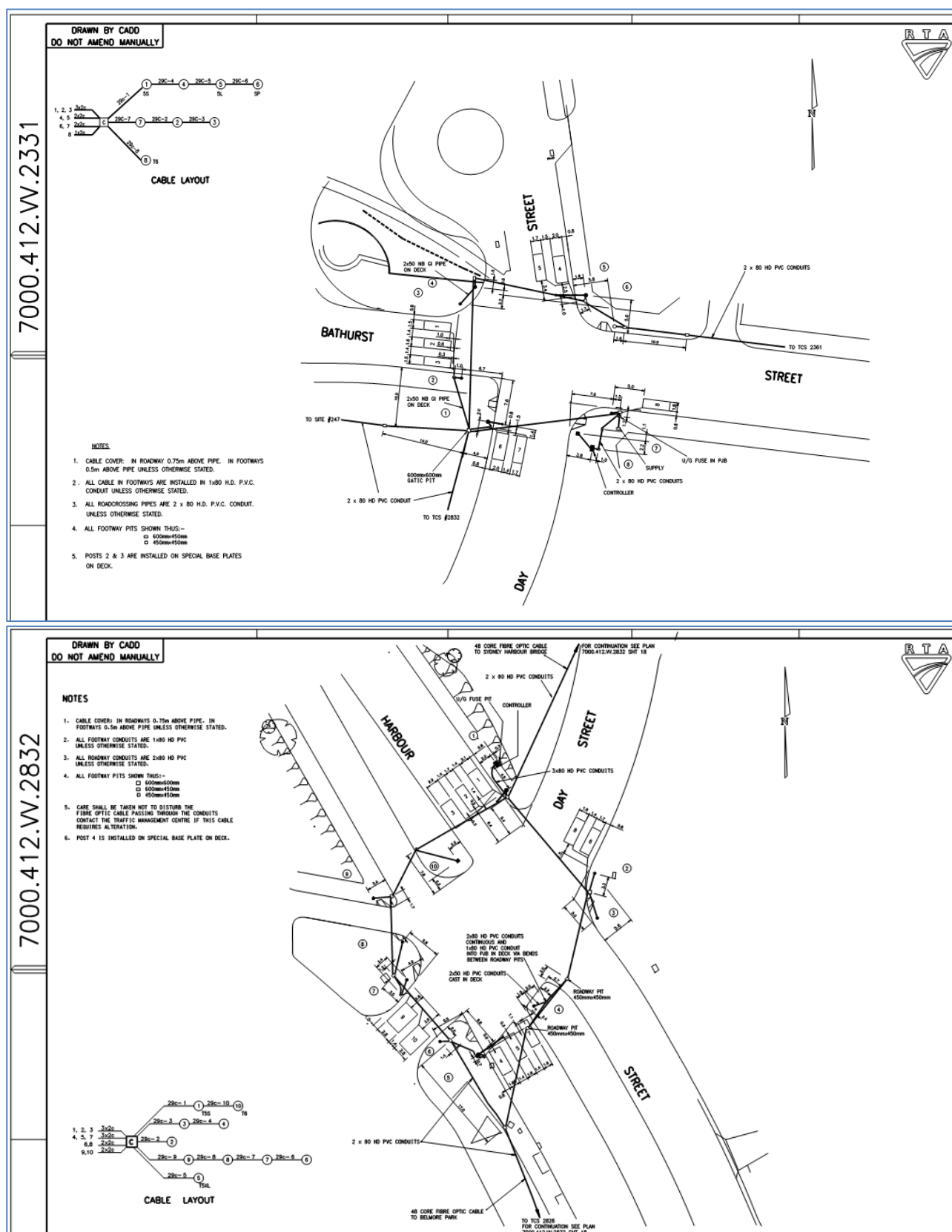
Figure 2-7: Ausgrid BYDA Results

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Figure 2-8: TfNSW BYDA Results (A)



2.9 Sydney Trains Central

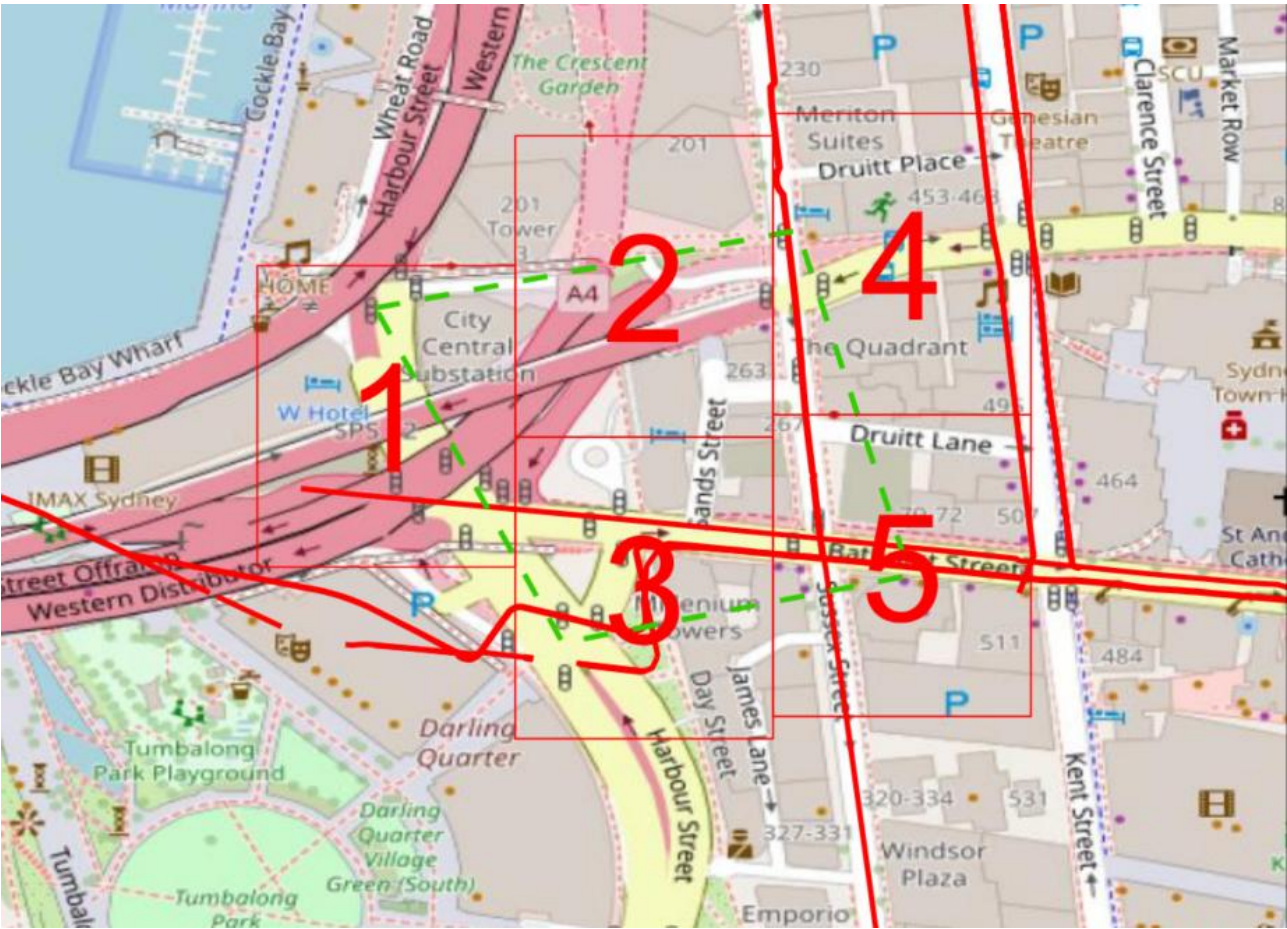


Figure 2-10: Sydney Trains BYDA Results

2.10 TPG

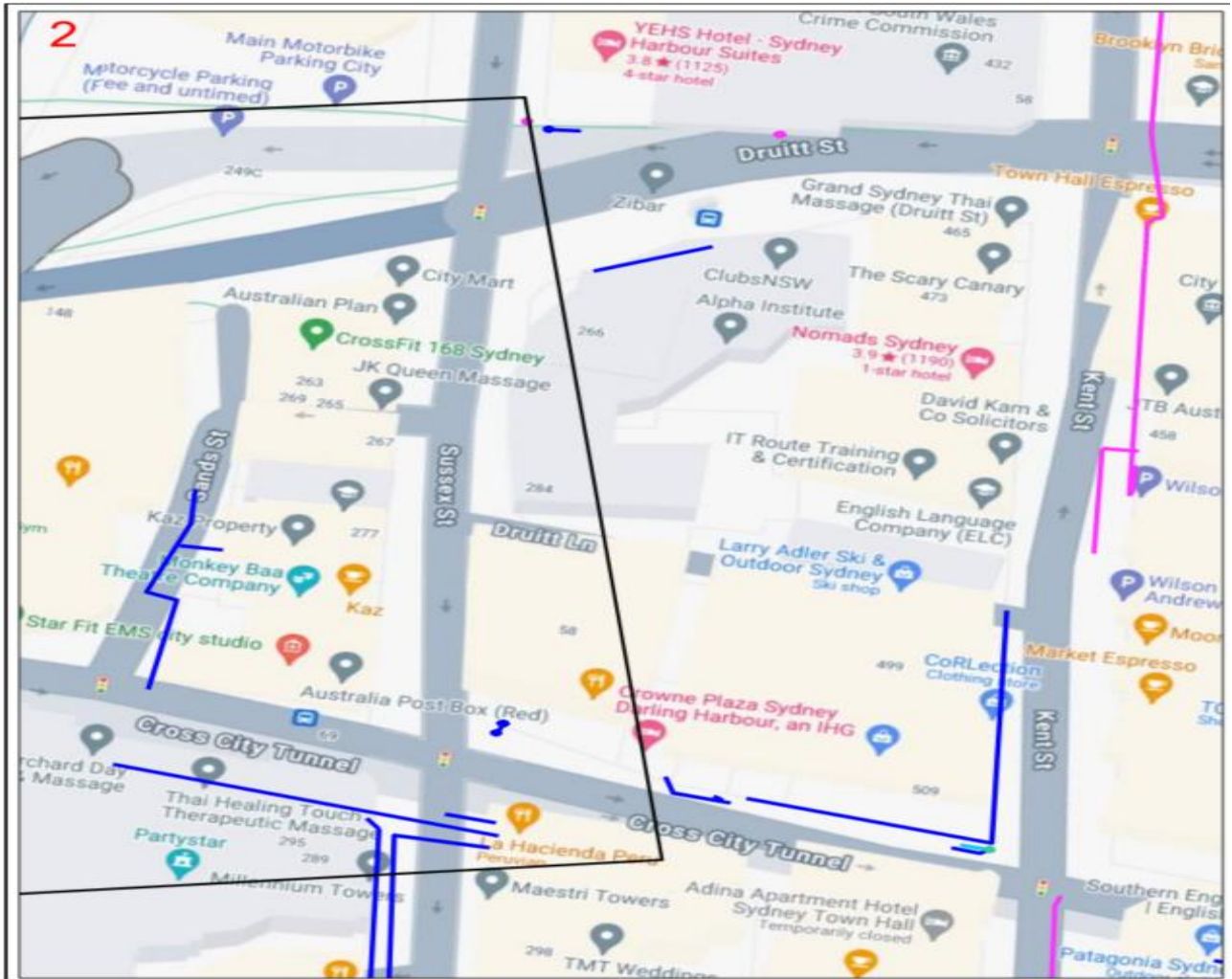


Figure 2-11: TPG BYDA Results

2.11 Telstra

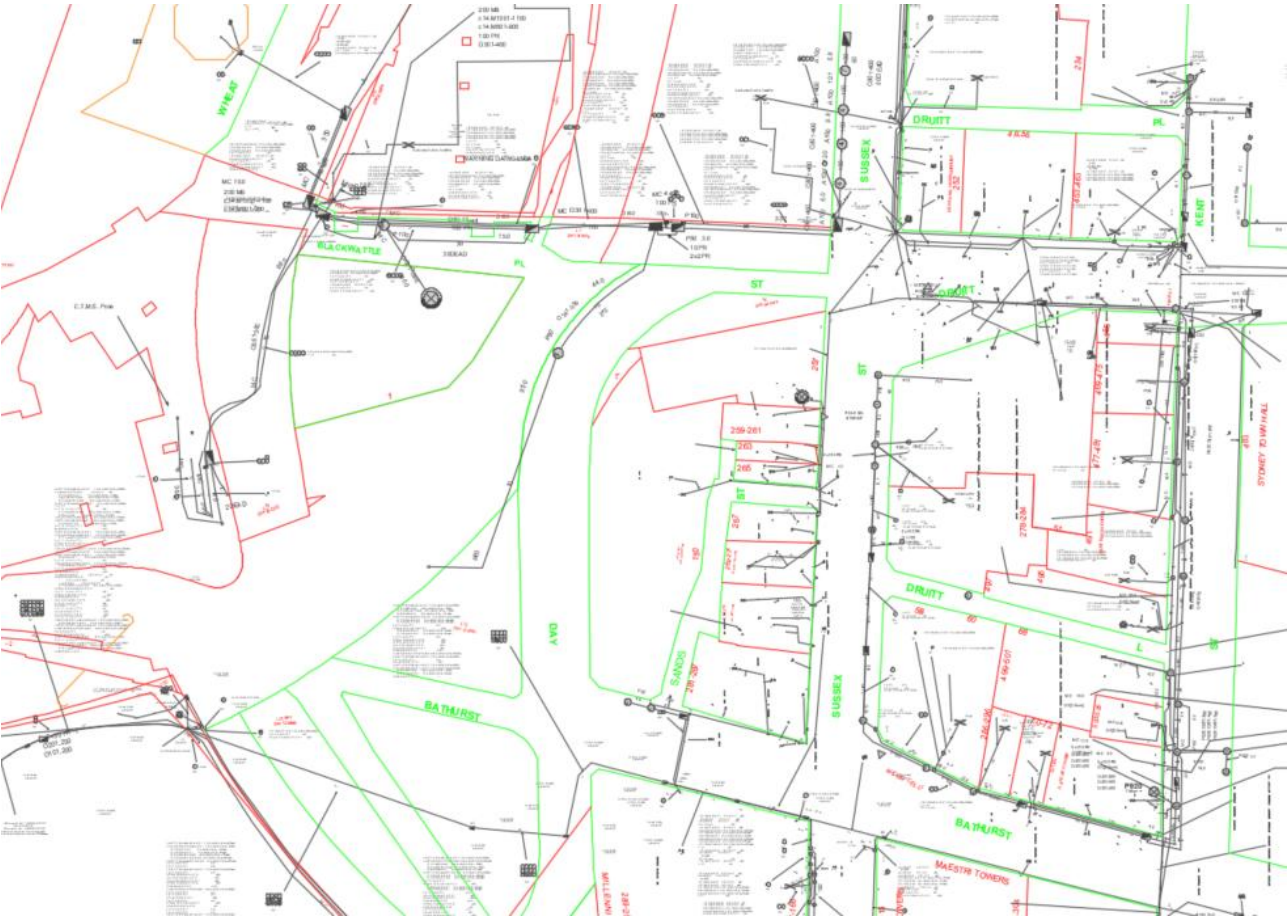


Figure 2-12: Telstra BYDA Results

3.0 Stormwater Quantity

The site's total area is approximately 2281m² (0.228ha) and does not have an existing On Site Detention tank within its structure.

As the site's location sits within Sydney Water's 'City Area 30 Catchment', and the runoff will be discharged into their assets, Sydney Water will dictate the OSD requirements. Initial correspondence from Sydney Water indicates that there is no need for any OSD required for any development located at 150 Day St.

4.0 Stormwater Quality

As set out in the City of Sydney's DCP, there is a requirement for water quality measures to be installed to ensure that the post development site runoff will exhibit reduced pollutants in alignment with the below extract.

3.7.3 Stormwater quality

- (1) Development of a site greater than 1,000sqm must undertake a stormwater quality assessment to demonstrate that the development will achieve the post-development pollutant load standards indicated below:
 - (a) reduce the baseline annual pollutant load for litter and vegetation larger than 5mm by 90%;
 - (b) reduce the baseline annual pollutant load for total suspended solids by 85%;
 - (c) reduce the baseline annual pollutant load for total phosphorous by 65%; and
 - (d) reduce the baseline annual pollutant load for total nitrogen by 45%.

Figure 4-1: City of Sydney Stormwater Quality Requirements

Given the substantive adaptive reuse of the base building, it is proposed that the typical water quality targets be omitted from the final design requirements. The design intent of the current proposal includes expansive greenspaces to be installed on the hotel's new rooftop areas, this will drastically improve the quality of water runoff compared with the existing state of the building.

In the event that this dispensation is not granted for the project, a comprehensive analysis of the final site layout will be undertaken. This process will incorporate WSUD features into the modelling via the software package MUSIC for review by relevant stakeholders.

5.0 Public Domain

Under the current refurbishment proposal, there are a series of upgraded elements being offered to the City of Sydney as part of the design.

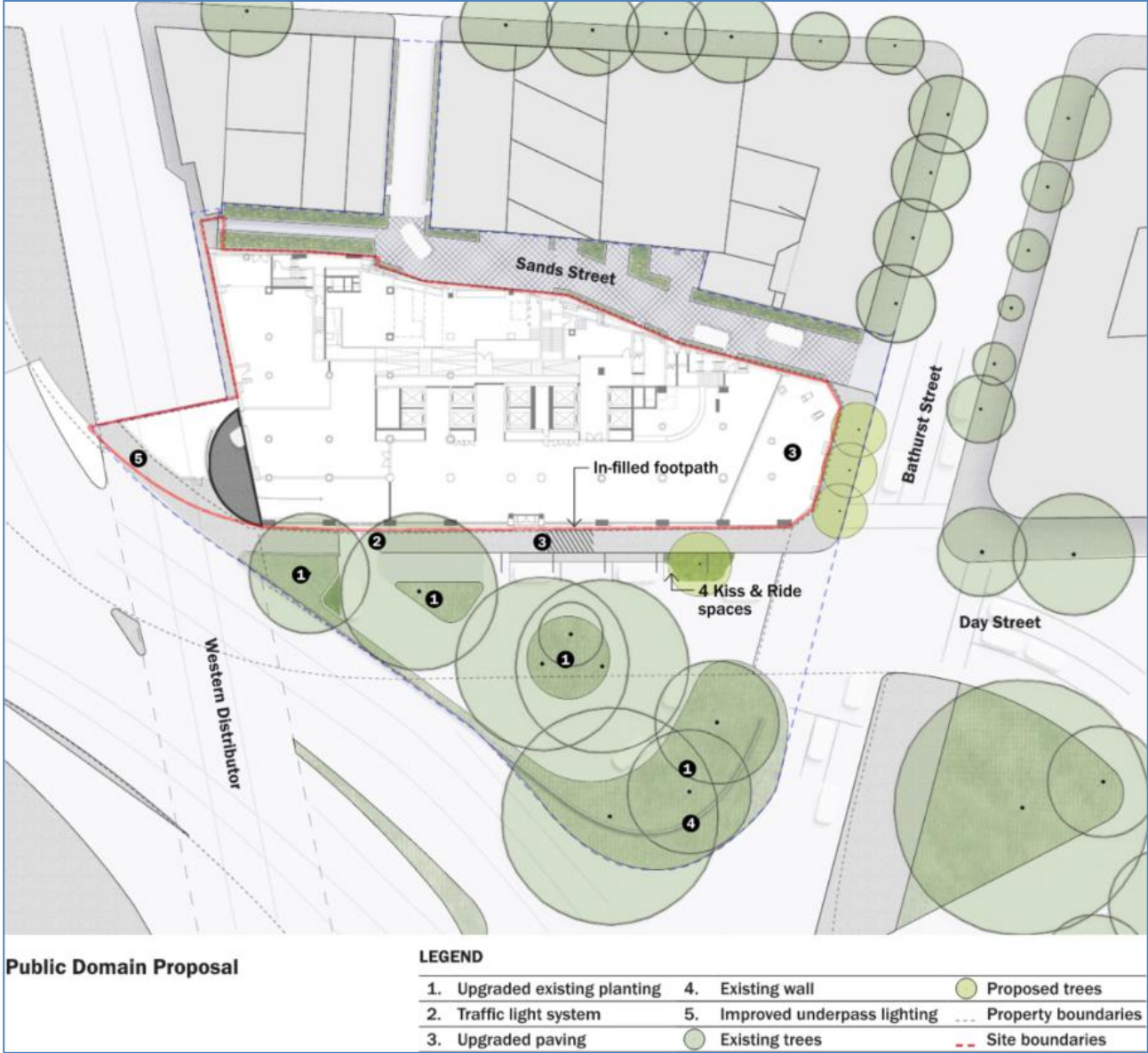


Figure 5-1: Extract from the current Aspect 'Landscape and Public Realm' presentation

5.1 Upgrade proposals

As above in Figure 5-1, TTW note the existing soft landscaping adjacent to the Hotel's pedestrian and vehicular access via Day Street is intended to be replanted and refurbished to maximise the aesthetic of the public domain and improve acoustic buffering.



Figure 5-2: Sand Street Excerpt from Google Maps

On the eastern side of the hotel, along Sand Street, the design intent aims at improving the public amenity and reducing the potential flood risk of the roadway's sag points.

As shown in Figure 5-2, the existing public domain is rather prohibitive to public access and does not offer any green space within the corridor. Figure 5-1 highlights that, in addition to proposed planting bed installation, the existing building frontage along Bathurst Street will be pushed back to the north. This will create a wider corridor along Bathurst Street between Sands Street and Day Street. Such a proposal will drastically improve public access and improve vehicle sight lines at either intersection.

Further, the proposal to install permeable paving along Sands Street will provide a much-needed improvement to the current flood risk threatening this portion of land. As outlined in TTW's Flood Due Diligence Report, some areas of the Sand Street sag points (pictured in Figure 5-2 above) are expected to experience flood depths of greater than 500mm in the 1% AEP storm event.

The key benefit of permeable pavement construction is the controlled release of water leading to peak flow reduction. Permeable paving incorporates a sub-base layer made of permeable materials, such as gravel or crushed stone. This layer temporarily attenuates water during heavy rainfall events and gradually releases it into the ground or drainage systems, reducing the likelihood of sudden surges in runoff. By allowing water to infiltrate the pavement substrata, the system diminishes the volume of water that flows across the surface and into stormwater drainage inlets. This slows down the rate at which water reaches downstream waterways, reducing peak flowrates and preventing the rapid accumulation of water that causes flooding.

As the development progresses, there are a handful of considerations which are being worked through:

- Location and depth of any existing utilities which may clash with current design proposals.
- Existing pavement subgrade permeability.
- Vehicle loading requirements.
- Compliance with CoS roadway design standards.

6.0 Survey Requirements

To date, a full topographic survey has been compiled by Woolpert for the external areas surrounding the existing hotel. This will be used as the basis for the continued development of the public domain design.

In order to further validate these public domain refurbishments and any future proposals that may arise as the design develops, a comprehensive utilities survey will be undertaken. The purpose of the survey is to highlight any potential hidden constraints which might impact upon the final design of the works (current design intent shown on Figure 5-1 and explored further in Section 5).

6.1 Existing Utilities

TTW propose an existing utilities survey be undertaken in the area highlighted in Figure 6-1 below.

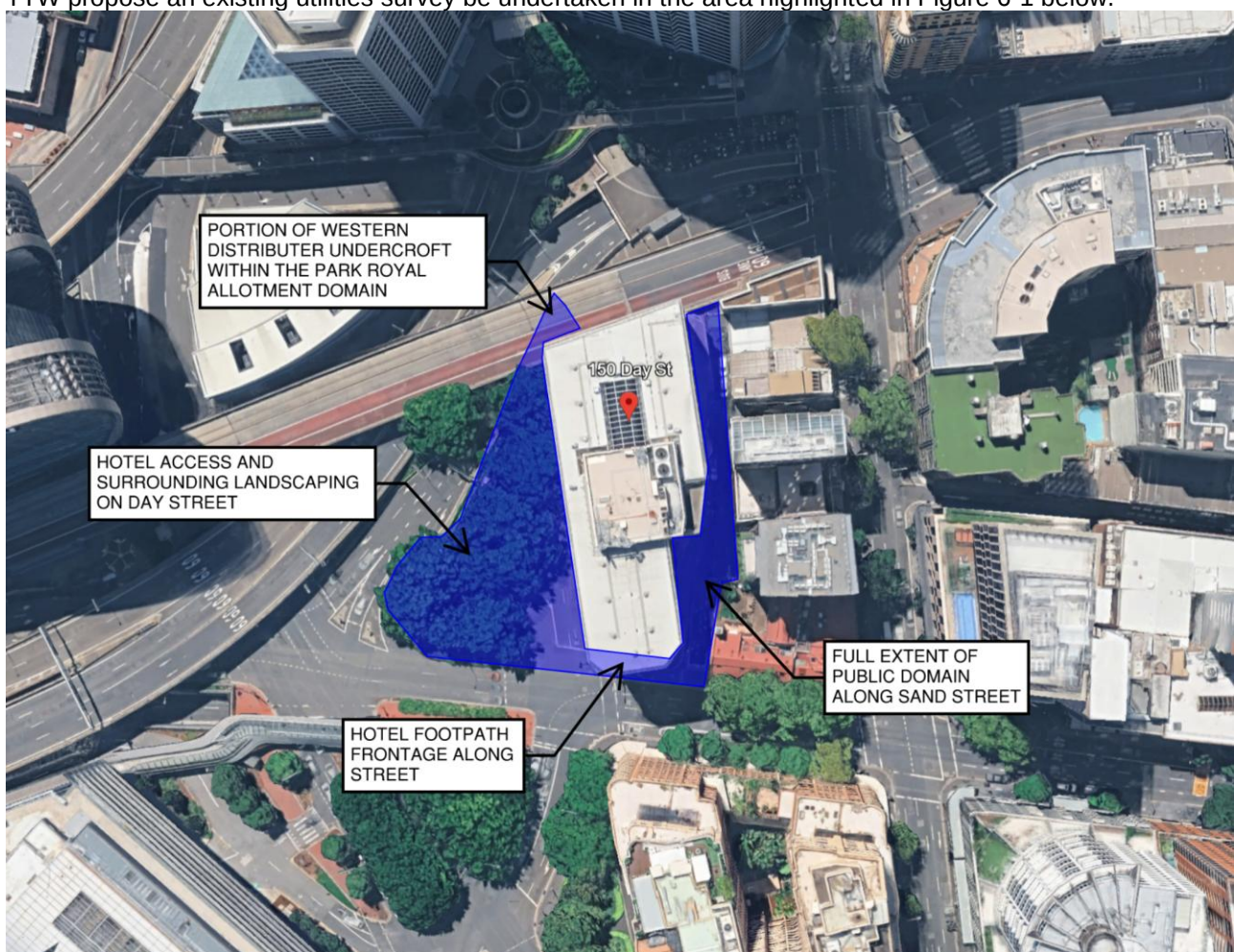


Figure 6-1: Proposed Extent of External Survey

This survey is to confirm the location, extents, sizes, and levels of existing infrastructure. Deliverables to include pit maps of all stormwater chambers. This will allow for the more detailed design of the site stormwater discharge as well as the avoidance of service clashes in the pavement upgrade works.

TTW recommend a review of any proposed survey brief is undertaken prior to the investigation being undertaken on site.

7.0 Geotechnical Investigation Requirements

In conjunction with the Douglas Partner's report (231572.00.R.002.Rev0), it is suggested that elements of this investigation are expanded to the areas highlighted in Figure 6-1.

The purpose of this expanded investigation zone is to verify and provide clarity on the existing pavement subgrade properties including composition, CBR design values, and compaction levels.

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