



## APPENDIX D

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### Visual Impact Assessment

August 2010

**energy2U**  
Alliance



## North Sydney Zone Substation Redevelopment Visual Impact Assessment



# QUALITY INFORMATION


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This project is being delivered by the Energy2U Alliance which brings together partners from EnergyAustralia, Leighton Contractors Pty Limited, AECOM Pty Limited and PowerServe Australia Pty Limited to undertake works for EnergyAustralia.



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# 1 INTRODUCTION

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Energy2U has prepared a visual impact assessment (VIA) for the proposed development of a new zone substation at North Sydney.

## 1.1 Proposed Development

### *Development Site*

The project involves the construction, operation and maintenance of the proposed new North Sydney zone substation and the decommissioning and demolition of the existing North Sydney zone substation.

The site for the proposed North Sydney zone substation (hereafter referred to as 'the Site') is located at 3-11 Ward Street, North Sydney (refer Figure 1.1.1). The Site was previously occupied by three residential dwellings, which were acquired and demolished by EnergyAustralia in 2008. The Site is generally rectangular in shape and has an area of approximately 1200m<sup>2</sup>.

The Site is located in a mixed use area, is part of the North Sydney CBD, and primarily addresses Ward Street along the full length of the western boundary (refer photo opposite), although the Ward Street entrance to the proposed substation would be pedestrian access only. It also has a small frontage to Harnett Street on the northern boundary (refer Figure 1.1.2), which would be the main vehicular access to the proposed substation development.

Opposite the Site on Ward Street is a 3-storey

Council owned multi-level car park, which is currently leased to Wilson Parking until 2020. The car park wraps around the end of Ward Street to adjoin the northern boundary of the Site.

To the east, the Site abuts a number of private properties that accommodate single and double storey residential dwellings which front Walker Street.

These buildings are currently used for residential purposes, however approval has been granted for:

- » 136 - 140 Walker Street: A proposed 22-storey mixed-use (retail and residential) development over two properties, and
- » 144-150 Walker Street: A proposed 8-storey mixed use (retail and residential) development over four properties which includes the retention of the four existing dwellings.

To the south, the Site is bounded by the existing substation. The Site also partially abuts a 10-storey commercial building to the south-east, which is located at 76 Berry Street on the corner of Berry and Walker Streets (People Telecom Building). The northern section of this building incorporates a small on-ground courtyard garden and adjoining rooftop garden that extends across the northern boundary ranging in approximate width of between 12 and 18m.

The Site has been cleared of all buildings and trees, and excavation of the site has been completed (as part of a separate approval) (refer Figure 1.1.3).

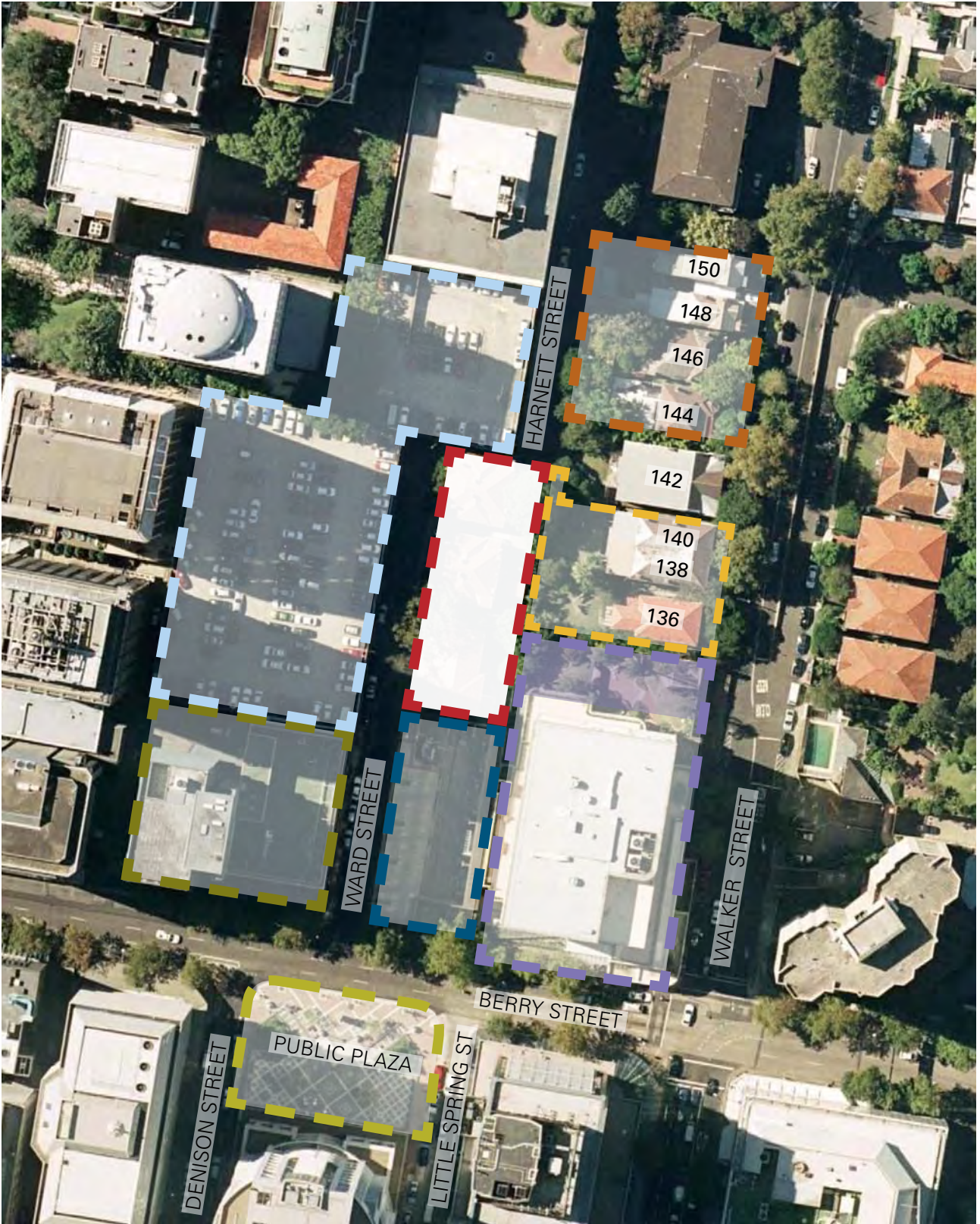


Figure 1.1.1: Aerial Photograph of proposed development site - detail view (source: Google Earth)

## Alternative Assessments

### 136 - 140 Walker Street

As described above, two possible scenarios exist for 136 - 140 Walker Street, which adjoins the eastern boundary of the Site, as follows:

- » one existing free standing residential building (No.136), and one multi-unit dwelling (No. 138-140) retained, or
- » 22 storey mixed use development.

Even though the development proposed at 136-140 Walker Street has been granted DA approval, there is no guarantee that the development will proceed. This report therefore assesses both options.

### Proposed 144-150 Walker Street Development

We have undertaken a review of the 144-150 Walker Street development application and consider that

it does not require separate assessment within this report as undertaken for the proposed 136-140 Walker Street development, for the following reasons:

- » The views from the apartments are primarily focused to the east across the expressway to Neutral Bay, away from the Site
- » The apartments are diagonally adjacent to and separated from the Site
- » The character of the zone within which the apartments are proposed to be located is significantly defined by adjacent non-residential development including a multi-storey car park and multi-storey commercial development to the west, and various multi-storey commercial developments and the existing substation to the south
- » There is no overshadowing impact from the substation onto the Site

#### LEGEND (FIGURE 1.1.1)



Figure 1.1.2: View down Harnett Street from McLaren Street to the Site



**Figure 1.1.3:** Vertical panorama showing the Site in its current state, with the existing substation behind.

### *Proposed Substation Design*

The proposed development of the new North Sydney zone substation includes the construction of a 5 level brick-clad substation building to RL 94.5, which equates to approximately 25m high above Ward Street and 29m above Harnett Street at its highest point. The proposed building is effectively built to all site boundaries.

The substation building houses all electrical equipment and is a long life, low maintenance weather proof structure. The building is proposed to be brick-clad, with anodized aluminium finished louvres and an oblique colourbond roof (refer Figure 1.1.4 for detail of facade treatment).

The building, particularly the brick facade, has been designed to complement the Federation building style characteristic to the lower North Shore area, and the previous dwellings which occupied the site. The masonry finish combined with louvered panels and window / opening details generally conform to similar low level developments in the area. To the casual observer or passer-by, the building effectively conceals its function.

The facade of the building consists of bands of cream and red brick, articulated with inset elements positioned over louvered vents on Ward Street. The bands of coloured brick reduce in scale at street level, and the bricks are laid in relief bands designed to deter graffiti. Anti-graffiti paint is applied to the Ward Street facade up to approximately 2.7m from the ground.

Lighting would be provided on the external walls of the substation building. These lights would be used during any maintenance works, replacement of equipment or for other essential operational purposes. The substation is not expected to require continual lighting for security surveillance, however two recessed doorways on the Ward Street boundary would be lit at night to discourage antisocial behavior. If security breaches occur, the use of night-time security lighting would need to be reassessed.

As the substation building occupies the entire site, no permanent site fencing would be required, nor any allowances for landscaping.

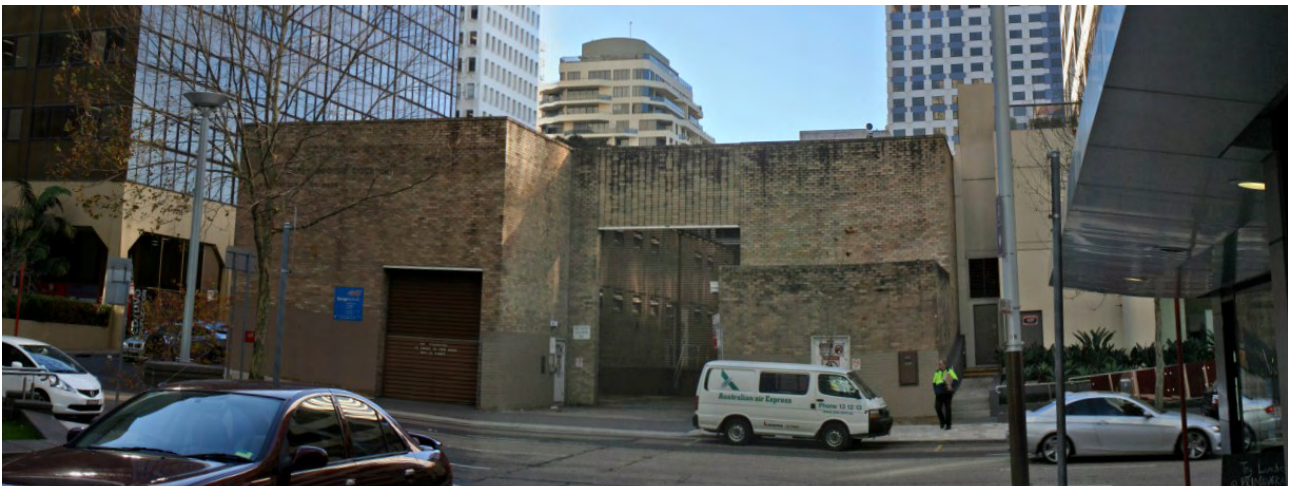
On completion and commissioning of the new substation, the existing North Sydney zone substation on Berry Street would be decommissioned and demolished. The future use of the site of the existing substation has not yet been determined. In the interim between demolition and development, the site would be turfed and fenced. This building was originally commissioned in 1968

and comprises a light-brown brick walled exterior, surrounding an open transformer area (refer Figure 1.1.5).

It is anticipated that the proposed substation would be completed by April 2013 after which the existing substation would be decommissioned and then demolished.



**Figure 1.1.4:** Proposed substation facade treatment (Source: Kann Finch Group). Updated detail regarding banding pattern, roof design and entry are shown in the photomontages provided within this report.



**Figure 1.1.5:** Existing substation on Berry Street, July 2010

## 1.2 Site Setting

The proposed site is located in a mixed use area and is part of the North Sydney CBD. Surrounding land uses include the existing North Sydney zone substation, a multi-level car park, a 10-storey commercial building, residential properties and potentially a proposed 22-storey multi-use development (refer Figures 1.1.1 and 1.2.2).

The Site primarily addresses Ward Street along the full length of the western boundary, but also has a small frontage to Harnett Street on the northern boundary. The Harnett Street entrance to the building would be the primary entrance for vehicular and pedestrians, the Ward Street entrance would only be a pedestrian entry to the building. The site has been cleared of all buildings and vegetation and is now excavated to an approximate depth of the proposed basement for the new substation. The Site is situated directly behind the existing substation.

Ward Street is a small cul-de-sac located off Berry Street. Its primary function at present is to convey vehicular traffic from Berry Street to the car park at the northern end of Ward Street. Visually, Ward Street is seen from Berry Street as a narrow, treeless laneway, terminating at the Wilson Car Park building facade (refer Figure 1.2.1). Large, red car park signage dominates the view down Ward Street from Berry Street at street level. The street is characterised by an almost total lack of fenestration and dull, muted colours.

Berry Street provides one-way access between the Pacific Highway and the Warringah Freeway, and as such conveys high volumes of vehicular traffic.

Harnett Street is a small laneway that services a number of residential blocks of land that front onto Walker Street and undercroft parking for a commercial development on the west side of the street. The view down Harnett Street from McLaren Street terminates at the Site, although direct views to the Site are partially screened by tree canopies from adjacent blocks (refer Figure 1.1.2).

The Site is located approximately 400m from North



Figure 1.2.1: View down Ward Street from Berry Street to the site

Sydney Train Station and Greenwood Plaza, a major shopping centre in the area. A pedestrian link from the station and Greenwood Plaza runs from Denison Street to Berry Street, which emerges diagonally opposite Ward Street (refer Figures 1.2.2 and 1.1.1). A pedestrian link also exists between Ward Street and McLaren Street through the Wilson Car Park and an adjoining private laneway, running parallel to Harnett Street.

A public plaza with cafes and outdoor seating that receives direct sunlight during the morning and midday in both winter and summer is located opposite Ward Street, on the corner of Berry Street and Denison Street. This public plaza would have high pedestrian and cafe use activity during morning and evening work arrival and departure times, and lunchtime period (refer Figure 1.2.3).

Berry Street in itself is part of the city block, with the majority of pedestrian traffic anticipated to travel on the southern sidewalk due to winter solar access and wide pavement.



**LEGEND**















-  PROPOSED SUBSTATION SITE
-  EXISTING SUBSTATION
-  GREENWOOD PLAZA, NORTH SYDNEY TRAIN STATION UNDERGROUND LINK
-  PUBLIC PLAZA, BERRY STREET
-  WARRINGAH FREEWAY
-  WALKER STREET
-  HARNETT STREET
-  WARD STREET
-  DENISON STREET
-  MILLER STREET
-  PACIFIC HIGHWAY
-  BERRY STREET
-  MCLAREN STREET
-  ACCESS TO WARRINGAH FREEWAY FROM BERRY STREET



Figure 1.2.2: Aerial photo: Context view (Source: Google Earth)



Figure 1.2.3: Panorama of public plaza on the southern side of Berry Street looking south-west across the site



### 1.3 Proposed development at 136-140 Walker Street

At the time of writing this report, the land adjoining the Site at 136 - 140 Walker Street is owned by a development company (refer Figure 1.3.1) and presently contains one free-standing residential dwelling and one low rise multi-unit dwelling. Approval has been granted for the development of a 22-storey mixed use development. Figure 1.3.2 provides an approximate massing diagram of the proposed development at 136-140 Walker Street and the substation development.

The approved mixed use development proposes the construction of a tower to RL 132.5m, consisting of 3530m<sup>2</sup> retail / commercial space over 4 levels, and 46 dwellings with associated recreational spaces and a basement car parking area.

The proposed 136-140 Walker Street development will primarily address Walker Street, including vehicular ingress / egress and primary pedestrian entry. However, a pedestrian through-site link to Harnett Street is also proposed.

The proposed 136-140 Walker Street development addresses Walker Street with a 4-storey commercial podium, set on sandstone piers that extend the height of the podium.

Access to Harnett Street from the podium will be provided for at Ground Level, at the rear (north-west corner) of the Site. The main building entrance off Walker Street provides public access to Level 1 via an open facade. Level 1 comprises a commercial arcade which provides the through-site link to the rear of the building and out to Harnett Street.

Within the podium, Ground Floor to Level 2 will provide a mixture of commercial tenancies of differing scales.

Level 3 will provide public access to recreational and community open terrace space, and landscaped areas as well as indoor facilities, including a swimming pool.

Level 4 will include commercial tenancies, as well as a light well to the indoor pool area at Level 3 (located adjacent to the Site).

Levels 5 and above are residential dwellings, containing between 4 and 1 dwelling per floor. Dwellings located on the western boundary of the Site between Levels 5 and 9 look out onto the proposed substation site at 3-11 Ward Street.

SCALE BAR

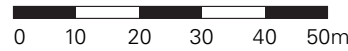


Figure 1.3.1: Proposed substation (red) and proposed 136-140 Walker Street development site (yellow)

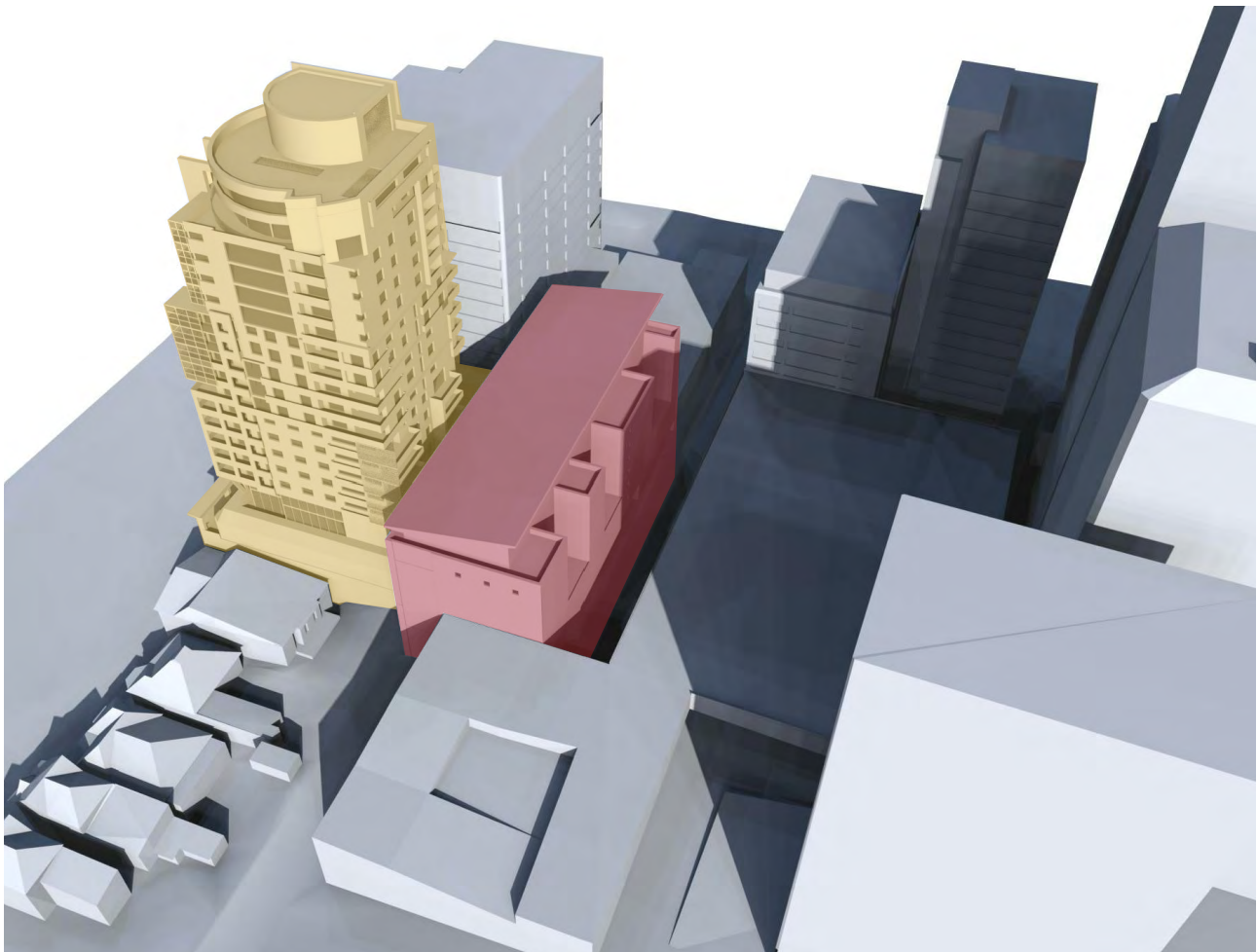
The proposed 136-140 Walker Street development is situated within close proximity to the western boundary of the Site, and thus close to the eastern rear facade of the proposed substation.

Dwellings on the western side of the proposed 136-140 Walker Street development at Levels 5, 6 and 7 (6 dwellings in total) are located such that the wall of the proposed tower building lies approximately 4.8m from the back wall of the proposed substation (refer Figure 1.3.3).

These apartments have bedrooms, living and dining rooms overlooking the back wall of the substation, in addition to the balconies which adjoin the living/ dining rooms. A majority of the balconies of these

dwellings sit approximately 2.9m from the back wall of the proposed substation, although the closest balcony on Level 5 sits 1.2m from the proposed substation.

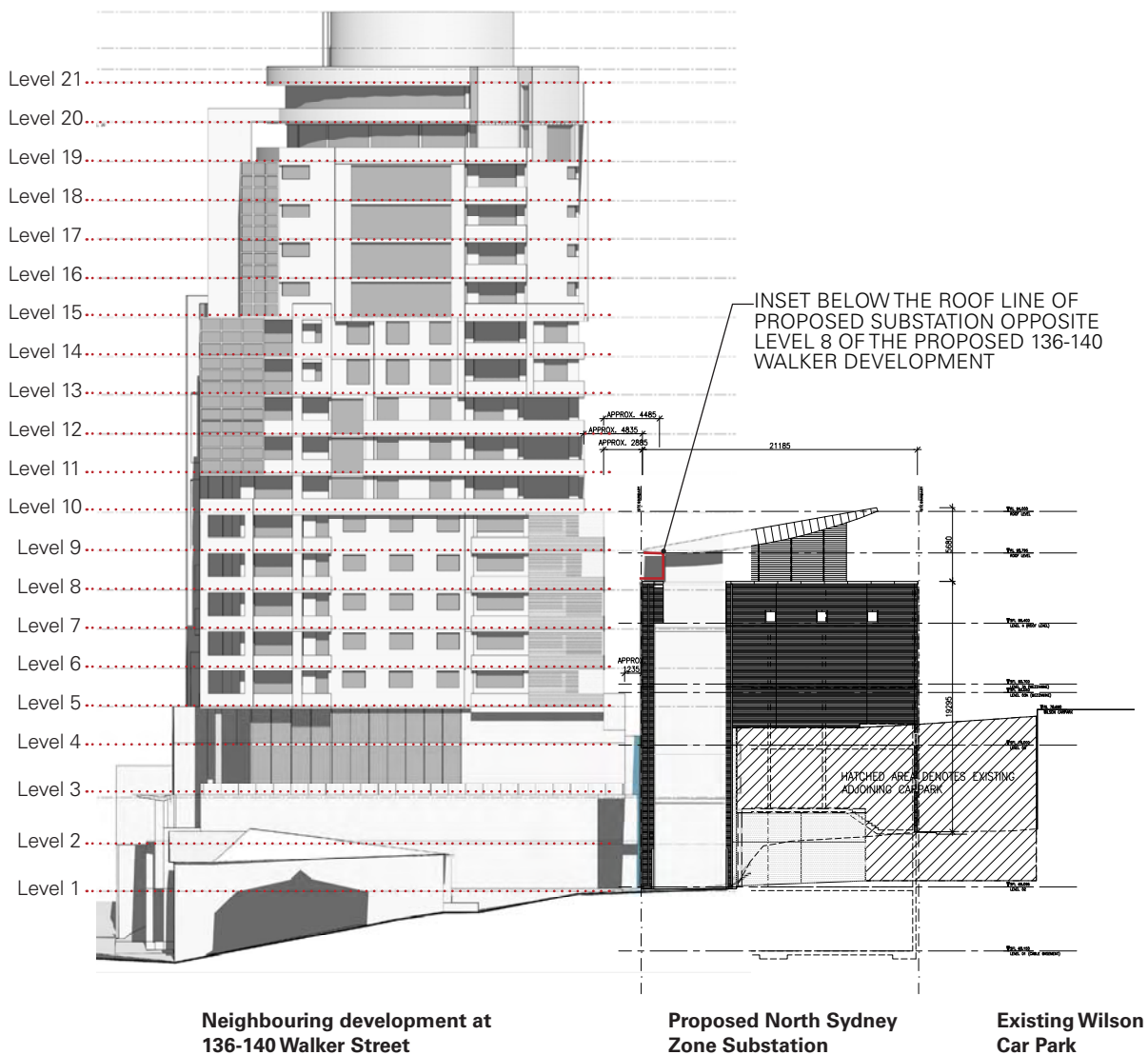
Units on the western side at Level 8 of the proposed 136-140 Walker Street development have a different view, as they sit at a similar height to the inset of the roof line of the substation. The units on this floor have a setback of approximately 6.4m from their back wall to the eastern side of the proposed substation, with the exception of a narrow lift well in one location. The balconies of these units sit approximately 4.8m away from the inset roofline of the proposed substation.



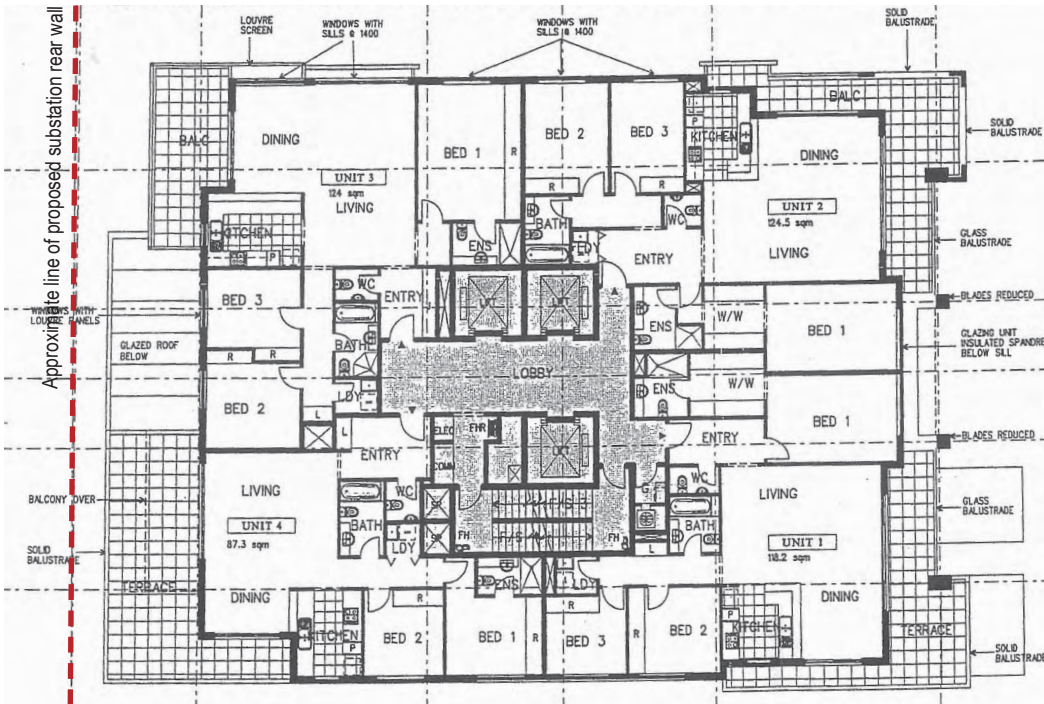
**Figure 1.3.2:** Proposed substation (red) and proposed mixed use development at 136-140 Walker Street (yellow) (Source: Kann Finch Group, Drawing number SD50)

The elevation shown in Figure 1.3.3 shows the lift well of the substation protruding past the roof inset opposite Level 8 of the proposed 136-140 Walker Street development. The inset line has been highlighted below in red (Figure 1.3.3).

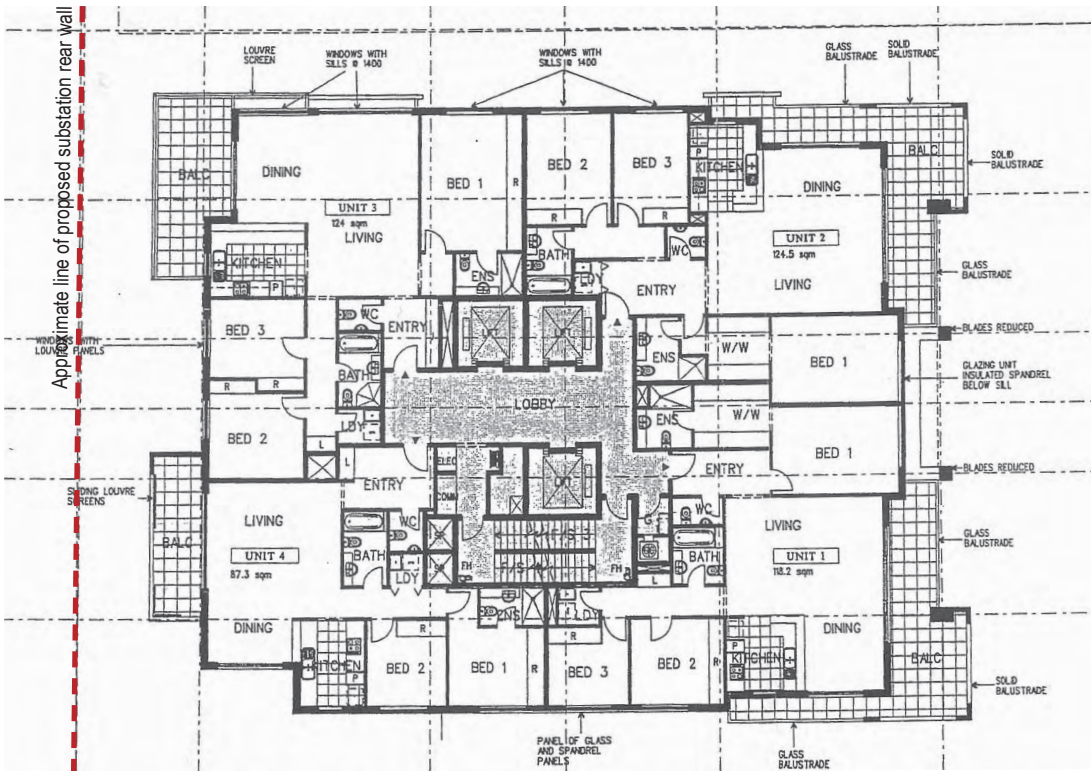
The units in the south-western corner of the development on Levels 5 to 8 have views orientated south to the People Telecom building on the adjoining lot from their kitchen, dining and bedrooms, while north-western units on these levels have views to the north from their dining, living and bedrooms (refer Figures 1.3.4 and 1.3.5).



**Figure 1.3.3:** Elevation of the proposed 136-140 Walker Street development in relation to proposed substation and existing car park [light diagonal hatch] where it adjoins the northern boundary of the site and the end of Ward Street (Source: Kann Finch Group, drawing number SD53) NTS



**Figure 1.3.4:** Floor plan of Level 5 of the proposed 136-140 Walker Street development (Source: Plans submitted to North Sydney Council for DA approval, 4th August, 2008) NTS



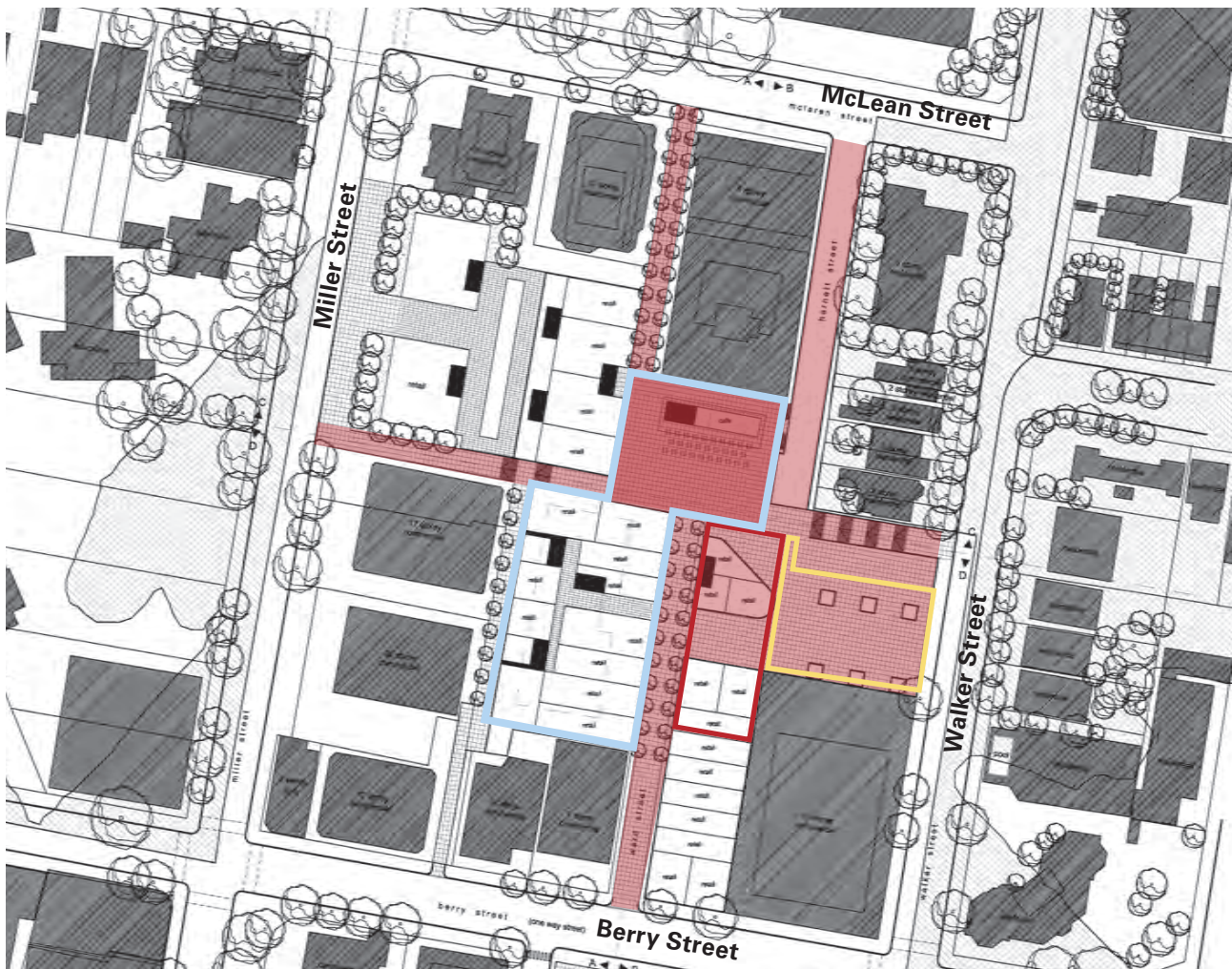
**Figure 1.3.5:** Floor plan of Levels 6 to 8 of the proposed 136-140 Walker Street development (Source: Plans submitted to North Sydney Council for DA approval, 4th August, 2008) NTS

## 1.4 Ward Street Precinct Masterplan

In May 2005, North Sydney Council produced a masterplan for the Ward Street Precinct which proposed a mixed-use development that spanned an area from Miller Street to Walker Street.

The scheme proposed a number of buildings that utilised land including 3 - 11 Ward Street (the proposed substation site) and 136 - 140 Walker Street.

The masterplan proposed a public, undercover retail space that linked Berry Street with Miller, McLaren and Walker Streets and Ward and Harnett Streets.



### LEGEND

- WARD STREET PRECINCT MASTERPLAN - PROPOSED THROUGH SITE LINKAGES
- WARD STREET PRECINCT MASTERPLAN - PROPOSED COURTYARD

- PROPOSED SUBSTATION SITE
- SITE OF PROPOSED DEVELOPMENT AT 136-140 WALKER STREET

- EXISTING WILSON CAR PARK
- SCALE BAR
- 0 10 20 30 40 50m

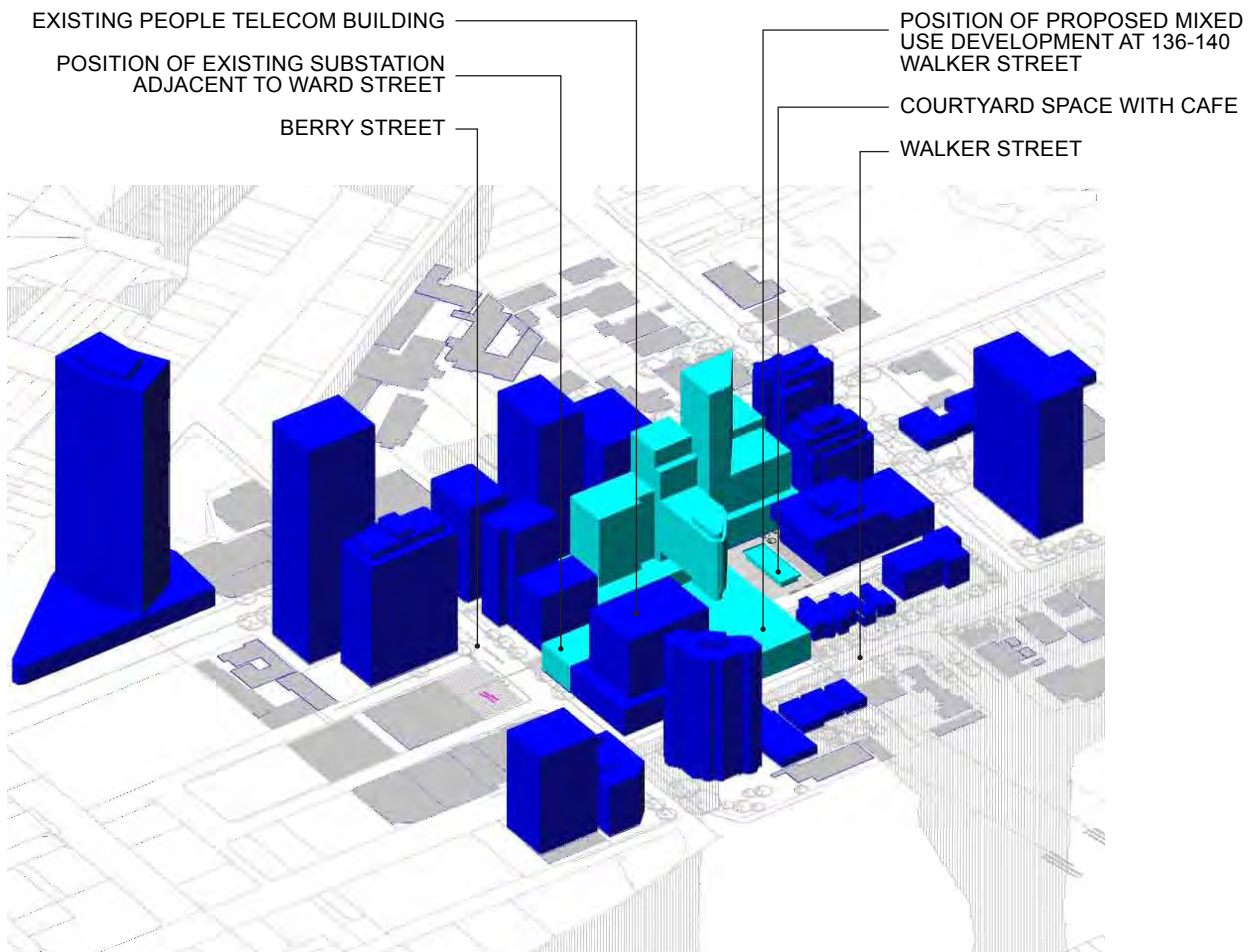
**Figure 1.4.1:** Ground floor of Ward Street Precinct Masterplan showing proposed through-site access from Berry Street to Miller, McLaren and Walker Streets (Excerpt from Ward Street Precinct Masterplan, North Sydney Council, 2005)

These thoroughfares converged on a central courtyard space with a cafe (refer Figure 1.4.1).

Figure 1.4.2 shows the proposed Ward Street Precinct Masterplan as 3-dimensional masses, showing the proposed podium buildings that join Walker and Berry Streets with Ward and Harnett Streets, as well as the central courtyard space.

With the sale of 3 - 11 Ward Street (EnergyAustralia), and the sale and subsequent approval for the development of 136 - 140 Walker Street, there is no possibility of a secondary through-site link between Walker, Ward and Harnett Streets that these two parcels of land had potentially offered.

It should be noted that the masterplan was undertaken without consultation with EnergyAustralia or surrounding land owners, and assumed the acquisition of land not owned by Council, e.g. the proposed retail development on corner of Berry and Ward Streets is sited upon the current EnergyAustralia substation.



**Figure 1.4.2:** Massing diagram of proposed development of the Ward Street Precinct (Excerpt from Ward Street Precinct Masterplan, North Sydney Council, 2005)