



APPENDIX D PART 2

Visual Impact Assessment

2 METHODOLOGY

2.1 Methodology

The visual impact of the proposed development has been assessed using the following method:

1. Describe the site
 - Context
 - Immediate setting
 - Site elements
 - Site character
2. Describe the adjacent development
3. Describe the proposed development
4. Identify the main observer locations to the site – map and photograph
5. Define a range of criteria against which the relative importance of each observer location can be assessed, e.g.:
 - Distance to view (foreground / middleground / background)
 - Observer type (e.g. site-seeing, other recreational user, resident, local user)
 - Number of observers
 - Duration of observation
 - Visibility / visual prominence of the development (including; skyline view / backdrop / screening / etc.)
 - Land use (Public Open Space / Private Ownership / Road)
 - Change from existing
6. Assess the visual impact for each key observer location
7. Provide mitigation measures where practicable, and define the extent of residual impacts
8. Provide a conclusion, and recommendations where relevant.

Photographs

For every Observer Location, photographs or groups of photographs (to create a panorama) were taken of the proposed development site with different focal lengths, as follows:

- » **Normal View:** 33mm digital focal length. These photos equate to 50 degrees in 35mm film format, which broadly equates to the view as seen unaided by the human eye.
- » **Detail View:** Provides detail greater than can be seen unaided with the human eye to assist in interpretation by the reader. These are taken with a focal length sufficient to capture detail for the purposes of analysis.

Observer Locations

Observer Locations were chosen based upon exploration of the surrounding area on foot. Observer Locations comprised of representative, publicly accessible places which encapsulated the potential for views to the proposed development site, including from nearby dwellings or other important observer types.

Observer Locations that were inspected but not included in this report were deemed not significant for the following reasons:

- very low observer numbers, or
- the proposed development site being substantially obscured from view e.g. by buildings, trees, etc.

2.2 Map of Observer Locations

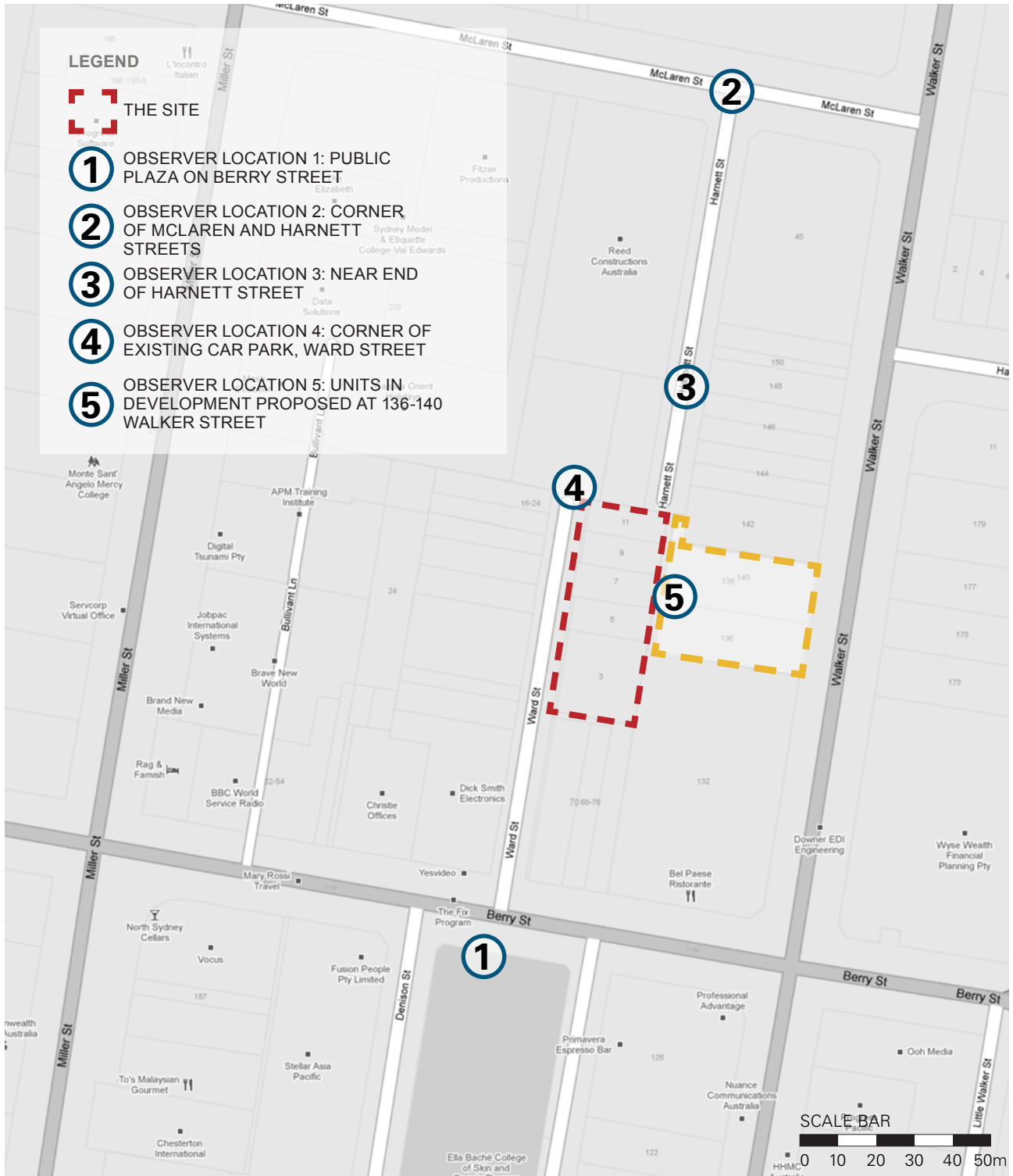


Figure 2.2.1: Map of proposed development site and surrounding locality, showing representative Observer Locations (source: Google Maps)

3 VISUAL IMPACT ASSESSMENT

3.1 Observer Location 1

Public Plaza on Berry Street

Approximate distance to centre of the site: 100m
Approximate distance to site boundary: 65m

Observer Location 1 is situated within the urban plaza on Berry Street (refer Keyplan). The plaza is located on the southern side of the street, which receives the greatest amount of sunlight, and is fronted by two cafes, one of which has an extensive outdoor seating area (refer Figure 3.1.1). Another cafe is located immediately adjacent to the plaza on Little Spring Street.

The plaza also has formal public seating, and two areas of turf and low walling suitable for informal seating. The plaza space can be expected to receive winter sunlight for much of the mid-morning period up until the middle of the day, during which time on fine days it can be expected to attract a substantial number of users.

The Berry Street footpath on the south side of the street can also be expected to receive substantial foot traffic during the morning work arrival and departure times, and lunchtime. This Observer Location can therefore be anticipated to have high user numbers during the above noted periods Monday to Friday, year round.

A narrow viewing window is available into the Site from this location, framed between the high walls of the Switzerland Insurance Building at 66 Berry Street and the existing substation (Refer Figure 3.1.2, 3.1.3 and 3.1.4). The viewing window occurs over a distance of approximately 15m from the pedestrian edge on the southern side of Berry Street. The viewing distance to the middle of the Site is approximately 100m.

A distinction needs to be made at this point with regard to when the finished substation would be viewed, as follows:

- » Shortly after completion, with the existing substation still in place
- » After demolition of the existing substation

- » After redevelopment of the existing substation site

Post-Completion Period

The proposed substation is programmed to be completed by April 2013, after which the existing substation would be decommissioned and then demolished. During much of this period, it can be anticipated that the new substation would be substantially obscured from Observer Location 1 by the existing substation.

It can reasonably be assumed that the extent of screening provided by the existing substation would be replicated in at least substantial measure once the site is redeveloped, i.e. it is unlikely that the site of the existing substation would be redeveloped by anything less than a three storey building (approximate equivalent height to the existing substation). On this basis, the visual impact of the proposed substation during the early post-completion period (prior to demolition of the existing substation) is undertaken in considerable detail.

For those observers viewing while walking, the Site would be visible when travelling east along Berry Street, although observers would need to turn their heads sharply to capture a view up Ward Street. The duration of observation can be anticipated to be very brief.



Figure 3.1.1: Panorama of public plaza on the southern side of Berry Street,

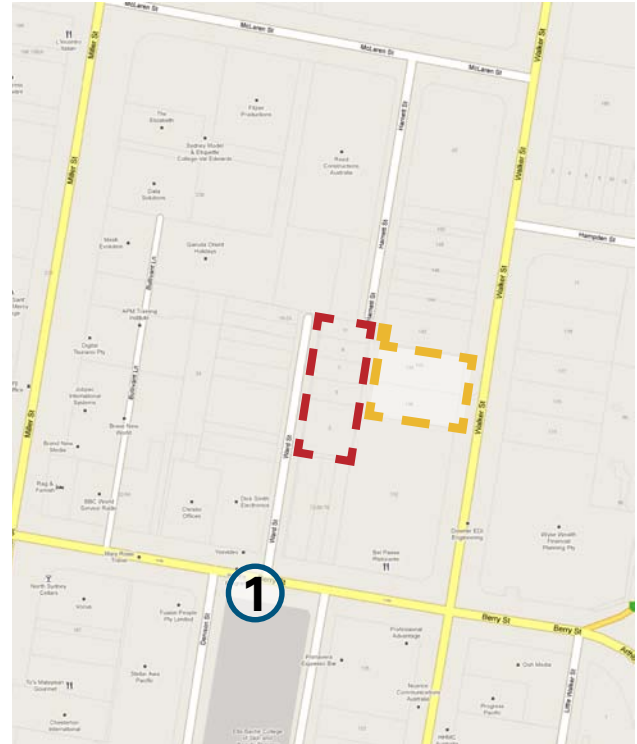


It is unlikely that the site would be viewed when travelling west, as pedestrians would need to look back over their shoulder to see the building.

For observers leaving the Denison Street exit from Greenwood Plaza, their gaze may be directed to a mid-ground view of the proposed building as they walk up Denison Street.

For those observers sitting within the plaza space, substantive views to the site would only be available from the middle-western portion of the plaza. The top of the proposed building may be visible above the existing substation from the plaza.

From all of the above noted locations, it is likely that most observers would focus their attention on their immediate surrounds, with pedestrians watching where they are going, and both pedestrians and seated individuals watching 'the passing parade' of other pedestrians and plaza users within their immediate vicinity. Additionally, due to regular heavy traffic along Berry Street, it is likely that people using the southern side of Berry Street would focus their attention within that immediate setting, rather than the adjoining traffic and across the road.



KEYPLAN

SCALE BAR

0 20 40 60 80 100m



with outdoor cafe area in background to left of frame (partially obscured by tree).



For pedestrians travelling east along the northern side of Berry Street, a brief glimpse of the proposed building would be available as they cross Ward Street, while looking left watching for approaching traffic from Ward Street.

Several hundred car park users can be anticipated to drive along Ward Street to and from Wilson's Car Park each business day, viewing the front of the proposed building as a whole facade when entering Ward Street, and then in close detail as they pass by it. It can be anticipated that for regular car park users passing the building, the new substation would quickly stop being a specific point of visual interest, and be perceived as part of the general streetscape.

The proposed substation building itself would provide a marked increase in the visual interest of Ward Street, given the dull and coloured, austere blank walls of the buildings currently fronting it. The proposed substation would read as a visually interesting, architecturally well articulated and potentially somewhat intriguing facade, with the architectural language of the building referencing an 'industrial' or 'utilities' usage, without the specific purpose of the building being clearly apparent. The use of the building would be able to be identified when viewed at close quarters, by means of a relatively small sign, announcing it as an electrical substation.

Post-Demolition Period

For the period between the demolition and redevelopment of the existing substation site, the proposed new substation would be highly visible when viewed from this Observer Location (refer Figure 3.1.6). During this period it is proposed that the now vacant site be turfed and fenced. At the time of writing, EnergyAustralia has not yet decided how or when the existing substation site would be redeveloped, so it is not possible to put a timeframe on how long it would remain undeveloped.

When viewed from this Observer Location, the building would provide a visually interesting composition of form, colour and materials, and would be setback approximately 45m from the footpath. The bulk and scale of the building would be commensurate with the surrounding built environment.

The building would not be visually prominent at night, as it would generally not be lit, with the exception of downlighting to two entry doors on Ward Street.



Figure 3.1.4: Panorama of Berry Street, including the Switzerland



Figure 3.1.2: Photo of view down Ward Street from observer location, Berry Street



Figure 3.1.3: Photomontage of view down Ward Street from observer location, Berry Street, post-demolition of the existing substation (Source: Kann Finch Group)



Insurance building, Ward Street, the existing substation and the People Telecom building.



Post-Redevelopment

As described above, it would seem unlikely that the site would be redeveloped such that it provided less screening of the proposed substation than that currently provided by the existing substation. Given the fact that the site would be adjoined by tall buildings to the north (proposed substation – approximately 25m high), east (People Telecom building – approximately 45m high, 12 storey), and west (Switzerland Insurance building – approximately 28m high, 7 storey), and would therefore be subject to heavy shading for much of the year, it would seem unlikely that Council would acquire it for use as a park.

Additionally, this scenario would also seem unlikely due to the value of the land and subsequent cost to Council of acquisition. A new building would seem to be the most likely outcome.

Any new building would be designed in accordance with local planning controls, and as such, can be anticipated to provide a substantial increase in built form aesthetics over that provided by the current substation.

Visual Impact Assessment

We would assess the visual impact of the proposed building from this observer location as being **low** for the following reasons:

- » even though this observer location is visited by large numbers of users, the proposed substation is not likely to be a highly visually prominent element of the view in the Post-Completion and Post-Redevelopment Periods, due to its location half way up a cul-de-sac, which runs perpendicular to the main flow of pedestrian and vehicular traffic on Berry Street, and generally requires pedestrians to sharply turn their heads to see it



Figure 3.1.5: Panorama of Berry Street showing existing substation

- » during the interim Post-Demolition Period, even though the building would be visually prominent from this observer location, it would be well setback from Berry Street, and provide a visually interesting composition of form, colour and materials, with bulk and scale commensurate with that of the surrounding built environment
- » it is likely that users of this observer location would be predominantly focused on 'the passing parade' of pedestrian and other user activity within their immediate vicinity, located on the sunlit side of the street, and within the plaza space opposite Ward Street

- » the proposed building has been architecturally well considered, and comprises a visually well articulated form, utilising an interesting palette of colours and materials, providing an increased level of architectural amenity to Ward Street over that currently existing when viewed during the Post-Construction and Post-Development Periods
- » the likely provision of a new building on the site of the existing substation, can be anticipated to provide a marked visual improvement to the local environs over the existing situation.



Figure 3.1.6: Photomontage from Berry Street, post completion of proposed substation and demolition of existing substation (Source: Kann Finch Group)

3.2 Observer Location 2

Corner of McLaren and Harnett Streets

Approximate distance to centre of the site: 120m
Approximate distance to site boundary: 105m

Observer Location 2 is located at the intersection of Harnett and McLaren Streets. Harnett Street acts as a vehicular access point, and in some cases primary building access point for dwellings fronting Walker Street (refer Figures 3.2.1 and 3.2.3). The observer location captures the view experienced by pedestrians walking along McLaren Street, and vehicle users, both local residents and users of a commercial building fronting McLaren Street, when looking down Harnett Street (refer Figure 3.2.2). The view comprises of a cul-de-sac bounded on the high (western) side by a large, monotone commercial building built up to the site boundary, and residential development on the low (eastern) side of the street, incorporating an informal avenue of trees, and the buildings set back some distance from the site boundary. User numbers along McLaren Street are anticipated to be very low when compared with Berry Street.

The view down Harnett Street currently provides limited visual interest (refer Figure 3.2.3) and is unlikely to attract significant local pedestrian usage, particularly given the fact that it is a cul-de-sac. The duration of viewing is also likely to be short given the above.

The northern end wall of the proposed development is viewed from a distance of approximately 100m and is seen as a middle ground view, given that it is substantially obscured by a large specimen of *Ficus benjamina*, located on the high side of the road between the commercial building and Wilson's Car Park.

The proposed substation building would provide a significant architectural feature and point of visual interest to the end of the street, comprising a well considered composition of form, scale, colour and materials. The visual scale of the building is commensurate with that of the residential units and commercial building fronting the Harnett Street and McLaren Street intersection

The building would not be visually prominent at night, as it would generally not be lit along this elevation.

Visual Impact Assessment

We would assess the visual impact of the proposed building from this observer location as being **low** for the following reasons:

- » the proposed development would be viewed by a relatively low number of observers, and generally over a short duration
- » the building would comprise a well considered composition of form, colour and materials when viewed from the north
- » the visual scale of the building would be commensurate with other relatively low commercial buildings within the locality, including the commercial building on the corner of Harnett and McLaren Streets, and that on the corner of Ward and Berry Streets (Switzerland Insurance building).



KEYPLAN





Figure 3.2.1: View down Harnett Street from McLaren Street



Figure 3.2.2: Photomontage of view down Harnett Street from McLaren Street with proposed substation (Source: Kann Finch Group)



Figure 3.2.3: Panorama from the top of Harnett Street looking south, showing residential housing and units to the left (east) and commercial building to the right (west)



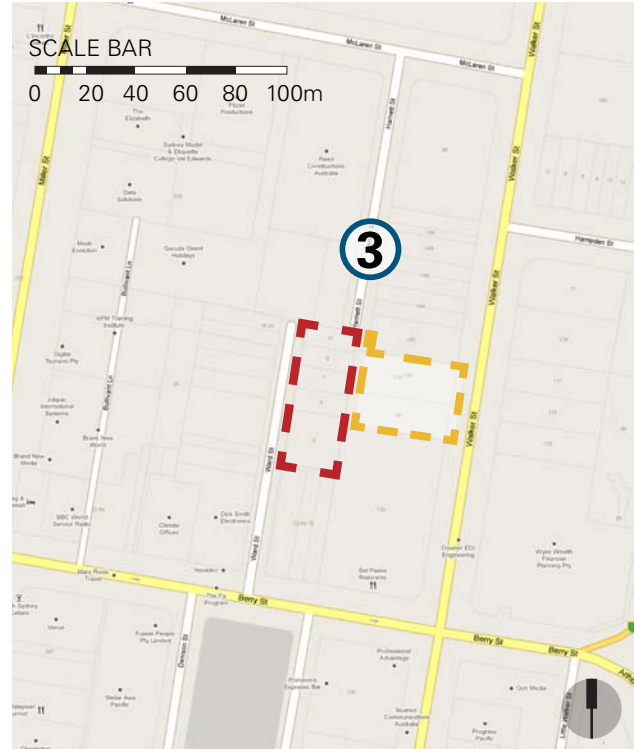
3.3 Observer Location 3

Middle of Harnett Street

Approximate distance to centre of the site: 60m
 Approximate distance to site boundary: 30m

Note: This location assumes the retention of the existing residential dwellings at 136 and 138 - 140 Walker Street.

Observer Location 3 is located approximately 30m from the northern facade of the proposed substation building. The observer location captures the view experienced by local residents living at the end of Harnett Street, most of whom appear to access their homes from the rear lane (refer Figure 3.3.1). The building would be viewed by residents both when driving into Harnett Street and recreating in their rear garden. (refer Figure 3.2.2).



KEYPLAN



Figure 3.3.1: Photo of view middle of Harnett Street



Figure 3.3.2: Photomontage of view middle of Harnett Street (Source: Kann Finch Group). The lower portion of the horizontal banded metal area is a roller door, the upper portion are louvres for ventilation.



Figure 3.3.3: View middle of Harnett Street showing the existing car park to the right (west, behind the shade cloth fence which contains construction sheds) and the residential dwellings to the left (east). Note the large tree overhanging the Site, which is located within the garden of 136 Walker Street.



Figure 3.3.4: Panorama of the back garden of 138-140 Walker Street, showing proximity to the Site (boundary fence covered with shade cloth)

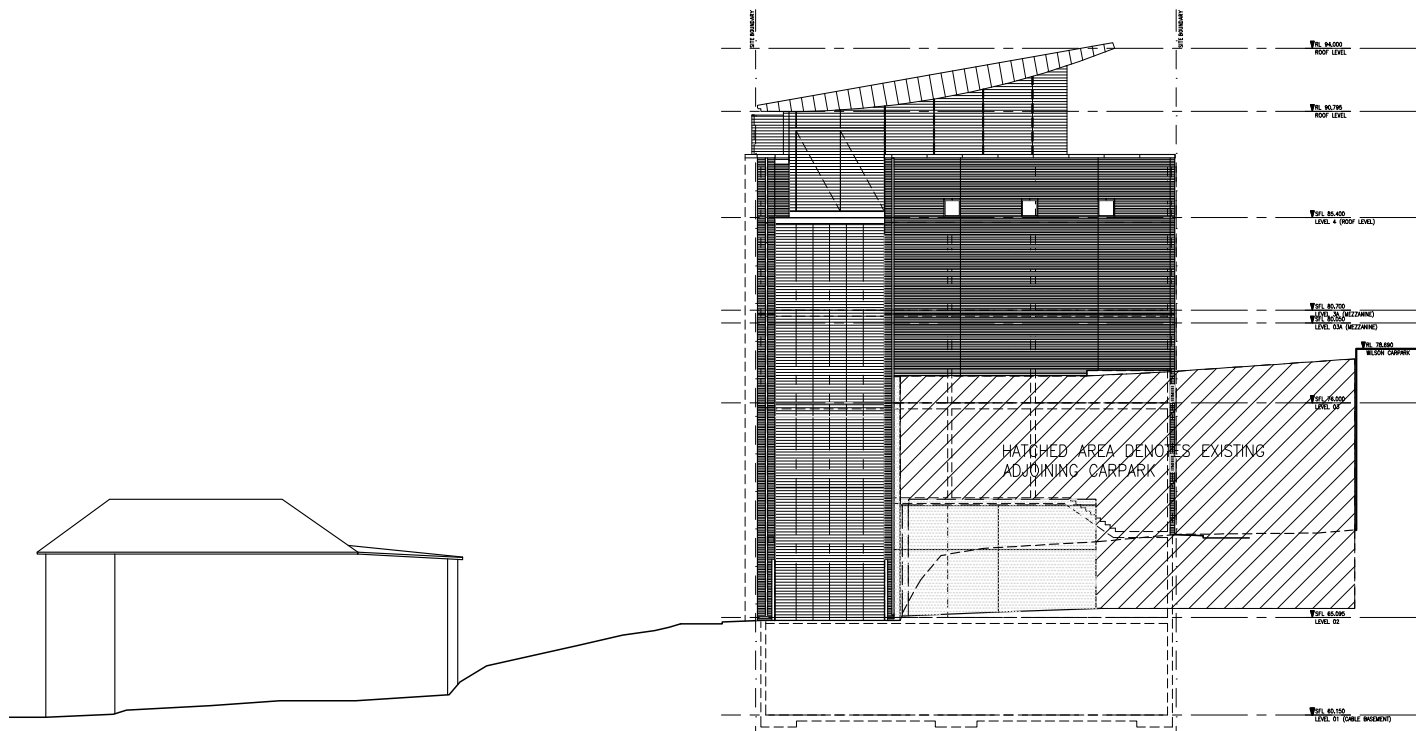



Figure 3.3.5: Elevation showing the relationship between number 136 Walker Street and the proposed substation (Source: Kann Finch Group, drawing number SD 58)





The northern facade of the proposed development comprises a well considered composition of form, colour and materials. The eastern (back) wall of the proposed development is flat with a simplified banding of coloured brickwork that is visually integrated with the more complex composition of the northern facade (refer Figure 1.1.4).

The rear wall and associated roof of the proposed substation would stand approximately 24 metres tall above the garden within the People Telecom site, and approximately 27 metres tall over the rear gardens of numbers 136-142 Walker Street (refer Figures 3.3.1, 3.3.3 and 3.3.4).

Screening Vegetation

The People Telecom site and many of the residences backing on to Harnett Street have substantial existing tree cover within their rear gardens, as shown in Figures 3.3.6 and 3.3.7, which would screen much of the view of the Site as follows:

- » People Telecom Gardens: One small Ginkgo tree within this garden particularly overhangs the Site (refer Figures 1.1.1 and 3.3.1), and two Cocos palms are set very close to the site boundary. All three trees would be removed to facilitate the set-up of scaffolding for the rear wall of the proposed substation. The removal of the Ginkgo in particular would contribute to further exposure of garden users to the rear wall of the proposed substation.
- » No. 136 Walker Street: This site backs directly onto the proposed substation. A medium sized Fig tree (Hills Weeping Fig) is located in the south-west corner of the rear garden.
- » No. 138-140 Walker Street: The southern half of the lot has substantial screening in place, primarily due to a tall specimen of Large-leaved Privet, which will be pruned to make way for scaffolding. The northern half of the lot has no substantial screening. The site backs onto the proposed substation.
- » No. 142 Walker Street: Insufficient vegetation to substantially screen the garden from the rear wall of the Site. The site all but backs onto the proposed substation, with the exception of a 2.5m access easement to the rear garden of No. 138-140 Walker Street.
- » No. 144 Walker Street: Dense tall vegetation that will substantially screen the rear garden from the proposed substation.
- » No. 146 Walker Street: Dense tall vegetation that will substantially screen the rear garden from the proposed substation.
- » No. 148 Walker Street: Insufficient vegetation to substantially screen the garden from the rear wall of the Site. However, the garden is set approximately 3m below the level of Harnett Street and would be screened from the Site by vegetation within numbers 144 and 146 Walker Street. Additionally, the residence is substantially distant from the Site.
- » No. 150 Walker Street: Insufficient vegetation to substantially screen the garden from the rear wall of the Site. However, the garden is set well below the level of Harnett Street and would be screened from the Site by vegetation within numbers 144 and 146 Walker Street. Additionally the residence is substantially distant from the Site.



Figure 3.3.6: Panorama of the rear gardens on Harnett Street. Photo taken from the roof of the adjacent car park

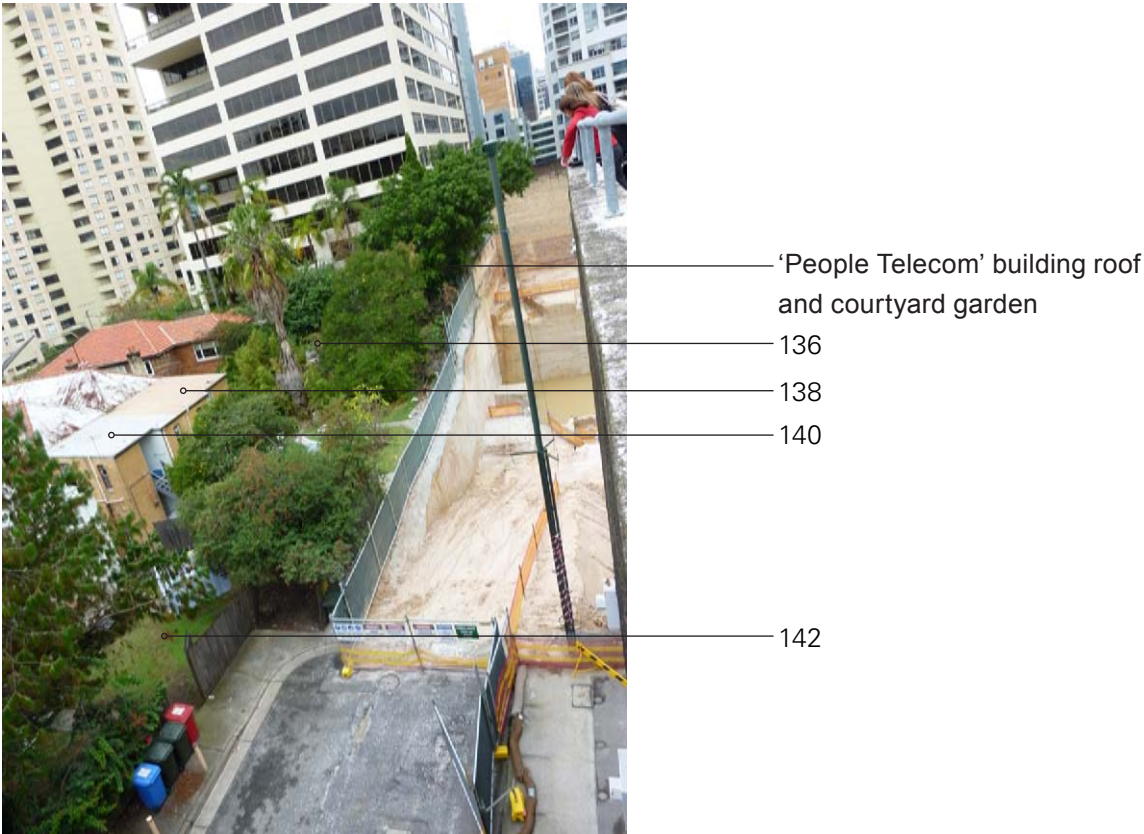


Figure 3.3.7: Extent of vegetation of the rear gardens on Harnett Street and the People Telecom site



Overshadowing

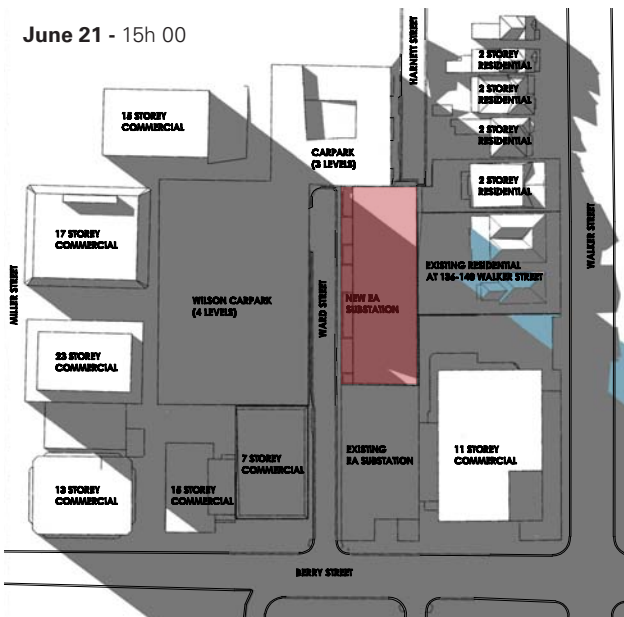
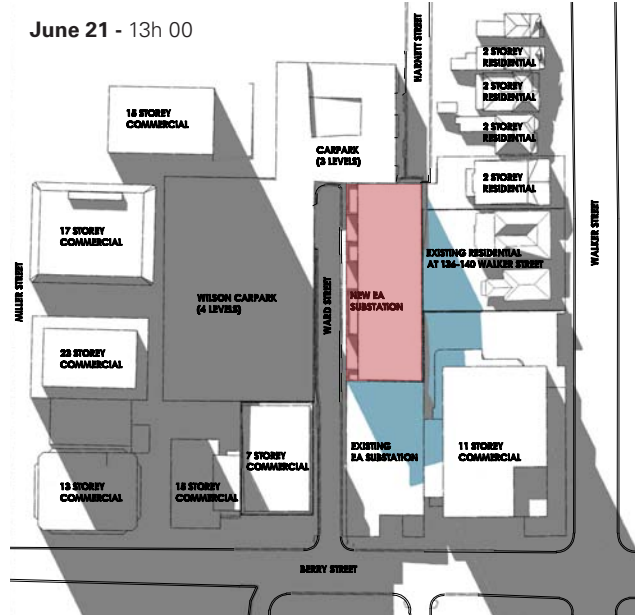
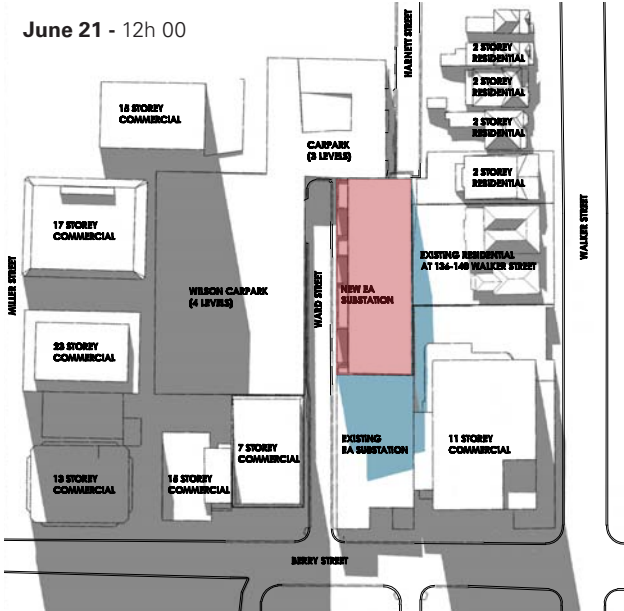
Overshadowing from the proposed substation would occur to rear gardens of 136 and 138-140 Walker Street as follows:

» **Winter Solstice** (refer Figure 3.3.8):

- **12.00 midday** - The proposed substation is starting to cast shade across the rear gardens
- **1.00pm** – Approximately 80% of the rear garden space of No.136 is in shadow, 30% of No. 138-140, and 40% of the People Telecom garden
- **2.00pm** – The entire rear garden of No.136 is in full shadow from the proposed substation, and nearly 100% of the rear garden in No.138-140 is in shadow. Note: Approximately 90% of the rear garden of No.138-140 would be in shadow by this time, as cast by the northern end of the Wilson Car Park, but the rear garden of No.136 would not otherwise be overshadowed by buildings. Approximately 80% of the People Telecom garden is overshadowed by the proposed development.
- **3.00pm** – The entire rear gardens of both No.'s 136 and 138-140 are in full shadow. (Note: Both rear gardens of No. 136, 138 and 140 would be in shadow by this time, as cast by the northern end of the Wilson Car Park, and a tall building on Miller Street). The People Telecom garden is completely overshadowed, with approximately 10% of that due to the proposed development.



Figure 3.3.8: Shadow diagrams for the Winter Solstice (Source:



LEGEND

- PROPOSED SUBSTATION
- SHADOWS CAST BY EXISTING CONDITIONS
- ADDITIONAL SHADOWS CAST BY PROPOSED NORTH SYDNEY SUBSTATION
- NOT TO SCALE

Kann Finch, Drawing number SD 57) Not to scale



» **Summer Solstice** (refer Figure 3.3.9):

Note: Times shown are Daylight Saving Time (DST), therefore hours shown are one hour ahead of Eastern Standard Time (EST)

- **12.00 midday** - No overshadowing of rear gardens
- **1.00pm** - No significant overshadowing of gardens
- **2.00pm** - Overshadowing to the rear garden of 136 Walker Street by approximately 40%, 50% to 138-140 Walker street and approximately 15% to the People Telecom garden
- **3.00pm** - Overshadowing to the garden of 136 Walker Street by approximately 90%, 100% to 138-140 Walker Street, 50% overshadowing to the garden of No. 142, and approximately 30% overshadowing to the People Telecom garden

The number of users for this observer location is anticipated to be relatively low, comprising of five freestanding and two multi-unit residential dwellings as listed above. However, as discussed above, the extent of residences that are likely to be impacted by the proposed development from their rear garden spaces is effectively limited to No.'s 136 to 142 Walker Street, comprising one freestanding and two multi-unit residential dwellings, all of which adjoin the Site.

The duration of observation from these spaces may periodically be relatively high when residents recreate or otherwise use their rear gardens, e.g. hanging out the washing.

The number of observers and duration of observation for residents driving towards the end of the street is anticipated to be relatively low. No overlooking of the rear yards would take place from the proposed substation as it has no windows.

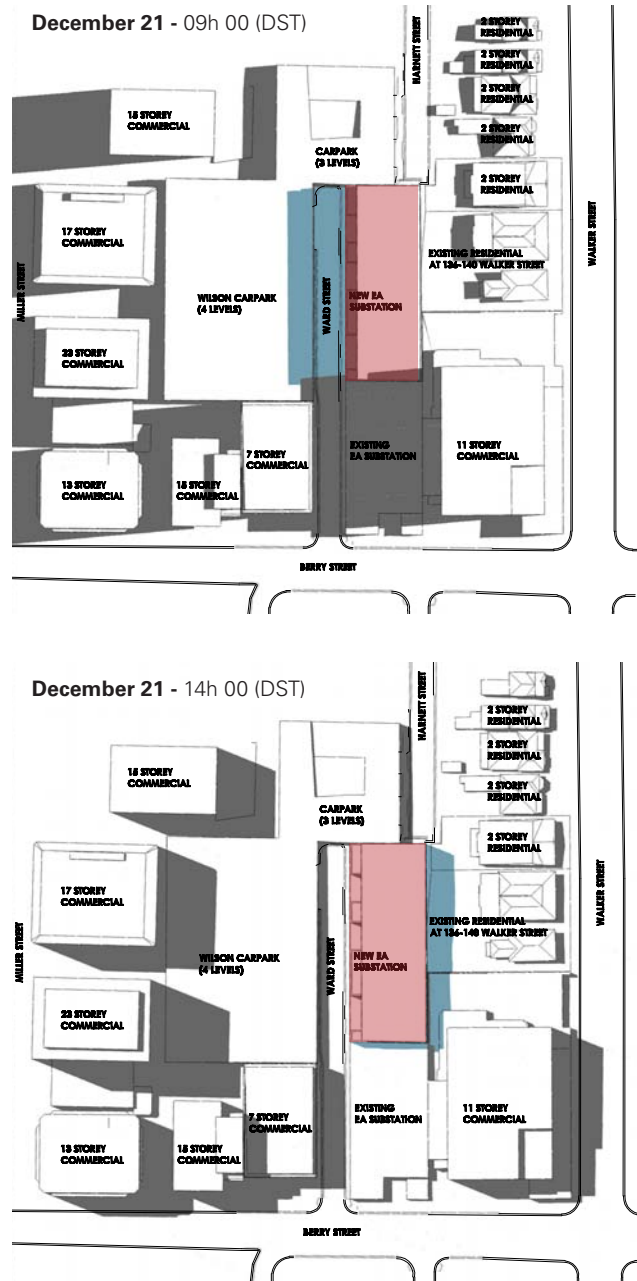
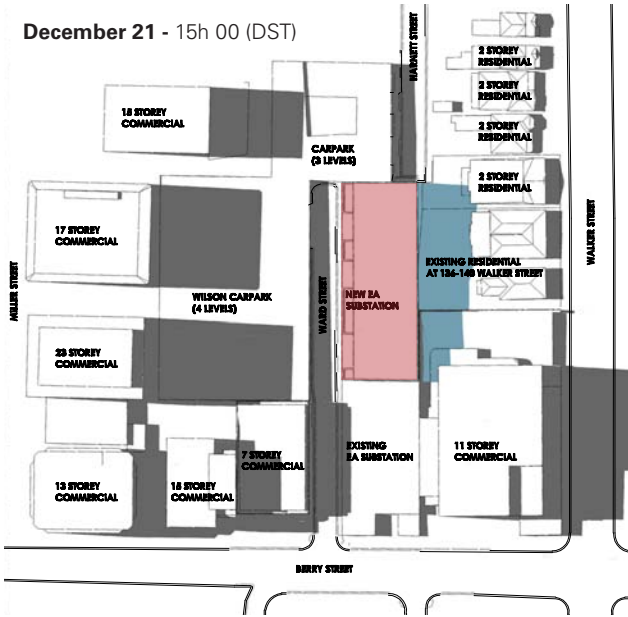
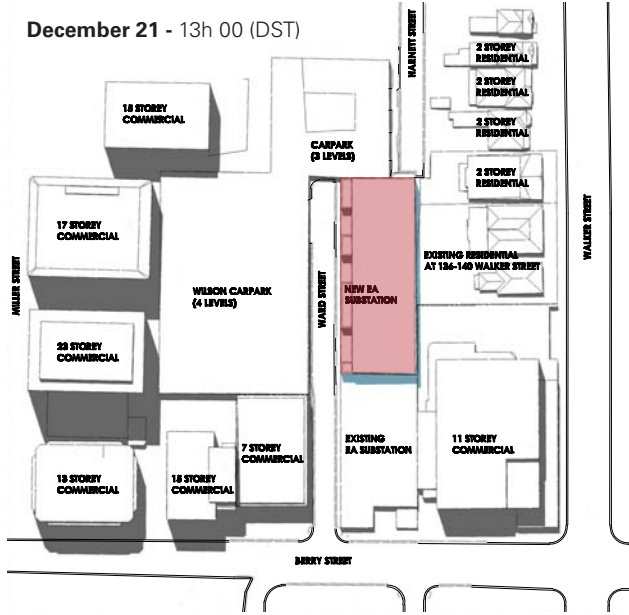
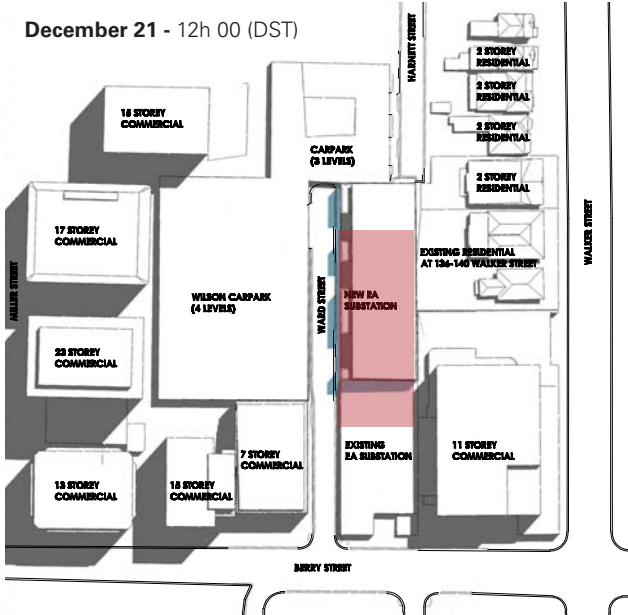


Figure 3.3.9: Shadow diagrams for the Summer Solstice (Source:



LEGEND

- PROPOSED SUBSTATION
- SHADOWS CAST BY EXISTING CONDITIONS
- ADDITIONAL SHADOWS CAST BY PROPOSED NORTH SYDNEY SUBSTATION
- NOT TO SCALE

Kann Finch Group, Drawing number SD71) Not to scale





Visual Impact Assessment

We would assess the visual impact of the proposed building from this observer location as being **Moderate to High** for the following reasons:

- » the extent of residences that would be likely to be adversely impacted by the proposed development is limited to No.'s 136 to 142 Walker Street, comprising one freestanding and two multi-unit residential dwellings. However, for these residents, the visual impact of the proposed substation would be significant, with the combination of looking out onto an approximately 27 metre high wall located on the site boundary, and overshadowing impacts.
- » the People Telecom garden space is substantially overshadowed from 1.00pm, and almost completely overshadowed by 2.00pm in the winter months, almost completely from the proposed development.
- » mitigating issues are that:
 - the most affected gardens (136 and 138-140 and the People Telecom garden) receive northern light up until midday
 - the visual scale of the proposed substation is commensurate with other relatively low commercial buildings within the locality, including the commercial building on the corner of Harnett and McLaren Streets, and the Switzerland Insurance building on the corner of Ward and Berry Streets
 - the proposed development maintains privacy for nearby residents in that it has no windows
 - the proposed development provides a well considered architectural composition of form, colour and materials, when viewing towards the northern facade, which is the main view for most of the residences
 - the residences would be anticipated to generate a low number of observers
 - the residence No.'s 136 and 138-140 retain sunlight in their rear gardens at the summer solstice up until 3.00pm.



Mitigation Measures

There is potential to mitigate the above impacts through implementation of the following measures:

- » Planting to Rear Gardens: Planting of a select suite of native tree and shrub species to the rear garden spaces of No.'s 136 to 142 Walker Street has the potential to substantially reduce the visual impact of the proposed substation from these dwellings, through reduction in the seen area of the wall, and provision of an attractive detailed focal point within the rear garden space.
- » People Telecom Garden: Provide replacement canopy cover of suitably sized native plants within the garden suited to the increased level of overshadowing from the Site.

The above measures could be provided in consultation with the property owners and include an initial plant establishment period of 13 weeks, after which time the property owners would be responsible for the works. We would assess this approach as being a feasible, effective and reliable approach to mitigating the above designated visual impact.

Residual Impacts

Implementation of the planting to the rear gardens of No.'s 136 to 142 Walker Street would over time provide a significant level of mitigation of the above designated visual impacts. If these measures were to be implemented, we would revise our assessment of visual impact from **Moderate to High**, to **Moderate**.