

Attachment B10(b)

**Visual Impact Assessment Part 2 –
Waterloo Estate (South) – Land and
Housing Corporation**

6 Visual Impact Analysis

6.1 Viewpoint Analysis

Views towards Waterloo South have been investigated via conventional means including use of GIS data to determine the visual catchment of the site – the area from which the site when developed as proposed would be likely to be visible – and then identification of viewing locations within the identified catchment that would provide a representative sample of views towards the developed site. Representative view locations for assessment of the Waterloo South proposal have been identified by:

- > Determination of the visual catchment of the site and likely critical view locations within the catchment relevant to Waterloo South development;
- > A site and area inspection to test the critical view locations and identify further local and regional viewpoints that should be investigated;
- > Liaison with the Land and Housing Corporation (LAHC) and other stakeholders (notably City of Sydney and Department of Planning, Industry and Environment) to agree on view locations for detailed investigation;
- > Further investigations to agree on which of the critical view locations should be selected as points for production of photomontage views illustrating the potential built form on the developed site;
- > Preparation of photomontages using NSW Land and Environment Court accepted best practice in electronic simulation of views of development proposals. The assessment has also relied on detailed Computer Generated Images (CGI's) prepared on behalf of Turner Studio, the architects responsible for the Waterloo South Concept Proposal.

The analysis of the potential visual impacts of the Waterloo South proposal has also been carried out along conventional lines for visual assessment of built developments and has included qualitative assessment of:

- > The existing visual environment (as viewed from the agreed critical viewing points);
- > The capacity of the visual environment to absorb change (as viewed from the agreed critical viewing points);
- > The amount of change that would be experienced as a result of the implementation of the proposal (carried out with the aid of survey accurate photomontages prepared from agreed critical viewing points);
- > The visual quality of the changed visual environment in comparison to the environment prior to development.

The above described exercise has been carried out for the following categories of views:

- > Distant views – significant viewpoints from 1km and up to 2kms from the Waterloo South boundary;
- > Medium distant views – streets and open spaces at distances between 500m and 1km from the Waterloo South boundary;
- > Close views – streets within and adjacent to the Waterloo South.

Viewpoints for analysis of the likely impacts of the proposal on its visual environment have been selected in consultation with LAHC, City of Sydney and Department of Planning, Industry and Environment. The selected viewpoints are illustrated in **Figure 6-1**.

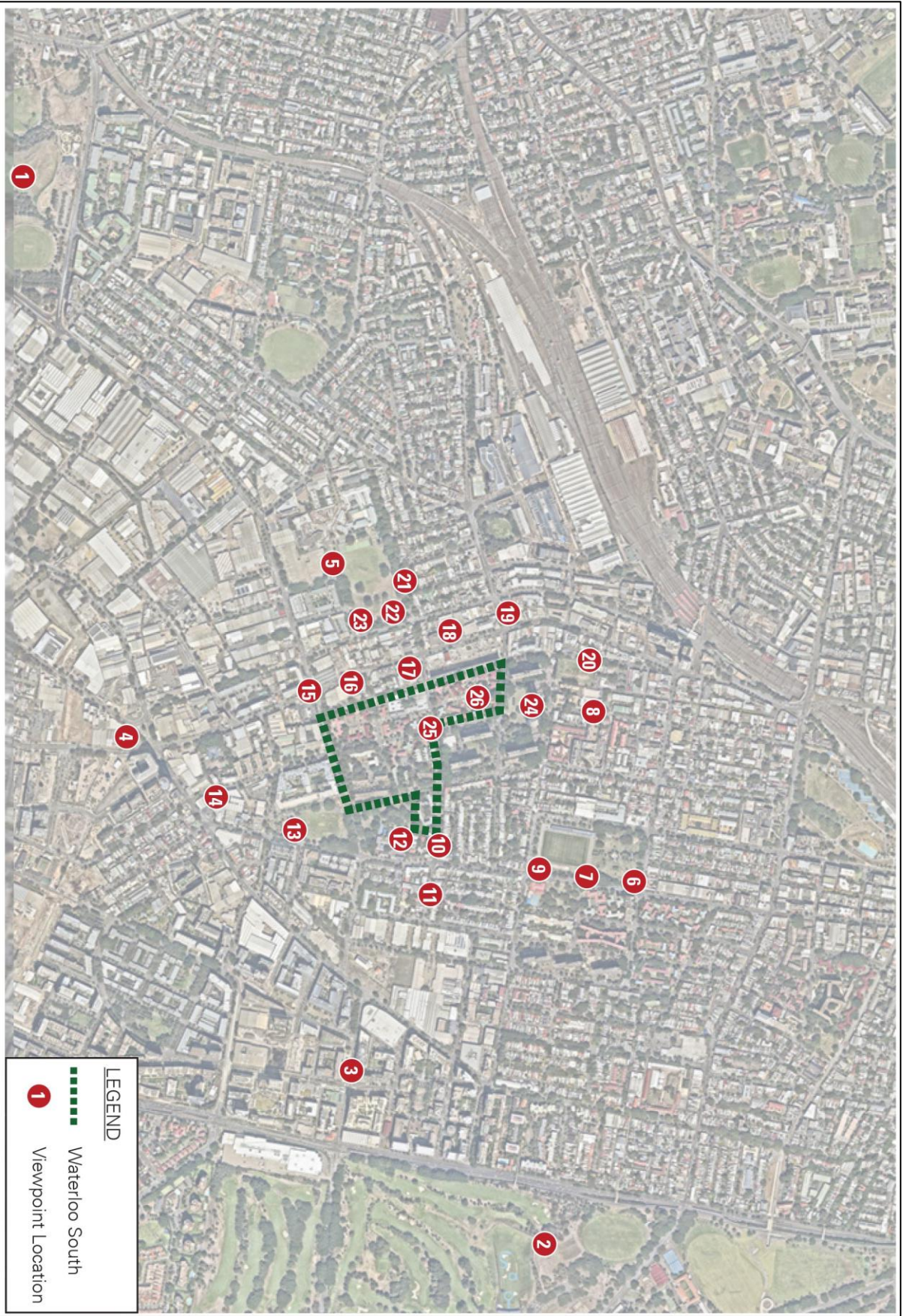


Figure 6-1 Waterloo South Critical Viewpoint Map
 Source: Cardno

Critical Viewpoints

Long distant views (over distances greater than 1.0kms)	
1	Sydney Park, hill-top facing north-east
2	Moore Park, facing west
Middle distant views (distances between 250m to 1km)	
3	Lachlan St and Gadigal Ave facing west
4	Green Square Plaza facing north
5	Alexandria Park, south-west corner facing north-east
Close views (Close to the Precinct then 250m)	
6	Redfern Park, north-east corner facing south-west
7	Redfern Park, north-east corner facing south-west
8	George St between Albert St and Phillip St facing south
9	Redfern Oval, south-east corner facing south-west
10	Wellington St and Gibson St facing west
11	Wellington St and Beaumont St facing west
12	Kellick St and Gibson St facing west
13	Waterloo Oval, south-east corner facing north-east
14	George St between Allen St and Bourke St facing north
15	Botany Rd and McEvoy St facing north-east
16	John St between Botany Rd and Cope St facing east

Critical Viewpoints

Close views (Close to the Precinct then 250m)	
17	Wellington St between Botany Rd and Cope St facing east
18	Botany Rd between Raglan St and Wellington St facing south-east
19	Botany Rd and McEvoy St facing south-east
20	NCIE Oval, north-west corner facing south
21	Garden St and Buckland St facing east
22	Alexandria Park, north-east corner facing east
23	Alexandria Park south-east corner facing north-east
24	Near existing apartments at Phillip St, west of Pitt St, facing south
Internal views (Views from within the Estate)	
25	George St and Wellington St facing south
26	Cooper St, near Raglan St, facing south

6.2 Long distant views (over distances greater than 1.0km)

6.2.1 Visual Environment

In the highly developed regional environment that incorporates the Waterloo Metro Quarter and the Waterloo Estate, opportunities for panoramic long views towards the sites are limited. The only open distant view from a public place that incorporates Waterloo South is from the hilltop at Sydney Park. Given that the Sydney Park hilltop provides a relatively rare publicly available 360° panorama that includes the Sydney CBD, this view is considered to be critically important at a regional level. To a lesser extent, views towards Waterloo South are also available from a viewing point within Moore Park known as Mount Steele. This regional viewpoint adjacent to the Moore Park Golf Course driving range is a recognised lookout with expansive north westerly views towards the Sydney CBD skyline. The view from Mount Steele has been consciously directed towards the CBD by tree planting on the north eastern and south western side of the hill, leaving a narrow view corridor directly orientated towards the CBD.

The view from the Moore Park Hill, known as Mount Steele, is of equal importance as it includes a direct view of the Sydney CBD skyline. However, the orientation of views from this location is directly towards the Sydney CBD. Views towards the Waterloo Precinct are secondary. The visibility of the developed Waterloo South from this location will be of importance only with respect to the level at which it detracts from this primary view to the CBD.

6.2.2 Capacity to absorb change

Waterloo South has a high capacity to absorb change with respect to scenic quality. In this regard, it is useful to include a brief discussion of other major urban renewal programs planned in the context of the subject site. Within the corridor extending west from the Sydney CBD to the Sydney International Airport the following urban renewal programs are either underway or in planning stages:

- > The Eveleigh Rail Corridor / Australian Technology Park;
- > The Waterloo Metro Quarter and Waterloo Estate; and
- > Green Square.



Figure 6-2 Green Square Town Centre massing plan (Green Square Town Centre Public Domain Strategy, City of Sydney, 2013)

In concert with the Sydney CBD, these three renewal projects will change the scenic environment of inner western Sydney by essentially creating three new nodes of high rise development. **Figure 6-3** provides a diagrammatic representation of the potential change to the skyline that could result from the implementation of these projects. Consistent with the growth of this part of Sydney as planned in the Regional Plan and the Eastern City District Plan, the nodes will contribute to a new cityscape characterised by four skyline clusters. If the new nodes are designed in keeping with general principles of design excellence they will create points of interest that will function as visual markers in the cityscape. In this regard, they will contribute positively to the scenic landscape of this part of the Sydney as it develops into the global city envisaged by the Sydney Regional Plan.

In the context of these city scale urban renewal programs, there is an expectation of significant change to the visual environment in the locality of the Waterloo Precinct and in this context, distant views of Waterloo south have a high capacity to absorb change.

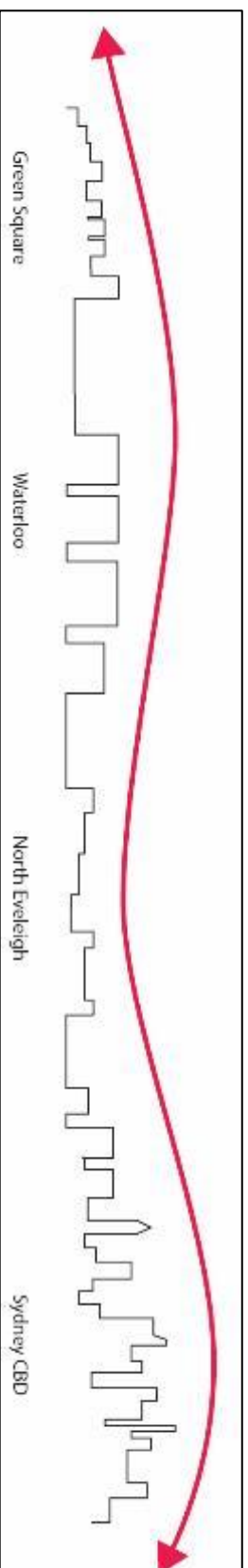


Figure 6-3 Indicative regional skyline (including potential local urban renewal projects with the existing skyline profile of Waterloo)
Source: Cardno

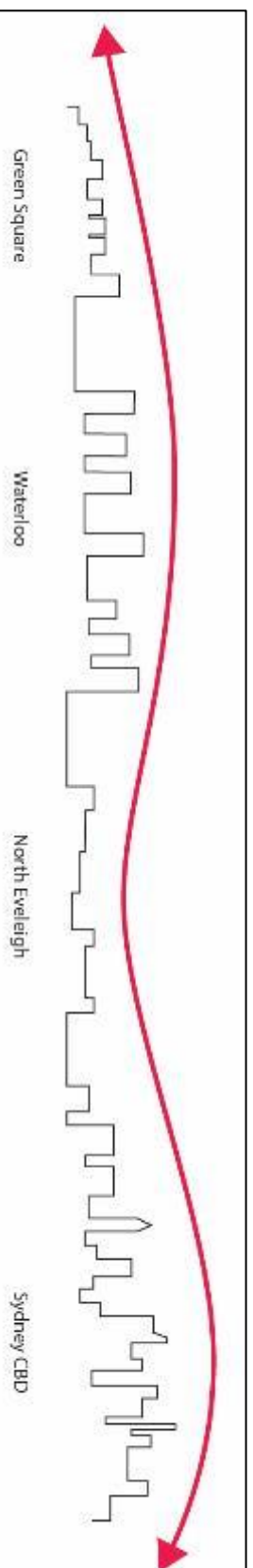


Figure 6-4 Indicative regional skyline (including potential local urban renewal projects with the potential skyline profile of Waterloo after redevelopment)
Source: Cardno

6.2.3 Amount of change resulting from the proposal

Sydney Park (Viewpoint 1)

In the view towards the Waterloo Precinct from the Sydney Park hilltop, the existing taller buildings located at Waterloo North and Waterloo Central are distinctive and prominent elements in the landscape. The building group, including the taller buildings and other large building blocks, in combination with other residential blocks of similar form off the site, result in an almost continuous line of buildings as a prominent skyline element in this view. **Figure 6-5** provides a diagrammatic illustration of this existing building form. The uniformity and lack of relief of this built element is considered to be a negative element in this view.

The view also illustrates the critical role played by the mature trees on and adjacent to the Study Area as elements that mitigate the impacts of built form in regional views such as this.

The montage from Sydney Park (Viewpoint 1) indicates that post development of the Metro Quarter and Waterloo South, the existing building group on the site would be replaced by a new urban skyline composed of a group of well-articulated buildings comprising tall and mid-level towers in a rhythmic arrangement consistent with contemporary city planning. **Figure 6-6** provides a diagrammatic representation of how the general skyline profile of the developed Waterloo South would change in comparison to its existing presentation. **Figure 6-4** provides an illustration of how the developed Waterloo South might present in the context of the other proposed urban renewal programs in the locality. The montage also illustrates that the towers would be well separated in the view and that open sky would remain a major component of the view. Forest scale trees within Alexandria Park and on the western side of the Precinct read as a continuous bank of foreground vegetation which softens the impact of the building group behind and, as indicated by the montage, would also screen lower level development within

the developed Estate. In the context of this highly built component of the very broad and expansive view available from the Sydney Park hill, Waterloo South and Metro Quarter would be an acceptable change to this view.

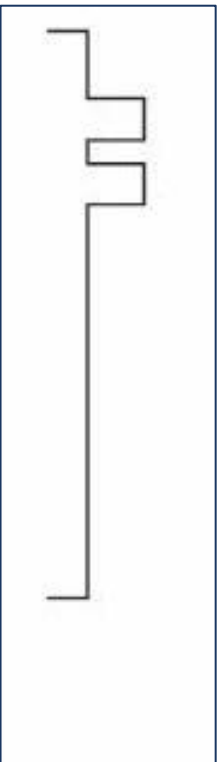


Figure 6-5 Skyline from Sydney Park (Existing)

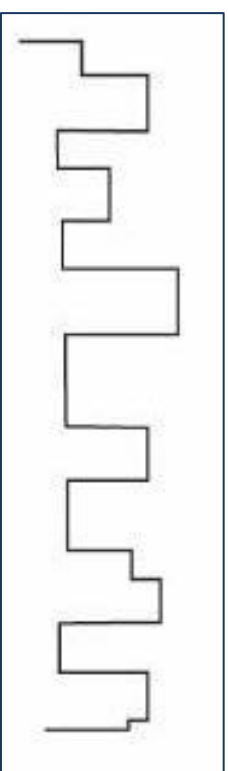


Figure 6-6 Skyline from Sydney Park (Proposed)

Moore Park (Viewpoint 2)

The view from the Moore Park hilltop (Mount Steele) is orientated by design in a Nor-Nor Westerly direction to provide a direct and carefully framed view over Moore Park Oval to the Sydney CBD. Views on either side of this designed view corridor are screened by tall trees within the boundaries of Moore Park. In this regard, the visibility of new or existing development above the tree line on either side of the view corridor would potentially impact on this viewing location in that it would detract from the significance of the CBD as the designed focal point of views from Mount Steele.

The montage at **Figure 6-8** indicates that the developed site would only be partially visible above the existing treeline on the south western slope of the Mount Steele lookout. This level of visibility of the developed Waterloo South would not detract from the quality of the principle view of the CBD and the impact of the development on Mount Steele would be acceptable.

6.2.4 Summary

In summary, the changes that the proposal would generate in distant views are consistent with expectations of how the visual environment of this part of Sydney is likely to change due to planned development in the medium term. The skyline profile created by the development is considered to be an improvement on the existing profile in distant views and an appropriate development form for this land parcel in its context. The impact of the development on distant views is considered to be acceptable.



Figure 6-7 Viewpoint 1 – Sydney Park, hilltop (current view).
Source: *Virtual Ideas*



Figure 6-8 Viewpoint 1 – Sydney Park, hilltop (photomontage) – Metro Quarter built form toned blue
Source: *Virtual Ideas*



Figure 6-9 Viewpoint 2 – Mount Steele, Moore Park (current view looking south west in the direction of the Waterloo Estate)
Source: *Virtual Ideas*



Figure 6-10 Viewpoint 2 – Mount Steele, Moore Park (photomontage looking south west in the direction of the Waterloo Estate)
Source: *Virtual Ideas*

6.3 Middle distant views (over distances between 250m and 1.0km)

6.3.1 Visual environment

Streets and open spaces at medium distances from the Estate site vary in character. Land to the north of the Estate includes medium to high density residential and mixed use development in Redfern, the railway lands and Prince Alfred Park. The Redfern town centre is in a state of transition from medium to high density with significant high rise development either in place or planned at the Station and in the Penulwuy aboriginal precinct. To the east, traditional terrace housing occurs in a precinct bonded by Phillip, Bourke and Young Streets, adjoined by a high rise social housing precinct extending west of Young Street to Elizabeth Street. Land to the south and west of the Estate includes pockets of traditional medium density residential development and transitioning warehousing. This area also supports major urban renewal projects including the Australian Technology Park and Green Square.



Figure 6-11 Redfern Town Centre



Figure 6-12 Green Square



Figure 6-13 Australian Technology Park

6.3.2 Capacity to absorb change

The land at medium distances from the Estate is subject to progressive transition from light industrial and warehousing uses to high density residential and mixed use urban forms. This progression will result in significant change in its visual character in the short to medium term. The traditional medium density precincts remaining in the area are protected by conservation controls and they will provide a low scale fine grain character. Retention and protection of the visual integrity of these Conservation Areas will be critical to the development of the locality as a contemporary mixed use inner city living and working environment.

Given that the locality will inevitably change in visual character as a result of major planned and progressing urban renewal, our opinion is that it has a high capacity to absorb change. The proposed redevelopment of the Precinct will be consistent with this planned change and will contribute to the planned urban renewal of the locality.

6.3.3 Amount of Change resulting from the proposal

From middle distant locations, the developed site will potentially be visible from streets with uninterrupted axial views towards Waterloo South. In summary, these include:

- > The north – south streets in the traditional residential precinct in Redfern, south of Cleveland Street;



Figure 6-14 Warehouses

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- > East – west streets to the east of the Precinct, including notably Phillip, Lachlan and McEvoy Streets;
 - > East – west streets to the west of the Precinct, including Henderson Road, Buckland Street and McEvoy Street;
 - > North and north-east trending streets to the south of the Precinct including Botany Road and the residential precinct to the south east of Bourke Street adjacent to Green Square.

To test the impacts of the proposal on middle distant views all of these streets have been visited and photomontages have been prepared from two representative locations. Impacts on these views are discussed below.

Middle distant views from north of the site would be similar to views from closer locations south of Redfern Street (viewpoints 8 and 20). Impacts on these views are discussed in Section 6.4.3.1 and they have been found to be variable. However, impacts of the developed Precinct on these views would be mitigated by distance from the Precinct and topography. Redfern Street runs along an east – west ridgeline so that views to the Estate from north of Redfern Street are in an uphill direction. Street vegetation and existing buildings will also mitigate the visibility of the developed site from these locations.

Typical middle distant views from the south of the site can be analysed with reference to the photomontage prepared from the Green Square rail plaza (Viewpoint 4). From this vicinity the developed site will be visible as a new urban skyline comprising well separated towers above a foreground of existing built form and vegetation. The level of visibility of the development will be contingent on the direction of the view but generally there will be ample separation and significant visibility of open sky between the built towers.

Middle distant views from the east have been tested via a photomontage prepared from Lachlan Street near the corner of Gadigal Avenue (Viewpoint 3). This montage illustrates that the new urban skyline will become a dominant component of these views, particularly where direct axial views to the Estate are available. The success of the development as a new element in these views will be contingent on following principles of design excellence in the design of individual buildings. The montage again illustrates the importance of existing foreground vegetation as a softening element in views towards the Waterloo Precinct.

From west of the Precinct, middle distant views have been assessed with reference to closer viewpoints at 5 & 21. Generally, the developed site will be intermittently visible from middle distant locations to the west.



Figure 6-15 Henderson Road, Erskineville



Figure 6-16 Buckland Street, Alexandria

Typical view on Henderson Rd, Erskineville (**Figure 6-15**) at the corner of Alexander St looking east. The developed site would appear as a new horizon line substantially softened by existing trees on either side of the street and at the end of the street. With high quality design, the developed site is likely to contribute positively to the quality of this view by creating an architecturally interesting focal point.

Typical view on Buckland Street, Alexandria (**Figure 6-16**) looking east. The developed site would be intermittently visible above the houses on the left (northern) side of the road but would be heavily screened by the existing street trees in the summer months. It would be more visible in winter when the trees would be bare but our opinion is that the change would not impact unacceptably on the views from this part of Alexandria.



Figure 6-17 McEvoy Street

View from McEvoy St to the south east of the Waterloo Precinct near corner of Elizabeth St (**Figure 6-17**). The developed site will appear as a new built horizon above the existing foreground vegetation in the north west (right hand sector) of this view. Views from this location will be similar to the view from Lachlan Street illustrated in Montage 21.



Figure 6-18 Green Square

Typical view in the direction of the Precinct from residential streets to the south, adjacent to Green Square (**Figure 6-18**). Views from this locality will be similar to the view from Green Square Plaza illustrated in Montage 4.



Figure 6-19 Viewpoint 3 – Lachlan St and Gadigal Ave facing west (current view)
Source: *Virtual Ideas*



Figure 6-20 Viewpoint 3 – Lachlan St and Gadigal Ave facing west (photomontage)
Source: *Virtual Ideas*



Figure 6-21 Viewpoint 4 – Green Square Plaza facing north (current view)
Source: Virtual Ideas



Figure 6-22 Viewpoint 4 – Green Square Plaza facing north (photomontage)
Source: Virtual Ideas

6.4 Close Views (closer than 250m from the Estate boundary)

6.4.1 Visual environment

Views towards the Precinct from the largely medium density suburban environments within 250m of the Precinct generally include the existing Waterloo tall buildings and residential blocks as prominent visual elements.

Substantial parcels of open space in close proximity to the Waterloo Precinct include:

- > *Redfern Oval and Park;*
- > *Waterloo Park (north and south); and*
- > *Alexandria Park.*

These generally well designed and managed parcels of open space provide visual relief and contrast in the otherwise densely developed environment. They are critical to the visual amenity and character of the region.

6.4.2 Capacity to absorb change

Due principally to the dominance of the existing large scale built form within the Waterloo Precinct, views from locations within 250m of the Estate boundary are considered to have a high capacity to absorb change. Specifically, in views from the north-east (Viewpoints 7 & 9), the existing Waterloo Precinct built form dominates the skyline as an almost continuous wall. In views from the direct north (Viewpoints 8 & 20) the existing towers in the northern part of the Estate and / or the tall block form buildings are prominent elements in the existing view. From the south (Viewpoints 13) the Waterloo built form is less visible largely due to the screening properties of the local topography and existing trees within the southern sector of the Waterloo Precinct. From the west (Viewpoints 5 and 21), the taller buildings within The Estate are isolated but significant skyline elements appear above a foreground of large trees. Built form in the northern part of Waterloo is dominant in these views and forms a precedent for the appearance of additional taller buildings in the view.

The Alexandria Park Heritage Conservation Area is located near to the western edge of the Precinct (see **Figure 7-1**). As an urban form, the area is comprised of a mosaic of traditional terrace housing on a grid street pattern and parklands (principally Alexandria Park). Large forest scale trees constitute a further significant element in the landscape. Views out of and into the Conservation Area are contained by this structure of dense housing and mature trees so that the area has a high capacity to absorb change in its surroundings. Specifically, views in the direction of the Metro Precinct are substantially screened by these elements.

6.4.3 Amount of change resulting from the proposal

Change to the visual environment in these views was tested via montages from each of the above described viewpoints.

6.4.3.1 Views from the north (viewpoints 6, 7, 8, 9, 20 & 24)

The photomontages prepared from these viewpoints illustrate that the developed site will vary substantially in its level of visibility from close locations to the north of the Precinct. Views towards the Precinct from Redfern Park (viewpoints 6, 7 & 9) are from the south west. The montages illustrate that the developed Waterloo South Precinct will read as a dramatic new skyline in these views. In views from the northern part of the Park (viewpoint 6), the existing development on the Estate is largely screened by existing tree stock within the Park boundary. The montage from this viewpoint illustrates that the new urban skyline in the developed Waterloo South Precinct will be softened and complemented by these trees resulting in a dramatic composition of built form and landscape.

Further to the north within Redfern Park (viewpoints 7 & 9) the existing view to the Precinct is dominated by the continuous wall of the long buildings located on the northern portion of the Estate. Montages from 7 & 9 illustrate that the Waterloo South Precinct will read as a new skyline element above the park vegetation and

housing along its southern boundary. The view 9 montage indicates that at the southern end of the park, the majority of the newly developed skyline will be screened by existing vegetation and built form. Our opinion is that, contingent on achieving high quality design, the developed site will improve the quality of views from this locality.

Close views to the Precinct from directly north of the Waterloo Precinct (viewpoints 8 & 20) will be moderately changed as a result of the Waterloo South development. Generally, however, these views will remain dominated by the existing towers and block buildings within the northern part of the Waterloo Estate and the new buildings in the Waterloo Metro Precinct. Substantial amounts of sky will remain in the views and the new building masses will generally be separated with sky appearing between the forms. The resultant built form would be well articulated and, if well designed, would be a positive contribution to the quality of existing views from these locations.



Figure 6-23 Viewpoint 6 – Redfern Park, north eastern edge (current view)
Source: *Virtual Ideas*



Figure 6-24 Viewpoint 6 – Redfern Park, north eastern edge (photomontage)
Source: *Virtual Ideas*



Figure 6-25 Viewpoint 7 – Redfern Oval, adjacent to north eastern edge of oval (current view)
Source: *Virtual Ideas*

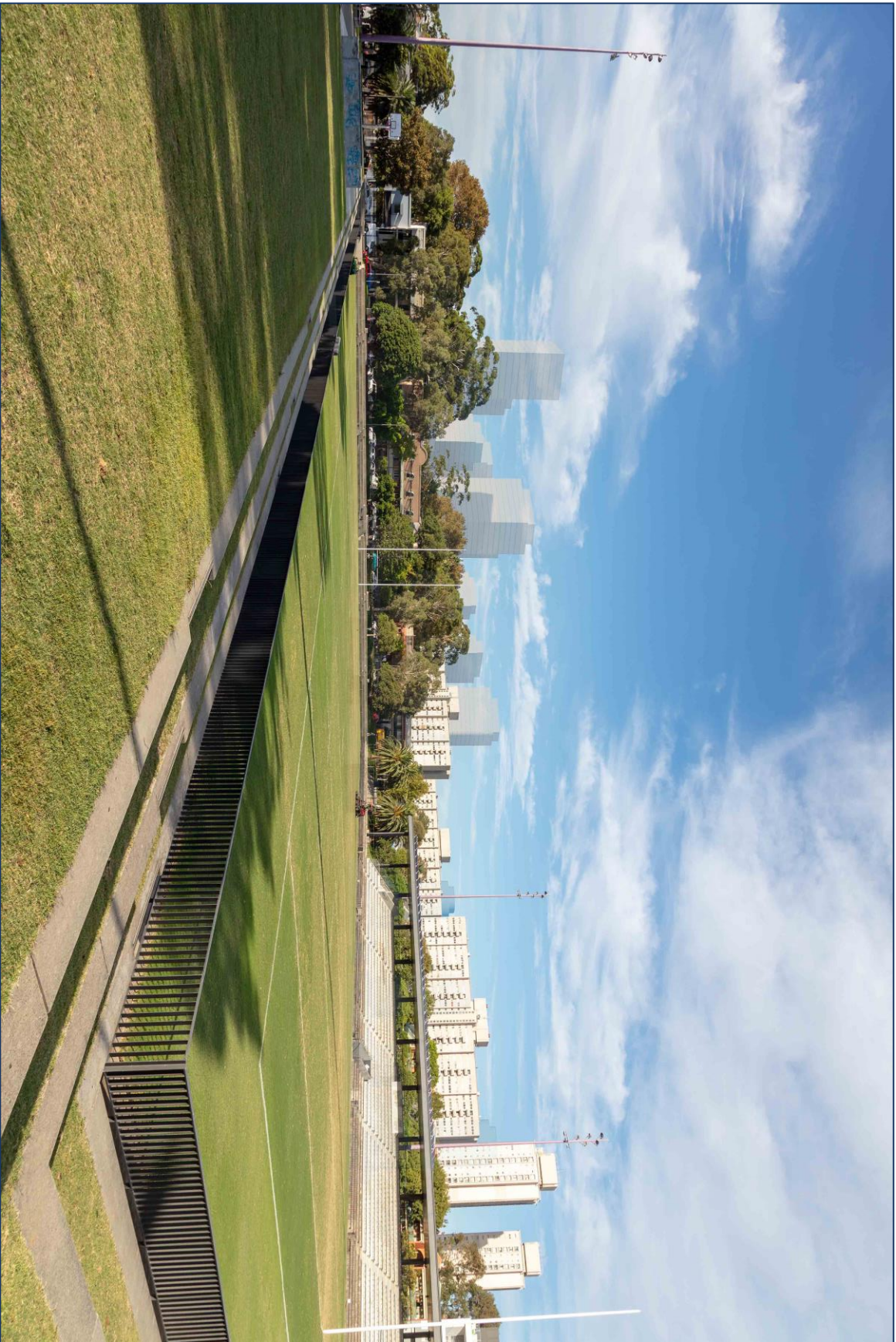


Figure 6-26 Viewpoint 7 – Redfern Oval, adjacent to north eastern edge of oval (photomontage)
Source: *Virtual Ideas*



Figure 6-27 Viewpoint 8 – George St between Albert St and Phillip St facing south (current view)
Source: David Duloy



Figure 6-28 Viewpoint 8 – George St between Albert St and Phillip St facing south (photomontage) – Metro Quarter built form toned blue
Source: *Virtual Ideas*



Figure 6-29 Viewpoint 9 – Redfern Park (current view)
Source: *Virtual Ideas*



Figure 6-30 Viewpoint 9 – Redfern Park (photomontage)
Source: *Virtual Ideas*

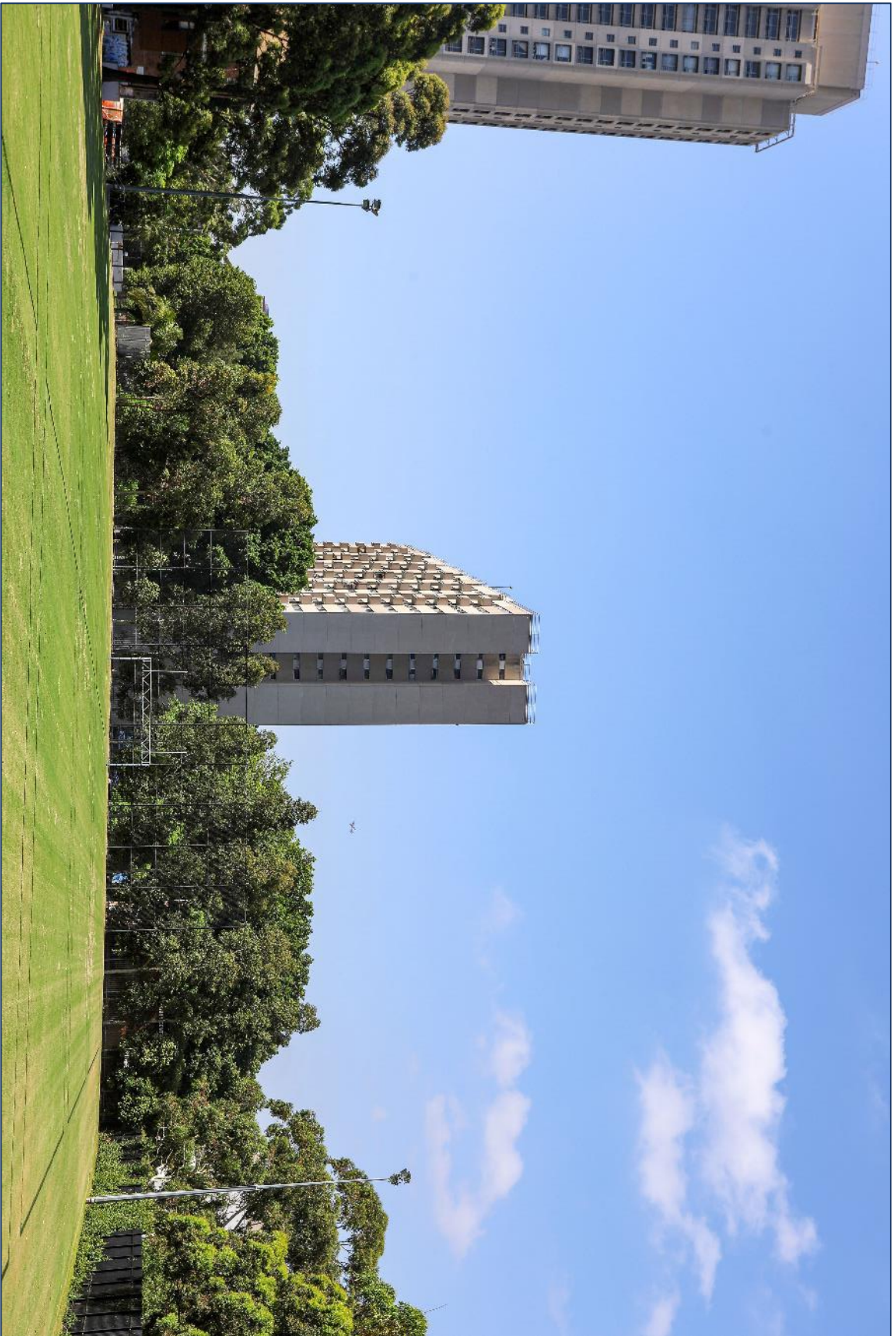


Figure 6-31 Viewpoint 20 – NCIE Oval, north west corner facing south (current view)
Source: David Duloy

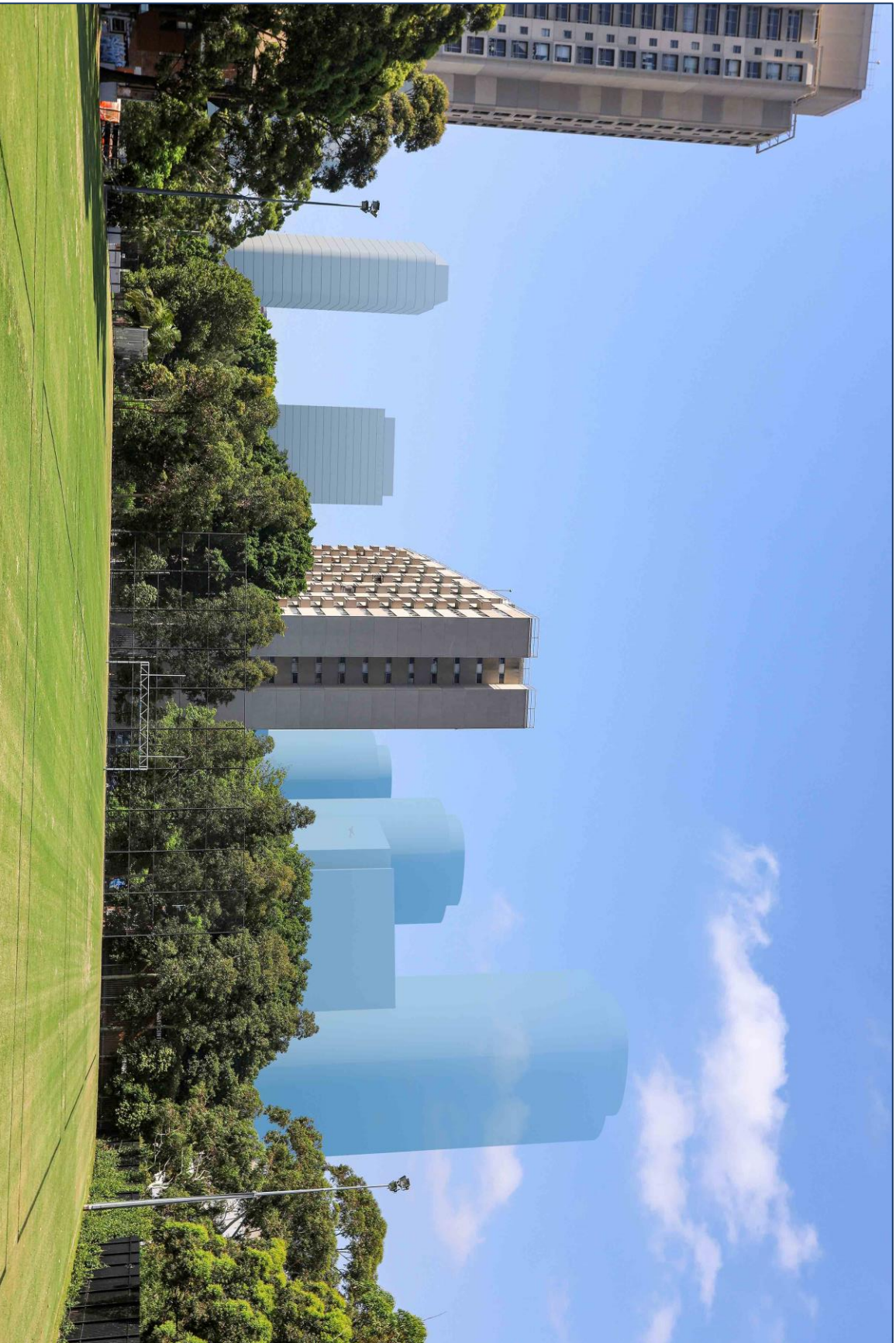


Figure 6-32 Viewpoint 20 – NCIE Oval, north west corner facing south (photomontage) – Metro Quarter built form toned blue
Source: *Virtual Ideas*



Figure 6-33 Viewpoint 24 – Off Phillip St, west of Turanga Tower (current view)
Source: *Virtual Ideas*

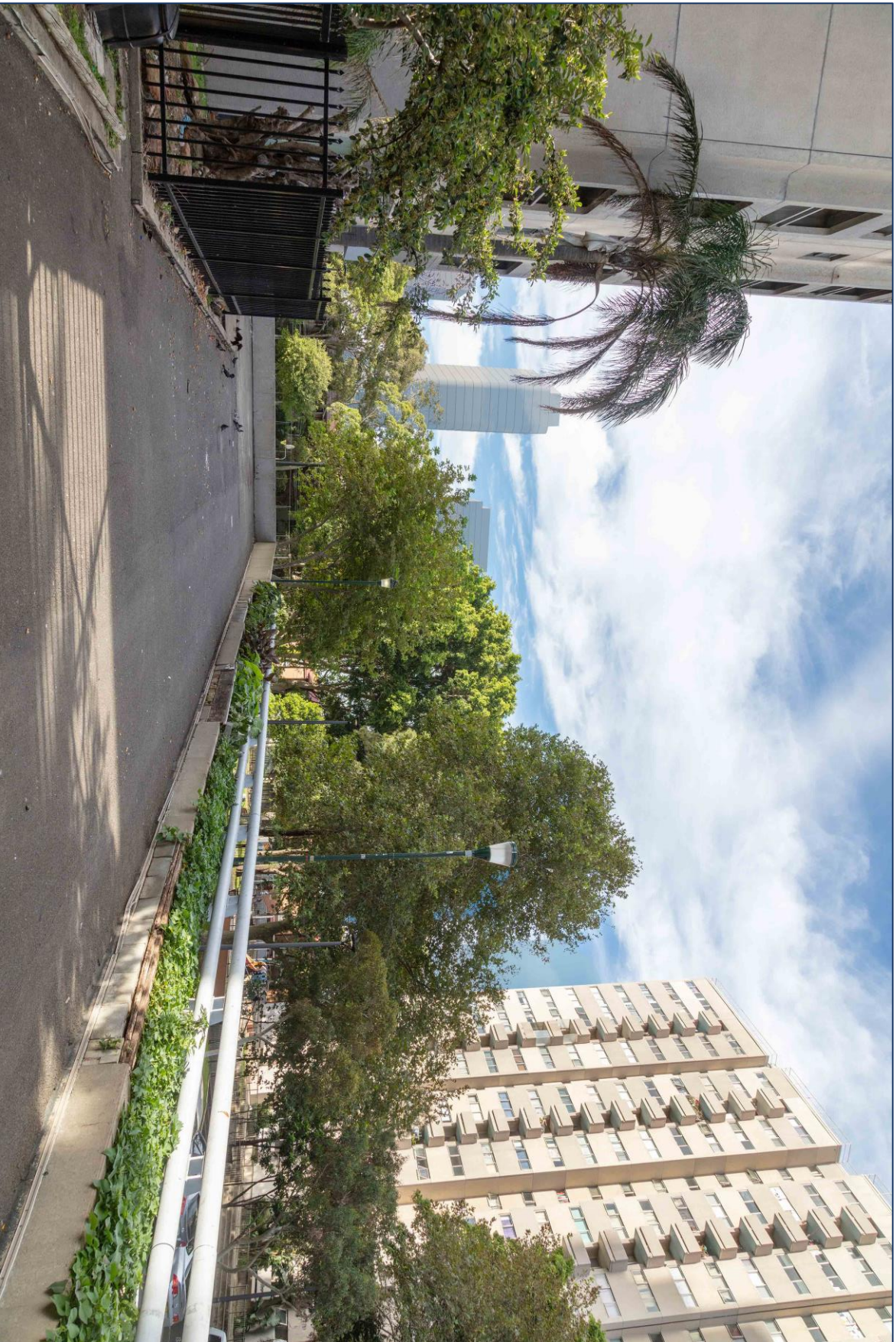


Figure 6-34 Viewpoint 24 – Off Phillip St, west of Turanga Tower (photomontage)
Source: *Virtual Ideas*

6.4.3.2 *Views from the east (Viewpoints 10, 11 & 12)*

The area immediately to the east of the Precinct is largely within a Conservation Area and includes the heritage listed Mount Carmel Church and School. West of Moorehead Street the area is characterised by traditional terrace style housing. Views to the west along the east – west oriented streets in this locality often include the existing towers and other tall buildings at the northern end of the Estate. So there is an expectation that tall buildings will occur in these views.

The developed Waterloo South site will generally not be a significant component of these views, although its level of visibility will increase with movement closer to the Precinct boundary. From locations 10 & 11, the developed Waterloo South site will present in the south west as a new urban form of well-articulated building masses separated by with substantial areas of sky. The montages illustrate that existing vegetation will play an important role in screening and softening the appearance of the new built form. At locations closer to the site boundary (Viewpoint 12), the new built form will inevitably constitute much more substantial portions of the existing view. From these locations the quality of the design and the retention of existing trees on the site will be critical to the success of the Proposal with respect to its visual presentation and impacts on visual quality.

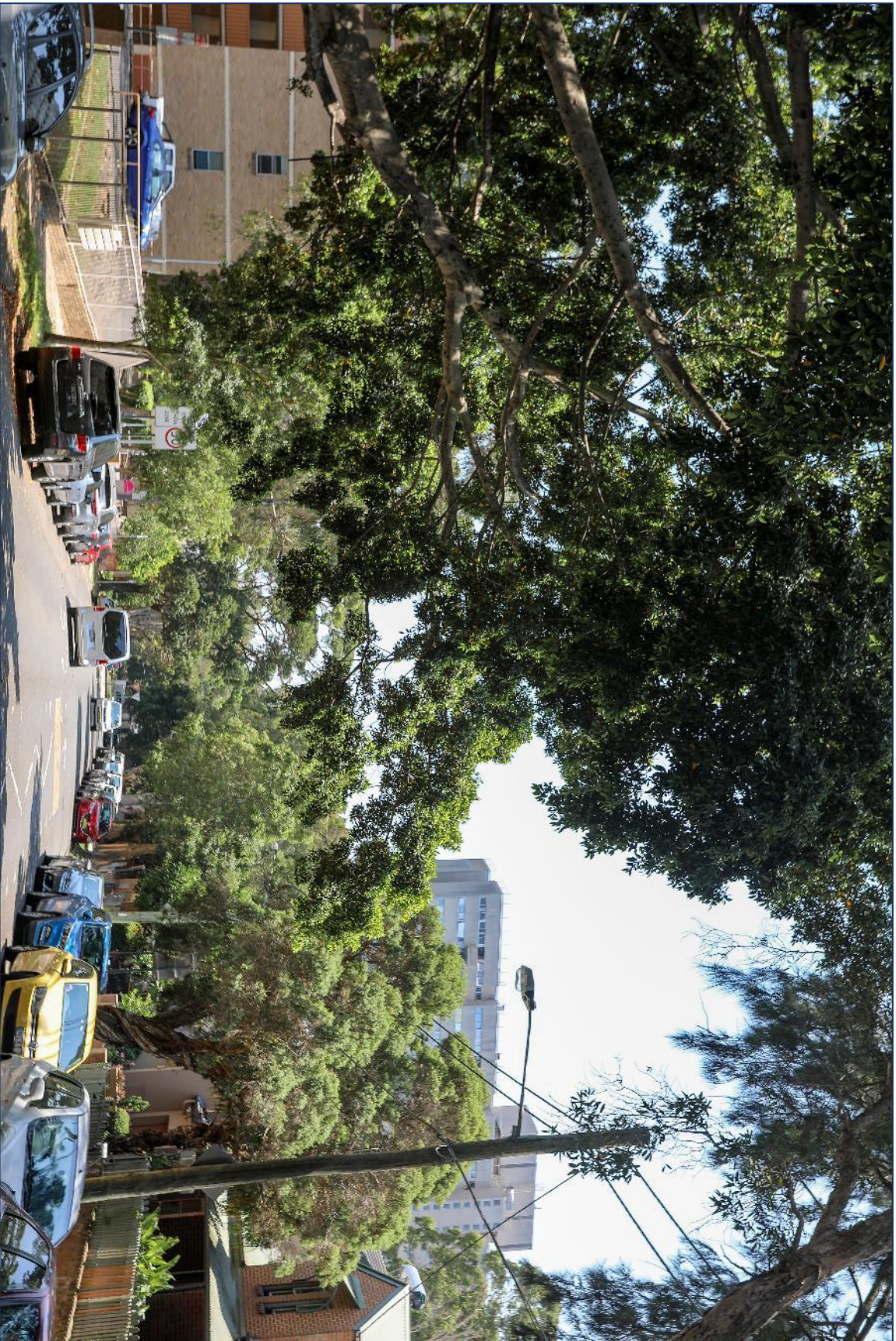


Figure 6-35 Viewpoint 10 – Wellington St and Gibson St facing west (current view)
Source: David Duloy



Figure 6-36 Viewpoint 10 – Wellington St and Gibson St facing west (photomontage) – Metro Quarter built form toned blue
Source: *Virtual Ideas*



Figure 6-37 Viewpoint 11 – Wellington St and Beaumont St facing west (current view)
Source: David Duloy



Figure 6-38 Viewpoint 11 – Wellington St and Beaumont St facing west (photomontage) – Metro Quarter built form toned blue
Source: Virtual Ideas



Figure 6-39 Viewpoint 12 – Kellick St and Gibson St facing west (current view)
Source: David Duloy



Figure 6-40 Viewpoint 12 – Kellick St and Gibson St facing west (photomontage)
Source: Virtual Ideas

6.4.3.3 Views from the south (Viewpoints 13, 14 & 15)

The montages over views from the south and south east illustrate that the developed Waterloo South precinct will appear as a series of new skyline towers that are generally well separated. Changes to the view will be most substantial from locations where uninterrupted views to the skyline above the Estate are available, notably from Waterloo Park south (Viewpoint 13) and from within and in the vicinity of McEvoy St. (Viewpoint 15). The montages indicate, however, that significant quantities of sky remain visible between towers in these close views and the lower levels of the development tend to be screened or softened by existing built form and / or vegetation. As with other viewpoint locations, the impact of the Proposal on close views from the south of the Precinct will be contingent on the existence of foreground built form and vegetation. Impacts on these views will generally be softened by existing large trees on and within the boundary of the Estate that are proposed to be retained and protected.

As is the case with the northerly view to the Estate over the NCIE playing fields (Viewpoint 20), the most dramatic view of the developed Precinct will be the relatively uninterrupted view across Waterloo Park (Viewpoint 13). The large mature figs around the northern side of the Park will significantly soften the foreground in these views. The new urban skyline will, however, be a dramatic change to the current open sky dominated view and the success of the development will be contingent on achieving design excellence in the presentation of each new building.

The view from viewpoint 14 is indicative of street views from north-south streets in this locality. The montage indicates that new towers will be visible but they will appear in the context of a relatively recently developed urban environment incorporating medium rise residential apartment buildings and well established street trees.



Figure 6-41 Viewpoint 13 – Waterloo Oval (current view)
Source: David Duloy



Figure 6-42 Viewpoint 13 – Waterloo Oval (photomontage)
Source: *Virtual Ideas*



Figure 6-43 Viewpoint 14 – George St between Allen St and Bourke St facing north (current view)
Source: David Duloy



Figure 6-44 Viewpoint 14 – George St between Allen St and Bourke St facing north (photomontage)
Source: Virtual Ideas

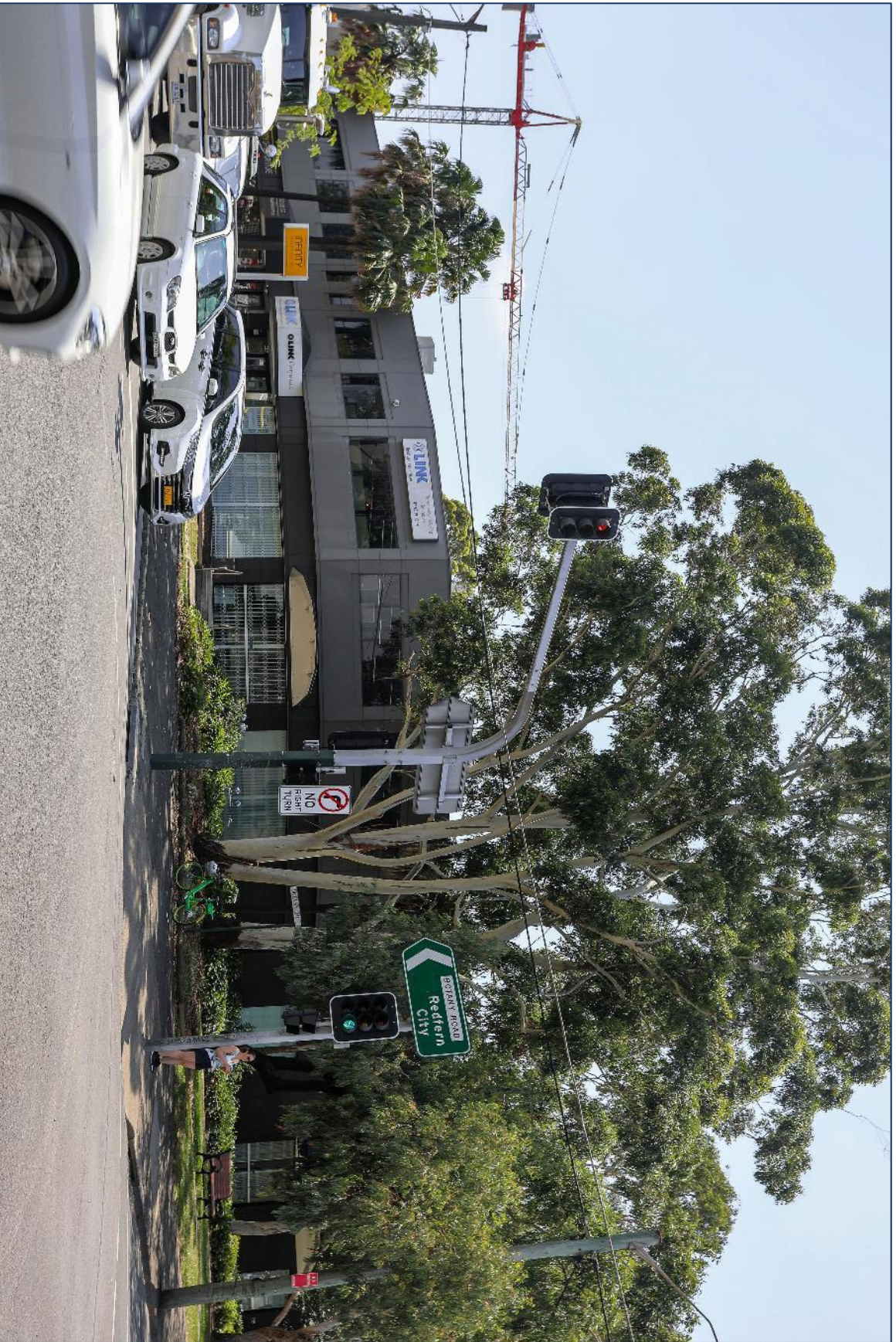


Figure 6-45 Viewpoint 15 – Botany Rd and McEvoy St facing north east (current view)
Source: David Duloy



Figure 6-46 Viewpoint 15 – Botany Rd and McEvoy St facing north east (photomontage)
Source: Virtual Ideas

6.4.3.4 *Views from the west (viewpoints 5, 16, 17, 18, 19, 21, 22, 23).*

Close views from west of the Estate will vary with regard to the level of visibility of the developed Waterloo South site depending on their location. Generally speaking, views from locations west of Wyndham Street (described typically in montages from viewpoints 5, 21, 22 & 23) will include a new urban skyline of tall buildings generally well separated to allow visibility of sky between and screened to varying degrees by foreground trees and / or existing buildings. Axial street views towards the Waterloo South site are not generally available from the west. The montage looking east along Buckland Street (viewpoint 21) illustrates that view lines to the site are generally screened by existing vegetation and / or buildings and the new built form would not be significantly visible.

In views from the west adjacent to the Precinct (16, 17, 18 & 19) the Metro Quarter development will be a significant component in new views. Montages 18 & 19 (respectively from adjacent to the heritage listed Waterloo Congregational Church and from the corner of Henderson Road) indicate that the Metro Quarter will completely obscure or almost completely obscure any view of the developed Waterloo South site. In the context of the developed Metro Quarter, impacts of Waterloo South on these views will be negligible.

South of the Metro Quarter (views 16 & 17) easterly views towards Waterloo South may be substantially screened by existing street trees which are proposed to be retained in the redevelopment. Where built form is proposed to form street walls (view 16) the development will be more substantially visible and the quality of the new view will be more contingent on the success of the architecture in its presentation to the street.



Figure 6-47 Viewpoint 5 – Alexandria Park, south-west corner facing north-east (current view)
Source: *Virtual Ideas*

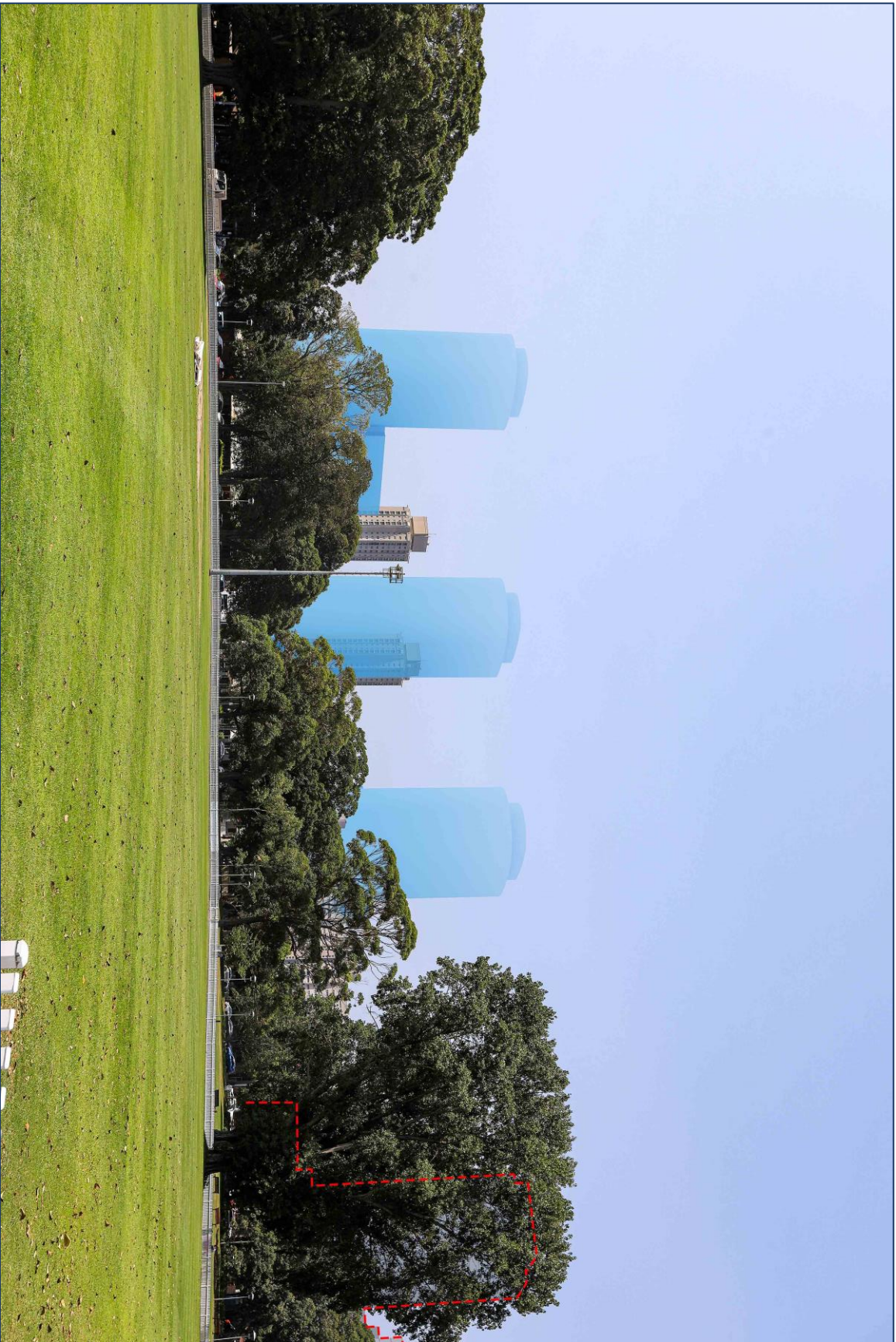


Figure 6-48 Viewpoint 5 – Alexandria Park, south-west corner facing north-east (photomontage) – Metro Quarter built form toned blue; Waterloo South built form outlined in red where obscured in view.
Source: *Virtual Ideas*



Figure 6-49 Viewpoint 21 – Garden St and Buckland St (current view)
Source: *Virtual Ideas*

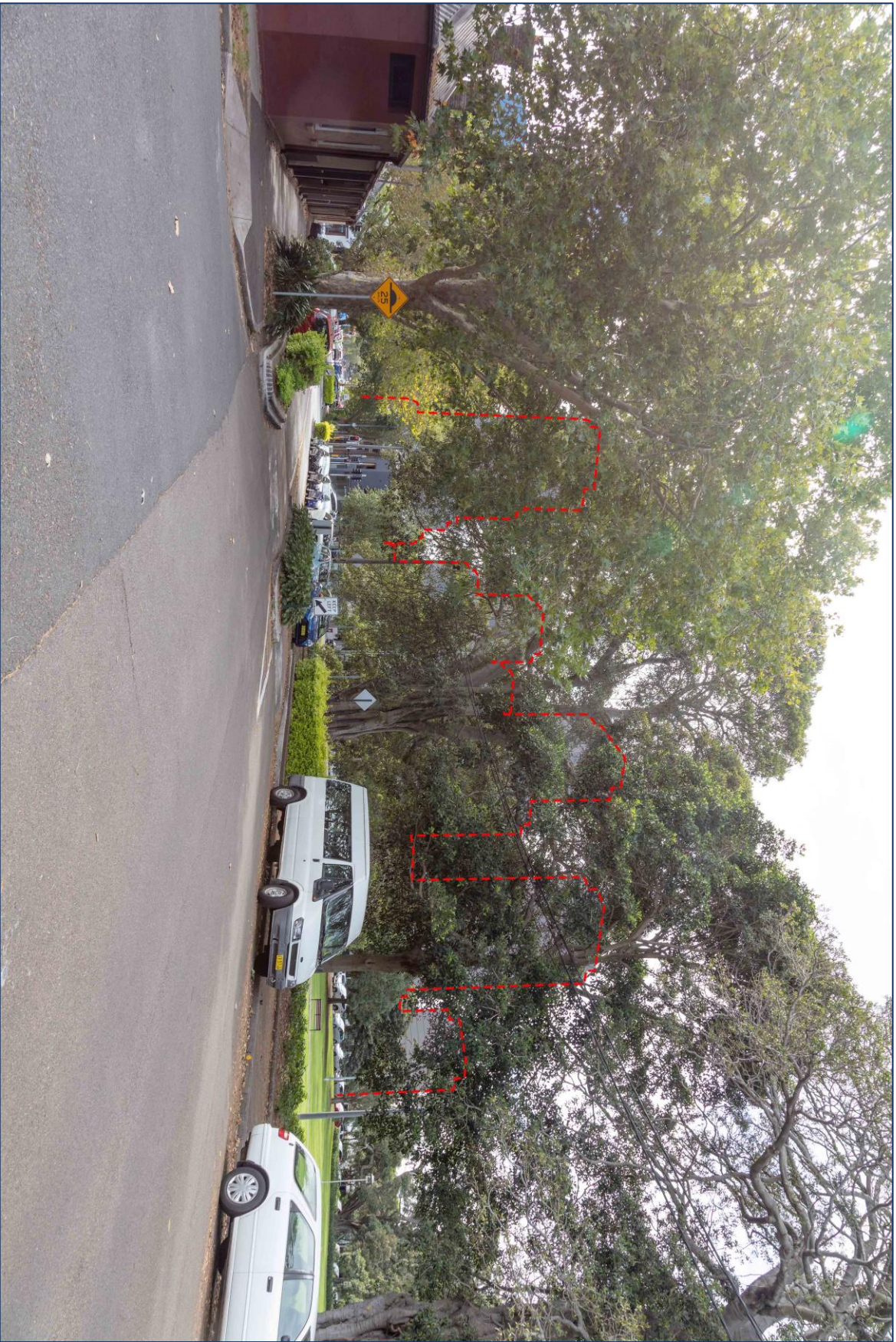


Figure 6-50 Viewpoint 21 – Garden St and Buckland St (photomontage) – Waterloo South built form outline in red where obscured in view.
Source: *Virtual Ideas*



Figure 6-51 Viewpoint 22 – Alexandria Park, north eastern edge (current view)
Source: Virtual Ideas



Figure 6-52 Viewpoint 22 – Alexandria Park, north eastern edge (photomontage)
Source: *Virtual Ideas*



Figure 6-63 Viewpoint 23 – Alexandria Park, south eastern corner of park (current view)
Source: *Virtual Ideas*



Figure 6-54 Viewpoint 23 – Alexandria Park, south eastern corner of park (photomontage) – Metro Quarter model toned blue
Source: *Virtual Ideas*



Figure 6-55 Viewpoint 16 – John St between Botany Rd and Cope St facing east (current view)
Source: David Duloy



Figure 6-56 Viewpoint 16 – John St between Botany Rd and Cope St facing east (photomontage)
Source: *Virtual Ideas*



Figure 6-57 Viewpoint 17 – Corner Cope St and Wellington St facing east (current view)
Source: David Duloy

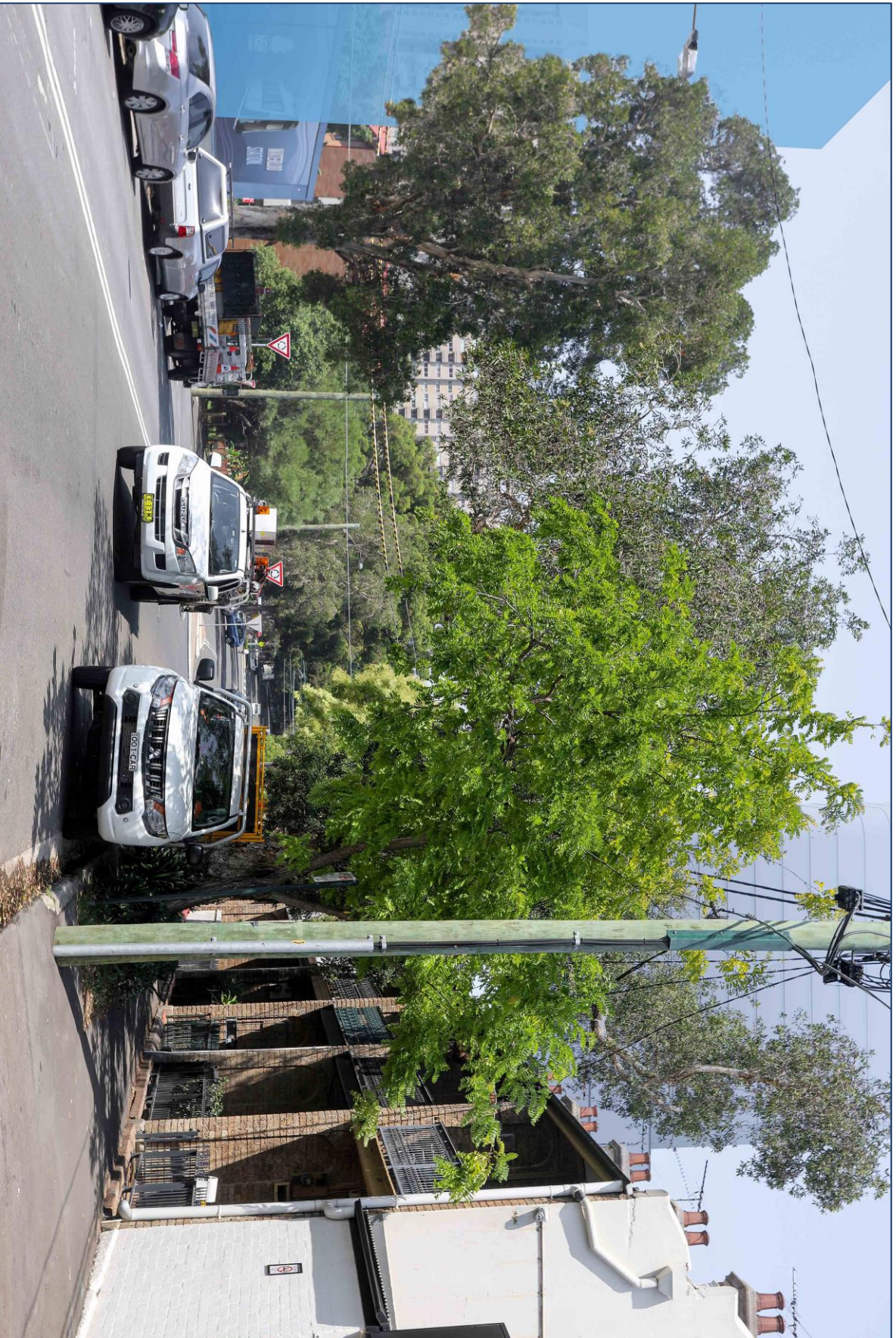


Figure 6-58 Viewpoint 17 – Corner Cope St and Wellington St facing east (photomontage)
Source Virtual Ideas



Figure 6-59 Viewpoint 18 – Botany Road between Raglan St and Wellington St facing south-east (current view)
Source: *Virtual Ideas*



Figure 6-60 Viewpoint 18 – Botany Road between Raglan St and Wellington St facing south-east (photomontage) – Metro Quarter built form toned blue; Waterloo South built form outlined in red where obscured in view.
Source: Virtual Ideas



Figure 6-61 Viewpoint 19 – Corner Henderson Rd & Botany Rd (current view)
Source: Virtual Ideas

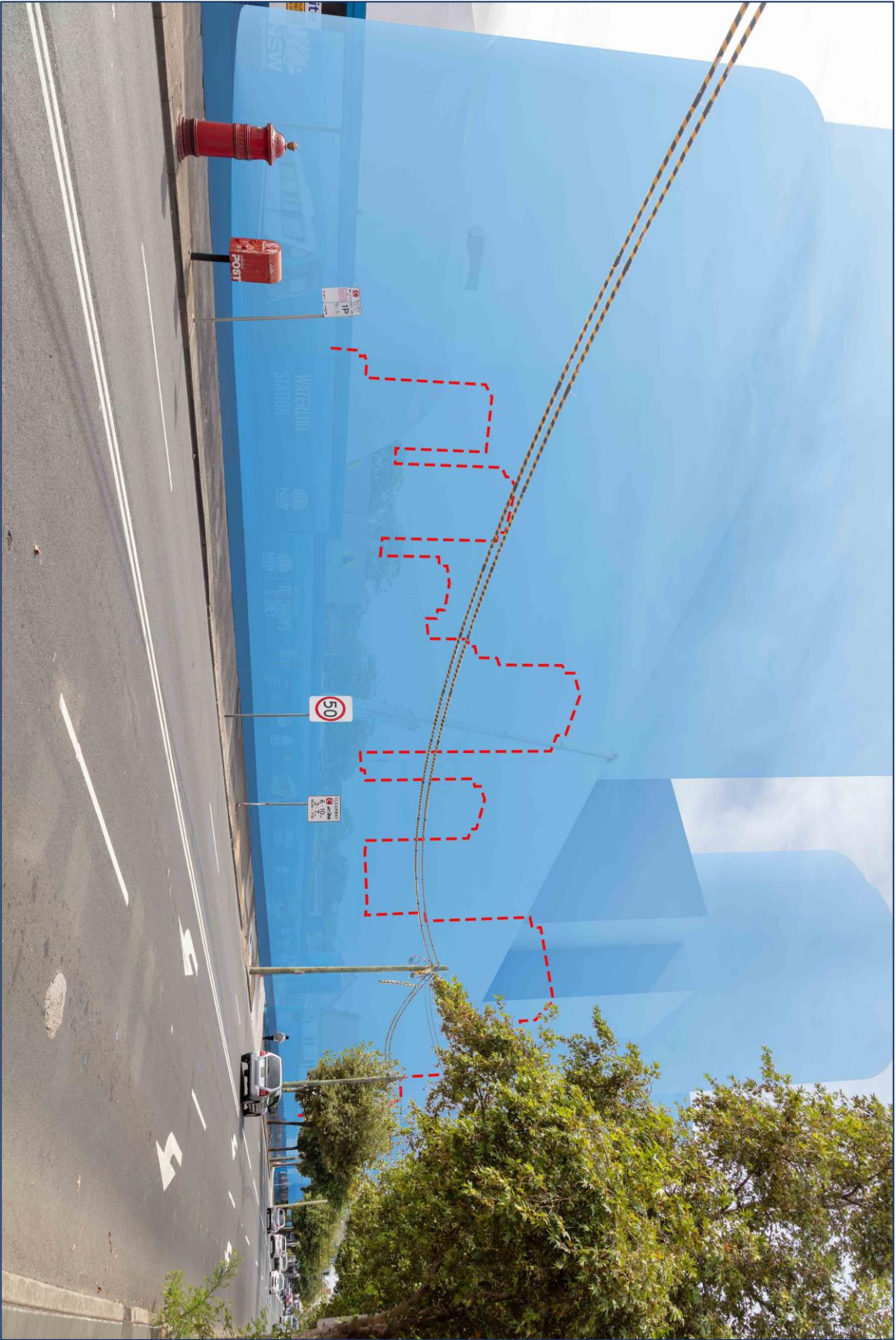


Figure 6-63 Viewpoint 19 – Corner Henderson Rd & Botany Rd (photomontage) – Metro Quarter built form toned blue, Waterloo South built form outline in red where obscured in view.
Source: Virtual Ideas

6.5 Views from within the Waterloo South site

6.5.1 Visual Environment

The greater Waterloo Estate incorporates a number of elements that contribute to its existing visual character. These include:

- > A mix of residential buildings including 29-storey apartment blocks in the northern portion of the Estate, residential flats up to around 6 storeys in height in the south east (within the Waterloo South site) and circa 1950 vintage “3 storey walk-ups” in the western portion (also within Waterloo South);
- > Wide streets, many of which are lined with large street trees;
- > Buildings that are well set back from the streets resulting in a feeling of spaciousness, particularly in comparison to the more densely developed surrounding neighbourhoods; and
- > Many large “forest scale” trees in the streets and around the existing buildings.

6.5.2 Capacity to absorb change

The following principles are relevant to the capacity of the Waterloo South site to absorb change to its visual environment:

- > Street level quality should be maintained in the redevelopment. An open, tree dominated character at the street should be a contributing component of the future character of the developed Estate.
- > The existing grid form street pattern should be a guiding principle for masterplanning in order to maintain one of the positive components the existing visual character of the Estate. Where tall buildings are proposed, they should be set back from the streets, at least at the above podium levels in order to maintain an open visual character at street level.
- > The taller buildings in the northern part of the greater Waterloo Estate are prominent in close, medium and distant views. Because they exist in the locality and people are used to seeing them, they provide an opportunity to build tall, slender buildings that would continue the established theme of dramatic sculptural elements in the local and regional townscape.
- > The significant amount of open space at ground level provides an opportunity to develop a distinctive character for the new neighbourhood that would set it apart from surrounding precincts.
- > The grid of long, straight streets provides opportunities for long views through, into and out of the Precinct and for dramatic views toward buildings. Master planning should take advantage of these established internal and local view lines.

Based on these principles, our opinion is that the Waterloo South site has a moderate capacity to absorb change, contingent on:

- > Retention of the existing streetscape quality and open character with buildings set back from the street.
- > Taller buildings exhibiting architectural design excellence and not being positioned to create continuous skyline elements.
- > Tall buildings appearing as sculptural elements with slender form.

6.5.3 Amount of change resulting from the proposal

Likely change to the visual character in the Waterloo South site was assessed with the aid of Computer Generated Images (CGIs) prepared by Turner Architects. The CGIs were prepared from a series of representative view locations on existing streets within the boundary of the Estate as indicated at **Figures 6-72 & 6-73**.

Fully rendered CGIs were prepared in lieu of block form photomontages on the basis that they provide realistic illustrations of the street level urban character that will result from the development of the Estate as proposed.

Further assessment was carried out with the aid of massing photomontages prepared from 2 locations within the Waterloo South Precinct - Viewpoint 25 from the corner of George and Wellington Streets looking south west and Viewpoint 26 from Cooper Street, south of Raglan St looking south.

The fully rendered and massing based montages illustrate that the proposal when implemented will transform the visual character of the Waterloo South site from a solely residential estate incorporating a mix of disparate architectural styles to a contemporary mixed use precinct with a varied but coherent architectural style in a contemporary urban setting. Specific attributes of the proposal that are considered to contribute positively to the urban character within the Estate are described below with reference to the CGI's.



Figure 6-64 Viewpoint 25 George and Wellington facing south west (current view)
Source: Virtual Ideas

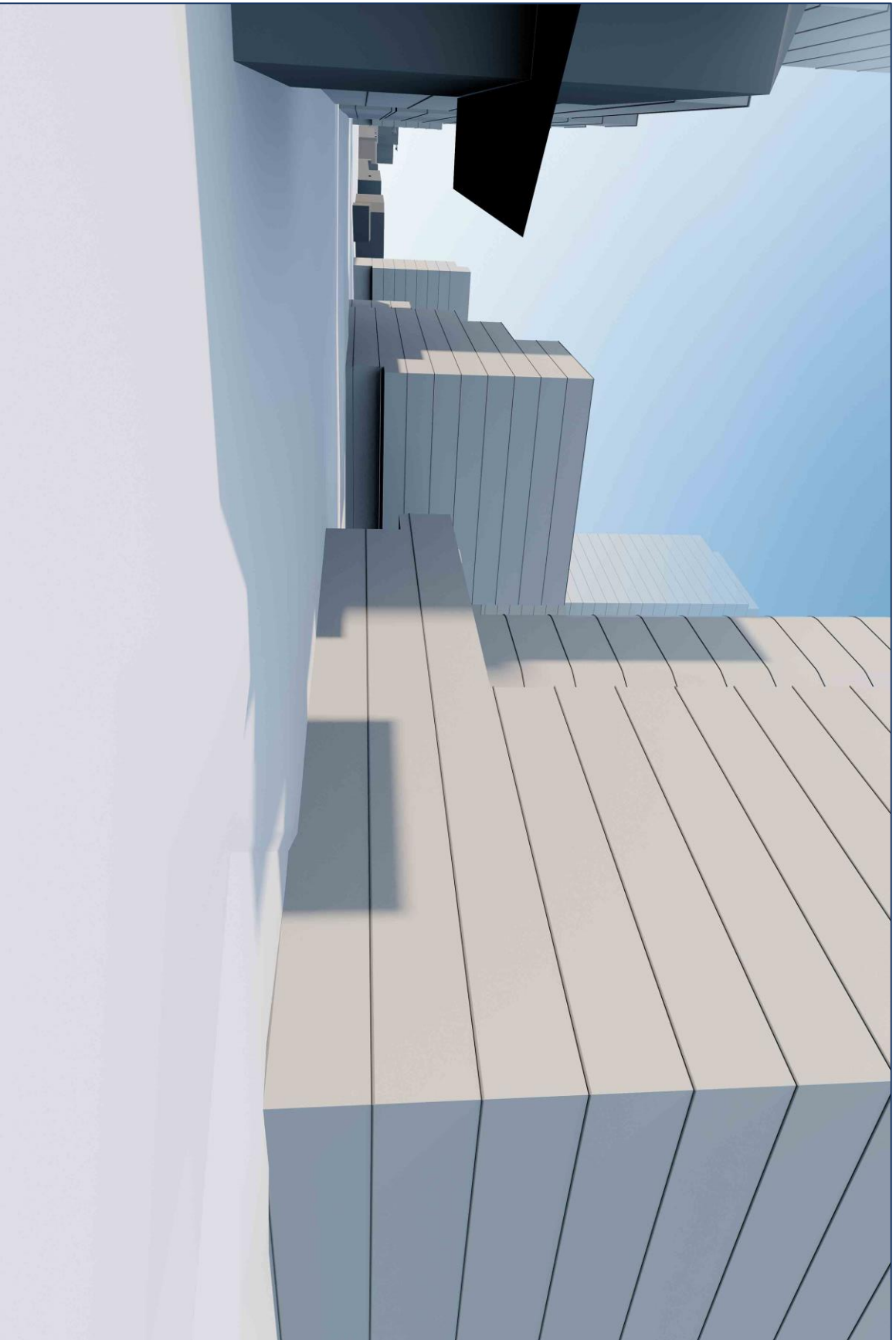


Figure 6-66 Viewpoint 25 George and Wellington facing south west (photomontage)
Source: *Virtual Ideas*



Figure 6-67 Viewpoint 26 Cooper St south of Raglan St looking south (current view)
Source: *Virtual Ideas*



Figure 6-69 Viewpoint 26 Cooper St south of Raglan St looking south (photomontage)
Source: *Virtual Ideas*

A series of Computer Generated Images (CGIs) have been prepared by Virtual Ideas Pty Ltd. The following CGIs have been selected from these to represent typical internal views within the Waterloo South Precinct. These are included below with associated commentary.



Figure 6-70 Rendered computer generated image from a location slightly to the east of Viewpoint 26.
Source: Turner Architects

The rendered CGI at Figure 6-70 provides an indication of the likely future character of views to the south across the Village Green. The image is consistent with the view that would be experienced from Viewpoint 26.



Figure 6-71 Site internal CGI – Viewpoint 9

Viewpoint 9 – Corner of Raglan & Cope Streets looking into the Village Green

The broad centrally located area of community open space will allow for open expansive views within the newly developed Waterloo South Precinct. This is consistent with the identified positive characteristic of the existing Waterloo Estate, being the presence of significant publically accessible open space at the ground plane. The proposed Village Green will also contribute to:

- > An open, tree dominated character at the street level.
- > Inclusion of tall buildings as well separated, sculptural elements that maximise the visibility of open sky.
- > Development of significant amounts of high-quality open space that is well connected visually and physically.



Figure 6-72 Site internal CGI – Viewpoint 10

Viewpoint 10 – Cope St looking north towards Raglan St.

The inclusion of a hierarchy of pedestrian priority precincts through the Waterloo South Precinct contributes to a high level of legibility at the street level and visual as well as physical connections between the open public spaces included in the masterplan. The pedestrian zones illustrated in this image are essentially extensions

of the existing street grid in the greater Waterloo Estate which contribute to a reinforced street grid urban structure. The image illustrates consistency with the following identified principles for visual quality identified at S.6.5.2 of this report:

- > Retention of an open tree dominated character at street level.
- > Reinforcement of the street grid development pattern.
- > Inclusion of tall buildings as sculptural elements, well separated in views and allowing for the visibility of significant amounts of open sky.
- > Establishment of long views down streets, particularly in this case towards proposed significant areas of public open space.



Figure 6-73 Site internal CGI – Viewpoint 11

Viewpoint 11 – George St looking toward the Waterloo Metro Quarter.

The masterplan allows for open views across the proposed Village Green to the newly developed Metro Quarter. The planning in this part of the Precinct creates a strong visual character consistent with the existing character of buildings in a landscape setting. The image indicates a number of elements of the proposal that would contribute to a high-quality visual environment within the developed Precinct. These include:

-
- > Tall buildings punctuating the skyline and creating visual interest points. Tall buildings do not form continuous walls of built form;
 - > Open sky remains a strong element in the view;
 - > Development of significant amounts of high-quality open space that is well connected visually and physically. and
 - > Tall forest scale trees contribute to a human scale at street level and soften views towards the proposed new buildings



Figure 6-74 Site Internal CGI – Viewpoint 12

Viewpoint 12 – George St looking north toward Wellington St.

The image also demonstrates the consistency of the proposal with the following identified visual quality based principals:

- > Retention of an open and tree dominated character at street level.

- > Retention of the existing grid form street pattern.
- > Set back of building towers from the street and retention of the existing broad, open visual character at street level.
- > Separation of tall buildings to maintain significant amounts of open sky in views from the street.



Viewpoint 13 – George St looking north into Waterloo Common.

The south park is a key component of a proposed connected network of public spaces through the Waterloo South Precinct. Consistent with principles of good urban design, the park is bordered by building walls to create a defined urban edge. The park also provides opportunities for open expansive views from within the Precinct and is specifically consistent with the following identified principles to protect visual quality:

- > Retention of an open and tree dominated character.
- > Reinforcement of a grid pattern street form.
- > Setback of tall buildings from the street and separation of building towers to allow for substantial views of open sky.
- > Retention of an open visual character at ground level via inclusion of significant areas of high quality public open space in a well-connected network.
- > Maintenance of opportunities for long views through, into and out of the Precinct and for dramatic views toward buildings.
- > Placement of tall buildings so that they appear as sculptural elements in the new cityscape.

6.6 Summary of Assessment Outcomes

A series of visual quality based Planning Principles proposed to guide the development of a Precinct masterplan for the Waterloo Metro site and The Estate has been derived out of this visual quality assessment. The Planning Principles have been used as a basis for a summary assessment of the suitability of the Waterloo South proposal in its locality with respect to changes to the local and regional visual environment. The outcomes of this assessment are:

Principle	Response
<p>Develop a unique visual character for the Precinct that maintains the positive elements of its existing character (tall slender buildings in the context of an open, legible ground plane incorporating tree lined streets with long views) and incorporates the positive components of its urban context including fine grain street level character and a street hierarchy including laneway typologies</p>	<p>The proposal has been illustrated through this assessment to be consistent with this Principle. The visual character of the completed development will incorporate buildings in a variety of heights across the Waterloo South site. Tall buildings are designed on slender plan forms and are strategically located across the site to ensure good separation between built forms in the majority of views. Open space is proposed across the site in a hierarchy that includes substantial parks connected by broad pedestrian thoroughfares. In concert with a street hierarchy of local streets connected by laneways the outcome is a ground plane that maintains the existing open character of the site and reflects the fine grain character of its suburban context. A high percentage of existing substantial trees on the site have been retained in the proposal and supplemented by a major public domain based tree planting program.</p>
<p>Build upon the precedent of tall buildings in a landscape setting to create a visually distinctive built environment</p>	<p>The developed Waterloo South site has been illustrated in this study to present in the majority of views as a series of tall slender buildings well separated in the landscape. The site will present as a distinctive new urban form contained within its boundaries and contrasting with its fine grain, low scale context.</p>
<p>Ensure that tall buildings vary in height and are well separated to create an articulated skyline with a substantial component of sky visible between building forms;</p>	<p>From the majority of close and distant views, tall buildings within the Waterloo South site will present as an articulated group of varying heights with ample visibility of sky as a contrast to the built form.</p>

<p>Retain the open internal qualities and legibility of the Precinct at street level that result from its existing development pattern of broad streets in a clear grid pattern;</p>	<p>The Estate has been planned on a street grid pattern that reflects its existing street layout and incorporates a hierarchy of street forms supplemented by a comprehensive network of pedestrian spaces. At street level the visual environment of the Waterloo South site will retain its open visual character and legibility, consistent with this Principle</p>
<p>Retain the dominance of large forest scale trees at street level</p>	<p>A comprehensive study of the existing trees on the Estate has informed the development of the Estate Masterplan. Planning for the Waterloo South site includes retention of a significant number of trees and a supplementary program of tree planting in streets and parks. Our opinion is that the existing dominance of trees at street level will remain in the developed Waterloo South site.</p>
<p>Avoid continuous “walls” of built form in local and regional views.</p>	<p>The new development will in the majority of cases result in new skyline views consisting of slender towers well separated in the view to allow for substantial views of sky. Most views from the north, south and west will be consistent with this description. Exceptions to this, where the juxtaposition of the proposed towers will result in the intermittent appearance of continuous walls, are in close views from the East. Our opinion is that this is the inevitable result of a major redevelopment of this scale. In the small number of cases where continuous walls of built form appear in new views, mitigation measures including judicious planting of forest scale trees and careful articulation of building facades to provide visual interest and minimise impacts will be required.</p>

6.7 Summary of recommended mitigation measures

With planning for the Estate currently at concept level, this assessment of the likely visual impacts of the proposed redevelopment of the Waterloo South component of the Estate has by necessity been carried out at a high level and in the absence of resolved building designs. In this context, the following measures are recommended to translate the above described visual quality based planning principles into the design process for the Waterloo South site:

- > Recognised principles for design excellence included in local and state government guidelines should be incorporated in in the developing design for Waterloo South and for the individual buildings within the masterplan. Specifically, the NSW Government Architect’s Design Excellence Guidelines and the relevant chapter of the Sydney Local Environmental Plan, 2012 (Division 4 – Design Excellence) should inform ongoing design development of the site.
- > The retention and protection of existing trees and the planting of new trees in judicious locations to soften the visual impacts of the new built form and to provide human scale should be carried through as a principle in the design process at the masterplan level and for individual development within the Estate. This principle should be included in the planning controls for the Waterloo South site.

-
- > The principles for protection of visual quality included in this Study are to be incorporated into the suite of planning controls being prepared for the ongoing development of the Estate. All subsequent development applications for land sites within Waterloo South are to be assessed for their success in achieving these principles.

7 Implementation Plan

7.1 The Waterloo Estate – Vision Statement (Visual Quality)

The vision statement for protection, improvement and enhancement of the visual quality of the greater Waterloo Estate and its locality has been derived from our assessment of the existing visual character of the locality and region and identification of its positive and negative attributes. This Vision Statement should be used to guide planning and design for each precinct within the Estate, including, in the case of this study, the Waterloo South site.

To address visual quality we propose:

The Waterloo Estate urban renewal will contribute to a high quality local and regional visual environment by:

- > *Incorporating built form, architectural design and finishes that respect and respond appropriately to local and regional visual character.*
- > *Enhancing the visual quality of the ground plane within the Estate and in its immediate vicinity.*
- > *Respecting and enhancing the visual values of heritage items and conservation areas within and in the locality of the Estate.*

7.2 Visual / Urban Quality Plan

7.2.1 Planning / Design Objectives

Objectives to guide the development of the Estate to produce a form consistent with the visual quality vision statement have been derived directly from the identified opportunities and constraints. Again these objectives should be applied to planning and design for each precinct within the greater Estate including, in this case, planning and design for Waterloo South.

The planning / design objectives are:

- > The plan will capture the unique local context of Waterloo in its design.
 - > Ensure that the built form of the new development responds appropriately to its local and regional context with particular regard to:
 - Close views from surrounding and nearby suburban streets;
 - Views from significant local open space (notably Waterloo Park, Alexandria Park and Redfern Park); and
 - Regional views including from Sydney Park and Moore Park (Mount Steele).
 - > Enhance the heritage values of the site and its locality. Specifically, ensure that the redevelopment retains, protects and enhances (or does not detract from) views to and from:
 - Our Lady of Mount Carmel Church and School;
 - The Waterloo Congregational Church; and
- Ensure that the development does not impact negatively on the heritage values of local listed Heritage Conservation Areas.

-
- > Ensure that tall buildings are slender in form and, wherever possible, are well separated in skyline views so that a high percentage of sky remains visible between the built elements.

7.2.2 Critical Viewpoints

GIS technology based generation of a visual catchment for the Estate has been carried out, incorporating its existing residential tall buildings, within a 2km radius (**Figure 3-38**). This diagram provides an indication of the visibility of the existing tall buildings within the Estate which informs the likely extent of the visual catchment of the redeveloped Estate.

The visual catchment diagram indicates that as an obvious function of their height, the tall buildings in the Estate are visible from broad areas within the catchment. Notwithstanding this, a representative sample of regional and local viewpoints within the catchment have been selected for The Estate renewal proposal in consultation with LAHC, the Department of Planning, Industry and Environment, and the City of Sydney on the following basis:

- > They are from broad open public places where it would be expected that views and visual quality would be highly valued by visitors, or
- > The give a good representation of views of the Estate from local streets and other public places, or
- > They include views towards the site that would be representative of the types of views that would be available from private places in the same vicinity.

The agreed critical viewpoints are indicated at **Figure 6-1**.

Heritage Conservation Areas

The Study Requirements for this study include, among other things, an assessment of the impacts of the Proposal on the visual quality of local Conservation Areas. Conservation Areas in the vicinity of the Estate are indicated on the extract from the Sydney Local Environmental Plan 2012 (SLEP 2012) Heritage Map at Figure 6-4. Conservation Areas in the vicinity of the Estate include:

- > The Redfern Estate (incorporating Redfern Park and adjacent residential streets);
- > Alexandria Park Conservation Area (incorporating Alexandria Park and adjacent Streets); and
- > Waterloo Conservation Area (incorporating Waterloo Park and Oval, the Our Lady of Mt Carmel Church and School and adjoining residential streets).

Impacts on views from these areas have been assessed as part of the more general local area assessment that follows and conclusions specific to the Conservation Areas are provided in the Conclusions at Section 7.

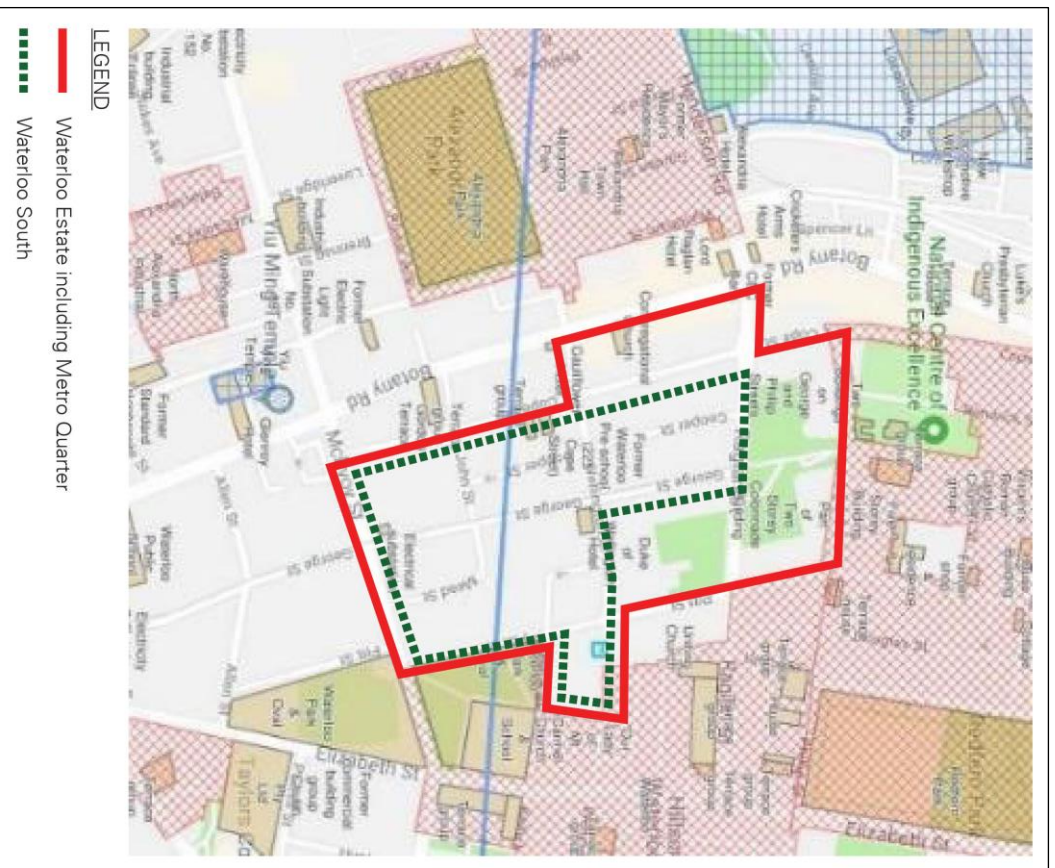


Figure 7-1 Sydney LEP Heritage Map
 Source: Department of Planning & Environment Planning Portal

8 Conclusion

This study of the likely impacts of the proposed development of the Waterloo South precinct with the greater Waterloo Estate on local and regional visual quality has been prepared to accompany a Planning Proposal for Waterloo South. It specifically addresses the Minister's Study Requirements, quoted in Section 3 of the report.

The assessment has been carried out with the aid of electronically generated photomontages over photos from surveyed locations taken with a 55mm focal length lens. Changes to visual character within the boundaries of the Estate have been assessed with the aid of Computer Generated Images prepared by others.

In summary, the conclusions of the visual impacts of the proposal with respect to the Minister's requirements are:

- > The proposal is consistent with current planning for inner western Sydney incorporating new centres of activity at Green Square and the Central to Eveleigh corridor. Where visible in distant views from the public domain it will present as a consolidated new urban centre within the context of the Sydney CBD and the other two mentioned developing centres.
- > In medium distant views, the proposal would have an acceptable impact in the context of existing and likely future development in the locality.
- > The proposal will impact on views from streets immediately surrounding the Estate. In close views its visibility will be variable depending on the context and the existence of local vegetation. Mitigation measures to address these impacts will include design development to result in a high quality ground plane including allowance for healthy growth of forest scale trees in the street and other proposed public places.
- > The proposal will be visible as a new skyline urban form from medium distant views in all directions. Its success as a new element in views from these locations will be contingent on achievement of design excellence in the completed development, with particular regard to the architectural design of the proposed tall buildings.
- > In distant regional views, the proposal will appear in the context of the proposed Metro Quarter building group and the substantial tree canopy within and adjacent to the Waterloo Precinct. If designed against principles of design excellence, the taller buildings in the proposal will have an acceptable impact on the quality of these existing views.
- > Overall, contingent on achieving design excellence and on maintaining a high quality vegetated foreground, the proposal has been found to have an acceptable impact on the conservation values of local Conservation Areas including specifically, the Redfern Estate, the Alexandria Park Conservation Area and the Waterloo Conservation Area.
- > Contingent on the recommended mitigation measures in this report, the proposal has been found to be consistent with the visual quality Planning Principles for development of the Waterloo Estate and Metro Quarter and is considered to be worthy of support with regard to its effects on the existing visual environment of the site and its locality.