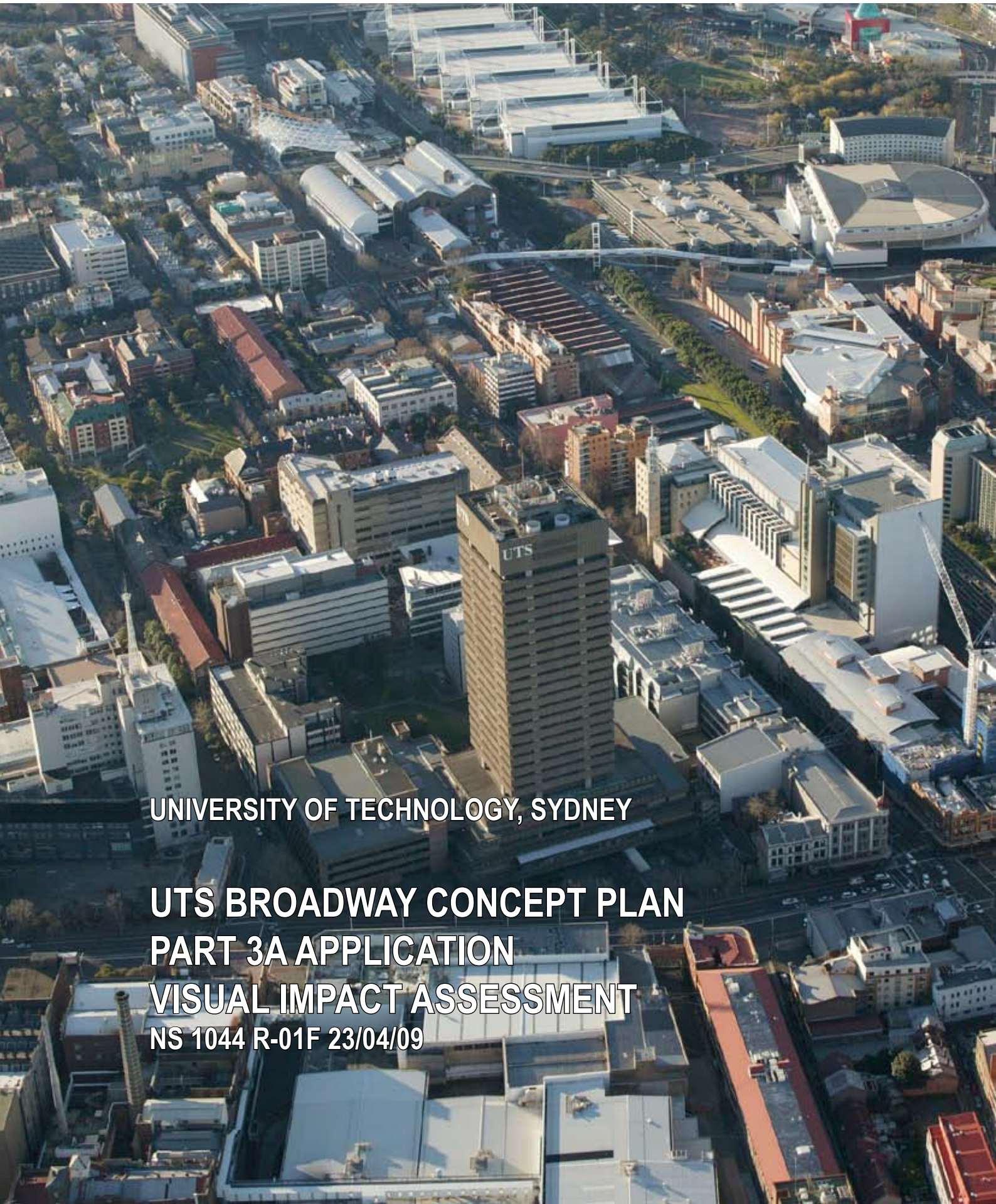
CLOUSTON associates



UNIVERSITY OF TECHNOLOGY, SYDNEY

UTS BROADWAY CONCEPT PLAN
PART 3A APPLICATION
VISUAL IMPACT ASSESSMENT

NS 1044 R-01F 23/04/09

VISUAL IMPACT ASSESSMENT

University of Technology
15 Broadway, Ultimo
P.O. Box 123
Broadway, NSW 2007

CLOUSTON Associates
Landscape Architects • Urban Designers • Landscape Planners
6A Wetherill Street • Leichhardt • NSW 2040
PO Box 44 • Leichhardt • NSW 2040
Telephone (02) 9569 3388 • Facsimile (02) 9569 3523
Email • sydney@clouston.com.au

NS 1044 • Issue F • 23rd April 2009

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Key issues
This Visual Impact Assessment (VIA) forms part of the baseline data for a Part 3A application for the proposed UTS Concept Plan .

The report assesses the impact of the Broadway precinct of the UTS Concept Plan which comprises extensions to CB01 and CB02, a new tower extension to CB06, a new building on Thomas Street and a ten storey new building on Broadway.

The assessment identifies a Zone of Visual Influence (the area from which the development is clearly visible) and assesses the impact of the development on views from receptors within the ZVI. The assessment also identifies and assesses any key distant views which will be impacted upon.

The Zone of Visual Influence (ZVI) sits tightly around the site as views of the development are constricted by the surrounding buildings. The key distant views of the site are from the western approach to the city looking down Broadway.

Assessment
Visual impacts arising from the proposed development range from moderate adverse to moderate beneficial. The majority of impacts are classed as slight adverse. There are no major adverse impacts as the development is of an appropriate scale to match the existing urban townscape.

The adverse visual impacts are predominantly related to 'built' receptors- residential, commercial or educational properties. The major cause of these adverse visual impacts is the loss of views for receptors, and the increase in built form within their view.

The beneficial visual impacts are predominantly related to public realm receptors (users of the public realm), the main cause being an improved perception of safety within the public realm (see page 31).

Management and Mitigation
In order to mitigate adverse visual impacts, architectural techniques to break down the perceived scale and massing of the proposed built form should be utilised. The facades of the buildings will be prominent features in views from many of the receptors so high quality architectural detailing will be important in mitigating adverse impacts.

It is a generally accepted view that the existing 'brutalist' architectural style of CB01 and CB02 is unattractive, and so new contemporary design should help to mitigate any adverse impacts.

Active ground floor uses and related streetscape/public realm design will enhance beneficial impacts upon the public realm receptors.

The retention or replacement of street trees is an important factor in integrating the development into the surrounding context.

INTRODUCTION

This Visual Impact Assessment (VIA) report forms part of a suite of technical studies to provide the baseline data for a Part 3A application for the proposed UTS Concept Plan. The Concept Plan provides a framework for refurbishment and new build works for the UTS city campus until 2013. This VIA has been prepared for UTS.

PURPOSE OF REPORT

The purpose of this report is to provide an objective assessment of:

- The visual impacts of the proposed development;
- The means by which such impacts might be mitigated through the appropriate design of the development.

The report has been prepared in such a manner that it may inform the future design process and be used as part of an iterative design process.

SCOPE AND LIMITATIONS

The assessment is concerned with the Broadway precinct of the Concept Plan.

As a framework document, the focus is on the use, size and massing of the buildings, not architectural detailing. Consequently this assessment is limited to the broad visual impacts of the built form size and massing, based on the 3D block modelling within the Concept Plan.

The assessment takes into account the Frasers development (on the assumption it will be completed prior to the development of the UTS Concept Plan) and includes it within the baseline study. The report assesses the cumulative impact of the UTS Concept Plan and the Frasers development together, and also includes potential visual impacts on receptors within the Frasers development. The information used in the assessment for the Frasers development is based upon the 'Preferred Project Report Modification to Concept Plan October 2008'.

The report has been based on a professional assessment of the local townscape character, the visual qualities of the locality and site as well as the visual impacts of the proposed development.

REPORT METHODOLOGY

The methodology adopted and adapted for this visual impact assessment is modelled on the methodology outlined in 'Guidelines for Landscape and Visual Impact Assessment' (GLVIA) prepared by the Landscape Institute (UK) and The Institute of Environmental Management and Assessment.

TERMS USED IN THIS REPORT

The following provides a brief explanation of the meanings of some terms and abbreviations that appear in this report and that are commonly used in Visual Impacts Assessments:

- **Visual Receptors** are the public or community at large who would have views of the subject site either by virtue of where they live and/or work or from transport routes, paths, lookouts and the like.
- **Zone of Visual Influence (ZVI):** the ZVI is the area from which the development is visible and directly impacts upon the visual receptors.
- **Visual Accessibility:** the numbers of people that would regularly view the site. High visual accessibility would include locations from which large numbers of people would view a subject site, such as from a major highway or dense urban area.
- **Visual Sensitivity:** the degree to which a given landscape can absorb change (from the proposed development) without significant detrimental effects. High sensitivity implies that even small changes in the view would alter the key characteristics of that view.
- **Magnitude of change:** Degree of change in the composition or arrangement of the view. Magnitude of change is a quantitative assessment of view composition- no judgement of quality is made.

Note that all of these definitions relate to measurable and non-subjective aspects of visibility and impact.

LOCAL CONTEXT

TOWNSCAPE CONTEXT

The site is located on the southern edge of the Sydney CBD, fronting Broadway, Thomas Street, Wattle Street, Harris Street, and the Ultimo Pedestrian Network. The local townscape character is high density mixed use, including residential, commercial, entertainment and education uses. Broadway is a major transport route (including bus route) and an important commercial corridor.

The public realm comprises the local streetscape and is of a medium-low quality, with numerous visual detractors (disorganised street furniture/signage clutter etc) and a lack of unity throughout the area arising from piecemeal development and improvements. There are several mature street trees, including fig and plane trees which lend the area a pleasant green character.

Views of the site are generally only apparent within the immediate vicinity as surrounding buildings quickly block it from view moving away from the site. There is an important distant view from the western approach to the city along Broadway. The UTS tower is clearly visible from here and is an important local landmark.

The main receptors within the locality are commercial uses, including office and retail space, residential apartments (including serviced apartments and student accommodation), education/campus buildings and the public realm.

PLANNING CONTEXT

The Broadway precinct sits within the Central Sydney – Ultimo/Pyrmont Boundary of the City of Sydney LEP 2005, and falls under the Urban Development Plan for Ultimo-Pyrmont Precinct.

The Broadway precinct is currently zoned Residential - Business in the City of Sydney LEP 2005. The objective of this zone is to create a diverse inner-urban area supporting a wide range of complementary uses encouraging sustainable travel behaviour.

The LEP contains certain aims which are relevant to this VIA, specifically:

- 12 (g): protection and enhancement of the quality and amenity of the public domain - the parks, places, streets and lanes.
- 12 (q): protection and enhancement of views and Vistas to the harbour, parkland and buildings and places of historic and aesthetic significance.
- 26 (2) (c): In considering whether proposed development exhibits design excellence, the consent authority must have regard to the following matter: whether the new development detrimentally impacts on view corridors identified in the relevant development control plan.

The precinct falls under the Central Sydney DCP (1996) which also contains policies relevant to this VIA, specifically:

- 2.8 Views Strategy:
  - To enhance vistas along city streets by sensitive building design.
  - To protect silhouettes of the tops of major heritage buildings as seen against the sky.

THE SITE AND PROPOSED DEVELOPMENT

The UTS city campus comprises a range of buildings which vary in architectural style and quality. The most prominent is the tower of CB01, which along with CB02 presents identifiable 1970s brutalist architecture, and inactive and unattractive facades onto the surrounding streets.

Other buildings within the precinct include CB10, a large 1950s building which presents minimal active frontage onto the public streetscape, and CB04, which was partly redeveloped in 2003/4 but offers minimal street activation. There is very little active frontage presented to the surrounding streets.

The landscape of the precinct is generally limited to Alumni green, which is an empty green space comprising some connecting concrete paths and grass areas. There are sections of high brick wall and shrub beds along Broadway which present a very inactive and unwelcoming frontage to the streetscape.

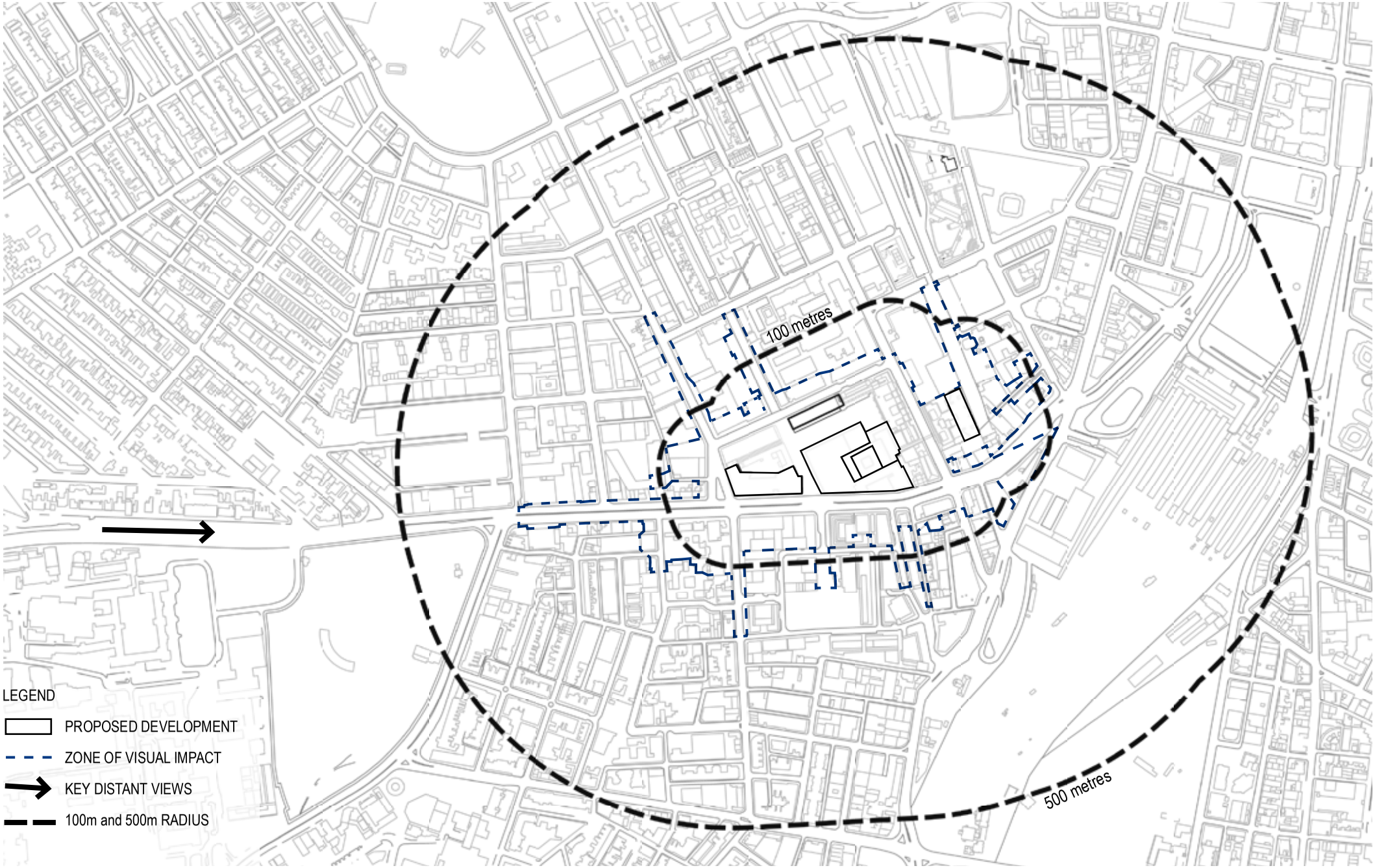
UTS BROADWAY PRECINCT CONCEPT PLAN

The Concept Plan involves the demolition, construction and extension of certain buildings on the Broadway Precinct to enable UTS to provide an additional 84,750 m2 of gross floor area of education, social and sporting facilities, including student housing. The proposal will also enhance existing open space and improve pedestrian, bicycle and vehicular access into the Campus. The project will deliver facilities for up to 15,000 EFTSL (equivalent full time student load) on the campus by 2015, up from 12,200 in 2008.

Concept approval is sought for the following:

- Demolition of existing Building 11 (81 Broadway), Building 12 (113 Broadway) and Building 13 (115 Broadway).
- Building 1 – extension to podium of existing building to a height of 22.47 metres to provide an additional 4,050 m2 of gross floor area for educational and cultural uses.
- Building 2 – extension to, and refurbishment of, existing building to a height of 24.24 metres to provide an additional 6,750 m2 of gross floor area for educational uses.
- Building 3 – modifications to existing building to provide café or retail uses on Level 1.
- Building 4 – modifications to existing building to provide café, retail uses or public facilities on Level 1.
- Building 6:
  - extension and modifications to Levels 1-7 of the existing building to provide approximately 5,950 m2 of gross floor area for educational, retail or café uses;
  - construction of a new 69.20 metre high extension to provide approximately 19,300 m2 of gross floor area for student accommodation;

  - new pedestrian link between Harris Street and the Ultimo Pedestrian Network through Building 6.
- Building 10 – modifications to existing building to provide vehicular access into the new Broadway Building at basement level, and pedestrian access at ground and upper levels.
- Broadway Building – construction of a new 44.47 metre high building to provide 34,650 m2 of educational, and café or retail uses plus basement car parking for approximately 160 relocated spaces.
- Thomas Street Building – construction of new 27.10 metre high building to provide 10,000 m2 of gross floor area for educational, cultural and café or retail uses.
- Alumni Green:
  - landscaping;
  - below ground book storage vault (2,250 m2 of gross floor area);
  - below ground multi-purpose sports hall (1,800 m2 of gross floor area).
- Public domain improvements to Broadway and Thomas, Harris, Wattle and Jones Streets.



CLOUSTON associates

LANDSCAPE ARCHITECTS • URBAN DESIGNERS • LANDSCAPE PLANNERS • 6A WETHERILL STREET • PO BOX 44 • LEICHHARDT • NSW 2040 • sydney@clouston.com.au • TELEPHONE (02) 9569 3388 • FACSIMILE (02) 9569 3523

CLIENT : University of Technology, Sydney

1:7500 @ A4

University of Technology Visual Impact Assessment

NS 1044 D01

LOCAL CONTEXT AND KEY VIEWS

09.03.09 issue C

CLOUSTON associates

CLIENT : University of Technology, Sydney

1:3000 @ A4

University of Technology Visual Impact Assessment

NS 1044 D02

VISUAL IMPACT RECEPTOR TYPES

09.03.09 issue C

LANDSCAPE ARCHITECTS • URBAN DESIGNERS • LANDSCAPE PLANNERS • 6A WETHERILL STREET • PO BOX 44 • LEICHHARDT • NSW 2040 • sydney@clouston.com.au • TELEPHONE (02) 9569 3388 • FACSIMILE (02) 9569 3523

SITE PHOTOGRAPHS (SEE DRAWINGS D03 & D04 FOR LOCATION)
The equivalent view has been created from the 3D model to demonstrate the existing site and the proposed development

Photo 1a

Model View 1b

Photo 2a

Model View 2b

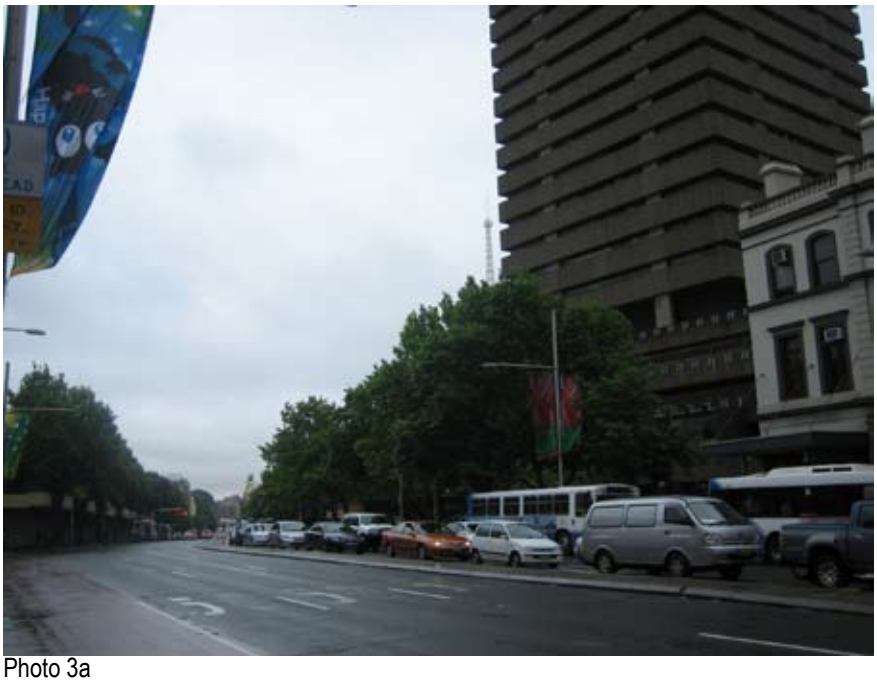


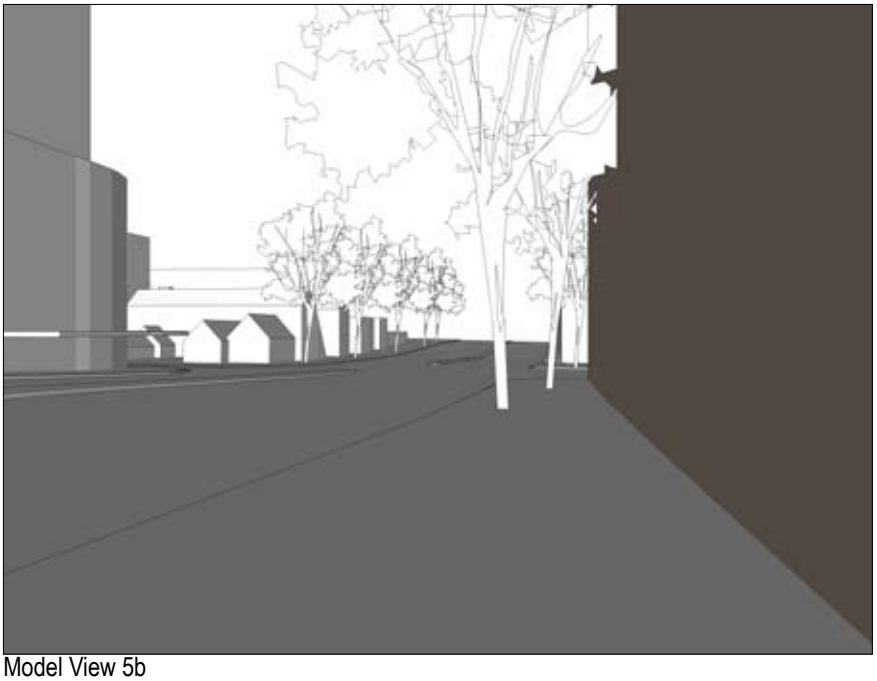
Photo 3a

Model View 3b

Photo 4a

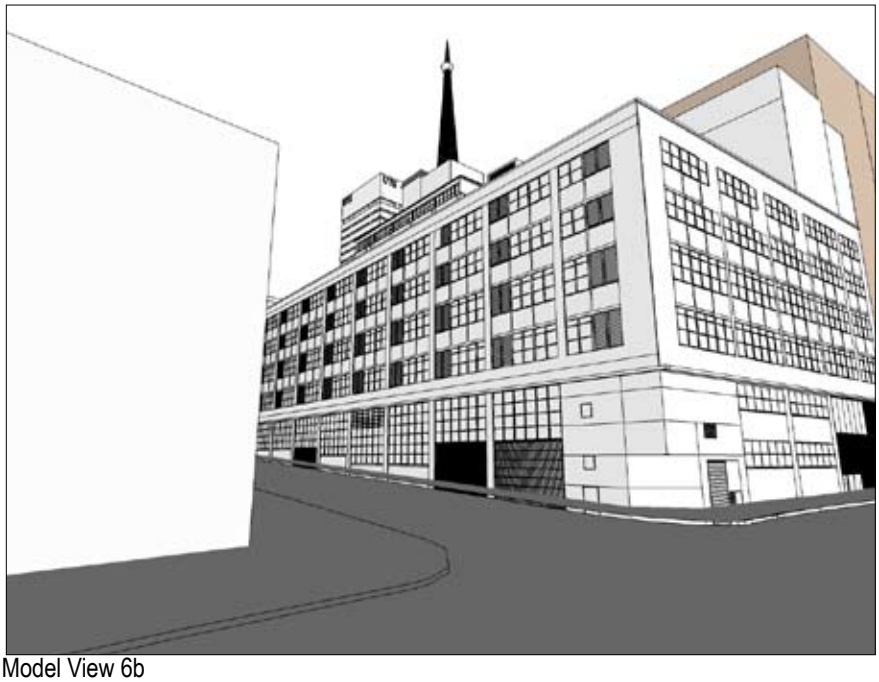
Model View 4b

Photo 5a



Model View 5b

Photo 6a



Model View 6b

Photo 7a

Model View 7b

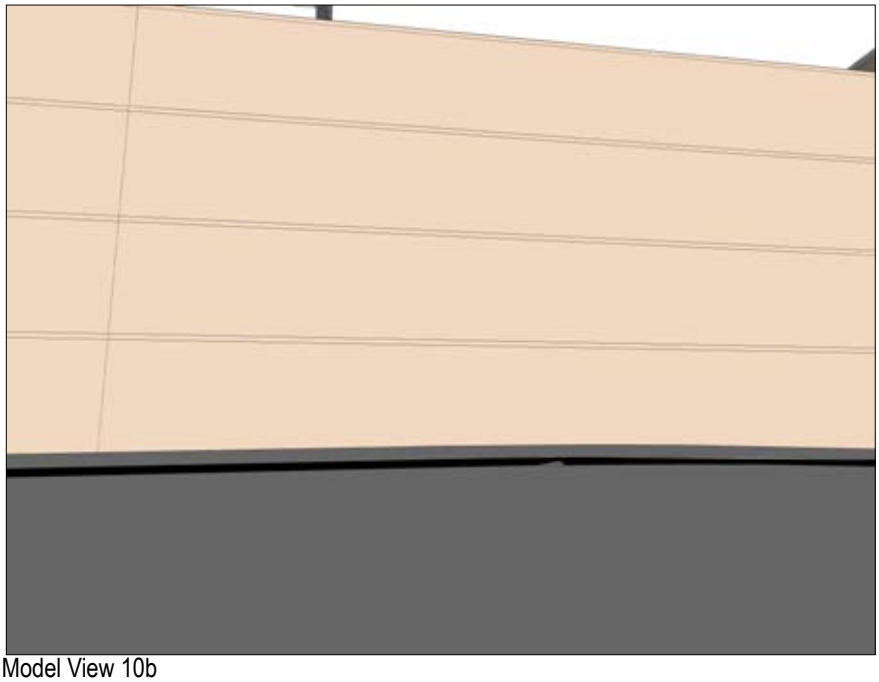
Photo 8a

Model View 8b

Photo 9a

Model View 9b

Photo 10a



Model View 10b

Photo 11 - Long distance view from the west

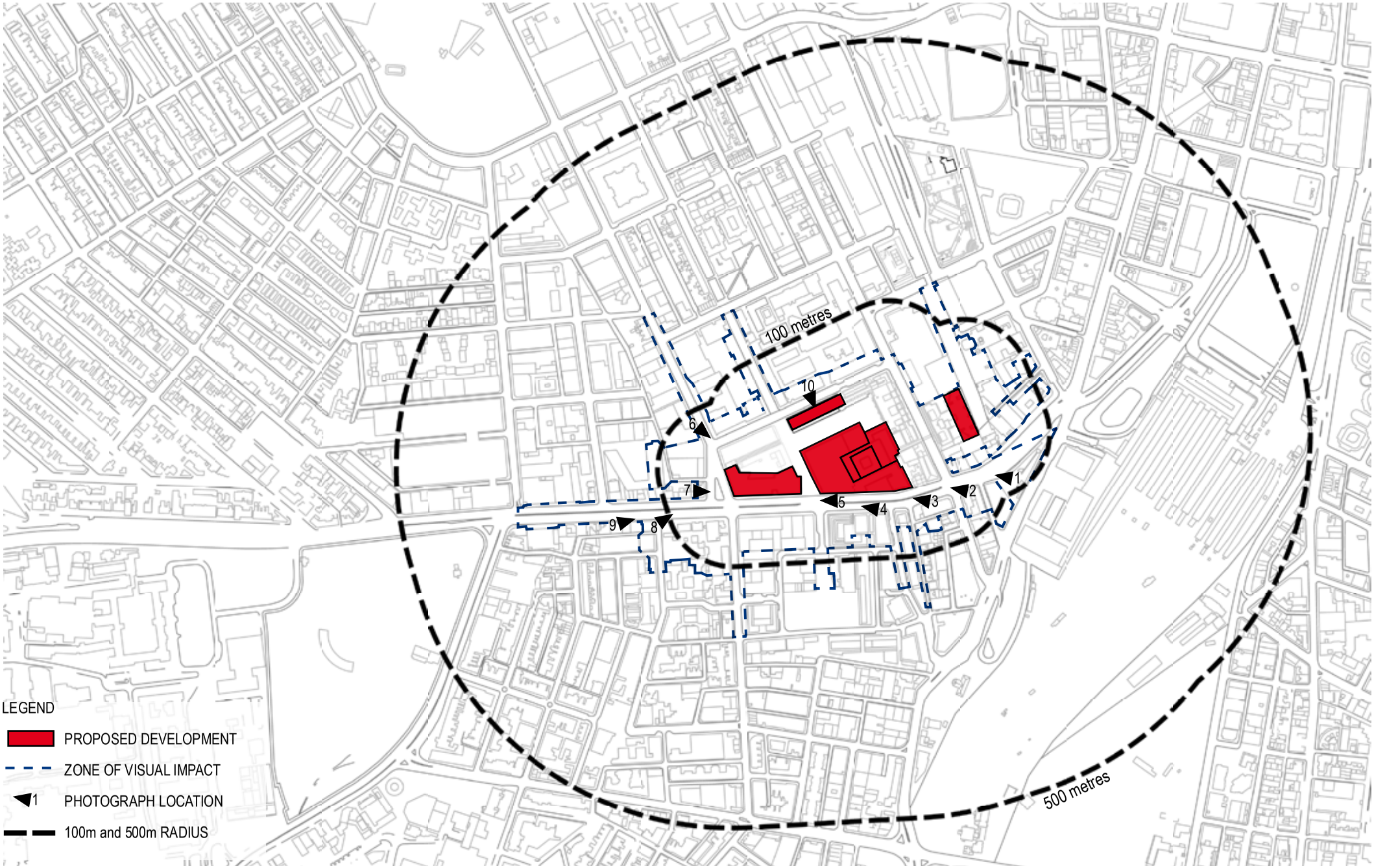
Photo 12 - Long distance view from the west

Photo 13 - Long distance view from the north west

Photo 15 - Long distance view from the north

Photo 14 - Long distance view from the south west

Photo 16 - Long distance view from the south



CLOUSTON associates

LANDSCAPE ARCHITECTS • URBAN DESIGNERS • LANDSCAPE PLANNERS • 6A WETHERILL STREET • PO BOX 44 • LEICHHARDT • NSW 2040 • sydney@clouston.com.au • TELEPHONE (02) 9569 3388 • FACSIMILE (02) 9569 3523

CLIENT : University of Technology, Sydney

1:7500 @ A4

University of Technology Visual Impact Assessment

NS 1044 D03

LOCATION OF PHOTOGRAPHS A

09.03.09 issue C

CLOUSTON associates

LANDSCAPE ARCHITECTS • URBAN DESIGNERS • LANDSCAPE PLANNERS • 6A WETHERILL STREET • PO BOX 44 • LEICHHARDT • NSW 2040 • sydney@clouston.com.au • TELEPHONE (02) 9569 3388 • FACSIMILE (02) 9569 3523

CLIENT : University of Technology, Sydney

University of Technology Visual Impact Assessment

NS 1044 D04

LOCATION OF PHOTOGRAPHS B

09.03.09 issue C

VISUAL IMPACT ASSESSMENT

Due to the dense urban context there are a vast number of receptors with a view of the proposed development. It must be acknowledged that most of these receptors from where the development is visible will incur such a minor change in their view that the visual impact can be classed as negligible.

The assessment identifies an immediate ZVI and the receptors within it which will be directly and measurably impacted upon. The assessment also identifies any key distant views which will be impacted upon.

Table 1.1 and drawing D05 set out the visual impacts of the proposed development and the criteria and thresholds used in assessing the impacts. To provide consistent assessment the evaluation criteria are assessed on a five point scale of high, medium-high, medium, low-medium and low. The impacts range from moderate beneficial impacts to moderate adverse impacts. There are no major adverse visual impacts arising from the proposed development as it is of an appropriate scale and character to match the existing urban townscape.

Together, the individual buildings of the Concept Plan create cumulative impacts upon the receptors within the ZVI, however to summarise they have been grouped according which building they are most affected by:

CB06:

CB06 is relatively well contained by its surrounding buildings, however due to the proximity of these surrounding buildings, it creates several moderate adverse impacts by blocking their views.

Moderate Adverse

- Most receptors around CB06 receive moderate adverse visual impacts as CB06 will block out views over the city and add extensive, dominant built form into the view. Views of the open air basketball court, which provides visual interest and variety will be blocked.
  Receptors effected: 2, 3, 7, 8, 54.

Slight Adverse

- Some receptors receive slight adverse impacts as although they also lose views over the city and suffer increasingly prominent built form within their view, the development only affects a small section of the view, usually on an oblique angle.
  Receptors effected: 4, 5, 6, 9, 10, 55.

Negligible

- CB06 is visible from the adjacent section of Harris Street, however it is well outside the usual field of view. You must intentionally look up and over the UTS and ABC buildings to see only a minor addition to the skyline. This impact is minor enough to be classed as negligible.
  Receptors effected: 53.

CB01 AND CB02 PODIUM EXTENSIONS AND NEW BROADWAY BUILDING:
Located on a main route, the extensions to the CB01 and CB02 podium and the new Broadway building create the majority of the impacts in the study. Impacts upon residential, commercial and education receptors are adverse as the impacts relate to loss of views. Impacts upon the public realm include beneficial impacts, which are mainly a result of an improved perception of safety (see page 31). This emotional response to the view is subjective, however it is an important factor in determining the visual impact of the development and is assessed using objective criteria and professional experience.

Moderate Adverse

- The few moderate adverse impacts are caused by a combination of a significant increase in built form in the foreground (ten storey's as opposed to the existing two) which blocks views, and a loss of the smaller architectural scale of the existing buildings and open space with the appearance of large scale massing.
  Receptors effected: 21, 25, 32, 34.

Slight – Moderate Adverse

- The receptors which receive slight – moderate adverse impacts are predominantly low sensitivity commercial receptors which experience an increase in built form with the foreground of the view.
  Receptors effected: 19, 20a, 33.

Slight Adverse

- Most receptors which receive slight adverse impacts are commercial and public realm receptors with views that incur only minor changes in composition; the main impacts are minor loss of views down Broadway and more prominent built form along the Broadway frontage. Residential receptors on the upper floors of the Frasers development also receive slight adverse impacts as the lower parts of their panoramic city views will increase in built form massing.
  Receptors effected: 1, 11, 12, 13, 14, 15, 16, 17, 18a, 20b, 22, 23, 24, 26, 27, 28 29, 30, 31, 35, 40, 42.

Negligible

- For the public realm of Wattle Street, the Broadway building creates only a very minor change in view composition against the backdrop of the Frasers development. Some residential receptors of the Frasers development have very minor changes in view composition in the lower part of wide panoramic city views. These changes are so minor as to be classed as negligible
  Receptors effected: 18b, 48

Slight Beneficial

- Public realm receptors receive slight beneficial impacts as the proposed development will provide a clearer and better defined termination to vistas along certain streets perpendicular to Broadway. The section of Wattle Street adjoining Broadway receives slight beneficial impacts due to the increased perception of safety created by the active frontage.
  Receptors effected: 43, 44, 45, 46.

Moderate Beneficial

- The public realm of Broadway which this section of development fronts onto receives moderate beneficial impacts due to the active frontages proposed along Broadway. The active frontages provide visual cues that natural surveillance is provided along this section of the street, which creates an increased perception of safety for users of the public realm. This is an indirect impact upon the receptor as it arises from an emotional response to the view, however it is an important impact.
  Receptors effected: 41.

THOMAS STREET BUILDING:

The visual impacts arising predominantly from the Thomas Street building are limited to the public realm of Thomas Street and buildings fronting onto it. As the building is located on existing green space, the impacts are predominantly adverse due to a loss of views.

Moderate Adverse

- The buildings directly opposite the Thomas Street building receive moderate adverse impacts as their current view of green space is lost to a view of built form in the immediate foreground.
  Receptors effected: 37, 38.

Slight / Moderate Adverse

- The public realm adjacent to the Thomas Street building receives slight - moderate adverse impacts as the current view of green space is lost to a view of built form in the immediate foreground, however this is offset by an improved perception of safety created by the proposed active frontage.
  Receptors effected: 51.

Slight Adverse

- The receptors with oblique views of the Thomas Street building receive slight adverse impacts as oblique views of green space are lost to built form.
  Receptors effected: 36, 39, 49, 52.

Negligible

- The Thomas Street and Broadway buildings makes only very minor changes in view composition, in a view that is heavily filtered by intervening street trees along the pedestrianised section of Jones Street.
  Receptors effected: 50.

IMPACTS UPON ICONIC VIEWS OF CB10 RADIO TOWER

The radio tower atop Building 10 forms an iconic visual landmark within this area of the city. Views of the mast occur mostly within the immediate ZVI due to the dense urban context of the area in which views are quickly blocked by the high number of tall buildings around. However there are some important long distance views of the radio tower from key roads to the north, east, south and west. In general, these long distance views are not impacted upon as the proposed development is not as tall as the radio tower, and so cannot obscure views of it.

Views from the immediate ZVI

- Some views of the tower from the immediate ZVI will be reduced or partially obscured by the proposed development. Views from Broadway will be most affected as the Broadway Building and the CB01 and CB02 extensions will block or partially block views of the tower. Only views directly adjacent to the development will lose their entire view of the tower; within a short distance it will be visible again over the proposed development as it is taller than the proposed buildings.

- Views of the radio tower from the north and east of the ZVI will remain largely unaffected as the bulk of development is proposed along Broadway and so will not block the views. The Thomas Street building will not block views of the tower due to its low height relative to the radio tower.

Views from the North (Photo 13 and 15)

- Views of the radio mast from the north are not impacted upon as the tallest buildings of the proposed development are located to the south (Broadway Building) and east (CB06) of the radio mast, and therefore cannot obscure views of the tower from the north.

Views from the East

- Due to the size and density of the buildings within the CBD, views of the radio tower are rare from the east and north east. The views which are available will not be impacted upon as the proposed development is not as tall as the tower and so will not block views of it.

Views from the South (Photo 14 and 16)

- Views of the radio mast from the south will be in part blocked by the Frasers development, however those views which are not will not be impacted upon by the proposed UTS development as the proposed development is not tall enough to block views of the radio tower.

- The radio tower forms a clear landmark in views from the Princes Highway to the south west. The Broadway Building will block CB10 from view but will not obscure views of the radio tower itself as the radio tower is taller than the proposed development.

Views from the West

- In views along Broadway from the west the radio tower is clearly visible against the sky or the CB01 tower depending on the viewpoint. These views will not be impacted upon as the proposed development, in particular the Broadway Building adjoining CB10 is not tall enough to obscure views of the tower.

IMPACTS SPECIFIC TO CONSTRUCTION PERIOD

Visual impacts arising from the construction phase are difficult to determine at this early concept stage, however it can be assumed several elements may be visible during the construction period. These include:

- Cranes and other plant used for construction.
- Building contractor's compound and contractor's parking.
- Construction signage.
- Temporary excavations, stockpiling and temporary erosion control measures.
- Major construction vehicles accessing and exiting the sites.
- Disturbance to ground for trenching for services.
- Lighting of construction during dark hours and for security.

Whilst the impacts from these elements is likely to be adverse, they are of a temporary duration which reduces their significance upon the visual amenity of the locality.

IMPACTS SPECIFIC TO OPERATION AND MAINTENANCE

Other elements may be visible in the day to day life and maintenance of the proposed development once completed. These include:

- Lighting to public realm and other security lighting.
- Ambient light from new buildings.

These impacts can mostly be mitigated by lighting design and appropriate location of planting.

CLOUSTON associates

LANDSCAPE ARCHITECTS • URBAN DESIGNERS • LANDSCAPE PLANNERS • 6A WETHERILL STREET • PO BOX 44 • LEICHHARDT • NSW 2040 • sydney@clouston.com.au • TELEPHONE (02) 9569 3388 • FACSIMILE (02) 9569 3523

CLIENT : University of Technology, Sydney

1:3000 @ A4

University of Technology Visual Impact Assessment

NS 1044 D05

VISUAL IMPACT RECEPTORS

09.03.09 issue C

TABLE 1.1: VISUAL IMPACT RECEPTOR IMPACT ANALYSIS

RECEPTOR	RECEPTOR TYPE	RECEPTOR SENSITIVITY	DISTANCE	EXTENT OF VIEW	MAGNITUDE OF CHANGE	VISUAL SIGNIFICANCE	VISUAL IMPACT	COMMENTS
1	R	H	H	L	L	Slight	Adverse	Street views of Broadway are obstructed by extension to CB01. Only the lower part of a panoramic city view is obstructed.
2	E	L	H	H	H	Moderate	Adverse	Loss of views over Harris St and loss of sky from view. Major increase in built form with CB06 prominent in foreground.
3	E	L	H	H	H	Moderate	Adverse	Loss of views over Harris St and loss of sky from view. Major increase in built form with CB06 prominent in foreground.
4	E	L	H	L	M	Slight	Adverse	Oblique middle distance view of the UTS campus is obstructed by CB06 in the foreground.
5	C	L	H	L	M	Slight	Adverse	Oblique middle distance view of the UTS campus is obstructed by CB06 in the foreground.
6	R	H	M	M	M	Slight	Adverse	Direct but restricted view of UTS campus is obstructed by CB06. Only a small portion of the view is effected.
7	E	L	H	H	H	Moderate	Adverse	Entire view is blocked by CB06 in foreground.
8	R	H	M/H	H	H	Moderate	Adverse	View of UTS Campus and Frasers is blocked by CB06. Approximately ¼ of the view to the west is affected.
9	C	L	H	L	M	Slight	Adverse	Oblique views of city roofscape are blocked by CB06 in foreground.
10	R	H	M	L	L	Slight	Adverse	Restricted views of city roofscape are blocked by CB06.
11	C	L	H	L	L	Slight	Adverse	Minor loss of street view along Broadway. Minor loss of sky from view.
12	C	H	H	L	L	Slight	Adverse	Minor increase in built form within oblique view. Minor loss of sky from view.
13	C	L	H	L	M	Slight	Adverse	Increase of built form in foreground and middle distance.
14	C	L	H	H	M	Slight	Adverse	Increase of built form in foreground. Increased height of built form.
15	C	L	H	M	L	Slight	Adverse	Minor increase of built form in foreground. Increased height of built form.
16	R	H	H	L-M	L	Slight	Adverse	Minor increase of built form in foreground. Increased height of built form.
17	C	L	H	H	L	Slight	Adverse	Change in view composition - CB01 frontage comes to foreground. Increase in built form.

RECEPTOR	RECEPTOR TYPE	RECEPTOR SENSITIVITY	DISTANCE	EXTENT OF VIEW	MAGNITUDE OF CHANGE	VISUAL SIGNIFICANCE	VISUAL IMPACT	COMMENTS
18a	C <25m	L	H	H	L	Slight	Adverse	Change in view composition - CB01 frontage comes to foreground. Increase in built form.
18b	R >25m	H	H	L	L	Negligible	N/A	Very minor change in lower part of panoramic city view.
19	C	L	H	H	L	Slight-moderate	Adverse	Change in view composition - CB02 frontage comes to foreground. Increase in built form with new floor on CB02.
20a	C <25m	L	H	H	L	Slight-moderate	Adverse	Change in view composition - CB02 frontage comes to foreground. Increase in built form with new floor on CB02.
20b	R >25m	H	H	L	L	Slight	Adverse	Minor increase in built form within lower part of panoramic city view.
21	C	L	H	H	H	Moderate	Adverse	Built form appears more prominent in the foreground. The finer grain of existing buildings is replaced by large scale massing. Views from upper storeys over the city are obstructed.
22	E	L	H	L	L	Slight	Adverse	Minor loss of view. The finer grain of existing buildings is replaced by large scale massing. Only end windows are impacted upon.
23	E	L	H	L	L	Slight	Adverse	Minor loss of view. The finer grain of existing buildings is replaced by large scale massing.
24	E	L	H	L	L	Slight	Adverse	Minor loss of view. The finer grain of existing buildings is replaced by large scale massing. Some loss of sky from view.
25	E	L	H	M	H	Moderate	Adverse	The finer grain of existing buildings is replaced by large scale massing. Some loss of sky from view.
26	E	L	H	L	M	Slight	Adverse	The finer grain of existing buildings is replaced by large scale massing in oblique view. Some loss of sky from view.
27	E	L	H	L	M	Slight	Adverse	The finer grain of existing buildings is replaced by large scale massing in oblique view. Some loss of sky from view.
28	C	L	M	L	L	Slight	Adverse	The finer grain of existing buildings is replaced by large scale massing in oblique filtered view. Some loss of sky from view.
29	C	L	M	L	L	Slight	Adverse	Built form becomes more prominent in the middle distance. Views from upper storeys only.
30	C	L	M	L	L	Slight	Adverse	Built form becomes more prominent in the middle distance. Views from upper storeys only.
31	C	L	M	L	L	Slight	Adverse	Built form becomes more prominent in the middle distance. Oblique views only.

RECEPTOR	RECEPTOR TYPE	RECEPTOR SENSITIVITY	DISTANCE	EXTENT OF VIEW	MAGNITUDE OF CHANGE	VISUAL SIGNIFICANCE	VISUAL IMPACT	COMMENTS
32	E	L	H	M	H	Moderate	Adverse	Major loss of sky from view. Broadway building prominent in foreground. View is filtered by large fig tree.
33	R	H	H	M	L	Slight-Moderate	Adverse	Loss of street view of Broadway. The finer grain of existing buildings is replaced by large scale massing.
34	C	L	H	M	H	Moderate	Adverse	Major loss of sky from view. Broadway building prominent in foreground. View is filtered by large fig tree.
35	R	H	H	L	L	Slight	Adverse	Loss of street view of Broadway. The finer grain of existing buildings is replaced by large scale massing within panoramic city view. Only apartments at the end of the block are impacted upon.
36	E	L	H	L	M	Slight	Adverse	Oblique view of green space blocked by Thomas Street Building.
37	E	L	H	H	M-H	Moderate	Adverse	View of green space is blocked by Thomas Street Building in direct foreground.
38	E	L	H	H	H	Moderate	Adverse	View of green space is blocked by Thomas Street Building in direct foreground.
39	E	L	H	L	M	Slight	Adverse	Oblique view of green space blocked by Thomas Street Building.
40	PR	M	H	L	L	Slight	Adverse	New façade creates prominent new frontage onto Broadway. Increased street enclosure leads to minor loss of street view along Broadway. The top of CB06 is visible above the street facades however it does not impact upon the view as it is out of the natural line of sight for the viewer, and effects only a small portion of the view.
41	PR	M	H	H	H	Moderate	Beneficial	CB01 and CB02 and the new facade create a prominent new frontage onto Broadway and increased street enclosure. The new built form is more appropriate in scale to the Frasers development to create a streetscape with balance in the height to width ratio. The main beneficial impact is the active frontage onto Broadway which provides visual cues to an increased perception of safety.
42	PR	M	M/H	L	L	Slight	Adverse	Broadway building creates a built form scale which matches the Frasers development with increased street enclosure. Views of the UTS tower, an important local landmark are partially blocked. Broadway building creates an abrupt jump in built form scale and grain at Wattle St (2 storeys to approx 13 storeys), with no transition. Views are largely filtered by street furniture and trees.
43	PR	M	M/H	M	L	Slight	Beneficial	Minor change to composition of the view - Broadway building creates a stronger and better defined termination to the view down the street.
44	PR	M	M/H	M	L	Slight	Beneficial	Minor change to composition of the view- CB02 creates a stronger and better defined termination to the view down the street.

RECEPTOR	RECEPTOR TYPE	RECEPTOR SENSITIVITY	DISTANCE	EXTENT OF VIEW	MAGNITUDE OF CHANGE	VISUAL SIGNIFICANCE	VISUAL IMPACT	COMMENTS
45	PR	M	M/H	M	L	Slight	Beneficial	Minor change to composition of the view- new facade creates a stronger and better defined termination to the view down the street.
46	PR	M	M/H	M	L	Slight	Beneficial	Minor change to composition of the view- Building 1 creates a stronger and better defined termination to the view down the street.
47	PR	M	H	M	M	Slight	Beneficial	Major loss of sky from view. Broadway building prominent in foreground. View is filtered by large fig tree. Active frontage provides visual cues to an increased perception of safety.
48	PR	M	M/H	L	L	Negligible	N/A	Broadway building makes a barely perceivable change in view composition against the backdrop of the Frasers development.
49	PR	M	H	M	M	Slight	Adverse	Thomas Street Building creates street enclosure and provides a continuation of the built form along streetscape. Oblique views of green space are lost.
50	PR	M	H/M	L	L	Negligible	N/A	The Broadway building and Thomas Street building make a barely perceivable change in view composition.
51	PR	M	H	H	H	Slight-Moderate	Adverse	Active frontage of the Thomas Street building provides visual cues to an increased perception of safety. Direct foreground views of green space are lost. Pedestrianisation of Jones St removes traffic from view and adds an aesthetic quality for views from the section of the street adjoining Jones St.
52	PR	M	H	M	M	Slight	Adverse	Thomas Street Building creates street enclosure and provides a continuation of the built form along streetscape. Oblique views of green space are lost.
53	PR	M	H	L	L	Negligible	N/A	Views of CB06 are out of the direct line of sight as you need to look up over buildings fronting Harris Street to it. Very minor addition to the skyline.
54	PR	M	H	M	M	Moderate	Adverse	Existing built form grain is lost to large scale massing of CB06. Views of open air basketball court are lost. Significant new enclosure and loss of sky from the view creates a 'canyon' effect along UPN, with an uncomfortable height to width ratio of the public realm.
55	PR	M	M/H	L	L	Slight	Adverse	Existing built form grain is lost to large scale massing of CB06. Significant new enclosure and loss of sky from the view. Views are restricted by existing buildings.

TABLE 1.2: KEY TO VISUAL IMPACT RECEPTOR IMPACT ANALYSIS

Receptor Type	R: Residential, C: Commercial, E: Education, PR: Public realm
Receptor sensitivity	Each receptor type has an inherent sensitivity based on its expected use, and the duration of views experienced from it: • Residential- high: experienced regularly over long periods of time, residents develop a strong familiarity with the view. Viewers may have a personal investment in the property and consequently the view. • Public realm- medium: users of the public realm would have a high sensitivity as attention could be expected to be focused on the surrounding townscape, however the duration for which the view is experienced is usually temporary whilst moving through the public realm, reducing its impact. • Commercial / Educational- low: viewer's attention is expected to be focused on the related activity rather than the view.
Distance	The effect the development has on the view is related to the distance between the development and the receptor. The effects can be categorised as: • Within 100m- high • Within 500m- medium • Over 500m- low
Extent of view	The position of the development within the view. The development located in the direct line of sight has a higher impact than if it were located obliquely at the edge of the view. Whether the view of the development is filtered by vegetation etc. also affects the impact, as does the nature of the view (panoramic, restricted etc.). A small element within a panoramic view has less impact than the same element within a restricted or narrow view. The effects can be categorised as: • A direct view of the development or its presence in a restricted view- high • A direct view of the development within a panoramic view- medium • An oblique or filtered view of the development- low
Magnitude of change	Degree of change in the composition or arrangement of the view. Magnitude of change is a quantitative assessment of view composition- no judgement of quality is made. If the development will complement the existing elements within the view- i.e. buildings of a similar scale, location and appearance, the magnitude of change is low. If the development radically changes the nature or composition of the view, i.e. a view of open space is replaced by a view of large buildings, the magnitude of change is high. The magnitude of change can be categorised as: • Elements of the view (e.g. built form, open space, streetscape) and composition of the view change- high • Elements of the view are unchanged but composition or arrangement of the view changes- medium • Elements and composition of the view remain largely unaltered- low
Visual significance	A rating of visual significance based on the overall combination of the preceding factors (Receptor sensitivity, Distance, Extent of view, Magnitude of change). The significance is rated as major, moderate-major, moderate, slight-moderate, slight or negligible.
Visual impact	The nature of the visual impact may be **beneficial** or **adverse**, based on a transparent professional judgement of the qualitative nature of the view.

MITIGATION

The most effective mitigation measures for any form of potential visual impact are largely those that entail avoidance of impacts by site selection or reduction of impacts by site and built form design. The principal forms of effective mitigation for the site are as follows:

AVOIDANCE

Site selection; given that the site is zoned appropriately for development of this nature and that the location is urban in character, site selection is appropriate here.

REDUCTION

Reductions in impacts can be achieved through the design and massing of the buildings in particular and through built form and landscape design. To reduce adverse visual impacts, the following suggestions are made:

Layout

The current proposal has been arrived at through a design process which has explored various options for the layout and siting of the development, and concluded the best fit for the development on the site. This report therefore does not make suggestions as to the layout of the proposal.

Use

It is clear that active frontages create beneficial impacts upon the public realm. The design should therefore aim to maximize active frontages onto the public realm.

Built Form Design

The significant scale and massing of the proposed development is a stark contrast to some of the existing smaller scale buildings, specifically on the corner of Broadway and Wattle Street. The design of the blocks and their facades should consider this and break down the perceived scale and massing through treatment of facades, materials and colours etc. In this manner it would be possible to reduce the severity of various adverse impacts and aid the integration of the development with the surrounding context.

The new buildings should offer the potential to create beneficial visual impacts in places, and mitigate adverse impacts due to loss of views.

A requirement of the LEP for this site is to pursue ‘design excellence’, and in accordance with this it is likely that the development maybe be subject to a design competition in order to achieve an attractive architectural solution.

Landscape Design

The associated landscape works for the development are predominantly internal with the improvements to Alumni Green. The landscape should provide a cohesive setting for the new campus and integrate with the surrounding public realm. The streetscape around the external frontages should complement the active ground floor uses to create a pleasant and welcoming public realm, which will mitigate adverse impacts and enhance beneficial impacts, specifically those relating to perception of safety.

Street trees play an important role in retaining as far as possible the existing scale of the street and its green elements. Ensuring that the streetscape has regular and appropriate tree planting (either through retention or replacement where necessary) will ensure the development integrates with the surrounding context successfully.

CONCLUSION AND RECOMMENDATIONS

From the foregoing report a number of conclusions can be drawn on the Concept Plan that may also direct the design development phase of the project

The author's conclusions on the Visual Impact of the UTS Concept Plan may be summarised as follows:

- The type development is appropriate for existing context and planning zoning.
- The ZVI sits tightly around the site as views are constricted by the surrounding built form and the Frasers development. The key distant views of the site are along the western approach to city down Broadway.
- Visual impacts upon distant views of the UTS CB01 tower and radio tower are not impacted upon.
- Visual impacts arising from the proposed development range from moderate adverse to moderate beneficial.
- There are no major adverse impacts as the development is of an appropriate scale and character to match the existing urban townscape.
- The adverse visual impacts are predominantly related to 'built' receptors-residential, commercial or educational properties. The major cause of these adverse visual impacts is the loss of views for receptors, and the increase in built form within their view. A loss of smaller scale buildings and open space, and the appearance of large scale built form massing is also a factor in adverse impacts.
- The beneficial visual impacts are predominantly related to public realm receptors (users of the public realm), the main cause being improved perception of safety within the public realm.
- In order to mitigate adverse visual impacts, architectural techniques to break down the perceived scale and massing of the proposed built form should be utilised. The facades of the buildings will be prominent features in views from many of the receptors so high quality architectural detailing will important in mitigating adverse impacts.
- Active ground floor uses and related streetscape design will enhance beneficial impacts upon the public realm receptors.
- Street trees are an important factor in integrating the development into the surrounding context.