

0.0 BACKGROUND TO RESPONSE

This response to the GA NSW Comments has been prepared in consultation with Group GSA, Landscape Architects, who have prepared the amended and updated landscape drawings included, and with Morris Goding Access Consulting who have reviewed the Architectural drawings clarifying the accessible paths of travel and the full text of this response and have approved same.

1.0 ADDITIONAL INFORMATION REQUESTED

1.1 Extent of Retention of Existing Floor Plates & Facades

Please refer to drawings numbered SSDA-50 to SSDA-57 inclusive. These are the original SSDA drawing set with colour overlays and legends added to show clearly the following:

- the extent of existing floor plate retained
- the extent of existing floor plate retained but with new paving added over to amend floor levels
- the extent of new floor area elements added
- the extent of existing façade retained either untouched or with new windows installed to replace existing dilapidated windows but in the original openings
- the extent of existing façade retained but with openings for windows either enlarged or new windows added but within the existing exposed brutalist concrete frame and with retained masonry sills/wall planes
- the extent of the entirely new facades
- the extent of entirely new facades but constructed of face brickwork to match the existing face brickwork

1.2 Co-ordinated Architectural and Landscape Drawings

The following SSAD DA Architectural drawings have been amended and are now resubmitted to coordinate with the now developed and advanced landscape drawings:

- SSDA-02B Site Analysis Plan
- SSDA-03B Proposed Ground Floor Plan – All Buildings
- SSDA-05B Proposed Floor Plan/Level 2 - 25WWA & 25 WWB/
Level 1 - 25 WWC
- SSDA-06B Proposed Floor Plan/Roof Level – 25WWA/Level 3 –
25WWB/Level 2 – 25WWC
- SSDA-12B North Elevation South Elevation
- SSDA-13B East Elevation West Elevation
- SSDA-22B Materials and Finishes

SSD DA Response to GA NSW Comments

30 January 2018 Rev 3

SSDA-23 Materials Details
SSDA-24 Atrium Images

The following advanced Landscape drawings are now submitted as a part of the SSD DA submission:

25WWA-LND 1100-DA A	Ground Floor Courtyard Finishes Plan
25WWA-LND 1102-DA A	Ground Floor Courtyard Furnishings Plan
25WWA-LND 1103-DA A	Ground Floor Courtyard Softworks Plan
25WWA-LND 3100-DA A	Ground Floor Courtyard Sections/Elevations
25WWB-LND 1200-DA A	Ground Floor Atrium Finishes Plan
25WWB-LND 1202-DA A	Ground Floor Atrium Furnishings Plan
25WWB-LND 1203-DA A	Ground Floor Atrium Softworks Plan
25WWB-LND 1300-DA A	Level 1 Exhibition Hall Terrace Landscape Plans & Sections
25WWB-LND 1400-DA A	Level 6 Roof Garden (West) Landscape Plan Plan
25WWB-LND 1401-DA A	Level 6 Roof Garden (East) Landscape Plan Plan
25WWB-LND 1402-DA A	Level 6 Roof Garden (East) Planting Plan Plan
25WWB-LND 1403-DA A	Level 6 Roof Garden (West) Planting Plan Plan
25WWB-LND 3400-DA A	Rooftop Garden (East and West) Sections/Elevations
APP-LND 1000-DA A	Ground Floor Periphery Finishes Plan
APP-LND 1002-DA A	Ground Floor Periphery Softworks Plan

1.3 Short to Medium Term Landscape and Urban Design Intent at the Carpark/25WWC interface

1.31 Short to Medium Term Interface:

The large scale carparking area to the south of 25WWC is retained in the Short to Medium Term but the interface area is revised as follows:

- a sensibly scaled paved forecourt area is provided immediately to the south of (in front of) the entry podium to 25WWC to highlight this public entry point
- accessible use carparking spaces are provided to the east of this new paved forecourt area and directly access the accessible use walkway onto the podium at this southern entry
- new pedestrian use paving – raised kerb above the general carparking surface level – of 2800 mm minimum clear width is provided to the entire southern frontage of 25WWC with associated tree plantings and soft landscape elements to provide a landscaped curtilage for the new building element & to appropriately separate pedestrian & vehicular circulation.

SSD DA Response to GA NSW Comments

30 January 2018 Rev 3

- the new pedestrian use paving to the south of 25WWC connects at the eastern end with the existing - but redeveloped as a shared pedestrian vehicular link – Service Road which continues its function as a north/south site link but now in an enhanced paved and landscaped form and which connects both to the new semi enclosed Atrium east/west link and to the well used internal link running through W5C to the east and to the overland paving between W3A and W5C
- the new pedestrian use paving to the south of 25WWC connects at the western end with new paving that forms a part of the external north/south link to the west perimeter of the Arts Precinct and which therefore links to both the new Atrium, X5A, X5B, the Lotus Theatre and the existing elevated and open parking areas to the west

1.32 Long Term Interface:

The Macquarie University Master Plan proposes the relocation of the various on site open carparking areas to the perimeter of the site – this will ultimately remove the carparking area to the south of the new 25WWC building.

The area to the south of 25WWC will then become a landscaped forecourt that will be viewed as a part of the public domain of the Arts Precinct and 25WWC – this space will be developed to a future design brief but will contain a mixture of paved and landscaped surfaces in a new outdoor space that forms a part of the east/west secondary link proposed by the Master Plan in this area

1.4 Architectural & Landscape Drawings that Demonstrate Accessibility from the southern carpark to/from the southern entry of 25WWC

The accessible use access from the carparking area to the south of 25WWC is direct and straightforward as follows:

- the entry podium to the southern entry of 25WWC is effectively on grade with the eastern zone of new pedestrian paving along the southern face at the south eastern corner of the podium – therefore level accessible use access is provided at this location with a minimal (lower than 1:20) gradient to the podium and the new entry doors
- the entry level of 25WWC directly accesses a two way entry passenger lift at entry level that provides access to all floor levels of 25WWC and specifically including the major Ground Floor plane level that then visually and physically links 25WWC and 25WWB via the Atrium space with a simple and direct axial link that is centred on the Ground Floor Concierge point within 25WWB that services the entire Arts Precinct development
- the entry doors to 25WWC are centred on this lift and the open stair that

SSD DA Response to GA NSW Comments

30 January 2018 Rev 3

accesses the link to the ground floor plane so that equitable access is provided for people with a disability who use a mobility aid while the stairway provides all accessibility features for people with a disability who able to walk, such as with vision impairment.

1.5 Photomontages &/or 3D representation of the form, massing and articulation of the 25WWB/25WWC Atrium Spaces

Please refer to Drawing SSDA 24 – this includes a fully rendered digital image which is a direct view into the Atrium space from the western end looking east which illustrates the form, massing & articulation of both the 25WWB and 25WWC facades and the visual interaction of these elements with the higher level connecting link bridge located at the approximate mid point of the Atrium and linking the social and visual cores of both 25WWB and 25WWC.

This rendered image also clearly illustrates the visual interaction of the steel framed ETFE pillow roof structure over the Atrium with the Atrium space and the two defining building elements.

Simpler rendered 3D views extracted from the BIM model of the Arts Precinct development are also included on drawing SSDA 24 – one looking west from the western end of the Atrium as requested and a second view looking east from the western end – these two images can be read in the context of the refined fully rendered presentation quality digital image to suitably explain the form, massing & articulation of the Atrium space in response to the GA's request

1.6 Materials and Finishes Drawing

Architectural Drawing SSDA-22B has been upgraded to include more specific material coding and drawing SSDA 23 has been added to include photographs of the actual external Finishes Material Sample Board and the External Materials Schedule to illustrate all significant façade/external materials.

1.7 Sustainability Benefits, Initiatives & Opportunities of the Atrium Space

The Atrium Space's primary function is to serve as a linking and unifying element that helps create an Arts Precinct rather than a collection of functionally linked buildings while still supporting the secondary east/west linkage proposed for this location by the Master Plan.

However, the Atrium space does also have a number of sustainability benefits to the overall complex as follows:

SSD DA Response to GA NSW Comments

30 January 2018 Rev 3

- the northern façade of 25WWC is shaded by the Atrium roof allowing the deletion of extensive external sun shading louvres and the use of clear glazing to meet the transparency and visibility aims of the Arts Precinct in a sustainable and environmentally efficient manner
- the southern façade of the redeveloped 25WWB tower is protected by the ETFE Atrium roof enclosure allowing the use of a clear glazed facade and weather protecting the exposed externally mounted services ductwork that both articulate the façade and address the limited floor to floor height dimensions to allow the reuse of much of the existing tower floorplate which is a sustainable outcome - the external ductwork is visually concealed with simple aluminium panel clad horizontal elements that do not require extensive weatherproofing
- the largely weather protected nature of the Atrium allows the activation of this area on the ground plane which accommodates external breakout and conversation spaces, display areas and discussion group areas plus a small scale amphitheatre outside the Museum zone in the western section of the Atrium – this usable outdoor space is clearly visually defined as a functional element of the Arts Precinct and is therefore usable area gained in a cost effective and environmentally sound manner
- the ETFE roof itself is a lightweight solution – less than 1 kg per square metre roof weight excluding structure – this allows a lightweight and efficient steel framing solution of minimal material content and therefore minimum environmental footprint
- both wind modelling and thermal modelling studies have shown controlled air movement through the naturally ventilated Atrium space – the airflow velocities at the low level open east & west end do not require any wind velocity control measures and the thermal stack effect within the Atrium works efficiently in conjunction with the high level fixed louvres to the ends and to the highest point above the 25WWB tower roof plus the open southern roof terraces above 25WWC to promote cross flow ventilation that removes warmer rising air from the Atrium and therefore maintains comfortable temperatures within this naturally ventilated space
- the ETFE roof material itself is a recyclable material that can be melted and reconstituted to create new ETFE material at any stage of its life cycle. The ETFE roof material has a warranted life of 25 years but international experience and testing currently suggest that the material itself has an effectively unlimited life with no discernable UV degradation
- the ETFE roof of the Atrium has been documented to have a shading pattern photoprinted on the internal (lower) face of the upper sheet in the pillow which provides UV screening & solar radiation shading for the occupants of the Atrium, the southern and northern facades on 25WWB and 25WWC respectively and the users of the 25WWC roof terraces

SSD DA Response to GA NSW Comments

30 January 2018 Rev 3

2.0 GA NSW DESIGN RECOMMENDATIONS

2.1 Equitable Access Strategy

Please refer to the drawings numbered SSDA-40 to SSDA-47 inclusive which are the original SSDA drawings with coloured overlays and legends to clearly show the following:

- All internal and external accessible use circulation paths which link all elements of the proposed Arts Precinct and which link the Precinct to the primary frontages to Wallys Walk, the southern carpark, the redeveloped central courtyard, the Atrium space and perimeter circulation to the east and west
- The locations of accessible use vertical transport elements – lifts and chair/stair lifts - that address the changes in the existing floor levels of the retained building floor plates in an equitable manner

Specific comments in response to the items raised by the GA NSW are as follows:

- Equitable access is provided to all key axial routes – the circulation routes for the overall complex are visually axial and clearly readable within the architecture and equitable access is provided as a part of all of these major routes as can be determined from the colour overmarked plans
- The accessible use circulation leading from Wallys Walk to the central Ground Floor Concierge point & Lift Lobby in 25WWB is consistent in location and travel path with the general use circulation – full undercover access is provided via the covered colonnades of 25WWA for both accessible use and general circulation with a chair/stair lift provided to the stair at the change of existing floor level between 25WWA and 25WWB as shown on the attached colour overmarked drawings. Similarly direct non-covered access is provided across the stepped platforms of the redeveloped central courtyard with a series of 1:20 walkways and stairways. The accessible path of travel through and around the area is via the 1:20 gradient walkways.
- Internal circulation has been developed to be similarly equitable with the provision of two further chair/stair lifts to Level 1 of 25WWB at the existing changes of floor level to 25WWA to ensure consistency of circulation and equitable access to all central facilities
- The colonnade breakout spaces to the southern frontage of 25WWC are deliberately accessed from the internal Function Room - east of the southern entry - and the Seminar Room to the west of the southern entry as this is consistent with the function of these areas as there will be no access from the colonnade into these areas as they are deemed exempt. Consequently accessible use – the thresholds from the internal areas

SSD DA Response to GA NSW Comments

30 January 2018 Rev 3

that can access these breakout zones will be detailed to be fully accessible – is consistent with fully ambulant usage paths. The external steps that directly connect the entry podium to these breakout spaces are for maintenance and overflow emergency egress only and are not a part of the regular functional use of these areas and therefore it is submitted that the duplication of these elements in an accessible form is not required to meet accessibility objectives or equality.

2.2 Accessible Carparking access to 25WWC

Please refer to Items 1.3 & 1.4 above and the associated drawings which demonstrate the accessibility of the southern entry to 25WWC from the accessible use carparking spaces which are located immediately adjacent the southern entry point to 25WWC and the Arts Precinct generally.

2.3 25WWC southern perimeter/carpark interface

Please refer to Item 1.3 above for a detailed explanation of the short to medium term interface proposal and for a description of the long term outcome which the complex has been sited to facilitate.

2.4 Atrium Space between 25WWB & 25WWC

Items 1.5 and 1.7 above include a description of the Atrium design and usage.

The Atrium is considered an active use component of the Arts Precinct while also forming a significant covered but light filled and therefore welcoming & comfortable component of the campus public domain.

The detailed landscaping, street furnishing and paving solutions have been generated to facilitate both of these functions with a variety of quiet discussion areas, general social meeting spaces and exhibition areas plus a comfortable stepped amphitheatre area that encourage the usage of the space both by Arts Precinct occupants & visitors and also by the general campus pedestrian traffic in this area using the Atrium as an east/west link – it will be an attractive option on combination with W5C to the east during inclement weather.

All levels of the redeveloped 25WWB tower, the social use areas of 25WWC and the multi-level connecting bridge link between the social cores of these buildings enjoy extensive views into and overlook the Atrium space

The Atrium area is at a consistent floor level with the ground level floor plates of 25WWB and 25WWC, which are both actively used areas and which are access points for the public interface with the Arts Faculty, and

SSD DA Response to GA NSW Comments

30 January 2018 Rev 3

the detailed design of this area has sought to maximise the social, display and public domain functionality of the Atrium space which is a unifying element in the overall Arts Precinct project.

2.5 Safety for the general public and users within the Atrium Space

The Atrium space is an active social use space that directly connects to the ground floor planes of 25WWB and 25WWC with additional usage generated by its function as an east/west link in both the short/medium and then longer term campus plans.

The level of activity generated in this space during normal campus operational hours will ensure the safety of users whether public or campus based – the Atrium is open to both the east and west ends from general campus infrastructure and all areas are visible from one end – any steps in the building façade alignments to each side of the Atrium that shield areas from direct passive overlooking from one end are readily visible from the opposite end which will deter non secure activity noting that there is current activity at both the western (carpark) end and at the eastern (W5C access circulation) ends.

This security is augmented by the 24 hour access expectation of the Arts precinct buildings – the social and student research use central connective cores are a 24 hour resource to encourage student activity within the building across a number of levels plus the extensive overlooking facade areas of both buildings and the Connecting bridge link into the Atrium space will also assist in ensuring that the passive overlooking of the Atrium area is in fact a significant factor.

Lighting levels have been selected to facilitate night time use and safe circulation throughout the Atrium as it will be a well lit area encouraging after hours travel.

CCTV security surveillance is installed consistent with the University's campus wide strategy to facilitate safe after hours usage and travel through the Atrium space.

The Connecting Bridge is located two conventional floor levels above the ground plane so it is possible to view from one end of the Atrium through to the opposite end – so there is a short distance only from any area that is visually shielded from one end only to a central zone that can easily be seen from either end of the Atrium.

When the expected levels of usage – social & educational in addition to through traffic – are considered in the context of the extent of overlooking that occurs from occupied building areas into a well lit Atrium space it is

SSD DA Response to GA NSW Comments

30 January 2018 Rev 3

reasonable to suggest that the safety of public and campus users of the Atrium area is reasonably considered and addressed in the design.

Ray Hudson

Budden Nangle Michael & Hudson Architects