

30 August 2018

Mr James Stanfield
Mantle Group Hospitality
GPO Box 2866
BRISBANE QLD 4001

Our Ref: 16-0163FjsHIS3

Re: Heritage Impact Statement—Proposed External Sunshading to Tenancy 5, Northern Outdoor Area, Overseas Passenger Terminal, Circular Quay

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GML Heritage Pty Ltd
ABN 60 001 179 362

Dear Mr Stanfield,

GML Heritage Pty Ltd (GML) has been engaged to provide heritage and archaeological services in relation to the proposed new restaurant, bar and micro-brewery in Tenancy 5 of the Overseas Passenger Terminal (OPT), Circular Quay West, Sydney (the subject site).

Development approval was granted in August 2017, which excluded external sunshading to the northern outdoor area. Development approval is now sought for the provision of external sunshading in this area, in the form of two freestanding shade structures and two retractable awnings.

This letter-form heritage impact statement (HIS) assesses the heritage impacts, both positive and negative, that may result from the proposed sunshades. It is based on the Greenlight Design drawing set titled 'Proposed New Sun Shade Structures and Awnings, Mantle Group and Lion, The Squires Landing, Tenancy 5, Northern Outdoor Area, Overseas Passenger Terminal, Circular Quay', dated July 2018 (refer to attached).

Site Identification

The OPT is located at Circular Quay West, Sydney, NSW. Tenancy 5 is located at the northern end of the building, and adjacent to Tenancy 5 is an external leasable area, which is the location of the proposed sunshades. The real property description of the proposed development site is:

- Lot 1 DP 876516—Overseas Passenger Terminal; and
- Lot 2 DP 876516—external area.

Summary of Heritage Listings

The sunshade awnings will be fixed to the OPT's northern elevation, and the proposed location of the freestanding sunshade structures is directly adjacent to the OPT, within the boundaries of The Rocks Conservation Area. The heritage listings that directly relate to the site are outlined in Table 1.1.

Table 1.1 Heritage Listings Directly Related to the Subject Site.

Heritage Item	Register
Sydney Cove Passenger Terminal	S170 NSW state agency heritage register: Sydney Ports Corporation, Listing No. 4560023
The Rocks Conservation Area	S170 NSW state agency heritage register: Sydney Harbour Foreshore Authority

The subject site is also located within the Sydney Opera House Buffer Zone, as identified in the *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005* (Figure 1.2).

There are several heritage items in the vicinity, the most relevant of which are included below and shown in Figure 1.1.

Table 1.2 Other Heritage Items in the Vicinity of the OPT.

Heritage Item	Significance	Register
Campbell's Stores	State	State Heritage Register (listing No. 01536) S170 NSW state agency heritage register: Sydney Harbour Foreshore Authority
ASN Co Building	State	State Heritage Register (listing No. 01526) S170 NSW state agency heritage register: Sydney Harbour Foreshore Authority
Metcalf Bond Stores	State	State Heritage Register (listing No. 01562) S170 NSW state agency heritage register: Sydney Harbour Foreshore Authority
Sydney Harbour Bridge, approaches and viaducts (road and rail)	National	National Heritage List (place ID 105888) State Heritage Register (listing No. 00781) <i>Sydney Local Environmental Plan 2012</i> (item I539) <i>North Sydney Local Environmental Plan 2013</i> (item I0530)
Sydney Opera House	World	World Heritage List National Heritage List (place ID 105738) State Heritage Register (listing No. 01685) <i>Sydney Local Environmental Plan 2012</i> (item I064)

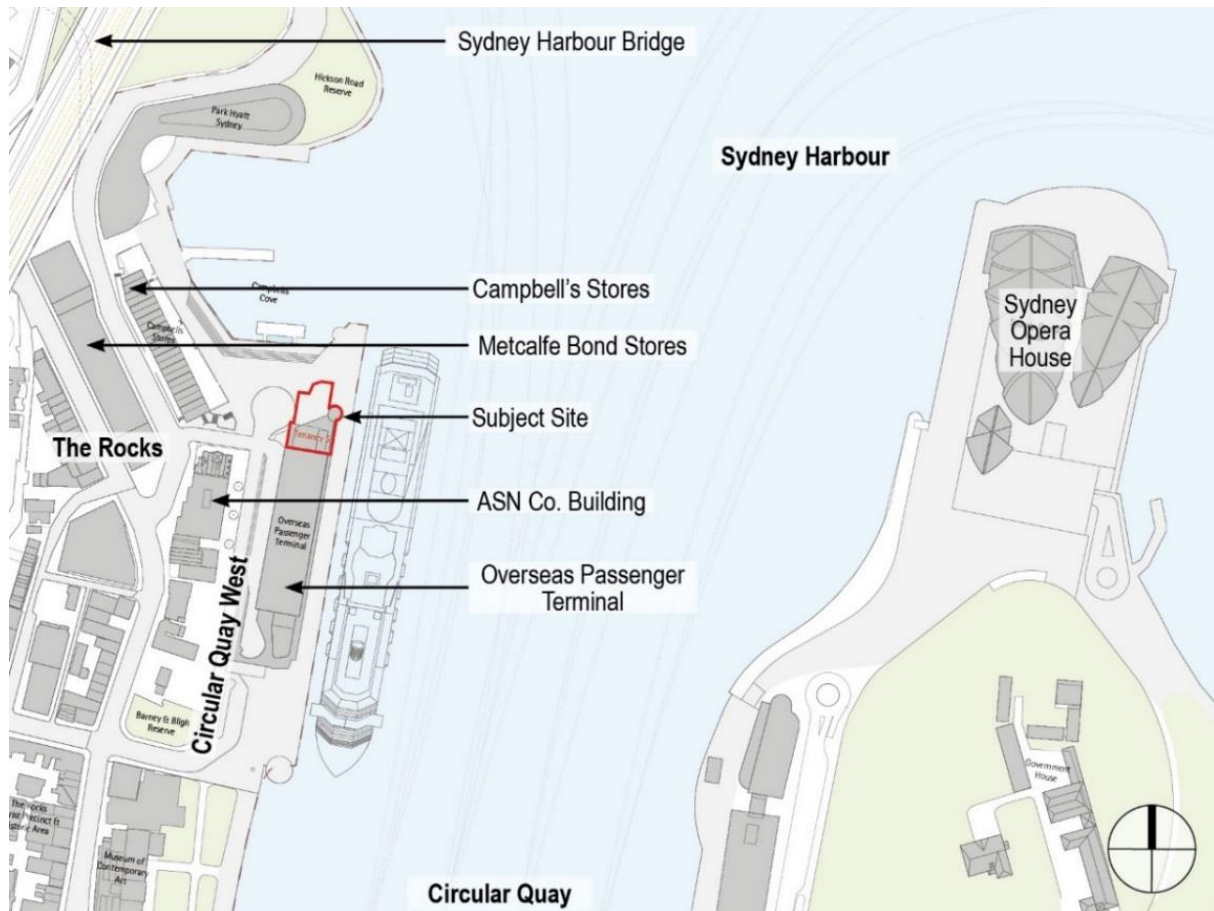


Figure 1.1 The subject site in its wider context. Listed heritage items in the immediate vicinity are shown, including the Sydney Opera House. (Source: Collins and Turner, with GML overlays)

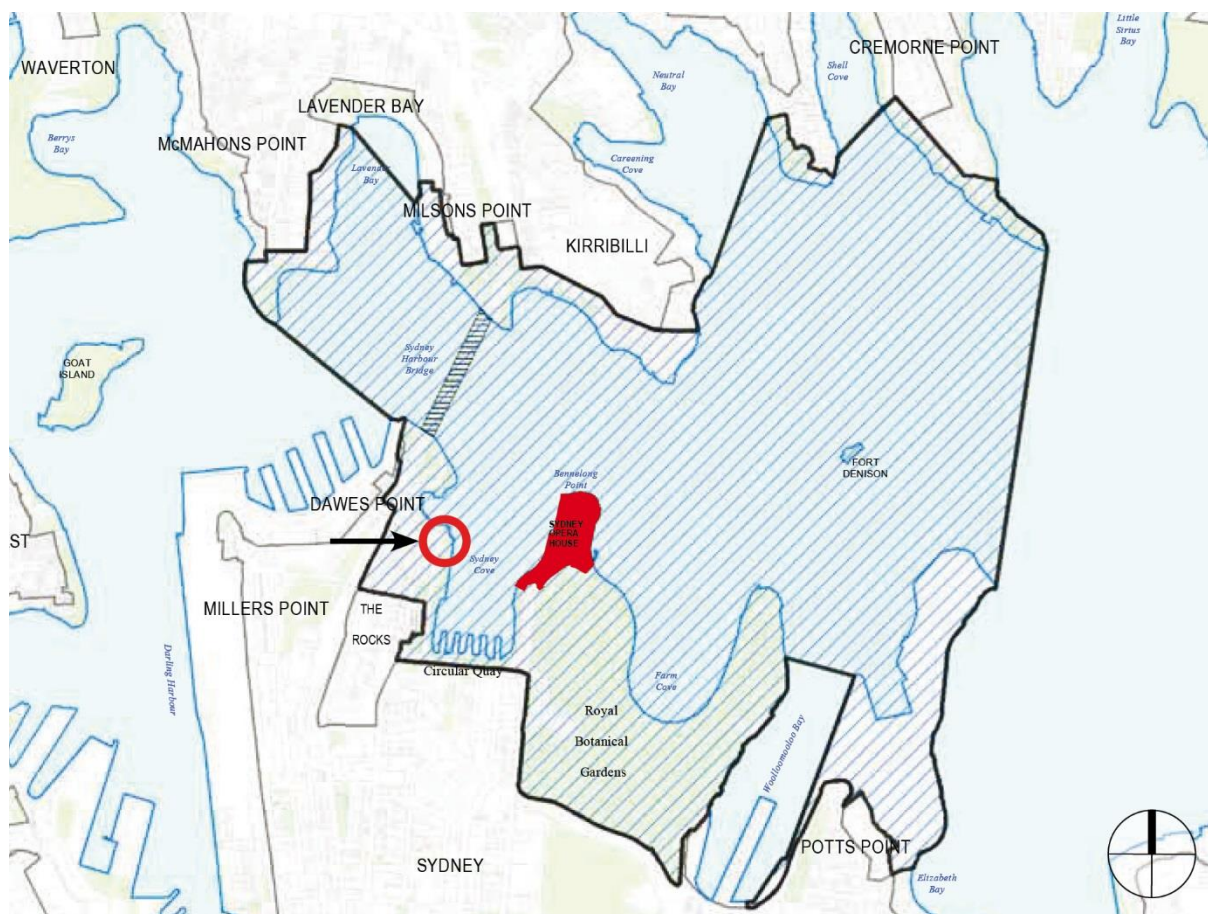


Figure 1.2 Extract from the Sydney Opera House (SOH) Buffer Zone Map, with the location of the subject site shown. The extent of the SOH World Heritage buffer zone is shown outlined in grey and hatched with diagonal blue lines. (Source: Sydney Regional Environmental Plan [Sydney Harbour Catchment] 2005, Amendment No. 1, with GML overlay)

Statement of Significance

The following Statement of Significance for the OPT (referred to as the Sydney Cove Passenger Terminal) is provided in the State Heritage Inventory listing.

Sydney Cove Passenger Terminal is a significant building on the shores of Sydney Harbour. The site is important for its ongoing historical use as a commercial and passenger shipping facility and its early role as a public gateway to the city. The building displays a twentieth century approach to adaptive re-use in response to changing community needs and, in its fabric, illustrates layers of its own history and use. The original building constructed in 1958-60 has historical associations with the changing needs of international travel. As the first point of entry for many immigrants during the post World War II period in Australia, the building also possesses social value. The architecture of the building is representative of the utilitarian approach to terminal design at the time with its 'functionalist' character influenced by international trends. The 1988 modifications to the building by Lawrence Nield form part of the Bicentennial works that focussed on improving the urban design character of Sydney Cove. The building responded to a desire for increased public access to the foreshore and an enhanced interrelationship with open spaces including First Fleet Park and Cambells Cove Plaza. The architecture is of aesthetic significance for its successful adaptive re-use and reductionalist approach and reinterpretation of the robust steel portal frame structure. With its maritime imagery and use of strong visual devices, including the northern tower, the building is of landmark value from Sydney Harbour.¹

¹ NSW Office of Environment and Heritage, State Heritage Inventory, database No. 4560023, viewed 6 July 2016 <<http://www.environment.nsw.gov.au>>.

Proposed Sunshades—Description

The proposed sunshades are intended to improve amenity for restaurant patrons seated in the outdoor dining area of Tenancy 5, which has a largely unshaded northern aspect. It is noted that sunshading in the form of umbrellas has previously been used in this location.

The proposal includes four new sunshades as follows:

- two freestanding sunshading structures (designated A1 and A2);
- one retractable awning sunshade fixed to the edge of the level 1 deck (A3); and
- one retractable awning sunshade fixed to the edge of the level 2 building structure (A4).

The two freestanding shade structures (A1 and A2) are steel framed with retractable fabric sunshading. They are rectangular in plan: A1 is 8.6m long x 5m wide, and A2 is 7.1m long x 7m wide (Figure 1.3). The footings for A1 and A2 will consist of 'U' bar reinforced concrete slabs 2m long x 2m wide x 0.6m deep, laid 0.4m below the current paving. A 0.1m downpipe will be encased in the steel support columns, which will extend through the concrete footings to a service trench.

These shade structures share common form and detailing: central steel columns support a central beam, from which steel and aluminium outriggers project at regular spacings, resulting in a butterfly roof form. It is intended that all metalwork be finished to match the steel framing of the OPT. The minimum height (above finished ground level) to the underside of the outriggers is approximately 4m. Retractable shade fabric spans between the outriggers (Figures 1.4 and 1.5).

The retractable awning sunshades (A3 and A4) are proprietary items that are fixed to a vertical surface: A3 is fixed to the edge of the level 1 deck, and A4 is fixed to the level 2 building structure (Figure 1.3). When open, each awning will cantilever from the support surface without column supports. When retracted, each awning will present as a slim aluminium rectangular attachment to the deck edge (A3) or building structure (A4).

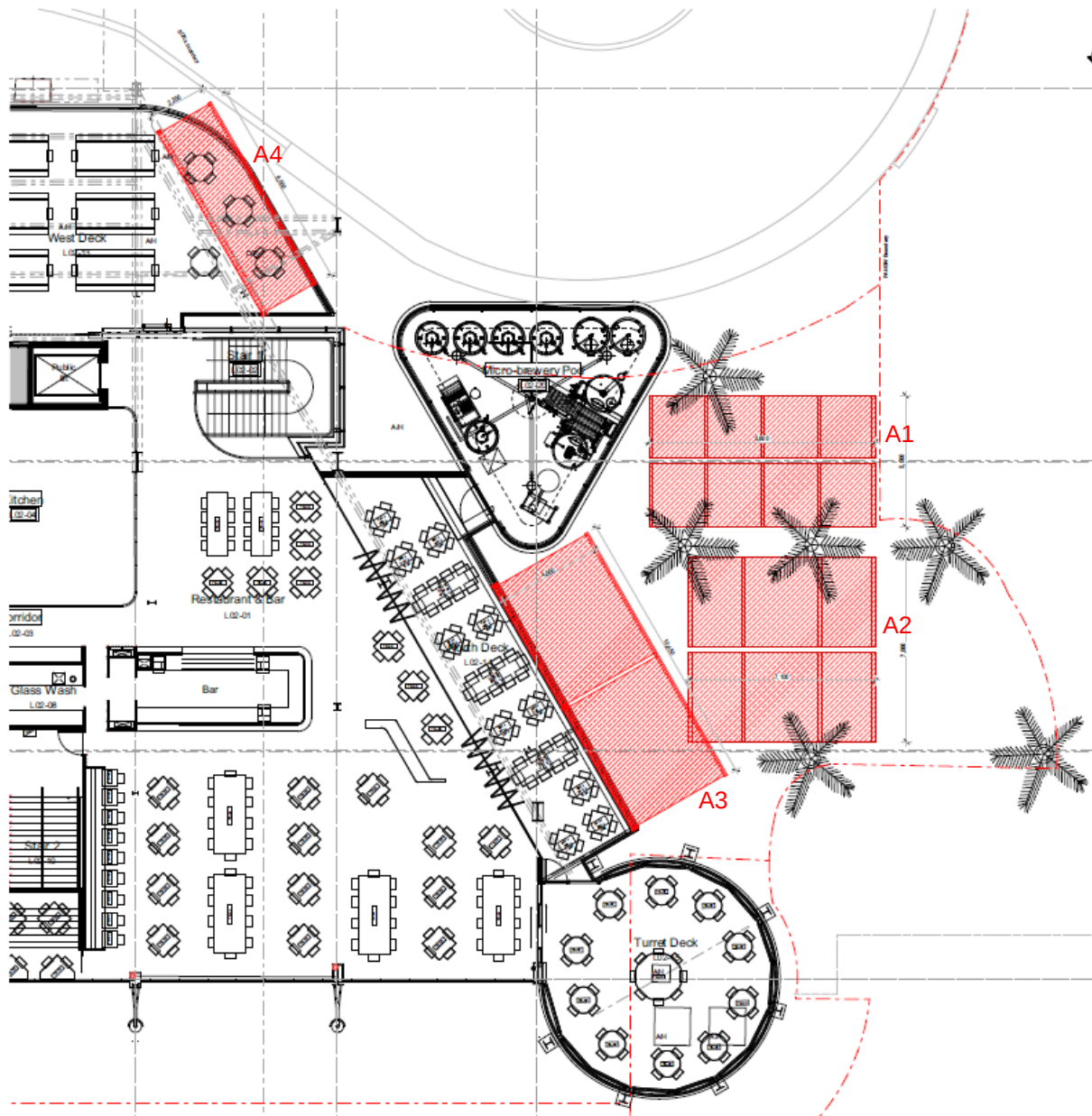


Figure 1.3 Plan of the subject site (not to scale) showing the planned form and location of the four proposed sunshading elements (shaded red and labelled A1–A4). (Source: Greenlight Design, 2018, with GML annotations)



Figure 1.4 Photomontage of the sunshading structures A1 and A2 showing the butterfly form of the roofs. Structures are shown with retractable shading fabric extended. (Source: Collins and Turner, 2018)



Figure 1.5 Photomontage of the sunshading structures A1 and A2 with retractable shading fabric folded back (closed). (Source: Collins and Turner, 2018)

Assessment of Potential Heritage Impacts

Historical Archaeological Potential

The historical archaeological potential of the Tenancy 5, OPT, study area has been investigated through a series of test excavations carried out for the construction of the Brewery Pod directly southwest of the proposed locations of the sunshades. The results of these excavations are summarised in the letter dated 18 January 2018 (Attachment 2).

The area of the proposed sunshade structures A1 and A2 is assessed as having low archaeological potential. Nineteenth-century archaeology is considered to lie farther west of the study area. Extensive redevelopment of the area for the construction of the Overseas Passenger Terminal in the late twentieth century has likely heavily impacted seawalls and wharf structures that are shown as present in the mid-to-early twentieth century (Figure 1.6). Therefore, the excavation of the proposed footings in this area is unlikely to impact on significant archaeological remains.



Figure 1.6 Three overlays with 1891, 1903 and 1956 historical overlays showing wharf structures present within the study area. Structures were likely destroyed by construction of the OPT in the late-twentieth century. (Source: Sydney Harbour Foreshore Authority, Campbell's Cove Archaeological Assessment 2012, Appendix B)

Potential Impacts on the Cultural Significance of OPT

The proposed sunshades will have a minor impact on the significance of the OPT. They will partially obstruct views of the north elevation of the building, and sunshades A1 and A2 will be partially visible from the east, as they project farther north beyond the building's existing tower element.

Sunshades A1 and A2 will clutter the building's northern forecourt, impacting on the setting of the OPT and its clarity of form.

However, this potential impact will be mitigated through the design of the sunshades. The form and materiality of the freestanding sunshading structures (A1 and A2) are sympathetic to the architecture of the OPT. The form of the proposed sunshading structures draws on the existing butterfly roof forms of the OPT, visually connecting the sunshading to the larger building. The proposed use of a painted steel structure, also utilised in the OPT, will also serve to marry the sunshading structures to the OPT. The sunshading structures are low in scale and compared to the OPT have a lightness of form, and so will not visually dominate the larger building.

The sunshading structures A1 and A2 represent a considered design approach and response to the site. Although the sunshading structures are additional built elements in the northern outdoor area, they will not visually 'clutter' the northern open area as their structure has been minimised and their architectural form is simple and well resolved.

The sunshades will partially impact on views from the north (harbour and north shore) to the OPT, yet the overall form of the OPT will remain legible. Views to the northeastern tower, a landmark of Circular Quay, will remain mostly unaffected, although there will be partial interruption of views to the ground and first floors from the west and northwest (Figures 1.9 and 1.10).

In developing a response to the provision of sunshades for the subject site, other alternatives have been considered, including outdoor umbrellas. It is considered that outdoor umbrellas would be more visually intrusive than the proposed sunshades. Although lower in height, it is considered that umbrellas would have a greater opacity, and give rise to a contrasting visual pattern and form and therefore present a more cluttered sunshading solution.

There will be some impact on views to the north of OPT, and little to no impact on views of the OPT from the east as a result of the proposed sunshading structures. Overall, the form and scale of the OPT will remain readily appreciable and the sunshading structures will not give rise to a heritage impact on the cultural significance of the building.

The retractable awning sunshades A3 and A4 will have a minimal visual impact on views of the OPT due to their narrow horizontal form when open and closed. They will be fixed to the surface of the slab edge/building structure, and will be able to be removed if required at a later date with little damage resulting to the building fabric.

Potential Impact on The Rocks Conservation Area

The OPT is located near the eastern edge of The Rocks Conservation Area (Figure 1.7). The State Heritage Inventory includes the following Statement of Significance for The Rocks Conservation Area:

The Rocks, with its complex layering of significant fabric, uses and associations, is a precinct of national cultural significance. The Rocks is valued as a place of major social history, reflecting more than two centuries of significant activity; including European invasion, early contact between Aboriginal people and European settlers, and colonial settlement. The drama of cross-cultural encounters reflects The Rocks' focal location as a place linking continental, colonial, city and maritime histories. The Rocks was saved through fierce battles for its conservation, and by government ownership. Despite ongoing incremental change in The Rocks, continuity and authenticity remain major themes, manifest in increasingly rare and fragile relics of original topography and built fabric, remnants of history and a living community.²

The State Heritage Inventory provides the following description of The Rocks Conservation Area.

The Rocks is sited on a rocky promontory projecting into the Harbour on the western side of Sydney Cove, with the southern approach of the Sydney Harbour Bridge along the ridge marking the western boundary of the area, and is some 21 hectares in area. The ground falls steeply to the east, in a series of sandstone escarpments, giving the important harbour views characteristic of the area. The topography gave rise to an erratic street pattern with many cuts into the rock to provide building materials and enable streets and stepped pedestrian ways to traverse the area. The conservation of The Rocks from the 1970s has reinforced these diverse streetscapes, laneways and pedestrian links. There is a mixture of individually important buildings by significant architects and more humble shops, cottages and terraces from different eras. Within this diversity the area has a coherent and consistent character of streetscapes and urban spaces in a very strong topographical setting. It has a strong maritime character, with warehouses and bond stores, and philanthropic buildings for seamen who also were abundantly catered for in the provision of public houses. A large amount of public open space is included in the area, including Dawes Point Park, with its early fortifications and archaeological remains, Foundation Park, West Circular Quay, First Fleet Park, the public domain around the Museum of Contemporary Art, Overseas Passenger Terminal, Campbells Cove, Park Hyatt and the Hickson Road Reserve. South of the Cahill Expressway the area has pockets of heritage items and streetscapes intermingled with high rise buildings dating from the 1970s.³

² NSW Office of Environment and Heritage, State Heritage Inventory, database No. 4500458, viewed 6 July 2016 <<http://www.environment.nsw.gov.au>>.

³ NSW Office of Environment and Heritage, State Heritage Inventory, database No. 4500458, viewed 6 July 2016 <<http://www.environment.nsw.gov.au>>.

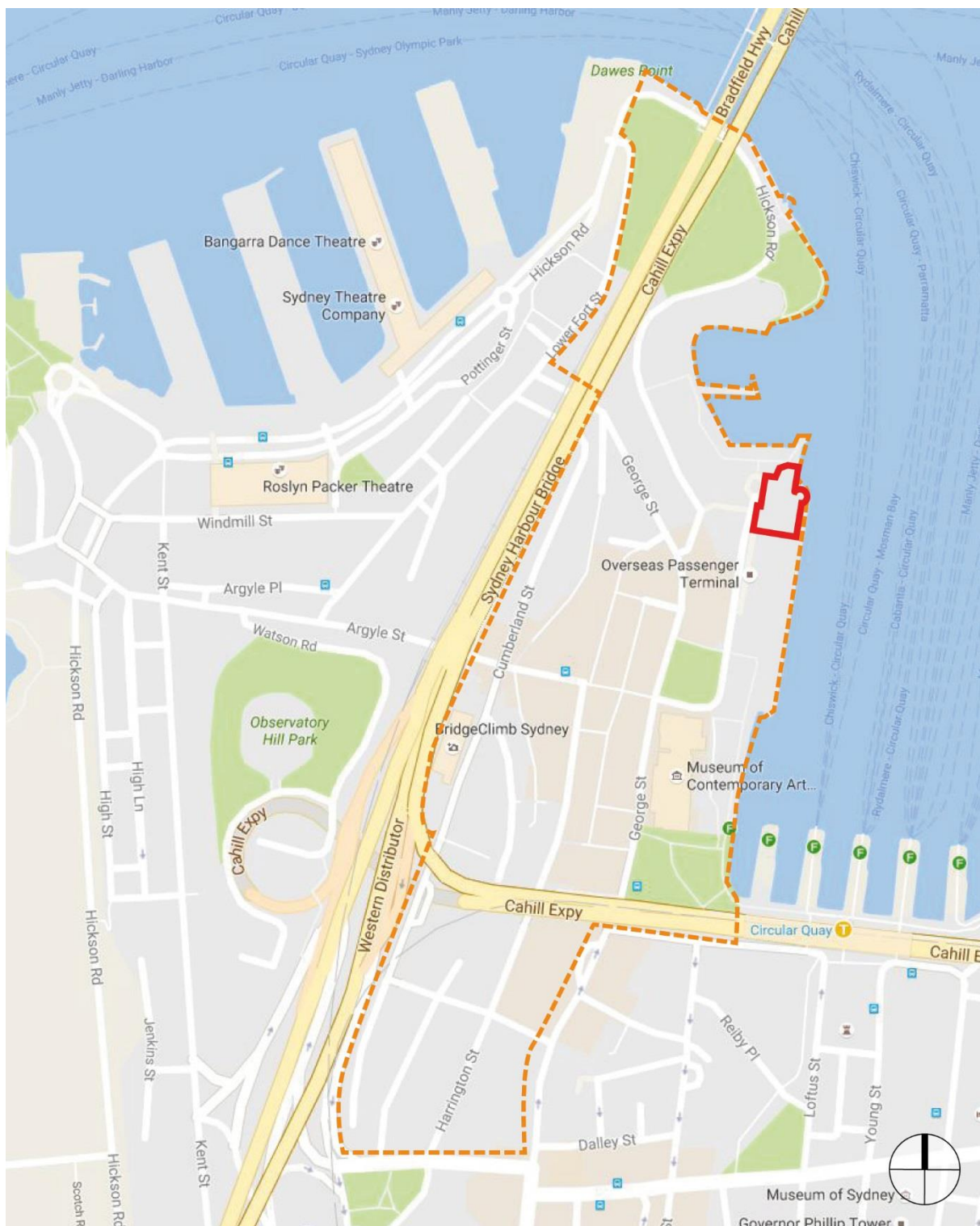


Figure 1.7 The location of the OPT within The Rocks Conservation Area (outlined in orange). The open area to the north of the OPT, the proposed location of the sunshade elements, is outlined in red. (Source: Google Maps with GML overlay 2016)

The potential impact of the sunshades on the heritage significance of The Rocks will be minimal due to their small scale and simplicity of form. They will not be visually prominent from vantage points around the harbour, and will not diminish the setting, topography, urban form and historic character of The Rocks. The sunshades will not be readily visible from parts of The Rocks beyond Campbell's Cove.

The Customs Officers Stairs, located to the west of the subject site, provide an important physical and visual link between The Rocks and the harbour. Views of the harbour from the top of the stairs (Hickson Road) will not be impacted by the sunshade structures as harbour views from this point are clearest to the north; views to the east and the Sydney Opera House (SOH) are blocked by the canopies of nearby palm trees. Harbour sounds and breezes, important to The Rocks' sense of place, will similarly be unaffected. On descending the stairs, the existing views of the harbour—to a degree filtered by the existing palm trees—will remain unaffected.

At the base of the stairs, the sunshading structures A1 and A2 will be clearly visible and will partially interrupt the expansive harbour views afforded from this vantage point. Any interruption to views of the water will be minimised through a slender structure with a slim profile and few elements. Substantial water views will remain. The maritime character of the area will not be diminished.

The proposed sunshades are contained within the leasable area of Tenancy 5, the boundary of which is defined by a glazed fence (which has already been granted development approval). The proposed sunshades will therefore not represent an additional physical barrier between The Rocks and the waterfront, and will not reduce access to the adjacent public foreshore area.

As the proposed sunshades represent change within The Rocks Conservation Area, their potential impact on the visual catchment of The Rocks has been assessed. *The Rocks Heritage Management Plan* (RHMP) is a non-statutory document which provides guidance for the conservation and management of The Rocks. The RHMP describes the visual catchment of The Rocks as including the inner harbour, Lavender Bay, Kirribilli, Cremorne Point, Garden Island, the SOH, East Circular Quay, Government House and the Outer Domain, and states that views to and from these areas should be considered (Sydney Harbour Foreshore Authority, *The Rocks Heritage Management Plan*, Volume 1, April 2010, p 15). The relatively small size and simple design qualities of the proposed sunshades will result in a minimal impact on views from areas within the visual catchment of The Rocks. They will be almost indiscernible from harbour vantage points, and will be even harder to see from the north shore. Refer to previous paragraphs for discussion of the minimal potential impact of the sunshades on harbour views from The Rocks, in particular the Customs Officers Stairs; views to district areas across the harbour would be impacted in a similar way.

Potential Impact on the Sydney Opera House

The Sydney Opera House, which is located adjacent to the OPT, is included in the National Heritage List and is also a World Heritage listed place.

Places on the National and World Heritage lists are protected under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act), which requires that approval be obtained before any action takes place that may have a significant impact on the heritage values of a listed place. An action is a project, a development, an undertaking, an activity or a series of activities, or an alteration of any of these things. A referral under the EPBC Act is required if a proposed action has, will have or is likely to have a significant impact on the heritage values of a National or World Heritage place.

As there are matters of national environmental significance in the vicinity of the proposed action, an assessment has been undertaken below to consider whether there is potential for an impact upon the heritage values of the Sydney Opera House.

Further details regarding the referrals process can be found on the Department of the Environment's website (<www.environment.gov.au>).

Assessment of Impact on the Outstanding Universal Value of the Sydney Opera House

Under the EPBC Act, a 'significant impact' is an impact that is important, notable or of consequence, having regard to its context or intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment which is impacted.

The Sydney Opera House is a sensitive place with exceptional heritage value at the highest levels nationally and internationally. The action will be located outside of the National and World Heritage boundary, but within the World Heritage buffer zone for the property.

In assessing the impact on the setting of the Sydney Opera House, the requirements of the Conservation Management Plan (CMP) for the Opera House have been considered. The CMP for the Sydney Opera House, Section 4.2, states:

The significant, tangible and intangible aspects of the setting and context of the Sydney Opera House ... include:

- *physical and visual relationship with the city and Sydney Harbour;*
- *quality as a monumental sculpture in the round;*
- *approach and arrival sequence of spaces, both beyond and within the site, providing an exceptional experience for patrons, performers and visitors;*
- *international recognition as a masterpiece of 20th century architecture and as an architectural icon;*
- *function as Australia's pre-eminent performing arts venue;*
- *place in the Australian psyche as a cultural icon and as a focus for national celebrations and events.*⁴

The sunshades, proposed to be located to the west of the Sydney Opera House on the opposite side of Circular Quay, will be of sufficient distance from the Opera House to have a minimal effect on the building's setting and context as described in the CMP (above). The relatively small scale of the proposed sunshades represents a minor change to the built environment of Circular Quay, and to the physical setting of the Sydney Opera House. The Sydney Opera House will retain its landmark qualities, and will continue to be perceived as 'a freestanding sculptural form'. The Outstanding Universal Value of the Sydney Opera House will be preserved.

Policy 2.3 of the CMP requires the retention of views to and from the Sydney Opera House, including 'vistas, progressively or suddenly enlarging to views, from The Rocks, the northern end of Circular Quay, East Circular Quay, Macquarie Street, the botanic gardens and the harbour'.⁵ Views of the Sydney Opera House from areas adjacent to the OPT are impacted when a cruise ship is docked in Circular Quay, a regular occurrence. However, the effect on views of the Sydney Opera House when no ship is in dock must be considered. The effect of the sunshading structures A1 and A2 on views to and from public spaces within the SOH Buffer Zone have been considered from key viewpoints east of the sunshading structures, as follows:

⁴ Croker, A, *Respecting the Vision: Sydney Opera House – a Conservation Management Plan*, fourth edition, July 2017, viewed 21 August 2018 <www.sydneyoperahouse.com>.

⁵ Croker, A, *Respecting the Vision: Sydney Opera House – a Conservation Management Plan*, fourth edition, July 2017, viewed 21 August 2018 <www.sydneyoperahouse.com>, p 54.

- Emerging views of the Sydney Opera House from The Rocks Conservation Area (Viewpoint A, Figure 1.8).

The Customs Officers Stairs, located between the OPT and Campbell's Stores, are part of a well-utilised pedestrian thoroughfare providing access from Hickson Road to the waterfront and the OPT. Potential emerging views of the Sydney Opera House from the stairs are currently obscured by the existing grove of palm trees adjacent to Campbell's Stores (Figures 1.9, 1.10). If the current grove of trees is discounted, there would be emerging views of the Sydney Opera House from this location, with full views partly blocked by the northern tower of the OPT. The sunshading structures could potentially further block these views, although any further obstruction to views would likely be minor due to the slender form and slim profile of the structures.

- Views from the public promenade adjacent to Campbell's Stores (Viewpoints B and C, Figure 1.8).

Views of the Sydney Opera House from the promenade near the eastern end of Campbell's Stores (the base of the Customs Officers Stairs) will be impacted to a small degree by the sunshading structures: they will partially obstruct views of the southern part of the Opera House (Figures 1.10). However, this is consistent with the concept of emerging views of the Opera House from The Rocks; partial views of the Opera House become clearer closer to the foreshore.

Figure 1.11 shows the current view from the promenade near the centre of Campbell's Stores, where there is a wide separation between the Opera House and the OPT. There will be no impact on views to the Opera House from this viewpoint.

In summary, there will be a minor impact on views from the base of the Customs Officers Stairs, and there is potential that views of the SOH from the Customs Officers Stairs could be partially blocked by sunshading structures A1 and A2 if the existing trees are removed at a later date. However, partial views of the Opera House are consistent with the concept of emerging views of the Opera House from The Rocks. Overall, the potential impact on views of the Sydney Opera House is considered to be acceptable and the Outstanding Universal Value of the Sydney Opera House will not be adversely impacted by the proposed development.

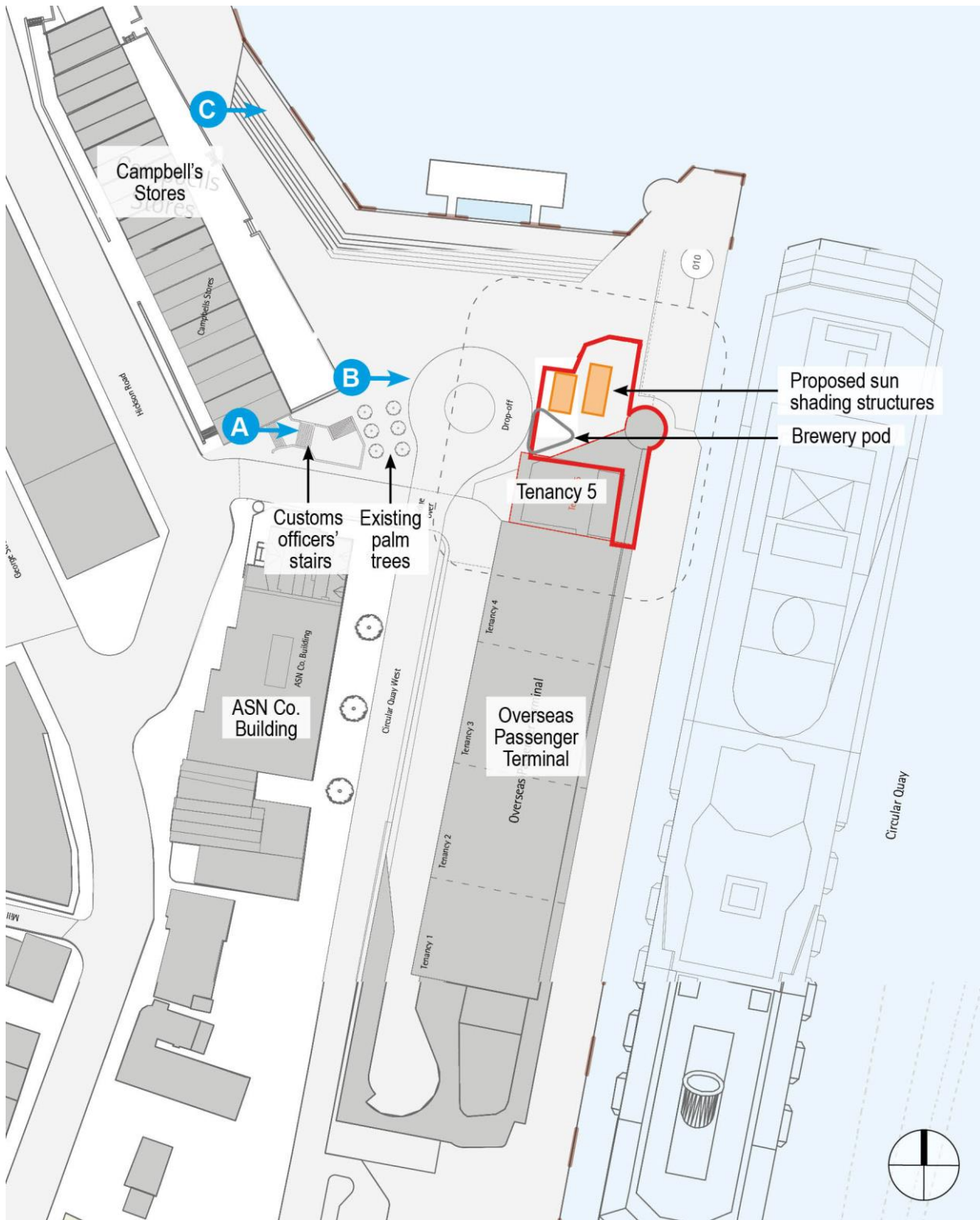


Figure 1.8 Plan showing location of Viewpoints A, B and C, looking towards the Sydney Opera House. (Source: Greenlight Design, with GML overlays, 2018)



Figure 1.9 Viewpoint A: Views of the Sydney Opera House from the Customs Officers Stairs are blocked by existing palm trees. (Source: GML, July 2016)



Figure 1.10 Viewpoint B: Photomontage showing views of the Sydney Opera House from the public walkway near the eastern end of Campbell's Stores (at the base of the Customs Officers Stairs). The sunshading structures A1 and A2 will partially interrupt views of the SOH from this location. This is, however, consistent with the concept of emerging views of the Opera House from The Rocks, which become clearer closer to the foreshore. (Source: Greenlight Design, 2018)



Figure 1.11 Viewpoint C: Existing view of the Sydney Opera House from the public walkway near the centre of Campbell's Stores. This view will be unaffected by the sunshading structures A1 and A2, the proposed location of which is outlined in red. The views of the OPT's tower will also remain mostly unaffected and it will retain its landmark qualities. (Source: GML, with GML overlay, July 2016)

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

As the OPT site is located within the World Heritage buffer zone of the Sydney Opera House, the project location is also included within the *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005* (SREP). The SREP specifies 'the need for development to preserve views and vistas between the Sydney Opera House and other public places' within the buffer zone, for development to preserve the World Heritage values of the place, and for 'development to avoid any diminution of the visual prominence of the Sydney Opera House when viewed from other public places' within the buffer zone.

The aim of the SREP provisions is to ensure that any development within the buffer zone would not create any additional impacts on the visual setting of the Sydney Opera House when compared with the current infrastructure and buildings associated with the OPT.

The nature and scale of the proposed sunshades at the OPT does not exceed the height of the existing buildings and would have only a minor effect on the views or vistas from or to the Sydney Opera House. In summary, the proposed sunshades would not reduce the visual prominence of the SOH, nor have any adverse impacts on its significance or setting.

Summary of Impact on Sydney Opera House

The subject site is located outside the National and World Heritage boundary of the Sydney Opera House, but is within the World Heritage buffer zone for the site.

As indicated in the assessment above, the proposed sunshades will not significantly alter or impact the views and vistas to and from the Sydney Opera House. It is our view that the proposal would not be considered a controlled action under the EPBC Act and would not require referral as such to the Federal Minister for the Environment.

Potential Impact on Other Heritage Items in the Vicinity

The relatively small scale of the sunshades, and delicate form of sunshading structures A1 and A2, will ensure that they will not visually dominate the much larger heritage buildings in the vicinity—Campbell's Stores, the ASN Co Building, the Metcalfe Bond Stores and the Sydney Harbour Bridge. Specific consideration of the potential impact on each of these items is as follows.

Campbell's Stores

Campbell's Stores is located to the west of the subject site, across a public forecourt. Campbell's Stores is listed on the State Heritage Register and on the Section 170 Register of the Sydney Harbour Foreshore Authority. The following Statement of Significance is provided in the State Heritage Register listing for Campbell's Stores:

Campbell's Stores and site are of State heritage significance for their historical and scientific cultural values. The site and building are also of State heritage significance for their contribution to The Rocks area which is of State Heritage significance in its own right. Campbell's Stores are a superb example of mid-nineteenth century warehouse buildings, now rare in Sydney. They are the only warehouses of their type remaining on the foreshores of Sydney Cove, the hub of commerce and international shipping transport until the late nineteenth century. As a memorable and easily recognisable landmark in The Rocks, visible from a wide area of Sydney Harbour, they have iconic value as a symbol of mid nineteenth century Sydney. Campbell's Stores have historic significance for their association with the Campbell family, one of the earliest and most influential free immigrant families in Australia. They are the surviving element of a complex of wharves and stores that began in 1801 with the construction by Robert Campbell of the first privately owned wharf in Australia. Later significant associations include the Australasian Steam Navigation Company, one of the most important commercial shipping and transport companies in Australian, and the Sydney Harbour Trust, established by the Government following of the bubonic plague scares of 1901. Campbell [sic] Stores is significant for its association with commercial Bond and Free store usage for over one hundred and twenty years, with each successive owner, including the Sydney Harbour Trust and Maritime Services Board, leasing sections of the Stores to a variety of merchant companies. The changes made to Campbell's Stores provide evidence of the changing commercial fortunes of maritime Sydney. The construction of the first five bays demonstrate economic growth following the 1840s depression, and the additional six bays demonstrate further economic growth, following the 1850s gold rushes. The construction of the third level by the ASN Co in the mid 1880s demonstrates a further period of economic growth and also of a change in the functional operation of the Stores, as evidenced by the inter-connection of the top floor spaces. The adaptive reuse of the building in the 1970s represents an early approach to the conservation of historic buildings. The continued subsequent use of the building for a series of restaurants demonstrates the changing uses of Sydney Cove from industrial purposes to largely tourist-related purposes. The design, form and materials of Campbell's Stores contribute to their aesthetic significance as a complex of buildings of high visual and sensory appeal. Their design elements reflect their original function in a simple but dignified manner. Their form is a coherent whole, made up of repetitive gabled bays combined with an undulating rhythm of door and window openings. The consistent use of sandstone, brick and slate materials reinforces this visual coherence and provides an appearance of solidity and quality. Campbell's Stores represent a surviving example of mid nineteenth century style warehouses; a building type once common around Sydney Cove, but now rare. The gabled bay form, cathead beams, hoists, goods aprons and doors are evidence of an older warehouse style. The form, bars on openings and lack of internal connections between bays evidence the security required for bond store use. Campbell's Stores have social significance for their contemporary role in cultural tourism. They are esteemed as an historic icon by Sydney-siders as well as international and domestic tourists, due to their appearance, location and use. Campbell's Stores have technical/research

significance because of their potential to contribute further to our understanding of the early maritime activity around Sydney Cove and, in particular, within the Campbell's Wharf complex. They also have the ability to contribute further to our understanding of the use and operations of mid-nineteenth century warehouse buildings, particularly in relation to goods handling and the changes in technology that occurred over time. The remnant hoisting equipment of the Campbell's Stores building provides evidence of the changes of technology in goods handling and haulage that occurred during the nineteenth and twentieth century. The hydraulic hoisting equipment and the winches in particular are evocative of the industrial nature of the site and the hydraulic hoists are prominent examples within the Sydney area. They demonstrate the scale and efficiency of the industrial processes undertaken at Campbell's Stores during its use as dockside goods storage.⁶

The proposed sunshades are located outside of the heritage curtilage of Campbell's Stores, as defined in the State Heritage Register 01536 Plan 2884 for Campbell's Stores (Figure 1.12). When considering the curtilage of Campbell's Stores as defined in the 2014 CMP for the building, sunshade A4 will be located within the southeastern corner of the curtilage (Figure 1.13). However, this represents a minor intrusion on the curtilage of Campbell's Stores, and will have a negligible impact on the heritage significance of the building.

Due to their location, the proposed sunshades will not interrupt the relationship between Campbell's Stores and the harbour. Although the sunshades will reduce the open space in the area to the east of Campbell's Stores, they are sufficiently distant from the Stores building to have a minimal impact on the setting of the building. Any potential impacts will be mitigated through the architectural character of sunshades A1 and A2, which reference the form and character of the OPT. There will be a minor impact on the views of Campbell's Stores from the Opera House—there may be a slight obstruction of the eastern elevation of the building—but for the most part, views of the building will remain unaffected, including views of the building's main (northern) elevation. The heritage significance of Campbell's Stores will not be diminished.

⁶ NSW Office of Environment and Heritage, State Heritage Inventory, database No. 5053151, viewed 5 July 2016 <<http://www.environment.nsw.gov.au>>.



State Heritage Register - SHR: 01536, Plan:2884
Campbell's Stores, 7-27 Circular Quay West The Rocks.

Gazettal Date: 10 May 2002

0 10 20 30 40 Metres

Scale: 1:750

Datum/Projection: GCS GDA 1994



Legend

- SHR Curtilage
- Land Parcels
- Roads
- LGAs
- Suburbs

Figure 1.12 State Heritage Register curtilage for Campbell's Stores. (Source: NSW Heritage Inventory, viewed 28 April 2017 <<http://www.environment.nsw.gov.au>>)

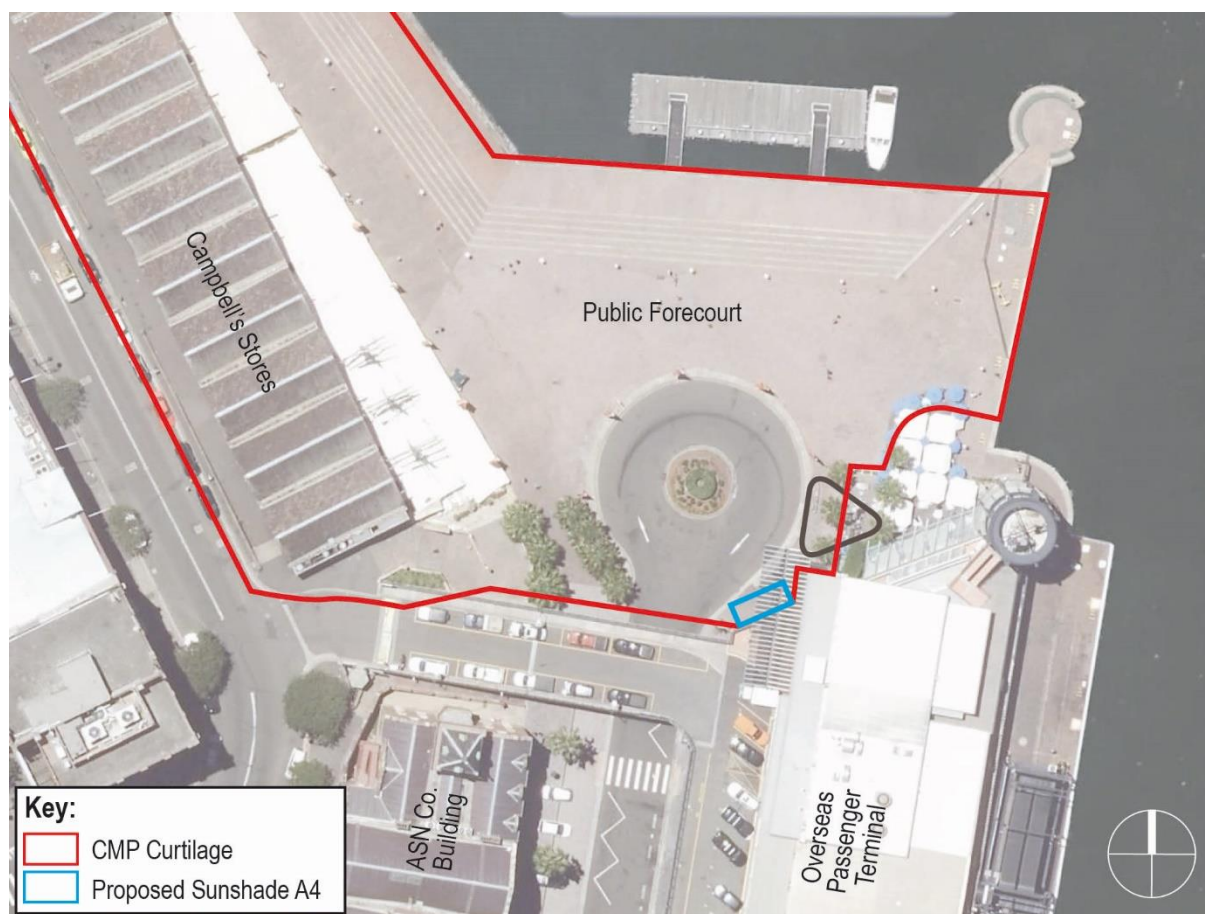


Figure 1.13 The proposed heritage curtilage (outlined in red) for Campbell's Stores as defined in the CMP for the building. The extent that sunshade A4 extends into the curtilage is shown in blue. Sunshades A1, A2 and A3 are located outside of the heritage curtilage. (Source: SIX Maps, with GML overlays, 2018)

ASN Co Building

The ASN Co Building is located to the southwest of the subject site. The two are separated by the raised roadway that provides access to the western side of the OPT. The following Statement of Significance is provided in the State Heritage Register listing for the ASN Co Building:

ASN Co Building and site are of State heritage significance for their aesthetic, historical and scientific cultural values. The site and building are also of State heritage significance for their contribution to The Rocks area which is of State Heritage significance in its own right. The former ASN Co warehouse and office building was built in 1884. The site has a long history because of its prominent location in the Rocks area, situated on the edge of the Quay and adjacent to the various wharfs, within the main commercial maritime centre. It is associated with the famous early merchant, Robert Campbell. No later store of this construction type was built in the area. The building was designed by the very prominent architect, William Wilkinson Wardell, who chiefly practiced in Victoria. He was an outstanding architect of the nineteenth century who was prolific and best known for building churches, including St Mary's Cathedral in Sydney, public buildings, including the Treasury building, the Mint and Government House in Melbourne, banks including the English Scottish and Australian Bank in George St, The Rocks as well as warehouses. The architectural style of the building is a rare intact example of the Pre-Federation Anglo Dutch style. It is a very rare and fine Victorian example of an office and warehouse development in Sydney. The mix of office and warehouse, each exhibit the same architectural style to varying degrees which forms a pleasant whole. Wardell allowed the site shape to partially dominate his design, which is an excellent example of his style. Each bay was a different length, stepping down the site. Although there were other buildings of similar style that existed in Sydney, none of them incorporate such picturesque facades with this type

of layout nor do they mix office and warehouse design together. When it was completed it was one of the most prominent buildings in Sydney, and remains an extremely prominent landmark, being visible from Port Jackson and the North Shore and being part of an important vista from Circular Quay to Campbells Cove and beyond. (Tropman1990: 15- 21) It was one of the last substantial warehouses with a timber structural system built in Sydney, from 1885 cast iron columns were used instead of timber. The construction method of the building is possibly the earliest surviving example of the use in Sydney of steam cranes imported from England. The importance of steam shipping to the colony's economy is strongly reflected through the high architectural style and the prominent waterfront location of the building.

The building is significant as a Landmark building, from its original construction to the present day in Sydney. It holds significance in its associations with The Rocks, Campbell Cove and Circular Quay and is part of a historical precinct that includes Cadmans Cottage, Mission to Seaman Chapel and the Sailors Home which together strongly illustrate this former maritime neighbourhood. It contributes strongly to the character of The Rocks and is an area that is well visited by residents and tourists. Its inclusion on the registers of the National Trust and the National Estate demonstrate the esteem the building is held in by the broader community. It is a benchmark building form capable of providing information about the special relationship between its design and function, being a very rare example of a mix of office and warehouse. It has research and scientific potential in the information that its fabric displays and retains, including the very early sprinkler system. It is possible that the sprinkler system is a rare surviving example, with cast iron pipework and 1929 sprinkler heads still intact. The remaining early sprinkler pipework is probably part of the original sprinkler system, possibly being installed when the water tower was constructed between 1892 and 1894.⁷

The wide distance between the proposed sunshades and the ASN Co Building, plus the physical separation provided by the raised roadway, mean that the sunshades will have a minor effect on the setting of the ASN Co Building. The sunshades will not impact views of the building from the harbour or from the Sydney Opera House, and the building will retain its landmark status. The proposed sunshades will not be located within the heritage curtilage of the ASN Co Building, as defined in its State Heritage Register listing (Figure 1.14).

⁷ NSW Office of Environment and Heritage, State Heritage Inventory, database No. 5053141, viewed 6 July 2016 <<http://www.environment.nsw.gov.au>>.



State Heritage Register - SHR 01526, Plan 3141
ASN Co Building
1-5 Hickson Road, The Rocks

Gazettal Date: 10 May 2002

0 5 10 15 20
Metres

Scale: 1:350 @A4

Datum/Projection: GCS GDA 1994



Legend

- SHR Curtilage
- Land Parcels
- Railways
- Roads
- LGAs
- Suburbs

Figure 1.14 State Heritage Register curtilage for ASN Co Building. (Source: NSW Heritage Inventory, viewed 21 August 2018, <<http://www.environment.nsw.gov.au>>)

Metcalfe Bond Stores

The Metcalfe Bond Stores is located west of the OPT, with Campbell's Stores located between the two buildings. The following Statement of Significance is provided in the State Heritage Register listing for the building:

Metcalfe Bond Stores and site are of State heritage significance for their historical and scientific cultural values. The site and building are also of State heritage significance for their contribution to The Rocks area which is of State Heritage significance in its own right.

The building known as the Metcalfe Bond Stores has simple unobtrusive lines with pleasing rhythm and texture. (Croker 1976) The building has landmark significance as part of a group of early 20th century buildings in George Street North complementing in scale, materials, façade treatment and fenestration the ASN Co Building, No 88 George Street, and the Harrington's Buildings, and being visible as a backdrop to Campbell's Stores from Campbell's Cove, Sydney Cove and Harbour, and Circular Quay East. Its conversion to shops and offices in 1973 also demonstrates attitudes to conservation philosophy and practice of the period as the first such conversion by the SCRA.⁸

The modest scale of the proposed sunshades and their distance from the Metcalfe Bond Stores will result in minimal impact on the setting of this building. Due to its height and elevated position, views of Metcalfe Bond Stores from Sydney Harbour and from the SOH will not be impacted.

Sydney Harbour Bridge

The Sydney Harbour Bridge is located in an elevated position to the northwest of the subject site. A landmark structure, the bridge is listed on the National Heritage List and State Heritage Register. The State Heritage Register provides the following Statement of Significance for the Sydney Harbour Bridge:

The bridge is one of the most remarkable feats of bridge construction. At the time of construction and until recently it was the longest single span steel arch bridge in the world and is still in a general sense the largest. The bridge, its pylons and its approaches are all important elements in townscape of areas both near and distant from it. The curved northern approach gives a grand sweeping entrance to the bridge with continually changing views of the bridge and harbour. The bridge has been an important factor in the pattern of growth of metropolitan Sydney, particularly in residential development in post World War II years. In the 1960s and 1970s the Central Business District had extended to the northern side of the bridge at North Sydney which has been due in part to the easy access provided by the bridge and also to the increasing traffic problems associated with the bridge (Walker and Kerr 1974).⁹

The modest scale of the sunshades and their distance from the Sydney Harbour Bridge will result in minimal impact on the setting of the bridge. Due to its height and elevated position, views of the Sydney Harbour Bridge will only be impacted from within Tenancy 5, and will remain unaffected from spaces in the public realm surrounding Circular Quay and the SOH. The proposed sunshading structures will not alter significant views from the bridge due to their low scale and location.

Conclusion and Recommendations

The proposed sunshading structures and awnings will have a slight impact on the OPT by partially obstructing views of the building from the north. However, views of the overall form of the building and its tower—and their landmark qualities—will remain intact. Potential impacts will be mitigated through the design of the sunshades: the freestanding sunshading structures A1 and A2 have been designed in

⁸ NSW Office of Environment and Heritage, State Heritage Inventory, database No. 5053177, viewed 8 August 2016 <<http://www.environment.nsw.gov.au>>.

⁹ NSW Office of Environment and Heritage, State Heritage Inventory, database No. 5045703, viewed 8 August 2016 <<http://www.environment.nsw.gov.au>>.

reference to the architecture of the OPT, and will visually harmonise with the larger building. They are modest in scale and will not visually dominate.

The proposed sunshades—sunshading structures A1 and A2 and sunshading awnings A3 and A4—will provide shade to an exposed outdoor space, improving their utility and amenity. This will potentially lead to a positive impact on the area by facilitating the increase in activity in this underutilised part of Circular Quay and The Rocks.

The potential of the proposed sunshades to give rise to visual impacts by ‘cluttering’ the area has been considered. Although the sunshading structures and awnings represent additional built elements in the space, the slender and simple form of the freestanding structures, with few columns and a pared-down structure, will minimise any potential visual impact. The sunshade awnings are free of columns, and represent a sunshading solution with minimal visual and physical impact. It is considered that shade umbrellas, a possible sunshading alternative, would be more visually intrusive through the introduction of a contrasting pattern and form.

The proposed sunshades will partially block views of the harbour and the Opera House from the Customs Officers Stairs. However, substantial water views will remain, and the impact on the connection between the harbour and The Rocks will be slight. Impacts on views to the Opera House are minor and as such are considered to be acceptable; the concept of emerging views of the Opera House will be maintained. Due to the small scale of the structures and their location—on the opposite side of the quay from the Opera House—it is considered that the outstanding universal values of the Sydney Opera House will not be adversely impacted.

There will be little impact on the significance of The Rocks Conservation Area. The character of The Rocks, combined with the urban maritime form in this area, will be maintained. Views to The Rocks from its visual catchment will be only slightly affected, as the proposed sunshades are small in scale. The potential impact on items of heritage significance within the vicinity is small, and the heritage significance of these items will not be adversely impacted.

The location of footings for sunshades A1 and A2 is in an area that has been assessed as having low archaeological potential. The proposed excavation of footings for the sunshade structures A1 and A2 are unlikely to impact significant archaeological remains. If archaeological remains are present, they will be from the twentieth-century wharves and/or seawalls.

The following recommendations are made in relation to the proposed sunshades:

- The structure of the proposed sunshades should be finished to match the structure of the OPT in colour.
- The shade fabric should be visually recessive and not contain any logos, text or advertisements.
- All materials and finishes should be selected for durability in a harbourside environment.
- Should any archaeological features be uncovered, such as seawalls or in situ wharves, works should stop immediately and a qualified archaeologist should be contacted to appropriately record any features before removal.

Yours sincerely,
GML Heritage Pty Ltd



Anna Simanowsky
Senior Heritage Consultant

Attachments:

- Attachment 1—Reference Drawings
- Attachment 2—Overseas Passenger Terminal Historical Archaeological Testing—Results Summary, letter dated 18 January 2018

Attachment 1

Reference Drawings

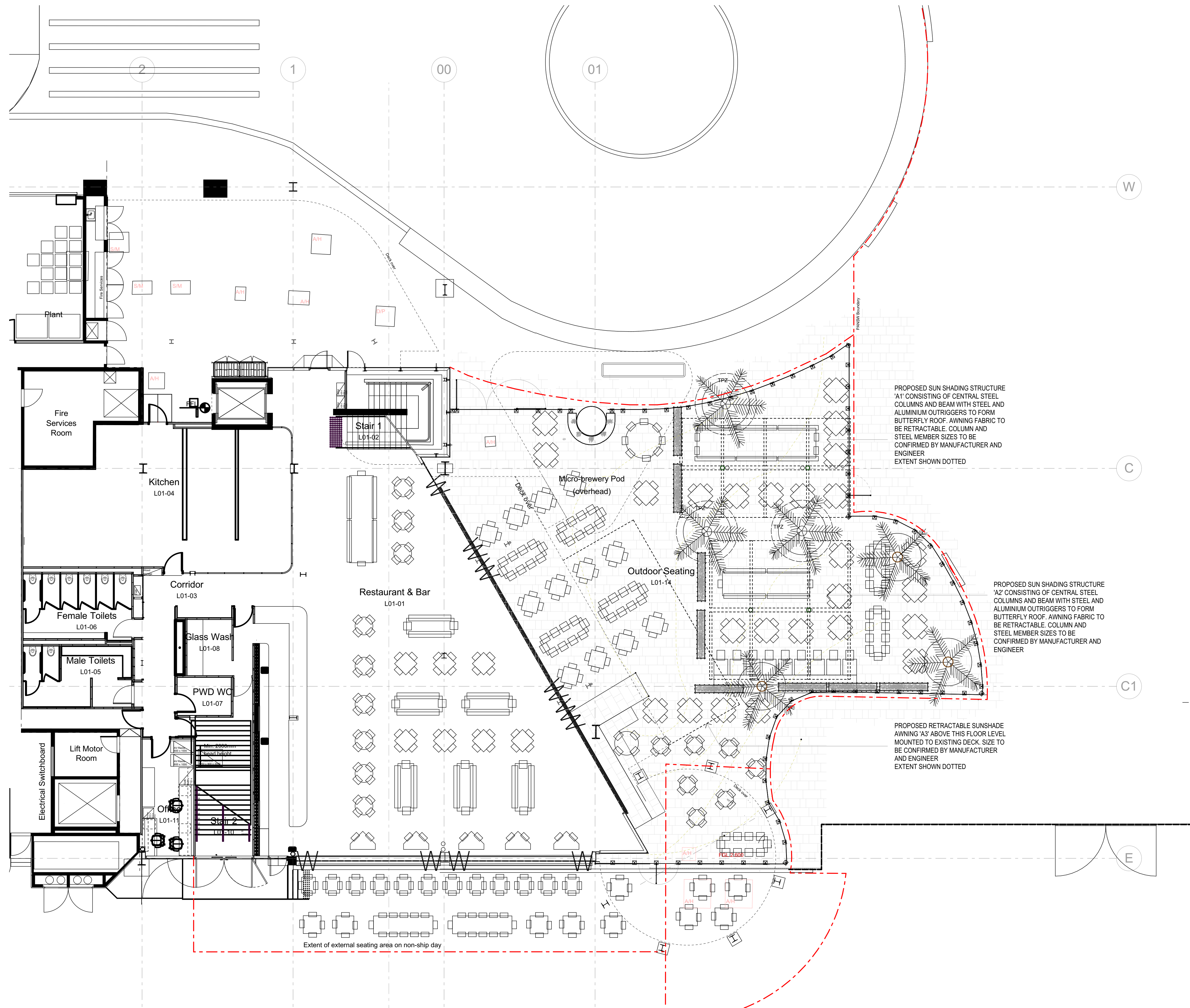
Table 1 Reference Drawings.

Drawing No./Title	Date
Drawings SK01–SK17 of the drawing package titled ‘Proposed New Sun Shades Structures and Awnings, Mantle Group and Lion, The Squires landing, Tenancy 5, Northern Outdoor Area, Overseas Passenger Terminal, Circular Key’, by Greenlight Design	July 2018
Drawing S601 (issue P1), Awning Footing Detail/Roof Plan and Details, prepared by Martin Cosgrove and Associates Pty Ltd	February 2018



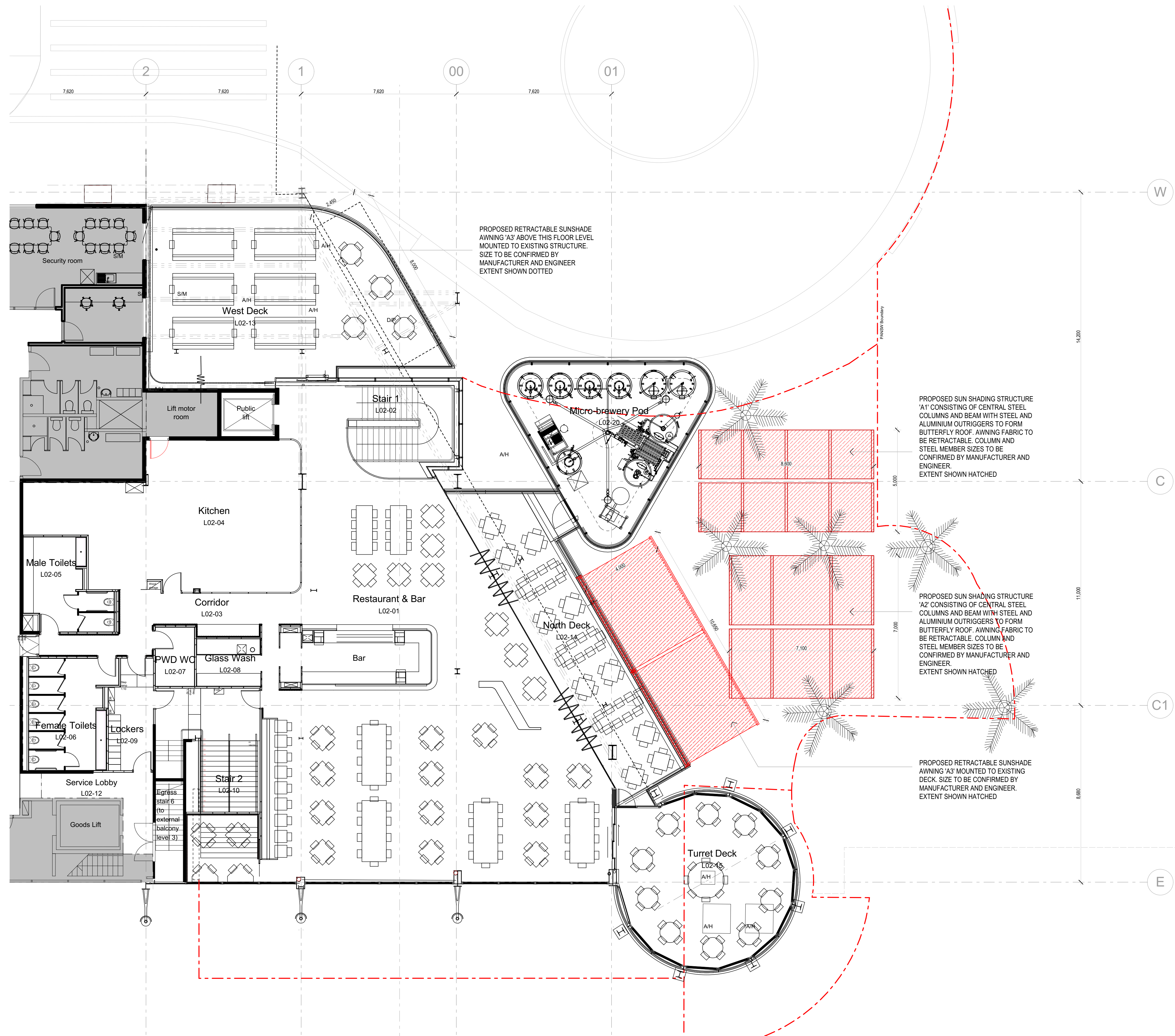
Proposed new Sun Shade Structures and Awnings
Mantle Group and Lion
The Squires Landing
Tenancy 5, Northern Outdoor Area,
Overseas Passenger Terminal, Circular Key

Number	Name
TSL DD - 100 - SK01 A	General Arrangement - Level 01 (Grd)
TSL DD - 100 - SK02 A	General Arrangement - Level 02 (First)
TSL DD - 100 - SK03 A	General Arrangement - Level 03 (Sec)
TSL DD - 100 - SK04 A	Elevations
TSL DD - 100 - SK05 A	View Impact Reference Plan
TSL DD - 100 - SK06 A	View 1 - Existing
TSL DD - 100 - SK07 A	View 1 - Proposed
TSL DD - 100 - SK08 A	View 2 - Existing
TSL DD - 100 - SK09 A	View 2 - Proposed (Extended)
TSL DD - 100 - SK10 A	View 2 - Proposed (Retracted)
TSL DD - 100 - SK11 A	View 3 - Existing
TSL DD - 100 - SK12 A	View 3 - Proposed (Extended)
TSL DD - 100 - SK13 A	View 3 - Proposed (Retracted)
TSL DD - 100 - SK14 A	Awning A4 - Proposed (Extended)
TSL DD - 100 - SK15 A	Awning A4 - Proposed (Retracted)
TSL DD - 100 - SK16 A	Sun Shading Structure Product Informati...
TSL DD - 100 - SK17 A	Retractable Awning Product Information



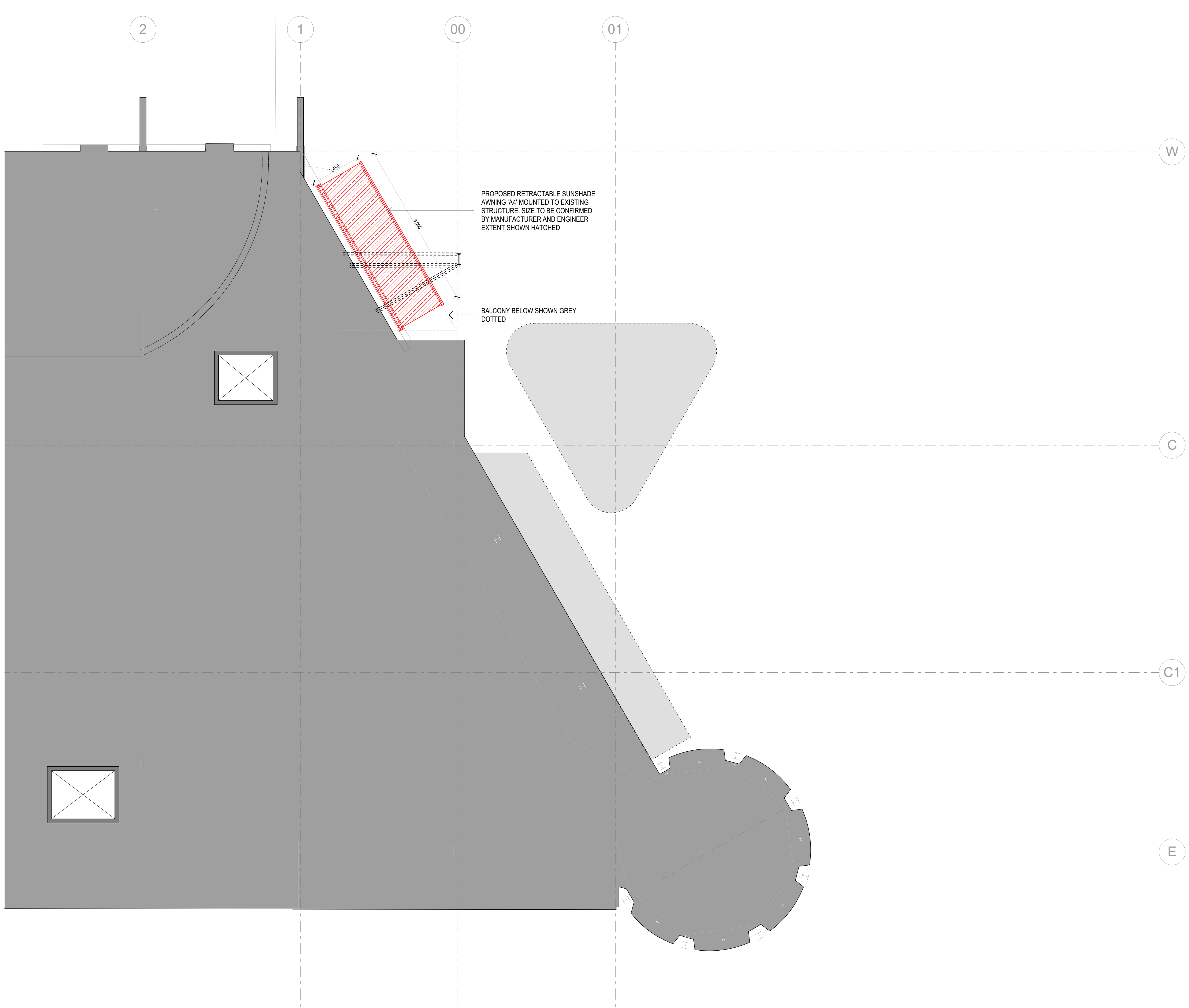
Level 01 - Ground Floor

1:100



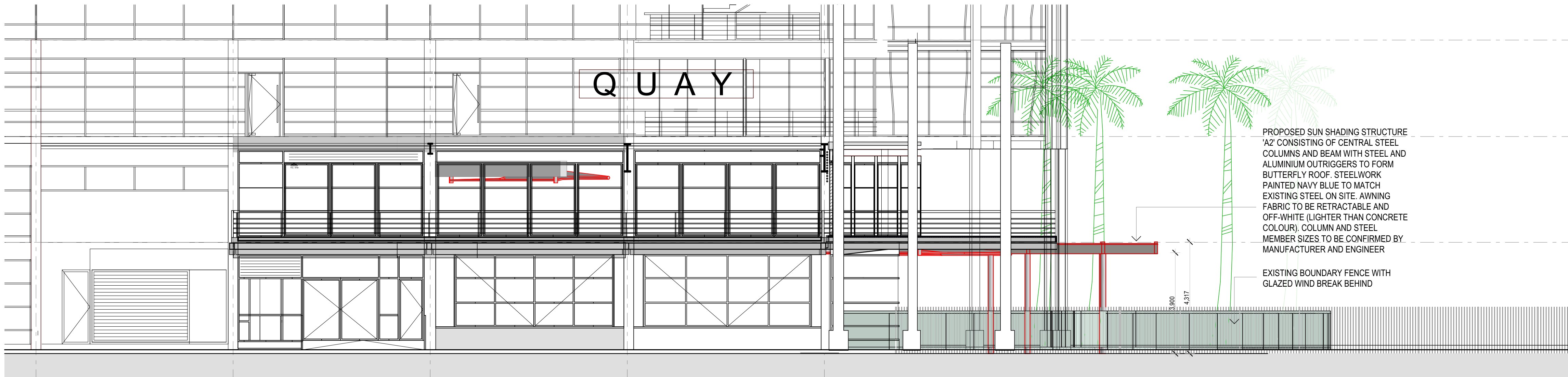
Level 02 - First Floor

1:100



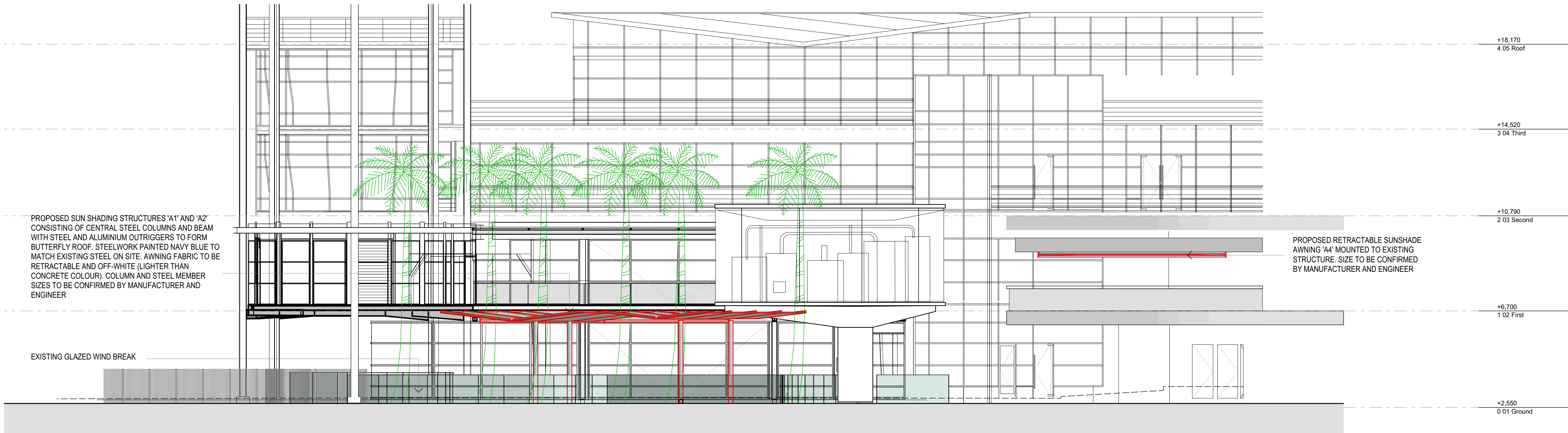
Level 03 - Second Floor

1:100



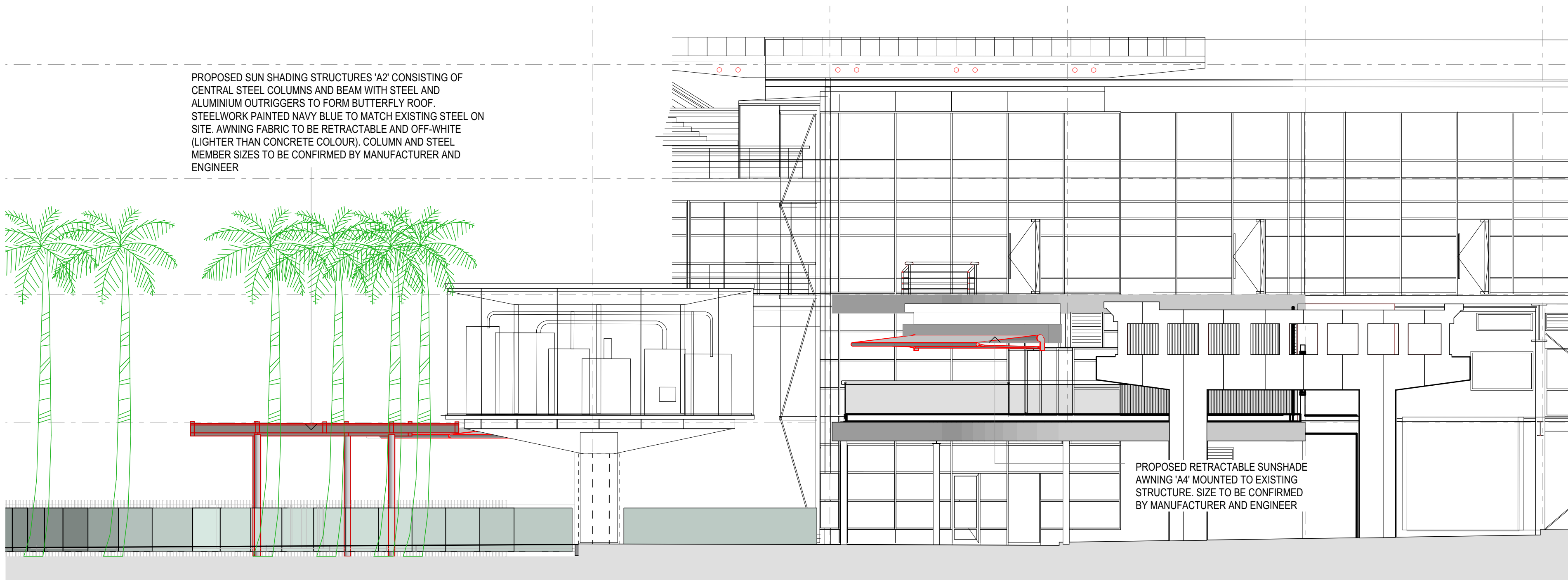
East Elevation

1:100



North Elevation

1:100



West Elevation

1:100



Location and View Impact Analysis



View 1 - Existing



View 1 - Proposed



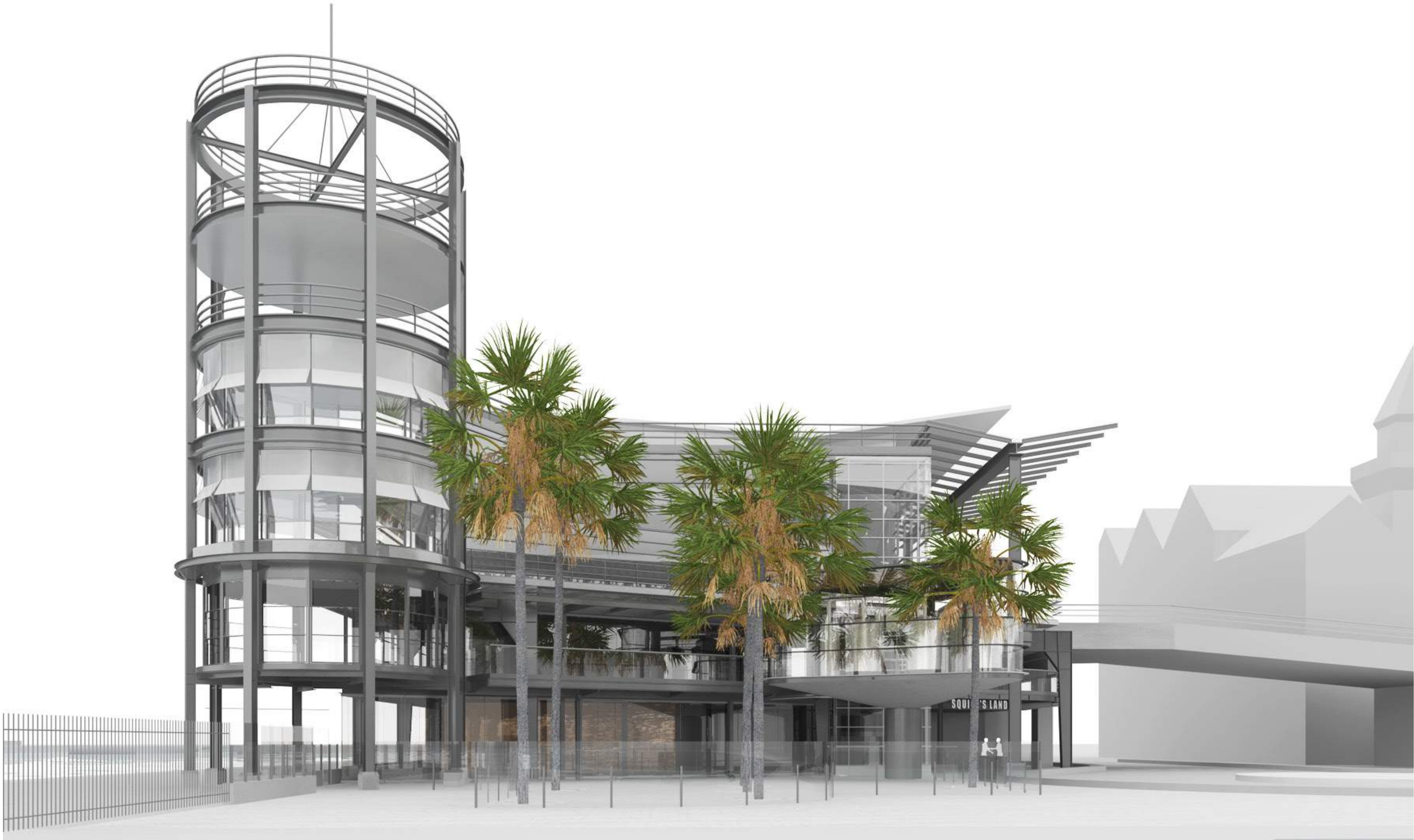
View 2 - Existing



View 2 - Proposed (Extended)



View 2 - Proposed (Retracted)



View 3 - Existing



View 3 - Proposed (Opened)



View 3 - Proposed (Retracted)



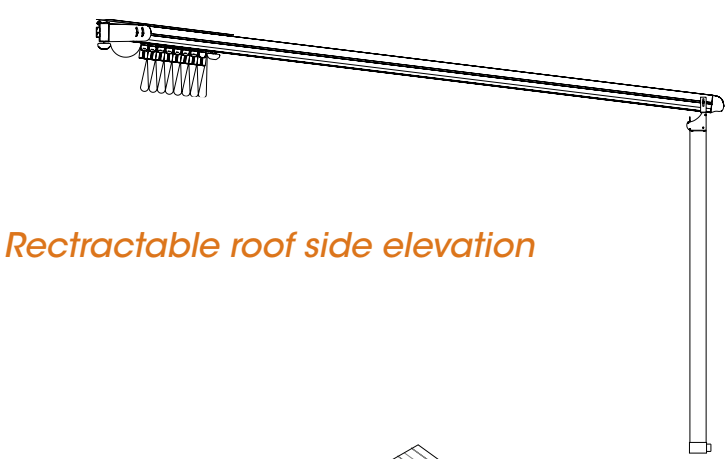
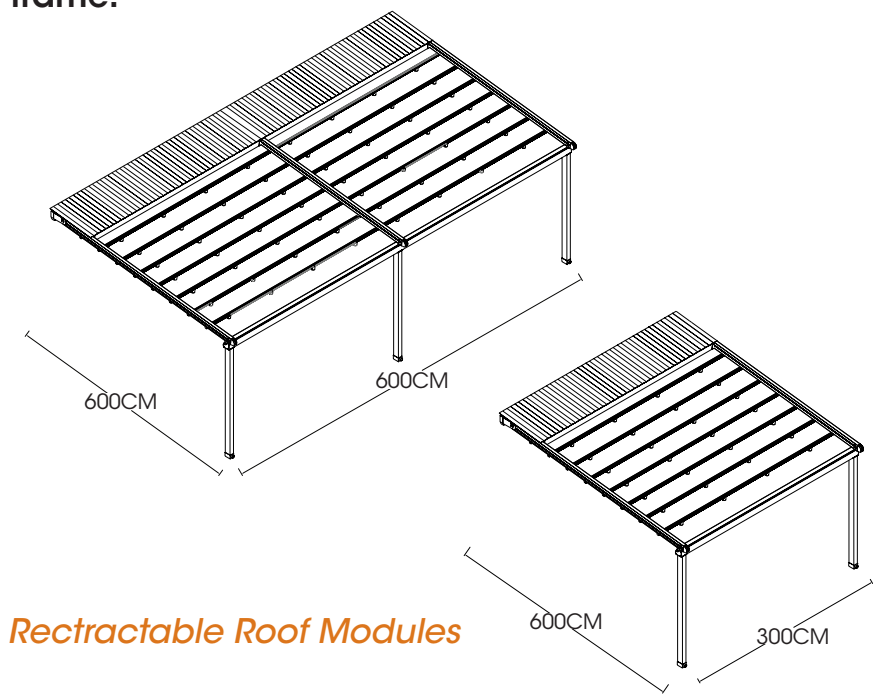
Awning A4 - Proposed (Extended)



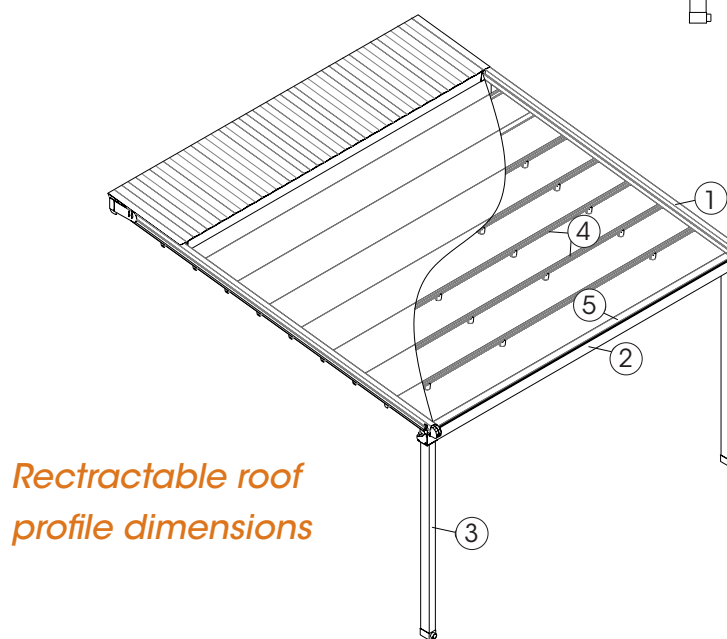
Awning A4 - Proposed (Retracted)



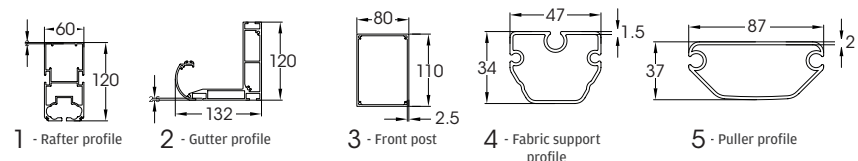
There are various options available in the profiles of the roof structures depending on the required widths and projections; the diagrams illustrate a basic retractable roof on a standard aluminium frame.



Retractable roof side elevation



Retractable roof profile dimensions



When the sun is not the only problem

What is needed in most cases is a structure that not only can provide shade so we can avoid the risk of sunburn, but also protection from high winds and rain so that the outdoor area can be utilised throughout all seasons.

Often umbrellas are installed in courtyards and beer gardens. Whilst they can look quaint and offer some protection from the sun, come winds and rain, the area is no longer useable and businesses can lose half their potential turnover due to the weather, not to mention a backyard barbie total ruined!

Alternately permanent shade structures such as fixed aluminium or Carbolite roofs retain the heat and do not provide any flexibility in controlling outdoor settings. For example, when the sun is lower in the winter months and UV rays are no longer a threat, or on a summer's evening when the stars are out and the breeze is cooler, it would be preferable to open up the roof to allow air movement and to enjoy the outdoor feel without obstruction from an overhead roof.

A retractable option for the roof is a solution that has in the past often been overlooked, perhaps because retractable roofs are a relatively new product in the Australian market. As with most innovative sun/ shade products, they originated in Europe some 20 years before reaching our shores about a decade ago.

A roof that retracts...a smart solution

A retractable roof (or retractable pergola) is a motorised, openable roof system that concertinas back to open up the area beneath the roof. The membrane is made of PVC coated polyester and travels along a light weight track system. When extended, the roof is held under tension making it extremely resilient to winds (up to 100km per hour) and rain. Generally, the roof is supported by a powder coated aluminium pergola type structure, which is standard and widely available from most suppliers. However, custom structures are becoming popular with architects and designers making the roofs more diverse and aesthetically compatible with the buildings and their environments.

The benefits of the retractable roof are that not only does it provide sun, wind and rain protection, but gives the user versatility in how they interact with the elements as well as the ability to furnish the area without the concerns of damage from the sun and rain.

Side screens can be attached the roof systems to allow for total protection from the weather, effectively creating an outdoor room that can be completely opened or closed when necessary.

Roofs that stand out from the rest



Aalta Australia not only provides these standard roofs but specialises in supplying the retractable roof component on custom-made structures, such as timber pergolas, dual posts, stainless steel or existing frameworks. This allows architects and designers a lot more freedom in their designs, integrating seamlessly the outside area with the building's style and function.

The following projects illustrate the adaptability of the retractable roof system with different frames custom-made to suit the area.

◀ **Office Building, North Sydney** – this freestanding timber structure was custom-built with the retractable roof providing shade and protection from the rain. Being a high wind area, the retractable roof was an ideal solution as it can be left extended without the risk of being damaged. The timber frame is juxtaposed from the steel and glass of this modern office building, allowing the staff to enjoy a more relaxed atmosphere during lunches and functions away from the stresses of the business that take place behind the glass.

◀ **Oxford Falls Grammar School, Oxford Falls** – three retractable roofs were installed – each at 7m x 9m with the timber frame ensuring that the roof fitted in with the natural environmental surrounds. Each roof works independently via a multi-channel remote control, giving the school flexibility in its use. Gas heaters were also installed to allow the school community to utilise the area throughout the year.

◀ **Residential home, Brooker Bay** – the three-runner system is supported by dual stainless steel posts. When retracted the structure reflects and complements the marine location with its piers and bridges, boats and masts. As with all retractable roofs, the PVC coated polyester fabric maintains its integrity even in such a harsh environment.

◀ **Manly 16ft Skiff Club, Manly** – Retractable roofs cover 110sqm comprising of eight motorised systems individually operated. Each roof is approximately 13.75sqm with separate remote controls allowing for individual operation and customisation of light control for morning and afternoon sun. The steel frame which the roof systems are supported by was engineered to withstand the high winds common to harbour side areas. The new roofs continue the roof line of the original historic boat sheds, marrying the new and old. Lighting, heating and external glazing were incorporated to provide comfort and ambience to the patrons, essentially creating an outdoor room.

Full brochure and manufacturers contact details available upon request

INNOVATIONS 2017



markilux 3300 pur

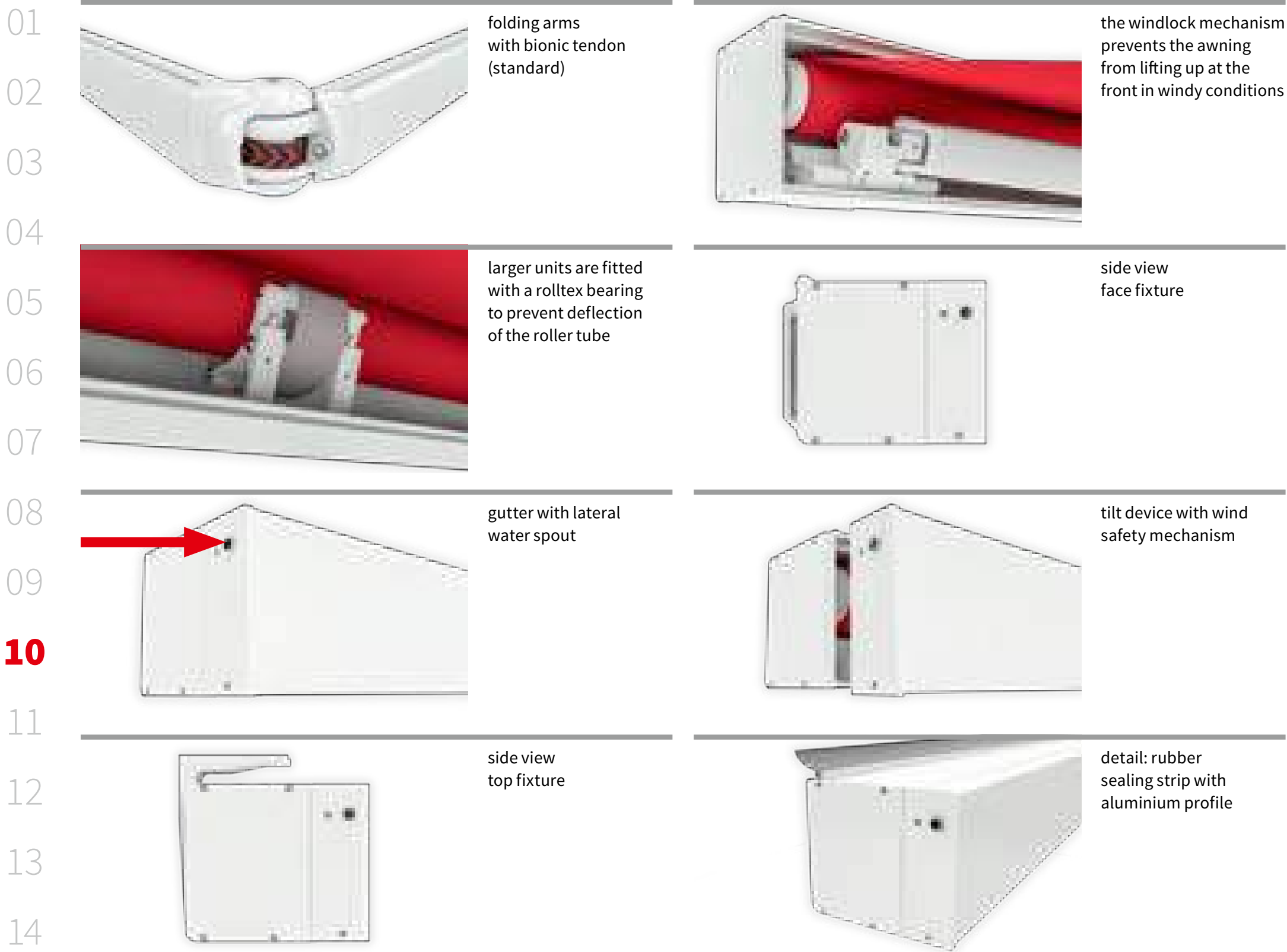
Simple and straightforward design up to 400 cm extension –
with smooth front profile and wall seal

markilux.com

markilux
safe timeless beautiful

markilux 3300 pur

INNOVATIONS 2017



Design Features

- the sturdy compact cassette with the perfect seal to the wall
- elegant and robust front profile made of aluminium
- self-supporting cassette made of extruded components
- full cassette awning: when closed all components are fully protected from the weather

Technical Specification

- the front profile with integrated double gutter ensures that water flows off to the side of the awning whether it is open or closed
- the 85 mm roller tube ensures the highest stiffness and the best possible cover winding characteristics even at the largest widths
- the extremely sturdy awning construction makes it possible to shade even very large areas safely
- unique arm technology with power transference using bionic tendon made of high-tech fibres with extremely high tensile strength. Tested by The Fraunhofer Institute

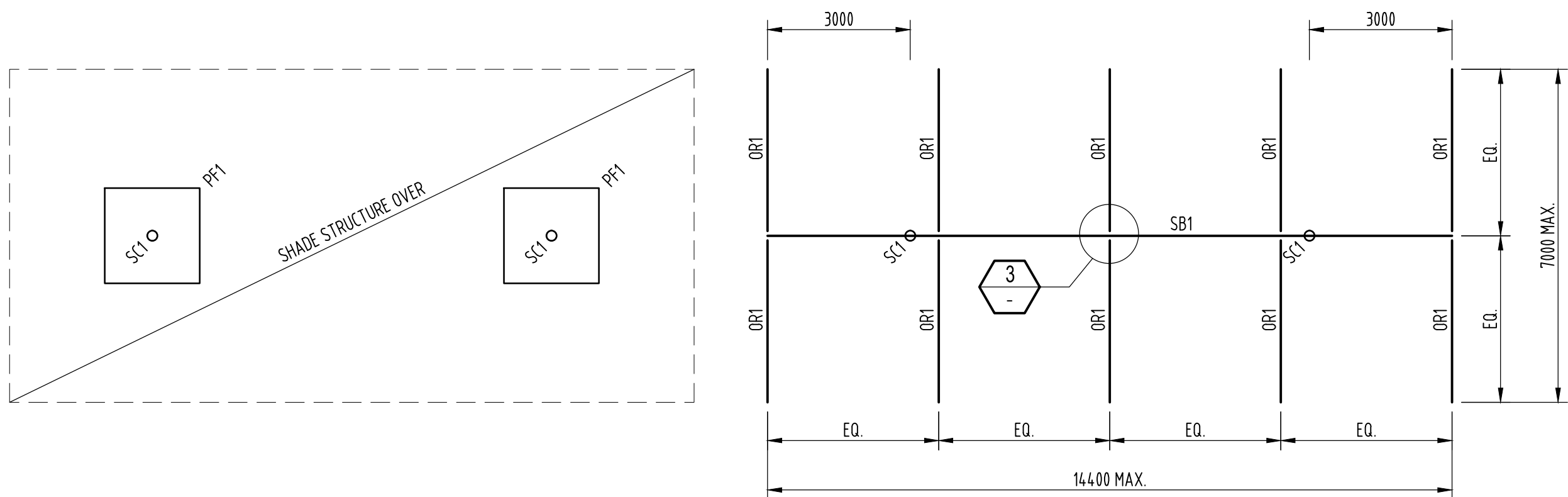
Accessories

- radio-controlled motor with radio remote control for ease of use
- hard-wired motor operation (optionally with automatic weather controls) for straightforward and easy operation
- in the case of manual operation ease of use is ensured with the spring-assisted gearbox
- awning available in non-standard RAL colours
- available with a valance
- wall seal using aluminium / rubber sealing strip

162 | Special features

markilux.com

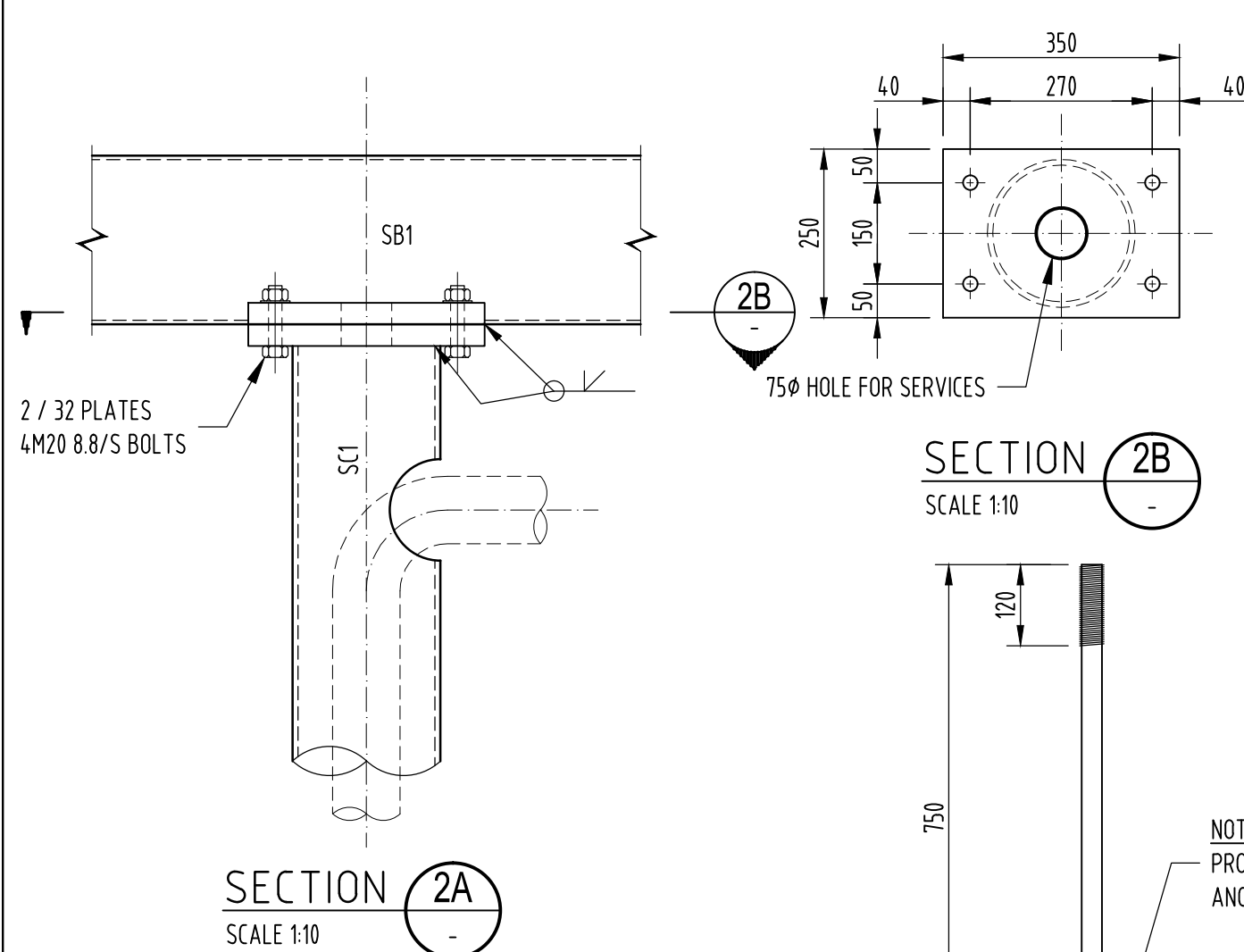
Full brochure and manufacturers contact details available upon request



FOOTING PLAN
SCALE 1:100

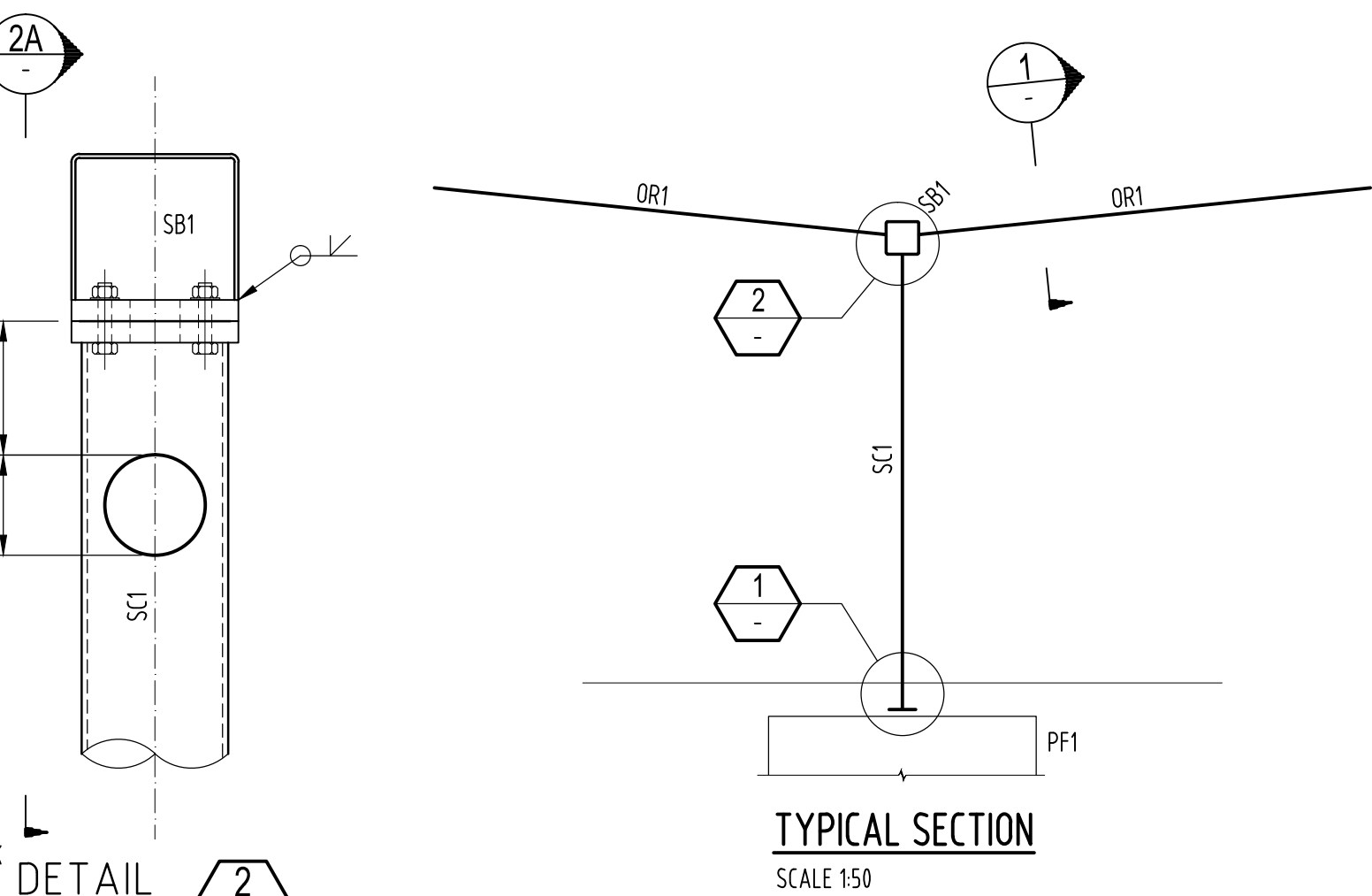
ROOF PLAN
SCALE 1:100

OR1 - FABRICATED OUTRIGGER RAFTER 12mm PLATE (REFER DETAIL)
SB1 - 250 x 6 SHS SPINE BEAM (GRADE 350)
SC1 - 219 x 8.2 CHS (GRADE 350) STEEL COLUMN



SECTION 2B
SCALE 1:10

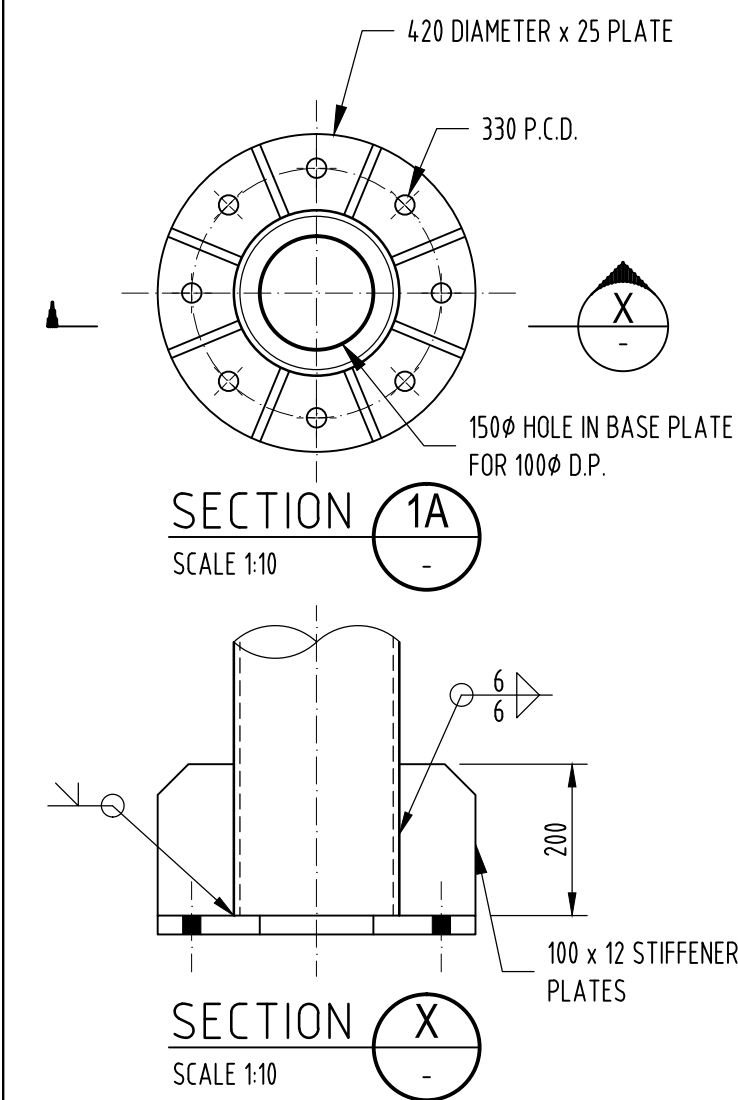
SECTION 2A
SCALE 1:10



TYPICAL SECTION
SCALE 1:50

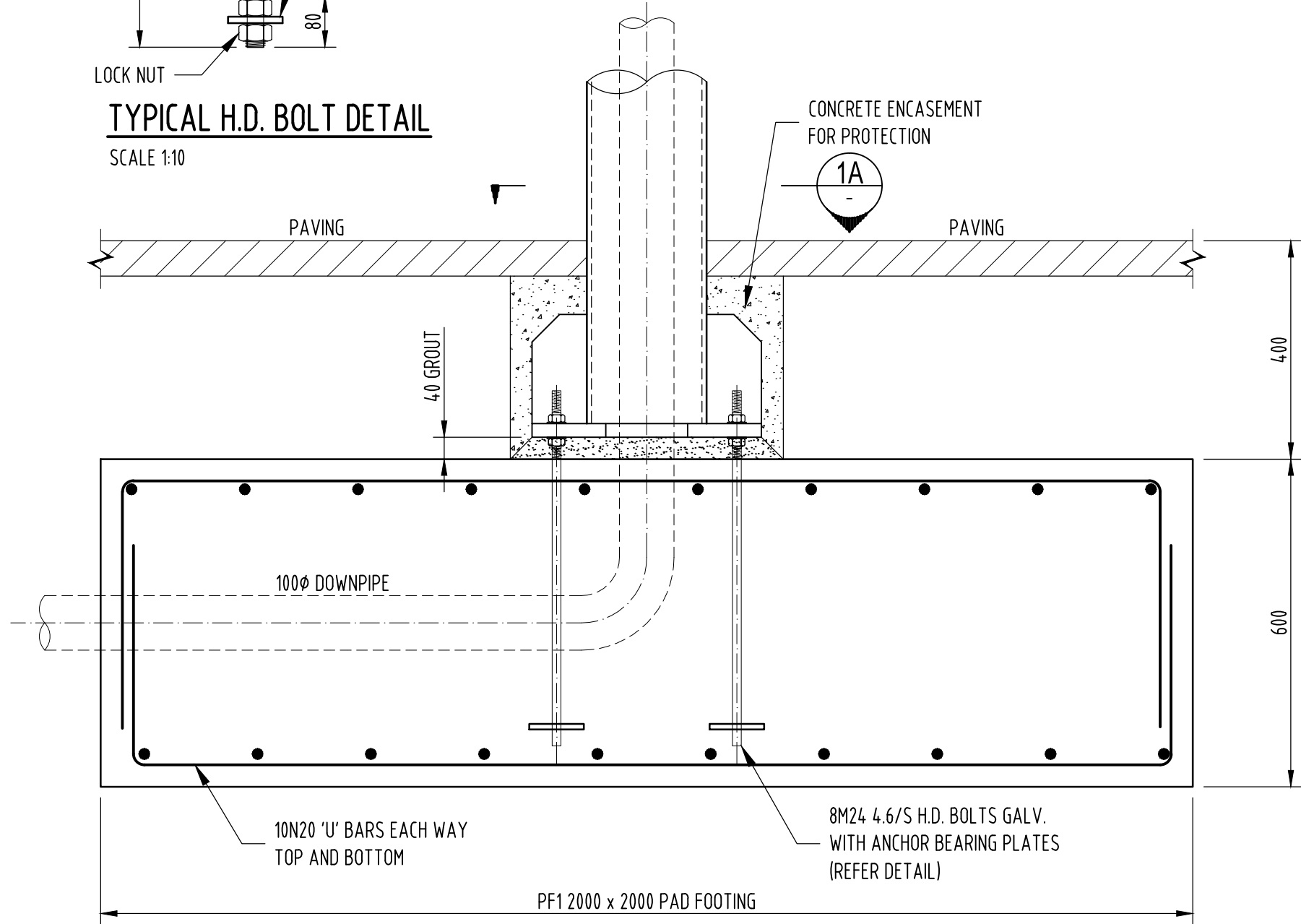
DETAIL 2
SCALE 1:10

TYPICAL H.D. BOLT DETAIL
SCALE 1:10



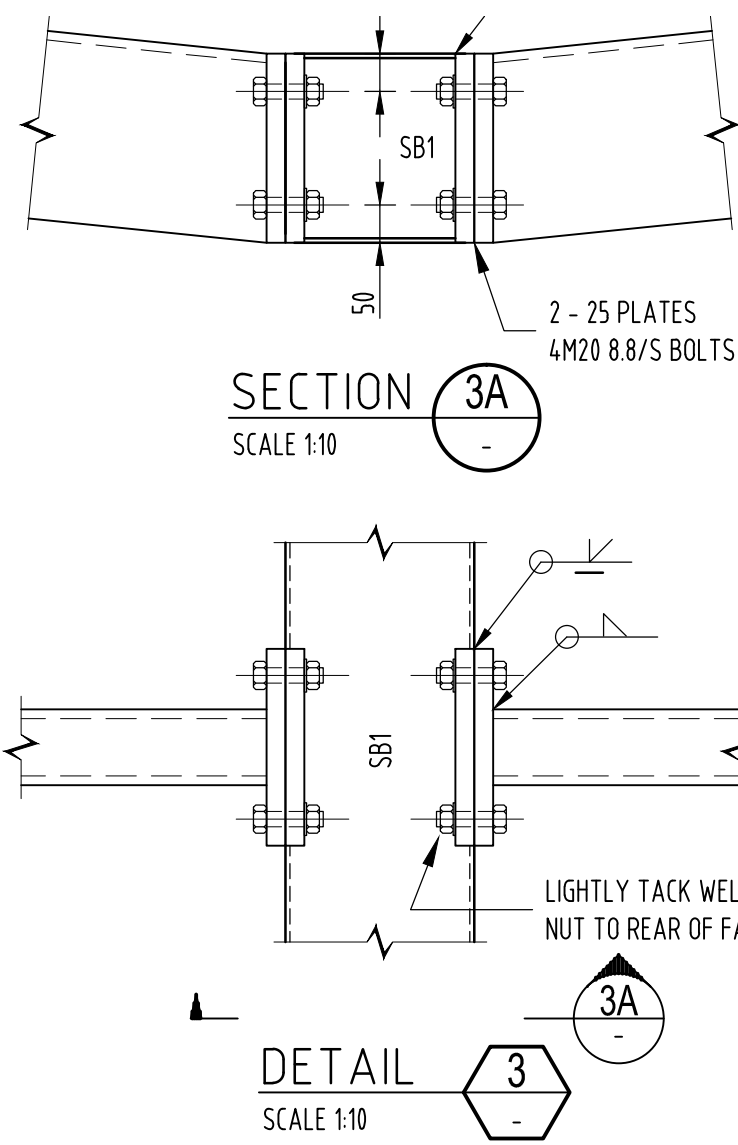
SECTION 1A
SCALE 1:10

SECTION X
SCALE 1:10



DETAIL 1
SCALE 1:10

25 MPa CONCRETE
60mm CLEAR COVER



SECTION 3A
SCALE 1:10

DETAIL 3
SCALE 1:10

STRUCTURAL STEELWORK NOTES

GENERAL

- FABRICATE AND ERECT ALL STRUCTURAL STEELWORK IN ACCORDANCE WITH AS 4100, AS 1554, AS 11013 AND THE SPECIFICATION.
- STEEL GRADES SHALL BE AS FOLLOWS :-
MEMBER GRADE
HOT ROLLED PLATE 250
UB,UC,PF, ANGLES & FLATS 300 PLUS
WB AND WC 300 PLUS
RHS,SHS AND CHS 350
- COLD FORMED PURLINS AND GIRTS SHALL BE "LYSAGHTS" / "STRAMIT" OR OTHER SECTION APPROVED IN WRITING BY THE ENGINEER, HAVING 450 MPa YIELD, AND A MIN. GALVANIZED COATING OF 350 gm/m² U.N.O. CHANNEL BRIDGING SHALL BE USED AS NOTED. CONTINUOUS PURLINS SHALL BE LAPPED 15% MIN. OF LONGER SPAN.
- VERIFY ALL SETTING OUT DIMENSIONS WITH THE ARCHITECT.
- DO NOT OBTAIN DIMENSIONS BY SCALING THE STRUCTURAL ELEMENTS.
- SUBMIT 1 No. ELECTRONIC & 1 No. HARD COPY OF SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL OF GENERAL ARRANGEMENT & MEMBER SIZES OF STRUCTURAL ELEMENTS BEFORE COMMENCING FABRICATION.
- ALL MEMBER CENTROIDS AT CONNECTIONS SHALL INTERSECT AT A POINT UNLESS NOTED OTHERWISE. GAUGE LINES MAY BE USED IN LIEU OF CENTROIDS FOR BOLTED END CONNECTIONS OF ANGLES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL STEELWORK IN A STABLE CONDITION DURING CONSTRUCTION.

DESIGN LOADS

ROOF LIVE LOAD - 0.25 KPa
WIND LOAD - REGION "A" CAT. "4" IMPORTANCE LEVEL 2

STEELWORK

- UNLESS OTHERWISE NOTED USE
(a) 10 mm THICK GUSSET, FIN AND END PLATES, WELD ALL ROUND.
(b) 20 mm DIA. 8.8/S BOLT.
(c) 6 mm CONTINUOUS FILLET WELDS.
- ALL WELDS SHALL BE CATEGORY SP. AS SPECIFIED IN AS1554 WITH THE EXCEPTION OF THE FOLLOWING GP. CATEGORY WELDS. PURLIN CLEATS, AND GIRT CLEATS.
- WELDING ELECTRODES SHALL BE E48XX/W50X.
- FABRICATION SHALL BE CARRIED OUT BY WELDERS WHO ARE QUALIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF AS1554.
- GRADE 8.8 BOLTS SHALL NOT BE WELDED, INCLUDING TACK WELDS FOR CAGING.
- ALL BOLTS (INCLUDING MASONRY ANCHORS) SHALL BE HOT DIP GALVANIZED.
- ALL HOLDING DOWN BOLTS SHALL BE GRADE 4.6/S UNLESS NOTED OTHERWISE.
- ALL HOLDING DOWN BOLTS SHALL BE HOT DIP GALVANIZED AND PASSIVATED IN A 0.2 % SODIUM DICHROMATE SOLUTION.
- GROUT UNDER BASE PLATES SHALL BE HIGH STRENGTH NON-SHRINK OF FLOWABLE CONSISTANCY. ENSURE FULL CONTACT WITH BASE PLATE AND NO VOIDS UNLESS NOTED OTHERWISE.
- CHIP ALL WELDS FREE OF SLAG.
- PROVIDE TEMPORARY BRACING AS REQUIRED TO MAINTAIN BUILDING STABILITY DURING CONSTRUCTION.
- DO NOT GROUT UNDER BASE PLATES UNTIL FIRST LEVEL STEELWORK IS PLUMB AND FIXED BY WELDING OR BOLTING.
- PREPARE AND FINISH STEELWORK SURFACES AS FOLLOWS :-
INTERNAL - ABRASIVE BLAST CLEAN STEELWORK TO AN AS 1627 CLASS 2.5 FINISH AND APPLY 0.075mm OF "ZINCANODE 304" OR EQUIVALENT PRIOR TO DELIVERY TO SITE.
EXTERNAL - EXPOSED TO ENVIRONMENT - STEELWORK SHALL BE CLEANED IN ACCORDANCE WITH AS 1657 PART 5 AND HOT DIP GALVANIZED IN ACCORDANCE WITH AS 1650 TO ACHIEVE AN AVERAGE ZINC COATING WEIGHT OF 600 gm/sq.m. (MIN. ZINC COATING WEIGHT 550 gm/sq.m.) U.N.O. (REFER TO ARCHITECTURAL SPECIFICATION FOR ALTERNATIVE PAINT SYSTEM WITH EQUIVALENT DURABILITY)
GALVANIZING DAMAGED BY WELDING SHALL BE MADE GOOD USING "GALSTICK" IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND HAVE 2 COATS OF "COLD-GAL" PAINT OR EQUAL.

CONCRETE NOTES

GENERAL

- CARRY OUT ALL CONCRETE WORK IN ACCORDANCE WITH AS 3600
- VERIFY ALL SETTING OUT DIMENSIONS WITH THE ARCHITECT.
- DO NOT OBTAIN DIMENSIONS BY SCALING THE STRUCTURAL ELEMENTS.
- IN CASE OF DOUBT - ASK.
- CONDUITS OR PIPES SHALL BE PLACED BETWEEN THE TOP AND BOTTOM REINFORCEMENT, NOT IN THE COVER CONCRETE ZONE.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY PENETRATIONS TO THE BEAMS AND PENETRATIONS LARGER THAN 150 x 150 TO THE SLAB NOT DETAILED ON THE DRAWINGS, PRIOR TO THE PLACEMENT OF ANY CONCRETE.

DESIGN LOADS

GROUND FLOOR - LIVE LOAD - 5.0 KPa

CONCRETE

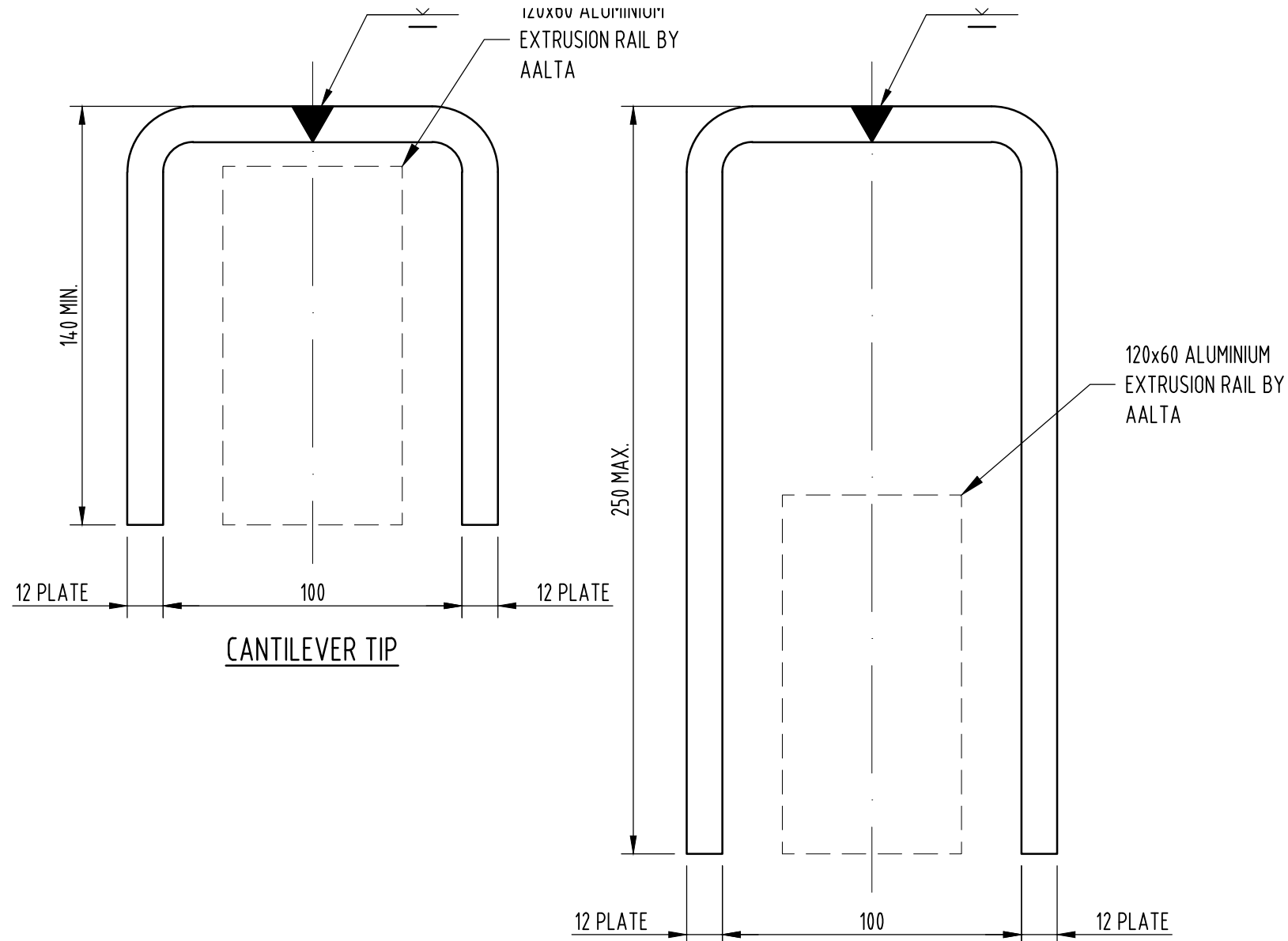
- PLACE CONCRETE OF THE FOLLOWING CHARACTERISTIC COMPRESSIVE STRENGTH f_{ck} AS DEFINED IN AS 3600. ADD A WATER REDUCING ADMIXTURE IN ACCORDANCE WITH AS 1478 AND AS 1479.

Location	AS 3600 f _{ck} MPa at 28 days	Specified Slump	Nominal Agg. Size
All U.N.O.	32	80	20
FOOTINGS	25	80	20

- USE "A.C.S.E. SPECIFICATION TYPE SL" CEMENT, UNLESS OTHERWISE SPECIFIED.
- CONCRETE TESTING :-
(a) CONCRETE SHALL BE SAMPLED AT THE PROJECT SITE IN ACCORDANCE WITH AS1012.1 PRIOR TO SITE HANDLING.
(b) THE FREQUENCY OF HANDLING SHALL PROVIDE ONE SAMPLE FROM EACH 50m³. OF CONCRETE IN A SINGLE POUR BUT NOT LESS THAN 3 NO. SAMPLES.
(c) ALL TEST RESULTS SHALL BE FORWARDED TO THE PROJECT SUPERINTENDENT.
- CONSOLIDATE BY VIBRATION. CURE ALL CONCRETE SURFACES.

REINFORCEMENT

- FIX REINFORCEMENT AS SHOWN ON DRAWINGS. THE TYPE AND GRADE IS INDICATED BY A SYMBOL AS SHOWN BELOW. ON THE DRAWINGS THIS IS FOLLOWED BY A NUMERAL WHICH INDICATES THE SIZE IN MILLIMETRES.
A MARK NUMERAL (IF USED) FOLLOWS THIS NUMERAL.
N. HOT ROLLED DEFORMED BAR, GRADE 500N
S. HOT ROLLED DEFORMED BAR, GRADE 230S
R. PLAIN ROUND BAR, GRADE 250R
L. HARD DRAWN WIRE FABRIC, GRADE 500L
- PROVIDE PLASTIC TIPPED BAR SUPPORTS TO GIVE THE FOLLOWING CONCRETE COVER TO ALL REINFORCEMENT UNLESS OTHERWISE NOTED ON THE DRAWINGS.
FOOTINGS - 50 BOTTOM, 40 TOP, 50 SIDES. U.N.O.
SLABS - 25 TOP, 25 BOTTOM, 40 WHEN EXPOSED TO WEATHER.
BEAMS - 30 TOP, 30 BOTTOM, 40 WHEN EXPOSED TO WEATHER
COLUMNS - 40 COVER TO TIES.
- LAP FABRIC 2 WIRES MINIMUM + 50mm AS INDICATED BELOW. FABRIC SHEET SHALL BE WIRED TOGETHER AT 1000 MAXIMUM CENTRES.
- LAPS IN REINFORCEMENT SHALL BE MADE ONLY WHERE SHOWN ON THE DRAWINGS UNLESS OTHERWISE APPROVED. LAP LENGTHS SHALL BE 40 BAR DIA. UNLESS NOTED OTHERWISE.
- ALL REINFORCEMENT SHALL BE INSPECTED BY THE ENGINEER TO ENSURE IT HAS BEEN ACCURATELY PLACED AND ADEQUATELY SUPPORTED PRIOR TO PLACING CONCRETE.



SECTION 1
SCALE 1:2

BASE OF CANTILEVER RAFTER

PRELIMINARY DRAWING

NOT TO BE USED FOR CONSTRUCTION PURPOSES

P1	26-02-18	PRELIMINARY ISSUE	RY
ISSUE	DATE	REVISION	INITIAL

CLIENT
MANTLE GROUP

ARCHITECT
COLLINS AND TURNER

PROJECT
THE SQUIRES LANDING TENANCY 5 OPT

SHEET SUBJECT
AWNING FOOTING / ROOF PLAN AND DETAILS

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DESIGNED	DRAWN	JOB No.
M.C.	RY	17200
DATE	SCALE at A1	DRAWING No.
Feb. 2018	1 : 100 UNO	S601
		ISSUE
		P1

Attachment 2

Overseas Passenger Terminal Historical Archaeological Testing—Results Summary, letter dated 18 January 2018

A. Tenancy 5, Overseas Passenger Terminal—Archaeological Test Excavation Results

A.1 Introduction

The following provides a description and results of two phases of archaeological test excavation as part of the refurbishment of Tenancy 5, Overseas Passenger Terminal (OPT), Circular Quay (Figure A.1, Figure A.2). Testing was undertaken in accordance with the Archaeological Research Design (ARD) prepared by GML Heritage in September 2017.¹

Excavation at the site of the proposed micro-brewery pod took place on 13 October 2017 under the direction of Abi Cryerhall, GML Senior Associate, and the works were undertaken by Erin Mein and Kieren Watson, GML Subconsultant Archaeologists.

Excavations for the support column piles took place on 10 January 2018, under the direction of Abi Cryerhall, GML Senior Associate. Site works were undertaken by Caitlin D'Gluyas, GML Heritage Consultant, Archaeologist.

A.2 Description and Results

A.2.1 Micro-brewery Footing

Two narrow trenches (approximately 400mm wide) were cut in an 'L' shape into the brick paving using a concrete saw. The longer trench ran east–west through the centre of the 3.8m x 3.8m proposed footing location, providing a cross-section in the forecourt of the OPT (Figure A.3). The longer trench was then widened to 1.2m to provide increased visibility and better understanding of the subsurface deposits within the trench, and to allow the operator to use the larger bucket, which had a blade rather than teeth. The shorter trench ran north–south to the south of the first trench, but this was not excavated (Figure A.4).

- The brick pavers overlay clean, coarse, pale-yellow sand (approximately 100mm).
- A small copper pipe was found running north–south at the eastern end of the test trench within this sand. As this pipe was unidentified on the service plans, it was left in situ. This reduced the lateral extent of the test trench to the east by approximately 800mm.
- Compact, black to dark-grey asphalt (approximately 100mm deep) was identified under the sand.
- A deeper layer of crushed sandstone (50–150mm) and coarse pale-yellow sand was observed below the asphalt (approximately 200mm deep). No artefacts were observed and the fill was extremely clean and free of inclusions.
- A poured concrete slab (200mm thick) was located below the crushed sandstone, 500mm below the current ground surface (Figure A.5). The concrete slab was cement based, contained blue metal aggregate and was reinforced with steel re-bar. The slab was broken up using the backhoe jack hammer and removed.
- A mixed crushed sandstone fill underlay the concrete slab. The fill was pale-grey-brown and contained highly compacted, large, sandstone rubble (200–400mm) and coarse pale-yellow sand (Figure A.6). This fill contained inclusions of broken shale, some fragments of bitumen and the occasional fragment of broken sand stock brick.

- This fill was homogenous across the whole test trench. One broken dark-green glass bottle base and a fragment of stoneware were observed within the fill, but it was not associated with any features or structures. In places the rubble was highly decayed and formed compact conglomerates, which were broken up using the toothed bucket.
- The pale grey-brown colour of the fill gradually transitioned into a pale yellow with increasing depth, but composition of the fill remained the same—mixed crushed sandstone.
- Three metal (steel?) pipes were observed within this fill, at approximately 1300mm below the ground surface. The pipes were running north–south through the centre of the test trench. No cut was observed for the pipes, indicating that they were laid within the crushed sandstone fill. These pipes were not marked on service drawings and were therefore treated as potential live services.
- This fill and its association with the metal pipes and concrete slab above was interpreted as relating to the 1958 reclamation activities and construction of the present OPT following the removal of the 1876 timber wharf.²
- The south-facing section was cleaned and photographed at this point in the excavation, prior to the trench becoming too deep to be safely accessed (Figure A.7).
- A rough level was taken (using a hand tape) of the depth of the waterline below the brick paving. The water was approximately 3m below the brick paving at current tidal heights.
- A phone conversation was held between Excavation Director Abi Cryerhall and archaeologist Erin Mein, regarding required depths of excavation in light of services obstructing the excavation of the test trench. It was agreed that excavation should proceed to the east and west of the services until further excavation became unviable due to excavator reach, other obstructions etc.
- This methodology was agreed to by Xenia, and excavation either side of the pipes proceeded. Due to the depth of the trench at this point, entering the trench was no longer possible for safety reasons and monitoring of the excavation proceeded on a visual basis only.
- Excavation to the east of the pipes proceeded to a maximum depth of 1m RL. Excavation on this side was limited due to the narrow space between the pipes (Figure A.8).
- Excavation to the west of the pipes proceeded to a maximum depth of 0.56m RL. At this depth, it was no longer possible to effectively excavate (Figure A.9). Access to the western end of the trench was limited by the presence of two palm trees immediately to the north and south of the test trench.
- Excavation ceased following consultation between Xenia and the Excavation Director via phone.
- At the completion of the excavation, the trench was surveyed and levels were taken (Figure A.11 and Figure A.12).
- A level was taken on the top of the sandstone seawall immediately in front of Campbell's Stores. The wall is 1.02m RL. This suggests that the excavation in the western end of the test trench extended below the likely level of a sea wall.
- The test trench was immediately backfilled following completion of the archaeological investigations.

A.2.2 Support Column Piles

Two test trenches were excavated to a maximum depth of 2.2m. The trenches were 'L' shaped to cover the extent of the piles (Figure A.15 and Figure A.16). The trenches were reduced to a narrow but deep slot trench to avoid uncovered services.

- The excavation revealed a sequence of fills consistent with those found in the previous test trench farther to the north. However, in these pile locations, the layer of concrete at 500mm deep was not identified.
- The pile locations were determined to be part of the twentieth-century reclaimed landscape. The fills mostly consisted of mixtures of crushed sandstone, sandstone rubble and concrete fragments (Figure A.17).
- Four plastic service pipes or conduits were identified at depths of between 200mm and 500mm in both pile locations 1 and 3. No evidence for cuts associated with these services was identified and they may have been laid concurrently with the filling event, or backfilled with consistent material.
- In pile location 1, the iron sheet piling from the OPT construction was found at the eastern extent of the trench. Extensive exposure of this sheet pile was not recommended due to stability concerns.

A.3 Interpretation of Findings and Site Phasing

Based on the comparative RL levels of the maximum extent of excavation, and that of the extant seawall to the north of the study area, it was concluded that the excavations extended below the likely level of a seawall, and therefore would have been encountered if it were located within the areas of excavation. This is further supported by the identification of a wall of large sandstone blocks approximately 1m below the current ground surface during excavation in 2000 to the south of the study area.³

Furthermore, based on the consistency of fills across the excavations it was concluded that the wall has not been demolished. In conjunction with a review of the historical plans and overlays, it appears likely that the trench is located entirely within the 1950s reclamation for the construction of the OPT, and therefore the 1850s seawall is located to the west of the study area.

A.4 Response to Research Questions

The results of the test excavation are unable to answer many of the research questions posed in the ARD as there were no significant archaeological findings. If the extent or location of impacts required by the project were to change following the finalisation of design documentation, further excavation may be required that could provide opportunities for further research. Despite this, some broad conclusions regarding the historical development of this area of the foreshore can be drawn.

The fills found throughout the trench consisted of poor and degraded sandstone rubble. This type of material is consistent with other areas of twentieth-century reclamation and findings from comparable archaeological investigations. In these sites, reclamation products were generally sourced from waste materials produced by the large-scale public works taking place across the Hawkesbury sandstone landscapes of the city, such as the cut and fill construction of the City Circle rail line. For example, sites excavated by Casey & Lowe along the western side of Darling Harbour contained fills believed to have been generated by such construction activities along the Pyrmont peninsula.

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The excavation also provides clarification regarding the accuracy of historical mapping and overlays of this area of Sydney Harbour. On the basis of this excavation, it is concluded that the 1850s seawall was constructed to the west of this area, with the reclamation fills excavated relating to the 1950s construction.

A.5 Conclusions

The construction of the proposed micro-brewery pod, and supporting columns in the proposed locations, will not result in any impact to significant archaeological remains, and design review is not required. The excavations have concluded that there are unlikely to be significant archaeological remains found within the study area, and relocation of the footings beyond the area tested as part of these excavations will not require further archaeological investigation.



Figure A.1 An aerial view of the subject site, outlined in red. (Source: Google Maps, with GML overlay 2016)

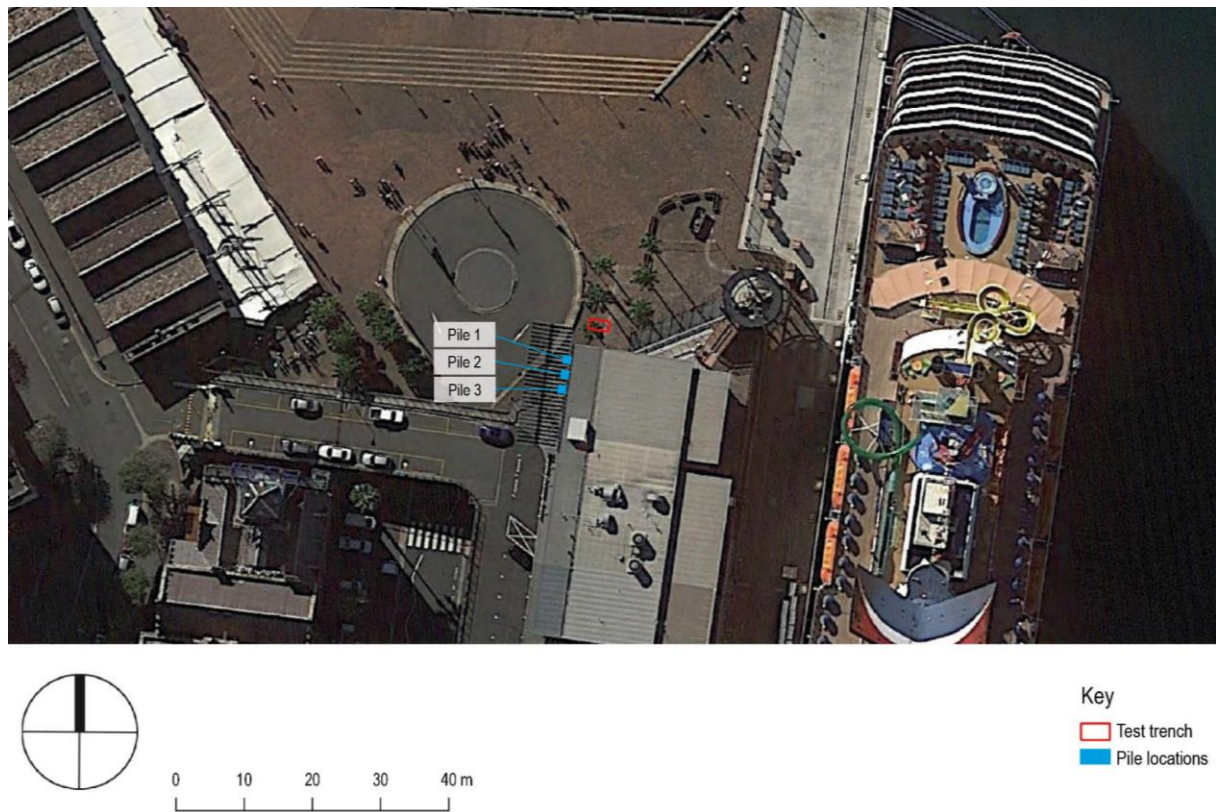


Figure A.2 Surveyed location of the proposed micro-brewery footing test trench, and support column piles. (Source: GML)



Figure A.3 General location of the test trench prior to excavation. Note extant palm trees and hydrant. (Source: GML)



Figure A.4 Removal of brick paving across the two trenches at the start of excavation. (Source: GML)



Figure A.5 Exposure of the concrete slab located at RL2.37, below layers of crushed sandstone fill. (Source: GML)



Figure A.6 Sandstone rubble and sand fill underlying the concrete slab. (Source: GML)



Figure A.7 Section through fills above and below the concrete slab. (Source: GML)



Figure A.8 Excavation to the east of three steel pipes identified within the trench. (Source: GML)



Figure A.9 End of excavation at the western end of the trench. (Source: GML)



Figure A.10 End of excavation. (Source: GML)

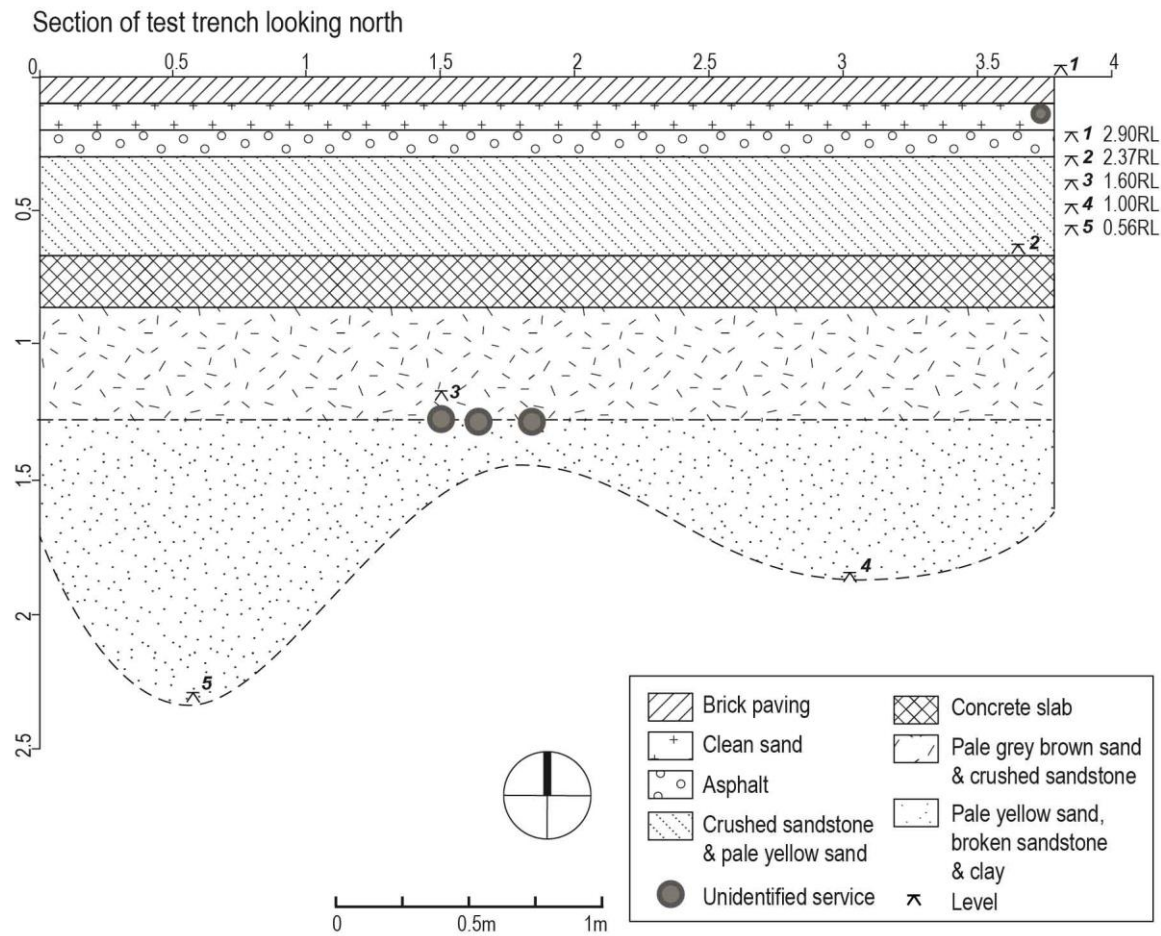


Figure A.11 Section drawing of the south-facing section. (Source: GML)

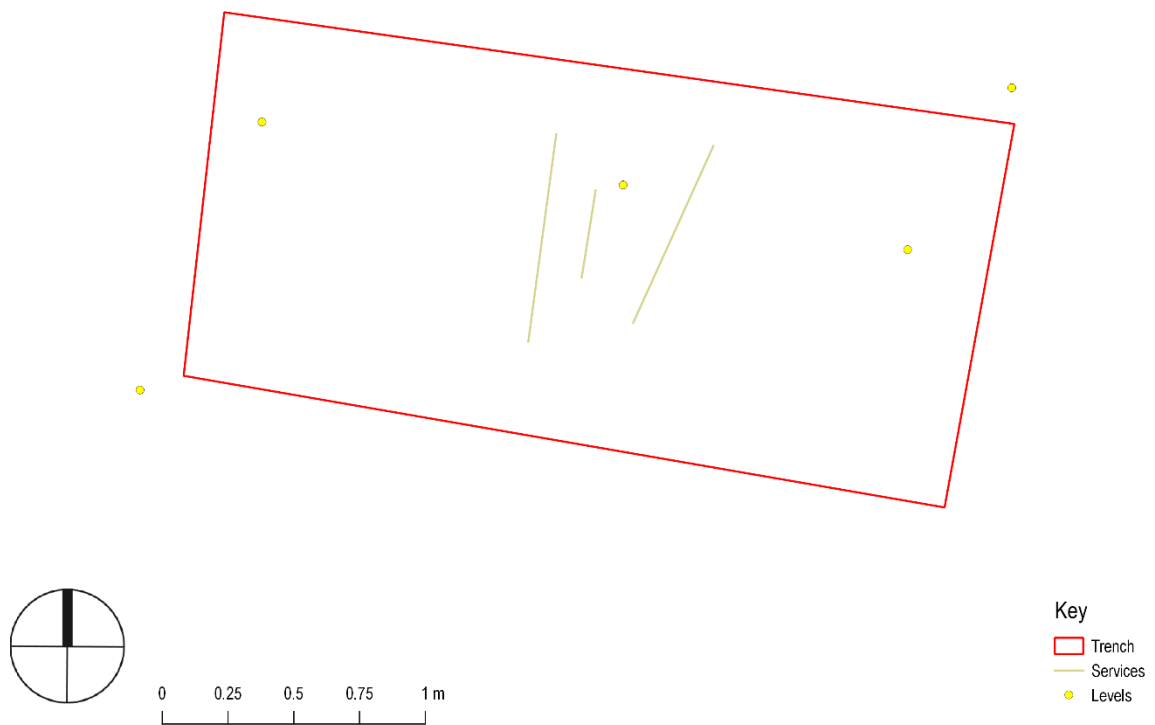


Figure A.12 Plan showing the relative locations of three identified services, and levels taken. (Source: GML)



Figure A.13 General location of the proposed piles for supporting columns prior to excavation. (Source: GML)



Figure A.14 Pile location 1 before excavation. (Source: GML)



Figure A.15 Excavation complete in pile location 1. (Source: GML)



Figure A.16 Excavation complete in pile location 3. (Source: GML)



Figure A.17 Excavation complete in pile location 3. (Source: GML)

A.6 Endnotes

- ¹ GML Heritage Pty Ltd, Tenancy 5, Overseas Passenger Terminal Circular Quay—Archaeological Research Design, prepared for the Ridgemill, September 2017, p 62.
- ² GML Heritage Pty Ltd, Tenancy 5, Overseas Passenger Terminal Circular Quay—Heritage Impact Statement, prepared for the Mantle Group, May 2017, p 62.
- ³ Godden Mackay Logan, N. Iacono, letter to NSW Heritage Office, 8 February 2000.