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Level 17, 4 Parramatta Square, Parramatta NSW 2124

Via Planning Portal

Dear Annie,

Response to EIS – Waterloo OSD – SSD 10437, 10438, 10439, 10440 and 10441

Thank you for your correspondence dated 4 November 2020 seeking comment on the EIS for the Waterloo OSD. City staff have reviewed the EIS cumulatively and provide the following combined response to the five SSD applications.

City staff would like to acknowledge the developer's efforts to reach out and engage during the preparation of the subject applications and note that several suggestions made during these meetings have been incorporated into the plans and accompanying documentation. City staff invite the applicant to continue this dialogue to resolve the concerns raised below and ensure that the best outcome for the site and surrounds is achieved.

Social planning and community land uses

1. Affordable housing - The City is concerned that the developer has watered-down their commitment to providing affordable housing on site in perpetuity, which was confirmed within their Response to Submissions during the assessment of concept approval SSD 9393. Clause 6.45(2)(a) of the SLEP makes no provision for a time-limited provision of affordable housing, and as such the development is contrary to the development standard. The development must be held to provide the affordable housing in perpetuity as previously promised and in accordance with the statutory provisions applicable to the Metro Quarter.
2. A wholistic approach to development - The developer and DPIE are to have greater consideration to the provision of community infrastructure within this development and the future redevelopment of the Waterloo Estate to avoid duplication of infrastructure, provide flexible spaces for community uses and adequately meet the needs of the community in the decades to come. This will ensure that the Metro Quarter and Waterloo Estate redevelopment meet the Desired Outcomes under the Waterloo Metro Design and Amenity Guidelines. For example, the developer should be committed to providing free Wi-Fi in public areas to address lack of access in the surrounding community. The City also

draws the DPIE attention to Section 3U of the Waterloo Metro Design and Amenity Guidelines which requires the developer to provide programs that “*engage and link the various communities within the Metro Quarter through ongoing and temporary activities that enliven and interpret the location*”.

3. Engaging with the community – The development must imbed commitments to culturally appropriate design and community consultation in future contracts and tenders. Skills development with local NCIE, TAFE, retailers and community services, as well as opportunities particularly for youth at risk and mature age ex-offenders or people in recovery are a high priority. There will be strong local job opportunities in construction and many apprenticeship opportunities for a long time with the re-development of the wider area, and the developer should investigate the lessons learned from the Australian Technology Park and Job Ready programs, looking for opportunities for social and local procurement beyond Aboriginal Participation in Construction. Any social enterprises should also have a strong local connection.
4. Centre-based childcare – The City has undertaken an analysis of existing and future demand and supply of childcare within the LGA. Excluding the proposal, there is projected to be an oversupply of centre-based childcare within the surrounding area, and as such, it is recommended that this significant proportion of the required community uses floor space is instead allocated for a [Health One facility](#).
5. Social enterprise cafe – The operator of the social enterprise cafe should be bound to provide opportunities for local employment, access to healthy food, growing of produce, and/or how to cook healthily.
6. Makerspace - We believe the space would be best used as workspaces for industrial design and woodwork type practices. A breakdown of the space is below.
 - 2 x 40sqm woodwork studios
 - 3 x 20sqm industrial design studios
 - A 25sqm showroom – for artists to be able to show and sell
 - A 135sqm common room – including small kitchenette etc

These spaces would enable the local community and local artists the opportunity to work together and develop skills and networks. It would also support local students who may be transitioning from school or TAFE courses and allow for places of practice. We would recommend the actual fit out of the space happen after construction with further input from the City.

7. Place Manager – The developer notes that a place manager will be employed to coordinate activities on site, however, further information is required to understand this role. For example, when will the place manager role commence; what work will the place manager focus on - community development and place making or more

to run events and activation of space; will the place manager will work closely with any future place manager for the Waterloo South redevelopment?

8. Voluntary Planning Agreement – It is recommended, in addition to those matters listed under condition A12 of SSD 9393, that any Planning Agreement address the provision of a place manager and require the social enterprise cafe and makerspace to be operated by an appropriate NGO, NFP or other suitable organisation in perpetuity, negotiated in consultation with the City of Sydney. This will ensure the development meets the design guidance under Section 3H of the Waterloo Metro Design and Amenity Guidelines.

Non-compliance with development standards

9. The site is identified on the Active Street Frontages map in accordance with Clause 7.27 of the Sydney Local Environmental Plan 2012 (SLEP). The application proposes to locate services and other infrastructure in areas fronting Botany and Wellington Street required for active frontage, as shown in the figure below. The development is therefore contrary to the development standard and the design criteria and objectives of Section 3I of the Waterloo Metro Design and Amenity Guidelines.
10. It would have been preferable for loading facilities to be co-located underground within the basement car park to allow for greater activation on these streets and reduce vehicle crossings across the site. However, it is acknowledged that this option would require excavation under the Church which does not form part of the application site and that the driveway is required on Botany Road for servicing the metro.
11. The applicant must provide a statement addressing Clause 4.6 of the SLEP to overcome non-compliance with Clause 7.27.



Figure 1: Extract from active frontages map, Clause 7.27 SLEP

Design Excellence

12. Wind – The wind report demonstrates that the development does not meet the wind comfort criteria in several locations, even when incorporating wind mitigation measures. Concern is raised regarding the Raglan Street and Cope Street plazas meeting at best the wind comfort criteria for standing, rather than sitting, and for none of the areas surrounding the retail tenancies having an appropriate environment for sitting and outdoor dining. The development therefore fails to satisfy the objectives and design criteria of Section 3G of the Waterloo Metro Quarter Design and Amenity Guidelines.
13. Awnings – The applicant and DPIE are to ensure that all awnings located over the public domain and through-site links are to be between 3.2 metres and 4.2 metres above finished ground level and to be setback a minimum 800mm from the kerb. Awning widths are to be between 2 metres and 3.6 metres whilst remaining clear of smartpoles by 1 metre and street trees by 1.5 metres. This is to allow for under awning signage, provide suitable weather protection for pedestrians and provide sufficient clearance for vehicles, trees and infrastructure.
14. Building 1 – Amending application
 - (a) Clause 6.45(2)(d) requires consideration of the Waterloo Metro Design and Amenity Guidelines prior to determining the application. Regarding SSD-10441 -
 - 3A: Desired Outcomes – Enable a building form which maintains excellent solar access to public open spaces and nearby residential areas
 - 3K Objective 3 – Minimise overshadowing impacts on Alexandria park and the wider public domain. Design Criteria 6: Identify opportunities to improve solar access to Alexandria park through redistribution of floor space and building bulk and scale between the hours of 9am and 10am in midwinter when compared to the shadow cast by the indicative scheme lodged with the Response to Submissions.
 - 3M Solar Access and Amenity – Design Criteria 4: New development does not create any additional overshadowing onto a neighbouring dwelling where that dwelling currently receives less than 2 hours direct sunlight to habitable rooms and 50% of the private open space between 9am and 30m on 21 June.
 - (b) The analysis provided does not demonstrate that Design Criteria 4 of Design Guideline 3M is met and does not respond to the specificity of the criteria, which requires analysis of both 'at grade' areas and living rooms windows (living rooms windows are not addressed). The analysis focuses on the Heritage Conservation Areas to the west of the site, which have a now reduced impact due to the reduction in height of the north tower. The analysis does not acknowledge that properties to the south of the site are impacted to an extent which exceeds the criteria. The Guideline also does

not distinguish residential properties by whether they are within a Heritage Conservation Area.

The overshadowing analysis indicates a very minor reduction only in overshadowing to Alexandria Park between 9am and 10am. The application therefore does not achieve the improvements anticipated in the Guidelines to improve solar access to Alexandria Park through detailed design by reducing the northern tower only, which is not responsible for the non-compliant overshadowing of Alexandria Park. A better urban design strategy would be to reduce the height of that part of the envelope which caused the non-compliant overshadowing.

15. Building 1 – Detailed design

- (a) External fire stair – Raglan Walk is unnecessarily encumbered by the proposed external fire stair. The application does not justify why this cannot be fully enclosed within the building line. The expression of the stair on the outside of the building's upper levels does not assist in articulating volumes and minimising bulk. It is recommended that the stair is re-designed to fall within the footprint of the building, without reducing the width of Raglan Street and removing active frontage to the adjacent retail tenancy. Should the stair need to be external at higher levels, a more expressive and high design quality form should be considered;
- (b) Building Expression – The Design Report notes that ‘the northern precinct has been identified as ‘Warehouse conversions’ character” in response to the local context. It is unfortunate that this idea was not more strongly achieved in the proposed design, as the result may have utilised more masonry, and a larger solid to void ratio in the elevations. The proposed substantially glazed, aluminium clad curtain wall facades do not adequately address the orientation of the building, particularly the large expanse of unprotected west facing glazing. On this elevation, a very minor (say 150mm) projection is proposed at a height equivalent to ceiling height. A similar vertical projection is provided to protect a 1.5 metre width of glazing. At summer afternoon, the altitude of the sun is low, and at one point, perpendicular to the west facade. These minor projections will have no perceptible shading impact;
- (c) Active frontages – Almost 50% of the Botany Road frontage is occupied by non-active uses;
- (d) Sun-Shading and Urban Heat – Although passive shading is nominated as one of the measures in the Project's Sustainability Framework (refer to page 36 App M, initiative 9.11.3), it is not delivered. The initiative is: Passive design of facades to improve thermal performance and reduce impact of extreme weather days. While the proposed design may achieve the requirements of the applicable energy rating systems, these govern internal thermal performance only, and do not consider occupant comfort for extreme weather days. Additionally, unshaded facades tend to rely on performance

glazing to reduce internal heat load which has the negative impact of reflecting heat and glare back into the public domain, causing both a nuisance and excessive heating of the public domain (Urban Heat Island effect). The proposed buildings have essentially a fully glazed facade, particularly the west elevations which have no substantial external shading devices. Best practice design should target the achievement of 100% shading through operable devices to combat extreme heat events. The development is inconsistent with the Waterloo Metro Design and Amenity Guideline Section 3R Sustainability – Objective 3: reduce energy consumption, emissions and urban heat island effect;

- (e) Glazing – Further clarity should be sought on the proposed glazing – “performance vision glass” is specified and no information is provided to describe any tint, reflectivity or urban heat issues associated with this selection. Clear glazing is always preferred;
- (f) Materials – ‘Prefinished fibre cement panel’ is proposed for the vast blank frontage to Botany Road, where non-habitable spaces are located at the perimeter of the tower. This does not represent a robust, high quality material fit for the intended location and use and the consideration of alternatives is encouraged. A view from the south west to the southern elevation should be requested to demonstrate acceptable visual appearance in views from the south along Botany Road;
- (g) Materials – There is a general lack of certainty or clarity of the finishes. Actual products must be specified rather than generic descriptions such as “light grey brick appearance” and “Oxidised copper coloured metal”. Materials must be described by a product or manufacturer’s details, and contain information on the material, finish, colour etc. For example, is the ‘oxidised copper coloured metal’ oxidised copper sheeting with a varied and interesting patina; or aluminium sheeting with an anodised finish; or aluminium sheeting with a flat, monotone powder-coated finish? These three options will provide entirely different outcomes and varying degrees of design excellence. Without adequate detail and certainty of the outcome, the department should not be satisfied that the project will deliver design excellence.

16. Building 2

- (a) There is a general lack of detail on facade design – 1:20 design intent facade sections should be provided to demonstrate design excellence;
- (b) There is a general lack of certainty or clarity of the finishes. Actual products must be specified rather than generic descriptions such as “patterned masonry facade”. References to options allowing later substitutions should be removed, e.g. “tiled or textured finish”;
- (c) The “patterned masonry screen” referred to as MAS-02 requires more detailed information to confirm that it is suitable for the proposed use. This is

a perforated screen surrounding portions of the external areas of the childcare. The reference image does not show a feasible masonry screen and the impact will be a vast reduction of available light and air through the screen. A 1:20 brickwork elevation and 1:10 plan and section details should be provided;

- (d) FAC-03 is shown to ground level solid facade areas. This is described as a solid textured panel. All materials at ground level should be robust and durable with an integral finish. This description implies a lightweight painted cladding panel which is not supported;
- (e) The proposed materials for the tower are also described too generically to allow proper assessment. They appear to be lightweight cladding panels with an applied paint finish. This is not supported on the basis of design excellence. A preferred material would have an integral finish to reduce costs and effort required to maintain the finish over the lifetime of the building;
- (f) Glazing type is not specified. Due west orientations will require thermal glass which will have negative impacts on reflectivity, heat reflection and outlook. A preferable solution is to have externally mounted, operable shading devices and clear glazing;
- (g) A large consolidated plant room is provided on Level 24, which is supported as this removes the need for ad-hoc equipment on the adjoining areas of roof. A condition of consent is recommended to require the integration of all roof services within the Level 24 plant room and to prohibit the installation of any roof plant on any other areas of the roof.

17. Buildings 3 and 4

- (a) Blank side walls – The north and east elevations of Building 3 feature large expanses of solid cladding. The east elevation is proposed to be clad in a moderately dark colour. The design would be improved by adding a window to the east wall of the studios in the SE corner on levels 6 and above. While the cladding is articulated into horizontal and vertical framing with infill panels, the materials for each of the elements is the same, resulting in monotony. This could be relieved by using alternate materials or textures for the infill panels;
- (b) There is a general lack of certainty or clarity of the actual finishes. Actual products must be specified rather than generic descriptions such as “brickwork – light / cream” and “brickwork – dark grey / brown”;
- (c) Further clarity should be sought on the proposed glazing – “performance vision glass” is specified and no information is provided to describe any tint or reflectivity issues associated with this selection. Clear glazing is always preferred;

- (d) The stainless-steel tensile wire mesh screen should be specified as “marine grade”;
- (e) A consolidated plant room is shown at Level 9, which is supported as the removes the need for ad-hoc equipment on other areas of roof, visible from higher surrounding buildings. A condition of consent is recommended to require the integration of all roof services with the Level 9 plant room and to prohibit the installation of any roof plant on any other areas of the roof.

Amenity – central residential building

18. Solar access – Objective 4A-1 of the Apartment Design Guide (ADG) recommends, as a minimum, 70% of apartments be provided solar access to living rooms and balconies for at least two hours during midwinter. The application states that 57% of apartments achieve the design criteria. The City does not support the applicant’s justification for the non-compliance by including solar access after 3pm as this is not reflected in the design guidance or criteria and is of little thermal benefit due to the low altitude of the sun.

No information is provided to illustrate alternatives to achieve compliant solar access within the widely accepted criteria (9am to 3pm) such as staggering the floor plate to allow sun ingress from 1pm. Winter sunlight is generally discounted outside 9.00am-3.00pm as it is of little thermal benefit due to the low altitude of the sun. The more detailed solar information in the architectural design report demonstrates that even at 1.30pm, sunlight is too oblique to the facade and there is no benefit to extending the assessment criteria:

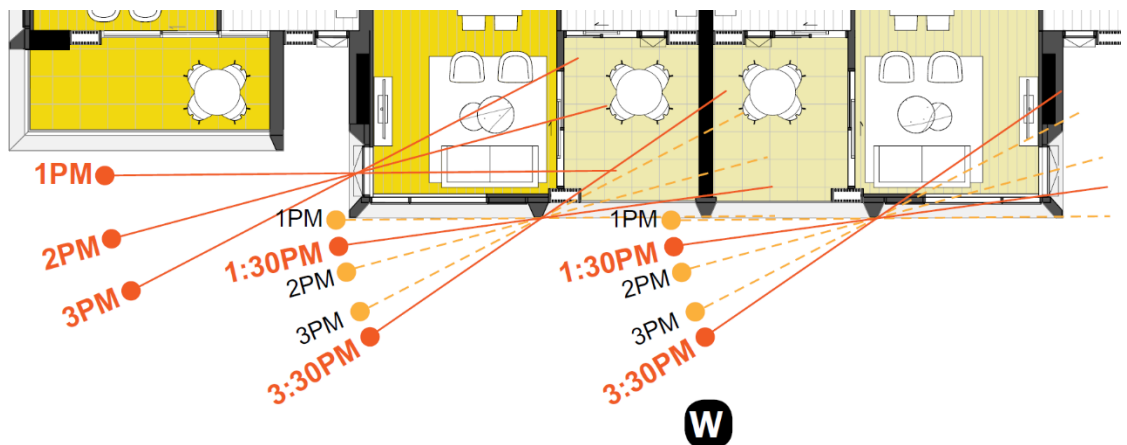


Figure 2: Extract from solar access plans

The tally incorrectly includes apartments as complying where only the living room glazing meets the criteria, rather than both living room glazing and balcony. This is not a correct interpretation of the ADG, which requires both to achieve a minimum of 2 hours of sunlight in order to be counted in the minimum 70% of apartments. This applies to both west facing apartments, and apartments at lower levels in the northeast corner of the plan, which are shaded by the southeast corner of Building 1. These apartments have been counted where only the balcony achieves the minimum amount of sunlight (loss of 3 apartments). The stated solar access tally is

incorrect and should be updated to reflect a correct interpretation of the ADG design criteria. It is likely to be well below the minimum when measured correctly.

The non-compliance is a symptom of the site planning, locating the commercial office building adjoining the northern boundary and obstructing solar access to the residential apartments to the south. The City therefore raises concerns with the appropriateness of SSD-10441 regarding Objectives 3A-1, 3B-1 and 4A-1 of the ADG.

19. External sun shading – Contrary to Objective 4A-3 of the ADG, no sun-shading is provided to west elevation. Despite probable compliance with internal thermal targets via energy rating tools, the tower facade design does not provide residents with the means to passively shade and cool their home, particularly where economic circumstances prohibit the use of air-conditioning. These apartments are not designed to withstand extreme heat events. External, operable shading devices should be provided to all facades with exposure to mid-morning and mid to late-afternoon sun. Although passive shading is nominated as one of the measures in the Project's Sustainability Framework (refer to page 34 App M, initiative 9.11.3), it is not delivered.
20. Natural cross ventilation – Objective 4B-3 of the ADG recommends a minimum 60% of apartments to be naturally cross ventilated. The applicant includes centrally located apartments as achieving natural cross ventilation, notwithstanding these do not meet the definition under the ADG. Furthermore, at least half of the apartments that do meet the definition of natural cross ventilation are noise affected and will require windows and doors to be closed to comply with Objective 4J-1. As such the development provides well below the minimum recommended.
21. Communal open space - Communal outdoor space is underprovided at 186sqm on level 22. According to the application, this equates to 7.5% of the site area, in contrast to the minimum 25% minimum recommended under Objective 3D-1 of the ADG. The wind analysis concludes that the terrace only achieves 'walking' comfort criteria in summer, and 'standing' conditions for the winter period. Neither is acceptable – the communal open space should be suitable for 'sitting' activities.
22. Private open space – 3-bedroom apartment balconies have less than the minimum 2.4m width (see apartment AXX05 on levels 20-21) as approximately 2 metres is provided. Insufficient room is provided to cater for furniture placement for the larger apartment and to allow space for other activities, contrary to Objective 4E-1 of the ADG.
23. Storage – A lack of verification is included in the application. Please request a typical storage diagram for each type of apartment.

Amenity – student accommodation

24. External sun shading - While it is acknowledged that the design includes some elements for shading to the western frontage, the current measures are not considered to properly address the building's exposure to direct western summer

sun and urban heat considerations. Ideally, the west facade should be capable of providing close to 100% shading on extreme heat days. This can only be balanced with the requirement for midwinter sunlight ingress through the provision of externally mounted, individually operable shading devices, allowing students the ability to control heat themselves. The use of occupant-operated external blinds would also alleviate the monotony of the building expression by creating a dynamic facade, where each 'unit' of the facade would take on an individual appearance depending on the position of the louvres. This improvement could be achieved through a condition of consent and the City is able to provide the wording upon request.

On the northern facade, the design does not provide any shading. The design concept would not be compromised through the addition of horizontal shading elements, which could be incorporated within the window framing, similar to the proposed "thin horizontal sunshade" which is proposed on the western elevation. On the western elevation, the horizontal sunshade has no effect on low altitude afternoon summer sun. The Design Integrity report notes that prior to closing out this issue, the Panel was supportive of the proposed 'moveable screens' solution. This has now been removed from the scheme and further endorsement should be sought from the Panel. The application of both changes discussed above could easily be achieved through a condition of consent and the City is able to provide the wording upon request.

25. Wind – The wind report identifies that the communal terrace will only achieve the standing comfort criteria, even accounting for mitigation measures. It is preferable that further design work be undertaken to try to improve the amenity of this area for residents such that it meets the sitting comfort criteria.
26. Visual privacy – Insufficient building separation and visual privacy is provided between the west facing social housing apartments and east facing boarding rooms pursuant to Objectives 2F and 3F of the ADG. The proposed privacy screens to the boarding rooms are inadequate to mitigate overlooking and ensure sufficient amenity to residents. An alternative design solution is required. For example, the boarding rooms could be provided bay windows with glazing oriented towards the north and either a solid wall or similar obscuring material presented to residents of the affected social housing units.

Amenity – social housing

27. Solar access – The City notes that 15 of 70 apartments (21%) do not receive any direct solar access during mid-winter, four more than is permitted (15%) in accordance with Objective 4A-1 of the ADG.

The City does not support the applicant's justification by including direct sunlight received after 3.00pm as this is not reflected in the design guidance or criteria and is of little thermal benefit due to the low altitude of the sun. Furthermore, some assertions regarding solar access are overstated, for example the quality of solar access to the living room of apartment 106 (the four-bedroom apartment).

The analysis ignores the fixed vertical louvres to the east facing studios on Level 2 to 7 which block winter morning sunlight to living spaces. This removes 4 apartments per floor on levels 2-7 (24 apartments) and reduces the tally to well below 70%. This issue can easily be mitigated through a condition of consent requiring the fixed vertical blades to be changed to operable vertical blades. It should be noted that the Design Integrity Report records at item 4.03 that the supported privacy solution for these apartments is a “sliding privacy and sunscreen”. This has now been removed from the scheme and further endorsement should be sought from the Panel.

28. Natural cross ventilation –The application erroneously claims that 60% of apartments are designed to achieve natural cross ventilation, however only 34% of apartments meet the definition of naturally cross ventilated. For example:
- (a) Plenums must not be used to claim natural cross ventilation as they do not provide equal sized outlets for pressure-based airflows.
 - (b) Corner apartments that do not have opposite openings of equal size and do not provide a logical flow path of air should not be counted.
 - (c) Natural ventilation paths should not cross common circulation spaces.

Furthermore, 21 apartments are identified as being noise affected and are designed with acoustic ventilators to achieve natural ventilation and acoustic privacy to achieve Objectives 3B-2, 4J-1 and 4J-2 of the ADG. As a result, only 10% of apartments achieve natural cross ventilation.

Natural ventilation and noise

29. Objective 3B-1 of the ADG requires all habitable rooms to be naturally ventilated. Objective 4J-1 requires development in noisy or hostile environments to minimise the impact of external noise and pollution through the careful siting and layout of buildings. The applicant has identified apartments within the central and southern precincts as being noise affected and requiring acoustically attenuated natural (non-mechanical) ventilation systems to meet these objectives.
30. City staff are concerned that the acoustic report has not sufficiently assessed the performance of the building to mitigate road noise, and the application has not adequately demonstrated compliance with Clause 102 of the State Environmental Planning Policy (Infrastructure) (ISEPP).
31. The report focuses on the incorrect measure for assessing acoustic privacy with windows open, which under the Development Near Busy Roads & Rail Corridors - Interim Guideline is the criteria under Clause 102(3) + 10dB.
32. Where windows are required to be closed and an alternative ventilation strategy proposed, the development must demonstrate that the criteria under Clause 102 (3) is met without the 10dB variance.

33. Compliance with Clause 102(3) is a precondition to development consent. The acoustic report has not used the correct criteria to demonstrate compliance with this provision. The City notes that the following information is pertinent to demonstrating compliance with the standard and must be forthcoming in the report:
- (a) The road traffic noise levels through noise monitoring, noting that traffic volumes may currently be depressed due to the pandemic.
 - (b) The relevant materials and finishes of the building, both internal and external.
 - (c) Whether the windows or doors can be open or are required to be closed.
34. City staff are continuing to review the efficacy of the alternative natural ventilation system and will provide an addendum to this submission when that review is complete. However, concern is raised regarding the assessment of the acoustic performance of the system. There is no calculation of the ventilator performance in keeping with the variables outlined above. As the windows closed ventilator open design criteria within the report is incorrect, the ventilator performance requirement will need to be increased.

Landscaping

35. Generally, the landscape drawings lack some critical information required to confirm the detail and viability of the proposals. This includes:
- (a) Levels: most planter walls are lacking top of wall levels, and spot levels across the ground plan are sparse. This applies to both ground level and upper level landscape spaces.
 - (b) Detailed sections: several green roofs are proposed at upper levels, however limited sections are provided and so I am unable to confirm the soil depth and buildup, as well as the interface with the building and subsequent likely maintenance access and edge conditions. These occur on the following levels:
 - Building 1 levels 02, 03, 04, 09 & 13
 - Building 2 levels 01 & 22
 - Building 3 levels 02 & 03
 - Building 4 levels 01 & 09
36. We request that the applicant provides top of wall levels to all walls, and more detailed spot levels across all landscape spaces on all buildings and ground level.
37. The applicant is also requested to provide comprehensive landscape sections through all green roofs and accessible landscape terraces, demonstrating soil depth and build-up, as well as the interface with the building.

38. Deep soil – Deep soil is underprovided, equating to approximately half of the area claimed. The Sydney Development Control Plan 2012 (SDCP) and ADG both have a minimum deep soil dimension of three metres. Many of the proposed garden beds are less than this three metre minimum and it is noteworthy that the remaining quantity of compliant deep soil relies heavily on permeable paving. City staff calculate that approximately 470sqm or 5.7% of the site area is allocated to deep soil.
39. Bollards - The use of bollards, presumably for security reasons, is awkward and excessive. This is consistent with advice provided regarding the CSSI application. To the Cope Street Plaza and the shared surface, bollards are spaced 1.2 metres apart and often directly adjacent to an alternative 'barrier' such as a raised planter or steps. Not only is the duplication of barriers unnecessary, but the 1.2 metres spacing may be prohibitive to wheelchair users who can just get through such a gap.

Please remove bollards where they are unnecessary, such as in front of a natural barrier like stairs or a raised planter and increase the spacing of bollards to a more comfortable 1.5 metres.

40. Green roofs - The maintenance access to all green roofs and planters at height is to be clarified. Wherever possible, planting should be able to be maintained without the use of specialist safety systems. To this end, fence lines should sit on outer edge of planters, not in the middle to ensure all planting is accessible from within the space. Any communal allotment gardens must be supported with necessary facilities such as taps, storage shed for tools, space for compost and so on. They should also be designed to create useable, interesting spaces between, with seating and shade as appropriate.
41. The roof terrace to level 13 of Building 1 includes an accessible area that has been indicatively designed (subject to tenant fit-out), and an expanse of gravel roof with photovoltaics. Studies show that co-locating photovoltaics and green roofs can greatly improve the performance of the PVs, whilst supporting habitat and biodiversity. This should be considered for this roof.
42. No landscape information has been provided for the (presumably inaccessible) green roofs to levels 2, 3, 4 & 9 of building 1. This is required.

Tree protection

43. The City does not support the high number of trees and existing canopy coverage proposed for removal to facilitate the development and associated upgrade works.
44. The redevelopment of Waterloo Metro will result in a significant loss of existing tree canopy. The NSW Government has various documents that aim to increase canopy coverage and help make NSW a more resilient and liveable place such as 'Greener Public Spaces' which includes 'Provide greater access to quality, green, open and public spaces closer to homes' and 'Increasing the tree canopy by planting one million trees in Greater Sydney by 2022.' These various NSW Government documents should be applied to this site, retain medium-high

significance trees and increase the canopy coverage of the area including more tree planting within the site.

45. Existing street trees and trees with medium-high retention values must be retained and protected. This will require modifications to the location and method of installing proposed utility services within the TPZ of existing trees. Sub-surface utilities within the TPZ of trees to be retained e.g. sub-surface conduits must be under bored using direction drilling to avoid damaging significant tree roots greater than 40mm diameter.
46. The location of any new driveway must ensure it does not require the removal of any existing street tree. The driveway shall be appropriately setback so as it does not adversely impact on any existing street trees both below and above ground.
47. All trees to be retained must be in accordance with AS4970-2009 Protection of Trees on Development Sites, a Project Arborist must be engaged to assist with tree management advice during the various stages of the design and construction process. The Project Arborist should be qualified in arboriculture to Australian Qualifications Framework (AQF) level 5 or above and have at least 5 years demonstrated experience in managing trees within complex development sites. City staff met with the developer on 23 November 2020 where a commitment was made to provide the City with detailed sub-service plans (existing and proposed) within the TPZ and SRZ of existing trees and greater detail of their trenched (size, location etc). The developer also committed to undertake exploratory root investigations to inform location of new services. This information must be provided in the Response to Submissions.
48. The protection and retention of all existing street trees is a priority for the City of Sydney. Street trees are long term assets that the community highly values. The City of Sydney Street Tree Master Plan includes general street tree protection measures and conditions that must be followed. See [Section 8](#) of the document.
49. The designers must liaise with an AQF Level 5 Arborist to design a development that will accommodate the retention of street trees and trees with medium/high retention values that will have minimal impact on the long-term viability of these trees, where possible.
50. All new street trees must be planted in accordance with the City's [STMP 2011](#), this includes species, adequate spacing (refer to Part D Section 2.2 STMP), soil and tree pit type etc.
51. Newly planted trees must meet Australian Standard 2303: Tree Stock for Landscape Use (2015).
52. All street tree plantings must be in accordance with the City's Street Tree Master Plan 2011. The street trees must be a minimum container size of 200 litres, at the time of planting and stock must be sourced well in advance.

Heritage

53. The construction management plan (or similar) should include specific construction methodology strategies to ensure that bulk excavation adjacent to the Waterloo Congregational Church will have no physical impact on the stability of the ground beneath this heritage item. A monitoring program should be undertaken during excavation and throughout the construction stage to monitor displacement, vibration and groundwater to further ensure stability of the ground beneath this heritage item.
54. A detailed dilapidation report of the church and surrounds to record the existing conditions should be prepared and submitted for approval prior to works commencing on site.
55. If any damage to the church fabric occurs during the excavation or the construction, it should be reported to DPIE and City of Sydney along with a remediation report to rectify the works in consultation with the heritage consultant.
56. Vibration measurements should be conducted on the structure of the Waterloo Congregational Church to ensure the vibration generated on the structure does not exceed the values for cosmetic damage and structural damage outlined in BS 7385 and DIN 4150.
57. Detailed material, colours and finishes schedule and sample boards to be provided for all the buildings.
58. A detailed Heritage Interpretation Strategy should be prepared in consultation with the Council, implemented prior to OC and certified by their Heritage Consultant to Council's satisfaction. The HIS should be developed in conjunction with the Landscape and Public Art strategies.
59. Adopt all heritage and archaeology related recommendations and strategies in the following documents:
 - Heritage Impact Statement
 - Geotechnical Report
 - Structural Report
 - Public Art Strategy
 - Landscaping Strategy
 - Heritage Interpretation Strategy

Transport

60. Walking access

- (a) Concerns remain as to the pedestrian priority and functionality of the new shared street and the surrounding intersections during peak hours (having regard to Section 3D of the Waterloo Metro Design and Amenity Guide), particularly morning peak is of concern. The area will experience high levels of people walking to and from the station in the morning and afternoon peaks. Vehicle parking on the site should be constrained further to reduce conflicts between people walking to and from the site and people driving through the shared zone.
- (b) It is recommended that level of service for walking follow Transport for NSW's guidance to ensure that sufficient space is provided to achieve comfortable environments which encourage people to walk as relevant to the NSW context - <https://www.rms.nsw.gov.au/business-industry/partners-suppliers/document-types/guides-manuals/walking-space-guide.html>

61. Vehicle parking

- (a) The first objective of Section 3N of the Waterloo Metro Design and Amenity Guideline is to "prioritise walking and cycling trips in and around the Metro Quarter over vehicles". The vehicle parking proposed for residential and commercial use is excessive for a transit-oriented development and should be minimised to reflect and support the public transport access of the site and the significant investment in public transport.
- (b) The amount of parking directly impacts the overall objective of the new metro line which aims to shift people from car driving to using the train and, in line with the desired outcomes under the Waterloo Metro Design and Amenity Guideline "create an urban environment that drives high usage of the Sydney Metro network responding directly to the principle of transit oriented development". The mode share targets to shift private car users to public and active transport uses will never be achieved without making the parking supply competitive. Availability of car parking spaces at origin and destination points is considered the most difficult obstacle to shifting people to use more sustainable transport methods.
- (c) DPIE are strongly advised to insist the proponent work together with the development partners, TfNSW, RMS and strive for 'zero' car parking provision or absolute minimums. This way the development can be expected to generate much fewer new car trips and will not adversely affect the existing adjacent road network, which is already congested.
 - This site should aim to be a world class transit-oriented development.
 - Providing car parking on the site contradicts the transport and sustainability objectives and the investment in public transport.

- The development aims to shift people from private vehicles into public transport.
 - 65 spaces were outlined in the Explanation of Intended Effect accompanying the proposed SEPP (State Significant Precincts) amendment. The proposal is for more than double this.
- (d) If parking is to be provided, accessible car parking space provision should be prioritised and provided for as per SDCP. All accessible car spaces are to be allocated to adaptable units.
- (e) Parking for loading and servicing should be prioritised over general vehicle parking.
- Given the rate of vehicle parking provided the site should provide for the required amount of loading and servicing.
62. Traffic modelling
- (a) It is unclear from the submitted documentation if the traffic modelling includes the cumulative traffic generation from adjacent developments plus the projected traffic generation for the subject proposal.
- (b) The zero trip generation rates for student housing are unrealistic.
- (c) The traffic modelling should include changes to the street network and intersections proposed as part of the Metro development.
63. Bike parking
- (a) Bike parking and end of trip facilities should be maximised and world class in design and provision so as to assist in the transition away from private vehicle use. The quality design of end of trip facilities should not be underestimated.
- (b) Bike parking for the student accommodation should be provided as per residential studio apartment rates (i.e. 1 per studio apartment) in accordance with design criteria 3 Section 3N of the Waterloo Metro Design and Amenity Guideline.
64. Loading and servicing
- (a) The proposal presents a shortfall of loading and servicing and should be provided as per the SDCP 2012 rates.
- (b) All loading and servicing should occur onsite and the development should not be potentially reliant on kerbside loading arrangements which are open to other users and subject to change.
- (c) Parking for loading and servicing should be prioritised over general vehicle parking.

- (d) The design of the loading areas to accommodate a City of Sydney 9.25m waste collection vehicle is supported. This needs to be ensured and should be conditioned.

Sustainable development

65. General - The SEARs require the development to demonstrate national best practice in sustainable development which the City strongly supports. While the developer has made many important commitments in line with the SEARs, in some instances exceeding minimum targets and incorporated many other key targets to reflect current best practice, the City sees potential to advance sustainable outcomes.
66. Green Star - For example, while the SEARs requires the development to achieve a 5 Star Green Star using the Design and As-Built Rating Tool, the City encourages the applicant and DPIE to move to the new Green Star Buildings tool.
67. The table below provides an overview of the City's response to key sustainable targets and outcomes proposed in the applications.

	Rating Tools	Energy Efficiency and GHG	Potable Water Savings
SSD-10437	<p>The City supports the energy ratings scores and methodologies used to achieve these efficiencies.</p> <p>The City also supports the use of Section J, rather than NatHERS to achieve thermal performance in the social housing building.</p>	<p>The PV panels should be relocated to avoid overshadowing in the morning and maximise energy generation. Additional PV or non-trafficable green roof could be provided to the roof of the social housing building.</p> <p>The size and capacity of the PV array must be clearly stated on the plans.</p>	<p>The onsite rainwater harvesting detentions are small but reasonable. The City encourage the developer to investigate larger detention systems. Hydraulic plans are to be updated to identify their capacity and connection to irrigation supply.</p>
SSD-10438		<p>The City supports the "capability to expand the electric vehicle charging to 100% of spaces in the car park" (page 27 of ESD Report) however further information is to be provided</p>	

		<p>accordingly. How will this be achieved?</p> <p>Energy efficiency initiatives regarding lighting and mechanical ventilation, including technology and performance targets, are anticipated to be now known and should be committed up front.</p>	
SSD-10439	<p>The City supports the energy ratings scores and methodologies used to achieve these efficiencies.</p> <p>The provision of 30kW of solar PV and electric heat pumps for domestic hot water systems is supported.</p>	<p>The City acknowledges the insulation mark-ups on plans being good practice and should be maintained on any future amended plans.</p> <p>The size and capacity of the PV array must be clearly stated on the plans. While the ESD report states that the 30 kW capacity is subject to final review, this should be conditioned as a minimum provision.</p>	<p>Rainwater harvesting and use for landscaping, vehicle washing, and toilet flushing is supported. The capacity of the retention tank and connections should be noted on the plans.</p>
SSD-10440	<p>As the developer has committed to off-site renewable electricity for the base building, the City requests that the proponent commit to 5.5 Star NABERS Energy via on site initiatives (as they have already done) and NABERS 6 Star achieved via offsite renewable energy</p>	<p>The minimum 99kW PV system is supported in addition to all other energy efficiency measures indicated in the relevant report</p>	<p>All water efficiency measures are supported</p>

	power purchase commitment		
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Public Art

68. City staff have reviewed the Public Art Strategy and associated documents and would like to commend the work of Aileen sage Architects, Tess Allas and Sebastian Goldspink in preparing a thorough and clear strategy of a high-quality guide for the delivery of Public Art across the site. The City wishes to make the following recommendations:
69. It is not clear from the strategy that the artists will have access to the material budgets for the project when working with integrated opportunities such as awnings and paving. If this is not the current intent these budgets should be made available to the artists over and above the \$4M specified and this should be made clear in the Strategy.
70. A powerful extension of the public art process could be for the landscape architects to work with Murawin and the relevant artists to extend and integrate any additional Aboriginal ideas and stories relevant to this specific site (captured through the development of the artworks) through the landscape design and species selection across the site, if appropriate. It is noted that the work Murawin have done to date has informed the Landscape Plan so this would only be relevant if new stories come to light through the development of the artworks.
71. It is noted that none of the public art opportunities are to be advertised as open Expressions of Interest. In the interest of equality and facilitating access to all artists, it may be worth considering identifying at least one of these opportunities as an open call for all Aboriginal artists.

Waste

72. The City has developed a [waste calculator](#) to ensure development provides sufficient waste storage facilities in accordance with the City's Guidelines for Waste Management in New Developments. Please find attached a PDF with the estimated area required for waste bins. The City requests that the developer use the waste calculator and demonstrate that sufficient area has been provided to meet the needs of each use proposed on site. Please note that the City discourages more than 3 collections per week to minimise traffic movements.
73. The turntable is to be a minimum dimension of 10.5 metres in accordance with the City's Guidelines for Waste Management in New Developments and Section 3P of the Waterloo Metro Design and Amenity Guidelines.
74. It is noted that the development does not currently provide for separate food waste collection, contrary to the guidelines. Sufficient space must be provided for food waste for each relevant use. The City is trialling a food waste collection service and the developer is encouraged to make provision for this service, rather than providing on-site composting which in the City's experience is likely to fail. Again,

the Guidelines for Waste Management in New Development provides suitable provisions.

Signage

75. Insufficient information such as form, size, siting, materiality, illumination and proliferation, has been provided to support the indicative signage zones. It is recommended that a wholistic signage strategy be the subject of a separate application to Council post consent.
76. Top of building signs are proposed to the commercial and student housing buildings. The proposal is inconsistent with the Schedule 1 Assessment Criteria under State Environmental Planning Policy 64 – Advertising and Signage as top of building signs are prohibited within this location in accordance with sections 3.16.5.2 and 3.16.12.15 of the SDCP. Furthermore, the signs are not accommodated under the Waterloo Metro Quarter Design and Amenity Guidelines.
77. As top of building signs are not common in the locality and are not accommodated within existing planning policies, they cannot be considered reflective of either the existing or desired future characters of the area. Support for these signs will establish an unacceptable precedent for future development in the area and should therefore be refused.

Public domain

78. Public domain works - There is a discrepancy between the scope of works to be undertaken by the station development under CSSI and these SSDs. The CSSI documentation only shows half of Raglan St and Wellington St and no work to Botany Rd. The through site shared zone is included in the Metro Station development and the cycleway along Wellington isn't. It is strongly recommended that the Interface Agreement and the scope of public domain work is agreed prior to the detailed design SSDs being approved.

The excerpt below is from the Northern precinct landscape plans. It is incorrect as it should include the purple hatched area. These works are not included in the Metro station development works.

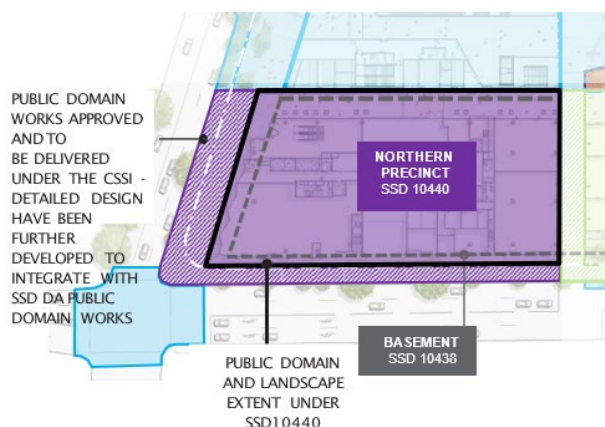


Figure 3: Overlay of CSSI and SSD public domain plans

79. Flood planning - Each application has its own site-specific flood assessment which is based on the proposed building layout to produce flood planning levels for the individual precincts. The flood planning levels specified in the assessment are in accordance with Councils Interim flood plain management policy with the exception of a retail strip fronting Botany Road identified as retail area 11 in the Central precinct. In this case the proposed floor levels of 15.2m AHD are below the flood planning level of 15.7m AHD. The flood planning level being the 1% AEP flood level for retail floor space.
80. The reason given for the non-compliance is the relatively small areas of retail floor space available does not allow for adequate DDA compliant ramping form the surrounding Botany road public domain level. This reasoning is not supported and given this is a new development with no site constraints, compliance with the required flood planning levels should be achieved. The depth of flooding in the proposed retail space of up to 500mm during the 1% AEP storm is not acceptable.
81. Public access - A public access easement (or similar) is required for the private land along Botany Road and Raglan Street. The buildings along these frontages have been set back to allow for public access but a formal guarantee is required so that these access paths will remain in perpetuity.

Should you wish to speak with a Council officer about the above, please contact David Zabell, Senior Planner, on 9265 9333 or at dzabell1@cityofsydney.nsw.gov.au

Yours sincerely,

A handwritten signature in black ink, appearing to read 'A-T', with a long horizontal stroke extending to the right.

Andrew Thomas
Acting Director
City Planning | Development | Transport

Recommended public domain conditions

(1) ASSOCIATED ROADWAY COSTS

All costs associated with the construction of any new road works including kerb and gutter, road pavement, drainage system and footway shall be borne by the developer. The new road works must be designed and constructed in accordance with the City's *Sydney Streets Technical Specification* including amendments and *Sydney Streets Code*.

(2) PHOTOGRAPHIC RECORD / DILAPIDATION REPORT - PUBLIC DOMAIN

Prior to an approval for demolition being granted or a Construction Certificate being issued, whichever is earlier, a photographic recording of the public domain site frontages is to be prepared and submitted to Council's satisfaction.

The recording must include clear images of the building facade adjoining the footpath, the footpath, nature strip, kerb and gutter, driveway crossovers and laybacks, kerb ramps, road carriageway, street trees and plantings, parking restriction and traffic signs, and all other existing infrastructure along the street.

The form of the recording is to be as follows:-

- (a) A PDF format report containing all images at a scale that clearly demonstrates the existing site conditions;
- (b) Each image is to be labelled to identify the elements depicted, the direction that the image is viewed towards, and include the name of the relevant street frontage;
- (c) Each image is to be numbered and cross referenced to a site location plan;
- (d) A summary report, prepared by a suitable qualified professional, must be submitted in conjunction with the images detailing the project description, identifying any apparent existing defects, detailing the date and authorship of the photographic record, the method of documentation and limitations of the photographic record;
- (e) Include written confirmation, issued with the authority of both the applicant and the photographer that the City of Sydney is granted a perpetual non-exclusive license to make use of the copyright in all images supplied, including the right to make copies available to third parties as though they were Council images. The signatures of both the applicant and the photographer must be included.

Any damage to the public way including trees, footpaths, kerbs, gutters, road carriageway and the like must immediately be made safe and functional by the applicant. Damage must be fully rectified by the applicant in accordance with the City's standards prior to a Certificate of Completion being issued for Public Domain Works or before an Occupation Certificate is issued for the development, whichever is earlier.

(3) SURVEY INFRASTRUCTURE – IDENTIFICATION AND RECOVERY

Under Section 24 of the Surveying and Spatial Information Act 2002, it is an offence to remove, damage, destroy, displace, obliterate or deface any survey mark unless authorised to do so by the Surveyor-General. Accordingly, the applicant must, where possible, ensure the preservation of existing survey infrastructure undisturbed and in its original state or else provide evidence of the Surveyor-General's authorisation to remove or replace marks.

Prior to the issue of any Construction Certificate, documentary evidence must be prepared by a Registered Surveyor and submitted to and approved by Council's Area Planning Manager / Coordinator. This evidence must include either:

- (a) A copy of any Surveyor-General's Approval for Survey Mark Removal granted by NSW Spatial Services for the subject site, including all documentation submitted as part of that application (for example the survey mark audit schedule, strategy plan and strategy report); or
- (b) A letter, signed by a current NSW Registered Land Surveyor and including his or her Board of Surveying and Spatial Information (BOSSI) identification number, stating that all investigations required under Surveyor-General's Direction No.11 have been made for the subject site and that no survey infrastructure will be affected by the proposal.

Council's Principal Surveyor may request further information and/or add conditions to any Surveyor-General's Approval at their discretion.

(4) PUBLIC DOMAIN CONCEPT PLAN

A concept public domain plan, showing all the site frontages and extending a minimum of 5m past the boundary and to the middle of the road, must be prepared in accordance with the *Public Domain Manual* and the City's *Sydney Street Code*. It must be submitted to and approved by Council's Public Domain Unit prior to the issue of any Construction Certificate for the development other than for demolition or excavation. The plan must include (where relevant) all existing and proposed paving materials, locations of street trees, site furniture, light poles, signage and other public domain elements.

Note: A detailed Public Domain Plan will be required prior to construction (refer to Public Domain Plan Detailed documentation for construction).

(5) PUBLIC DOMAIN LEVELS AND GRADIENTS

Prior to the issue of any Construction Certificate, a Public Domain Levels and Gradients submission for the building and site frontages must be submitted to and approved by the City's Public Domain Unit. The submission, must be prepared in accordance with the City's *Public Domain Manual* and submitted with a completed *Application for Public Domain Levels and Gradients*. Information on how to complete the submission can be downloaded from the City's website at <https://www.cityofsydney.nsw.gov.au/development/public-domain-works/da-associated-works>.

Any requirements to comply with Disability Discrimination Act at the entrance to a building or publicly accessible space must be resolved inside the site boundary.

Note: Public Domain Levels and Gradients plans are to be included with Public Domain Plan – Detailed Documentation for Construction Condition submission.

(6) STORMWATER DRAINAGE DESIGN

Prior to issue of any Construction Certificate a detailed stormwater management plan prepared by suitable qualified and experienced professionals demonstrating compliance with the requirements of Section 3.7.2 - *Drainage and Stormwater Management*, Section 3.7.3 – *Stormwater Quality*, 3.7.4 – *Additional provisions for Commercial and Industrial Properties* of the Sydney Development Control Plan 2012 must be submitted to and approved by the City's Public Domain Unit.

The submission must include the following;

- (a) A stormwater infrastructure design certification, stating that the proposed design complies with:
 - (i) Council's *Sydney Streets Technical Specifications*, Part A4 *Stormwater Drainage Design*;
 - (ii) Council's *Sydney Streets Technical Specifications*, Standard Drawings;
 - (iii) Council's *Sydney Streets Technical Specifications*, Part B10: *Stormwater Drainage Construction*; and
 - (iv) All relevant Australian Standards.
- (b) Structural certification of the hydraulic and structural design of all elements, excluding standard details from Council's *Sydney Streets Technical Specifications*.

The above certification shall accompany information that address the requirements of *Section 4.5 Data Requirements, Part A4 Stormwater Drainage Design* of Council's *Sydney Streets Technical Specifications*. This information is available for download from the City's website at <https://www.cityofsydney.nsw.gov.au/development/public-domain-works/da-associated-works>.

The requirements of Sydney Water with regard to the on-site detention (OSD) of stormwater must be ascertained and complied with. Evidence of the approval must be submitted to Council prior to any Construction Certificate other than demolition.

- (a) Note: A Deed of Agreement for all proposed connections to the City's drainage system, and a Positive Covenant for all OSD systems may be required prior to issue of any Occupation Certificate.
- (b) Note: The total discharge per site from kerb outlets must not exceed 25Litres/sec. If site discharge is greater, a connection must be made to a Council kerb inlet pit. If no kerb inlet pit exists, an extension of the Council storm water pipe system is required with a minimum 375mm diameter RCP.

(7) FLOOD PLANNING LEVELS

The development must be constructed to comply with the recommended flood planning levels indicated in Table 4 of the report titled Waterloo Metro Quarter over station development Environmental Impact Statement Appendix O Storm water management strategy and flood impact assessment for southern precinct prepared by WSP dated 30 September 2020.

Details must be submitted to the Principal Certifier prior to the issue of any Construction Certificate demonstrating that the development will comply with the recommended flood planning levels.

(8) STORMWATER QUALITY

The development must comply with the stormwater quality assessment titled Waterloo Metro Quarter over station development Environmental Impact Statement Appendix O Storm water management strategy and flood impact assessment for southern precinct prepared by WSP dated 30 September 2020.

(9) PUBLIC DOMAIN LIGHTING UPGRADE

Prior to issue of any Construction Certificate for excavation, civil construction, drainage or building work (whichever is earlier), a concept Public Domain Lighting Upgrade Plan for pedestrian and street lighting in the public domain must be submitted to and approved by City's Public Domain Unit. The Lighting Plan must be prepared in accordance with the *Sydney Streets Technical Specifications A5 and B8*, *Sydney Lights Design Code* and *Public Domain Manual*. This information is available for download from the City's website at <https://www.cityofsydney.nsw.gov.au/development/public-domain-works/da-associated-works>.

The lighting upgrade plan must cover all adjacent street frontages.

Advice on site specific lighting requirements must be obtained from the City's Public Domain Unit before proceeding with the preparation of any final lighting design proposals.

(10) PUBLIC DOMAIN PLAN DETAILED DOCUMENTATION FOR CONSTRUCTION

A detailed public domain plan and all relevant documentation must be submitted to and approved by the City's Public Domain Unit prior to the construction of any public domain works. This Plan must document all works required to ensure that the public domain complies with the City of Sydney's *Public Domain Manual*, *Sydney Streets Code*, *Sydney Street Tree Masterplan*, *Sydney Lights Design Code*, *Sydney Streets Technical Specification* and *Sydney's Parks Code*. The plan must consider road pavement, traffic measures, footway pavement, kerb and gutter, drainage, vehicle crossovers, pedestrian ramps, lighting, street trees and landscaping, signage and other public domain elements. The documentation must be *checked, accurate, and comply with specified requirements*. Plans must be based on an accurate survey, to scale and fully coordinated across all disciplines and submissions. The supplied documentation must be to construction standard and will be approved under Section 138 of the Roads Act.

The Public Domain Manual and all other relevant documents are available for download from Council's website at <https://www.cityofsydney.nsw.gov.au/development/public-domain-works/da-associated-works>.

The Public Domain Plan documentation must be submitted with an *Application for Public Domain Plan Assessment* and include the approved Public Domain Levels and Gradients documentation. If the proposed detailed design of the public domain requires changes to any previously approved levels, an *Application for Public Domain Levels and Gradients* must be submitted to and approved by the Public Domain Unit to reflect these changes prior to an approval being issued for the construction of public domain work.

Note: Stamped plans will be issued for construction and approved under Section 138 of the Roads Act.

(11) SECTION 138 ROADS ACT APPROVAL

Approval under Section 138 of the *Roads Act 1993* must be obtained from Council prior to the commencement of any excavation in or disturbance of a public way for the construction of approved public domain works.

(12) HOLD POINTS

Prior to an approval being issued for the construction of public domain work, including civil, drainage and subsurface works, a set of hold points for approved public domain, civil and drainage work is to be provided by the City's Public Domain Unit in accordance with the City's *Public Domain Manual* and *Sydney Streets Technical Specification* (an approved list of hold points will be included in the Public Domain works Approval letter). These hold points must be adhered to during construction works.

(13) DRAINAGE CONNECTION

For approval of a connection into the City of Sydney's drainage system an "*Application for Approval of Stormwater Drainage Connections*" must be submitted to the City, together with an application fee in accordance with the City of Sydney's adopted Schedule of Fees and Charges. This must be approved prior to the issue of a Construction Certificate for the public domain.

(14) LIGHTING RETICULATION

Prior to the issue of any relevant approval for the construction of public domain works, a detailed Public Domain Lighting Plan for pedestrian and street lighting in the public domain must be submitted to and approved by the City's Public Domain Unit in accordance with the City of Sydney's *Sydney Lights Design Code*, *Sydney Streets Code*, *Sydney Streets Technical Specification* and *Public Domain Manual*.

The *Public Domain Manual* and all other relevant documents are available for download from Council's website at <https://www.cityofsydney.nsw.gov.au/development/public-domain-works/da-associated-works>.

If applicable, this public domain lighting documentation shall include pole footing locations and structural details, location and details of underground

electrical reticulation including connections and conduits, pit cabling and certifications as described in the City's *Public Domain Manual*. The public domain lighting is to be superimposed on the public domain plan to show any conflicts between lighting and the proposed landscape design.

(15) PUBLIC DOMAIN WORKS BOND

A Public Domain Works Bond will be required as security for the public domain works and for repairing damage that may be caused to the public domain in the vicinity of the site, in accordance with the City of Sydney's adopted fees and charges and the *Public Domain Manual*. The Public Domain Works Bond must be submitted as cash, an unconditional bank guarantee or insurance bond as per the Council's Performance Bond Policy in favour of the City as security for completion of the obligations under this consent (Guarantee).

The City's Public Domain Unit must be contacted to determine the guarantee amount prior to lodgement of the guarantee. The guarantee must be lodged with the City prior to an approval being issued for the Public Domain Plan.

The Guarantee will be retained in full until all Public Domain works, including rectification of damage to the public domain, are completed to City of Sydney standards and approval and the required certifications, warranties and works-as-executed documentation are submitted and approved by the City in writing. On satisfying the above requirements, 90% of the security will be released. The remaining 10% will be retained for the duration of the specified Defects Liability Period.

(16) DEFECTS LIABILITY PERIOD – PUBLIC DOMAIN WORKS

All works to the City's public domain, including rectification of identified defects, are subject to a 6-month defects liability period from the date of final completion. The date of final completion will be nominated by Council on the Certificate of Practical Completion for public domain works.

(17) NO OBSTRUCTIONS

All public footways and paths of travel must be free from obstructions. If services are required to be relocated to clear paths of travel, then this must be undertaken at the developer's expense. All obstructions are to be removed prior to the issue of any Occupation Certificate.

(18) PUBLIC DOMAIN WORKS COMPLETION

The Public Domain works are to be constructed in accordance with the Public Domain Works Approval, approved stamped plans for Gradients and Levels, Stormwater, Public Domain Lighting, the City of Sydney's *Public Domain Manual*, *Stormwater Drainage Manual*, *Sydney Lights Design Code* and *Sydney Streets Technical Specification*.

The public domain work must be inspected, and a Certificate of Practical Completion must be issued by Council's Public Domain Officer prior to the issue of any Occupation Certificate or before the commencement of use, whichever is earlier.

(19) PUBLIC DOMAIN COMPLETION - WORK AS EXECUTED DOCUMENTATION

Prior to a Certificate of Practical Completion being issued for public domain works, works-as-executed (As-Built) plans and documentation, must be submitted to and accepted by the City of Sydney for all public domain works, including where required Stormwater, Public Domain Lighting and Road construction. These works must be certified by a suitably qualified, independent professional. Details of the documentation required for approval will be advised by the City's Public Domain Unit.

(20) STORMWATER COMPLETION DEED OF AGREEMENT AND POSITIVE COVENANT

Prior to the issue of any Occupation Certificate:

- (a) The Owner is required to enter into a Deed of Agreement with the City of Sydney and obtain registration of Title of a Positive Covenant for all proposed connections to the City's underground drainage system. The deed and positive covenant will contain terms reasonably required by the City and will be drafted by the City's Legal Services Unit at the cost of the applicant, in accordance with the City's Fees and Charges.
- (b) A Positive Covenant must be registered on the property title for all drainage systems involving On-Site Detention (OSD) to ensure maintenance of the approved OSD system regardless of the method of connection. The positive covenant will contain terms reasonably required by the City and will be drafted by the City's solicitor at the cost of the applicant, in accordance with the City's Fees and Charges.

(21) SURVEY INFRASTRUCTURE – PRE-SUBDIVISION CERTIFICATE WORKS

- (a) Pursuant to Section 38 of the Surveying and Spatial Information Act 2002, if it is likely that any new survey mark will be disturbed by associated works (for example, footpath or kerb and gutter construction), a surveyor may defer the placement of those marks.
- (b) Prior to any the issue of any Subdivision Certificate, documentary evidence in accordance with Section B11 – *Survey Infrastructure of the Technical Specification* must be prepared by a Registered Surveyor and submitted to and approved by the City. This evidence must include:
 - (i) A copy of any Surveyor-General's Approval for Deferment of Survey Marks granted by NSW Spatial Services for the subject site, including all documentation submitted as part of that application (for example the draft deposited plan) or
 - (ii) A certificate of Practical Completion obtained from the City's Public Domain team, together with a letter, signed by a current NSW Registered Land Surveyor and including his or her Board of Surveying and Spatial Information (BOSSI) identification number, stating that all survey marks shown on their Deposited Plan remain at the date of practical completion.

(22) SURVEY INFRASTRUCTURE – RESTORATION

- (a) Prior to any Occupation Certificate being issued for the development, documentary evidence of restoration must be prepared by a Registered Surveyor and submitted to and approved by Council's Area Planning Manager / Coordinator. This evidence must include:
- (i) Certification that all requirements requested under the Surveyor-General's Approval for Survey Mark Removal or by the City's Principal Surveyor under condition "Survey Infrastructure – Identification and Recovery" have been complied with;
 - (ii) Certification that all requirements requested under any Surveyor-General's Approval for Deferment of Survey Marks from condition "Survey Infrastructure – Pre-Subdivision Certificate works" have been complied with and;
 - (iii) Time-stamped photographic records of all new survey infrastructure relating to the site clearly showing the mark itself and sufficient context to aid in identifying the mark on site.

(23) CONSTRUCTED FLOOR LEVELS

A certification report prepared by a suitably qualified practitioner engineer (NPER), must be submitted to the Principal Certifier prior to issue of any Occupation certificate stating that the development has been constructed and the required levels achieved in accordance with the recommendations of the report titled Waterloo Metro Quarter over station development Environmental Impact Statement Appendix O Storm water management strategy and flood impact assessment for southern precinct prepared by WSP dated 30 September 2020.

(24) FLOOD RISK MANAGEMENT

Prior to the issue of any Occupation Certificate, a certification report prepared by a suitably qualified practitioner engineer (NPER), for flood risk management measures including flood planning level/s demonstrating compliance with the approved construction plans must be submitted to and be approved by the Principal Certifier. A copy of the report shall be provided to Council for record keeping purposes.

(25) PUBLIC DOMAIN DAMAGE BOND

- (a) A Public Domain Damage Bond calculated on the basis of 900 square metres of concrete unit paved site frontage must be lodged with Council in accordance with the City of Sydney's adopted Schedule of Fees and Charges. The Public Domain Damage Bond must be submitted as an unconditional bank guarantee or insurance bond as per the Council's Performance Bond Policy in favour of Council as security for repairing any damage to the public domain in the vicinity of the site (Guarantee).
- (b) The Guarantee must be lodged with Council prior to an approval for demolition being granted or any Construction Certificate being issued, whichever is earlier.

- (c) The Guarantee in this condition will be retained in full until the Public Domain Works Deposit Guarantee is lodged with Council. Upon lodgement of the Public Domain Works Deposit Guarantee, the Guarantee in this condition will be released.

(26) DRAINAGE AND SERVICE PIT LIDS

All existing or proposed drainage and service pit lids throughout the public domain shall be to City of Sydney specifications and heel / bicycle safe, slip resistant, infill with material to match surrounding surface, finished flush with the adjacent pavement to avoid trip hazards and be clear of obstructions for easy opening and cleaning. Infill pit lids are to be detailed where specified by the Council's Public Domain Officer. Private pits are not permitted within the public domain. All details of pit lids must be shown on the public domain plan and must be approved by the City's Public Domain Unit prior to the issue of an approval for public domain works.

(27) TACTILE GROUND SURFACE INDICATORS AND HANDRAILS

All tactile ground surface indicators, handrails and other elements required to provide access into the building / property must be located entirely within the private property boundary.

(28) PAVING MATERIALS

The surface of any material used or proposed to be used for the paving of colonnades, thoroughfares, plazas, arcades and the like which are used by the public must comply with AS/NZS 4586:2004 (including amendments) "Slip resistance classification of new pedestrian surface materials".

(29) PHYSICAL MODELS

- (a) Prior to the issue of any Occupation Certificate an accurate 1:500 scale model of the development as constructed must be submitted to and approved by Council's Area Coordinator Planning Assessments/Area Planning Manager for the City Model in Town Hall House.

Note:

- (i) The models must be constructed in accordance with the Model Specifications available online at <http://www.cityofsydney.nsw.gov.au/development/application-guide/application-process/model-requirements> Council's modellers must be consulted prior to construction of the model.
- (ii) The models are to comply with all of the conditions of the Development Consent.
- (iii) The models must be amended to reflect any further modifications to the approval (under Section 4.55 of the *Environmental Planning and Assessment Act*) that affect the external appearance of the building.

(30) SUBMISSION OF ELECTRONIC CAD MODELS PRIOR TO OCCUPATION CERTIFICATE

- (a) Prior to any Occupation Certificate being issued, an accurate 1:1 electronic CAD model of the completed development must be submitted to and approved by Council's Area Coordinator Planning Assessments/Area Planning Manager for the electronic Visualisation City Model.
- (b) The data required to be submitted within the surveyed location must include and identify:
 - (i) building design above and below ground in accordance with the development consent;
 - (ii) all underground services and utilities, underground structures and basements, known archaeological structures and artefacts;
 - (iii) a current two points on the site boundary clearly marked to show their Northing and Easting MGA (Map Grid of Australia) coordinates, which must be based on Established Marks registered in the Department of Lands and Property Information's SCIMS Database with a Horizontal Position Equal to or better than Class C.

The data is to be submitted as a DGN or DWG file on a Compact Disc. All modelling is to be referenced to the Map Grid of Australia (MGA) spatially located in the Initial Data Extraction file.

- (c) The electronic model must be constructed in accordance with the City's 3D CAD electronic model specification. The specification is available online at <http://www.cityofsydney.nsw.gov.au/development/application-guide/application-process/model-requirements> Council's Modelling staff should be consulted prior to creation of the model. The data is to comply with all of the conditions of the Development Consent.