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6 May 2022

Our Ref: R/2021/6/A
File No: 2022/229540
Your Ref: SSI-22765520

Keith Ng
Department of Planning and Environment
via Planning Portal

Dear Keith,

Advice on EIS
Sydney Metro West Stage 3 – Rail infrastructure, stations, precincts and operations

Thank you for your correspondence dated 22 March 2022 inviting the City of Sydney (the City) to comment on the EIS submitted by the applicant for Sydney Metro West Stage 3.

Stage 3 of the approval process for Sydney Metro West proposes tunnel fit-out, construction of stations, ancillary facilities and station precincts, operation and maintenance of the Sydney Metro West line. There are two stations proposed within the City of Sydney LGA, being Pyrmont Station and Hunter Street Station.

The City supports the Sydney Metro West project and welcomes the decision to include stations at Pyrmont and Hunter Street, which will help ensure the future expanded Harbour CBD is adequately served by rail and connected to other job-rich centres.

The City has reviewed the EIS and supporting documentation and provides the following comments for consideration:

1. Transport and access

The City is eager to work with Sydney Metro to make the most of this opportunity as a key city-shaping project. Detailed comments from a transport and access perspective are outlined in **Attachment A**. This includes an outline of the City's vision for station precincts at both Hunter Street Station and Pyrmont Station as well as a detailed response to the EIS and key recommendations.

2. Urban Design

2.1 General comments on both stations

- The City's comments on specific elements of Parts 1-4 of the Design Guidelines, which address the Metro project as a whole, are outlined in **Attachment B.** This includes mark-ups (in red text) relating to commitment to sustainability, customer circulation, comfort and amenity, customer safety, security, station buildings/ precinct development and lighting.

- In terms of the place-specific design elements, it is noted that the City's ability to provide meaningful comments on the urban design impacts of the

proposal is limited without detailed architectural drawings of each of the proposed stations.

- The design guidelines propose a design review process that includes a Design Review Panel. The intent of the design review process is to ensure that the design adequately responds to the submitted guidelines. The design guidelines provided in the EIS has insufficient information to guide the development as they are too generic to guide good design outcomes.

Recommendations:

- The proposal for a Design Review Panel is supported, subject to the City nominating a panel member and provision being made for an observer from the City to be present.

- More detailed place specific design guidelines are to be developed and detailed drawings are required.

2.2 Pyrmont station

The City's mark-ups to Part 5.8 – Pyrmont Station of the Design Guidelines are included in **Attachment B.** In addition, the City notes the following:

2.2.1 Further drawings required

The drawings provided lack clarity and need to better consider the public domain, with more attention to footpath widths reflective of the needs of the volume of pedestrians, spaces for replacement tree planting in the public domain, and appropriate setbacks. The sections provided at Figures 14-2, 14-3 and 14-4 (in Chapter 14 of the EIS) depict the tower envelope extending to the kerb, which would result in an exceptionally poor urban design outcome, inconsistent with the surrounding urban fabric. The public domain and the station envelope's relationship to the public domain appears not to have been adequately considered.

Recommendations:

- Greater consideration of the public domain is required, including clear drawings which communicate proposed footpath widths, street tree planting, and adequate setbacks of the station building envelope

- Further drawings are required to enable to provide meaningful comments.

2.3 Hunter Street station

The following general comments are made regarding Hunter Street Station. For more detailed mark-ups of Part 5.9 of the Design Guidelines – Hunter Street Station, refer to **Attachment B.** The following points are also raised:

2.3.1 Adjoining development sites

Objective 1 of the Design Guidelines is "*ensuring an easy customer experience encompasses accessibility."* There is a Planning Proposal at 15-25 Hunter Street and 105-107 Pitt Street next to Hunter Street station and there are significant opportunities to coordinate pedestrian connections at ground level, below ground and above ground. This planning proposal should be considered in Chapter 19 of the EIS - Cumulative impacts.

Recommendations:

- Should the Planning Proposal be approved, it will need to be considered in Chapter 19 of the EIS - Cumulative impacts.

- Coordination is required between the two sites to ensure that pedestrian connections are direct, clear and easy to use at ground level, below ground and above ground level. Proposed RLs for these connections on the subject site are to be determined.

2.3.2 Vehicular access

The place specific section of the design guidelines does not show where any future vehicular access will be located to service the Metro.

In the case of Hunter Street Metro West, George Street has limited opportunities for access and Hunter Street is constrained by the Skinners Family Hotel, the Tank Stream and flooding.

Hunter Street Metro East has limited access from Bligh Street due to Richard Johnson Square, although there are some vehicular crossings associated with the site located on O'Connell Street.

Recommendations:

- More information is required to clarify any vehicular access locations.

- Conflicts between pedestrians and vehicles are to be minimised in accordance with Objective 1 of the design guidelines – *'Ensuring an easy customer experience'.*

- Consideration should be made for a break-through clause for vehicular access from the planning proposal site located to the east that provides vehicular access from Pitt Street (subject to further Traffic and Transport consideration and assessment).

2.3.3 Heritage considerations

Objective 4 of the design guideline is "*being responsive to distinct contexts and communities".* While this objective speaks to 'inherited urban fabric', it shies away from the word 'heritage'.

The Hunter Street Metro East and West sites have heritage items on both their sites and adjoining sites.

Recommendations:

- Detailed design guidelines are required for the Hunter Street Station over station development that ensure that the Tank Stream is protected from any excavation, construction and structures.

- The street frontage heights for the Hunter Street Metro West is to match the Former Skinners Family Hotel and 15-17 Hunter Street. See Attachment B with mark-ups.

- Similarly, Hunter Street Metro East is to respect the alignment and street frontage height of 12-16 O'Connell Street and 31 Bligh Street. Refer to Attachment B.

- Consideration must also be made to the interface between Richard Johnston Square and the Hunter Street Metro East building. Refer to Attachment B.

2.3.4 Future tower envelopes

The future tower of the Hunter Street West over station development appears to be aligned parallel to George Street but not to Hunter Street in the design guidelines. Hunter Street is spatially defined by buildings which reinforce its curved form. This is achieved by buildings being predominantly aligned parallel to Hunter Street with a street frontage height of approximately 45 metres.

Recommendation:

- Any future tower form and design guidelines around this should reinforce the alignment of Hunter Street - See detailed mark-up in Attachment B.

3 Heritage

3.1 Pyrmont Station

Pyrmont Station comprises two construction sites for the two station entry buildings. As the two station service buildings will be built directly on prominent corner sites, their design and outcome will have major impacts on the character of these streetscapes, heritage items in the vicinity and the Pyrmont Heritage Conservation Area.

The two station services buildings, however, appear to be still subject to future design developments, with only general design guidelines being provided. Without understanding the proposed detailed design, the City's ability to assess their impact on the adjacent heritage sites and the streetscapes is limited.

The following specific issues and recommendations are made:

3.1.1 Pyrmont Station western entry building

The proposed western entry station building occupies a prominent corner site within the heritage conservation area at the junctions of three streets - Pyrmont Bridge Road, Pyrmont Street and Paternoster Row.

The location of the site opposite Elizabeth Healey Reserve and near the confluence of other streets increases the visual prominence of the site. This building is adjacent to the heritage listed Quarryman's Hotel at 214-216 Harris Street, the northern boundary abuts a row of two storey Victorian terraces at Nos 115 to 127 Pyrmont Street and to the northwest are two storey terraces.

The site is also within the visual curtilage of a number of significant heritage items, including the Quarryman's Hotel, 214-216 Harris Street, Pyrmont Fire Station at 147 Pyrmont Street, the John Taylor Wool Stores at 137 Pyrmont Street and the Former 'Bank of NSW Stores' warehouse at 17-21 Pyrmont Bridge Road.

The proposal involves the demolition of a late twentieth century building designed by Alan Jack and Cottier and a mid-twentieth century warehouse building. These two buildings are considered by the City to be sympathetic in terms of scale and design to the surrounding heritage items and heritage conservation area. The late

twentieth century building designed by Alan Jack and Cottier was carefully designed as two components; a three storey section abutting the warehouse also to be demolished and a narrow two storey section built of face brickwork with vertical proportions to provide a transition between the warehouse and the adjacent row of terraces.

The loss of these two well designed, well-mannered buildings will erode the character of the Pyrmont conservation area.

The two existing buildings are to be replaced by a building of four to five storeys (12-15 metres) in height. The proposed station building has the potential to overscale the surrounding built form within the Pyrmont Heritage Conservation Area and overscale heritage listed buildings within the visual curtilage of the site. The proposed height and scale of the western entry building is excessive in terms of the historic built form of its context.

The EIS Technical Paper 5 (Non Aboriginal Heritage) acknowledges that the proposed station building will overscale and visually dominate the area but attempts to justify this dominance by suggesting it is on the periphery of the heritage conservation area. This is not considered adequate justification.

The proposed design guidelines are generic in terms of strategies on the form of new buildings, lacking essential definitions on the specific scale, articulation and materiality.

3.1.2 Pyrmont Station eastern entry building

The Pyrmont Station eastern site is located between Edward Street, Union Street and Pyrmont Bridge Road.

The context of the eastern building differs from that of the western building. Union Street, Murray Street and Pyrmont Bridge Road is predominantly 3 storeys or over and the site is not within a heritage conservation area. While the station services building will be directly opposite the heritage item known as the Former New York Hotel, the new building will not overscale this heritage item nor diminish the item's prominence in the streetscape.

<u>Recommendations (for both western and eastern entry buildings)</u>

- The height, scale and bulk of the proposed western entry building should be modified to respond to the predominate low scale of its historic context. The height should not exceed 10 to 12 metres or 3 storeys to provide a transition of scale between the Victorian warehouses opposite the site at 137 Pyrmont Street and at 17-21 Pyrmont Bridge Road and the row of two storey Victorian terraces at 115 to 127 Pyrmont Street and the two storey Quarryman's Hotel at 214-216 Harris Street.

- The bulk and form of both buildings should be modulated and articulated to reflect the narrow frontages of historic development in the vicinity of the site.

- Specific design guidelines should be developed for each site considering the heritage context of each differs. The guidelines should aim to enhance the predominant low scale and height, the predominant modulation reflecting early subdivision patterns, the robust articulation of heritage buildings, and the low ratios of walling to glazing. Materiality should respond to those that predominate the context including sandstone, face brick and stucco, and the

low ratio of walling to glazing. Proportions should be vertical to further reinforce the surrounding historic built form. The City should be consulted during the design development.

3.1.3 Construction zone - visual impacts

During construction, stacked site offices and amenities will be surrounded by construction hoarding visible from outside of the site and prominent along the length of each of the streets surrounding the two Pyrmont sites. They will also be temporarily prominent in significant views to nearby terrace housing and heritage items.

EIS Appendix F, CEMF-LV4 states that all structures (including acoustic sheds or other acoustic measures, site offices and workshop sheds) would be finished in a colour which aims to minimise their visual impact, if visible from areas external to the construction site. This approach is considered inadequate to mitigate the visual impacts upon the views and settings of the heritage conservation area and heritage items within the vicinity of the construction site.

Recommendation

- The design of the hoardings should be consistent with the City of Sydney Hoardings and Scaffolding Policy 2017 and the Guidelines for hoardings and scaffolding 201, by integrating public art, high quality graphics , historic images and heritage interpretation with temporary structures to mitigate visual impacts and enrich and vitalise the public place to give added creativity, interest and meaning to Sydney's culture, vibrancy and history.

3.1.4 Construction zone – settlement and vibration impacts

EIS Tecnhical Paper 5 (Non Aboriginal Heritage) states that there has been an assumption that the construction of the station services infrastructure would not resulting vibration impacts or settlement, so no separate vibration assessment has been prepared. The basis of this assumption has not been provided. The nature of footings of early structures make such buildings more vulnerable to settlement and vibration. The report should provide an analysis of the structures around the Pyrmont sites.

Technical Paper 4 - Construction Noise and Vibration and the EIS Appendix F entitled 'Construction Environmental Management Framework' provides a number of 'standard mitigation measures' related to construction noise and vibration that may arise as a result of excavation works including Bore Piling and rock excavation. The mitigation measures proposed in Appendix F include CEMF-NV16 and NV-18 for airborne noise ground-borne noise and vibration which is limited to consultation and locate a number of receivers.

These measures are considered inadequate at this stage. The effects of vibration from excavation and construction work may impact upon the integrity of the building may be compromised through structural or cosmetic damage.

CEMF-NV28 suggests mitigation through the undertaking of Building Dilapidation Surveys prior to the commencement of excavation. While Appendix H, Section 2.5.1 states that it is possible to increase vibration control standards if neighbouring heritage building is found structurally unsound, it is noted that an overall cosmetic damage control standard is applied in assessing the risk and impact on the heritage buildings.

Recommendations

- Specific mitigation and protection measures should be developed for each of the early structures surrounding the two Pyrmont sites and above the associated tunnel corridors. Specific mitigation and protection measures are to be based on investigation and analysis by a suitably structural engineer experienced in heritage buildings, of the nature of the footings and above ground construction of each early structure surrounding to the two Pyrmont sites, and in close vicinity as well as early structures above associated tunnelling.

- The potential of 'rock growth' and the impact of any associated ground movements generated should be assessed.

- Investigation, and analysis of each of the early built structures around the two Pyrmont sites should inform the design and offset distances of excavation from early buildings.

3.1.5 Protection of 127 Pyrmont Street terrace

There are a number of specific issues related to the terrace at 127 Pyrmont Street as follows:

- The early masonry footings may be not properly engineered, meaning that it may be sensitive and vulnerable to construction vibrations.

- Upon demolition of the buildings adjacent to this terrace, the south party wall will become exposed to the weather. Being single skin rather than cavity construction, the wall will become vulnerable to falling and lateral damp. The ingress of damp could impact upon the interior fabric.

Recommendation

- A vibration control standard and measure are to be specifically prepared for the terrace at 127 Pyrmont Street, given its significance and proximity to the future construction site and to ensure it is sufficiently protected during construction. The measures should be based on a thorough structural assessment of the existing building.

3.1.6 Heritage interpretation

Aboriginal heritage interpretation and non-Aboriginal heritage interpretation should be a key consideration in the design of the buildings, in conjunction with the proposed strategy. The strategy should be further developed to inform the station design in addition to the initiatives detailed in the EIS Appendix K. Opportunities to integrate interpretation with Public Art consistent with the City of Sydney's Public Art Policy should be explored.

Recommendation:

- The interpretation strategy should be further developed to inform the station design in addition to the initiatives detailed in the EIS Appendix K. Opportunities to integrate interpretation with Public Art consistent with the City of Sydney's Public Art Policy should be explored. Specific interpretation devices should be developed in consultation with the City of Sydney.

3.1.7 Archaeology

An Aboriginal archaeological assessment and non-Aboriginal archaeological assessment should be undertaken prior to further development of the proposals.

If Aboriginal archaeological site/s are recovered during test excavation (and salvage, if required), results would be incorporated into Aboriginal heritage interpretation in consultation with registered Aboriginal parties. If Aboriginal archaeological remains are recovered during construction, results would be incorporated into the project specific 'Designing with Country' strategy in consultation with Aboriginal knowledge holders.

Similarly, if non-Aboriginal archaeological relics are recovered during excavation, information should be recorded and relics, and incorporated into heritage interpretation in consultation with NSW Heritage.

Recommendation:

- An Aboriginal archaeological assessment and non-Aboriginal archaeological assessment should be undertaken in accordance with the comments above.

3.1.8 Wayfinding signage, lighting and advertising

Wayfinding signage, lighting and advertising may have potential adverse impacts upon the character, views and settings of the heritage conservation area and heritage listed buildings in the vicinity and should be responsive to the distinctive heritage context. All external signage should be consistent with the policies within Sydney DCP 2012 for the conservation areas.

A brass plaque relating to the history of the site must be installed on the facade of the building prior to occupation. The design, location and wording must be submitted for the approval of Council prior to an Occupation Certificate being issued.

Recommendation:

- Additional details regarding compliance with the SDCP 2012 for all external signage is required.

- A brass plaque is to be provided on the façade in accordance with the above comments.

3.2 Hunter Street station

The proposal includes underground stations, 4-5 storey station services buildings or aboveground station infrastructure built above street levels. As the station service buildings will be built directly on George, Hunter, O'Connell and Bligh Streets and form part of the street walls, their design and outcome will have major impacts on the character of these street intersections and streetscapes.

The two station services buildings, however, appear to be still subject to future design developments, with only the design guidelines being provided. Without understanding the proposed detailed design, the City's ability to assess their impact on the adjacent heritage sites and the streetscapes is limited. It is unclear whether the heritage items are to be incorporated into the future over-station development applications.

The following specific issues and recommendations are made:

3.2.1 Sensitive design zones

Only the eastern site has two sensitive zones being identified, both of which are adjacent to heritage items. No sensitive zones are identified for the western site, despite containing the Skinners Family Hotel, an early Victorian building and listed on the State Heritage Register. Being only 3 storeys high, the juxtaposition of the fine grained Victorian building and the modern civic building will need meticulous design considerations.

Recommendation:

- As a minimum, the north-west portion of the new building on the north and west sides of the pedestrian links should be identified as sensitive design zones to ensure the new building responds sympathetically to the low scale heritage building at 296 George Street. A separation of the heritage building from the new building by pedestrian links, as shown in the photomontage, may be considered a preferred option.

3.2.2 Site-specific guidelines

The overall principles and strategies appear to take the adjoining heritage items into account. The proposed pedestrian links connecting to the existing or planned laneways are supported. However, the guidelines also appear to be generic in terms of strategies on the form of new buildings, lacking essential definitions on the specific scale, articulation and materiality. A detailed urban design study of the existing streets and environment would inform the further development of the guidelines.

Recommendation:

- Further design of any over-station buildings should respect the local characteristics and be based on proper urban design studies. The City should be consulted in the design development.

3.2.3 Protection of Skinners Family Hotel

The building was built in 1840s and is one of the earliest surviving commercial buildings in the Sydney CBD. The early masonry construction may be not properly engineered, meaning that it may be sensitive and vulnerable to construction vibrations. The City has previously recommended that the building be investigated and assessed by a suitably structural engineer experiencing in heritage buildings, so that the protection requirements and measures to the building can be specified. While Appendix H, Section 2.5.1 states that it is possible to increase vibration control standards if neighbouring heritage building is found structurally unsound, it is noted that an overall cosmetic damage control standard is applied in assessing the risk and impact on the heritage building at 296 George Street.

Recommendation:

- A vibration control standard and measure are to be specifically prepared for the Skinners Family Hotel, given its significance and proximity to the future construction site and to ensure it is sufficiently protected during construction. The standard and measures should be based on a thorough structural assessment of the existing building.

3.2.4 Heritage Interpretation Strategy

The proposed through-site/pedestrian links provide opportunity for incorporating heritage interpretations and public art. Heritage interpretations have been implemented to many old or new laneways in the Sydney CBD, such as the recent AMP redevelopment site, Quay Quarter.

Recommendation:

- The interpretations at Hunter Street Station should make best use of the through site links. The interpretation strategy should be further developed to detail specific interpretation devices.

4. Landscape

Minimal information has been provided to allow an assessment of the suitability of the interface between the proposed stations and surrounds, public domain and landscape design. Detailed design guidelines and plans are required to confirm how the commitment to sustainability principles, greening at precinct level and station entries will be realised.

The City raises the following comments for consideration based on the Design Guidelines (Appendix E) relevant to landscaping:

4.1 Comfort and amenity

Section 3.1.4 of the Design Guidelines discusses the urban heat island effect and states this is to be minimised through a range of measures. This is a good outline, however, limited detail is provided.

Recommendations:

- Detailed design guidelines are required to confirm how urban heat island effect is to be mitigated and what greening is proposed.

- Any landscape on slab (roofs, podium or walls) needs to make allowance for site microclimate, available light levels, planters with adequate soil volume, slab capacity and drainage.

4.2 Customer safety

Section 3.1.5 of the design guidelines nominate physical barriers to minimise risk, however no detail is provided.

Recommendations:

- Detailed design guidelines are required to ensure that turnstiles at the station entry are integrated and can be secured, when necessary, rather than reliance on vehicle hostile barriers that clutter the public domain with obstacles that fail to meet Australian Standards and safety requirements for vision impaired users.

- The surrounding quality of the public domain is to be well organised and designed with equitable and safe access for all users.

4.3 Station buildings and associated precinct development

Section 4.1.3 of the design guidelines provide statements regarding street frontages, forecourts and plazas and building design that are generic and non-conclusive.

To combat urban heat island effect, warmer climate and the need for respite of shaded streets and public domain, the interface with the metro stations should prioritise tree canopy and greening.

Recommendation:

- Detailed design guidelines should require best practice design of streets, plaza layouts with canopy trees and functional design for shade relief, not simply for wind mitigation, and contribute to urban canopy targets set by the NSW Government and the City.

4.4 Environment and sustainability

The statements provided in Section 4.1.5 of the Design Guidelines are generic and do not demonstrate integration of landscape design excellence.

Recommendation:

- A commitment to best practice sustainable design solutions including the integration of WSUD, green infrastructure, improved biodiversity, green roofs/ walls, plantings and shade trees must be demonstrated by measurable design guidelines, known targets and minimum requirements for each precinct.

4.5 Landscape design

The guidelines in Section 4.3.1 are generally acceptable. However, in terms of soft landscape, where trees are proposed in deep soil the design must ensure that services are coordinated. Where trees are located on slab, all soil depths and volumes are to comply with the minimums required by the Sydney Landscape Code.

Where green infrastructure, green roofs and walls are proposed, the design must take into account available lift levels, depth of structure and drainage and ongoing safe maintenance working at heights.

Recommendations:

- Details demonstrating consideration of the above comments regarding tree planting and green infrastructure, roofs and walls are to be provided.

4.6 Plazas and forecourts

It is questioned by tree planting in plazas/ forecourts at grade and on structure require a minimum set down of 1.6m. Soil depths greater than 1m are generally anerobic.

Tree pit design is to make allowance for required soil volumes. If trafficable pavements are used, strata cell is encouraged.

Street tree species selection is to be consistent with the Street Tree Masterplan.

Recommendations:

- Clarification is requested regarding the soil depths provided, tree pit design and street tree species as outlined above.

4.7 Hunter Street Station

The Artist's impression indicates pavements flush with the street, new street trees with guards, pots with floral display, and street furniture parallel with the kerb. Ideally, structures/ features like coffee kiosks should be aligned with street furniture zone to reduce clutter.

Landscape and trees on the podium rooftop terrace must be designed with understanding of wind impacts at the base of (future) over station towers, with planting designed for longevity, in compliance with the Sydney Landscape Code.

Recommendations:

- Further details are required to address the comments above, including location of structures/ features on the street and landscape and trees on the podium rooftop.

5. Public Domain

The submitted documentation indicate that new public domain works will be provided at both Pyrmont and Hunter Street stations. Works will include upgraded pavements, street furniture and street tree planting.

Recommendations:

Further details of public domain works are required to provide more detailed feedback. It is recommended that:

- The City is to be involved in the preparation of the site precinct plans for each of the stations to ensure that the scope of works and future detailed design documentation encompasses the required public domain elements to cater for the increased pedestrian activity.

- Concept public domain plans are to be provided for review and should specifically address the following items:

    - Demonstration that the public domain elements (footpaths, street furniture, public domain lighting and levels) comply with relevant Australian Standards, City of Sydney design codes (e.g., Sydney Streets Technical Specifications, Sydney Streets Code 2021, Public Domain Manual 2021, City North Public Domain Plan and Street Tree masterplan for all new works including materials and levels).

    - Placement of furniture and fixtures is aligned with the street furniture zone to reduce clutter.

    - Public domain levels are resolved to enable safe and comfortable use by all pedestrians using the public domain around new metro stations not just

those who will be entering the station. Surrounding footpaths are to have a grade of no more than 1:40 to ensure equitable access for all.

- No ventilation stacks, skylights, electrical switchboards or traffic signal kiosks are to be located above ground within the public domain.
- Affected or new required services and utilities are kept clear of tree planning zones in the public domain to ensure that replacement trees and new street trees can be accommodated without compromise. Service authority requirements are to be considered when locating new services to reduce future conflicts.
- Trees to be planted in ground, flush with pavement, no planters. Set downs in slabs to be provided which required and designed to ensure appropriate soil volumes are provided. Street tree species selection is to be consistent with the Street Tree Masterplan.
- The public domain lighting has been considered and complies with or is upgraded to meet Australian standards.
- Demonstration that there is adequate room between lower levels and surface treatments so that required services can be installed between the finished surface levels and the lower ground station structures.
- Required infrastructure protection measures are incorporated into the design of the station structures and not placed within the public domain to ensure that there is equitable access for all
- All new vehicular access driveways are designed as flush treatments to reinforce pedestrian priority.
- Any proposed footpath widening, kerb extensions and on-street parking changes will be subject to SCO and RMS approval, as well as subsequent endorsement by the LPCTCC.

6. Hydrology, Flooding & Water Quality

Flood gates have been proposed for Pyrmont Station at both the western & eastern station entrances, as well as at the Hunter Street station to protect station entries.

Additional information is required documenting alternative options considered prior to recommending flood gates.

Flood mitigation measures were proposed but have not been detailed. Further details are required.

Recommendations:

- Details are requested outlining the consideration and assessment of alternative options prior to recommending flood gates.
- Details are requested regarding the proposed flood mitigation measures.

7. Construction Traffic

Technical Paper 2 – Construction Transport has been reviewed and the City notes the following:

- The contractor must carry out their works according the City's Construction Traffic Management Plan Standard Requirements.
- No dog trailers or articulated vehicles (AV) are to be used (unless specific approval for a one-off occasion is obtained from the City's Construction Regulation Unit).
- All vehicles associated with the development must be parked wholly within the site. All site staff related with the works are to park in a designated off-street area or be encouraged to use public transport and not park on the public road.
- All temporary parking changes must be consulted with properties within 50 metres radius of where the changes are.
- The temporary parking changes must be submitted to the City's Local Pedestrian, Cycling and Traffic Calming Committee (LPCTCC) for endorsement before implementation.
- Reduce overall speed limit to 30 km/h around construction sites and along haulage routes within City Centre / Pyrmont to address the road safety risk associated with interactions between high construction traffic and numbers of people walking and cycling
- Promote safer outcomes by requiring all heavy haul vehicles working on the project should be at CLOCKS-A standard or similar.

Recommendation:

- The Construction Transport Technical Paper is to consider the City's comments above.

8. Environmental Sustainability

The City is strongly supportive of the commitment to achieve a minimum Infrastructure Sustainability Council IS Design and As Built Rating of 75 points.

It is noted that there is currently intense focus on the quality and veracity of carbon offsets in Australia. The proponent is urged to be fully transparent in its offset strategy and commit to robust evidence-based offsets, instead of theoretical carbon-savings attributed to tree growth in arid areas or claimed avoided vegetation removal in agricultural contexts.

Overall, the City expects that:

- A strong focus will be applied to energy efficiency in all operations.
- Any commitment to offsetting carbon emissions will adhere to robust, verifiable and well governed offsetting.

- Design detail will respond to the specific impacts of climate change affecting the locality, especially more intense rainfall events, more frequent extreme heat days and more common heatwave events.

9. Waste Management

Section 18.5 of the EIS outlines the likely waste generation during the operation and demolition/ construction stages of the proposal. The document summarises that the waste management and resource use during construction of the proposal would be managed in accordance with Sydney Metro's CEMF (Appendix F). However, there is limited information provided regarding the operational management of waste at Pyrmont Station and Hunter Street Station.

Recommendation:

- Further information regarding the management of operational waste and provision for servicing at these two stations in relation to loading demands, size of waste collection areas and methods of collection to/ from and within the sites are requested.

In addition to the above comments on the proposal, please see the following attachments enclosed with this letter:

- **Attachment A – City Access response to Metro West Stage 3 EIS**

- **Attachment B – Design Guidelines with the City's mark-ups**
  Note: The City's additions to the Design Guidelines are outlined in red.

Should you wish to speak to a Council officer about these comments, please contact Samantha Kruize, Senior Planner on 9265 9333 or at skruize@cityofsydney.nsw.gov.au.

Yours sincerely,

Graham Jahn AM LFRAIA Hon FPIA
Director
City Planning | Development | Transport

Attachment A

City Access response to EIS

CITY OF SYDNEY

City Access response to Metro West Stage 3 EIS

Document Type
April 2022

The City of Sydney acknowledges the Gadigal of the Eora Nation as the Traditional Custodians of our local area.

Contents

1. The City's vision for station precincts

1.1. Improving public domain around station precincts to lock in Sydney's advantage

The City is planning for the urban growth and renewal that Metro West will catalyse

Metro will be a major catalyst, for urban growth and renewal, and for economic growth through increased productivity of employment in areas on the Metro network. The catalyst effect will be felt at many levels:

- Station precincts can transform, with high quality development and changes to streets, to create areas of high amenity and environmental sustainability
- Subregions with multiple centres on Metro will experience productivity uplift, and also benefit from changes to transport networks (e.g. bus-metro interchange), taking advantage of increased connectivity via Metro
- Using Metro to connect clusters of these centres, especially in the growing sectors of innovation, education and health, will supercharge Sydney's economy.

More space for people and public domain improvements around Metro West stations are critical to the success and value that the project will bring

Public domain improvements are essential, with more space needed for people in response to the growth attracted by Metro, but also the basic task of accessing the station. The precincts are more likely to be crowded for longer periods of the day, as a result of business to business, health, educational, recreational and shopping trips – as well as heavy commuter loads.

Planning for changes to the transport system and public domain improvements around Metro West Stations must be done now

Planning for Metro West, especially the station precincts, needs to focus on capturing and maximising these future benefits. If station precincts are well planned, with sufficient high quality public domain, each station in the City of Sydney can make an increased contribution to Sydney's competitiveness and sustainability:

- Hunter Street will be a major gateway hub. It will be the initial terminus, potentially the busiest rail station on the network due to it being the only city centre station on Metro West. It will connect the city centre to a series of job-rich centres, as well as recreational and tourism facilities at Pyrmont, Olympic Park and Parramatta. It is located in the heart of Sydney's commercial precinct, but also close enough to walk to the waterfront for tourists. It is also likely to be a major interchange precinct, between two Metro lines, suburban rail, light rail and some bus services.
- Pyrmont is a growing hub for employment, recreation, tourism and residential living, as outlined in the *Pyrmont Peninsula Place Strategy*. It is closely located to the NSW Government's Blackwattle Bay redevelopments.

Planning for these public domain improvements now is mutually beneficial, it creates a shared framework for how streets will operate in future, and certainty for individual developers seeking to build around the stations. While Metro West needs a finite scope under NSW legislation (treasury, transport, and environmental planning), the public domain elements need to occur in the context of broader needs and opportunities around stations, and shared responsibility for these.

1.2. Hunter Street Station – a world-class precinct

> *"Metro will shift everything. One of the biggest and most exciting projects anywhere in the world will be the Hunter Street station development…"* Minister Stokes to Committee for Sydney, February 2022.

The City of Sydney shares the Minister's vision for reimagining the area around the Hunter Street station. As stated above, as this is both the terminus and the only city centre station, the attractiveness of the station will extend far beyond the normal range of a city centre rail station. The City proposes the following actions to make the most of this precinct.

Extend George Street Pedestrianisation North (Hunter Street – Circular Quay)

A key overdue initiative to contribute to this transformation is the further pedestrianisation of George Street – between Hunter Street and Circular Quay, consistent with the City's vision of a pedestrian spine linking three squares.

Develop the *Precinct Access Plan* for the area around Hunter Street Metro Station

The City wants to work with TfNSW to develop the *Precinct Action Plan* for the 5 minute walking catchment around Hunter Street metro station. This would resolve (at a strategic level) the future street network and operations within the precinct as well as identifying key locations where road space will be reallocated from vehicles to people (walking, cycling and place). It would provide a plan (or blueprint) for the various NSW Government agencies, City of Sydney and development community to work towards over the coming years to realise the agreed vision for the precinct.

A key part of the Precinct Action Plan would be to identify how changes to the street network and operations would support the northern extension of the George Street pedestrianised zone.

The City has undertaken preliminary analysis of access requirements in the Hunter Street Metro precinct, as part of updating its *City North Public Domain Plan*. This work is imperative to support the significant number of development applications in the precinct, consistent with the tower cluster identified in the *Central Sydney Planning Strategy.* Public domain works agreed in the Metro development process would contribute to this approach.

As outlined in **Section 2.1**, Sydney Metro, Transport for NSW and the City of Sydney should agree the future street operations and public domain opportunities prior to construction on the Hunter Street station commencing.

Recommendation 1:

TfNSW to develop a Precinct Access Plan for the area within 500 metres of Hunter Street Metro Station in collaboration with the City of Sydney and Metro

1.3. Pyrmont Station – the heart of the place

"Pyrmont [is] to be an attractor for global investment, driven by the connectivity of the Peninsula to Sydney's CBD, complementing and strengthening its position as a place at the cutting edge of the future of work, a place enlivened by creativity and design thinking, a globally connected place with jobs in arts, culture, entertainment, and the innovation economy." – Pyrmont Peninsula Place Strategy, DPIE 2020

Metro is the key to unlocking the vision for Pyrmont that has been set out in the Pyrmont Peninsula Place Strategy. To make the most of this opportunity of having a Metro Station and two state significant projects, Blackwattle Bay and the new Fishmarkets, all within a short walk of each other, Metro, TfNSW, DPIE and the City need to coordinate and work together. A particular focus needs to be on ensuring room for walking, cycling and place in order to stitch these developments into a cohesive fabric for the peninsula.

Develop the *Precinct Access Plan* for the area around Pyrmont Metro Station

The City wants to work with TfNSW to develop a *Precinct Access Plan* for the 5 minute walking catchment around Pyrmont metro station. This would resolve (at a strategic level) the future street network and operations within the precinct as well as identifying key locations where road space will be reallocated from vehicles to people (walking, cycling and place). It would provide a plan (or framework) for the various NSW Government agencies, City of Sydney and development community to work towards over the coming years to realise the agreed vision for the precinct. A key part of the Precinct Action Plan would be to identify how changes to the street network and operations would support the Blackwattle Bay development and new Fish Markets development.

TfNSW is currently developing the *Pyrmont Transport Plan* in consultation with the City. This work could provide the key inputs required of the *Precinct Action Plan.* The City is seeking the following transport and access outcomes in the Pyrmont Metro Station Precinct:

- Net reduction of vehicle traffic through Pyrmont. This was a key justification of the WestConnex project.
- Reduction of traffic impacts associated with motorway (distributor) on- and off-ramps. This could include closing some on- and off-ramps.
- Provision of pedestrian crossings on all legs of all signalised intersections.
- Footpath widths to reflect good "place" and public domain outcomes rather than minimum Fruin levels of service
- Traffic speed reduction to 40 km/hr or lower enforced by red light speed cameras due to proximity of motorway driving conditions and high risk to people walking and cycling
- Reduction of Bridge Road to one traffic lane in each direction west of Wattle Street (except for short right turn bays into Wattle Street and Wentworth Park Road).
    - This is consistent with Bridge Road having only one lane of capacity in each direction west of Wentworth Park Road.
    - This will allow the construction of an on-street separated cycleway between Taylor Street and Wattle Street (rather than the currently proposed, unsafe shared path along the frontage of the new Fish Markets.

Recommendation 2:

TfNSW to develop a Precinct Access Plan for the area within 500 metres of the Pyrmont Street Metro Station in collaboration with the City and Metro.

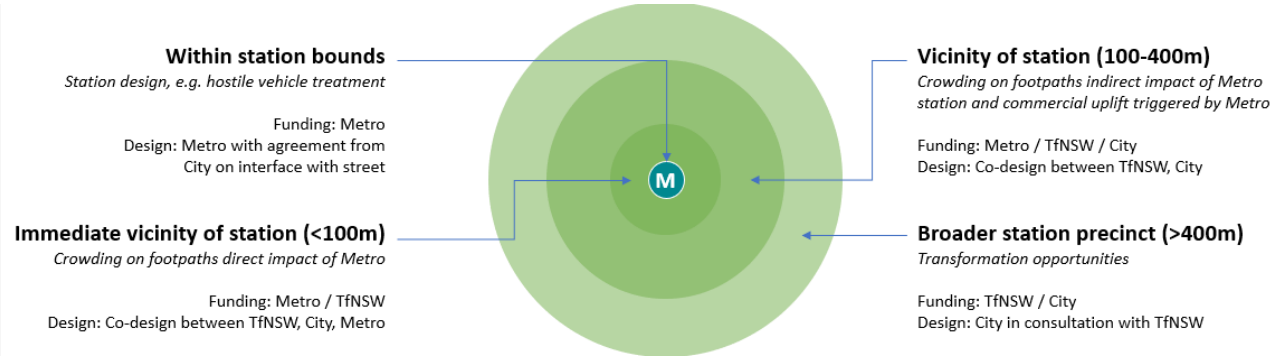
2. Response to EIS

2.1. General comments

Governance to support the EIS conditions of consent

As the City of Sydney, our primary objective is to provide quality spaces and transport in our city for the hundreds of thousands of residents, workers and visitors who use it daily. As such, while we understand that Metro has been tasked with a scope of works relating to delivering the metro itself and mitigation measures in the immediate vicinity, we recognise Sydney Metro and Transport for NSW as two parts of the same state government working towards the same overall outcomes.

We wish to work with TfNSW to make the most of this opportunity beyond Metro's direct scope.



Our response to the Stage 3 EIS is our main opportunity for formal input into the planning assessment and design process for the station precincts. This Stage 3 EIS is the best forum for us to raise our recommendations, concerns and visions and set up a framework for our engagement with both Metro and TfNSW from here onwards. This is critical because after this EIS is approved, there are limited formal pathways for us to comment on and be involved in the design of the station precincts.

These are our streets and we want to ensure that we seize the opportunity Metro is providing to transform them; to do this we need an agreed framework for working collaboratively.

We have learnt from our experience on previous metro projects that agreeing on the scope, responsibility, funding and delivery mechanism for precinct improvements before contracts are signed is crucial. Our ask is that DPIE provides conditions of consent that require Sydney Metro and Transport for NSW to engage with the City going forward and that agreed actions are committed before DPIE issue the construction certificate.

We expect this process to begin as soon as possible in order for us to be able to provide timely input into the Stage 1 design which we understand is to be completed in the next six months.

Recommendation 3:

That DPIE establish governance to support the EIS conditions of consent. For example, a regular working group between TfNSW, Metro and the City could be established by a condition of consent and that the decisions of the working group be adopted into the design process. The purpose of the working group would be to:

- **Track responses / progress on key conditions**
- **Develop the Precinct Access Plans for Hunter Street and Pyrmont Metro Stations per Recommendations 1 and 2**
- **Address key design requirements in the immediate vicinity of the metro stations, including:**
  - **Footpath widths**
  - **Reconfiguration or partial closure of streets fronting the metro station**
  - **Public domain treatments including hostile vehicle measures**
  - **Specific mitigation measures proposed in EIS (TT11-TT13)**

Recommendation 4:

That DPIE requires all actions related to the station precincts along with the funding and delivery body and mechanism to have been agreed prior to Metro contracts being awarded for Stage 3 works.

Red line boundary

The red line boundary demarcates the limits of the project within which the proponent is responsible for all works to mitigate impacts. The official red line boundary has not been made public.

We are concerned that the red line will be drawn (a) too narrowly and (b) in a way that arbitrarily cuts streets and hinders holistic precinct planning.

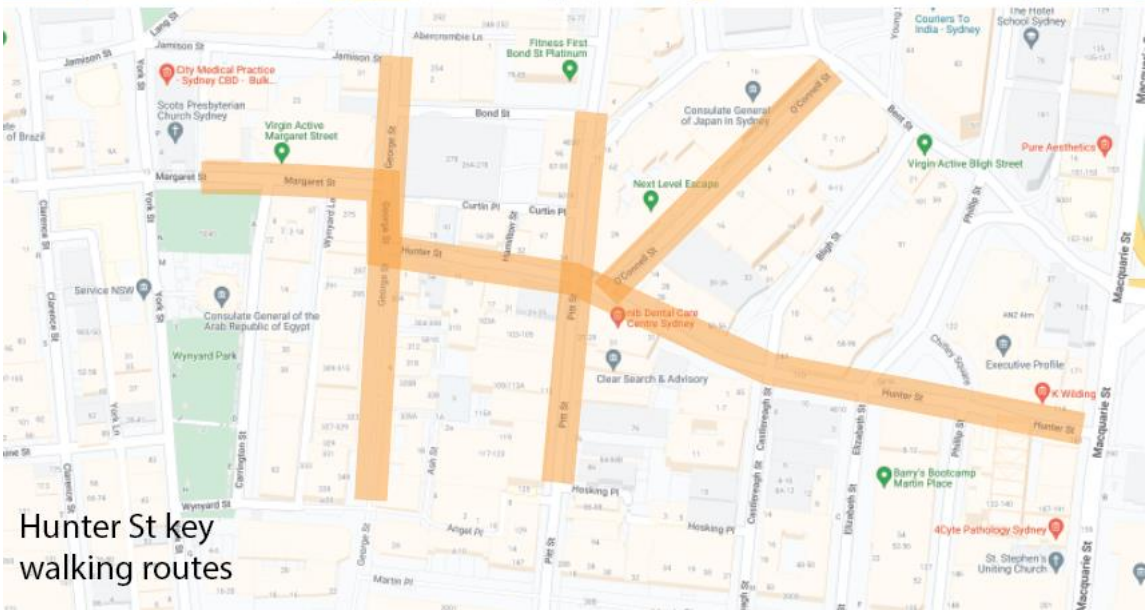
In addition, the development around Hunter Street has been catalysed by the future presence of metro, so not only is the catchment large, the commitment of a station at Hunter Street has actually intensified the level of demand expected in the precinct.

While this is the intention of the project capitalises on the nexus of land use and transport planning, it nonetheless intensifies the crowding of the city footpaths directly and indirectly caused by Metro.

In any other project where the City is the consent authority, we would require the proponent to mitigate the impacts of the development. Metro West should be no different, and the red line boundary should reflect the extent of the impacts of footpath crowding.

A key consideration in the definition of the red line boundary is the impact mitigation and improvements to conditions for people walking, including: safety, comfort, connectivity.

The City has provided a preliminary definition of *Key Walking Routes* to assist TfNSW in addressing this fundamental need of the Metro project.



Recommendation 5:

That TfNSW / Metro mitigate impacts on key walking routes for the metro stations as shown in figure above and that Metro work with the City to determine actions that are needed within the red line boundary as per Recommendations 3 and 4.

Pedestrian Level of Service assessment

The Metro stations are expected to generate a large number of people walking to and from the sites, particularly in peak hours, and we support the use of a level of service assessment to determine whether the footpaths around the sites are adequate.

However, the EIS methodology is in our view flawed. We note that the EIS uses Fruin level of service for their calculations, as opposed to the methodology set out in *Walking Space Guide: Towards Pedestrian Comfort and Safety* (TfNSW, 2020*)* as specified in the SEARS. Fruin is a measure better suited to confined walking environments such as inside transport interchanges but

does a poor job of the complex environments on street where people interact with street furniture, shop fronts, adjacent traffic lanes and multiple walking desire lines associated with the wider area. The *Walking Space Guide* is TfNSW's own policy and provides a more nuanced approach specific to the Australian context that takes into consideration other factors such as the type of street environment. Designing footpaths based on Fruin assessment will result in under-designed footpaths in the heart of our city, causing issues with both pedestrian comfort and safety.

We require the proponent to comply with the requirements of the SEARS and undertake a revised analysis of the footpath crowding using TfNSW's *Walking Space Guide*. The City and Metro should then work collaboratively to agree footpath designs that meet agreed performance standards.

A few examples of where using a Fruin assessment would result in under-performing footpaths are:

- Hunter Street between George Street and Pitt Street
  - The north footpath is 4.5m wide and the southern footpath is 3.7m. Both sides have active frontages and the speed limit is 40km/h.
  - There is forecast to be 830 people using the northern footpath and 4150 using the southern footpath, making it a Type 5 footpath.
  - The Fruin assessment shows LOS A and C on the northern and southern sides respectively.
  - To meet a LOS C using the *Walking Space Guide* requires a minimum clear width of 3.9m or maximum of 9.5 people/m/min. Also, the 40km/h limit with active frontages means a 1.2m buffer is required.
  - In total, the guidelines indicate 5.1m and 8.5m are required on the northern and southern sides respectively, much greater than the 4.5m and 3.7m deemed adequate by the Fruin assessment.
- Pyrmont Bridge Road south side between Harris Street and Paternoster Row.
  - The footpath width is 2m adjacent to a park, and the speed limit is 40km/h.
  - There is forecast to be ~1,100 people using this footpath in the future AM peak hour, putting it as a Type 4 footpath.
  - The Fruin assessment shows the existing 2m wide path achieving LOS A.
  - To meet a LOS C using the *Walking Space Guide* given the non-active use adjacent to the footpath (the park) means 3.7m minimum walking space is required.
  - The 40km/h speed limit of the street means a 1.2m buffer is required, giving a **total footpath width requirement of 4.9m, much wider than the existing 2m.**

In the case of the Hunter Street example, we believe that as a result of redoing the assessment, the logical conclusion is to pedestrianise Hunter Street and/or restrict general traffic. A full 13.6m of clear width would be required to meet LOS C. It is likely to be more once the design accounts for street furniture and other obstacles.

The whole building-to-building width of the street is only 18m, so less than 5m would be available for traffic use, barely enough for two lanes. This suggests that a more holistic design for Hunter Street is necessary and the City would like to be a core part of this process, as per Recommendations 1 and 2.

Getting this issue right is also a matter of safety. When a project results in an increase in the number of people walking and cycling in an area that is dominated by vehicle access for the motorway network, there is a significant and tangible road safety issue that needs to be addressed. This needs to be reflected as a priority in the EIS.

Recommendation 6:

That Metro re-do the pedestrian level of service assessment using the methodology in TfNSW's *Walking Space Guide: Towards Pedestrian Comfort and Safety (TfNSW, 2020)* as per the SEARS requirements. We expect footpaths within the immediate vicinity of the station (<100m) to target LoS A, and those in the vicinity of the station (100-400m) to target LoS B. We would expect no lower than LoS C in any location.

Recommendation 7:

That Metro work collaboratively with the City to on all changes to street and footpaths that are needed along *key walking routes* as a result of the assessment required in Recommendation 6. At a minimum, the City would expect the design to include:

- **Footpath widths to allow groups to comfortably pass each other (>4m)**
- **Maximum wait times of 60 seconds at signalised pedestrian crossings**
- **Maximum vehicle speeds of 40km/h**
- **No slip lanes**
- **Pedestrian crossings on all approaches of signalised intersections**
- **Continuous footpath treatment on non-signalised side streets**

Modelled demands in Pyrmont

We believe there may be some issues with the Pyrmont modelling, both in demand estimates and the routes.

- Clarification is needed what the midblock counts in Figures 110 and 111 of Technical Paper 1 (Operational Transport) represent. We are not aware of any midblock links between and parallel to Miller Street and Pyrmont Bridge Road. If it does not exist, it means demand assigned to this link would be absorbed by either Miller Street or Pyrmont Bridge Road.
- Clarification is needed regarding the land use scenario that was used to generate the PTPM and ETCM results for Metro West patronage includes the uplift of Pyrmont planned under the *Pyrmont Peninsula Place Strategy (DPIE, 2020)* as referenced in the SEARS. Omitting this uplift would result in underestimates and under-design for footpaths.
- We disagree that there would be such a high proportion of people using the southern footpath on Pyrmont Bridge Road as opposed to the northern side. Figure 110 and 111 both show ~1,000 people crossing Pyrmont Bridge Road and walking west along the southern footpath. We would argue that since the demand exits the Metro on the north side, and the attractors to the west are also on the northern side of the road, the majority of pedestrians would choose to stay on the northern side rather than cross Pyrmont Bridge Road twice.

We are concerned that the three issues above indicate underlying problems with the pedestrian modelling around Pyrmont and that this will have negative consequences for the precinct design.

Recommendation 8:

That further evidence is provided showing that the pedestrian modelling around Pyrmont is based on: **(i) an accurate network, (ii) a land use scenario that includes uplift in Pyrmont as per the *Pyrmont Peninsula Place Strategy* (DPIE, 2020) and (iii) reasonable routing choices. The analysis must be revised by the proponent if issues are found.**

Hostile vehicle management

The design guide (Appendix E) states that “all security and pedestrian management devices are to be contained within the station development site where possible and integrated with the design of the public domain using features such as furniture”. The City objects to the ‘where possible’ phrasing.

Recommendation 9:

If Metro determines that hostile vehicle mitigation is required, it must be incorporated within the building envelope or through preventing vehicle access into metro frontage roads.

Bus network changes

The Operational Transport technical paper does not provide detail on how the bus network is expected to change in response to Metro West. We expect that as a result of Metro West and the two previous metro projects, there would be significantly reduced need for buses in the city centre and reduced layover requirements, potentially freeing up kerbside space around the Hunter Street precinct.

Recommendation 10:

That key future bus corridors are identified as part of the Precinct Network and Operations Plan process (see recommendations 1 and 2) and that any future bus corridors on Metro station frontage routes are identified so that provision can be made for stops that are easily accessible to metro.

Parking impacts

The Pyrmont Station chapter of the EIS notes that there will be approximately seven parking spaces removed in the station precinct as a result of the project. We would expect to be involved in developing any measures intended to offset this impact.

Recommendation 11:

That the measures for offsetting the impact of the parking removed around the Pyrmont Station would need to be agreed with the City.

Vehicle access locations

The station layouts show indicative access locations for service vehicles. We support the locations indicated and would like to be consulted on the exact locations as design progresses as it will affect our plans for the public domain, particularly on O’Connell St in the Hunter Street precinct.

Recommendation 12:

That Metro to work collaboratively with the City on elements of the station design that interface with the street environment, as per Recommendations 3 and 4.

Through-site links

We support the through-site links shown for Hunter Street in Fig. 15-1 and we are keen to work with Metro and the developer of 15-25 Hunter Street and 105-107 Pitt Street (one site) to coordinate design and make sure northern connection between George and Pitt is high quality. This is a time-sensitive matter as the developer recently lodged a planning proposal for the site, so we need to work quickly to ensure that the design processes align.

Recommendation 13:

That the design of the through-site link from Pitt to George Street be considered as a project separate to Metro requiring coordination between Metro, City Planning and the developer.

Future extensions

The City continues to call for the proposed Metro West extension to the South East to be brought forward to 2030-1. As well as addressing longstanding capacity and reliability issues in the growing Green Square, that extension supercharges productivity, with stations at Central and Zetland as priorities, linking to Randwick (with the investigation of a potential site at Camperdown). Connections via Metro West to Pyrmont, Bays Precincts, GPOP and Westmead lock in the opportunities for business formation and collaboration in multiple sectors.

Recommendation 14:

That TfNSW bring the proposed Metro West extension to the South East forward to 2030-1.

Share bikes

Our experience working with share bike providers has demonstrated to us that stations outside the city centre are prime origins and destinations for trips using share bikes. If space to allow people to leave share bikes near the station is not considered in designing the station, the spill over into the public domain can cause issues.

Recommendation 15:

Consider the demand for share bikes at Pyrmont Station and ensure that adequate space is provided to accommodate them in the public domain.

2.2. Specific comments

The EIS notes three mitigation measures relating to Operational Traffic and Transport (Technical Paper 1) that fall within our LGA. These are listed below.

Reference	Mitigation measure
EIS-TT11	Measures to improve overall performance for both pedestrians and vehicles at the intersection of Pyrmont Bridge Road/ Union Street would be investigated in consultation with City of Sydney Council and Transport for NSW
EIS-TT12	Widening of selected pedestrian crossings at the Bligh Street/ Hunter Street intersection to accommodate future pedestrian demands would be investigated in consultation with City of Sydney Council and Transport for NSW
EIS-TT13	The potential for minor footpath upgrades on O'Connell Street, Hunter Street and at Richard Johnson Square (corner of Bligh Street and Hunter Street) would be investigated

	in consultation with key stakeholders, in response to increased pedestrian demand associated with the metro station

All three only commit to *investigating* measures. Phrased like this, the proponent could investigate solutions but do nothing and the requirement would be met. A stronger commitment is required so that improvements are delivered. Our experiences in the past have indicated to us that it is critical that such commitments are locked in at the EIS stage so that they are not later value-engineered out of the process.

The EIS can contribute to building trust in Sydney Metro from the public and the City by using clear, action based language and by avoiding 'soft words' such as "we will investigate".

Recommendation 16:

That DPIE require commitment to action rather than investigation in all mitigation measures.

Recommendation 17:

That specific plans of proposed mitigation measures developed as part of the Precinct Network and Operations Plan as per Recommendations 1 and 2, and that the City is involved in the solution design, as per Recommendations 3 and 4.

EIS-TT11: Improvement of Pyrmont Bridge Road/ Union Street intersection

We are cautious about the wording of 'improving' the intersection for vehicles. Any assessment of impacts to vehicle movements in the EIS should be made in consideration of TfNSW policies and priorities. Any "predict and provide" modelling needs to be couched in the reality that vehicle trips can reduce if through traffic capacity is reduced by reallocating road space from vehicles to people and place.

Recommendation 18:

The planning and design for mitigation measures proposed for Pyrmont Bridge Road / Union Street intersection should be undertaken as part of the Precinct Access Plan for Pyrmont as per Recommendation 2. At a minimum, the intersection design should include the design elements listed in Recommendation 7. The City must be involved in the design process, as per Recommendations 3 and 4.

EIS-TT12: Widening crossing at Bligh Street / Hunter Street

The EIS notes that the high pedestrian demand at the Bligh Street / Hunter Street intersection means that the crossings need to be widened. The City strongly opposes this conclusion: it is the area for waiting that is the limiting factor, not the width of the crossing itself.

We recommend that the footpath is widened (consistent with the City's public domain plan), and/or signal timings are adjusted to give more green time to people walking.

Recommendation 19:

That footpath width and signal phasing at the Bligh Street / Hunter Street intersection be considered part of EIS-TT12 and that the City is involved in the solution design, as per Recommendations 3 and 4.

EIS-TT13: Minor footpath upgrades

The EIS notes potential footpath improvements around Hunter Street Station on O'Connell Street, Hunter Street and at Richard Johnson Square. Given the City is the custodian of the public domain around the station, we would expect to be involved in the design. In particular, we have broader plans for the north CBD that involve reducing the capacity of Hunter Street and pedestrianizing George Street north of Hunter Street. We wish to work with TfNSW and Metro to work these plans into the design for the station to avoid abortive work that would need to be redone at a later date.

Recommendation 20:

That actions, delivery and funding body must be agreed with the City and TfNSW on any and all proposed footpath changes prior signing of contracts for Stage 3 works. See Recommendations 3 and 4.

Attachment B

Design Guidelines with CoS mark-up

2.4 Commitment to sustainability

For Sydney Metro, sustainability means planning, building and operating a metro network, stations and precincts for current and future generations that optimise environmental, social and economic outcomes. This includes ensuring sustainability informs design and is core to the metro product.

Six sustainability principles govern how Sydney Metro embed and deliver on our commitments to the community, our customers and key partners.

These principles align with the commitments in both the *Transport for NSW Environment and Sustainability Policy* and *Sydney Metro Environment and Sustainability Statement of Commitment* and have been identified based on best practice endeavours on past metro projects, emerging needs and trends and in response to wider government policy.

Project-specific objectives, targets and initiatives will be identified under each of the six principles and will form an integral part of the Sydney Metro West Sustainability Plan.

Add a commitment to meeting any requirements in NSW Climate Change Policy Framework, the NSW Net Zero Plan Stage 1: 2020 – 2030, Net Zero Plan Stage 1: 2020-30 Implementation Update and any subsequent updates; and in relation to Pyrmont and Hunter Street stations, the City of Sydney's Environmental strategy 2021-2025, and Planning for net zero energy buildings and subsequent updates.

Sydney Metro six sustainability principles.

3.1.2 Customer circulation

Applicable design objective

Ensuring an easy customer experience

Principle

Provide adequate space to meet customer demands during peak periods and for long-term patronage forecasts.

Guidelines

- The movement capacity, configuration and spatial sequences of each station is to respond to patronage requirements defined as Level of Service C or better (based on a scale from A to F), appropriate to the location and context.
- Pedestrian paths, crossings and spaces within station precincts are to have sufficient capacity to meet potential demand with particular consideration of customer decision points (gatelines, entrances, exits, customer queue zones) and information points (refer Section 4.3.2) and meet the requirements of the TfNSW Walking Space Guide.
- Circulation paths within stations are to optimise timeliness for customers moving between concourse, platform and station entries.
- Circulation paths are to be designed for convenience of connections into the station and from surrounding areas and other transport modes, reflecting pedestrian desire lines as much as possible to enhance the convenience of circulation routes.
- Retail activities, services areas and advertising structures within station sites are not to compromise efficient transport operations.
- All stations are to provide sufficient space for emergency access and movements in accordance with relevant design standards and legislation.

3.1.4 Comfort and amenity

Applicable design objective

Ensuring an easy customer experience

Principle

Provide a comfortable well-lit customer environment with sufficient space for movement and an effective and appropriate microclimate.

Guidelines

- Station entry orientation and design are to minimise adverse microclimate effects including wind tunnel impacts and the area adjoining station entries are to have safe and standing comfort wind conditions.
- Weather protection is to be provided within station precincts so that good levels of customer comfort are maintained, and usable spaces are provided at ground level.
- A range of customer facilities and amenities is to be provided to grow patronage by making public transport a more attractive choice.
- A high level of amenity and security in customer waiting areas is to be provided to positively influence patronage and perceptions of the public transport system.
- Waiting areas, pedestrian walkways and cycleways within station precincts are to have adequate shade and lighting, providing an appropriate balance between sun access in winter and shade in summer and safe and walking comfort wind conditions.
- The urban heat island effect is to be minimised through light coloured finishes, roofs and pavements, and through the installation of green infrastructure such as roof and/or podium landscapes, green walls, water sensitive urban design and maximising opportunity for shade trees/tree canopy.

Chatswood Transport interchange. Waiting and circulation areas outside the station entry are weather protected and have a high level of amenity and customer facilities. (Architect: CoxDesignInc. Source: Cox Richardson, Photographer: John Gollings)

9 Castlereagh Street, Sydney. Landscaped spaces provide shade in waiting areas. (Architect: Harry Seidler & Associates. Source: Cox Richardson)

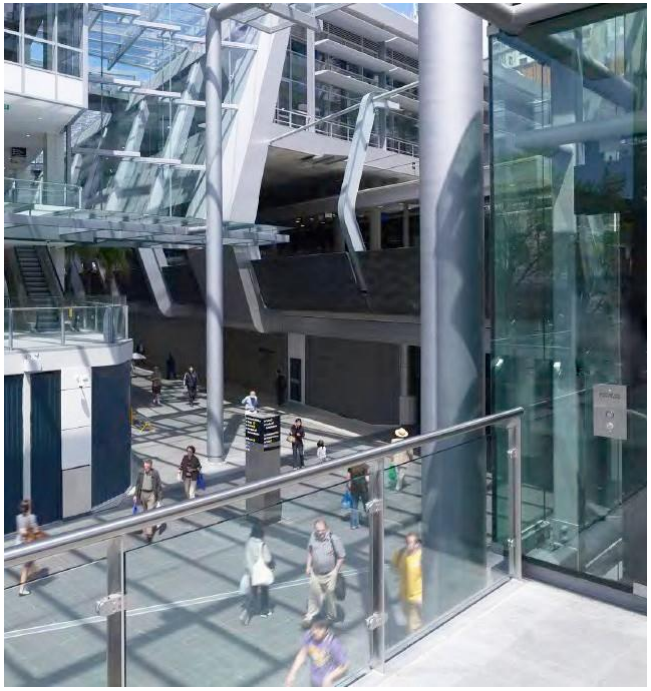
3.1.5 Customer safety

Applicable design objective

Ensuring an easy customer experience

Principle

Design stations and their precincts to provide a safe and secure environment for customers and contribute to the overall public safety of urban places throughout the day and night.



Chatswood Transport Interchange, NSW. Design of the public domain enables passive surveillance with clear sight lines through the station areas. (Architect: CoxDesignInc. Source: Cox Richardson)

Guidelines

General

- Safety considerations and requirements are to be embedded in the design development process and optimised through the application of relevant Crime Prevention through Environmental Design (CPTED) principles and guidelines.
- Operators and maintenance staff are to be consulted on issues such as lighting, lines of sight, access points and CCTV, based on their network experience.
- Integrated CCTV systems are to be provided at entries and exits, stairways, ramps, bridges, tunnels, lifts, ticket office and vending machines, emergency help points, public telephones, waiting and seating areas in accordance with Australian Standards and Sydney Metro requirements. Consult with and integrate with the City of Sydney safety and security operations including agreement on the location of any systems within public space outside stations
- Vandal-resistant fittings and fixtures are to be used throughout.

Public domain safety

- An initial CPTED review of station precincts is to assess activity generators, edge effects, movement predictors, conflicting user groups, crime hot spots, the 'displacement phenomenon' and building elements.
- All public domain areas around stations are to be planned with guidance from CPTED experts, adopt a risk prevention design approach and eliminate entrapment and concealed space opportunities.
- A Crime Risk Assessment audit is to be applied to station precinct design to confirm compliance with CPTED guidelines.

Station safety

- Station design is to incorporate CPTED strategies such as:
  - eliminating hidden spaces, recesses or voids that could provide a person with the ability to conceal themselves or others from general view
  - securing stations out of operating hours and during emergencies
  - positioning ticket vending machines to allow surveillance
  - minimising inadvertent or intentional access to hazardous or unauthorised areas of the station
  - including physical barriers to minimise risk of trespass or self-harm by station users
  - installing protective screening to elevated walkways and concourse areas particularly where persons traverse above or immediately adjacent to the rail corridor
  - glazing lift cars and lift shaft enclosures to maximise visibility and safety.
- Station design is to:
  - support visible staff presence as close as possible to customer movement and decision-making zones to enhance customer safety
  - minimise obstructions and projections, providing clear routes for customers
  - eliminate potential for crush zones and provide equipment at safe and accessible locations.
- Help points are to be easily identifiable, accessible components integrated into station cladding systems and positioned to allow surveillance.
- Help point enclosures are to be integrated with the surrounding wall or equipment cabinet.

3.3.4 Security

Applicable design objective

Being part of a fully integrated system

Principles

Ensure adequate security for rail corridor infrastructure, station assets and for rail users.

Visually and physically integrate security elements as part of coordinated station, precinct and corridor design.

Guidelines

General

- Risk assessments are to form part of the design process during all phases.
- A public address system, capable of projecting clearly audible information throughout the station, is to be provided at emergency egress points, controllable from station control rooms and operational control rooms.
- CCTV is to be provided throughout the station, including at all corridor access/egress points and potentially risk-sensitive areas.
- Fencing is to be robust, suitable for the rail environment and consider maintenance and future replacement.

Crowded places

- In high volume stations, station design is to include strategies to manage the movement of crowds, particularly at peak times.
- Hostile vehicle mitigation strategies are to be developed for each station.
- All security and pedestrian management devices are to be:
  - contained within the station development site ~~where possible~~
  - integrated with the design of the public domain, using features such as furniture.
- Security bollards are to be provided where necessary but are not to impede safe pedestrian movement by adopting a rational layout to minimise visual clutter and maintain safe, accessible paths of travel. Stations are designed to accommodate security bollards within the station property and not in the public space – footpaths and streets – surrounding the station.

Homebush, Sydney. Rail corridor security fences should be robust, easily maintained, modular systems that are readily integrated with other urban design elements such as retaining walls. (Source: AECOM)

4.1.3 Station buildings and associated precinct development

Applicable design objectives

- Ensuring an easy customer experience
- Being a catalyst for positive change
- Being responsive to distinct contexts and communities
- Delivering an enduring and sustainable legacy for Sydney

Principle

Integrate station buildings and associated precinct development where relevant, to contribute to an active, safe and stimulating public domain around stations.

Guidelines

General

- Station and precinct development is to:
  - be designed to prioritise the activation of the public domain, particularly station plazas and key pedestrian routes
  - minimise potential negative impacts on public spaces, including the overshadowing of key spaces of congregation and activity (refer Section 3.1.5)
  - be coordinated with local planning strategies and or master plan initiatives to maximise place opportunities within precincts.

Street frontages, forecourts and plazas

- Uses and activities are to be integrated and services coordinated between the station buildings and precinct development wherever possible.
- Forecourts and plazas are to be designed to facilitate active uses at the interface with station and precinct development, considering the role of landscaping, level changes and outdoor dining space in activating the interface zone.
- Active frontages are to be maximised across the ground plane to provide for a high-quality pedestrian environment and exciting urban experiences.
- Ground floor entries are to be level with the footpath and open towards surrounding streets, wherever possible, to maximise street level activation.
- Expansive and inactive street level frontages in areas of high pedestrian use are to be avoided.

Building design

- The design of new development above stations including structural elements, building grids, column loadings, building infrastructure and services is to be integrated with the station.
- The ground level of buildings is to be well-designed, able to attract a diverse range of active retail and business uses and create variation and interest, using appropriate ceiling heights, floor plate dimensions and fine-grain architectural façade treatments to maximise the number of tenancies addressing the ground plane.
- Design of non-residential buildings and spaces is to be adaptable over time by providing appropriate ceiling heights, floor plate dimensions and servicing and access.
- Façade elements and architectural treatments that break up the massing when viewed from public spaces and at street level are to provide visual interest and reinforce a sense of scale and design continuity.
- Awnings are to be visually appealing to provide weather protection, allow light onto the street, respond to topography, and break the vertical building bulk. For Pyrmont and Hunter Street stations, comply with The City of Sydney Awnings Policy.
- ~~Wind mitigation devices such as impermeable canopies, awnings, pergolas and trees are to be incorporated where there is potential for significant wind downwash from buildings and where required to achieve the relevant wind comfort and/or safety criteria.~~

  Avoid the need for canopies and other structures to mitigate wind in the public space around stations by designing buildings that minimise downdraft and do not cause unsafe or uncomfortable pedestrian wind environments. Do not rely on trees to provide safe and comfortable wind environments

- The extent of grilles, vents, mechanical plant and other operational and security measures are to be minimised in areas that front onto the public domain.

4.1.7 Lighting

Applicable design objectives

- Ensuring an easy customer experience
- Being responsive to distinct contexts and communities

Principle

Ensure a coordinated station and precinct lighting design that is appropriate for the local context, addresses Crime Prevention through Environmental Design (CPTED) and operational requirements and contributes to a positive image of Sydney Metro in the locality.

Guidelines

General

- Lighting design is to:
  - form part of a coordinated approach to station access, wayfinding and, where appropriate, public art and activation
  - be generally consistent, in both function and aesthetic intent, across stations.
- Public lighting is to highlight station entries and approaches, enhance station architecture and contribute to the quality of public spaces.
- Illumination levels are to be fit for purpose, whether wayfinding, reading or facial recognition, while minimising light spill.
- Efficiency in lighting design is to be pursued with the number of luminaires minimised as far as possible without compromising design intent.
- Market leading energy efficient luminaires and systems are to be specified.
- Glare is to be minimised through appropriate specification and location of luminaires.
- All outdoor lighting design is to minimise light pollution.

Station lighting

- Lighting design including placement of fittings is to be integrated into and serve the station architecture.
- Station and lighting design is to achieve a considered balance between natural and artificial light.
- Protection from intense summer sunlight penetration is to be provided.
- All outdoor lighting design is to align with AS/NZS4282 or equivalent standard.

Public domain lighting

- Lighting in station precincts and at other facilities is to contribute to a safe, legible and comfortable environment for all staff and users.
- Public lighting is to support a wide range of potential uses.
- All public areas are to use a consistent, multi-function pole and associated luminaires.
- Lighting elements are to be coordinated spatially and aesthetically with all other public domain elements and the public landscape.
- Precinct lighting is to be of an appropriate scale and quality, consistent with surrounding local authority approaches.
- For Pyrmont and Hunter Street stations comply with The City of Sydney - Sydney Lights: Public domain design code

Britomart Transport Centre, Auckland. Lighting is designed to provide a safe, legible and comfortable environment for customers and users. (Architects: Mario Madayag & Jasmax. Source: Opus)

Georg-Brauchle-Ring Station, Munich U-Bahn, Germany. Artwork on the trackside walls gives the station a distinctive identity and facilitates wayfinding. (Artist: Franz Ackermann. Source: Wikipedia)

5.8 Pyrmont Station

Centre type

Metropolitan centre (part of Harbour CBD)

Station function

Origin and destination

Local Government Area

City of Sydney

Precinct vision

A new harbour-side precinct enabled by the metro station, focused on knowledge-intensive employment and supported by public domain, retail and residential activities.

Context

Site

Pyrmont Station precinct is centrally located within the Pyrmont Peninsula adjoining Union Square and Pyrmont Bridge Road. The station will occupy two sites. The eastern site comprises the triangular block bounded by Union Street, Edward Street and Pyrmont Bridge Road. The western site comprises the south end of the block bound by Pyrmont Bridge Road, Pyrmont Street, Union Street and Paternoster Row.

Country

The precinct is located on the traditional lands of the Gadigal people.

Precinct description

Pyrmont is a key residential and employment area within Central Sydney. The station precinct is characterised as mixed-use, which includes residential, commercial, cultural and entertainment uses. Several intact mid to late nineteenth century terrace houses and former industrial and commercial heritage listed buildings are found within the precinct, as well as a number of contemporary medium to high rise residential and commercial buildings.

Union Square is a pedestrianised area on Union Street, between Paternoster Row and Harris Street which provides a distinctive village character to Pyrmont. Primary east-west pedestrian and vehicular connections through the Pyrmont Peninsula are via Pyrmont Bridge Road, which is heavily trafficked, and Union Street, which contains a separated cycleway. The precinct is within walking distance of the western edge of the CBD, linking pedestrians and cyclists via Pyrmont Bridge. The precinct also connects to Ultimo, Darling Harbour and the site of the Sydney Fish Markets and proposed Blackwattle Bay redevelopment.

Precinct future

The vision for Pyrmont is to become an innovative, creative and cultural precinct and an engine room of the Eastern Harbour City. This vision, defined in the Pyrmont Peninsula Place Strategy, guides the future of Pyrmont as protecting the quality and history of the Harris Street spine, while unlocking the potential of sites to deliver jobs aligned with Pyrmont's position within the Innovation Corridor identified in the Eastern City District Plan.

Reference documents

Eastern City District Plan (2018)

City Plan 2036: Local Strategic Planning Statement (Mar 2020)

Pyrmont Peninsula Place Strategy (Dec 2020)

Draft Pyrmont Peninsula design guidelines (Nov 2021)

Pyrmont Urban Design Report Vol. 3 Sub-Precinct Master Planning (Oct 2021)

Sydney Development Control Plan 2012

Sydney Local Environmental Plan 2012

Place and design principles

- Support Pyrmont's role as a significant employment and entertainment destination and urban renewal area with a new metro station, connected to the Sydney CBD, The Bays Precinct and Western Sydney.
- Provide a direct rail service to Pyrmont to support a catchment not currently serviced by the Sydney Trains network.
- Align with the strategic directions of the Pyrmont Peninsula Place Strategy to deliver a metro station that will reinvigorate investment and facilitate a future integrated development which achieves design excellence, responds to context and delivers Place Strategy aspirations.
- Facilitate efficient interchange with bus and light rail and enable comfortable and safe connections for pedestrians and cyclists, including Union Street, Pyrmont Street and Pyrmont Bridge Road.
- Deliver an activated ground plane and high-quality public domain that contributes to the streetscape, complements the surrounding context and heritage character and offers a welcoming place for people.

Urban design strategies

Land use and function

- Integrate the station precinct within Pyrmont's established urban context with a mix of tenancies which operate day and night, bringing life and interest to the street.
- Complement the western station entry with a small retail tenancy along Pyrmont Street, to bring visual surveillance and serve basic customer needs while respecting adjacent residential amenity.

Pyrmont Station land use and function.

- Provide a diverse range of retail and business tenancies to Union Street at ground level, complementing the busy station setting, and adding visual richness.
- Design for a high-quality and visually interesting interface along the Pyrmont Bridge Road frontage and where possible, activate Pyrmont Bridge Road to create an attractive and welcoming pedestrian environment.

Places and spaces

- Set back the eastern station building along Pyrmont Bridge Road to accommodate a safe and comfortable walking environment. Extend the northern footpath in Pyrmont Bridge Road between the station and the Blackwattle Bay State Significant Precinct to provide a safe and comfortable walking environment.
- Design a high-quality public interface along Union Street with active edges, places for people to dwell, and generous space for customers and pedestrians. Transform Union Street to a predominately pedestrian environment, with limited and slow vehicle access, to join the station entry to the pedestrian Pyrmont Bridge and Union Square.
- Design station services within the podium to have minimal visual impact to Union Street.
- Set back the western station entry to Pyrmont Bridge Road to deliver suitable public space for safe pedestrian movement and gathering.
- Design the western station building to respond to, and act as a companion building to the heritage listed wool store opposite.
- Sensitively design the western station building to sit comfortably within the Harris Street Heritage Conservation Area.
- Respond to the local heritage conservation area setting with a high-quality façade design which aligns with the heritage values, manages the visual impact of station services to the street and enhances the character and amenity of its setting.

Pyrmont Station places and spaces.

5.9 Hunter Street (Sydney CBD) Station

Centre type

Metropolitan centre (part of Harbour CBD)

Station function

Destination, origin and interchange

Local Government Area

City of Sydney

Precinct vision

A landmark station that reinforces the commercial heart of the Eastern Harbour City, unlocking public transport capacity and catalysing new economic opportunities by linking with Greater Parramatta in the Central River City.

Context

Site

Hunter Street metro station precinct is located in the northern part of Sydney CBD, within the heart of the financial and legal centre of the city. The station development will occupy two sites, one on the corner of Hunter and George Street, and the other on the corner of Hunter, O'Connell and Bligh Streets. The precinct is within close proximity of Wynyard train station and CBD Light Rail to the south west and Martin Place station to the east.

Country

The precinct is located on the traditional lands of the Gadigal people.

Precinct description

The wider precinct is characterised by a concentration of commercial towers and represents a major employment district and flagship location for many global and national organisations.

Several heritage items are located within the precinct including the Skinners Family Hotel, Richard Johnson Square, Perpetual Trustee Building and the City Mutual Life Assurance Building and the Tank Stream. These historic buildings, landscapes and archaeological sites are intermixed with more recent and contemporary high-rise buildings.

The walking catchment of the station encompasses significant major employment, attractors at ground level and part of an extensive subterranean pedestrian network linking Barangaroo and Martin Place.

Future integration

The station will have direct interchange with Sydney Metro City & Southwest and Sydney Trains T4 line at Martin Place Station, and direct connections to T1, T2 and T8 lines at Wynyard Station. Sydney Light Rail (Wynyard Stop) is near the George Street entry and Wynyard bus station is nearby.

Reference documents

Eastern City District Plan (2018)

City Plan 2036: Local Strategic Planning Statement (Mar 2020)

Central Sydney Planning Strategy (Nov 2021)

Sydney Development Control Plan 2012

Sydney Local Environmental Plan 2012

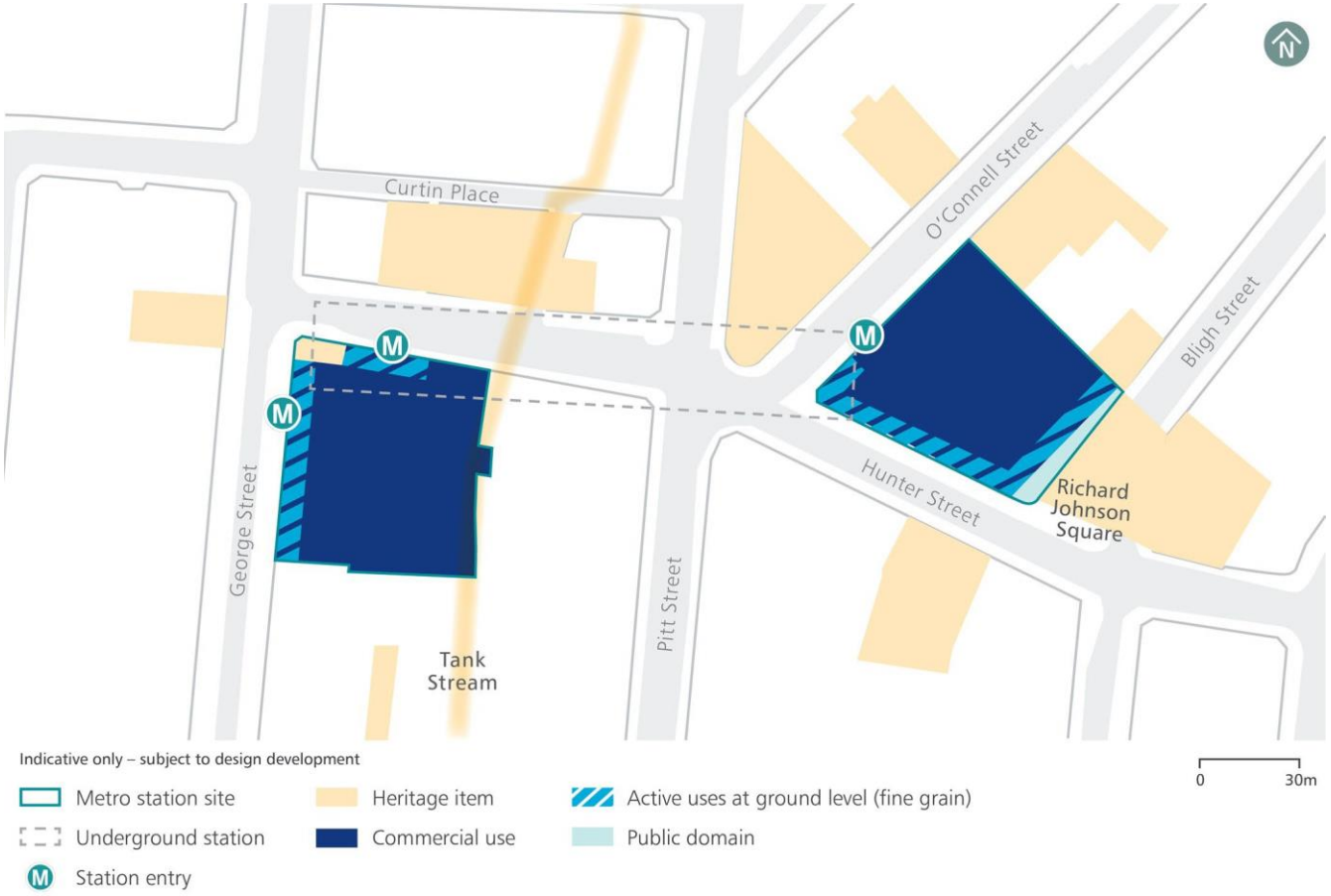
Place and design principles

- Reinforce Sydney's global standing by significantly improving public transport accessibility between the Eastern Harbour City and the Central River City, enhancing 'job-to-job' connections and catalysing economic growth.
- Establish an integrated transport hub in this northern CBD precinct, strengthening Sydney's rail network and linking important destinations to deliver a more connected city.
- Deliver highly efficient interchanges between metro and other public transport modes, with capacity to support high volumes of pedestrians above ground and underground, while delivering a high-quality customer experience.
- Facilitate integrated station developments that promote design excellence and contribute to the unique attributes and character of this northern CBD location, aligned with the Central Sydney Planning Strategy.
- Deliver a design that promotes active street frontages to support a vibrant public domain in the heart of the Sydney CBD, and which delivers a high-quality station address to George Street – the CBD's north-south pedestrian boulevard.

Urban design ~~strategies~~ guidelines

Land use and function

- Provide a diverse range of retail and business tenancies at ground level ~~(where possible)~~ facing the surrounding Public Places that complement the busy station setting, and activate the street and unpaid station concourse areas to support customer needs and create lively and interesting places.



Hunter Street (Sydney CBD) Station land use and function.

- Promote night-time uses which can activate Sydney CBD streets, laneways and through site links.
- Design for high quality commercial tenancies within the podium (where possible), aligning with this highly sought-after central CBD address.
- Design for a high-quality commercial interface (retail /business tenancies) along the George Street frontage to complement the station entry.
- Support active uses at Bligh Street fronting onto Richard Johnson Square, to align with the role and programming of this public space.
- Design for ground level tenancies along O'Connell Street where practical to activate the station entry.

Places and spaces

- Deliver a high-quality design which responds to the unique attributes of each street and recognises the importance of its Sydney CBD address.
- Explore opportunities to tell our First Nations story and create a place of healing.

On the eastern site:

- set the entire building above ground back from Bligh Street to align with the adjoining heritage building (Lowy Institute Building) to expand Richard Johnson Square (shown mauve in the diagram opposite), celebrate this heritage façade and promote a visual connection to Richard Johnson Square.
- ~~Sensitively~~ Seamlessly integrate the setback area with Richard Johnson Square and into the ground plane of the station precinct.
- For the podium, build to the street alignments of O'Connell and Hunter Streets
- Establish a legible station address at O'Connell Street, with a design which responds to its important CBD location.

Hunter Street (Sydney CBD) Station places and spaces.

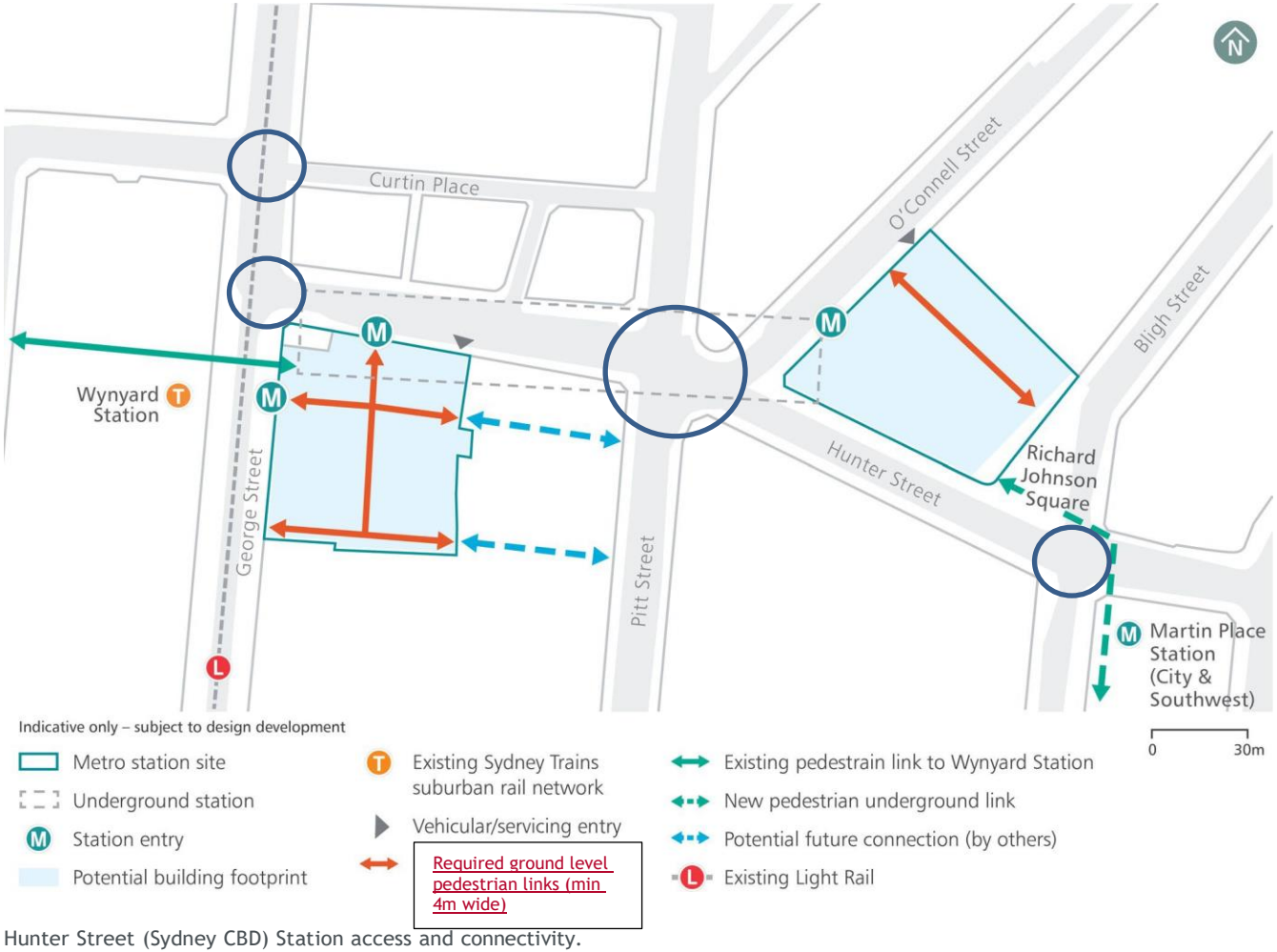
- Integrate a through site link between Bligh and O'Connell Streets, to connect with the station entry and scaled to support activation ~~where possible.~~

On the western site:

- build to the street alignments to reinforce the established building line along Hunter and George Streets. Set the podium heights to surrounding context.
- Design the streetwall height on Hunter Street to match the datum of the cornice line of the Skinners Family Hotel buildings ~~to respond in scale and orientation to neighbouring heritage buildings and to protect streetscape vistas to heritage facades along Hunter Street~~. Setback higher podium elements such as plant by at least 10m from street boundaries.
- ~~Integrate~~ Retain and conserve the former Skinners Family Hotel ~~into the design of the station precinct~~, with adaptive reuse of this heritage asset to create a unique and interesting precinct, using the scale to guide the streetwall height along Hunter Street, and wrap around to George Street with a sensitive interpretation of the original western elevation.
- Design the building podium to have a maximum equal height to the datum 32m above the level of George Street. The plant level may be above the height of the podium if it is setback by at least 10m from street boundaries.
- Establish a memorable station entry experience at George Street, consistent with the landmark address, and which complements the Wynyard Station entry located opposite.
- Provide an awning to the infill building podium on George Street. Ensure that the awning mazimises continuous weather protection for pedestrians and is continuous in height and form with existing adjoining awnings. Fully glazed awnings are generally not acceptable.
- Respect and interpret the Tank Stream within the station precinct, protecting its historic and archaeological value, and communicating the importance of the Tank Stream from First Nations People through to Colonisation.

Access and connectivity

- Support clear wayfinding with legible station entries which are appropriately scaled and seamlessly connect with adjacent streets and public spaces including George Street (western site) and O'Connell Street (eastern site).
- Establish an accessible through site connection shown on the diagram opposite to link Richard Johnson Square (Bligh Street) to O'Connell Street, adjacent to the metro station entry.
- Integrate vehicular access via O'Connell Street (eastern site).
- Design a high-quality subterranean connection to Martin Place to provide a seamless interchange with the City & Southwest line and Sydney Trains services.
- ~~Explore the~~ Create extension of adjacent footpaths to cater to metro customers to create comfortable conditions in accordance with the NSW Walking Space guide.
- Enhance waiting space at and modify timing of surrounding signalized intersections shown with blue circles on the diagram opposite to minimise pedestrian crowding and delay (achieving at least Fruin LOS B).
- Locate station entries on George Street and Hunter Street to provide an accessible and intuitive interchange between Sydney Metro and Sydney Trains stations, light rail and bus stops.
- Retain established subterranean connections to Wynyard to contribute to the network of underground pedestrian links to key city sites and transport modes.
- ~~Investigate the opportunity~~ Create ground level pedestrian links shown on the diagram opposite to connect with lanes adjacent to the site, to deliver through site pedestrian links to Pitt Street (via Empire Lane and the former Hunter Connection) and south to connect with Ash Lane.
- Integrate vehicular access at Hunter Street (western site), protecting pedestrian priority to George Street.



Hunter Street (Sydney CBD) Station access and connectivity.