Appendix I

Healthy Built Environment Checklist

Appendix I Healthy Built Environment Checklist (NSW Government, 2020), Checklist questions 04 – Transport and connectivity (a) and (b), pages 98-100

Question no.	Topic	Details about the policy, plan or proposal	How addressed in this proposal
04 Transport and connectivity			
a) Reduce car dependency and encourage active transport			
1.	Car dependency	Is it a stated goal to reduce car dependency and car use and encourage more active forms of transport?	Sydney Metro West would more than double rail capacity from Parramatta to the Sydney CBD with the delivery of a new high-capacity rail connection. At ultimate capacity, Sydney Metro West would be able to move more than 40,000 people an hour in each direction and would complement the suburban and intercity services between Parramatta and the Sydney CBD. The operation of this world class turn-up-and-go metro service between Westmead and the Sydney CBD would encourage people living, working, and playing within the surrounding suburbs to reduce their car dependency. By encouraging people to use the metro network, this proposal would provide the opportunity for mode shift from car to public transport. Analysis undertaken by Sydney Metro shows that total network wide car trips would be reduced by about 83,000 weekday trips by 2036 and about 110,000 weekday trips by 2056. This would create benefits, including travel time savings and a reduction in environmental impacts to communities such as air pollution, greenhouse gas, noise, and water pollution. Furthermore, the additional mass transit accessibility and amenity provided by this proposal would also provide an opportunity to optimise the bus network. This could include additional feeder services to Sydney Metro West stations and re-deployment of existing parallel bus services that would otherwise duplicate parts of the Sydney Metro West alignment. A modal access hierarchy would be applied in the design of metro stations which prioritises walking and cycling connections. This would encourage customers to use more active forms of transport to access the stations.

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2.	Active transport	Does it propose measures to encourage walking and cycling such as vehicle speed limits, restrictions on vehicle access and parking requirements?	A modal access hierarchy would be applied in the design of metro stations which prioritises walking and cycling connections. Sydney Metro West would provide key connections to surrounding active transport networks, encouraging walking and cycling to and from metro stations. The proposed pedestrian network in the vicinity of the metro stations would allow for good connectivity within the precincts, following all desire lines. The pedestrian networks would create safe and walkable streets that are designed for people by: • providing low vehicle speed environments in the vicinity of some stations, for example on Railway Parade at Westhead and Queen Street at North Strathfield • installing new mid-block and signalised pedestrian crossings at key locations • designing nearby access points to prioritise pedestrians, whilst allowing access for vehicles to surrounding developments. Commuter car parking is not proposed at any Sydney Metro West stations.
3.	Car sharing	Does it encourage carpooling or car sharing, including through designated parking spaces for car share programs?	Kiss and ride and taxi zones would be provided at relevant stations. These spaces can be used by point-to-point services and would encourage car sharing.
4.	Encourage cycling	Does it include incentives to encourage bicycle use such as ‘park and bike’ measures, shared bicycle schemes or end of trip facilities?	Secure and accessible bicycle parking would be available at all metro stations. Bicycles would also be able to be taken onboard metro trains.
5.	Car dependency/active transport	Does it encourage the reduction of car parking spaces in urban areas (particularly where there is good public transport available) including the re-allocation of car parking spaces for bicycle parking and cycling routes?	Sydney Metro West would encourage the use of a turn-up-and-go public transport network. At some stations, some existing on-street car parking spaces would be reallocated for transport interchange such as bus stops, kiss and ride or taxi zones. Bicycle parking would be located at all stations near to the station entries. Sydney Metro West would integrate into the surrounding cycling network, both existing and proposed by councils (e.g. at Parramatta where both the City of Parramatta Bike Plan and the NSW Principal Bicycle Network show a future cycling link at George Street).

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6.	Walkable neighbourhoods	Does it provide a well-connected street pattern? This includes blocks that are relatively short, a road and pedestrian network that provides numerous alternative routes, mid-block pedestrian access links and pedestrian and bicycle through access for all cul-de-sacs.	At most locations there would be limited changes to the surrounding street network. Where appropriate, the metro station precincts would include through-site links to increase pedestrian and/or cyclist permeability. This would include: • the Civic Link and a new east-west pedestrian connection at Parramatta • new north-south connectivity at Sydney Olympic Park along the shared Precinct Street B and the pedestrian promenade, and east-west connectivity from Olympic Boulevard through to the future town centre • new north-south connectivity at Burwood North between Parramatta Road and Burton Street, and safeguarding for additional connections • safeguarding for future pedestrian connections at Five Dock, consistent with Council plans • a new street network at The Bays which prioritises pedestrian and cyclist movements. The metro stations would also support walkable neighbourhoods by providing station entrances which connect to a variety of attractors and respond to pedestrian desire lines. For example, at Pyrmont Station the eastern station entry would face Union Street to provide easy access along an existing active transport link, and at Hunter Street Station (Sydney CBD), the western entry would face the pedestrianised George Street. Sydney Metro would continue to engage with key stakeholders such as Transport for NSW, NSW Department of Planning and Environment and local councils in regard to broader precinct initiatives and plans so that the stations are well integrated to both existing and planned pedestrian infrastructure upgrades for each precinct.
7.	Transport safety	Are there particular features that present potential safety hazards, such as busy roadways separating schools from residential areas, level crossings of rail lines?	Where busy roads are located in the vicinity of station entries, appropriate measures have been incorporated into the design. For example, at Burwood North an underground pedestrian connection would be provided so that customers would not need to cross Parramatta Road and building setbacks would be provided to both Parramatta Road and Burwood Road.

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8.	Transport safety	Are there areas with both high pedestrian and bicycle activity and high vehicle traffic that could benefit from additional safety measures?	Conflicts between pedestrians and cyclists at stations would be avoided through design, particularly at high activity zones such as station entries and retail areas. Taxi, ride-share and kiss and ride spaces would be located in accordance with the modal hierarchy outlined in Technical Paper 1 (Operational transport), where safe and efficient vehicle access and high turnover is available, minimising conflicts with pedestrians, cyclists, buses, and other vehicles. Other safety initiatives include providing an underground pedestrian connection at Burwood North Station so that customers would not need to cross Parramatta Road.
9.	Streetscape design	Do trees border streets where walking and cycling is desired (as a means for improving amenity and helping to reduce traffic speeds)?	Metro station precincts would include appropriate landscaping (including street trees) to provide high-quality amenity for customers walking and cycling to and from the stations.
10.	Active transport	Are walking and cycling entrances to buildings prioritised and safe (avoiding conflict with cars)?	A modal access hierarchy would be applied in the design of metro stations which prioritises walking and cycling connections. These would either be separated from vehicle access areas (including bus, kiss and ride and taxi zones) or appropriately designed to provide for customer safety such as low speed zones.
11.	Active transport	Are walking and cycling routes through parking areas clearly marked and safe (avoiding conflict with cars)? Is bicycle parking prioritised?	Bicycle and pedestrian movements would be prioritised consistent with modal access hierarchy. Secure and accessible bicycle parking would be available at all metro stations. Walking and cycling routes to and from stations are generally not proposed through car parking areas.
12.	Active transport	Where traffic ‘squeeze points’ are introduced (to slow traffic speeds and provide safer pedestrian crossings) are there provisions for cyclists to pass through unobstructed?	Low speed vehicle environments are proposed at a number of locations near station entries such as on Railway Parade at Westmead and on Queen Street at North Strathfield to provide safe customer environments. In these locations, separated cyclist facilities are generally proposed which would allow unobstructed cyclist access.
13.	Universal design	Are pedestrian areas (such as public plazas, squares, pathways, trails, shopping areas) designed to be universally accessible?	All pedestrian areas would be designed to be universally accessible, in accordance with the Sydney Metro West Design Guidelines (Appendix E of this Environmental Impact Statement).

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b) Improve public transport services			
1.	Public transport	Does it identify the provision of public transport as a priority?	Sydney Metro West is a public transport system that would provide high-quality door-to-door transport service. Sydney Metro West would provide a number of transport related benefits and encourage greater use of public transport services.
2.	Transport connections	Does it make provision for public transport routes/services to link the proposed development to the wider area?	Sydney Metro West would provide access and interchange features to allow transfers to and from other modes of transport and the surrounding precinct. The new metro service would be integrated with other transport modes, including transfers with the existing Sydney Trains suburban rail network, pedestrian and cycle networks, light rail, and buses.
3.	Community needs	Does it identify public transport routes that address the needs of different groups in the population, such as travel to education, shopping, recreation, and employment areas?	Sydney Metro West is being design for all day use and for customers to carry out their daily tasks. By connecting to key centres, Sydney Metro West will provide customer access for employment, education, shopping, entertainment, health and recreation purposes.
4.	Walkable neighbourhoods	Are public transport stops located within comfortable walking distance (around 400 to 500 metres for bus stops and 800 metres for train stations) of housing, employment, and other local destinations?	Station options were assessed against a range of criteria, including customer outcomes, constructability, operation, environmental impacts, accessibility, heritage and placemaking considerations, risk and cost effectiveness. Sydney Metro West station locations were selected to provide a balance between an efficient travel time between Greater Parramatta and Sydney CBD, provide connections to key precincts and service large catchments (particularly those not currently serviced by rail). The new metro stations are located within the comfortable walking distances of housing, employment and other local destinations including key services.
5.	Access	Are public transport systems and nodes designed to be universally accessible?	The stations and associated spaces would be safe, efficient, universally accessible, legible, and easy for customers and pedestrians. For example, all metro service elements would comply with the *Disability Discrimination Act 1992* and the Disability Standards for Accessible Public Transport 2002.

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6.	Active transport	Are public transport nodes safe and easy to approach on foot and bicycle (are they clearly signed and well-lit with direct routes and safe and convenient crossing points)?	Sydney Metro West stations would be integrated with the surrounding pedestrian and cycle network. Access to the metro stations would be well-lit, safe, clearly signed, and accessible. Safety issues would be addressed during the design development process and optimised through the application of relevant Crime Prevention through Environmental Design (CPTED) principles and guidelines. Additionally, integrated CCTV systems would be provided at key locations in accordance with Australian Standards and Sydney Metro requirements.
7.	Encourage cycling	Do public transport nodes include places to park and/or rent bicycles? Can bicycles be taken onto trains and/or buses?	Secure and accessible bicycle parking would be available at all metro stations. Bicycles would also be able to be taken on metro trains.
8.	Community needs	Do public transport nodes include amenities such as: shelter, seating, proper lighting, transport user information, wayfinding guidance, washrooms, refreshments, bicycle parking, power outlets and internet service, as well as information about the surrounding area and transport options (including walking and cycling) for the onward journey?	State-of-the-art technology is proposed to keep customers connected at all stages of their journey, from smart phone travel apps on the way to stations to real time journey information at metro stations and on-board trains. This would include audio and visual and tactile signage, as well as assisted listening for the hearing impaired and near field technologies to optimize accessibility for all users. Public transport information would be provided for customers that considers user impairment, culture, and language. Another key characteristic of Sydney Metro West would be the range and quantity of services available at stations, interchanges and within station precincts. These would include for example, toilets (including accessible and ambulant toilets), shelter, seating, and provision for retail and other active uses.
9.	Transport connections	Is the area affected near an existing transport node and if so, does the node need upgrading to ensure it can meet future population needs?	The new metro stations at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, and Hunter Street (Sydney CBD), are all located near to existing transport nodes. This proposal includes upgrades to the existing stations at Westmead and North Strathfield to cater for the anticipated increase in customers interchanging between transport modes.