

Attachment 1: Response to Project Working Group Recommendations

Project Working Group Recommendation	Sydney Metro Position
Sustainability	
ADD Objectives:	
1. Create an integrated sustainable infrastructure network incorporating transport facilities, public domain, water systems and vegetation.	Agree – Already included within Design Guidelines.
2. New development encourages sustainable water use practices.	Agree – Already included within Design Guidelines.
3. Support precinct-scale, low energy, highly-efficient approaches that support net-zero emissions by 2050.	Object – Sydney Metro has already included an objective in the Design Guidelines to “ <i>Reduce energy consumption and emissions</i> ” and therefore the intent of this recommendation is met.
4. Reduce urban heat island effect and improve air quality and the absorption of carbon.	Agree – Already included within Design Guidelines.
ADD Design criteria:	
5. Energy and water consumption is minimised, efficient, and affordable for all in the community.	Object – The existing objectives within the Design Guidelines encourage efficient use of energy and water. Making energy and water affordable for all in the community is beyond Sydney Metro’s control.
ADD Design Guidance:	
6. Commit to beyond the compliance targets for BASIX Energy and BASIX Water.	As proposed in letter, Sydney Metro is now committing to BASIX 30 Energy and BASIX 40 Water. Sydney Metro is supportive of updating the Design Guidelines to reflect the latest commitment. Sydney Metro objects to a requirement to increase over and above minimums for BASIX Water as there are limited opportunities to achieve this, they may not be feasible, and they may be prohibitively expensive. However, Sydney Metro notes that the current Design Guidelines commit to looking for opportunities to go beyond the minimum BASIX (item 3 of design criteria). Refer also response on 20 below.
7. Achieve a NABERS Energy rating of 5.5 stars and NABERS Water rating of 4.5 stars for the commercial areas.	Agree – Already included within Design Guidelines and included within letter.
8. Generate at least 5% of its forecast annual energy demand from on-site renewable energy. Where this is not deemed possible then a cash in lieu contribution must be set to secure delivery of renewable energy supplies of the equivalent elsewhere in the LGA.	Agree to part of this only. The Design Guidelines current provide guidance through the provision to “<i>maximise opportunities for the installation of photovoltaics</i>”. Sydney Metro suggests that the Design Guidelines could be augmented to: • Add to “Design criteria” that photovoltaics will be provided. • Add to “Design guidance” such that point 2 reads “<i>Maximise opportunities for the installation of solar photovoltaic systems,</i>

	<i>aiming to meet 5% of the forecast electricity consumption of the precinct"</i> Sydney Metro objects to the "cash in lieu" portion. This is not a design initiative.
9. Commit to engaging a micro-grid operator to manage peak demand and carbon emissions. An additional step may be to consider an 'energy services company' (ESCO) instead of a 'traditional' electricity retailer.	Object - This is not a design requirement.
10. Demonstrate that the design either enable, or not preclude, future energy technologies and initiatives.	Agree Sydney Metro suggests that the following be added to the Design Guidelines under the "Guidance" section: <i>"Consider enabling, or not precluding, future energy technologies and initiatives"</i>
11. Permit residents to air dry laundry on balcony. Include design measures such as screened outdoor areas on balconies to facilitate.	Sydney Metro objects to this on the basis that it is already covered by the Apartment Design Guideline (ADG) – see 4U. No change to Design Guidelines required.
12. Enable future retrofitting of new technologies such as building integrated PV.	Sydney Metro is of the view this is already sufficiently covered off in the Design Guidelines through the following: <i>"maximise opportunities for the installation of solar photovoltaic cells".</i> This issue is also covered as part of 10 above. No changes required.
13. Commit to 100% electric for the buildings (i.e. no gas).	Sydney Metro objects to this requirement, but notes that consideration could occur as part of achieving ratings and is supported by the current Design Guideline "Design Guidance" Item 1. No change to Design Guidelines recommended.
14. Identify on the drawings potential future sites for solar installations.	Sydney Metro objects to this requirement.
15. Demonstrate how the risers capacity and accessibility enable future additions of thermal and water networks.	Sydney Metro objects to this on the basis that it is already covered by the ADG – see 4U. No change to Design Guidelines required.
16. Consider heat pumps to achieve the required hot water demand.	Agree that this could be included as a possible consideration in design. Suggest that the "Design Guidance" portion of the Design Guidelines is augmented to include a new point as follows: <i>"Energy efficient and low carbon measures could include: heat pumps for hot water demand".</i>

17. For thermal comfort within the development: • Design residential units to achieve optimal thermal comfort conditions in such a way that minimises the need for active systems • Prioritise passive design measures in the buildings such as optimised orientation, western shading devices, minimised glazing and using high thermal performance glazing to reduce overall energy consumption.	Sydney Metro objects to this on the basis that it is already covered by the ADG – see 4U. No change to Design Guidelines required.
18. Provide mixed mode HVAC for commercial and retail with maximised COP ratios to drive energy efficiency.	Agree that this could be included as a possible consideration in design. Suggest that the “Design Guidance” portion of the Design Guidelines is augmented to include a new point as follows: <i>“Energy efficient and low carbon measures could include: provision of mixed mode energy efficient HVAC for commercial and retail areas”.</i>
19. For residential units, do not install split system fan coil units on balconies so as to avoid formation of heat drafts and undesirable outdoor balcony conditions. The following solutions are potential technical solutions available: • Design residential units for potential retrofitting of mechanical cooling systems comprising of indoor direct expansion fan coil unit with pipe reticulation to an outdoor air cooled condenser unit located in a designated plant room, as opposed to on the unit balcony. Consider locating a plant room every 10 floors to house the condenser unit. • Centralised chilled and heating water systems with fan coil units servicing residential units. The thermal energy (chilled and hot water) metered to allow allocation of central energy plant energy and operating cost. Provide heating by electrically driven heat pumps to negate the need for gas.	Sydney Metro objects to this on the basis that it is already covered by the ADG – see 4U-2 - <i>“Provision of consolidated heating and cooling infrastructure should be located in a centralised location (e.g. the basement)”</i>. No change to Design Guidelines required.
20. Exceed the BASIX Water compliance by: • Going beyond the water efficiency requirements of fixtures and fittings	As proposed in letter, Sydney Metro is now committing to BASIX 30 Energy and BASIX 40 Water. Sydney Metro is supportive of updating the Design Guidelines to reflect the latest commitment.

• Use drought-tolerant, low water use vegetation in gardens & green roofs to reduce irrigation water use • Design in high efficiency water fixtures rated at 4, 5 or 6 star WELS, to the highest of these ratings depending on the fixture type • Include high water efficiency appliances such as dishwashers and laundry machines in the apartment.	Sydney Metro objects to a requirement to increase over and above minimums for BASIX Water as there are limited opportunities to achieve this, they may not be feasible, and they may be prohibitively expensive. The current Design Guidelines commit to <i>"investigate opportunities to deliver beyond the compliance targets..."</i> but does not give examples of how this could be achieved. Sydney Metro suggests that the following could be added to the "Design Guidance" section: <i>"Water efficiency measures could include: water efficient fixtures and fittings, using drought-tolerant, low water use vegetation in gardens & green roofs to reduce irrigation water use".</i>
21. Connect with the nearby Green Square Town Centre recycled water scheme and extend this system to the site and/or the water recycling facility at Australian Technology Park (ATP).	Sydney Metro objects to this requirement.
22. Include stormwater harvesting with on-site water detention tanks and reuse.	Sydney Metro objects to this requirement as matters related to stormwater and on-site detention are sufficiently covered off in Section 3S of the Design Guidelines.
23. Install dual plumbing of buildings to enable potential connection to a precinct scale recycled water system (e.g. at the Waterloo Estate).	Sydney Metro objects to this requirement.
24. WSUD measures could include gross pollutant traps, passive irrigation measures, bio-retention areas and rainwater harvesting.	Sydney Metro objects to this requirement as matters related WSUD are sufficiently covered off in Section 3R of the Design Guidelines.
25. Water sensitive urban design measures are incorporated to improve stormwater quality flowing into waterways.	Agree – Already included within Design Guidelines.
Waste Management	
ADD Design Criteria:	
1. Facilitate and prioritise waste management practices in line with the waste hierarchy	Sydney Metro objects to this requirement as the intent of this is already captured in, and is intrinsic in all of the requirements currently articulated in the Design Guidelines. No change to Design Guidelines required.
2. Encourage reduction of waste generation rates, through reduced waste levies and fees	Sydney Metro objects to this requirement as it is not a design issue or one Sydney Metro has control over. No change to Design Guidelines required.
3. Commit to NABERS Waste rating for the commercial and waste rates.	Sydney Metro objects to this requirement. No change to Design Guidelines required.

4. Include a 'Return and Earn' container collection point to allow the community to access a new income stream and promote recycling rates.	Sydney Metro objects to this requirement. There is not sufficient space within the station or public domain for a return and earn collection point and they are not a great use of space in terms of activation. Individual retailers can elect to participate in this scheme if they wish. No change to Design Guidelines required.
5. Meet the provisions of the NSW EPA Better Practice Guide for Waste Management in Multi-unit Dwellings.	Sydney Metro objects to this on the basis that it is already covered by the ADG – see 4W. No change to Design Guidelines required.
6. Include in-sink food waste disposers to reduce organic waste and encourage use of waste as a fertiliser. Would need to be discussed with Sydney Water.	Sydney Metro objects to this on the basis that it is already covered by the ADG – see 4W-2 - <i>"Alternative waste disposal methods such as composting should be provided"</i> . No change to Design Guidelines required.
7. Include waste and recycling bins in the public domain to reduce littering and promote recycling.	Sydney Metro recommends no changes to the Design Guidelines and notes that this level of detail is not included for the CSSI Approval, and much of the public domain space falls under that approval.
8. Include smaller residential waste bins into the residential apartment to disincentivise waste generation.	Sydney Metro objects to this on the basis that it is already covered by the ADG – see 4W-2 - <i>"All dwellings should have a waste or recycling cupboard or temporary storage area of sufficient size to hold two days worth of waste and recycling"</i> However, Sydney Metro suggests the Design Guidelines could be updated to include the following in the Design Guidance: <i>"The design of the waste management system should discourage waste generation and encourage recycling"</i>
9. Separate residential and commercial/retail waste disposal rooms to avoid overloading issues.	Sydney Metro objects to this on the basis that it is already covered by the ADG – see 4W-2 - <i>"For mixed use developments, residential waste and recycling storage areas and access should be separate and secure from other uses."</i> The Design Guidelines also currently include the following in Design Guidance: <i>"The design and management of the waste management system is to physically and actively discourage non-residential tenants from using residential waste and recycling systems"</i>. This is considered to adequately address this issue. No change to Design Guidelines required.
10. Provide for residents storerooms separate from apartments for storage of unwanted bulky items.	Sydney Metro objects to this on the basis that it is already covered by the ADG – see 4W-2 - <i>"Temporary storage should be provided for large bulk items such as mattresses."</i>

	No change to Design Guidelines required.
ADD Design Guidance:	
1. Future consideration of a vacuum waste solution should be considered for its merits within the Metro Quarter. Due to the ground level space constraints there may be potential for a vacuum waste system that would separate and centrally transfer and store waste, ready for collection either on site or off site. This will reduce the need for multiple waste collections and reduce storage / separation facilities within buildings and reduce loading docks size. It may also have amenity improvements within the streets with reduced loading docks and waste vehicle movements. It may also allow for a change in street geometry.	Sydney Metro objects to this on the basis that it is already covered by the ADG – see 4W-1 and 4W-2, in particular: <i>“Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core”</i> <i>“[waste storage is] located discretely away from the front of the development or in the basement car park”</i> <i>“Circulation design allows bins to be easily manoeuvred between storage and collection points.”</i> No change to Design Guidelines required.

Reference to Design Guidelines is a reference to *Waterloo Metro Quarter Design and Amenity Guidelines Draft*, 21 October 2019 (version 9)

3R Sustainability

Objectives:

1. Create an integrated sustainable infrastructure network incorporating transport facilities, public domain, water systems and vegetation
2. New development encourages sustainable water use practices
3. Reduce energy consumption, emissions and urban heat island effect and improve air quality and the absorption of carbon

Design criteria:

1. Achieve a 6 Star Green Star Communities rating and a 5 Star Green Star Design and As-Built rating
2. Achieve a minimum BASIX Energy target of 30 and a minimum BASIX Water target of 40
3. Investigate opportunities to deliver beyond the compliance targets for BASIX Energy and BASIX Water
4. Achieve a NABERS Energy rating of 5.5 stars and NABERS Water rating of 4.5 stars for the commercial office components
5. Water sensitive urban design measures are incorporated to improve stormwater quality flowing into waterways
6. Photovoltaics are to be provided within the development

Design guidance:

1. Reduce energy consumption and carbon emissions using measures that are:
 - Affordable for all in the community
 - Achieve low or zero carbon
 - Efficient in consumption
 - Resilient in supply and network security
 - Flexible and adaptable
2. Energy efficient and low carbon measures could include:
 - Provision of mixed mode energy efficient HVAC for commercial and retail areas
 - Heat pumps for hot water demand
3. Maximise opportunities for the installation of solar photovoltaic systems, aiming to meet 5% of the forecast electricity consumption of the precinct
4. Consider enabling, or not precluding, future energy technologies and initiatives
5. Rainwater and/or stormwater harvesting tanks to meet BASIX requirements can be used to irrigate public open spaces
6. Green roofs and/or green walls provide amenity, improve microclimate conditions and create comfortable spaces for recreation
7. Water sensitive urban design measures are incorporated to improve stormwater quality flowing into waterways. These could include:
 - Water efficient fixtures and fittings
 - Using drought tolerant, low water use vegetation in gardens
 - Green roofs to reduce irrigation water use
8. WSUD measures could include gross pollutant traps, passive irrigation measures, bio-retention areas and rainwater harvesting

