

Appendix M Addendum to Utilities and Servicing Assessment

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Sydney Metro West

Sydney Olympic Park Over and Adjacent Station
Development

Addendum to Appendix EE - Preliminary Station
Utilities & Infrastructure Servicing Assessment

Contents

Executive summary	iv
1 Introduction	1
2 Agency Submissions.....	2
3 Sydney Olympic Park Utility Demands	3
3.1 Development Profiles	3
3.1.1 Potable Water	3
3.1.2 Wastewater.....	4
4 Conclusion and recommendations	6

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Executive summary

This addendum to the Utilities and Infrastructure Servicing Assessment report supports a Concept State Significant Development Application (Concept SSDA) submitted to the Department of Planning and Environment (DPE) pursuant to part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Sydney Metro is seeking to secure concept approval for an over station development and adjacent station development on an area defined as Site 47 within the Central Precinct of Sydney Olympic Park. A flooding assessment was previously undertaken and presented in the Sydney Olympic Park Metro Station - Over & Adjacent Station Development Environmental Impact Statement (EIS) (SSD-35283699) which was exhibited from 16 November 2022 until 13 December 2022. During this period agency submissions were received along with submissions from the public.

DPE issued a letter to Sydney Metro on 16 December 2022 requesting a response to the issues raised during the public exhibition of the application. DPE also issued a further Request for Further Information (RFI) on 6 February 2023 and the Submissions Report provides a response to these matters.

This addendum report addresses utilities and infrastructure related issues raised in one agency submission from Sydney Water. Through this addendum the water and wastewater demands have been re-forecast to include the most up to date indicative architectural arrangements in the Concept SSDA.

It is recommended that the Detailed SSDA application preparation includes additional consultation with Sydney Water, similarly outlined in the Sydney Olympic Park Over and Adjacent Station Development EIS Appendix X - Integrated Water Management Report (Sydney Metro, 2022), to address agency comments.

It is premature to determine whether there will be adequate capacity available for the time the proposed development would become operational. Once the quantum of development to be constructed is known and it has planning certainty at the Detailed SSDA stage, the Section 73 application can be made and any need for reticulation amplification and/or minor extensions can be determined with more certainty.

1 Introduction

This addendum to the Utilities and Infrastructure Servicing Assessment report supports a Concept State Significant Development Application (Concept SSDA) submitted to the Department of Planning and Environment (DPE) pursuant to part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Sydney Metro is seeking to secure concept approval for an over station development (OSD) and adjacent station development (ASD) on an area defined as Site 47 within the Central Precinct of Sydney Olympic Park. A IWMP assessment was previously undertaken and presented in the Sydney Olympic Park Metro Station - Over & Adjacent Station Development Environmental Impact Statement (EIS) (SSD-35283699) which was exhibited from 16 November 2022 until 13 December 2022. During this period agency submissions were received along with submissions from the public.

DPE issued a letter to Sydney Metro on 16 December 2022 requesting a response to the issues raised during the public exhibition of the application. DPE also issued a further Request for Further Information (RFI) on 6 February 2023 and the Submissions Report provides a response to these matters.

Agency submissions have been received in response to the EIS. This addendum report addresses utility demand related issues raised by Sydney Water (Reference 193096, 203725).

This report should be read in conjunction with the Sydney Olympic Park Station Over and Adjacent Station Development Environmental Impact Statement Appendix EE - Utilities & Infrastructure Servicing Assessment (Sydney Metro, 2022) which details the methodology and the applicable industry guidelines.

2 Agency Submissions

The following table, Table 2-1 outlines how the agency submission comments from the Sydney Water have been addressed.

Table 2-1 Agency Comments

Key Issue	Sydney Water Comment	Report Reference
Water and Wastewater Servicing	<ul style="list-style-type: none"> The water and wastewater system should have adequate capacity to service the proposed development in the short term. Amplifications, adjustments, and/or minor extensions may be required. However, if any reticulation amplification is required beyond 2026, the current servicing plan is required to be revisited and reassessed at the S73 application phase. We request that the proponent complete a Sydney Water Growth data form, in Appendix 1, to provide an ultimate and annual staging plan as part of the next lodgement in order for Sydney Water to assess timescale impacts more readily. 	Refer to Section 3
Recycled Water Servicing	<ul style="list-style-type: none"> There is an existing recycled water system, managed by the Sydney Olympic Park Authority, available to service the Sydney Olympic Park Precinct. Recycled water initiatives should be considered for all developments within the Precinct so that all new homes, whether they are private, social or build-to-rent, as well as commercial properties within this precinct, are future-proofed with the internal structures that enable customers to benefit from the sustainable supply of recycled water from any source. Therefore, consideration should be given to rainwater capture and stormwater runoff reduction for the proposed development. It is recommended that integrated water management provision via dual-pipe controls is implemented for the subject redevelopment in line with the wider GOP recycled water initiatives and Parramatta Councils' vision for its area, including initiatives such as the installation of dual reticulation systems to support immediate or future connections to a recycled water network. 	Sydney Olympic Park Authority Specific Project Requirement (SPR) document dated July 2022 Section 2.5.3 states harvesting rainwater and stormwater (on site storage tanks) in the Water Reclamation and Management Scheme (WRAMS) catchment shall be avoided as this stormwater is already captured and reused through SOPA's existing system

3 Sydney Olympic Park Utility Demands

3.1 Development Profiles

In regard to whether amplification is required post-2026, it is premature to determine whether there will be adequate capacity available for the time the proposed development would become operational. Once the quantum of development to be constructed is known and it has planning certainty at the Detailed SSDA stage, the Section 73 application can be made and any need for reticulation amplification and/or minor extensions can be determined with more certainty. The Sydney Water Growth data form can also be completed at that time.

Refer to Section 3.1.1 and 3.1.2 for high level estimated utility demands based upon the Indicative Reference design at 4-May-2023 for the proposed Concept SSDA development at Sydney Olympic Park.

While the development yields are finalised, indicative development yields based on the architectural targets for the Gross Floor Area (GFA) were provided to estimate the future servicing demand. The development profiles for Sydney Olympic Park, as used for the additional feasibility applications to utility authorities, are shown in Table 3-1 below.

Table 3-1 Demand Assessment Development Profiles (Sydney Metro, 4th May 2023)

Investigation Site	Residential Apartments (No.)	Indicative Commercial Space GFA (m2)	Indicative Retail Space GFA (m2)	Development Timeframe (Year)
Sydney Olympic Park	316	33,537	2,273*	2029-2033**

*Includes 884m2 GFA of CSSI retail space

**Indicative timeframes for this assessment only. Actual timeframes are not confirmed at this stage and are dependent on matters such as timing of statutory approvals, procurement and construction program

Please note, the residential, commercial and retail GFA figures are provided for the purposes of assessing the potential utility infrastructure demands which will formed the basis of the concept SSDA design. The demands may be subject to changes with the design development of the architectural design of the over station development and adjacent station development at the Detailed SSDA stage.

3.1.1 Potable Water

The estimated potable water demand is calculated based on the standard unit rates summarised in Table 3-2 below and the development yields in Section 3.1. This development yield has been referenced for the purposes of utilities infrastructure assessments only and the final architectural designs should be used to confirm the building details.

The Net Lettable Area (NLA) was assumed to be 80% of the GFA to determine estimated maximum day demand (MDD). Calculated values are summarised in Table 3-3.

Table 3-2 Potable Water Demand Estimate

Land Use	Design Criteria	Unit	Demand Rate	Source
Residential – Multi-unit (>140 units/net/ha)	Max Day Demand	kL/unit/day	0.8	WSA 03-2011
Commercial – City high rise commercial	Max Day Demand	kL/ha/day	63	WSA 03-2011
Retail – Suburban Commercial	Max Day Demand	kL/ha/day	41	WSA 03-2011
BASIX reduction (residential only)	N/A	%	40	Building Sustainability Index

Table 3-3 Estimated maximum day demand (MDD) for potable water including BASIX (kL/day)

Location	Residential (incl. BASIX)	Commercial and retail	Total (kL/day)
Estimated MDD for Building 1	0	164	164
Estimated MDD for Building 2	42	14	57
Estimated MDD for Building 3	110	21	131
Estimated MDD for Station	0	0	73
Totals	152	199	424

3.1.2 Wastewater

The estimated wastewater demand is calculated based on the standard unit rates summarised in below and the development yields in Section 3.1. This development yield was used for the purposes of utilities infrastructure assessments and feasibility applications only and the final architectural designs should be used to confirm the building details. This demand assessment is summarised in Table 3-4 and see estimated average day weather flows (ADWF) values in Table 3-5

Table 3-5

Table 3-4 Wastewater Design Loading Criteria

Land Use	Design Criteria	Unit	Demand Rate	Source
Residential – Single occupancy high density dwelling	ADWF	EP/dwelling	2.5	Gravity Sewerage Code of Australia, WSA 02-2014
Commercial – High density commercial	ADWF	EP/ha (gross)	500	Gravity Sewerage Code of Australia, WSA 02-2014

Land Use	Design Criteria	Unit	Demand Rate	Source
Retail – Local commercial	ADWF	EP/ha (gross)	75	Gravity Sewerage Code of Australia, WSA 02-2014
BASIX reduction (residential only)	N/A	%	40	Building Sustainability Index

Table 3-5 Estimated ADWF for Wastewater including BASIX (L/s)

Location	Residential (incl. BASIX)	Commercial and Retail	Total (L/s)
Estimated ADWF for Building 1	-0	1.30	1.30
Estimated ADWF for Building 2	-0.22	0.11	0.33
Estimated ADWF for Building 3	0.58	0.17	0.75
Estimated ADWF for Station	0	0	0.14
Total	0.8	3.0	2.52

4 Conclusion and recommendations

This Addendum to the Utilities and Infrastructure Servicing Assessment has been written to support a Concept SSDA and to respond to agency comments received to the EIS.

Sydney Water submissions have been reviewed and responded to and the Sydney Metro will continue the engagement with Sydney Water as the design concept continues.

Updated estimated potable water and wastewater demands have been provided in Section 3. Sydney Water comments have been acknowledged and will be noted through the detailed design process for the Detailed SSDA in conjunction with ongoing engagement with Sydney Olympic Park Authority.

It is premature to determine whether there will be adequate capacity available for the time the proposed development would become operational. Once the quantum of development to be constructed is known and it has planning certainty at the Detailed SSDA stage, the Section 73 application can be made and any need for reticulation amplification and/or minor extensions can be determined with more certainty.

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