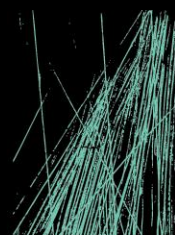




HYDRAULICS SERVICES SSDA REPORT

**MARSDEN PARK NEW HIGH SCHOOL
MELONBA NEW PRIMARY SCHOOL**



JHA

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DOCUMENT CONTROL SHEET

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Project Name	Marsden Park New High School and Melonba New Primary School
Description	SSDA Report
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1 INTRODUCTION

1.1 PURPOSE OF REPORT

This report has been prepared for the new high school in Marsden Park and new primary school in Melonba in response to the SEARS Requirement 15 – Hazards and Risks and SEARS Requirements 21 – Infrastructure Requirements and Utilities.

This report provides an overview of the existing hydraulic services infrastructure available and its suitability and intended service of the site.

JHA have reviewed the existing hydraulics infrastructure for sewer, water and gas services at/around the development site to assess the infrastructure availability and service options that can serve the proposed development.

The following sources of information were assessed at the time of writing this report and have been used to provide a summary of infrastructure available to the site and determine the points of connection for the development:

The infrastructure and connection points and their suitability have been based on the following:

- Information obtained via Dial Before You Dig plans
- Sydney Water mains diagram
- Sydney Water Sewer diagrams
- Preliminary discussions/ review of Authorities/utilities requirements
- Architectural information
- Sydney Water Statement of Available Pressure and Flows

The content of this document should be read in conjunction with the documents produced by the architect and other consultants for all other disciplines.

1.2 PROJECT INFORMATION

The proposed works encompass the development of the new high school in Marsden Park (MPHS) and new primary school in Melonba (MPS) with construction of all new buildings.

The site is located at 20 Kaluta Avenue and 10 Swallowtail Street, Melonba, which is within the Central River City Precinct and Blacktown Local Government Area (LGA). The site is irregular in shape and is sited between two tributaries of Little Creek. The site is generally level but has a gentle fall from the south-eastern corner (RL23) to the north western corner (RL19.5). The site contains no vegetation other than grass and is currently fenced to prevent unauthorised access.

Marsden Park new high school is a new secondary school comprising:

- 97 general learning spaces (GLS) and specialist teaching spaces;
- Three supported education learning unit (SELU) rooms;
- School hall, and lecture and movement studio;
- Administration spaces;
- Staff and student facilities;
- Library;
- Canteen;
- Sports courts;
- Playing field;
- Landscaping and outdoor learning areas;
- Covered outdoor learning area (COLA); and

- Car parking (shared with Melonba new primary school).

Melonba new primary school will comprise:

- 44 GLS;
- Three SELU rooms;
- Administration and staff facilities;
- Canteen;
- Multi-purpose hall;
- Library;
- Out of School Hours Care (OSHC);
- COLA; •Outdoor play areas including sports courts; and
- Landscaped outdoor learning areas.

2 SEARS REQUIREMENTS

The new high school in Marsden Park and new primary school in Melonba SSDA Report is required by the Secretary's Environmental Assessment Requirements (SEARs). This table identifies the relevant SSDA requirement/s and corresponding reference/s within this report.

SSDA Deliverable	Text
Requirement 15 Hazards and Risks	▪ Where there are dangerous goods and hazardous materials associated with the development provide a preliminary risk screening in accordance with Chapter 3 of SEPP (Resilience and Hazards) 2021 ▪ Where required by SEPP (Resilience and Hazards) 2021, provide a Preliminary Hazard Analysis prepared in accordance with Hazardous Industry Planning Advisory Paper No.6 – Guidelines for Hazard Analysis ▪ If the development is adjacent to or on land in a pipeline corridor, report on consultation outcomes with the operator of the pipeline, and prepare a hazard analysis
Requirement 21 Infrastructure Requirements and Utilities	In consultation with relevant services providers ▪ Assess the impacts of the development on existing utility infrastructure and service provider assets surrounding the site ▪ Identify any infrastructure upgrades required on-site and off-site to facilitate the development and any arrangements to ensure that the upgrades will be implemented on time and be maintained ▪ Provide an infrastructure delivery and staging plan, including description of how infrastructure requirements would be co-ordinated, funded and delivered to facilitate the development

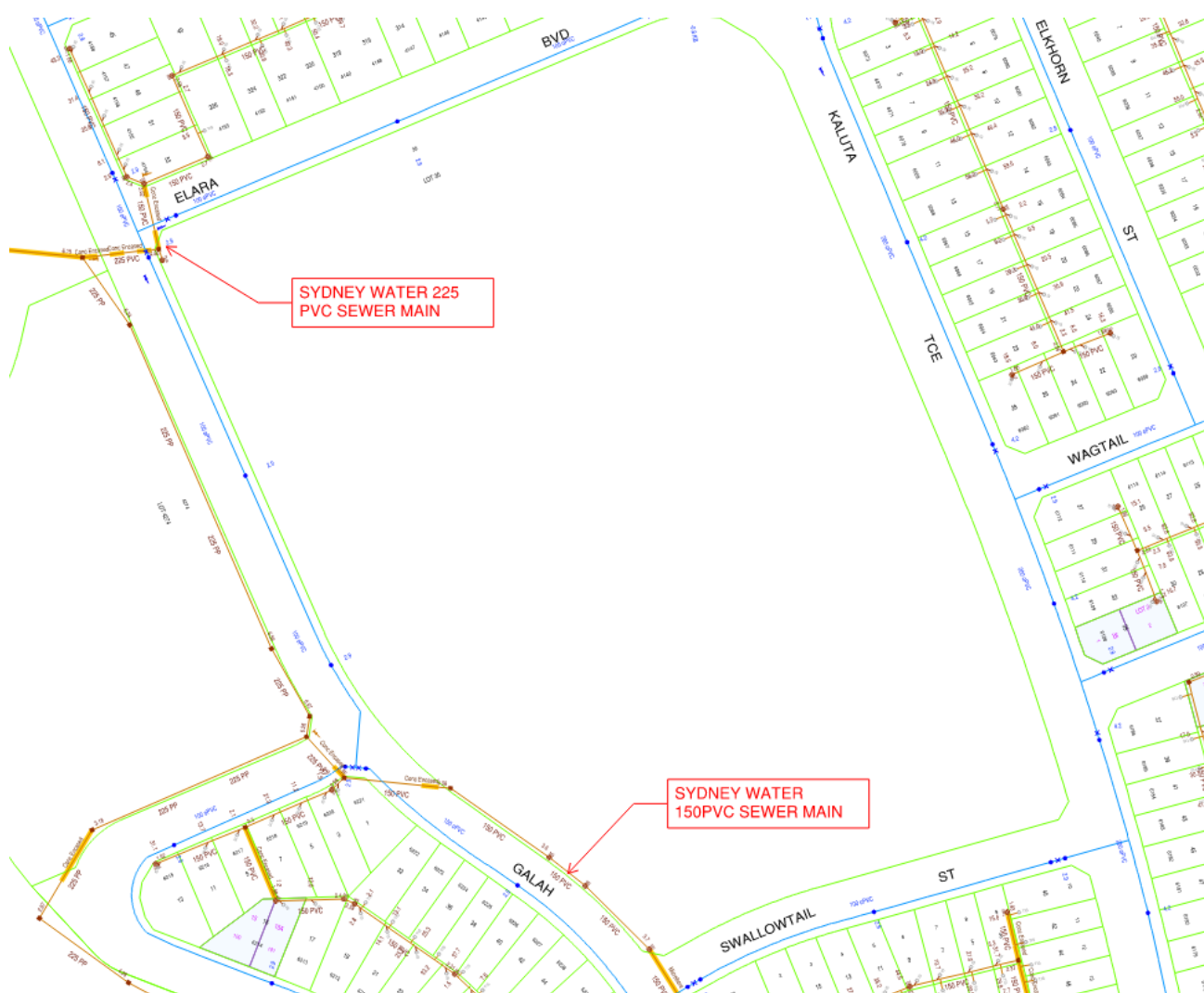
3 HYDRAULIC INFRASTRUCTURE

3.1 SEWER DRAINAGE MAINS

There is an existing Sydney Water Ø225 mm PVC sewer main located at the North West corner of the site, and an Ø150 mm PVC sewer main located at the South West corner of the site, available for connection of the sewer drainage from the development.

There is sufficient capacity in the Sydney Water sewer to cater for the proposed loads expected from both the new high school in Marsden Park and the new primary school in Melonba. In which case the existing utility will not require upgrading or further funding.

There will be a separate connection point to the Sydney Water Sewer for each school.



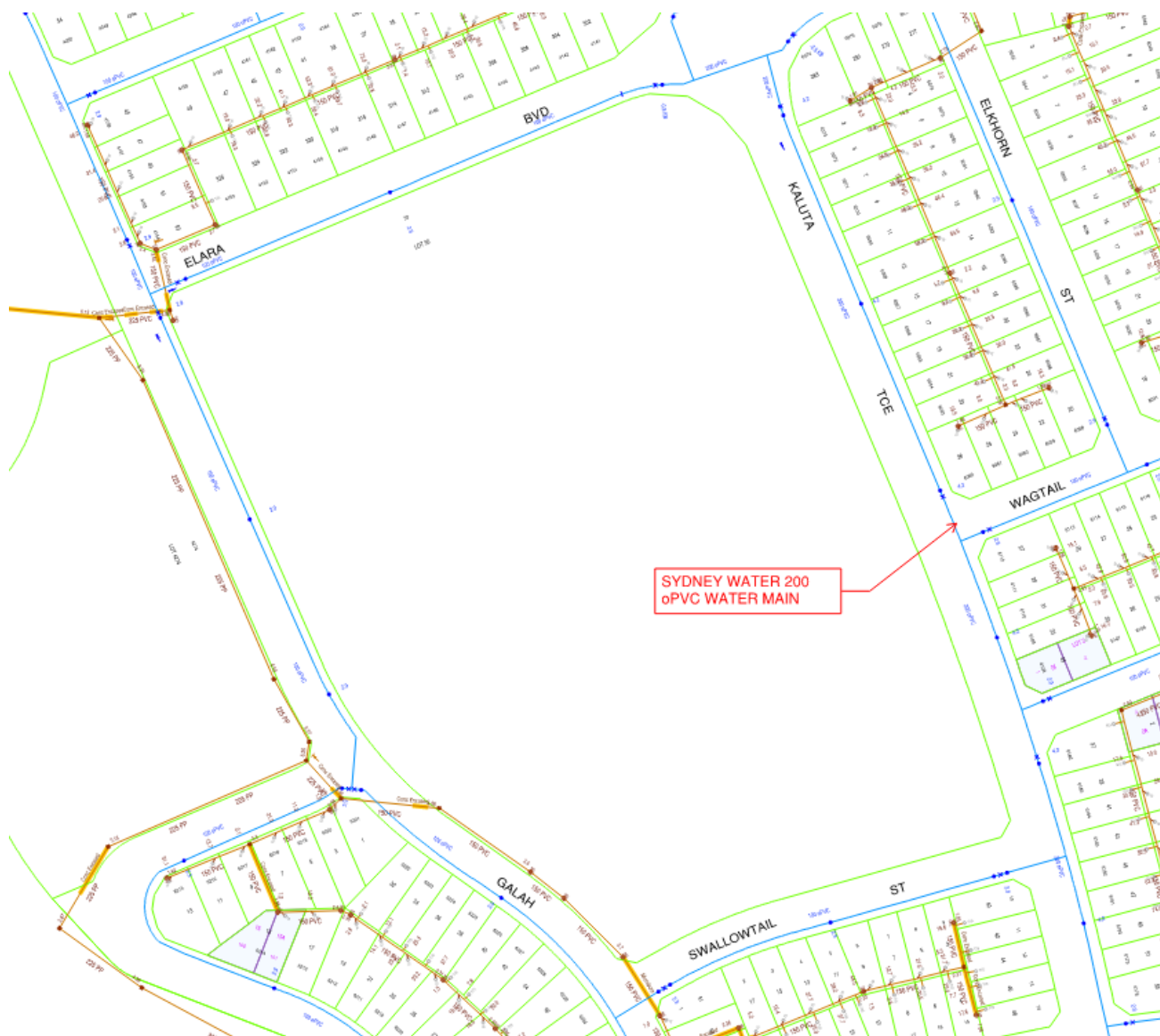
Existing Sydney Water Sewer Mains

3.2 WATER MAINS

There is an existing Ø200 mm Sydney Water Main in Kaluta Avenue available for connection. A single connection point for will be provided for both schools, to supply the common fire hydrant system and the cold-water services for each school.

Separate water meters will be provided for each school.

A Sydney Water Pressure and Flow Inquiry has been undertaken, and the results have shown that the 200 Sydney Water Main in Kaluta Avenue is able to cater for the proposed potable water and fire services demand of the development. In which case the existing utility will not require upgrading or further funding.

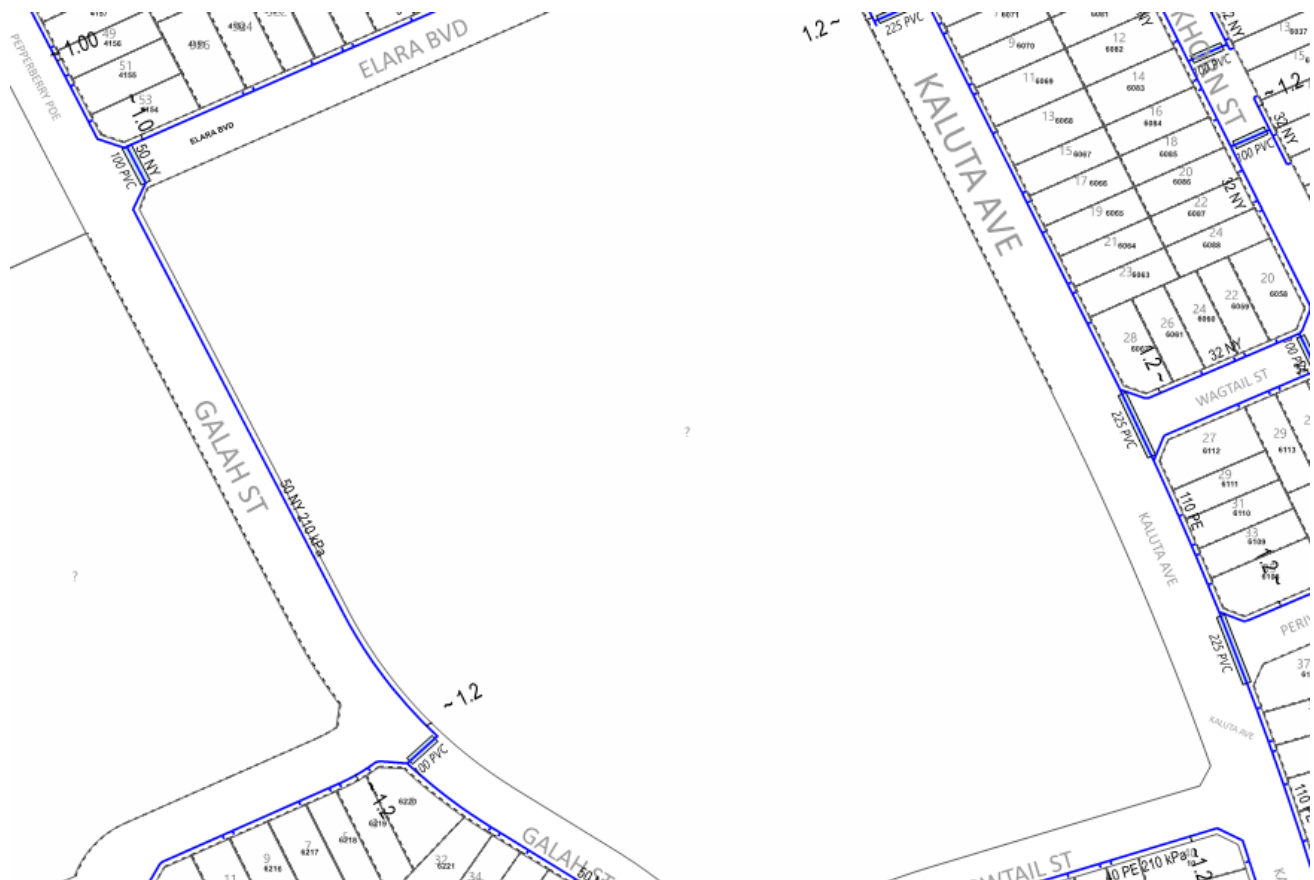


Existing Sydney Water Potable Water Mains

3.3 GAS MAINS

There are existing Jemena gas mains available around all street frontages of the site. This includes the following existing gas mains:

- A 110PE in Kaluta Avenue
- A 50 NY in Elara Boulevard
- A 50NY in Galah Street
- A 40PE in Swallowtail Street



Existing Jemena Gas Mains

A new gas main connection will be provided to supply the gas requirements for the project.

A boundary gas regulator and gas meter will be positioned on the boundary at street level, close to the point of usage.

Gas will be supplied to the site to supply gas to the required fixtures and fittings for the Science Labs and Food Technology uses only.

As part of the Electrification Green Star initiative, there will be no gas used for hot water generation within the new buildings.

There is no gas proposed for the new primary school in Melonba

3.4 HAZARDS AND RISKS

There are no pipeline corridors associated with the new high school in Marsden Park and new primary school in Melonba. In relation to the hydraulic services design, there are no dangerous goods or hazardous materials associated with the development.

4 APPENDIX A – PRESSURE AND FLOW INQUIRY



Statement of Available Pressure and Flow

Diego Montelvere
23 101 Miller Street
North Sydney, 2060

Attention: Diego Montelvere

Date: 31/01/2022

Pressure & Flow Application Number: 1335259
Your Pressure Inquiry Dated: 2022-01-27
Property Address: Elara Boulevard Marsden Park 2765

The expected maximum and minimum pressures available in the water main given below relate to modelled existing demand conditions, either with or without extra flows for emergency fire fighting, and are not to be construed as availability for normal domestic supply for any proposed development.

ASSUMED CONNECTION DETAILS

Street Name: Kaluta Terrace	Side of Street: East
Distance & Direction from Nearest Cross Street	2 metres North from Wagtail Street
Approximate Ground Level (AHD):	23 metres
Nominal Size of Water Main (DN):	200 mm

EXPECTED WATER MAIN PRESSURES AT CONNECTION POINT

Normal Supply Conditions	
Maximum Pressure	117 metre head
Minimum Pressure	64 metre head

WITH PROPERTY FIRE PREVENTION SYSTEM DEMANDS	Flow l/s	Pressure head m
Fire Hose Reel Installations (Two hose reels simultaneously)	0.66	64
Fire Hydrant / Sprinkler Installations (Pressure expected to be maintained for 95% of the time)	10	69
	15	68
	20	67
	25	67
	30	66
	40	64
Fire Installations based on peak demand (Pressure expected to be maintained with flows combined with peak demand in the water main)	50	62
	10	62
	15	62
	20	61
	25	60
	30	59
Maximum Permissible Flow	40	57
	50	54
	60	52

(Please refer to reverse side for Notes)

For any further inquiries regarding this application please email :

swtapin@sydneywater.com.au