



henry&hymas

**KINCOPPAL-ROSE BAY
Cnr NEW SOUTH HEAD ROAD & VAUCLUSE ROAD,
VAUCLUSE ROAD**

Infrastructure Report

Revision 1

September 2020

Job No.: 19949

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1. Introduction

This Infrastructure Management Plan incorporating the Water Management Plan has been prepared to satisfy Condition 14 (Concept Proposal) and Condition 4 (Stage 1 Works) of the SEARs. It will form part of an Environmental Impact Statement (EIS) submitted as part of the State Significant Development Application for the Kincoppal-RoseBay School. It will cover the following:

- Water supply
- Sewer and Wastewater
- Gas
- Stormwater quantity and quality
- Water re-use and water sensitive urban design (integrated water management plan)

2. Water Supply (Utility) in Vacluse Road.

The site is currently serviced by Sydney Water potable water mains in Vacluse Rd. Since the development mainly comprises of access roads, carparking and landscape works with only minor building construction and refurbishment, it is not expected that there will be a greater demand on the water supply compared to the current development on site. The building works include a new out of hours childcare building to replace the existing facility and refurbishment of existing buildings. On this basis it is not proposed that any additional water meter or additional connections to the mains will be required. Refer to Figure 2.1 below showing location of water mains in Vacluse Rd.

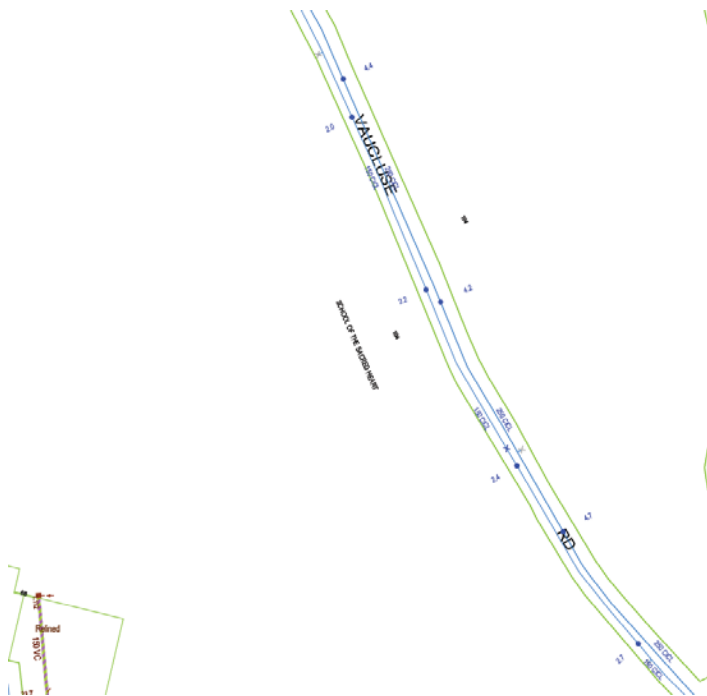


Figure 2.1: Sydney Water Mains (DBYD)

3. Sewer and Wastewater

The site has access to two (2) Sydney Water sewer mains. These connections are located as follows:

- 150mm sewer main at the southern boundary of the school site. This sewer main runs through several properties parallel to Bayview Hill Lane and directly in Bayview Hill Road.
- 225mm sewer main at the northern boundary of the school site. This sewer main runs through several properties in a northerly and westerly direction before connecting directly to the sewer main within Queens Lane.

As the site only consists of minor building construction and refurbishment, it is not expected that there will be a greater demand on the sewer mains compared to the current development on site. On this basis it is not expected that any additional connections to the mains or upsizing of the mains will be required. Refer Figure 2.1 and 2.2 for the locations of existing sewer mains.

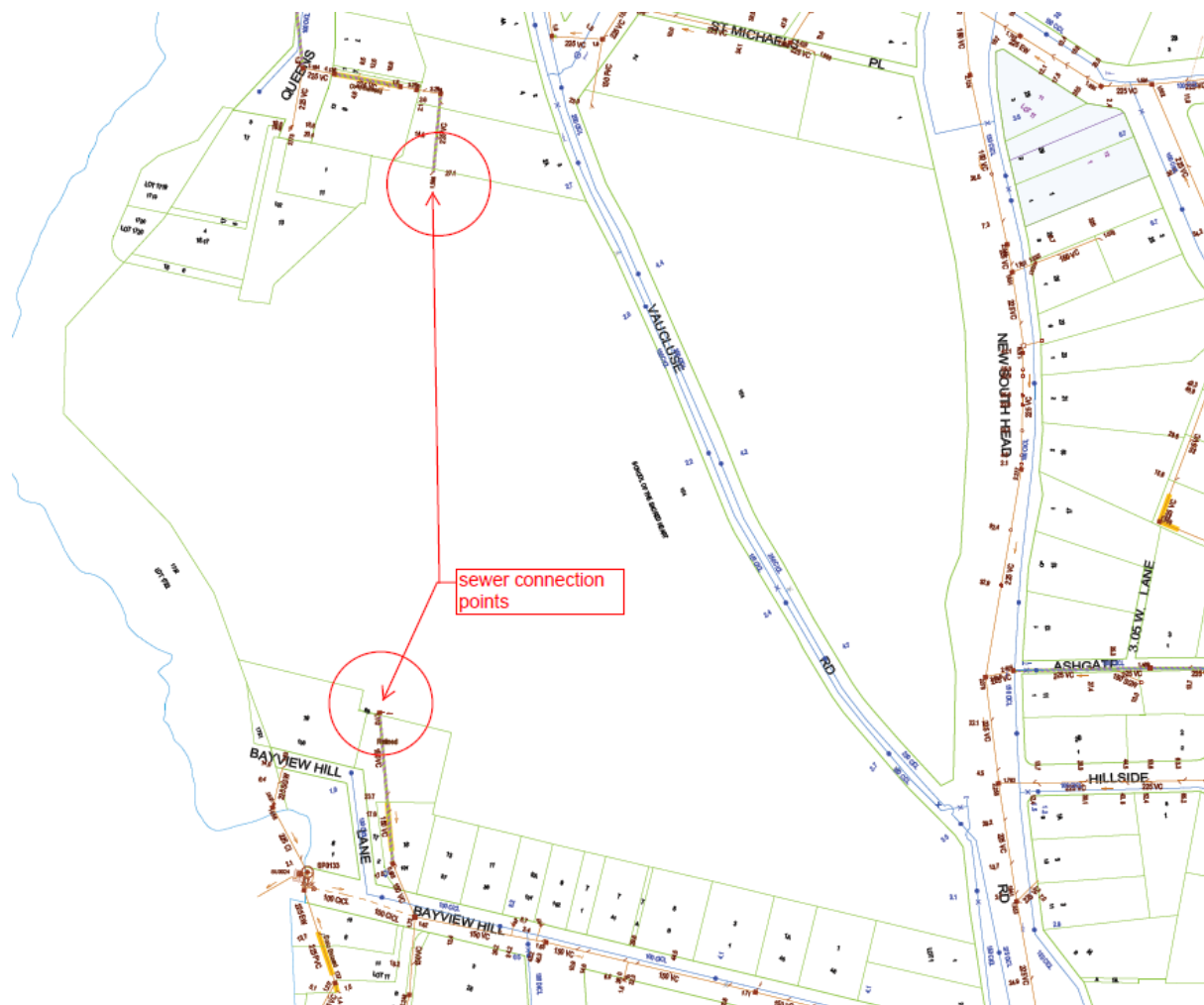


Figure 3.1 Sewer Mains (DBYD)

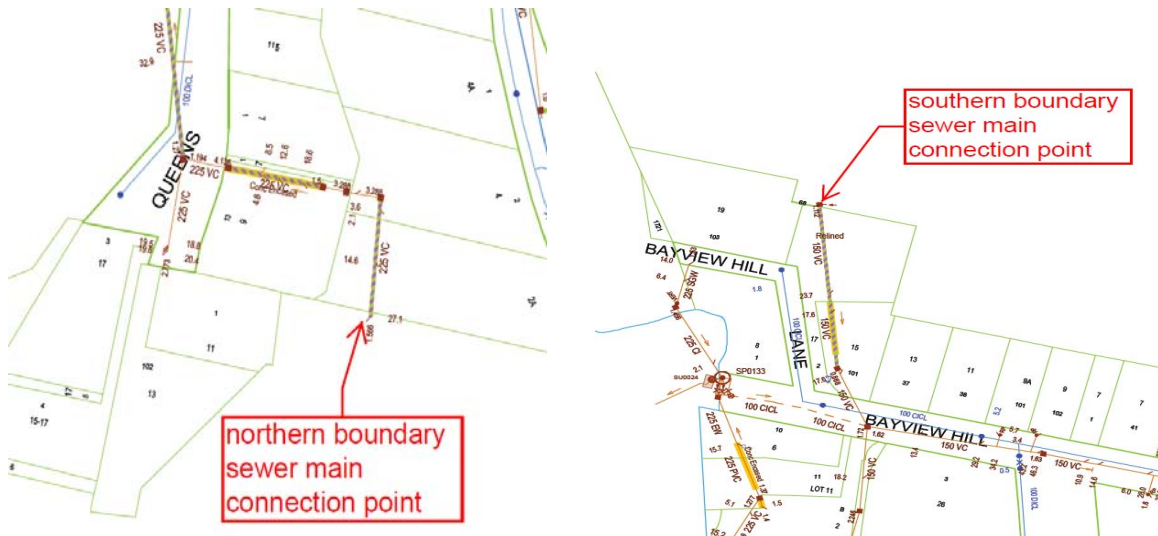


Figure 2.2 Sewer Main connection points (DBYD)

4. Gas

As shown in Figure 4.1 below, a 75mm Nylon main inserted into 4 inch (nominal Bore) Cast Iron pipe, 210kPa medium Pressure gas main runs along Vaucluse Rd.



As the site only consists of minor building construction and refurbishment, it is not expected that there will be a greater demand on the gas mains compared to the current development on site. On this basis it is not expected that any additional connections to the mains or upsizing of the mains will be required.

5. Stormwater Quality and Quantity

To comply with Council requirements, stormwater filter cartridges were incorporated into the design to reduce the amount of pollutants (namely suspended solids, phosphorus, nitrogen and gross pollutants) generated from the driveway and parking areas to the downstream waterways and open water courses. This will result in a net positive outcome to the downstream receiving water body.

Whilst On-site Stormwater Detention (OSD) tank was not required by Council, the provision of the OSD tank helps attenuate the flow to provide more retention time to treat the stormwater runoff.

Refer to the 'Civil Engineering Report by Henry & Hymas revision 1- State Significant Development Application' for more information about the stormwater quality and quantity.

6. Water re-use and Water Sensitive Urban Design

Since there is no increase demand on potable water and there is not a significant demand for water on site, it is not considered cost effective for water reuse in the form of rainwater tanks as the cost of the tank and associate reticulation infrastructure is likely to exceed the benefits for the overall lifecycle of the system.

For this type of development, the most effective method of providing possible outcomes from an overall water cycle management perspective is to provide stormwater quality treatment which we have done in the form of water quality control devices for the new impervious area of the site.

7. Conclusion

Whilst it is inevitable that the development will have an impact on the existing landform and stormwater runoff characteristics due to earthworks, change of land-use and changes in impervious areas; by providing a safe and efficient design, and implementing appropriate measures during construction and operation of the development, it can be ensured that there will be minimal impact on the existing environment as a result of the proposed development.