

Wilton Public School Waste Water Feasibility Assessment

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Attention: NSW Department of Education, Wollondilly Shire Council

1 Introduction

Cardno have been engaged by the NSW Department of Education (DoE) to prepare a Waste Water Feasibility Assessment to support their DA submission at Wollondilly Shire Council for the expansion of Wilton Public School.

The increase in student, administrator and teacher numbers are outlined in Table 1-1 as provided by NSW DoE.

Table 1-1 Existing and Proposed Numbers

	Administration staff no.	Student no.	Teacher no.	Subtotal no.
Existing (2020)	8	460	24	492
Proposed	10	750	60	820
Additional	2	290	36	328

2 Feasibility Assessment

The following assessment has been prepared in accordance with *WSA 02-2002-4.0_Sydney Water Edition 2017*.

The existing waste water network was reviewed to identify the capacity of the downstream network. This review was completed using work as constructed drawings as provided by the developer, Lendlease Communities (Wilton) Pty Ltd.

The review identified that the school site drains to an existing DN225 uPVC sewer main along Charlton Street. This sewer main along Charlton Street has a capacity of 3,365 equivalent population (EP) as per Table 4.4 from *WSA 02-2002-4.0_Sydney Water Edition 2017*. The capacity was based on a minimum grade of 1.2% as shown on the work as constructed plans. The existing sewer load from the school is 98.4 EPs which is based on Table A1 from *WSA 02-2002-4.0_Sydney Water Edition 2017*. The downstream catchment provides an additional load of 1,697.4 EPs. With the increased number of students, administrators and teachers the load will increase to 1,762.9 EPs. Therefore, the existing sewer main along Charlton Street has sufficient capacity for the proposed expansion of Wilton Public School.

As the DN225 sewer main along Charlton Street connects to a downstream network, a further assessment was also undertaken to assess potential impacts downstream. The sewer catchment used for this assessment is shown in Figure 2-1.

Figure 2-1 Sewer Catchment



The catchment shown in Figure 2-1, including Wilton Public School drains to a DN225 uPVC main that crosses the existing creek at Fairway Drive and drains to an existing sewer pump station (SPS). The downstream catchment assessment was completed on the DN225 sewer that flows to the SPS.

The DN225 sewer main that drains to the SPS has a capacity of 3,365 EPs based on a minimum grade of 1.2% as shown on the work as constructed plans and as per Table 4.4 from *WSA 02-2002-4.0_Sydney Water Edition 2017*. The existing sewer load from the catchment is 2,611.4 EPs. With the increased number of students, administrators and teachers the load will increase to 2,677 EPs. Therefore, the existing sewer main that drains the upstream catchment to the SPS also has sufficient capacity for the proposed expansion of Wilton Public School.

3 Recommendation

As per the work as constructed drawings provided by the developer, the feasibility assessment has shown the existing waste water network has sufficient capacity for the proposed expansion of Wilton Public School.

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