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CONSULTANT ADVICE

PROJECT NAME:	Wee Waa High School	PROJECT #:	210538
Subject:	Pump to Sewer main	Revision:	JHA – CAN – H - 001

The following Consultant's Advice is provided as an outline the design of sanitary drainage for the above project, particularly the discharge to sewer mains. These arrangements have been discussed and agreed in principle with Narrabri Council representatives Leon Ross and Marc Harris.

A design report including the below has been sent to Leon and Marc for formal agreement and input of any fine detail, an example of fine detail discussed and yet to be defined is pump controls and the possibility of limiting discharge to times outside of peak residential flows, this way there would be no impact on the sewer infrastructure although the size was agreed as being suitable for discharge of the school.

Sanitary Service

The Sanitary Drainage system shall consist of both a gravity and pump out systems. The Sanitary Drainage will gravity drain to a sewer pump station and be pump periodically to a new connection to the sewer main at the North West corner of the property. It is understood that a new branch line will be required at the existing manhole.

The reason for the sewer pump station is that the index length of Sanitary Drainage from furthest fixture to proposed connection point to sewer main is over 450m. With a fall of 1.65% (or 1:60) for half the length and 1% for the remainder (to allow for larger pipe and move load) this would have a depth of

250m x 1% = 2.5m

200m x 1.65% = 3.3m

Total Depth = 5.8m

JHA understand that the depth of existing sewer main is between 3m – 4.5m.

The Sewer pump station is designed to cater for a 24hr volume in case of catastrophic failure of the pumps.

The school population of Wee Waa High school for 2021 was 131 students and 28 Teachers and non teaching staff for a total population of 159, for the school year 2016 the population was 163 students and 23 Teachers and non-teaching staff for a total population of 186.

The Educations Facilities Guide Lines states design is to allow for future population growth, JHA have allowed in the sewer pump station for the school population to increase to 300.

JHA have allowed for a total waste load of 30L per occupant per day which includes toilet flushing, kitchen use, canteen, Gym showers, science Labs etc.

Our storage size comes to $300 \times 30 = 9,000\text{L}$

JHA have to round this up to 10,000L.

Component	Pumps	Design Criteria	Population	Proposed storage tank
Sewer Pump station	5L /s Dual Grinder, Duty / Standby arrangement	24hr Storage 30L / per occupant	300	10,000L

Yours sincerely,



Mitchell McLennan
Senior Associate