



SEEC

Onsite Wastewater Management.

**for Existing Pre-School
Lot 1039 DP 752038
No. 1039A Oxford Falls Road, Oxford Falls**

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SEEC

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Document Certification

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Any recommendations contained in this report are based on an honest appraisal of the opportunities and constraints that existed at the site at the time of investigation, subject to the limited scope and resources available. Within the confines of the above statements and to the best of my knowledge, this report does not contain any incomplete or misleading information.

Mark Passfield
Director
SEEC

7th May 2018

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1 INTRODUCTION

SEEC have been commissioned by the Oxford Falls Learning Centre to provide comment regarding the existing wastewater management system at their child care centre. It currently has approval for up to 60 children and operates as a long day care centre. It operates from 6.30am to 6.00pm on all weekdays. The proposal is to increase the maximum child numbers by 48, i.e. to a maximum total of 108 children. The increase will generally utilise the footprint of the existing buildings.

This study only looks at the design wastewater load. SEEC have not visited the site and so we make no comment on the actual wastewater system itself. It is assumed the system has been operating to the requirements of a previous wastewater assessment prepared by others (Section 2) and under the terms of any "Approval to Operate" granted through a previous Section 68 Application to Council.

2 PREVIOUS REPORT

Martens and Associates prepared a wastewater report to accompany the development application to build the child care centre. It is referenced "*Revised Wastewater Assessment: Proposed Child Care Centre, Lot 1039 Oxford Falls Road, Oxford Falls, NSW*" and dated March 2009.

In Table 5 of that report, Martens and Associates used several methods to estimate the likely wastewater load for the centre. They assumed there would be 90 children and 10 staff. The estimates varied from 4,160 L/day to 1,942 L/day and a mean value of 3,458 L/day was adopted for design purposes (i.e. approximately 35 L/day per attendee). This load was also assumed to occur seven days a week (24,206 L/week).

However, we are advised by the client:

- That about 35% of the children do not use the toilets as they are in nappies
- The centre is only open five days a week; and
- The facility is currently only licensed for 60 children, not 90.

This means the estimated wastewater loads in Table 5 of Martens and Associates are likely to be very conservative.

3 HISTORICAL WATER USAGE

The facility is connected to reticulated water and there is a water meter that monitors the facility's mains water usage. The client has provided photographs of the meter taken on 31st October 2017 and 28th April 2018 that showed a total water usage of 323.216 kL over that period. This equates to about 12,700 L/week.

However, some of this water is used for external irrigation of grassed play areas. Information from the irrigation company (Sprinkler City) says the popup watering system would consume 70L per minute. The grass is watered three times a day for 15 minutes per session and that is done four times a week. Thus, the approximate irrigation use is: $70 \times 15 \times 4 = 4,200\text{L/week}$.

Thus, the indoor water use in the facility is estimated to be $12,700 - 4,200 = 8,500\text{ L/week}$. If this water is used for only five days a week, that is 1,700 L/day. During this period the facility has been attended by 60 children and 15 staff (75 total), so this equates to approximately 23L/day per attendee. This matches the daily estimate given in NSW Health (2001) which estimates a load of 23L/day per person for schools with WC, urinal and basins.

4 SUMMARY AND CONCLUSION

It can be shown from the water meter readings that the actual wastewater load at the child care centre is currently about 1,700 L/day. This is approximately half that assumed at design stage in the original wastewater assessment. A figure of 23L/day can be applied to the total number of attendees (children and staff). Therefore, in our opinion, the existing system can accommodate the demand generated by the proposal providing:

- The ratio of toilet users to non-toilet users stays the same (i.e. about 35% of the children remain in nappies);
- The wastewater treatment system and its disposal area remain well-managed;
- There is little (if any) stormwater infiltration into the onsite wastewater system.

5 REFERENCE

NSW Health (2001). *Septic Tank and Collection Well Accreditation Guideline*