

Our Ref LH9500 L002 Stanton Dahl Planning clarification:KL
 Contact Kevin Leedow

13th February 2015

Greater Sydney Conference
 C/- Stanton Dahl and Associates
 Post Office Box 833
 Epping NSW 1710

Attention: Mr David Bell

Dear Sir,

**WAHROONGA SEVENTH DAY ADVENTIST COLLEGE
 FOX VALLEY ROAD WAHROONGA**

With regard to the submissions from various Government Departments, conveyed via the Department of Planning and Environment, for the proposed Wahroonga Adventist School, Wahroonga (SSD 5535), we note below responses for various queries related to Civil Engineering (including stormwater), Electrical Engineering (including lighting) and Acoustic Engineering.

Civil Engineering

The following civil aspects were raised in the submissions and our comments are:

Item	Comments
WSUD for playing fields	The treatment of nutrient loaded run off from the playing fields will be treated with a gross pollutant trap and biofilter such as Humes 'Humeguard' and "hydrofilter". These devices will be sized and the MUSIC model amended in the detailed design phase.
Impact of the playing fields and PE courts on the overland flow and water course	A catch drain has been provided on the uphill side of the playing fields to divert upstream overland flow. Refer to drawing LH9500-2103 Stormwater Drainage Plan Playing Field and PE Court.
Piped drainage design requirements in accordance with DCP 47	DCP 47 requires the piped drainage design to be sized for the 50 year storm event. The detailed design will reflect this storm event. The change from the 20 year storm to the 50 year storm will not change the concept design for the stormwater.
Location of dispersion trenches	The dispersion trenches for the playing fields and PE courts are located at the base of the retaining walls for the fields and courts and will impact the design of the retaining walls. The detailed design of the retaining walls will account for the location of the dispersion trenches and will effectively be designed for a retained height from the invert of the dispersion trenches to the upper level of the fields.
On site stormwater detention for PE courts	On site stormwater detention for the PE courts will be included in the detention for the school building area in the detailed design phase such that the total discharge from the

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	school site and PE courts are within DCP 47 requirements.
Section through detention tanks	The section through the detention tanks has been included in the drawings submitted but not in the Stormwater and Water Quality Engineering Report.
Headwall and dispersion trench detail	The headwall/dispersion trench detail has been revised and amended drawings will be submitted.
Stormwater and Water Quality Engineering Report	The Stormwater and Water Quality Engineering Report will be amended as noted above and will be available for future reference.

Electrical Engineering

With regard to the potential for light spill from the playing fields impacting on the adjoining E2 zoned land, we comment as:

The detailed lighting design (in particular selection of the luminaires for the playing fields) will address the potential for light spill from the playing fields and PE courts.

Acoustic Engineering

With regard to the Acoustic report, the following clarifications of the report are required:

1. Table 13 is for noise emissions with doors closed. The heading of the table is incorrect.
2. The conclusion of the report is that the hall should operate with all doors closed.
3. The noise emissions for "all day use" would be similar to Table 13 and is not an emission problem.
4. Noise barrier measures for the playing fields have been recommended for a 3m high earth embankment or 2m high if use to the fields is restricted or a vinyl cloth around the netball courts.

We trust that these comments are sufficient for your purposes.

Yours faithfully



Kevin Leedow
 Senior Principal
 NSW Building Structures
 for **Cardno**