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Date:	**18/01/2018**
Project Title:	**Maria Fidelis Catholic School**
Project No:	**5112**
Subject:	**External Lighting**

External Lighting

The external lighting has been designed to minimise light pollution as much as practically possible. B&F have calculated levels of light trespass in accordance with BREEAM POL 4 & ILE Guidance notes for the reduction of light pollution 2011.

Overall the results are good and meet the requirements of Table 1 for environmental Zone E3 with the exception of the light trespass into the Convent pre-curfew*

The Muga pitch lighting would create light trespass levels of 51lux (Worst case) into the window of the convent that is at the closest proximity to the Muga pitch, this is above the required 4 lux given for this Environmental zone E3 (Refer to Table 1 B&F drawing 5112-EL-302)

The Convent is in very close proximity to the Muga pitch and this in turn creates problems with light pollution into the convent (pre-curfew*).
B&F applied back shields to the Muga pitch lighting to minimise the light pollution into the convent but due to the close proximity of the convent windows to the pole mounted fittings and the level of 200 lux needed for the pitch this did not resolve the problem.

The lighting is controlled through a timeclock allowing the school to automatically turn off all (except security) external lighting at set times.
The MUGA pitch lighting will be set to turn off between the hours of 9pm-8am Monday-Saturdays and 4pm-10am on Sundays.

All external lighting including lighting along Drummond Crescent will be turned off when the school is not in use.

*Curfew = The time after which stricter requirements (for the control of obtrusive light) will apply; often a condition of use of lighting applied by the local planning authority. If not otherwise stated _ 23.00hrs is suggested.

There are no luminaires to the roof areas so consequently there will be no excess light spill to the area where the bat box is located (Refer to B&F drawing 5112-EL-302 – Bat Box location identified on roof)

Lighting to the front of the building (Drummond Crescent) utilises directional wall mounted down lighting luminaires, which are designed to minimise the upward light ratio to meet BREEAM requirements (refer to table on drawing 5112-EL-302 and image of luminaire below)

The lighting levels shown using isolines on the drawing are recorded at floor level and the upward light ratio of these fittings is maximum 0.1% (guidelines for this area are 5% and below)
As the luminaires are installed lower than the tree canopies the impact on the mature trees on Drummond Crescent will be very minimal.

Signed for and on behalf of Briggs & Forrester Engineering Services Ltd

C A Palmer

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