

- LIGHTING EQUIPMENT**
- 6m Column Carrying the Following Apollo LED Lanterns**
1 x AL6666 / 30 / A3
Post top mounted
Lantern elevation: +5'
 - 6m Column Carrying the Following Apollo LED Lanterns**
1 x AL6666 / 60 / A3
Post top mounted
Lantern elevation: +5'
 - 6m Column Carrying the Following Apollo LED Lanterns**
2 x AL6666 / 30 / A3
Twin bracket
Bracket projection: 0.2m
Bracket: +5' / Spigot: +5' / Lantern: 0'
 - Wall Mounted Apollo LED Lanterns**
1 x AL6666 / 30 / A3
Mounted at 6m high
Wall mounted stub bracket
Bracket: +5' / Spigot: +5' / Lantern: 0'
 - 6m Column Carrying the Following Apollo LED Lanterns**
1 x AL6666 / 30 / A3
Post top mounted
Lantern elevation: +5'
 - Wall Mounted LED Bulkhead Lantern**
1 x AL14436 / 16W LED
Mounted at 3.5m high
 - Wall Mounted LED Bulkhead Lantern**
1 x AL15849 / 32W LED
Mounted at 3.5m high
 - 16m Masts Each Carrying the Following Challenger 1 Floodlights**
M1 - M4 1 x AL5780 / MH-TS 2000WXLK12745 - Medium Beam (switched off)
M5 - M6 2 x AL5780 / MH-TS 2000WXLK12745 - Medium Beam (switched off)
 - LAMP**
MH-TS 2000WXLK12745 (240,000 l.m)
 - ILLUMINANCE LEVEL**
Car Park "A"
Average horizontal illuminance (E_h): 10 lx
Minimum horizontal illuminance (E_{h,min}): 4 lx
Uniformity ratio (E_{h,min}/E_h): 0.4
Car Park "B"
Average horizontal illuminance (E_h): 13 lx
Minimum horizontal illuminance (E_{h,min}): 4 lx
Uniformity ratio (E_{h,min}/E_h): 0.31
Disabled and Visitor Car Park "C"
Average horizontal illuminance (E_h): 23 lx
Minimum horizontal illuminance (E_{h,min}): 7 lx
Uniformity ratio (E_{h,min}/E_h): 0.31
Pathway "D" (main)
Average horizontal illuminance (E_h): 20 lx
Minimum horizontal illuminance (E_{h,min}): 9 lx
Uniformity ratio (E_{h,min}/E_h): 0.44
Pathway "E" (main)
Average horizontal illuminance (E_h): 21 lx
Minimum horizontal illuminance (E_{h,min}): 7 lx
Uniformity ratio (E_{h,min}/E_h): 0.34
Pathway "F" (main)
Average horizontal illuminance (E_h): 20 lx
Minimum horizontal illuminance (E_{h,min}): 12 lx
Uniformity ratio (E_{h,min}/E_h): 0.6
Pathway "G" (main)
Average horizontal illuminance (E_h): 21 lx
Minimum horizontal illuminance (E_{h,min}): 8 lx
Uniformity ratio (E_{h,min}/E_h): 0.28
Entrance Plaza
Average horizontal illuminance (E_h): 22 lx
Minimum horizontal illuminance (E_{h,min}): 8 lx
Uniformity ratio (E_{h,min}/E_h): 0.28
Perimeter Path (secondary)
Average horizontal illuminance (E_h): 12 lx
Minimum horizontal illuminance (E_{h,min}): 3 lx
Uniformity ratio (E_{h,min}/E_h): 0.25
- Energy Center Service Yard**
Average horizontal illuminance (E_h): 30 lx
Minimum horizontal illuminance (E_{h,min}): 8 lx
Uniformity ratio (E_{h,min}/E_h): 0.26
- Access Road "H"**
Average horizontal illuminance (E_h): 8 lx
Minimum horizontal illuminance (E_{h,min}): 2 lx
Uniformity ratio (E_{h,min}/E_h): 0.33
- Access Road "I"**
Average horizontal illuminance (E_h): 17 lx
Minimum horizontal illuminance (E_{h,min}): 3 lx
Uniformity ratio (E_{h,min}/E_h): 0.40
- Access Road "J"**
Average horizontal illuminance (E_h): 8 lx
Minimum horizontal illuminance (E_{h,min}): 3 lx
Uniformity ratio (E_{h,min}/E_h): 0.37
- Car Park "K"**
Average horizontal illuminance (E_h): 10 lx
Minimum horizontal illuminance (E_{h,min}): 1 lx
Uniformity ratio (E_{h,min}/E_h): 0.1
- Tennis Court 1**
PPA
Average Initial Horizontal Illuminance (E_h): 643 lx
Average Maintained Horizontal Illuminance (E_{h,m}): 480 lx
Uniformity Ratio (E_{h,m} / E_h): 0.83
TPA
Average Initial Horizontal Illuminance (E_h): 579 lx
Average Maintained Horizontal Illuminance (E_{h,m}): 434 lx
Uniformity Ratio (E_{h,m} / E_h): 0.63
- Tennis Court 2**
PPA
Average Initial Horizontal Illuminance (E_h): 643 lx
Average Maintained Horizontal Illuminance (E_{h,m}): 482 lx
Uniformity Ratio (E_{h,m} / E_h): 0.88
TPA
Average Initial Horizontal Illuminance (E_h): 588 lx
Average Maintained Horizontal Illuminance (E_{h,m}): 441 lx
Uniformity Ratio (E_{h,m} / E_h): 0.68
- Tennis Court 3**
PPA
Average Initial Horizontal Illuminance (E_h): 641 lx
Average Maintained Horizontal Illuminance (E_{h,m}): 481 lx
Uniformity Ratio (E_{h,m} / E_h): 0.87
TPA
Average Initial Horizontal Illuminance (E_h): 576 lx
Average Maintained Horizontal Illuminance (E_{h,m}): 432 lx
Uniformity Ratio (E_{h,m} / E_h): 0.7
- Grid values in lux
Grid Interval: 5m
Contour values in lux
- Initial levels shown
Maintenance factor: 0.75 (MH-TS)
Location: Medium pollution
Cleaning interval: 12 Months
Maintenance factor: 0.9 (LED's)
Location: Medium pollution
Typical LED life time: 50,000h
- NOTES**
1. This drawing has been developed from Abacus Lighting drawing LS21962-2
2. This scheme has been modelled based upon a flat and open area, where shadowing from building, plants and equipment have not been taken into consideration.
3. Positions of poles 4 & 6 in the wooded carpark indicative and final setting out TBC onsite.

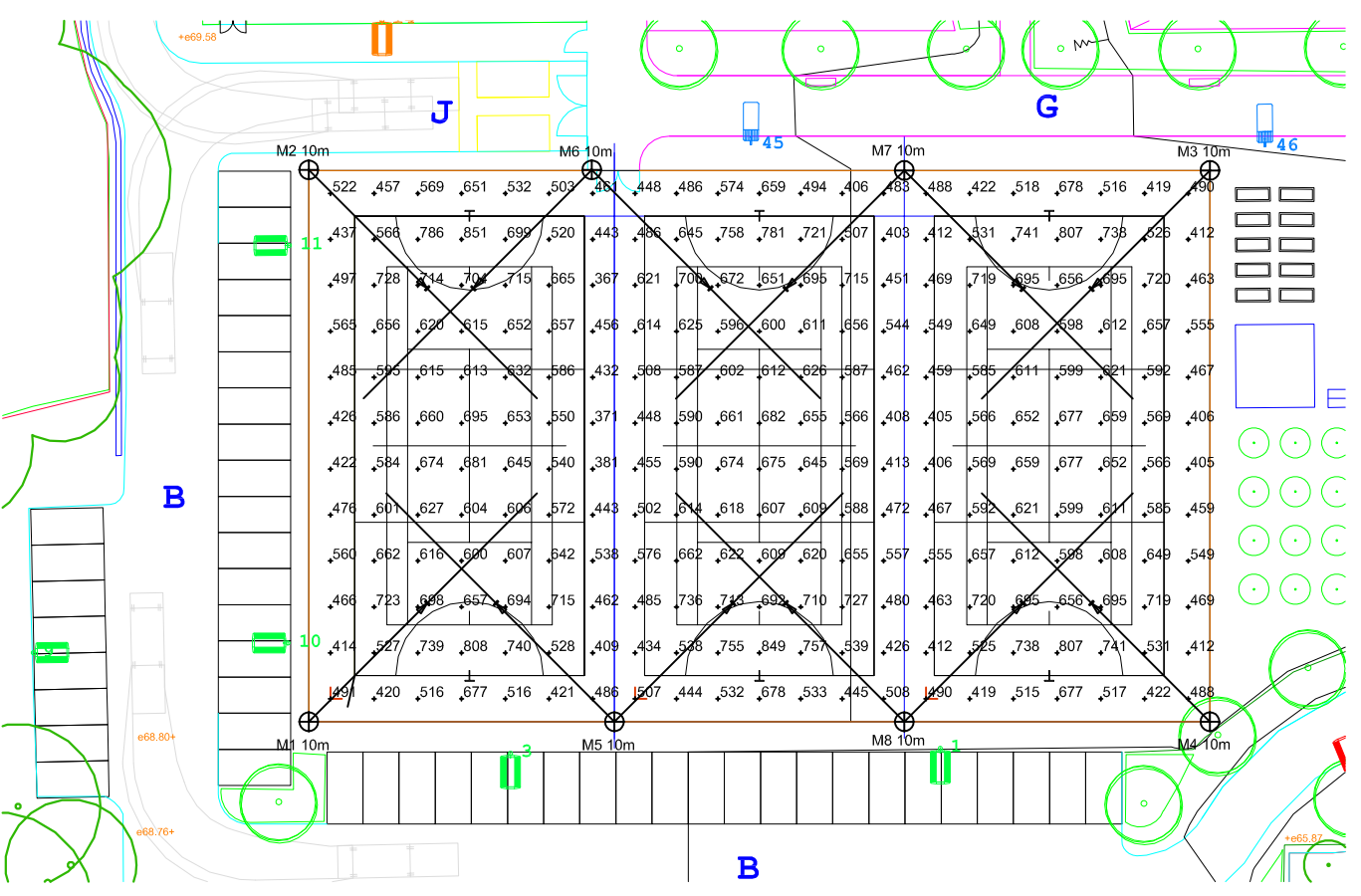
Obtrusive Light - Compliance Report
Filename: LS21962_2 - St Julies
11/12/2014 12:30:19

Luminous Intensity (Cd) Per Luminaire
Maximum Allowable Value: 7500 Cd
Control Angle: 83 Degrees
Luminaire Locations Tested (64)
Test Results: **PASS**

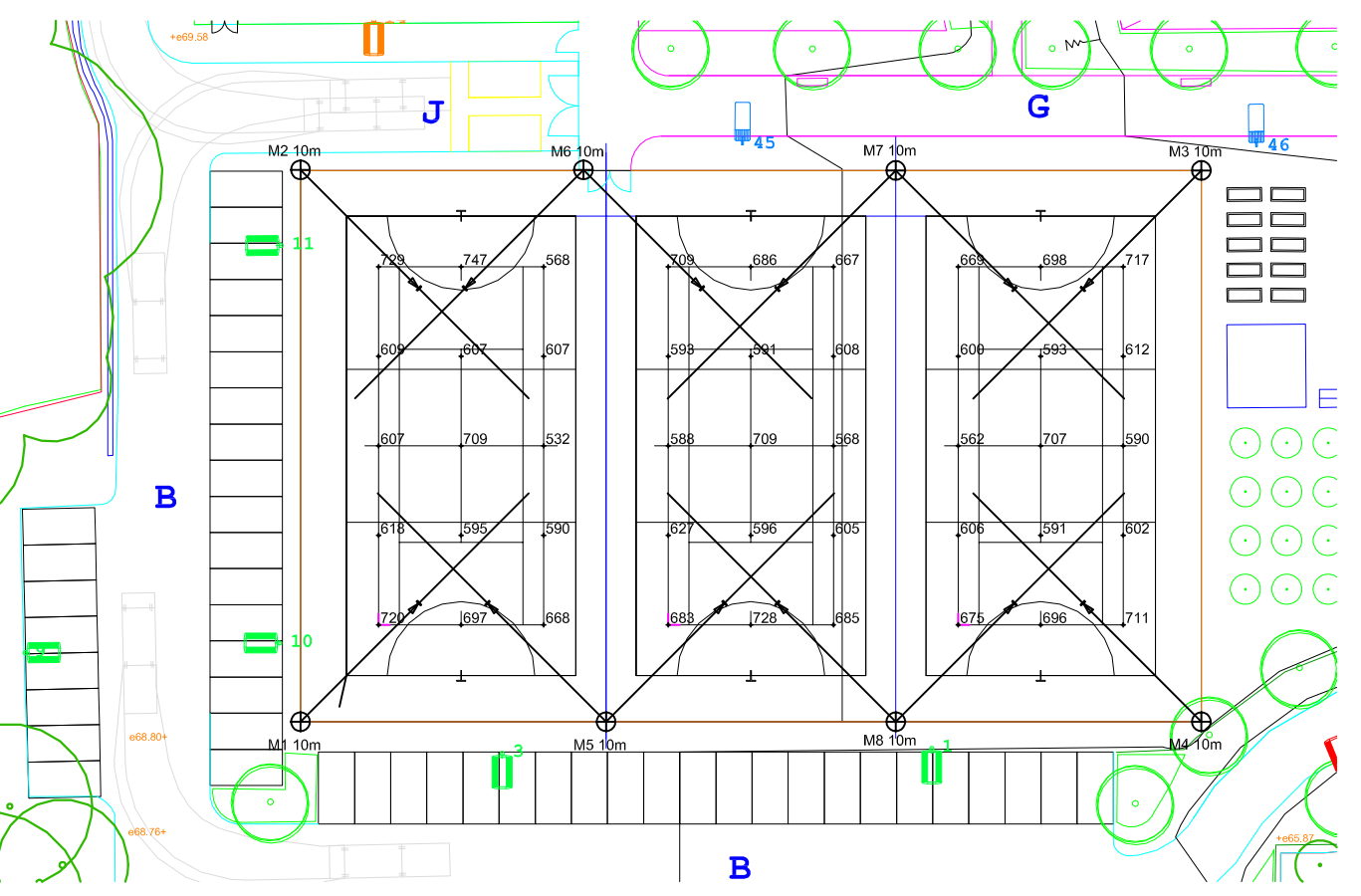
Upward Waste Light Ratio (UWLR) - for all luminaires
Maximum Allowable Value: 2.5 %
Calculated UWLR: 0.1 %
Test Results: **PASS**

Upward Waste Light Ratio (UWLR) - for sport pitches
Maximum Allowable Value: 2.5 %
Calculated UWLR: 0.0 %
Test Results: **PASS**

1	16/12/14	INITIAL ISSUE FOR PLANNING	KS	JS	BW
Rev	Date	Description	By	Check	App.



Horizontal initial illuminance levels for Total Play Areas calculated separately



Horizontal initial illuminance levels for Principal Play Areas calculated separately

1	16/12/14	INITIAL ISSUE FOR PLANNING	KS	JS	BW
Rev	Date	Description	By	Check	App.

Client: ST. JULIES CATHOLIC HIGH SCHOOL


Project: LIVERPOOL SCHOOLS INVESTMENT
ST. JULIES CATHOLIC HIGH SCHOOL

Office: LIVERPOOL

Discipline: ELECTRICAL

Title: PROPOSED EXTERNAL LIGHTING
& ISOLUX PLOTS

Scale at A1: 1:500 Status: CONCEPT


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Originator	Job Number	Discipline	Building/Zone
CCL	7/4987.1	E	-
Type	Level	Drawing No.	Revision
PDF	SITE	305505	1

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