

Eastern S38  
Results - Horizontal Illuminance (lux)  
Eav= 3.73  
Emin= 0.37  
Emax= 10.31  
Emin/Emax= 0.06  
Emin/Eav= 0.18

Western S38  
Results - Horizontal Illuminance (lux)  
Eav= 4.37  
Emin= 0.92  
Emax= 10.05  
Emin/Emax= 0.09  
Emin/Eav= 0.21

Luminaire Data  
Luminaire A CIVITEQ Small - 12 Neutral White 4000K LED 35  
Luminaire B CIVITEQ Small - 36 Neutral White 4000K LED 50  
Luminaire F 2552 WRN/V1 - Lamp 1SOX90

Comparable Level of Lighting Classes from EN13201-2:2015											
M Class	M1	M2	M3	M4	M5	M6					
C Class	C0	C1	C2	C3	C4	C5					
P Class			P1	P2	P3	P4	P5				
Car Parks			Heavy	Medium	Light						

Summary of Lighting S Classes from EN13201-2:2015			
Class	Eave	E Min	E Ave Max
S1	1.5m	0.10 lux	0.20 lux
S2	3.0m	0.10 lux	0.20 lux
S3	4.5m	0.10 lux	0.20 lux
S4	6.0m	0.10 lux	0.20 lux
S5	7.5m	0.10 lux	0.20 lux
S6	9.0m	0.10 lux	0.20 lux
S7	10.5m	0.10 lux	0.20 lux
S8	12.0m	0.10 lux	0.20 lux
S9	13.5m	0.10 lux	0.20 lux
S10	15.0m	0.10 lux	0.20 lux
S11	16.5m	0.10 lux	0.20 lux
S12	18.0m	0.10 lux	0.20 lux
S13	19.5m	0.10 lux	0.20 lux
S14	21.0m	0.10 lux	0.20 lux
S15	22.5m	0.10 lux	0.20 lux
S16	24.0m	0.10 lux	0.20 lux
S17	25.5m	0.10 lux	0.20 lux
S18	27.0m	0.10 lux	0.20 lux
S19	28.5m	0.10 lux	0.20 lux
S20	30.0m	0.10 lux	0.20 lux
S21	31.5m	0.10 lux	0.20 lux
S22	33.0m	0.10 lux	0.20 lux
S23	34.5m	0.10 lux	0.20 lux
S24	36.0m	0.10 lux	0.20 lux
S25	37.5m	0.10 lux	0.20 lux
S26	39.0m	0.10 lux	0.20 lux
S27	40.5m	0.10 lux	0.20 lux
S28	42.0m	0.10 lux	0.20 lux
S29	43.5m	0.10 lux	0.20 lux
S30	45.0m	0.10 lux	0.20 lux
S31	46.5m	0.10 lux	0.20 lux
S32	48.0m	0.10 lux	0.20 lux
S33	49.5m	0.10 lux	0.20 lux
S34	51.0m	0.10 lux	0.20 lux
S35	52.5m	0.10 lux	0.20 lux
S36	54.0m	0.10 lux	0.20 lux
S37	55.5m	0.10 lux	0.20 lux
S38	57.0m	0.10 lux	0.20 lux
S39	58.5m	0.10 lux	0.20 lux
S40	60.0m	0.10 lux	0.20 lux
S41	61.5m	0.10 lux	0.20 lux
S42	63.0m	0.10 lux	0.20 lux
S43	64.5m	0.10 lux	0.20 lux
S44	66.0m	0.10 lux	0.20 lux
S45	67.5m	0.10 lux	0.20 lux
S46	69.0m	0.10 lux	0.20 lux
S47	70.5m	0.10 lux	0.20 lux
S48	72.0m	0.10 lux	0.20 lux
S49	73.5m	0.10 lux	0.20 lux
S50	75.0m	0.10 lux	0.20 lux
S51	76.5m	0.10 lux	0.20 lux
S52	78.0m	0.10 lux	0.20 lux
S53	79.5m	0.10 lux	0.20 lux
S54	81.0m	0.10 lux	0.20 lux
S55	82.5m	0.10 lux	0.20 lux
S56	84.0m	0.10 lux	0.20 lux
S57	85.5m	0.10 lux	0.20 lux
S58	87.0m	0.10 lux	0.20 lux
S59	88.5m	0.10 lux	0.20 lux
S60	90.0m	0.10 lux	0.20 lux
S61	91.5m	0.10 lux	0.20 lux
S62	93.0m	0.10 lux	0.20 lux
S63	94.5m	0.10 lux	0.20 lux
S64	96.0m	0.10 lux	0.20 lux
S65	97.5m	0.10 lux	0.20 lux
S66	99.0m	0.10 lux	0.20 lux
S67	100.5m	0.10 lux	0.20 lux
S68	102.0m	0.10 lux	0.20 lux
S69	103.5m	0.10 lux	0.20 lux
S70	105.0m	0.10 lux	0.20 lux
S71	106.5m	0.10 lux	0.20 lux
S72	108.0m	0.10 lux	0.20 lux
S73	109.5m	0.10 lux	0.20 lux
S74	111.0m	0.10 lux	0.20 lux
S75	112.5m	0.10 lux	0.20 lux
S76	114.0m	0.10 lux	0.20 lux
S77	115.5m	0.10 lux	0.20 lux
S78	117.0m	0.10 lux	0.20 lux
S79	118.5m	0.10 lux	0.20 lux
S80	120.0m	0.10 lux	0.20 lux
S81	121.5m	0.10 lux	0.20 lux
S82	123.0m	0.10 lux	0.20 lux
S83	124.5m	0.10 lux	0.20 lux
S84	126.0m	0.10 lux	0.20 lux
S85	127.5m	0.10 lux	0.20 lux
S86	129.0m	0.10 lux	0.20 lux
S87	130.5m	0.10 lux	0.20 lux
S88	132.0m	0.10 lux	0.20 lux
S89	133.5m	0.10 lux	0.20 lux
S90	135.0m	0.10 lux	0.20 lux
S91	136.5m	0.10 lux	0.20 lux
S92	138.0m	0.10 lux	0.20 lux
S93	139.5m	0.10 lux	0.20 lux
S94	141.0m	0.10 lux	0.20 lux
S95	142.5m	0.10 lux	0.20 lux
S96	144.0m	0.10 lux	0.20 lux
S97	145.5m	0.10 lux	0.20 lux
S98	147.0m	0.10 lux	0.20 lux
S99	148.5m	0.10 lux	0.20 lux
S100	150.0m	0.10 lux	0.20 lux

Summary of Lighting Car Park Classes from BS5489:2013		
Usage	Eave	Uo
Light	5 Lux	25%

Parking Plots 63-68  
149 points at z=0, sp 1.5m by 1.5m  
HORIZONTAL LUX  
Average 4  
Maximum 10  
Minimum 1  
Min/Avg(Uo) 0.258  
Min/Max 0.100  
Coef Var 0.621  
UnifGrad 3.00

Parking Plots 79-82  
112 points at z=0, sp 1.5m by 1.5m  
HORIZONTAL LUX  
Average 3  
Maximum 9  
Minimum 1  
Min/Avg(Uo) 0.318  
Min/Max 0.111  
Coef Var 0.653  
UnifGrad 2.50

Parking Plots 15-21  
187 points at z=0, sp 1.5m by 1.5m  
HORIZONTAL LUX  
Average 4  
Maximum 10  
Minimum 1  
Min/Avg(Uo) 0.241  
Min/Max 0.100  
Coef Var 0.548  
UnifGrad 2.00

Car Park Apartments 1-12  
132 points at z=0, sp 1.5m by 1.5m  
HORIZONTAL LUX  
Average 6  
Maximum 15  
Minimum 2  
Min/Avg(Uo) 0.311  
Min/Max 0.133  
Coef Var 0.465  
UnifGrad 1.75

Office Parking  
504 points at z=0, sp 1.5m by 1.5m  
HORIZONTAL LUX  
Average 5  
Maximum 18  
Minimum 2  
Min/Avg(Uo) 0.377  
Min/Max 0.111  
Coef Var 0.468  
UnifGrad 2.50

## Notes

- All columns to be supplied by DNO supply.
- Columns shall be fitted with secondary isolation above the DNO cut out. The Unit shall be as Derbyshire County Council specification i.e. Charles Endreick LSI-02 with a 32A Isolator and BS88 Fuse Carrier with 4A fuse. Fuse discrimination shall comply with BS7671 between the DNO cut out and the secondary isolation.
- Where there are known services in the vicinity of excavations the Contractor shall ensure hand digging is carried out with care. The Contractor shall arrange for statutory undertakers plant to be marked on site prior to excavations with mechanical excavators.
- In this instance the use of 3 dimensional masking has **not** been used to take into consideration the actual position of high sided objects such as buildings and the like. Trees and shrubs etc have not been considered as their masking ability will vary with seasonal conditions.
- Iso contours produced in this drawing have been created using a conventional symmetrical grid. This does not take into account the spacing or weightings as detailed in BS5489 or BS EN 13201-3:2003
- Equipment shown on this drawing is available through most specialist street lighting electrical distributors like Maclean Electrical ([www.maclean.co.uk](http://www.maclean.co.uk)) or Marwood Electrical ([www.marwoodelectrical.co.uk](http://www.marwoodelectrical.co.uk))
- Copies of the original lighting reality calculations available upon request please send a email to [mail@nicksmithassociates.com](mailto:mail@nicksmithassociates.com) quoting the project number.
- This design has been prepared in accordance with BS5489-1:2013 the use of S/P ratios has NOT been used to reduce the lighting levels. The lighting class chosen takes account of a reduction in level.
- The LED driver shall be pre programmed for 100% output between switch on and 21:30, 75% between 21:30 and 00:00, 50% between 00:00 and 05:00 & 75% till dawn

## Key

Proposed steel galvanised 6m column with post mounted TRT Lighting Aspect lantern (14W ASPECT ECO 1 FOPR LENS) with neutral white LED to deliver 1500 lumens, integral driver and photocell set to switch on at 35 lux

Proposed tubular steel road lighting column finished in Derbyshire Green (RAL6006) of 6m nominal height with post mounted Thom Lighting CIVITEQ Lantern (CIVITEQ Small - 36 Neutral White 4000K LED 500mA - PWC Optic ) at 0° tilt with 36 no neutral white LED @500ma integral driver and photocell set to switch on at 35 lux with 2:1 negative switching ratio (see note 9). As DCC LED specification and standard drawings

Proposed tubular steel road lighting column finished in Derbyshire Green (RAL6006) of 6m nominal height with post mounted Thom CIVITEQ Lantern (CIVITEQ Small - 12 Neutral White 4000K LED 350mA - WSC Optic ) at 0° tilt with 12 no neutral white LED integral driver and photocell set to switch on at 35 lux with 2:1 negative switching ratio (see note 9). As DCC LED specification and standard drawings 1300/1, 1300/2, 1300/3 and 1400/17.

Existing 6m column with SOX lantern to remain

Existing 6m column with single arm bracket and SOX lantern to remain

Existing 6m column to be disconnected and removed to tip

- Project column number
- Existing column number
- 15.00 lux iso-contour line
- 3.00 lux iso-contour line
- 0.60 lux iso-contour line

REV	DETAILS	APP/ DWN	DATE
B	Site Layout revised, Columns and calculations updated to suit	RSS/NWS	28.02.17
A	Changes to proposed adopted lighting	RSS/NWS	31.08.16

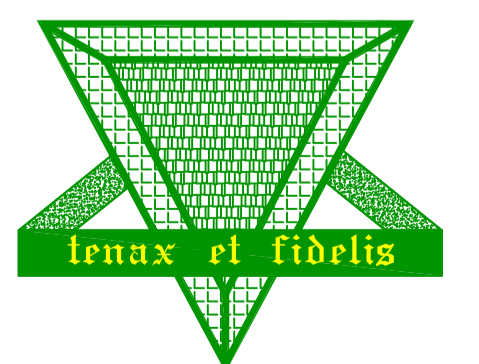
Drawing Number	Revision
2241-D-02	B

Client: **Sherwood Homes**  
Project: **Former Kingspan Works  
Charlestown Road  
Glossop, Derbyshire**

Drawing Title: **Proposed  
Road Lighting  
and Illuminance  
Layout**

Scale at A1	Sheet 2 of 2
1:500	Date
Drawn	24.08.16
NWS	

**Nick Smith Associates Ltd**



Tel: 01246 229444  
Fax: 01246 270465  
mail@nicksmithassociates.com  
www.nicksmithassociates.com

