

Grid 1	Grid 2	Grid 3	LIGHTING CONTOURS
Results - Horizontal Illuminance (lux) Eav= 22.37 Emin= 10.01 Emax= 43.68 Emin/Emax= 0.23 Emin/Eav= 0.45	Results - Horizontal Illuminance (lux) Eav= 20.80 Emin= 8.55 Emax= 36.10 Emin/Emax= 0.24 Emin/Eav= 0.41	Results - Horizontal Illuminance (lux) Eav= 16.24 Emin= 7.13 Emax= 28.57 Emin/Emax= 0.25 Emin/Eav= 0.44	1 LUX 5 LUX 10 LUX 15 LUX 20 LUX 25 LUX 30 LUX

KEY	
<b>LUMINAIRE A (existing)</b> SUPPLIER TYPE LAMP(s) LAMP FLUX (klm) MAINTENANCE FACTOR IMAX 70,80,90(cd/klm) HEIGHT TILT OUT-REACH	Philips Iridium SGS253 SON-T 17.50 0.87 306.5, 10.0, 0.0 10 5° Post Top (0.4m to photometric centre)
<b>LUMINAIRE B (proposed)</b> SUPPLIER TYPE LAMP(s) LAMP FLUX (klm) MAINTENANCE FACTOR IMAX 70,80,90(cd/klm) HEIGHT TILT OUT-REACH	LED Roadway NXT 72M 0 X 3LB 700 LED 16.84 0.75 529.5, 23.1, 0.0 10.6 5° 0.75m (+ 0.35m to photometric centre)
<b>LUMINAIRE C (proposed)</b> SUPPLIER TYPE LAMP(s) LAMP FLUX (klm) MAINTENANCE FACTOR IMAX 70,80,90(cd/klm) HEIGHT TILT OUT-REACH	LED Roadway NXT 72M 0 X 3HB 450 LED 11.91 0.75 574.2, 23.1, 0.0 10.6 5° 0.75m (+ 0.35m to photometric centre)

**Installation Notes**

- All equipment to comply with Oxfordshire County Council's 'Street Lighting Design Requirements - April 2016', 'Schedule DB1' & 'LED Roadway - 10mPassive LED NXT M lantern 9.4klm brkt 0.75m - Conical Style 9'
- Lanterns fixed to passively safe columns to be powered off a private cable network with a circuit disconnection time of less than 0.4 secs. All arrangements including cabling & ducting design to be undertaken by the Contractor. Location of feeder pillar(s) to be agreed on site with OCC and the Client. The Contractor shall submit cabling proposals to OCC for approval.
- Lamp operating/control gear to be compatible with the DALI CMS system and be capable of being dimmed / switched as required, 7 pin Nema type socket with 1 piece PECU set at 35 lux on and 18 lux off, all to OCC specification.
- All electrical components are to be designed and tested in accordance with OCC's specification - Section 8 Electrical Testing.
- Refer to 'Lighting Column Schedule' for column description at each location, Lighting columns to be in accordance with Section 5 - 'Columns' & OCC Dwg 'HSD/13/027' :-
  - 10.6m Passively safe (100HE 2) Conical 'Salus' steel column, Stainton Metal Co. Thames style or equivalent, single arm, 0.6m uplift & 0.75m projection bracket, with 5 deg uplift. Column to have G2a protection system EPA Compliant OCC specification, final coat to be Reed Green RAL 6013.
- Refer to HSD drawings 13-005, 14-035, 14-045 for 'column', 'fusing and cut out' details & 'wiring lighting columns type a-c'
- Refer to drawings 32765-2004-1200 & 1201 for proposed traffic signs
- Lighting column numbering indicated on the drawings relates to the reality lighting design report, actual column numbering to be agreed with OCC

**Design Rationale - Notes**

Lighting designed in accordance with BS5489-1:2013 and Oxfordshire County Council's 'Street Lighting Design Requirements - April 2016', 'Schedule DB1' & 'LED Roadway - 10mPassive LED NXT M lantern 9.4klm brkt 0.75m - Conical Style 9'

- Lighting class's -
  - M3 / C2 (Eav min 20, Emin/Eav MIN 0.40) - Specified in Schedule DB1 - OCC ref A4484
  - M4 / C3 (Eav min 15, Emin/Eav MIN 0.40) - BS5489-1:2013 - Table A.3 typical speed of main user ≤ 40mph, single carriageway, low/mod Traffic flow.
- LED Roadway NXT-M LED luminaires used for scheme in accordance with OCC's preference
- Column heights and positions were optimised so the minimum amount were needed
- Calculation grid spacing's 1.5m x 1.5m
- All columns to be passively safe to 100HE 2

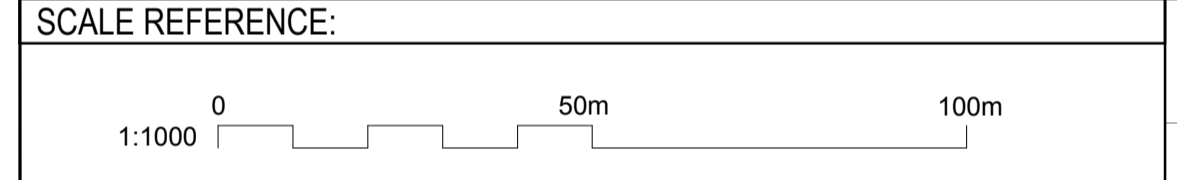
Lantern No.	Lantern Type	Column Desc	Easting	Northing	Height	Angle Deg.	Tilt Deg.	Cant Deg.	Out-reach	Dimmed to%
1	A	Existing	460031.20	220541.30	10	41	5	0	0.4	100
2	A	Existing	460049.22	220554.59	10	255	5	0	0.4	100
3	B	Proposed	460070.38	220533.79	10.6	94	5	0	1.1	100
4	A	Existing	460055.62	220519.25	10	190	5	0	0.4	100
5	B	Proposed	460123.88	220522.81	10.6	76	5	0	1.1	100
6	B	Proposed	460303.23	220503.62	10.6	243	5	0	1.1	100
7	A	Existing	459997.78	220553.23	10	76	5	0	0.4	100
8	B	Proposed	460282.47	220490.97	10.6	83	5	0	1.1	100
9	B	Proposed	460261.86	220507.42	10.6	273	5	0	1.1	100
10	B	Proposed	460239.17	220496.11	10.6	85	5	0	1.1	100
11	B	Proposed	460208.20	220500.95	10.6	78	5	0	1.1	100
12	B	Proposed	460179.86	220508.26	10.6	75	5	0	1.1	100
13	B	Proposed	460332.57	220484.04	10.6	81	5	0	1.1	100
14	B	Proposed	460364.06	220479.12	10.6	81	5	0	1.1	100
15	B	Proposed	460395.48	220473.97	10.6	79	5	0	1.1	100
16	B	Proposed	460275.65	220518.05	10.6	344	5	0	1.1	100
17	B	Proposed	460151.90	220515.80	10.6	75	5	0	1.1	100
18	B	Proposed	460426.76	220467.86	10.6	77	5	0	1.1	100
19	B	Proposed	460095.80	220529.60	10.6	77	5	0	1.1	100
20	C	Proposed	460284.35	220548.52	10.6	343	5	0	1.1	100
21	C	Proposed	460300.10	220577.75	10.6	332	5	0	1.1	100
22	C	Proposed	460325.52	220600.41	10.6	151	5	0	1.1	100
23	C	Proposed	460332.51	220636.14	10.6	336	5	0	1.1	100
24	C	Proposed	460340.87	220657.92	10.6	332	5	0	1.1	100
25	C	Proposed	460361.30	220672.62	10.6	152	5	0	1.1	100
26	C	Proposed	460368.26	220702.87	10.6	316	5	0	1.1	100
27	C	Proposed	460390.61	220725.81	10.6	316	5	0	1.1	100
28	C	Proposed	460410.02	220745.84	10.6	316	5	0	1.1	100
29	C	Proposed	460322.03	220574.15	10.6	241	5	0	1.1	100
30	C	Proposed	460351.05	220633.62	10.6	241	5	0	1.1	100
31	C	Proposed	460330.97	220677.90	10.6	62	5	0	1.1	100
32	C	Proposed	460428.67	220727.40	10.6	239	5	0	1.1	100
33	C	Proposed	460390.52	220702.05	10.6	226	5	0	1.1	100

**NOTES:**

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- ALL DIMENSIONS ARE IN MILLIMETRES, ALL CHAINAGES, LEVELS AND COORDINATES ARE IN METRES UNLESS DEFINED OTHERWISE.
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**KEY:**

- EXISTING HIGHWAY BOUNDARY
- PROPOSED HIGHWAY BOUNDARY



**XREFS:**

- x- topo
- x- highway alignment
- x- OS map
- x- highway boundary
- x- site boundary\_Zones 1 & 2
- x- Streetlighting - GREY
- x- c-proposed highway boundary
- x- Streetlighting
- x- Proposed Masterplan(ACAD) Grey - PBA
- db symmetry.PNG

Mark	Revision	Date	Drawn	Chkd	Appd
D	LIGHTING UPDATED FOLLOWING COMMENTS FROM OCC	21.02.17	MA	AF	AF
C	UPDATED HIGHWAY BOUNDARY & MASTERPLAN	23.09.16	OE	AF	AF
B	UPDATED TO SUIT AMENDMENTS FROM RSA STAGE 2.	18.07.16	MA	AF	AF
A	LIGHTING AMENDED TO SUIT GA CHANGES.	10.06.16	MA	EJT	EJT

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.  
 UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Drawing Issue Status

FOR APPROVAL

**SOUTH EAST BICESTER  
SECTION 278 APPLICATION  
STREET LIGHTING LAYOUT**

Client			 Offices throughout the UK and Europe <b>www.peterbrett.com</b> © Peter Brett Associates LLP BIRMINGHAM Tel: 0121 633 2900
Date of 1st Issue	Designed	Drawn	
31.05.16	SAB	SAB	
A1 Scale	Checked	Approved	
1:1000	AF	AF	
Drawing Number		Revision	
32765-2004-1300		D	

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