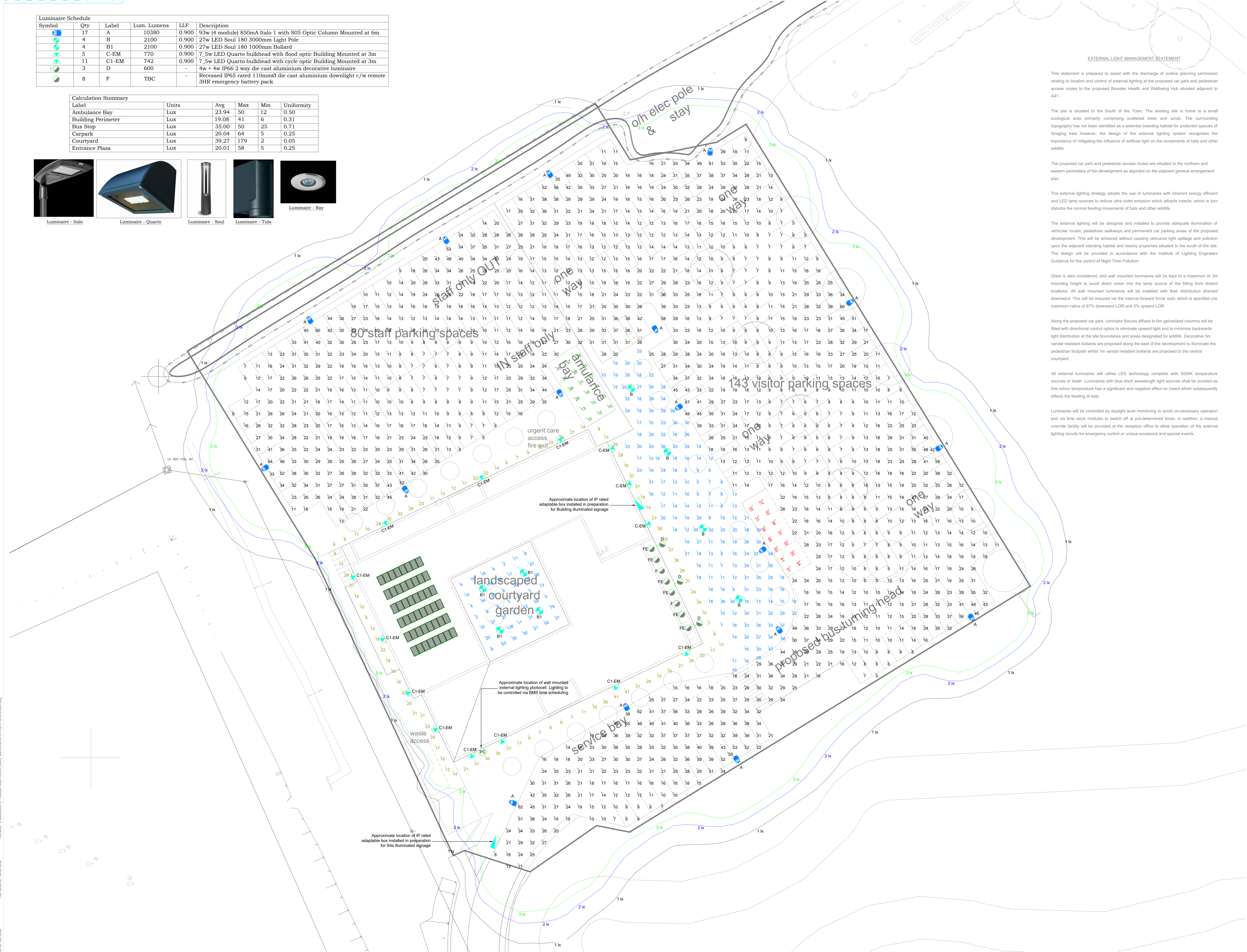
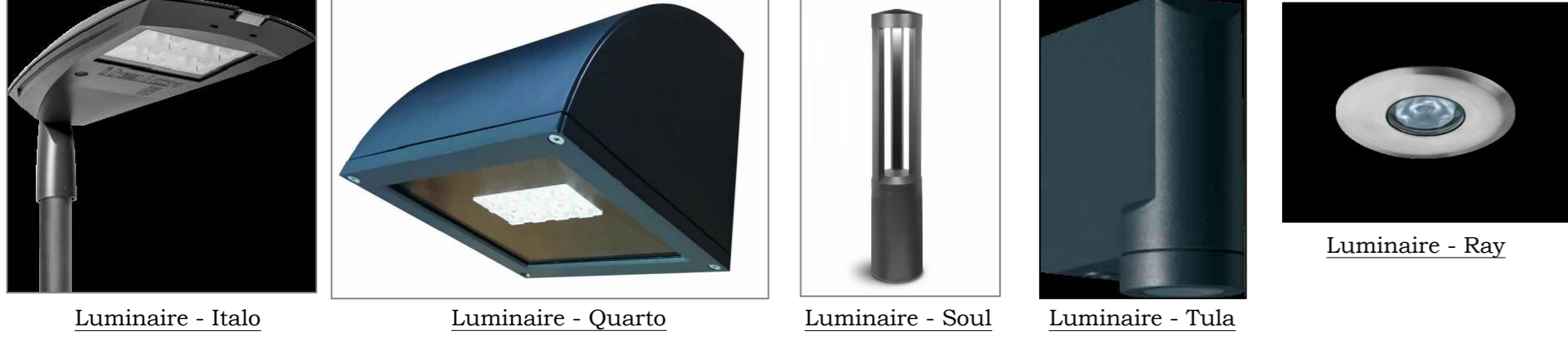


Luminaire Schedule					
Symbol	Qty	Label	Lum. Lumens	LLF	Description
	17	A	10380	0.900	93w (4 module) 850mA Italo 1 with S05 Optic Column Mounted at 6m
	4	B	2100	0.900	27w LED Soul 180 3000mm Light Pole
	4	B1	2100	0.900	27w LED Soul 180 1000mm Bollard
	5	C-EM	770	0.900	7.5w LED Quarto bulkhead with flood optic Building Mounted at 3m
	11	C1-EM	742	0.900	7.5w LED Quarto bulkhead with cycle optic Building Mounted at 3m
	3	D	600	-	4w + 4w IP66 2 way die cast aluminium decorative luminaire
	8	F	TBC	-	Recessed IP65 rated 110mmØ die cast aluminium downlight c/w remote 3HR emergency battery pack

Calculation Summary					
Label	Units	Avg	Max	Min	Uniformity
Ambulance Bay	Lux	23.94	50	12	0.50
Building Perimeter	Lux	19.08	41	6	0.31
Bus Stop	Lux	35.00	50	25	0.71
Carpark	Lux	20.04	64	5	0.25
Courtyard	Lux	39.27	179	2	0.05
Entrance Plaza	Lux	20.01	58	5	0.25



EXTERNAL LIGHT MANAGEMENT STATEMENT

This statement is prepared to assist with the discharge of outline planning permission relating to location and control of external lighting at the proposed car park and pedestrian access routes to the proposed Bicester Health and Wellbeing Hub situated adjacent to A41.

The site is situated to the South of the Town. The existing site is home to a small ecological area primarily comprising scattered trees and scrub. The surrounding topography has not been identified as a potential breeding habitat for protected species of foraging bats however, the design of the external lighting system recognises the importance of mitigating the influence of artificial light on the movements of bats and other wildlife.

The proposed car park and pedestrian access routes are situated to the northern and eastern perimeters of the development as depicted on the adjacent general arrangement plan.

The external lighting strategy adopts the use of luminaires with inherent energy efficient and LED lamp sources to reduce ultra violet emission which attracts insects, which in turn disturbs the normal feeding movements of bats and other wildlife.

The external lighting will be designed and installed to provide adequate illumination of vehicular routes, pedestrian walkways and permanent car parking areas of the proposed development. This will be achieved without causing obtrusive light spillage and pollution upon the adjacent standing habitat and nearby properties situated to the south of the site. The design will be provided in accordance with the Institute of Lighting Engineers Guidance for the control of Night Time Pollution.

Glare is also considered, and wall mounted luminaires will be kept to a maximum of 3m mounting height to avoid direct vision into the lamp source of the fitting from distant locations. All wall mounted luminaires will be installed with their distribution directed downward. This will be ensured via the internal forward throw optic which is specified c/w maximum ratios of 97% downward LOR and 3% upward LOR.

Along the proposed car park, luminaire fixtures affixed to 6m galvanised columns will be fitted with directional control optics to eliminate upward light and to minimise backwards light distribution at the site boundaries and areas designated for wildlife. Decorative 3m vandal resistant bollards are proposed along the east of the development to illuminate the pedestrian footpath whilst 1m vandal resistant bollards are proposed to the central courtyard.

All external luminaires will utilise LED technology complete with 3000K temperature sources or lower. Luminaires with blue short wavelength light sources shall be avoided as this colour temperature has a significant and negative effect on insect which subsequently effects the feeding of bats.

Luminaires will be controlled by daylight level monitoring to avoid un-necessary operation and via time clock modules to switch off at pre-determined times. In addition, a manual override facility will be provided at the reception office to allow operation of the external lighting circuits for emergency control or unique occasions and special events.

- Notes
- This is not an installation drawing
 - The final coordination of services, specialist Sub-Contractors, and building structure is the responsibility of the building services Contractor.
 - Do not scale from this drawing
 - This drawing shall be read in conjunction with the MEP Specification
 - The installation of services shall be in compliance with the workmanship clauses detailed in the Specification.

1. All luminaires shall be manufactured by Messrs Kingsfisher Lighting complete with 3000K output temperature LEDs

Legend

LG Neon R 375Wp Monocrystalline Photovoltaic Panel located on Roof

Safety, Health & Environmental Information

In addition to the hazards / risks normally associated with the types of work detailed on this drawing, note the following:

Construction

1. None identified at date of issue.

Maintenance / Cleaning

1. None identified at date of issue.

Decommissioning / Demolition

1. None identified at date of issue.

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Details	Eng	Date	Rev

Revisions					
Scale	Date	Authorised	Checked	Engineer	Drawn
1:200	Mar 21	GBH	DC	BM	CR

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McCann
and partners

Job Title
 Bicester Health & Wellbeing Hub
 For Apollo Capital Projects

Drawing Title
 Electrical Engineering Services
 External Lighting Strategy &
 Photovoltaic Layout

Project	Origin	Volume	Level	Type	Discipline	Number
8757	MCP	V1	XX	DR	E	9000