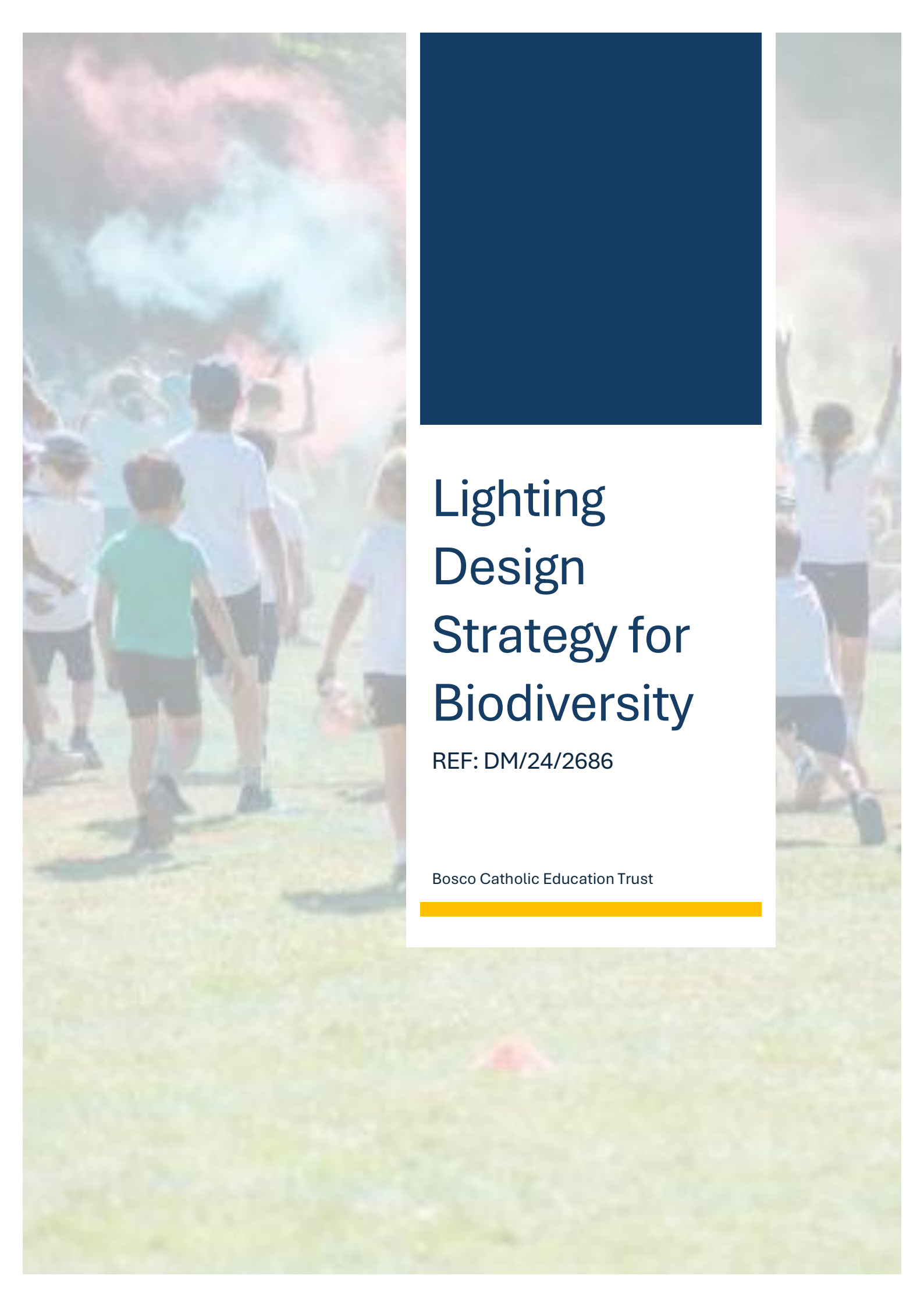




Lighting Design Strategy for Biodiversity

REF: DM/24/2686

Bosco Catholic Education Trust

Introduction

This Lighting Design Strategy has been developed to ensure that external lighting provision is kept to the minimum necessary for safe access while protecting biodiversity and supporting local wildlife. The design follows the principles of reducing artificial light pollution, maintaining dark environments, and avoiding disturbance to sensitive species, particularly bats and nocturnal fauna.

Proposed Lighting Scheme

The development incorporates only two external light fittings:

- One light at the main front entrance
- One light at the garden exit

No additional external lighting is proposed elsewhere on the site.

Both luminaires will be controlled by occupancy/motion sensors and will operate only during normal working hours of 08:00 to 17:00. The lights will therefore remain off outside operational hours and will only activate when required.

The locations of the two external lights are show in red on the elevation drawings at the end of this document. The proposed lighting floor plan is also included.

Biodiversity Considerations

The lighting design has been developed to minimise ecological impacts through the following measures:

Minimal Lighting Provision

External lighting has been restricted to the smallest number of fittings necessary to ensure safe access and egress. No lighting is proposed within landscaped areas, boundary features, vegetation, trees, or other potential wildlife habitats.

Limited Operating Hours

The lights will operate solely during working hours between 08:00 and 17:00. As a result, there will be no artificial illumination during evening, night-time, or early morning periods when nocturnal wildlife is most active.

Sensor-Controlled Operation

The installation of motion sensors ensures that lighting is only activated when required, reducing unnecessary illumination and limiting the overall duration of operation.

Light Spill Control

Lighting will be directed only towards entrance and exit routes and designed to minimise upward and horizontal light spill. This approach avoids illumination of surrounding habitats, maintaining dark conditions across the wider site.

Appropriate Light Levels

Lighting levels will be kept to the minimum required to provide safe access for building users while reducing glare and avoiding excessive brightness.

Support for Nocturnal Species

The proposed lighting strategy actively supports nocturnal wildlife by maintaining natural darkness during the hours of darkness. Species such as bats, hedgehogs, moths, beetles, and other nocturnal invertebrates rely on dark environments for feeding, movement, breeding, and predator avoidance.

As the lighting will not operate during periods when these species are active, the design avoids disruption to natural behaviours and prevents the creation of illuminated barriers that may restrict movement between habitats. The retention of dark conditions helps maintain ecological connectivity throughout the site and surrounding landscape.

Support for Bat Conservation

Bats are particularly sensitive to artificial lighting, with many species avoiding illuminated areas. The proposed lighting design supports bat conservation through:

- The absence of lighting during bat activity periods between dusk and dawn.
- Retention of dark commuting and foraging corridors across the site.
- Avoidance of light spill onto vegetation, trees, boundaries, and other habitat features that may be used by bats.
- Reduction of habitat fragmentation caused by unnecessary illumination.
- Limitation of lighting to two essential locations only.

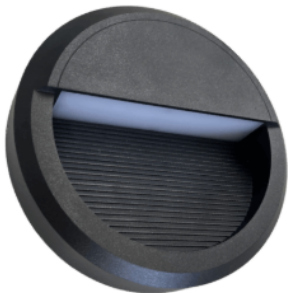
By ensuring that the site remains dark throughout the night, the design allows bats to continue commuting and foraging without disturbance and maintains favourable conditions for local bat populations.

Conclusion

The proposed lighting scheme represents a highly sensitive and low-impact approach to external illumination. By limiting provision to only two sensor-controlled lights at the front entrance and garden exit, operating exclusively between 08:00 and 17:00, the development will maintain dark conditions throughout the hours of darkness.

The scheme avoids unnecessary light spill, protects habitat connectivity, and supports a wide range of nocturnal species, including bats. Consequently, the lighting design is considered to have a negligible impact on biodiversity and accords with best-practice principles for ecological protection and enhancement.

Specification



BAKER SERIES - BAT FRIENDLY BULKHEAD

[Overview](#) [Technical Summary](#)

The Baker Series is a Low CCT architectural fixture for residential outdoor lighting. It is designed to provide sympathetic yet practical illumination in environmentally sensitive areas, e.g. where bat activity needs to be accommodated.

This sleek, modern fixture complements a wide range of architectural styles, blending effortlessly into both contemporary and traditional homes.

Its recessed, downward-facing design delivers full cut-off illumination with zero uplight, making it Dark Sky-compliant and ideal for minimising light pollution. With an energy-efficient 10W output, it offers subtle, ambient lighting perfect for pathways, entryways, and accent areas.

Here at [Kellwood Lighting](#), our team is here to help you find the best light fittings for your project. You can enquire about the **Baker Series** using the link on this page. Alternatively feel free to speak to one of our team on +44 (0)1387 255816.

Phone: +44 (0) 1387 255 816

[Contact](#)



Performance Summary:	
Code (Series-Wattage/Size)	BAK-10
Nominal Power	10W
Luminaire Efficacy @ CRI>80, 3000K CCT	33lm/W
Lumen Output @ CRI>80, 3000K CCT	330lm
Lumen Maintenance (TM21 Reported)	L80B10 ≥50,000 hours
Certification	CE, RoHS
Product Warranty	3 Years
Light Source and Photometric Parameters:	
Chip Brand, Model, & Size	Cree
Light Emmission	Direct
CCT	4000K (2700K, 3000K, 5000K, 5700K Optional)
CRI	≥80Ra, (≥90Ra optional)
SDCM	<3
Diffusers	Clear
Symmetric Light Distribution	60°
Electrical Parameters:	
System Operating Power	8W
Input Voltage	220-240VAC
Input Frequency	50-60Hz
Qty of Drivers per Light	1
Insulation Class	Class II
Environmental Parameters:	
IP Rating	IP65
IK Rating	IK08
Ambient Usage Tolerance	-10°C to 45°C
Ambient Storage Tolerance	-20°C to 60°C
Physical/Mechanical Parameters:	
Product Dimensions: (Ø x H) (mm)	230 x 54
Fixture Primary Material(s)	Aluminium Alloy
Lens(es) Materials	UV Stabilised Polycarbonate
Options/Accessories:	
Mounting Styles	Surface mounted
Available Product Colours	Grey, Black



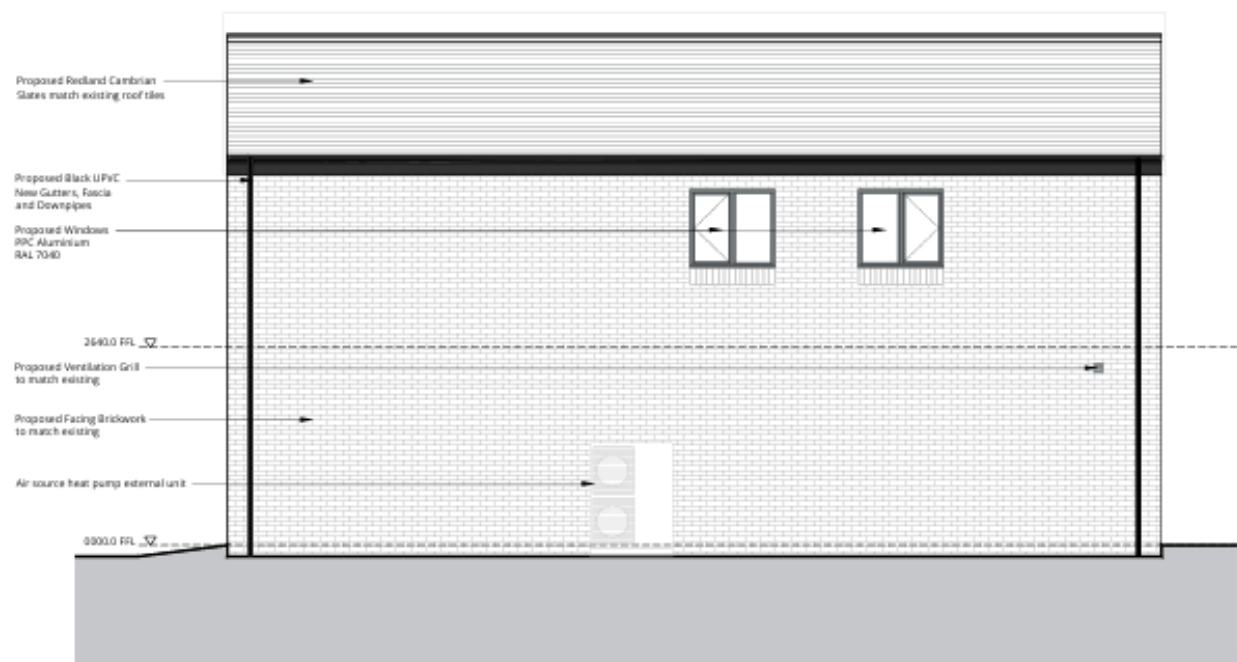
North Elevation



East Elevation

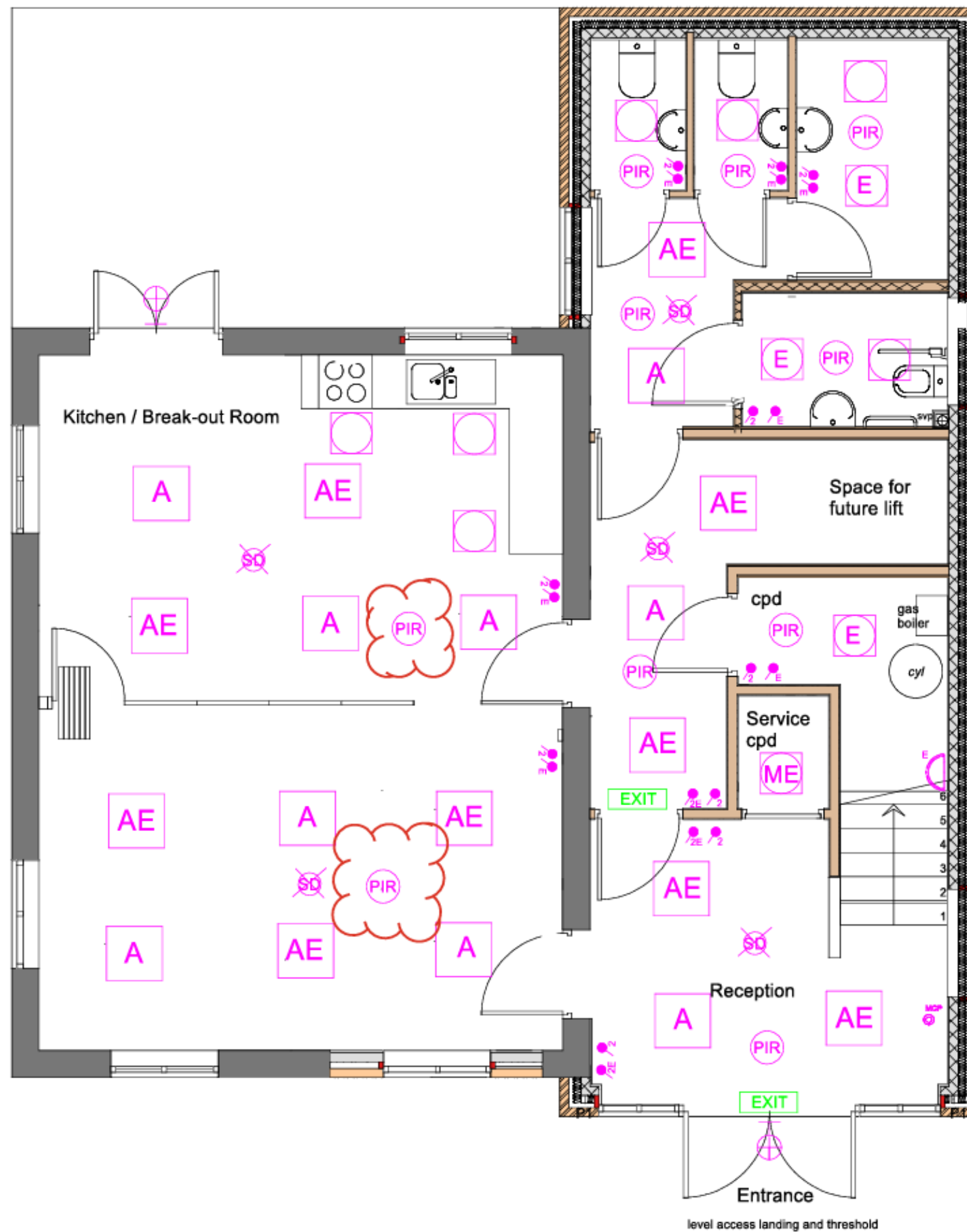


South Elevation



West Elevation

Drawing Status			
PLANNING			
Rev	Description	Date	By
PL4	PLANNING SUBMISSION	04/11/24	JM
PL3	PLANNING SUBMISSION	29/10/24	JM
PL2	ISSUED FOR COMMENTS	25/10/24	JM
PL1	ISSUED FOR PLANNING	24/09/24	TW
 MAJESTY HOUSE, AVENUE WEST SKYLINE 120, BRAINTREE ESSEX, CM77 7AA T: 01279 647111 W: www.barker-associates.co.uk E: mail@barker-associates.co.uk			
Client BOSCO CATHOLIC EDUCATION TRUST			
Project Title ST PAUL'S CATHOLIC COLLEGE JANE MURRAY WAY, BURGESS HILL, RH15 8GA			
Drawing Title PROPOSED ELEVATIONS			
Drawn	Checked	Scale	Date
TW	JM	1:50 @ A1	JULY 24
ARCHITECTURAL			
Drawing Number		Status	Revision
SPC002-BA-A1-ZZ-DR-A-2150		S4	PL4



- KEY LEGEND**
- One way light switch
 - One way light switch ("E" denotes Emergency Lighting Key Switch)
 - Two way light switch
 - Two way light switch ("E" denotes Emergency Lighting Key Switch)
 - Passive Infrared Detector
 - External wall mounted light fitting with energy saving lamp
 - Surface/Recessed LED Downlights
 - Well mounted LED light fitting
 - LED surface mounted Quadraprism 600x600mm luminaire
 - As "A" but emergency fitting with 3h integral battery
 - Illuminated exit sign with integral 3hR emergency battery pack
 - Manual call point
 - Mains operated smoke detector
 - Light fitting with emergency fitting with 3h integral battery

Rev	Revision Detail	Date

CONSTRUCTION ISSUE



GM Monk Electrical Contractors
Unit 8 Haverington Business Park, Brampton Road, Eastbourne BN22 9BN
TEL: 01323 841789
EMAIL: enquiries@gmonk.co.uk
WEB: www.gmonk.co.uk

CLIENT:
Bosco Catholic Education Trust

PROJECT:
**St Paul's Catholic College
Jane Murray Way
Burgess Hill
RH15 8GA**

TITLE:
Proposed Ground Floor Plans - Lighting

DRAWN	CHECKED	DATE	SCALE
GB	KB	02/06/2025	NTS

DRAWING No.	REVISION
MON-BO-GF-DR-E-1002	1