

HARD SURFACE PLAYING AREA

MUGA

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 Ysgol Trefethyr Criccieth development situated adjacent to A407.

The site is situated to the West of the Village. 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 Primary School 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.

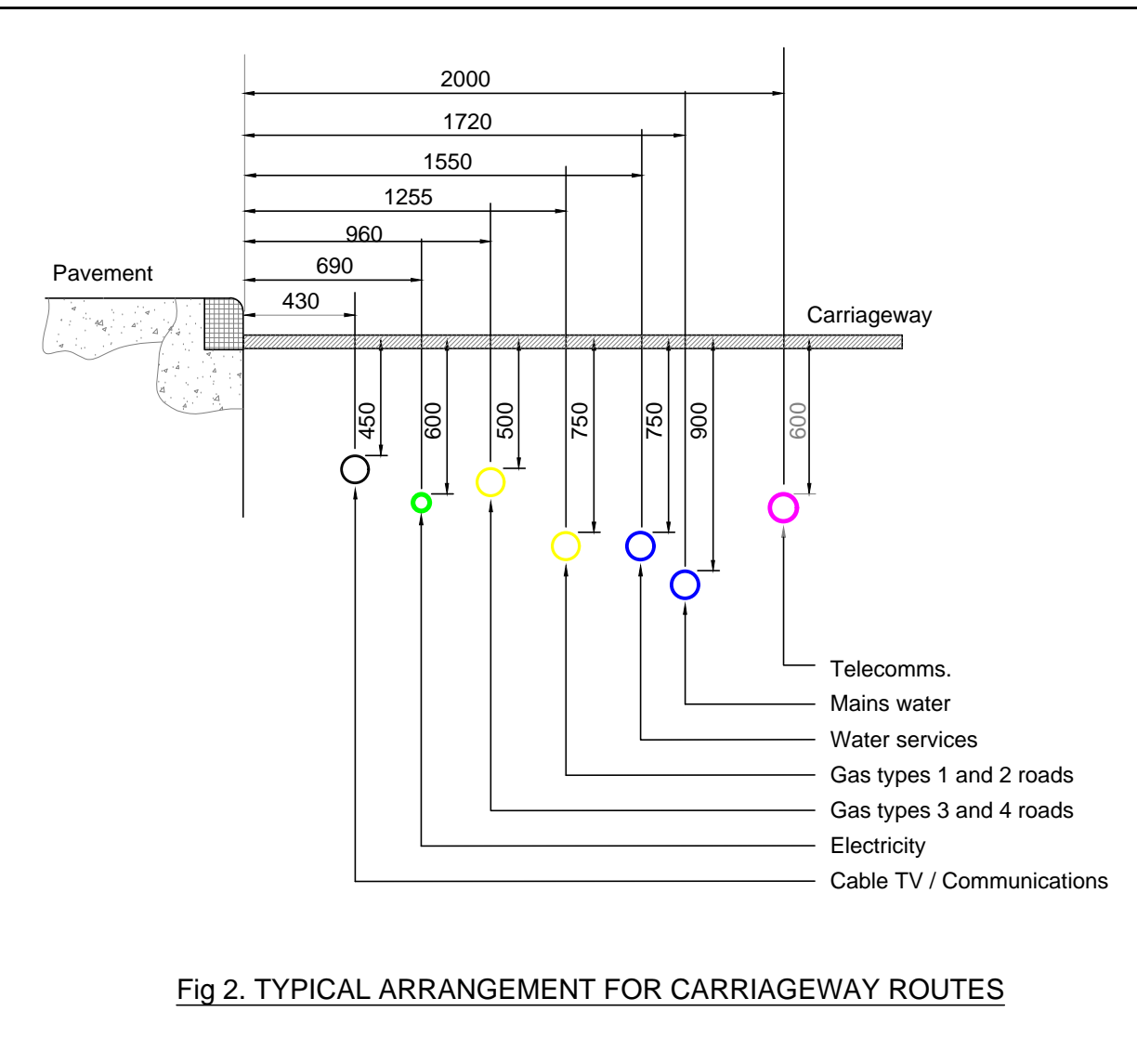
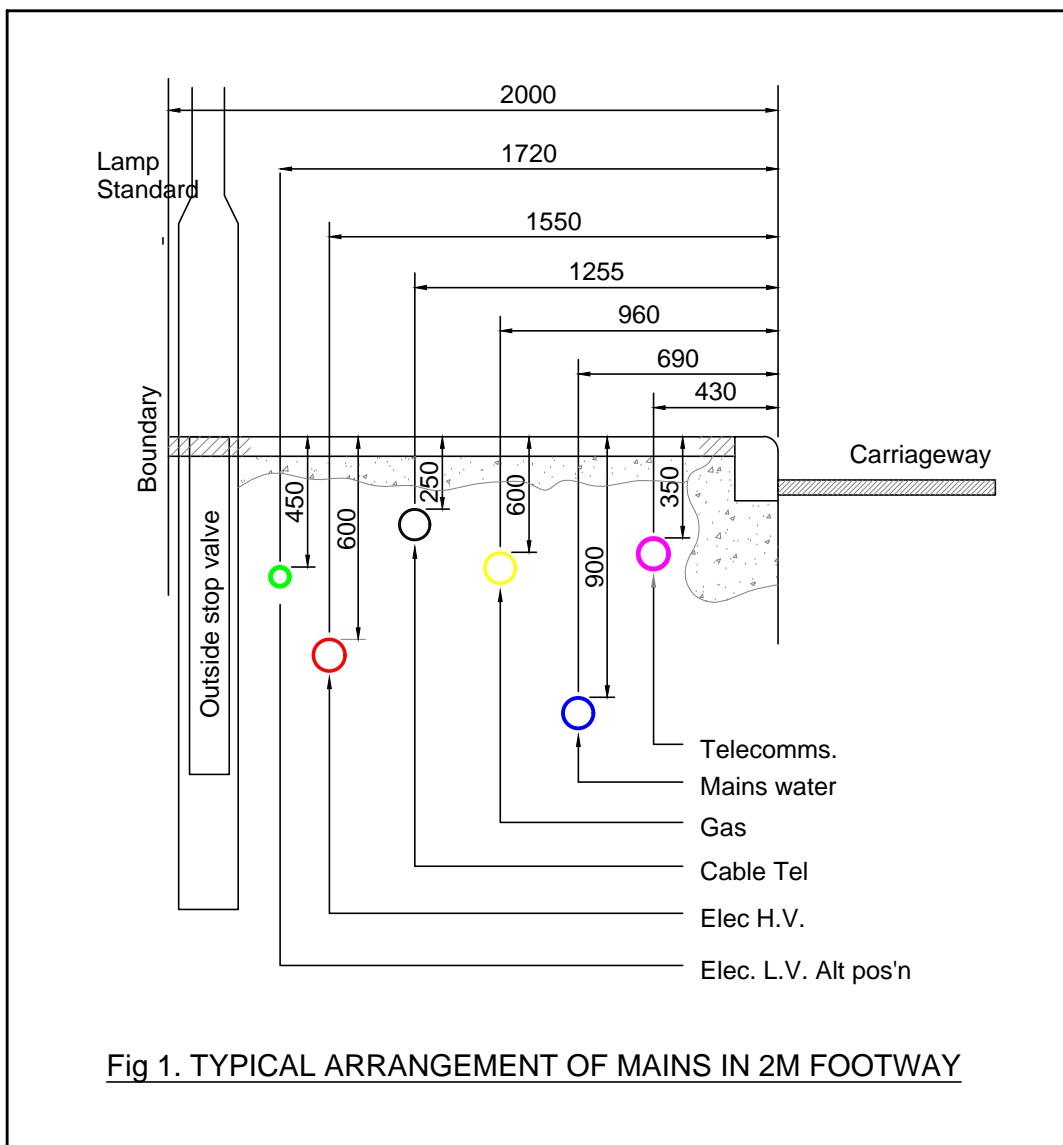
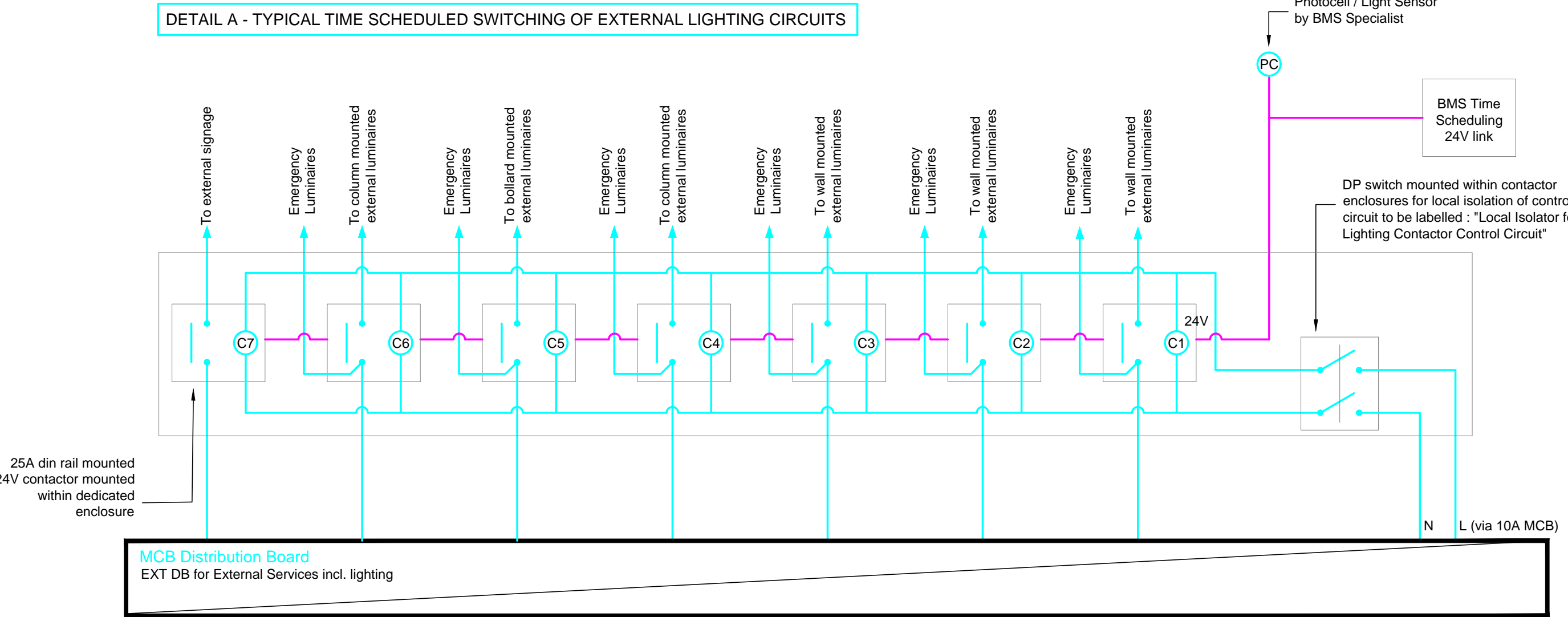
The external lighting will be designed and installed to provide adequate illumination of vehicular routes, pedestrian walkways and permanent car parking areas of the proposed development. This will be achieved without causing obtrusive light spillage and pollution upon the adjacent standing habitat and neighbouring properties situated to the east boundary 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 6m 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 57% downward LOR and 3% upward LOR. Along the proposed access road and car park, luminaire fixtures affixed to 6m galvanneal 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. Vandal resistant bollards are proposed along the north eastern border to illuminate the pedestrian footpath.

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.

DETAIL A - TYPICAL TIME SCHEDULED SWITCHING OF EXTERNAL LIGHTING CIRCUITS



Luminaire Reference	Luminaire Type / Mounting	Proposed Luminaire	Image
A-EXT	Surface Mounted LED c/w Polycarbonate refractor and wide distribution 3000K.	Thorlux Realta LED 8W Wide Distribution	
B1-EXT	LED 3000K Bollard c/w Pathway Distribution	Thorlux Passway 11W Pathway Distribution	
B2-EXT	LED 3000K Bollard c/w Area Distribution	Thorlux Passway 11W Area Distribution	
C-EXT	31W LED 3000K Column Mounted luminaire c/w 6m galvanneal tubular steel column	Thorlux Starbeam ECO 31W Area Distribution	
E-EXT	Surface Mounted LED Emergency Luminaire.	Thorlux Realta Micro LED 3W	

- 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.

Notes

- All luminaires shall be c/w 3000K colour temperature LEDs.
- The external lighting scheme shall be designed in accordance with ILE Guidelines.
- All external lighting circuits will be time controlled via BMS Time Scheduling.
- Refer to Stage 3 Luminaire Schedule for details of each luminaire.
- Cabling laid out under hard standing area shall be contained within high impact resistant ducting. Marker tape labelling to be placed 150mm above duct with sizes as indicated on the drawing.
- Final location and routing of all cabling shall be agreed on site with the Principal Contractor in conjunction with the requirements of this drawing, drainage layouts and slab penetration drawings provided by the Project Architect & Landscape Architect.
- All duct colours detailed below shall be verified by the Principal Contractor prior to installation.
- All works to be carried out in accordance with BS7671.
- The Contractor will ensure that all drivers, transformers and control gear are compatible with the lighting control system.
- This drawing shall be read in accordance with the M&E Stage 3 Report

Legend

- Type B distribution board

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

- None identified at date of issue.

Maintenance / Cleaning

- None identified at date of issue.

Decommissioning / Demolition

- 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
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Revisions

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Ysgol Trefethyr Criccieth

Drawing Title
Electrical Engineering Services
Proposed External Lighting Layout

Scale	@ A0	Date	Authorised	Checked	Engineer	Drawn
1:200	May 21	GBH	DC	BM	CR	
Revision	No	By	Date	Reason	Drawn	Checked
8774	Information	S1	P01			
YTC	MCP	V1	XX	DR	E	9000