

DRAWING NOTES

1. THIS SERVICES DRAWING IS TO BE READ IN CONJUNCTION WITH OODA'S, THE ARCHITECTURAL & STRUCTURAL ENGINEER'S SPECIFICATION / DRAWINGS.

LIGHTING NOTES

LIGHTING LAYOUTS

THE LIGHTING HAS BEEN DESIGNED TO MINIMISE LIGHT SPILL AND THE IMPACT ON THE LOCAL ECOLOGY. ENSURING LIGHT SPILL WITHIN THE DARK CORRIDOR IS KEPT BELOW 0.2 LUX ON THE HORIZONTAL PLANE AND 0.4 LUX ON THE VERTICAL BOUNDARIES OF THE DARK CORRIDOR.

THE MOUNTING LOCATIONS AND HEIGHTS OF THE LUMINAIRES HAVE BEEN CAREFULLY CONSIDERED TO ENSURE LIGHT SPILL IS CONTROLLED AS MUCH AS POSSIBLE.

COLOUR TEMPERATURE

THE LANDSCAPE LUMINAIRES ARE PROPOSED TO BE 2700K.

LUMINAIRES

EXTERNAL BOLLARD LUMINAIRE - EX1

MANUFACTURER Collingwood
MODEL Triple LED Wooden Bollard
DESCRIPTION 1m Bollard Luminaire
TYPICAL OUTPUT 2700K 156lm
MOUNTING HEIGHT Floor Mounted



EXTERNAL WALL LUMINAIRE - EX2

MANUFACTURER Astro
MODEL Bathroom Single
DESCRIPTION Wall Light
TYPICAL OUTPUT 2700K 250lm
MOUNTING HEIGHT Approx 1800mm



EXTERNAL FLOODLIGHT LUMINAIRE - EX3

MANUFACTURER Duxis
MODEL Opus 3
DESCRIPTION Asymmetric Floodlight
TYPICAL OUTPUT 2700K 4800lm
MOUNTING HEIGHT Approx 3000mm



EXTERNAL CANOPY LUMINAIRE - EX4

MANUFACTURER Light Graphics
MODEL L040
DESCRIPTION R6S Recessed Downlight
TYPICAL OUTPUT 2700K 135lm
MOUNTING HEIGHT Approx 2800mm
(In Camping Pod Porch Canopy)



SWITCHING, CONTROL AND HOURS OF OPERATION

EXTERNAL LIGHTING TO BE CONTROLLED VIA TIME CLOCK AND PIR SENSORS.

LIGHTING TO BE ON FROM DUSK TILL 10PM AND FOR 30 MINUTES BEFORE DAWN (WINTER MONTHS ONLY).

FROM 10PM THE LIGHTING WILL ONLY COME ON WHEN TRIGGERED BY LOCALISED PIR SENSORS.

CALCULATION AND ASSUMPTIONS

A MODEL OF THE SITE WAS CREATED IN LIGHTING CALCULATION SOFTWARE AND THE PROPOSED EXTERNAL LIGHTING APPLIED.

A MAINTENANCE FACTOR OF 1 WAS APPLIED TO THE CALCULATION TO ENSURE A WORST CASE SCENARIO WAS CALCULATED.

HORIZONTAL ILLUMINANCE

A HORIZONTAL CALCULATION PLANE WAS LOCATED AT FLOOR LEVEL ACROSS THE SITE, THE RESULTS OF WHICH HAVE BEEN SHOWN IN THE FORM OF ISOINES ON THE ADJACENT DRAWING.

ISO LUX KEY

0.1 LUX
0.2 LUX
0.5 LUX
1 LUX
5 LUX
10 LUX

VERTICAL ILLUMINANCE

A NUMBER OF VERTICAL PLANES WERE ALSO INCLUDED WITHIN THE CALCULATION MODEL ALONG THE BOUNDARIES OF THE DARK CORRIDOR TO INSURE LIGHT SPILL WAS KEPT BELOW 0.4 LUX ON THE VERTICAL BOUNDARY.

THE LOCATION OF THESE CALCULATION PLANES ARE NOTED ON THE ADJACENT DRAWING AND THE MAXIMUM ILLUMINANCE VALUES CALCULATED ON THESE NOTED BELOW:

VERTICAL PLANE 1
MAXIMUM ILLUMINANCE - 0.02 LUX

VERTICAL PLANE 2
MAXIMUM ILLUMINANCE - 0.2 LUX

VERTICAL PLANE 3
MAXIMUM ILLUMINANCE - 0.08 LUX

VERTICAL PLANE 4
MAXIMUM ILLUMINANCE - 0.01 LUX

VERTICAL PLANE 5
MAXIMUM ILLUMINANCE - 0.3 LUX

VERTICAL PLANE 6
MAXIMUM ILLUMINANCE - 0.04 LUX

VERTICAL PLANE 7
MAXIMUM ILLUMINANCE - 0.1 LUX

VERTICAL PLANE 8
MAXIMUM ILLUMINANCE - 0.01 LUX

--- DARK CORRIDOR BOUNDARY

DO NOT SCALE

P2 PRELIMINARY - WORKSHOP LIGHT ADDED AND NOTES UPDATED 15.02.2023

P1 PRELIMINARY - DARK CORRIDOR ADDED 02.02.2023

P PRELIMINARY 26.02.2023

Rev Description Date



Client:

BIKE PARK WALES

Project:

BIKE PARK WALES, MERTHYR TYDFIL

Drawing Title:
Electrical Services
EXTERNAL LIGHTING LAYOUT & LIGHT SPILL

Designed: Drawn: Checked: Scale: Paper Size:

BP BP SD 1:250 A0

Drawing Number: 3272-QODA-XX-XX-DR-E-0501 Rev. P2

0 1:250 5m 10m 15m 20m