	Luminaire A	Luminaire B	Luminaire C	Luminaire D	Luminaire E	Luminaire F
Supplier	TRT Lighting		TRT Lighting			TRT Lighting
Type	OPM16_LED_27W_GR5_(Blue)_2700K_FG_PSO	OPM16_LED_42W_GA2_BS_(Yellow)_2700K_FG_PSO	OPM16_LED_18W_GR5_(Blue)_2700K_FG_PSO	OPM16_LED_19W_GR5_LS_(Blue)_2700K_FG_PSO	OPM16_LED_27W_GR5_LS_(Blue)_1750K_FG_PSO	OPM16_LED_27W_GR5_(Blue)_1750K_FG_PSO
Lamp(s)	42 0027 0000 100	42 0042 0000 100	42 0019 0000 100	42 0019 0000 100	42 0027 0000 100	42 0027 0000 100
Lamp Flux (klm)	3.17	4.11	2.18	1.99	1.74	1.75
Maintenance Factor	0.87	0.87	0.87	0.87	0.87	0.87
No. in Project	17	7	16	1	2	5

Grid 1 Horizontal Illuminance (lux)

Pond

Ivy Cottage

Wildwood

Cilmeri

Ty Camlas

Pond Row

Upgraded roundabout to Site entrance

El Sub Sta

TRT LIGHTING
ROAD & TUNNEL SYSTEMS

PROJECT NAME:
Dragon Park, Merthyr Tydfil

PROJECT No:
River Levels Design Check

SCALE: **1:500**

DATE: **5 August 2025**

CALCULATION:
Horizontal Illuminance (lux)

DESIGNER:
Pete Harris

Lighting Residential Roads - Designed in Accordance with BS5489-1 2020
The main purpose of lighting for subsidiary roads, namely access roads, residential roads and associated pedestrian areas, footpaths and cycle tracks and areas associated with those roads is to enable pedestrians and cyclists to orientate themselves and detect vehicular and other hazards, and to discourage crime against people and property. The lighting on such roads can provide some guidance for motorists, but is unlikely to be sufficient for revealing objects on the road without the use of headlights.

P4 - Eav = 5.00-7.50 Lux, Emin 1.00 Lux

<=6.00m in environmental zones E1 or E2 from BS5489 LMF = 0.92
Maintenance factor = LLMF x LMF = 0.95 x 0.92 = 0.87

No account is taken for the blocking effect caused by buildings, trees etc.
The calculation shown by this drawing assumes that the whole area being considered is in the same plane, i.e. there are no changes in gradient or elevation.

This lighting design proposal is a suggested lighting layout to present how TRT products could be used to meet the design criteria. No design risk assessment has been conducted for the lighting layout and TRT may not have undertaken a site survey. The lighting design has been based entirely on information supplied by others and therefore TRT cannot be held responsible for any risk associated with implementation of the design. This lighting design proposal should be considered only as guidance and not as a final design for the purposes of Construction Design and Management Regs 2015.

PREPARED BY:

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Results Grid 1	
Eav	0.10
Emin	0.02
Emax	0.31
Emin/Emax	0.05
Emin/Eav	0.17