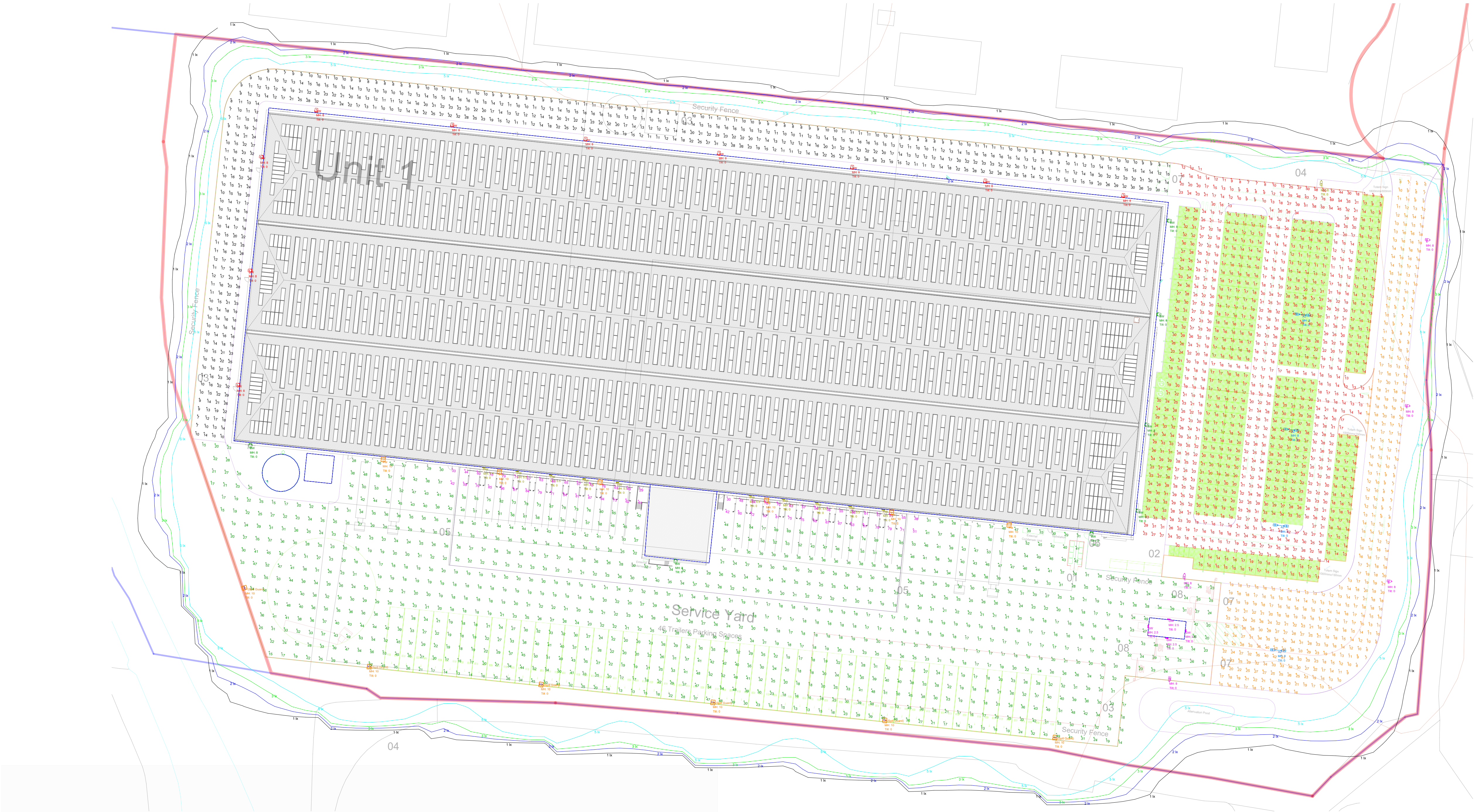


NOTES

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER MECHANICAL AND ELECTRICAL SERVICES DRAWINGS AND DOCUMENTATION.
2. REFERENCE SHALL BE MADE TO THE ARCHITECTURAL & STRUCTURAL DRAWINGS AND DOCUMENTATION WHEN READING THIS DRAWING.
3. ALL ELECTRICAL SERVICES SHALL BE INSTALLED IN ACCORDANCE WITH BS7671: 18th EDITION OF THE WIRING REGULATIONS.
4. REFERENCE SHALL BE MADE TO THE ARCHITECTURAL AND LANDSCAPE DRAWINGS AND DETAILS FOR SETTING OUT.
5. REFERENCE SHALL BE MADE TO THE ELECTRICAL SITEWIDE SERVICES DRAWING WHEN READING THIS DRAWING.
6. EXTERNAL LIGHTING SHALL BE CONTROLLED VIA PHOTOCELL AND TIMECLOCK ARRANGEMENT WITH A MANUAL OVERRIDE SWITCH.



LUMINAIRE PERFORMANCE SCHEDULE

	Colour Temperature (K)	Qty	Range	Light Source	Luminaire Lumens (lm)	Watts (W)	lm/W	LOR	Total Lumens	U.LOR	Upward Lumens	CRI	** ART Hour Per Day	CO ² (tonnes)	Kwh/Year
	4000	8	Viva City PRO	80w LED FW70	11040	80	138.00	100%	88320	0.0%	0	>90	12	0.59	2803.20
	4000	7	Viva City PRO Flood	120w LED FW70 (Flood)	14002	120	116.68	100%	98014	0.0%	0	>90	12	0.77	3679.20
	4000	1	Viva City PRO	120w LED FWB70	13780	120	114.83	100%	13780	0.0%	0	>90	12	0.11	525.60
	4000	10	Viva City PRO Flood	60w LED AY70 (Flood)	8780	60	146.00	100%	87600	0.0%	0	>90	12	0.55	2638.00
	4000	5	Viva City PRO	80w LED AYB70	6600	80	82.50	100%	33000	0.0%	0	>90	12	0.37	1752.00
	4000	12	ZACTIS	250w LED FW70	34250	250	137.00	100%	411000	0.0%	0	>90	12	2.76	13140.00
	4000	4	Semita Urban	11w LED ST	1496	11	136.00	100%	5984	0.0%	0	>90	12	0.04	152.72
	4000	10	Semita Urban	24w LED FL	8000	24	125.00	100%	80000	0.0%	0	>90	12	0.22	1051.20

ILP GUIDANCE NOTE 01 FOR THE REDUCTION OF OBTUSIVE LIGHT CALCULATION RESULTS

Table 1 Compliance			
Environmental Zone	E3		
Sky Glow	Target	Achieved	Status
	5.00%	0.00%	Pass
Source Intensity (candelas)			
Pre-Curfew	10,000		Pass
Post-Curfew	1,000		Pass
Light Trespass Into Windows (lux)			
Pre-Curfew	50		Pass
Post-Curfew	5		Pass
Building Luminance (cd/m²)	10		Pass

ENERGY AND EFFICACY CALCULATION RESULTS

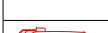
Total Installation Lumens	767698.00	Total Upward Light	0.00%
Total CO2 Per Year (Tonnes)		5.42	
Total Electric Consumption (kwh)		5.88	
Total Electric Consumption Per Year (kwh)		25771.92	
Average Luminaire Lumens Per Circuit Watt		136.47	

BREEAM COMPLIANCE STATUS

Pol 04	Reduction Of Night Time Light Pollution	Pass
Enr 02	Energy Efficient External Lighting	Pass
Hea 01	Internal And External Lighting Levels	Pass

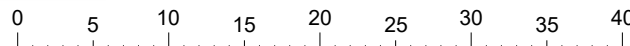
Note: HEAD1 in this report only applies to exterior lighting
** ART = (Average Run Time)

Luminaire Schedule

Symbol	Qty	Label	Arrangement	LLF	Description	Luminaire LW	UWLR	TM65 & TM66 Information
	4	A2	BACK-BACK	0.900	2 x 80W LED 4000K VIVA-CITY Pro 805mA with FW70 forward throw optic column mounted at 8m	138	0.00	TM65 Embodied Carbon = 123kg CO ₂ e - TM66 Circular Economy Score = 2.9 (2.5-4.0 Excellent Circularity)
	7	BW	SINGLE	0.900	120W LED 4000K VIVA-CITY Flood 810mA with FW70 forward throw optic wall mounted at 8m	116	0.00	TM65 Embodied Carbon = 130kg CO ₂ e - TM66 Circular Economy Score = 2.9 (2.5-4.0 Excellent Circularity)
	1	C	SINGLE	0.900	120W LED 4000K VIVA-CITY Pro 620mA with FWB70 forward throw optic column mounted at 8m	115	0.00	TM65 Embodied Carbon = 182kg CO ₂ e - TM66 Circular Economy Score = 2.9 (2.5-4.0 Excellent Circularity)
	10	DW	SINGLE	0.900	60W LED 4000K VIVA-CITY Flood 610mA with AY70 street optic wall mounted at 8m	146	0.00	TM65 Embodied Carbon = 96kg CO ₂ e - TM66 Circular Economy Score = 2.9 (2.5-4.0 Excellent Circularity)
	5	E	SINGLE	0.900	80W LED 4000K VIVA-CITY Pro 805mA with AYB70 street optic column mounted at 8m	82	0.00	TM65 Embodied Carbon = 123kg CO ₂ e - TM66 Circular Economy Score = 2.9 (2.5-4.0 Excellent Circularity)
	6	FW	SINGLE	0.900	250W LED 4000K ZACTIS Flood 640mA with FW70 forward throw optic wall mounted at 10m	142	0.00	TM65 Embodied Carbon = 289kg CO ₂ e - TM66 Circular Economy Score = 2.9 (2.5-4.0 Excellent Circularity)
	6	F (Split Guard)	SINGLE	0.900	250W LED 4000K ZACTIS Flood 640mA with FW70 forward throw optic column mounted at 10m	142	0.00	TM65 Embodied Carbon = 289kg CO ₂ e - TM66 Circular Economy Score = 2.9 (2.5-4.0 Excellent Circularity)
	4	GW	SINGLE	0.900	11W LED 4000K SEMITA Urban 410mA with ST street optic wall mounted at 2.5m	137	0.00	TM65 Embodied Carbon = 44kg CO ₂ e - TM66 Circular Economy Score = 2.8 (2.5-4.0 Excellent Circularity)
	10	HW	SINGLE	0.900	24W LED 4000K SEMITA Urban 920mA with FL flood optic wall mounted at 5.5m	125	0.00	TM65 Embodied Carbon = 44kg CO ₂ e - TM66 Circular Economy Score = 2.8 (2.5-4.0 Excellent Circularity)

ILLUMINATION AND UNIFORMITY CALCULATION SUMMARY

Label	CalcType	Units	Avg	Max	Min	Uniformity (Min/Avg)	Diversity (Min/Max)	Meter Type	Description
Car Park	Illuminance	Lux	21.10	76	7	0.33	0.09	Horizontal	
Fire Track Road	Illuminance	Lux	15.49	33	6	0.39	0.18	Horizontal	
Loading Bays	Illuminance	Lux	65.67	96	29	0.44	0.30	Horizontal	
Main Access Road	Illuminance	Lux	17.59	44	5	0.28	0.11	Horizontal	
Service Yard	Illuminance	Lux	30.01	82	13	0.43	0.16	Horizontal	



SCALE 1:500

m

P02	BACKGROUND UPDATE	HC	LW	MH	19-10-23
P01	PRELIMINARY ISSUE	ST	LW	MH	26-06-23
Revision	Description	Drawn By	Engineer	Approved	Date



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PRELIMINARY

Client

TRITAX

Project/Site Location

WATERFOLD BUSINESS PARK

Drawing Title

SITE WIDE PROPOSED EXTERNAL LIGHTING LAYOUT

Scale	Size	Drawn By	Engineer	Approved	Date
1:500	A1	ST	LW	MH	Sep'23
Drawing Reference					Revision

6473-CBC-00-XX-DR-E-63001

P02