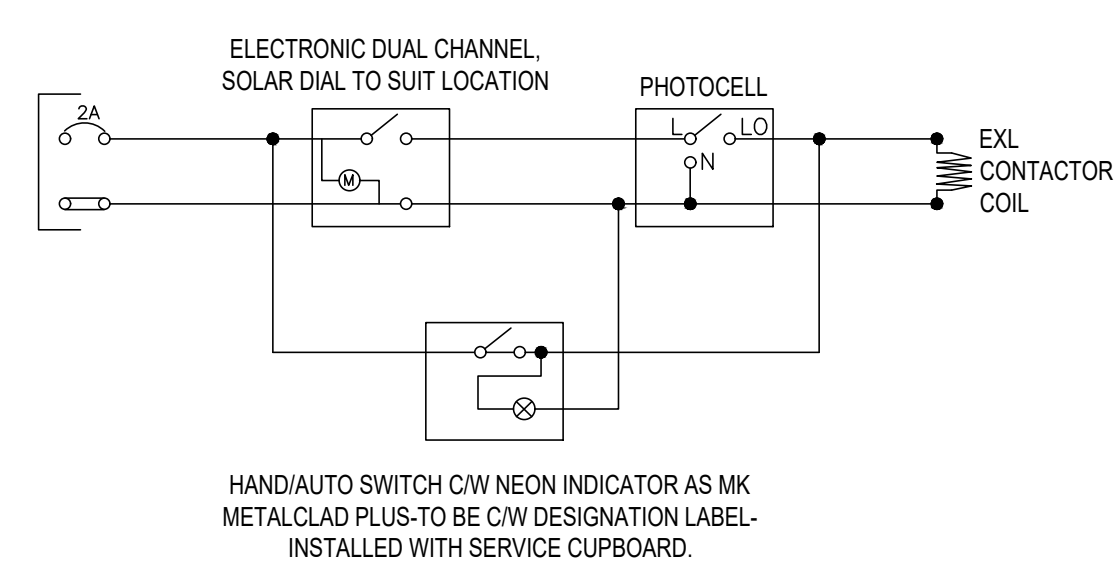
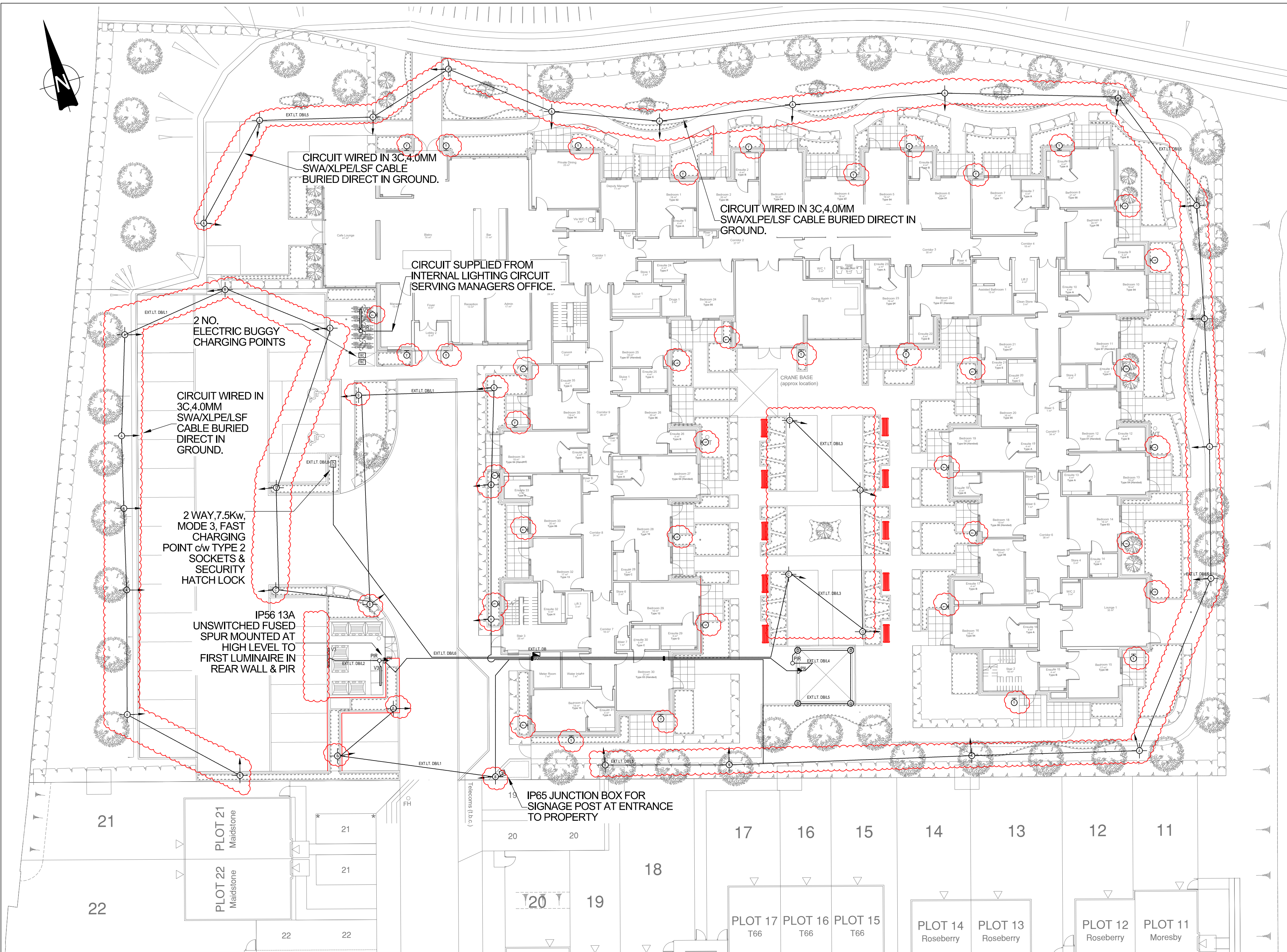
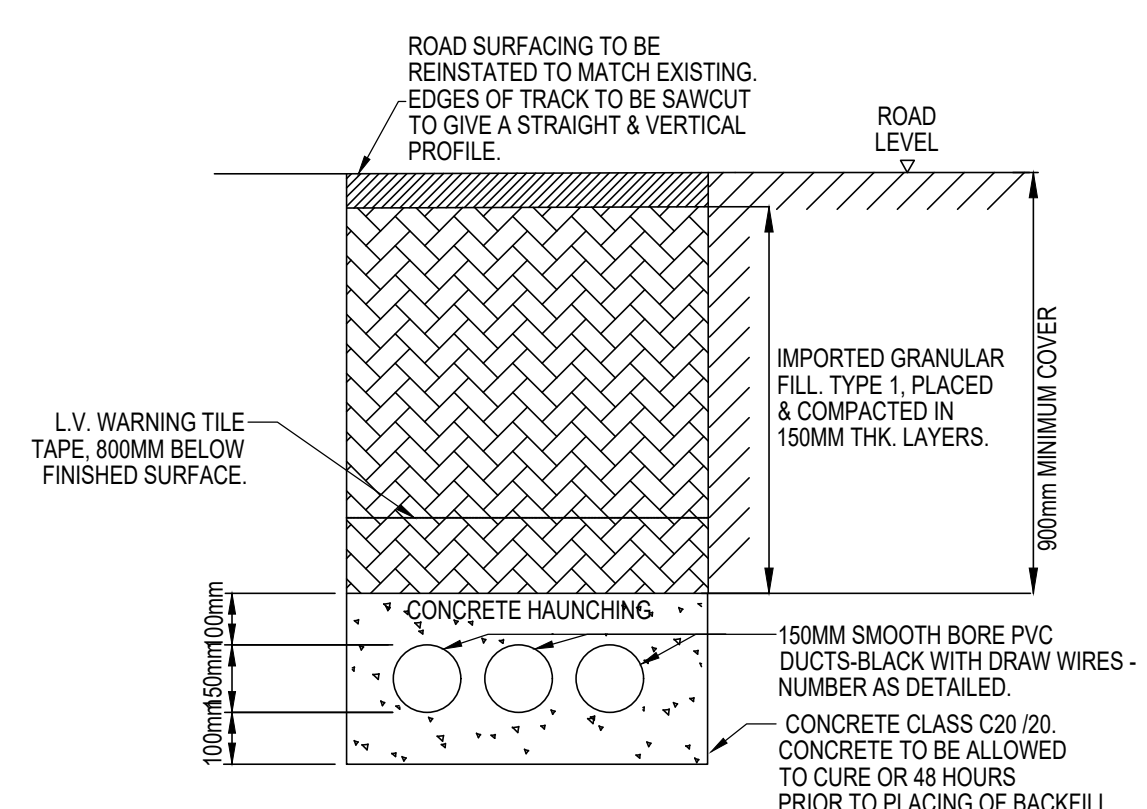


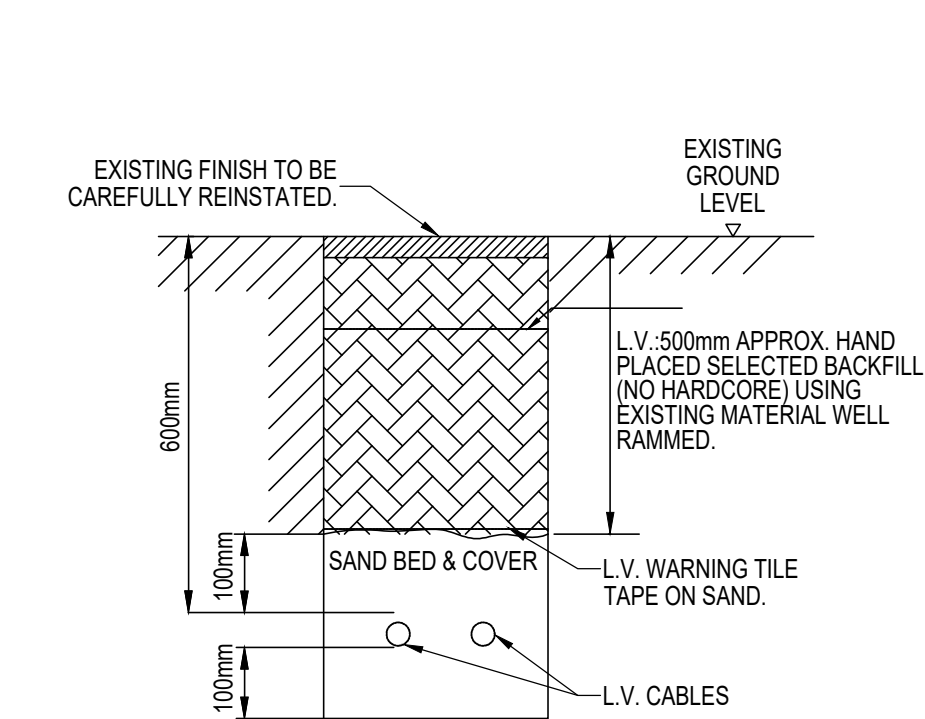


NOTE:
ALL INTERNAL WIRING TO BE 1.5MM² LSZH CABLE IN SURFACE GALVANISED CONDUIT.
FINAL CONNECTION TO PHOTOCELL BY MULTI-CORE FLEXIBLE CABLE VIA AN IP65 PVC JUNCTION BOX. ALL EXTERNAL TERMINATIONS TO BE PROTECTED TO IP65 MIN.

INDICATIVE EXTERNAL LIGHTING CONTROL
WIRING DIAGRAM (N.T.S.)



TYPICAL DETAIL OF L.V. CABLES AT
ROAD CROSSING (N.T.S.)



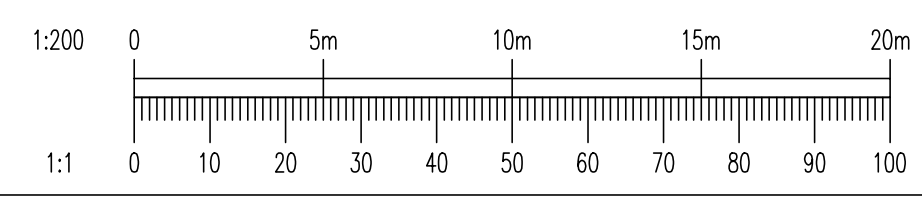
TYPICAL DETAIL OF L.V. CABLES LAID IN
GROUND (N.T.S.)

- LEGEND
- AS TYPE B c/w SPILL/ SHIELD (AS GEMMA LIGHTING - HAMILTON 10W)
 - 10W, IP55, IK10, DIE CAST ALUMINIUM BOLLARD, 960mm x Ø180mm, 20W WITH 1,320lm LED RATING W/ 1,874lm AT 4000K WITH CR> 70. LED LIFE SPAN>100,000 HRS USING OSRAM LEADS AND OSRAM DRIVER. C/W INTEGRAL (3HR EMERGENCY / MINI PHOTOCELL). (AS GEMMA LIGHTING - HAMILTON 10W)
 - 20W, IP55, IK10 BLACK FLAT HEAD LED BOLLARD WITH POLYCARBONATE DIFFUSER, 860mm x Ø180mm, 2,640lm LED RATING W/ 1,874lm AT 4000K WITH CR> 70. HOUSING WITH TAMPER ROOF FIXINGS. LED LIFE SPAN OF 100,000 HRS USING OSRAM LEADS AND OSRAM DRIVER. c/w INTEGRAL (3HR EMERGENCY / MINI PHOTOCELL). (AS GEMMA LIGHTING - HAMILTON 20W)
 - 1X 18W SURFACE MOUNTED EYEDIE TYPE SURFACE LUMINAIRE C/W POLYCARBONATE DIFFUSER & PRESENCE DETECTION. IP65 RATED, ANSELL OR EQUAL.
 - IP RATED JUNCTION BOX
 - EXTERNAL DISTRIBUTION BOARD. FINAL LOCATION TO BE CONFIRMED ON SITE
 - 13A, IP54 RATED UNSWITCHED FUSED SPUR UNIT.
 - EXTERIOR GU 10, DIE-CAST, MATT BLACK, ALUMINIUM LUMINAIRE, SURFACE MOUNTED, AT HIGH LEVEL INSIDE PERGOLA FEATURE TO ILLUMINATE ROOF STRUCTURE.

- INSTALLATION NOTES
- THE ELECTRICAL INSTALLATION SHALL FULLY COMPLY WITH 18TH EDITION B.S.7671: 2018 INCLUDING ALL AMENDMENTS & GUIDANCE NOTES.
 - ALL EXTERNAL LIGHTING SHALL BE CONTROLLED BY MEANS OF A PHOTOCELL/ELECTRONIC SOLAR DIAL TIME SWITCH C/W HAND/AUTO SWITCH WITH NEON INDICATOR & DESIGNATION LABEL.
 - ALL CABLING ACROSS ROADS SHALL BE CONTAINED WITHIN DUCTS HUNCHED IN CONCRETE. THE ELECTRICAL CONTRACTOR SHOULD ALLOW FOR ALL TESTING & COMMISSIONING AND ENSURE PERFORMANCE TO MANUFACTURERS CLAIMS. CONTRACTOR TO ENSURE THE PRODUCTION OF ALL RELEVANT CERTIFICATES IN A TIMELY MANNER.
 - CONTRACTOR MUST INCLUDE FOR ALL BUILDERSWORK & ENSURE FIRE COMPARTMENTATION IS RETAINED THROUGHOUT WHERE APPLICABLE. ELECTRICAL SERVICES, PLANT SUPPORTS & ACCESS EQUIPMENT REQUIRED TO COMPLETE THE WORKS.
 - CONTRACTOR MUST READ ALL EMPLOYER REQUIREMENTS & ELECTRICAL SERVICES PERFORMANCE SPECIFICATION, PRIOR TO CARRYING OUT WORKS AND PRODUCE FULLY DETAILED DESIGN LAYOUTS
 - SEPARATE ELECTRONIC DUAL CHANNEL SOLAR DIAL TIME CLOCKS TO BE PROVIDED TO ALLOW FOR CONTROL OF WALL MOUNTED FITTINGS AND CAR PARK BOLLARDS SEPARATELY.
 - WIRING - WALL MOUNTED REF.Y. WIRING SHALL BE BY MEANS OF 3 CORE 1.5mm XLPE-SWA-LSF CABLING CONTAINED ON MDRF GALVANISED TRAY INTERNALLY WALL WITH PVC CONDUIT OFFERING PROTECTION THROUGH EXTERNAL WALL. THE CONDUIT SHALL TERMINATE AT THE REAR OF EACH LUMINAIRE IN A FLUSH BESA BOX IN SUCH AS POSITION THAT SAME CAN BE SUITABLY SEALED AGAINST THE INGRESS OF WATER ETC.
 - BOLLARDS WIRING SHALL BE BY MEANS OF 3 CORE XLPE-SWA-LSZH CABLES INSTALLED IN GROUND. ALL FINAL CABLE TERMINATIONS SHALL BE EXECUTED IN BRASS E1W IP66 CABLE GLANDS C/W SHROUDS. IP66 SEALING WASHERS TO SUIT CABLES DETAILED. ALL CABLING ACROSS ROADS SHALL BE CONTAINED WITHIN DUCTS HAUNCHED IN CONCRETE.
 - EXTERNAL LIGHTING TO MEET BREEAM 2014 REQUIREMENTS HEA 014. VISUAL COMFORT ENL03 EXTERNAL LIGHTING AND POL04 REDUCTION OF NIGHT TIME LIGHT POLLUTION.
 - TO MEET BREEAM 2014 ENL03 EXTERNAL LIGHTING. ALL EXTERNAL FITTINGS, WHERE PROVIDED, WITHIN THE CONSTRUCTION ZONE MEET LIGHTING REQUIREMENTS AS GIVEN IN TABLE 11 BELOW:

(Table 11)		
LED Luminaires Where The Lamp Is Integral To The Fitting Measured In Luminaire Lumens/ Circuit Watt, When:		
External Lighting Location	Colour Rendering Index (Ra) ≥ 60	Colour Rendering Index (Ra) < 60
Building, access ways, pathways	40	50
Car parking, associated roads, floodlighting	55	60
	Lamp wattage ≥ 25W	Lamp wattage < 25W

- EXTERNAL LIGHT FITTINGS ARE CONTROLLED THROUGH A TIME SWITCH, OR DAYLIGHT SENSOR, TO PREVENT OPERATION DURING DAYLIGHT HOURS. DAYLIGHT SENSOR OVERRIDE ON A MANUALLY SWITCHED LIGHTING CIRCUIT IS ACCEPTABLE AS PER DETAIL.
- TO MEET BREEAM 2014 POL04 REDUCTION OF NIGHT TIME LIGHT POLLUTION THE EXTERNAL LIGHTING STRATEGY HAS BEEN DESIGNED IN COMPLIANCE WITH TABLE 2 (AND ITS ACCOMPANYING NOTES) OF THE ILP GUIDANCE NOTES FOR THE REDUCTION OF OBTRUSIVE LIGHT, 2011. THIS CAN BE DEMONSTRATED VIA COMPLETION OF THE CHECKLISTS IN ANNEXES B AND C OF THE GUIDANCE NOTE BY A RELEVANT MEMBER OF THE DESIGN TEAM. ALL EXTERNAL LIGHTING (EXCEPT FOR SAFETY AND SECURITY LIGHTING) CAN BE AUTOMATICALLY SWITCHED OFF BETWEEN 23:00 AND 07:00AM. IF SAFETY OR SECURITY LIGHTING IS PROVIDED AND WILL BE USED BETWEEN 23:00 AND 07:00, THIS PART OF THE LIGHTING SYSTEM COMPLIES WITH THE LOWER LEVELS OF LIGHTING RECOMMENDED DURING THESE HOURS IN TABLE 2 OF THE ILP'S GUIDANCE NOTES.
 - VEHICLE CHARGING POINT VEHICLE CHARGING POINT TO BE SUPPLIED FROM THE DISTRIBUTION BOARD VIA A 40 AMP SPN, MCB TYPE C. CIRCUIT TO WIRED VIA A 3C, 6.0MM XLPE.SWA LSF CABLE. EV PEDESTAL CHARGER SHALL BE c/w 2NO, MODE 3, FAST CHARGING SINGLE PHASE OUTLETS READY WITH SMART CHARGING CONTROL VIA MOBILE AND/OR RFID CARDS, ON BOARD GPRS MODEM WITH ANTENNA, ETHERNET CONNECTION.
 - ALL EXTERNAL LIGHTING INCLUDING CYCLE STORAGE FACILITY WILL BE IN ACCORDANCE WITH BS5489- 1 2013 & BS EN 12464- 2 2014.



Rev. Description Date Initials Checked

A UPDATED TO DALTON HOMES COMMENTS AUG 22 KD DMB

Status CONSTRUCTION

Client BEDHAMPTON CARE LTD. & DALTON HOMES

Location HAVANT ROAD, BEDHAMPTON, PO9 3LW

Drawing Title ELECTRICAL SERVICES PROPOSED EXTERNAL LIGHTING LAYOUT

Project Ref. 9120

Dwg. No. E(90)001

Rev. A

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