

TYPICAL STREET LIGHTING EARTH ELECTRODE PIT DETAIL
SCALE 1:15

NOTES

ALL BACKFILLING MATERIAL IS TO BE PLACED IN 150mm THICK LAYERS AND TO BE WELL COMPACTED.

DURING COMPACTING, CARE IS TO BE TAKEN TO ENSURE THAT THE CORROSION PROTECTION SYSTEM OF THE LIGHTING COLUMN IS NOT DAMAGED.

WHERE THE HOLE IS BACKFILLED WITH CONCRETE, THE CONCRETE IS TO EXTEND FROM THE BASE OF THE LIGHTING COLUMN TO GROUND LEVEL.

WHERE FINISHING OR BITUMINOUS SURFACING IS TO BE APPLIED AROUND THE LIGHTING COLUMN, THE TOP LEVEL OF THE CONCRETE LAY BE LOWERED BY THE THICKNESS OF THE SURFACING.

A DUCT WITH THE SAME DIMENSIONS AS THE LIGHTING COLUMNS CABLES ENTRY SLOT IS TO BE FORMED IN THE CONCRETE USING A SUITABLE PRE-FORMED LINING TUBE.

TYPICAL STREET LIGHTING COLUMN BASE DETAIL
SCALE 1:15

STREET LIGHTING SPECIFICATION FOR ESTATE ROAD

THE LIGHTING INSTALLATION MUST BE INSTALLED TO THE APPROPRIATE BS5489/EN13201 STANDARD WITH SUPPORTING DOCUMENTATION FOR APPROVAL. THE REGIONAL ELECTRICITY COMPANY SUPPLY MUST TERMINATE WITHIN A GALVANISED FEEDER PILLAR TO BE INSTALLED WITHIN THE DEVELOPMENT. THE METHOD OF DISTRIBUTION MUST BE UNDERGROUND CABLE AND CALCULATIONS MUST BE WITHIN + OR - 4% VOLT DROP. ALL CUT OUTS WITHIN COLUMNS AND FEEDER PILLARS MUST BE DOUBLE POLE ISOLATION. THE ELECTRICAL INSTALLATION MUST COMPLY WITH THE LATEST EDITION OF THE IEE WIRING REGULATIONS. AN EARTH ROD MUST BE INSTALLED ADJACENT TO EACH LIGHTING CIRCUIT TERMINATION AND BE ENCLOSED WITHIN A SUITABLE EARTH ROD CHAMBER.

SPECIFICATION:

- COLUMNS** - 6000 SERIES ALUMINIUM ALLOY CONTINUOUSLY TAPERED OR CONICALLY EXTRUDED, WITH NO WELDS OR JOINTS (ALUMINIUM LIGHT COMPANY LTD OR SIMILAR) WITH SEPARATE EARTHING CONNECTION. AN INTERNAL STRENGTHENING TUBE IS TO BE INCORPORATED INTO THE LOWER SECTION, TOGETHER WITH INTEGRATED FIXING RAIL. THIS TUBE MUST BE FITTED USING AN EXPANSION METHOD AND ALSO MUST BE JOINT AND WELD FREE TO ENSURE MAXIMUM STRENGTH. THE ROOT SECTION IS TO BE COATED WITH A GREY THERMOPLASTIC CO-POLYMER (VIA A HEAT SYSTEM) TO ENSURE BONDING OCCURS TO BOTH INNER AND OUTER SURFACES. ACCESS DOORS ARE TO BE DUAL LOCKING AND FLUSH MOUNTED. ALL TO COMPLY WITH BS5649/EN40.
- SWITCHING METHOD** - PHOTO ELECTRIC ONE PART NEMA CELLS - PART NIGHT WITH MINIMUM IP67 RATING AND WITH MINIMUM GUARANTEE OF SIX YEARS FITTED TO A NEMA SOCKET TO EACH AND EVERY LANTERN. TO BE FULLY ELECTRONIC WITH A SWITCH ON LEVEL OF 70 LUX AND BE ABLE TO SWITCH ON AT DUSK, OFF AT DAWN AND OFF AT 00:00 (MIDNIGHT) AND BACK ON AT 05:30 AM. MANUFACTURED BY SELCO REFERENCE 8480-PN.
- FEEDER PILLARS** - GALVANISED STEEL CONSTRUCTION AND SHOULD BE VANDAL RESISTANT WITH TAMPER PROOF LOCK AND SUFFICIENT CABLE TERMINATIONS FOR INSTALLED SYSTEM.
- CONTROL GEAR** - GEAR MUST BE FULLY ELECTRONIC AND ENCLOSED WITHIN THE LANTERN.
- CABLE** - XLPE STEEL WIRE ARMoured PVC/PVC INSULATION 10mm² 3 CORE COPPER CONDUCTORS, BURIED 450mm IN FOOTPATHS AND 750mm IN ROAD CROSSINGS - COMPLETE LENGTH OF CABLE ROUTE DUCTED, DUCTS TO BE 62mm OD FLEXI-DUCT PVC ORANGE COLOUR WITH MARKER TAPE INDICATING "PUBLIC LIGHTING CABLE BELOW", WITH CABLES BEING LOOPED FROM ONE COLUMN TO THE OTHER ALL AS PEMBROKESHIRE COUNTY COUNCIL SPECIFICATION "EARTH ELECTRODE INSTALLED AT LAST COLUMN (16mm² EARTH WIRE TO BE USED) CONTAINED WITHIN PROPRIETARY CONCRETE INSPECTION CHAMBER. WHERE FLEXI-DUCT CROSSES UNDER THE ROADWAY PROVIDE A 100mm Ø ORANGE COLOURED DUCT TO FEED THROUGH 62mm OD FLEXI-DUCT.

REQUIRED DESIGN LEVEL FOR COLUMNS & LANTERNS:

BS 5489 / EN 13201:2003, S5
 MINIMUM ILLUMINANCE = $E_{min} \geq 0.6 \text{ lux}$
 MEAN ILLUMINANCE = $E_m \geq 3.0 \text{ lux}; \leq 4.5 \text{ lux}$

LANTERNS SELECTED BY DESIGN (REDESIGN MUST BE CARRIED OUT SHOULD ALTERNATE SPECIFICATION OF LANTERN USED):

LIGHTING LEVEL S5 BY URBIS AXIA LANTERN WITH 4 NEUTRAL WHITE LED OPTIC: 5079 CURRENT: 350mA - AXIA_Clear P_5079_16LEDs 350mA NW (2.4 km)_19_31313F_31313FZ2 (MEDIUM WIDTH ROAD) WITH NEMA SOCKET AND INTEGRAL ELECTRONIC CONTROL GEAR AS ABOVE.

MOUNTING HEIGHT - 6 METRES
 INCLINATION - 0°
 BRACKET LENGTH - POST TOP MOUNTED
 COLUMN LOCATION - AS SHOWN ON PLAN

MAINTENANCE FACTOR - 0.82
 (36 MONTH CLEANING CYCLE & 60,000 HOURS BURN TIME)

QUANTITY OF LANTERNS AND COLUMNS - 4

COLUMNS ORIENTATED THAT ACCESS PANEL FACES AWAY FROM ON-COMING TRAFFIC FLOW - IF IN DOUBT ASK.

NOTES:

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THE CONTRACTOR IS TO CHECK ALL LEVELS AND DIMENSIONS BEFORE WORK COMMENCES, AND ANY DISCREPANCIES TO BE REPORTED IMMEDIATELY TO THE CONSULTANTS.

WORK TO FIGURED DIMENSIONS IN PREFERENCE TO SCALING.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER ROGER CASEY ASSOCIATES DRAWINGS AND SPECIFICATIONS AND ALL OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS RELATING TO THIS PROJECT.

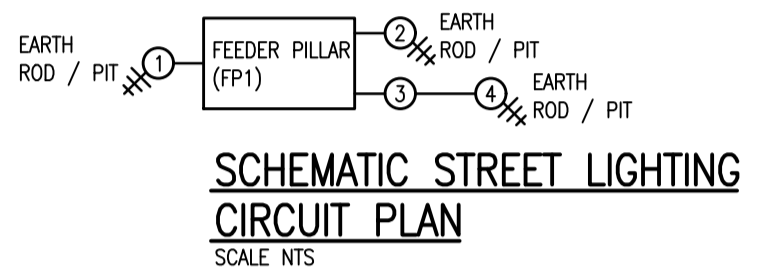
STREET LIGHTING DESIGN LEGEND

LUX CONTOUR AND VALUE $\frac{1.0}{7.5}$

LUX GRID POINT AND VALUE +2.0

KEY

- SL - STREET LIGHTING COLUMN
- FP - STREET LIGHTING FEED PILLAR
- ER - STREET LIGHTING EARTH ROD AND PIT
- RD - PROPOSED DUCTED STREET LIGHTING CABLE ROUTE



SCHEMATIC STREET LIGHTING CIRCUIT PLAN
SCALE NTS

REV	DESCRIPTION	DATE	DRAWN	CHECKED	DATE
A	STREET LIGHTING DESIGN UPDATED FOR NEW ARCHITECTURAL LAYOUT	16/05/19	DM	PWJL	16/05/19

DRAWING STATUS: PLANNING

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DRAWING TITLE: STREET LIGHTING SITE PLAN

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