ELECTRICAL SCHEMATIC KEY

CIRCUIT REFERENCE	TERMINATION TYPE
FUSE TYPE	FUSE SIZE
CABLE SIZE AND TYPE	

EARTH ELECTRODE (WHEN APPLICABLE)

EQUIPMENT DETAILS

UNIT REFERENCE IDENTIFICATION NUMBER
FUSE SIZE
TERMINATION TYPE

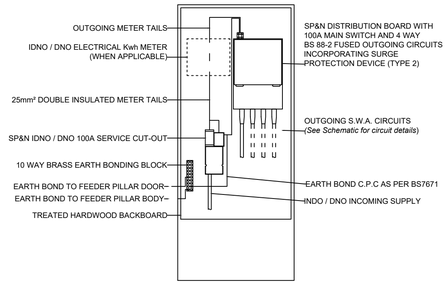
EARTH ELECTRODE (WHEN APPLICABLE)

ELECTRICAL SCHEMATIC DETAIL

FP01	T3
BS 88 Type 2	16A
6MM² 3 CORE CU XLPE/PVC/SWA/PVC	

PR01 6A T2
PR02 6A T2
PR03 6A T2
PR04 6A T1

METERED FEEDER PILLAR DETAIL

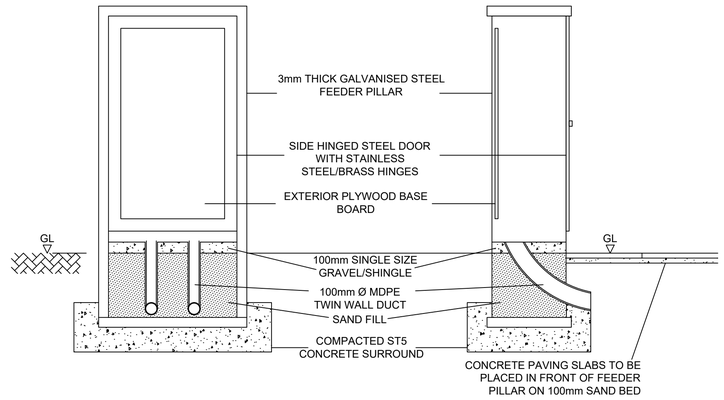


METERED FEEDER PILLAR - SCHEMATIC

DNO / IDNO SUPPLY — 100A BS88-2 FUSE
25MM ² DOUBLE INSULATED TAILS
ELECTRICITY METER
25MM² DOUBLE INSULATED TAILS
SECONDARY ISOLATION — BS88-2 FUSE + SPD (Type 2) (Refer to schematic for fuse size)
XLPE/PVC/SWA/PVC CABLE (Refer to schematic for cable size)
LIGHTING COLUMN LOCAL ISOLATION — 6A BS88-2 FUSE
1.5MM² FLEXIBLE CORD
LIGHTING COLUMN LUMINAIRE

TYPICAL STREET LIGHTING FEEDER PILLAR

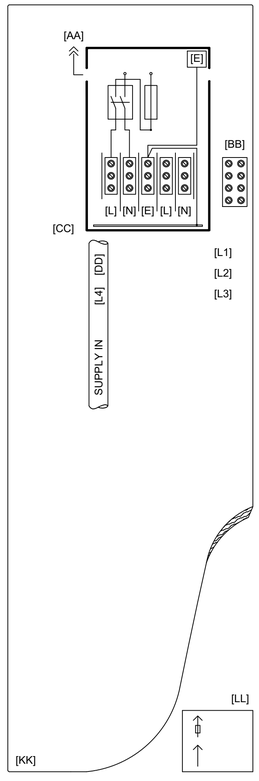
REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION DETAIL AND SPECIFICATION



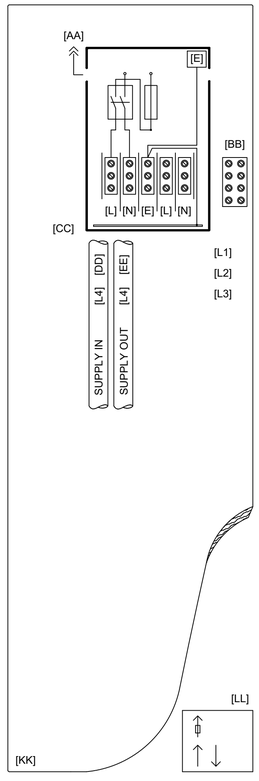
TERMINATION KEY

ITEM	DESCRIPTION
[AA]	CABLE TO LIGHTING UNIT
[BB]	BRASS EARTH BLOCK WITH INDIVIDUAL PVC 6491X GREEN/YELLOW EARTH CABLES
	BONDED TO THE FOLLOWING COMPONENTS:
	CUT-OUT GLAND PLATE, BASE COMPARTMENT DOOR,
	DISTRIBUTION NETWORK OPERATOR CUT-OUT, BASE COMPARTMENT MAIN EARTH STUD.
	(ALL EARTH CABLES SHALL BE SIZED IN ACCORDANCE WITH BS 7671: 2018)
[CC]	CUT-OUT INCORPORATING THE FOLLOWING COMPONENTS:
	DOUBLE POLE ISOLATION SWITCH
	OUTGOING WAYS FUSED WITH BS 88 FUSES
	CUT-OUT EXTENSION BOX WITH TERMINAL BLOCK
	3mm BRASS GLAND PLATE WITH 3No. INCOMING / OUTGOING WAYS
	NATURAL RUBBER CABLE GROMMETS
[DD]	INCOMING PRIVATE SUPPLY CABLE
[EE]	OUTGOING PRIVATE SUPPLY CABLE
[FF]	OUTGOING PRIVATE FUSED SUPPLY CABLE
[GG]	6mm² PVC/PVC 6181Y SINGLES
[HH]	(INDEPENDENT) DISTRIBUTION NETWORK OPERATOR CUT-OUT
[JJ]	(INDEPENDENT) DISTRIBUTION NETWORK OPERATOR SUPPLY CABLE
[KK]	BASE COMPARTMENT BACKBOARD
[LL]	SCHEMATIC OF TERMINATION ARRANGEMENT
[NN]	25mm² PVC/PVC 6181Y SINGLES
[OO]	MINI FEEDER PILLAR BACKBOARD
[PP]	4 WAY SINGLE POLE & NEUTRAL DISTRIBUTION BOARD, INCORPORATING:
	METAL CLAD CASE
	DOUBLE POLE ISOLATION SWITCH
	BS 88 FUSES
	NATURAL RUBBER CABLE GROMMETS
[QQ]	SURGE PROTECTION DEVICE (TYPE 2)
[L1]	EARTH BLOCK LABEL "SAFETY ELECTRICAL CONNECTION - DO NOT REMOVE"
[L2]	PME WARNING LABEL "WARNING PME SERVICE POINT"
[L3]	PME WARNING LABEL "PRIVATE CABLE NETWORK LOOPED VIA PME SERVICE POINT"
[L4]	SOURCE/DESTINATION CABLE IDENTIFICATION MARKER LABELS
NOTES	
1	[DD] , [EE] & [FF] CABLES SHALL BE CLEATED TO THE BASE COMPARTMENT BACKBOARD
	APPROXIMATELY 200mm BELOW CUTOUT
2	[AA] DRIP LOOP MUST BE FORMED USING CABLE TIE
3	[L2] & [L3] SHALL BE INSTALLED WHEN APPLICABLE TO THE ELECTRICAL INSTALLATION
4	[L1] MUST BE INSTALLED ADJACENT TO EARTH BLOCK [BB]

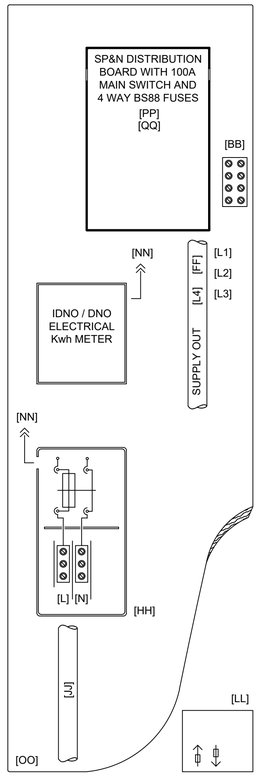
TERMINATION TYPE: 1



TERMINATION TYPE: 2



TERMINATION TYPE: 3



GENERAL NOTES

1. Before construction commences, the site engineer shall ensure that all design information is mutually compatible with all other drawings and documents provided by the overseeing organisation and all drawings and documents are to be read in conjunction with one another.
2. In the event of apparent ambiguity or contradiction, SHD Lighting Consultancy Ltd and the overseeing organisation shall be notified immediately.
3. SHD Lighting Consultancy Ltd accept no liability in the event of not being notified and where construction work has commenced.
4. This lighting design has been prepared in accordance with the HEMSA/HEA Guidance Note - CDM2015 Regulations, Issue 1.1 dated 09/04/15 - Procedure 2 and The Construction (Design and Management) Regulations 2015 - PART 3 Health and safety duties and roles - 9. Duties of designers.

NOTES

1. All drawings and documents are to be read in conjunction with one another and are mutually compatible and shall be read as such.
2. Any inaccuracies are to be reported to the overseeing organisation immediately.
3. The information on this drawing does not account for installation considerations, site conditions or provide any form of risk assessment.
4. Electrical installation work shall be carried out in accordance with the requirements of the latest edition of the IET wiring regulations, BS 7671
5. The planting of trees near to lighting columns is to be avoided as future growth may inhibit lighting levels. Due to the layout of the plots and associated driveways it is inevitable that there will be conflict with proposed landscaping features. Where such instances occur the street lighting column locations will take precedence in order to satisfy the requirements of the British Standard.
6. 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 and no account has been taken for the blocking effect caused by buildings, trees, etc.
7. Final lighting unit positions shall be agreed onsite with the overseeing organisation.
8. Lighting unit foundations shall be designed in accordance with the manufacturer datasheet's for the columns and soil types present.
9. Lighting columns shall be located to the rear of the footpath or verge, unless stated otherwise. If this is not possible the minimum setback distance for any lighting column to be erected from the kerb face shall be 800mm.
10. Before construction commences, the site engineer shall ensure that all setting out information is mutually compatible with all the drawings and documents provided by the designers.
11. Lighting unit positions indicated upon this drawing may change without prior or additional notice due to local site or environmental constraints subject to designers approval.
12. The developer will be required to arrange payment for any energy liability charges with their electricity supplier and will be responsible, unconditionally, for the condition,operation and any risk or liability of all the street lighting equipment on all privately owned sections of the development.

STATUTORY SERVICE NOTES

1. Current statutory service record plans should be obtained by the contractor / overseeing organisation before the commencement of any street lighting installation or removal works.
2. It should be assumed by the contractor that not all services have been identified during the design period. It is the responsibility of the contractor to ensure that all unidentified services are carefully located and reported.
3. The contractor shall identify the location of any overhead electrical or communication equipment prior to the undertaking of any onsite works. Should the presence of such equipment be identified, the contractor shall consult with the relevant statutory undertaker for further guidance.
4. Installation and Removal works should be carried out in accordance with Energy Network Association Technical Specification 43-8, Electricity at Work Regulations 1989, Construction Design and Management (CDM) 2015 & G39/1 and all other relevant Health and Safety Executive regulations.
5. All works in the vicinity of any overhead cables shall conform to the requirements of Health and Safety Executive, Guidance Note GS6 "Avoidance of danger from overhead power lines"
6. All works in the vicinity of underground mains or cables shall conform to the requirements of Health and Safety Executive, Health and Safety Guidance HGS47 "Avoiding danger from underground services" and any additional requirements specified by the relevant undertaker.
7. The contractor will be responsible for liaison with the undertakers and for programming the agreed protection and / or diversion works to any statutory undertakers apparatus into the overall works programme

The details provided on this drawing are subject to comments by all the relevant approving authorities or overseeing organisation.
No construction works shall take place until technical approval has been obtained by the approving authority or overseeing organisation.
It is to be understood that these drawings and the information shown are preliminary only and shall not be used for construction.
Should the contractor commence work on site prior to obtaining technical approval, then it is entirely at their own risk and no liability shall be accepted by SHD Lighting Consultancy Ltd.

REV	DESCRIPTION	DATE	BY
R0	INITIAL DESIGN FOR REVIEW AND COMMENT	27/01/2024	SRH

info@shdlighting.co.uk ☎ 07834 490 192 www.shdlighting.co.uk

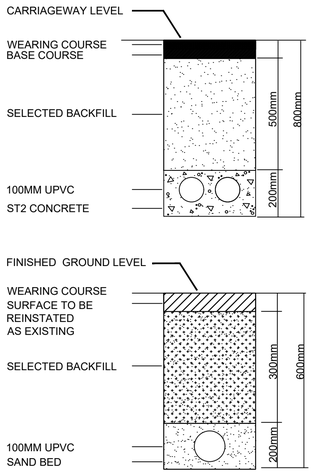
SCHEME:	OFF ARLECDON PARKS ROAD
DRAWING:	PRIVATE LIGHTING DESIGN ELECTRICAL
CLIENT:	RG PARKINS
DRAWING NUMBER:	SHD1349-SHD-HLG-ARLE-DR-EO-Electrical-R0 — SHEET 1 OF 2
DRAWN:	SRH
CHECKED:	SRH
APPROVED:	
CONTRACT NUMBER:	SHD1349 — DATE: 27/01/2024
SCALE @ A1	N.T.S
REVISION:	R0

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

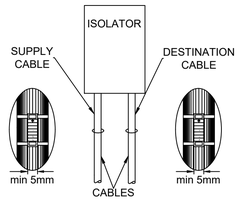
29/01/2024 10:12:27, SHD Plotstamp

CARRIAGEWAY AND FOOTWAY DUCTING DETAILS

REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION DETAIL AND SPECIFICATION



SOURCE/DESTINATION LABELLING DETAIL

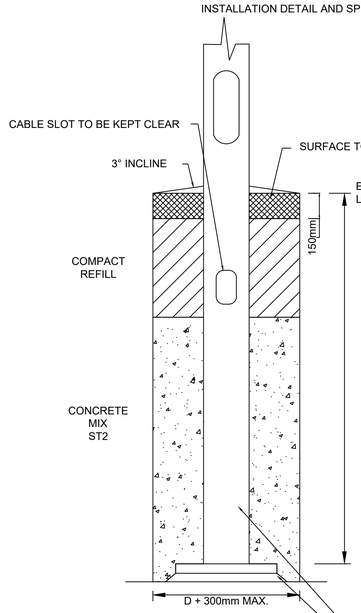


LABELLING NOTES:

1. ALL CABLES SHALL BE MARKED TO INDICATE THE SUPPLY SOURCE/DESTINATION. FINAL DETAILS TO BE SPECIFIED BY THE OVERSEEING ORGANISATION.
2. ALL CABLE MARKERS SHALL BE BLACK ON WHITE BACKGROUND AND SHALL BE MANUFACTURED FROM PLASTICIZED PVC AND HELD IN POSITION WITH BLACK PLASTIC TIE WRAP OR SIMILAR APPROVED THE OVERSEEING ORGANISATION.

TYPICAL COLUMN PLANTING FOUNDATION DETAIL

REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION DETAIL AND SPECIFICATION



PLANTING DEPTH - SEE TABLE BELOW

MOUNTING HEIGHT	PLANTING DEPTH
15m	2.0m
12m	1.7m
10m	1.5m
8m	1.2m
6m	1.0m
5m	0.8m

SOIL TYPE

GOOD — COMPACT WELL GRADED SAND AND GRAVEL, HARD CLAY, WELL GRADED FINE AND COURSE SAND.DECOMPOSED GRANITE ROCK AND SOIL. GOOD MATERIAL SHOULD BE WELL DRAINED AND IN LOCATIONS WHERE WATER WILL NOT STAND.

AVERAGE — COMPACT FINE SAND, MEDIUM CLAY, COMPACT WELL DRAINED SANDY LOAM, LOOSE COARSE SAND AND GRAVEL. AVERAGE SOILS SHOULD DRAIN SUFFICIENTLY WELL THAT WATER DOES NOT STAND ON THE SURFACE.

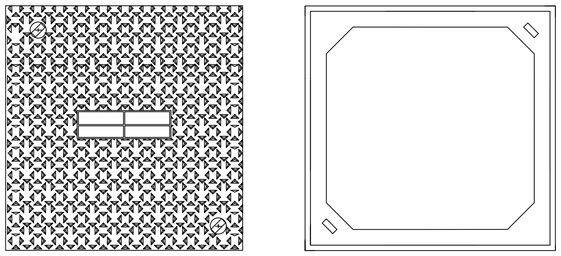
POOR — SOFT CLAY, CLAY LOAM, POORLY COMPACTED SAND, CLAYS CONTAINING A LARGE AMOUNT OF SILT AND VEGETABLE MATTER, AND MADE GROUND. POOR SOILS WILL NORMALLY BE WET AND HAVE POOR DRAINAGE

POOR SOIL CONDITIONS
REQUIRE C25P CONCRETE
INSIDE SHAFT AND 300 X 300 X 50
PC CONCRETE SLAB AND 25
SAND BED

PROPOSED CHAMBER AND DUCT DETAIL

REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION DETAIL AND SPECIFICATION

MULTI-DIRECTIONAL ANTI-SLIP COMPOSITIVE COVER

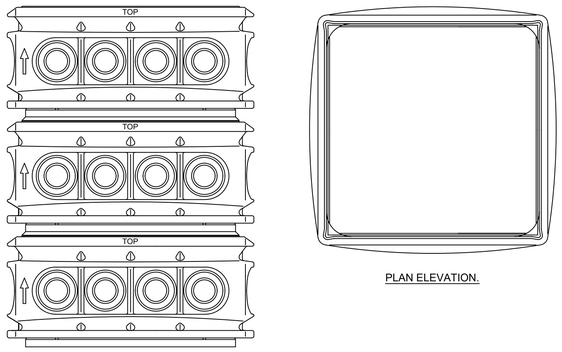


TOP SIDE.

UNDERSIDE.

SIDE VIEW.

3 STACK ACCESS CHAMBER



SIDE/END ELEVATION.

PLAN ELEVATION.

SPECIFICATION CLAUSE

COMPOSITE MANHOLE COVER SHALL BE BLACK, (SIZE), BADGED (BADGING) MADE FROM STRUCTURAL MOULDING COMPOSITE MATERIAL WITH AVERAGE SKID RESISTANT VALUES (SRV) OF DRY 84, WET 50.THE COVER SHALL HAVE A SURFACE PROFILE TO REDUCE FOOT AND VEHICLE CONTACT WITH SLIP LUBRICANTS. COVER/FRAME UNIT SHALL BE LOCKED AS STANDARD AND MEET THE REQUIREMENTS OF EN 124 B125. THE COVER SHALL WEIGH LESS THAN 25KG.

NOTE:

BLANK QUARTER OF THE BADGE SHALL READ: STREET LIGHTING

SPECIFICATION CLAUSE

THE CHAMBER SHALL BE OF SOLID CONSTRUCTION OF (TRIPLE) CONSTRUCTION TO MEET THE HIGHWAY REGULATION OF (750MM) COVER. THE CHAMBER SHALL HAVE PRE- TREPANED KNOCKOUT AREAS TO ACCEPT (50MM/100MM) INTERNAL DIAMETER STANDARD 5MM THICK WALL DUCTING (FLEX-E-DUCT/ TWIN WALL). THE CHAMBER SHALL BE MANUFACTURED BY ROTATIONAL MOULDING AND WHEN INSTALLED IN A WELL-COMPACTED SURROUND SHALL WITHSTAND 50 KN SHEER LOADING AND SIDE WALL LOADING OF 50 KN.

SPECIFICATION FOR COMPOSITE COVERS & FRAMES

1. COMPOSITE COVERS MUST BE MANUFACTURED FROM SHEET MOULDING COMPOUND (SMC)
2. COMPOSITE COVERS MUST BE LOAD TESTED TO EN124 WITH A B125 (12.5 TONNE) OR C250 (25 TONNE) LOADING.
3. COMPOSITE COVERS MUST HAVE A MINIMUM SKID RESISTANCE VALUE (SRV) OF 80
4. COMPOSITE COVERS MUST BE SUPPLIED WITH LOCKABLE STEEL FRAMES WHICH ARE HOT DIPPED GALVANISED TO BS EN ISO 1461:2009.
5. GALVANISED STEEL FRAMES MUST HAVE THE ABILITY TO BE ADJUSTED IN HEIGHT AND ANGLE WITHIN THE CHAMBER.
6. FRAMES MUST HAVE A MINIMUM UP STAND OF 80MM TO ENABLE PAVEMENT MATERIALS TO BE INSTALLED DIRECTLY AGAINST THE FRAME. FRAMES MUST NOT HAVE AN EXTERNAL FLANGE.
7. FRAMES MUST HAVE A FIXING MECHANISM WHICH ENABLES THEM TO BE MECHANICALLY SECURED TO THE ACCESS CHAMBER.
8. ACCESS CHAMBERS SHALL BE A TWIN-WALL DESIGN AND ASSEMBLED FROM STACKABLE 150MM DEEP SECTIONS.
9. ACCESS CHAMBERS MUST BE TESTED TO WITHSTAND A MINIMUM VERTICAL LOAD OF 40 TONNES WITHOUT THE USE OF CONCRETE SURROUND FOR SUPPORT.
10. ACCESS CHAMBERS MUST BE MANUFACTURED FROM THERMOPLASTIC MATERIAL WHICH IS BOTH RECYCLED AND RECYCLABLE AT THE END OF ITS PRODUCT LIFE.
11. EXTERNAL WALLS SHALL HAVE AN EXTERNAL RIB OF WIDTH NO GREATER THAN 15MM, POSITIONED AT THE BOTTOM OF EACH SECTION, TO ALLOW FULL SECTION DEPTH COMPACTION.
12. EXTERNAL WALLS SHALL BE FREE FROM MOULDING VOIDS THAT WILL NEGATIVELY IMPACT THE EFFECTIVENESS OF COMPACTION WHICH SHOULD BE IN ACCORDANCE WITH THE NEW ROADS AND STREET WORKS ACT (1991).
13. ACCESS CHAMBERS MUST NOT BE JOINTED IN THE CORNER OR REQUIRE MECHANICAL FIXING TO ACHIEVE STRENGTH.
14. ACCESS CHAMBER SECTIONS MUST HAVE THE ABILITY TO BE ADJUSTED IN HEIGHT DURING INSTALLATION.
15. ACCESS CHAMBER SECTIONS MUST BE CAPABLE OF BEING CUT LATERALLY TO ALLOW FOR TRANSITIONAL GRADIENT INSTALLATIONS.
16. ACCESS SECTIONS SHOULD HAVE PRE-DRILLED DUCT ENTRIES AND BE SUPPLIED WITH REMOVABLE CAPS.
17. ACCESS CHAMBERS MUST HAVE THE ABILITY TO ALLOW INTERNAL CABLE MANAGEMENT FURNITURE TO BE RETROFITTED WITHOUT THE NEED FOR ANY EXCAVATION.

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R0	INITIAL DESIGN FOR REVIEW AND COMMENT	27/01/2024	SRH

info@shdlighting.co.uk ☎ 07834 490 192 www.shdlighting.co.uk

SCHEME:	OFF ARLECDON PARKS ROAD
DRAWING:	PRIVATE LIGHTING DESIGN ELECTRICAL
CLIENT:	RG PARKINS
DRAWING NUMBER:	SHD1349-SHD-HLG-ARLE-DR-EO-Electrical-R0 / SHEET 2 OF 2
DRAWN:	SRH
CHECKED:	SRH
APPROVED:	
CONTRACT NUMBER:	SHD1349
DATE:	27/01/2024
SCALE @ A1	N.T.S
REVISION:	R0

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION