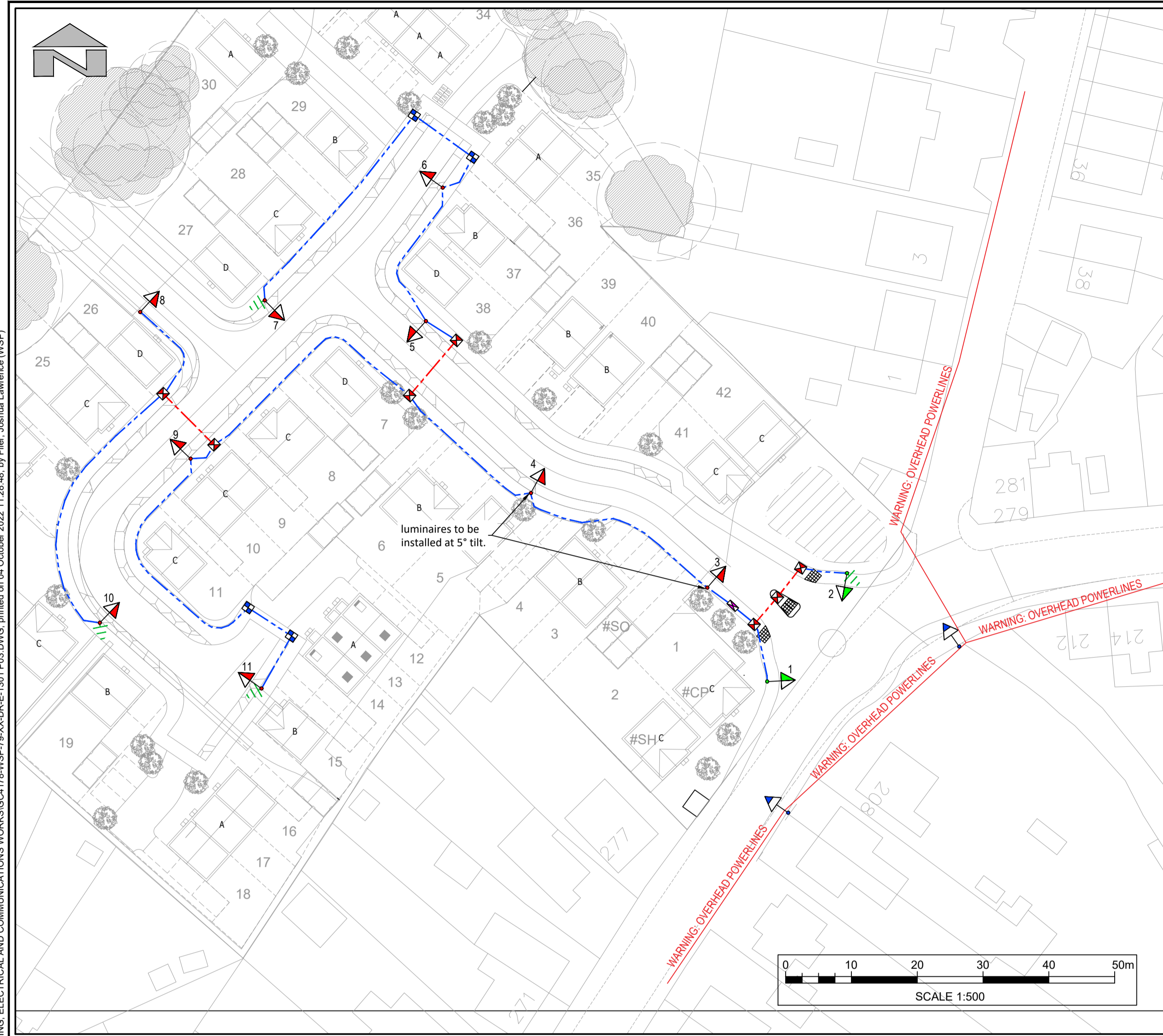
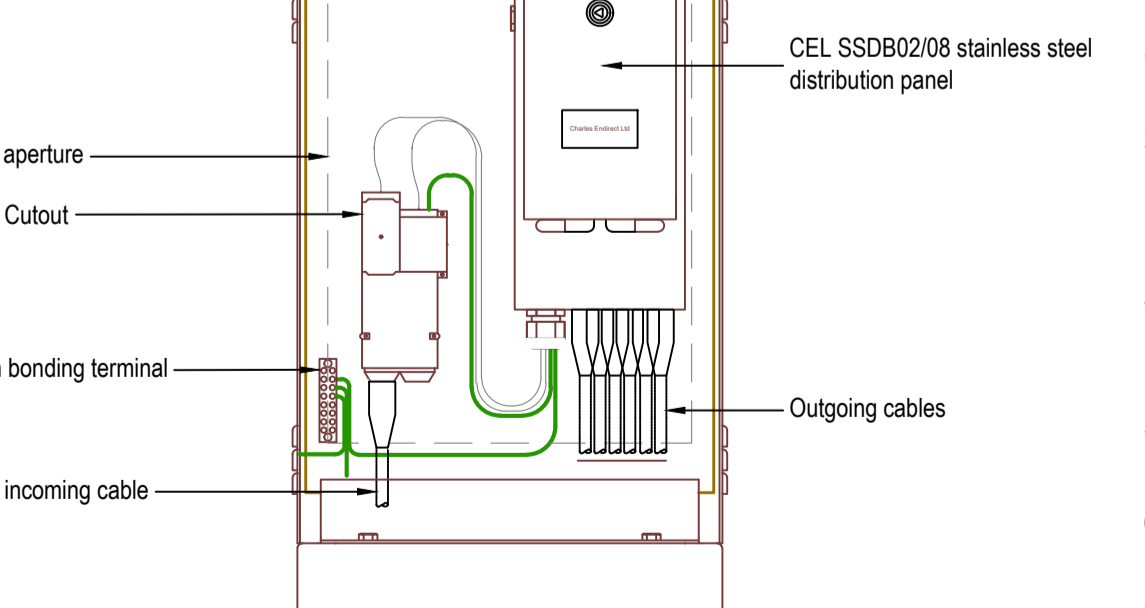
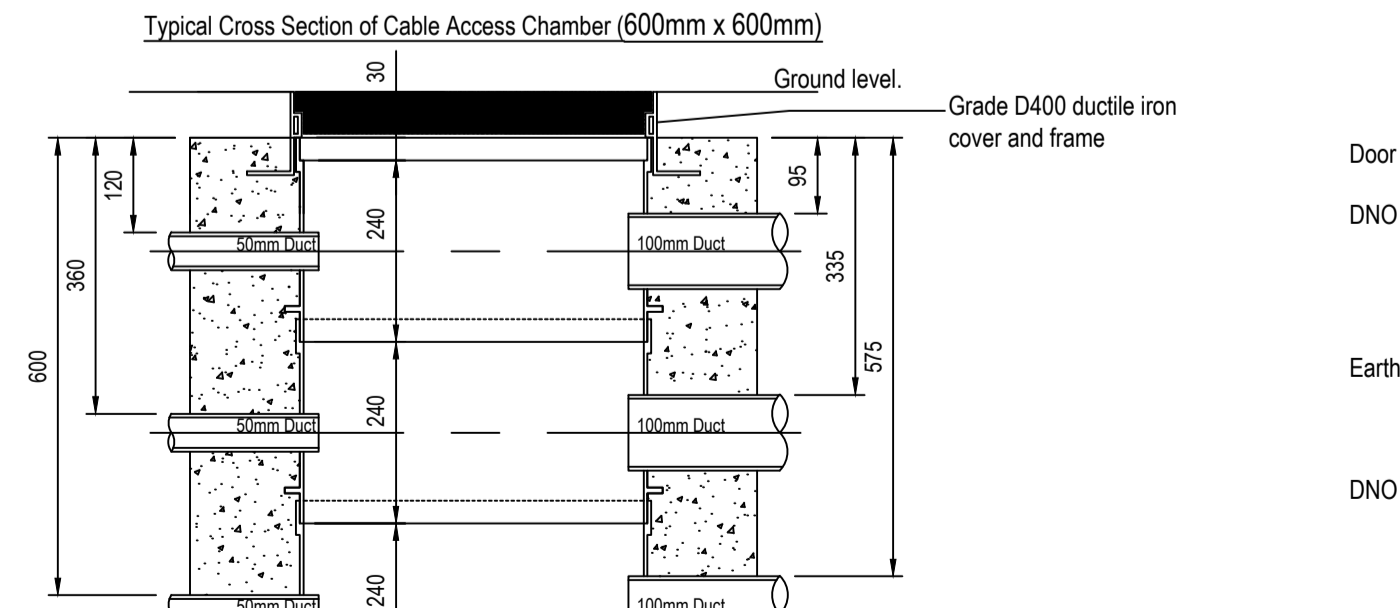
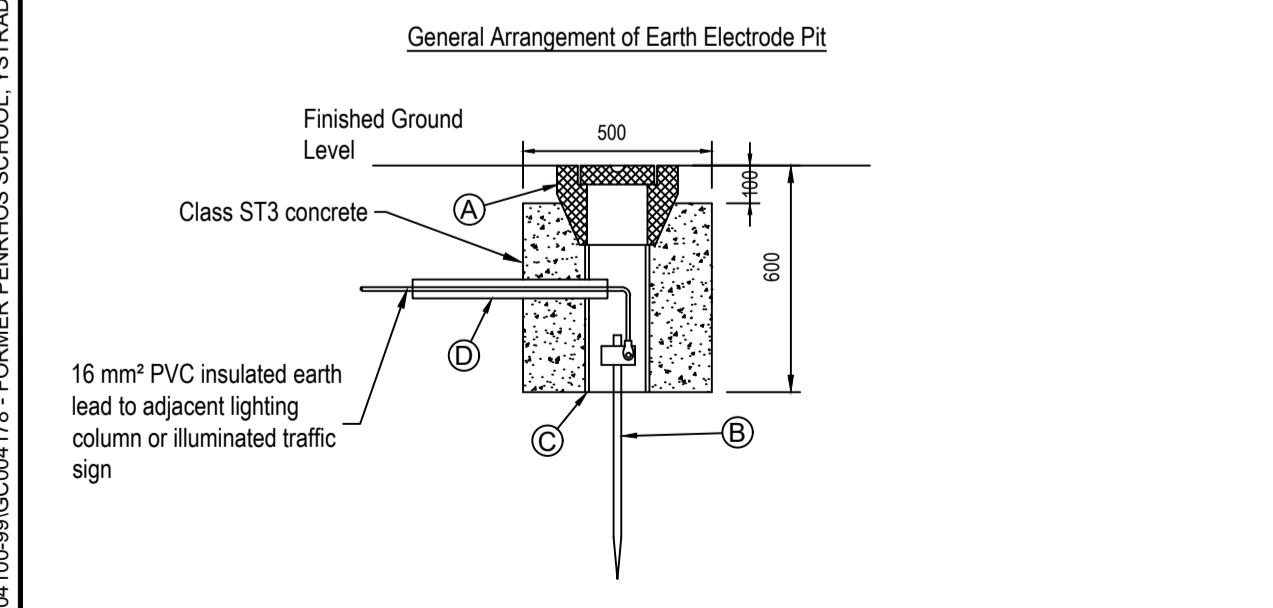
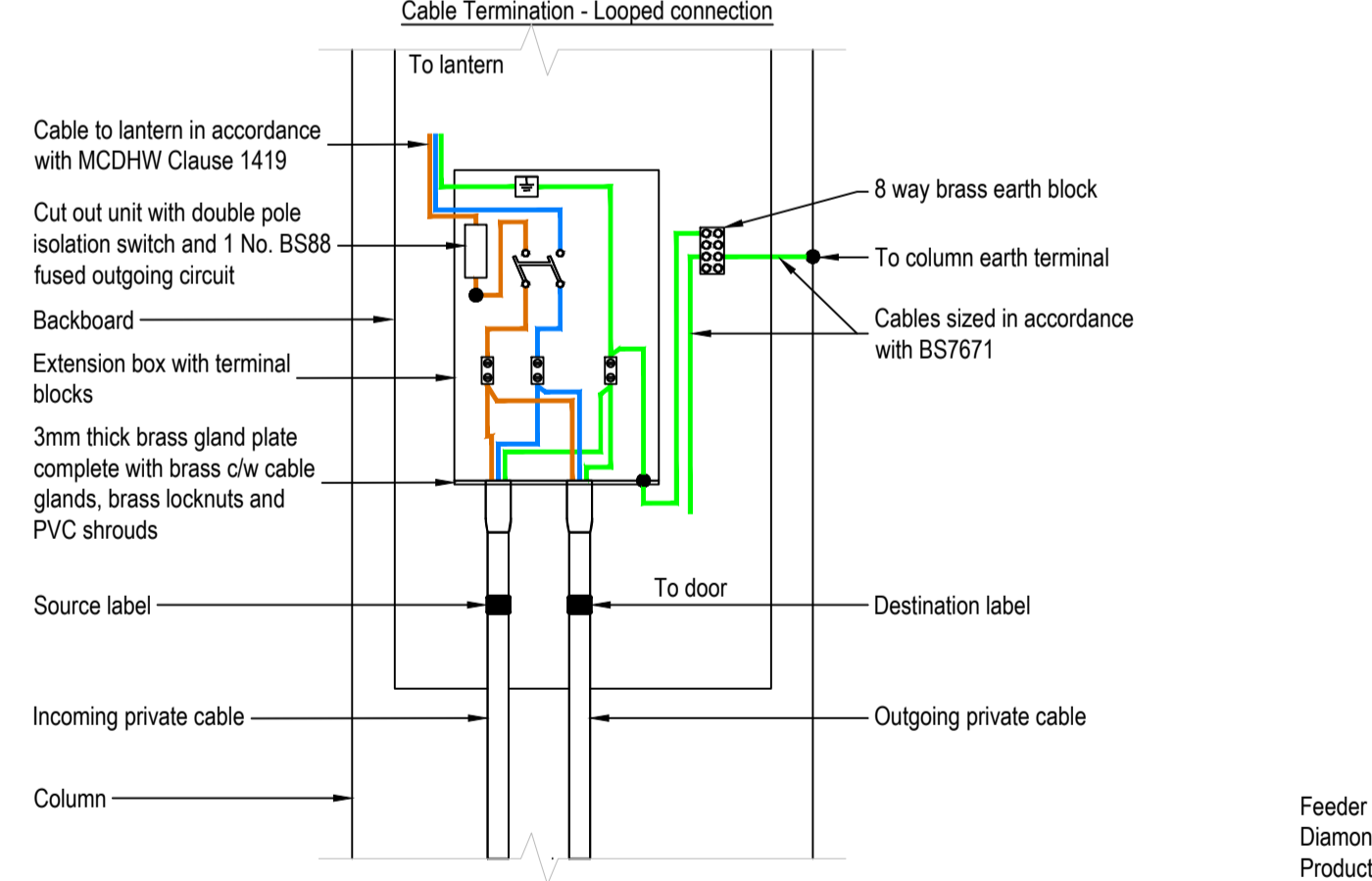
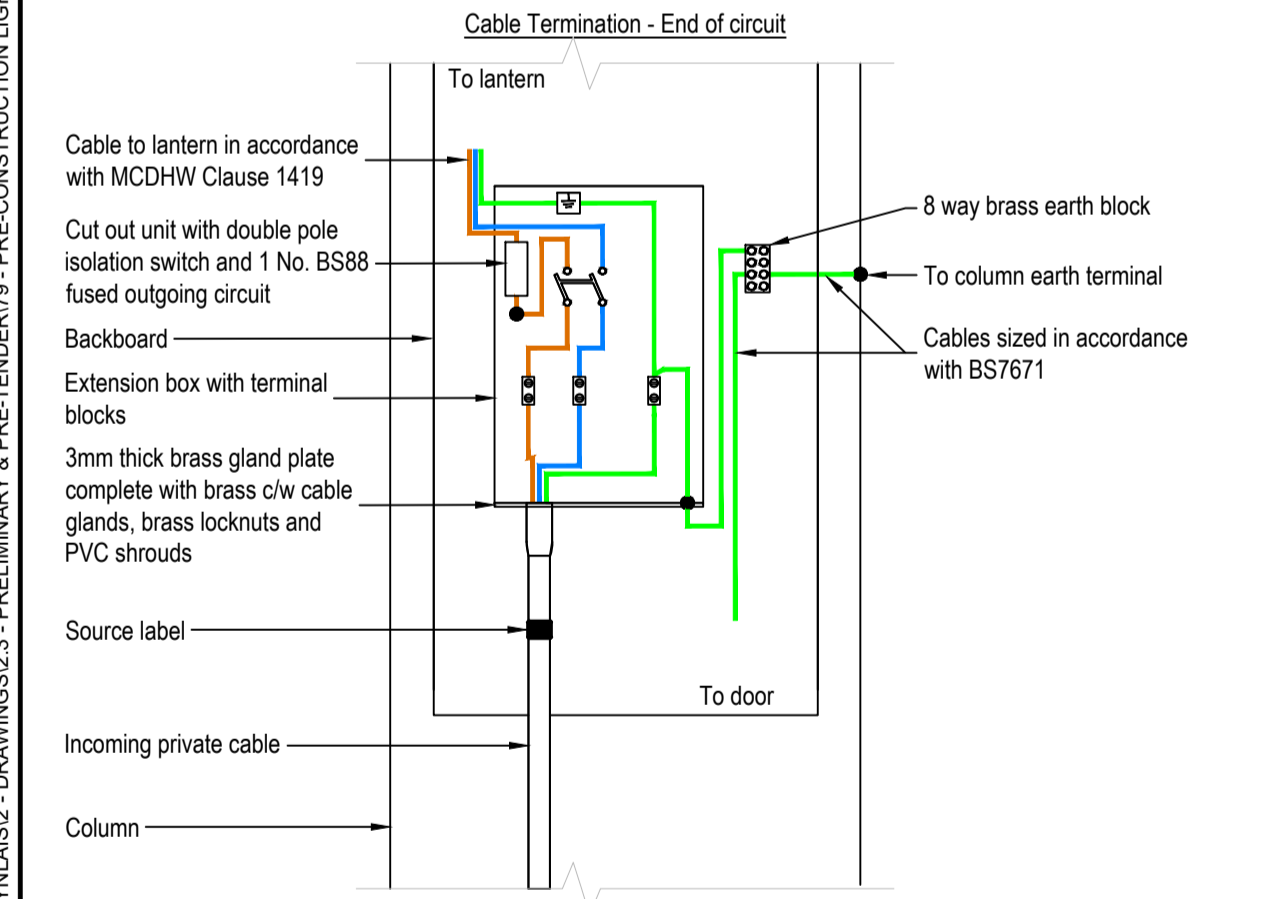


File name: P:\SCHEMES_CG\CG00410039\CG004178 - FORMER PENRHOS SCHOOL_YSTRADGYNLAIS2 - DRAWINGS\2.3 - PRELIMINARY & PRE-CONSTRUCTION LIGHTING - ELECTRICAL AND COMMUNICATIONS WORKS\CG4178\WSP-79-XX-DR-E-1301 P03.DWG, printed on 04 October 2022, 11:28:48, by File: Joshua Lawrence (WSP)

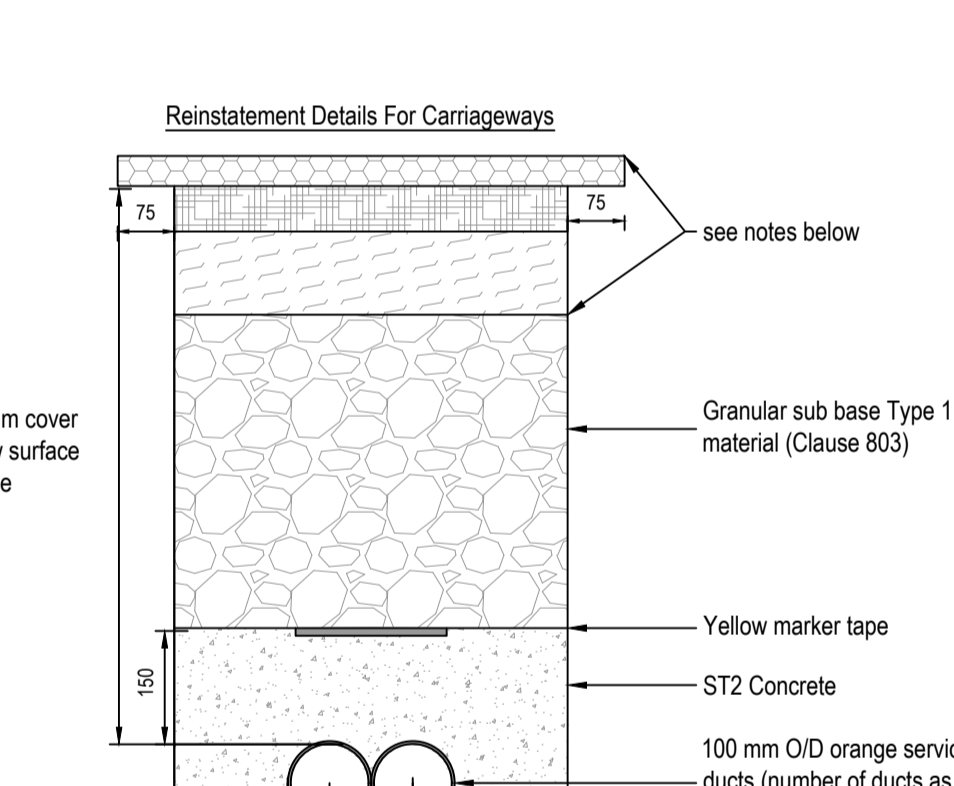
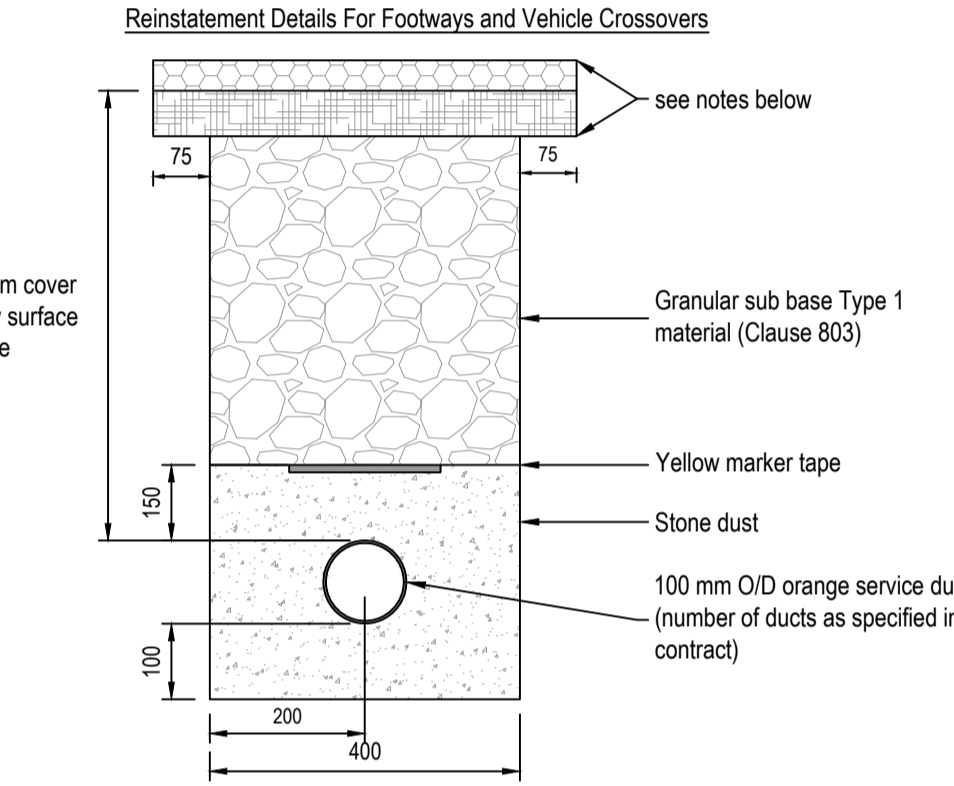


- Notes**
- The street lighting design layout meets the requirements of BS5489-1:2020 and BS EN 13201:2015, Class P5 for residential roads and Class C4 for the mini roundabout.
 - The street lighting installation must comply fully with Powys CC specification for road lighting and the Manual of Contract Documents for Highway Works (MCHW). All electrical work to be carried out by a Highway Electrical Association and HERS approved contractor.
 - An unmetered DNO/IDNO 230V ac 50Hz PME supply is required to the proposed feeder pillar. The Contractor shall liaise with the DNO/IDNO to arrange the service connection and undertake all trenching and ducting required to accommodate the DNO/IDNO service cables. Ducting shall be black in colour and laid in accordance with DNO/IDNO requirements.
 - Lighting columns shall be supplied via a private underground cable network installed by the Contractor using 10mm² 3 core XLPE/SWA/PVC cables in accordance with BS5467 with copper conductors and core insulation coloured Brown, Blue and Green/Yellow. The cable sheath shall be embossed with the legend "Street Lighting" at no more than 1000 mm intervals. Cables shall be terminated by loop in/loop out method, joints will not be permitted.
 - All cables shall be drawn through 100mm diameter thermoplastic ducts coloured orange with 5mm thick solid walls. A yellow warning tape inscribed "Street Lighting Cable Below" shall be installed 150mm above the service ducts after partially back filling the trench.
 - Road lighting columns shall be of aluminium construction to Powys CC specification with flush fitting, dual tri-head locking door and thermoplastic root protection. Columns shall be installed in accordance with the manufacturer's instructions, taking account of local soil conditions and wind factor.
 - Identification numbers shall be painted onto the column using stenciling equipment with the number 75mm in height located 2.4m above ground level and in a position that can be easily read by passing maintenance personnel (i.e. facing oncoming traffic). Numbers shown on the drawing are for design reference only, final maintenance numbers shall be obtained from Powys CC Street Lighting.
 - Lighting columns shall be fabricated and installed such that when the door is accessed, the operative will face oncoming traffic.
 - Double pole cutouts shall be provided in the column base compartment, as manufactured by Charles Endirect Cat No. L3/SF/TR2/K3 with earth terminal for 3 core cables. Cables shall be terminated with CET glands. All electrical equipment shall be secured to the backboard with brass round headed wood screws.
 - The phase and neutral wiring between the cutout and luminaire shall be 3 core flexible "Blue Arctic Grade" 1.5 mm² PVC/PVC cable with copper conductors.
 - The main protective conductor between the cutout glandplate and the column main earthing terminal shall be 10 mm² PVC insulated cable with copper conductors complying with BS 6004:2012 Table 3 Ref 6181Y.
 - Lighting columns shall be installed at the back of footway or with a minimum of 800mm lateral clearance from the face of column to the edge of carriageway when installed in verge. Where there is no footway or highway verge present columns shall be installed in an adoptable 1m x 1m parcel of land behind the shared surface, constructed to match the shared surface material. All locations to be agreed with the Supervising Engineer before installation.
 - A circuit diagram of the underground cable network enclosed in a clear laminated waterproof case shall be attached to the inside of the feeder pillar door.
 - The installation shall be installed, tested and commissioned in accordance with BS7671 "Requirements For Electrical Installations - IET Wiring Regulations (18th edition) with appropriate test certificates issued to the Project Manager on completion of the Works
 - This drawing shall be used solely for the purpose described in the drawing title, as other details may be inaccurate.

- Key**
- 6m aluminium tubular tapered lighting column and post-top mounted TRT Opto Micro 16 LED/18WGR5/4K/2.61 km LED luminaire c/w Royce Thompson Oasis 2000 one-part photo-electric NEMA cell with switch on/off of 35/18 lux.
 - 6m aluminium tubular tapered lighting column and post-top mounted Urbis Ampera Mini 5119/16/850mA/NW/44W/404652/4.73 km LED luminaire c/w Royce Thompson Oasis 2000 one-part photo-electric NEMA cell with switch on/off of 35/18 lux.
 - Isolate, disconnect and remove existing luminaire from wood pole and return to Powys CC street lighting depot. Fit side-entry mounted Urbis Ampera Mini 5119/16/850mA/NW/44W/404652/4.73 km LED luminaire c/w Royce Thompson Oasis 2000 one-part photo-electric NEMA cell with switch on/off of 35/18 lux.
 - Proposed single way 100mm internal diameter orange UPVC service duct laid with 500mm depth of cover in verge and footways.
 - Proposed two way 100mm internal diameter orange UPVC service duct laid with 750mm depth of cover in carriageways.
 - Proposed cable access chamber 600mm x 600mm with BS EN124 Class D400 ductile iron cover and frame, depth to base slab 1000mm.
 - Proposed cable access chamber 450mmx450mm with BS EN124 Class D400 ductile iron cover and frame, depth to base slab 600mm.
 - Earth electrode 20mm diameter x 1200mm long in concrete earth pit with 16mm² PVC insulated copper conductor connected to adjacent lighting column.
 - Proposed Feeder Pillar



- Notes**
- The column shall be installed in accordance with the manufacturer's specific instructions.
 - The hole shall be excavated to the depth required for the root of the particular column, keeping the width of the hole to a minimum & creating as little disturbance as possible to the surrounding soil.
 - A concrete or paving slab shall be provided in soft ground to prevent sinking.
 - A pre-formed duct shall be inserted to the cable entry slot for protection of the cable.
 - Where paving or bituminous surfacing is to be applied around the lighting column, the top level of the concrete may be lowered by the thickness of the surfacing.
 - The soil type factor shall be taken from PD6547/EN 40 Part 2. For undetermined or unusual conditions guidance should be sought from a Geotechnical Engineer.

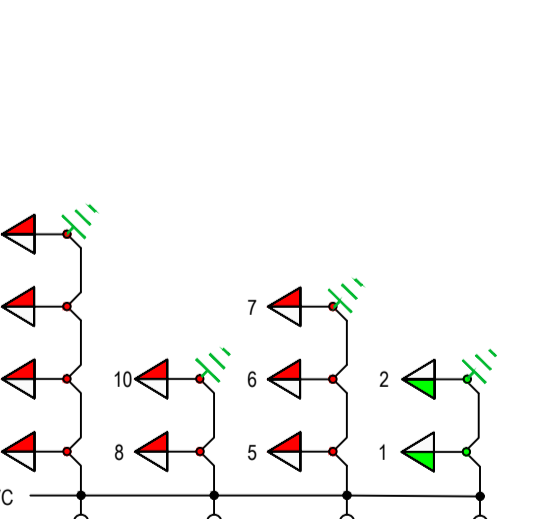


- Surfacing materials and thicknesses to be:
- Continuous with either:
 - Proposed adjacent materials in contract drawings; or
 - Existing pavement materials where proposed resurfacing not required;
 - 20mm Surface Course - AC6 med surf 160/220 Pen
60mm Binder Course - AC20 dense bin 100/150 Pen

- or, where the above are not specified:
- 40mm Surface Course - AC14 close surf 100/150 Pen
60mm Binder Course - AC20 dense bin 100/150 Pen
110mm Base - AC32 dense base 100/150 Pen

- Surfacing materials and thicknesses to be:
- Continuous with either:
 - Proposed adjacent materials in contract drawings; or
 - Existing pavement materials where proposed resurfacing not required;
 - 40mm Surface Course - AC14 close surf 100/150 Pen
60mm Binder Course - AC20 dense bin 100/150 Pen
110mm Base - AC32 dense base 100/150 Pen

- or, where the above are not specified:
- 40mm Surface Course - AC14 close surf 100/150 Pen
60mm Binder Course - AC20 dense bin 100/150 Pen
110mm Base - AC32 dense base 100/150 Pen



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING

The contractor shall ensure that any work within 10m of overhead electricity lines is undertaken in accordance with HSE guidance note GS6. Operatives shall be G39/1 certified.

Refer to Designers CDM Risk/Hazard Identification Sheet for further information

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT

P03	JF	DH	MB	Site layout updated	04/10/2022
P02	JF	DH	MB	Site layout updated	26/07/2022
P01	JF	JR	MB	First issue	14/06/2022
REV	BY	CHK	APP	Description	DATE

DRAWING STATUS: **S4 - Suitable for Approval**

St David's House, Pascal Close, St. Mellons, Cardiff CF3 0LW, UK
T+ 44 (0) 29 2080 3500
wsp.com

CLIENT: **Persimmon Homes West Wales**

ARCHITECT:

SITE/PROJECT: **Former Penrhos School, Ystradgynlais**

TITLE: **Street Lighting**

SCALE @ A1:	1:500	CHECKED:	JR	APPROVED:	MB
PROJECT NO:	GC4178	DESIGNED:	JF	DATE:	14th June 2022

DRAWING NO:	GC4178-WSP-79-XX-DR-E-1301	REV:	P03
-------------	----------------------------	------	-----

© WSP REI Ltd