RECLAIMED LAND CAR PARK LUMINAIRE SCHEDULE

Index	Manufacturer	Article name	Item number	Luminous flux	Maintenance factor	Connected load	Quantity
A	PHILIPS	IRIDIUM GEN 4 BGP502	910925867323	14196 lm	0.8	104W	14
B	PHILIPS	IRIDIUM GEN 4 BGP502	910925866567	3977 lm	0.8	26.8W	12

DRA 007

RECLAIMED LAND CAR PARK LIGHTING COLUMN SCHEDULE

Index	Manufacturer	Article name	Item number	Height	Spigot Ø	Base Ø	Quantity
LA	ROSA	BRUSHED ALUMINIUM LIGHTING COLUMN	SAL87MDZ	8.7m	60mm	180mm	7
LB	ROSA	BRUSHED ALUMINIUM LIGHTING COLUMN	SAL87 DOUBLE	8.7m	60mm	180mm	4
LC	ROSA	BRUSHED ALUMINIUM LIGHTING COLUMN	SAL67MDZ	6.7m	60mm	180mm	12

DRA 007

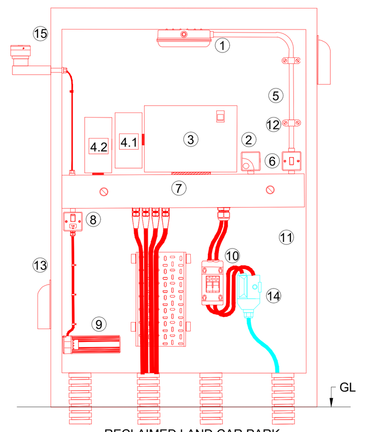
EXAMPLE LIGHTING COLUMN AND LUMINAIRE REFERENCE: A1 / LA1

TYPE OF AREA, TASK OR ACTIVITY	CALCULATED ILLUMINATION VALUES	
	AVERAGE ILLUMINANCE (lx)	MINIMUM UNIFORMITY (Uo)
CAR PARK	16 @ 50% OUTPUT	0.4
WALKWAY	10.9	0.28

RECLAIMED LAND CAR PARK HAS BEEN DESIGNED IN ACCORDANCE WITH BS5489 AND BS12464-2 FOR FURTHER INFORMATION REFER TO SVM LIGHTING CALCULATION REF: 161378-FRH-13-00-CA-E-000002
Reclaimed Land Carpark

CABLE DUCTING LEGEND

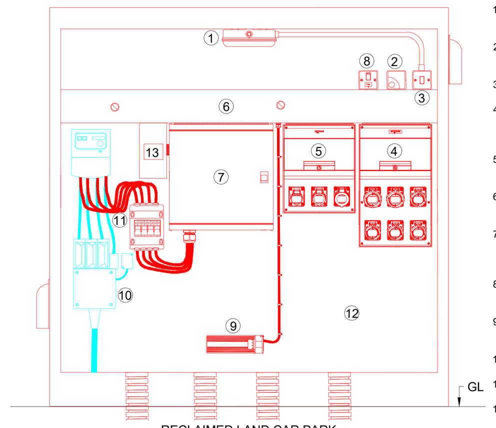
—A—A—A—A—	1 x 150mmØ TWIN WALLED SMOOTH INTERNAL BORE DUCT (PURPLE) 3 x 150mmØ TWIN WALLED SMOOTH INTERNAL BORE DUCT (BLACK)
—B—B—B—B—	2 x63mmØ TWIN WALLED SMOOTH INTERNAL BORE DUCT (PURPLE IN COLOUR)



RECLAIMED LAND CAR PARK
PROPOSED CAR PARK LIGHTING SUPPLY CUBICLE
SCALE-1:20

EQUIPMENT LIST DRA 007

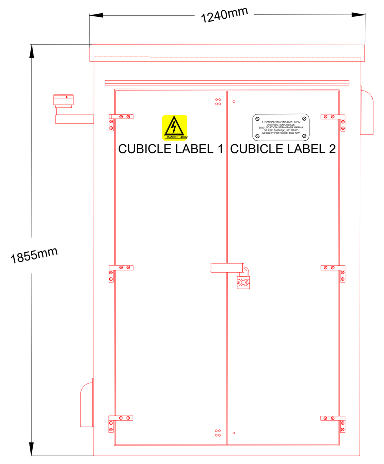
1. IP 65 POLYCARBONATE BULKHEAD LUMINAIRE C/W 5W 4000K LED LIGHT SOURCE
2. DANFLOSS RET 230F ROOM THERMOSTAT WITH ADJUSTABLE TEMPERATURE RANGE
3. 14 WAY SP+N SCHNEIDER ACTI9 ISOBAR P A DISTRIBUTION BOARD (SCHNEIDER PRODUCT CODE - SEA9BPN4) LABELLED: RECLAIMED LAND CAR PARK AND WALKWAY LIGHTING DB.
4. IP30 4 WAY G9 STEEL SURFACE ENCLOSURE (SCHNEIDER PRODUCT CODE -14599)
   4.1. FITTED WITH SCHNEIDER IPRD8 MODULAR SURGE ARRESTER- SP+N (SCHNEIDER PRODUCT CODE A9L08500)
   4.2. FITTED WITH A SCHNEIDER ACTI9 ICT 4 POLE N/O 40A MODULAR CONTACTOR (SCHNEIDER PRODUCT CODE- A9C20844)
5. 20mmØ PRE GALVANISED STEEL CONDUIT
6. MK METALCLAD PLUS 10A SWITCH (MK PRODUCT CODE- K3591ALM)
7. 100mm x 100mm PRE GALVANISED STEEL SINGLE COMPARTMENT CABLE TRUNKING -STRAIGHT
8. MK METALCLAD PLUS 13A DP SWITCHED FUSED CONNECTION UNIT (PRODUCT CODE K942ALM)
9. 400W RESISTANCE HEATER WITH FAN ENCLOSED WITH AN ALUMINIUM HOUSING (Ref. SCHNEIDER CLIMASYS NSYCR400W230V)
10. 100A DP ISOLATOR WITH 2 MODULE ENCLOSURE (REF- WYLEX- REC2S)
11. 6mm MARINE BOARD TO ALLOW SECURE FIXING OF ALL EQUIPMENT
12. 20mm STEEL GALVANISED CONDUIT SADDLE
13. CUBICLE VENTILATION/ COWL REQUIRED FOR AIR CIRCULATION
14. 100A SP&N INCOMING DNO CABLE HEAD
15. S300 70LUX ELECTRONIC PHOTOCELL



RECLAIMED LAND CAR PARK
PROPOSED CAR PARK EVENT SUPPLY CUBICLE
SCALE-1:20

EQUIPMENT LIST DRA 007

1. IP 65 POLYCARBONATE BULKHEAD LUMINAIRE C/W 5W 4000K LED LIGHT SOURCE
2. DANFLOSS RET 230F ROOM THERMOSTAT WITH ADJUSTABLE TEMPERATURE RANGE
3. MK METALCLAD PLUS 10A SWITCH (MK PRODUCT CODE- K3591ALM)
4. IP30 4 WAY G9 STEEL SURFACE ENCLOSURE (SCHNEIDER PRODUCT CODE -14599) FITTED WITH SCHNEIDER iPRD8 MODULAR SURGE ARRESTER- SP+N (SCHNEIDER PRODUCT CODE A9L08500)
5. SCAME IP 66 PRE ASSEMBLED DISTRIBUTION UNIT SERVING 2Nr. TP&N 16A & 1Nr. TP&N 32A OUTGOING WAYS.
6. SCAME IP 66 PRE ASSEMBLED DISTRIBUTION UNIT SERVING 6Nr. SP&N 16A OUTGOING WAYS.
7. 6 WAY TP&N SCHNEIDER ACTI 9 ISOBAR P B DISTRIBUTION BOARD (SCHNEIDER PRODUCT CODE - SEA9BPN6) LABELLED: RECLAIMED LAND CAR PARK EVENT POWER DB.
8. MK METALCLAD PLUS 13A DP SWITCHED FUSED CONNECTION UNIT (PRODUCT CODE K942ALM)
9. 400W RESISTANCE HEATER WITH FAN ENCLOSED WITH AN ALUMINIUM HOUSING (Ref. SCHNEIDER CLIMASYS NSYCR400W230V)
10. 100A TP&N DNO SUPPLY CABLE HEAD
11. 100A TP&N MAIN ISOLATOR (RED - WYLEX - REC4)
12. 6mm MARINE BOARD TO ALLOW SECURE FIXING OF ALL EQUIPMENT
13. IP30 4 WAY G9 STEEL SURFACE ENCLOSURE (SCHNEIDER PRODUCT CODE -14599) FITTED WITH SCHNEIDER IPRD8 MODULAR SURGE ARRESTER- TP+N (SCHNEIDER PRODUCT CODE A9L08600)

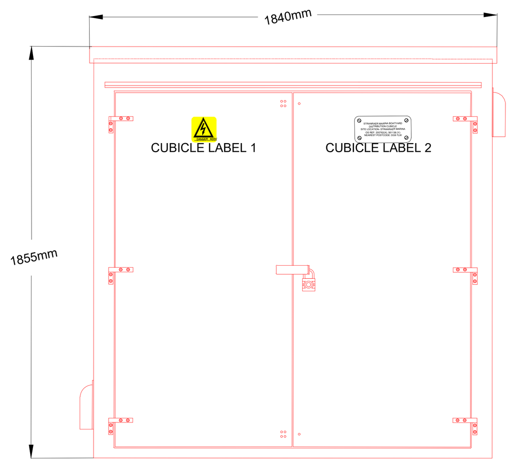


RECLAIMED LAND CAR PARK
LIGHTING SUPPLY CUBICLE FRONT ELEVATION
SCALE - 1:20

CUBICLE LABEL 1- DANGER 240V

STRANRAER RECLAIMED LAND
CARPARK LIGHTING
DISTRIBUTION CUBICLE
SITE LOCATION- STRANRAER MARINA
OS REF: 206291 (X), 560985 (Y)
NEAREST POSTCODE: DG9 7EE

CUBICLE LABEL 2- IDENTIFICATION DETAILS

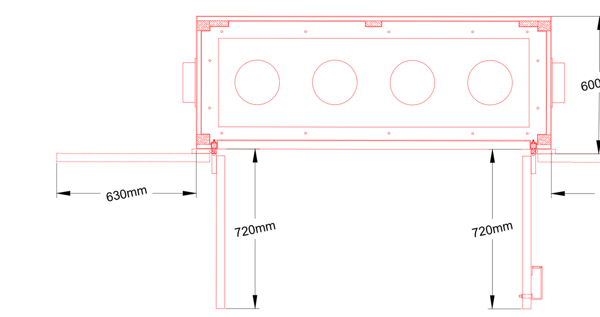


RECLAIMED LAND CAR PARK
EVENT SUPPLY CUBICLE FRONT ELEVATION
SCALE - 1:20

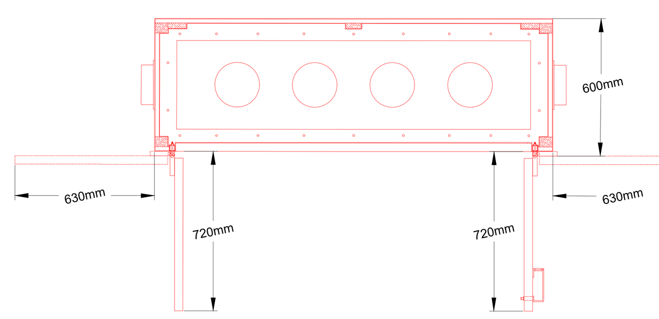
CUBICLE LABEL 1- DANGER 400V

STRANRAER RECLAIMED LAND
CARPARK EVENT
DISTRIBUTION CUBICLE
SITE LOCATION- STRANRAER MARINA
OS REF: 206291 (X), 560985 (Y)
NEAREST POSTCODE: DG9 7EE

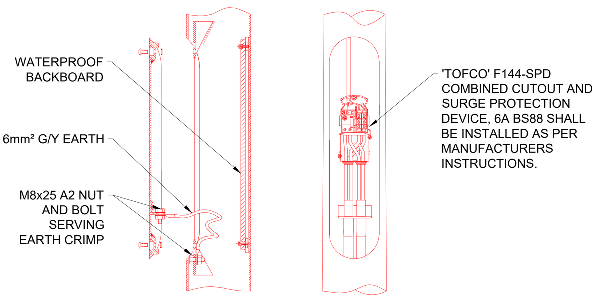
CUBICLE LABEL 2- IDENTIFICATION DETAILS



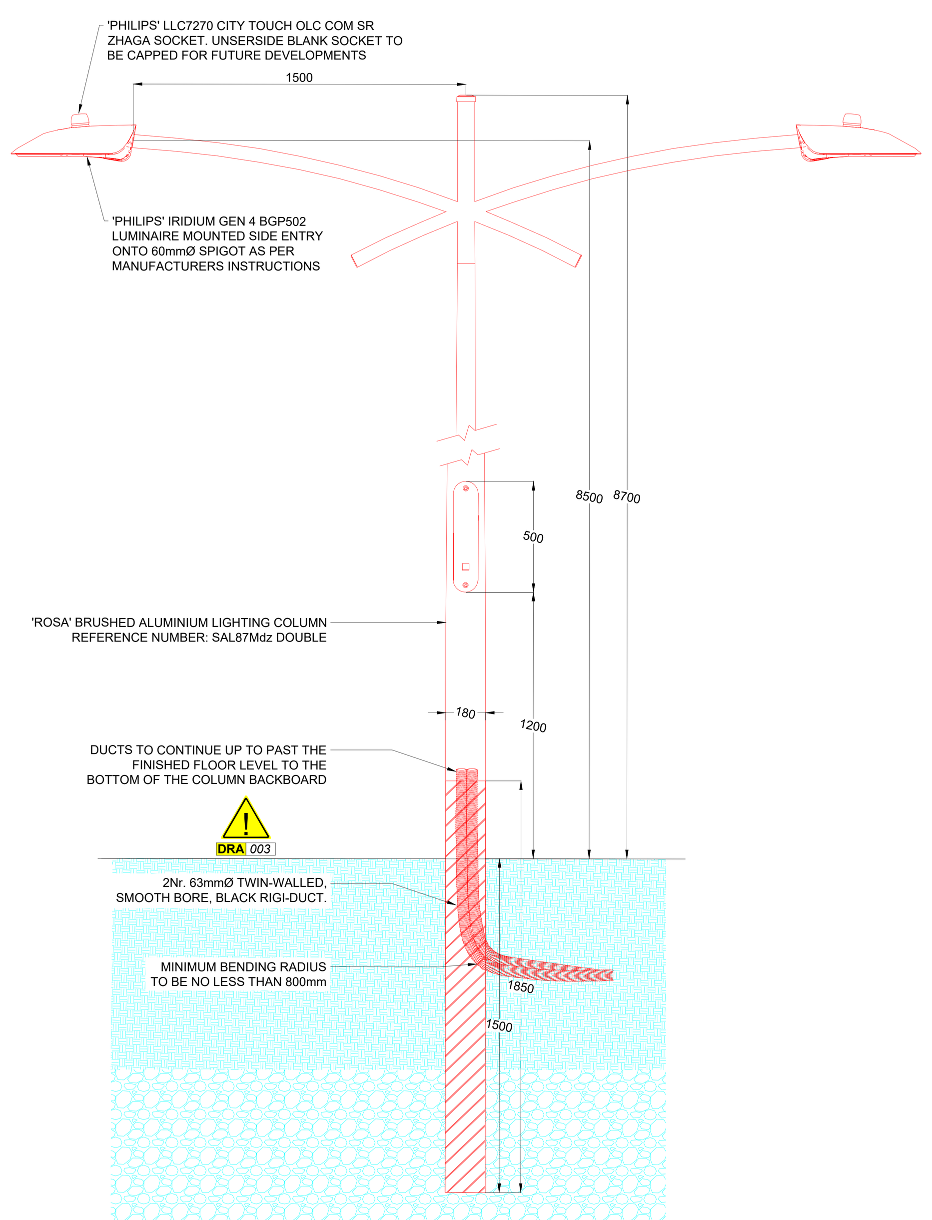
RECLAIMED LAND CAR PARK
LIGHTING SUPPLY CUBICLE PLAN
SCALE - 1:20



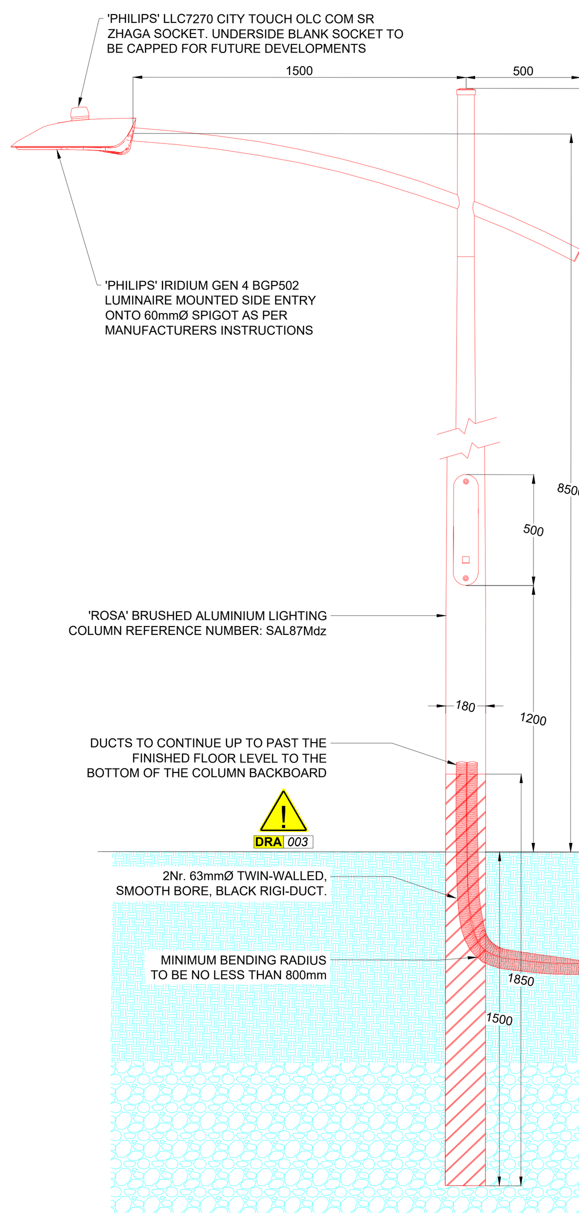
RECLAIMED LAND CAR PARK
EVENT SUPPLY CUBICLE PLAN
SCALE - 1:20



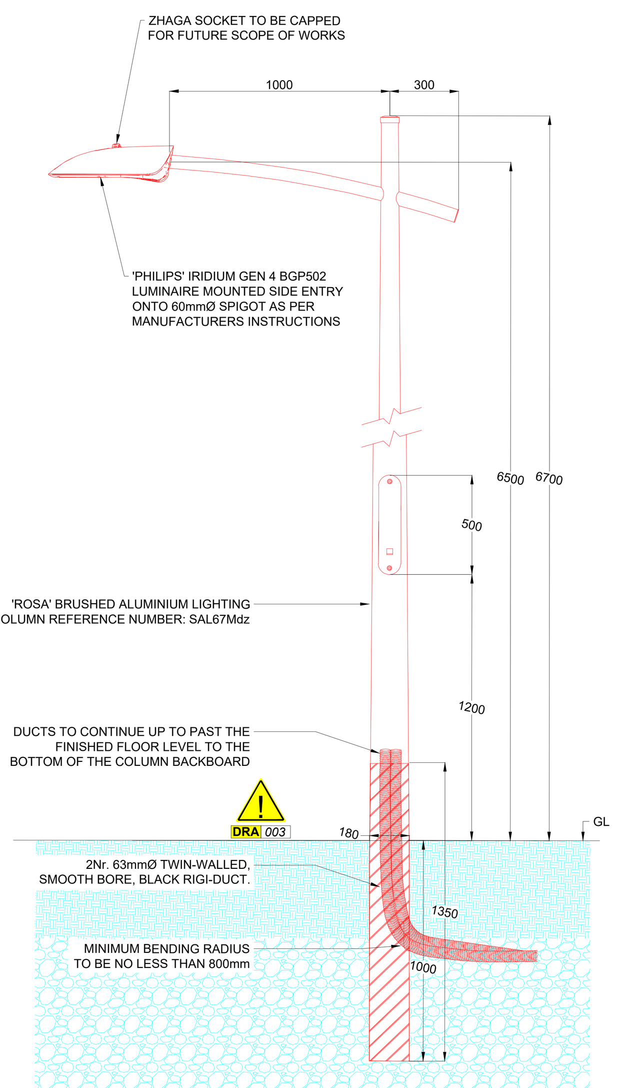
RECLAIMED LAND CAR PARK LIGHTING COLUMN INTERNAL INSTALLATION DETAIL
SCALE - 1:20



RECLAIMED LAND CAR PARK
LIGHTING COLUMN LB ELEVATION
SCALE - 1:20



RECLAIMED LAND CAR PARK
LIGHTING COLUMN LA ELEVATION
SCALE - 1:20



RECLAIMED LAND CAR PARK
LIGHTING COLUMN LC ELEVATION
SCALE - 1:20

GENERAL NOTES

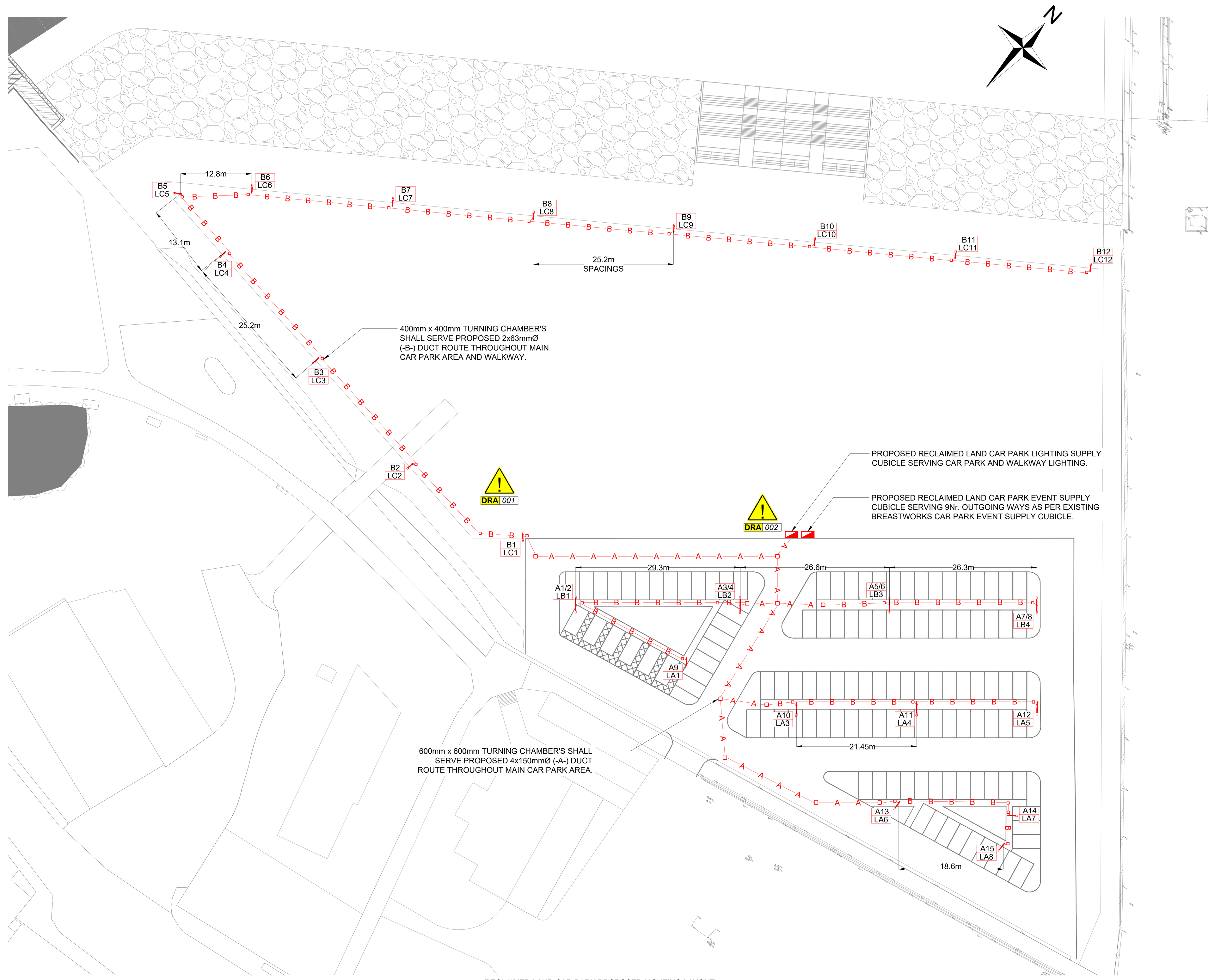
1. CROSS-REFERENCE TO FULL DESIGN AND DRAWINGS SUBMISSION SHALL BE UNDERTAKEN SO AS TO CO-ORDINATE A FULL UNDERSTANDING OF THE PROPOSALS CONTAINED WITHIN THIS DRAWING.
2. ALL WORKS SHALL BE UNDERTAKEN IN LINE WITH THE CURRENT EDITION OF THE IET WIRING REGULATIONS BS 7671: 2018, INCLUDING ALL AMENDMENTS.
3. ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH CURRENT AND APPLICABLE EURO CODES AND BRITISH STANDARDS.
4. DRAWING MUST BE PRINTED IN COLOUR TO BE READ CORRECTLY.
5. PROPOSED WORKS ARE REFLECTIVE OF THE STRANRAER MARINA EXPANSION PROJECT ONLY.
6. THIS DRAWING IS REPRESENTATIVE OF THE PROPOSED LAYOUT.

CABLE & EQUIPMENT INSTALLATION NOTES

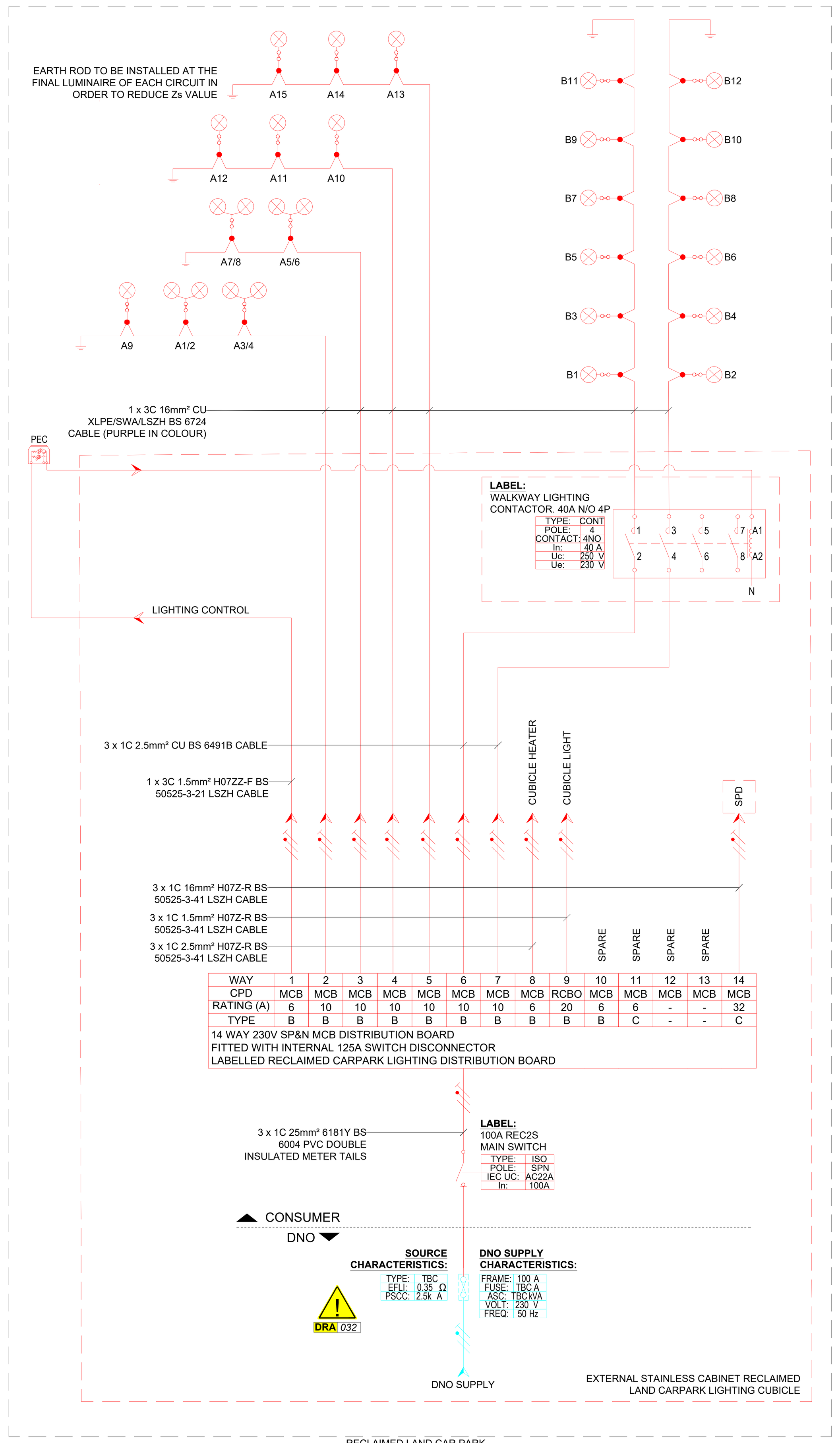
7. DUCTS SHALL SHALL BE LAID WITH MINIMUM, UNDULATIONS AND HAVE A BENDING RADIUS OF NO LESS THAN 800mm.
8. A NON-DEGRADABLE PLASTIC COATED ALUMINIUM FOIL MARKER TAPE, YELLOW IN COLOUR, SHALL BE LAID IN THE TRENCH 100mm ABOVE THE INVERT OF THE TOP DUCTS / DUCTS. THE TAPE SHALL BE 150mm WIDE AND MARKED AT APPROX. 1200mm CENTRE WITH BOLD LETTERING, BLACK IN COLOUR, THAT READS 'CAUTION - ELECTRIC CABLE BELOW'.
9. PRIOR TO HANDOVER, EACH DUCT SHALL BE PULLED THROUGH USING A CORRECT SIZE MANDREL & BRUSH TO REMOVE ANY DEBRIS THAT MAY BE PRESENT.
10. EACH DUCT SHALL BE COMPLETE WITH A THREADED POLYPROPYLENE OR NON-BIODEGRADABLE DRAW CORD WITH A MINIMUM BREAKING STRENGTH OF 550 NEWTON, AT LEAST 5000mm LONGER THAN THE DUCT RUN, SECURED TO THE CHAMBER FURNITURE UPON COMPLETION OF THE INSTALLATION.
11. DUCT ENTRIES SHALL BE FITTED WITH SPLIT BELL MOUTHS TO PREVENT DAMAGED TO THE CABLE AND TO THE DUCT ENTRY. THE BELL MOUTH SHALL FITTED SO THAT THE CABLE DOES NOT RUN ON THE SPLIT DURING INSTALLATION TO AVOID THE RISK OF DAMAGED TO THE CABLE OVERSHEATH.
12. ALL DUCTS SHALL BE BEDDED AND BLINDED AS DEFINED BELOW:
    12.1. SOFT FINEFILL MATERIAL SHALL BE AS PER ENA TS 97-1 AND BE OF CONSISTENT COMPOSITION UNDER ALL CONDITIONS OF HUMIDITY AND TEMPERATURE AND SHALL NOT CONTAIN ANY READILY VISIBLE FOREIGN MATTER.
    12.2. SELECTED SAND BACKFILL SHALL BE AS PER ENA Ts 97-1 AND BE OF CONSISTENT COMPOSITION AND SHALL NOT CONTAIN ANY READILY VISIBLE FOREIGN MATTER. NOT LESS THAN 95% BY WEIGHT OF THE MATERIAL SHALL PASS THROUGH A BRITISH STANDARD 5mm SIEVE. THE DRY RELATIVE DENSITY OF THE SELECTED SAND BACKFILL SHALL NOT BE LESS THAN 1.6 WHEN DETERMINED IN ACCORDANCE WITH APPENDIX A OF ENA TS 97-1.
13. ALL SWITCHES AND EQUIPMENT SHALL BE FITTED WITH INDELIBLE, UV STABLE, PERMANENT THREE-PLY PLASTIC IDENTIFICATION LABELS, FIXED WITH NON-FERROUS METAL RIVETS OR SMALL BA BRASS NUTS AND BOLTS, ENGRAVED BLACK OR RED LETTERING ON WHITE FIELD TO IDENTIFY THEIR FUNCTION, LOCATION NAME, DESTINATION AND SOURCE. THE CHARACTER HEIGHT WILL BE MINIMUM 10MM BLOCK CAPITALS.
14. THE INTERNAL RADIUS OF EVERY BEND IN A CABLE SHALL BE SUCH AS NOT TO CAUSE DAMAGE TO THE CABLE NOR IMPAIR THE CHARACTERISTICS OF THE CABLE, AND SHALL BE IN ACCORDANCE WITH MANUFACTURERS GUIDELINES.
15. CABLES SHALL BE SUPPORTED TO PROVIDE STRAIN RELIEF AND PREVENT KINKING, AND IN SUCH A WAY THAT MECHANICAL DAMAGE IS AVOIDED DURING LATER ACCESS TO THE EQUIPMENT AND ACCESSORIES.

DESIGNERS RISK ASSESSMENT
REFER TO DRA IN LINE WITH BELOW

DRA 001	UNVERIFIED CABLE ROUTES TO BE CONFIRMED BY CONTRACTOR ON SITE PRIOR TO WORKS COMMENCING, ALL ROUTES SHALL BE VERIFIED FOR FEASIBILITY AND MEASURED ON SITE PRIOR TO PURCHASE OF ANY MATERIALS.
DRA 002	RISK OF ELECTRIC SHOCK WHEN CARRYING OUT WORKS ON OR AROUND LIVE PARTS, SAFE ISOLATION PROCEDURE SHOULD BE IMPLEMENTED TO MITIGATE RISKS
DRA 003	DETAILS FOR COLUMN AND ENCLOSURE BASES TO BE CONFIRMED BY CIVIL DESIGNER PRIOR TO WORKS COMMENCING
DRA 007	IMPROPER EQUIPMENT SELECTION, ALL EQUIPMENT SELECTED HAS BEEN DESIGNED TO CONFORM TO RELEVANT STANDARDS AND CLIENT SPECIFICATIONS, ALL DEVIATIONS FROM SPECIFIED EQUIPMENT SHALL BE EQUAL AND APPROVED PRIOR TO INSTALLATION COMMENCING.
DRA 032	DNO CHARACTERISTICS UNCONFIRMED ASSUMED Ze OF 0.35 USED FOR CALCULATION PURPOSES.



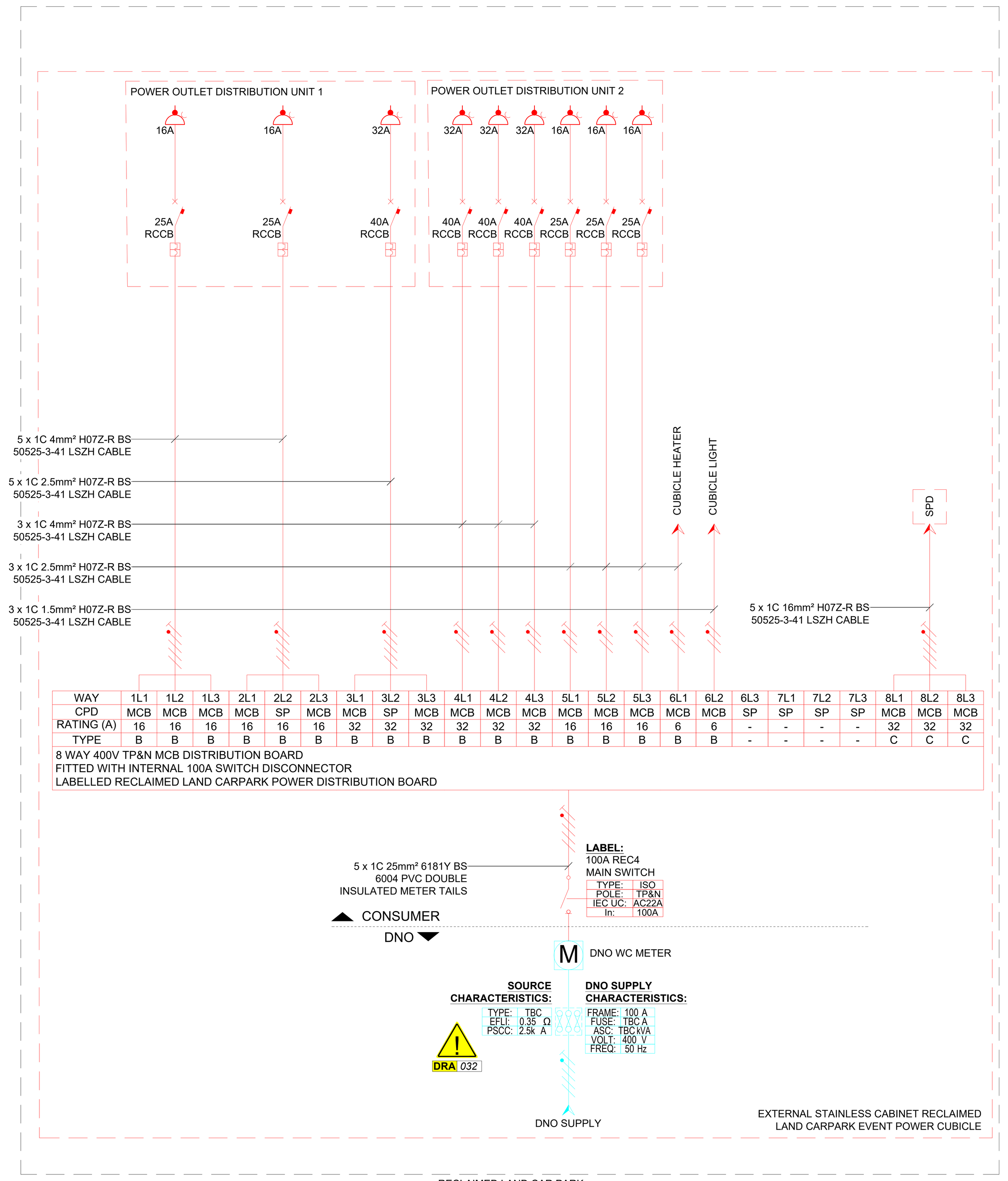
RECLAIMED LAND CAR PARK PROPOSED LIGHTING LAYOUT
SCALE - 1:500



WAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CPD	MCB	MCB	MCB	MCB	MCB	MCB	MCB	MCB	RCBO	MCB	MCB	MCB	MCB	MCB
RATING (A)	6	10	10	10	10	10	10	6	20	6	6	-	-	32
TYPE	B	B	B	B	B	B	B	B	B	B	C	-	-	C

14 WAY 230V SP&N MCB DISTRIBUTION BOARD
FITTED WITH INTERNAL 125A SWITCH DISCONNECTOR
LABELLED RECLAIMED CARPARK LIGHTING DISTRIBUTION BOARD

RECLAIMED LAND CAR PARK
PROPOSED LIGHTING SCHEMATIC



WAY	1L1	1L2	1L3	2L1	2L2	2L3	3L1	3L2	3L3	4L1	4L2	4L3	5L1	5L2	5L3	6L1	6L2	6L3	7L1	7L2	7L3	8L1	8L2	8L3
CPD	MCB	MCB	MCB	MCB	SP	MCB	MCB	SP	MCB	MCB	MCB	MCB	MCB	MCB	MCB	MCB	MCB	SP	SP	SP	SP	MCB	MCB	MCB
RATING (A)	16	16	16	16	16	16	32	32	32	32	32	32	16	16	16	6	6	-	-	-	-	32	32	32
TYPE	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-	-	C	C	C

8 WAY 400V TP&N MCB DISTRIBUTION BOARD
FITTED WITH INTERNAL 100A SWITCH DISCONNECTOR
LABELLED RECLAIMED LAND CARPARK POWER DISTRIBUTION BOARD

RECLAIMED LAND CAR PARK
PROPOSED EVENT POWER SCHEMATIC

DO NOT SCALE FROM THIS DRAWING

SAFETY HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazard/risks normally associated with the types of work detailed on this drawing, note the following risks and information.

Risks listed here are not exhaustive.
Refer to

CONSTRUCTION

MAINTENANCE AND INSPECTION

RESIDUAL DESIGN RISKS

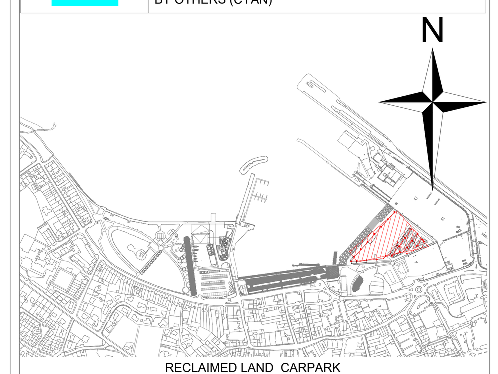
For information relating to use, cleaning and maintenance refer to the Health and Safety file.

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement.

This plan is based on the Ordnance Survey map with the permission of the controller of HMSO. Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings.

COLOUR CODE:

- EXISTING OR UNCHANGED (BLACK)
- MODIFIED OR TO BE MOVED (BLUE)
- REDUNDANT OR TO BE REMOVED (GREEN)
- NEW, PROPOSED OR ADDITIONAL (RED)
- FOR TEMPORARY WORKS (PURPLE)
- OS/SURVEY DATA (GREY)
- BY OTHERS (CYAN)



RECLAIMED LAND CARPARK
LOCATION PLAN
SCALE - NTS

LEGEND

- 4POLE CONTACTOR
- SINGLE PHASE DNO FUSE CARRIER
- SINGLE PHASE CABLE. LIVE, NEUTRAL, EARTH.
- THREE PHASE CABLE. L1, L2, L3, NEUTRAL, EARTH.
- PEC — PHOTOCELL SENSOR FOR WALKWAY LIGHTING
- LED LUMINAIRES
- 'SCAME' COMMANDO SOCKET OUTLET
- ENCLOSURE DIN RAIL MOUNTED RESIDUAL CURRENT CIRCUIT BREAKER (RCCB)
- INCOMING DNO SUPPLY FUSE PROTECTIVE DEVICE
- WYLEX CUBICLE MAIN SWITCH DISCONNECTOR

Rev	Date	Description	Drawn	Chkd	Appd
P02	09/07/25	S4 Issue	BM	GD	CT
P01	02/07/25	Preliminary First Issue	BM	GD	CT

Drawing Status: Suitable for Review & Authorisation - By Lead Appointed Party

Dumfries and Galloway Council — Comhairle Dhùn Phris is Ghall-Ghàidhealaibh
Balfour Beatty
FAIRHURST
SCAPE SCOTLAND CIVIL ENGINEERING

Project Title: Stranraer Marina Expansion

Drawing Title: Reclamied Land Carpark Proposed Lighting & Power Distribution

Drawn	Date	Designed	Date
BM	24/03/25	RB	24/03/25
Checked	Date	Approved	Date
GD	24/03/25	CT	24/03/25
Size	Scale	Fairhurst Ref	
A0	VARIES	-	
Drawing Number	Status	Revision	
161378-FRH-13-00-DG-E-002201	S4	P02	