

#### ELECTRICAL SERVICES SPECIFICATION

THE ELECTRICAL INSTALLATIONS SHALL FULLY COMPLY WITH THE REQUIREMENTS OF BS7671:2008 THE WIRING REGULATIONS SEVENTEENTH EDITION AND SUBSEQUENT AMENDMENTS.

FIRE ALARM SYSTEM MODIFICATIONS AND ADDITIONS SHALL FULLY COMPLY WITH THE REQUIREMENTS OF BS5839:PART 1 2013.

EMERGENCY LIGHTING SHALL FULLY COMPLY WITH THE REQUIREMENTS OF BS5266-1:2011. TEST KEYSWITCHES SHALL BE PROVIDED AS SHOWN. EACH TEST KEYSWITCH SHALL BE PROVIDED WITH A GREEN 'POWER ON' NEON INDICATOR.

THE CONTRACTOR SHALL PROVIDE ALL LABOUR AND MATERIALS TO PROVIDE COMPLETE, OPERATIONAL AND COMMISSIONED SYSTEMS AND INSTALLATIONS. ANY MATERIALS NOT SPECIFICALLY INCLUDED IN THE SPECIFICATION NECESSARY TO COMPLETE THE WORKS SHALL BE INCLUDED IN THE TENDER COST.

THE TENDER COST SHALL INCLUDE THE PROVISION OF ALL MATERIALS, LABOUR, DELIVERY TO SITE AND COMMISSIONING TO PROVIDE COMPLETE AND OPERATIONAL SYSTEMS/INSTALLATIONS.

AS FITTED DRAWING(S) SHALL BE PROVIDED WITH OPERATING AND MAINTENANCE INSTRUCTIONS FOR THE NEW INSTALLATIONS. THE O&M MANUAL SHALL INCLUDE ALL TEST CERTIFICATES AND COMMISSIONING CERTIFICATES.

THE ELECTRICAL CONTRACTOR SHALL EMPLOY A LIGHTNING PROTECTION SPECIALIST TO DESIGN THE SYSTEM TO COMPLY WITH THE LATEST REGULATORY STANDARDS.

#### LIGHTING AND EMERGENCY LIGHTING

THE CONTRACTOR SHALL PROVIDE AND INSTALL COMPLETE LIGHTING AND EMERGENCY INSTALLATIONS AS DESCRIBED HEREIN AND AS DETAILED ON THE DRAWINGS.

PRESENCE DETECTORS WITH AN ADJUSTABLE OPERATIONAL RANGE FROM 0-30 MINUTES SHALL BE PROVIDED AS LIGHTING CONTROL FOR THE LOBBY AREA.

INSTALLATION STANDARD SHALL BE BS6242B LSOH INSULATED AND SERVED TWIN AND EARTH CABLES LAID ON CABLE BASKET AND ENCLOSED IN GALVANISED CONDUITS FOR DROPS WITHIN THE BUILDING FABRIC AND SURFACE TRUNKING UNLESS STATED OTHERWISE. AN EMERGENCY LIGHT TEST KEYSWITCH WITH 'TEST' NEON INDICATOR SHALL BE PROVIDED AT THE DB POSITION FOR EACH LIGHTING CIRCUIT WITH EMERGENCY LUMINAIRES.

#### NOTES

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#### LEGEND

- PRESENCE DETECTOR
  - LIGHT SWITCH
  - TIME SWITCH
  - PHOTO CELL
  - DISTRIBUTION BOARD
  - EMERGENCY LIGHTING TEST KEYSWITCH 1 PER CIRCUIT
- REFER TO LUMINAIRE SCHEDULE FOR ALL LUMINAIRE AND EMERGENCY LUMINAIRE DETAILS

T2	29/01/19	UPDATED TO SUIT LATEST LAYOUT AND COMMENTS	OR	DB
T1	28/09/18	ISSUED FOR TENDER	OR	DB
REV	DATE	DESCRIPTION	BY	VE



Drawing Status

TENDER

Project

SHOTTON COMMUNITY CENTRE

Drawing Title

ELECTRICAL ENGINEERING SERVICES  
LIGHTING AND EMERGENCY LIGHTING  
LAYOUT



Scale

1:50@A1

Engineer

OR

Date

OCT 18

Drawing Number

1442-00-00-DR-E-200

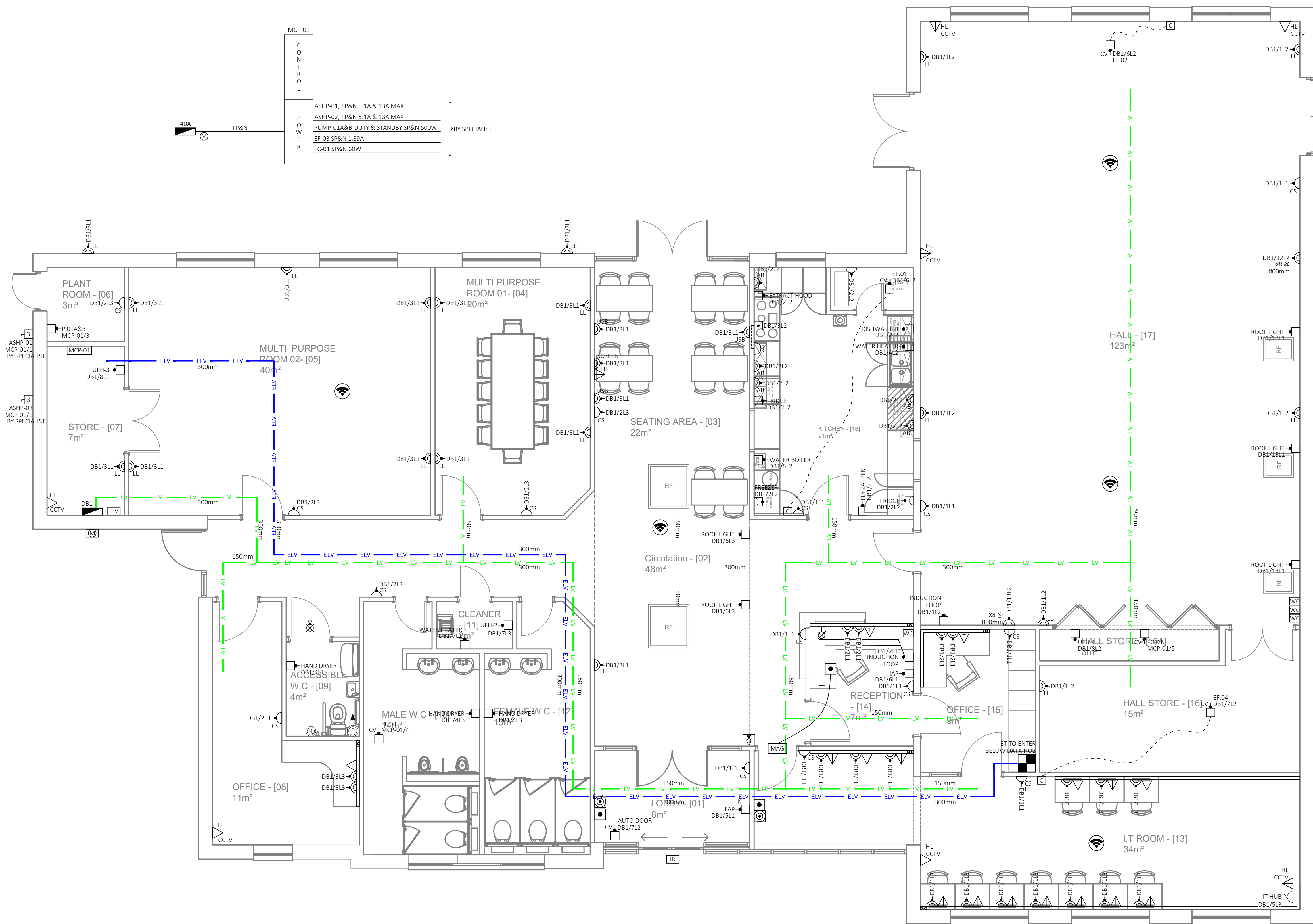
Rev

T2

Architects Revision

L-(2)101 P1





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SMALL POWER

A NEW 25mm<sup>2</sup> XLPE/SWA/LSF (+16mm<sup>2</sup> CPC) SUBMAIN SHALL BE INSTALLED BETWEEN THE SWITCHBOARD - NEW 25mm TAILS SHALL BE INSTALLED FROM THE NEW NPG CUT OUT AND THE NEW DB.

THE INSTALLATION STANDARD SHALL BE BS6242B LSOH INSULATED AND SERVED TWIN AND EARTH CABLES LAID ON CABLE BASKET AND ENCLOSED IN UPVC CONDUITS WITHIN THE BUILDING FABRIC AND SURFACE TRUNKING UNLESS STATED OTHERWISE.

A NEW THREE PHASE RCBO/MCB SCHNEIDER ACTI 9 DISTRIBUTION BOARD SHALL BE INSTALLED WITHIN THE STORE.

INSTALLATION STANDARD SHALL BE BS6242B LSOH INSULATED AND SERVED TWIN AND EARTH CABLES LAID ON CABLE BASKET AND ENCLOSED IN UPVC CONDUITS WITHIN THE BUILDING FABRIC AND SURFACE TRUNKING UNLESS STATED OTHERWISE.

THE CONTRACTOR SHALL INCLUDE FOR ALL PROTECTIVE DEVICES AND CABLES AS LISTED IN THE ASSOCIATED DB SCHEDULES.

DATA INSTALLATION

DATA INSTALLATIONS SHALL FULLY COMPLY WITH EN50173-1:2007 AND SHALL PROVIDE A 25 YEAR WARRANTY. THE CAT6 CABLES SHALL BE ROUTED ON CONTAINMENT WITHIN THE CEILING VOID AND ENCLOSED IN UPVC TRUNKING OR CONDUIT. THE CAT6 CABLES SHALL BE ROUTED FROM THE NEW DATA RACK TO THE OUTLET POINTS INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL INCLUDE FOR AN APPROVED DATA SPECIALIST TO TERMINATE THE CABLES AT THE RACK AND WITHIN THE RJ45 OUTLET POINTS.

INDUCTION LOOP SYSTEM

THE CONTRACTOR SHALL PROVIDE TWO PERMANENT INDUCTION LOOP SYSTEMS IN THE HALL AND RECEPTION AREA. THE INDUCTION LOOP SHALL BE CONTAINED WITHIN UPVC CONDUIT ROUTED WITHIN THE CEILING VOID.

A PORTABLE INDUCTION UNIT TO BE PROVIDED AS PART OF THE TENDER.

MECHANICAL SERVICES

ALL INTERCONNECTING CABLING BETWEEN MECHANICAL PLANT AND CONTROL DEVICES ARE TO BE INSTALLED BY THE BMS SPECIALIST. MECHANICAL SPECIALIST TO PROVIDE AND INSTALL PROTECTION DEVICES AND ALL OUTGOING WAYS.

WIRING TO THERMOSTATS AND ROOM CONTROLLERS TO BE INSTALLED BY THE ELECTRICAL CONTRACTOR. FOR FINAL LOCATIONS REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS.

NOTES

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LEGEND

- DOUBLE SWITCHED SOCKET OUTLET
- SINGLE SWITCHED SOCKET OUTLET
- SWITCHED FUSED SPUR
- SWITCHED FUSED SPUR C/W LOW LEVEL SPUR
- SINGLE DATA OUTLET
- TELEPHONE OUTLET
- IT CABINET
- CEILING MOUNTED WIFI POINT
- OUTLET PLATE
- COOKER POINT
- DADO TRUNKING
- METER CABINET
- DISABLED CALL PULL CORD
- DISABLED CALL RESET BUTTON
- DISABLED CALL INDICATOR
- DISABLED CALL SOUNDER / BEACON
- DISTRIBUTION BOARD
- GALVANISED STEEL TRAY FOR LV POWER AND LIGHTING (SIZE AS INDICATED)
- GALVANISED STEEL ELV BASKET C/W METAL DIVIDE FOR FIRE ALARM SEPARATION (SIZE AS INDICATED)
- COMMANDO SOCKET
- LL DENOTES LOW LEVEL
- HL DENOTES HIGH LEVEL
- AB DENOTES ABOVE BENCH
- CS DENOTES CLEANERS SOCKET
- PV INVERTOR BY A.R. POWER (OR EQUAL AND APPROVED) ALL BLACK VIRIDIAN CLEARLINE FUSION SYSTEM.
- INFRA RED SENSOR WITHIN AUTO DOOR
- PUSH TO EXIT
- ROOF LIGHT CONTROLS
- GREEN BREAK GLASS

T2	29/01/19	UPDATED TO SUIT LATEST LAYOUT AND COMMENTS	OR	DB
T1	01/10/18	ISSUED FOR TENDER	OR	DB
REV	DATE	DESCRIPTION	BY	VE

**WGC**  
WILSON GRAY CONSULTING

North East  
0191 000 0000  
Yorkshire  
0113 390 0185

Drawing Status  
**TENDER**

Project  
**SHOTTON COMMUNITY CENTRE**

Drawing Title  
**ELECTRICAL ENGINEERING SERVICES  
SMALL POWER, DATA AND  
CONTAINMENT LAYOUT**

Client  
**d3associates**

Scale  
**1:50@A1**

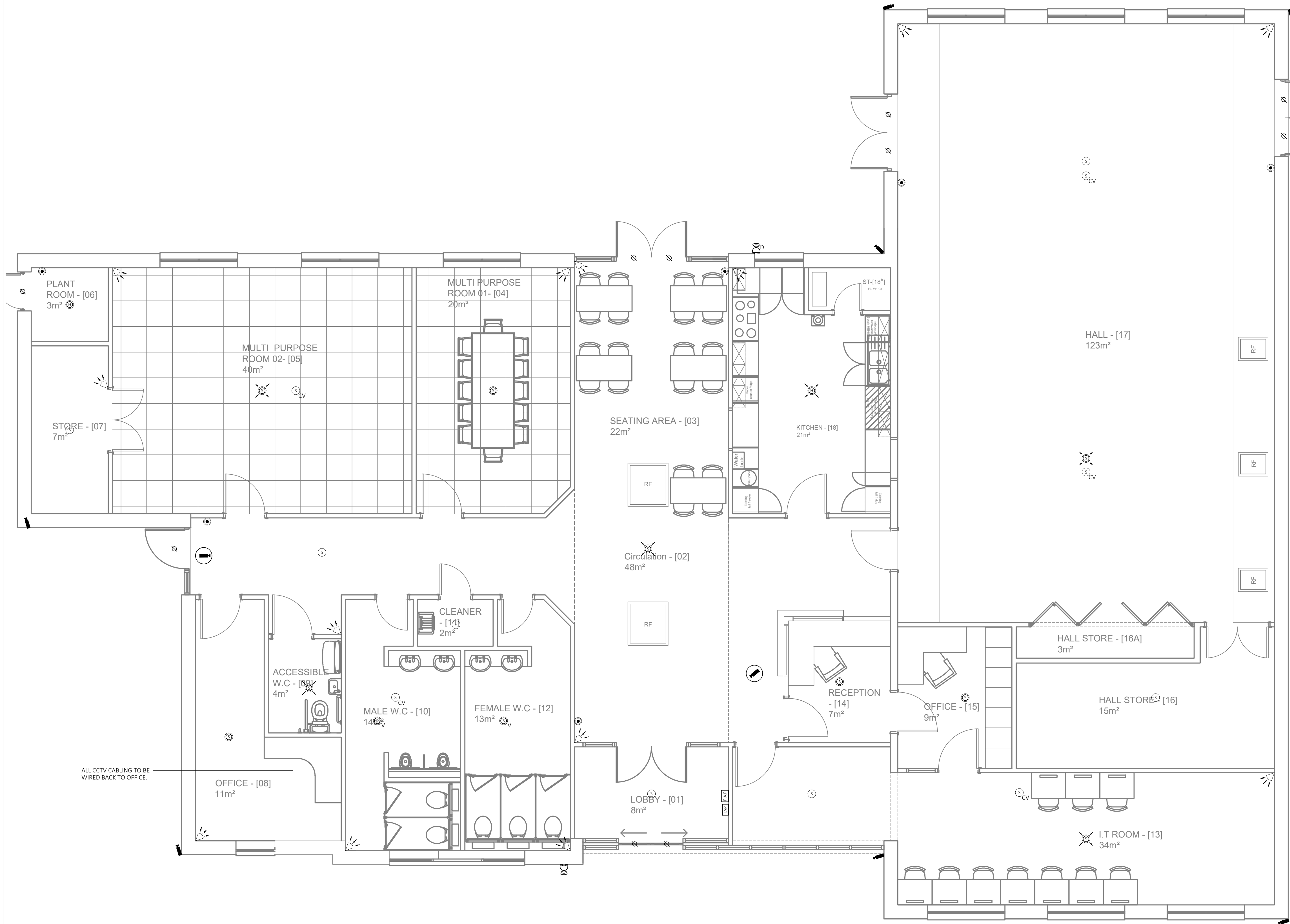
Engineer  
**OR**

Date  
**OCT 18**

Drawing Number  
**1442-00-00-DR-E-300**

Rev  
**T2**

Architects Revision  
**L-(2)101 P4**



ALL CCTV CABLING TO BE WIRED BACK TO OFFICE.

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#### FIRE ALARM

INSTALLATION STANDARD SHALL BE BASEC AND LPCB SOFT SKIN CABLE. INSTALLATIONS WITHIN THE AREA SHALL BE RECESSED WITHIN THE BUILDING FABRIC WITHIN GALVANISED CONDUITS OR LAID ON DEDICATED CABLE BASKET WITHIN THE CEILING VOID.

THE DETECTION SHALL BE PROVIDED AS INDICATED ON THE DRAWING. NO TEES OR SPURS SHALL BE PROVIDED. DETECTION DEVICES SHALL BE OF ADT MANUFACTURE AND SHALL BE COMPATIBLE WITH THE CONTROL EQUIPMENT.

PROVIDE, INSTALL AND CONNECT A COMPLETE NEW FIRE ALARM SYSTEM AS SHOWN ON THE DRAWINGS AND AS DESCRIBED BELOW:-

THE NEW FIRE ALARM INSTALLATION SHALL BE CATEGORY L1 SYSTEM WITH CEILING VOID DETECTION WHERE REQUIRED AND SHALL BE IN ACCORDANCE WITH B.S. 5839, PART 1. THE NEW FIRE ALARM SYSTEM SHALL BE AN ADDRESSABLE INTELLIGENT ALARM SYSTEM.

THE CONTRACTOR SHALL ALLOW FOR FINAL POSITIONING OF DEVICES AND PROVIDE SITE COORDINATION TO ENSURE THAT DEVICES ARE CO-ORDINATED WITH MECHANICAL AIR INLET OR OUTLET GRILLES, VARYING CEILING TYPES/HEIGHTS/OBSTRUCTIONS, PARTITIONS, RACKING AND STAIRWELLS AND LIFT SHAFTS IN LINE WITH THE REQUIREMENTS OF BS 5839.

THE CONTRACTOR SHALL ALSO INCLUDE FOR AND ASSOCIATED WIRING TO THESE ITEMS OF EQUIPMENT. IE POWER SUPPLIES, DATA OUTLETS, ETC.

THE NEW EQUIPMENT TO BE PROVIDED, INSTALLED AND CONNECTED BY A FIRE ALARM SPECIALIST AS SHOWN ON THE DRAWINGS.

THE BREAK GLASS UNITS WITHIN THE NEW EXTENSION SHALL BE PROVIDED AS INDICATED ON THE DRAWING AND SHALL BE CONNECTED TO THE ADJACENT AREA LOOP. NO TEES OR SPURS SHALL BE PROVIDED. DETECTION DEVICES SHALL BE OF ADT MANUFACTURE AND SHALL BE COMPATIBLE WITH THE CONTROL EQUIPMENT.

THE COMPLETED SYSTEM SHALL BE COMMISSIONED BY ADT.

#### INTRUDER ALARM

THE CONTRACTOR SHALL EMPLOY THE SERVICE OF ABCA SYSTEMS, SWIFT FIRE AND SECURITY OR CDS FIRE AND SECURITY FOR THE SUPPLY, INSTALLATION AND COMMISSIONING OF THE INTRUDER ALARM SYSTEMS AS INDICATED ON THE DRAWINGS AND AS DESCRIBED BELOW.

THE SECURITY SYSTEM SHALL BE TESTED AND COMMISSIONED BY THE SECURITY ALARM SPECIALIST UPON COMPLETION. THE COVERAGE PROVIDED BY ALL MOVEMENT DETECTORS SHALL BE DEMONSTRATED AT THE TIME OF COMMISSIONING OF THE SYSTEM AND SUBSEQUENTLY FOLLOWING ANY REPLACEMENT OF ANY DETECTOR AS A RESULT IF NECESSARY SERVICE WORK.

THE SYSTEMS SHALL OPERATE FROM A 12 VOLT D.C FLOAT CHARGED BATTERY SUPPLY. THE BATTERY SUPPLY WHEN FULLY CHARGED TO BE SUFFICIENT TO OPERATE THE SYSTEM TO SUIT THE GRADING OF THE SYSTEM IN THE EVENT OF A FAILURE TO THE MAINS SUPPLY.

AN EXTERNAL SELF-ACTIVATING 109DB @ 1MTR ELECTRONIC SOUNDER INCLUDING STROBE LIGHT SHALL BE INSTALLED TO THE FRONT ELEVATION OF THE FM BUILDING AND CEFA BUILDING. THIS SOUNDER SHALL SOUND FOR NO LONGER THAN 20 MINUTES IN ACCORDANCE WITH EN50131. THE FLASHING STROBE LIGHT SHALL CONTINUE TO OPERATE AFTER THE AUDIBLE ALARM SWITCHES OFF. THIS UNIT SHALL HAVE THE FOLLOWING FEATURES:- IP65 SEALED ELECTRONICS, ADVANCED MICROPROCESSOR TECHNOLOGY, NON-RUST POLYCARBONATE CONSTRUCTION, TWIN WARNING LED'S & HAVE A SELF CONTAINED BATTERY BACKUP.

#### FIRE STOPPING

FIRE STOPPING OF SMALL HOLES SHALL BE CO-ORDINATED WITH THE MAIN CONTRACTOR. THE CONTRACTOR SHALL IDENTIFY ON LAYOUT DRAWINGS ANY SMALL HOLES FORMED FOR THE ROUTING OF SERVICES THAT BREACH FIRE COMPARTMENT WALLS.

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#### LEGEND

- ③ SMOKE DETECTOR
- ③ SMOKE DETECTOR C/W SOUNDER
- ③ SMOKE DETECTOR C/W SOUNDER AND BEACON
- ④ HEAT DETECTOR
- ④ HEAT DETECTOR C/W SOUNDER
- RED BREAK GLASS CALL POINT
- GREEN BREAK GLASS POINT
- FA FIRE ALARM PANEL
- IA INTRUDER ALARM PANEL
- DI EXTERNAL INTRUDER ALARM SOUNDER/STROBE WALL MOUNTED AT HIGH LEVEL
- DI DUMMY EXTERNAL INTRUDER ALARM SOUNDER/STROBE WALL MOUNTED AT HIGH LEVEL
- IM INTRUDER ALARM MOTION DETECTOR
- Q DOOR CONTACT
- CC EXTERNAL CCTV CAMERA
- CV DENOTES CEILING VOID

T2	29/01/19	UPDATED TO SUIT LATEST LAYOUT AND COMMENTS	OR	DB
T1	01/10/18	ISSUED FOR TENDER	OR	DB
REV	DATE	DESCRIPTION	BY	VE



Drawing Status  
TENDER

Project  
SHOTTON COMMUNITY CENTRE

Drawing Title  
ELECTRICAL ENGINEERING SERVICES  
FIRE AND SECURITY LAYOUT



Scale  
1:50@A1

Engineer  
OR

Date  
OCT 18

Drawing Number  
1442-00-00-DR-E-400

Rev  
T2

Architects Revision  
L-(2)101 P4



# Distribution Board Schedule

Project		Shotton Community Centre				Date	25-01-19		Revision		T2		
						Made By	OR		Checked By		DB		
Board Ref		DB1		Number of Ways		16	Location	Store (-17)				Incoming Supply	TBC
Circuit Ref		Protective Device Information				Circuit Description	Cable Details				BS7671 Inst No. Table 4A2	Notes	
		Rating (A)	Description	Type	I <sub>sc</sub> (kA)		Live (mm2)	CPC (mm2)	No. of Cores	Type			
1	L1	32	RCBO	B	10	Ring: Cleaner sockets	4	1.5	3	T+E LSF			
	L2	32	RCBO	B	10	Ring: Hall	4	1.5	3	T+E LSF			
	L3	32	RCBO	B	10	Ring: IT Room	4	1.5	3	T+E LSF			
2	L1	32	RCBO	B	10	Ring: Reception and office 07	4	1.5	3	T+E LSF			
	L2	32	RCBO	B	10	Ring: Kitchen	4	1.5	3	T+E LSF			
	L3	32	RCBO	B	10	Ring: Cleaner sockets	4	1.5	3	T+E LSF			
3	L1	32	RCBO	B	10	Ring: Multi purpose room 01 and 02	4	1.5	3	T+E LSF			
	L2	45	RCBO	B	10	Radial: Cooker	10	6	3	T+E LSF			
	L3	32	RCBO	B	10	Ring: Office 18	4	1.5	3	T+E LSF			
4	L1	20	RCBO	B	10	Radial: Hand dryer Dis. W.C.	4	1.5	3	T+E LSF			
	L2	20	RCBO	B	10	Radial: Water heater kitchen	4	1.5	3	T+E LSF			
	L3	20	RCBO	B	10	Radial: Hand dryer male and female W.C.	4	1.5	3	T+E LSF			
5	L1	16	MCB	B	10	Radial: Fire alarm panel	2.5	2.5	3	FP200			
	L2	20	RCBO	B	10	Radial: Water boiler kitchen	2.5	1.5	3	T+E LSF			
	L3	16	RCBO	B	10	Radial: IT Hub	2.5	1.5	3	T+E LSF			
6	L1	16	MCB	B	10	Radial: Intruder alarm panel	2.5	1.5	3	T+E LSF			
	L2	32	RCBO	B	10	Ring: Extract fan 01, 02 and HRU	4	1.5	3	T+E LSF			
	L3	32	RCBO	B	10	Ring: Circulation Roof Lights	4	1.5	3	T+E LSF			
7	L1	20	RCBO	B	10	Radial: Water heater cleaners cupboard	4	1.5	3	T+E LSF			
	L2	16	RCBO	B	10	Radial: Auto Door	2.5	1.5	3	T+E LSF			
	L3												
8	L1	20	RCBO	B	10	Radial: UFH-1	4	1.5	3	T+E LSF			
	L2	20	RCBO	B	10	Radial: Water heater female W.C. and Clnrs	4	1.5	3	T+E LSF			
	L3												
							Revision	Description				Approved / Date	
							T2	Tender Issue				DB 25/01/2019	

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Project		Shotton Community Centre				Date	25-01-19		Revision		T2		
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Circuit Ref		Protective Device Information				Circuit Description	Cable Details				BS7671 Inst No. Table 4A2	Notes	
		Rating (A)	Description	Type	Isc (kA)		Live (mm2)	CPC (mm2)	No. of Cores	Type			
9	L1	10	RCBO	C	10	Lighting: Reception, Office, Hall Store and IT Room	1.5	1	3	T+E LSF			
	L2	10	RCBO	C	10	Lighting: Kitchen	1.5	1	3	T+E LSF			
	L3	10	RCBO	C	10	Lighting: WCs and office 18	1.5	1	3	T+E LSF			
10	L1	10	RCBO	C	10	Lighting: Plant, Store and multi purpose rooms	1.5	1	3	T+E LSF			
	L2	10	RCBO	C	10	Lighting: Seating Area	1.5	1	3	T+E LSF			
	L3	10	RCBO	C	10	Lighting: External wall lighting	1.5	1	3	T+E LSF			
11	L1	10	RCBO	C	10	Lighting: External lighting	4	Armour	3	XLPE/SWA/LSF			
	L2	10	RCBO	C	10	Lighting: External street lighting	4	Armour	3	XLPE/SWA/LSF			
	L3	10	RCBO	C	10	Lighting: External street lighting	4	Armour	3	XLPE/SWA/LSF			
12	L1	40	MCB	B	10	Submain: Mech panel	6	Armour	3	XLPE/SWA/LSF		Separate meter required	
	L2	32	RCBO	B	10	Ring: Hall x8 sockets	4	1.5	3	T+E LSF			
	L3	32	RCBO	B	10	Ring: External sockets	4	Armour	3	XLPE/SWA/LSF			
13	L1	32	RCBO	B	10	Ring: Hall Roof Lights	4	1.5	3	T+E LSF			
	L2	32	RCBO	B	10	Ring: Hall x8 sockets	4	1.5	3	T+E LSF			
	L3	10	RCBO	C	10	Lighting: Seating area wall lights	1.5	1	3	T+E LSF			
14	L1	10	RCBO	C	10	Lighting: Hall	1.5	1	3	T+E LSF			
	L2	10	RCBO	C	10	Lighting: Hall wall lights	1.5	1	3	T+E LSF			
	L3												
15	L1												
	L2												
	L3												
16	L1												
	L2												
	L3												
							Revision	Description				Approved / Date	
							T2	Tender Issue				DB 28/01/2019	

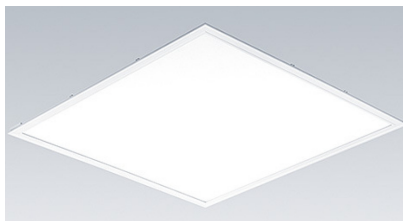


## SCHEDULE OF LUMINAIRES

### NOTES

1. This schedule indicates the performance and quality of fittings required. Alternative proposals shall be equal performance and quality. All luminaires shall be subject to approval of samples by Client.
2. The table of technical details of the luminaires proposed on this project can be found on the 63 series drawings.
3. Luminaires suffixed with an E shall be classified as M/3 and NM/3 giving 3 hour battery autonomy and tested via a keyswitch facility. The inverter packs and batteries shall be located in a ventilated enclosure within 1 metre of the respective luminaire. Optionally this equipment may be incorporated in the luminaire if the luminaire manufacturer can guarantee that by enclosing these items within the body of the luminaire there will be no detrimental effect on battery life or system operation.
4. Emergency lighting conversions shall be undertaken by the luminaire manufacturer using components approved and procured by the manufacturer himself. The luminaire manufacturer shall retain product liability for the complete assembly.
5. Luminaires shall comply with BS 4533.
6. All Luminaires terminals shall accept minimum 3 x 2.5mm<sup>2</sup> cables.
7. All Luminaires shall incorporate power factor correction equipment.
8. All Luminaires shall be quiet in operation and comply with the EC EMC Directive.
9. Recessed luminaires must not be covered by insulation.
10. Luminaire illuminance and controls to be set during commissioning.



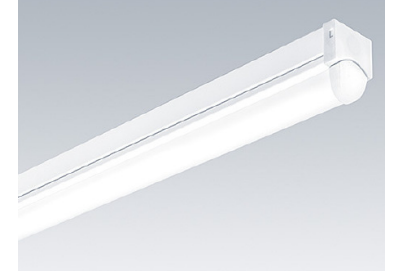
## PART D - SECTION 3

### LUMINAIRE SCHEDULE

<b>PROJECT</b>		Shotton Community Centre			<b>ISSUE DATE</b>		29/01/19	
<b>PROJECT NO</b>		1442	<b>SCHEDULE REF</b>	1442-00-00-SC-E-L01	<b>REV</b>	T2	<b>CHECKED</b>	DB
<b>Ref</b>	<b>Image</b>	<b>Lamp Qty &amp; Size / Colour</b>	<b>Luminaire Efficacy</b>	<b>Manufacturer/ Model</b>	<b>Description</b>			<b>Location Type Used</b>
A1		38W LED 4127 lumens 4000k	108Lm/W	Thorn Beta	<b>Mounting:</b> Recessed <b>IP:</b> <b>Fitting Colour:</b> White <b>LOR:</b> 100% <b>Ballast/Driver:</b> LED <b>Attachment:</b>			Office
A2		40W LED 4250 lumens 4000k	106Lm/W	Thorn IQ Wave	<b>Mounting:</b> Recessed <b>IP:</b> 20 <b>Fitting Colour:</b> White <b>LOR:</b> 100% <b>Ballast/Driver:</b> LED <b>Attachment:</b>			Office Reception I.T Room Mutli purpose rooms
A3		29W LED 3300 lumens 4000k	114Lm/W	Thorn Omega	<b>Mounting:</b> Recessed <b>IP:</b> 44 <b>Fitting Colour:</b> White <b>LOR:</b> 100% <b>Ballast/Driver:</b> LED <b>Attachment:</b>			Kitchen

### PART D - SECTION 3

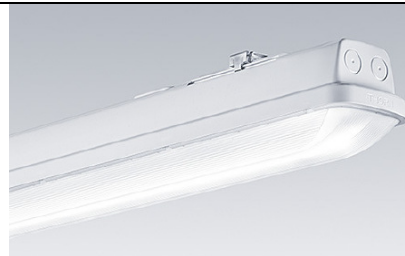




#### LUMINAIRE SCHEDULE

PROJECT		Shotton Community Centre			ISSUE DATE		29/01/19			
PROJECT NO		1442	SCHEDULE REF	1442-00-00-SC-E-L01		REV	T2		CHECKED	DB
Ref	Image		Lamp Qty & Size / Colour	Luminaire Efficacy	Manufacturer/ Model	Description				Location Type Used
B1			19.5W LED 1950 lumens 4000K	100Lm/W	Thorn Cetus	<b>Mounting:</b> Recessed <b>IP:</b> 44 <b>Fitting Colour:</b> White <b>LOR:</b> 100% <b>Ballast/Driver:</b> LED <b>Attachment:</b>				<b>Diameter:</b> 215mm <b>Height:</b> 88mm  General areas
B1/E			19.5W LED 1950 lumens 4000K	100Lm/W	Thorn Cetus	<b>Mounting:</b> Recessed <b>IP:</b> 44 <b>Fitting Colour:</b> White <b>LOR:</b> 100% <b>Ballast/Driver:</b> LED <b>Attachment:</b> C/W 3 hour integral emergency				<b>Diameter:</b> 215mm <b>Height:</b> 88mm  General areas
C1			23.5W LED 3200 lumens 4000K	136Lm/W	Thorn Poppack	<b>Mounting:</b> Surface <b>IP:</b> 20 <b>Fitting Colour:</b> White <b>LOR:</b> 100% <b>Ballast/Driver:</b> LED <b>Attachment:</b>				<b>Length:</b> 1200mm <b>Width:</b> 60mm <b>Height:</b> 74mm  Stores






## PART D - SECTION 3

### LUMINAIRE SCHEDULE

PROJECT		Shotton Community Centre			ISSUE DATE	29/01/19			
PROJECT NO		1442	SCHEDULE REF	1442-00-00-SC-E-L01		REV	T2	CHECKED	DB
Ref	Image		Lamp Qty & Size / Colour	Luminaire Efficacy	Manufacturer/ Model	Description			Location Type Used
C2/E			51W LED 67 lumens 4000K	141Lm/W	Thorn Aquaforce Pro	<b>Mounting:</b> Surface <b>IP:</b> 66 <b>Fitting Colour:</b> White <b>LOR:</b> 100% <b>Ballast/Driver:</b> LED <b>Attachment:</b> C/W 3 hour integral emergency			<b>Length:</b> 1100mm, <b>Width:</b> 92mm <b>Height:</b> 90mm  Plant Room
			6.5W LED		Hostwave	<b>Mounting:</b> Recessed <b>IP:</b> 42 <b>Fitting Colour:</b> White <b>LOR:</b> 100% <b>Ballast/Driver:</b> LED <b>Attachment:</b> Anti-panic diffuser			<b>Length:</b> <b>Width:</b> <b>Height:</b>  
			5W LED		Hostwave	<b>Mounting:</b> Wall <b>IP:</b> 65 <b>Fitting Colour:</b> White <b>LOR:</b> 100% <b>Ballast/Driver:</b> LED <b>Attachment:</b> C/W directional signage / legend			<b>Length:</b> <b>Width:</b> <b>Height:</b>  


### PART D - SECTION 3

#### LUMINAIRE SCHEDULE



PROJECT		Shotton Community Centre				ISSUE DATE	29/01/19		
PROJECT NO		1442	SCHEDULE REF	1442-00-00-SC-E-L01		REV	T2	CHECKED	DB
Ref	Image		Lamp Qty & Size / Colour	Luminaire Efficacy	Manufacturer/ Model	Description			Location Type Used
			5W LED		Hostwave	<b>Mounting:</b> Wall <b>IP:</b> 65 <b>Fitting Colour:</b> White <b>LOR:</b> 100% <b>Ballast/Driver:</b> LED <b>Attachment:</b>			<b>Length:</b> <b>Width:</b> <b>Height:</b>
EX1/E			17.9W 1119 Lumens 4000K		Whitecroft Spectre WX	<b>Mounting:</b> Wall <b>IP:</b> 65 <b>Fitting Colour:</b> Grey <b>LOR:</b> 100% <b>Ballast/Driver:</b> LED <b>Attachment:</b>			<b>Length:</b> 224mm <b>Width:</b> 375mm <b>Height:</b> 329mm  External
W1			24W LED 3000k	148Lm/W	Apollo Luca	<b>Mounting:</b> Wall <b>IP:</b> 20 <b>Fitting Colour:</b> White <b>LOR:</b> <b>Ballast/Driver:</b> LED <b>Attachment:</b>			<b>Length:</b> 580mm <b>Width:</b> 227mm <b>Height:</b> 82mm  Hall and Seating Area

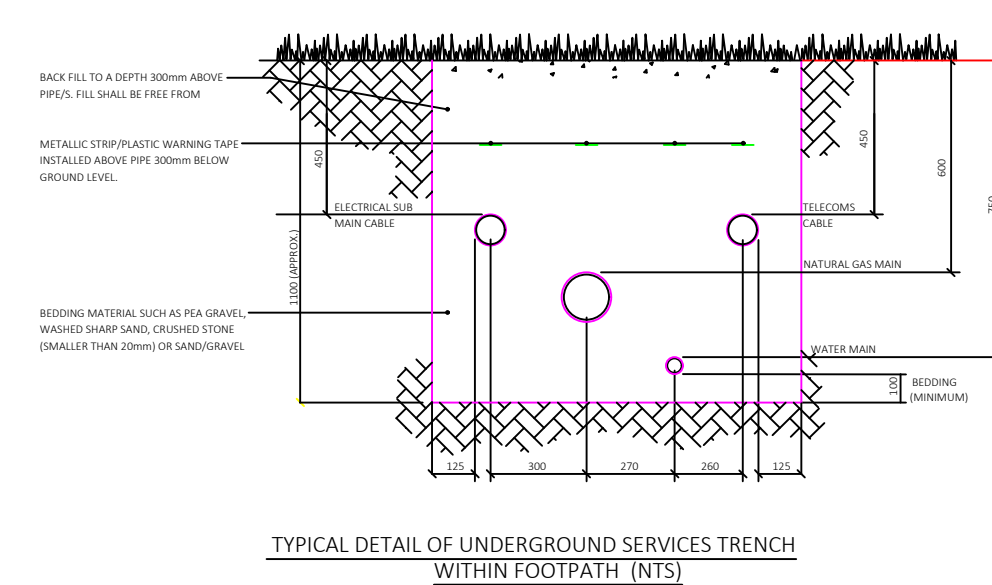
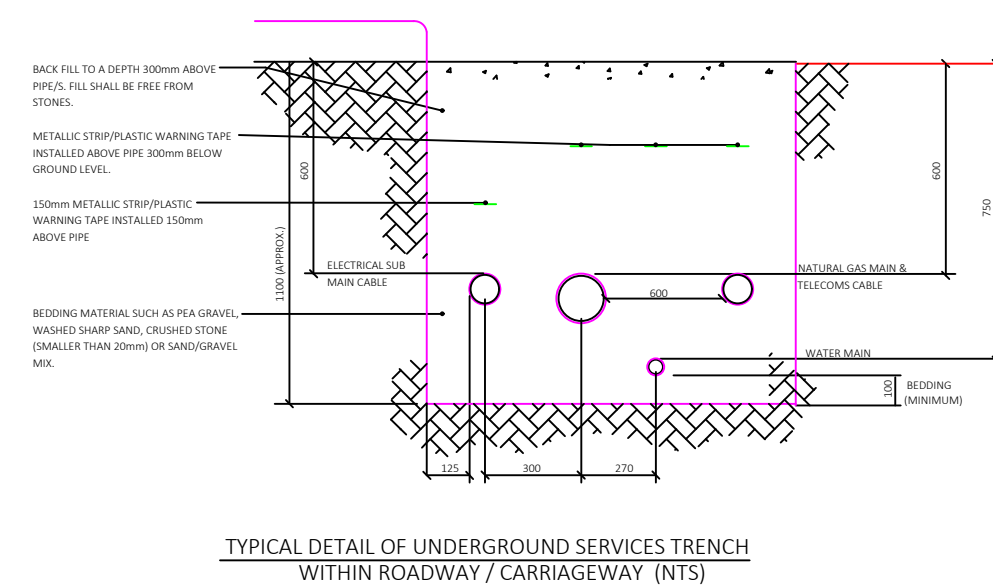
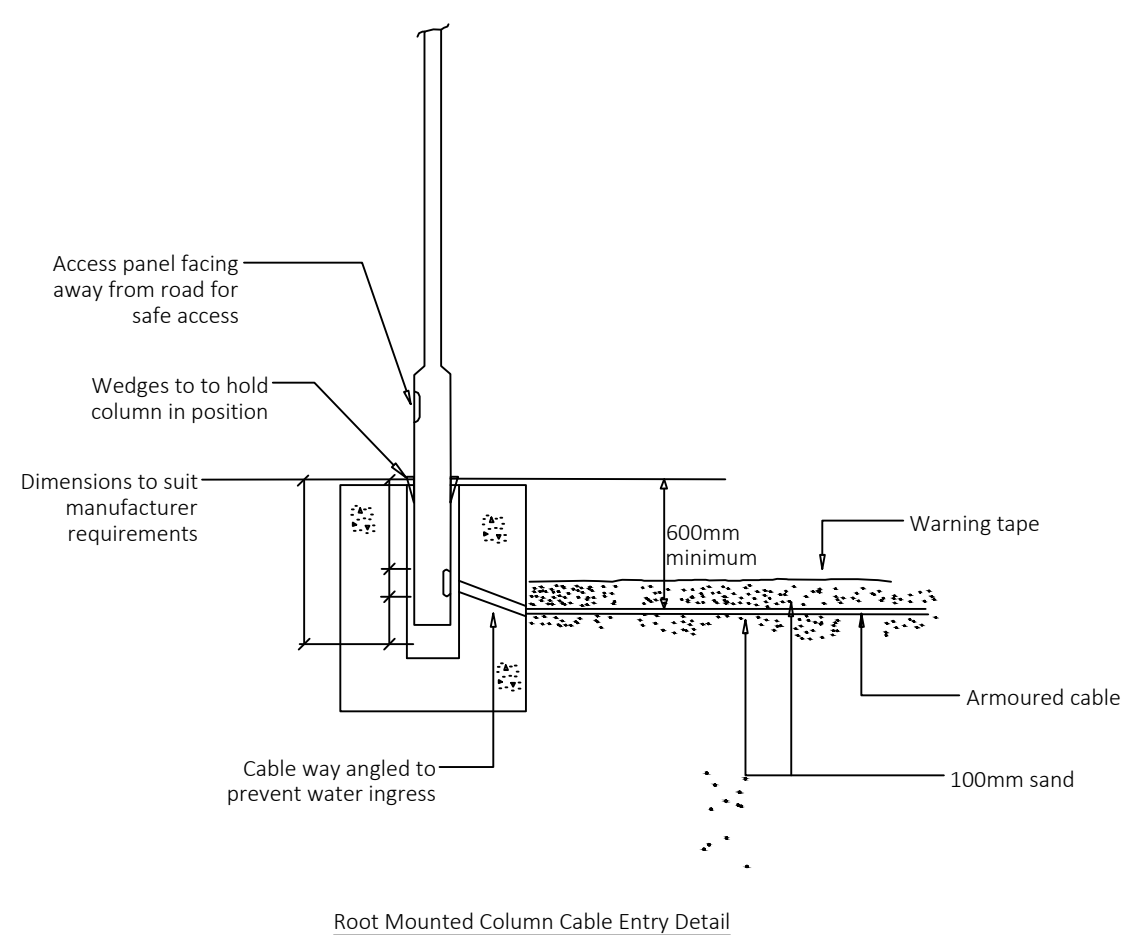
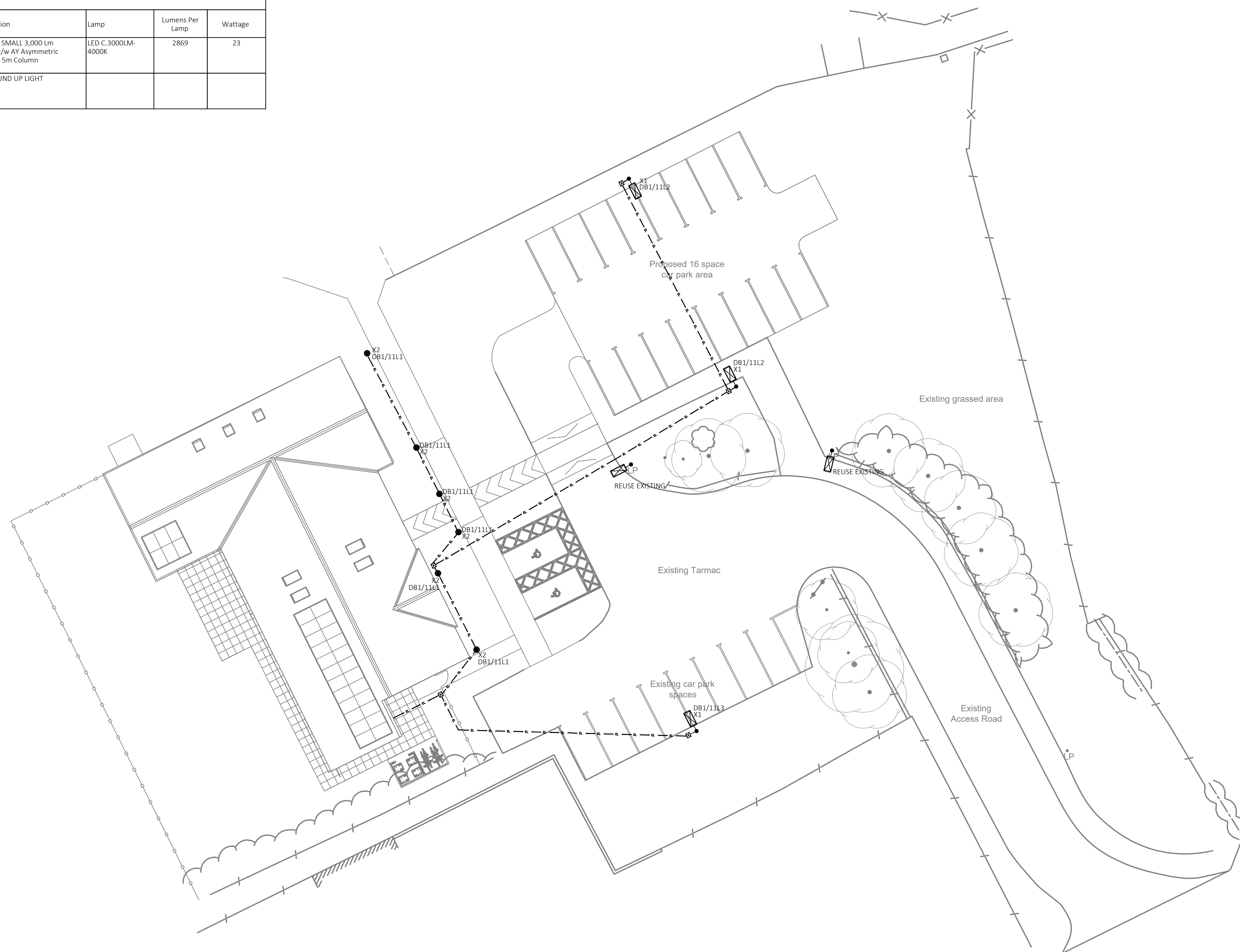
**PART D - SECTION 3**

## LUMINAIRE SCHEDULE

PROJECT		Shotton Community Centre				ISSUE DATE		29/01/19		
PROJECT NO		1442	SCHEDULE REF	1442-00-00-SC-E-L01		REV		T2	CHECKED	DB
Ref	Image		Lamp Qty & Size / Colour	Luminaire Efficacy	Manufacturer/ Model	Description				Location Type Used
P1			Decorative red pendant to be sourced by contractor.							



Schedule					
Symbol	Catalog Number	Description	Lamp	Lumens Per Lamp	Wattage
 X1	FTS 2.LA034-AY HOLOPHONE	FACTOR SMALL 3,000 Lm output c/w AY Asymmetric optic on 5m Column	LED C.3000LM-4000K	2869	23
 X2	PARK ELECTRICAL TO SPECIFY	IN GROUND UP LIGHT			



NOTES

THIS IS A DESIGN DRAWING NOT AN INSTALLATION DRAWING.  
DIMENSIONS SHOULD NOT BE SCALED.  
SITE DIMENSIONS TO BE CHECKED BEFORE PRODUCTION OF  
CRITICAL MANUFACTURING DRAWINGS.  
THE DRAWING IS COPYRIGHT AND NO PART MAY BE  
REPRODUCED WITHOUT WRITTEN CONSENT.

**LEGEND**

— a — PVC 50mm DUCT

☒ DRAW PIT

## ELECTRICAL SERVICES SPECIFICATION

THE ELECTRICAL INSTALLATIONS SHALL FULLY COMPLY WITH THE REQUIREMENTS OF BS7671:2008 THE WIRING REGULATIONS SEVENTEENTH EDITION AND SUBSEQUENT AMENDMENTS.

THE CONTRACTOR SHALL PROVIDE ALL LABOUR AND MATERIALS TO PROVIDE COMPLETE, OPERATIONAL AND COMMISSIONED SYSTEMS AND INSTALLATIONS. ANY MATERIALS NOT SPECIFICALLY INCLUDED IN THE SPECIFICATION NECESSARY TO COMPLETE THE WORKS SHALL BE INCLUDED IN THE TENDER COST.

THE TENDER COST SHALL INCLUDE THE PROVISION OF ALL MATERIALS, LABOUR, DELIVERY TO SITE AND COMMISSIONING TO PROVIDE COMPLETE AND OPERATIONAL SYSTEMS/INSTALLATIONS.

AS FITTED DRAWING(S) SHALL BE PROVIDED WITH OPERATING AND MAINTENANCE INSTRUCTIONS FOR THE NEW INSTALLATIONS. THE O&M MANUAL SHALL INCLUDE ALL TEST CERTIFICATES AND COMMISSIONING CERTIFICATES.

## EXTERNAL LIGHTING

PROVIDE, INSTALL AND CONNECT THE EXTERNAL LIGHTING AS SHOWN ON THE DRAWINGS.

CONTACTORS SHALL BE INSTALLED WITHIN THE RELEVANT DISTRIBUTION BOARD ENCLOSURE SUPPLYING THE EXTERNAL LIGHTING. THE CONTROL OF THE CONTACTORS SHALL BE VIA A LOCAL TIMESWITCH AND PHOTOCCELL ARRANGEMENT

THE CONTACTORS SHALL BE COMPLETE WITH LABELS TO DENOTE DUTY.

MOUNTING HEIGHTS OF ALL EXTERNAL WALL LIGHTS SHALL BE 3M AFFL AS A MINIMUM. ACTUAL MOUNTING HEIGHTS TO BE CONFIRMED PRIOR TO INSTALLATION.

PROVIDE, INSTALL AND CONNECT THE NEW ROADWAY / CARPARK LIGHTING COLUMNS AND BOLLARDS, AS SHOWN ON THE DRAWINGS AND AS FOLLOWS.

THE COLUMN ROOT SHALL BE PAINTED WITH BLACK BITUMEN PAINT AND SHALL BE SET 600MM BELOW GROUND LEVEL IN A CONCRETE BASE WHICH WILL BE POURED AROUND THE COLUMN BY THE MAIN CONTRACTOR WHO WILL ALSO SUPPLY AND INSTALL 50MM DIA. CABLE DUCTS THROUGH THE BASES FOR THE CABLES.

THE CONTRACTOR SHALL ERECT THE COLUMNS AND SHALL ENSURE THAT ALL COLUMNS ARE VERTICAL AND ALIGNED WITH ADJACENT COLUMNS WHERE REQUIRED.

THE COLUMNS SHALL BE WIRED BY THE CONTRACTOR USING XLPE/SWA/PVC CABLE. THE CABLES SHALL FOLLOW THE ROUTES SHOWN AND IN TRENCHES SHALL BE LAID ON A BED OF CLEAN SAND PROTECTED WITH INTERLOCKING CABLE TILES AND DRAWN THROUGH DUCTS BELOW THE ROADS.

THE INCOMING WIRING TO EACH COLUMN SHALL TERMINATE AT A BILL FUSED STREET LIGHTING CUT-OUT SITUATED IN THE COLUMN BASE ONTO A NON-HYDROSCOPIC BACKBOARD WIRING FROM THE CUT-OUT TO THE POST TOP LUMINAIRE TO BE VIA THE INSULATED AND SHEATHED FLEXIBLE CABLE PROVIDED WITH THE LANTERN RUN INTERNALLY IN THE COLUMN.

THE COLUMNS SHALL BE EARTHED TO THE INCOMING CABLE USING 6.0MM<sup>2</sup> GREEN/YELLOW EARTH CABLE.

T2	29/01/19	UPDATED TO SUIT LATEST LAYOUT AND COMMENTS	OR	DB
T1	01/10/18	ISSUED FOR TENDER	OR	DB
REV	DATE	DESCRIPTION	BY	VE

**WGC**  
WILSON GRAY CONSULTING



☒ North East  
0191 000 0000

☐ Yorkshire  
0113 390 0185

Drawing Status

TENDER

Project

SHOTTON COMMUNITY CENTRE

Drawing Title

ELECTRICAL ENGINEERING SERVICES  
EXTERNAL LIGHTING LAYOUT  
LAYOUT

Client



Scale

Engineer  
OR

Date  
OCT 18

Drawing Number

1442-EX-00-DR-E-200

Rev

Architects Revision

L-(1)101 REV P