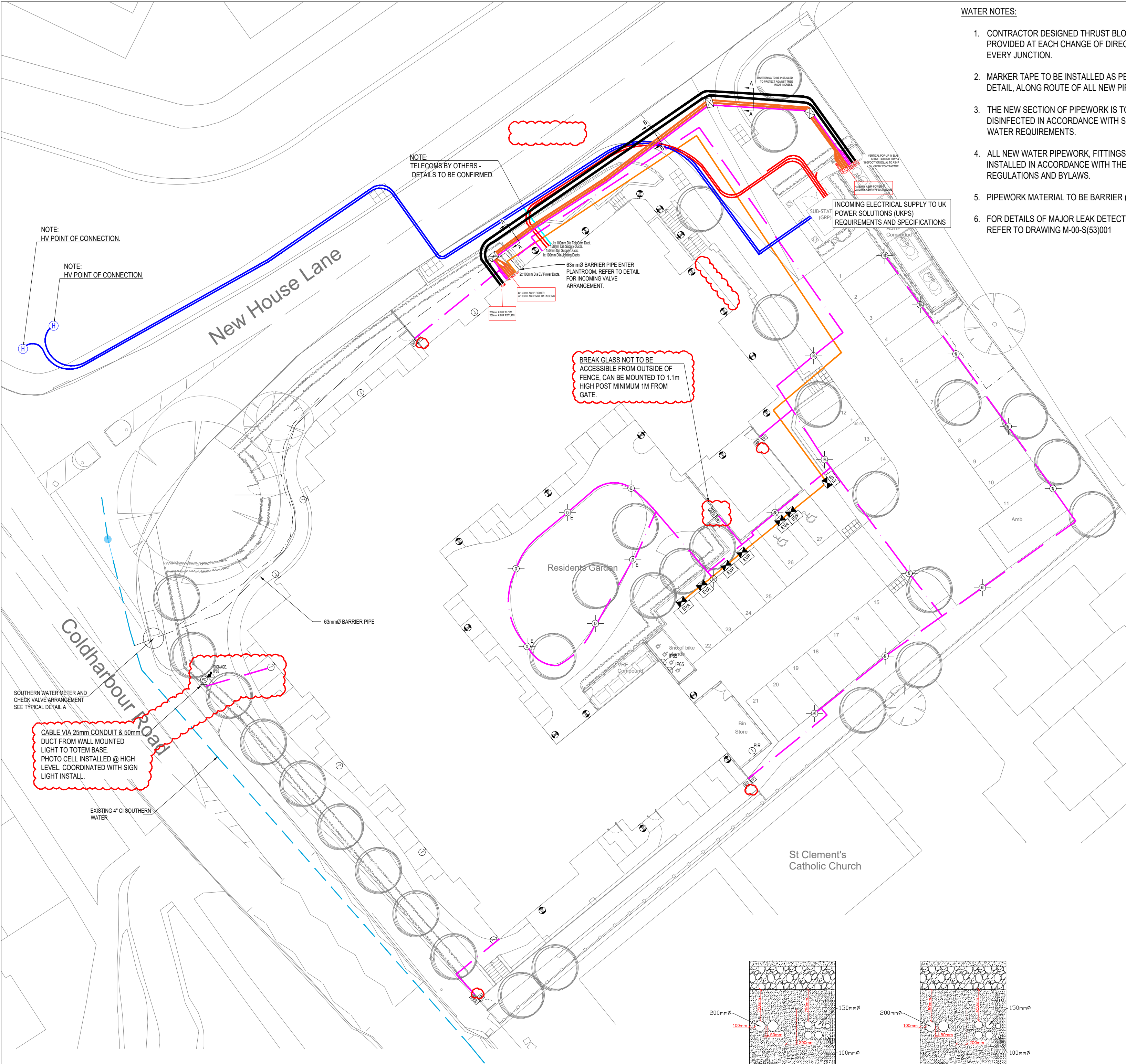


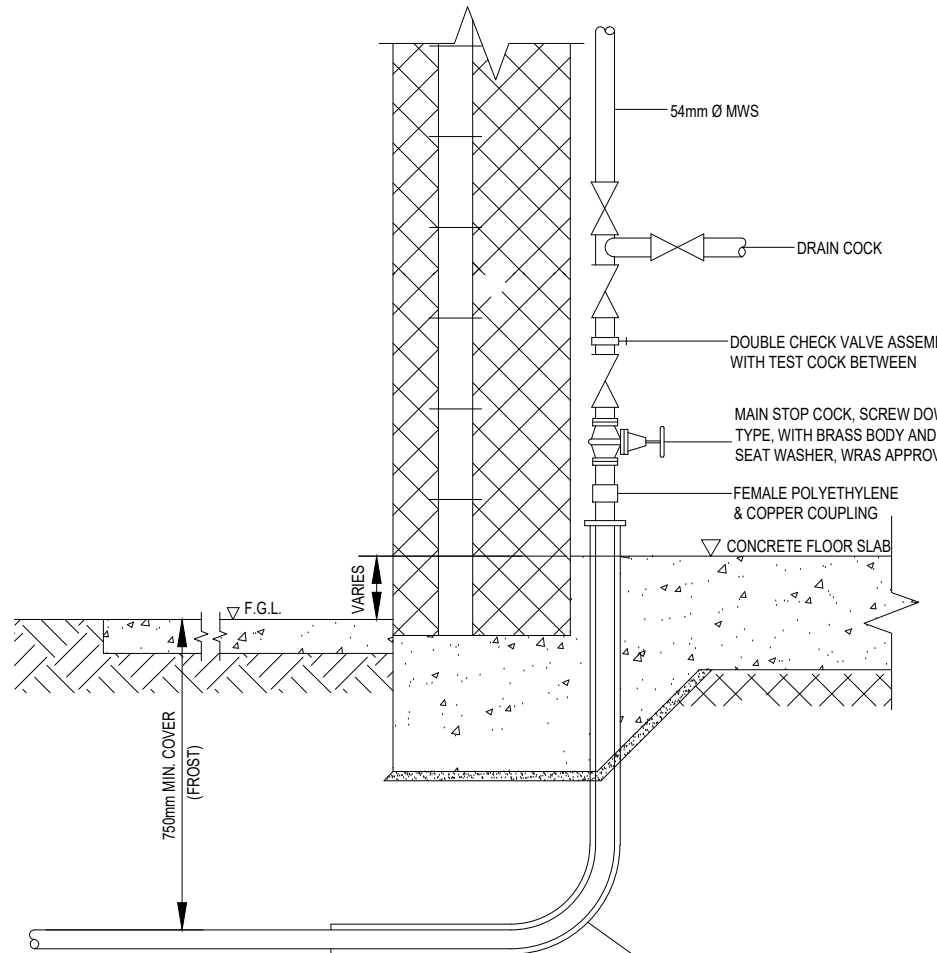


WATER NOTES:

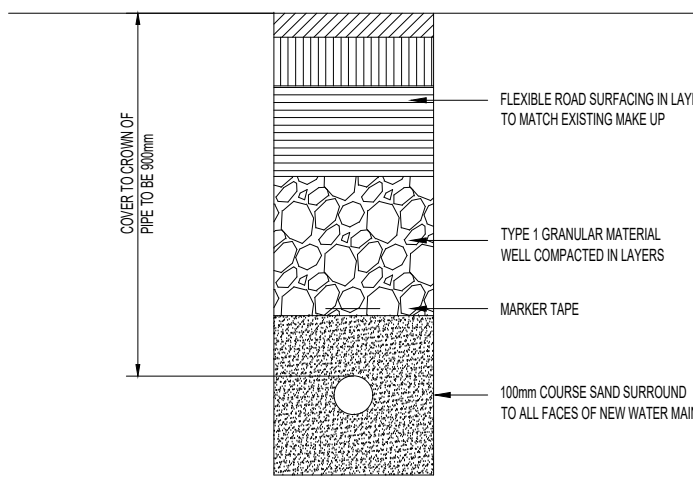
- CONTRACTOR DESIGNED THRUST BLOCKS TO BE PROVIDED AT EACH CHANGE OF DIRECTION AND AT EVERY JUNCTION.
- MARKER TAPE TO BE INSTALLED AS PER THE TYPICAL DETAIL, ALONG ROUTE OF ALL NEW PIPEWORK.
- THE NEW SECTION OF PIPEWORK IS TO BE FLUSHED & DISINFECTED IN ACCORDANCE WITH SEVERN TRENT WATER REQUIREMENTS.
- ALL NEW WATER PIPEWORK, FITTINGS & FIXINGS TO BE INSTALLED IN ACCORDANCE WITH THE WATER REGULATIONS AND BYLAWS.
- PIPEWORK MATERIAL TO BE BARRIER (PE/AL/PE)
- FOR DETAILS OF MAJOR LEAK DETECTION SYSTEM REFER TO DRAWING M-00-S(53)001

GENERAL NOTES

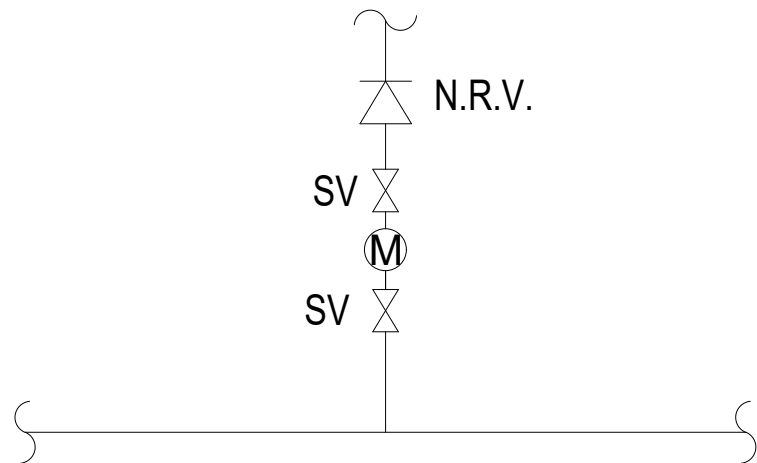
- IF THIS DRAWING HAS BEEN RECEIVED ELECTRONICALLY IT IS THE RECIPIENTS RESPONSIBILITY TO ENSURE THAT THE DOCUMENT IS PLOTTED TO THE CORRECT SCALE.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS STATED OTHERWISE.
- DO NOT SCALE FROM THIS DRAWING.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTATION & DRAWINGS / SCHEDULES.
- ALL PLANT & EQUIPMENT MUST BE ISSUED FOR APPROVAL PRIOR TO ORDER.
- ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE LATEST EDITION OF THE IET WIRING REGULATIONS, BS 7671-18TH EDITION AND ALL SUBSEQUENT AMENDMENTS INCLUDING THE IET ON SITE GUIDE.
- THE CONTRACTOR MUST ENSURE THAT THE MECHANICAL & ELECTRICAL SERVICES ARE FULLY COORDINATED.



DETAIL A - INCOMING MAINS COLD WATER SERVICE DETAIL (N.T.S.)



TYPICAL WATER MAIN INSTALLATION WITHIN BITMAC ROAD SURFACED AREAS (N.T.S.)



DETAIL A - TYPICAL WATER CONNECTION DETAIL (N.T.S.)

INSTALLATION NOTES

- THE ELECTRICAL INSTALLATION SHALL FULLY COMPLY WITH 18TH EDITION B.S.7671: 2018 INCLUDING ALL AMENDMENTS & GUIDANCE NOTES.
- ALL EXTERNAL LIGHTING SHALL BE CONTROLLED BY MEANS OF A PHOTOCELL/ELECTRONIC SOLAR DIAL TIME SWITCH C/W HAND/AUTO SWITCH WITH NEON INDICATOR & DESIGNATION LABEL.
- ALL CABLEING ACROSS ROADS SHALL BE CONTAINED WITHIN DUCTS HUNCHED IN CONCRETE. THE ELECTRICAL CONTRACTOR SHOULD ALLOW FOR ALL TESTING & COMMISSIONING AND ENSURE PERFORMANCE TO MANUFACTURERS CLAIMS. CONTRACTOR TO ENSURE THE PRODUCTION OF ALL RELEVANT CERTIFICATES IN A TIMELY MANNER.
- CONTRACTOR MUST INCLUDE FOR ALL BUILDERSWORK & ENSURE FIRE COMPARTMENTATION IS RETAINED THROUGHOUT WHERE APPLICABLE. ELECTRICAL SERVICES, PLANT SUPPORTS & ACCESS EQUIPMENT REQUIRED TO COMPLETE THE WORKS.
- CONTRACTOR MUST READ ALL EMPLOYER REQUIREMENTS & ELECTRICAL SERVICES PERFORMANCE SPECIFICATION, PRIOR TO CARRYING OUT WORKS AND PRODUCE FULLY DETAILED DESIGN LAYOUTS
- SEPARATE ELECTRONIC DUAL CHANNEL SOLAR DIAL TIME CLOCKS TO BE PROVIDED TO ALLOW FOR CONTROL OF WALL MOUNTED FITTINGS/ COLUMNS AND BOLLARDS TO BE CONTROLLED SEPARATELY.
- WIRING - WALL MOUNTED REF. J WIRING SHALL BE BY MEANS OF TWIN & EARTH CABLEING CONTAINED IN MDRF GALVANISED TRAY INTERNALLY WITH PVC CONDUIT OFFERING PROTECTION THROUGH EXTERNAL WALL. THE CONDUIT SHALL TERMINATE AT THE REAR OF EACH LUMINAIRE IN A FLUSH BESA BOX IN SUCH A POSITION THAT SAME CAN BE SUITABLY SEALED AGAINST THE INGRESS OF WATER ETC.
- BAT / ECOLOGIST RECOMMENDATION: - CONSIDERED
 - USE THE LOWEST LEVEL OF BRIGHTNESS POSSIBLE
 - USE NARROW SPECTRUM LIGHT SOURCES
 - USE LIGHT SOURCES THAT EMIT MINIMAL ULTRA-VIOLET LIGHT
 - LIGHTS SHOULD NOT HAVE A PEAK WAVELENGTH HIGHER THAN 550nm
 - AVOID WHITE AND BLUE WAVELENGTHS OF THE LIGHT SPECTRUM (WHERE WHITE LIGHT SOURCES ARE REQUIRED THEY SHOULD BE OF A WARM/ NEUTRAL COLOUR TEMPERATURE <4200 KELVIN.
 - POSITION LIGHTS AT THE LOWEST LEVEL POSSIBLE I.E. LIT ROAD STUDS, BOLLARDS.
 - ENSURE LIGHTS ARE DIRECTIONAL AND FIT SHIELDS OR HOODS TO REDUCE LIGHT SPILL.
 - MAX 1 Lux AVERAGE AT BOUNDARY ZONES NOTED.
- ALL EXTERNAL FITTINGS, WHERE PROVIDED, WITHIN THE CONSTRUCTION ZONE MEET LIGHTING REQUIREMENTS AS GIVEN IN TABLE 11 BELOW;

(Table 11)		
LED Luminaires Where The Lamp Is Integral To The Fitting Measured In Luminaire Lumens/ Circuit Watt, When:		
External Lighting Location	Colour Rendering Index (Ra) ≥ 60	Colour Rendering Index (Ra) < 60
Building, access ways, pathways	40	50
Car parking, associated roads, floodlighting	55	60
	Lamp wattage > 25W	Lamp wattage < 25W

EXTERNAL LIGHT FITTINGS ARE CONTROLLED THROUGH A TIME SWITCH, OR DAYLIGHT SENSOR, TO PREVENT OPERATION DURING DAYLIGHT HOURS. DAYLIGHT SENSOR OVERRIDE ON A MANUALLY SWITCHED LIGHTING CIRCUIT IS ACCEPTABLE AS PER DETAIL.

TO REDUCE NIGHT TIME LIGHT POLLUTION THE EXTERNAL LIGHTING STRATEGY HAS BEEN DESIGNED IN COMPLIANCE WITH TABLE 2 (AND ITS ACCOMPANYING NOTES) OF THE ILP GUIDANCE NOTES FOR THE REDUCTION OF OBTRUSIVE LIGHT, 2011. ALL EXTERNAL LIGHTING (EXCEPT FOR SAFETY AND SECURITY LIGHTING) CAN BE AUTOMATICALLY SWITCHED OFF BETWEEN 23:00 AND 07:00AM. IF SAFETY OR SECURITY LIGHTING IS PROVIDED AND WILL BE USED BETWEEN 23:00 AND 07:00, THIS PART OF THE LIGHTING SYSTEM COMPLIES WITH THE LOWER LEVELS OF LIGHTING RECOMMENDED DURING THESE HOURS IN TABLE 2 OF THE ILP'S GUIDANCE NOTES.

- LOCAL PLANNING EV CHARGING REQUIREMENTS: 10% OF PARKING SPACES TO HAVE ACTIVE EV CHARGING FACILITIES

BUILDING REGULATIONS PART 5 SECTION S4 REQUIREMENTS: DEVELOPMENTS WITH MORE THAN 10 PARKING SPACES

- ONE OF THOSE PARKING SPACES MUST HAVE ACCESS TO ONE ELECTRIC VEHICLE CHARGE POINT; AND
- CABLE ROUTES FOR ELECTRIC VEHICLE CHARGE POINTS MUST BE INSTALLED IN A MINIMUM OF ONE FIFTH OF THE TOTAL NUMBER OF REMAINING PARKING SPACES.

- DUCTS TO ASHP TO BE CO-ORDINATED WITH UKPS AND OTHER SITE BERRIED SERVICES ON SITE. FUTURE ACCESS MUST BE RETAINED.

LEGEND:

- EXISTING WATER MAIN
- PROPOSED WATER MAIN PIPEWORK PIPEWORK FROM EXISTING

LEGEND

- WALL MOUNTED 2000mm AFFL, 30W LED, 3600lm, 4000K, CR82, IP65, DIM. 217x343x245mm, DIE CAST ALUMINIUM, AS ANSELL WOLF
- AS TYPE J c/w INTEGRAL 3 HOUR EMERGENCY STANDBY BATTERY PACK AND STATUS INDICATING GREEN LED INDICATOR
- STREET LIGHT ON 5m COLLUMN, 14W LED, 2000lm, 5000K, CR170, IP66, DIE CAST ALUMINIUM, AS ANSELL ONIX STREET LIGHT 1.
- BOLLARD 1000MM HIGH, 25W LED, 2400lm, 4000K, CR80, IP66, IK06, ROBUST DIE-CAST ALUMINIUM BODY WITH ATEXTURED GRAPHITE FINISH, C/W INTEGRAL EMERGENCY OPTION, AS ANSELL TAURUS.
- HIGH LEVEL SIGNAGE LINEAR LED LUMINAIRES FOR CLIENT SIGN ABOVE MAIN ENTRANCE DOOR. EXACT DETAILS TO BE CONFIRMED BY SIGNAGE CONTRACTOR.
- SIGNAGE LIGHTING CONTROLLED BY LOCAL PHOTOCCELL. (SIGNAGE DETAIL TBC BY CLIENT)
- 11kW TYPE 2 EV CHARGE POINT APPROX 8HR FULL CHARGE. INSTALLED 'ACTIVE' C/W E-MAT EARTH MODULE. POLE MOUNT. MONITORING REPORTING & CONTROL SOFTWARE AS POD POINT OR EQUAL. 10% OF AVAILABLE PARKING
- SYSTEM TO BE SCALABLE TO 100% ACTIVE
- DUCTING FOR FUTURE (900) EXPANSION OF EV CHARGING TO SPACE C/W END DRAW PIT (300x300) @ EACH 'PASSIVE' SPACE. 10% OF AVAILABLE PARKING.
- TWIN 13AMP UNSWITCHED SOCKET OUTLET IP65
- 13AMP FUSED SWITCHED CONNECTION UNIT IP65
- KEYPAD
- BREAKGLASS RELEASE (GREEN)
- VIDEO ENTRY PANEL
- ASHP FLOW & RETURN : 1 X 200mm DIA. PRE INSULATED PIPEWORK. MAXIMUM BENDING RADIUS 1.2M
- HV DUCTS: 1x 150mm DIA. RIGI DUCT
- LV POWER DUCTS: 1x 150mm DIA. RIGI DUCT
- STREET LIGHTING DUCTS: 1x 100mm DIA. RIGI DUCT
- TELECOM DUCT BY OTHERS TO BE CONFIRMED.
- POWER DUCTS: 2x 100mm DIA. RIGI DUCT
- 300X300mm DRAWPIIT TO BE INSTALLED AT 30M CENTRES OR CHANGE IN DIRECTION/BRANCH OR AS NOTED FOR EV CHARGE POINTS.
- 600X800mm DRAWPIIT TO BE INSTALLED AT 30M CENTRES OR CHANGE IN DIRECTION/BRANCH OR AS NOTED FOR EV CHARGE POINTS.

Rev.	Description	Date	Initials	Checked
J	POWER & LIGHTING ADDED FOR SIGNAGE. ACCESS CONTROL AT GATES UPDATED	15.10.25	PMcD	RB
I	DUCTS FOR INCOMING LV SUPPLY & EV SWAPPED	28.08.25	RB	MMcN
H	ASHP SUPPLIES ROUTE AMENDED	31.07.25	RB	KM
G	ISSUED FOR CONSTRUCTION	14.04.25	PMcD	RB
F	HV&LV DUCTS UPDATED, ASHP PIPEWORK LAYOUT & POWER DUCTS ADDED. INCOMER WATER SERVICES ADDED	14.02.25	PMcD	RB
E	ACCESS CONTROL ADDED TO THE 4 GATES	04.12.24	PMcD	RB
D	LIGHTING DUCTS ADDED TO RESIDENTS GARDEN	20.11.24	PMcD	RB
C	1x REF. 'EVP' ADDED	07.11.24	PMcD	RB
B	SUBSTATION AND HV DUCTS ADDED	08.08.24	PMcD	RB
A	ISSUED FOR TENDER	12.06.24	PMcD	RB

Status			
CONSTRUCTION			
Client			
SIMPLY UK			
Location			
COLDHARBOUR ROAD NORTHFLEET, GRAVESEND DA11 8NT			
Drawing Title			
ELECTRICAL SERVICES PROPOSED EXTERNAL SERVICES LAYOUT			
Date			
MAY 24	Drawn by	Scale @ A1	Checked
	PM	1:250	RB
Date			
MAY 24	Drawn by	Scale @ A1	Checked
	PM	1:250	RB
Project Ref.			
9360			
Dwg. No.			
E-00-EX(90)001			
Rev.			
J			

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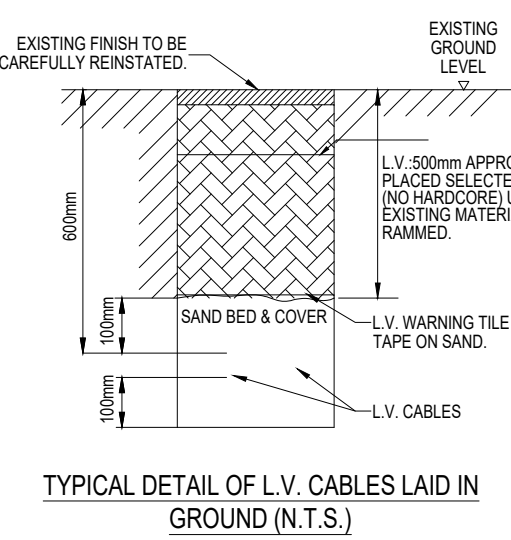
J/JE' REFERENCE WALL MOUNTED LUMINAIRE



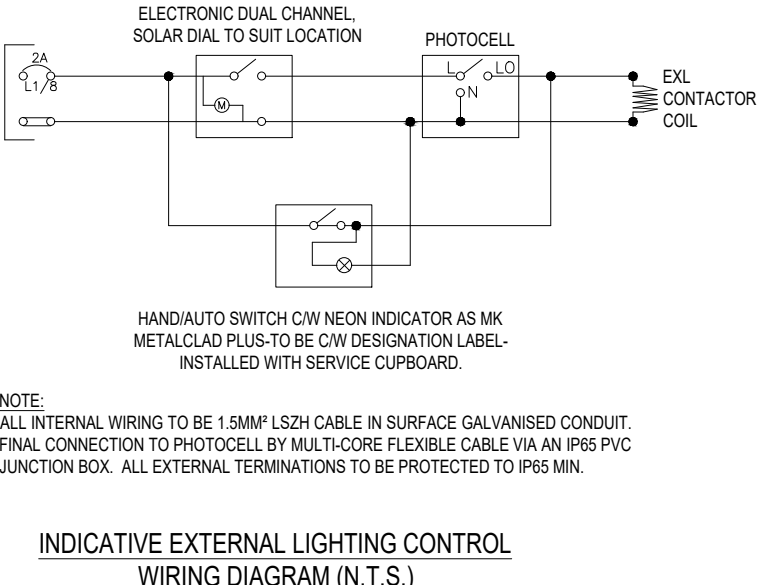
N' REFERENCE COLUMN MOUNTED LUMINAIRE



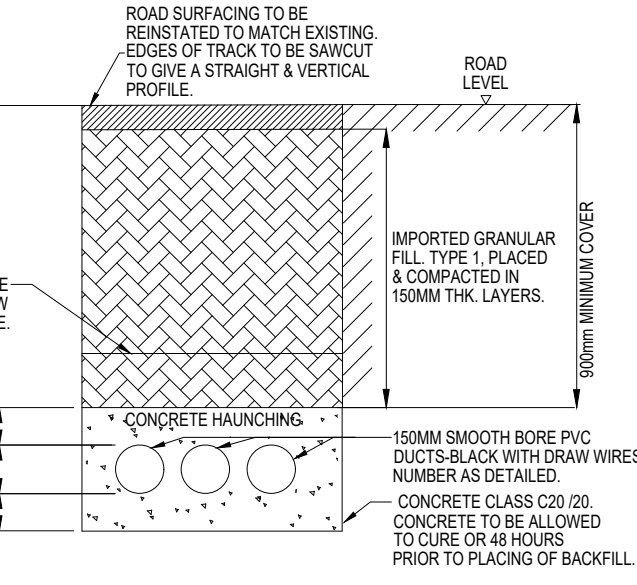
O' REFERENCE BOLLARD LUMINAIRE



TYPICAL DETAIL OF L.V. CABLES LAID IN GROUND (N.T.S.)



INDICATIVE EXTERNAL LIGHTING CONTROL WIRING DIAGRAM (N.T.S.)



TYPICAL DETAIL OF L.V. CABLES AT ROAD CROSSING (N.T.S.)