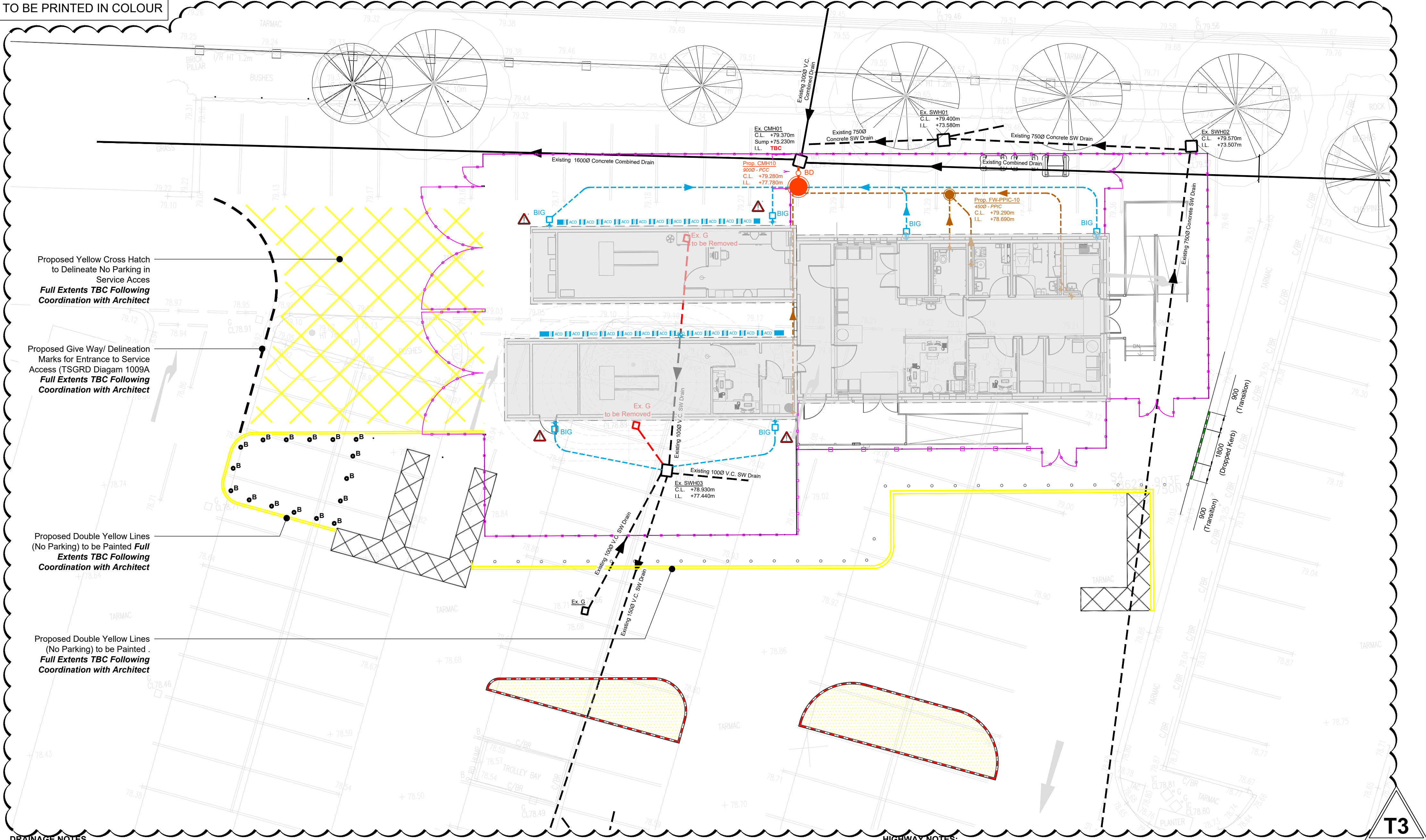




DRAINAGE NOTES:

- EXISTING DETAILS SHOWN ON THIS DRAWING INCLUDING EXISTING DRAINS, CHAMBERS, SEWERS, PIPEWORK, STUB CONNECTIONS WHERE NEW CONNECTIONS, DIVERSIONS OR ABANDONMENT ARE SHOWN, INVERT LEVELS AND PIPE SIZES SHALL BE CHECKED AND CONFIRMED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF ANY WORKS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER FOR ACTION PRIOR TO ANY NEW CONSTRUCTION.
- ALL PROPOSED SVP/ SS/ RWP LOCATIONS TO BE CONFIRMED BY ARCHITECT/ M&E CONTRACTOR.
- DISCHARGE UNITS FOR EACH SVP AND SS TO BE CONFIRMED BY M&E ENGINEER TO ESTABLISH FW DISCHARGE RATES.
- ALL DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY AND IN CONJUNCTION WITH ALL RELEVANT BRITISH STANDARDS, CODES OF PRACTICE AND 'SEWERS FOR ADOPTION' 7th EDITION AND ADDENDUMS AS APPROPRIATE.
- ALL DRAINAGE SHALL COMPLY WITH THE TYPICAL DRAINAGE CONSTRUCTION DETAILS AND THE REQUIREMENTS OF BS EN 752.
- ACCESS COVERS AND FRAMES SHALL COMPLY WITH THE LOADINGS SPECIFIED AND TO BS EN 124 AND KITEMARKED OR IF RECESSED COVERS ARE SPECIFIED THEN IN ACCORDANCE WITH FACTA ASSOCIATION EQUIVALENT.
- THE PROPOSED BUILDING OUTLINES SHOWN ON THE DRAWING ARE FOR INFORMATION ONLY. REFER TO THE ARCHITECTS PLANS FOR PRECISE LOCATION SETTING OUT INFORMATION AND DETAILS.
- FOR SETTING OUT DIMENSIONS OF SS, SVP, RWP, FLOOR GULLY & OTHER DRAINAGE 'POP-UP' LOCATIONS REFER TO ARCHITECTS OR MECHANICAL & ELECTRICAL ENGINEERS DRAWINGS.
- ALL UNDER-SLAB DRAINAGE SHALL BE LAID AT GRADIENTS OF 1 in 40 MIN. FOR FOUL PIPEWORK AND 1 in 80 MIN. FOR SURFACE WATER UNLESS NOTED OTHERWISE.
- AT LEAST ONE SOIL PIPE AT THE HEAD OF EACH FOUL RUN SHALL BE VENTED TO THE ATMOSPHERE.
- ALL RAINWATER DOWNPIPES SHALL BE ACCESSIBLE ABOVE GROUND FOR RODDING PURPOSES.
- COVER LEVELS SHOWN ON THIS DRAWING ARE APPROXIMATE AND SHALL BE ADJUSTED TO SUIT FINISHED LEVELS ON SITE BY THE CONTRACTOR. COVERS SHALL BE ORIENTATED TO SUIT FINISHES WHERE APPROPRIATE.
- ALL PRIVATE DRAINAGE PIPEWORK FOR FOUL AND SURFACE WATER SYSTEMS HAVE BEEN DESIGNED ON THE BASIS OF UPVC TO BS EN 1401-1 UNLESS NOTED OTHERWISE.
- ALL ADOPTABLE DRAINAGE PIPEWORK FOR FOUL AND SURFACE WATER SYSTEMS HAVE BEEN DESIGNED ON THE BASIS OF CLAYWARE, CONCRETE OR PLASTIC TO COMPLY WITH 'SEWERS FOR ADOPTION' 7TH EDITION.
- ALL DRAINAGE PIPEWORK SHALL BE LAID SOFFIT TO SOFFIT UNLESS NOTED OTHERWISE.
- WHERE NEW DRAINAGE IS SITUATED WITHIN 5 METRES OF NEW OR EXISTING TREES THE PIPEWORK SHALL BE ENCASED IN CONCRETE TO REDUCE THE RISK OF ROOT INGRESS.
- CONCRETE ENCASEMENT OF THE PIPEWORK SHALL BE REQUIRED WHERE THE VERTICAL CLEARANCE BETWEEN TWO PIPES CROSSING IS LESS THAN 300mm.
- ALL EXISTING DRAINAGE SHALL BE ASSUMED TO BE 'LIVE' AND SHALL BE MAINTAINED AT ALL TIMES DURING THE WORKS. EXISTING DRAINAGE SHALL BE RECONNECTED TO THE NEW DRAINAGE SYSTEM UNLESS PROVEN TO BE REDUNDANT FOR ABANDONMENT. ALL EXISTING DRAINAGE TO BE ABANDONED SHALL BE SEALED BY APPROPRIATE MEANS.
- ALL DRAINAGE CONNECTING TO THE PUBLIC SEWER NETWORK SHALL NOT COMMENCE UNTIL RECEIPT OF THE APPROVAL FROM THE DRAINAGE AUTHORITY AND SHALL COMPLY WITH REQUIREMENTS USING VITRIFIED CLAY PIPEWORK TO BS EN 295 WITH PLAIN SLEEVED OR SOCKETED FLEXIBLE JOINTS SUBJECT TO THEIR APPROVAL.
- ALL UNDERGROUND DRAINAGE SHALL BE LAID AT GRADIENTS OF 1:40 MIN. FOR FOUL PIPEWORK AND 1:80 MIN. FOR SURFACE WATER UNLESS NOTED OTHERWISE.
- UPON COMPLETION, ALL NEW DRAINAGE INSTALLATIONS TOGETHER WITH ANY EXISTING DRAINAGE RETAINED SHALL BE JETTED AND CCTV SURVEYED. CONTRACTOR TO ENSURE THAT THE DRAINAGE SYSTEM IS FULLY OPERATIONAL, FREE OF EXCESS DEBRIS / SILT AND ALL IDENTIFIED FAULTS RECTIFIED.
- EXACT LOCATIONS OF PROPOSED MANHOLES AND INSPECTION CHAMBERS TO BE DETERMINED AND AGREED ON SITE.
- ALL PIPES BUILT INTO THE MANHOLE INVERTS SHALL BE INSTALLED WITH SOFFIT LEVELS UNLESS SHOWN OTHERWISE.

- THE CONTRACTOR SHALL CONTROL ACCURATE LINE AND LEVEL OF PIPE LAYING BY USE OF AN OPTICAL LASER.
- THE CONTRACTOR SHALL PROTECT THE PIPELINE FROM DAMAGE BY SITE TRAFFIC DURING THE CONSTRUCTION PROCESS.
- PIPEWORK SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS U.N.O. -
 - CLAYWARE PIPES TO BS 65.
 - MAIN RUNS 150mm DIAMETER, MINIMUM CRUSHING STRENGTH 40kN/m ON CLASS B FLAT BED.
 - ALL SVP's / SS's TO BE 100Ø & HAVE AN INVERT OF 750mm BELOW SSL U.N.O.
 - ALL RWP's TO BE 150Ø & HAVE AN INVERT OF 600mm BELOW SSL U.N.O
 - PIPEWORK WITH LESS THAN 600mm COVER FROM FINISHED ROAD LEVEL SHALL BE PROTECTED WITH A 150mm C20 CONCRETE BED AND SURROUND.
 - SOFT SPOTS IN THE TRENCH FORMATION SHALL BE REMOVED AND REPLACED WITH GRANULAR BEDDING UNLESS INSTRUCTED OTHERWISE.
 - UNLESS NOTED OTHERWISE MANHOLE COVERS SHALL BE DUCTILE IRON TO BS 497 BLACK COATED WITH 600 x 600 SQUARE OPENING AS FOLLOWS:

HIGHWAYS	-	CLASS D400
CAR PARKS	-	CLASS D400
LANDSCAPED AREAS	-	CLASS B125

27. HEALTH & SAFETY:

THE WORKS SHALL BE CARRIED OUT BY SPECIALIST, COMPETENT AND EXPERIENCED CONTRACTORS. ALL OPERATIVES SHALL HAVE RECEIVED FULL AND APPROPRIATE TRAINING WITH APPROPRIATE QUALIFICATIONS FOR THE OPERATIONS THEY ARE REQUIRED TO UNDERTAKE. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT HEALTH & SAFETY REGULATIONS.

HIGHWAY NOTES:

- CBR TESTS ARE TO BE UNDERTAKEN ON TOP SURFACE OF THE SUB-LAYER BY AN APPROVED TESTING COMPANY. THE NUMBER AND LOCATIONS ARE THE BE DETERMINED BY A REPRESENTATIVE OF MCC HIGHWAYS. A MINIMUM CBR VALUE OF 30% TO BE ACHIEVED ON TOP OF THE SUB-BASE AT EACH LOCATION FOR THE ROAD ADOPTION TO PROGRESS.
- PPC EDGINGS WILL BE REQUIRED FOR DEMARCATION BETWEEN PRIVATE DRIVEWAYS & ADOPTABLE DROPPED VEHICLE CROSSINGS.
- CCTV SURVEYS WILL BE REQUIRED ON ALL HIGHWAY DRAINS (INCLUDING GULLY CONNECTIONS) FOLLOWING ROAD & DRAINAGE CONSTRUCTION.
- ALL ROAD GULLIES WITHIN THE S278 WORKS ARE TO BE DE-SILTED PRIOR TO ADOPTION.
- THE KERB FACE FOR VEHICULAR DROPPED CROSSINGS = 25mm.
- THE KERB FACE FOR PEDESTRIAN DROPPED CROSSINGS = MAX. 6mm
- THE LOCATION OF ALL SIGNAGE & (BOLLARDS) TO BE AGREED ON SITE WITH A REPRESENTATIVE OF LHA PRIOR TO INSTALLATION.
- ALL NEW MANHOLE COVERS AND FRAMES IN THE 278 WORKS ARE TO BE (U.N.O.) 150mm dp (MIN.), DUCTILE IRON TO BS 497 BLACK COATED WITH 600 x 600 SQUARE OPENING AS FOLLOWS:

HIGHWAYS	-	CLASS D400
CAR PARKS	-	CLASS D400
LANDSCAPED AREAS	-	CLASS B125
- ANY REFLECTORISED SIGNS REQUIRED ARE TO BE TO 'CLASS REF. 2 (12899:2001)'.
- ALL PERMANENT ROAD MARKINGS SHALL BE OF THERMOPLASTIC MATERIAL IN ACCORDANCE WITH BS EN 1871 AND BS EN 1436. ALL ROAD MARKING SHALL BE WHITE OR YELLOW AND SHALL BE REFLECTORISED IN ACCORDANCE WITH CLAUSE 1212. ALL ROAD MARKINGS SHALL HAVE SOLID GLASS BEADS INCORPORATED INTO THE THERMOPLASTIC MIXTURE IN ACCORDANCE WITH CLAUSE 1212.
- THE SKID RESISTANCE LEVEL FOR ALL ROAD MARKINGS SHOULD NOT BE LESS THAN 55 (CLASS S3) AT ALL LOCATIONS, AS DEFINED IN TABLE 7 OF BS EN 1436.
- PRIOR TO THE APPLICATION OF THERMOPLASTIC MATERIAL A TACK COAT COMPATIBLE WITH THE ROAD SURFACE AND THE MARKING MATERIAL SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THOROUGHLY CLEANING THE CARRIAGEWAY SURFACE TO ENABLE A STRONG BOND TO BE FORMED BETWEEN THE ROAD MARKING MATERIAL AND THE CARRIAGEWAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE APPROPRIATE METHODS FOR CLEANING THE CARRIAGEWAY.
- THE CONTRACTOR SHALL PROTECT THE NEWLY LAID ROAD MARKINGS FROM BEING TRAFFICKED BY VEHICLES OR PEDESTRIANS UNTIL THE MATERIAL HAS COOLED SUFFICIENTLY TO PREVENT DAMAGE TO THE MARKINGS OR INJURY TO THE PUBLIC.
- THE THICKNESS OF THERMOPLASTIC ROAD MARKINGS, INCLUDING SURFACE APPLIED SOLID GLASS BEADS, SHALL BE 4MM +/- 1MM ABOVE THE TOP OF THE EDGE LINE.

Legend

- Denotes Proposed Footway Construction (Pedestrian Zone) - Refer to **Typical Adopted Footway Build Up** for Construction Details.
- Denotes Proposed Half Battered Kerb Location
- Denotes Proposed Bull Nosed Dropped Kerb/ Transition Kerb Location
- Denotes Proposed Pin Kerb Edging Location -
 - Edgings to be Flush at Driveway/ Hard Surfacing
 - 50mm Upstand at Landscaped/ Soft Scape Area
- Denotes Existing Manhole Location Usage & Runs TBC Following Further Site Investigations/ Surveys.
- Denotes Existing Gully Location Runs TBC Following Further Site Investigations/ Surveys.
- Denotes Proposed Secure Fence/ Enclosure Typical Fence Posts @ 1.8m c/c Final Details TBC by Architect
- Denotes Proposed Bollard Location Final Details TBC by Architect

Drainage Legend

- Denotes Combined Drain (Existing)
- Denotes Foul Water Drain (Existing)
- Denotes Surface Water Drain (Existing)
- Denotes Redundant Drain - To be Removed/ Capped Off
- Denotes Combined Drain (Proposed)
- Denotes Foul Water Drain (Proposed)
- Denotes Proposed Secondary Foul Water Drain - All Runs to be 100Ø U.N.O.
- Denotes Surface Water Drain (Proposed)
- Denotes Proposed Secondary Surface Water Drain - All Runs to be 100Ø U.N.O.
- Denotes Proposed Channel/ Slot Drain
- Denotes Proposed SVP Location - Ground Floor Penetration (Shown Indicatively - Final Locations TBC)
- Denotes Proposed RWP Location As Provided by Architect (Shown Indicatively - Final Locations TBC)
- MH Denotes Manhole Location
- IC Denotes Inspection Chamber Location
- FG Denotes Floor Gully Location
- SVP Denotes Soil Vent Pipe Location
- SS Denotes Stub Stack Location
- G Denotes Gully
- BIG Denotes Back Inlet Gully

notes :

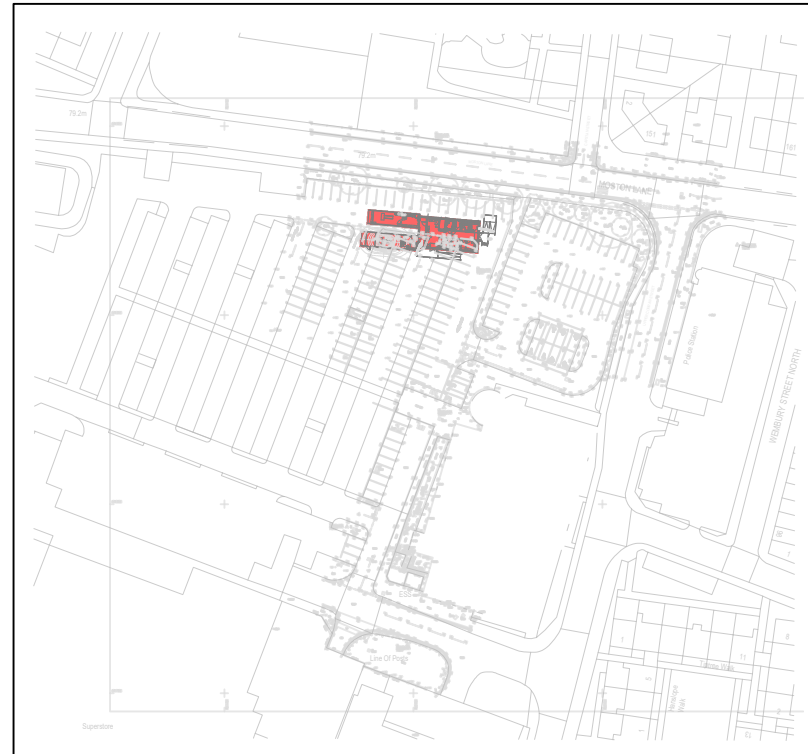
- IF THIS DRAWING HAS BEEN RECEIVED ELECTRONICALLY IT IS THE RECIPIENTS RESPONSIBILITY TO PRINT THE DOCUMENT TO THE CORRECT SCALE
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE. IT IS RECOMMENDED THAT INFORMATION IS NOT SCALED OFF THIS DRAWING
- THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS AND SPECIFICATIONS
- ANY DISCREPANCIES NOTED ON SITE ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

MAIN CONTRACTOR TO CONFIRM ALL EXISTING ON SITE DRAINAGE PRIOR TO CONSTRUCTION. ALL PROPOSED RWP'S/ SVPS/ CONDENSATE PIPE REQUIREMENTS TO BE CONFIRMED FOLLOWING FURTHER DESIGN COORDINATION.

Hazard Notes:

Proposed External Scanner Modules - Drainage Requirements TBC by Specialist Supplier. Allowance made for 2 No. SW / RWP Drains & 1 No. FW Drain per Module. Final Locations / Details TBC / Further Coordinated Prior to Construction.

KEYPLAN



T3	Updated to Suit Latest Architectural Layout.	17.02.24	JF	LDC
T2	Updated to Suit Latest Received Below Ground Services (GPR) Survey.	03.10.23	JF	LDC
T1	Tender Issue. Title Block/ Drawing Reference Updated Following Client Comments. Topo Survey Information Added. Updated to Suit Latest Architectural Layout.	31.08.23	JF	LDC
P1	Preliminary Issue	26.07.23	JF	LDC
REV.	DESCRIPTION	DATE	DRW.	CHK.

Tender Issue - For Costing Purposes Only

 Manchester University NHS Foundation Trust	
APPOINTED PARTY LOGO/INFORMATION 	
PROJECT Harpurhey CDC	
TITLE Proposed External Scanner Unit - External Works Plan	
STATUS D2	PURPOSE OF ISSUE For Tender
DRAWN BY JF	CHECKED BY LDC
DATE July '23	
SCALE (@A1) 1:125 @ A1	PROJECT NUMBER 23-2457
FILE DRAWING NUMBER 23051-CCS - HAR204 - XX-DR - S - 90001	REV. T3