



- ADDITIONAL SURFACE WATER DRAINAGE NOTES:**
- LOCATION OF ALL EXISTING DRAINAGE TO BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF WORKS AS IT IS APPROXIMATELY TRANSLATED FROM SURVEY DRAWING.
 - ALL DRAINAGE AT MANHOLES/ACCESS CHAMBERS TO CONNECT WITH SOFFITS LEVEL UNLESS OTHERWISE NOTED. MANHOLE INVERT LEVELS SHOWN ON PLAN ARE THAT OF LOWEST OUTGOING PIPE.
 - FOR SURFACE WATER DRAINAGE WHERE OBLIQUE CONNECTIONS ARE NOT POSSIBLE 87.5° CURVED SQUARE BRANCH CONNECTIONS TO BE USED IN DIRECTION OF FLOW OF MAIN LINE.
 - ALL DRAINAGE WITHIN 300mm OF UNDERSIDE OF STRUCTURAL SLAB TO HAVE FULL GEN 3 CONCRETE BED AND SURROUND.
 - ALL PROPOSED SURFACE WATER DRAINAGE TO BE 150mm DIA. LAID AT FALLS NOT LESS THAN 1:150 UNLESS OTHERWISE NOTED.
 - ALL RAINWATER DOWNPIPES THAT DO NOT CONNECT DIRECTLY TO AN ACCESS POINT SHALL HAVE A RODDING FACILITY FITTED.
 - ALL INTERNAL MANHOLE & INSPECTION CHAMBERS TO HAVE SCREW DOWN DOUBLE SEAL ACCESS COVERS.
 - ALL INTERNAL & EXTERNAL SURFACE WATER INSPECTION CHAMBERS SITUATED IN AREAS WITHOUT VEHICULAR ACCESS TO BE TYPE 3 CHAMBERS WITH 150mm DOT TYPE 1 SURROUND UNLESS NOTED OTHERWISE.
 - ALL EXTERNAL SURFACE WATER INSPECTION CHAMBERS SITUATED IN AREAS WITH VEHICULAR ACCESS TO BE TYPE 3 CHAMBERS WITH GEN 3 CONCRETE SURROUND UNLESS NOTED OTHERWISE.
 - ALL TYPE 3 INSPECTION CHAMBERS WHERE DEPTH TO INVERT OF CHAMBER IS > 1m SHALL HAVE COVER FRAME WITH ACCESS RESTRICTED TO 350mm DIA. OR 300x300mm SQUARE.
 - ALL EXTERNAL SURFACE WATER MANHOLES TO BE MIN. 1200mm DIA. WIDE WALL (125mm THICK) TYPE 2 PRECAST CONCRETE CHAMBERS UNLESS NOTED OTHERWISE.
 - EXTERNAL GULLY/CHANNEL POSITIONS SHOWN ARE INDICATIVE AND SUBJECT TO CHANGE FOLLOWING CONFIRMATION OF FINAL EXTERNAL LEVELS.
 - FINAL GULLY POSITIONS TO SUIT SITE LOW POINTS WITH SUFFICIENT SURFACE FALLS TO ENSURE SURFACE WATER DRAINS WITHOUT PONDING (MINIMUM SURFACE FALL OF 1:60 IS RECOMMENDED).
 - THE LOAD CLASS OF ALL COVERS, GRATINGS, GULLIES, CHANNELS & FRAMES TO CHAMBERS TO SUIT THEIR LOCATION AS FOLLOWS (REFER TO MANHOLE SCHEDULE FOR CONFIRMATION):
 - A15 - INTERNAL LOCATIONS
 - B125 - EXTERNAL WITH PEDESTRIAN ACCESS ONLY
 - C250 - EXTERNAL LIGHTLY TRAFFICKED AREAS
 - D400 - MAIN ROADS/HIGHWAYS
 - E600 - HGV/LOADING BAY AREAS
 - GRATINGS IN PEDESTRIAN AREAS TO HAVE HEEL SAFE ANTI-SLIP COVERS.
 - THE CONSTRUCTION OF ALL EXISTING GULLIES, MANHOLE CHAMBERS & THEIR COVERS & GRATINGS TO BE 'MADE GOOD' OR REPAIRED/REPLACED TO SUIT REVISED LEVEL/LOCATION.
 - REFERENCE SHOULD BE MADE TO ARCHITECT & M&E ENGINEERS DRAWINGS FOR ABOVE GROUND DRAINAGE DETAILS & SET-OUT.

- PERMEABLE SUB-BASE NOTES:**
- ALL PERMEABLE COARSE GRADED AGGREGATE SUB-BASES TO BE LAID IN 100-150mm LAYERS AND COMPACTED TO ENSURE THAT THE MAXIMUM DENSITY IS ACHIEVED FOR THE PARTICULAR MATERIAL TYPE AND GRADING WITHOUT CRUSHING THE INDIVIDUAL PARTICLES OR REDUCING THE VOID RATIO BELOW 30%. CONVENTIONAL ROLLERS CAN BE USED BUT THESE SHOULD NOT BE VIBRATING. THE AGGREGATES ARE RELATIVELY SELF COMPACTING AND HEAVY VIBRATING COMPACTION IS NOT USUALLY REQUIRED. PERMEABLE SUB-BASES SHALL NOT BE USED AS TEMPORARY ACCESS ROADS OR AS HARD STANDING STORAGE AREAS. SITE TRIALS ARE TO BE UNDERTAKEN IF NECESSARY TO DETERMINE THE APPROPRIATE CONSTRUCTION METHODOLOGY.

- General Notes**
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
 - ALL DRAINAGE TO BE TO THE SATISFACTION OF THE LOCAL AUTHORITY BUILDING CONTROL AND MAIN DRAINAGE SECTIONS ON MATTERS INVOLVING PUBLIC SEWERS.
 - ALL PIPERWORK, BENDS AND JUNCTIONS TO BE EXTRA STRENGTH VITRIFIED CLAY TO BS 65:1991, BS EN 295 OR PVCu TO BS EN 1401 TO BE AGREED WITH RELEVANT AUTHORITY.
 - INVERT LEVELS ON EXISTING DRAINS & OUTFALLS TO BE CHECKED PRIOR TO COMMENCEMENT OF WORKS.
 - TRENCH WIDTHS GENERALLY:- AS SMALL AS PRACTICABLE BUT NOT LESS THAN PIPE DIAMETER +300mm OR LARGER IF SPECIFIED. TRENCH SIDES MUST BE VERTICAL FROM BOTTOM UP TO 300mm ABOVE CROWN OF PIPE.
 - WHERE DRAINAGE PIPES HAVE LESS THAN 1.2m COVER IN TRAFFICKED AREAS AND LESS THAN 600mm UNDER LANDSCAPED AREAS PIPES SHALL HAVE A FULL CLASS Z CONCRETE SURROUND. CONCRETE PROTECTION TO BE DISCONTINUED AT EACH PIPE JOINT WITH COMPRESSIBLE MATERIAL. ALL OTHER FLEXIBLE PIPES TO HAVE CLASS S GRANULAR BEDDING DETAIL UNLESS OTHERWISE NOTED. ALL OTHER RIGID PIPES TO HAVE CLASS B GRANULAR BEDDING DETAIL UNLESS OTHERWISE NOTED.
 - GRANULAR BEDDING:
 - 10mm SINGLE SIZED COARSE AGGREGATE SHALL BE USED ON PIPES NOT EXCEEDING 140mm DIAMETER.
 - 2-14mm WELL GRADED COARSE AGGREGATE MAY BE USED ON PIPES EXCEEDING 140mm BUT NOT EXCEEDING 400mm DIAMETER.
 - 4-20mm WELL GRADED COARSE AGGREGATE MAY BE USED ON PIPES EXCEEDING 400mm DIAMETER.
 - THE DEPTH OF GRANULAR BEDDING UNDER THE PIPES SHALL BE X/6 OR 150mm, WHICHEVER IS GREATER, WHERE X=EXTERNAL DIAMETER OF THE PIPE.
 - ADAPTABLE PUBLIC SEWERS TO BE CONSTRUCTED IN ACCORDANCE WITH SEWERS FOR ADOPTION, 7th EDITION, SEPTEMBER 2012.
 - ALL PRIVATE DRAINAGE WORKS SHALL BE IN ACCORDANCE WITH "THE BUILDING REGULATIONS APPROVED DOCUMENT H" AND BRITISH STANDARD BS EN 752.
 - ALL NEW DRAINAGE TO BE TESTED PRIOR TO BACKFILL OF THE TRENCHES & PRIOR TO HANDOVER TO THE SATISFACTION OF THE BUILDING CONTROL INSPECTOR.
 - THE CONTRACTOR MUST LIAISE WITH THE LOCAL AUTHORITY MAIN DRAINAGE SECTION PRIOR TO COMMENCEMENT OF WORK ON PUBLIC DRAINAGE.
 - TRENCH BACKFILL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 250mm ONCE 300mm COVER HAS BEEN PROVIDED TO THE TOP OF PIPE.
 - THE CONTRACTOR SHALL ALLOW IN HIS RATES FOR MAINTAINING FLOW IN PUBLIC SEWERS AT ALL TIMES DURING DIVERSION WORKS INCLUDING TEMPORARY PUMPING AND ALSO KEEPING EXCAVATIONS FREE FROM GROUNDWATER INCLUDING PUMPING AND FORMATION OF TEMPORARY SUMPS.
 - THE CONTRACTOR SHALL MAKE PROVISIONS FOR AND LIAISE WITH ALL RELEVANT STATUTORY BODIES FOR THE MANAGEMENT OF TRAFFIC WHILE CARRYING OUT WORKS IN THE PUBLIC HIGHWAY.
 - THE CONTRACTOR IS TO SATISFY HIMSELF TO THE POSITION AND AND DEPTH OF THE PUBLIC UTILITIES AND ALLOW FOR TEMPORARY SUPPORT, PROTECTION AND DIVERSION WORKS AS NECESSARY. THE CONTRACTOR SHALL ALSO INCLUDE FOR ANY TRIAL PIT EXCAVATIONS NECESSARY.
 - BACKFILL TO EXCAVATIONS IN PUBLIC HIGHWAYS TO BE WELL COMPACTED GRANULAR TYPE 1 TO CL.803 OF THE DTP SPECIFICATION FOR HIGHWAY WORKS 2009.
 - ALL EXTERNAL GULLIES TO BE 375mm DIA. MINIMUM, PRECAST CONCRETE, HEAVY DUTY, KITE MARKED & ANTI-THEFT.

LEGEND.

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- - - -	EXISTING COMBINED SEWERS
- - - -	NEW COMBINED SEWERS
○ EX	NEW COMBINED MANHOLE
- - - -	EXISTING SURFACE WATER SEWERS
- - - -	NEW SURFACE WATER SEWERS
—	CONCRETE ENCASED SW SEWER
○ SX	NEW SURFACE WATER MANHOLE
- - - -	EXISTING SURFACE WATER RISING MAIN
- - - -	SURFACE WATER RISING MAIN
- - - -	NEW LAND DRAINS
○ BD	VERTICAL BACK DROP
○	PETROL INTERCEPTOR
—	DRAINAGE CHANNEL
○ G	ROAD GULLY
□ TG	TRAPPED ROAD GULLY
□ SU	TRAPPED SUMP UNIT
○ RWP	RAIN WATER PIPE
○ RE	RODDING EYE
□ DT	PERMAVOID 150 DISTRIBUTION TANKS

PROPOSED SURFACE WATER DRAINAGE LAYOUT
SCALE: 1:250

P2	26.07.23	ISSUED FOR PLANNING APPROVAL.	M.H	C.J.H			
P1	23.06.23	ISSUED FOR APPROVAL.	M.H	C.J.H			
Rev	Date	Comment	By	Check			
Status Code		Drawing Status					
S3		FOR APPROVAL					
This drawing may only be used for construction/manufacture if status is CONSTRUCTION							
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Project							
CLEATOR MOOR ACTIVITY CENTRE							
Drawing Title							
PROPOSED SURFACE WATER DRAINAGE LAYOUT							
FP Job No.	Drawn	Date	Checked	Scale @ A1			
L2763	M.H	JUN '23	C.J.H	1:250			
PROJECT	OPERATOR	ZONE / VOLUME	LEVEL / LOCATION	FILE TYPE	ROLE	SHEET No.	Rev.
L2763	FUR	XX	XX	DR	D	0921	P2