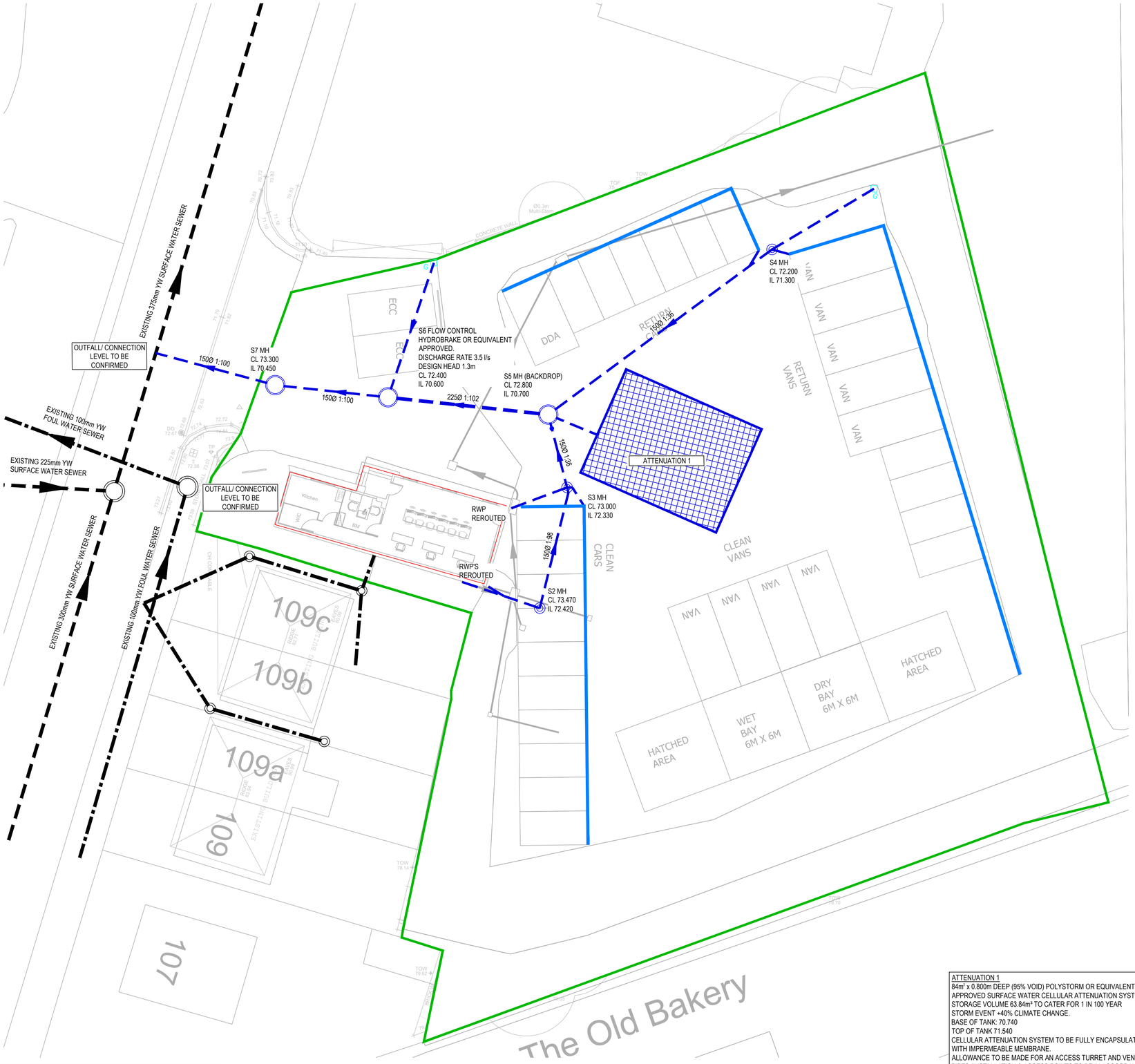

CONTRACTOR TO CONFIRM AND SATISFY THEMSELVES OF EXACT LOCATION OF EXISTING UNDERGROUND SERVICES AND DRAINAGE.

FOUL DRAINAGE TO BE DESIGNED BY OTHERS.

EXISTING SEWERS TO BE SURVEYED TO CONFIRM LOCATION AND LEVEL. SURVEY TO BE UNDERTAKEN PRIOR TO COMMENCEMENT ONSITE.

ATTENUATION 1
84m³ x 0.800m DEEP (95% VOID) POLYSTORM OR EQUIVALENT APPROVED SURFACE WATER CELLULAR ATTENUATION SYSTEM.
STORAGE VOLUME 63.84m³ TO CATER FOR 1 IN 100 YEAR STORM EVENT +40% CLIMATE CHANGE.
BASE OF TANK: 70.740
TOP OF TANK 71.540
CELLULAR ATTENUATION SYSTEM TO BE FULLY ENCAPSULATED WITH IMPERMEABLE MEMBRANE.
ALLOWANCE TO BE MADE FOR AN ACCESS TURRET AND VENT PIPES (INSTALLATION & ACCESS POINTS TO BE IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS).
FURTHER PROTECTION REQUIRED IF COVER LEVELS OVER THE TANK ARE REDUCED BELOW 72.290

LEGEND

- SITE BOUNDARY
- PROPOSED FOUL DRAIN (SVP/ISS CONNECTIONS TO BE 100Ø)
- PROPOSED SURFACE WATER DRAIN (RWP CONNECTIONS TO BE 150Ø)
- PROPOSED FOUL POLYPROPYLENE INSPECTION CHAMBER
- PROPOSED SW POLYPROPYLENE INSPECTION CHAMBER
- PROPOSED FOUL PRECAST CONCRETE MANHOLE
- PROPOSED SW PRECAST CONCRETE MANHOLE
- PROPOSED DRAINAGE CHANNEL
- PROPOSED FOUL DRAINAGE CHANNEL
- EXTENTS OF PROPOSED CELLULAR ATTENUATION
- EXISTING ON SITE SURFACE WATER SEWER TO BE REMOVED
- EXISTING FOUL SEWER
- EXISTING MANHOLE
- EXISTING YORKSHIRE WATER SURFACE WATER SEWER
- BACKDROP
- G GULLY

DRAINAGE NOTES:

1. ALL WORKS TO BE CONDUCTED IN STRICT ACCORDANCE WITH SPECIFICATION OF THE LOCAL AUTHORITY & BS EN 752:2017.
2. ALL PIPE RUNS NEAR BUILDINGS TO COMPLY WITH THE LATEST BUILDING REGULATIONS PART H1. WHERE A PIPE IS WITHIN 1m OF A FOUNDATION THE TRENCH SHALL BE FILLED WITH CLASS GEN3 CONCRETE UP TO THE LOWEST LEVEL OF THE FOUNDATION. WHERE THE TRENCH IS FURTHER THAN 1m FROM THE FOUNDATION, THE TRENCH SHALL BE FILLED WITH CLASS GEN3 CONCRETE TO A LEVEL BELOW THE LOWEST LEVEL FOR THE FOUNDATION EQUAL TO THE DISTANCE FROM THE FOUNDATION LESS 150mm. IN BOTH CASES THE PIPE SHALL BE BEDDED AND SURROUNDED IN 150mm THICK CLASS GEN3 CONCRETE.
3. WHERE PIPES, EXTERNAL TO THE STRUCTURES, HAVE A DEPTH TO SOFFIT FROM GROUND LEVEL OF LESS THAN 600mm THEY SHALL HAVE A CLASS GEN3 CONCRETE ENCASEMENT (150mm THICK).
4. WHERE A PIPE, UNDER A CARRIAGEWAY, HAS A DEPTH OF COVER OF LESS THAN 1.2m THE PIPE SHALL BE LAID IN A CLASS Z BEDDING.
5. WHERE PIPES ARE BEDDED AND SURROUNDED IN CONCRETE, FLEXIBLE JOINTS SHOULD BE PROVIDED. COMPRESSIBLE BOARDS (FIBREBOARD OR POLYSTYRENE) SHALL BE PROVIDED AT A MAXIMUM OF 8m CENTRES (COINCIDING WITH PIPE JOINTS). THE BOARDS SHALL BE PRE-CUT TO PIPE DIAMETER AND TO A HEIGHT AND WIDTH EQUAL TO THE CONCRETE CROSS SECTION. A BOARD THICKNESS OF 18mm FOR PIPES UP TO 450mm NOMINAL DIAMETER AND 36mm FOR PIPES OVER 450mm NOMINAL DIAMETER.
6. ALL PRIVATE BUILDING DRAINAGE SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH BS EN 752:2017.
7. UNLESS OTHERWISE SPECIFIED, BUILDING DRAINAGE TO BE 150mm INTERNAL DIAMETER.
8. MINIMUM GRADIENT FOR Ø100mm SURFACE DRAINAGE PIPES IS 1:60, AND Ø150mm IS 1:100 U.N.O.
9. MINIMUM GRADIENTS FOR FOUL DRAINAGE PIPES:Ø100mm: 1:40 WHERE FLOW IS LESS THAN 1L/S, OR WHERE NO WCS ARE CONNECTED.Ø100mm: 1:80 WHERE FLOW IS 1L/S OR GREATER, OR WHERE AT LEAST 1NO. WC IS CONNECTED. Ø150mm: 1:135 WHERE FLOW IS LESS THAN 5L/S, OR WHERE UP TO 5NO. WCS ARE CONNECTED.Ø150mm: 1:150 WHERE FLOW IS 5L/S OR GREATER, OR WHERE 5NO. OR MORE WCS ARE CONNECTED
10. Ø450mm PPIC'S TO HAVE A Ø150mm TO Ø225mm REDUCER FOR ALL OUTFALL CONNECTIONS TO A Ø225mm PIPE. NO Ø225mm PIPES TO CONNECT AS INLETS TO Ø450 PPIC'S, Ø600 PPIC'S TO BE USED IN THIS OCCURRENCE.
11. ALL GULLIES NOT CONNECTED TO INSPECTION CHAMBERS ARE TO BE RODDABLE.
12. ALL GULLY CONNECTIONS OTHER THAN THOSE AT MANHOLES TO BE MADE VIA "Y" JUNCTIONS.
13. GULLIES COINCIDENT WITH PEDESTRIAN/ DRIVE CROSSINGS TO HAVE PEDESTRIAN TYPE GULLY COVERS.
14. ALL ROAD GULLY CONNECTIONS TO BE 150mm DIAMETER AND ANY GULLY CONNECTIONS SUBJECT TO TRAFFIC LOADING TO HAVE CLASS Z BEDDING & SURROUND.
15. ALL STUB STACKS TO BE FITTED WITH AIR ADMITTANCE VALVES WHERE BRANCH DRAIN EXCEEDS 12m EXCEPT AT THE HEAD OF THE RUN. SOIL VENT PIPES LOCATED AT THE HEAD OF A RUN TO BE INSTALLED WITH ROOF TILE VENT.
16. ALL CONNECTIONS TO BE MADE FROM SOFFIT TO SOFFIT UNLESS WERE NOTED OTHERWISE.
17. ALL MANHOLES SHALL BE WATERTIGHT.
18. TRENCH TEMPORARY FORMWORK IS REQUIRED TO ALL EXCAVATIONS EXCEEDING 1.2m DEPTH TO PROVIDE ADEQUATE SUPPORT AND STABILITY AT ALL TIMES.
19. SEWERS ARE TO BE CONSTRUCTED IN SINGLE SECTIONS BETWEEN MANHOLES ONLY. TRENCHES TO BE BACKFILLED PRIOR TO EXCAVATING THE SUCCEEDING SEWER RUN.
20. ALL CONCRETE AND CONCRETE PRODUCTS TO BE IN ACCORDANCE WITH BRE SPECIAL DIGEST 1 FOR SULPHATES.
21. WHERE SEWER OR DRAINS ARE TO BE ABANDONED THEY SHALL BE REMOVED OR INFILLED BY GROUTING IN ACCORDANCE WITH THE CIVIL ENGINEER SPECIFICATION FOR THE WATER INDUSTRY 7TH EDITION, CLAUSE S.23.
22. EXTERNAL RAIN WATER PIPES TO HAVE ACCESS POINTS 1m ABOVE GROUND LEVEL. (REFER TO DETAIL WITHIN CONSTRUCTION DETAILS).
23. ALL RWP, SVP AND SS LOCATIONS TO HAVE ABOVE GROUND RODDABLE ACCESS POINTS BY M&E.
24. ALL DRAINAGE TO BE CCTV SURVEYED FOLLOWING CONSTRUCTION.
25. REFER TO SPECIFICATION FOR DETAILS OF PIPE BEDDING BENEATH / ADJACENT TO FLOOR SLAB & FOUNDATIONS.
26. THE CONTRACTOR SHALL CHECK ALL EXISTING MANHOLE INVERT LEVELS PRIOR TO THE COMMENCEMENT OF ANY DRAINAGE WORKS AND REPORT HIS FINDINGS BACK TO THE ENGINEER IN WRITING.
27. WHERE PROPOSED DRAINAGE PIPE WORK RUNS ARE IN CLOSE PROXIMITY TO THE NEW FOUNDATIONS, THE CONTRACTOR SHALL ALLOW FOR EXTENDING THE DEPTH OF NEW FOUNDATIONS IN LEAN MIX CONCRETE DOWN TO THE PROPOSED PIPE BEDDING LEVEL, EXCLUDING WHERE SITE HAS PILED FOUNDATIONS

Notes

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTS, ENGINEERS AND SPECIALISTS DRAWINGS TOGETHER WITH THE APPROPRIATE SPECIFICATIONS.
- IT IS THE CONTRACTORS RESPONSIBILITY TO CHECK ALL DIMENSIONS ON SITE. DIMENSIONS MUST NOT BE SCALED FROM THIS DRAWING. ANY DISCREPANCIES TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT IN WRITING.
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- ALL LEVELS ARE IN METRES, UNLESS NOTED OTHERWISE

GENERAL NOTES:

1. THE SPECIFICATION IN ALL RESPECTS SHALL BE IN ACCORDANCE WITH THE CURRENT "DELIVERING STREETS AND PLACES" PUBLICATION IN FORCE IN THE COUNTY AT THE TIME OF CONSTRUCTION.
2. GENERAL DETERIORATION OF THE EXISTING HIGHWAY/FOOTWAY/VERGES CREATED THROUGH CONSTRUCTION OF THE NEW SECTION 38 DEVELOPMENT WILL BE REINSTATED TO THE CURRENT DEVELOPMENT ROAD SPECIFICATION AT THE DEVELOPER'S OWN COST AT THE AGREEMENT OF THE INSPECTING HIGHWAY OFFICER.
3. ANY WORKS WITHIN THE PUBLIC HIGHWAY TO BE CARRIED OUT TO THE APPROVAL OF THE HIGHWAY AUTHORITY. CONTRACTOR TO LIAISE WITH THE HIGHWAY AUTHORITY TO ENSURE WORKS ARE INSPECTED AND APPROVED DURING CONSTRUCTION.
4. WHERE THE EQUILIBRIUM CBR FALLS BETWEEN VALUES, USE THE LOWER VALUE.
5. VERIFICATION (PROOF ROLLING) MUST NE CARRIED OUT ON TOP OF THE SUB-BASE.
6. PREPARATION & TREATMENT OF FORMATION TO DTP SPEC CL 612 & 616. THE FORMATION, WHETHER IN CUT OR FILL, SHALL BE PREPARED, PROFILED AND THOROUGHLY COMPACTED AS REQUIRED BY CLAUSES 612 AND 616 OF THE DOT SPECIFICATION FOR HIGHWAY WORKS.
7. OVER EXCAVATION BELOW ROAD FORMATION IS TO BE BACKFILLED WITH 6F2 GRANULAR MATERIAL, WELL COMPACTED IN LAYERS NOT EXCEEDING 225mm.
8. MATERIALS USED IN CAPPING LAYERS SHALL BE IN ACCORDANCE WITH THE SPECIFICATION FOR HIGHWAY WORKS TABLE 6/1. THE MATERIALS SHALL BE SAMPLED IN THE FREQUENCY STATED IN THE SPECIFICATION AND TESTED TO DEMONSTRATE THAT IT HAS AND IN-SITU VALUE OF 15% (OR EQUIVALENT TEST RESULT). THE CONTRACTOR SHOULD PROVIDE INFORMATION THAT THE TESTED MATERIALS COMPLY WITH THE REQUIRED SPECIFICATION.
9. ANY SOFT SPOTS TO BE CONFIRMED ON SITE & REPORTS TO THE ENGINEER.
10. EXISTING LEVELS TO BE MAINTAINED U.N.O.
11. THE HEIGHT OF THE DROPPED KERB ABOVE THE SURFACE COURSE SHALL BE AS FOLLOWS: PRIVATE VEHICULAR ACCESS - 12mm. PEDESTRIAN CROSSINGS - 0mm.
12. 10. NO PRIVATE SURFACE WATER SHALL DISCHARGE ONTO THE ADOPTABLE HIGHWAY. POSITIVELY DRAINED LINEAR DRAINAGE TO BE PROVIDED WHERE HARD LANDSCAPING FALLS TOWARDS THE PUBLIC HIGHWAY.
13. CONTRACTOR TO SATISFY THEMSELVES OF EXISTING SERVICES. ALLOWANCE TO BE MADE FOR EXPOSING AND PROTECTING ALL EXISTING SERVICES AS NECESSARY IN AREAS OF PROPOSED WORKS.
14. 1:30 ABSOLUTE MAXIMUM CROSS FALL TO FOOTWAYS. 1:40 DESIRABLE MAXIMUM CROSS FALL TO FOOTWAYS.

NOTE: PAVING/LANDSCAPING DESIGN TO IMPLEMENT MEASURES TO KEEP FIRST 5mm OF WATER ONSITE

P03	21.03.2023	BM	FOUL DRAINAGE REMOVED AND NOTATION ADDED.	JS
P02	07.02.23	BM	SURFACE WATER PETROL INTERCEPTOR REMOVED. LINEAR CHANNELS AMENDED AND S1 REMOVED. DRAWING TITLE UPDATED.	JS
P01	26.01.2023	BM	FIRST ISSUE.	JS
Rev	Date	By	Description	Appd

PRELIMINARY

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Project
ENTERPRISE RENT-A-CAR, BARNSLEY

Title
DRAINAGE GENERAL ARRANGEMENT

Scale: 1:100 @A1
Drawn: BM
Revision: P03
Date: JANUARY 2023
Checked: JS

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