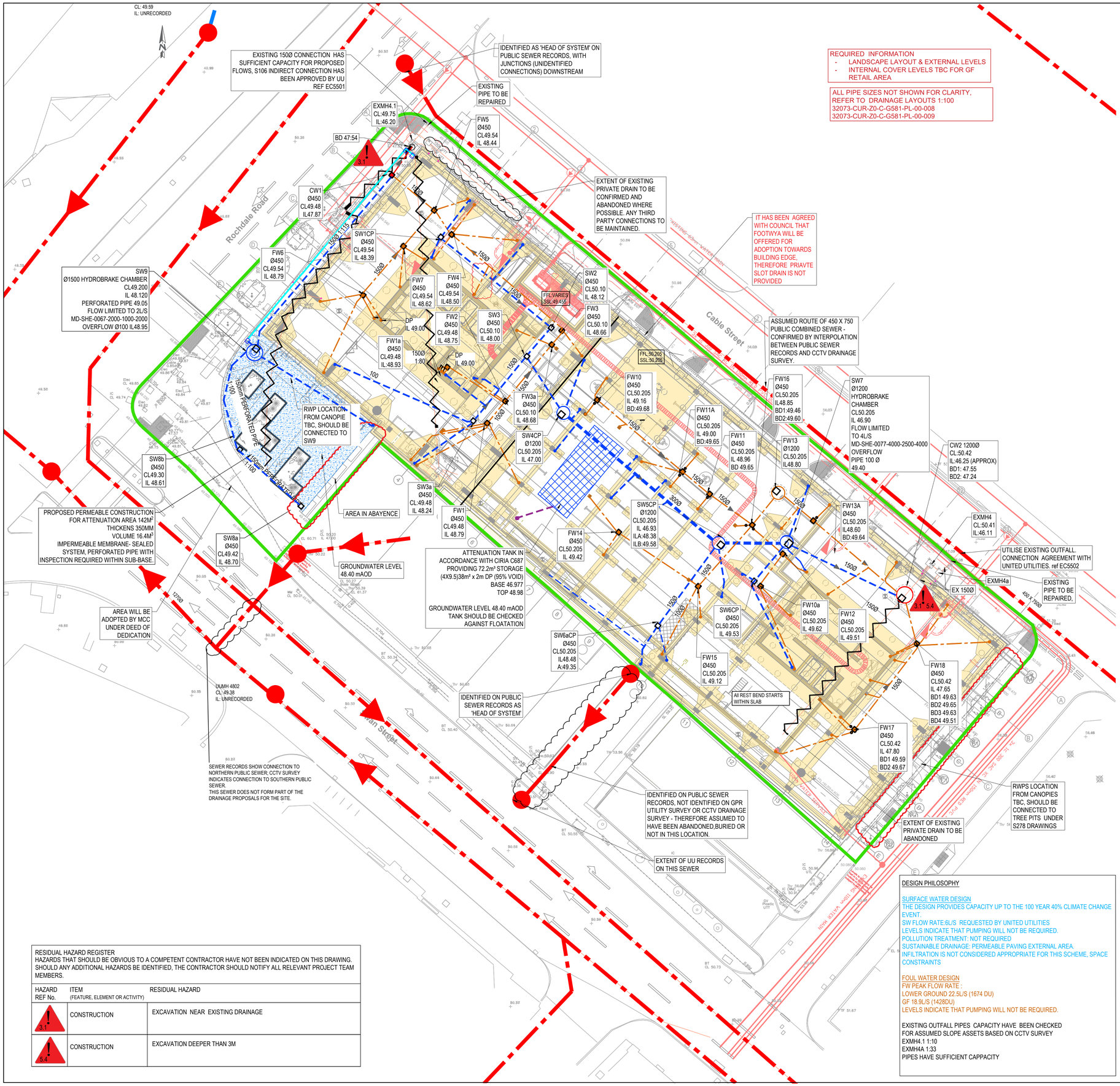


RESIDUAL HAZARD REGISTER
HAZARDS THAT SHOULD BE OBVIOUS TO A COMPETENT CONTRACTOR HAVE NOT BEEN INDICATED ON THIS DRAWING. SHOULD ANY ADDITIONAL HAZARDS BE IDENTIFIED, THE CONTRACTOR SHOULD NOTIFY ALL RELEVANT PROJECT TEAM MEMBERS.

HAZARD REF No.	ITEM (FEATURE, ELEMENT OR ACTIVITY)	RESIDUAL HAZARD
3.1	CONSTRUCTION	EXCAVATION NEAR EXISTING DRAINAGE
5.4	CONSTRUCTION	EXCAVATION DEEPER THAN 3M

DESIGN PHILOSOPHY

SURFACE WATER DESIGN
THE DESIGN PROVIDES CAPACITY UP TO THE 100 YEAR 40% CLIMATE CHANGE EVENT.
SW FLOW RATE:6L/S REQUESTED BY UNITED UTILITIES
LEVELS INDICATE THAT PUMPING WILL NOT BE REQUIRED.
POLLUTION TREATMENT: NOT REQUIRED
SUSTAINABLE DRAINAGE: PERMEABLE PAVING EXTERNAL AREA.
INFILTRATION IS NOT CONSIDERED APPROPRIATE FOR THIS SCHEME, SPACE CONSTRAINTS

FOUL WATER DESIGN
FW PEAK FLOW RATE :
LOWER GROUND 22.5L/S (1674 DU)
GF 18.9L/S (1428DU)
LEVELS INDICATE THAT PUMPING WILL NOT BE REQUIRED.

EXISTING OUTFALL PIPES CAPACITY HAVE BEEN CHECKED FOR ASSUMED SLOPE ASSETS BASED ON CCTV SURVEY
EXMH4.1 1:10
EXMH4A 1:33
PIPES HAVE SUFFICIENT CAPPACITY

GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. ALL ADOPTABLE DRAINAGE WORKS INCLUDING WORKS TO EXISTING PUBLIC SEWERS TO BE UNDERTAKEN IN ACCORDANCE WITH "SEWERS FOR ADOPTION 7th EDITION" AND "CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION" AND CONSTRUCTED TO THE RELEVANT STATUTORY UNDERTAKERS DETAILS.
3. ALL PRIVATE DRAINAGE WORKS TO BE IN ACCORDANCE WITH CURTINS DRAINAGE SPECIFICATION, "CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION", BS EN 752 2017 'DRAIN AND SEWER SYSTEMS OUTSIDE BUILDINGS' AND THE BUILDING REGULATIONS APPROVED 'DOCUMENT H'.
4. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
5. DESIGN BASED ON TOPOGRAPHICAL SURVEY AND CCTV SURVEY INFORMATION AVAILABLE AT THE TIME OF THE DESIGN.
6. OUTFALL CONNECTION(S) SUBJECT TO AGREEMENT WITH THE APPROVING AUTHORITY.
7. ALL DIMENSIONS ARE IN METRES AND LEVELS IN METRES ABOVE ORDNANCE DATUM UNLESS OTHERWISE NOTED.
8. COVER LEVELS, GULLY POSITIONS, AND BUILDINGS LOCATION ARE APPROXIMATE AND SHALL BE CONFIRMED BY ARCHITECT/ LANDSCAPE ARCHITECT. CONTRACTOR TO ALLOW FOR ADJUSTMENT TO SUIT AGREED POSITIONS AND FINISHED LEVELS, AND CONFIRM ALL COVER LEVELS ON SITE.
9. ALL INTERNAL DRAINAGE CONNECTIONS ARE PROVIDED TO THE PENETRATION POSITIONS SHOWN ON ARCHITECT AND M&E DRAWINGS. REFER TO DIMENSIONED LOCATIONS AND DIAMETERS ON ARCHITECT'S GROUND FLOOR SETTING-OUT PLANS.
10. ALL UNDERGROUND FOUL DRAINAGE SHOULD BE SUITABLY VENTED AT OR NEAR TO THE HEAD OF RUNS.
11. ALL ACCESS FITTINGS, STACKS, RWP'S AND GULLIES TO BE RODDABLE. ALL TO HAVE LOW LEVEL RODDING ACCESS PLATES UNLESS AN ALTERNATIVE MEANS OF ACCESS IS AGREED. ACCESS POINT TO BE ABOVE ANY GROUND FLOOR CONNECTED APPLIANCE SPILL LEVEL.
12. LARGE ACCESS FITTING REQUIRED ABOVE GROUND WHERE GREATER THAN 12M UP TO 22M TO A JUNCTION. SMALL ACCESS FITTING REQUIRED UP TO 12M TO A JUNCTION.
13. ALL GULLY AND CHANNEL DRAIN OUTLETS AND TERMINATION POINTS TO BE TRAPPED AND RODDABLE. INTERNAL GULLIES AND CHANNEL DRAINS TO BE SPECIFIED BY OTHERS.
14. WHERE NO WC'S ARE CONNECTED UPSTREAM, UNDERSLAB FW DRAINAGE TO BE LAID AT 1:80 MIN. AFTER THE CONNECTION OF AT LEAST 1NO WC, A MIN. FALL OF 1:80 APPLIES.
15. ALL CONNECTIONS FROM POP-UPS TO BE LAID AT A CONSTANT GRADIENT TO JUNCTION/ INSPECTION CHAMBER/ MANHOLE UNLESS NOTED OTHERWISE. ANY ISSUES RELATING TO CLASHES WITH FOUNDATIONS ARE TO BE FORWARDED TO THE ENGINEER, ALLOWING SUFFICIENT TIME FOR AN ALTERNATIVE SOLUTION TO BE PROPOSED.
16. INVERT LEVELS AT MANHOLES/ INSPECTION CHAMBERS TO BE USED TO SET OUT PIPEWORK. PIPE GRADIENTS ARE SHOWN INDICATIVELY ONLY.
17. ALL PIPE DIAMETERS GIVEN ARE NOMINAL INTERNAL PIPE DIAMETERS.
18. ALL SEWERS, UNLESS AGREED OTHERWISE STATED, SHALL BE:
- 150mm to 300mm DIA TO BE VITRIFIED CLAY.
19. AS AN ALTERNATIVE THE CONTRACTOR MAY USE AN APPROVED UNPLASTICISED POLYVINYL CHLORIDE (PVCU) WITH APPROVAL FROM THE ENGINEER.
20. SEWER PIPES TO BE LAID IN MAXIMUM 3 METRE LENGTHS UNLESS THERE IS A SPECIFIC OPERATIONAL NEED TO LAY LONGER LENGTHS.
21. THE FIRST PIPE OUT OF MANHOLES TO BE AS SHORT AS PRACTICABLE SO AS TO PROVIDE A FLEXIBLE JOINT AS CLOSE AS POSSIBLE TO THE OUTSIDE FACE OF THE CONCRETE SURROUND AND CONNECTED TO A LENGTH OF ROCKER PIPE.
22. ALL NEW CONNECTIONS INTO EXISTING MANHOLES (OR INTO EXISTING SEWERS) TO BE 'SOFFITS LEVEL' UNLESS OTHERWISE NOTED.
23. ALL ADOPTABLE DRAINAGE PIPES WILL REQUIRE A MINIMUM OF 1200mm COVER, IN ACCORDANCE WITH SEWERAGE UNDERTAKERS REQUIREMENTS. WHERE THIS IS NOT ACHIEVED, IT WILL BE NECESSARY TO AGREE THE BED AND SURROUND DETAIL.
24. ALL PRIVATE DRAINAGE PIPES WITH A COVER OF LESS THAN 600mm IN NON-TRAFFICKED AREAS AND LESS THAN 1200mm IN TRAFFICKED AREAS TO BE BEDDED AND SURROUNDED IN CONCRETE (CLASS Z). COMPRESSIBLE MATERIAL SHALL BE PROVIDED AT EVERY PIPE JOINT. WHERE COVER EXCEEDS THIS DEPTH, PIPES ARE TYPICALLY BEDDED AND SURROUNDED IN CLASS S. REFER TO PIPE EMBEDMENT DETAILS DRAWING FOR SPECIFIC TYPES.
25. WHERE DRAINAGE PIPES ARE LESS THAN 300mm BELOW THE UNDERSIDE OF THE GROUND FLOOR SLAB, CONCRETE ENCASEMENT IS REQUIRED (CLASS Z). COMPRESSIBLE JOINTS ARE TO BE PROVIDED AT EVERY PIPE JOINT WITHIN THE CONCRETE.
26. WHERE PIPES ARE MORE THAN 300mm BELOW THE UNDERSIDE OF THE SLAB, CLASS S BEDDING IS ACCEPTABLE.
27. SULPHATE RESISTANT CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED TO PROVE THAT SUCH PRECAUTIONS ARE NOT REQUIRED.
28. WHERE FOUL SEWERS RUN ABOVE SURFACE SEWERS, CONCRETE PROTECTION MAY BE REQUIRED AT CROSSOVERS TO PREVENT ANY POTENTIAL CONTAMINATION.
29. ALL CONNECTIONS PASSING THROUGH BASES OR EDGE BEAMS TO BE IN SEALED SLEEVES. ALTERNATIVELY CONNECTIONS MAY BE CAST-IN WITH FLEXIBLE JOINTS NOT GREATER THAN 150MM FROM FACE OF CONCRETE.
30. THE CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION MAY NEED TO BE INCREASED TO ACCOMMODATE THE CONNECTIONS AND BENDS.
31. ALL MANHOLE COVERS IN BLOCK/SLAB AND EXTERNAL PAVING AREAS TO HAVE RECESSED COVERS OF THE APPROPRIATE GRADE TO ACCEPT ARCHITECT'S PAVING PROPOSAL.
32. ALL INTERNAL COVERS TO HAVE MECHANICALLY JOINTED CORNERS AND DOUBLE SEALED WITH RECESSED TRAY TO ALLOW FOR FINISHES.
33. UNLESS NOTED OTHERWISE IN THE MANHOLE SCHEDULE, ALL MANHOLE, GULLY AND CHANNEL COVERS (IRONWORK) SHOULD BE THE FOLLOWING SPECIFICATION:
- B125 LOAD CLASS IN PEDESTRIAN AREAS
- D400 LOAD CLASS IN VEHICULAR AREAS.
35. ALL PROPRIETARY PRODUCTS TO BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS, INSTRUCTIONS AND RECOMMENDATIONS.
36. THE DESIGN IS BASED ON A GRAVITY RAINWATER SYSTEM. WHERE A SIPHONIC SYSTEM IS PROPOSED ADDITIONAL NOTES REQUIRED AND DESIGN ADJUSTED TO SUIT.

KEY:

- SITE BOUNDARY - AS SHOWN ON SIMPSON HAUGH DRAWING 10133-Z1-00-PL-A-B5D8-G200-0001 REV 00 (PDF PLANNING ISSUE)
- EXISTING PUBLIC COMBINED SEWER (APPROXIMATE)
- EXISTING PRIVATE DRAINAGE TO BE ABANDONED
- PROPOSED FOUL PUBLIC SEWER AND MANHOLE
- PROPOSED SURFACE PUBLIC SEWER AND MANHOLE
- PROPOSED SERVICES
- PROPOSED SURFACE WATER ATTENUATION
- PROPOSED SURFACE WATER FLOW CONTROL
- DP DOWNPIPE
- RWP RAINWATER PIPE
- IT INTERCEPTOR TRAP
- BD BACKDROP
- CP CATCHPIT
- FG FLOOR GULLY
- AB OB GATIC 150 TREADESAFE
- PROPOSED PERMEABLE PAVING
- THB THROUGH BEAM
- ABB ABOVE BEAM
- BB BELOW BEAM

DRAWING BASED ON:
TOPOGRAPHICAL SURVEY 18560-TOPO-REV1 BY SURVEY SYSTEM
UTILITY SURVEY 18560A-UTIL REV 1 BY SURVEY SYSTEM
CCTV SURVEY 15148 BY SUB SCAN MAY 2018
ADDITIONAL CCTV SURVEY TEAM DRAINAGE 04.05.2021
GF 32073-SHP-Z1-A-G200-PL-00-001 P09
FOUNDATION 32073-CUR-Z1-S-G210-PL-FN-095 C04
POPUP, DU& ROOF AREA 32073-BGL-Z1-P-G581-PL-00-0710 AGD
RWP Pop Up Locations revJ
SETTING OUT 32073-SHP-Z1-A-G220-PL-00-001
SERVICES AU-1183-013 P4
4714.02D Landscape layout work in progress 28.01.22

Rev:	Description:	Date:	By:	Chkd:
C05	MANHOLES F13A AND SW6A MOVED TO CAR PARK	30.03.22	MW	MW
C04	POPUP ADDED, COVER LEVELS AMENDED	15.02.22	MW	MW
C03	POPUPS AND SERVICES UPDATED	10.02.22	MW	MW
C02	POPUPS UPDATED	02.02.22	MW	MW
C01	ISSUED FOR CONSTRUCTION	02/12/21	MW	MW
P12	BUILDING & DRAINAGE LOCATION UPDATE	11/10/21	MW	MW
P11	ISSUED STAGE 4	08/07/21	RH	MW
P10	COORDINATION OPTION 2	17/05/21	MW	MW
P09	COORDINATION	07/05/21	MW	CG

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Status: CONSTRUCTION

Project: SWAN HOUSE, ROCHDALE ROAD

Drg Title: DETAILED DRAINAGE STRATEGY

Project No:	Size:	Date:	Drawn By:	Designed By:	Checked By:	RG Series
067266	A1 Scale: 1:200	22/12/18	MW	MW	CG	26

Project Code:	Originator:	Volume:	Role	Uniclass:	Type:	Level	Number:	Rev:
32073	CUR	Z0	C	G581	PL	00	001	C05

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