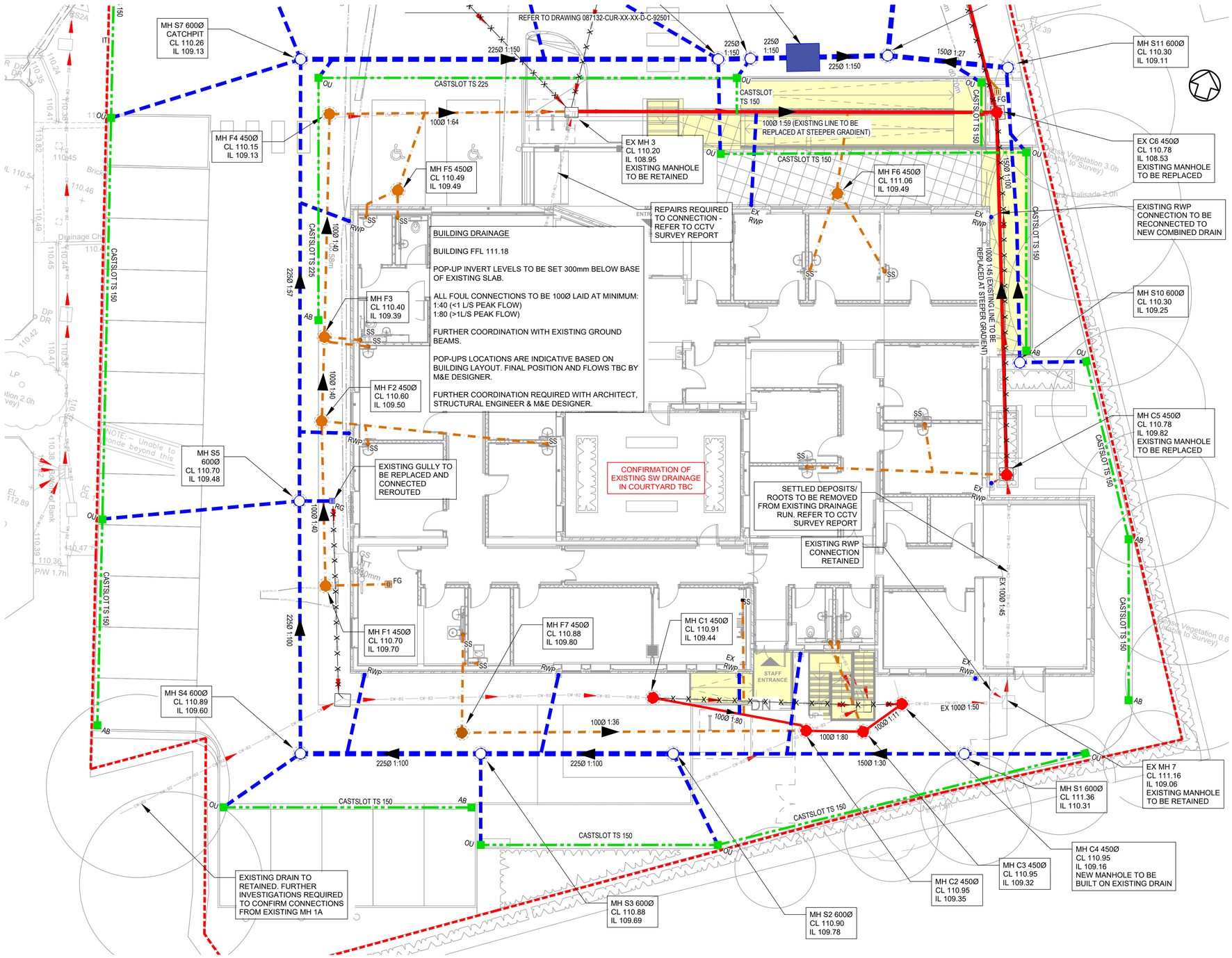


GENERAL NOTES:

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 "DESIGN AND CONSTRUCTION GUIDANCE FOR FOUL AND SURFACE WATER SEWERS OFFERED FOR ADOPTION - LATEST 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 INFORMATION AVAILABLE AT THE TIME OF THE DESIGN.
6. ALL EXISTING SERVICES TO BE LOCATED PRIOR TO COMMENCEMENT OF ANY DRAINAGE WORKS, AND WHERE NECESSARY PROTECTION OR DIVERSIONS TO BE UNDERTAKEN TO AVOID CONFLICT WITH THE PROPOSED WORK.
7. OUTFALL CONNECTION(S) SUBJECT TO AGREEMENT WITH THE APPROVING AUTHORITY.
8. ALL DIMENSIONS ARE IN METRES AND LEVELS IN METRES ABOVE ORDNANCE DATUM UNLESS OTHERWISE NOTED.
9. 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.
10. 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.
11. ALL UNDERGROUND FOUL DRAINAGE SHOULD BE SUITABLY VENTED AT OR NEAR TO THE HEAD OF RUNS.
12. 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.
13. 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.
14. ALL GULLY AND CHANNEL DRAIN OUTLETS AND TERMINATION POINTS TO BE TRAPPED AND RODDABLE. INTERNAL GULLIES AND CHANNEL DRAINS TO BE SPECIFIED BY OTHERS.
15. WHERE NO WC'S ARE CONNECTED UPSTREAM, UNDERSLAB FW DRAINAGE TO BE LAID AT 1:40 MIN. AFTER THE CONNECTION OF AT LEAST 1NO WC, A MIN. FALL OF 1:80 APPLIES.
16. 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.
17. INVERT LEVELS AT MANHOLES/ INSPECTION CHAMBERS TO BE USED TO SET OUT PIPEWORK. PIPE GRADIENTS ARE SHOWN INDICATIVELY ONLY.

GENERAL NOTES:

18. ALL PIPE DIAMETERS GIVEN ARE NOMINAL INTERNAL PIPE DIAMETERS.
19. ALL SEWERS, UNLESS AGREED OTHERWISE STATED, SHALL BE:
- 100mm to 300mm DIA TO BE VITRIFIED CLAY.
- 375mm DIA AND GREATER TO BE CLASS 120 CONCRETE PIPES.
20. AS AN ALTERNATIVE THE CONTRACTOR MAY USE AN APPROVED UNPLASTICISED POLYVINYL CHLORIDE (PVCU) WITH APPROVAL FROM THE ENGINEER.
21. SEWER PIPES TO BE LAID IN MAXIMUM 3 METRE LENGTHS UNLESS THERE IS A SPECIFIC OPERATIONAL NEED TO LAY LONGER LENGTHS.
22. 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.
23. ALL NEW CONNECTIONS INTO EXISTING MANHOLES (OR INTO EXISTING SEWERS) TO BE 'SOFFITS LEVEL' UNLESS OTHERWISE NOTED.
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.
35. 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.
36. WHERE LAND DRAINAGE PERFORATED PIPES ARE SPECIFIED, TH E PIPES SHOULD BE FULLY PERFORATED AND IN ACCORDANCE WITH BS EN 295.
37. PERFORATED PIPES SHOULD BE WRAPPED IN A GEOTEXTILE MEMBRANE UNLESS NOTED OTHERWISE.
38. ALL PROPRIETARY PRODUCTS TO BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS, INSTRUCTIONS AND RECOMMENDATIONS.
38. THE DESIGN IS BASED ON A GRAVITY RAINWATER SYSTEM.

KEY:

- SITE BOUNDARY
- EXISTING PRIVATE COMBINED DRAINAGE
- DRAINAGE TO BE ABANDONED/ REMOVED
- PROPOSED COMBINED WATER DRAINAGE
- PROPOSED SURFACE WATER DRAINAGE
- PROPOSED FOUL DRAINAGE
- PROPOSED MANHOLE/ PPIC
- PROPOSED FLOW CONTROL MANHOLE
- GATIC CASTSLOT TREADSAFE D400 OR SIMILAR APPROVED.
- AB GATIC ACCESS BOX
- OU GATIC OUTLET UNIT
- RG ROAD GULLY
- RWP PROPOSED RAINWATER PIPE
- EX RWP EXISTING RAINWATER PIPE
- SVP SOIL VENT PIPE
- SS STUB STACK
- FG FOUL GULLY
- PROPOSED CELLULAR ATTENUATION TANK
- PROPOSED PETROL INTERCEPTOR
- PROPOSED FOUNDATION EXTENT

*RESIDUAL HAZARD REGISTER (RELATES TO CIVIL/STRUCTURAL MATTERS ONLY)
MUST BE READ IN CONJUNCTION WITH CURTINS RESIDUAL HAZARD REGISTER XXXXX-CUR-ZZ-XX-HA-X-00001.
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 REGISTER

Hazard Ref.	Item (Feature, Element or Activity)	Potential Hazard Identified	Action (Information to Assist Control)
2.00 Side Wide Issues			
2.01	Surface water flood risk	Potencial surface water flooding within car park	Contractor should locate equipment, materials compound located outside low areas
3.00 Existing Buried & Overhead Services			
3.01	Existing foundation, services& drainage	Existing buried services and structure. Risk of plant damaging services during excavation.	Potential for unmapped services obstructions and structure . All excavation must be considered carefully. All underground services, foundation must be identified and located by the main contractor prior to commencement of work
5.00 Excavations and Foundations			
5.01	Excavation below existing slab and foundation	Potential of damaging existing structure	Contractor should consider take percussion during drainage installation below existing building.

DESIGN PHILOSOPHY

SURFACE WATER DESIGN
THE DESIGN PROVIDES CAPACITY UP TO THE 100 YEAR + 45% CLIMATE CHANGE EVENT.
SW FLOW RATE: 5 l/s (FLOW CALCULATED BASED ON GREENFIELD RUNOFF RATE, INCREASED TO ACHIEVE MINIMUM ORIFICE SIZE TO PREVENT BLOCKAGES)

ATTENUATION
APPROXIMATE STORAGE REQUIREMENT:64m³ PROVIDED WITHIN CELLULAR STORAGE.

OUTFALL:
SITE DISCHARGES TO THE EXISTING 500Ø COMBINED SEWER IN PINFOLD LANE VIA AN EXISTING COMBINED CONNECTION.
A S106 AGREEMENT IS REQUIRED WITH UNITED UTILITIES:
PART 1 BY CURTINS
PART 2 ASSUMED NOT REQUIRED AS CONNECTION IS INDIRECT.

LEVELS INDICATE THAT PUMPING WILL NOT BE REQUIRED.

POLLUTION TREATMENT/ SUSTAINABLE DRAINAGE:
THE CAR PARK DRAINAGE IS ROUTED THROUGH A BYPASS PETROL INTERCEPTOR. AREA USED 1670m² INFILTRATION IS NOT CONSIDERED APPROPRIATE FOR THIS SCHEME.

EXISTING RAINWATER PIPES
WHERE EXISTING RAINWATER PIPES ARE TO BE RETAINED, THESE WILL BE CONNECTED INTO THE AMENDED FOUL/ COMBINED NETWORK ON SITE. THIS IS TO REDUCE THE RISK OF FLOODING TO THE BUILDING. THIS ACCOUNTS FOR APPROXIMATELY 250m².

ALL NEW RAINWATER PIPES, WHICH SERVE APPROXIMATELY 290m² OF THE ROOF AREA, ARE CONNECTED TO THE NEW SURFACE WATER DRAINAGE NETWORK.

FOUL WATER DESIGN

FOUL WATER TO DISCHARGE VIA THE EXISTING AMENDED FOUL/ COMBINED DRAINAGE NETWORK ON SITE.

THE FOUL/ COMBINED NETWORK REQUIRES SOME SECTIONS TO BE RELAID IN ORDER TO PROVIDE SUFFICIENT GRADIENTS FOR SELF CLEANSING.

OUTFALL:
SITE DISCHARGES TO THE EXISTING 500Ø COMBINED SEWER IN PINFOLD LANE VIA AN EXISTING COMBINED CONNECTION.
A S106 AGREEMENT IS REQUIRED WITH UNITED UTILITIES:
PART 1 BY CURTINS
PART 2 ASSUMED NOT REQUIRED AS CONNECTION IS INDIRECT.

LEVELS INDICATE THAT PUMPING WILL NOT BE REQUIRED.

DRAWING BASED ON:

TOPOGRAPHICAL SURVEY
- 72968MCLS-01TOPOGRAPHICAL SURVEY 24.04.25

CCTV SURVEY
- S26150-U CCTV SURVEY BY SEP DATED MAY 25

GPR SURVEY
- 72968NGUG-01 GPR SURVEY BY SURVEY SOLUTIONS DATED MAY 25

ARCHITECT'S PLANS
- WFLREF-GDA-V1-S1-DR-A-1002_P06_PROPOSED SITE
- WFLREF-GDA-V1-00-DR-A-1001_P04_PROPOSED GROUND FLOOR GA PLAN
- WFLREF-GDA-V1-R1-DR-A-2001_P01_PROPOSED ROOF PLAN

STRUCTURAL PLANS
- 087132-CUR-XX-GF-D-S-20001 P01 GROUND FLOOR GENERAL ARRANGEMENT

ROOT PROTECTION ZONE AREA TBC ONCE ABOROCULTURALIST REPORT RECEIVED. SOME ADJUSTMENT TO DRAINAGE MAY BE REQUIRED

Rev.	Description:	Date:	By:	Chkd:
P02	STAGE 3 ISSUE	05/06/25	ATL	MW
P01	ISSUED FOR COMMENTS	01.05.25	MW	MW

Curtins
Merchant Exchange, 17-19 Whitworth Street West, Manchester, M1 5WG
0161 236 2394
manchester@curtins.com
www.curtins.com
Civils & Structures • Transport Planning • Environmental • Infrastructure • Geotechnical • Conservation & Heritage • Principal Designer
Birmingham • Bristol • Cambridge • Cardiff • Douglas • Dublin • Edinburgh • Glasgow • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

Status: STAGE 3

Project: WHITEFIELD MEDICAL CENTRE

Drg Title: PROPOSED DRAINAGE PLAN SHEET 1

Drawn By	Designed By	Checked By
MW	MW	MW
	Date: 29/04/2025	Scales @ A1: 1:100

Project No - Originator - Function - Spatial - Form - Discipline - Number: 087132 - CUR - XX - XX - DR - C - 92500
Revision: P02

\\mia-fs-1\Projects\087001 - 088000\087132 - Whitefield Medical Centre\04-Production\4A-Models-Drawings\C\CAD\92500.dwg