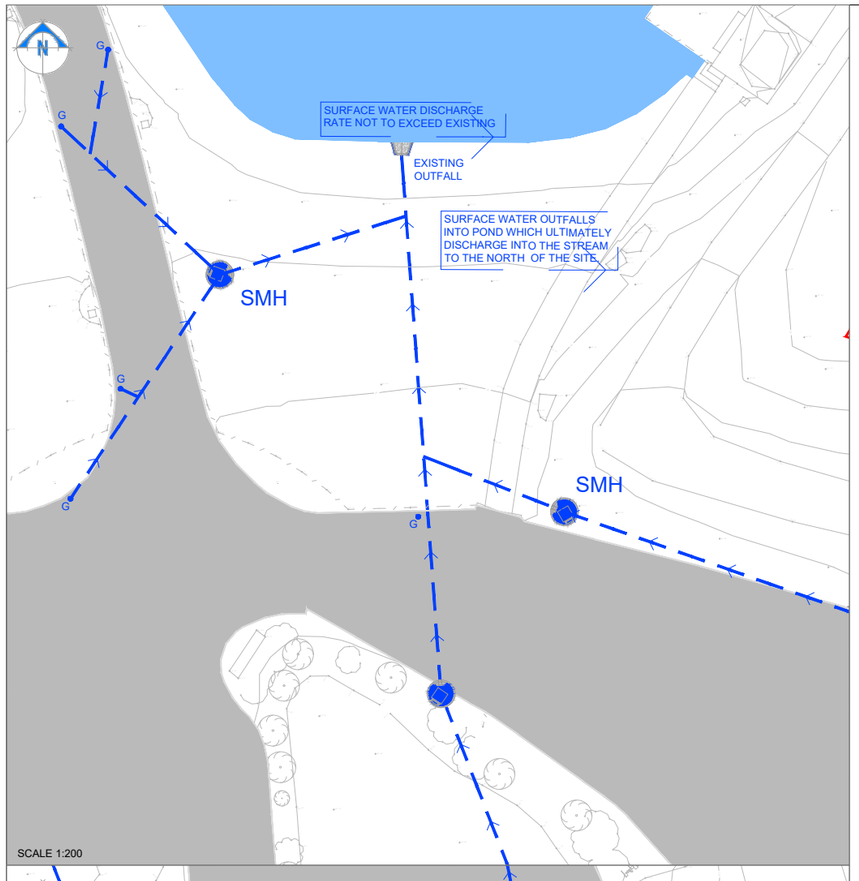
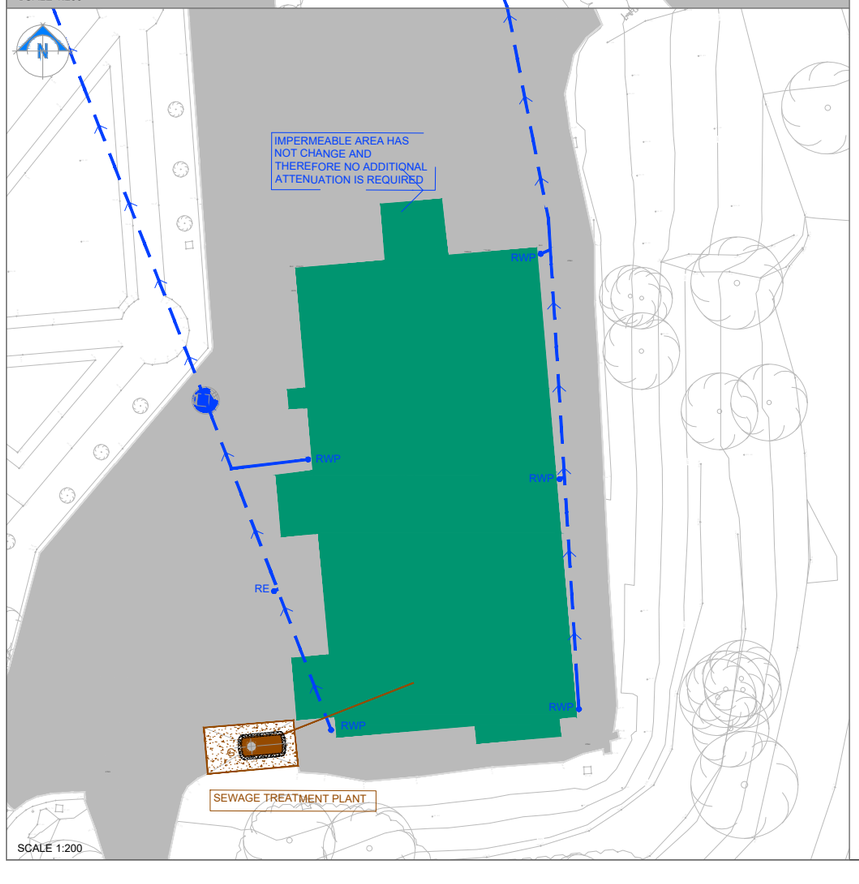
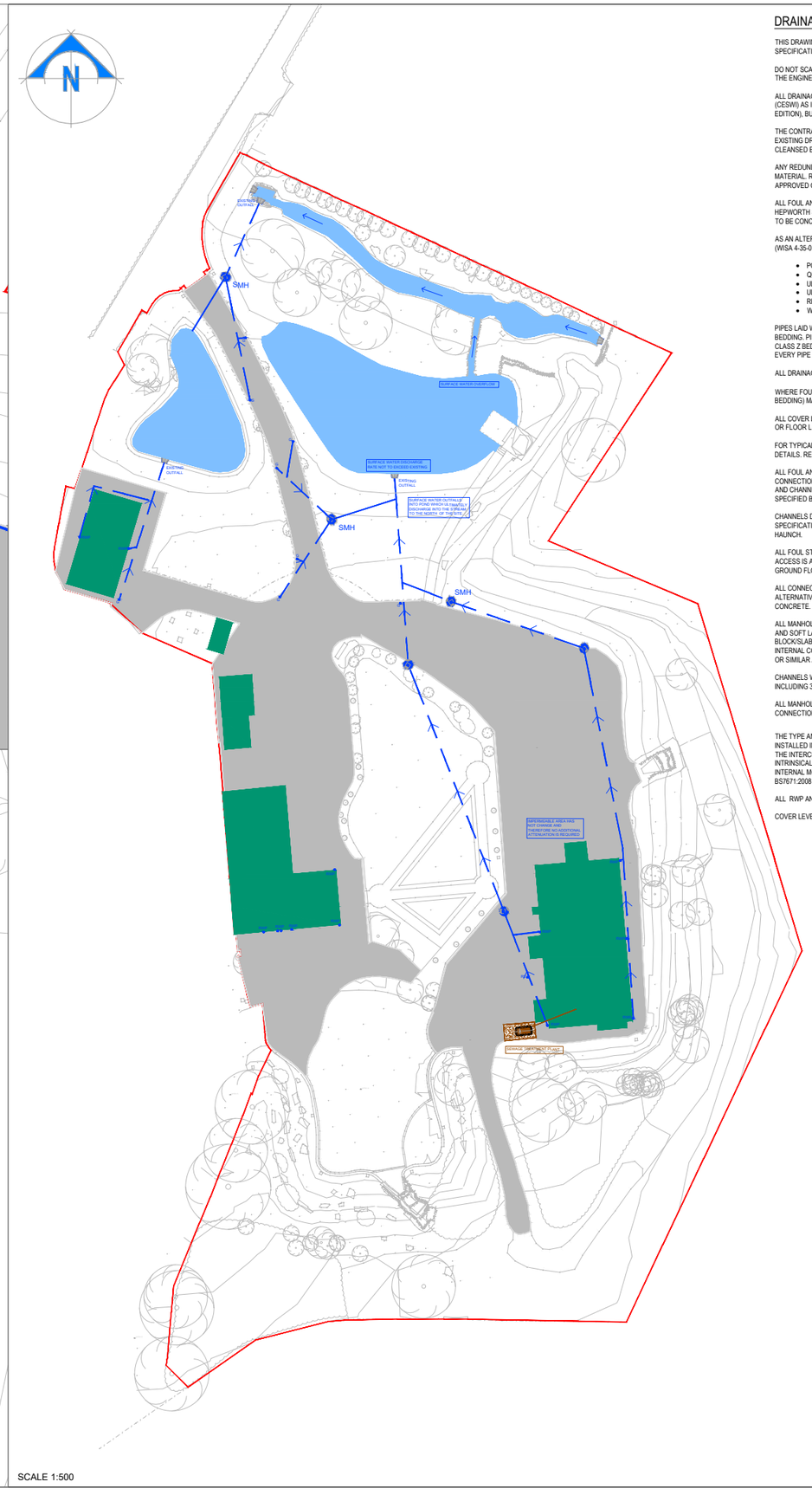


SCALE 1:200



SCALE 1:200



SCALE 1:500

DRAINAGE NOTES

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS DRAWINGS AND SPECIFICATIONS.

DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON THE DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED AND VERIFIED ONSITE.

ALL DRAINAGE WORKS TO BE IN ACCORDANCE WITH THE CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY (CESWI) AS INCLUDED IN SEWERS FOR ADOPTION 7TH EDITION, THE REQUIREMENTS OF APPROVED DOCUMENT H (2015 EDITION), BUILDING REGULATIONS 2000 AND THE DETAILS PROVIDED ON THE CONTRACT DRAWINGS.

THE CONTRACTOR MUST SURVEY THE RETAINED DRAINAGE AND REPORT THE LINE, LEVEL AND CONDITION OF THE EXISTING DRAINAGE TO THE ENGINEER. WE WOULD RECOMMEND THAT THE EXISTING DRAINAGE TO BE SURVEYED IS CLEANSED BEFORE UNDERTAKING THESE WORKS.

ANY REDUNDANT MANHOLES ARE TO BE BROKEN OUT AND BACKFILLED WITH A APPROVED COMPACTED GRANULAR MATERIAL. REDUNDANT PIPES ARE TO BE FILLED WITH A 10:1 PFA/CEMENT MIX OR BROKEN OUT AND BACKFILLED WITH A APPROVED COMPACTED GRANULAR MATERIAL.

ALL FOUL AND SURFACE WATER DRAINS UP TO AND INCLUDING 300MM DIAMETER ARE TO BE VITRIFIED CLAY SUCH AS HEPWORTH SUPERSLEVE/SUPERSEAL OR SIMILAR APPROVED (BS EN 295-1). ALL PIPES GREATER THAN 300MM DIAMETER TO BE CONCRETE CLASS 120 (BS EN 1916:2002). ALL CONCRETE MANHOLES TO BE IN ACCORDANCE WITH BS EN 1917.

AS AN ALTERNATIVE (SUBJECT TO THE CLIENTS APPROVAL) THE CONTRACTOR MAY USE STRUCTURAL WALLED PIPES (WISA 4-35-01 & BS EN 13476) SUCH AS;

- POLYSEWER - POLYPIPE BUILDING PRODUCTS - SIZE 150mm TO 300mm
- QUANTUM- MARLEY - SIZE 150mm TO 300mm
- ULTRARIB - UPONOR - SIZE 150mm TO 300mm
- ULTRARIB - WAVIN - SIZE 150mm TO 300mm
- RIDGISEWER - POLYPIPE CIVILS LTD - SIZE 400mm TO 900mm
- WEHOLITE - ASSET INTERNATIONAL - SIZE 450mm TO 3000mm

PIPES LAID WITHIN VEHICLE TRAFFICKED AREAS WITH LESS THAN 900mm OF COVER SHALL BE SURROUNDED IN CLASS Z BEDDING. PIPES LESS THAN 300mm BELOW THE UNDERSIDE OF A GROUND FLOOR SLAB SHALL BE SURROUNDED IN CLASS Z BEDDING. WHERE CLASS Z BEDDING IS USED AS A SURROUND A COMPRESSIBLE MATERIAL MUST BE PLACED AT EVERY PIPE JOINT. ALL OTHER PIPES ARE TO BE LAID IN A CLASS S BEDDING.

ALL DRAINAGE MUST BE PROTECTED DURING CONSTRUCTION WHERE INTERMEDIATE COVER IS LESS THAN 900mm.

WHERE FOUL AND SURFACE DRAINS/SEWERS CROSS WITHIN 100mm OF EACH OTHER CONCRETE PROTECTION (CLASS Z BEDDING) MANY BE REQUIRED TO PREVENT ANY POTENTIAL CONTAMINATION.

ALL COVER LEVELS ARE APPROXIMATE ONLY. ALL MANHOLE COVERS TO BE SET AT THE PROPOSED FINISHED PAVEMENT OR FLOOR LEVEL. REFER TO THE ARCHITECTS PROPOSED LEVELS DRAWING FOR LEVEL CONFIRMATION.

FOR TYPICAL MANHOLE CONSTRUCTION DETAILS, PIPE BEDDING/TRENCH DETAILS AND OTHER ASSOCIATED DRAINAGE DETAILS. REFER TO SGI TYPICAL DETAILS DRAWING.

ALL FOUL AND SURFACE WATER CONNECTIONS TO BE 100MM DIAMETER UNLESS STATED. ALL EXTERNAL GULLY CONNECTIONS AND CHANNEL DRAIN SUMP/GULLY CONNECTIONS TO BE 150mm DIAMETER UNLESS STATED. ALL GULLY AND CHANNEL DRAIN OUTLETS TO BE TRAPPED AND RODDABLE. ALL INTERNAL GULLIES AND CHANNEL DRAINS TO BE SPECIFIED BY OTHERS.

CHANNELS DRAINS TO BE FITTED WITH A HEALGUARD CAST IRON GRATING. GRATINGS TO BE TO LOAD CLASS D400 SPECIFICATION UNLESS OTHERWISE AGREED. LINEAR CHANNELS TO HAVE A 200mm MINIMUM CONCRETE BED AND HAUNCH.

ALL FOUL STACKS AND RWP'S TO HAVE LOW LEVEL RODDING ACCESS PLATES UNLESS AN ALTERNATIVE MEANS OF ACCESS IS AGREED. ACCESS POINT SIZE TO BE IN ACCORDANCE WITH DOCUMENT H AND SITED ABOVE ANY CONNECTED GROUND FLOOR APPLIANCE SPILL LEVEL.

ALL CONNECTIONS PASSING THROUGH FOUNDATION BASES AND/OR EDGE BEAMS TO BE WITHIN SEALED SLEEVES. ALTERNATIVELY CONNECTIONS MAY BE CAST-IN WITH FLEXIBLE JOINTS NOT GREATER THAN 150mm FROM FACE OF THE CONCRETE.

ALL MANHOLE COVERS LOCATED WITHIN THE ROAD AND CAR PARKING AREAS TO BE D400 CLASS. COVERS WITHIN HARD AND SOFT LANDSCAPED AREAS WITH PEDESTRIAN TRAFFIC ONLY TO BE B125 CLASS. COVERS LOCATED WITHIN BLOCK/SLAB PAVING AREAS TO BE RECESSED TO SUIT THE PROPOSED PAVING AND OF THE APPROPRIATE GRADE. ALL INTERNAL COVERS TO BE RECESSED WITH DOUBLE SEALED BOLT DOWN COVERS SUCH AS HOWE GREEN 5000 SERIES OR SIMILAR APPROVED.

CHANNELS WITHIN TYPE 1 & 2 MANHOLES MUST USE PRE-FORMED CLAYWARE SECTIONS FOR PIPES UP TO AND INCLUDING 300mm DIAMETER. CHANNELS TO BE SET AT THE APPROPRIATE INCOMING AND OUTGOING PIPE GRADIENTS.

ALL MANHOLES CONNECTIONS TO BE FORMED AT SOFFIT TO SOFFIT UNLESS OTHERWISE STATED. ALL BRANCH CONNECTIONS TO BE MADE WITH SWEPT BENDS IN THE DIRECTION OF FLOW IN THE MAIN SEWER.

THE TYPE AND SIZE OF THE SEPARATOR IS SPECIFIED ON THIS DRAWING AND SHALL BE A CLASS 1 TYPE. IT SHALL BE INSTALLED IN COMPLETE ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS AND VENTED VIA 75mmØ PIPE WORK. THE INTERCEPTOR REQUIRES POWER FOR THE HIGH LEVEL OIL ALARM AND THE ARRANGEMENT SHALL BE INTRINSICALLY SAFE AND EXPLOSION PROOF. THE CONTRACTOR SHALL PROVIDE THE REQUIRED DUCTING & CABLING TO INTERNAL MONITORING POSITION TOGETHER WITH AUDIO AND VISUAL MONITORING UNIT ALL IN ACCORDANCE WITH BS7671:2008 +A1:2011

ALL RWP AND SVP POSITIONS ASSUMED, TO BE CONFIRMED

COVER LEVELS BASED ON ARCHITECT'S SITE LEVELS

LEGEND

- SITE BOUNDARY
- SMH — EXISTING SURFACE WATER MANHOLE
- EXISTING SURFACE WATER PIPE
- PPIC — EXISTING POLYPROPYLENE INSPECTION CHAMBER - SW
- EXISTING OUTFALL
- PPIC — EXISTING POLYPROPYLENE INSPECTION CHAMBER - FW
- FMH — EXISTING FOUL WATER MANHOLE
- EXISTING FOUL WATER PIPE
- EXISTING PONDS (PRIVATE)

ALL DRAINAGE INFORMATION CONTAINED ON DRAWING IS ASSUMED USING TOPOGRAPHICAL SURVEY ONLY

RESIDUAL RISKS

REV	DESCRIPTION	DRAWN	APPROVED	DATE

STATUS

PLANNING

FLOOD FLOW LTD
CONSULTING CIVIL AND STRUCTURAL ENGINEERS
TEL: 07940523819
WEBSITE: www.floodflow.co.uk
EMAIL: mail@floodflow.co.uk
FLOOD FLOW

Client

-

Project

PROPOSED DEVELOPMENT AT
LAND AT GOODMANS FOLD FARM
BLACKROD, BOLTON, BL6 5LG

Title

INDICATIVE DRAINAGE LAYOUT

Drawn	AJ	Checked	JJ	Drawing number
Date	05/12/23	Date	05/12/23	23187-001 -
Scale	1:500 & 1:200		A1	