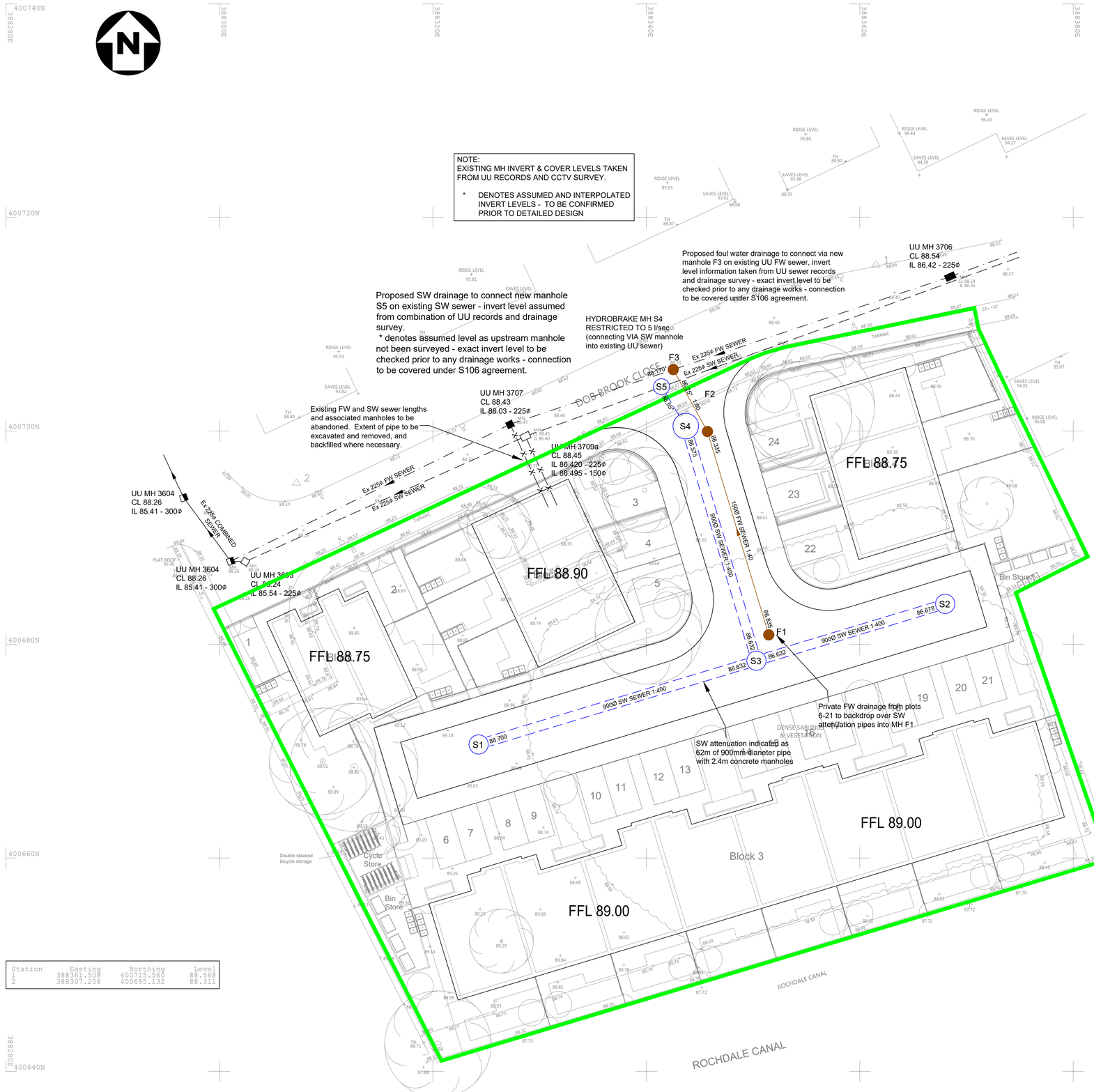


Station	Easting	Northing	Level
1	388361.508	400715.560	88.568
2	388307.208	400695.132	88.311

DRAINAGE KEY:

- PROPOSED SITE BOUNDARY
- FINISHED FLOOR LEVEL — FFL 88.50
- PROPOSED SW SEWER
- PROPOSED SW SEWER ATTENUATION
- PROPOSED FW SEWER
- EXISTING COMBINED SEWER
- EXISTING FW SEWER
- EXISTING SW SEWER
- EXISTING SEWER TO BE ABANDONED

MANHOLES -

FOR TYPICAL DRAINAGE CONSTRUCTION DETAILS REFER TO UNITED UTILITIES STANDARD DETAILS.

100mm DIA DRAIN, SUPERSLEEVE OR SIMILAR APPROVED. 150mm DIA HEPSLEEVE OR SIMILAR APPROVED FOR ALL CONNECTIONS TO SEWERS/MANHOLES AND WHERE NOTED.

PRELIMINARY

ALL DRAINAGE DETAILS SUBJECT TO DETAILED DESIGN

GENERAL NOTES

DO NOT SCALE FROM THIS DRAWING WORK TO FIGURED DIMENSIONS ONLY.

NO DEVIATION FROM THE DETAILS SHOWN ON THIS DRAWING IS ALLOWED WITHOUT PRIOR PERMISSION IN WRITING.

ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL ARCHITECTS, ENGINEERS AND SPECIALISTS DRAWINGS AND THE SPECIFICATION.

THE CONTRACTOR SHALL INCORPORATE ALL THE REQUIREMENTS OF THE PRE-TENDER STAGE HEALTH AND SAFETY PLAN.

SURFACE WATER DRAINAGE STRATEGY

THE SURFACE WATER DRAINAGE PROPOSALS HAVE BEEN DESIGNED IN ACCORDANCE WITH BS EN 752-4 AND THE BUILDING REGULATIONS APPROVED DOCUMENT H (2010), WHICH INDICATES THE FOLLOWING HIERARCHY FOR THE DISPOSAL OF SURFACE WATER DRAINAGE FROM DEVELOPMENT SITES:-

1. DISCHARGE VIA INFILTRATION;
2. DISCHARGE TO WATERCOURSE / CANAL;
3. DISCHARGE TO SEWER.

THESE OPTIONS ARE DISCUSSED IN FURTHER DETAIL BELOW.

SURFACE WATER DISCHARGE VIA INFILTRATION

FROM THE INFORMATION CONTAINED IN THE INTRUSIVE PHASE 2 REPORT, IT WOULD APPEAR THAT THE GROUND CONDITIONS AT THE SITE ARE COHESIVE (GLACIAL TILL), HENCE THE USE OF INFILTRATION / SOAKAWAY TECHNIQUES IS CONSIDERED TO NOT BE FEASIBLE.

SURFACE WATER DISCHARGE VIA WATERCOURSE

THERE ARE NO EXISTING WATERCOURSES IN THE VICINITY OF THE SITE. ON THIS BASIS, IT IS CONSIDERED NOT FEASIBLE TO DISCHARGE THE SURFACE WATER RUNOFF FROM THE PROPOSED DEVELOPMENT TO AN EXISTING WATERCOURSE.

HISTORIC RECORDS SHOW A WATERCOURSE, PRESUMABLY DOB BROOK, EXTENDING NORTH-WEST TO SOUTH-EAST ACROSS THE CENTRAL SECTION OF THE SITE, BEFORE BEING CULVERTED TO THE SOUTH-EAST. BY 1892 DOB BROOK HAD BEEN EITHER BEEN CULVERTED OR DIVERTED. THE CCTV SURVEY UNDERTAKEN BY GUN IN SEPTEMBER 2019, DID NOT ENCOUNTER ANY EVIDENCE FOR A CULVERT EXTENDING BENEATH THE SITE FROM DOB BROOK CLOSE IN THE NORTH-WEST. HOWEVER, IT WAS NOTED THAT DUE TO THE SITE BEING OVERGROWN, IT COULD NOT BE DETERMINED IF ANY MANHOLE COVERS WERE LOCATED WITHIN THE SITE BOUNDARY. THEREFORE, ALTHOUGH CONSIDERED UNLIKELY, IT CANNOT BE FULLY DISCOUNTED THAT DOB BROOK MAY BE CULVERTED BENEATH THE SITE.

SURFACE WATER DISCHARGE VIA CANAL

WE HAVE CONTACTED THE 'CANAL RIVERS & TRUST' WHO HAVE CONFIRMED THAT IT IS NOT POSSIBLE TO DISCHARGE THE SURFACE WATER RUNOFF FROM THE PROPOSED DEVELOPMENT INTO THE CANAL. THEY STATED THAT DUE TO PROPOSED CONNECTION LEVELS AND EXISTING FLOODING ISSUES AT NEARBY LOCKS.

SURFACE WATER DISCHARGE TO EXISTING UU SEWER

GIVEN THE SW RUNOFF IS NOT ACHIEVABLE VIA INFILTRATION OR WATERCOURSE, IT IS PROPOSED THAT SURFACE WATER WILL DISCHARGE VIA A CONNECTION TO THE EXISTING SURFACE WATER SEWER IN DOB BROOK CLOSE. UNITED UTILITIES HAVE BEEN CONSULTED ON THIS (VIA A PRE-DEVELOPMENT ENQUIRY) AND THEY HAVE CONFIRMED THEIR PREFERRED POINT OF CONNECTION AS BEING TO THIS SURFACE WATER SEWER.

IT IS PROPOSED THAT SURFACE WATER WATER DRAINAGE WILL DISCHARGE INTO A NEW MANHOLE ON THE EXISTING PUBLIC SURFACE WATER SEWER IN DOB BROOK CLOSE. THIS IS LOCATED TO THE NORTH OF THE DEVELOPMENT.

THE DRAINAGE STRATEGY PUT FORWARD IN THIS DOCUMENT IS BASED ON A PRE-DEVELOPMENT ENQUIRY AND THE ASSUMPTION THAT SURFACE WATER DISCHARGE IS ALLOWED TO PASS INTO THE EXISTING PUBLIC SURFACE WATER SEWER.

THE SURFACE WATER FLOW WILL BE RESTRICTED TO 5.0 l/sec WITH ATTENUATED WATER BEING STORED IN A PIPED SYSTEM WITHIN THE PROPOSED ADOPTED ROAD WITHIN THE PROPOSED DEVELOPMENT. THE CONNECTION INVERT LEVEL HAS BEEN ESTIMATED USING UNITED UTILITIES INFORMATION, TOPO SURVEY AND 'GUN' SEWER SURVEY, THIS IS TO BE CONFIRMED PRIOR TO DETAILED DESIGN.

FOUL WATER DESIGN

IT IS PROPOSED THAT FOUL WATER DRAINAGE WILL DISCHARGE INTO A NEW MANHOLE ON THE EXISTING PUBLIC FOUL WATER SEWER IN DOB BROOK CLOSE. THIS IS LOCATED TO THE NORTH OF THE DEVELOPMENT.

LEVEL ASSUMPTIONS

THE SITE FALLS GENTLY TOWARDS THE SOUTHERN AND EASTERN BOUNDARIES. WE HAVE HAD TO ASSUME A CONNECTION LEVEL FOR THE SURFACE WATER CONNECTION TO THE SEWER IN DOB BROOK CLOSE - EXACT CONNECTION LEVELS TO BE IDENTIFIED PRIOR TO DETAILED DESIGN.

FINISHED FLOOR LEVELS HAVE BEEN SET AT 150mm ABOVE PROPOSED GROUND LEVELS.

Rev.	Amendment	Date	By	Chkd
P01	PLANNING ISSUE	03.02.20	RH	KPT

Project
DOB BROOK CLOSE
FAILSWORTH

Client
THE GUINESS PARTNERSHIP

Title
DRAINAGE STRATEGY PLAN

WML Job No.	Drawn	Checked	Date	Scale
8948	RH	KPT	Feb 20	1:200 @ A1

WML CONSULTING
Civil, Structural & Geotechnical Engineers
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Earl Road
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Drawing No.

Project	Originator	Volume	Level	Type	Role	Number	Rev
8948	WML	XX	01	DR	C	0001	P1