THE FOUL AND SURFACE WATER DRAINAGE SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE FRA , SFA 6th EDITION AND SC030219 AND ARE SUBJECT TO S106 CONNECTION APPROVAL BY UNITED UTILITIES IN RESPECT OF COMBINED SEWER CONNECTION
INFILTRATION HAS INITIALLY BEEN DISCOUNTED AS A SUITABLE MEANS OF SURFACE WATER DISPOSAL DUE TO GROUND CONDITIONS.
REFER TO FRA BY UK FLOOD RISK CONSULTANTS LTD.
SURFACE WATER IS TO DISCHARGE TO EXISTING WATERCOURSE , WITH RATE OF RUN OFF RESTRICTED TO
9.41 LITRES/SECOND MAXIMUM.
DISCHARGE RATE TO APPLY TO ALL EVENTS UP TO AND INCLUDING
1%AEP + 30% CC.

DUE TO LACK OF AVAILABLE INFORMATION ON SEWER RECORDS AND SURVEY IN RELATION TO EXISTING SEWER NETWORK IT IS IMPERATIVE THAT WHERE INVERT LEVELS HAVE BEEN ASSUMED OR INTERPOLATED THESE ARE VERIFIED AS CORRECT BY CLIENT / CONTRACTOR PRIOR TO ANY CONSTRUCTION WORKS TAKING PLACE. REFA ACCEPT NO RESPONSIBILITY FOR THE ACCURACY OF SEWER RECORD INFORMATION OR SURVEY INFORMATION.
ANY DISCREPANCIES ARE TO BE REPORTED TO REFA TO ENABLE DESIGNS TO BE CHECKED AND UPDATED AS NECESSARY

REFA WOULD ADVISE THE CLIENT THAT A DETAILED OFF SITE SURVEY SHOULD BE UNDERTAKEN AT THE EARLIEST OPPORTUNITY TO ENABLE THE FEASIBILITY DRAWINGS TO BE UPDATED WITH ACCURATE INFORMATION OF PARTICULAR IMPORATNCE ARE :-

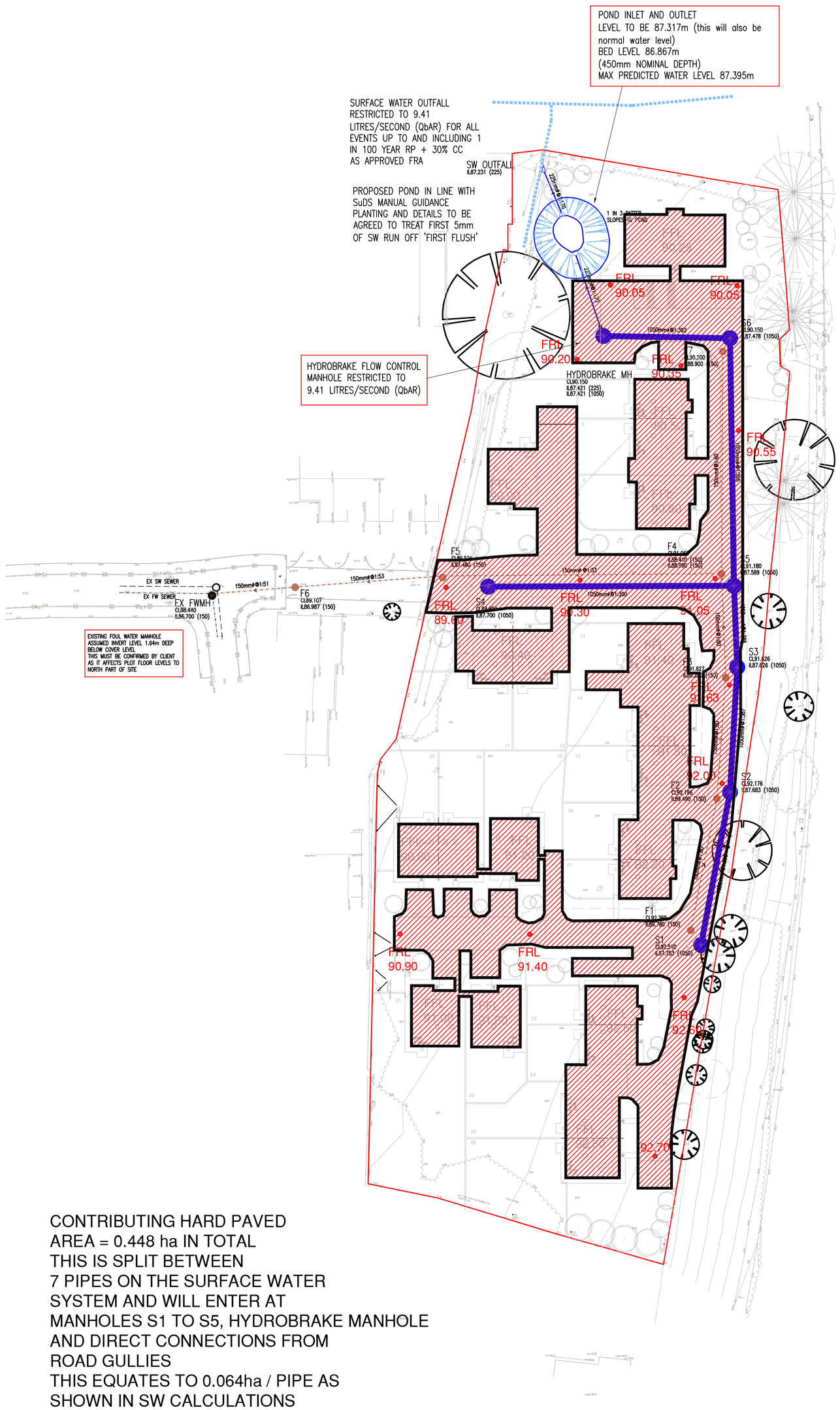
1. EXISTING MAINS SERVICES AND OTHER APPARATUS
2. EXISTING SEWER INVERT LEVELS

PROPOSED OFF SITE FOUL SEWER ROUTE IS INDICATIVE ONLY UNTIL SUCH TIME AS DETAILED INVESTIGATION IN TO LOCATION OF EXISTING SERVICES ETC. IS UNDERTAKEN
REFA THUS CANNOT AT THIS STAGE CONFIRM THE VIABILITY OF CONSTRUCTING THE OFF SITE SEWER ALONG THE ROUTE / DEPTHS SHOWN

THE FOUL AND SURFACE WATER DRAINAGE SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH SFA 6th EDITION, SuDS MANUAL CIRIA C753, AND FRA.
FOUL WATER CONNECTION SUBJECT TO APPROVAL BY UNITED UTILITIES

THE PIPE DIAMETERS AND GRADIENTS SHOWN ARE FOR GUIDANCE ONLY AND MAY BE SUBJECT TO CHANGE AT DETAILED DESIGN STAGE

CLIENTS ATTENTION IS DRAWN TO THE FACT THAT THE PROPOSED LEVELS SHOWN ARE BASED ON THE FRA, PLANNING LAYOUT AND TOPOGRAPHICAL SURVEY IN THE EVENT THAT REMEDIATION / CAPPING LAYER IS REQUIRED THEN THE LEVELS SHOWN MAY BE SUBJECT TO CHANGE



CONTRIBUTING HARD PAVED AREA = 0.448 ha IN TOTAL
THIS IS SPLIT BETWEEN 7 PIPES ON THE SURFACE WATER SYSTEM AND WILL ENTER AT MANHOLES S1 TO S5, HYDROBRAKE MANHOLE AND DIRECT CONNECTIONS FROM ROAD GULLIES
THIS EQUATES TO 0.064ha / PIPE AS SHOWN IN SW CALCULATIONS

N

SCALE IN METRES
0 5 10 20 50

ALL DESIGNS SHOWN ARE FOR APPRAISAL PURPOSES ONLY AND ARE SUBJECT TO DETAILED DESIGN AND APPROVAL BY THE RELEVANT REGULATORY AUTHORITIES AT THE APPROPRIATE TIME DRAWING IS THUS NOT ISSUED FOR CONSTRUCTION PURPOSES

GENERAL

1. All adoptable sewers and associated works are to comply fully with "Sewers for Adoption" 6th.Edition
2. All highway works to be to adoptable standards and to to comply fully with the Local Authority specification.
3. All private drainage works are to comply fully with part H of the Building Regulations
4. All existing invert levels to be checked by the Contractor at the start of works and any discrepancies notified to REFA. All levels are based on topographical survey information provided by others.
5. All materials to bear the relevant B.S.Kitemark and comply fully with the specifications. All concrete & concrete products must use Sulphate resistant cement (unless the site investigation report proves that sulphate attack from soils and groundwater will not occur)
6. All opening notices etc. as required under highways acts etc. are to be obtained prior to commencement of works. All works are to be inspected by L.A., NHBC or Relevant Water Authority as applicable.

C.D.M. REGULATIONS 2015

In line with the above regulations we are obliged to inform the Client of their responsibilities under section CDM 15/1, and residual risks that may be encountered in the construction of these works. All design work has been carried out with Health and Safety aspects given full consideration. Wherever possible risks have been eliminated from the design, however due to the very nature of this type of work it is not possible to remove all the risks from the design.
We would also respectfully remind the Client of his obligations to take all reasonable steps in ensuring that only competent Contractors who have a valid safety policy are employed.
They should also provide satisfactory responses at tender stage as to the manner in which they will deal with the elements of risk involved in this type of work and in particular those highlighted by REFA below:-

1. Support / treatment for ALL excavation work.
2. Guarding to edges of excavations to prevent people,materials and vehicles falling into excavation.
3. Guarding of excavations outside working hours to prevent unauthorised access.
4. Undermining to adjacent roads or structures.
5. Confined space operations.
6. Dealing with existing services.
7. Traffic management on existing highways.
8. Procedure to be followed in event of accident or emergency.
9. Method of working where contaminated ground is present on site.
10. Confirmation will be required that all operatives are adequately trained, copies of relevant training certificates to be supplied.

The above list is by no means exhaustive but it does highlight operations that present a risk to contractors and the general public.
For clarification on any item please contact REFA.

rev	Revision details	Rev.By	Date

smas worksafe designer — as recognised by SSIP SAFETY SCHEMES IN PROCUREMENT — www.smasltd.com

Drawing Stage			Drawing Status		
	Draft		Comments	●	Tender
●	Issued		Information		Construction
		●	Approval		As Built

Client
LEA HOUGH & COMPANY LTD.

Job title
BARROW BROOK WHALLEY

Drawing title
SW AREAS PLAN

REFA
45 Bridgeman Terrace
Wigan, Lancs
WN1 1TT
Tel:-(01942) 826020
Fax:-(01942) 230816
CONSULTING ENGINEERS
CIVIL• STRUCTURAL
GEOTECHNICAL•ENVIRONMENTAL

Date	Scale	Drawn
1/500	1.10.20	GWH

DRAWING No 20046/01/2 Rev

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A1 SHEET