

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 IMPORTANCE ARE :-

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

PROPOSED OFF SITE SEWER ROUTE IS INDICATIVE ONLY UNTIL SUCH TIME AS DETAILED INVESTIGATION IN TO LOCATION OF EXISTING SERVICES ETC. IS UNDERTAKEN

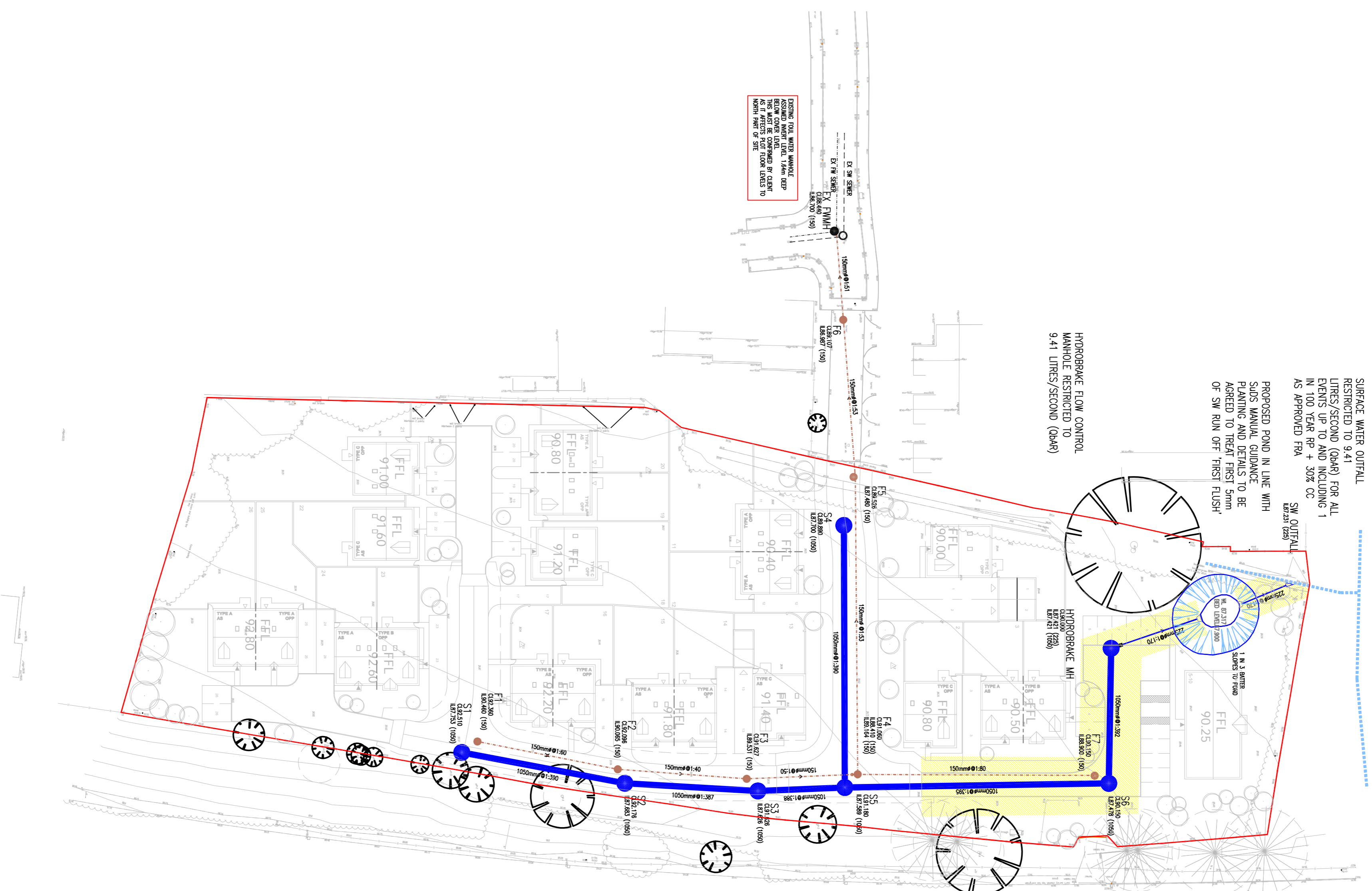
REFA THUS CANNOT AT THIS STAGE CONFIRM THE VIABILITY OF CONSTRUCTING THE OFF SITE SEWER ALONG THE ROUTE / DEPTHS SHOWN

THE FOUL AND SURFACE WATER DRAINAGE SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH SFA 6th EDITION, SADS MANUAL CIRIA C753, AND FRA.

FOUL WATER CONNECTION SUBJECT TO APPROVAL BY UNITED UTILITIES

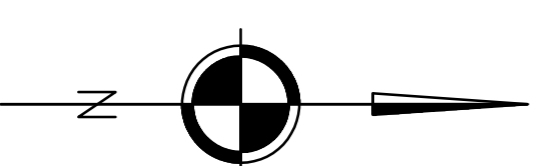
THE PIPE DIAMETERS AND GRADIENTS SHOWN ARE FOR GUIDANCE ONLY AND MAY BE SUBJECT TO CHANGE AT DETAILED DESIGN STAGE

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 LAYERS IS REQUIRED THEN THE LEVELS SHOWN MAY BE SUBJECT TO CHANGE



PLEASE NOTE THAT THE FLOOR LEVELS SHOWN ARE FOR APPRAISAL PURPOSES ONLY AND WILL BE SUBJECT TO REVIEW/ CHANGE AT DETAILED ROAD AND SEWER DESIGN STAGE

- DENOTES PROPOSED FOUL SEWER TO BE ADOPTED UNDER ST04 AGREEMENT
- DENOTES PROPOSED SURFACE WATER SEWER TO BE ADOPTED UNDER ST04 AGREEMENT
- DENOTES EXISTING ADOPTED FOUL WATER SEWER
- DENOTES EXISTING ADOPTED SURFACE WATER SEWER
- DENOTES EXISTING WATER COURSES
- DENOTES EXISTING WATER COURSES
- FFL DENOTES INDICATIVE FINISHED FLOOR LEVEL
- DENOTES SEWER EASEMENT
- DENOTES SURFACE WATER FLOOD ROUTING INTENT OF DESIGN EXCEEDANCE OF MAIN SURFACE WATER SEWERS



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 - Education
 2. All highway works to be to adoptable standards and to comply fully with the local highway specifications.
 3. All work to be carried out in accordance with part 11 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 REFAs immediately. All information provided by others.
 5. All methods to bear the relevant BS/ENmark and comply fully with the specifications.
 6. All concrete & concrete products must use sulphate resistant cement (unless the site check from soils and groundwater will not occur)
 7. All opening notices etc. as required under the Building Regulations must be obtained prior to commencement of works.
 8. All highway works to be approved by L.A. WBC or relevant Water Authority as appropriate.

C.M.A. REGULATIONS 2015

In line with the above regulations we are obliged to ensure that all proposed works are carried out in accordance with the relevant regulations. All design work has been carried out with Health and Safety aspects given full consideration. Where possible risks have been eliminated from the design. 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 licence to carry out the work are engaged. They should also provide satisfactory responses of 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 pedestrians and vehicles falling into excavation.
 3. Containing of excavations outside working hours to prevent access to adjacent roads or structures.
 4. Underpinning 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 the health and safety of the general public contact REFA for definition on any item please contact REFA.

Rev	Description	Issued By	Date
A	AUTOCAD LAYOUT INSERTED	GMH	18/04/2020
Rev	Revision details		
Rev	Revision details		

www.smassteel.com

worksafe designer SSIIP

SAFETY SCHEDULED IN PROGRESS

Client	LEA HOUGH & COMPANY LTD.
Job title	BARROW BROOK WHALLEY
Drawing title	DRAINAGE STRATEGY PLAN
Date	1/5/20
Scale	6:120
Drawing No	20046/01/1
Rev	A

REFA

CONSULTING ENGINEERS

CIVIL • STRUCTURAL

GEOTECHNICAL • ENVIRONMENTAL

45 Bishops' Terrace
Wigan, Lancs
Tel: (01942) 868200
Fax: (01942) 230816