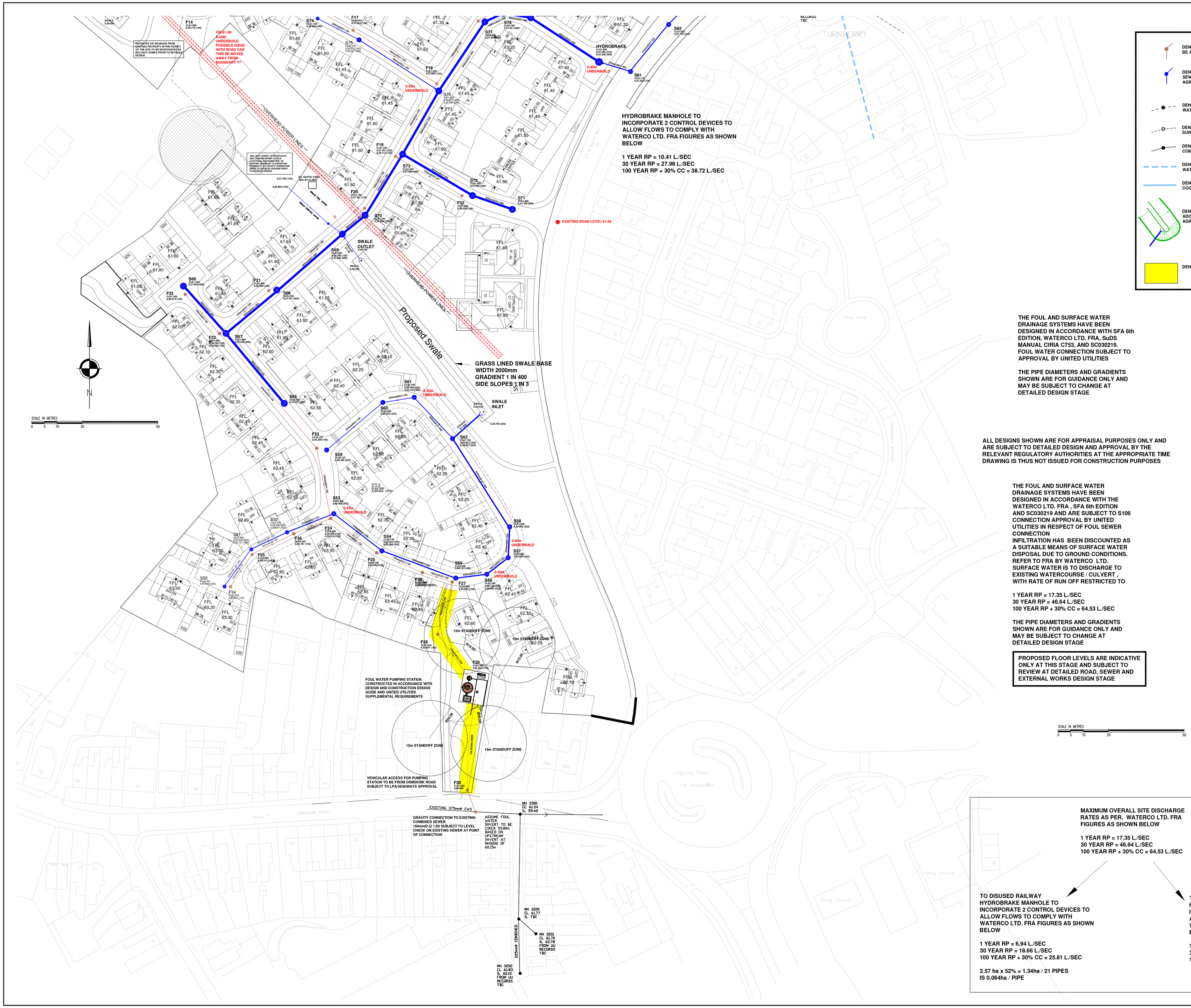

DENOTES PROPOSED FOUL SEWER TO BE ADOPTED UNDER S104 AGREEMENT

DENOTES PROPOSED SURFACE WATER SEWER TO BE ADOPTED UNDER S104 AGREEMENT

DENOTES EXISTING ADOPTED FOUL WATER SEWER

DENOTES EXISTING ADOPTED SURFACE WATER SEWER

DENOTES EXISTING ADOPTED COMBINED WATER SEWER

DENOTES EXISTING CULVERTED WATER COURSE

DENOTES EXISTING WATER COURSE - SLATE BROOK

DENOTES PROPOSED ADOPTABLE SWALE UNDER S104 AGREEMENT

DENOTES SEWER EASEMENT

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.

THE FOUL AND SURFACE WATER DRAINAGE SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH SFA 6th EDITION, WATERCO LTD. FRA, SuDS MANUAL CIRIA C753, AND SC030219. 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

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

THE FOUL AND SURFACE WATER DRAINAGE SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE WATERCO LTD. FRA , SFA 6th EDITION AND SC030219 AND ARE SUBJECT TO S106 CONNECTION APPROVAL BY UNITED UTILITIES IN RESPECT OF FOUL SEWER CONNECTION
INFILTRATION HAS BEEN DISCOUNTED AS A SUITABLE MEANS OF SURFACE WATER DISPOSAL DUE TO GROUND CONDITIONS. REFER TO FRA BY WATERCO LTD.
SURFACE WATER IS TO DISCHARGE TO EXISTING WATERCOURSE / CULVERT , WITH RATE OF RUN OFF RESTRICTED TO

1 YEAR RP = 17.35 L./SEC
30 YEAR RP = 46.64 L./SEC
100 YEAR RP + 30% CC = 64.53 L./SEC

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

PROPOSED FLOOR LEVELS ARE INDICATIVE ONLY AT THIS STAGE AND SUBJECT TO REVIEW AT DETAILED ROAD, SEWER AND EXTERNAL WORKS DESIGN STAGE

SCALE IN METRES
0 5 10 20 50

MAXIMUM OVERALL SITE DISCHARGE RATES AS PER. WATERCO LTD. FRA FIGURES AS SHOWN BELOW

1 YEAR RP = 17.35 L./SEC
30 YEAR RP = 46.64 L./SEC
100 YEAR RP + 30% CC = 64.53 L./SEC

TO DISUSED RAILWAY HYDROBRAKE MANHOLE TO INCORPORATE 2 CONTROL DEVICES TO ALLOW FLOWS TO COMPLY WITH WATERCO LTD. FRA FIGURES AS SHOWN BELOW

1 YEAR RP = 6.94 L./SEC
30 YEAR RP = 18.66 L./SEC
100 YEAR RP + 30% CC = 25.81 L./SEC

2.57 ha x 52% = 1.34ha / 21 PIPES
IS 0.064ha / PIPE

TO SLATE BROOK HYDROBRAKE MANHOLE TO INCORPORATE 2 CONTROL DEVICES TO ALLOW FLOWS TO COMPLY WITH WATERCO LTD. FRA FIGURES AS SHOWN BELOW

1 YEAR RP = 10.41 L./SEC
30 YEAR RP = 27.98 L./SEC
100 YEAR RP + 30% CC = 38.72 L./SEC

rev	Revision details	Date
C	TO PLANNING REV B (GWH)	25.11.20
B	TO PLANNING REV PB DRAINAGE REVISED (GWH)	20.8.20
A	TO PLANNING P4 FLOOR LEVELS ADDED (GWH)	30.4.20

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

Client
BELLWAY LIVERPOOL LIMITED

Job title
LATHOM PASTURES PHASE 2

Drawing title
DRAINAGE STRATEGY PLAN

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

Date	Scale	Drawn
22.4.20	1/500	GWH

DRAWING No 192202/02/1 Rev C

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