

**C.D.M. REGULATIONS 2015**

In line with the above regulations we are obliged to inform the Client of their responsibilities under section 1(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 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:-

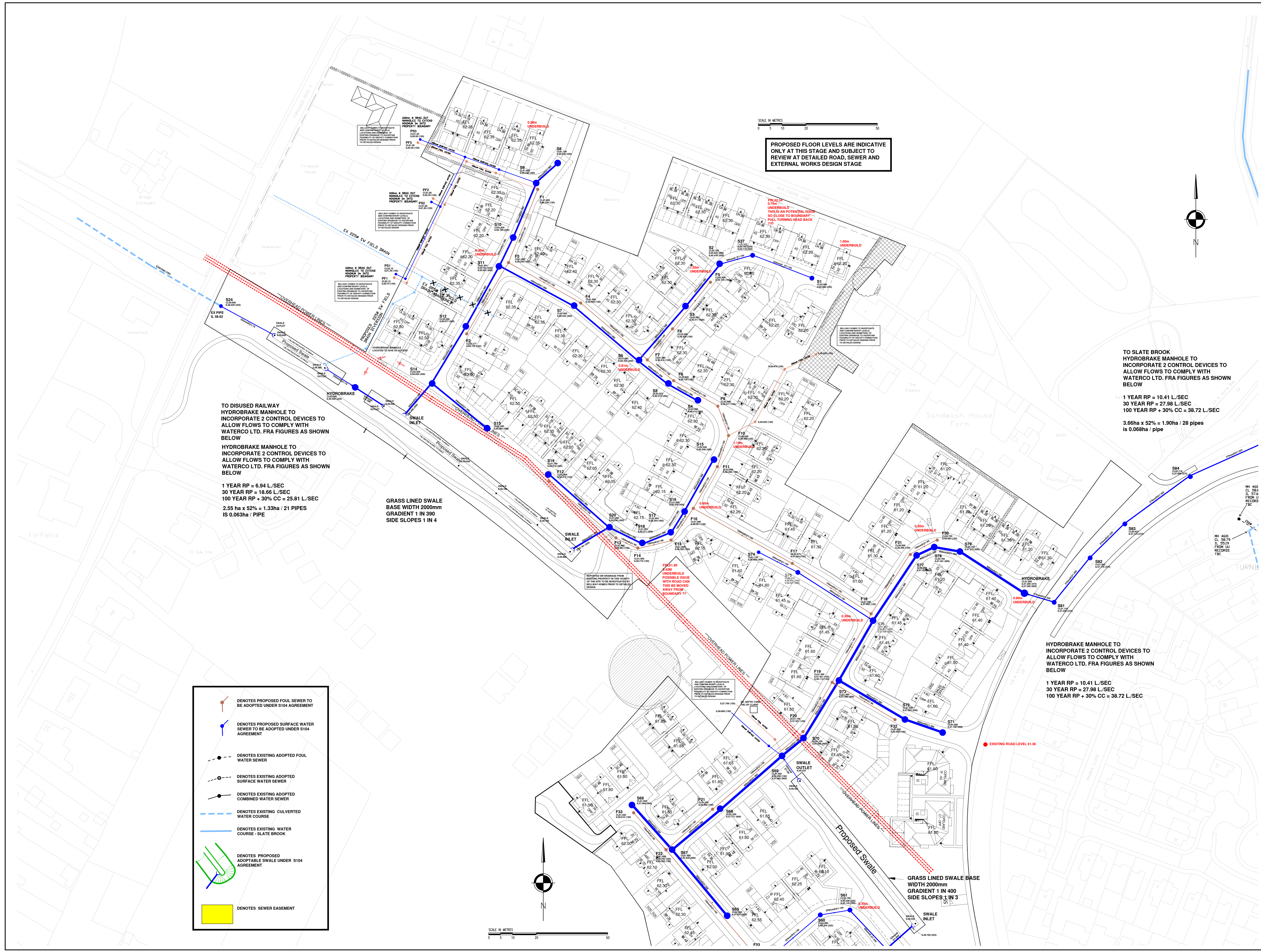
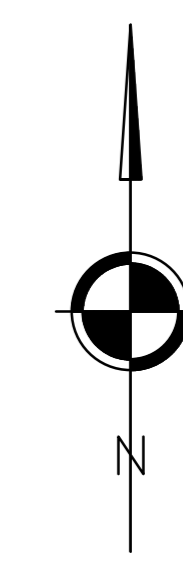
1. Support / treatment for ALL excavation work.
2. Guarding to edges of excavations to prevent people, materials and vehicles falling into excavation.
3. Guarding of excavations outside working hours to prevent unauthorised access.
4. Undermining to adjacent roads or structures.
5. Confined space operations.
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 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.

**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 30 40 50



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

**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  
2.55 ha x 52% = 1.33ha / 21 PIPES  
IS 0.063ha / PIPE

**GRASS LINED SWALE BASE WIDTH 2000mm GRADIENT 1 IN 390 SIDE SLOPES 1 IN 4**

**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  
3.66ha x 52% = 1.90ha / 28 pipes  
is 0.068ha / pipe

**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

	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

SCALE IN METRES  
0 5 10 20 30

Rev	Revision details	Date
D	TO PLANNING REV 9 (S104)	25.11.20
C	CONNECTIONS TO BOUNDARY REVISED	24.11.20
B	CONNECTIONS TO ADJACENT PROPERTIES ADDED	23.11.20
A	PROPOSED 3RD PARTY CONNECTIONS ADDED (S104)	17.11.20

Drawing Stage	Drawing Status
Draft	Information
Issue	Approval
	As Built

Client  
**BELLWAY LIVERPOOL LIMITED**

Job title  
**LATHOM PASTURES PHASE 2**

Drawing title  
**DRAINAGE STRATEGY PLAN**

**REFA**  
CONSULTING ENGINEERS  
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Date: 20.10.20 Scale: 1/500 Drawn: DM  
DRAWING No: 192202/02/3 Rev: D