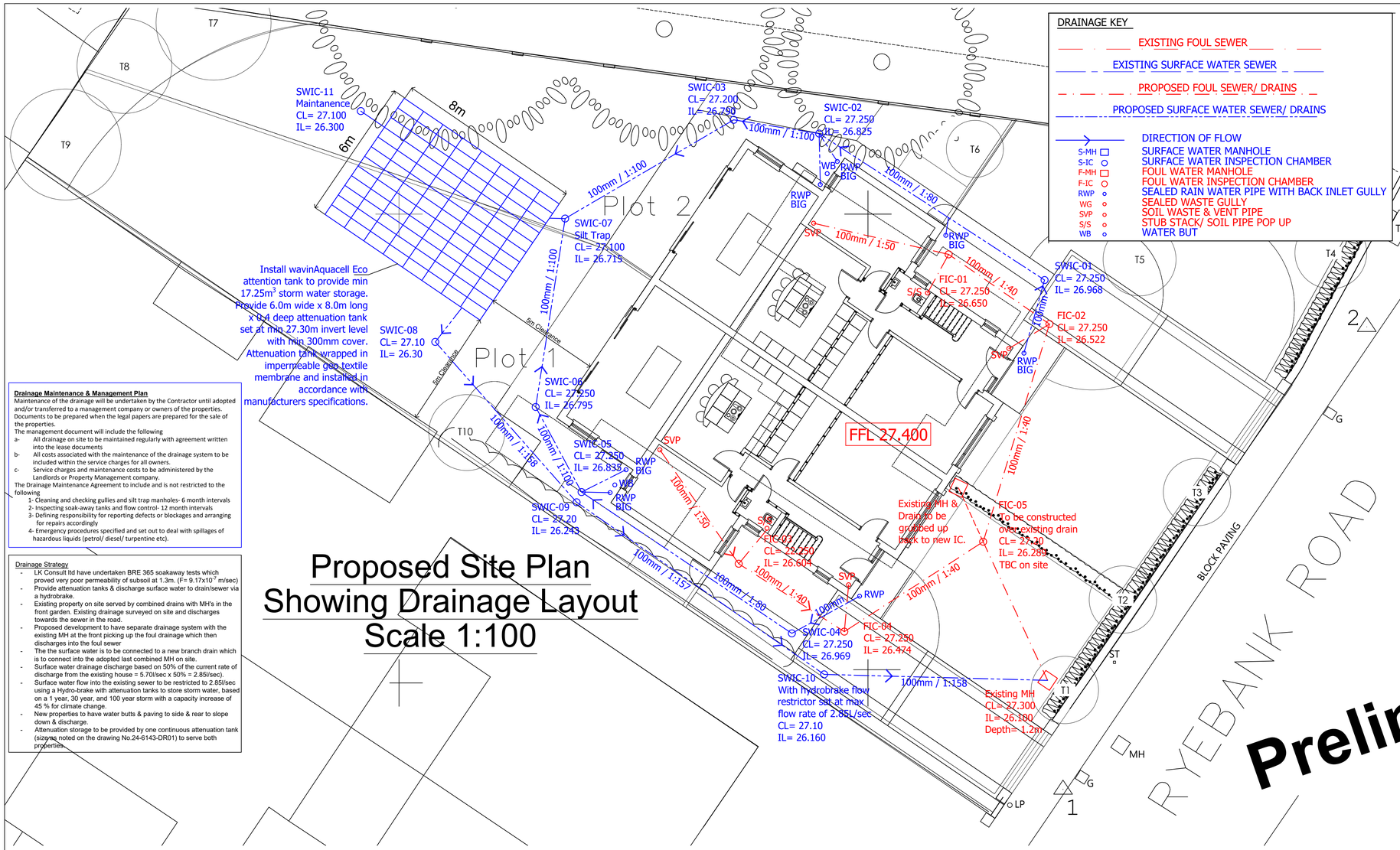


Drainage Maintenance & Management Plan

Maintenance of the drainage will be undertaken by the Contractor until adopted and/or transferred to a management company or owners of the properties. Documents to be prepared when the legal papers are prepared for the sale of the properties.

The management document will include the following

a- All drainage on site to be maintained regularly with agreement written into the lease documents

b- All costs associated with the maintenance of the drainage system to be included within the service charges for all owners.

c- Service charges and maintenance costs to be administered by the Landlords or Property Management company.

The Drainage Maintenance Agreement to include and is not restricted to the following

1- Cleaning and checking gullies and silt trap manholes- 6 month intervals
2- Inspecting soak-away tanks and flow control- 12 month intervals
3- Defining responsibility for reporting defects or blockages and arranging for repairs accordingly
4- Emergency procedures specified and set out to deal with spillages of hazardous liquids (petrol/ diesel/ turpentine etc).

Drainage Strategy

- LK Consult ltd have undertaken BRE 365 soakaway tests which proved very poor permeability of subsoil at 1.3m. (F= 9.17x10^{-6} m/sec)
- Provide attenuation tanks & discharge surface water to drain/sewer via a hydrobrake.
- Existing property on site served by combined drains with MH's in the front garden. Existing drainage surveyed on site and discharges towards the sewer in the road.
- Proposed development to have separate drainage system with the existing MH at the front picking up the foul drainage which then discharges into the foul sewer
- The the surface water is to be connected to a new branch drain which is to connect into the adopted last combined MH on site.
- Surface water drainage discharge based on 50% of the current rate of discharge from the existing house = 5.70l/sec x 50% = 2.85l/sec).
- Surface water flow into the existing sewer to be restricted to 2.85l/sec using a Hydro-brake with attenuation tanks to store storm water, based on a 1 year, 30 year, and 100 year storm with a capacity increase of 45 % for climate change.
- New properties to have water butts & paving to side & rear to slope down & discharge.
- Attenuation storage to be provided by one continuous attenuation tank (sizes noted on the drawing No.24-6143-DR01) to serve both properties.

Proposed Site Plan Showing Drainage Layout Scale 1:100

Below Ground Drainage

1. All below ground drainage to be in accordance with Sewers For Adoption 7.
2. All proposed drainage levels shown on the drawings are taken from the levels provided on the Architects/Survey drawings and **must** be confirmed by the contractor on site **prior** to excavating trenches etc. All invert levels are to the underside of any pipes, inspection chambers, manholes or tanks and it is the contractors responsibility to check these prior to commencing works. Any discrepancies are to be reported to STL Projects Ltd as soon as possible to allow for re-assessment where necessary.
3. All new below ground drainage is to be of min 100mm diameter, unless noted otherwise, platic pipework to BSEN 13476 laid and bedded to manufacturer's instructions to sizes dependant upon loading conditions and gradients within their recommendations, to comply with BS 8301:1985 together with parts H1, 2 & 3 of the Building Regulations.
4. Jointing shall be either u.p.v.c pushfit cuplings or by sealing rubber "o" rings in polyester mouldings.
5. Drains to be laid in suitable trench bedding classes for the specific application and accordance with all relevant British Standards and Building Regulations at the time of installation.
6. Where pipes run beneath solid floors, roads or are close to the surface then these should be encased in minimum 150mm concrete.
7. Where pipes run through walls then suitable precast concrete lintels are to be installed over the line of the pipe and the voids filled with gravel to prevent loading from the walls to the pipes.
8. No drainage pipes are to be laid beneath or within 45 degrees of the underside of a foundation. Where this occurs - foundations to extend down below invert.
9. Pipes are to be laid on a gradual fall as shown on the drawings to suit invert levels shown, although minimum falls of 1:40 for 100mm diameter foul sewers and 1:100 for 100mm diameter surface water pipes are used unless calculated otherwise.
10. Wherever possible, surface water should be discharged into suitable water storage units or directly into a soakaway positioned at least 5m from any structure.
11. Where drainage runs exceed 20m in length then intermediate rodding access/inspection chambers should be installed.
12. All new gullies should be back inlet gullies, BIG's, for rodding purposes. All new soil waste pipes should have roddable access covers.
13. All new manholes are to be of suitable design for the application and in accordance with all relevant British Standards and Building Regulations at the time of installation.
14. Proprietary plastic inspection chambers are required at a change in direction upto 1.0m deep, whilst masonry or precast concrete ring chambers are required below this depth.
15. Brickwork manhole construction to be of 225mm class "B" engineering brickwork in 1:3 cement/mortar
16. Brick or concrete ring manholes to be built up off minimum 150mm thick concrete base. Benching of concrete base to be formed around drainage channels to a smooth finish and fall to outlet.
17. Cast iron steps to BS1247:1975 shall be provided where depth of chamber exceeds 1000mm. All external MH covers shall be medium duty galv. steel to BS497 unless located within carriageways or car parks where heavy duty cast iron are to be used.
18. Manhole cover to be seated in rebated steel frames and sealed with grease on 100mm thk concrete frame base with 600x600mm min opening.
19. Any internal chambers shall be fitted with a double seal bolt down cover with an "inlay" recess for finishes and set in greased frame.
20. Proprietary u.p.v.c inspection chambers to have 150mm min sulphate resisting conc base.

The Copyright of this drawing belongs to STL Projects Ltd and shall not be used or reproduced in any form without its express permission. The moral right of the Author is hereby asserted - Copyright © 2000. Do not scale from this drawing - Work to figured dimensions only. All dimensions to be confirmed with Architect, where applicable, or checked on site prior to the execution of any work. For the avoidance of doubt all dimensions are measured to wall structure and not the finishes unless otherwise stated. Where any discrepancy is found to exist within or between drawings and/or documents it should be reported to the engineer immediately. STL Projects Ltd shall not be liable for any use of drawings & documents for any purpose other than for which the same were prepared by or on behalf of STL Projects Ltd. This drawing is to be read in conjunction with all other relevant information.

STL
CONSULTING STRUCTURAL ENGINEERS
1 Barkers Lane Sale Cheshire M33 6RP
t. 0161 969 3218
e. info@stlprojectsltd.co.uk
www. stlprojectsltd.co.uk

Details

0 500 1000 mm

Plans

0 1 2 3 4 5 m

Revisions:

	Date	Revision Details
H		
G		
F		
E		
D		
C		
B		
A		

Preliminary

- ISSUED AS WORKING DRAWING
- CLIENT APPROVED
- PRELIMINARY

Client: St. Werburgh Developments

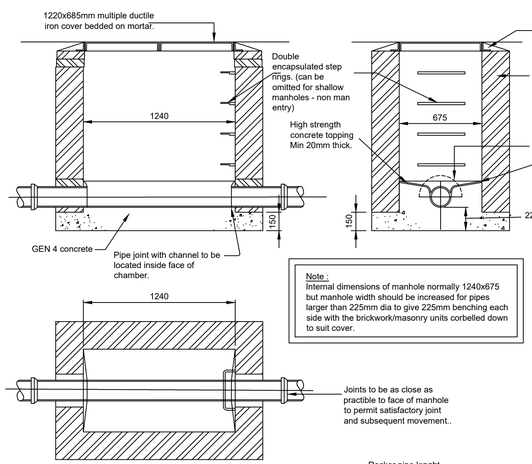
Project: 262 Ryebank Road

Title:

PROPOSED EXTENSION & ALTERATIONS

PROPOSED DRAINAGE PLAN LAYOUT

Drawn: RJ	**Scale:** As shown @ A1
Checked by: MR	**Date:** June 2024
Drawing No. 24-6143 DR01	P1

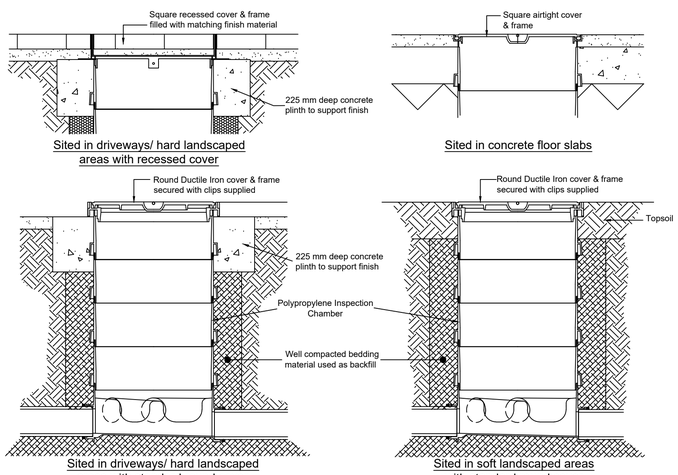


Note :
Internal dimensions of manhole normally 1240x675 but manhole width should be increased for pipes larger than 225mm dia to give 225mm benching each side with the brickwork/masonry units corbelled down to suit cover.

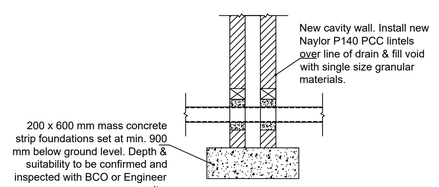
Rocker pipe lenght

Nominal dia. (mm)	Effective length (m)
150 to 600	0.6
675 to 750	1.0
825 & over	1.25

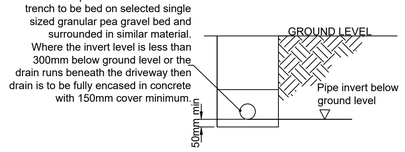
TYPICAL MANHOLE DETAIL
Scale 1:25
DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE UP TO 1.5m



POLYPROPYLENE INSPECTION CHAMBER INSTALLATION DETAIL
DEPTH FROM COVER LEVEL TO INVERT LEVEL < 1.2m
SCALE 1:25
NB - Universal Product - Adaptor to pvc-u pipe included



Typical Footing Detail With Drain
Scale 1:20



Detail 3
Typical Bedding Detail
Scale 1:20