Robin Royd Lane, Mirfield

5150-DD-XX-XX-RP-D-0001-S4-01

Proposed Drainage Strategy

First Issue

Version 1.0

Document prepared on behalf of CRL Architects

DOCUMENT CONTROL

Document:	Surface water storage requirements
Project:	Robin Royd Lane, Mirfield
Client:	CRL Architects
Project Number:	5150-DD-XX-XX-RP-D-0001-S4-01

Revision:	P01	**Prepared by:**	PE
Date:	10.07.2025	**Checked by:**	MY
Status:	For Planning	**Approved By:**	MY
Description of Revision:	First Issue.		

Revision:		**Prepared by:**	
Date:		**Checked by:**	
Status:		**Approved By:**	
Description of Revision:			

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Date:		**Checked by:**	
Status:		**Approved By:**	
Description of Revision:			

Revision:		**Prepared by:**	
Date:		**Checked by:**	
Status:		**Approved By:**	
Description of Revision:			

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 PURPOSE OF THIS REPORT

The Drainage Designers have been appointed by CRL Architects (the 'Client') to prepare a calculation for surface water storage requirements for a development of 5 dwellings at Robin Royed Lane, Mirfield.

1.2 SCOPE OF THE REPORT

The drainage strategy will consider all the relevant published code and guidance, including the Ciria SuDS manual C753, the Department for Environment, Food and Rural Affairs Sustainable Drainage Systems: Non-statutory technical standards for sustainable drainage systems, and Drainage and waste disposal: Approved Document H.

1.3 LIMITATIONS OF THIS REPORT

This report has been prepared by The Drainage Designers on behalf of the client in connection with the scope of the report, as described in Section 1.1 above and considering the particular instructions and requirements set out in the fee proposal, and the Client's acceptance. It is not intended for and should not be relied on by any third party and no responsibility is undertaken to any third party.

The Drainage Designers accepts no duty or responsibility (including in negligence) to any party other than the Client and disclaims all liability of any nature whatsoever to any such party in respect of this report.

The Drainage Designers
Registered Office: Shelton Street, Covent Garden, London, WC2H 9JQ

2.0 SITE DESCRIPTION

2.1 EXISTING SITE

A location plan is included in Appendix A.

The site lies on the site occupied by No. 42 Robin Royed Lane, Mirfield.

The Existing property is semi-detached dwelling with gardens. It appears that the site has a pre-existing connection to Yorkshire Water Sewers – At this location the Sewers are combined foul and surface water.

It is assumed that before demolition proceeds that the existing drain will be exposed, checked for serviceability and an invert level determined and preserved such that, later in the development, an indirect connection can be made using a new demarcation chamber to the existing Yorkshire Water system.

2.2 SOIL INFILTRATION TESTS

No infiltration tests have been offered, we have proceed on the assumption that infiltration is not possible and that calculation for an attenuated system is required.

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3.0 EXISTING SITE SURFACE WATER DRAINAGE

3.1 EXISTING SURFACE WATER DRAINAGE

Surface water is positively drained from the roof of the existing dwelling of No. 44 (78 m^2) with the rest of the site (815 m^2) as garden and assumed to be greenfield. There is no attenuation of the surface water runoff at present.

Using the principles of the Modified Rational Method an estimate of the pre development surface runoff rates of the existing roof and for a 15 minute storm of a 1 in 1 year return period is 0.6 l/s. The greenfield runoff for the site for a 1 in 1 year storm is calculated as 0.27 l/s (Appendix B). Taken together we should limit discharge rate for the new development to 0.87 l/s for all storm events up to a 1 in 100 year storm plus 40% to limit discharge rates to no more than the pre-development discharge rate for a 15 minute 1 in 1 year storm event.

4.0 PROPOSED DEVELOPMENT

The proposed development involves the demolition of the existing dwelling and the construction of a new development comprising 5 No. terrace houses. The proposed site plan is included in Appendix C

4.1 PROPOSED SURFACE WATER DISCHARGE STRATEGY

The proposed design makes the following assumptions:

No information is available from the client or Yorkshire Water with respect to the cover levels or invert levels of the existing drains and sewers. In addition we have no finished ground level information for the dwellings or landscaping. The site has a AOD level of around 108m (around 0.5m higher on the north-east corner of the plot and 0.5m lower on the south-west corner of the plot). However because of the uncertainty of the levels discussed previously we taken the ground level of the entire site to be a nominal 10 m.

In the event that the proposed Yorkshire Water Sewer connection is too high for the development a alternative route into the Yorkshire Water network may be available through the rear of the property located at the rear of No. 24 Robin Royed Lane (in Wellhouse lane). It is however unclear as to what access rights you have the lane behind the site. (see Appendix D)

It is likely that Yorkshire Water / the planning authority will wish to explore the possibility of infiltration before granting permission to connect the new development. If infiltration is a possibility (infiltration tests to BRE Digest 365 would be required) then we would suggest consideration to a permeable driveway and a soakaways to the front and/or rear to both simplify the drainage and reduce the size of the attenuation storage we have proposed in this document.

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5.0 PROPOSED SURFACE WATER DESIGN

Considering the strategy outlined above the proposed drainage design for the new development is included in the appendices as follows

Appendix E Proposed Drainage Plan

Appendix F Proposed Surface Water Hydraulic Analysis

Appendix G Existing Surface Water Hydraulic Analysis

The following discharge betterment rates for the design are tabulated below.

Storm Event	Greenfield Discharge (l/s)	Existing Dwelling discharge (l/s)	Total Pre-development discharge (l/s)	Proposed Post development Critical Discharge (l/s)	Betterment
1 in 1 year	0.27	0.6	0.87	0.3	67%
1 in 30 year	0.55	2.6	3.15	0.6	80%
1 in 100 year	.66	3.3	3.96	0.9 (including 40% CC)	77%

The system is designed to ensure discharge rates for the proposed site for all storm events up to a 1 in 100 year event plus 40% climate change does not exceed the pre-development discharge rate for a 1 in 1 year storm event.

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6.0 APPENDICES

The Drainage Designers
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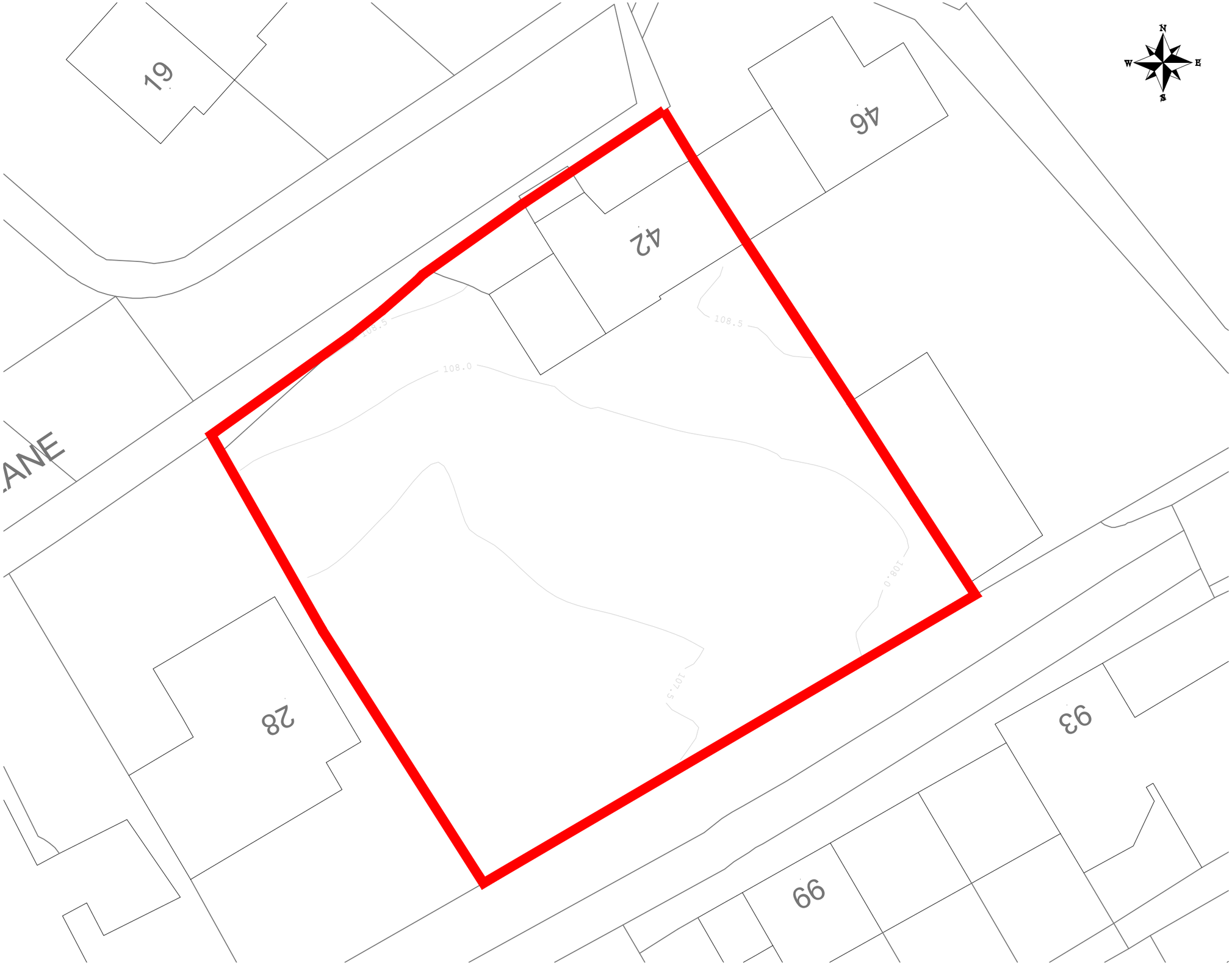
APPENDIX A

LOCATION PLAN



1:200

4m 0 4m 8m 12m 16m 20m

NOTES:
Sketch schemes may be based on plan information of unknown origin and are subject to Topographical survey, Geotechnical survey, Arboricultural and Ecological survey, Planning, Building Regulations, Highways and other Statutory Authorities.

Structural Elements, including, but not limited to, steel beams ,columns, steel and concrete lintels, foundations etc are strictly to structural engineers design and calculation.

A 09.06 Trees removed to match current site ICM

CRL architects

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Tel: 0113 274 2511
Email:crlarchitects@btconnect.com

Status: Planning

Project:
42 Robin Royd Lane, Mirfield, WF14 0LG

Title:
Existing Block Plan

Scale: 1:200 @ A3
Drawn by: ICM

Client: --
Checked by: DMC

Job No: 3115
Drawing No: 002

Revision: A
Date: APR 25

DO NOT SCALE FROM THIS DRAWING.

APPENDIX B

GREENFIELD RUNOFF REPORT

Greenfield runoff rate estimation tool

www.uksuds.com | Greenfield runoff rate estimation tool (https://www.uksuds.com/)

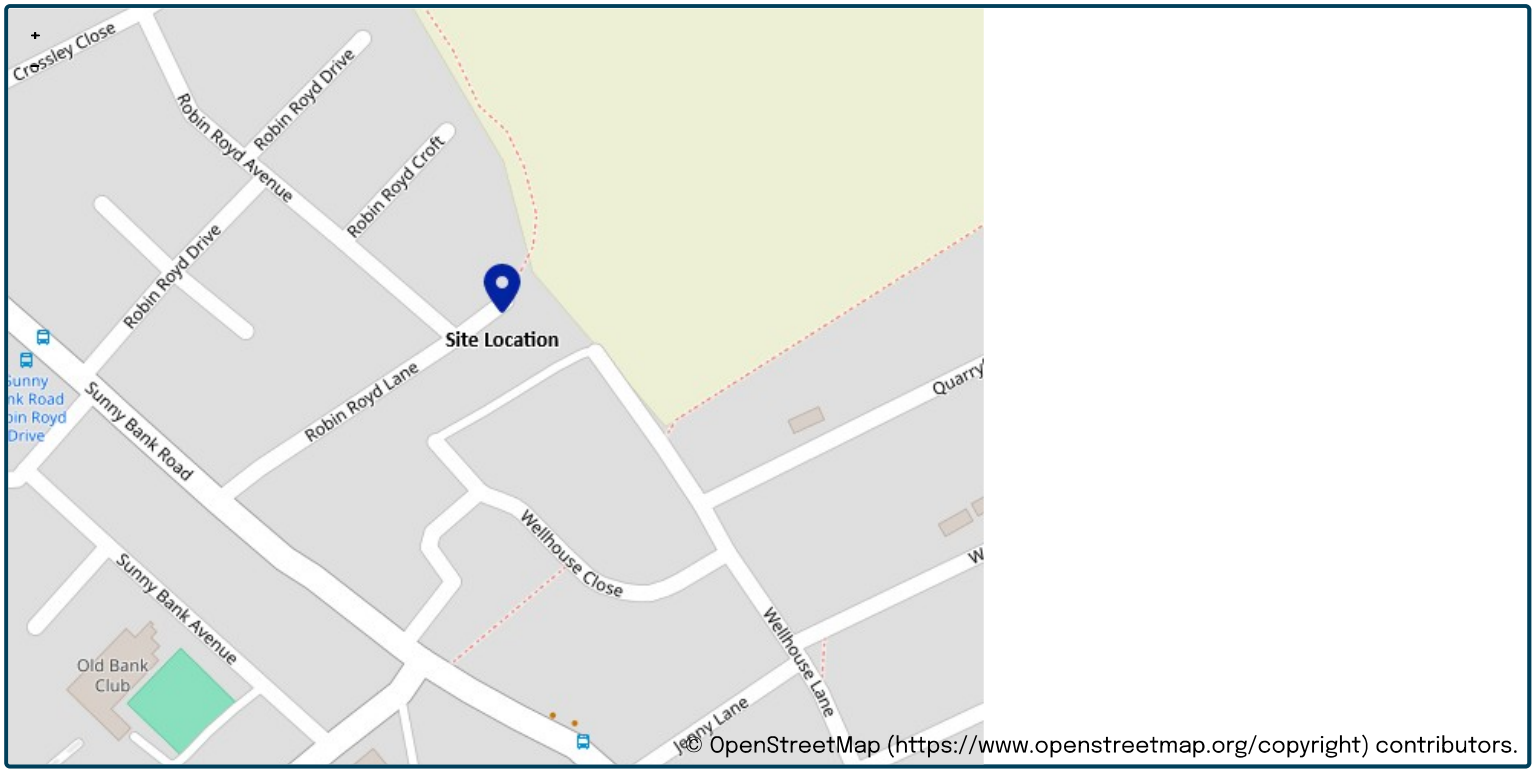
This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Project details

Date	09/07/2025
Calculated by	Paul Evans
Reference	5150 Robin Royd Lane
Model version	2.0.1

Location

Site name	Robin Royd Lane
Site location	Mirfield



Site easting	420445
Site northing	421535

Site details

Total site area (ha)	.0892 ha

Greenfield runoff

Method

Method	FEH statistical

FEH statistical

	My value		Map value
SAAR (mm)	737 mm		737
BFIHOST	0.502		
QMed-QBar conversion	1.064		1.064
QMed (l/s)	0.298 l/s		
QBar (FEH statistical) (l/s)	0.32 l/s		

Growth curve factors

	My value		Map value
Hydrological region	3		3
1 year growth factor	0.86		
2 year growth factor	0.94		
10 year growth factor	1.45		
30 year growth factor	1.75		
100 year growth factor	2.08		
200 year growth factor	2.37		

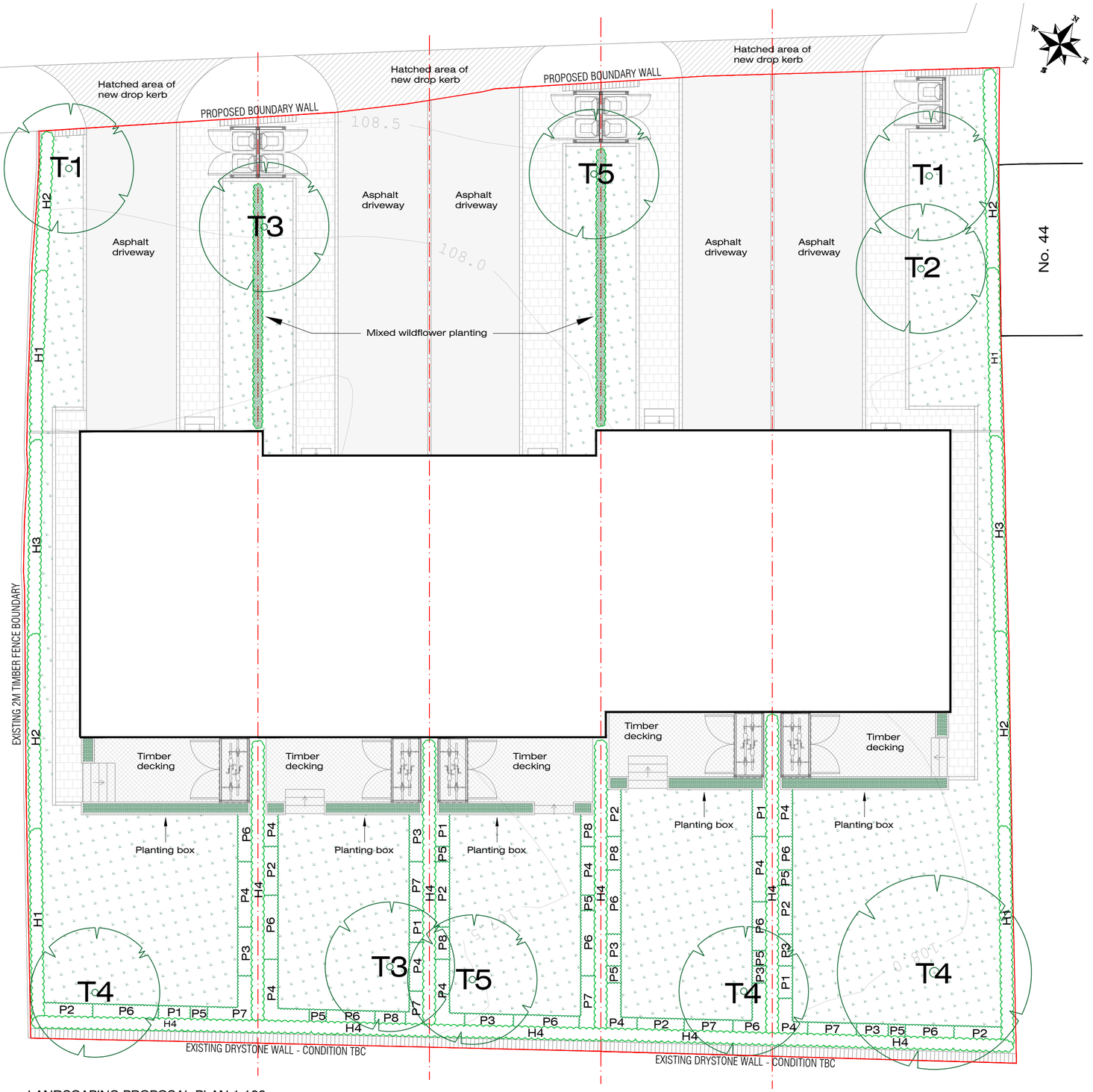
Results

Method	FEH statistical
Flow rate 1 year (l/s)	0.27 l/s
Flow rate 2 year (l/s)	0.3 l/s
Flow rate 10 years (l/s)	0.46 l/s
Flow rate 30 years (l/s)	0.55 l/s
Flow rate 100 years (l/s)	0.66 l/s
Flow rate 200 years (l/s)	0.75 l/s

Disclaimer

APPENDIX C

PROPOSED SITE PLAN



LANDSCAPING PROPOSAL PLAN 1:100

LEGEND

- Grass
- P_ Planting
- H_ Hedging
- Mixed wildflower planting
- Asphalt driveway
- Natural stone paving
- Timber decking
- New drop kerb

Topsoil and Subsoil

The overall management aim is to prevent the compaction of soil, especially in areas to be planted. The site is to be stripped of topsoil and the soil stored on site or in a nearby location. If space is restricted, soil heaps to be maximum of 2 m high for short periods, but ideally should be low and narrow and not more than 1 m high. Low storage heights are to help prevent killing of earthworms, compaction and waterlogging of the topsoil.

Subsoils are to remain in place and be protected with reinforcement matting to help spread loads. Mats are to be removed once heavy machinery has left site. Subsoils are to be broken up prior to respreading topsoil.

Subsoil Surface Preparation:
Generally Works to comply with BS3882. BS3882 recommends minimum rooting depths of 450 mm for grass, 600 mm for shrubs. The depth of topsoil is typically 150-400 mm. Therefore loosened subsoil should make up the remainder of the rooting depth for the specified plants or trees. Loosening should only take place when soils are dry enough to fracture. Under wet conditions ripping can damage the soil structure and should not be carried out. See BS 3882 'Specification for topsoil' and BS8601 'Specification for subsoil and requirements for use' for further guidance.

Loosening: Loosening by ripping is inappropriate where the subgrade is mainly chalk or rock. In these circumstances, the surface should be lightly scarified to avoid forming a pan. Do not loosen subsoils in wet conditions.

When ground conditions are sufficiently dry to allow breaking up of soils, loosen thoroughly to specified depth
· Light and noncohesive subsoils:150 mm depth
· Stiff clay and cohesive subsoils: 300 mm depth
· Rock and chalk subgrades: Lightly scarify to promote free drainage. Lightly scarify to promote free drainage.

Management and Placing of Topsoils:
To protect topsoil, no other material to be placed on top of storage heaps. Do not allow any construction plant or people to pass over them. Minimize multiply handling of topsoils in any conditions.

Topsoil is very susceptible to damage and compaction when handled during wet conditions. Topsoil should not be worked during sustained heavy rainfall (e.g. greater than 10 mm in 24 hours), and that at least one dry day should be allowed following such rainfall events until operations are resumed. Topsoil can be considered to have suitable moisture content for stripping and handling operations if the whole topsoil layer has a moisture content below the plastic limit, as determined in accordance with BS1377-2.

Do not contaminate topsoil. Soil ameliorants can added as per specification on drawing SJ.HH.02. Do not firm, consolidate or compact topsoil when laying. Tip and grade to approximate levels in one operation with minimum of trafficking by plant.

Preparation of Topsoil:
Break up topsoil to full depth. Loosen, aerate and break up topsoil to a tilth suitable for blade grading. Do not use machinery such as cultivators on heavy soils if the soils are wet. Leave soils regular and even prior to planting and seeding.

Dressing:
Shrubs and hedges are to be mulched at the base with bark mulch. Plants are to be watered after planting.

Lawn Establishment

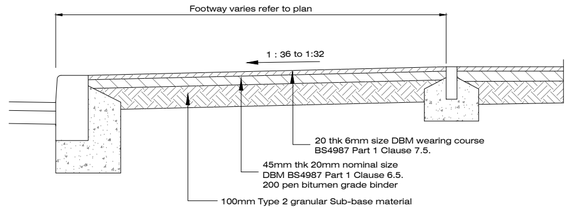
After building works are completed, reseed lawn where affected (reseeding to happen in Spring or Autumn only). Apply top dressing to encourage growth. Leave grass to grow and establish before first mow, avoid cutting too short. Do not mow during winter. Keep lawn moist while grass establishes. In Spring apply nitrogen-rich fertiliser, in Autumn apply potash and phosphate fertiliser.

PLANTING SCHEDULE

REF		NAME	COMMON NAME	HEIGHT (metres)	NO.
TREES	T1	Crataegus Monogyna	Common Hawthorn	4 - 8	2
	T2	Pyrus Comminus	Common Pear	8 - 12	1
	T3	Ulmus minor 'Atinia'	English Elm	16 - 30	2
	T4	Acer pseudoplatanus	Sycamore	30 - 40	3
	T5	Prunus avium	Wild Cherry	18 - 25	2
HEDGES	H1	Crataegus monogyna	Hawthorn	4 - 8	4
	H2	Prunus spinosa	Blackthorn	4 - 6	4
	H3	Corylus avellana	Hazel	3 - 7	2
	H4	Fagus sylvatica	Beech	1 - 5	5
PLANTS	P1	Acer Campestre	Field Maple	15	5
	P2	Crataegus Monogyna	Common Hawthorn	15	7
	P3	Corylus Avellana	Hazel	8	7
	P4	Alnus Glutinosa	Alder	20	10
	P5	Viburnum opulus	Guelder rose	5	8
	P6	Salix lanata	Wooly willow	15	11
	P7	Salix lapponum	Downy willow	15	6
	P8	Fagus Sylvatica	Beech	30	3

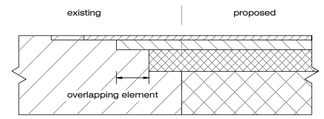
NOTES:
Sketch schemes may be based on plan information of unknown origin and are subject to Topographical survey, Geotechnical survey, Arboricultural and Ecological survey, Planning, Building Regulations, Highways and other Statutory Authorities.

Structural Elements, including, but not limited to, steel beams ,columns, steel and concrete lintels, foundations etc are strictly to structural engineers design and calculation.

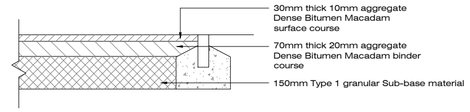


TYPICAL SECTION THROUGH FOOTWAY

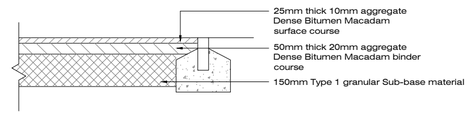
Wearing course to use 200 pen bitumen grade binder and with an additional 0.5% of binder to supplement the binder target content in BS Part 1 Table 30



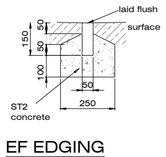
FOOTWAY TIE-IN



SECTION THROUGH ACCESS ROAD

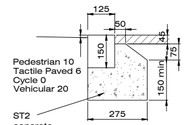


SECTION THROUGH DRIVEWAY



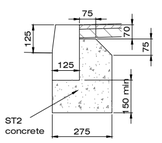
EF EDGING

Footway edging



BN KERB

Bull nosed



HB2 KERB

Half batter

EXISTING DRYSTONE WALL

1:20
400mm 0 400mm 800mm 1200mm 1600mm 2000mm

1:50
1m 0 1m 2m 3m 4m 5m

1:100
2m 0 2m 4m 6m 8m 10m

Rev Date Description Initial

CRL architects

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LS6 2HF

Tel: 0113 274 2511
Email:crlarchitects@btconnect.com

Status: Planning

Project:
42 Robin Royd Lane, Mirfield, WF14 0LG

Title:
Proposed Landscaping Plan

Scale: 1:100 @ A2 (or as indicated)
Drawn by: ICM

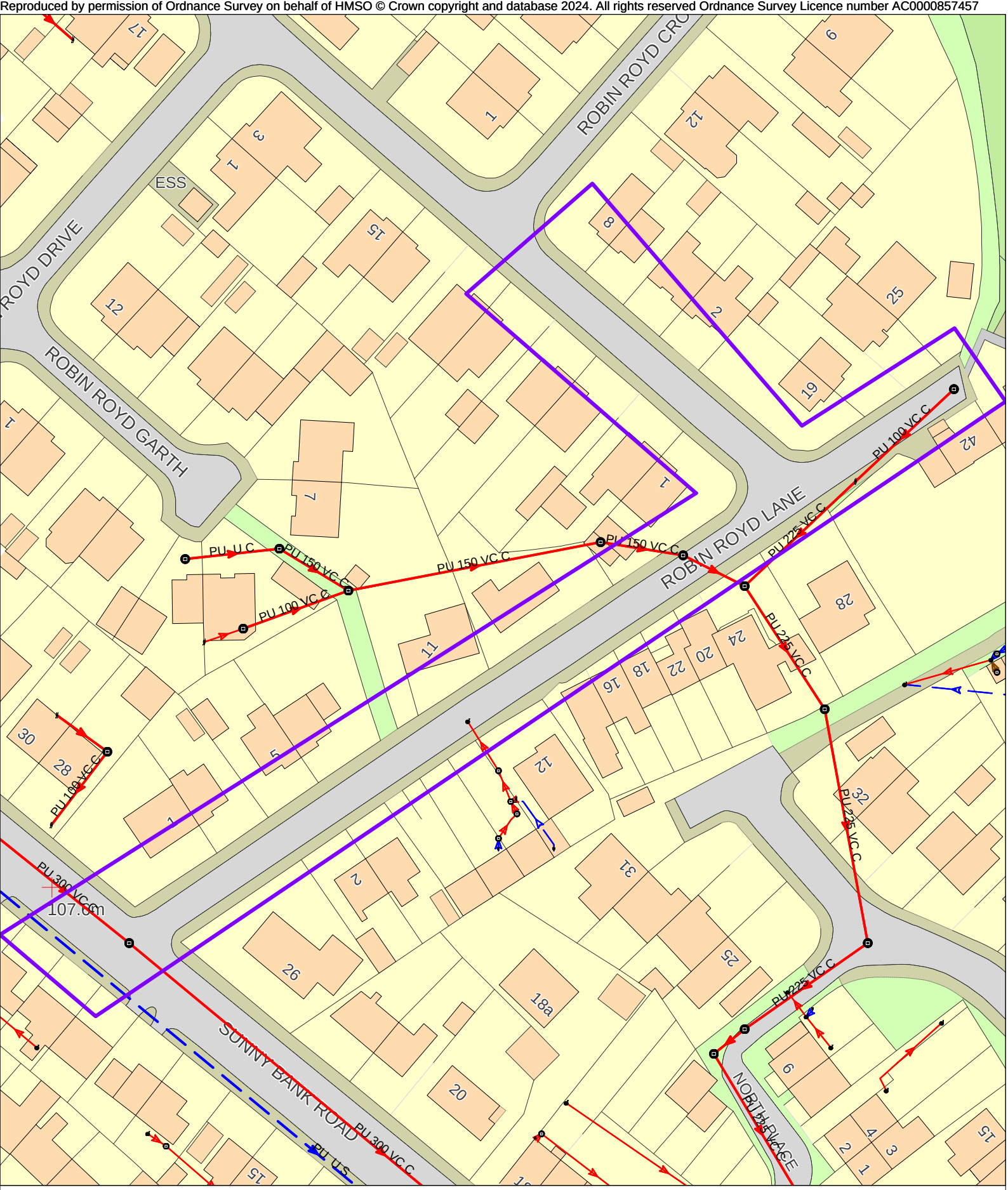
Client: --
Checked by: DMC

Job No: 3115
Drawing No: 005

Revision: --
Date: APR 25

APPENDIX D

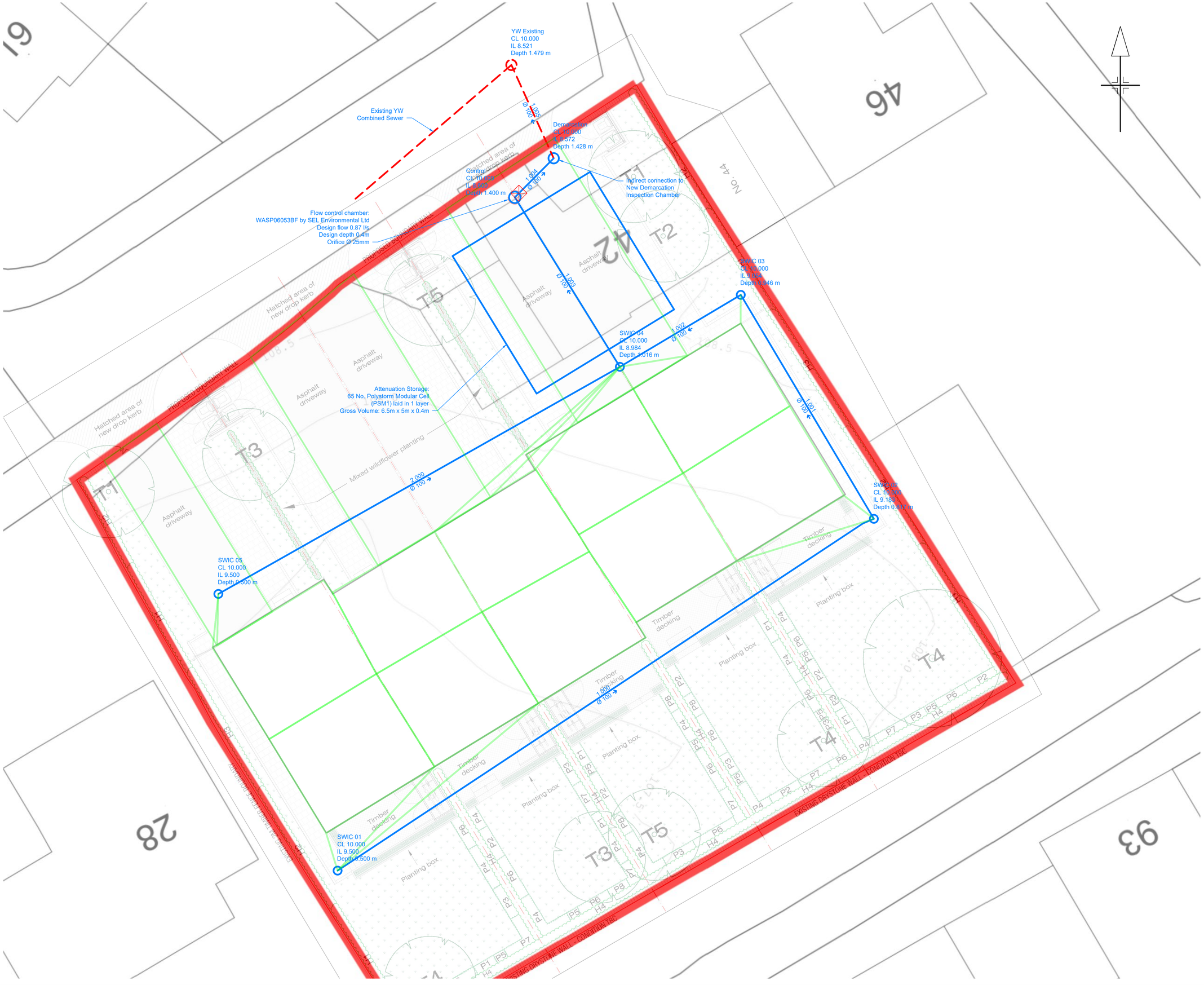
YORSHIRE WATER SEWER RECORDS



Public Waste Water Network 07/07/2025 16:08:23 OS Grid Coordinates: 420294 : 421420 Map Name : SE2021SW svcGISSafeMovePD

APPENDIX E

PROPOSED DRAINAGE PLAN



LEGEND

- Proposed surface water drainage
- Proposed foul drainage
- Existing surface water sewer
- Existing foul sewer
- Existing combined sewer
- Catchment areas
- Site Boundry

Rev.	Date	Description	By	Chk'd	App'd
01	10/07/25	FIRST ISSUE	PE	MTY	MTY

The Drainage Designers
90 Coronation Street, Sunderland, SR1 2HE

Drawing Status: FOR CONSTRUCTION
Suitability: C4

Project Title: ROBIN ROYD LANE

Drawing Title: PROPOSED DRAINAGE LAYOUT

Scale	Designed	Drawn	Checked	Authorised
1:75	PE	PE	MTY	MTY
Original Size	**Date**	**Date**	**Date**	**Date**
A1	10/07/25	10/07/25	10/07/25	10/07/25

Drawing Number: 5150-DD-XX-XX-DR-D-0001
Revision: 01

APPENDIX F

PROPOSED SURFACE WATER HYDRAULIC ANALYSIS

Simulation Settings

Rainfall Methodology	FEH-22	Skip Steady State	x	Check Discharge Rate(s)	x
Rainfall Events	Singular	Drain Down Time (mins)	240	Check Discharge Volume	x
Winter CV	0.840	Additional Storage (m³/ha)	20.0		
Analysis Speed	Normal	Starting Level (m)			

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
30	0	0	0
100	40	0	0

Node Control Online Orifice Control

Flap Valve	x	Design Depth (m)	0.400	Discharge Coefficient	0.650
Replaces Downstream Link	x	Design Flow (l/s)	0.9		
Invert Level (m)	8.600	Diameter (m)	0.025		

Node Control Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	8.600
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	0

Depth (m)	Area (m²)	Inf Area (m²)
0.000	49.0	49.0

Results for 1 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SWIC 01	11	9.521	0.021	0.6	0.0082	0.0000	OK
15 minute winter	SWIC 02	11	9.210	0.027	1.0	0.0057	0.0000	OK
15 minute winter	SWIC 03	11	9.083	0.029	1.2	0.0043	0.0000	OK
15 minute winter	SWIC 05	11	9.514	0.014	0.4	0.0042	0.0000	OK
15 minute winter	SWIC 04	10	9.026	0.042	3.2	0.0197	0.0000	OK
480 minute winter	Control	312	8.666	0.066	0.6	3.0955	0.0000	OK
480 minute winter	Demarcation	312	8.587	0.015	0.3	0.0025	0.0000	OK
480 minute winter	YW Existing	312	8.536	0.015	0.3	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	SWIC 01	1.000	SWIC 02	0.6	0.425	0.093	0.0396	
15 minute winter	SWIC 02	1.001	SWIC 03	1.0	0.556	0.155	0.0203	
15 minute winter	SWIC 03	1.002	SWIC 04	1.2	0.518	0.183	0.0152	
15 minute winter	SWIC 05	2.000	SWIC 04	0.4	0.245	0.041	0.0378	
15 minute winter	SWIC 04	1.003	Control	3.2	1.867	0.248	0.0161	
480 minute winter	Control	1.004	Demarcation	0.3	0.411	0.049	0.0019	
480 minute winter	Demarcation	1.005	YW Existing	0.3	0.422	0.049	0.0034	5.8

Results for 30 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SWIC 01	10	9.543	0.043	2.5	0.0171	0.0000	OK
15 minute winter	SWIC 02	10	9.240	0.057	4.1	0.0123	0.0000	OK
15 minute winter	SWIC 03	11	9.189	0.135	4.9	0.0195	0.0000	SURCHARGED
15 minute winter	SWIC 05	10	9.529	0.029	1.8	0.0089	0.0000	OK
15 minute winter	SWIC 04	11	9.144	0.160	12.2	0.0749	0.0000	SURCHARGED
240 minute winter	Control	184	8.808	0.208	2.5	9.7005	0.0000	SURCHARGED
240 minute winter	Demarcation	184	8.593	0.021	0.6	0.0034	0.0000	OK
240 minute winter	YW Existing	184	8.542	0.021	0.6	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	SWIC 01	1.000	SWIC 02	2.5	0.628	0.383	0.1094	
15 minute winter	SWIC 02	1.001	SWIC 03	4.1	0.747	0.629	0.0706	
15 minute winter	SWIC 03	1.002	SWIC 04	4.9	0.697	0.754	0.0478	
15 minute winter	SWIC 05	2.000	SWIC 04	1.8	0.333	0.183	0.0973	
15 minute winter	SWIC 04	1.003	Control	12.1	2.129	0.942	0.0629	
240 minute winter	Control	1.004	Demarcation	0.6	0.488	0.093	0.0030	
240 minute winter	Demarcation	1.005	YW Existing	0.6	0.507	0.094	0.0053	11.7

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.66%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SWIC 01	13	9.769	0.269	4.5	0.1073	0.0000	FLOOD RISK
15 minute winter	SWIC 02	13	9.693	0.510	6.8	0.1092	0.0000	SURCHARGED
15 minute winter	SWIC 03	12	9.606	0.552	5.9	0.0800	0.0000	SURCHARGED
15 minute winter	SWIC 05	12	9.569	0.069	3.1	0.0211	0.0000	OK
15 minute winter	SWIC 04	12	9.541	0.557	17.8	0.2612	0.0000	SURCHARGED
240 minute winter	Control	200	8.993	0.393	4.6	18.3554	0.0000	SURCHARGED
240 minute winter	Demarcation	200	8.598	0.026	0.9	0.0041	0.0000	OK
240 minute winter	YW Existing	200	8.546	0.025	0.9	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	SWIC 01	1.000	SWIC 02	4.1	0.652	0.634	0.2180	
15 minute winter	SWIC 02	1.001	SWIC 03	5.5	0.745	0.857	0.0885	
15 minute winter	SWIC 03	1.002	SWIC 04	7.7	0.980	1.186	0.0478	
15 minute winter	SWIC 05	2.000	SWIC 04	3.1	0.494	0.316	0.1361	
15 minute winter	SWIC 04	1.003	Control	17.0	2.167	1.323	0.0678	
240 minute winter	Control	1.004	Demarcation	0.9	0.532	0.131	0.0039	
240 minute winter	Demarcation	1.005	YW Existing	0.9	0.557	0.132	0.0068	17.6

APPENDIX G

EXISTING SURFACE WATER HYDRAULIC ANALYSIS

Simulation Settings

Rainfall Methodology	FEH-22	Skip Steady State	x	Check Discharge Rate(s)	x
Rainfall Events	Singular	Drain Down Time (mins)	240	Check Discharge Volume	x
Winter CV	0.840	Additional Storage (m³/ha)	20.0		
Analysis Speed	Normal	Starting Level (m)			

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
30	0	0	0
100	0	0	0

Results for 1 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	11	9.322	0.022	0.6	0.0069	0.0000	OK
15 minute winter	2	11	9.272	0.021	0.6	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	1	1.000	2	0.6	0.490	0.097	0.0057	0.3

Results for 30 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	10	9.348	0.048	2.6	0.0153	0.0000	OK
15 minute winter	2	10	9.296	0.045	2.6	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	1	1.000	2	2.6	0.717	0.413	0.0167	1.2

Results for 100 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	10	9.356	0.056	3.3	0.0178	0.0000	OK
15 minute winter	2	10	9.302	0.051	3.3	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	1	1.000	2	3.3	0.760	0.527	0.0200	1.5