ALTARNUN,

FIFIELD, CHIPPING NORTON

OX7 6HD

DRAINAGE DESIGN TECHNICAL NOTE

1.0 Summary

1.1 Condon Drew Associates Ltd (CDA) have been appointed by Goldings to provide drainage design services for a proposed residential development at Altarnun, Fifield, Chipping Norton in Oxfordshire.

1.2 The site currently comprises one detached dwelling with a garage along with associated paved areas, patios and out buildings. Full development proposals are shown in the architect's submission pack and detail the erection of one proposed dwelling and associated works.

1.3 This Technical Note has been prepared to support a Notice of Decision (NOD) at the Site. From the NOD dated 9th August 2023, Condition No. 10 relates to drainage and states:

That, prior to the commencement of development, a full surface water drainage scheme shall be submitted to and approved in writing by the Local Planning Authority. The scheme shall include details of the size, position and construction of the drainage scheme and results of soakage tests carried out at the site to demonstrate the infiltration rate. Three tests should be carried out for each soakage pit as per BRE 365 with the lowest infiltration rate (expressed in m/s) used for design. The development shall be carried out in accordance with the approved details prior to the first occupation of the development hereby approved. Development shall not take place until an exceedance flow routing plan for flows above the 1 in 100 year + 40% CC event has been submitted to and approved in writing by the Local Planning Authority.

REASON: To ensure the proper provision for surface water drainage and/ or to ensure flooding is not exacerbated in the locality (The West Oxfordshire Strategic Flood Risk Assessment, National Planning Policy Framework and Planning Practice Guidance). If the surface water design is not agreed before works commence, it could result in abortive works being carried out on site or alterations to the approved site layout being required to ensure flooding does not occur

1.4 All surface water runoff from the site will be discharged to ground within underground soakaways via infiltration.

2.0 Surface Water Drainage Design

2.1 The site measures 0.4Ha and currently comprises one dwelling with a garage along with associated paved areas, patios and out buildings.

2.2 Greenfield Calculations have been carried out for the site, and are included in **Appendix A**, and summarised in **Table 2.1**, below.

Table 2.1: Greenfield Runoff Rates

Return Period	Greenfield Runoff (ls^{-1})
Q2	0.1
Qbar	0.1
Q30	0.2
Q100	0.2

2.3 Following a site investigation, it has been determined that the site comprises primarily a layer of limestone above a clay layer. Infiltration testing was completed throughout the Site and preliminary results supported infiltration as a primary source of discharge. This is detailed fully in the *Preliminary Field Data Report* by Soils Limited. The Infiltration testing results are included as **Appendix B**.

2.4 The proposed site layout introduces 293m^2 of impermeable areas comprising dwellings and garages. The patios make up 87m^2 of the site, meaning the total impermeable area is 380m^2. The access and driveway are to be finished as gravel and will allow for infiltration at the source.

2.5 The roof areas and patio will drain to a soakaway to the east of the dwelling, close to Trial Pit 1 from the infiltration testing. The lowest of the three rates determined during the tests has been used in the calculations (2.4 x 10^{-4} m/s).

2.6 A Hydraulic model for the site has been produced, which is included in **Appendix A**. the model includes storms up to and including the 1-in-100-year storm with a 40% allowance for climate change (as per the advice on Defra's climate change allowances map for the Cotswolds Management Catchment.

2.7 The soakaway is to be 3m x 3m and 0.8m deep, with a void of at least 95%.

2.8 The half drain times of the soakaway is 34 minutes; considerably lower that the required 1,440

minutes.

2.9 It is recommended that water butts are utilised at the dwelling to allow for re-use of water within the garden. These are not included in the calculations as there is no guarantee they will be empty at the start of any storm. However, it is likely that there will be some available capacity within the site.

2.10 The Drainage Strategy Drawing is included in **Appendix C** and shows the drainage network and soakaway.

2.11 During Exceedance events, excess surface water runoff will form overland flows to the east towards Bruern Road. This will mimic the existing situation. An exceedance flow route plan is included in **Appendix C**.

3.0 Maintenance

3.1 The surface water system will be privately maintained by the Owners of the property, in line with the guidance set out in the SuDS Manual.

4.0 Report Summary

4.1 This Note has been prepared for submission, along with the appended calculations and drawing for a residential development at Altarnun, Fifield, Chipping Norton.

4.2 Surface water will be infiltrated into the ground via underground soakaways.

4.3 Surface Water drainage has been designed and sized for the Q100 storm event, with a climate change allowance of 40%.

Appendix A
Hydraulic Calculations

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	5	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	20.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.400	Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	✓

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S01	0.010	5.00	163.700	180	423858.894	218650.665	0.650
S02			163.700	180	423863.333	218639.873	0.764
ACO_2	0.009	5.00	163.700		423879.101	218644.088	0.635
JCT			163.700		423879.797	218646.645	0.883
S03			163.700	180	423884.373	218648.527	0.916
S04	0.015	5.00	163.700	180	423867.798	218662.838	0.650
S05	0.000	5.00	163.500		423876.954	218666.562	0.846
SOAKAWAY			163.500		423890.463	218672.119	0.943

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	S01	S02	11.669	0.600	163.050	162.972	0.078	150.0	150	5.24	50.0
1.001	S02	JCT	17.802	0.600	162.936	162.817	0.119	150.0	150	5.60	50.0
2.000	ACO_2	JCT	2.650	0.600	163.065	162.817	0.248	10.7	150	5.01	50.0
1.001_1	JCT	S03	4.948	0.600	162.817	162.784	0.033	150.0	150	5.70	50.0
1.002	S03	S05	19.501	0.600	162.784	162.654	0.130	150.0	150	6.10	50.0
3.000	S04	S05	9.884	0.600	163.050	162.984	0.066	150.0	150	5.20	50.0
1.003	S05	SOAKAWAY	14.607	0.600	162.654	162.557	0.097	150.0	150	6.40	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	0.818	14.5	1.4	0.500	0.578	0.010	0.0	31	0.511
1.001	0.818	14.5	1.4	0.614	0.733	0.010	0.0	31	0.511
2.000	3.099	54.8	1.2	0.485	0.733	0.009	0.0	16	1.270
1.001_1	0.818	14.5	2.6	0.733	0.766	0.019	0.0	43	0.621
1.002	0.818	14.5	2.6	0.766	0.696	0.019	0.0	43	0.621
3.000	0.818	14.5	2.0	0.500	0.366	0.015	0.0	38	0.577
1.003	0.818	14.5	4.6	0.696	0.793	0.034	0.0	58	0.729

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	11.669	150.0	150	Circular	163.700	163.050	0.500	163.700	162.972	0.578
1.001	17.802	150.0	150	Circular	163.700	162.936	0.614	163.700	162.817	0.733
2.000	2.650	10.7	150	Circular	163.700	163.065	0.485	163.700	162.817	0.733
1.001_1	4.948	150.0	150	Circular	163.700	162.817	0.733	163.700	162.784	0.766
1.002	19.501	150.0	150	Circular	163.700	162.784	0.766	163.500	162.654	0.696
3.000	9.884	150.0	150	Circular	163.700	163.050	0.500	163.500	162.984	0.366
1.003	14.607	150.0	150	Circular	163.500	162.654	0.696	163.500	162.557	0.793

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	S01	180	Manhole	Adoptable	S02	180	Manhole	Adoptable
1.001	S02	180	Manhole	Adoptable	JCT		Junction	
2.000	ACO_2		Junction		JCT		Junction	
1.001_1	JCT		Junction		S03	180	Manhole	Adoptable
1.002	S03	180	Manhole	Adoptable	S05		Junction	
3.000	S04	180	Manhole	Adoptable	S05		Junction	
1.003	S05		Junction		SOAKAWAY		Junction	

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S01	423858.894	218650.665	163.700	0.650	180	0	1.000	163.050	150
S02	423863.333	218639.873	163.700	0.764	180	1 0	1.000 1.001	162.972 162.936	150 150
ACO_2	423879.101	218644.088	163.700	0.635		0	2.000	163.065	150
JCT	423879.797	218646.645	163.700	0.883		1 2 0	2.000 1.001 1.001_1	162.817 162.817 162.817	150 150 150
S03	423884.373	218648.527	163.700	0.916	180	1 0	1.001_1 1.002	162.784 162.784	150 150
S04	423867.798	218662.838	163.700	0.650	180	0	3.000	163.050	150
S05	423876.954	218666.562	163.500	0.846		1 2 0	3.000 1.002 1.003	162.984 162.654 162.654	150 150 150

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
SOAKAWAY	423890.463	218672.119	163.500	0.943		1	1.003	162.557	150
									

Simulation Settings

Rainfall Methodology	FSR	Drain Down Time (mins)	240
FSR Region	England and Wales	Additional Storage (m³/ha)	0.0
M5-60 (mm)	20.000	Check Discharge Rate(s)	✓
Ratio-R	0.400	2 year (l/s)	0.1
Summer CV	0.750	30 year (l/s)	0.2
Winter CV	0.840	100 year (l/s)	0.2
Analysis Speed	Detailed	Check Discharge Volume	x
Skip Steady State	x		

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 %)
2	0	0	0
10	0	0	0
30	0	0	0
100	40	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	Growth Factor 30 year	2.40
Greenfield Method	IH124	Growth Factor 100 year	3.19
Positively Drained Area (ha)	0.400	Betterment (%)	0
SAAR (mm)	712	QBar	0.1
Soil Index	1	Q 2 year (l/s)	0.1
SPR	0.10	Q 30 year (l/s)	0.2
Region	6	Q 100 year (l/s)	0.2
Growth Factor 2 year	0.88		

Node SOAKAWAY Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.86400	Invert Level (m)	161.400	Depth (m)	0.800
Side Inf Coefficient (m/hr)	0.86400	Time to half empty (mins)	34	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	3.000	Number Required	1
Porosity	0.95	Pit Length (m)	3.000		

Results for 2 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	S01	10	163.086	0.036	1.8	0.0009	0.0000	OK
15 minute winter	S02	11	162.971	0.035	1.7	0.0009	0.0000	OK
15 minute summer	ACO_2	10	163.083	0.018	1.6	0.0000	0.0000	OK
15 minute winter	JCT	11	162.867	0.050	3.3	0.0000	0.0000	OK
15 minute winter	S03	11	162.832	0.048	3.3	0.0012	0.0000	OK
15 minute winter	S04	10	163.094	0.044	2.7	0.0011	0.0000	OK
15 minute winter	S05	11	162.720	0.066	5.9	0.0000	0.0000	OK
30 minute winter	SOAKAWAY	27	161.633	-0.924	4.7	1.9915	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute winter	S01	1.000	S02	1.7	0.548	0.121	0.0373
15 minute winter	S02	1.001	JCT	1.8	0.426	0.121	0.0738
15 minute summer	ACO_2	2.000	JCT	1.6	0.760	0.029	0.0082
15 minute winter	JCT	1.001_1	S03	3.3	0.655	0.227	0.0248
15 minute winter	S03	1.002	S05	3.3	0.529	0.225	0.1204
15 minute winter	S04	3.000	S05	2.7	0.621	0.184	0.0424
15 minute winter	S05	1.003	SOAKAWAY	5.8	0.778	0.401	0.1088
30 minute winter	SOAKAWAY	Infiltration		1.4			

Results for 10 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	S01	10	163.095	0.045	2.7	0.0011	0.0000	OK
15 minute winter	S02	11	162.979	0.043	2.7	0.0011	0.0000	OK
15 minute winter	ACO_2	10	163.087	0.022	2.5	0.0000	0.0000	OK
15 minute winter	JCT	11	162.880	0.063	5.1	0.0000	0.0000	OK
15 minute winter	S03	11	162.845	0.061	5.0	0.0015	0.0000	OK
15 minute winter	S04	10	163.105	0.055	4.1	0.0014	0.0000	OK
15 minute winter	S05	11	162.739	0.085	9.0	0.0000	0.0000	OK
30 minute winter	SOAKAWAY	29	161.802	-0.755	7.0	3.4338	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute winter	S01	1.000	S02	2.7	0.615	0.184	0.0504
15 minute winter	S02	1.001	JCT	2.7	0.473	0.184	0.1005
15 minute winter	ACO_2	2.000	JCT	2.5	0.966	0.045	0.0114
15 minute winter	JCT	1.001_1	S03	5.0	0.736	0.347	0.0340
15 minute winter	S03	1.002	S05	5.0	0.591	0.348	0.1658
15 minute winter	S04	3.000	S05	4.0	0.696	0.279	0.0574
15 minute winter	S05	1.003	SOAKAWAY	8.9	0.868	0.619	0.1506
30 minute winter	SOAKAWAY	Infiltration		1.7			

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	S01	10	163.102	0.052	3.5	0.0013	0.0000	OK
15 minute winter	S02	11	162.985	0.049	3.4	0.0012	0.0000	OK
15 minute winter	ACO_2	10	163.089	0.024	3.1	0.0000	0.0000	OK
15 minute winter	JCT	11	162.890	0.073	6.4	0.0000	0.0000	OK
15 minute winter	S03	11	162.854	0.069	6.4	0.0017	0.0000	OK
15 minute winter	S04	10	163.113	0.063	5.2	0.0016	0.0000	OK
15 minute winter	S05	11	162.754	0.100	11.4	0.0000	0.0000	OK
30 minute winter	SOAKAWAY	30	161.944	-0.613	9.0	4.6535	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute winter	S01	1.000	S02	3.4	0.658	0.237	0.0608
15 minute winter	S02	1.001	JCT	3.4	0.506	0.236	0.1203
15 minute winter	ACO_2	2.000	JCT	3.1	0.966	0.056	0.0136
15 minute winter	JCT	1.001_1	S03	6.4	0.781	0.442	0.0407
15 minute winter	S03	1.002	S05	6.4	0.624	0.442	0.1990
15 minute winter	S04	3.000	S05	5.1	0.741	0.354	0.0683
15 minute winter	S05	1.003	SOAKAWAY	11.4	0.918	0.786	0.1807
30 minute winter	SOAKAWAY	Infiltration		1.9			

Results for 100 year +40% CC 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
60 minute winter	S01	50	163.125	0.075	3.2	0.0019	0.0000	OK
60 minute winter	S02	52	163.125	0.189	3.2	0.0047	0.0000	SURCHARGED
60 minute winter	ACO_2	51	163.126	0.061	2.9	0.0000	0.0000	OK
60 minute winter	JCT	50	163.126	0.309	6.1	0.0000	0.0000	SURCHARGED
60 minute winter	S03	51	163.122	0.338	6.1	0.0084	0.0000	SURCHARGED
15 minute winter	S04	10	163.140	0.090	9.4	0.0023	0.0000	OK
60 minute winter	S05	51	163.124	0.470	11.0	0.0000	0.0000	SURCHARGED
60 minute winter	SOAKAWAY	51	163.120	0.563	11.0	6.8443	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
60 minute winter	S01	1.000	S02	3.2	0.647	0.221	0.1542
60 minute winter	S02	1.001	JCT	3.2	0.494	0.221	0.3134
60 minute winter	ACO_2	2.000	JCT	2.9	0.751	0.053	0.0323
60 minute winter	JCT	1.001_1	S03	6.1	0.767	0.422	0.0871
60 minute winter	S03	1.002	S05	6.1	0.616	0.422	0.3433
15 minute winter	S04	3.000	S05	9.3	0.857	0.641	0.1070
60 minute winter	S05	1.003	SOAKAWAY	11.0	0.909	0.759	0.2572
60 minute winter	SOAKAWAY	Infiltration		2.2			

Appendix B
Infiltration Results

Figure 2: Exploratory Hole Locations

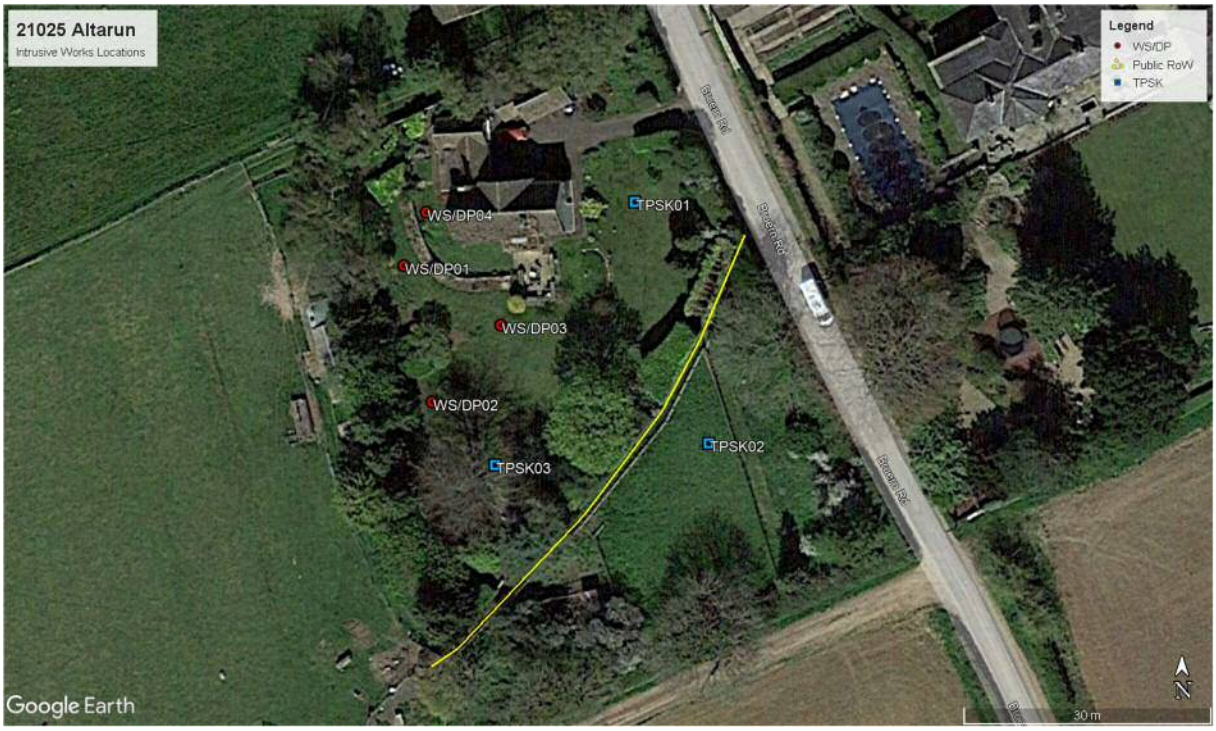


Figure 2 – Exploratory Hole Location Plan

Job Number 21025	**Project** Altarnun
Client MiCiM	**Date** August 2023

Appendix B: Soakage Results (Interim)

TPSK01:

Test 1:

Time (minutes)	Depths (m)
0.00	0.800
0.30	0.880
1.00	0.910
1.30	0.970
2.00	1.000
3.00	1.060
4.00	1.110
5.00	1.160
7.00	1.250
9.00	1.340
11.00	1.420
14.00	1.500

Rate: 3.17E-04 m/sec

Test 2:

Time (minutes)	Depths (m)
0.00	0.700
0.30	0.770
1.00	0.800
1.30	0.830
2.00	0.860
3.00	0.910
4.00	0.960
5.00	1.010
6.00	1.040
8.00	1.120
10.00	1.190
12.00	1.230
15.00	1.320
18.00	1.400

Rate: 2.58E-04 m/sec

Test 3:

Time (minutes)	Depths (m)
0.00	0.790
0.30	0.810
1.00	0.840
1.30	0.860
2.00	0.920
3.00	0.950
4.00	1.000
5.00	1.040
7.00	1.110
9.00	1.150
11.00	1.210
13.00	1.260
15.00	1.300
17.00	1.340
19.00	1.390

Rate: 2.40E-04 m/sec

TPSK02:

Test 1:

Time (minutes)	Depths (m)
0.00	0.750
1.00	0.810
2.00	0.890
3.00	0.960
4.00	1.010
5.00	1.050
7.00	1.110
9.00	1.170
11.00	1.230
13.00	1.290
15.00	1.330
17.00	1.370

Rate: 2.64E-04 m/sec

Test 2:

Time (minutes)	Depths (m)
0.00	0.710
1.00	0.760
2.00	0.810
3.00	0.860
4.00	0.890
6.00	0.940
8.00	1.000
10.00	1.070
13.00	1.160
16.00	1.210
20.00	1.300
22.00	1.330

Rate: 2.14E-4 m/sec

Test 3:

Time (minutes)	Depths (m)
0.00	0.710
1.00	0.750
2.00	0.800
3.00	0.820
4.00	0.870
6.00	0.920
8.00	0.980
12.00	1.100
16.00	1.200
20.00	1.280
22.00	1.330

Rate: 2.15E-04 m/sec

TPSK03:

Test 1:

Time (minutes)	Depths (m)
0.00	0.700
1.00	0.760
2.00	0.790
3.00	0.830
4.00	0.850
5.30	0.900
7.30	0.960
9.30	0.990
11.30	1.030
13.30	1.060
17.30	1.130
23.30	1.220
28.30	1.300

Rate: 1.63E-04 m/sec

Test 2:

Time (minutes)	Depths (m)
0.00	0.760
1.00	0.790
2.00	0.800
3.00	0.830
5.00	0.860
8.00	0.910
13.00	0.970
18.00	1.030
23.00	1.100
29.00	1.170
33.00	1.200

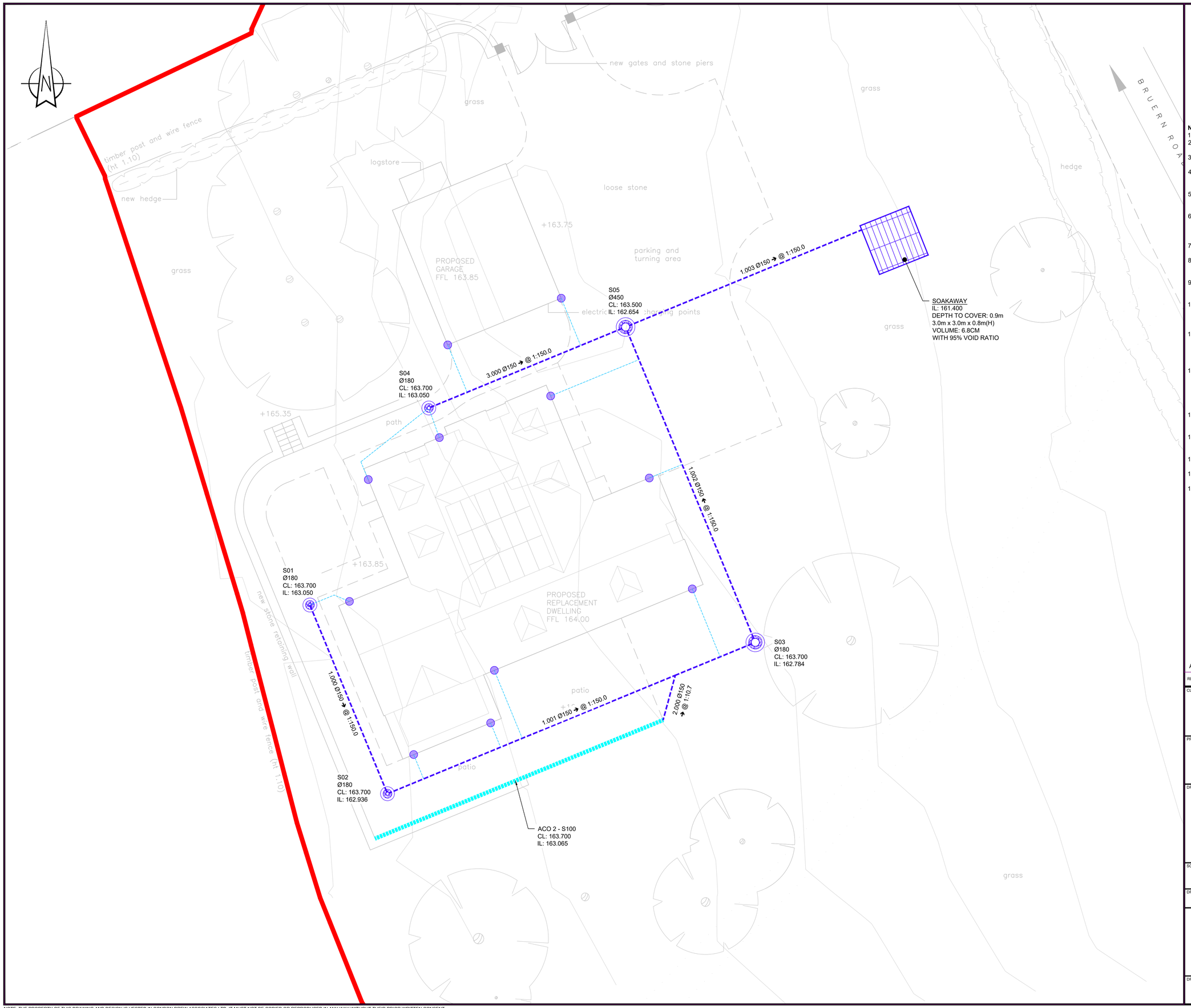
Rate: 1.13E-04 m/sec

Test 3:

Time (minutes)	Depths (m)
1.00	0.780
2.00	0.810
3.00	0.860
5.30	0.890
6.30	0.910
11.30	0.970
16.30	1.020
21.30	1.070
26.30	1.120

Rate: 1.12E-04 m/sec

Appendix C
Drainage Drawings



KEY

- PROPERTY BOUNDARY
- SURFACE WATER SEWER
- RWP CONNECTION SEWER
- ACO CHANNEL DRAIN
- RWP CONNECTION
- SURFACE WATER INSPECTION CHAMBER
- SOAKAWAY CRATES

NOTES

1. DO NOT SCALE FROM DRAWING.
2. ALL DIMENSIONS ARE IN METRES, UNLESS STATED OTHERWISE. PIPE DIAMETERS ARE IN mm.
3. THIS DRAWING IS FOR ILLUSTRATIVE PURPOSES ONLY AND NOT FOR CONSTRUCTION.
4. THE INFORMATION CONTAINED IN THIS DRAWING IS BASED ON TOPOGRAPHICAL SURVEY DATA PROVIDED BY OTHERS AND CDA SHALL NOT BE LIABLE FOR ANY INACCURACIES OR DEFICIENCIES.
5. POSITION, SIZE AND DEPTH OF ALL EXISTING SEWERS AND SERVICES SHALL BE ESTABLISHED PRIOR TO COMMENCEMENT ON SITE.
6. ALL SEWERS TO BE THERMOPLASTIC PIPES. PIPES, JOINTS AND FITTINGS FOR SEWERS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 1401-1 (PVC-U), BS EN1852-1 (PP), OR BS EN 12666-1 (PE) AS APPROPRIATE.
7. ALL SEWERS TO BE CONSTRUCTED TO THE DESIGN AND CONSTRUCTION GUIDANCE (DCG OR "THE CODE").
8. NO TREES TO BE PLANTED WITHIN SEWER EASEMENT. FOR DETAILS ON PERMITTED VEGETATION IN PROXIMITY TO SEWERS, SEE SFA7.
9. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS, ARCHITECTS AND SPECIALISTS DRAWINGS AND THE SPECIFICATION.
10. DO NOT SCALE FROM THIS DRAWING MANUALLY OR ELECTRONICALLY. WRITTEN PERMISSION MUST BE OBTAINED FROM CDA PRIOR TO SCALING ELECTRONICALLY OR USING THIS ELECTRONIC FILE.
11. PRIOR TO COMMENCEMENT OF THE WORKS, THE CONTRACTOR SHALL LIAISE WITH ALL RELEVANT AUTHORITIES AND SERVICE PROVIDERS TO ENSURE THAT ALL PIPES, CABLES AND OTHER PLANT IS/ARE LOCATED, PROTECTED AND WHERE NECESSARY DIVERTED.
12. PRIOR TO COMMENCEMENT OF THE WORKS, THE CONTRACTOR SHALL DETERMINE THE LOCATION AND DEPTH OF EXISTING UTILITIES ACROSS THE SITE; LIAISE WITH ALL RELEVANT AUTHORITIES AND SERVICE PROVIDERS TO ENSURE THAT ALL PIPES, CABLES AND OTHER PLANT IS/ARE LOCATED, PROTECTED AND WHERE NECESSARY DIVERTED.
13. ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT BRITISH STANDARDS, EUROPEAN NORMS, CODES OF PRACTICE AND BUILDING PRACTICE.
14. ALL DIMENSIONS ARE TO BE CHECKED BY THE CONTRACTOR PRIOR TO STARTING THE WORKS ON SITE. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.
15. FOR CIVIL & STRUCTURAL HEALTH & SAFETY HAZARDS PLEASE REFER TO DESIGNERS RISK ASSESSMENTS.
16. IF YOU DO NOT UNDERSTAND FULLY ANY OF THE DETAILS SHOWN ON THIS DRAWING CONTACT THE ENGINEER FOR CLARIFICATION.
17. THE CONTRACTOR SHALL OBTAIN PRIOR APPROVAL AND ALL NECESSARY LICENCES FROM THE THE HIGHWAY AUTHORITY BEFORE CARRYING OUT ANY WORKS WITHIN THE EXISTING PUBLIC HIGHWAY.

REV	DETAILS	DRAWN BY	CHECKED BY	DATE
A	RWPs AND SOAKAWAY AMENDED	MM	MM	04.09.23

CLIENT:

MR I GOLDING

PROJECT:

ALTARNUN, FIFIELD

DRAWING TITLE:

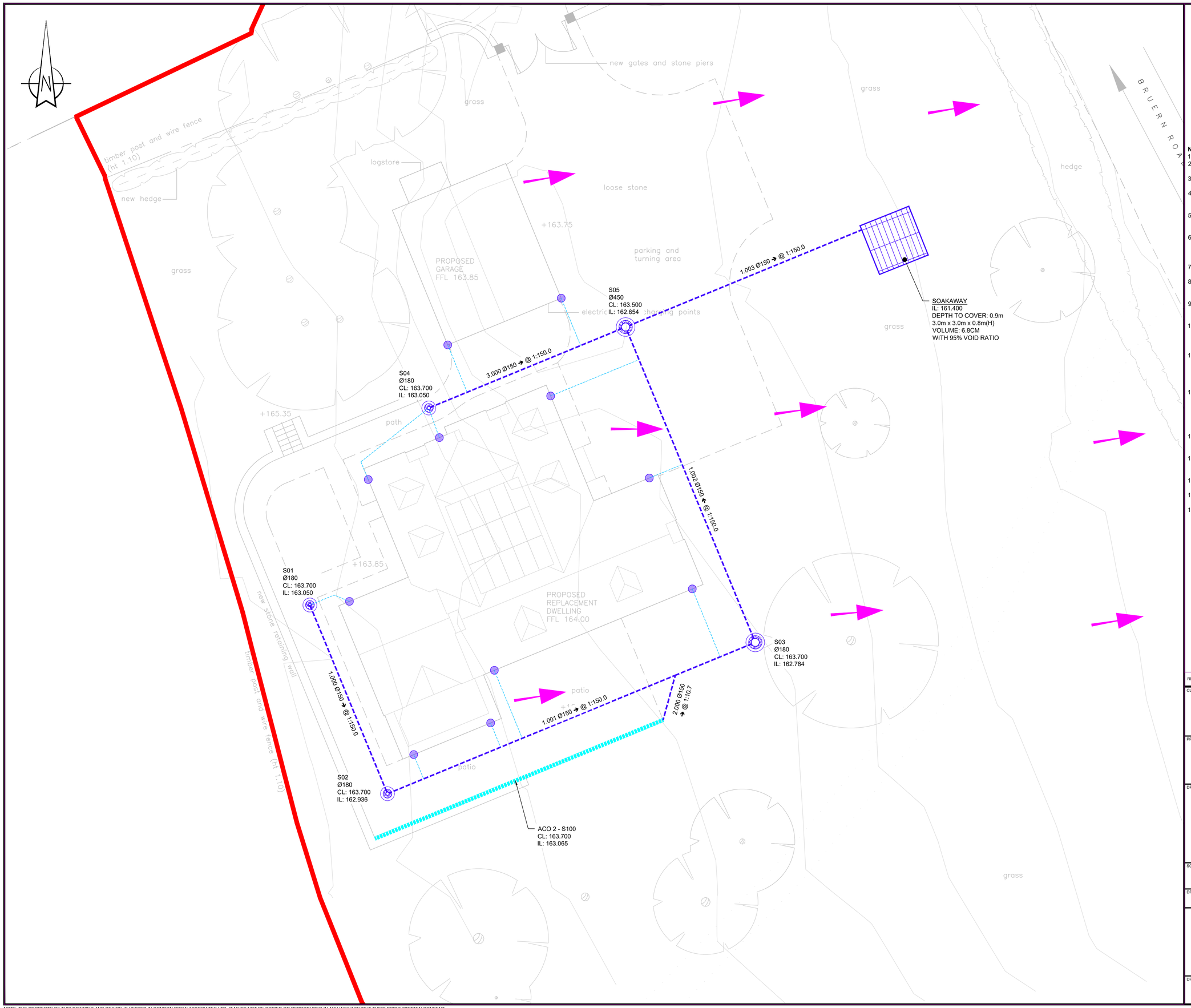
SURFACE WATER DRAINAGE LAYOUT

SCALES:	SHEET SIZE:
1:100	A1

DRAWN:	CHECKED:	DATE:
JMD	MRM	31.08.2023

DRAWING NUMBER: 1849-501

REVISION: A



KEY

- PROPERTY BOUNDARY
- SURFACE WATER SEWER
- RWP CONNECTION SEWER
- ACO CHANNEL DRAIN
- RWP CONNECTION
- SURFACE WATER INSPECTION CHAMBER
- SOAKAWAY CRATES
- EXCEEDANCE FLOW PATH

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