

WREXHAM SAB SOUTHERN PARCEL PERMEABLE ROAD DETAILS

Site at Rossett Road, Rossett

For

Castle Green Homes Ltd



Rev. 4.0

20th October 2023

ROSSETT ROAD, ROSSETT

Southern Parcel Permeable Road Details

30th October 2023

Issue no.	Rev. 1.0	Rev. 1.1	Rev. 2.0	Rev. 3.0	Rev. 4.0
Date:	20 th August 2021	24 th May 2022	27 th February 2023	25 th July 2023	30 th October 2023
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Betts Associates Ltd
Old Marsh Farm Barns
Welsh Road
Sealand
Flintshire
CH5 2LY

Tel no. 01244 288178
Project no. CAS02

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023		
	Designed by: CP	Checked by: RDN	Approved By: RA
	Report Details: Type: Junctions Storm Phase: South		
Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY			



Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Sump Depth (m)	Chamber Shape	Diameter (m)	Lock
Silt Trap	Manhole	337281.028	357123.285	13.441	1.517	11.924	0.450	Circular	0.450	None
Silt Trap (35)	Manhole	337285.218	357134.288	13.429	1.563	11.866	0.450	Circular	0.450	None
Silt Trap (61)	Manhole	337317.546	357175.189	13.394	1.526	11.868	0.450	Circular	0.450	None
Silt Trap (50)	Manhole	337276.924	357112.874	13.047	1.067	11.980	0.450	Circular	0.450	None
Silt Trap (49)	Manhole	337275.471	357109.107	13.452	1.307	12.145	0.450	Circular	0.450	None
Silt Trap (60)	Manhole	337324.368	357165.127	13.348	1.555	11.793	0.450	Circular	0.450	None
Silt Trap (59)	Manhole	337347.231	357161.040	13.105	1.360	11.745	0.450	Circular	0.450	None
Silt Trap (7)	Manhole	337347.364	357172.936	13.150	1.354	11.796	0.450	Circular	0.450	None
Silt Trap (57)	Manhole	337313.322	357166.220	13.291	1.338	11.953	0.450	Circular	0.450	None
Silt Trap (12)	Manhole	337294.739	357200.147	13.488	1.599	11.889	0.450	Circular	0.450	None
Silt Trap (23)	Manhole	337294.174	357221.250	13.423	1.618	11.805	0.450	Circular	0.450	None
Silt Trap (1)	Manhole	337294.893	357209.675	13.398	1.507	11.891	0.450	Circular	0.450	None
Silt Trap (21)	Manhole	337288.886	357247.026	13.348	1.485	11.863	0.450	Circular	0.450	None
Silt Trap (25)	Manhole	337285.987	357255.416	13.340	1.587	11.753	0.450	Circular	0.450	None
Silt Trap (4)	Manhole	337277.068	357279.038	13.417	1.847	11.570	0.450	Circular	0.450	None
Silt Trap (48)	Manhole	337266.296	357114.512	13.443	1.298	12.145	0.450	Circular	0.450	None
Silt Trap (47)	Manhole	337275.883	357138.300	13.430	1.343	12.087	0.450	Circular	0.450	None
Silt Trap (46)	Manhole	337271.563	357127.904	13.435	1.237	12.198	0.450	Circular	0.450	None
Silt Trap (45)	Manhole	337272.429	357166.609	13.452	1.735	11.717	0.450	Circular	0.450	None
Silt Trap (37)	Manhole	337279.014	357150.813	13.448	1.253	12.195	0.450	Circular	0.450	None
Silt Trap (11)	Manhole	337293.478	357186.674	13.507	1.562	11.945	0.450	Circular	0.450	None
Silt Trap (44)	Manhole	337269.494	357167.112	13.463	1.396	12.067	0.450	Circular	0.450	None
Silt Trap (56)	Manhole	337256.565	357168.626	13.489	1.438	12.051	0.450	Circular	0.450	None
Silt Trap (71)	Manhole	337243.660	357170.137	13.486	1.431	12.055	0.450	Circular	0.450	None
Silt Trap (70)	Manhole	337222.509	357172.471	13.420	1.567	11.853	0.450	Circular	0.450	None
Silt Trap (36)	Manhole	337300.214	357167.440	13.420	1.377	12.043	0.450	Circular	0.450	None
Silt Trap (64)	Manhole	337252.049	357178.810	13.464	1.620	11.844	0.450	Circular	0.450	None
Silt Trap (63)	Manhole	337247.086	357179.394	13.464	1.405	12.059	0.450	Circular	0.450	None
Silt Trap (62)	Manhole	337237.205	357180.554	13.467	1.444	12.023	0.450	Circular	0.450	None
Silt Trap (66)	Manhole	337223.499	357182.349	13.451	1.426	12.025	0.450	Circular	0.450	None
Silt Trap (52)	Manhole	337223.691	357205.815	13.603	1.407	12.196	0.450	Circular	0.450	None
Silt Trap (32)	Manhole	337225.699	357222.955	13.693	1.547	12.146	0.450	Circular	0.450	None
Silt Trap (31)	Manhole	337225.820	357223.945	13.690	1.434	12.256	0.450	Circular	0.450	None
Silt Trap (26)	Manhole	337229.471	357242.506	13.457	1.432	12.025	0.450	Circular	0.450	None
_Silt Trap (30)	Manhole	337224.343	357250.404	13.400	1.389	12.011	0.450	Circular	0.450	None
Silt Trap (10)	Manhole	337282.952	357187.534	13.512	1.589	11.923	0.450	Circular	0.450	None
Silt Trap (16)	Manhole	337284.044	357197.432	13.504	1.412	12.092	0.450	Circular	0.450	None
Silt Trap (51)	Manhole	337284.307	357212.334	13.456	1.592	11.864	0.450	Circular	0.450	None
Silt Trap (20)	Manhole	337283.065	357225.408	13.420	1.529	11.891	0.450	Circular	0.450	None
Silt Trap (54)	Manhole	337282.737	357227.494	13.414	1.517	11.897	0.450	Circular	0.450	None
Silt Trap (73)	Manhole	337280.250	357239.060	13.382	1.494	11.888	0.450	Circular	0.450	None

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Silt Trap (3)	Manhole	337276.791	357250.033	13.352	1.449	11.903	0.450	Circular	0.450	None
Silt Trap (2)	Manhole	337273.022	357259.495	13.350	1.459	11.891	0.450	Circular	0.450	None
Silt Trap (8)	Manhole	337268.805	357269.831	13.394	1.497	11.897	0.450	Circular	0.450	None
Silt Trap (65)	Manhole	337214.136	357165.910	13.567	1.767	11.800	0.450	Circular	0.450	None
Silt Trap (18)	Manhole	337264.650	357296.162	13.474	1.545	11.929	0.450	Circular	0.450	None
Simple Junction	Simple Junction	337286.623	357172.061							
Hydro-Brake	Manhole	337326.643	357071.972	13.412	2.378	11.035	0.000	Circular	1.800	None
Manhole (R4TH)	Manhole	337222.579	357235.386	13.486	1.201	12.285	0.000	Circular	1.050	None
Silt Trap (5)	Manhole	337281.329	357298.382	13.368	1.275	12.093	0.000	Circular	0.450	None
Domestic IC (3)	Manhole	337288.358	357296.709	13.279	1.138	12.141	0.000	Circular	0.450	None
Domestic IC (2)	Manhole	337297.629	357287.811	13.102	0.875	12.227	0.000	Circular	0.450	None
Domestic IC (1)	Manhole	337308.130	357280.199	12.923	0.610	12.313	0.000	Circular	0.450	None
Domestic IC	Manhole	337318.951	357272.924	12.881	0.481	12.400	0.000	Circular	0.450	None
Wet Well	Manhole	337337.172	357070.306	13.404	2.433	10.971	0.000	Circular	2.400	None

Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
Silt Trap	Inlet	S Drive (40) S Roof (35)	(None)	No Restriction
Silt Trap (35)	Inlet	S Drive (41) S Roof (36)	(None)	No Restriction
Silt Trap (61)	Inlet	S Drive (33) S Roof (24)	(None)	No Restriction
Silt Trap (50)	Inlet	S Drive (38)	(None)	No Restriction
	Inlet (1)	S Roof (34)	(None)	No Restriction
Silt Trap (49)	Inlet	S Drive (39) S Roof (33) S Roof (32)	(None)	No Restriction
Silt Trap (60)	Inlet	S Drive (30) S Roof (40)	(None)	No Restriction
Silt Trap (59)	Inlet	S Roof (31) S Drive (31) S Roof (28) S Roof (53) S Roof (29) S Roof (30)	(None)	No Restriction
Silt Trap (7)	Inlet	S Roof (25) S Roof (26) S Drive (32)	(None)	No Restriction
	Inlet (1)	S Roof (27)	(None)	No Restriction

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Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
Silt Trap (57)	Inlet	S Drive (29) S Roof (39)	(None)	No Restriction
Silt Trap (12)	Inlet	S Drive (13) S Roof (22)	(None)	No Restriction
Silt Trap (23)	Inlet	S Drive (2) S Roof (12)	(None)	No Restriction
Silt Trap (1)	Inlet	S Roof (54)	(None)	No Restriction
Silt Trap (21)	Inlet	S Drive (3) S Roof (7)	(None)	No Restriction
Silt Trap (25)	Inlet	S Drive S Drive (1)	(None)	No Restriction
Silt Trap (4)	Inlet	S Roof	(None)	No Restriction
Silt Trap (48)	Inlet	S Roof (41) S Drive (37) S Roof (42)	(None)	No Restriction
Silt Trap (47)	Inlet	S Roof (44) S Drive (35)	(None)	No Restriction
Silt Trap (46)	Inlet	S Drive (36) S Roof (43)	(None)	No Restriction
Silt Trap (45)	Inlet	S Drive (27) S Roof (46)	(None)	No Restriction
Silt Trap (37)	Inlet	S Roof (45)	(None)	No Restriction
Silt Trap (11)	Inlet	S Drive (34) S Roof (23)	(None)	No Restriction
Silt Trap (44)	Inlet	S Drive (26) S Roof (47)	(None)	No Restriction
Silt Trap (56)	Inlet	S Drive (25) S Roof (48)	(None)	No Restriction
Silt Trap (71)	Inlet	S Drive (24) S Roof (55)	(None)	No Restriction
Silt Trap (70)	Inlet	S Drive (22) S Roof (50)	(None)	No Restriction
Silt Trap (36)	Inlet	S Roof (37) S Drive (28) S Roof (38)	(None)	No Restriction
Silt Trap (64)	Inlet	S Drive (42) S Roof (17)	(None)	No Restriction
Silt Trap (63)	Inlet	S Drive (21) S Roof (56)	(None)	No Restriction
Silt Trap (62)	Inlet	S Drive (20) S Roof (16)	(None)	No Restriction

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Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
Silt Trap (66)	Inlet	S Drive (19) S Roof (57)	(None)	No Restriction
Silt Trap (52)	Inlet	S Drive (15) S Roof (15)	(None)	No Restriction
Silt Trap (32)	Inlet	S Drive (16) S Roof (14)	(None)	No Restriction
Silt Trap (31)	Inlet	S Drive (17) S Roof (13)	(None)	No Restriction
Silt Trap (26)	Inlet	S Drive (6) S Roof (6)	(None)	No Restriction
_Silt Trap (30)	Inlet	S Drive (5) S Roof (5)	(None)	No Restriction
Silt Trap (10)	Inlet	S Drive (18) S Roof (18) S Roof (19)	(None)	No Restriction
Silt Trap (16)	Inlet	S Drive (14) S Roof (20)	(None)	No Restriction
Silt Trap (51)	Inlet	S Drive (12) S Roof (21)	(None)	No Restriction
Silt Trap (20)	Inlet	S Drive (11) S Roof (11)	(None)	No Restriction
Silt Trap (54)	Inlet	S Drive (10) S Roof (10)	(None)	No Restriction
Silt Trap (73)	Inlet	S Drive (9) S Roof (9)	(None)	No Restriction
Silt Trap (3)	Inlet	S Drive (8) S Roof (8)	(None)	No Restriction
Silt Trap (2)	Inlet	S Drive (7) S Roof (4)	(None)	No Restriction
Silt Trap (8)	Inlet	S Drive (4) S Roof (3)	(None)	No Restriction
_Silt Trap (65)	Inlet	S Drive (23) S Roof (51) S Roof (52) S Roof (49)	(None)	No Restriction
Silt Trap (18)	Inlet	S Roof (2) S Roof (1) S Drive (52)	(None)	No Restriction
Simple Junction	Inlet	R1(c) - R1(d)	(None)	No Restriction
	Inlet (1)	R2 - R1(d)	(None)	No Restriction
	Inlet (2)	R3(a) - R1(d)	(None)	No Restriction

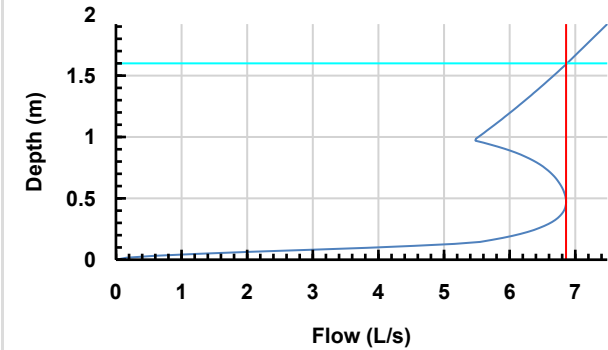
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Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
Hydro-Brake	Inlet (1)	Pipe (47)	(None)	No Restriction
Manhole (R4TH)	Inlet	Pipe (45) Pipe (49)	(None)	No Restriction
Silt Trap (5)	Inlet	Pipe (54)	(None)	No Restriction
Domestic IC (3)	Inlet (1)	Pipe (53)	(None)	No Restriction
Domestic IC (2)	Inlet (1)	Pipe (52)	(None)	No Restriction
	Inlet (2)	S Roof (69)	(None)	No Restriction
Domestic IC (1)	Inlet (1)	Pipe (51)	(None)	No Restriction
	Inlet (2)	S Roof (70) S Roof (71)	(None)	No Restriction
Domestic IC	Inlet	S Roof (72)	(None)	No Restriction
Wet Well	Inlet	Pipe (56)	(None)	No Restriction

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
Silt Trap	Outlet	Pipe (26)	Free Discharge
Silt Trap (35)	Outlet	Pipe (29)	Free Discharge
Silt Trap (61)	Outlet	Pipe (20)	Free Discharge
Silt Trap (50)	Outlet	Pipe (24)	Free Discharge
Silt Trap (49)	Outlet	Pipe (23)	Free Discharge
Silt Trap (60)	Outlet	Pipe (19)	Free Discharge
Silt Trap (59)	Outlet	Pipe (18)	Free Discharge
Silt Trap (7)	Outlet	Pipe (17)	Free Discharge
Silt Trap (57)	Outlet	Pipe (21)	Free Discharge
Silt Trap (12)	Outlet	Pipe (13)	Free Discharge
Silt Trap (23)	Outlet	Pipe (10)	Free Discharge
Silt Trap (1)	Outlet	Pipe (12)	Free Discharge
Silt Trap (21)	Outlet	Pipe (6)	Free Discharge
Silt Trap (25)	Outlet	Pipe (4)	Free Discharge
Silt Trap (4)	Outlet	Pipe (1)	Free Discharge
Silt Trap (48)	Outlet	Pipe (25)	Free Discharge
Silt Trap (47)	Outlet	Pipe (28)	Free Discharge
Silt Trap (46)	Outlet	Pipe (27)	Free Discharge
Silt Trap (45)	Outlet	Pipe (32)	Free Discharge
Silt Trap (37)	Outlet	Pipe (30)	Free Discharge
Silt Trap (11)	Outlet	Pipe (15)	Free Discharge
Silt Trap (44)	Outlet	Pipe (31)	Free Discharge
Silt Trap (56)	Outlet	Pipe (33)	Free Discharge
Silt Trap (71)	Outlet	Pipe (36)	Free Discharge
Silt Trap (70)	Outlet	Pipe (38)	Free Discharge
Silt Trap (36)	Outlet	Pipe (22)	Free Discharge
Silt Trap (64)	Outlet	Pipe (34)	Free Discharge
Silt Trap (63)	Outlet	Pipe (35)	Free Discharge
Silt Trap (62)	Outlet	Pipe (37)	Free Discharge
Silt Trap (66)	Outlet	Pipe (39)	Free Discharge

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Junction	Outlet Name	Outgoing Connection	Outlet Type
Silt Trap (52)	Outlet	Pipe (41)	Free Discharge
Silt Trap (32)	Outlet	Pipe (42)	Free Discharge
Silt Trap (31)	Outlet	Pipe (43)	Free Discharge
Silt Trap (26)	Outlet	Pipe (49)	Free Discharge
Silt Trap (30)	Outlet	Pipe (45)	Free Discharge
Silt Trap (10)	Outlet	Pipe (16)	Free Discharge
Silt Trap (16)	Outlet	Pipe (14)	Free Discharge
Silt Trap (51)	Outlet	Pipe (11)	Free Discharge
Silt Trap (20)	Outlet	Pipe (9)	Free Discharge
Silt Trap (54)	Outlet	Pipe (8)	Free Discharge
Silt Trap (73)	Outlet	Pipe (7)	Free Discharge
Silt Trap (3)	Outlet	Pipe (5)	Free Discharge
Silt Trap (2)	Outlet	Pipe (3)	Free Discharge
Silt Trap (8)	Outlet	Pipe (2)	Free Discharge
Silt Trap (65)	Outlet	Pipe (40)	Free Discharge
Silt Trap (18)	Outlet	Pipe	Free Discharge
Simple Junction	Outlet	R1(c) - R1(d) (1)	Free Discharge
Hydro-Brake	Outlet	Pipe (56)	Hydro-Brake®
	Invert Level (m)	11.035	
	Design Depth (m)	1.600	
	Design Flow (L/s)	6.88	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☒	
	Unit Reference	SHE-0114-6880-1600-6880	
			
Manhole (R4TH)	Outlet	Pipe (50)	Free Discharge
Silt Trap (5)	Outlet	Pipe (55)	Free Discharge
Domestic IC (3)	Outlet	Pipe (54)	Free Discharge
Domestic IC (2)	Outlet	Pipe (53)	Free Discharge

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Junction	Outlet Name	Outgoing Connection	Outlet Type
Domestic IC (1)	Outlet	Pipe (52)	Free Discharge
Domestic IC	Outlet	Pipe (51)	Free Discharge

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Pond

Type : Pond

Dimensions

Exceedance Level (m)	13.000
Depth (m)	1.842
Base Level (m)	11.158
Freeboard (mm)	0
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	3.00
Total Volume (m³)	682.500

Depth (m)	Area (m²)	Volume (m³)
0.000	200.02	0.000
1.842	573.00	682.500

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Pipe (46)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (47)
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	33.578
Friction Scheme	Manning's n
n	0.025

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S Road 1 (a)

Type : Porous Paving

Dimensions	
Exceedance Level (m)	13.350
Depth (m)	1.327
Base Level (m)	12.023
Paving Layer Depth (mm)	450
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	21.099
Long. Slope (1:X)	400.00
Width (m)	5.500
Total Volume (m³)	31.706

Under Drain	
Height Above Base (m)	0.010
Diameter (mm)	225
No. of Barrels	2
Release Height (m)	0.010
Friction Scheme	Manning's n
n	0.015

Inlets	
Inlet	
Inlet Type	Point Inflow
Incoming Item(s)	S Road (9)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)	
Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)	
Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (55)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets	
Outlet	
Outgoing Connection	R1(a) - R1(b)
Outlet Type	Free Discharge

Advanced	
Conductivity (m/hr)	500.0



S Road 1 (b)

Type : Porous Paving

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Dimensions

Exceedance Level (m)	13.322
Depth (m)	1.474
Base Level (m)	11.848
Paving Layer Depth (mm)	450
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	60.678
Long. Slope (1:X)	400.00
Width (m)	5.500
Total Volume (m³)	105.899

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	225
No. of Barrels	2
Release Height (m)	0.010
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	S Road (8)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (1)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (2)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (3)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (3)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (4)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (4)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (5)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (5)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (6)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (6)
Bypass Destination	(None)
Capacity Type	No Restriction

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
Report Details: Type: Stormwater Controls Storm Phase: South	Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY			

Inlet (7)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (7)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (8)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (8)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (9)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (9)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (10)

Inlet Type	Point Inflow
Incoming Item(s)	R1(a) - R1(b)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	R1(b) - R1(c)
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	500.0
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S Road 1 (c)

Type : Porous Paving

Dimensions

Exceedance Level (m)	13.414
Depth (m)	1.672
Base Level (m)	11.742
Paving Layer Depth (mm)	450
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	35.212
Long. Slope (1:X)	400.00
Width (m)	5.500
Total Volume (m³)	72.958

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	225
No. of Barrels	2
Release Height (m)	0.010
Friction Scheme	Manning's n
n	0.015

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
Report Details: Type: Stormwater Controls Storm Phase: South	Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY			

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	S Road (7)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (10)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (11)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (3)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (12)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (4)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (13)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (5)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (14)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (6)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (15)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (7)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (16)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (8)

Inlet Type	Point Inflow
Incoming Item(s)	R1(b) - R1(c)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	R1(c) - R1(d)
Outlet Type	Free Discharge

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by:	Checked by:	Approved By:	
	CP	RDN	RA	
Report Details:			Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY	
Type: Stormwater Controls				
Storm Phase: South				

Advanced

Conductivity (m/hr)	500.0
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S Road 1 (d)

Type : Porous Paving

Dimensions

Exceedance Level (m)	13.336
Depth (m)	1.879
Base Level (m)	11.457
Paving Layer Depth (mm)	450
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	40.818
Long. Slope (1:X)	400.00
Width (m)	5.500
Total Volume (m³)	98.516

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	225
No. of Barrels	2
Release Height (m)	0.010
Friction Scheme	Manning's n
n	0.015

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
Report Details: Type: Stormwater Controls Storm Phase: South	Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY			

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	S Road (2)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (26)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (27)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (3)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (28)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (4)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (29)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (5)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (30)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (6)

Inlet Type	Point Inflow
Incoming Item(s)	R1(c) - R1(d) (1)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	R1(d) - R1(e)
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	500.0
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S Road 1 (e)

Type : Porous Paving

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
Report Details: Type: Stormwater Controls Storm Phase: South	Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY			

Dimensions

Exceedance Level (m)	13.337
Depth (m)	1.946
Base Level (m)	11.391
Paving Layer Depth (mm)	450
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	20.332
Long. Slope (1:X)	400.00
Width (m)	5.500
Total Volume (m³)	51.320

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	225
No. of Barrels	2
Release Height (m)	0.010
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	S Road (1)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (23)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (24)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (3)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (25)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (4)

Inlet Type	Point Inflow
Incoming Item(s)	R1(d) - R1(e)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	R1(e) - R1TH
Outlet Type	Orifice
Diameter (m)	0.225
Coefficient of Discharge	0.600
Invert Level (m)	11.391

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
	Report Details: Type: Stormwater Controls Storm Phase: South			
Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY				

Advanced

Conductivity (m/hr)	500.0
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S Road 2

Type : Porous Paving

Dimensions

Exceedance Level (m)	13.164
Depth (m)	1.434
Base Level (m)	11.730
Paving Layer Depth (mm)	450
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	59.841
Long. Slope (1:X)	400.00
Width (m)	4.800
Total Volume (m³)	88.124

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	225
No. of Barrels	2
Release Height (m)	0.010
Friction Scheme	Manning's n
n	0.015

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
Report Details: Type: Stormwater Controls Storm Phase: South	Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY			

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	S Road (3)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (17)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (18)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (3)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (19)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (4)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (20)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (5)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (21)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (6)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (22)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	R2 - R1(d)
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	500.0
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CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
Report Details: Type: Stormwater Controls Storm Phase: South	Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY			



S Road 3 (a)

Type : Porous Paving

Dimensions

Exceedance Level (m)	13.365
Depth (m)	1.375
Base Level (m)	11.990
Paving Layer Depth (mm)	450
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	14.774
Long. Slope (1:X)	400.00
Width (m)	4.800
Total Volume (m³)	20.501

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	225
No. of Barrels	2
Release Height (m)	0.010
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	S Road (4)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (31)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (32)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (3)

Inlet Type	Point Inflow
Incoming Item(s)	Pipe (48)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	R3(a) - R1(d)
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	500.0
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S Road 3 (b)

Type : Porous Paving

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023					
	Designed by: CP	Checked by: RDN	Approved By: RA			
	Report Details: Type: Stormwater Controls Storm Phase: South				Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY	

Dimensions	
Exceedance Level (m)	13.319
Depth (m)	1.273
Base Level (m)	12.046
Paving Layer Depth (mm)	450
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	41.406
Long. Slope (1:X)	400.00
Width (m)	4.800
Total Volume (m³)	51.377

Under Drain	
Height Above Base (m)	0.010
Diameter (mm)	225
No. of Barrels	2
Release Height (m)	0.010
Friction Scheme	Manning's n
n	0.015

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
Report Details: Type: Stormwater Controls Storm Phase: South	Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY			

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	S Road (5)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (33)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (34)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (3)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (35)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (4)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (36)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (5)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (37)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (6)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (38)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (7)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (39)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (8)

Inlet Type	Point Inflow
Incoming Item(s)	Pipe (44)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (48)
Outlet Type	Free Discharge

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
	Report Details: Type: Stormwater Controls Storm Phase: South			
			Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY	

Advanced

Conductivity (m/hr)	500.0
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S Road 4

Type : Porous Paving

Dimensions

Exceedance Level (m)	13.380
Depth (m)	1.230
Base Level (m)	12.150
Paving Layer Depth (mm)	450
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	57.709
Long. Slope (1:X)	1000.00
Width (m)	4.800
Total Volume (m³)	68.031

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	225
No. of Barrels	2
Release Height (m)	0.010
Friction Scheme	Manning's n
n	0.015

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
Report Details: Type: Stormwater Controls Storm Phase: South	Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY			

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	S Road (6)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (40)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (41)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (3)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (42)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (4)

Inlet Type	Lateral Inflow
Incoming Item(s)	Pipe (43)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (5)

Inlet Type	Point Inflow
Incoming Item(s)	Pipe (50)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (44)
Outlet Type	Orifice
Diameter (m)	0.225
Coefficient of Discharge	0.600
Invert Level (m)	12.150

Advanced

Conductivity (m/hr)	500.0
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CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
Report Details: Type: Stormwater Controls Storm Phase: South	Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY			



S Road 1TH

Type : Porous Paving

Dimensions

Exceedance Level (m)	13.209
Depth (m)	1.872
Base Level (m)	11.337
Paving Layer Depth (mm)	450
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	21.500
Long. Slope (1:X)	400.00
Width (m)	5.500
Total Volume (m³)	51.642

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	225
No. of Barrels	2
Release Height (m)	0.010
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	S Road
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	R1(e) - R1TH
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (46)
Outlet Type	Flap Valve
Diameter (m)	0.225
Coefficient of Discharge	0.600
Invert Level (m)	11.337

Advanced

Conductivity (m/hr)	500.0
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CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
Report Details: Type: Stormwater Controls Storm Phase: South	Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY			



Plot 97-101 SA

Type : Porous Paving

Dimensions	
Exceedance Level (m)	13.600
Depth (m)	0.600
Base Level (m)	13.000
Paving Layer Depth (mm)	80
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	52.041
Long. Slope (1:X)	175.00
Width (m)	4.800
Total Volume (m³)	40.417

Under Drain	
Height Above Base (m)	0.000
Diameter (mm)	225
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets	
Inlet	
Inlet Type	Point Inflow
Incoming Item(s)	S Drive (50)
	S Drive (51)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)	
Inlet Type	Lateral Inflow
Incoming Item(s)	S Drive (43)
	S Drive (44)
	S Drive (45)
	S Roof (58)
	S Roof (59)
	S Roof (60)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets	
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Advanced	
Base Infiltration Rate (m/hr)	0.2819
Side Infiltration Rate (m/hr)	0.2819
Safety Factor	10.0
Conductivity (m/hr)	500.0

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
Report Details: Type: Stormwater Controls Storm Phase: South	Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY			



Plot 80-82 SA

Type : Porous Paving

Dimensions		
Exceedance Level (m)		13.400
Depth (m)		0.600
Base Level (m)		12.800
Paving Layer Depth (mm)		80
Membrane Percolation (m/hr)		1.0
Porosity (%)		30
Length (m)		64.003
Long. Slope (1:X)		200.00
Width (m)		4.800
Total Volume (m³)		49.703

Under Drain		
Height Above Base (m)		0.000
Diameter (mm)		225
No. of Barrels		1
Release Height (m)		0.000
Friction Scheme		Manning's n
n		0.015

Inlets		
Inlet		
Inlet Type	Point Inflow	
Incoming Item(s)	S Drive (49)	
	S Drive (48)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Inlet (3)		
Inlet Type	Lateral Inflow	
Incoming Item(s)	S Roof (61)	
	S Roof (62)	
	S Roof (63)	
	S Roof (64)	
	S Drive (47)	
	S Drive (46)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
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Advanced		
Base Infiltration Rate (m/hr)		0.2628
Side Infiltration Rate (m/hr)		0.2628
Safety Factor		10.0
Conductivity (m/hr)		500.0

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
Report Details: Type: Stormwater Controls Storm Phase: South	Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY			



Plot 122-124 SA

Type : Porous Paving

Dimensions	
Exceedance Level (m)	13.500
Depth (m)	0.700
Base Level (m)	12.800
Paving Layer Depth (mm)	80
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	44.140
Long. Slope (1:X)	100.00
Width (m)	4.800
Total Volume (m³)	39.954

Under Drain	
Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets	
Inlet	
Inlet Type	Point Inflow
Incoming Item(s)	S Drive (55)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)	
Inlet Type	Lateral Inflow
Incoming Item(s)	S Roof (66)
	S Roof (65)
	S Drive (54)
	S Roof (67)
	S Drive (53)
	S Roof (68)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets	
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Advanced	
Base Infiltration Rate (m/hr)	0.2884
Side Infiltration Rate (m/hr)	0.2884
Safety Factor	2.0
Conductivity (m/hr)	500.0

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
	Report Details: Type: Connections Storm Phase: South			
Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY				

Name	Length (m)	Connection Type	Slope (1:X)	Manning's n	Colebrook-White Roughness (mm)	Diameter / Base Width (mm)	Upstream Cover Level (m)	Upstream Invert Level (m)	Downstream Cover Level (m)	Downstream Invert Level (m)	Lock	Flow Restriction (L/s)
Pipe	6.537	Pipe	148.572		0.6	150	13.474	12.379	13.328	12.335	All	
Pipe (1)	3.000	Pipe	150.000		0.6	150	13.417	12.020	13.266	12.000	All	
Pipe (2)	3.002	Pipe	150.078		0.6	150	13.394	12.347	13.226	12.327	All	
Pipe (3)	3.010	Pipe	143.345		0.6	150	13.350	12.341	13.180	12.320	All	
Pipe (4)	3.000	Pipe	150.000		0.6	150	13.340	12.203	13.179	12.183	All	
Pipe (5)	3.004	Pipe	150.180		0.6	150	13.352	12.353	13.183	12.333	All	
Pipe (6)	3.000	Pipe	150.000		0.6	150	13.348	12.313	13.201	12.293	All	
Pipe (7)	3.001	Pipe	150.028		0.6	150	13.382	12.338	13.216	12.318	All	
Pipe (8)	3.002	Pipe	150.078		0.6	150	13.414	12.347	13.251	12.327	All	
Pipe (9)	3.001	Pipe	150.032		0.6	150	13.420	12.341	13.257	12.321	All	
Pipe (10)	3.000	Pipe	150.000		0.6	150	13.423	12.255	13.273	12.235	All	
Pipe (11)	3.004	Pipe	150.182		0.6	150	13.456	12.314	13.296	12.294	All	
Pipe (12)	3.000	Pipe	150.000		0.6	150	13.398	12.341	13.304	12.321	All	
Pipe (13)	3.000	Pipe	150.000		0.6	150	13.488	12.339	13.330	12.319	All	
Pipe (14)	3.002	Pipe	150.118		0.6	150	13.504	12.542	13.340	12.522	All	
Pipe (15)	2.928	Pipe	146.383		0.6	150	13.507	12.395	13.356	12.375	All	
Pipe (16)	3.043	Pipe	152.143		0.6	150	13.512	12.373	13.357	12.353	All	
Pipe (17)	4.402	Pipe	150.000		0.6	150	13.150	12.246	12.998	12.217	All	
Pipe (18)	4.261	Pipe	150.000		0.6	150	13.105	12.195	12.987	12.167	All	
Pipe (19)	2.798	Pipe	150.000		0.6	150	13.348	12.243	13.195	12.224	All	
Pipe (20)	3.085	Pipe	150.000		0.6	150	13.394	12.318	13.238	12.297	All	
Pipe (21)	3.120	Pipe	150.000		0.6	150	13.291	12.403	13.247	12.382	All	
Pipe (22)	3.319	Pipe	150.000		0.6	150	13.420	12.493	13.265	12.471	All	
Pipe (23)	3.000	Pipe	150.000		0.6	150	13.452	12.595	13.287	12.575	All	
Pipe (24)	3.000	Pipe	150.000		0.6	150	13.047	12.430	13.283	12.410	All	
Pipe (25)	3.013	Pipe	150.000		0.6	150	13.443	12.595	13.285	12.575	All	
Pipe (26)	3.000	Pipe	150.000		0.6	150	13.441	12.374	13.274	12.354	All	
Pipe (27)	3.000	Pipe	150.000		0.6	150	13.435	12.648	13.273	12.628	All	
Pipe (28)	2.794	Pipe	150.000		0.6	150	13.430	12.537	13.264	12.518	All	
Pipe (29)	2.861	Pipe	143.064		0.6	150	13.429	12.316	13.264	12.296	All	
Pipe (30)	3.000	Pipe	150.000		0.6	150	13.448	12.645	13.270	12.625	All	
Pipe (31)	3.000	Pipe	150.000		0.6	150	13.463	12.517	13.297	12.497	All	
Pipe (32)	3.058	Pipe	150.000		0.6	150	13.452	12.167	13.288	12.147	All	
Pipe (33)	3.000	Pipe	150.000		0.6	150	13.489	12.501	13.322	12.481	All	
Pipe (34)	2.999	Pipe	149.955		0.6	150	13.464	12.294	13.329	12.274	All	
Pipe (35)	3.000	Pipe	150.014		0.6	150	13.464	12.509	13.326	12.489	Levels	
Pipe (36)	3.000	Pipe	150.000		0.6	150	13.486	12.505	13.318	12.485	All	
Pipe (37)	3.000	Pipe	142.857		0.6	150	13.467	12.473	13.310	12.452	All	
Pipe (38)	3.000	Pipe	150.000		0.6	150	13.420	12.303	13.282	12.283	All	

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023					
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Pipe (39)	3.000	Pipe	150.000		0.6	150	13.451	12.475	13.285	12.455	All	
Pipe (40)	3.000	Pipe	150.000		0.6	150	13.567	12.250	13.380	12.230	All	
Pipe (41)	2.800	Pipe	147.368		0.6	150	13.603	12.646	13.447	12.627	All	
Pipe (42)	2.795	Pipe	147.121		0.6	150	13.693	12.596	13.533	12.577	All	
Pipe (43)	2.800	Pipe	147.369		0.6	150	13.690	12.706	13.531	12.687	All	
R1(a) - R1(b)	3.970	Pipe	165.400		0.6	225	13.348	12.023	13.324	11.999	All	
R1(b) - R1(c)	2.888	Pipe	167.000		0.6	225	13.318	11.848	13.326	11.831	All	
R1(d) - R1(e)	2.569	Pipe	167.000		0.6	225	13.331	11.457	13.332	11.442	All	
R1(e) - R1TH	1.121	No Delay										
R1(c) - R1(d)	15.291	Pipe	167.000		0.6	225	13.411	11.742	13.386	11.650	None	
R1(c) - R1(d) (1)	14.970	Pipe	167.000		0.6	225	13.386	11.650	13.341	11.560	All	
R2 - R1(d)	13.518	Pipe	168.974		0.6	225	13.304	11.730	13.386	11.650	None	
Pipe (44)	1.642	No Delay										
Pipe (48)	3.090	Pipe	167.000		0.6	225	13.364	12.046	13.361	12.027	All	
R3(a) - R1(d)	13.237	Pipe	38.933		0.6	225	13.332	11.990	13.386	11.650	None	
Pipe (45)	15.121	Pipe	149.715		0.6	150	13.400	12.461	13.486	12.360	All	
Pipe (49)	9.909	Pipe	86.165		0.6	150	13.457	12.475	13.486	12.360	All	
Pipe (50)	11.035	Pipe	167.000		0.6	225	13.486	12.285	13.577	12.219	All	
Pipe (47)	20.553	Pipe	167.000		0.6	225	13.210	11.158	13.412	11.035	None	
Pipe (46)	13.878	Pipe	157.708		0.6	225	13.188	11.337	13.210	11.249	All	120.9
Pipe (51)	13.039	Pipe	149.878		0.6	150	12.881	12.400	12.923	12.313	None	
Pipe (52)	12.970	Pipe	150.809		0.6	150	12.923	12.313	13.102	12.227	None	
Pipe (53)	12.850	Pipe	149.418		0.6	150	13.102	12.227	13.279	12.141	None	
Pipe (54)	7.226	Pipe	150.535		0.6	150	13.279	12.141	13.368	12.093	None	
Pipe (55)	3.161	Pipe	150.000		0.6	150	13.368	12.093	13.269	12.072	All	
Pipe (56)	10.660	Pipe	167.000		0.6	225	13.412	11.035	13.404	10.971	None	7.5

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
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Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
S Drive	Silt Trap (25)		Time of Concentration	0.002	100	0	100	0.002
S Drive (1)	Silt Trap (25)		Time of Concentration	0.023	100	0	100	0.023
S Drive (2)	Silt Trap (23)		Time of Concentration	0.023	100	0	100	0.023
S Drive (3)	Silt Trap (21)		Time of Concentration	0.004	100	0	100	0.004
S Drive (4)	Silt Trap (8)		Time of Concentration	0.003	100	0	100	0.003
S Drive (5)	_Silt Trap (30)		Time of Concentration	0.020	100	0	100	0.020
S Drive (6)	Silt Trap (26)		Time of Concentration	0.009	100	0	100	0.009
S Drive (7)	Silt Trap (2)		Time of Concentration	0.003	100	0	100	0.003
S Drive (8)	Silt Trap (3)		Time of Concentration	0.003	100	0	100	0.003
S Drive (9)	Silt Trap (73)		Time of Concentration	0.003	100	0	100	0.003
S Drive (10)	Silt Trap (54)		Time of Concentration	0.003	100	0	100	0.003
S Drive (11)	Silt Trap (20)		Time of Concentration	0.003	100	0	100	0.003
S Drive (12)	Silt Trap (51)		Time of Concentration	0.003	100	0	100	0.003
S Drive (13)	Silt Trap (12)		Time of Concentration	0.003	100	0	100	0.003
S Drive (14)	Silt Trap (16)		Time of Concentration	0.003	100	0	100	0.003
S Drive (15)	Silt Trap (52)		Time of Concentration	0.003	100	0	100	0.003
S Drive (16)	Silt Trap (32)		Time of Concentration	0.003	100	0	100	0.003
S Drive (17)	Silt Trap (31)		Time of Concentration	0.003	100	0	100	0.003
S Drive (18)	Silt Trap (10)		Time of Concentration	0.005	100	0	100	0.005
S Drive (19)	Silt Trap (66)		Time of Concentration	0.002	100	0	100	0.002
S Drive (20)	Silt Trap (62)		Time of Concentration	0.002	100	0	100	0.002
S Drive (21)	Silt Trap (63)		Time of Concentration	0.002	100	0	100	0.002
S Drive (22)	Silt Trap (70)		Time of Concentration	0.004	100	0	100	0.004
S Drive (23)	_Silt Trap (65)		Time of Concentration	0.020	100	0	100	0.020
S Drive (24)	Silt Trap (71)		Time of Concentration	0.002	100	0	100	0.002
S Drive (25)	Silt Trap (56)		Time of Concentration	0.002	100	0	100	0.002
S Drive (26)	Silt Trap (44)		Time of Concentration	0.003	100	0	100	0.003
S Drive (27)	Silt Trap (45)		Time of Concentration	0.005	100	0	100	0.005
S Drive (28)	Silt Trap (36)		Time of Concentration	0.005	100	0	100	0.005
S Drive (29)	Silt Trap (57)		Time of Concentration	0.003	100	0	100	0.003
S Drive (30)	Silt Trap (60)		Time of Concentration	0.003	100	0	100	0.003
S Drive (31)	Silt Trap (59)		Time of Concentration	0.035	100	0	100	0.035
S Drive (32)	Silt Trap (7)		Time of Concentration	0.011	100	0	100	0.011
S Drive (33)	Silt Trap (61)		Time of Concentration	0.003	100	0	100	0.003
S Drive (34)	Silt Trap (11)		Time of Concentration	0.005	100	0	100	0.005
S Drive (35)	Silt Trap (47)		Time of Concentration	0.003	100	0	100	0.003
S Drive (36)	Silt Trap (46)		Time of Concentration	0.003	100	0	100	0.003
S Drive (37)	Silt Trap (48)		Time of Concentration	0.005	100	0	100	0.005
S Drive (38)	Silt Trap (50)		Time of Concentration	0.004	100	0	100	0.004
S Drive (39)	Silt Trap (49)		Time of Concentration	0.006	100	0	100	0.006
S Drive (40)	Silt Trap		Time of Concentration	0.004	100	0	100	0.004

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
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S Drive (41)	Silt Trap (35)		Time of Concentration	0.003	100	0	100	0.003
S Drive (42)	Silt Trap (64)		Time of Concentration	0.005	100	0	100	0.005
S Drive (43)	Plot 97-101 SA		Time of Concentration	0.003	100	0	100	0.003
S Drive (44)	Plot 97-101 SA		Time of Concentration	0.002	100	0	100	0.002
S Drive (45)	Plot 97-101 SA		Time of Concentration	0.002	100	0	100	0.002
S Drive (46)	Plot 80-82 SA		Time of Concentration	0.003	100	0	100	0.003
S Drive (47)	Plot 80-82 SA		Time of Concentration	0.003	100	0	100	0.003
S Drive (48)	Plot 80-82 SA		Time of Concentration	0.002	100	0	100	0.002
S Drive (49)	Plot 80-82 SA		Time of Concentration	0.032	100	0	100	0.032
S Drive (50)	Plot 97-101 SA		Time of Concentration	0.027	100	0	100	0.027
S Drive (51)	Plot 97-101 SA		Time of Concentration	0.004	100	0	100	0.004
S Drive (52)	Silt Trap (18)		Time of Concentration	0.005	100	0	100	0.005
S Drive (53)	Plot 122-124 SA		Time of Concentration	0.002	100	0	100	0.002
S Drive (54)	Plot 122-124 SA		Time of Concentration	0.003	100	0	100	0.003
S Drive (55)	Plot 122-124 SA		Time of Concentration	0.026	100	0	100	0.026
S Road	S Road 1TH		Time of Concentration	0.021	100	0	100	0.021
S Road (1)	S Road 1 (e)		Time of Concentration	0.018	100	0	100	0.018
S Road (2)	S Road 1 (d)		Time of Concentration	0.051	100	0	100	0.051
S Road (3)	S Road 2		Time of Concentration	0.076	100	0	100	0.076
S Road (4)	S Road 3 (a)		Time of Concentration	0.025	100	0	100	0.025
S Road (5)	S Road 3 (b)		Time of Concentration	0.037	100	0	100	0.037
S Road (6)	S Road 4		Time of Concentration	0.068	100	0	100	0.068
S Road (7)	S Road 1 (c)		Time of Concentration	0.045	100	0	100	0.045
S Road (8)	S Road 1 (b)		Time of Concentration	0.057	100	0	100	0.057
S Road (9)	S Road 1 (a)		Time of Concentration	0.027	100	0	100	0.027
S Roof	Silt Trap (4)		Time of Concentration	0.006	100	10	110	0.006
S Roof (1)	Silt Trap (18)		Time of Concentration	0.007	100	10	110	0.008
S Roof (2)	Silt Trap (18)		Time of Concentration	0.002	100	10	110	0.002
S Roof (3)	Silt Trap (8)		Time of Concentration	0.008	100	10	110	0.009
S Roof (4)	Silt Trap (2)		Time of Concentration	0.009	100	10	110	0.010
S Roof (5)	_Silt Trap (30)		Time of Concentration	0.009	100	10	110	0.009
S Roof (6)	Silt Trap (26)		Time of Concentration	0.012	100	10	110	0.013
S Roof (7)	Silt Trap (21)		Time of Concentration	0.012	100	10	110	0.013
S Roof (8)	Silt Trap (3)		Time of Concentration	0.008	100	10	110	0.009
S Roof (9)	Silt Trap (73)		Time of Concentration	0.009	100	10	110	0.010
S Roof (10)	Silt Trap (54)		Time of Concentration	0.008	100	10	110	0.009
S Roof (11)	Silt Trap (20)		Time of Concentration	0.009	100	10	110	0.010
S Roof (12)	Silt Trap (23)		Time of Concentration	0.009	100	10	110	0.009
S Roof (13)	Silt Trap (31)		Time of Concentration	0.008	100	10	110	0.009
S Roof (14)	Silt Trap (32)		Time of Concentration	0.008	100	10	110	0.008
S Roof (15)	Silt Trap (52)		Time of Concentration	0.008	100	10	110	0.008
S Roof (16)	Silt Trap (62)		Time of Concentration	0.007	100	10	110	0.007
S Roof (17)	Silt Trap (64)		Time of Concentration	0.005	100	10	110	0.006

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
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S Roof (18)	Silt Trap (10)		Time of Concentration	0.002	100	10	110	0.002
S Roof (19)	Silt Trap (10)		Time of Concentration	0.007	100	10	110	0.008
S Roof (20)	Silt Trap (16)		Time of Concentration	0.009	100	10	110	0.010
S Roof (21)	Silt Trap (51)		Time of Concentration	0.012	100	10	110	0.013
S Roof (22)	Silt Trap (12)		Time of Concentration	0.010	100	10	110	0.010
S Roof (23)	Silt Trap (11)		Time of Concentration	0.006	100	10	110	0.006
S Roof (24)	Silt Trap (61)		Time of Concentration	0.008	100	10	110	0.009
S Roof (25)	Silt Trap (7)		Time of Concentration	0.012	100	10	110	0.014
S Roof (26)	Silt Trap (7)		Time of Concentration	0.011	100	10	110	0.012
S Roof (27)	Silt Trap (7)		Time of Concentration	0.004	100	10	110	0.004
S Roof (28)	Silt Trap (59)		Time of Concentration	0.012	100	10	110	0.014
S Roof (29)	Silt Trap (59)		Time of Concentration	0.011	100	10	110	0.012
S Roof (30)	Silt Trap (59)		Time of Concentration	0.011	100	10	110	0.012
S Roof (31)	Silt Trap (59)		Time of Concentration	0.004	100	10	110	0.004
S Roof (32)	Silt Trap (49)		Time of Concentration	0.007	100	10	110	0.008
S Roof (33)	Silt Trap (49)		Time of Concentration	0.002	100	10	110	0.002
S Roof (34)	Silt Trap (50)		Time of Concentration	0.009	100	10	110	0.010
S Roof (35)	Silt Trap		Time of Concentration	0.010	100	10	110	0.010
S Roof (36)	Silt Trap (35)		Time of Concentration	0.012	100	10	110	0.013
S Roof (37)	Silt Trap (36)		Time of Concentration	0.002	100	10	110	0.002
S Roof (38)	Silt Trap (36)		Time of Concentration	0.007	100	10	110	0.008
S Roof (39)	Silt Trap (57)		Time of Concentration	0.008	100	10	110	0.009
S Roof (40)	Silt Trap (60)		Time of Concentration	0.009	100	10	110	0.010
S Roof (41)	Silt Trap (48)		Time of Concentration	0.007	100	10	110	0.008
S Roof (42)	Silt Trap (48)		Time of Concentration	0.002	100	10	110	0.002
S Roof (43)	Silt Trap (46)		Time of Concentration	0.008	100	10	110	0.009
S Roof (44)	Silt Trap (47)		Time of Concentration	0.009	100	10	110	0.010
S Roof (45)	Silt Trap (37)		Time of Concentration	0.003	100	10	110	0.003
S Roof (46)	Silt Trap (45)		Time of Concentration	0.003	100	10	110	0.003
S Roof (47)	Silt Trap (44)		Time of Concentration	0.012	100	10	110	0.013
S Roof (48)	Silt Trap (56)		Time of Concentration	0.005	100	10	110	0.006
S Roof (49)	_Silt Trap (65)		Time of Concentration	0.004	100	10	110	0.004
S Roof (50)	Silt Trap (70)		Time of Concentration	0.004	100	10	110	0.004
S Roof (51)	_Silt Trap (65)		Time of Concentration	0.008	100	10	110	0.009
S Roof (52)	_Silt Trap (65)		Time of Concentration	0.008	100	10	110	0.008
S Roof (53)	Silt Trap (59)		Time of Concentration	0.004	100	10	110	0.004
S Roof (54)	Silt Trap (1)		Time of Concentration	0.008	100	10	110	0.009
S Roof (55)	Silt Trap (71)		Time of Concentration	0.005	100	10	110	0.006
S Roof (56)	Silt Trap (63)		Time of Concentration	0.005	100	10	110	0.006
S Roof (57)	Silt Trap (66)		Time of Concentration	0.007	100	10	110	0.007
S Roof (58)	Plot 97-101 SA		Time of Concentration	0.012	100	10	110	0.013
S Roof (59)	Plot 97-101 SA		Time of Concentration	0.008	100	10	110	0.009
S Roof (60)	Plot 97-101 SA		Time of Concentration	0.008	100	10	110	0.008

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
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S Roof (61)	Plot 80-82 SA		Time of Concentration	0.013	100	10	110	0.014
S Roof (62)	Plot 80-82 SA		Time of Concentration	0.013	100	10	110	0.014
S Roof (63)	Plot 80-82 SA		Time of Concentration	0.011	100	10	110	0.012
S Roof (64)	Plot 80-82 SA		Time of Concentration	0.004	100	0	100	0.004
S Roof (65)	Plot 122-124 SA		Time of Concentration	0.004	100	10	110	0.004
S Roof (66)	Plot 122-124 SA		Time of Concentration	0.008	100	10	110	0.009
S Roof (67)	Plot 122-124 SA		Time of Concentration	0.012	100	10	110	0.013
S Roof (68)	Plot 122-124 SA		Time of Concentration	0.008	100	10	110	0.009
S Roof (69)	Domestic IC (2)		Time of Concentration	0.005	100	10	110	0.006
S Roof (70)	Domestic IC (1)		Time of Concentration	0.005	100	10	110	0.006
S Roof (71)	Domestic IC (1)		Time of Concentration	0.005	100	10	110	0.006
S Roof (72)	Domestic IC		Time of Concentration	0.005	100	10	110	0.006
TOTAL		0.0		1.346				1.401

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
	Report Details: Type: Outfall Details Storm Phase: South			
			Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY	

Outfalls

Outfall	Outfall Type	Fixed Surcharged Level (m)	Level Curve
Wet Well	Free Discharge		

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
Report Title: Rainfall Analysis Criteria	Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY			

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Use Catchment Values
Junction Flood Risk Margin (mm)	300
Pre-fill Manhole Sumps	☒
Perform No Discharge Analysis	☐

Rainfall	
Rossett	Type: FSR
Region	England And Wales
M5-60 (mm)	18.0
Ratio R	0.354
Summer	☒
Winter	☒

Return Period	
Return Period (years)	Increase Rainfall (%)
1.0	0.000
2.0	0.000
5.0	0.000
10.0	0.000
30.0	0.000
100.0	0.000
100.0	40.000

Storm Durations	
Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
	Report Details: Type: Junctions Summary Storm Phase: South			
Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY				



Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Silt Trap	Rossett: 100 years: +40 %: 120 mins: Winter	13.441	11.924	12.527	0.603	2.6	0.096	0.000	2.6	7.616	Surcharged
Silt Trap (35)	Rossett: 100 years: +40 %: 120 mins: Winter	13.429	11.866	12.527	0.661	2.9	0.105	0.000	2.9	8.465	Surcharged
Silt Trap (61)	Rossett: 100 years: +40 %: 120 mins: Winter	13.394	11.868	12.568	0.700	2.1	0.111	0.000	2.0	6.107	Surcharged
Silt Trap (50)	Rossett: 100 years: +40 %: 15 mins: Winter	13.047	11.980	12.499	0.519	5.4	0.083	0.000	5.3	3.380	OK
Silt Trap (49)	Rossett: 100 years: +40 %: 15 mins: Winter	13.452	12.145	12.674	0.529	6.7	0.084	0.000	6.6	4.030	OK
Silt Trap (60)	Rossett: 100 years: +40 %: 120 mins: Winter	13.348	11.793	12.568	0.775	2.3	0.123	0.000	2.2	6.720	Surcharged
Silt Trap (59)	Rossett: 100 years: +40 %: 120 mins: Winter	13.105	11.745	12.572	0.827	14.5	0.131	0.000	14.1	42.434	Surcharged
Silt Trap (7)	Rossett: 100 years: +40 %: 120 mins: Winter	13.150	11.796	12.569	0.773	7.3	0.123	0.000	7.0	21.376	Surcharged
Silt Trap (57)	Rossett: 100 years: +40 %: 120 mins: Winter	13.291	11.953	12.568	0.615	2.1	0.098	0.000	2.1	6.107	Surcharged
Silt Trap (12)	Rossett: 100 years: +40 %: 120 mins: Winter	13.488	11.889	12.578	0.689	2.4	0.110	0.000	2.4	7.034	Surcharged
Silt Trap (23)	Rossett: 100 years: +40 %: 120 mins: Winter	13.423	11.805	12.579	0.774	5.8	0.123	0.000	5.7	17.063	Surcharged
Silt Trap (1)	Rossett: 100 years: +40 %: 120 mins: Winter	13.398	11.891	12.578	0.687	1.7	0.109	0.000	1.7	4.853	Surcharged
Silt Trap (21)	Rossett: 100 years: +40 %: 120 mins: Winter	13.348	11.863	12.585	0.722	3.0	0.115	0.000	3.0	8.711	Surcharged
Silt Trap (25)	Rossett: 100 years: +40 %: 120 mins: Winter	13.340	11.753	12.585	0.832	4.6	0.132	0.000	4.6	13.379	Surcharged
Silt Trap (4)	Rossett: 100 years: +40 %: 120 mins: Winter	13.417	11.570	12.585	1.015	1.1	0.161	0.000	0.8	3.112	Surcharged
Silt Trap (48)	Rossett: 100 years: +40 %: 15 mins: Winter	13.443	12.145	12.672	0.527	6.4	0.084	0.000	6.3	3.880	OK
Silt Trap (47)	Rossett: 100 years: +40 %: 15 mins: Winter	13.430	12.087	12.604	0.517	5.2	0.082	0.000	5.0	3.275	OK
Silt Trap (46)	Rossett: 100 years: +40 %: 15 mins: Winter	13.435	12.198	12.712	0.514	4.7	0.082	0.000	4.6	2.993	OK
Silt Trap (45)	Rossett: 100 years: +40 %: 120 mins: Winter	13.452	11.717	12.572	0.855	1.4	0.136	0.000	1.2	4.013	Surcharged
Silt Trap (37)	Rossett: 100 years: +40 %: 30 mins: Winter	13.448	12.195	12.675	0.480	1.1	0.076	0.000	1.1	1.063	OK
Silt Trap (11)	Rossett: 100 years: +40 %: 120 mins: Winter	13.507	11.945	12.578	0.633	2.0	0.101	0.000	2.0	5.858	Surcharged

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023		
	Designed by: CP	Checked by: RDN	
Report Details: Type: Junctions Summary Storm Phase: South	Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY		

Silt Trap (44)	Rossett: 100 years: +40 %: 15 mins: Winter	13.463	12.067	12.590	0.523	5.9	0.083	0.000	5.8	3.895	OK
Silt Trap (56)	Rossett: 100 years: +40 %: 120 mins: Winter	13.489	12.051	12.585	0.534	1.5	0.085	0.000	1.5	4.331	OK
Silt Trap (71)	Rossett: 100 years: +40 %: 120 mins: Winter	13.486	12.055	12.585	0.530	1.5	0.084	0.000	1.5	4.331	OK
Silt Trap (70)	Rossett: 100 years: +40 %: 120 mins: Winter	13.420	11.853	12.585	0.732	1.4	0.116	0.000	1.4	4.166	Surcharged
Silt Trap (36)	Rossett: 100 years: +40 %: 120 mins: Winter	13.420	12.043	12.569	0.526	2.7	0.084	0.000	2.7	7.904	OK
Silt Trap (64)	Rossett: 100 years: +40 %: 120 mins: Winter	13.464	11.844	12.585	0.741	1.9	0.118	0.000	1.8	5.549	Surcharged
Silt Trap (63)	Rossett: 100 years: +40 %: 120 mins: Winter	13.464	12.059	12.585	0.526	1.5	0.084	0.000	1.5	4.331	OK
Silt Trap (62)	Rossett: 100 years: +40 %: 120 mins: Winter	13.467	12.023	12.585	0.562	1.7	0.089	0.000	1.7	5.021	OK
Silt Trap (66)	Rossett: 100 years: +40 %: 120 mins: Winter	13.451	12.025	12.585	0.560	1.7	0.089	0.000	1.7	5.021	OK
Silt Trap (52)	Rossett: 100 years: +40 %: 15 mins: Winter	13.603	12.196	12.707	0.511	4.3	0.081	0.000	4.2	2.759	OK
Silt Trap (32)	Rossett: 100 years: +40 %: 15 mins: Winter	13.693	12.146	12.657	0.511	4.3	0.081	0.000	4.2	2.759	OK
Silt Trap (31)	Rossett: 100 years: +40 %: 15 mins: Winter	13.690	12.256	12.768	0.512	4.5	0.081	0.000	4.4	2.858	OK
Silt Trap (26)	Rossett: 100 years: +40 %: 30 mins: Winter	13.457	12.025	12.638	0.613	8.0	0.097	0.000	7.4	7.414	Surcharged
_Silt Trap (30)	Rossett: 100 years: +40 %: 30 mins: Winter	13.400	12.011	12.643	0.632	10.6	0.100	0.000	10.0	9.743	Surcharged
Silt Trap (10)	Rossett: 100 years: +40 %: 120 mins: Winter	13.512	11.923	12.578	0.655	2.8	0.104	0.000	2.8	8.084	Surcharged
Silt Trap (16)	Rossett: 100 years: +40 %: 15 mins: Winter	13.504	12.092	12.607	0.515	4.9	0.082	0.000	4.8	3.143	OK
Silt Trap (51)	Rossett: 100 years: +40 %: 120 mins: Winter	13.456	11.864	12.578	0.714	2.9	0.114	0.000	2.9	8.417	Surcharged
Silt Trap (20)	Rossett: 100 years: +40 %: 120 mins: Winter	13.420	11.891	12.585	0.694	2.3	0.110	0.000	2.3	6.812	Surcharged
Silt Trap (54)	Rossett: 100 years: +40 %: 120 mins: Winter	13.414	11.897	12.585	0.688	2.1	0.109	0.000	2.1	6.308	Surcharged
Silt Trap (73)	Rossett: 100 years: +40 %: 120 mins: Winter	13.382	11.888	12.585	0.697	2.4	0.111	0.000	2.4	6.896	Surcharged
Silt Trap (3)	Rossett: 100 years: +40 %: 120 mins: Winter	13.352	11.903	12.585	0.682	2.1	0.108	0.000	2.1	6.173	Surcharged
Silt Trap (2)	Rossett: 100 years: +40 %: 120 mins: Winter	13.350	11.891	12.585	0.694	2.3	0.110	0.000	2.3	6.878	Surcharged
Silt Trap (8)	Rossett: 100 years: +40 %: 120 mins: Winter	13.394	11.897	12.585	0.688	2.1	0.109	0.000	2.1	6.281	Surcharged
_Silt Trap (65)	Rossett: 100 years: +40 %: 30 mins: Winter	13.567	11.800	12.635	0.835	14.7	0.133	0.000	14.1	13.477	Surcharged
Silt Trap (18)	Rossett: 100 years: +40 %: 120 mins: Winter	13.474	11.929	12.585	0.656	2.7	0.104	0.000	2.7	8.042	Surcharged

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023							
	Designed by: CP	Checked by: RDN	Approved By: RA					
	Report Details: Type: Junctions Summary Storm Phase: South							
			Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY					

Simple Junction	Rossett: 100 years: +40 %: 120 mins: Winter		11.650	12.561	0.911	48.8			48.6	396.616	Surcharged
Hydro-Brake	Rossett: 100 years: +40 %: 720 mins: Winter	13.412	11.035	12.419	1.384	7.0	3.523	0.000	6.9	490.912	Surcharged
Manhole (R4TH)	Rossett: 100 years: +40 %: 30 mins: Winter	13.486	12.285	12.630	0.345	17.4	0.299	0.000	16.8	17.125	Surcharged
Silt Trap (5)	Rossett: 100 years: +40 %: 120 mins: Winter	13.368	12.093	12.585	0.492	3.4	0.078	0.000	3.3	12.120	Surcharged
Domestic IC (3)	Rossett: 100 years: +40 %: 120 mins: Winter	13.279	12.141	12.586	0.445	4.0	0.071	0.000	3.4	12.298	Surcharged
Domestic IC (2)	Rossett: 100 years: +40 %: 120 mins: Winter	13.102	12.227	12.586	0.359	4.2	0.057	0.000	4.0	12.451	Surcharged
Domestic IC (1)	Rossett: 100 years: +40 %: 120 mins: Winter	12.923	12.313	12.587	0.274	3.2	0.044	0.000	3.2	9.357	Surcharged
Domestic IC	Rossett: 100 years: +40 %: 120 mins: Winter	12.881	12.400	12.587	0.187	1.1	0.030	0.000	1.1	3.119	Flood Risk
Wet Well	Rossett: 10 years: +0 %: 120 mins: Winter	13.404	10.971	11.034	0.063	6.9	0.000	0.000	6.9	74.222	OK

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
	Report Details: Type: Stormwater Controls Summary Storm Phase: South			
Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY				



Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
S Road 1 (a)	Rossett: 100 years: +40 %: 120 mins: Winter	12.585	12.585	0.509	0.562	12.2	18.644	0.000	0.000	6.5	28.444	41.198	OK
S Road 1 (b)	Rossett: 100 years: +40 %: 120 mins: Winter	12.585	12.579	0.585	0.731	36.0	65.916	0.000	0.000	15.4	92.680	37.756	OK
S Road 1 (c)	Rossett: 100 years: +40 %: 120 mins: Winter	12.578	12.567	0.748	0.825	32.3	45.717	0.000	0.000	17.5	146.989	37.338	OK
S Road 1 (d)	Rossett: 100 years: +40 %: 180 mins: Winter	12.518	12.424	0.959	0.967	59.7	64.595	0.000	0.000	45.8	459.739	34.431	OK
S Road 1 (e)	Rossett: 100 years: +40 %: 720 mins: Winter	12.436	12.435	0.995	1.044	30.3	34.199	0.000	0.000	28.2	796.856	33.361	OK
S Road 2	Rossett: 100 years: +40 %: 120 mins: Winter	12.568	12.563	0.688	0.833	43.6	65.641	0.000	0.000	17.3	92.916	25.513	OK
S Road 3 (a)	Rossett: 100 years: +40 %: 120 mins: Winter	12.572	12.566	0.545	0.576	38.1	11.933	0.000	0.000	33.2	161.772	41.794	OK
S Road 3 (b)	Rossett: 100 years: +40 %: 120 mins: Winter	12.584	12.574	0.435	0.528	42.2	28.720	0.000	0.000	30.6	141.097	44.099	OK
S Road 4	Rossett: 100 years: +40 %: 60 mins: Winter	12.626	12.608	0.418	0.458	51.5	36.304	0.000	0.000	26.0	72.663	46.636	OK
S Road 1TH	Rossett: 100 years: +40 %: 720 mins: Winter	12.430	12.430	1.040	1.093	29.2	37.834	0.000	0.000	27.0	785.457	26.738	OK
Pond	Rossett: 100 years: +40 %: 720 mins: Winter	12.423	12.423	1.265	1.265	26.9	392.429	0.000	0.000	7.0	494.353	42.501	OK
Plot 97-101 SA	Rossett: 100 years: +40 %: 120 mins: Winter	13.459	13.459	0.162	0.459	12.6	23.245	0.000	28.529	0.0	0.000	42.486	OK
Plot 80-82 SA	Rossett: 100 years: +40 %: 120 mins: Winter	13.263	13.263	0.143	0.463	14.9	27.927	0.000	32.616	0.0	0.000	43.814	OK
Plot 122-124 SA	Rossett: 100 years: +40 %: 30 mins: Winter	13.340	13.116	0.099	0.316	23.9	8.880	0.000	21.014	0.0	0.000	77.775	OK

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN	Approved By: RA	
	Report Details: Type: Connections Summary Storm Phase: South			
Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY				



Critical Storm Per Item: Rank By: Total Discharge Volume

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
Pipe	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (18)	S Road 1 (a)	13.474	12.397	0.032	14.654	0.4	0.03	0.4	OK
Pipe (1)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (4)	S Road 1 (b)	13.417	12.389	0.150	6.150	0.1	0.01	0.2	Surcharged
Pipe (2)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (8)	S Road 1 (b)	13.394	12.389	0.052	11.495	0.3	0.02	0.3	OK
Pipe (3)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (2)	S Road 1 (b)	13.350	12.389	0.059	12.623	0.3	0.03	0.4	OK
Pipe (4)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (25)	S Road 1 (b)	13.340	12.389	0.150	24.641	0.4	0.05	0.7	Surcharged
Pipe (5)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (3)	S Road 1 (b)	13.352	12.389	0.046	11.162	0.3	0.02	0.3	OK
Pipe (6)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (21)	S Road 1 (b)	13.348	12.389	0.086	15.959	0.4	0.03	0.5	OK
Pipe (7)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (73)	S Road 1 (b)	13.382	12.389	0.061	12.707	0.3	0.03	0.4	OK
Pipe (8)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (54)	S Road 1 (b)	13.414	12.389	0.052	11.489	0.3	0.02	0.3	OK
Pipe (9)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (20)	S Road 1 (b)	13.420	12.389	0.058	12.395	0.3	0.02	0.4	OK
Pipe (10)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (23)	S Road 1 (c)	13.423	12.389	0.144	31.250	0.4	0.06	0.9	OK
Pipe (11)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (51)	S Road 1 (c)	13.456	12.389	0.085	15.449	0.4	0.03	0.4	OK
Pipe (12)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (1)	S Road 1 (c)	13.398	12.389	0.058	8.921	0.3	0.02	0.3	OK
Pipe (13)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (12)	S Road 1 (c)	13.488	12.389	0.060	12.821	0.3	0.03	0.4	OK
Pipe (14)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (16)	S Road 1 (c)	13.504	12.559	0.017	12.269	0.3	0.02	0.4	OK
Pipe (15)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (11)	S Road 1 (c)	13.507	12.411	0.015	10.613	0.3	0.02	0.3	OK
Pipe (16)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (10)	S Road 1 (c)	13.512	12.392	0.026	14.840	0.4	0.03	0.4	OK
Pipe (17)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (7)	S Road 2	13.150	12.389	0.150	39.173	0.5	0.08	1.1	OK
Pipe (18)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (59)	S Road 2	13.105	12.389	0.150	77.885	0.6	0.16	2.3	Surcharged
Pipe (19)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (60)	S Road 2	13.348	12.389	0.150	12.239	0.3	0.02	0.4	OK

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023							
	Designed by: CP	Checked by: RDN	Approved By: RA					
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			Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY					

Pipe (20)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (61)	S Road 2	13.394	12.389	0.081	11.072	0.3	0.02	0.3	OK
Pipe (21)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (57)	S Road 2	13.291	12.419	0.016	11.066	0.3	0.02	0.3	OK
Pipe (22)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (36)	S Road 2	13.420	12.511	0.018	14.342	0.4	0.03	0.4	OK
Pipe (23)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (49)	S Road 1 (e)	13.452	12.614	0.019	15.752	0.4	0.03	0.5	OK
Pipe (24)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (50)	S Road 1 (e)	13.047	12.448	0.017	13.277	0.3	0.03	0.4	OK
Pipe (25)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (48)	S Road 1 (e)	13.443	12.614	0.018	15.230	0.4	0.03	0.4	OK
Pipe (26)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap	S Road 1 (d)	13.441	12.392	0.024	13.925	0.4	0.03	0.4	OK
Pipe (27)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (46)	S Road 1 (d)	13.435	12.665	0.016	11.867	0.3	0.02	0.3	OK
Pipe (28)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (47)	S Road 1 (d)	13.430	12.554	0.017	12.905	0.3	0.03	0.4	OK
Pipe (29)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (35)	S Road 1 (d)	13.429	12.388	0.082	15.533	0.4	0.03	0.4	OK
Pipe (30)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (37)	S Road 1 (d)	13.448	12.654	0.008	3.164	0.2	0.01	0.1	OK
Pipe (31)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (44)	S Road 3 (a)	13.463	12.536	0.018	15.311	0.4	0.03	0.4	OK
Pipe (32)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (45)	S Road 3 (a)	13.452	12.389	0.150	7.538	0.3	0.02	0.2	Surcharged
Pipe (33)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (56)	S Road 3 (b)	13.489	12.515	0.014	7.904	0.3	0.02	0.2	OK
Pipe (34)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (64)	S Road 3 (b)	13.464	12.389	0.105	10.136	0.3	0.02	0.3	OK
Pipe (35)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (63)	S Road 3 (b)	13.464	12.523	0.014	7.904	0.3	0.02	0.2	OK
Pipe (36)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (71)	S Road 3 (b)	13.486	12.519	0.014	7.904	0.3	0.02	0.2	OK
Pipe (37)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (62)	S Road 3 (b)	13.467	12.488	0.014	9.233	0.3	0.02	0.3	OK
Pipe (38)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (70)	S Road 3 (b)	13.420	12.389	0.096	7.643	0.3	0.02	0.2	OK
Pipe (39)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (66)	S Road 3 (b)	13.451	12.490	0.014	9.233	0.3	0.02	0.3	OK
Pipe (40)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	_Silt Trap (65)	S Road 4	13.567	12.389	0.149	39.620	0.3	0.08	1.2	OK
Pipe (41)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (52)	S Road 4	13.603	12.662	0.016	10.757	0.3	0.02	0.3	OK
Pipe (42)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (32)	S Road 4	13.693	12.612	0.016	10.757	0.3	0.02	0.3	OK
Pipe (43)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (31)	S Road 4	13.690	12.722	0.016	11.090	0.3	0.02	0.3	OK
R1(a) - R1(b)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	S Road 1 (a)	S Road 1 (b)	13.348	12.363	0.225	63.753	0.1	0.02	1.8	Surcharged

CGH02 - Rossett Road, Rossett: Southern Parcel Surface Water (SAB) Details Rev 4.0	Date: 20/10/0023			
	Designed by: CP	Checked by: RDN		Approved By: RA
	Report Details: Type: Connections Summary Storm Phase: South			Betts-Associates: Old Marsh Farm Barns, Welsh Road, Sealand Flintshire, CH5 2LY

R1(b) - R1(c)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	S Road 1 (b)	S Road 1 (c)	13.318	12.313	0.225	236.589	0.3	0.07	5.8	Surcharged
R1(d) - R1(e)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	S Road 1 (d)	S Road 1 (e)	13.331	12.336	0.225	1050.245	0.3	0.25	19.7	Surcharged
R1(e) - R1TH	Rossett: 100 years: +40 %: 1440 mins: Winter	No Delay	S Road 1 (e)	S Road 1TH		12.360	0.191	1103.751	0.0		19.9	
R1(c) - R1(d)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	S Road 1 (c)	Simple Junction	13.411	12.345	0.225	385.414	0.4	0.11	8.4	Surcharged
R1(c) - R1(d) (1)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Simple Junction	S Road 1 (d)	13.386	12.389	0.225	954.269	0.5	0.25	20.1	Surcharged
R2 - R1(d)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	S Road 2	Simple Junction	13.304	12.314	0.225	238.610	0.3	0.06	5.1	Surcharged
Pipe (44)	Rossett: 100 years: +40 %: 1440 mins: Winter	No Delay	S Road 4	S Road 3 (b)		12.361	0.120	187.660	0.0		5.5	
Pipe (48)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	S Road 3 (b)	S Road 3 (a)	13.364	12.337	0.225	283.137	0.4	0.1	8.3	Surcharged
R3(a) - R1(d)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	S Road 3 (a)	Simple Junction	13.332	12.371	0.225	330.339	0.5	0.06	9.3	Surcharged
Pipe (45)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	_Silt Trap (30)	Manhole (R4TH)	13.400	12.486	0.025	28.770	0.4	0.06	0.8	OK
Pipe (49)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (26)	Manhole (R4TH)	13.457	12.494	0.019	21.659	0.5	0.03	0.6	OK
Pipe (50)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Manhole (R4TH)	S Road 4	13.486	12.389	0.137	50.441	0.3	0.04	1.5	OK
Pipe (47)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Pond	Hydro-Brake	13.210	12.375	0.225	989.932	0.3	0.17	7.0	Surcharged
Pipe (46)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	S Road 1TH	Pond	13.188	12.354	0.225	1111.689	0.9	0.46	19.1	Surcharged
Pipe (51)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Domestic IC	Domestic IC (1)	12.881	12.411	0.041	5.709	0.2	0.01	0.2	OK
Pipe (52)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Domestic IC (1)	Domestic IC (2)	12.923	12.389	0.119	17.127	0.3	0.04	0.5	OK
Pipe (53)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Domestic IC (2)	Domestic IC (3)	13.102	12.389	0.150	22.834	0.4	0.05	0.7	Surcharged
Pipe (54)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Domestic IC (3)	Silt Trap (5)	13.279	12.389	0.150	22.830	0.4	0.05	0.7	Surcharged
Pipe (55)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Silt Trap (5)	S Road 1 (a)	13.368	12.389	0.150	22.830	0.3	0.05	0.7	Surcharged
Pipe (56)	Rossett: 100 years: +40 %: 1440 mins: Winter	Pipe	Hydro-Brake	Wet Well	13.412	12.371	0.064	987.688	0.7	0.17	6.9	Surcharged