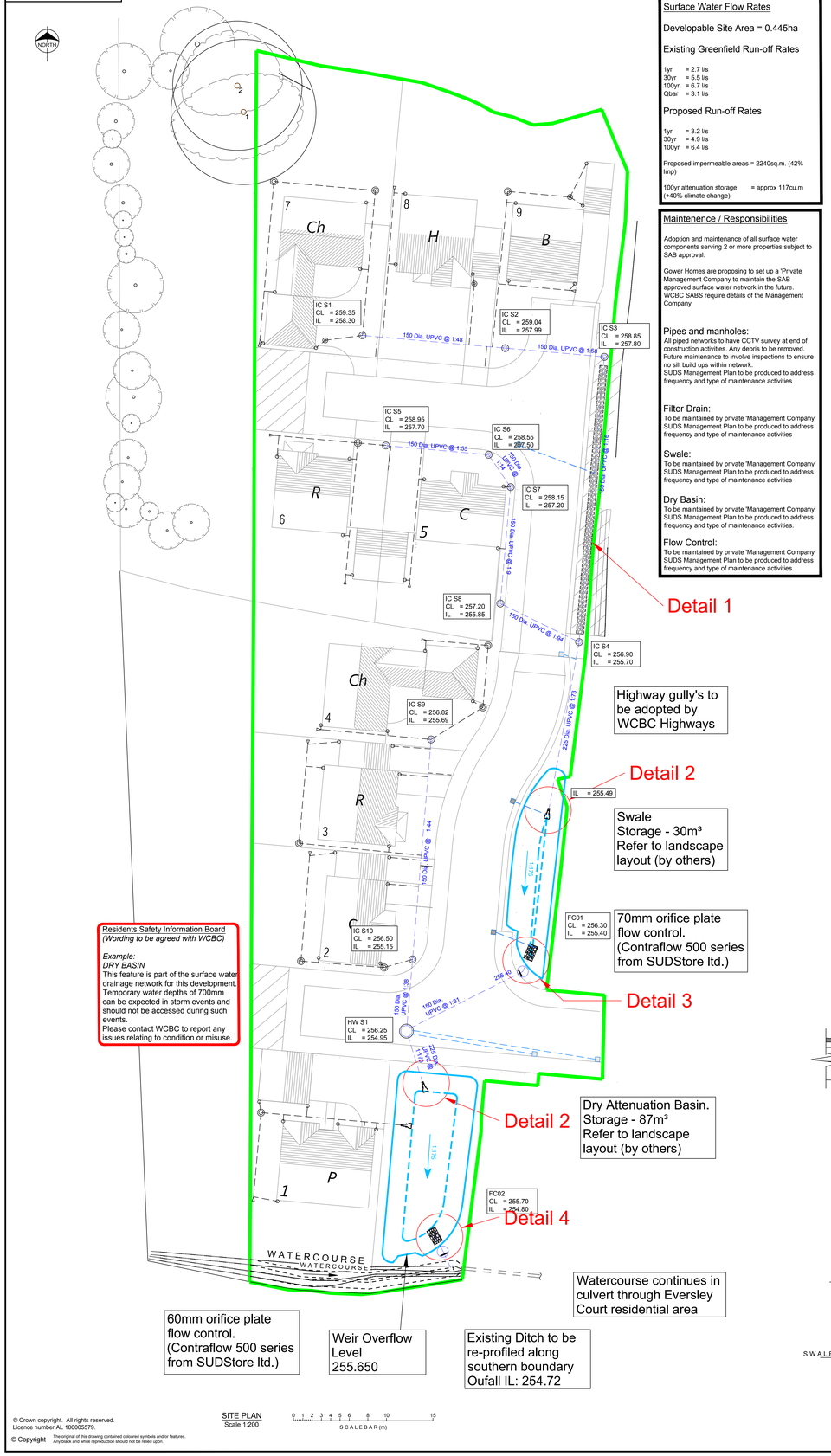
DO NOT SCALE



Detail 1

Highway gully's to be adopted by WCBC Highways

Detail 2

Swale
Storage - 30m³
Refer to landscape layout (by others)

70mm orifice plate flow control.
(Contraflow 500 series from SUDStore ltd.)

Detail 3

Detail 2

Dry Attenuation Basin.
Storage - 87m³
Refer to landscape layout (by others)

Detail 4

Watercourse continues in culvert through Eversley Court residential area

Residents Safety Information Board
(Wording to be agreed with WCBC)

Example:
DRY BASIN
This feature is part of the surface water drainage network for this development. Temporary water depths of 700mm can be expected in storm events and should not be accessed during such events.
Please contact WCBC to report any issues relating to condition or misuse.

60mm orifice plate flow control.
(Contraflow 500 series from SUDStore ltd.)

Weir Overflow Level
255.650

Existing Ditch to be re-profiled along southern boundary
Oufall IL: 254.72

SITE PLAN
Scale 1:200

0 1 2 3 4 5 6 8 10 15
SCALEBAR (m)

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Surface Water Flow Rates

Developable Site Area = 0.445ha

Existing Greenfield Run-off Rates

1yr = 2.7 l/s
30yr = 5.5 l/s
100yr = 6.7 l/s
Qbar = 3.1 l/s

Proposed Run-off Rates

1yr = 3.2 l/s
30yr = 4.9 l/s
100yr = 6.4 l/s

Proposed impermeable areas = 2240sq.m. (42% Imp)

100yr attenuation storage = approx 117cu.m (+40% climate change)

Maintenence / Responsibilities

Adoption and maintenance of all surface water components serving 2 or more properties subject to SAB approval.

Gower Homes are proposing to set up a 'Private Management Company to maintain the SAB approved surface water network in the future. WCBC SABS require details of the Management Company

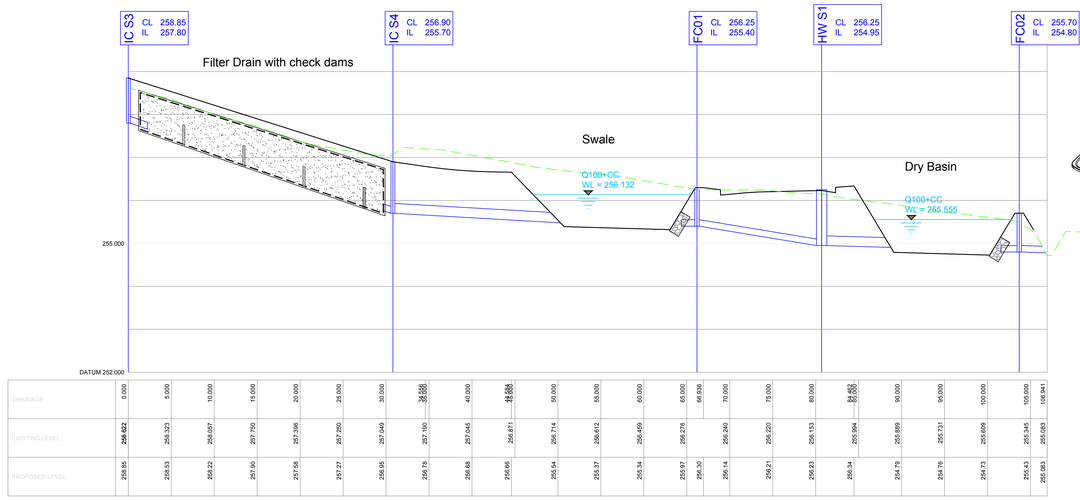
Pipes and manholes:
All piped networks to have CCTV survey at end of construction activities. Any debris to be removed. Future maintenance to involve inspections to ensure no silt build ups within network.
SUDS Management Plan to be produced to address frequency and type of maintenance activities

Filter Drain:
To be maintained by private 'Management Company' SUDS Management Plan to be produced to address frequency and type of maintenance activities

Swale:
To be maintained by private 'Management Company' SUDS Management Plan to be produced to address frequency and type of maintenance activities

Dry Basin:
To be maintained by private 'Management Company' SUDS Management Plan to be produced to address frequency and type of maintenance activities.

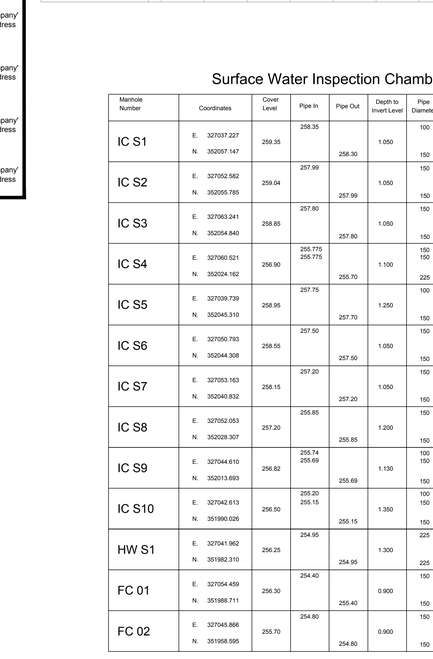
Flow Control:
To be maintained by private 'Management Company' SUDS Management Plan to be produced to address frequency and type of maintenance activities.



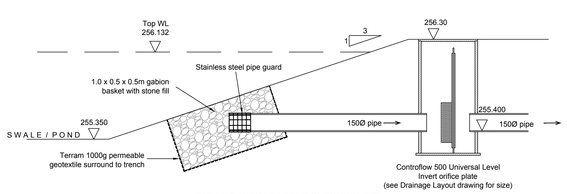
Longsection through main SUDS route
Scale H 1:250 V 1:50

Surface Water Inspection Chamber Schedule

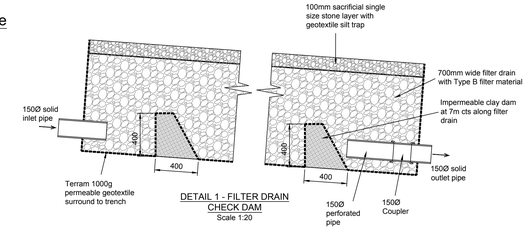
Manhole Number	Coordinates	Cover Level	Pipe In	Pipe Out	Depth to Invert Level	Pipe Diameter	Manhole Size	Manhole Type	Manhole Cover
IC S1	E. 327037.227 N. 352057.147	259.35	258.35	258.30	1.050	100 150	450	Type 4 PPIC	C250
IC S2	E. 327052.582 N. 352055.785	259.04	257.99	257.99	1.050	150 150	450	Type 4 PPIC	C250
IC S3	E. 327063.241 N. 352054.840	258.85	257.80	257.80	1.050	150 150	450	Type 4 PPIC	C250
IC S4	E. 327060.521 N. 352024.162	256.90	255.775 255.775	255.70	1.100	150 150 225	450	Type 3 PPIC	C250
IC S5	E. 327039.739 N. 352045.310	258.95	257.75	257.70	1.250	100 150	450	Type 4 PPIC	C250
IC S6	E. 327050.793 N. 352044.308	258.55	257.50	257.50	1.050	150 150	450	Type 4 PPIC	C250
IC S7	E. 327053.163 N. 352040.832	258.15	257.20	257.20	1.050	150 150	450	Type 4 PPIC	C250
IC S8	E. 327052.053 N. 352028.307	257.20	255.85	255.85	1.200	150 150	450	Type 3 PPIC	C250
IC S9	E. 327044.610 N. 352013.693	256.82	255.74 255.69	255.69	1.130	100 150 150	450	Type 4 PPIC	C250
IC S10	E. 327042.613 N. 351990.026	256.50	255.20 255.15	255.15	1.350	100 150 150	450	Type 4 PPIC	C250
HW S1	E. 327041.962 N. 351982.310	256.25	254.95	254.95	1.300	225 225	1200	Type 2 PPIC	D400
FC 01	E. 327054.459 N. 351988.711	256.30	254.40	255.40	0.900	150 150	500	Type 2 PPIC	C250
FC 02	E. 327045.866 N. 351958.595	255.70	254.80	254.80	0.900	150 150	500	Type 2 PPIC	C250



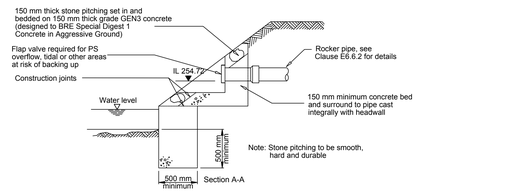
DETAIL 1 - FILTER DRAIN
Scale 1:20

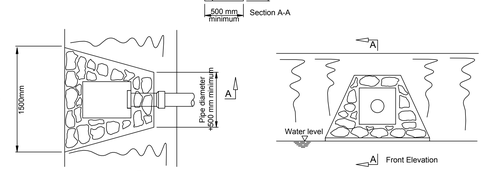


DETAIL 3 - SWALE / POND OUTGOING PIPE
Scale 1:20

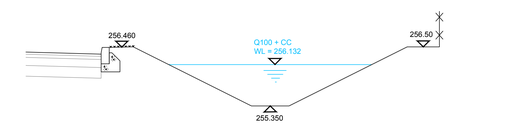


DETAIL 1 - FILTER DRAIN
CHECK DAM
Scale 1:20

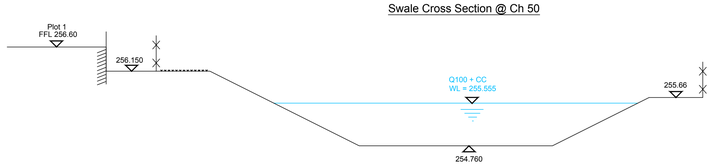




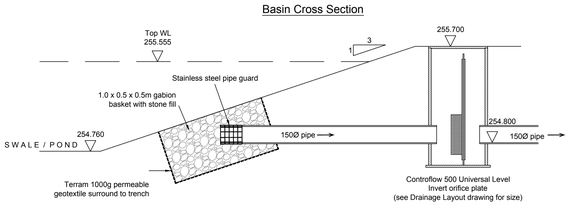
DETAIL OF OUTFALL TO WATERCOURSE
Not to scale, dimensions in millimetres



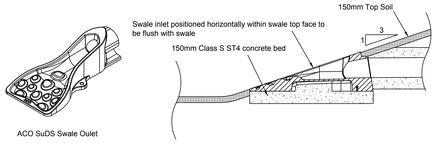
Swale Cross Section @ Ch 50



Basin Cross Section



DETAIL 4 - SWALE / POND OUTGOING PIPE
Scale 1:20



DETAIL 2 - SWALE / POND INCOMING PIPE
Scale 1:20

Notes

1. The specification in all respects shall be in accordance with the current Wrexham County Borough Council Specification and Construction publication in force in the county at the time of construction
2. All adoptable drainage shall be constructed in accordance with 'Sewers for Adoption' 7th Edition, Welsh Ministers Standards and Welsh Water Details and Guidelines.
3. All private drainage works are to comply fully with Part H of the Building Regulations.
4. All existing invert levels to be checked by the contractor at the start of works and any other discrepancies notified to the Engineer prior to commencing works. All levels are based on topographical survey information provided by others.
5. It is the responsibility of the Contractor to verify all information given with regards to existing services and drainage connections etc. prior to commencing the works.
6. The Contractor shall adhere to the CDM Regulations at all times.
7. Only trained personnel shall be permitted to enter confined spaces.
8. All materials to bear the relevant B.S. Kitemark and comply fully with the Sewers for Adoption 7th Specification. All concrete & concrete products must use Sulphate resistant cement (unless the site investigation report proves that sulphate attack from soils and groundwater will not occur to withstand a class 3 condition).
9. All opening notices etc. as required under Highways Acts etc. are to be obtained prior to commencement of works. All works are to be inspected by L.A., NHBC or Welsh Water as applicable.
10. Trench backfill in highways to within 1m of highway shall, as directed by the Highway Authority be a suitable granular material all in accordance with Sewers for Adoption.
11. Cover loadings shall be as detailed on the Manhole Schedule.
12. Drain trenches should not be excavated lower than the foundations of any building nearby unless either:
 a) The trench is within 1m of the foundation, the trench is filled with concrete up to the lowest level of the foundation, or
 b) Where the trench is further than 1m from the building, the trench is filled with concrete to a level below the lowest level for the building equal to the distance from the build, less 150mm.
13. All SVP and RWP connections are indicative and shall be confirmed by the client.
14. Pipe gradients out of the building to connecting manhole to be laid at 1:40 in accordance with Building Regulations, Part H, Table 6.
15. Where pipe sizes are not indicated :
 100Ø to be used for foul
 100Ø to be used for surface water
 unless stated otherwise.
16. Minimum surface water gradients shall be:
 100Ø laid at 1:100 with the exception of the first connection which shall be minimum 1:60. 150Ø laid at 1:150
17. Minimum 100Ø foul drainage gradient to be 1:80 with the exception of the first connection which shall be minimum 1:40.
18. Manhole covers to be marked FWS or SW as appropriate.
19. All manhole covers and frames shall comply with BS EN124. All adoptable manholes and chambers shall comply with Sewers for Adoption 7th Edition. Covers in roads to be grade D400 and be 150mm deep. Manhole covers in car parking areas and drives to be grade B125 and covers in landscaping areas to be grade A15. All to be sized in accordance with Building Regulations Part H, Tables 11 & 12.
20. Pipes have not been designed to accommodate construction traffic loading. The contractor is responsible for providing adequate protection to the pipes during construction.
21. Highway gullies to be 150mm pipework connecting into main Surface Water sewer

CONSTRUCTION

Rev.	Date	Revision	By	Appd.
H	29.01.20	Basin and swale cross sections, longsection of SUDS features and headwall detail added	PW	A.J
G	13.01.20	Updated for construction	PW	A.J
F	10.01.20	Filter drain check dam detail updated	LW	A.J
E	06.11.19	Filter drain check dam detail added	LW	A.J
D	10.10.19	Private drainage routes and MH table revised	PJN	A.J
C	29.08.19	Layout revised to suit SAB comments	L.W	A.J
B	23.07.19	Detail 2 updated	L.W	A.J
A	17.07.19	Drainage updated	L.W	A.J

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Client
GOWER HOMES

Project
Eversley Court
Minera

Title
Surface Water
SUDS Details

DRAWING NUMBER
6896 / 12

SCALE at A0 1:100
DATE 08.04.19
DRAWN LW
CHECKED AJ
REVISION H