Plots and Shared Drive to drain via a traditional pipe network. Run-off is conveyed through pipe system to the sub-base of the shared drive infiltrating direct to ground.

Plots and Shared Drive to drain via a traditional pipe network. Run-off is conveyed through pipe system to the sub-base of the shared drive infiltrating direct to ground.

Proposed Surface Water Pumping Station.

Proposed Surface Water Rising Main Termination Chamber.

There is an existing DCWW Combined Rising Main within the the Retained Land.
This main will require further investigation to determine exact location, depth, levels & size.

Proposed Surface Water Sewer to Outfall with 6m Easement.

Pipe work fitted with non-return valve to prevent back flow of high/flood waters from the River Alyn in the event of the riverbank being overtopped.

Flow Control Manhole

The developer holds rights to lay sewers within this Retained Land. This includes the right to *enter on the Sewer Easement Strip at all reasonable times and on reasonable notice (except in case of emergency) to inspect, repair, maintain, replace and cleanse any such sewers.*

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Proposed Surface Water Outfall Headwall to the River Alyn. *(fitted with non-return valve)*

Attenuation Basin, Impermeably lined, NOT infiltrating. Providing storage during extreme storm events and conveying flows to the Surface Water Pumping Station

Permeable surface carriageway, substructure impermeably lined NOT allowing water to infiltrate directly to ground. Run-off is conveyed through the sub-base ultimately discharging to the surface water pumping station.

Surface Water Run-off from roof areas is conveyed through a typical plot drainage network discharging into the impermeably lined sub-base of the permeable carriageway via a perforated outlet pipe .

Plots and Shared Drive to drain via a traditional pipe network. Run-off is conveyed through pipe system to the sub-base of the shared drive infiltrating direct to ground.

Footpath Link

LEGEND

- Site Boundary
- FFL 134.65 Finished Floor Level
- Surface Water Conveyance Main Drainage
- Surface Water Rising Main
- S104 Foul Water Main Drainage
- Surface Water run-off from roof areas is conveyed through a typical plot drainage network discharging into the sub-base of the permeable carriageway via a perforated outlet pipe.
- Surface Water run-off from roof areas is conveyed through a typical plot drainage network discharging into domestic pcc ring soakaway.
- Permeable surface carriageway, substructure impermeably lined not allowing water to infiltrate directly to ground, run-off is conveyed through the sub-base ultimately discharging to the pumping station.
- Impermeable pedestrian footways discharging onto permeable surface carriageway
- Impermeable drive's, non infiltrating, run-off is conveyed through pipe system via catch-pit to an outlet pipe and into the impermeably lined sub-base of the carriageway conveying flows to the pumping station.
- Impermeable drive's, non infiltrating, run-off is conveyed through pipe system via catch-pit to an outlet pipe and into the permeable sheared private drive infiltrating direct to ground.
- Impermeable carriageway/ feature table - dcww service corridor for adoptable fw drainage access.
- Impermeable carriageway - dcww service corridor for adoptable fw drainage access.

Foul Water

- Proposed Foul Water Sewer (ADOPTABLE - **DCWW**)
- Proposed Foul Water Lateral Drain (ADOPTABLE - **DCWW**)
- Proposed Foul Water Drain (PRIVATE)
- Foul Water Manhole (ADOPTABLE - **DCWW**)
- Type 3 Foul Water Inspection Chamber (ADOPTABLE - **DCWW**)
- Type 4 Foul Water Inspection Chambers - *Not greater than 3 properties* (ADOPTABLE - **DCWW**)
- Type 4 Foul Water Inspection Chambers - *Not greater than 1 property* (PRIVATE)
- Soil Vent Pipe (SVP)/ Direct Drain Connection (PRIVATE)

Surface Water

- Proposed Surface Water Sewer (ADOPTABLE - **Wrexham SAB**)
- Proposed Surface Water Lateral Drain (ADOPTABLE - **Wrexham SAB**)
- Proposed Surface Water Sewer Connections to SUDs (ADOPTABLE - **Wrexham SAB**)
- Proposed Surface Water Under Drain (ADOPTABLE - **Wrexham SAB**)
- Proposed Surface Water Drain (PRIVATE)
- ACO Drainage Channel (PRIVATE)
- Surface Water Manhole (ADOPTABLE - **Wrexham SAB**)
- Type 3 Surface Water Inspection Chamber (ADOPTABLE - **Wrexham SAB**)
- Type 3 Surface Water Silt Trap Chamber (ADOPTABLE - **Wrexham SAB**)
- Type 4 Surface Water Inspection Chambers - *Not greater than 3 properties* (ADOPTABLE - **Wrexham SAB**)
- Type 4 Surface Water Inspection Chambers - *Not greater than 1 property* (PRIVATE)
- Surface Water Rodding Eye (ADOPTABLE - **Wrexham SAB**)
- Surface Water Rodding Eye (PRIVATE)
- Rain Water Pipe (RWP) Connection (PRIVATE)
- Yard Gully (PRIVATE)
- Road Gully (ADOPTABLE - **Wrexham SAB**)
- PERMEABLE ROAD CONSTRUCTION (ADOPTABLE - **Wrexham SAB**)

Waterco SA Test Results - Oct 2015	
Ref.	Infiltration Result
TP1	$1.28x10^{-4}$
TP2	$7.71x10^{-5}$
TP3	**$4.67x10^{-5}$**
TP4	$1.26x10^{-4}$
TP5	N/A
TP6	N/A
TP7	$7.83x10^{-5}$
TP8	$6.33x10^{-4}$
TP9	$1.42x10^{-5}$
TP10	$1.69x10^{-5}$
TP11	$4.66x10^{-5}$
TP12	$8.01x10^{-5}$

Betts Geo SA Test Results	
Ref.	Infiltration Result
SA1	$7.3x10^{-5}$
SA2	$3.4x10^{-5}$
SA3	N/A
SA4	$1.2x10^{-4}$
SA5	$4.6x10^{-5}$
SA6	$6.6x10^{-5}$

Betts Associates SA Test Results (28-29.01.2021)			
Ref.	Infiltration Result 1	Infiltration Result 2	Infiltration Result 3
*SA1	$5.0x10^{-5}$	$4.8x10^{-5}$	**$4.1x10^{-5}$**
*SA2	$1.0x10^{-5}$	No Result	$1.3x10^{-5}$
*SA3	$9.6x10^{-5}$	$1.1x10^{-4}$	$8.3x10^{-5}$
*SA4	$1.0x10^{-4}$	$1.1x10^{-4}$	$6.1x10^{-5}$
*SA5	$1.8x10^{-5}$		
*SA6	$1.7x10^{-4}$	$1.4x10^{-4}$	$7.9x10^{-5}$
*SA7	$1.2x10^{-4}$	$6.5x10^{-5}$	$5.2x10^{-5}$
*SA8	$8.0x10^{-5}$	$5.4x10^{-5}$	$5.6x10^{-5}$
*SA10	$8.4x10^{-5}$	$2.8x10^{-5}$	$4.0x10^{-5}$

Note: Isometric drawing is for reference only, details may not accurately represent actual design - please see detailed views for technical information

Althon PTK-G 180 HDPE/SS Flap Valve Specification Information

- The valve plate and the back plate are produced using HDPE/SS
- The hinge pin and ballast weight are produced in SS316 as standard
- The ballast weight can be easily adjusted if required
- The sealing arrangement consists of an EPDM lips seal in the back plate
- The valve plate is also installed on an angle in relation to the back plate to ensure a good seal

Material: HDPE, SS316, EPDM
Opening: ø150mm
Max load from bottom invert level (B.I.L): 1.15MWC
long period (>50 years)
5MWC
short period (>72hours)
Number of chemical anchors M8: 6 pieces
All dimensions in mm

Mark	Date	Details	By
H	23.07.24	Surface Water Pumping Station Relocated	CP
G	19.06.24	Details updated to reflect Planning Layout Rev R	CP
F	22.05.24	Details updated to reflect Planning Layout Rev Q	CP
E	23.04.24	Details updated to reflect Planning Layout Rev L1B	CP
D	11.12.23	Non-return valve indicated at manhole 542	CP
C	27.11.23	Updated with longsection and headwall details	CP
B	15.11.23	Key/legend adjusted to reflect comments from SAB	CP
A	09.10.23	Produced following comments from SAB@Wrexham.	CP

Revision history

Drawing originator: BETTS HYDRO CONSULTING ENGINEERS · BETTS ASSOCIATES CONSULTING ENGINEERS · BETTS GEO CONSULTING ENGINEERS

Client: Castle Green

Project title: Rossett Road, Rossett

Drawing title: Southern Land Parcel
Main Drainage SuD's Features
SW Rising MAin Route

Scale: 1:250 for the original size of A0
Drawn by: CP | Checked by: RA | Passed by: RA | Date: Oct 2021
Drawing status: For Information

Job No: CAS02 | Drawing No: Project: BET | Origin | Volume | Level | Type | Discip.: C | Number: 104 | Revision: H

Do not scale this drawing

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