

HYDRAULIC CONTROL - S2

Greenfield Catchment Area = 1.50ha
*based on proposed impermeable area

Greenfield Runoff Rates (1.50ha)

1 in 1yr = 7.4l/s
1 in 2yr = 7.8 l/s
1 in 30yr = 15.1 l/s
1 in 100yr = 18.3 l/s

Pre-Development volume discharge (1.50ha)

1 in 100yr (360mins) = 471m³

Post-Development
Approx Impermeable Area = 1.50ha

Post-Development peak flow rate

1 in 1yr = 7.4 l/s (+0.0 l/s)
1 in 2yr = 7.5 l/s (-0.3 l/s)
1 in 30yr = 11.8 (-3.3 l/s)
1 in 100yr + 40% = 16.5 l/s (-1.8 l/s)

Discharge Volume (100yr 360mins)

Post-Dev - 1 in 100yr + 40% (360mins) = 436m³

Total Volume +/- = -35m³

SuDS Measures

The above post-development flow rates are based on a traditional piped system with a 5 minute concentration time.

However, all runoff is to be conveyed to pass through a SuDS feature which will further reduce the above discharge rates and volume.

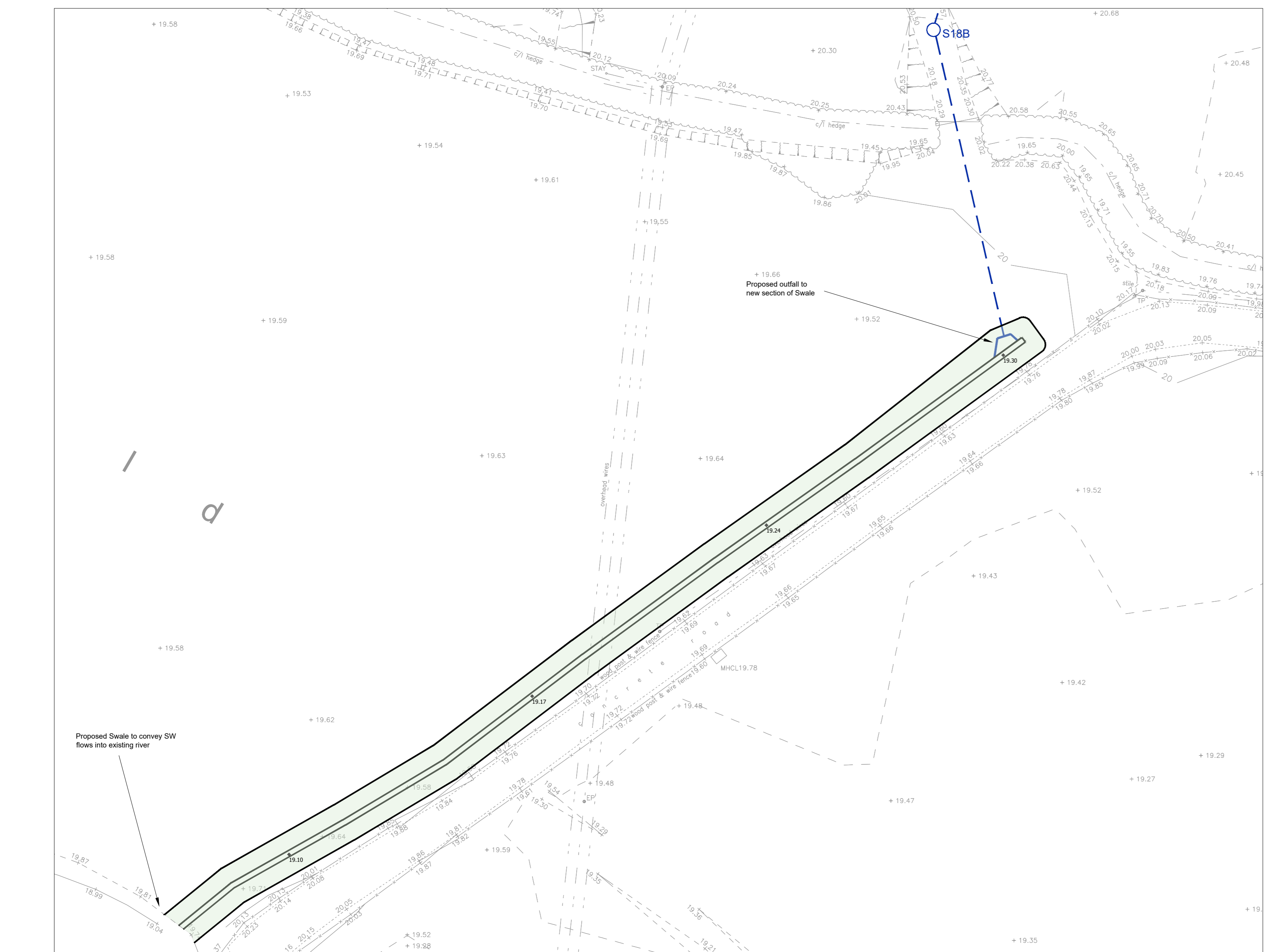
The SuDS components will effectively increase concentration time, reduce flow velocities and rates, and providing significant volume losses through evaporation and evapotranspiration.

DRAINAGE KEY

- Private Storm Drain
- Adaptable Storm Drain (S4S)
- Adaptable Storm Drain (S4S) (perforated)
- Adaptable Storm Drain (S4S) (perforated pipe imbedded in impermeable membrane)
- Non-Adaptable Permeable Paving with open graded sub-base (S4S)
- Adaptable Swale (S4S)
- Pit Rain Garden (Non-Adaptable)
- Adaptable Bioretention Area (S4S)
- Indicative Hoodwell
- Gully Matrix
- Water Butt
- Adaptable Foot Sewer
- Adaptable Foot Rising Pipe

- KEY**
- Proposed Ground Level
 - Masonry Retaining Wall (Height Indicated)
 - Cable Board Retaining Wall (Height Indicated)
 - Gabion Retaining Wall
 - Exposed Facing Brickwork (Height Indicated)
 - Exposed Facing Brickwork (Height Indicated)
 - 1 in 2 max Embankment
 - Finished Floor Level
 - Steps (No. Indicated)

EXISTING RESIDENTIAL



This drawing is copyright and its use or reproduction without the permission of Spring Design Consultancy Limited. All rights are reserved until invoices are paid in full. No responsibility will be taken for any design used for construction prior to receipt of relevant approvals.

| rev | date | description | by |
|-----|-----------|---|-----|
| A | May 2022 | Drawing amended to suit updated Layout. | VCH |
| B | June 2022 | Detention basin, foul pumping station and adjacent turning head layout revised, Plots 95-97 floor levels revised accordingly. | RMJ |
| C | Aug 2022 | Site levels generally updated at Client's direction; Swales/SuDS layout along southern boundary updated. | RMJ |

| rev | date | description | by |
|-----------------|------|-------------|----|
| PLANNING | | | |

| | | | |
|----------|------------|----------|---------------------------------------|
| Drawn: | VCH | Client: | Redrow Homes |
| Checked: | MCC | Project: | Land West of Windmill Lane, Cowbridge |
| Date: | March 2022 | Title: | Engineering Layout (2 of 2) |
| Scale: | 1:250 (A0) | Ref: | 2614-520-2 |
| | | Rev: | C |

