

HYDRAULIC CONTROL - S18A
 Greenfield Catchment Area* = 1.50ha
 *based on proposed impermeable area

Greenfield Runoff Rates (1.50ha)
 1 in 1yr = 7.6 l/s
 1 in 2yr = 8.0 l/s
 1 in 30yr = 15.6 l/s
 1 in 100yr = 18.8 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 (-0.2 l/s)
 1 in 2yr = 7.5 l/s (-0.5 l/s)
 1 in 30yr = 11.8 (-3.8 l/s)
 1 in 100yr + 40% = 16.5 l/s (-2.3 l/s)

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

Total Volume +/- = -35m³

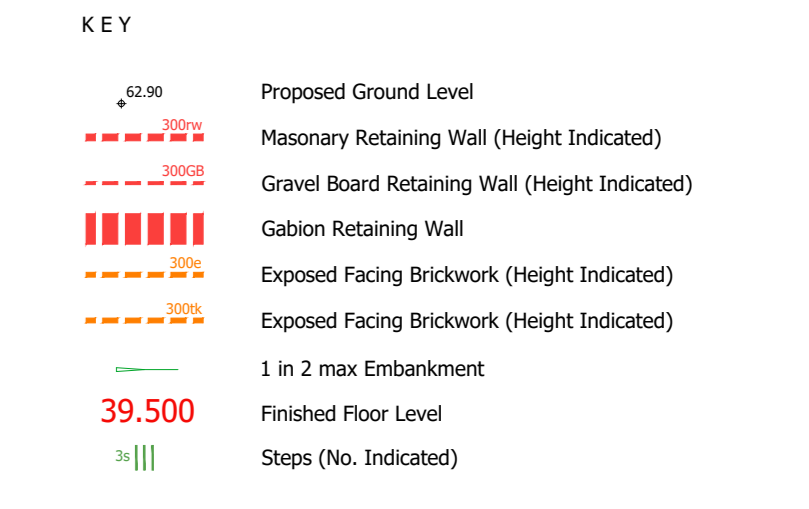
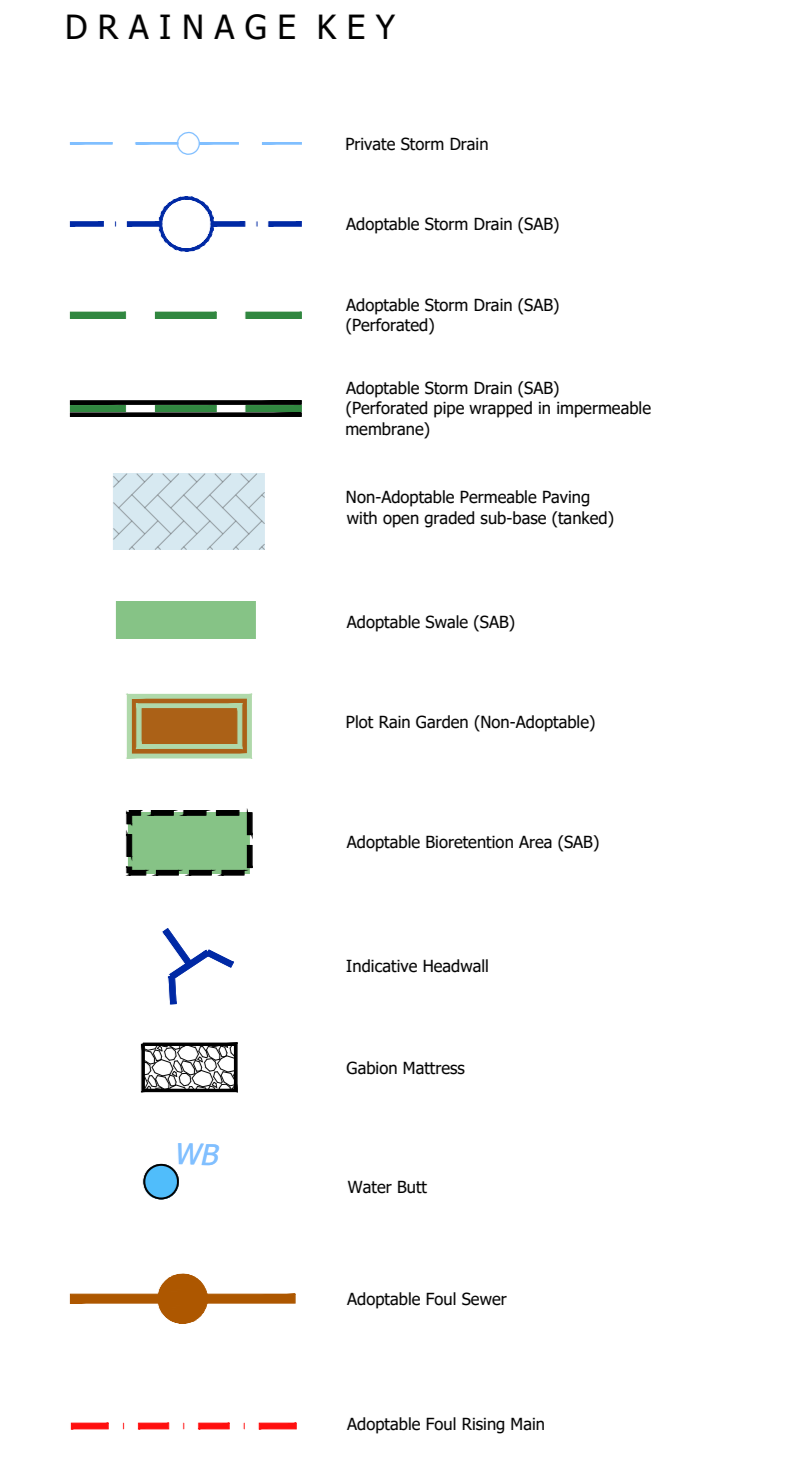
SuDS Measures

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.

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| rev | date | description | by |
|-----|-----------|--|-----|
| A | May 2022 | Drainage amended to suit updated Layout. | VCH |
| B | June 2022 | Detention basin, foot pumping station and adjacent turning head layout revised; Note 59-61 floor levels revised accordingly. | RMJ |
| C | Aug. 2022 | Site levels generally updated at Client's direction; Swale/SuDS layout along southern boundary updated. | RMJ |
| D | Aug. 2022 | Discharge rates updated in line with Drainage Strategy Report calculations. | CSM |

Status: **PLANNING**

Drawn: VCH
 Checked: MCC
 Date: March 2022
 Scale: 1:250 (A0)

Client: Redrow Homes
 Project: Land West of Windmill Lane, Cowbridge
 Title: Engineering Layout (2 of 2)
 Ref: 2614-520-2
 Rev: D

spring design

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