Outfall
52.4l/s (Qbar)

Area 2

Top of Bank 1.60m

Top of Bank 1.60m

Detention Basin

Contributing area:

Roads/Driveways	–	2.00 Ha
Blue Roofs	–	1.48 Ha
Detention Basin	–	3.00 Ha
Greenfield	–	6.93 Ha
Base Level	–	1.200m AOD
Top water Level	–	1.499m AOD
Top of Bank Level	–	1.600m AOD
Volume	–	8990m³

Drainage Strategy

The eastern half of the site has been analysed (Area 1) as the most onerous section of the site. The analysis area covers 14.69Ha of the total 28Ha site coverage.

The surface water flows from Area 1 have been modelled to replicate high ground water conditions for the 100yr + 40% climate change critical storm event. The model doesn't allow for any natural infiltration.

The rainfall model is based on FEH Catchment data provided by Centre for Ecology & Hydrology.

The proposed discharge rates for the site have been limited to Greenfield run–off (Qbar).

Qbar for the 28Ha site is calculated as 95.4l/s.

The discharge rate for Area 1 is set at 52.4l/s.

Attenuation requirement are determined by a maximum allowable discharge rate of 52.4l/s for the 100yr + 40% climate change critical storm event.

Contributing areas to the drainage network is as follows:

- Roads/Driveways (assumed 100% impermeable) 2.00Ha
- Blue Roofs, to all buildings (assumed 100% impermeable) 1.48Ha
- Detention Basin (assumed 100% impermeable) 3.00Ha
- Greenfield (remainder of site area assumed rate at Qbar) 6.93Ha

General Notes

Legend

Analysis Area

Road Levels (A.O.D)

+ 1.80m

Swale/Piped ditch
(Conveyance/Infiltration – swale 400–500mm deep)
(Conveyance – piped at road crossings

Blue roof
(Discharge into permeable paving sub–base at 0.50 l/s)

Detention Basin/Bioretention area
(Infiltration – exceedance storage set 200–300mm below adjacent ground levels)

Existing Watercourse/ditch

Drainage Channel
(Drainage channel 15m wide x 1.5m deep)

All highways, parking areas and private drives to be formed of permeable paving (full infiltration). Sub–base structure to acomodate storage requirements of 100yr +40% climate change critical storm event.

Testing should be undertaken for each development phase to establish the infiltration rate. In the event of infiltration not being suitable in localised areas surface water will be discharged to swales and ditches.

INFORMATION

REV	DATE	DESCRIPTION	BY	CHK'D
A	10.03.17	Detention basin updated in accordance with revised hydraulic calculations	CH	.

hyde

TITLE:
Area 1
High Ground Water Scenario
(No Infiltration)

PROJECT:
New Salts Farm

SCALE: 1:1000@A1 DATE: Feb'17 DRAWN: CH CHK'D: JT

DRG NO. 11649–CIV–120 REV. A

Tully De'Ath consultants
Engineering at its Best
T: 01342 828 000
E: info@tullydeath.com
W: www.tullydeath.com