

Technical Note 002		
Project Name and number:	Church Road, Climping	D2385
Subject:	SW Drainage Planning Conditions	
Client:	Foreman Homes	
Prepared by and Date:	LF	21/10/2025 (Rev 0)



Response to Arun District Councils comments dated 06/08/25 relating to Planning Condition 9 attached to Decision Notice Ref: CM/18/25/DOC.

This resubmission pack comprises the following documents:

- Technical Note 002 (this document)
- Surface water calculations, including pipe velocity calculations, 1:2, 1:30 and 1:100+CC
- Hydrostatic uplift calculations for Basins 1, 2, 3, 4 and 5
- Hydrostatic uplift calculations the Swale
- Drawing 000-BPC-WD-ZZ-D-C/D415A Manhole Schedules
- Drawing 000-BPC-WD-ZZ-D-C/D416A Manhole Schedules.
- Drawing 000-BPC-WD-ZZ-D-C/D419 P01 Manhole Schedules.
- Drawing 000-BPC-WD-ZZ-D-C/D451 P02 Domestic Drainage Layout Sheet 1
- Drawing 000-BPC-WD-ZZ-D-C/D452 P01 Domestic Drainage Layout Sheet 2
- Drawing 000-BPC-WD-ZZ-D-C/D453 P01 Domestic Drainage Layout Sheet 3
- Drawing 000-BPC-WD-ZZ-D-C/D454 P02 Domestic Drainage Layout Sheet 4
- Drawing 000-BPC-WD-ZZ-D-C/D458 P02 Domestic Drainage Layout Sheet 8
- Drawing 000-BPC-WD-ZZ-D-C/D459 P01 Domestic Drainage Layout Sheet 9
- Drawing 000-BPC-WD-ZZ-D-C/D463 P01 Domestic Drainage Layout Sheet 13
- Drawing 000-BPC-WD-ZZ-D-C/D464 P01 Domestic Drainage Layout Sheet 14
- Drawing 000-BPC-WD-ZZ-D-C/D468 P01 Domestic Drainage Layout Sheet 18
- Drawing 000-BPC-WD-ZZ-D-C/D469 P01 Domestic Drainage Layout Sheet 19
- Drawing 000-BPC-WD-ZZ-D-C/E351 P02 External Works Layout Sheet 1
- Drawing 000-BPC-WD-ZZ-D-C/E352 P02 External Works Layout Sheet 2
- Drawing 000-BPC-WD-ZZ-D-C/E353 P02 External Works Layout Sheet 3
- Drawing 000-BPC-WD-ZZ-D-C/E354 P02 External Works Layout Sheet 4
- Drawing 000-BPC-WD-ZZ-D-C/E358 P02 External Works Layout Sheet 8
- Drawing 000-BPC-WD-ZZ-D-C/E359 P02 External Works Layout Sheet 9
- Drawing 000-BPC-WD-ZZ-D-C/E363 P02 External Works Layout Sheet 13
- Drawing 000-BPC-WD-ZZ-D-C/E364 P02 External Works Layout Sheet 14
- Drawing 000-BPC-WD-ZZ-D-C/E368 P02 External Works Layout Sheet 18
- Drawing 000-BPC-WD-ZZ-D-C/E369 P02 External Works Layout Sheet 19
- Drawing 000-BPC-WD-ZZ-D-C/E531 Permeable Paving Base Levels Sheet 1
- Drawing 000-BPC-WD-ZZ-D-C/E532 Permeable Paving Base Levels Sheet 2
- Drawing 000-BPC-WD-ZZ-D-C/E533 Permeable Paving Base Levels Sheet 3
- Drawing 000-BPC-WD-ZZ-D-C/E534 Permeable Paving Base Levels Sheet 4
- Drawing 000-BPC-WD-ZZ-D-C/G901 Geotechnical Test Locations
- Ground and Water - Phase II Site Investigation Report
- Ground and Water – Groundwater Monitoring Report
- Ground and Water – Technical Note regarding Soakage Testing

Comment 5

Please submit the updated calculations that reflect all the recent changes. Comment remains.

Response

The calculations have been updated using Site3D, which is the software that has been used to build the drainage model, (rather than exporting data to a 3rd party software ie. Microdrainage) and now also include FEH22 rainfall data. Note, that in terms of pipe velocity, this is shown on the separate

Causeway Flow calculations. There are a small number of pipes where the velocity is less than 1m/s, this is because they are dummy pipes.

Comment 9

All the manholes prior to attenuation tanks and the watercourses should be catchpits. Please also specify the cover type of each manhole.

Response

All the manholes have been updated accordingly and the cover grades have been added to the manhole schedules. The revised drawings are included in this resubmission pack ref : 000-BPC-ZZ-D-C/S415A and 000-BPC-ZZ-D-C/S416A .

Comment 11

A Factor of Safety of 1.1 should be applied to disturbing forces and a Factor of Safety of 0.9 should be applied to resisting forces. Please update accordingly.

Response

The correct factors of safety have been applied, in order to clarify this, the calculations have been made again with a clearer output and are included in this resubmission pack.

Comment 14

Buoyancy calculations need updating as per comment 11. Comment remains.

Response

Calculations relating to the swale liner are included in this resubmission pack.

Comment 15

The winter groundwater monitoring is suggesting that at several locations groundwater was encountered deep into the ground or the boreholes were dry. At these areas soakaways or permeable paving could be implemented. On the other hand email named " Climping Groundwater monitoring" dated 20/11/24 is advising against the installation of soakaways due to high groundwater levels during the BRE testing. Please submit the full results of the BRE testing together with a location map of the trial pits. Finally clarify why the hybrid strategy has been abandoned.

Response

Details relating to groundwater depths and infiltration testing are included in this resubmission pack.

Ground and Water Ltd undertook infiltration testing in 12 locations across the site. The infiltration testing reports states that before excavation commenced for the testing, large areas of standing water on the surface were observed in 8 of the test locations (on the western part of the site), groundwater was found to be less than 1m below ground level and in some locations, at ground level. Infiltration testing was therefore not possible. There is a requirement for a 1m unsaturated zone between the underside of infiltration structures and groundwater level, which would not be achieved even with shallow infiltration such as permeable paving.

On the eastern part of the site, closer to Church Lane, groundwater was deeper and BRE365 testing was possible. Out of the 4 locations, compliant testing was achieved in only 1 excavation, being BRE2. It is noted from the geotechnical log for BRE2 that the soil is classified as "SAND" and other locations close by the soils is classified as "CLAY", or the sand layer is much thinner. This shows that the soil is inconsistent in this area, with a classification of mostly of "CLAY".

This assessment concurs with Ground and Water Ltd.'s statement that infiltration methods of drainage on this site are not suitable. However, un-lined permeable paving with overflows to the proposed public sewer has now been shown in the private driveways and parking courts

In summary, the hybrid system has not been implemented on the west part of the site due to high groundwater and on the eastern part of the site, a hybrid system is now shown.

The locations of the inconsistent infiltration test results and high groundwater are as shown on drawing 000-BPC-ZZ-D-C/G901, included in this resubmission pack.

Comment 16

Same as above please clarify why the hybrid strategy has been abandoned.

Response

Please refer to response to Comment 15

Comment 38

Please confirm that there is no clash between tank's connecting pipe and the foul pipe

Response

Confirmed, there is approximately 75mm clearance between the pipes

Comment 39

The gullies outside plot 268 should be moved slightly to the lowest local point.

Response

The gullies have been moved to the correct location. Please see drawing referenced 000-BPC-ZZ-D-C/D458, included in this resubmission pack

Comment 40

*It is understood that either the calculations need updating or some networks are missing.
E.g the areas shown on FOR-E5139-489 to 491 are different from those shown on calculations
Please submit the most updated calculations for all the networks.*

Also, make sure that there is a clear reference between the pipe numbers showing on the layouts and those on the calculations and reflect all the recent changes.

Response

The calculations have been updated using Site3D, which is the software that has been used to build the drainage model, (rather than exporting data to a 3rd party software ie. Microdrainage) and now also include FEH22 rainfall data. The node and pipe references are now consistent with the drawings. The results are included in this resubmission pack.