

Supporting Response

Condition 25

A review of the private drainage levels has been undertaken, there are large swathes of the development site whereby the private external and drainage cover levels are lower than the receiving modelled manhole top water level. This means water will flood from private drainage

infrastructure during the critical flood event which is not an acceptable design strategy. The extent of flooding from private drainage across Phase 4 is highly significant. Generally, the system will flood from private drainage infrastructure in most areas rather than flood from the modelling network within the public highway during critical flood events. These needs reviewing.

- External drainage around plots 466 to 470 are lower than the top water level for S1020.
- External drainage around plots 587 to 590 and 595 to 596 are lower than the top water level for S8136. This includes the FFLs of plots 595 and 596 which are 723mm below the top water level of the modelled drainage system.
- External drainage around plots 678 to 685 are lower than the top water level for S8158.
- Private gully with cover level of approx. 97.025mAOD is lower than the receiving modelled manhole top water level – S4004 (97.329mAOD).
- Private channel drainage serving Plot 460 is lower (96.600mAOD) than the receiving modelling manhole top water level – S8166 (96.760mAOD) External levels for plots 460 to 463 are also lower than this value.
- Top water level for manhole S4012 (97.312mAOD) is higher than the FFLs for plots 488 to 490 (97.300mAOD) and all external levels for which the manhole drains.
- Top water level for manhole S8151 (98.013mAOD) is higher than the FFLs for plots 577 to 580 and 597 to 599 (98.000mAOD) and all external levels for which the manhole drains. Plots 572 to 576 are also impacted due to low external levels only.
- Top water level for manhole S8150 (96.904mAOD) is higher than the FFL for plot 567 (96.900mAOD) and all external levels for which the manhole drains. Plot 568 is also impacted due to low external levels only.
- Top water level for manhole S8149 (96.550mAOD) is higher than the FFL for plot 558 to 560 (96.300mAOD and 96.500mAOD) and all external levels for which the manhole drains. Plots 539 and 556 are also impacted due to low external levels only.
- Top water level for manhole S8164 (97.185mAOD) is higher than the FFL for plots 553 to 555 (97.150mAOD) and all external levels for which the manhole drains. Plot 552 is also impacted due to low external levels only.
- Plot 551 external levels are lower than the top water level in manhole S8165 with which it is connected.

- Plots 543 to 546 external levels are lower than the top water level in manhole S8155 with which they connect.

- Top water level for manhole S8135 (98.246mAOD) is higher than the FFLs for plots 591 to 595 (97.700mAOD and 97.800mAOD) and all external levels for which the manhole drains. Plot 581 is also impacted due to low external levels only.

- Gully in parking area of plot 520 is a lower level (97.000mAOD) the top water level of receiving manhole S8159 (97.110mAOD).

- Gully in parking area of plot 536 is a lower level (97.150mAOD) the top water level of receiving manhole S8165 (97.188mAOD).

Private drainage levels being below top water level isn't something we can change. This happens on the majority of drainage calculations across the county where discharging to a ditch. The only way around this is to lift plots well above the ground and new road levels which is completely impractical. Bear in mind this is the 1 in 100 critical storms. No action proposed.

- Suspected error in gully cover level in plot 633 – shown at 97.900mAOD, ~2 metres lower than surrounding ground. Thanks – amended to correct level.

Please provide the cover levels used within the hydraulic model and ensure both drawings and model are consistent with one another. Cover levels are on the S104 layout that you have.

Please provide the cross-sectional details for the Hydro-Brake serving Network 5. Attached

Finally, alongside the maintenance schedule submitted, please confirm the company or organisation who will assume responsibility for the maintenance of the attenuation basin upon completion. It's most likely going to be Trinity Estates – although the final confirmation is TBC. Either way, a management company.