Subject: FW: Dewsbury Riverside Drainage Update - 2021/93689
Date: 04 June 2023 21:25:09

I'm afraid I have to maintain my objection to the above application despite a drawing being submitted showing indicative tank designs to replace ponds/basins.

Some aspects are more pertinent to the objection than others.

However the main aspect is that the microdrainage calculations do not reflect any sort of tank design (irregular shape) and remain the shape of basins (trapezoid) with different depths to this indicated on the plan. The hydraulics therefore do not match and will not perform in the same way.

The basin placed at manhole S23 provides 396.75m^3 in theory in the microdrainage calcs. An additional depth to area at 1.501m depth should read 0.000m^2 (omitted) this is to ensure that the maths involved in microdrainage knows the pond doesn't have capacity above the 1.5m depth entered in the programme.

The tank depth on the drawing is 1.4m and does not give any area dimensions to establish its actual 2D area take up on the drawing. It does state a volume of 365m^3 so an area can be worked out but they are irregular shapes and not rectangles so length and width dimensions remain unknown. It is irrelevant really give the volume is less than that offered in the calculation with different depths which will effect the hydraulics and gives a completely false answer to the flood simulation compared to the actual design.

Similarly, the tanks at S34 is again a trapezoid basin in the microdrainage calculations but an irregular shaped tank on the drawings. Again the calcs state a volume of 471.75m^3 but is not closed off at 1.5m as in the first example. The tank depth on the plan is 1.4m and lists a smaller volume of 450m^2. The two don't match.

Tanks will also have a cover level above the void with manholes at the surface. The cover level on Tank 1 and Tank 3 is only 500mm which could be affected by structural loading going forward or require extra protections. Tank 2 has a cover of 850mm.

Tank 1 does have a matching volume of 900m^2 with the calculations but depths are different 0.9m vs 1.5m so hydraulics will work differently for this tanks as well from drawing to the submitted calculations.

We also point out that these systems will be expected to be adopted by Kirklees Council Highways and the full design must have approval from our Section 38 and Structures Team. Please note separate comments copied into the planning officer.

Please note that some pipework is shown as 150mm. These may required increasing the

highways minimum diameter for carrier drains, 225mm.

It is noted that the levels of connections to existing systems from this highway drainage is ‘assumed’.

Some pipes cross each other with very similar invert levels on the respective manholes close by. Cross sections will be required for a detailed adoption design to prevent unworkable clashes or potential for pipe fracture.

Kind regards,

Paul Farndale
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