

Site Drainage and Sewage – Calder Farm Caravan Site.

Calder Farm Caravan Site has operated as a Caravan and Camping Licenced site since 2013. The site is located within a small agricultural parcel of grassland. The infrastructure within the site comprises a hardcore track with 8 no hard standings for caravans. A small facilities block is located in the north east corner of the site. The facilities include showers and toilets with foul water draining to a septic tank.

The proposed scheme is to create an additional 5 no caravan pitches within the site and replace the existing facilities building with a timber unit. A plan showing the proposed site plan is attached as Appendix A.



Drainage

The land falls towards the west with an approximate slope of 1 in 15-20. Soils are well drained glacial drift with approximately 25-30% clay content.

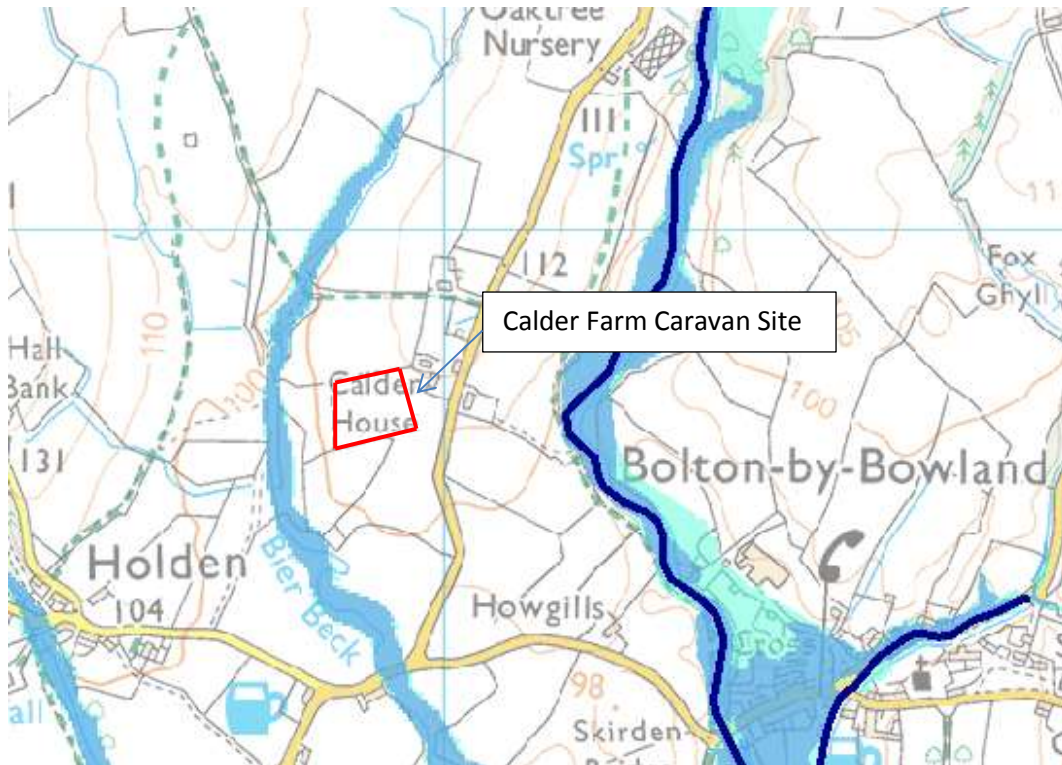
The site is drained with 4" clay field tiles which run in a south westerly direction towards the western boundary where they connect with a 6" plastic drain overlaid with clean stone, emptying into an open ditch running along the southern boundary. The open ditch continues across the adjacent grassland parcel to join Hungrill Beck. A plan showing the drainage arrangement is attached as Appendix B.

The hardcore track and caravan pitches have been formed by removing 30mm soil and laying 75mm clean stone to a depth of 25mm and overtopping with 25mm gravel.

Surface Water- Facilities Building

Surface water from the facilities building will drain to an existing field drain. The roof area of the proposed facilities building is 24m². The surface water off this size building is insignificant and can be accommodated by the existing drains adequately.

Flood Risk



Calder Farm Caravan Site is 77 metres from Flood Zone 3. The site is located above the 110m contour line with the flood zone at the 100m contour.

The land is former agricultural grassland and is drained with clay tiles. The infrastructure within the site is permeable stone roadways and caravan pitches. Tents are located on grassland.

The proposed use will involve touring caravans and tents which will not create excessive surface water run-off.

The natural slope of the land and the permeability of the soils and stone tracks and pitches will ensure that surface water drainage is not a risk. The site has operated for 4 years without any flooding including extreme weather events such as storm Desmond in 2015.

Foul Water and Sewage

Foul water and sewage drains to a septic tank in the south east corner of the site. The system deals exclusively with the caravan site and is a modular system. The unit has a capacity to deal with 6,500 litres/day. The septic tank is certified to EN12566-3 2005 and has been installed to BS6297 specification.

In line with Caravan and Camping Club guidance the septic tank is not connected to a soakaway. A modular hard plastic cesspool is connected to the septic tank and is emptied as required by vacuum tanker. (See Annex 3 for images of septic tank and cesspool).

The capacity of the septic tank system was calculated using British Water Codes of Practice – Flows and Loads 4; Sizing Criteria, Treatment Capacity for Sewage Treatment Systems.

Flow calculations:

Caravan sites – not serviced 100 litres/day / person

Tent sites 75 litres/day/person.

Assuming an average of 3 persons/caravan and 2 persons/tent

13 caravans x 3	39 persons x 100 litres	=	3,900 litres
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10 tents x 2 persons	20 persons x 75 litres	=	1,500 litres
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Total	5,400 litres.
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The above calculations are based on 100% occupancy. In reality occupancy levels only reach this level at peak times.

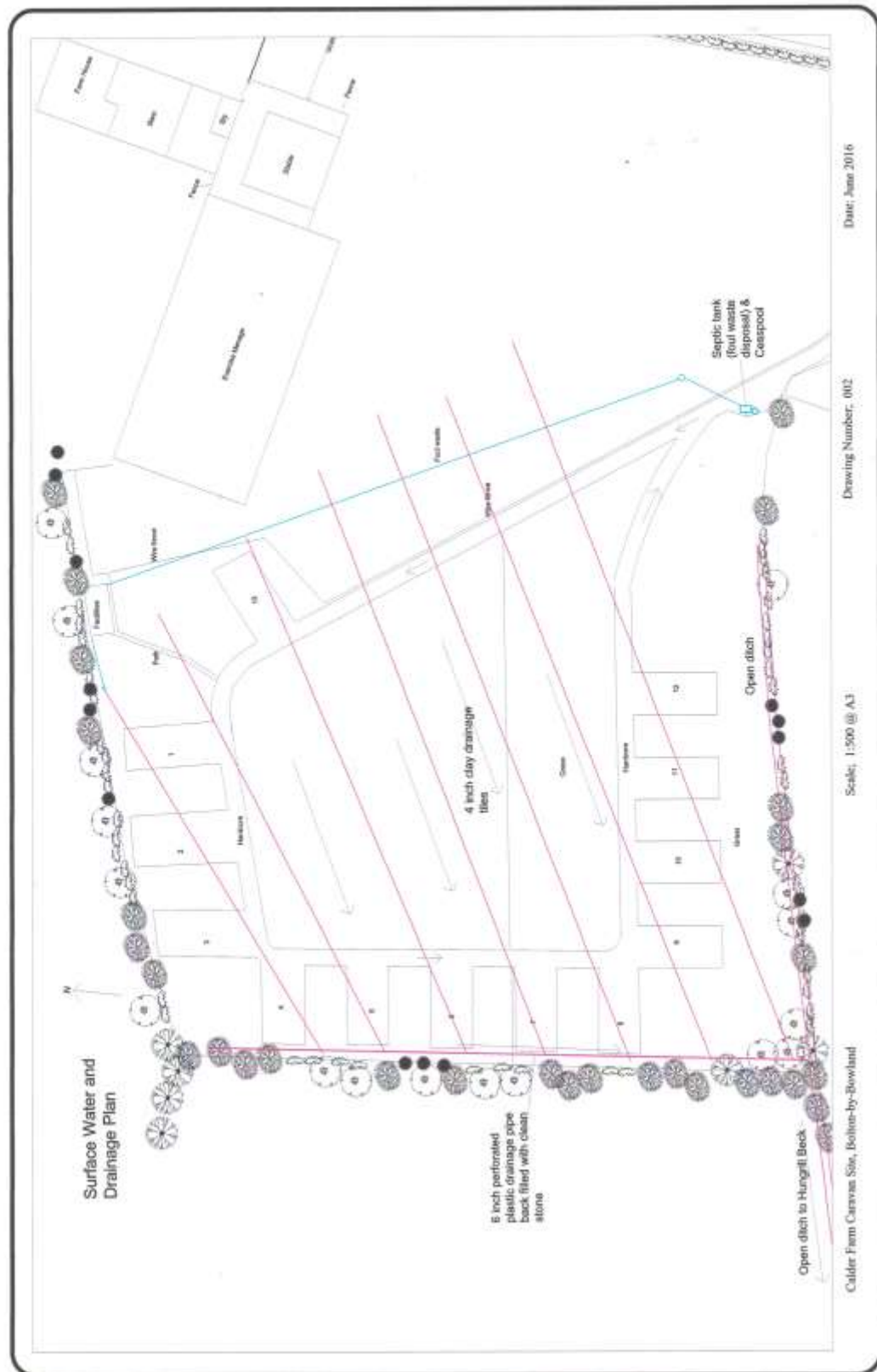


Septic tank and cesspool with waste disposal point

Annex A Propose Development



Appendix B Surface Drainage and Sewage Layout

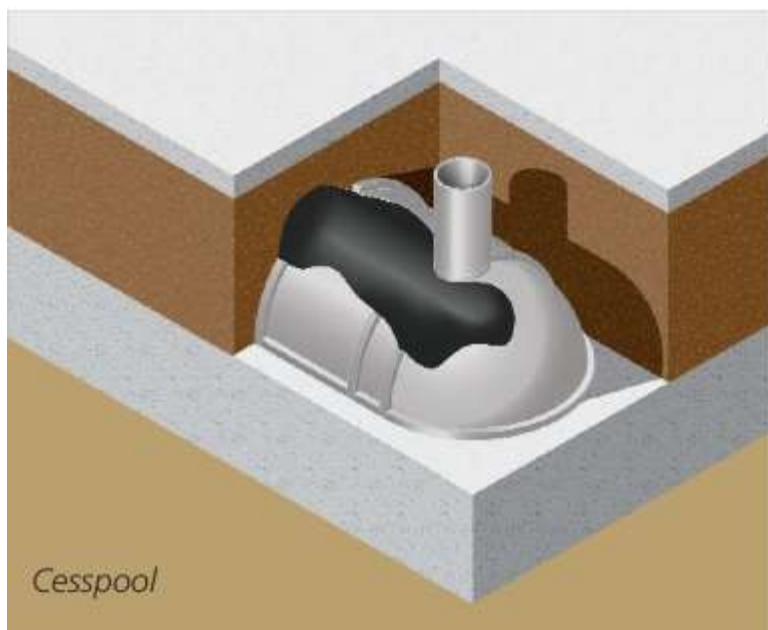


Annex C Septic Tank and Cesspool



Tricel 6500 septic tank. EN12566-3 2005 Certification

Cesspool



Clearwater Cesspool