WATER NEUTRALITY - MARCHES ROAD

Existing baseline water consumption
This is considered to be ZERO

Proposed water consumption (including onsite mitigation)
This is calculated as 64.3 lppd

Each caravan is said to have an average occupancy of 2.47 people (4.94 people in total on site) with a total water use of:

317.64 litres per day or 115,938.6 litres per year.

However, given the lifestyle of the families being gypsies, you will need to factor in travelling days throughout the year in which water demand is nil on-site. In interview, they confirm that they travel 75 days a year. We have allowed a reduced amount of 65 days to provide a precautionary approach.

Taking away 65 days of water demand a year, across the site will result in a total water use of:

95,292 litres per year

The strategy seeks to ensure the proposal is water neutral through the installation of rainwater harvesting to provide 100% of the required water.

Please note that we have applied the same principles that the LPA apply to those from the the settled community. We therefore use the average occupancy rate. This ensures that there are no breaches to the equality act. We trust the LPA accept and will follow the same principles.

The calculations submitted and set out in these WN calculations show there is sufficient roof area TO BE PLACED on the site to collect the required amount of rainwater. This was also shown within the original WNS - no changes have been made to roof sizes. We note you mention that the plans are different to what dimensions we use within our calculations. This is because the plans you are referring to are demonstrating the caravans that are currently present. We do previously mention, but will raise the point again, that we have always intended to place larger caravans on the site. This was shown in submitted drawing GP/03/24 Rev A, where larger units are shown on a block plan. I do appreciate though, that dimensions are not marked up nor floor plans and elevations are provided for the larger proposed units, so this may have been missed. A plan marking up these dimensions will be provided to you along with this document. The Caravan and Sites Act 1960 stipulates that a caravans maximum dimensions is any structure not exceeding 65ft long or 22ft4 wide; this means there is no restriction on the size we state here, and have previously stated in our original WNS.

We acknowledge an error/misunderstanding in our WNS in demonstrating the proposed plans as smaller units, not including the coefficients, and not factoring in travelling days away from the site. This is all a matter of a detailed WNS, when originally we provided a basic version. But since you suggested factoring in coefficients, we felt the detail was necessary to include time away from site. We trust the details of factoring in travel days due to the families' nomadic lifestyle, is accepted by the LPA. We can now provide a statement that shows these larger units demonstrate the site can be water neutral. We also provide you with a block plan, demonstrating these proposed units on the site.

CALCULATIONS

CARAVAN SIZE/ROOF AREA AVAILABLE ***ON-SITE CURRENTLY***

PITCH 1: 3.658X10.668=39.02
PITCH 2: 3.048X8.534. =26.01
(65.03M2 in caravan roof space)
PLUS 15.75 AND 6.2M2 CONTAINERS
=86.98 M2 total roof space currently

AVERAGE RAINFALL= 760MM

86.98 X 0.9 (surface yield coefficient) X 760 X 0.9 (hydraulic treatment efficiency coefficient) =

53,545 YEARLY YIELD = 146.7 LPD DAILY YIELD

We acknowledge that larger caravans, with bigger roof spaces, will be needed

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CARAVAN SIZE/ROOF AREA **TO BE PLACED on-site incl. existing containers**

A plan is provided to you, to show that these caravans can be accommodated on site.
A 6 metre clearance is shown and three metre space is shown from all boundaries.

CARAVANS: 6.66X10M
X2= (133.2M2 in caravan roof space)
PLUS 15.75 AND 6.2M2 CONTAINERS
= 155.15M2 total roof space

AVERAGE RAINFALL= 760MM

155.15 X 0.9 (surface yield coefficient) x 760MM x 0.9 hydraulic treatment efficiency coefficient)=

95,510 YEARLY YIELD= 261.67 LPD DAILY YIELD

Whilst we accept it doesn't yield the required *daily* need, you need to factor in the yearly demand with travelling days in account. 65 days of the year will not need to be supplied for. This need therefore accounts to 95,292 litres a year, and these caravans and containers provide a yearly yield of 95,510 litres.

There is an excess of 228 litres a year.

The site can therefore be deemed water neutral

Alternatives

If for whatever reason, the council were not able to accept the case that the family will be travelling for an average of 65 days/year and therefore not require water supply on-site, first of all it would be deemed unjust given their well-known nomadic lifestyle (of which we are all aware of).. there are other measures which can be taken in order to achieve water neutrality.

In order to achieve water neutrality (without the travelling days being taken away from the yearly need), there would be a remaining 55.96litres/day that would be needed. This comes from a difference in the yearly yield of 95,510, and a yearly need of 115,938.6 litres. The remaining 55.96L/day would need to be offset.

It could be proposed that the water demand be offset via the purchase of water credits via a supplier such as Nicholls Licensing and Consulting. The Council will be aware of these, through application DC/24/1409, which as it turns out is also involving the stationing of caravans.

Please note that no objections, including Natural England were upheld to this application regarding water neutrality, subject to the mitigation measures taking place. We trust the same view applies to this site.