

Title of theme that you are commenting on

Foxbridge Wellness Spa – Water Neutrality/Mains Sewage

Brief summary of areas of concern/challenge

Water Neutrality: I have read through the Quantum CE report V6 by the Substantia Group dated 25th August 2022 on Water Neutrality for the development of the former Foxbridge Golf Course in detail. This report is one of the many documents attached in support of the outline application for the Foxbridge Wellness Spa.

To the casual observer, the afore mentioned report may seem comprehensive. However, on a detailed look there are some significant omissions and misguided assumptions that **demonstrate that the proposed development does not achieve water neutrality**. What is abundantly clear is that the development **will bring about a significant increase in water consumption**.

According to Natural England (source:

https://www.horsham.gov.uk/_data/assets/pdf_file/0019/106552/Natural-Englands-Position-Statement-for-Applications-within-the-Sussex-North-Water-Supply-Zone-September-2021.pdf)

Sussex North Water Supply Zone

Arun Valley SPA, SAC and Ramsar Site- Sussex North Water Supply Zone

The Sussex North Water Supply Zone includes supplies from a groundwater abstraction which cannot, with certainty, conclude no adverse effect on the integrity of;

- *•Arun Valley Special Area Conservation (SAC)*
- *•Arun Valley Special Protection Area (SPA)*
- *•Arun Valley Ramsar Site.*

As it cannot be concluded that the existing abstraction within Sussex North Water Supply Zone is not having an impact on the Arun Valley site, we advise that developments within this zone must not add to this impact. This is required by recent caselaw, [Case C-323/17 People over wind and Sweetman. Ruling of CJEU](#) (often referred to as sweetman II) and [Coöperatie Mobilisation for the Environment and Vereniging Leefmilieu Case C-293/17](#) (often referred to as the Dutch Nitrogen cases).

Between them these cases require Plans and Projects affecting sites where an existing adverse effect is known (i.e. the site is failing its conservation objectives), to demonstrate certainty that they will not contribute further to the existing adverse effect or go through to the latter stages of the Regulations (no alternatives IROPI etc).

Developments within Sussex North must therefore must not add to this impact and one way of achieving this is to demonstrate water neutrality.

In addition, the [Gatwick Sub regional Water Cycle Study](#) concluded that water neutrality is required for Sussex North to enable sufficient water to be available to the region.

The definition of water neutrality is the use of water in the supply area before the development is the same or lower after the development is in place.

Strategic approach

Natural England has advised that this matter should be resolved in partnership through Local Plans across the affected authorities, where policy and assessment can be agreed and secured to ensure water use is offset for all new developments within Sussex North. To achieve this Natural England is working in partnership with all the relevant authorities to secure water neutrality collectively through a water neutrality strategy.

Whilst the strategy is evolving, Natural England advises that decisions on planning applications should await its completion. **However, if there are applications which a planning authority deems critical to proceed in the absence of the strategy, then Natural England advises that any application needs to demonstrate water neutrality**

Natural England go on to say (source:

https://www.horsham.gov.uk/_data/assets/pdf_file/0016/112444/02032022-Arun-Valley-Water-Neutrality-Frequency-Asked-Questions-Developer-FINAL.V3.pdf)

How is water neutrality achieved?

Water neutrality is achieved through a combination of water efficiency measures for new developments to reduce the water use per person (called per capita consumption). The amount of water from new homes, offices and other developments that use public water supply in the Sussex North water supply zone is then calculated on an individual or cumulative basis to produce a predicted “demand” for water from growth. **This total amount of water from growth is then offset by reducing the amount of water currently used in the Sussex North water supply zone.**

B: BACKGROUND

Why is water neutrality needed? – simple explanation

The existing water supply in the Sussex North water supply zone cannot be ruled out as contributing to the declines in wildlife within internationally protected sites in the Arun Valley, Sussex. The Arun Valley is legally protected for its wintering birds, its wetland habitats, a rare snail species, invertebrates and several rare and uncommon aquatic and wetland plants.

Evidence shows that wildlife within the Arun Valley site is declining. Some of the designated site has been shown to be linked hydrologically to a layer of rocks from which water is currently being abstracted, or in other locations the hydrogeological link cannot be ruled out.

Following case law on the Conservation of Species and Habitats Regulations 2017, where existing impacts are causing declines on designated sites, further impacts should be avoided where possible. Since the public water supply abstraction cannot be ruled out as one of the existing impacts **making development water neutral prevents development increasing the impacts on the wildlife and therefore meets these legal tests.** As an extra benefit, water neutrality improves the overall sustainability of the development by reducing water consumption and therefore also energy consumption and carbon.

Minimising water use of new builds.

- Complete a water budget (based on occupancy)

- *All new builds to demonstrate that they can achieve strict water targets (e.g., 85L/pp/day*)*

This can be achieved by measures such as:

- *Grey water recycling (advantage of being reliable in hot dry weather);*
- *Rainwater harvesting;*
- *Water efficient fixings (such as shower aerators) to demonstrably reduce demand-this would need to be suitably certain.*

**This is the reasonably achievable figure with the above measures based on the early data from the strategic solution and may be subject to change as the strategic solution evolves.*

In summary Natural England make the following points:

- 1) The existing water supply in the Sussex North water supply zone cannot be ruled out as contributing to the decline in wildlife within internationally protected sites in the Arun Valley, Sussex
- 2) Following case law on the Conservation of Species and Habitats Regulations 2017, where existing impacts are causing declines on designated sites, further impacts should be avoided where possible
- 3) The application needs to be deemed critical by the planning authority
- 4) All new builds to demonstrate they can achieve strict water targets (e.g. 85L/pp/day) after measures such as Grey water recycling, rainwater harvesting, water efficient fixings have been applied

It also makes the following abundantly clear:

“The definition of water neutrality is the use of water in the supply area before the development is the same or lower after the development is in place”.

The Parish Council has also checked Natural England's advice note:

<https://crawley.gov.uk/sites/default/files/2022-02/Water%20Neutrality%20advice%20note.pdf>

This reinforces the comments made in the Natural England Statement regarding water neutrality.

It goes on to say on page 3;

“

It is Natural England's intention that Water Neutrality is integrated into relevant Local Plans in partnership with local authorities. However, given the existing stresses on the sites and the need to engage with individual planning decisions, the Statement is considered the most effective interim approach to help ensure that any planning applications within the Sussex North Water Supply Zone can be determined in compliance with the 2017 Regulations whilst the Strategy is evolving.

Strategic long-term approach

Given existing pressures, both environmental and developmental, achieving Water Neutrality is likely to remain necessary for as long as the adverse effect risk from water supply abstraction continues, and may be required until the Habitats sites in question are restored to FCS. In practical terms, this is likely to require the delivery of an alternative water supply (estimated around 2030 with significant uncertainty).

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The main findings on reviewing the water neutrality report and the statements made by Natural England are as follows:

- 1) The application for a Wellness Spa and 121 holiday units does not amount to a critical need (unless defined as such by the planning authority) which in itself should lead to a rejection as defined by Natural England's Statement.
- 2) The Quantum Water Neutrality report talks about the Golf Course and its corresponding water consumption (due to irrigation) as if it's in current use but the Golf Course closed in 2019. This is an incorrect assumption as any estimated water consumption associated with the previous Golf Course does not reflect the water consumption before the development. This is misaligned with Natural England.

The current consumption backed up by meter readings should be provided for setting the existing demand prior to the development.

- 3) The same report gives a common water consumption of 90Litres/person/day (L/p/d) for many of the users but this is a wrong interpretation. Natural England clearly state that water usage should be limited to 90L/p/day after measures have been taken (i.e. a target consumption) **NOT** before, i.e. for holiday Chalets the figure is more like 150L/p/day and for hotel guests 250-300L/p/day. Additionally, the water consumption for the Spa/Concierge has been significantly underestimated by 5 times
- 4) The water neutrality report has several omissions with regards to consumption such as the farm shop, soft landscaping, new ponds, tree planting, water for initial filling and maintenance of the swimming pool and other Spa facilities
- 5) Insufficient detail has been provided for rainwater harvesting and the annual rainfall figure of 875mm is incorrect. According to the water neutrality report the golf course benefits from 8 rainwater harvesting lakes that are linked to the irrigation water tank. This is confusing since the tank is above ground and would appear to be at a higher elevation than the lakes. It rather appears to be linked to the roof drain of the adjacent building which is then pumped for irrigation of the golf course so the details in the water neutrality report appear misleading.
- 6) The report takes credit for the WaterBank but this should not be assumed and therefore not taken as a credit. Details should be provided on the schools that have been approached and that they are willing to make the necessary upgrades to offset the water demand. Also that they are not linked to any other development.
- 7) The site is not on mains sewage. The only residences on mains water are located adjacent to the Foxbridge Lane/Plaistow Road but these are at a higher elevation than the Foxbridge site and so can gravity flow into the existing main. They are also located on the north side of an existing stream whereas the Foxbridge site is located to the south which makes connection to the existing main extremely difficult and lends itself more to an onsite sewage treatment plant.

Either way, details for connection to the mains system should be included in the application along with communication with Southern Water or details of onsite sewage treatment including odour assessment report to the EA and permit to discharge.

On the grounds of the above points the Parish Council STRONGLY OBJECTS to the application

Detailed comments/areas of challenge/further questions to raise with CDC planning officer – to include document and page references if appropriate. Please draw out specific questions/queries to be drawn to the planning officer's attention.

Water Neutrality

Issue 1 – The application does not amount to a critical need which in itself should lead to a rejection

It is the Parish Councils understanding that Natural England are still working on a strategy for extraction from the Arun site. Therefore, only developments deemed critical by the planning authority should be considered. The Foxbridge application incorrectly assumes that the development has already been deemed critical and has pursued the water neutrality route without first passing this gate. This is outlined in Natural England's statement with regard to water neutrality.

This issue only is grounds for a STRONG OBJECTION

Issue 2 – Incorrect baseline (Existing Consumption) taken for determination of water neutrality

The report goes to great lengths in talking about the Foxbridge Golf Course as a current water consumer but the Golf course closed in 2019.

Natural England are very clear in that the existing water demand (baseline for demonstrating water neutrality) should be taken before the development to show how water consumption will increase. Taking a very estimated consumption prior to 2019 is a gross misinterpretation of what Natural England are trying to safeguard, i.e. the current state of the Arun extraction site.

The water report should be amended with a baseline (existing demand) of the current consumption which should be provided by meter readings and not an estimated demand.

On page 31 of the water neutrality report it says that Natural England have been contacted to establish whether or not the 3 year time limit is applicable to this development (time since Golf Course closure). Why then does the water neutrality report go to great lengths to describe the golf course in its present tense. The fact that the water infrastructure associated with the golf course is still in place has no bearing on the state of the Arun site.

As it stands this would invalidate the assertion of water neutrality (as the Golf course irrigation should not be used as the existing capacity) and is also grounds for a STRONG OBJECTION of the application

The Parish Council have written to Natural England who have responded to say they have been consulted on this planning application and a copy of their response will be available for viewing on Chichester District Councils planning website in due course. Since Natural England is a statutory consultee for this type of planning application their response will need to be made available on the CDC planning portal.

Issue 3 – Incorrect base water consumption of 90L/pp/day

In section 1.3 of the water report it states, “The Council has stipulated the allowable daily water consumption for each guest as 90litres/person/day”.

This seems to contradict Natural England which states, “All new builds to demonstrate that they can achieve strict water targets (e.g., 85L/pp/day*) which can be achieved by; Grey water recycling, rainwater harvesting and water efficient fixings”.

**This this is the reasonably achievable figure with the above measures based on the early data from the strategic solution and may be subject to change as the strategic solution evolves.*

The Parish Council believes that Foxbridge have misinterpreted 90L/pp/day provided by the council as a consumption for many users rather than a target after credits have been taken.

Foxbridge have assumed 90L/pp/day for Type 3, 4 & 5 holiday units as well as the Spa apartments, 30L/pp/day for the Restaurant, 10L/pp/day for the Spa apartments/concierge and 71.1L/pp/day for Tents. For the first 2 cases this is a wrong assumption.

For a summary of water loads per person per day the following table has been used by the Parish Council

https://www.theseptictankstore.co.uk/wp-content/uploads/British_Water_flows_and_loads.pdf

This is a summary of the loads from the above reference with figures assumed by Foxbridge in red text in the bracketed term

Holiday Camp Chalet resident – 150L/pp/day (90L/pp/day)

Hotel Guests – 250L/pp/day (90L/pp/day)

Restaurant – 30L/pp/day (30L/pp/day)

Health Club/Sports Centre – 50L/pp/day (10L/pp/day)

Tents – 75L/pp/day (71.1L/pp/day)

Therefore, the water consumption for the Holiday Units, Spa apartments, Spa and tents has been greatly underestimated by Foxbridge and will need to be recalculated.

This correction should be requested of Foxbridge to allow a proper review by the case officer

Issue 4 – Missing Water users in the report

The water report has omitted the water consumption for several users in the report, namely;

- i) Farm Shop
- ii) Soft Landscaping
- iii) New Ponds
- iv) Tree Planting
- v) Water for initial filling/refilling of swimming pool following maintenance

These users need to be included in the report and submitted as a matter of urgency

Issue 5 – Rainwater Harvesting

According to: <https://www.worldweatheronline.com/plaistow-weather-averages/west-sussex/gb.aspx>

The average rainfall by month is given below:

Month	Average Rainfall (mm)	Average Rainfall to date (mm)
January	78.2	78.2
February	68.3	146.5
March	52.9	199.4
April	41.3	240.7
May	59.3	300
June	67.3	367.3
July	61.1	428.4
August	65.4	493.8
September	47.8	541.6
October	81.7	623.3
November	81.2	704.5
December	87.6	792.1

The annual average being 792mm which is considerably less than the figure of 875mm given in the report.

The water report on page 31 states that the water infrastructure associated with the historic golf course is still in place. However, on page 20 of the report in Figure 3.3. it shows an ageing above ground tank connected to the roof drain of a building rather than the existing ponds that are scattered around the site. Any rainwater harvesting from the existing ponds should be to an underground tank, not an above ground tank which would not meet free draining requirements. Therefore, it would appear that the infrastructure the report refers was for irrigation of the existing Golf Course and not for rainwater harvesting from the Golf Course.

Issue 6 – Credit for theWaterBank

The report makes the following statement:

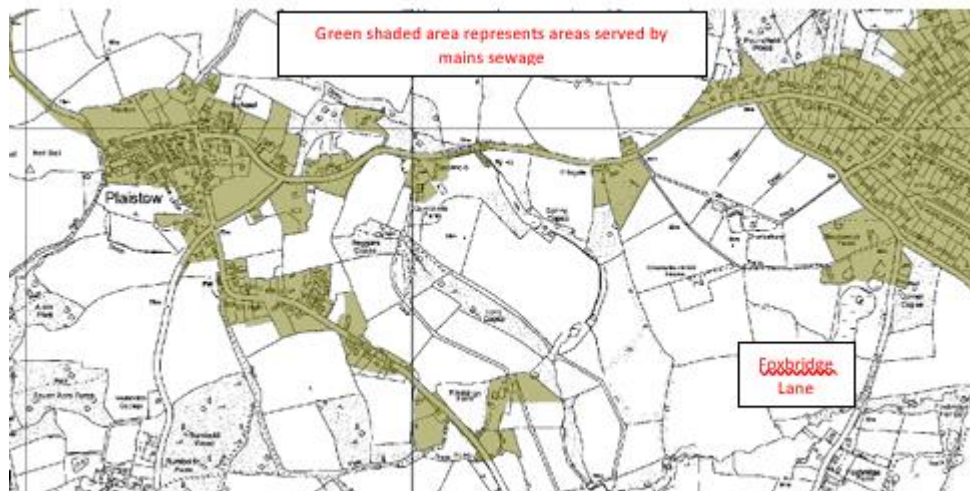
“theWaterBank will secure the water offsetting credits on its GIS database which will allocate a unique reference number associated to the development site and the schools providing the water credits. Once assigned to a site the water offsets credits cannot be transferred to another site and

are secured via a S106 agreed with the Council. theWaterBank can provide a letter of commitment to support this development. Therefore, in order to meet the offsetting requirement, this development would require 5 schools”.

Everything in the above statement is future tense and so should not be taken as a credit. Foxbridge need to provide the list of 5 schools and their willingness to take part and invest in improved water facilities. Also, that these schools are not already used to offset against other developments

Issue 7 – Lack of provision for Foul Sewer

No details are given in the report for connection to the existing mains sewer or for an independent sewage treatment plant. As can be seen from the below catchment map for mains sewage only the Northerly end of Foxbridge Lane connects to the mains sewer



Therefore, the proposed site is not currently connected to the foul main. The application will need to liaise with Southern Water on whether it can connect to the mains sewer or to show plans for an independent sewage treatment plant along with proposed discharge, permit from the environment agency and odour assessment.

I have looked at the sustainable Drainage Strategy and Foul Water Drainage Report attached to this application. On page 24 under the section 5.1 it says, “The proposed foul drainage strategy for the sites will be to make **three new connections to the public combined water sewer in Cook’s Road, one for each block**. At this stage arrangement of the private network inside the site boundary has not been established”.

This seems to be a copy and paste error from another report since the proposed site is located on Foxbridge Lane and the mains sewer runs to the north, down Plaistow Road. There is no Cooks Road in this area.

Between the proposed location and the existing main located on Plaistow Road there is a stream which runs under a small bridge under Foxbridge Lane. This would render any gravity drainage

from the new site impossible as any new main would need to be routed underneath this stream and well below the elevation of the existing main.

Mention of this stream is given in the conclusion (section 12, page 33) of the Flood Risk Assessment and Sustainable Drainage Strategy document, "The site is vastly in flood zone 1 with flood zones 2 and 3 restricted **to the banks of the stream flowing at the northern tip of the site**".

I have also looked at the Flood Risk Assessment and Sustainable Drainage Strategy document attached to this application. On page 32 under point 7 it says, "In terms of the foul drainage strategy, it is proposed to discharge at a rate of 5.1 l/s into the Southern Water public sewer network. The foul water is to drain by gravity into a new diverted foul water pipe located within the site". This foul discharge rate needs to be aligned with the corrected water consumptions highlighted in this report.

However, for the reasons explained above this does not appear to be possible to gravity drain into the existing main.

Foxbridge also need to be aware that when the pool needs draining for periodic maintenance it will not be possible to discharge the chlorinated water to a septic tank as this will damage the bacteria.

If the new site is connected to the mains sewer then Foxbridge will need **authorisation** to dispose of pool water into the main sewer, surface waters or ground water. Usually, you would have to store the water in a vented storage pool to allow chlorine to disperse before disposal. This can take at least 5 days, depending on the volume of water, source:

<https://www.netregs.org.uk/environmental-topics/water/more-ways-to-prevent-water-pollution/swimming-and-exercise-pools/#:~:text=You%20will%20need%20authorisation%20to,on%20the%20volume%20of%20water>