Application under Regulation 77 of the Conservation of Habitats and Species Regulations 2017

Relating to

Prior Approval for Change of use from agricultural building to two number C3 residential dwellings and associated works approved under application DC/20/1477

Grainingfold Horsham Road Five Oaks Billingshurst West Sussex RH14 9AT

December 2023

Introduction and Background

The application site lies on the eastern edge of Five Oaks Village and comprises an agricultural barn.

The barn is a simple utilitarian structure comprising a 5-bay Dutch barn structure with the eastern side open to the elements and the other three sides clad with tin cladding. The roof is a simple barrel vaulted structure clad in tin sheeting.

Prior approval was granted on 4th December 2023 under application DC/23/1873 for change of use of agricultural buildings to 2 dwellinghouses (Class C3) with associated works.

The purpose of this application is to determine that the approval would not have a significant effect on the Arun Valley (a European Site) as required under Regulation 75 of the Conservation of Habitats and Species Regulations 2017

This application is therefore submitted under regulation 77 of the Conservation of Habitats and Species Regulations 2017 to demonstrate that the development will result in water neutrality and therefore can be implemented lawfully.

Baseline Calculations

The existing building is used for agricultural storage of machinery and hay, as such the site has no demonstrable water use.

The baseline water consumption for the development site is therefore considered to be nil.

Proposal Demand and Water Reduction Measures

The Design stage water Neutrality report that accompanies this application, prepared by Melin Consultants, calculates the proposed water demand from the development approved under DC/23/1873 to be 315.7 litres / day for the entire development.

This has been calculated based on a baseline water consumption of 95.4 litres / person / day, achieved by using efficient fittings in the development. A further allowance of 5 litres / person / day is made for external water usage.

This figure is to be reduced further through the installation of a rainwater harvesting tank to feed the WCs and washing machine which will reduce the figure to 63.8 litres /person / day.

Water butts will be installed to collect excess rainwater from the roof which can be used for external use, eliminating the external water usage from the mains

On the basis of the above, based on an average occupancy of 2.47 people (Based on extrapolated 2011 census data for Horsham District) the water demand for each unit will be 157.59 litres/day (2.47 x 63.8)

For the two units, the development total will result in 315.17 litres / day.

The proposed water consumption is 315.7 litres / day higher than the baseline consumption even after installing efficient fixtures and appliances and rainwater harvesting. It is therefore necessary to provide offsetting measures to achieve water neutrality.

Offsetting measures

The mitigation property

The applicant owns the property to the south east of the application site. The address of this property is

Grainingfold Farmhouse
Horsham Road
Five Oaks
RH14 9AT

The applicant proposes to incorporate water saving measures to this property in order to achieve water neutrality. This property is referred to in this report as “The mitigation property”

For clarity, the mitigation property is shown highlighted in the image below in blue, with the application site shown in red.

The mitigation property comprises a 5 bedroom / 5 bathroom residential property. The property is occupied full time by three persons with occasional guests staying, for the purpose of these calculations figures have been based on the full time occupancy of three persons.

To the south east of the house is a converted Sussex barn which is approved for holiday let and ancillary residential use.



The mitigation property also includes a stable building, an external swimming pool and a pool house.

The applicant also uses land for the grazing of sheep, an orchard containing 30-40 small fruit trees, a greenhouse, fruit cages and vegetable garden.

Full details of the mitigation property's water consumption are provided in the Melin report which calculates the flow rates / water consumption of the fittings based on manufacturers data and calculated using the Part G water calculator.

Evidencing the water usage

Appendix 1 of the Melin report provides a photographic schedule of the fixtures and fittings in the mitigation property.

Appendix 2 of the Melin report provides a water bill for the mitigation property which evidences the water consumption of the property. This bill relates to the combined water consumption of the dwelling, the barn, stables, pool house and pool.

Water usage from the mitigation property

The main house

The Water Neutrality report that accompanies this application, prepared by Melin Consultants, calculates the existing water demand from the mitigation property to be 383.4 litres / day for the main dwelling.

This has been calculated based on a Part G calculation for the existing fittings in the house, evidenced by the photographic schedule in Appendix 1 which calculates a water consumption of 127.8 litres/person/day.

Based on an occupancy of three persons the water consumption of the dwelling is 383.4 litres / day.

The water consumption of the house can be reduced through the installation of a rainwater harvesting tank to feed the WCs and washing machine which will reduce the figure to 67.9 litres /person / day.

Water butts will be installed to collect excess rainwater from the roof which can be used for external use, eliminating the external water usage from the mains which will reduce the figure to 62.8 litres /person / day.

Based on an occupancy of three persons the water consumption of the dwelling can be reduced to 188.4 litres / day.

This results in a reduction in water usage of 195 litres / day (383.4- 188.4)

Other water usages at the mitigation property

The water bill included in appendix 2 of the Melin report covers 1,265 days (2019 – 2022) and shows an average water use at the mitigation property of 1,457.87 litres/person/day.

Based on the calculations provided 383.4 litres / day is used by the main dwelling. The remaining water consumption of 1,074.47 litres / day is used by the grazing livestock, the orchards, the greenhouse, the barn, stables, pool and pool house.

The land amounts to around 40 acres of grazing land. The applicants have 5 sheep of their own grazing on the land permanently. In addition, they rent the land to a local farmer for additional grazing and the movement of sheep needs to be documented for DEFRA so can be evidenced.

Grazing sheep

The total number of sheep kept on the land for a period of 4 years from 2018 to 2022 is provided in the Melin report. The report uses DEFRA figures to demonstrate that an average of 75.23 litres/day is used by the grazing sheep.

The drinking water for the sheep will be changed over to be fed by way of rainwater harvesting and so a further offset of 75.23 litres / day is proposed.

Swimming pool usage

The property contains a swimming pool with a volume of 54,0000 litres. The pool is flushed and topped up every 2 weeks during Spring and Summer. The Melin report calculates the amount of water that each flush will use and provides an average figure of 96.16 litres per day.

The topping up of the pool will be changed over to be fed by way of rainwater harvesting and so a further offset of 96.16 litres / day is proposed.

It is clear from the water bills appended to the Melin report that there is further water consumption on site from the orchards, the greenhouse, the barn, stables etc.

Total offsetting measures proposed

Through the provision of rainwater harvesting tanks to supply the WCs and washing machines in the house, domestic outside water usage (195 litres/day), sheep grazing (75.23 litres/day), and the pool top up (96.16 litres/day), a total off set of 366.39 litres per day can be secured.

Compares to the 315.17 litres / day that the proposed development will use, this results in a net reduction of 50.69 litres/day

Details of the rainwater harvesting tank proposed for the mitigation property are shown in The accompanying report by Motion dated 10th august 2023

Securing the mitigation

Both the application site and the mitigation property are in the applicants ownership.

The applicant confirms their agreement to entering in to a Section 106 legal agreement to secure the mitigation in perpetuity.

Conclusion

The Design stage water Neutrality report that accompanies this application, prepared by Melin Consultants, calculates the proposed water demand from the development approved under DC/23/1873 to be 315.7 litres / day after incorporating water efficiency measures and rainwater harvesting.

The existing dwelling and associated land, after rainwater harvesting measures have been implemented can be reduced by 366.9 litres / day.

With these measures implemented and following construction of the new development, the demand on water from the Arun Valley will be reduced by 50.69 litres / day.

The proposal provides a robust and enforceable mitigation proposal and would therefore not have a significant effect on the Arun Valley (a European Site) as required under Regulation 75 of the Conservation of Habitats and Species Regulations 2017