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Development Management
Wokingham Borough Council

By Online Submission Only

1st October 2024

Original Application Number: 21/1081

**Barkham Farms (High Barn Farm and part of Brook Farm and Rooks Nest Farm),
Barkham RG40 4EX**

Full application for EIA development for the proposed installation of a new 52ha solar farm for a temporary period of 25 years including underground grid connection between site and Electricity Distribution Centre, laying of internal access road, the erection of substation building security fencing and associated landscaping with approximately 3.4ha of tree planting for carbon sequestration.

Background

Prospus Group Ltd has been engaged to submit a discharge of conditions relating to planning application 21/1081 to seek the discharge of conditions 11, 12, 13, 14, 17, 19, 20 and 21 as instructed by Equans.

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The Submission

The attached table 23_027 – TB3 sets out each condition, the related plan, and a brief description. The following documents form the discharge of condition application

DCA3 Covering letter (this letter)

Condition	Description	Document Number	Revision	Description
11	Pedestrian crossing details	BFSF-CURT-XX-DR-C-9500 General arrangement BFSF-CURT-XX-DR-C-9501 Vehicle tracking BFSF-CURT-XX-DR-C-9503 Legal Plans BFSF-CURT-XX-DR-C-9505 Visibility splays BFSF-CURT-XX-DR-C-9510 Levels plan BFSF-CURT-XX-DR-C-9540 Signs and lines BFSF-CURT-XX-DR-C-9580 Highway details BFSF-CURT-XX-DR-C-9590 Long Sections		Details of the pedestrian crossing proposals which also show the main accesses into the site being close by and pertinent to the design.
12	Access details	BFSF-CURT-XX-DR-C-9500 General arrangement BFSF-CURT-XX-DR-C-9501 Vehicle tracking BFSF-CURT-XX-DR-C-9503 Legal Plans BFSF-CURT-XX-DR-C-9505 Visibility splays BFSF-CURT-XX-DR-C-9510 Levels plan BFSF-CURT-XX-DR-C-9540 Signs and lines BFSF-CURT-XX-DR-C-9580 Highway details BFSF-CURT-XX-DR-C-9590 Long Sections		Details of the site access proposals which also show the pedestrian crossing details being close by and pertinent to the design.
13	Construction Traffic Management Plan	BFSF-WSPC-ZZ-RP-Z-0002 Construction Traffic Management Plan		CTMP
14	Construction Environmental Management Plan	BFSF-WSPC-ZZ-RP-Z-0001 Construction Environmental Management Plan	Optimized	CEMP
17	CCTV	BFSF-EQNS-ZZ-DR-Y1-0006 CCTV Layout BFSF-EQNS-ZZ-DR-Y1-2005 CCTV Pole elevations		CCTV Layout and elevations
19	Lighting	BFSF-EQNS-ZZ-NO-T-0001 Lighting Strategy BFSF-EQNS-ZZ-DR-Y1-0023 External Lighting Layout BFSF-EQNS-ZZ-DR-E-0029 Customer Substation Elevation BFSF-EQNS-ZZ-SP-Z-0004 External Lighting Specifications		Description of the external lighting its location and the specification together with the strategy pertaining to it.
20	Drainage	BFSF-CURT-XX-RP-C-9201 Proposed Drainage Strategy (3 parts) BFSF-CURT-XX-DR-C-9200 Proposed Drainage General Arrangement sheet 1 BFSF-CURT-XX-DR-C-9201 Proposed Drainage General Arrangement sheet 2 BFSF-CURT-XX-DR-C-9202 Proposed Drainage General Arrangement sheet 3 BFSF-CURT-XX-DR-C-9203 Proposed Drainage General Arrangement sheet 4		Drainage Strategy
21	Underground Infrastructure	DCA3 Covering letter		Outline of measures taken to attempt to positively determine the route of the water pipes to Church Cottages. As that has that been possible the reasonable assumption is that the pipes do not run in the proposal site.

Discussion

Conditions 11 and 12 – Pedestrian crossing details and Access details

These details are provided on the following drawings which also incorporate details of the new access to the solar farm and demonstrates how these highway alterations interact.

BFSF-CURT-XX-DR-C-9500 General arrangement

BFSF-CURT-XX-DR-C-9501 Vehicle tracking

BFSF-CURT-XX-DR-C-9503 Legal Plans

BFSF-CURT-XX-DR-C-9505 Visibility splays

BFSF-CURT-XX-DR-C-9510 Levels plan

BFSF-CURT-XX-DR-C-9540 Signs and lines

BFSF-CURT-XX-DR-C-9580 Highway details

BFSF-CURT-XX-DR-C-9590 Long Sections

C12 refers to the use of permeable and bonded material. The access details submitted in the above drawings only include bonded material in the immediate vicinity of the highway. The remaining sections of the access road will be in a permeable surface and the details of that will be submitted as part of the discharge of C5.

Condition 13 – Construction Traffic Management Plan

The Construction Traffic Management Plan: BFSF-WSPC-ZZ-RP-Z-0002 is submitted and is in accordance with the principles contained within the draft CTMP dated March 2021.

Condition 14 Construction Environmental Management Plan

The submitted Construction Environmental Management Plan: BFSF-WSPC-ZZ-RP-Z-0001 Optimized set out the details requested in Condition 14.

Condition 17 CCTV

The following plans are submitted to illustrate the CCTV system for the proposal.

BFSF-EQNS-ZZ-DR-Y1-0006 CCTV Layout

BFSF-EQNS-ZZ-DR-Y1-2005 CCTV Pole elevations

Condition 19 Lighting

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The Lighting Strategy is set out in the following submitted documents:

BFSF-EQNS-ZZ-NO-T-0001 Lighting Strategy
BFSF-EQNS-ZZ-DR-Y1-0023 External Lighting Layout
BFSF-EQNS-ZZ-DR-E-0029 Customer Substation Elevation
BFSF-EQNS-ZZ-SP-Z-0004 External Lighting Specifications

The following lighting strategy is proposed:

- Siting of luminaires will be designed to avoid unnecessary light spill on retained or newly planted trees;
- Luminaires should lack UV elements when manufactured, and should not use metal halide or fluorescent sources;
- LED luminaires should be used wherever possible due to their lower intensity and dimming capabilities;
- All lighting will use a warm white spectrum to reduce blue light components, and should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats;
- Lighting will not be in permanent operation throughout the night; and
- Lighting heights should be carefully considered to minimise light spill, with luminaires mounted on the horizontal to avoid upwards light spill.

Operational Phase

In response to this strategy and in a change to the previously submitted information on lighting, no lights are proposed for security purposes during the operational phase. Lighting on the site is restricted to emergency lighting at the doorways of the substation and spare parts building which number 2 in total. These lights are necessary for H&S purposes when out of hours visits by maintenance staff occur. However, normal maintenance operations will occur during daylight hours and the lighting will only be necessary on rare occasions when there is an emergency issue that requires attention during the hours of darkness. On a solar farm this is not considered to be likely at all. The lights will be controlled manually by controls at each building.

The submitted material provides details of the locations of each light and the type of fitting together with its proposed brightness.

Construction Phase

During the construction phase, temporary construction lighting to be minimal in extent and use. The lighting is to be highly directional and seek to minimise light spill and glare into the surrounding landscape. The majority of the construction events will occur in the summer months when no external lighting will be required. If any such lighting is required in the winter months it is likely, according to the construction programme, to be in a dispersed pattern across the site for small areas to assist with specific work

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such as connections. These events would be fleeting and discrete and likely to cause no more disturbance than crop harvesting by vehicle headlights.

Condition 20 Drainage

The submitted Drainage Strategy states in its recommendations and conclusions section:

This report is intended to provide further details on the design of the drainage systems for the proposed redevelopment of Barkham Solar Farm and to act as additional information in support of the planning application. The conclusions to be drawn from this report are as follows:

- *A detailed FRA has been carried out for the site by WSP. The report shows the majority of the site lies within Flood Zone 1 with a small area to the north of the site located within Flood Zone 2.*
- *It is proposed for the majority of the site to drain via infiltration as existing.*
- *The new roads being installed to allow vehicular access to the site will be fully permeable and are to infiltrate directly to the ground.*
- *The site is served by existing drainage ditches. As the site is to mostly drain as per existing with minimal increase in impermeable areas it is expected the flow into and through the existing drainage ditches will remain unchanged by the proposed works.*
- *There are several substations and containers to be located in various locations throughout the site. It is proposed for these to be drained via new piped networks and discharged to the existing drainage ditches on site.*
- *There are no foul drainage requirements as part of the proposed development.*
- *There is no risk of contamination due to the minimal increase in impermeable areas.*

The Drainage Strategy for the site follows the following principles:

- All PV panels will drain directly to ground and the rain shadow beneath them. Any surface water flows below and between the panels will flow to the rain shadow area of the adjoining panel or to the vegetated areas adjacent. This is a general principle of ground mounted PV systems accepted nationally.
- All internal roads and access ways will be of permeable construction requiring no positive drainage systems. This principle is accepted through the approval of the recent Surface Water Drainage Strategy drawing BFSF-EQNS-XX-DR-D-0016.
- All impermeable inverter stations and the substation area will drain directly to the surrounding ditch system via a series of underground pipes. The pipes will provide

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sufficient attenuated storage volume and a choked outflow will reduce the volumes entering the watercourses to an appropriate amount. This is a change to the approved drainage strategy which was updated following the results of the detailed ground investigation work.

These elements are detailed in the submitted drawings and report:

BFSF-CURT-XX-RP-C-9201 Proposed Drainage Strategy (3 parts)

BFSF-CURT-XX-DR-C-9200 Proposed Drainage General Arrangement sheet 1

BFSF-CURT-XX-DR-C-9201 Proposed Drainage General Arrangement sheet 2

BFSF-CURT-XX-DR-C-9202 Proposed Drainage General Arrangement sheet 3

BFSF-CURT-XX-DR-C-9203 Proposed Drainage General Arrangement sheet 4

Extract from the Ground investigation Report

10.7 Preliminary Soakaway Design

Infiltration testing was undertaken within ten trial pit locations (TP01 to TP10) with tested strata comprising both cohesive and granular Bagshot Formation with the results presented within Table 10.7 below. In six of the locations, insufficient infiltration occurred to determine an infiltration rates whilst four locations (TP01, TP03, TP05 and TP07) were extrapolated to provided an approximate permeability.

Table 10.7 Summary of Infiltration Testing Results

Location	No. of Tests	Approximate Permeability (m/s)	Strata (Field Description)
TP01	1	3.604 X10 ⁻⁷ (extrapolated)	Bagshot Formation (Cohesive and Granular)
TP02		*	
TP03		1.6835 x10 ⁻⁶ (extrapolated)	
TP04		*	
TP05		8.73358 x10 ⁻⁷ (extrapolated)	
TP06		*	
TP07		2.27826 x10 ⁻⁶ (extrapolated)	
TP08		*	
TP09		*	
TP10		*	

- * Denotes insufficient infiltration due to cohesive nature of soil.

The infiltration testing results recorded within Table 10.7 highlight unfavourable infiltration conditions within the underlying strata where cohesive strata is present. However, infiltration was noted within granular soils once the data has been extrapolated.

These drawings also show connections and new culverts proposed to the existing ordinary watercourses which are, in turn, regulated by WBC LLFA. All these culverts and connections are subject to Ordinary Watercourse Consents (OWC). These OWC are a separately to planning consents. It is a general principle of planning conditions that they should not seek to replicate other regulations. Therefore, it is proposed not to provide further details of these culverts or drainage connections through the planning system, but to provide them to the LLFA through the OWC consenting process instead.

Condition 21 Underground Infrastructure

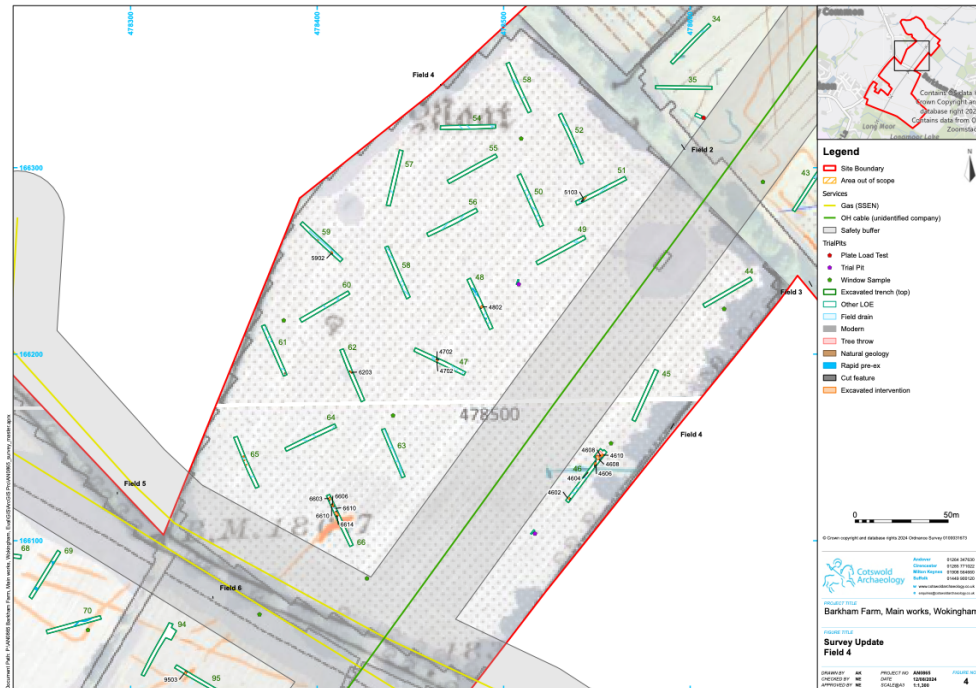
This condition is intended to ensure that the water supply to Church Cottages is not disturbed or damaged through the construction of this development. The condition seeks that a report demonstrating that there will be no adverse impact on these pipes be submitted. There is also an informative suggesting that the pipes lie within the paddock to the south of Church Cottages but their location is not known in detail and, that discussions should be held with both the owners of these cottages and Thames Water to help identify their locations. The presumed logic being that if the pipes can be located, they can be avoided.

It has been established that the water supply to Church Cottages runs from a tank positioned off Barkham Ride close to the junction with the public right of way that leads towards the properties (see extract below). However, despite discussions with those suggested, undertaking a comprehensive Underground Utility Search, and a series of archaeological investigations within the suggested paddock, the water pipes have not been found. It is therefore suspected that the pipes run within the public right of way (PROW) rather than within the paddock. This would be a reasonable assumption to make in the absence of contrary evidence because 1) the PROW lies on the shortest route from the tank to the properties, 2) Pipes are less likely to be placed in ploughed land if non-ploughed land is available, 3) The archaeological investigations did not unearth any pipes.

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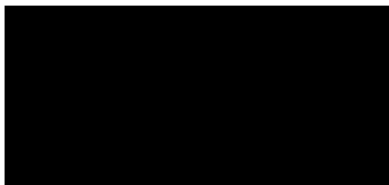


Extract from the archaeological investigation plan

As it has not been possible to positively determine the precise route of the water pipes the following is a reasonable assumption to make - that the pipes run in PROW BR11.



Yours faithfully



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