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Environment Agency

Aylesbury Vale District Council
Development Control
The Gateway Gatehouse Road
AYLESBURY
Buckinghamshire
HP19 8FF

Our ref: WA/2024/131141/01-L01
Your ref: 23/03875/APP

Date: 07 March 2024

Dear Sir/Madam

Development Of A Battery Energy Storage System (Bess), Connected Directly To The National Grid, With Associated Infrastructure Including Access, Drainage And Landscaping.

Rookery Farm, Granborough, Bucks MK18 3NJ

Thank you for consulting us on this application, which we received on 26 January 2024. Please accept our apologies for the delay in providing this response. We have reviewed the information submitted with the application in line with our planning remit.

This site is located within Flood Zones 1, 2 and 3 according to the Flood Map for Planning. This is defined as areas having a low, medium and high probability of flooding respectively in accordance with Table 1 'Flood Risk' of the Planning Practice Guidance (PPG).

Environment Agency position
We **object** to the application based on risk of pollution to controlled waters, insufficient information to determine impacts to groundwater, and absence of an acceptable flood risk assessment. We recommend that permission is refused.

Objection 1
We object to this development, as the submitted planning application as submitted does not demonstrate that the risks of pollution to controlled waters are acceptable, or can be appropriately managed.

Reason 1
The current plans show permeable surfaces and therefore allows for uncontrolled infiltration. In the event of an emergency, such as a fire, and use of the proposed on site

fire water tank, hazardous substances and other pollutants are likely to enter controlled waters (groundwater and watercourses) and contaminate land since there is no containment proposed. Further, there is reference to existing land drainage at the site and this could provide rapid preferential pathways for water and contaminants to enter the Claydon Brook.
Whilst the site itself is shown as being on Unproductive Strata, there is Secondary A aquifer (Alluvium) along the river valley close by.
As the planning application is not supported by an appropriate risk assessment, it does not meet the requirements set out in paragraphs 180 and 189 of the National Planning Policy Framework.

Overcoming our objection 1
The applicant should submit a preliminary risk assessment which includes a desk study, conceptual model and initial risk assessment for the operation of the site. This information must demonstrate to the local planning authority that the risk to controlled waters has been fully understood and can be addressed through appropriate measures. Please re-consult us on any revised information submitted.

Objection 2
We object to the planning application, as submitted, because the risks to groundwater from the development are unacceptable. The applicant has not supplied adequate information to demonstrate that the risks posed to groundwater can be satisfactorily managed, in line with paragraph 180 of the National Planning Policy Framework.

Reason 2
Our approach to groundwater protection is set out in 'The Environment Agency's approach to groundwater protection'. In implementing the position statements in this guidance we will oppose development proposals that may pollute groundwater especially where the risks of pollution are high and the groundwater asset is of high value. In this case position statement D Pollutant storage - *storage and handling of hazardous substances and other pollutants that present a significant and ongoing potential for groundwater pollution through accidents, vandalism, theft, poor practice . . .* applies.
Groundwater and the wider water environment is particularly sensitive in this location because of the potential risks from the proposed development site.
To ensure development is sustainable, applicants must provide adequate information to demonstrate that the risks posed by development to groundwater can be satisfactorily managed. In this instance the applicant has failed to provide this information and we consider that the proposed development may pose an unacceptable risk of causing a detrimental impact to groundwater quality particularly in the event of a fire.

Overcoming our objection 2
In accordance with our approach to groundwater protection we will maintain our objection until we receive a satisfactory risk assessment that demonstrates that the risks to groundwater posed by this development can be satisfactorily managed. Please re-consult us on any revised information submitted.

Objection 3
In the absence of an acceptable flood risk assessment (FRA) we object to this application.

Reason 3
The submitted FRA does not comply with the requirements for site-specific flood risk assessments, as set out in paragraphs 20 to 21 of the Flood Risk and Coastal Change

planning practice guidance and its site-specific flood risk assessment checklist. The FRA does not therefore adequately assess the flood risks posed by the development. In particular, the FRA fails to:

- Establish a reliable baseline fluvial flood risk evidence base for the site.

The FRA has only utilised the flood map for planning (rivers and sea) to determine the fluvial flood risk to the site and to design the site layout. We deem this as inappropriate as the Flood map for planning is not deemed fit for purpose for a site-specific FRA.
The site has been designed to avoid areas of fluvial flood risk but is reliant upon the accuracy of the information within the FRA. The flood map for planning contains a series of assumptions and generalisations which it should only be used as an indicative area of flood risk, while this FRA has used it a definitive assessment of the risk.
The FRA highlights that The Vale of Aylesbury Local Plan (2021) Policy I4: Flooding, Point I require flood risk assessments to:
"include detailed modelling of any ordinary watercourses within or adjacent to the site, where appropriate, to define in detail the area at risk of flooding and model the effect of climate change".
The FRA doesn't assess the fluvial flood risk from the field drains that discharge into the Claydon Brook. The flood map for surface water indicates that there is a flood risk associated with these drains, but this is also broadscale modelling and is not fit for purpose for a site-specific assessment.
The FRA doesn't provide any indication on the impact of climate change on the fluvial flood risk.

- Establish a reliable baseline surface water flood risk evidence base for the site.

The FRA highlights that the site is at risk from surface water flooding. It has utilised the flood map for surface water to assess the site. This is not appropriate for a site-specific FRA given the uncertainties of the broadscale modelling.

- Assess the impacts of the temporary works on flood risk.

The FRA doesn't appear to assess the impacts of the two temporary bridges across the watercourses proposed as part of the enabling works. If these are not designed appropriately, they could temporarily increase flood risk in the local area.
There may be further issues with the proposal once the baseline flood risk has been established. We recommend that the FRA is revisited once the evidence base has been approved to determine whether there will need to be further mitigation.

Overcoming our objection
To overcome our objection, the applicant should submit a revised FRA which addresses the points highlighted above.
If this cannot be achieved, we are likely to maintain our objection. Please re-consult us on any revised FRA submitted.

Please note: Subject to our objections being overcome, we have planning conditions we would recommend including with regards to containing surface water run-off and fire water in the event of an emergency incident.

Advice to LPA – Sequential test

What is the sequential test and does it apply to this application?
In accordance with the National Planning Policy Framework (paragraph 168), development in flood risk areas should not be permitted if there are reasonably available alternative sites, appropriate for the proposed development, in areas with a lower risk of flooding. The sequential test establishes if this is the case.
Development is in a flood risk area if it is in Flood Zone 2 or 3, or it is within Flood Zone 1 and your strategic flood risk assessment shows it to be at future flood risk or at risk from other sources of flooding such as surface water or groundwater.

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The only developments exempt from the sequential test in flood risk areas are:

- Householder developments such as residential extensions, conservatories or loft conversions
- Small non-residential extensions with a footprint of less than 250sqm
- Changes of use (except changes of use to a caravan, camping or chalet site, or to a mobile home or park home site)
- Applications for development on sites allocated in the development plan through the sequential test and:
    - the proposed development is consistent with the use for which the site was allocated; and
    - there have been no significant changes to the known level of flood risk to the site, now or in the future, which would have affected the outcome of the test

Avoiding flood risk through the sequential test is the most effective way of addressing flood risk because it places the least reliance on measures such as flood defences, flood warnings and property level resilience.

Who undertakes the sequential test?

It is for you, as the local planning authority, to determine an appropriate area of search and to decide whether the sequential test has been passed, with reference to the information you hold on land availability. You may also ask the applicant to identify any other 'reasonably available' sites which are on the open market and to check on the current status of identified sites to determine if they can be considered 'reasonably available'. Further guidance on the area of search can be found in paragraphs 027-030 of the planning practice guidance here.

What is our role in the sequential test?

We can advise on the relative flood risk between the proposed site and any alternative sites identified - although your strategic flood risk assessment should allow you to do this yourself in most cases. We won't advise on whether alternative sites are reasonably available or whether they would be suitable for the proposed development. We also won't advise on whether there are sustainable development objectives that mean steering the development to any alternative sites would be inappropriate. Further guidance on how to apply the sequential test to site specific applications can be found in the planning practice guidance here.

Please note that

- The Sequential Test may be impacted by the further work that needs to be done on the baseline evidence base.
- The Sequential Test should utilise the red line boundary to determine the flood zones present on the site. The FRA utilises the built development area instead. This is contrary to the NPPF and the PPG. They have undertaken a sequential approach to the site layout, which is an appropriate mitigation measure if the sequential test indicates that there is no areas at lower flood risk where this proposal can be located.
- The FRA has not defined the flood zone 3b, the functional floodplain, extent. In cases where there is no modelled information available flood zone 3a extent is used as a proxy.
- The sequential test should consider all sources of flood risk. It doesn't appear that the surface water flood risk has been considered.
- The sequential test should consider the impacts of climate change. No information on the impacts of climate change have been provided.

Advice to LPA and Applicant

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Energy storage will play a significant role in the future of the UK energy sector. Effective storage solutions will benefit renewables generation, helping to ensure a more stable supply and give operators access to the Grid ancillary services market. Currently, DEFRA does not consider the need to regulate the operation of battery energy storage systems (BESS) facilities under the Environmental Permitting Regulations regime. These facilities also do not currently fall within the Control of Major Accident Hazards Regulations.

Although these are a source of energy to the National Grid they do not result in a direct impact to the environment during normal operations. However, the potential to pollute in abnormal and emergency situations should not be overlooked. Applicants should consider the impact to groundwater and surface waters from the escape of firewater/foam and any metal leachate that it may contain. Where possible the applicant should ensure that there are multiple 'layers of protection' to prevent the source-pathway-receptor pollution route occurring. In particular, proposals should avoid being situated near to rivers and sensitive drinking water sources.

An important factor that can be overlooked by parties involved in new battery storage projects or investing in existing projects is that battery storage falls within the scope of the UK's producer responsibility regime for batteries and other waste legislation. This creates additional lifecycle liabilities which must be understood and factored into project costs, but on the positive side, the regime also creates opportunities for battery recyclers and related businesses. Operators of battery storage facilities should be aware of the Producer Responsibility Regulations. Under the Regulations, industrial battery producers are obliged to:

- take back waste industrial batteries from end users or waste disposal authorities free of charge and provide certain information for end users;
- ensure all batteries taken back are delivered and accepted by an approved treatment and recycling operator;
- keep a record of the amount of tonnes of batteries placed on the market and taken back;
- register as a producer with the Secretary of State;
- report to the Secretary of State on the weight of batteries placed on the market and collected in each compliance period (each 12 months starting from 1January).

Putting aside the take back obligations under the producer responsibility regime, batteries have the potential to cause harm to the environment if the chemical contents escape from the casing. When a battery within a battery storage unit ceases to operate, it will need to be removed from site and dealt with in compliance with waste legislation. The party discarding the battery will have a waste duty of care under the Environmental Protection Act 1990 to ensure that this takes place. Many types of batteries are classed as hazardous waste which creates additional requirements for storage and transport.

The Waste Batteries and Accumulators Regulations 2009 also introduced a prohibition on the disposal of batteries to landfill and incineration. Batteries must be recycled or recovered by approved battery treatment operators or exported for treatment by approved battery exporters only.

In the event of a fire at a BESS currently it is considered best practice to let the containers on fire burn out. However, water is likely to be used to cool neighbouring containers. This water could enter burning containers through surface run off or directly from spray cooling neighbouring containers. Furthermore, during or following a fire at a

BESS development, water could enter exposed containers through rainfall during the period of time it takes to remove or cover burnt out containers. There is a risk that highly polluting chemicals in batteries could enter groundwater or surface water in firewater or rainfall.

Advice to Applicant - Other Consents

As you are aware we also have a regulatory role in issuing legally required consents, permits or licences for various activities. We have not assessed whether consent will be required under our regulatory role and therefore this letter does not indicate that permission will be given by the Environment Agency as a regulatory body.

The applicant should contact 03708 506 506 or consult our website to establish if consent will be required for the works they are proposing. Please see http://www.environment-agency.gov.uk/business/topics/permitting/default.aspx

This includes any proposal to undertake work in, over, under, or within 8 metres of the top of the bank of a designated Main River, called a Flood Risk Activity permit.

Final comments

Thank you again for consulting us on this application. Our comments are based on the best available data and the information as presented to us.

If you are minded to approve the application contrary to our objection, please contact us to explain why material considerations outweigh our objection. This will allow us to make further representations. Should our objection be removed, it is likely we will recommend the inclusion of condition(s) on any subsequent approval.

In accordance with the planning practice guidance (determining a planning application, paragraph 019), please notify us by email within two weeks of a decision being made or application withdrawn. Please provide us with a URL of the decision notice, or an electronic copy of the decision notice or outcome.

Should you require any additional information, or wish to discuss these matters further, please do not hesitate to contact me on the number below.

Yours faithfully

Sarah Warriss-Simmons
Planning Advisor

Direct dial 0203 025 9855
Direct e-mail Planning_THM@environment-agency.gov.uk

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