CARE Suffolk

Community Alliance for a Rural Environment

www.caresuffolk.org

Dear Ms Curtis,

Ref: Re-consultation for Cross-Boundary Planning Applications DC/20/05895 & DC/21/00060

I write to you on behalf of the members at CARE Suffolk to state that we continue to **STRONGLY OBJECT** to the revised plans submitted by Bramford Green Ltd.

We note that the Application was reopened for public consultation, and wish to submit comments on:

- The proposed Skylark mitigation;
- The Hazardous Substances that could be present on the site after consulting with DLUHC;
- The recent report by the House of Lords Land Use Committee concerning BMV land;
- And the Councils validation checklists.

Skylark Mitigation

We note that a single new document has been made public on the BMSDC Planning Portal for cross-boundary Planning Applications DC/20/05895 & DC/21/00060, and that public consultation has reopened. The document is a map called BD1-01-P20 Skylark Mitigation.

No accompanying documentation or correspondence has been made available to the public with this map, so exact details are unclear, thus making it difficult for the public to be properly consulted.

Our response here is therefore based entirely on the presumption that the Applicant is attempting to address the holding objection made by Place Services on 22nd October 2022.[1]

The holding objection states…

"Following the reduction of size of the development, we are still not satisfied that there is sufficient ecological information available for determination of this application. This is because we are not satisfied that an appropriate evidence-based solution has been provided to demonstrate that the loss of Skylark breeding habitat can be appropriately compensated on-site across the development…

The Breeding Bird Surveys carried out by the applicant identified four skylark territories within the arable fields that are to be developed with solar arrays and battery storage. Therefore, based on the area covered by the built development it has been predicted that site could support a single skylark nesting territory, which would likely be located within the Ecology Enhancement Area / Nature Area to the south of the site….

…we request that further clarification should be provided to fully confirm the likely significance of effect of the development upon Skylark and an updated mitigation strategy provided. This should be undertaken in line with recent prototype methodology submitted in CIEEM In Practice."

[1] The actual objection is dated 21st October 2021 but we suspect this is a typo and should be 21st October 2022 to match the date it was published on the BMSDC Planning Portal

According to this, and supported by the results of the Breeding Bird Survey carried out in December 2020[2], there are 3 Skylark nesting sites which would be lost as a result of this development, and for which the Applicant needs to provide for.

The map BD1-01-P20 Skylark Mitigation shows the proposed site and outside of this it shows several blue shaded areas. According to the key these blue areas are "Potential Skylark Area". It must be made clear here that the blue areas are OUTSIDE of the proposed site area. The potential of these sites already exists, and no work is being proposed to improve their nesting potential by the Applicant. Thus, they cannot be deemed as mitigation.

Perhaps then the Applicant is attempting to suggest that these areas could provide the new homes for the 3 displaced nests. If that is the case, then it would need to be demonstrated that these fields are vacant but also suitable for nesting Skylark. Where is the Breeding Bird Survey for these fields to demonstrate they are even vacant and could hold any of the displaced Skylark nests? Where is the assessment to demonstrate the suitability of these Potential Skylark Areas? A field that is empty of Skylark may be empty for a very good reason. Many of the suggested areas are edged by tall trees, making large areas of the proposed areas unsuitable for Skylark in the first place.

The below map shows the outline of the site (red) and the Potential Skylark Areas (blue) proposed by the Applicant. Many of the fields are lined with tall trees (yellow) and have overhead power lines or other tall energy infrastructure (pink) near them. These are well known deterrents for Skylark, and once any margins around these are taken out, there is very little space left for any of the 3 Skylark nests. Assuming those spaces are even vacant.

Based on the limited information made available to the public, the Applicant continues to fail in protecting this Priority species as listed under the NERC Act 2006.

Hazardous Materials

It comes as no surprise that the public are still very concerned about the battery energy storage technology proposed as part of this application.

Document R007 in chapter 9 states at paragraph 9.3.3 briefly discusses the equipment and how it *"is not considered to pose a significant risk of creating an accident or disaster."*

[2] Figure 5 of Appendix 8.1 dated 14th December 2020

We listed the potential risks associated with battery storage technology in our previous responses, and will not repeat those here, except to say that none of those potential risks have been addressed by the applicant since.

Instead we wish to bring to the attention of BMSDC the relevance of The Planning (Hazardous Substances) Regulations 2015 to this application, and in particular Schedule 1 Part 3.

The Planning (Hazardous Substances) Regulations 2015 includes under Schedule 1 three Parts, or lists, of substances and minimum quantities that are regulated under the Act. Parts 1 and 2 list various products, with minimum quantities required before the Act applies. Part 3 is a catch-all in the event of an incident as follows *"Where it is reasonable to foresee that a substance falling within Part 1 or Part 2 ("HS") may be generated during loss of control of the processes, including storage activities in any installation within an establishment, any substance which is used in that process ("S")."*

We contacted the Department for Levelling Up, Housing and Communities (DLUHC) for clarification on Part 3 of the Act. Our original enquiry is as follows:

"I have been pointed in your direction regarding hazardous substances. I am trying to understand part of The Planning (Hazardous Substances) Regulations 2015. The bit I am particularly stuck on is Schedule 1, Part 3. It says "Where it is reasonable to foresee that a substance falling within Part 1 or Part 2 ("HS") may be generated during loss of control of the processes, including storage activities in any installation within an establishment, any substance which is used in that process ("S")." Does this mean that if an abnormal operating process occurs, and a hazardous substance in part 1 or 2 is generated as a result, that the development is subject to the regulations?"

The response received on 6th October 2022 is attached in Appendix 1. It confirms that our interpretation is correct, but also that it goes further than that, by stating that a loss of control does not need to happen for Part 3 to come into effect either… *"also brings into scope circumstances where hazardous substances could be present on land"*

It is important to note that this clarification from the DLUHC simply says could be present. There is no reference to magnitude or probability of an event occurring. If hazardous substances could be present in the required quantities, then the Act applies.

So then, only two questions remain. Could hazardous substances be present on the land? And would it be in sufficient quantities to trigger the Act?

The current application form declares that there are no hazardous materials proposed on site. However, evidence from the Merseyside Fire and Rescue Services (MFRS) IIT report published early 2021 into a BESS explosion and fire incident suggests otherwise.

"After an external examination of the container and reviewing data from CCTV footage, there is evidence of a deflagration due to the ignition of gases that had been given off from the lithium battery cells. This would have been a mix of toxic and explosive fumes. When LiBs (Lithium ion Batteries) go into thermal runaway they generate a dense, white vapour containing hydrogen, hydrogen cyanide, hydrogen chloride, a large range of flammable/explosive hydrocarbons, carbon monoxide, carbon dioxide and droplets of the organic solvents used in the cells'"[3]

"The explosion was a result of a failure within Battery Zone 3-Rack 7 Module 6 (BZ3-R7M6) which led to a thermal runaway, which, in turn produced gases within the container culminating in a deflagration."[4]

The consistent expansion of the affected container at Merseyside clearly suggests that the chemical reactions as part of the battery failure caused the container to fill with gases. A mix of toxic and flammable gases. The ignition of these gases caused the explosion and subsequent fire.

The Planning (Hazardous Substances) Regulations 2015 Schedule 1 Part 3 includes the listing *"Where it is reasonable to foresee that a substance falling within Part 1 or Part 2 ("HS") may be generated during loss of control of the processes, including storage activities in any installation within an establishment, any substance which is used in that process ("S")."* Referring back to Part 1 of the same Schedule, it lists *"P2 FLAMMABLE GASES Flammable gases, Category 1 or 2"*.

Some of the gases produced during a thermal runaway chemical reaction can include carbon monoxide, hydrogen, nitrogen, carbon dioxide, methane, oxygen, ethyne, ethylene, ethane, and other hydrocarbons. In addition diethyl

[3] MFRS Significant Incident Report page 25
[4] IIT Report Final p 1.2

carbonate, methyl ethyl carbonate, dimethyl carbonate, hydrogen chloride, ethylene carbonate, hydrogen fluoride may also be present. The substances underlined are all highly flammable.

The MFRS IIT Report paragraph 8.6.3 *states "Based on my investigations, the evidence is consistent with the initial cell having suffered an exothermic reaction which then lead to a thermal runaway which resulted in flammable and toxic vapours being produced."*

The same paragraph states *"The internal CCTV shows the vapours (vented gases-droplets of organic solvent from the cells building up at low level filling the container as to started to reach their flammable limits, before coming into contact with an ignition source, the exact ignition source within the container is not known. The vapours ignited causing a deflagration which blew off both doors and caused the HVACs to come detached from the roof as well as deforming the container."*

Although the DLUHC reply states a loss of control incident is not required for Part 3 to come into effect, it is widely understood that battery failure is a loss of control of the normal process. Sadly a subsequent product of that failure is a mix of gases including flammable gases as evidenced at the Merseyside incident, where *"Due to the nature of the contents, the incident was declared as a fire containing hazardous materials and a Hazardous Materials Environmental Protection Officer (HMEPO) was requested."*[5]

Furthermore, we understand that the HSE does not classify the batteries themselves as hazardous substances because they are defined as "articles" and not substances. We are not suggesting the batteries themselves are the hazardous substance. It is the toxic and flammable gas by-products of an incident that are substances in their own right.

It is therefore reasonable to foresee that there could be hazardous substances on site as defined under Schedule 1 Part 3 of The Planning (Hazardous Substances) Regulations 2015 and confirmed by DLUHC. But would these hazardous substances be in quantities sufficient enough as listed in Part 2?

Parliamentary evidence[6] from Northern Irelands points out:

"To date the chemicals inside the batteries of a BESS (and in a 50MWh BESS these number around 185,000) have not been included in any calculation for hazardous substances release under COMAH and therefore the subsequent dangers to human health and environmental damage have not been assessed. We have made these calculations and any such lithium-ion based BESS over 17.5MWh would be brought into the scope of COMAH and separately require Hazardous Substances Consent under Planning. All five BESS's in NI would reach the thresholds for COMAH and HSC. Yet, to date, no direction has been issued by DfI or HSENI that any chemicals inside the batteries of a BESS will be assessed going forward."

Around the same time that that evidence was submitted a world leading scientist on BESS, Edmund John Fordham, published a scientific paper calculating the Hazardous Substances potential of the leading types of BESS. He found that the majority of BESS trigger Hazardous Substances potential in the mid-20MWh range.

The Applicant has so far refused to state any details about the BESS except that there would be 20 large shipping containers of them. Instead they are attempting to rely on the Rochdale Envelope Principle which is preventing the public from being fully informed during the consultation phase. The Council should note that the Rochdale Envelope Principle applies to outline planning applications[7], and not suitable for a full planning application such as this one.

Looking at various leading industry manufacturers for BESS, a large shipping container seems to have between 1.5-2MWh of capacity. For 20 of these that would put the total range somewhere between 30-40MWh. This range exceeds the thresholds for Hazardous Substances potential calculated by Dr Edmund Fordham, and advocates that this application would require Hazardous Substances Consent.

[5] MFRS Significant Incident Report page 6
[6] https://committees.parliament.uk/writtenevidence/23583/html/
[7] https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-nine-rochdale-envelope/

Land Use Strategy and Protecting BMV Land

Since this application was submitted in December 2020 the UK Government has become much more active again in promoting the importance of protecting BMV land from development. We listed many these in our response to this application on 14th September 2022 and will not repeat them again here.

However, on 22nd December 2022 the House of Lords Land Use in England Committee, following a lengthy public consultation, published its report called *Making the most out of England's land*.[8] Within this report solar farms, such as this one, are given their own section on page 39-40 of which CARE Suffolk evidence contributes to the Committees recommendation. This recommendation is paragraph 132 and states:

"Although there are provisions within the NPPF to dissuade the development of solar farms on Best and Most Versatile land, from the evidence received we are concerned that too many exceptions are being made. We believe that a consistent policy toward encouraging the installation of solar panels on industrial, commercial and domestic buildings is needed and would negate the need for largescale ground mounted solar farms. Alongside that, we would like to see stricter regulations put in place to prevent the development of solar farms on BMV land."

Existing planning policy CL11 from the Mid Suffolk Local Plan clearly states that developments such as this, and the other two solar applications (DC/21/04711 and DC/22/00683 & DC/22/01243) are not in accordance with the Local Plan. These policies are not only not in conflict with the NPPF 2021, but are supported by it at paragraph 174.

Missing Manufacturers Specifications

BMSDC are currently consulting on a revised Local Validation Checklist in regards to Planning Applications. At present all Major Planning Applications are required to be accompanied by certain documentation and information in order for an application to be validated prior to public consultation. The current list[9] was adopted on 23rd January 2020 and is applicable to this application for Major Development.

According to the list Item 22 requires manufacturer's specifications for the following (inter alia):

- Air conditioning units
- Electrical goods
- Lighting
- Satellite dishes
- Solar panels
- Ventilation/ extraction systems

We understand the Battery Storage Containers are due to use some form of air conditioning/ ventilation systems. The Battery Storage Containers, inverters, and transformers are all electrical goods. Lighting is proposed to be installed at key locations across the site. A satellite dish is proposed on the communication tower. And there will clearly be solar panels on the site.

Without these documents we are unsure why the application was validated. This information is important to ensure the public are adequately and fully informed on the details of the planning application we are being asked to consult on.

We continue to ask that Babergh and Mid Suffolk District Councils **REFUSE** planning permission.

Yours Sincerely,

[redacted]

Samantha Main

Chair

[8] https://committees.parliament.uk/committee/583/land-use-in-england-committee/
[9] https://www.babergh.gov.uk/assets/DM-Planning-Uploads/LVL-Part-2-Major-and-Minor.pdf