2023/0322

Harmony HS (JV) Ltd

Energy storage facility

Land off Tofts Lane, Snowden Hill, Barnsley S36 8YR

Description

The site adjoins the existing electricity substation located adjacent to Tofts Lane and Mucky Lane on Snowden Hill in Hunshelf Parish.

The site is an open grassed area located within the boundaries of the existing sub-station. Ground levels rise as the land moves southwards away from Tofts Lane which runs east west along the northern boundary of the site.

The existing substation is located to the east of the site with access roughly in the middle and the proposed site located to the west. The site is contained within a low dry stone wall and there is high safety fencing around the substation itself. A number of high voltage lines converge at the site. The wider area is rural Green Belt, largely used for pasture.

The nearest residential dwelling is Carr Head Farm located over 400m to the southwest of the site. The site lies within Flood Zone 1 where whereby the risks of both tidal and fluvial flooding are at their lowest and is not in or within proximity to any heritage assets. There are no ecological or landscape designations associated with the site.

Proposed Development

It is proposed to install and operate a battery storage facility at the site. The equipment proposed on site comprises of 16no. high efficiency BESS units housed within individual containers and 8no. transformer units, all at a height of up to 3m. The compound will be surrounded by a 2.4m palisade fence, with 4m high CCTV and thermal imaging poles within the site to ensure site security. The site will also include native landscaping.

The proposed equipment will sit on concrete plinths within a fenced compound. The remainder of the compound surface will be finished in type 1 aggregate, with a harder sub-base to be used for the short section of access track within the site. A laydown area is indicated close to the entrance of the compound adjacent to the storage and office container, both of which are at a height of up to 3m. To the rear (south west) of the laydown area there will be a customer control room, customer switchgear room and an Aux Transformer, all up to 6m in height.

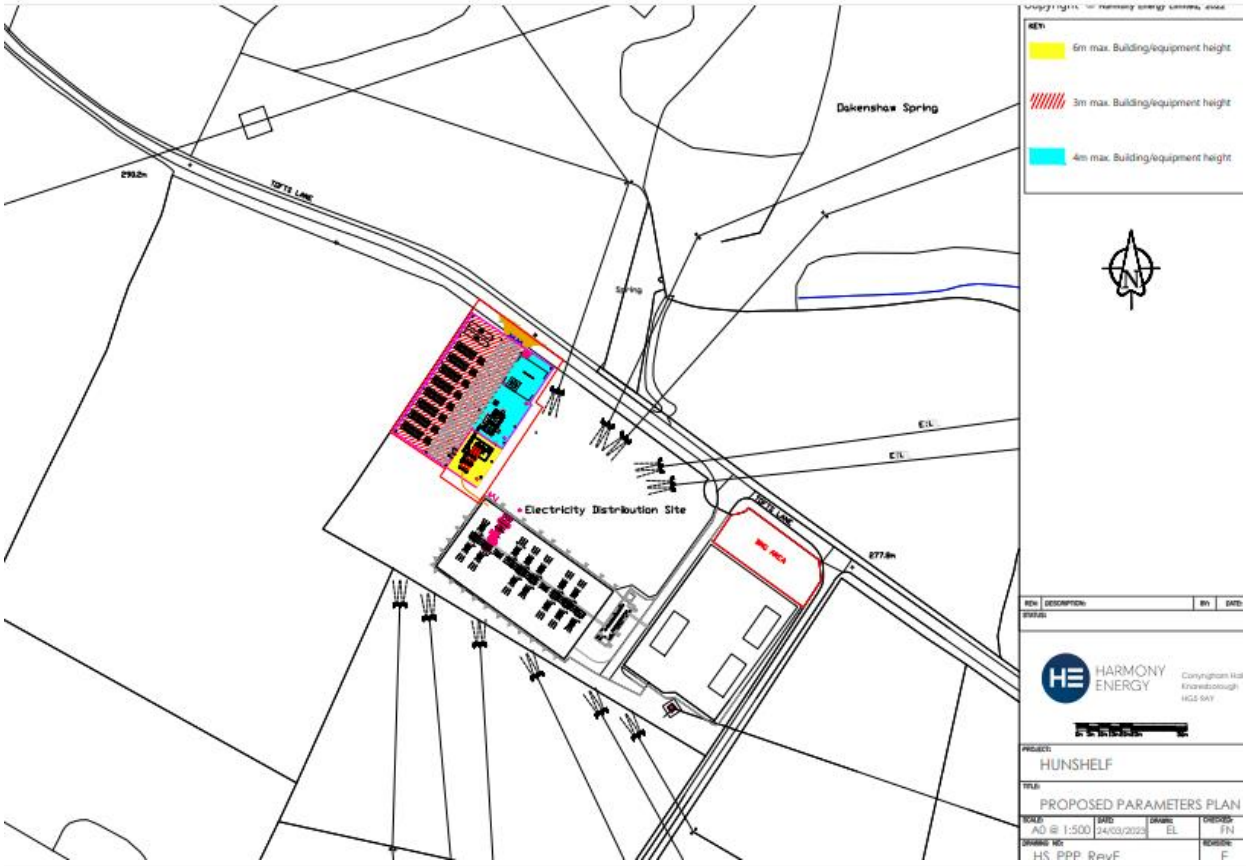
A new access into the site would be taken via Tofts Lane, with Tofts Lane accessed via the A6101. There is an existing gate into this site, but this will be moved centrally with the stone wall rebuilt accordingly.

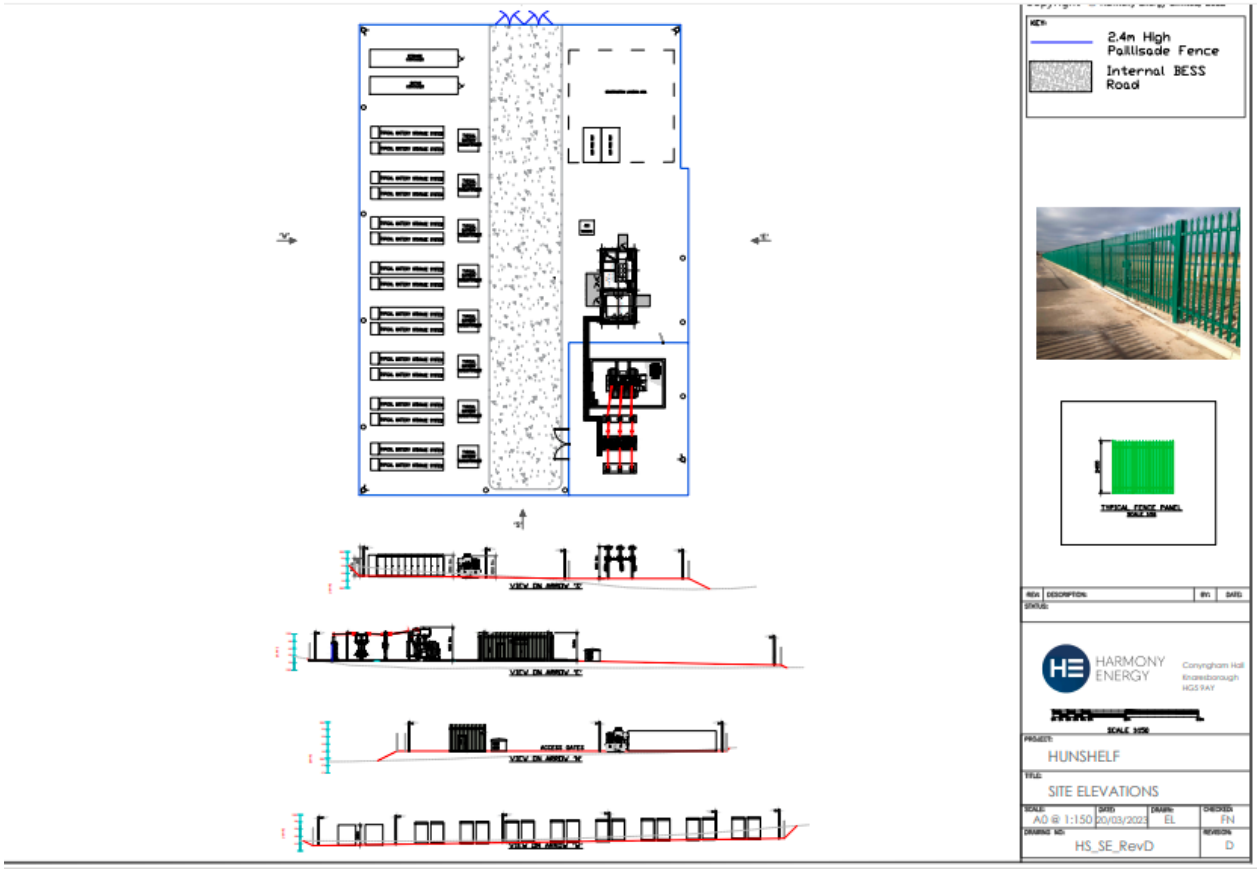
The layout of the proposed development and detailed layout of the proposed equipment is shown in the Proposed Parameters Plan in which the applicant is seeking to allow some flexibility in the specification and the layout of the equipment within the compound. The Parameters Plan specifies that across the majority of the site, equipment heights would be up to 3m. This covers the battery containers, transformers, storage and office containers and some ancillary equipment. Other equipment on site associated with the development includes a switchgear room, which would have a height of up to 4m, which applies only to one area of the plan, and a transformer on the site adjacent to the substation; this will be up to 6m in height.

The submitted layout is based on Tesla equipment for illustrative and consenting purposes. It is however requested that the final layout and specification of equipment is agreed by condition since at this stage it is not certain who the battery supplier will be. The submitted parameters plan works on maximum heights so no equipment proposed on this site would exceed this.

The following documents have been submitted in support of this planning application:-

- Biodiversity Metric Report
- Construction Traffic Management Plan
- Flood Risk and Drainage Assessment Report
- Landscape and Visual Appraisal
- Noise Impact Assessment
- Preliminary Ecological Appraisal
- Transport Statement





Planning History

B/97/1540/PR - Erection of 32m high radio mast. Refused planning permission 15th April 1998 as it was considered that insufficient very special circumstances existed to allow the development which would have harmed the openness and visual amenity of the Green Belt by virtue of its size.

2010/0586 - Erection of an embedded Short-Term Operating Reserve (STOR) power plant fuelled on diesel and comprising of 2 no. buildings, bunded area, delivery and parking area and formation of a new access. Decision: Withdrawn by the applicant.

2011/1454 - Installation of an embedded STOR power plant fuelled on gas or diesel and comprising of 52 containerised engines, ancillary equipment, bunded and fenced area, delivery and parking area and formation of a new access. (Resubmission of 2010/0586). Decision: Refused planning permission 29th August 2012 as it was considered that the benefits of the scheme were insufficient to clearly outweigh the harm that would have occurred to the visual amenities and openness of the Green Belt.

2017/0624 - Formation of a battery storage facility with associated transformer cabling security and CCTV Poles – Approved with conditions – Development not commenced within 3 years and permission has expired

Policy Context

Local Plan

Planning decisions should be made in accordance with the development plan unless material considerations indicate otherwise and the NPPF does not change the statutory status of the development plan as the starting point for decision making. The Local Plan was adopted in January 2019 and is also now accompanied by seven masterplan frameworks which apply to the largest site allocations (housing, employment and mixed-use sites).

In addition, the Council has adopted a series of Supplementary Planning Documents and Neighbourhood Plans which provide supporting guidance and specific local policies and are a material consideration in the decision-making process.

The Local Plan review was approved at the full Council meeting held 24th November 2022.

The review determined that the Local Plan remains fit for purpose and is adequately delivering its objectives. This means no updates to the Local Plan, in whole or in part, are to be carried out ahead of a further review. The next review is due to take place in 2027 or earlier if circumstances, require it.

The site is located within the Green Belt as shown on the emerging Local Plan Proposals Map, therefore policy GB1, Protection of the Green Belt applies, protecting the Green Belt from inappropriate development in accordance with National Planning Policy.

In addition the following policies apply:

Policy SD1, Presumption in favour of Sustainable Development;
GD1, General Development;
T4, New Development and Highway Improvement
D1, Design
BI01, Biodiversity and Geodiversity
LC1, Landscaper Character
CC1, Climate change and Sustainable Construction
CC3, Flood Risk

RE1, Low Carbon and Renewable Energy

NPPF (September 2023)

The National Planning Policy Framework sets out the Government's planning policies for England and how these are expected to be applied. At the heart is a presumption in favour of sustainable development. Development proposals that accord with the development plan should be approved unless material considerations indicate otherwise. Where the development plan is absent, silent or relevant policies are out-of-date, permission should be granted unless any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in the Framework as a whole; or where specific policies in the Framework indicate development should be restricted or unless material considerations indicate otherwise.

In respect of this application, relevant policies include:

Para 8 – 3 dimensions to sustainable development
Para 11 – Presumption in favour of sustainable development
Para 20 – Strategic Policies

Section 13 – Protecting Green Belt Land:

Para 137 -"The Government attaches great importance to Green Belts. The fundamental aim of Green Belt Policy if to prevent urban sprawl by keeping land permanently open: the essential characteristics of Green Belts are their openness and their permanence"

Para 147. Inappropriate development is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances.

Para 148. When considering any planning application, local planning authorities should ensure that substantial weight is given to any harm to the Green Belt. 'Very special circumstances' will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations.

Para 149. A local planning authority should regard the construction of new buildings as inappropriate in the Green Belt. Exceptions to this are:

a) buildings for agriculture and forestry;
b) the provision of appropriate facilities (in connection with the existing use of land or a change of use) for outdoor sport, outdoor recreation, cemeteries and burial grounds and allotments; as long as the facilities preserve the openness of the
Green Belt and do not conflict with the purposes of including land within it;
c) the extension or alteration of a building provided that it does not result in disproportionate additions over and above the size of the original building;
d) the replacement of a building, provided the new building is in the same use and not materially larger than the one it replaces;
e) limited infilling in villages;
f) limited affordable housing for local community needs under policies set out in the development plan (including policies for rural exception sites); and
g) limited infilling or the partial or complete redevelopment of previously developed land, whether redundant or in continuing use (excluding temporary buildings), which would:

– not have a greater impact on the openness of the Green Belt than the existing development; or

– not cause substantial harm to the openness of the Green Belt, where the development would re-use previously developed land and contribute to meeting an identified affordable housing need within the area of the local planning authority.

Para 150. Certain other forms of development are also not inappropriate in the Green Belt provided they preserve its openness and do not conflict with the purposes of including land within it. These are:

a) mineral extraction;
b) engineering operations;
c) local transport infrastructure which can demonstrate a requirement for a Green Belt location;
d) the re-use of buildings provided that the buildings are of permanent and substantial construction;
e) material changes in the use of land (such as changes of use for outdoor sport or recreation, or for cemeteries and burial grounds); and
f) development, including buildings, brought forward under a Community Right to Build Order or Neighbourhood Development Order.

Para 151. When located in the Green Belt, elements of many renewable energy projects will comprise inappropriate development. In such cases developers will need to demonstrate very special circumstances if projects are to proceed. Such very special circumstances may include the wider environmental benefits associated with increased production of energy from renewable sources.

Para 158 - When determining planning applications for renewable and low carbon development, local planning authorities should:
a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions;
b) approve the application if its impacts are (or can be made) acceptable. Once suitable areas for renewable and low carbon energy have been identified in plans, local planning authorities should expect subsequent applications for commercial scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying suitable areas, and
c) in the case of applications for the repowering and life-extension of existing renewable sites, give significant weight to the benefits of utilising an established site, and approve the proposal if its impacts are or can be made acceptable

Consultations

Hunshelf Parish Council; - The Parish Council wishes to raise the following objections to the above planning application:

The proposed structure will double the size of the site is a major concern together with the impact on the visual amenity of the surrounding Green Belt. Whilst the site may share a boundary with an electricity sub station it is a green field site.

The application states there will be a 9 month construction period. Traffic management is a big issue with HGV's being routed down Underbank Lane, there are no restrictions with all other site traffic. This will undoubtedly lead to vans and cars coming through Green Moor or Snowden Hill for the construction period.

The application comments on the proposed road cleaning using wheel washes and possibly a road sweeper. Tofts Lane is a narrow lane with a 60 mph speed limit. In practice this will lead to Tofts Lane having a potential road surface, especially in wet conditions. Residents and the local farms will face 9 months of disruption.

Highways DC – No objections subject to conditions

Ecology – No objections subject to conditions

Drainage – No objections

Pollution Control – No objections

Representations

The application was publicised by way of a site and press notice. No comments have been received.

Assessment

Principle of development

The proposal is inappropriate development within the Green Belt. Green Belt policy states that inappropriate development is by definition harmful to the Green Belt and should not be approved except in very special circumstances.

The harm to the Green Belt, from the proposed development, is caused by the visual impact of the battery storage units and associated infrastructure on the landscape and from the increased highway movements associated with the proposed. The NPPF defines the essential characteristic of the green belt as “their openness and their permanence”. The proposal will have a harmful impact on this characteristic.

The harm to the green belt is in part mitigated by the location of the proposed development, within the confines of the existing substation, which is an existing urban structure with clearly defined boundaries. The topography is such that the site is not highly visible over medium to long distance views, as demonstrated in the landscape and visual analysis accompanying the application. The site is highly visible in the immediate vicinity as viewed from Tofts Lane, Mucky Lane and the Public Rights of Way to the north and North West, all of which offer opportunities for outdoor recreation. Nevertheless the proposed battery storage, within the context of the existing substation, represents an intensification of the existing urban form rather than a standalone feature. In this respect the harm to the Green Belt is reduced.

The impact is further lessoned by the height of the units and through the planting of screening which will soften the appearance as well as providing some benefits to biodiversity through the enhancement of habitat.

Notwithstanding this, substantial weight must be given to the harm to the Green Belt when assessing the very special circumstances which will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations. Permission has been previously granted on the site for a similar battery storage facility, however this permission was not implemented and has lapsed. The Planning Permission 2017/0624 should be given consideration and previous acceptability of a battery storage facility on site. The site has not changed significantly, nor have planning policies

The case for very special circumstances is as follows, the batteries are required to provide storage of electricity, increasing the flexibility of the Grid to respond to fluctuations in energy demand. This increased flexibility is required to support the Government's target of reducing carbon emissions which will be achieved through the decommissioning of carbon intensive plants and delivery of low carbon generation i.e. wind and solar; low carbon generation being inherently inflexible in relation to when they generate electricity.

Para 151 of the NPPF states that 'When located in the Green Belt, elements of many renewable energy projects will comprise inappropriate development. In such cases developers will need to demonstrate very special circumstances if projects are to proceed. Such very special circumstances may include the wider environmental benefits associated with increased production of energy from renewable sources.'

Whilst the proposed is not for energy generation, it is accepted that it will support these aspirations through storing energy for release when it is needed, providing increased flexibility to the network and supporting the transition to low carbon and renewable energy. Having established that there is a clear benefit to the proposed and that this can be considered to form part of the very special circumstances. The proposal site is also sited adjacent to an existing electricity substation, having sufficient space for the proposed and the technical capacity is therefore considered a suitable site for the battery storage proposed.

It is therefore accepted that, weighing all the above in the balance, there are very special circumstances for the proposed development which outweigh the harm to the Green Belt in accordance with the NPPF and policy GB1 of the Local Plan.

Visual Amenity

It is proposed to install and operate a battery storage facility at the site. The equipment proposed on site comprises of 16no. high efficiency BESS units housed within individual containers and 8no. transformer units, all at a height of up to 3m. The compound will be surrounded by a 2.4m palisade fence, with 4m high CCTV and thermal imaging poles within the site to ensure site security. The site will also include native landscaping.

The proposed equipment will sit on concrete plinths within a fenced compound. The remainder of the compound surface will be finished in type 1 aggregate, with a harder sub-base to be used for the short section of access track within the site. A laydown area is indicated close to the entrance of the compound adjacent to the storage and office container, both of which are at a height of up to 3m. To the rear (south west) of the laydown area there will be a customer control room, customer switchgear room and an Aux Transformer, all up to 6m in height.

Given the rural nature of the landscape, the proposed will impact on visual amenity being an urban form of development, however its location adjacent to the existing substation reduces the impact by virtue of it being contained within an existing urban form which undoubtedly has a more significant impact on the environment. The visual impact is further mitigated by the provision of a planting buffer within the north western corner of the site and a further wild flower meadow being planted to the west of the site. This extensive planting will also bring biodiversity improvements.

It is therefore considered that the effects on the openness and visual amenity of the Green Belt would be limited.

In terms of long term visual impacts, the previous unimplemented approval required the batteries to be removed after 25 years, due to concerns regarding their lifespan and any

impact upon visual amenity. The applicant has requested a longer time period of 40 years and has provided the following additional information in support of this request:-

'Typically, the lithium-ion phosphorate batteries that Harmony Energy install at their sites have a lifespan of approx. 20 years, after which they lose their efficiency and need to be replaced. These are the only piece of equipment that would be replaced as standard during the lifespan of the consent (unless there is an abnormal reason for replacement, i.e. faulty product)…. The exact choice of battery for this site has yet to be chosen. The attached shows that the Megapack system is covered by a standard 15-year warranty, with a 20-year Capacity Management Agreement. A 40-year consent from first energisation allows for two cycles of batteries which is the most commercially viable approach given the cost of the other equipment at the site, and of course the other associated costs involved with such an installation.

As such, once initially installed and energised, the site remain as is for a period of up to 20 years. Typically, we would then look to begin the replacement of the batteries on site which could take a number of weeks, albeit this is typical phased to allow for portions of the site to remain energised while replacements take place. In terms of vehicle movements during this period, you would be looking at a small number of HGVs/LGVs a week which would have no noticeable impact on the locality. As I am sure you can appreciate, given the period of time before the decommissioning of the site, it is difficult for us to provide specific details at this stage.

I have attached 6 appeals decisions relating to BESS and Solar schemes for your consideration, all of which accept a 40 year lifecycle for the proposed low carbon/renewable energy developments proposed which is effectively an industry standard approach now. The projects are built without government subsidies which means that the certain criteria including the life of the project are critical to ensuring a robust business model to facilitate financial investment. Our financial model is based on a project life of 40 years from commercial operation (grid energisation) and as such we need to ensure that other activities within the development process align with that. You will see on the attached appeal decisions that the decommission condition of 40 years is accepted as an industry standard by Inspectors.'

Given the above, the suggested proposed 40 year lifespan condition is acceptable.

Highway Safety

The proposed will not generate significant traffic once operational and a highway condition survey and construction methodology has been conditioned to ensure construction traffic and any damage caused to the highway is mitigated. Highway Officers have assessed the application and raised no objections.

With regards to the concerns expressed by the Parish Council on the construction period, it is recommended that a construction management plan be conditioned to help manage the impacts during that phase of development. In addition a condition about hours of construction is also recommended.

Biodiversity

The proposed development would be located on an area of unused grass land adjacent to the existing electricity substation and additional planting is proposed in the form of a wildflower meadow and screening planting to the north eastern corner of the site. A Preliminary Ecological Appraisal (PEA) has been submitted in support of the application and concludes that the site was found to comprise an improved grassland field, three drystone walls and a poor semi-improved grassland road verge. The site was found to have the following potential ecological constraints:

- Wall 1 (W1), Wall 2 (W2) and Wall 3 (W3) were found to provide suitable habitat for nesting birds and common amphibians.
- Field horsetail was identified on the roadside verge on the northern site boundary.
- Badger, hedgehog and brown hare are anticipated to be present within the surrounding area.

No further surveys are recommended to inform a planning application and mitigation measures have been suggested within the report. The Ecology Officer has been consulted and is satisfied with the findings and recommendations made within the report and a condition is recommended to secure a Biodiversity Mitigation and Enhancement Scheme is submitted and agreed, prior to the commencement of the development. The proposal is therefore acceptable when measured against policy BIO1 of the Local Plan.

Pollution Control

The nearest residential dwelling is Carr Head Farm located over 400m to the southwest of the site, therefore a noise report has been submitted in support of the application. The Pollution Control Officer has considered the noise report submitted with the application and has no objections to the scheme. The report concludes that 'This assessment has shown that no adverse impact is predicted during the day at the receptors due to the proposed plant items. As such, sufficient information has been provided in order to consider potential noise impact and found no adverse impact is expected.' Subject to a condition regarding construction hours, there is no objection to the scheme in terms of residential amenity in accordance with Local Plan Policy POLL1.

Fire Safety

The agent has provided the following additional information in terms of fire safety. 'Whilst the batteries to be used on site are not specifically known (this would be subject to the tendering process prior to construction works), the plans have used the typical dimensions of the Tesla Megapack within the site layout (which have been used on the last three sites built out), with the information within the Noise Assessment also using Tesla Megapack data. As such, additional information has been provided in the form of the Megapack datasheet and the Industrial Lithium-Ion Battery Emergency Response Guide (ILBERG) as further background information. The ILBERG contains specific guidance on emergency procedures, firefighting methods etc. as industry standards, which would be used to formulate the Risk Management Plan and Emergency Response Plan. This should be conditioned to be submitted upon commencement of the development, in accordance with Local Plan Policy POLL1.

Other Matters

The applicant has requested a 5 year permission instead of the usual 3 year implementation period due to complexities surrounding connection to the grid. The relevant time limit for beginning development is usually 3 years beginning with the date on which the permission is granted, or such other period (whether longer or shorter) as the local planning authority may impose. In the case of requests for longer periods this may be justified for very complex projects where there is evidence that 3 years is not long enough to allow all the necessary preparations to be completed before development can start. The applicant has provided sufficient evidence to allow for a 5 year permission in this instance.

Conclusion

The proposed battery storage would contribute towards the security of electricity supply from low carbon sources. Whilst the proposed is not for energy generation, it is accepted that it will support these aspirations through storing energy for release when it is needed, providing increased flexibility to the network and supporting the transition to low carbon and renewable energy. Having established that there is a clear benefit to the proposed and that this can be considered to form part of the very special circumstances. The proposal site is also sited adjacent to an existing electricity substation, having sufficient space for the proposed and the technical capacity is therefore considered a suitable site for the battery storage proposed. In terms of impact upon openness, the site is viewed in the context of the utilitarian structures associated with existing substation including pylons and overhead powerlines, which lessen the sensitivity of the site despite its rural Green Belt location. In addition a similar scheme was approved in 2017 on this site and is therefore a material consideration.

In the circumstances it is considered that the benefits of the development in the form of its contribution towards the security and supply of electricity would amount to very special circumstances that would be sufficient to clearly outweigh the limited harm to the openness and purposes of including land in the Green Belt that would occur in this case in accordance with the NPPF and policy GB1 of the Local Plan.

Recommendation

Grant planning permission subject to conditions