

Please find attached below, the notes (in black text) used at the OFH1 Tuesday 6th December. The Planning Inspectorate requested the list of examples in the presentation to be added to the examination library, so I have included a little extra detail (detail I had insufficient time to read out), although there's significant information about each site available on the web - (the additional detail is included in red).

BESS

The first point to raise is the location of the battery plant on Elms Road. The experts will discuss the technical requirements around Health & Safety and arguments will ensue over Risk Mitigation, but the Parish Council have no expertise in these matters. So we can review the many different plume maps and see no impact or conversely serious impact and not know which to believe. We are baffled by the talk of water volumes or safety barriers and spacing between units but still do not know if the residents are safe or not from this proposal.

However, what we have explored is the wealth of information about other solar farm locations that are using Lithium Battery technology and know that at this point in time, its the same or very similar technology to that proposed by Sunnica at this point in the project and it's very frightening reading.

Here are the examples quoted:

Carnegie Road, Liverpool, UK - September 2020

Liverpool 20MW (four containers, one caught fire and exploded) completed in early 2019 - blast then fire in September 2020. Residents asked to stay in doors and keep their windows and doors closed, keeping medicines to hand should they need to evacuate - various differences reported as to the time to extinguish the fire, ranging from 15 hours to 59 hours (I suspect that was visual flames and smoke differences).

Hongseong-gun Solar Storage plant South Korea - April 2021

Hongseong-gun Solar Storage South Korea (one of 30 battery fires experienced in the country) - 10MW capacity - blast then fire damaging one battery container - only a small solar farm in quite a remote area, but still resulted in residents from 20 houses over 1000 meters being told to stay indoors - the fire was put out in just over 4 hours

Morris Industrial, Illinois, USA - May 2021

Emergency evacuations were ordered in parts of Morris due to the dangerous fumes. The Grundy County IL Emergency Management Agency ordered anyone who lives in the 900 blocks of Benton, Douglas or Armstrong streets as well as those who live on East Street to "please evacuate your residence now (800 to 1000 meters from the incident) The biggest hazard we're dealing with right now is the

smoke or the fumes from this fire," Steffes (Fire Chief) said. "This gas is highly poisonous, it's very deadly."

Moorabool, Victoria, Australia - July 2021

Moorabool, Victoria, Australia - July 2021 a Tesla Megapack BESS unit caught fire at the 300MW (450MWh) Victorian Big Battery facility in Geelong, Victoria. This is a very remote area with little population density. The fire triggered a toxic air alert to the surrounding areas. Flames did not spread to any of the other 210 Megapacks, however, residents & businesses along the Geelong-Ballan and Anakie Roads were instructed to stay indoors and the fire services considered a potential clearance of the area which could have stretched as far as the outskirts of Geelong (1 mile approx.).

Vistra Energy Facility, Moss Landing, California, USA - Sept 2021

Vistra Energy Facility - Moss Landing, Monterey County, California - September 2021 (also happened again Feb 2022 in the next phase of the project expansion). Some of the Li-ion battery modules overheated in the 300MW Phase I of the world's biggest BESS project. Safety features kicked in, detecting that the temperatures had exceeded operational standards in a few of the modules. Targeted sprinkler systems aimed at those affected modules were triggered. The project's owner and operator, power generation and retail company Vistra Energy, reported that there were no injuries and no harm caused to the community from the situation, which had been contained. The firefighting team found no fire, just smoke and drenched batteries from the facility's fire suppression system. On request from Vistra, the team remained on standby for six days.

The nearest residential area to the south of the plant is mainly housing occupied by the site workers. They were told to stay away from the plant by the fire services and for safety to remain in doors. Although not specifically told to be aware they may have to be evacuated, it's assumed the fire services would have considered it, although the worst of the smoke had cleared by the time the fire services were on site.

Chandler, Arizona, USA - April 2022

The 10MW Dorman grid storage facility (Lithium Batteries) smoldered from 18 April until 21 April and hazardous gas leaks forced the firefighters to evacuate nearby residents and businesses, and use a robot to open the building's door before it could be safely brought under control. The facility was opened in 2018, and intended to balance the grid, allowing solar energy to be used by residents and local businesses round the clock. The evacuation area measured 1200 meters from the point of the fire (fire on South 56th Street and evacuation area stretched to the intersection of highways 202 and 10).

Elkhorn Energy Facility, also Moss Landing - September 2022

Elkhorn (Phase II of the Moss Landing plant mentioned above). - The fire was confined to a single Megapack, which is Tesla's commercial battery storage system. The safety systems at the facility worked as designed when the fire was detected. The battery storage facility was automatically disconnected from the electrical grid. There's also a pedestrian warning system that provides alarms and visuals as soon as an incident is detected. These alarms will help alert workers to evacuate the premises as soon as possible. Other workers responsible for safety and security at the site will be able to take up posts in a command center that's away from the danger zone. From there, they have access to system power controls and can watch the incident unfold via various cameras. Thus far, reports confirm that there were no injuries as a result of the Tesla Megapack fire. Moreover, there are no related power outages in the area. However, Highway 1 has been closed while officials deal with the aftermath of the fire. The department asked nearby residents (1500 metres) and a school (1200 metres) the North Monterey County Unified School to shelter in place for 5 hours (the school was reported by the local press as in 'lockdown'). Roughly 20 hours after the fire was reported, Monterey County said the fire was fully controlled, but said it may continue to emit smoke for several days.

In the summer of 2022, Red Lodge suffered two fires, one of these took place in the same location as the battery plant on Elms Road. The fire was a simple grassland fire (from the heat of the summer we experienced this year). The prevailing wind blew the smoke across the A11 and directly at the Barratt Estate, causing residents to go inside and close windows as it was causing a soreness in the eyes and a dreadful smell. (the estate has its own Facebook page and the FB links posted that day about the fire makes very interesting reading. This was only a grassland fire, yet highlighted how the smoke from a grassland fire could impact residents within minutes (at 600 to 800 metres), far faster than the fire services were able to attend site to control the fire. In this instance it was simply smoke, but it bought home what could happen in minutes if a battery container caught fire and if the prevailing wind was in the same direction.

Not all of these are associated with solar farms, but all are Lithium-Ion battery fires, which some of you will recognise the names of, what do they have in common?

That's a Rhetorical question - they all resulted in the fire services declaring the need for residents in the vicinity of the fire to be placed on stand-by to evacuate or in the case of two I've mentioned to actually evacuate.

There are dozens more (maybe hundreds more) I could have listed, 21 more in South Korea alone, all of these associated with Solar energy management and Lithium battery fires.

Fact- all those listed that were Solar storage had Battery Fire Safety Plans, Automatic Fire Controls, Suppression Systems, Spacing, the list goes on, the common denominator was that each initially was a single battery unit fire that resulted in the fire services decision to take precautionary actions.

The Minister of Trade, Industry & Energy in South Korea in 2020 declared that

“fires caused by lithium-ion batteries are inevitable. But the key lies in how we can minimize occurrences and casualties through the advance of technologies and the reinforcement of preventive measures and regulations”

So its a high probability that a battery unit will catch fire, especially in the sizeable BESS proposed by Sunnica and it is likely to be contained to one unit with the methods they are proposing, however, you can produce as many plume maps as you like, its a fact that where there has been a fire in a unit, to date the fire services have acted as though a toxic gas release could occur. The minimum evacuation zone has been 1000 meters in the cases mentioned and much further in some instances.

24 hours exclusion is not uncommon and one of the above examples resulted in 5 days before the the area was considered safe. In Moss Landing the local school was locked down for 5 hours for fear of toxic emissions.

In Red Lodge we have residents within 300 metres on Elms Road, a new estate of 90+ houses within 600 metres and two sizeable schools within 1200 metres, the schools a similar distance to the school locked down in Moss Landing.

I ask one simple question, should the residents of Red Lodge be subjected to this risk. Should we have to live with the thought that at anytime we may have to be put on stand-by or maybe even evacuate parts of the village including the children from two schools - I think we all know the sensible answer.

I have had a resident ask me will they be provided with gas filter masks, another stated they are going to move. We have one resident who has already sold up and moved sighting the solar farm as one of the reasons for moving. It's causing a real concern in the village and I think if you review reports from around the world regarding Lithium Battery fires, especially BESS fires, you might understand the fear and anger the proposal is creating.

Put simply the current proposal for the BESS on Elms Road is unacceptable to the Parish Council and residents of Red Lodge.

Second point:

Landscape & Environment:

Red Lodge village is considered 'Rural, yet affordable and accessible'

- Accessible because of its proximity to two main arterial routes A11 and A14
- Affordable because of the new developments and type houses provided, certain more affordable than the neighbouring villages and Newmarket
- Rural, because of the close proximity of countryside and public footpaths accessing it - used by all sorts of leisure activities within the village

To the east we have a new build estate passed planning about to commence.

To the north a proposal for a 300 plus housing estate, beyond that a sizeable proposal for light industry stretching down towards Barton Mills.

To the North West an existing Solar Farm and a Quarry.

To the south a suspended proposal for further housing and about to commence a 500 new build estate on the boundary with Kennett.

But all of that pales into insignificance with the Sunnica proposal to the West of the village. This is by far the biggest of the proposals mentioned and by far the biggest impact on the Rural aspect.

None of the roads out of the village have lighting or footpaths, so any escape for leisure is via one of only a few Public Rights of Way and most of these will become far less accessible, both temporarily and in some cases permanently. Where the PROW are re-instated in the solar farm, they will be enclosed by wire fencing. The rural views when driving out of the village will have almost evaporated.

In essence, the word rural in the statement 'Rural, yet affordable and accessible will disappear'. Yes its a cumulative effect. But Sunnica is by far the largest component of that impact. The rural aspect is going to feel like an industrial setting, something the Parish Council and residents feel is wrong and unacceptable.