From: [redacted]
To: Norfolk Boreas
Subject: Norfolk Boreas Project – EN010087
Date: 10 December 2019 20:26:25

Dear Planning Inspectorate

My reference - 20022886

My submission is a duplicate of that already sent to you by a family member. I have used it with his permission. I am using it because it sums up the points I also wish to bring to your attention. I have added a small paragraph at the end.

I am concerned about the implications of the cumulative effect of the National Grid substation and 2 extensions plus Dudgeon, Vaguard, and Boreas all in the same site, with regard to the effect of scale, on probability and magnitude of a hazardous incident. This appears to be overlooked.

The nature of the projects cannot be regarded as 100% inert and non hazardous.The structures are not empty, just to be scrutinised on visual and audible impacts. The risk of a hazardous incident cannot be 0%. Any one electrical component from the site would be designed with a life expectancy, but they also have a failure rate. All substations are designed to be reliable, but we get occasional power cuts, and they have caught fire.

Cumulatively increasing the scale therefore has the effect of increasing the probability of a failure. The increasing scale of this combined substation complex also increases the amount of energy being handled. This also increases the scale of a possible hazardous incident, and the size of the affected area. This combined complex cannot be regarded as a normal local substation. Substations normally reduce AC voltage, this complex of 70 acres of substation, converts HVDC to HVAC, and then matches the voltage to 400kv to feed the grid, and has to handle enough electricity to supply 3.01 million homes.

It would be reassuring to see this capacity and types of process specified entered into a matrix, or formula, to calculate a safe distance to the closest residents, and how this was considered in the site selection process. This would surely be one of the most important matrix to publish. This may be a planned consideration for after consent, when the applicant works on detail, but I think the final total scale and nature of this construction is so serious, to not show it has been considered, gives an impression of either it is not being considered, very worrying, or residents will not notice what's happening.

I, like most people in day to day life working on a project, hope for the best, and it turns out as good as planned. With this project we need reassurance, and to be shown other examples of 70 acre 4GW 400KV HVDC to HVAC converter substations working 750m from homes with happy residents. It seems we are expected to get more happy and exited the larger the project is. (The applicant extolled how many millions of homes it can supply, and that it is the largest in the world), instead of increasingly more worried as the site grows. It seems that the applicant has taken the approach of playing down the negative implications and impacts of a total substation site of this size, hoping to minimise the chance of objections from residents and interested parties. I feel this is unprofessional and unrealistic when this attitude prevails through the project, when the purpose of the pre application work is to try and foresee as accurately as possible the effects of the construction on the surrounding area. I feel to achieve this, there should be a scoping, PEIR, and environmental impact report of the whole 70 acre+ 400kv connection cable Necton substation site, regardless of who owns what and whether it should be included in this application or in another, rather than relying on 3 seperate project's documents, created at different times, to be fully understood as to the relevance of cumulative effects.This would ensure no cumulative issues are overlooked when adding these three projects together. The impression given is, 1 substation is safe and acceptable, therefore 2 is and 3

is. It seems like the only formula being used is 0+0+0=0.

The substation site is clay subsoil over a chalk aquifer, which is used for water abstraction. As the cumulative scale increases, the probable risk of contamination must also increase, during construction and operation. The project requires a 400kv cable to cross the Ivy Todd stream. This stream runs in a glacial vale, deep in the subsoil. Trenching through the stream bed to accommodate the cable could be close to the limits of the subsoil.

There are archeological features documented in the surrounding area, therefore I feel when any soil is disturbed below the plough depth, it should be monitored for artefacts, and any recorded. Whilst the construction is avoiding the main features, activity in the area must have been high, giving a higher than average concentration of historically interesting items, and possibly important ones.

I have noticed the Vanguard application was prepared in a worst case scenario presentation, and Boreas is presented with 2 scenarios. Scenario 1, both projects built. Scenario 2, only Boreas built. It is very good the Vanguard project is being included in diagrams etc to show the cumulative effect, as the 2 projects are so linked at the substation end, it looks like one project split in half, giving 2 identical constructions, so it is a little confusing that they are handled differently,and causes a couple of questions. As scenario 2 fig.29.19 shows a new position for the substation, should there be a scenario 3 showing Vanguard on its own in a new position, or as we were not informed of a new position for Vanguard if Boreas is not built, maybe Vanguard would not move. Vattenfall uses the footprint selection process as an important part of the public consultation procedure, and yet we were not informed that if one project goes ahead without the other, the remaining one would move to the centre of the site. Also if Vanguard gets rejected, part of Boreas is going to be built on a site already rejected. This just adds to my uncertainty already caused through the lack of pre consent detail.

Vanguard and Boreas are regarded as 2 seperate projects and applications and yet the public consultation for Vanguard included issues relating to Boreas eg. site selection, cable corridor, national grid, and footprints. At that time Vanguard had to be considered in worst case scenario, so we also considered the included parts of Boreas the same way, with an AC cable corridor, relay stations, and DC converter halls, and related impacts, and now we have to consider Boreas in scenarios 1&2. This seems to make a difference to the footprint consulted in the Vanguard consultation, and adds to my confusion and concern, trying to consider how these 2 methods, combined will affect the whole project. Is it acceptable to present parts of a project for public consultation in a worst case scenario, and then after the consultation change the methodology to scenarios 1 or 2?

The photo montages of view point 3 Lodge Lane North are flawed. Fig. 29.25b shows the problem. The baseline photograph shows the actual topography.The 3D model view shows the land's horizon, right to left, rising, and then falling forming a earth mound, concealing most of the converter halls. The actual baseline photograph shows the land gently falling away from the lane (right to left), with no mound. This is correct, as I am familiar with this view. Also the land does not fall away behind Lodge Farm, it is almost level, so in reality the view would show the halls almost in their entirety. (this affects scenario 1&2)

The photo montage views of the national grid substation extension fail to show the actual impact of the pylons carrying the cables that drop at an angle down to the substation. The pylon that connects Dudgeon now, does not show the impact of the connecting cables, as in reality they are quite dominant, I live with the view.

Fig. 29.29c and Fig. 29.29d shows a photo montage of viewpoint 7 scenario1, with and without 15 years of mitigating planting. this effect seems impossible. 29.29c shows this view is looking at the east end of the Boreas halls. Fig. 29.9 shows the planting only 20-50m away from the project at this point. 29.29c shows the halls in view, and 29.29d

show them totally concealed, as this is level ground, and all thing considered, the only conclusion is, the trees must be 65 feet high.

These views I live with, and feel I must comment. I worry about the possibility that other imagery of other views are not accurate. If the mentioned faults can be confirmed, could there be a change to more earth banking with planting to actually achieve the mitigated views in the photo montages.

What safety plans have been put in place in the event of a terrorist attack. Has this possibility been considered or addressed. Words and phrases such as ‘unlikely’, ‘no evidence to suggest’, do not feel reassuring or acceptable.

Thank you for your kind attention.

Diana Lockwood.

Sent from my iPad