**From:** Jenny Smedley [mailto:author@globalnet.co.uk]
**Sent:** 02 December 2018 09:37
**To:** Norfolk Vanguard
**Subject:** Additional Submissions

Dear Sirs
Since the closing dates for submissions (during which I posted a representation), I have received 15 documents (mostly from the MOD under the Freedom of information Act) relating to the F16 plane crash in Necton and the subsequent attempts to clear it up.

Using these documents I have complied a brief report on the crash and clear-up, all corroborated by documents that are referred to.
All documents have impeccable sources.

I would like to add this report (and all documents it relates to if possible) as an Additional Submission (as I have seen other parties be allowed to do).

I have attached the report itself, and will send the documents, if you will permit it. (I have blindly attached them all as they have considerable file sizes.)

The Environment agencies Barbara Moss-Taylor also is in possession of all this material now, but believes they cannot add them at this stage.

Jenny Smedley (Representing Necton Substation Action Group).

Introduction
RDAF F-16(B) crashed near Necton on 11th December 1996, impacting between Ivy Todd Road and Necton Wood, the debris **covering 3 fields**. It is directly on the area Vattenfall plan to build 2 x 18.5 acre substations and dig a deep cable corridor. **Vattenfall failed to mention the crash and contamination on its Environmental Report** despite being told about it on 5th June 2018 by Norfolk County Council and before that by local people.

Co-ordinates of impact: 52°39'29''N 00°47'83''E Approximately 16 km east of RAF Marham on a W to E trajectory. (doc M).

Contaminants mentioned in documents as listed throughout this report.
**Radioactive substance** (Doc G) warned of by IPC (an ex MOD department within the RAF according to the Environmental Agency – see doc P) – has been used in F-16s and their ammunition. Two missiles (of a possible 6) and 200 shells (of a possible larger number) were recovered. Depleted Uranium is also commonly used as counter-weights in aircraft both military and commercial.
Hydrazine (doc A)
Oil (doc A)
Aviation Fuel (doc A)
**Composites, such as Carbon Fibre** (doc A)

There is one document still being withheld by the RDAF. **As radioactive substance clearing is not reported in the redacted clean-up documents so far given, we have to ask if this is why the RDAF report is being withheld**.

F-16 crash site was recovered in 1996/1997 with a view to restoring it for **arable use only**, and only within the constraints of the knowledge available at the time. The clearance was not adequate either for **large scale development** or to comply with current standards and knowledge.

The **worst case scenario must be adopted** – which is that **contaminants may remain in the soil at a deep level,** and any disturbance could create an **environmental disaster**, especially with regard to water supplies. Vattenfall's onshore infrastructure will also entail the use of pile-driving. The vibration from this invasive procedure could disturb contaminated ground at depth, and from there contaminate water supplies.

With the complexity and spasmodic nature of the task, carried out in extreme weather, with documented anomalies to the prescribed procedures, lack of data (at that time) on the long term breakdown of hazards in plane crash sites of this type, which necessitated further monitoring for just arable use, the lack of wreckage recovered, the sensitivity of information still being withheld, and the importance of public credibility of the whole operation, it would be prudent not to disturb the crash site. We therefore urge the Planning Inspectorate to refuse Planning Consent on the site proposed, as it is **not a suitable site**. It is **disingenuous of Vattenfall to have ignored the plane crash** and contamination in their Environmental Impact Report.

The full report compiled by the RDAF **which is still withheld** was apparently supplied to the MOD with an expectation of confidentiality. It was subjected to a

Public Interest Test, and was adjudged 'The PIT found that the public interest in maintaining the confidence of the Royal Danish Air Force (RDAF) outweighed the interest in releasing documentation, held by the Ministry of Defence, which originated with the RDAF' (See doc L)

Details of clearance and demonstrations of it being inadequate to accommodate large scale development of the site

- Impact Crater, referred to in documents variously as being both 9m x 19m x **2m deep** and spread over 3 fields, (doc A) **and 30 feet deep** (doc L)
- The aircraft carried 6000lbs of fuel (doc A)
- The aircraft broke under such intense force that only a few pieces of wreckage were longer than 50cms. (doc A). Surely an impact of that force would create a crater more than 2m deep.
- Debris said to cover 1 square mile (doc B)
- Parts of aircraft recovered are mentioned as being a wing, the engine and jet pipe, the hydrazine tank, which had split open leaving several deposits, 2 acquisition missiles and 200 rounds of 20mm ball ammunition. (doc D)
- The ARO said he, 'was of the opinion that the body of the aircraft was buried in the bottom of the crater.' (doc E) but no mention is made of finding the body of the aircraft. The ARO also advised digging 50cm deep trenches outside the 5m contaminated area around the crater before wreckage recovery commenced. This would limit deep excavations for recovery of the plane to the area enclosed by these trenches. If one takes even the smallest reported crater size version of 19mx9mx2m deep, this equates to 547 tons of soil being moved in a fraction of a second, so the amount of energy released by such an impact could reasonably be expected to push wreckage beyond the 5m trench-imposed limit. If the 30 feet deep crater mentioned in the original reports is correct, the tons of soil moved and the possible spread of wreckage would be very much greater. **This would explain why such a small amount of the aircraft was reported as being found, as excavations outside the trenches would not have been deep enough to locate it.**
- Contaminated soil was **mistakenly added to the clean soil pile** by members of the clean-up crew. (doc E)
- In addition to this, a blizzard obliterated the site on 31st December 1996, which kept the clean-up crew away from the site. (doc D). When the clean-up crew returned to the site on 7th January, they found that **the contaminated soil had been transferred to a hard standing by persons unknown**. (doc E). This moving around of the soil (at least 4/6 times) may have enabled carbon fibres to have been spread all around the area. In time it would have become untraceable (as it bonds to soil) and is likely to still exist under and in the soil all around the area.
- This is confirmed by the monitoring strategy which was advised for the whole site, for any further environmental impact, including the possibility of carbon fibres entering the food chain. It was admitted that at the time **no data was available on the long term breakdown of carbon composite fibres from aircraft crashes**. And that an area of approximately 1200m2 was contaminated carbon fibres to **varying depths.** (doc E) There are no available reports on any on-going assessments and it is unknown if they were carried out.

- Further, the PHMDiv were asked to continue monitoring for '**re-emergence'** of **carbon fibre**. (doc E) There is no information on whether this monitoring for environmental damage ever took place. The word 're-emergence' implies that **contamination was indeed suspected at levels lower than what was examined.**
- Consultations with the Environment Agency and a subsequent ground water vulnerability survey, confirmed that the aircraft crashed in the vicinity of a major chalk aquifer used for the abstraction of private and public water supplies. The aquifer is covered with a 20m layer of boulder clay and flint. The soil structure has a moderate ability to attenuate diffuse source pollutants, but liquid discharges could penetrate this soil layer. The local Environment Agency officer expressed the opinion that there was little risk to either the aquifer or the nearby stream. (doc E). **However this did not take into account what might happen if a future deep excavation disturbed the soil again.**
- Tile drains over all 3 fields were wrongly identified by the clean-up crew as being mole drains. This showed an unfortunate lack of expertise in arable matters. (doc E)
- **The danger to health from burnt carbon fibre was underestimated by modern standards,** limited only to mentions of the possibility of needlestick injury. (doc E) Carbon Fibre is harmless in normal use but if exposed to high impact and high heat at the same time, this causes the polymer to melt away and the fibres (which can be inhaled and also penetrate skin) to float free, also bonding to soil.
- **Modern thinking on carbon fibres** https://www.ed.ac.uk/inflammation-research/news-events/2017/carbon-nanotubes-may-pose-cancer-risk
- The landowner was told that he could not grow any crops on the main field for a **minimum of 1 year**. (Necton Parish Council Meeting March 1997 – doc N). It was also been stated by a Parish Councillor, Ms Jean Bass (doc J) 'They said the land was contaminated **for 5/7 years. Any residential growth would need special clearance**.' Whilst Vattenfall's project does not involve residential growth, it would have been unimaginable in 1996/1997 that a massive industrial project like this would ever be allowed to be built on arable land, and this could be why it was not specified in the instructions. The Air Control Report that is still withheld by the RDAF/RAF/MOD might clarify the above.
- The F16 is said by the RDAF to have impacted at the crash site on a W to E trajectory. However the main orientation of the area of search appears to lay in a N to S direction from the impact point. Burning debris fell to the ground at Ivy Todd Farm, (doc I) which does not lay within the area of search, but is some distance further to the East, and was not visited by clean-up crew, which would suggest that some **contamination remained undiscovered**. It would therefore appear that the splatter cone may have been wrongly placed. This is borne out by the fact that the only parts mentioned as having been recovered are as previously listed, so **large parts of the F16 may remain undiscovered**.
- One document speaks of 'defensive press lines, which have been redacted. We would like to know what they were defending. (doc F).

CONCLUSION:

1. The cost of remediating contaminated ground over such a wide area could be so significant that it **should not be ignored in the estimated project costs, which is currently the case**, as it has not been mentioned in any way by Vattenfall in their DCO Application.

2. The population of Necton and Ivy Todd feel strongly that this site should not be disturbed as **no-one can guarantee that no harm will result from it.** There are very few sites in Norfolk that have had a modern jet crash into them with the possible environmental hazards of this one, and yet Vattenfall have indeed chosen one out of the many other options offered. It shows a lack of competence in their environmental investigations, and they **should be made to seek a different site that doesn't hold such potential damage to the area**.
3. CPO requirements appear to state that it must be proven that there was not another, better site other than the one chosen, which might have been purchased voluntarily. There are many viable sites that do not have the remains of an F16 air crash on them and would therefore be immeasurably better. **Vattenfall were for instance offered Top Farm in Necton, which stands on lower ground, would be easier to mitigate, and has 186 clean acres of land. This is the farm across which VF are currently planning to build their access road to their chosen site. Top Farm is on the current cable route from the coast and also has direct access to the A47.**
4. We would also ask what information **the RDAF are concealing** in the Air Crash Report we are not allowed to see.
5. It is clear that there were many problems in the clearing of this site, which in modern times would make the clearance inadequate. The clearance may have been acceptable at the time for restoration of the site to arable use, but certainly it would **not be considered sufficient either then or today for a major development.**
6. The complications and lack of knowledge of the time, and imprecise boundaries means that it would be extremely difficult to go back and make a 100% guaranteed clearance check

**If there are any doubts at all, development should not be permitted on this site.**

Additional Information.
http://webarchive.nationalarchives.gov.uk/20081013111454/http://www.mod.uk/DefenceInternet/AboutDefence/CorporatePublications/HealthandSafetyPublications/Uranium/
https://www.gov.uk/guidance/depleted-uranium-du-general-information-and-toxicology#what-is-depleted-uranium-du

List of documents
A – Factual Information Regarding the Crash of a Danish F-16
B – Enclosure 2- Danish Air Force F16 Accident on Departure from RAF Marham
C – Enclosure 5- Update on Danish Air Force F16 Accident
D – Enclosure 12- Report on the Recovery of an RDAF F-16 Trainer
E – RAF Institute of Health and Medical Training Report IHMT/5/97
F – Loose Minute – RDAF-F16-ACCIDENT-11DEC86
G – Land contamination crash 2
H – Land contamination air crash
I - statement by Mr Colin King, owner of Ivy Todd farm
J – Jean Bass email
K – F01201806031 covering letter
L – F01201811881 covering letter
M – RAF Map enlarged site of crash
N – Extract from Necton Parish Council Meeting March 1997
P – Email from Environment Agency regarding the identity of the IPC

Authors of this report: Alice Spain, Colin King, Tony Smedley, Jenny Smedley

**From:** Jenny Smedley [mailto:author@globalnet.co.uk]
**Sent:** 16 November 2018 08:29
**To:** Sian Evans
**Subject:** Norfolk Vanguard/Boreas - Necton contamination

Dear Sian
Please can you advise me? Since representations were made some new and extremely vital information has come to light regarding the Danish F16 plane crash in Necton and the resultant contamination in the area proposed for the substations by Vattenfall.

This information takes the form of a brief report compiled from, and referring to, 15 documents, the majority of which were acquired from the MOD and the RAF under the Freedom of Information Act.

(It should be noted that one document has yet to be released under the Freedom of Information Act, and this is the Royal Danish Air Force crash report, which has been withheld following a Public Information Test. I have put in a request for an internal review of this decision to withhold it, which is currently being processed).

Our report and the documents were offered to Vattenfall, who refused to respond.

The report and documents were supplied (recently) to the Environment Agency (Barbara Moss-Taylor), who requested them.

I would like to send the report and the documents to PINS as it appears that currently this matter is not on the agenda for the Preliminary Meeting, presumably as up until now there has been little hard evidence available about the crash.

The documents show that the contamination (as listed in the documents) caused by the crash was only cleared sufficiently for the knowledge of the time, and to enable only arable use of the land to be restored, and not for industrial/development use which would disturb the contaminants, and that the contamination area includes the entire site proposed. We would like to give the report and documents to PINS to give them the opportunity to appraise them. Can you please advise me of how we get this information to you?

I have not attached it to this email, as I won't send it without permission, and also as it contains some large files.

We were going to wait until the hearings to present this evidence, but are now concerned that as it doesn't appear in the agenda, we might not be permitted/invited to

do so.

George Freeman MP, Necton Parish Council, Holme Hale Parish Council, Breckland Council and the Environment Agency are all now in possession of the report and the documents.

Thank you
Jenny Smedley (Necton)