
From: [name redacted]@hse.gsi.gov.uk [mailto:[name redacted]@hse.gsi.gov.uk]
Sent: 07 May 2009 15:52
To: [name redacted] (OND)
Subject: RE: Dungeness: Proposed expansion of Lydd Airport

[name redacted]

There is a long, long history to all this. I attach an internal briefing note we prepared a few weeks ago for the HSE CEO. Also attached is a letter we sent to the local planning authority. The Lydd Airport Action Group is very active and very vocal and there is a pretty strong local campaign against the airport. They are deeply unhappy that NII has expressed itself content for the airport expansion to go ahead. Happily, I am not really involved in any of this any more - so if you need any further information then I will put you in touch with our Dungeness inspection team.

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-----Original Message-----

From: [name redacted] (OND) [mailto:[name redacted]@decc.gsi.gov.uk]
Sent: 07 May 2009 15:12
To: [name redacted]
Subject: Dungeness: Proposed expansion of Lydd Airport

[name redacted]

The Public Comments Window for nominations has drawn a number of comments on the proposed expansion of Lydd Airport and its potential impact for both the existing plant and any new build. I understand that planning applications have already been made for a new runway and terminal and that these are currently being considered by the local planning authority. I also understand that BE/EDF have objected to the applications on safety case grounds, although the NII hasn't. What is the current NII view on the proposed expansion? Could it compromise current activities and future development on the site? DfT have informed me that the local council could make decision at any time, so I'm keen to construct the full picture of what we're dealing with and how it may play out with the nomination process of sites into the NPA.

Regards

[name redacted]

[name redacted]
Office for Nuclear Development
Department of Energy and Climate Change
Tel. [number redacted]

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Lydd Airport Briefing Note

Summary of Issue

HSE (NII) has been consulted by the local planning authority on the implications for the Dungeness nuclear licensed sites resulting from proposed changes to operations at Lydd airport. HSE (NII) has undertaken a detailed review of the proposals and provided a response to the local planning authority that it has no objections on the grounds of nuclear safety. Lydd Airport Action Group (LAAG) has written to a number of individuals expressing concern at this decision.

In addition, LAAG is complaining that a letter it sent to NII in July 2008 was not replied to.

It should be noted that the risk referred to in this note is from accidental aircraft crash, and does not discuss malicious events.

Line to Take

HSE (NII) has undertaken a rigorous review of the proposed changes to operations at Lydd airport and has concluded that for the Dungeness A and B power stations the overall risk still fulfils the ALARP requirement.

HSE (NII) regrets that due to administrative oversight, the LAAG letter of July 2007 was not replied to.

Background

There is a proposal to extend the levels of passenger numbers and size of aircraft using the aerodrome at Lydd, now referred to as London Ashford International Airport. There are two planning applications related to the development of the airport. The proposals would involve the construction of some 294m of additional pavement to the northern end of the runway to create a total runway length of 1,799m, with a further 150 metres starter extension and the construction of a new terminal building. The new terminal building will provide facilities for processing up to 500,000 passengers per annum (ppa). However, it is a medium term aspiration to achieve 2 million passengers per annum (mppa).

Lydd lies c 3 miles to the north/ north west of the Dungeness Sites. The runway is orientated south east - north west. The airspace around the airport is restricted for two reasons, firstly from the Air Navigation (Restriction of Flying) (Nuclear installations) Regulations. Secondly, the firing ranges at Lydd and Hythe impose further restrictions on adjacent areas.

An initial request for expansion of operations at Lydd was submitted in 1988. HSE (NII) undertook considerable assessment at that time, and ultimately lifted its initial objection to the development provided certain caveats on flight paths and flight mix were in place (enforced via a Schedule 106 agreement on the planning consent). The latest proposed expansion of operations will also require caveats on flight paths and flight mix to be put in place.

British Energy has undertaken an assessment of the risk posed to the operating nuclear reactors at Dungeness B from the proposed development. The BE position as stated in its objection letter is that it is not inclined to support the development, on the basis that it increases the overall risk, albeit by a very small amount. BE's objection is therefore based on the principle of avoiding any increase in risk, however small, where that is reasonably practicable. Clearly, BE's effort involved in posting an objection to the external development is minimal and, if successful, would prevent a small predicted increase in risk (*whether it is real or not could not be substantiated at these levels*). This is consistent with BE's legal duty to ensure that the risk due to its own operations is reduced as far as is reasonably practicable.

Dungeness A permanently ceased power operations in December 2006 and is currently defuelling. The program for removal of this fuel is part of the national strategy for reprocessing of Magnox fuel, known as the Magnox Operating Plan (MOP). This currently envisages all fuel removed from the reactors by March 2011. As the changes to operations at Lydd are not expected to be fully implemented until 2014, any period of overlap between the presence of fuel, and the increased risk due to airport operations is likely to be negligible. Magnox South have not objected on this basis, and on the low levels of risk posed to the now cold fuel for the short period it will remain on the site.

HSE(NII) first examined the current application in 2006. Our assessment has included.

- Review by NII specialists of the basis and assumptions of the case and applicability of the risk assessment methodology adopted by British Energy. This methodology is based on recognised best practice and uses the appropriate target area for an aircraft crash together with the relevant historical data whilst addressing any uncertainties.
- Independent risk studies by an external consultant with considerable experience in the field of analysing and/or assessing aircraft impact studies. These studies have demonstrated the robustness of the methodology used.
- Consultation with relevant statutory bodies, including Department for Transport, Civil Aviation Authority, (in respect of flight paths), Office for Civil Nuclear Security (OCNS) and the local authority Emergency Planning office.

The studies have shown that the risk level imposed by the proposed airport operations is a small increase on that extant from current operations and postulated background crash rate (without the presence of an airport). The calculated risk of a significant radiological release (per annum) are as follows.

Status	Background	Airport Operations	Total
Current	5.4×10^{-8}	1.5×10^{-8}	6.9×10^{-8}
Airport by 2014	5.4×10^{-8}	1.6×10^{-8}	7.0×10^{-8}

Whilst there will be an increase in the numbers of larger commercial aircraft, (which have high reliability but more significant accident consequences), there will be a significant decrease in the numbers of light aircraft and helicopters using the airport.

Light aircraft and helicopters have a much lower reliability but also lower accident consequences. The combined effects of these factors mean that the overall risk to the Dungeness licensed site posed by air traffic using the airport will be more or less unchanged and still dominated by the background risk.

The risk levels are below those which are considered generally acceptable within the Safety Assessment Principles (SAPs). Additionally, at such low levels of predicted risk the variation in the numbers is probably within the bounds of error. We therefore consider that the overall risks, including those presented by the proposed airport operations, still fulfil the ALARP requirement and the duty holders safety cases have satisfactorily demonstrated legal compliance.

We therefore advised the LA that we do not object to the airport planning proposals.

The effects of development of the airport on the potential for a Dungeness C NPS are difficult to be absolute over until a particular design has been identified. It is worth noting however that by the time a Dungeness C station is built and operating (estimated 2017-2025), it is highly likely that the existing B station will have ceased operations. In addition, the 2 designs currently going through GDA have a physical withstand to impact from commercial airliner impact claimed by the requesting parties; something which we are in the process of examining in GDA.

The letter from LAAG was received in NII on 8th July. This letter was not replied to, and appears to have slipped through the net. It should be noted that in addition to the LAAG letter we have received over 250 campaign letters from individuals within the Lydd area, which we have replied to, including having to deal with "missing" correspondents. We are also now starting to see a second tranche of replies to our response letter. The letter of 7th July requested clarification over the criteria used to assess the risk to Dungeness B from operations at Lydd, and an explanation of how the decision of no objection was reached. The response to the campaign of letters addresses all the points put forward in the letter of 7th July by LAAG but we will reply to the original letter and to a second LAAG letter dated 28th November.

[name redacted]
Dec 2008

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17th December 2007

Our Ref:
Unique
No:

Your Ref: Y06/1647/SH and
Unique Y06/1648/SH
No:

FAO [name redacted]

Dear [name redacted]

**Re: Proposed Development at Lydd Airport and the Implications for the
Development of a 'C' Station at the Dungeness Site**

This letter provides a response to your request for HSE's view on the consequences for potential development of the Dungeness site in light of the proposed expansion of Lydd airport. In the absence of any specific proposals for new build at Dungeness, and in advance of the expansion plans for the airport being finally decided, I can only give you a broad regulatory overview on this issue.

As you know, the Dungeness Site has been used for Nuclear Power Generation since the 1960's, and has been identified by British Energy as a potential site for a 'C' station should the Government decide that new Nuclear Build is appropriate. Dungeness A permanently ceased power operations in December 2006 and is preparing to defuel. British Energy currently anticipates Dungeness B will operate until 2018, subject to the required regulatory approvals.

You are aware, of course, that before construction could begin on any new power station at the Dungeness site, there would need to be extensive review through both the planning and regulatory processes prevailing at the time of a development application. HSE's NII enforces the nuclear licensing and security regimes in relation

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[name redacted]
Dec 2008

to such an application. Other regulatory permissions, for instance from the Environment Agency, would also be needed.

In addressing the suitability of Dungeness as a site for a new nuclear power station, NII would consider a wide range of external hazards to the plant, included in which would be aircraft impact. As part of that consideration, the degree of structural resilience designed into the structure(s) would be a consideration. Para 121 in the NII Safety Assessment Principles (SAP's) provides a neat synopsis of our position.

"If the external hazards over which the dutyholder has no control are judged to be too great to be accommodated through the design of the plant. The use of the site may be precluded for its proposed purpose."

Of additional relevance is the statement in para 30 is that "...NII would expect modern facilities to have no difficulty in satisfying their overall intent." The remainder of the SAP's provide a more detailed exposition of the regulatory expectations for protection against external hazards.

What this means in practice is that if the developer of a proposed new nuclear development were unable to demonstrate that the risks of aircraft impact were sufficiently low, a revision to the design would be required, or the development could not proceed. Given that there is no indication of the type of development that might be proposed at Dungeness C, it is difficult to comment further other than in this general manner.

Any proposed power station design would also be expected to include for any reasonably foreseeable changes to the external threats it may be subject to. This must be considered in the context of the lifetime of any new plant, which is currently expected to be in the order of 60 years operation, followed by a period of (say) 40 years during which all significant hazardous material would be removed.

It should also be noted that the DBERR Strategic Siting Assessment (SSA) consultation document (<http://www.berr.gov.uk/files/file39199.pdf>) makes passing mention of the need to consider aircraft impact in relation to siting for new nuclear power stations. If the Government decides in favour of allowing the private sector to invest in new build in the UK, it is likely that DBERR will consult on some exclusionary principles for new nuclear power station siting in 2008. It is unclear how broad these principles might be, however it is possible that proximity to airports will be included in some form.

If there is anything that you wish to discuss, please contact me on [number redacted] or via email on [name redacted]@hse.gsi.gov.uk

Yours Sincerely,

[name redacted]

HM Principal Inspector of Nuclear Installations