

# Consulting Engineers

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Ref: L3136-A1

11 October, 2008

For the attention of Ms Louise Barton

Dear Sirs

**PLANNING APPLICATIONS Y06/1647/SH AND Y06/1648/SH  
NEW TERMINAL AND RUNWAY EXTENSION AT LONDON ASHFORD AIRPORT AT LYDD, KENT**

Thank you for your letter of instruction of 8 September 2008.

You ask if the most recent Planning Application (Supplementary Information) submission of 19 August 2008 has given me any reason to revise my assessment of the aircraft crash risk frequency associated with the proposed air traffic movements.

I have studied those sections of the supplementary information details that are relevant to my assessment as presented by the previously submitted Large & Associates Report R3136-A1 of 22 March 2007. With respect to how supplementary information relates to my previous assessment:

- 1) I remain of the opinion that the proposed expansion of air traffic operations would carry with it the same magnitude of increased risk of accidental aircraft crash onto the existing Dungeness nuclear power station (A & B) site;
- 2) that the introduction of commercial airliners (such as the Boeing 737 Category C4 aircraft) operating from the Lydd airfield would give rise to a level of risk of accidental aircraft crash substantially higher (ie more frequent) than the 1 in 10 million screening level required for the nuclear safety case by the Nuclear Installations Inspectorate; and
- 3) that the impact of a crashing commercial aircraft of this mass and aviation fuel capacity (Boeing 737 and similar C4 category aircraft) could result in severe damage to the nuclear plant and equipment, and loss and/or serious disruption of nuclear safety systems, including operating and management personnel essential for the continuing safe functioning of the operational power station (Dungeness B) and for maintaining surety of the radioactive containment of the decommissioning plant (Dungeness A).

You will be aware that since the submission of R3136-A1 central government has further encouraged a programme of new nuclear power plants at existing British Energy sites, amongst which Dungeness has been identified to be within the first phase of new-builds.<sup>1</sup> Quite recently, a professional engineering journal reported an interview with British Energy on the prospects of a new-build nuclear plant at Dungeness that, in account of predicted sea rises

<sup>1</sup> *Brief Report on the Potential Implications for Nuclear Material Transportation Issues across London in account of HM Government's 2006 Energy Review*, Mayor of London, Large & Associates, 8 October 2006 – see <http://www.largeassociates.com/clientzone/CZ3156/R3156-2%20final.pdf>

brought about by climate change, any new nuclear plant would be sited “. . . *much further back, possibly by a couple of hundred metres . . .*”.<sup>2</sup>

The effect of siting a third nuclear plant at Dungeness at, say, 200m due north of the existing nuclear plants would not only render i) its north boundary nearer to the proposed airport take-off point, but there would a corresponding ii) increase of the overall area of the ‘ground footprint’ and iii) enlargement of projected height profile of the combined hazardous nuclear plants, so:

- 4) these three changes to the siting, footprint and profile together give rise to the increase of the chance that a crashing aircraft would impact on part of the hazardous nuclear facility at Dungeness, which directly interprets to a further increase in projected frequency of accidental aircraft crash.

So, in summary, the Applicant’s recent submission has not given me any reason to amend my previous assessment of the risk of accidental aircraft crash onto the nuclear power stations at Dungeness. Moreover, information from British Energy relating to any future new-build nuclear power plant at Dungeness leads me to the firm conclusion that the necessity to construct any new plant further inland, in account of future global warming, would promote a further increase in the risk of accidental aircraft crash upon the nuclear power complex.

I trust that this response satisfactorily completes Item (1) of your letter of instruction.

Yours faithfully



**JOHN H LARGE**  
LARGE & ASSOCIATES

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2 See *Professional Engineering* of the Institution of Mechanical Engineers, 3 September 2008 in which David Norfolk, of British Energy’s new-build team, when commenting on environmental assessments of projected sea rises, wave heights and intertidal currents at four coastal sites, including Dungeness, said “. . . *But Dungeness, our earliest Advanced Gas Cooled Reactor, is relatively close to the sea and requires constant effort to ensure stability of its shingle bank. In this case we would expect to place a new-build much further back (ie landside), possibly by a couple of hundred metres. . .*” - British Energy confirmed this to be so by e-mail to Ms Barton dated 22 September 2008.