

Basingstoke and Deane Borough Council
Civic Offices
London Road
Basingstoke
Hampshire
RG1 4AH

Date: 12 December 2008

Our reference: 2008/651477

HSE
HM Nuclear Directorate
Name **Dr John Highton**

Division 3B
Nuclear Directorate
Building 4S2
Redgrave Court
Merton Road
Bootle
Merseyside
L20 7HS

Tel: 0151 951 4933.
Fax: 0151 951 3942
Nsd.land.use.planning@hse.gsi.gov.uk

<http://www.hse.gov.uk/>

For the attention of: Ms Rebecca Fenn-Tripp
Principal Planning Officer
Tel: 01256 845307

Dear Ms Fenn-Tripp

Residential Developments in the Nuclear Safeguarding Zone of AWE Aldermaston

I am writing in response to your letter of 28th November. Your letter sought clarification of a number of points from HSE regarding HSE's policy in relation to planning applications for residential developments where such developments were likely to give rise to a long term net positive increase in population density within the safeguarding zone (DEPZ), in the instant case that around the AWE Aldermaston licensed nuclear site. Taking your points in turn:

With regard to clarifying the reasons for HSE's refusal I believe that the Annex attached to this letter, which has been circulated to all Local Authorities in the vicinity of both the AWE Aldermaston and Burghfield sites, provides the necessary background to HSE's stated position.

HSE will advise against a planning application where it has health and safety concerns in relation to the application or to aspects of the application. Where HSE advises against an application it means that HSE is opposed to the application on the grounds of those concerns, and in the case of developments such as this around nuclear licensed sites, the concerns would be nuclear safety and the protection of the public from an off-site release of radioactive material, rather than HSE being opposed to the application more generally.

In the event that Basingstoke and Deane Borough Council decide to refuse planning permission on the grounds of HSE's decision to 'advise against', I can confirm that HSE will provide all necessary support to the Council in the event of an appeal.

Yours sincerely

A handwritten signature in black ink, appearing to read 'J Highton', written in a cursive style.

Dr John Highton
HM Principal Nuclear Inspector
Nuclear Installations Inspectorate

Electronic copies to:

Mr John Ashworth, Corporate Director for Environment, West Berkshire District Council: jashworth@westberks.gov.uk

Mr Tony Curtis, Chief Executive, Head of Planning and Transport Services, Basingstoke and Deane Borough Council: tony.curtis@basingstoke.gov.uk

Mr Ian Houlton, Head of Emergency Planning, Hampshire County Council: ian.houlton@hants.gov.uk

Mr Mark Cupit, Head of Development Management, Wokingham Borough Council: mark.cupit@wokingham.gov.uk

Ms Alison Bell, Head of Planning, Reading Borough Council: alison.bell@reading.gov.uk

Annex A

AWE Aldermaston and Burghfield Nuclear Licensed Sites

Residential Developments in the Nuclear Safeguarding Zones (DEPZs)

Justification for HSE/NII's Position to 'Advise Against'

HSE, through its Nuclear Installations Inspectorate (NII), is a non-statutory consultee for proposed developments around nuclear licensed sites. As a consultee NII advises Local Authorities on the hazards arising from ionising radiations at such licensed sites and on factors which should be taken into account by the Local Authorities when they are considering such developments in order to protect the public from the radiation hazards posed by such sites. In advising Local Authorities NII applies consistent criteria for assessing hazard potential, population density and other relevant matters.

Consistent with Government policy on siting at the time of licensing in July 1997, a cautious approach was adopted by HSE/NII and it was deemed that an appropriate designation for the AWE Aldermaston and Burghfield sites would be that they should be treated as 'remote sites' Table (i), because of the unique nature of their operational activities. Given the extant population distributions around the sites, HSE/NII has exercised its discretion and adopted a pragmatic approach in its determinations thus far, with the application of semi-urban population density criteria rather than the more restrictive remote site criteria to estimate residual demographic margins for proposed developments in the safeguarding zones for the AWE Aldermaston and Burghfield sites.

	30° Sector Population Density Limits		All Around Site Population Density Limits	
	Persons per square kilometre	Persons per square mile	Persons per square kilometre	Persons per square mile
Remote Site	1,000	2,590	250	647
Semi-Urban Site	5,000	12,950	1,250	3,237
New Build Site	1,667	4,317	417	1,079

Table (i)

The application of the semi-urban population density criteria to estimate demographic margins, represents siting criteria which are least constraining for an operational UK nuclear licensed site. Semi-urban population density constraint limits have previously, only been applied by HSE/NII to Advanced Gas-Cooled Reactor (AGR) licensed sites in the United Kingdom, where the AGR Safety Case seeks to ensure that reactor faults identified within the design basis leading to a predicted off-site dose exceeding the lower emergency reference level (lower ERL) for evacuation, is negligibly small. Accordingly for AGR sites, licensees' have identified a 1.0 kilometre DEPZ as an appropriate minimum distance for emergency planning purposes which is consistent with the extant Safety Case. This is in contrast to the AWE Aldermaston site where a 3.0 kilometre DEPZ is in place.

The specific choice of an appropriate siting criteria for determining demographic margins (remote, semi-urban, or new build) for land-use planning applications, is contingent on the extant site safety case relating to the potential for off-site releases of radioactive material. Where the likelihood of a significant off-site release is perceived to be greater or where

uncertainty in the outcome is present, more conservative siting criteria may be appropriate for the determination of demographic margins.

In addition, use of the DEPZ provides an area for assessment consistent with the zone defined originally for emergency planning purposes. Notwithstanding the above, the demographic margins within the DEPZs for the AWE Aldermaston and Burghfield nuclear licensed sites, are, even without the proposed Boundary hall development, approaching unacceptable limits when judged against semi-urban population density criteria.

HSE/NII have therefore, recently '*advised against*' the Boundary Hall planning application by Cala Homes (South) Ltd because of the residential nature of the proposed development, and its size and close proximity to the AWE site boundary. This recommendation by HSE/NII to Basingstoke and Deane Borough Council was informed by a thorough examination by NII of the impact of the application on existing population density and is consistent with the findings of the Buncefield Major Incident Board report of 15 July 2008 by Lord Newton on '*land use planning and the control of societal risk around major hazard sites*' to avoid further erosion of available demographic margins.

HSE/NII considers that its decision to '*advise against*' planning applications within the nuclear safeguarding zones DEPZs of the AWE Aldermaston and Burghfield nuclear sites should be maintained until such time that:

- the criteria for judging acceptable population density levels around nuclear licensed sites change, and/or
- requisite engineered safeguards are in place, and/or
- additional information relating to the off-site release of radioactive material is made available by AWE for assessment by HSE/NII specialists.

In the interim, HSE/NII's decision to '*advise against*' planning applications within the DEPZs of the AWE Aldermaston and Burghfield sites is contingent on the size, location and nature (residential, commercial, or institutional) of the proposed development. A further consideration is whether any proposed development will contribute to a long term net positive increase in residential population density which will result in an increased potential long term risk to the public from the radiation hazard in the event of an off-site release. Please note that this decision has been made by HSE/NII solely on the ground of nuclear safety and protection of the public from an off-site release of radioactive material.

It is NII's view that the existence of a controlled '*Low Population Zone*' around a nuclear licensed site is important and represents a buffer between the nuclear licensed site boundary, and more concentrated centres of population. It is the only effective non-engineered means of restricting exposure of the local population to radiation in the event of a potential release of radioactive material into the environment following a significant plant fault. The maintenance of a controlled low population zone around a nuclear facility is a key element of defence-in-depth which is a basic principle of nuclear safety adopted internationally by the nuclear community.