

PROOF OF EVIDENCE

EMERGENCY PLANNING IMPLICATIONS
RESULTING FROM NEW BUILD AT BOUNDARY HALL, TADLEY

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SUMMARY AND CONCLUSIONS

SC 1. CONTEXT OF EVIDENCE

SC1.1. The Health and Safety Executive (HSE) has on public safety grounds advised against the planning application to redevelop, for mixed use including residential, the Boundary Hall site adjacent to the licensed nuclear installation at the Atomic Weapons Establishment (AWE) Aldermaston.

SC1.2. The HSE / NII advise against relates to land use controls and public protection issues specifically to the demographic margin being breached as outlined by the Government policy on siting and the potential compromise of the emergency arrangements resulting from increased population profiles within the DEPZ.

SC1.3. The AWE site is a licensed nuclear site under the Nuclear Installations Act 1965. The AWE applied for licensing in 1997 in order to provide '*...greater public confidence in the safety of our operations...*' (Hunting-Brae 1997). This was a positive step in enhancing emergency arrangements as confidence and public reassurance in the emergency arrangements are central to the effective management.

SC1.4. As a licensed nuclear site AWE is also therefore subject to the Radiation Emergency Preparedness and Public Information Regulations 2001 (REPPIR), although it is not a reactor site, which have different risk profiles.

SC1.5. The REPPIR Regulations 'establish a framework for the protection of the public through emergency preparedness for radiation accidents with the potential to affect members of the public, from premises ...' (REPPIR 2001 Guidance). Central to this obligation is the requirement under regulation 9 for the local authority, within whose area the site exists, to prepare an 'Off-Site' emergency plan to protect the public living within a specified area around the site, known as the 'Detailed Emergency Planning Zone' (DEPZ). In this case, the council is West Berkshire Council (WBC) and the DEPZ is 3km for AWE.

SC1.6. The AWE Emergency Off-Site Plan (AWE EOSP), as required under REPPIR, is regularly tested, reviewed and is currently endorsed as 'fit for purpose' by all stakeholders including the HSE Nuclear Installations Inspectorate (NII), both as part of the 'Emergency Planning Group' that prepares the plan and as 'assessor / umpire' for demonstration exercises required by the HSE / NII (Regulator).

SC1.7. The HSE 'advise against' cites siting policy which suggests that the existing population profile already exceeds accepted guidance on population density (demographic

margins) and the new development will further aggravate that situation which is described by the HSE as 'bad' and therefore, in their view make the community less safe.

SC2 APPROACH

SC2.1. An examination of the legislative framework, policy and associated guidance and conditions leads me to consider the HSE position and objections, as they extend to potential deficiencies in the emergency management arrangements resulting from the proposed development.

SC2.2. 'Siting policy' as outlined by the HSE as applied to AWE is not accepted in so far as AWE is not a reactor site. The analysis used by the HSE on demographic margins does not apply and is therefore 'non-specific' to AWE and at best can only offer general guidance. However it is relevant in the context of emergency management to examine the rationale associated with any policy of managing risk by the imposition population limits. In particular how that is achieved in practice and then translated into an effective means of protecting the public. Although reference to the siting policy / demographic margins are discussed in the context of emergency management it is not intended in this document to challenge the calculations or risk assessment methodologies use by the HSE in arriving at the remote, semi-urban or new build figures (HSE Statement of Case [HSE SOC]) but rather to highlight areas of concern in adopting this approach in terms of offering protection to the whole community. It is not accepted that risk calculations used by the HSE, as they extend to preparing a demographic margins, are applicable as they rely on data used for nuclear reactor sites which AWE is not. My conclusions are set out below.

SC3 CONCLUSIONS

SC3.1. It is contended that any off-site emergency plan prepared under the REPIIR regulations will have a capacity to offer a flexible and scalable emergency response (managed dynamically by the police at the Strategic Co-ordination Centre) to cater for significant fluctuations in population density, as would be expected in any community subject to a DEPZ. In this case the minimal increase resulting from the proposed development creates no difficulty in that respect. The HSE assertion that an additional 268 head of population represents a '*substantial new population*' (HSE SOC Para 5g) fails, where in reality it is in the region of 2% of the DEPZ population.

SC3.2. The HSE assert in their statement of case that one safety control measure is achieved by...'*the limitation of off-site population near the site.*' It will be argued that this position is untenable in so far as every DEPZ will have a transient population with varying density at all times. In addition, the assertion that a 'Low Population Zone' (HSE SOC Para 4) acts as a 'buffer' as a key element of defence in depth falls on the same argument, in that the application of such criteria are not relevant to AWE. Indeed, it is argued that the existing site boundary fence forms the 'limit' beyond which effective and realistic management of population movement is impractical to control without severe imposition or restriction on public movement and serious long term impact on the

community. The main threat is to a transient population and those out of doors at the time of the emergency, not those who are protected by buildings.

SC3.3. The imposition of demographic margins as risk control measures, such as the HSE siting policy propose may prevent the community developing as a community, growing in infrastructure, and thriving economically.. Community reassurance and confidence are important to effective emergency planning arrangements which can be compromised if the community is alarmed and not reassured. It is important that any siting policy is specific to a given location based upon the known hazards and used as means to offer guidance and advice across a whole spectrum of emergency planning options to create a 'best fit' for the site in question. Anything less undermines the very ethos of good emergency management. A new and appropriate siting policy that integrates the relevant specific technical analysis of risk and the cultural, social and individual response structures is needed, not a siting policy that is non-specific, excludes public input needed to inform the wider issues to be considered in emergency response.

SC3.4. Siting policy is not proven as an effective means of reducing exposure to radiation in the context of a site such AWE by reducing or 'capping' the residential population. In fact, this approach could be viewed as too simplistic as a means of risk reduction. Controlling or predicting the local population at any given time at any given place in the DEPZ is impossible. Residential properties will vary in occupancy throughout a 24 hour cycle, reducing and increasing, so the assumption of a fixed residential population at any given time as a measure of 'riskiness' is not viable.

SC3.5. Residences and business premises are recognised as representing the safest section of the community, as they offer effective sheltering and they can also potentially offer locations of refuge for those caught out of doors. This approach is in line with the Government Community Resilience programme of developing resilient communities. The altruistic behaviours recognised in such initiatives are well documented and supported academically. It is not suggested that more dwellings or businesses premises be allowed in a DEPZ to fulfil this option but within the current context, location and environment of the proposed development it should not be seen as a wholly negative emergency management burden. Therefore refuge options can reduce the risk exposure to the most vulnerable in the population, those caught out of doors that are unaware of the emergency (as there is no audible warning from AWE). In terms of this proposed new development, there is potential to enhance risk reduction and reduce potential radiation exposure to the population by presenting additional opportunities for the population to take refuge if safe to do so and to be offered refuge. The current AWE EOSP has no arrangements for managing those caught out of doors, who would in effect be left to their own devices during the initial stages of an off-site emergency; this alternative approach creates a further option to safeguard the local population within that short critical timeframe following a radiation release. This should be welcomed as a means of developing emergency response, not hindering it.

SC3.6. In the event of a declared nuclear emergency AWE describe 'the *likelihood that such a scenario could endanger the public outside a site is considered to be low*' (1.8.2 AWE EOSP 2009). The initial countermeasures advice to the public is to stay or go indoors and listen to media broadcasts for further information. This is deemed in the AWE EOSP as the most effective means of protecting the public, which states, '3.6.3 *Even the*

most serious incident that can be envisaged at either AWE sites should not require the urgent evacuation of areas outside the site fence' (AWE EOSP.p34.para 3.6.3.b. 2009). They go on to say 'There will be no need for urgent evacuation (REPPiR – p3 What to do 2010). The printed off-site advice to the public produced by AWE and WBC states ...'staying indoors with the doors and windows closed would remove almost all the risk [from radiation]' (REPPiR –'What to do' 2010). The public would also be involved in the AWE 'opt-out' telephone warning scheme to alert them immediately of an emergency (AWE EOSP 3.2.3c.2009). In addition, they would also be in receipt of the AWE / WBC emergency printed information leaflet (REPPiR –' What to do' 2010). Therefore those within the new development would be protected no matter what position they occupied in the DEPZ. .

SC3.7. It is not accepted that the increased numbers of people resulting from the proposed development would compromise the existing off-site emergency plan or emergency arrangements contained within it in any way and therefore put in jeopardy public safety of those within the new development or those who currently reside or work in that area. The existing plan, endorsed by the HSE / NII and the police, forms a robust and effective means of protection for the resident population within any part of the DEPZ. The risk as articulated by the HSE in statement of case, within the context of existing emergency plans is overstated, which is evidenced by current policy and procedure.

SC3.8. It is my opinion that the proposed development presents no additional risk to the existing or proposed new population or the effectiveness of the existing AWE EOSP. Nor indeed does it add any increased burden on the emergency services in responding to an off-site nuclear emergency at AWE.

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Brian Dillon will say:

1. Introduction

1.1 My name is Brian Dillon. I have a Masters Degree in Risk, Crisis and Disaster Management from the University of Leicester and continue as an external marker for Leicester University MSc programme in Risk Crisis and Disaster Management. I have a police background with 30 years as a police officer in operational response and planning. Latterly I was as a police emergency planning manager for the last 10 years of that service. I am a published author of the 'Emergency Planning Officers' Handbook' published by Oxford University Press and I am a contributing author to 'Blackstone's Operational Police Handbook' covering Civil Contingencies (Emergency Response). I am an editorial advisor to Oxford University press on Civil Contingencies. As an emergency planning manager, I produced emergency plans for the police and taken part in planning for Off-Site Nuclear emergencies for two major nuclear sites for over 10 years, both reactor and non reactor sites. I have managed, directed and continue to assess level 2 and 3 nuclear exercises across the UK.

I was the chair and founder of the National Police Nuclear Forum and reported on nuclear issues to the Association of Chief Police Officers (ACPO) National Emergency Procedures Committee. I am an associate lecturer at the Emergency Planning College Easingwold with the lead on civil nuclear emergencies. As Nuclear lead, I represent the Cabinet Office Emergency Planning College on the Nuclear Emergency Planning Liaison Group (NEPLG) within the Department of Emergency and Climate Change (DECC). During 2006/07 I assisted and contributed in the Association of Chief Police Officers' review of their Command and Control arrangements including the operation of Strategic Co-ordination Centres which were published in 2008. I was also responsible for preparing the National Strategic Co-ordination Centre guides on behalf of DECC for managing civil nuclear emergencies. I was the strategic co-ordination centre (SCC) manager for Lancashire Constabulary from 1997 to 2007 and advisor to Gold Commanders on civil nuclear emergencies as part of my role.

1.2 The evidence which I have prepared and produce for this inquiry in this proof of evidence is true and I confirm that the opinions expressed are my true and professional opinions.

2. OVERVIEW OF LEGISLATION. POLICY AND PROCEDURE

2.1. The legislative framework as it extends to public safety around nuclear sites focuses upon the Radiation (Emergency Preparedness and Public Information) Regulations 2001 (REPPiR) (made under the Health and Safety at Work Act 1974, except regulation 17 (see below), which is made under the European Communities Act 1972) that implement the articles on intervention in cases of radiation (radiological) emergency in Council Directive 96/29/ Euratom in Great Britain. The Directive lays down the basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation (the BSS96 Directive).

2.2 REPPIR does not replace the existing nuclear site licence conditions required under the Nuclear Installations Act 1965, but for operators, such as AWE, compliance with these conditions should satisfy the equivalent provisions in REPPIR. All operators need arrangements in place to demonstrate their compliance with REPPIR to the HSE who is the regulator.

2.3 **Regulation 9** of REPPIR specifies the requirement for an off-site emergency plan:

9. - (1) The local authority in whose area there is situated premises at which there is carried out work with ionising radiation to which these Regulations apply and in respect of which an assessment made by the operator pursuant to regulation 4(1) or regulation 5 shows that it is reasonably foreseeable that a radiation emergency might arise (having regard to the steps taken by the operator under regulation 4(2)) shall prepare an adequate emergency plan (in these Regulations referred to as an "off-site emergency plan") designed to secure, so far as is reasonably practicable, the restriction of exposure to ionising radiation and the health and safety of persons who may be affected by such reasonably foreseeable emergencies as are identified in that assessment and the plan shall be prepared in respect of such area as in the opinion of the Executive any member of the public is likely to be affected by such radiation emergencies.

2.4 In simple terms the Local Authority have to prepare an off-site plan to protect the public and the operator must supply information to them to achieve that. It should be noted that the term 'reasonably foreseeable emergencies' is used to describe what is being planned for. In that respect the planned responses will be commensurate with that planning assumption. In other words the responses whilst being effective should also be proportionate and appropriate as set against the risk.

2.4. **Regulation 10** of REPPIR requires plans created under regulations 9 (above) of REPPIR to be tested at suitable intervals not exceeding 3 years, to:

- a) review and where necessary revise and;
- b) test the plan and take reasonable steps to arrange for the emergency services to participate in the test to such extent as is necessary,

and any such review shall take into account changes occurring in the work with ionising radiation to which the plan relates and within the emergency services concerned, new technical knowledge and knowledge concerning the response to radiation emergencies and any material change to the assessment on which the plan was based since it was last reviewed or revised.

2.5. In this respect any material fact that could affect the plan must be disclosed by any contributor to the plan, including the regulator, so that the plan can be amended.

2.6. Nuclear exercises are divided into three main areas;

Level 1 – testing on-site arrangements only with external support on-site

Level 2 – testing off-site arrangements, principally the SCC, decision-making and communication

Level 3 – testing off-site arrangements with support from central Government.

(NEPLG Ch.5 2009)

2.7. During this review process or following an exercise if issues arise that impact upon the operational effectiveness of the plan they must be incorporated as soon as possible and not wait for the next scheduled exercise.

2.8. **Regulation 16** places a duty on operators (AWE) to:

a) ensure that members of the public who are in the area in which, in the opinion of the Executive (HSE/NII), they are likely to be affected by a radiation emergency arising from the undertaking of that operator or carrier, as the case may be, are supplied, in an appropriate manner, without their having to request it, with at least the information specified in Schedule 9 and

b) make the information publically available.

2.9. This requirement requires the operator to keep up to date lists of all those living in the 3km AWE DEPZ and any business premises. This list must be current and through the Local Authority ensuring that new properties or businesses are included on that list. This information must be freely made available.

2.10. **Regulation 17** of REPPiR, which places a duty on a local authority to supply information to the public in the event of a radiation emergency is made under the European Communities Act 1972 and is applicable to ALL local authorities, irrespective of the rest of REPPiR. In effect, all local authorities have a duty to inform the public of any radiation emergency notwithstanding that they may not have a licensed site or nuclear operation within their areas. In effect, the duty rests with the local authority to ensure (to arrange) that following a nuclear emergency the affected population are promptly informed (or warned) and provided with information as to what they should do to protect themselves.

2.11. This regulation is vital to the effective protection of the public. There is a direct relationship between the speed of the alert and the time that members of the public can take action. Robust arrangements must be in place to alert not only DEPZ residents and those within buildings (which provide the best protection) but people out of doors and transient populations which could account for more people than residents.

EMERGENCY CO-ORDINATION

2.12. In the event of a nuclear emergency the police are responsible for the co-ordination of the emergency response (NEPLG Ch 4 Para 4.26.3. 2010). This is endorsed by the Civil Contingencies Act 2004 Guidance 'Emergency Response and Recovery' 2009. A police Gold Commander is charged with facilitating inter agency co-ordination.

2.13. The police will implement command and control arrangements to facilitate multi-agency working, principally at a Strategic Co-ordination Centre (SCC) (NPIA Command and Control 2009), usually sited at police Headquarters, in support of tactical and operational response functions. Many national response agencies will attend this location to contribute to the management of the incident.

2.14. Specific advice and guidance for managing a civil nuclear emergency at the SCC is contained in the NEPLG Consolidated Guidance. NEPLG is a multi-agency forum sitting within the Department of Energy and Climate Change (DECC). The NEPLG is a national forum which brings together organisations with interests in off-site planning for an emergency at a civil nuclear licensed site. NEPLG guidance, although not mandatory represents the areas of best practice and experience gained from exercises. REPIR guidance endorses the NEPLG as source of advice and information in preparing plans required by the regulations.

2.15. The SCC is the focal point of decision making through the Strategic Co-ordinating Group (SCG) (which is chaired by the police Gold Commander)(NPIA Command and Control 2009). Its systems, procedures and structures are flexible and scalable to ensure that effective dynamic incident management is achieved by the appropriate acquisition, management and deployment of resources. The SCC and SCG is a tried and tested structure across the UK that is capable of responding to incidents and consequences from small scale to catastrophic.

2.16. Well established mutual aid arrangements exist across all emergency services to access the necessary resources, both personnel and equipment, as required to manage a civil nuclear emergency.

2.17. Within the SCC a Scientific and Technical Advice Cell (STAC) will be established to consider the health implications during the incident and will advise on appropriate actions to take to protect the public by advising the SCG (NEPLG Ch.11 2009).

2.18. Initial countermeasures will direct first response activity to protect the public as the SCC will not be available for up to 2 hours post event declaration. The SCC, as configured for a nuclear response requires many national agencies to attend. The expectation is that

the SCC could take from 2 – 6 hours to be fully operational, hence the need to have early countermeasures (Dillon. B. 2009).

2.19. The SCG will, when operating, advise on matters of public protection, lifting or relaxing initial countermeasures or consideration of any evacuation.

PLANNING SUPPORT

2.20. To ensure effective planning occurs around and within licensed nuclear sites an Emergency Planning Group (EPG – names could vary from site to site) meets usually twice a year consisting of all stakeholders who contribute to the plan, including the regulator. They exchange information, ensure compliance with the regulations and notify each other of any material change that may affect the plan – this is required by regulation. This is also a licence condition under the Nuclear Installations Act 1965 (LC. 13), which requires a 'Nuclear Safety Committee to meet.

2.21. In support of the EPG, a Local Liaison Committee (LLC) will also sit to promote reassurance and confidence to the public by keeping them informed of issues that directly affect them such as changes in plans and to listen to any concerns or issues that can be addressed, such as public information. (Note that names of these groups can change from area to area but the functions remain the same.)

3. APPLICATION OF LEGISLATION, POLICY AND PROCEDURE TO AWE

(Information in this section includes extracts from the AWE EOSP 2009 – specific references will be cited where required)

3.1. In accordance with REPIR regulation 9 the local authority, West Berkshire Council, together with Hampshire County Council, Basingstoke and Deane Borough Council and Wokingham Borough Council has prepared an off-site plan for AWE. This will be abbreviated to AWE EOSP for reference purposes. This plan was published in July 2009 and is made available to the public in a revised version to exclude sensitive information.

3.2. The AWE EOSP sets out the contingency arrangements for a multi-agency response should a "Radiation Emergency" (in this case a release of radioactive material) at the AWE Aldermaston or Burghfield sites pose a hazard to the public outside the site boundary. The contents comply with REPIR guidance in Schedule 7. The AWE EOSP is a compilation of emergency response commitments for all responding agencies designated within the plan that make up the AWE Off Site Planning Group chaired by West Berkshire Council. Reference is also made to many generic emergency planning arrangements held by all stakeholders that would be brought to bear if required in support of an incident at AWE, such as Rest Centre Plans, Media Plans, Evacuation Plans, for example.

3.3. The primary aim of the AWE EOSP is to detail the emergency interactions, communications and counter measures to facilitate protection of the public and/or

environment following an event involving an on-site accident resulting in the release of radioactive materials from the AWE at Aldermaston or the AWE at Burghfield.

3.4. Serious failures in plant operation or process conditions and/or physical damage to a research or production facility, might conceivably lead to a release of radioactive material that could present a local problem within the sites. *'The likelihood that such a scenario could endanger the public outside a site is considered to be low'* (1.8.2 AWE EOSP 2009).

3.5. This AWE EOSP was prepared by the Off Site Plan Working Group, chaired by West Berkshire Council and consisted of Emergency Planning Officers and professionals drawn from the following organisations whom are also copy holders of the Plan:

AWE Plc;

Basingstoke and Deane Borough Council;

Department of the Environment Food and Rural Affairs;

Environment Agency;

Food Standards Agency;

Government Office for the South East;

Government Decontamination Service;

Hampshire County Council;

Hampshire Police;

Health Protection Agency;

Health Protection Agency Radiological Protection Division;

HSE Nuclear Installations Inspectorate;

Met Office;

Ministry of Defence;

Primary Care Trusts - Berkshire, Hampshire & Oxfordshire;

Reading Borough Council;

Royal Berkshire Fire and Rescue Service;

Royal Berkshire HEOSPital;

South Central Ambulance Service;

Thames Valley Police;

Thames Water;

West Berkshire Council; and

Wokingham Borough Council

3.6. There are also descriptions in the plan regarding the interactions and links that would occur with the civil authorities and the many organisations that would be involved in ensuring the safety and welfare of the public living near the establishment within the counties of Berkshire and Hampshire.

3.7. It is the individual responsibility of the participating organisations to prepare, revise and test the operational procedures described in the document (AWE EOSP) to discharge their responsibilities under these arrangements. That includes declaring any material fact which could affect the plan.

3.8. The co-ordination of the response to an offsite emergency Aldermaston would be the responsibility of Thames Valley Police in the first instance during the emergency phase (where public safety is at risk) .

3.9. The main centres of populations within the DEPZ are defined in the AWE EOSP as follows (2.3.4.AWE EOSP 2009). (Appendix A, Sector map):

Main Centres of Population within 3km DEPZ.

Aldermaston	927	Tadley	11,651 (North and South Wards)
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From the submission in support of Radiation (Emergency Preparedness and Public Information Regulations) REPIR 2001 the immediate villages have populations estimated from the 2001 Census as:

Aldermaston	up to 1,000	Tadley (plus absorbed villages)	up to 15,000
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3.10. It should be noted that fixed population centres are documented but there will be a transient population also. The plans are designed for both resident and transient (workers) within the DEPZ.

3.11. REPIR requires nuclear operators to make and implement arrangements to ensure that members of the public are properly informed and prepared for an emergency in advance (Regulation 16 – Operator’s responsibility), about what to do in the unlikely event of a radiation emergency occurring. This duty, which rests with the operator, is jointly managed with West Berkshire Council. They have produced an Information booklet called ‘*REPIR What to do in the event of an emergency at AWE*’. This was published in May 2010 and should be distributed to all those residents and businesses within the DEPZ against a database held by the operator, AWE.

3.12. REPIR requires the local authority to inform the affected population promptly within the DEPZ (under Regulation 17) following a nuclear emergency. In practice, this is achieved by local agreement within the Emergency Planning Group (responsible for preparing the AWE EOSP). This takes the form of a combination of activities which include telephone warnings, internet broadcast to residents and media broadcasts by radio and television. It should be noted that the police will not enter an affected area to carry out public warnings unless safe to do so following a dynamic risk assessment. The current Association of Chief Police Officers (ACPO) policy as outlined to the Nuclear Emergency Planning Liaison Group (NEPLG) within the Department of Energy and Climate Change (DECC) remains as:

“the police service should not seek to deploy police officers into a situation where they are likely to receive increased levels of radiation unless and until a dynamic risk assessment has been undertaken at the time using the best available advice and this

deployment must be done with the full agreement of the officer who has had all the risks explained to him/her”.

(McAllister, A. ACPO 2006)

3.13. The decision to deploy emergency response personal into a radiologically contaminated environment would be a decision taken at the SCG in extremis and then only with the full support and informed consent from those undertaking the action, taking into account all the attendant issues surrounding the Health and Safety at Work Act for each individual concerned. For example, in terms of training, protection and gender weighed against the task to be to be achieved. These situations would centre on life saving circumstances. Regulation 14 of REPPIR outlines the conditions under which emergency responders may be asked to receive a radiation dose and specifies that only appropriately trained and equipped employees who have agreed to undergo exposure may be placed at risk of receiving exposure to radiation. The police service do not routinely train and equip their staff for such civil nuclear emergencies. Although it should be noted that specialist police officers are trained and equipped for responding terrorist radiological incidents (CBRN) but their deployment and use in civil nuclear incidents is not police policy. It is not anticipated that evacuation during an active release of radiation will occur as emergency advice states, ‘There will be no need for urgent evacuation. In the highly unlikely event that you (resident) are told to leave the area...’ (RIPPER – p3 ‘What to do’ 2010)

3.14. Activity within a contaminated area may create further risk by the re-suspension of radioactive particulates and expose unprotected members of the public to greater risk of contamination. A strategic objective contained within the AWE EOSP states;

‘To stabilise the incident and stop any release of radioactive material (for example sealing breaches [release pathways] in the facility through which a release might occur and subsequently by immobilising or ‘tying down’ deposited material.’ (AWE EOSP P.15. 1.8 para 1.9.2b. 2009)

In effect, the aim is to avoid any unnecessary activity to disturb settled radioactive deposits. This being a major consideration during an ‘active’ plume situation, prior to detailed ground monitoring, before any intervention or evacuations are considered in an affected area.

3.15. In terms of exposure, a radiation emergency is defined as an event which is likely to result in a member of the public receiving a committed effective dose of 5mSv during the year immediately following the event. The average exposure for a member of the public in the UK is 2.5mSv.

3.16. It is noted within the plan that the most likely off-site consequences could be a release in the form of a visible smoke plume. *‘A major fire might disperse radioactive material in particulate form into the atmosphere’ (REPPIR – What to do..2010)*, unlike a reactor incident where the plume may be invisible.

3.17. AWE activate a telephone warning system to all those within the affected areas of the DEPZ in the event of the declaration of an off-site incident. If the call is picked up a message will be given to the resident or business. (AWE EOSP Ref 3.2.4). Note that the

AWE telephone alerting system is run as an 'opt-out' basis only; only those individuals or organisations that specifically request that their details are removed from the system are excluded from the system database. In other words – everyone is included unless they specifically ask to be removed from the system.

3.18. There are no arrangements for warning the public in the open air beyond the site boundary within the plan in the event of an off-site release. There are no audible warning mechanisms for the public near the site. The public are advised to ignore any warning alarm signals emanating from the site (RIPPER p2 'What to do' 2010). In effect those out of doors will be unaware of an event and to take cover.

3.19. The AWE EOSP is recognised as flexible and scalable plan in terms of its ability to accommodate the 'extendibility' scenario, a scenario in which the incident impacts the community beyond the design base accident DEPZ which is reasonably foreseeable, (Ref. 5.7.1 AWE EOSP). The plan also recognised the issues around spontaneous evacuation and evacuation by those outside the DEPZ as being capable of being managed by the AWE EOSP (Ref 5.7.4 AWE EOSP).

3.20. The AWE EOSP was last tested 16 November 2007. The next test, which is a level 2 is due on 10 November 2010, code named Aldex 10. The plan has been regularly exercised since 1998. (AWE EOSP 1.2 .2009)

3.21. The current AWE EOSP 2009 carries the full endorsement of all participating organisations (Ref 3.5 above) as a plan that is fit for purpose and capable to a flexible response that complies with all aspects of the REPPIR regulations.

4. ANALYSIS

4.1. This final section assesses the effect of the proposed development on the emergency planning measures in place around the Aldermaston Atomic Weapons Establishment (AWE) and the effects associated with the location of the development within the DEPZ. In particular it considers the potential effects of an increase in the local population within the DEPZ due to the proposed development and the potential effects on the new population in the event of an incident at AWE Aldermaston taking into consideration the issues raised by the HSE in their statement of case.

4.2. 'Siting policy' as outlined by the HSE as applied to AWE is not accepted in so far as AWE is not a reactor site. The analysis used by the HSE on demographic margins does not apply and is therefore 'non-specific' to AWE and at best can only offer guidance. However it is relevant in the context of emergency management to examine the rationale associated with any policy of managing risk by the imposition of population limits. In particular how that is achieved in practice and then translated into an effective means of protecting the public. The discussion presented within this section examines the rationale of siting policy on risk reduction in this context and compares and contrasts the AWE EOSP with current best practice, introduces the proposed development into that structure and then demonstrates that there will be no adverse effects arising from the development

in the DEPZ or on the AWE EOSP. It is not intended here to challenge the basis for the current HSE risk assessment methodologies in terms of numerical values in determining population density or demographic margins. That will be presented in evidence.

4.3. The simple questions are:

1. As a primary determinant in risk reduction is siting policy a viable and justifiable means?
2. Will the proposed additional increase in population compromise the AWE EOSP 2009 and thus create a less safe situation for that new population and/or those currently living there in the event of a nuclear incident?

MANAGING POPULATION DENSITY

4.4. In February 1999 a new land use planning distance was put in place at AWE to refer planning proposals to the HSE for advice. This distance was 3km, co-terminus with the DEPZ. This was further amended in 2007 to add two further distances of 5km and 8km, the three zones now being designated as inner, middle and outer 'Safe Guarding Zones' (HSE SOC 2010). The HSE advice on building proposals would be based upon a 'siting policy' that would restrict the population on the DEPZ.

4.5. The 'siting policy', of the HSE used to define 'Low Population Zones' is described by them as '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' (HSE SOC Justification to 'Advise Against' document 2010). This requires further scrutiny on three levels. The first being the nature and effectiveness of the low populations zones in risk control, the potential positive impact of additional properties on emergency management in the area and the societal impact on a community of a siting policy which restricts numbers of population.

4.6. The risk of a nuclear release, although very unlikely, remains the same no matter how large the population is in the DEPZ. The issue is how to keep those exposures and those being exposed to a minimum. One solution, as alluded to by the HSE, is to keep the population within limits so reducing the numbers of people that can be exposed. Using this approach the fewer the people in the DEPZ the less effect a radiation emergency will have. In that case, it would seem logical to ensure that there was no population in the DEPZ at all and therefore the effect of a radiation emergency would be zero. It is difficult with a siting policy or using demographic margins to measure 'safe'. It is therefore assumed that there is a point at which the risk posed by AWE to the community is assessed as 'tolerable' as long as the demographic margins are in place and not exceeded. That then assumes that at any given time the demographic (only in terms of numbers – not make up, which is more relevant to exposure effects) is static and within the set limits. This assumption is not possible and renders the demographic margins approach unreliable and misleading for emergency planning purposes.

4.7. A siting policy does not take into account crowd dynamics in terms of spread and movement. Simply reducing a static population will not necessarily reduce actual numbers in an area. The HSE assert in their statement of case that one safety control measure is

by... *'the limitation of off-site population near the site.'* It will be argued that this position is unsupported in so far as every DEPZ will have a vibrant transient population with varying density at all times. This is based upon the day of the week, time of day, local holidays, local events and weather conditions. Controlling or predicting the local population at any given time at any given place in the DEPZ in terms of numbers, age and gender profile (younger people and pregnant women who are more vulnerable to radiation exposure), the aged, the disabled and vulnerable is impractical. Residential properties will vary in occupancy throughout a 24 hour cycle, reducing and increasing, so the assumption of a fixed residential population at any given time as a measure of 'riskiness' is not viable. Coupled with a combination of large retail outlets (supermarkets, some 24 hour), leisure and entertainment (pubs and clubs), businesses, schools / colleges, shops, events and traffic movements, with the associated variability and unpredictability, renders siting policy as untenable as a primary 'impact' reducing strategy.

4.8. There are more complex issues that affect population density and perhaps more importantly attitude of people living with risk that go to make up a resilient community that is risk aware, reassured and confident, who are more likely to respond effectively following an emergency. In this way exposures and those exposed will be kept to a minimum, not by applying simple head counts in a sector. In addition, the difficulty in applying an ambiguous non specific siting policy is being able to justify to a community that currently live, work and move about close to the site they are not safe because the HSE object to a new development near to them. The 'tolerability' of the risk in that case is undermined and shifted.

4.9. Without physical headcounts, exclusion zones and 'border' controls this expectation of a static population controlled by siting policy is impractical. In addition, the assertion that a 'Low Population Zone' as a key element of defence in depth falls on the same argument. Indeed, it is argued that the existing site boundary fence forms the 'limit' beyond which the effective and realistic management of population movement is impractical to control effectively without severe imposition or restriction on public movement .

4.10 The main threat is to a transient population without access to refuge and those out of doors at the time of the emergency, not those who are protected by buildings who can be informed by telephone of an emergency, who would be exposed to almost no risk.(REPPiR p5 'What to do' 2010).

4.11. Siting policy actually seeks to reduce residential and commercial property in the area but this policy fails to recognise the potential emergency benefits of having additional properties in the DEPZ. It not only fails to take account of the complexity of crowd movements and dynamics, perhaps more importantly it fails to take account of the behaviours of those affected including altruistic behaviours, which are well documented.

Following disasters such as Hillsborough Football Stadium, Bradford Fire, World Trade Centre Attacks, Kings Cross underground fire, Ladbrooke Grove rail disaster, 7/7 bombings during which those affected took pro-active steps to help and support fellow citizens. This concept may seem unrealistic but in many emergency situations, crowd behaviours remain fairly organised and structured (Chertkoff & Kushigian, 1999), whilst members of the crowd exhibit helping behaviours, alongside collective concern and cooperation (Johnson, 1987). In other words, panic and the selfish or antisocial behaviours typically associated with it is very rare (Muir, Bottomley & Marrison, 1996;

Galea & Gwynne, 2000; Sorensen, 2000; Glass, 2001; Quarantelli, 2001; Mawson, 2005; Wessely, 2005); it is a misconception (Fischer, 1998, 2002). This helps explain the collective behaviours i.e., coordination, cooperation, helping behaviours and personal sacrifices frequently observed amongst unfamiliar crowd members during an emergency (Johnson & Feinberg, 1997; Raphael, 2005; Drury & Cocking, 2007; Cocking & Drury, 2008; Cocking et al., in press; Drury et al., in press)'.

(Drury et al in Cabinet Office – Theory of Crowd behaviour in Emergencies Understand Crowd Behaviours. 2009).

4.12 In March 2010 the Cabinet Office Civil Contingencies Secretariat (CCS) launched an extensive consultation programme to develop and enhance community resilience. That consultation is now closed but it is clear from the content where effective emergency management is being developed.

“Emergencies happen. Our emergency services will always have to prioritise those in greatest need during an emergency especially where life is in danger. There will be times when you maybe affected by an emergency but your life is not in immediate danger. During this time, individuals and communities may need to rely on their own resources to ensure they are able to cope with the consequences of the emergency. Many communities already spontaneously help each other in times of need but previous experience has shown that those who have spent time planning and preparing for this are better able to cope, and recover more quickly from national and local emergencies”.

(HM Government – ‘Preparing for Emergencies – What you need to know’ Draft consultation document. 2010)

4.13 The thrust of this initiative is to build more resilient communities and engaging with them to help themselves, in particular, where the emergency services may be engaged elsewhere on priority tasks or are unable to assist immediately due to demand or safety constraints. In this case where a radioactive plume from AWE prevents emergency responder interventions. The public protection model in the UK is clearly changing in favour of a more holistic and multi-faceted approach. The process is a shared responsibility with an informed public making better decisions in crisis. Developing such initiatives not only complies with Government policy but creates a more effective means of protecting communities.

4.14. It can be construed from this research and the Government Community Resilience programme that it is not unreasonable to expect communities to help themselves. Residences and business premises are recognised as representing the safest section of the community, as they have effective sheltering and they can potentially offer locations of refuge for those caught out of doors. It is not suggested that more dwellings or businesses premises be allowed in a DEPZ to fulfil this option. Within the current context, location and environment of the proposed development it should not be seen a wholly a negative emergency management burden. Therefore there is potential to reduce the risk of exposure to the most vulnerable in the population, those caught out of doors that are unaware of the emergency. It is academically accepted based upon empirical study of disaster that faced with ‘shared fate’ emergencies those affected ‘display co-operation and

altruistic behaviour rather than panic [which] will predominate in mass responses to emergencies, even in situations where there is a clear threat of death (Drury et al 2009).

4.15. The resident population offering potential shelter when safe to do so, warnings, advice and communication (to leave the area) to those unaware and caught in the open is a realistic expectation. Public behaviour changes in crisis and cannot be dismissed. Government advice contained within the draft new 'Preparing for Emergencies – What you need to Know' document advocates the following advice, '*Try to get to a safe place if possible – this may not be your home*'. Therefore having additional dwellings and premises in the DEPZ is not necessarily a bad thing but a positive emergency management tool.

4.16. In addition, siting policy does not take into consideration all of the other social, cultural, socioeconomic benefits that will be reduced or stripped out of a community. The imposition of such measures, will prevent the community developing as a community, growing in infrastructure, and thriving economically. In addition to driving down the 'tolerability' of the risk as presented by the AWE site with potential effects on negative community behaviours in the event of an off-site incident.

4.17. In short, a non specific ambiguous siting policy can propagate community blight (property values go down and investment is reduced), societal anxiety (a worried community results) and it creates a stigmatised environment for the area. In this context, the question must be, 'can an unproven risk strategy as a siting policy be justified in terms of the long term potential negative impacts on this community? The layperson around Aldermaston may well ask 'why are the experts refusing planning permission to build near my home – is it so dangerous to live here?'

4.18. Following the Buncefield Major Incident of 2005 a report entitled '*Recommendations On Land Use Planning And The Control Of Societal Risk Around Major Hazard Sites*' (2008) was published within which the latest thinking in land use planning was articulated by the Buncefield Major Incident Investigation Board chaired by Lord Newton. Lord Newton commented;

'A more cohesive system, greater collaboration between interested parties and more refined risk assessment tools can enable industries to provide the products we need, while maintaining the levels of safety that everyone expects in a developed society and avoiding the unnecessary blighting of development opportunities'.

(Lord Newton of Braintree - Chair of the Buncefield Major Incident Investigation Board 2008)

4.19. Lord Newton went on to say in that report that 'With land use planning...we have been conscious that it is also about balancing several disparate interests – strategic, economic, social, safety and environmental' (ibid). This societal impact is mentioned in this context, not as a political statement but to emphasise that it can significantly erode public and business confidence within the community and undermine public reassurance in the emergency arrangements and so have direct impact on public response to an emergency.

4.20. Community reassurance and confidence are important to effective emergency planning arrangements and cannot be underestimated. It is important that any siting policy is specific to a given location based upon the known hazards and used as means to offer guidance and advice across a whole spectrum of emergency planning options to create a 'best fit' for the site in question. Anything less undermines the very ethos of good emergency management. A new policy that integrates the relevant specific technical analysis of risk and the cultural, social and individual response structures is needed, not a siting policy that excludes public input needed to inform the wider issues to be considered in emergency response.

THE CURRENT SITUATION

4.21. A key element in creating effective emergency plans is to instil public confidence and reassurance in the plans (the reason d'être for AWE becoming in nuclear licensed site in 1997, SC1.2), by doing so to develop public confidence in the emergency response in the hope that the public will comply with emergency advice and instructions in the event of an emergency, in other words, to develop trust and belief between the community and the responding authorities. This is particularly important around a nuclear site.

4.22. The HSE in their statement of case state that the proposed development will if it goes ahead, *"Put, simply, a bad situation should not be allowed to become worse"* (HSE SOC 2010). This statement needs to be addressed as it has direct bearing on the current emergency arrangements and public perception of the threat and therefore consideration of the proposed development. The statement suggests that the existing situation around AWE's population profile and density already present a 'bad situation', in terms of emergency arrangements.

This being the case the effect of this statement raises two issues:

1. It presents a picture that will alarm existing residents and local populations, undermining existing and future emergency offsite plans not only at AWE and Burghfield but across the UK.
2. It appears to represent a raised 'risk profile' that requires specific emergency arrangements and a revision of the existing plan.

Issue 1 is not helpful in developing that community trust and confidence to build a resilient confident community and issue 2 requires further examination to explore how the current situation came to be described as 'bad'.

4.23. In July 2009 a revised off-site local authority plan (AWE EOSP) was published which was ratified by all stakeholders, including the HSE, as fit for purpose containing no caveats or addendums for example on upper limits for populations, recognition of near residential saturation or special warning arrangements to cater for over populated sectors. In short, the 'situation' was catered for within the requirements of the current AWE EOSP, in compliance with REPIR and presented no special risks that required additional treatments.

4.24. The current AWE EOSP was revised with the HSE site inspectors as part of the mandatory process and passed as fit for purpose for the latest version. If the plan is not fit

for purpose because of concerns regarding the over saturated population profile the HSE should have declared that, which is their duty and then review AWE on site operations to bring it into line or alter the plan. If the site operations had to be modified by the NII perhaps the current situation could have been pulled back or indeed the plan should have been amended. This means that the HSE have, or should have known about any material fact that would compromise and render the existing plan unfit, under Regulation 10 REPPIR 2001. It is contended that this was not brought to light as it did not in fact compromise the AWE EOSP or create an unsafe off-site situation.

4.25. The site has also been tested on several occasions from 1998 to 2007, under level 2 and 3 exercise arrangements and those tests confirmed that the plan is robust and fit for purpose. Extensive de-briefing is carried out which should highlight areas of concern. Indeed, each exercise is independently assessed by the Government Technical Advisor (GTA), a senior HSE / NII inspector appointed by DECC and each exercise deemed to be satisfactory demonstration of the emergency arrangements. Any such review should take into account changes occurring in the work with ionising radiation to which the plan relates and within the emergency services concerned, new technical knowledge and knowledge concerning the response to radiation emergencies and any material change to the assessment on which the plan was based since it was last reviewed or revisited. There is no evidence that shows that the concerns of the HSE were brought to the attention of the emergency planning group.

4.26. Notwithstanding the duty of the regulator to intervene to ensure the emergency arrangements were fit for purpose having considered the situation as 'bad', the local authorities have a proactive responsibility, not only under REPPIR but a duty under the Human Rights Act Article 2. Article 2 imposes a duty on the state to take positive and proactive steps to protect the life of an individual where it is being threatened. Consequently, where there is an environmental hazard that poses a risk to the life, by virtue of over saturation or any other cause to the people living nearby, the state has a duty to provide information about that hazard to enable the people to take steps to protect themselves and their families. There must be an assumption therefore that the existing plan which came into effect after the re-designation of 'safe guarding zones' accommodates those issues.

4.27. The police have the responsibility to co-ordinate the offsite emergency response (NEPLG para 4 4.26.3. 2009) which is outlined in the AWE EOSP. This is done primarily within the SCC by the Strategic Coordinating Group (SCG). The SCG is a collective of senior emergency services, experts from range of disciplines, regulators, and operators. An example is shown in Appendix B. A basic principle of effective incident management in the UK is the ability of the SCG to scale the response to meet the challenges and needs of each individual incident presented, no matter what the cause. *'Plans must be flexible'* (NEPLG Guidance Ch.3.4.8 2009). The AWE EOSP underpins these principles and hence delivers the flexibility to manage the offsite nuclear emergency no matter what emerges as a consequence, in particular in terms of numbers of people affected. As long as the co-ordination, command structures, processes and procedures as described at the SCC are in place the AWE EOSP works. As part of the function of the police SCC and SCG has an ability to remain flexible in order to react quickly and effectively to changing circumstances. *'A key part of effective command and control is the ability of the command team to adjust quickly to changing circumstances* (p 10 ACPO / NPIA Command and

Control 2009). The UK emergency planning arrangements are specifically designed to be totally scalable and flexible.

4.28. To give an example of the flexibility required in an off-site plan we consider another nuclear licensed site, Heysham twin nuclear reactor sites in Lancashire. During silent hours the DEPZ has only a small number of residents, about 349 homes 1300 residents (in 2003) plus approximately 500 residential caravans 1000 people average (in 2003) making 2300 people and a few night shift workers in the vicinity of the plant, in some cases 'right up' to the fence such as the ferry and rail port (Dillon. B. 2003). However, during certain times, in periods of summer, such as the Isle of Man TT week with heavy port activity, industrial units, golf course, nature reserve, residential caravans and touring caravans, all within the DEPZ (some up to the fence) the population can increase by a factor of 10X this is due to the anticipated high influx of people during the peak holiday and event seasons but the same plan is used as it is not dependent of numbers and remains flexible to cater for such variation.

4.29. We highlight that the Thames Valley Police support the existing AWE EOSP. The police are responsible for the overall co-ordination of the emergency response off-site to protect the public by facilitating multi-agency working at their control centres (AWE EOSP p37.para 4.0.1. 2009). They are also responsible for traffic management and co-ordinating any proposed evacuation, in the unlikely event that it should be deemed appropriate, following discussion at the multi-agency Strategic Co-ordination Centre (SCC). It should be noted that the police fully support the existing AWE EOSP.

IMPACT ON THE PLAN BY THE DEVELOPMENT

4.30. As an automatic countermeasure the local population would be advised to stay indoors and not travel in the event of an incident at AWE. However, it should be noted that there is no specific reference to numbers of people in the AWE EOSP as a determinant as to the effectiveness of a plan. References to numbers and vulnerable locations are there to assist in dynamic and accurate decision making and resource allocation. These plans outline procedures, management structures, roles and responsibilities and processes activated by pre-determined triggers. It does not follow that more people in the DEPZ will compromise the emergency management arrangements contained within the plan – the plan still works. The issue of scalability and flexibility relates to resource acquisition and deployment against tried and tested mutual aid arrangements by all the emergency services and local authorities.. Therefore an additional increase in population of only 268 will not compromise the emergency off-site planning arrangements. Indeed, it is argued that this level of fluctuation and more would be seen every day as the transient population in the DEPZ comes and goes about their business.

4.31. In broad terms, the proposed development will increase the population within the DEPZ by some 268 people. This is an increase of circa 2%. Evidence will be presented that shows that the effect of the proposed development will be to increase traffic flows on the local road network in the vicinity of the site also by approximately 2%. This change is of the same order as the change in population and, therefore, the emergency plan's robustness, designed to cater for wide variations in the population, will similarly be able to cater for such small variations in traffic conditions. The traffic arising from the proposed

development will have a limited effect on access to the AWE in the event of an incident, as the AWE has its own on-site fire service and emergency arrangements on site to contain and resolve any potential emergency from their activities.

4.32. Under the AWE EOSP the Thames Valley Police would be responsible for instigating traffic management controls in the local area (AWE EOSP annex B. 6d. 2009). The controls (road blocks) would prevent members of the public entering the DEPZ and assist those leaving the area. These traffic management arrangements would therefore give the emergency services ordered control of traffic movements into and out of the area, such that the circa 2% change in population arising from development of the Boundary Hall Site would not be a material factor.

EVACUATION ISSUES

4.33. Evacuation is NOT an automatic countermeasure and it is not envisaged that evacuation would be feasible or desirable in the initial stages of a nuclear release at AWE. Indeed, evacuation of large numbers of people during an 'active' plume would necessarily expose members of the public to additional radiation, in particular young and vulnerable citizens. The overwhelming advice to the public is to stay indoors. Taking shelter would offer the best protection.

"Sheltering" is normally the most effective countermeasure that can be adopted while the release is actually taking place and in its immediate aftermath. Sheltering in its simplest sense involves going inside (or remaining inside) one's home, workplace etc and closing windows and doors.'

(AWE EOSP p46. Para5.2.1. 2009)

'There will be no need for urgent evacuation, in the highly unlikely event that you are told to leave the area you will be sent to a Reception/Rest Centre...'

('REPPIR – p3. What to do in the event of an emergency at AWE' – May 2010. West Berkshire

'In most cases following a release of a radiological material the best advice is to shelter indoors, with the doors and windows closed until notified that the treat has passed or the call comes for evacuation. If an evacuation is decided upon, it needs to be conducted in a controlled, systematic way in order to minimise potential exposure'.

(HM Government Evacuation and Sheltering 2006).

4.34. It must be borne in mind that *'the police have no statutory power to enforce a request or order for people to leave a designated area'*. (ACPO / NPIA Guidance on Emergency Procedures 2009). Therefore calling an evacuation may not secure total removal of the public and may impact upon those who are not only unwilling to leave their homes but those who cannot due to illness or disability.

4.35. There will be no need for the urgent evacuation of areas outside of the site (REPIIR p3 'What to do' 2010) and unnecessary movement in the open may pose a greater risk to members of the public due to the risk of re-suspending any hazard, therefore, *'the public would normally be encouraged to remain inside.'*(AWE EOSP.p48.para 5.4.2.b.i. 2009). Those evacuated during an active plume and/or into deposits of radioactive material on the ground will need decontamination and potentially long term health monitoring. Moving around in a contaminated area would be an action of last resort in order to save life. This also includes any responders engaged in assisting in this activity.

4.36. In terms of the question of the Boundary Hall site population requiring additional emergency responder support in the event of evacuation. This is not the case. The AWE EOSP confirms that evacuation from the DEPZ area is *'unlikely even in the worse case scenario'*. Advice to the public goes on to tell the public;

'There would be no immediate health effects caused by a release of radioactive material on the public following a serious incident at AWE. Staying indoors with the doors and windows closed would remove almost all the risk.'

(REPIIR - What to do in the event of an emergency. May 2010).

4.37. It is not anticipated that there would be a planned deployment of any emergency responders into an affected sector of a DEPZ, including the proposed new development, to implement any part of the AWE EOSP, including evacuation. Indeed the overwhelming advice for the public is to stay indoors. Only in extremis would consideration be given to deployment of an emergency responder into an affected DEPZ, then and only then in a life saving situation. This would be following a full risk assessment with volunteer emergency personnel that are trained and equipped correctly to carry out such tasks safely. The police are not routinely trained or equipped to respond into radiological situations in any part of a DEPZ. The decision to deploy into a radiological environment would be taken at the SCG with advice from the STAC. Specialist police officers trained to manage terrorist nuclear incidents are not deployable for civil nuclear emergencies. The Boundary Hall site presents no additional issues for the emergency services emergency response as they stand today.

4.38. Any evacuation is normally considered prior to any exposure risk or following the event and the situation is stable. Following the initial countermeasures subsequent evacuation of the public in some areas outside the incident site boundary may be necessary. This will depend on the results of ground monitoring, which could take between 4 – 6 hours (AWE EOSP p46 para 5.1.4. 2009) and the evacuation will be carried out to reduce contact with deposited material and to facilitate decontamination and restoration. This subsequent evacuation may also be necessary earlier than intended if people take cover in buildings such as factories, offices and other work places. These sheltering areas may not be suitable in terms of providing support for the people there for any length of time due to lack of facilities, food and bedding. This will need to be considered at an early stage depending on the zones affected.

4.39. The proposed new properties offer effective protection if instructions are followed under the distributed REPPIR instructions.

WIDER EVACUATION

4.40. Extendibility is a situation in which the release of radiation from the site exceeds that anticipated by the design based accident scenario and consequences. Extendibility requires special consideration in terms of managing those affected who are outside the DEPZ. Extendibility will not affect those living in or around the proposed development.

4.41 The AWE EOSP quite rightly alludes to population in general and vulnerable people and sites, primarily for the 'extendibility' scenario but it must be borne in mind that these factors are not determinants in terms of the plans effectiveness. They are there to assist in the assessment of and deployment of resources if necessary as those areas potentially become threatened by the hazards. A more important factor in this case is that the new residents will be indoors or have refuge where sheltering is seen as a highly efficient protection factor as endorsed by the AWE, '*Staying indoors with the doors and windows closed would remove almost all the risk*' (REPPIR- What to do in the event of an emergency at AWE 2010)

4.42. AWE will in conjunction with the MOD Coordinating Authority make recommendations as appropriate to Thames Valley Police (and Hampshire Constabulary) as to whether any evacuation of the general public was required due to a release of radioactive material. If evacuation is recommended, then the Police will be responsible for advising residents in person, if safe to do so or by media broadcast, in the affected area that they shall be evacuated and will direct them to assembly points or rest centres or alternative accommodation as appropriate for onward transportation (AWE EOSP.p48.para5.4.2.b.iv.2009).

4.43. If this proposed development was granted the only additional emergency planning arrangements required would be to place the new population on the AWE database for distribution of the 'REPPIR *What to do in the event of an emergency at AWE*' document and include those details on the automated telephone warning system.

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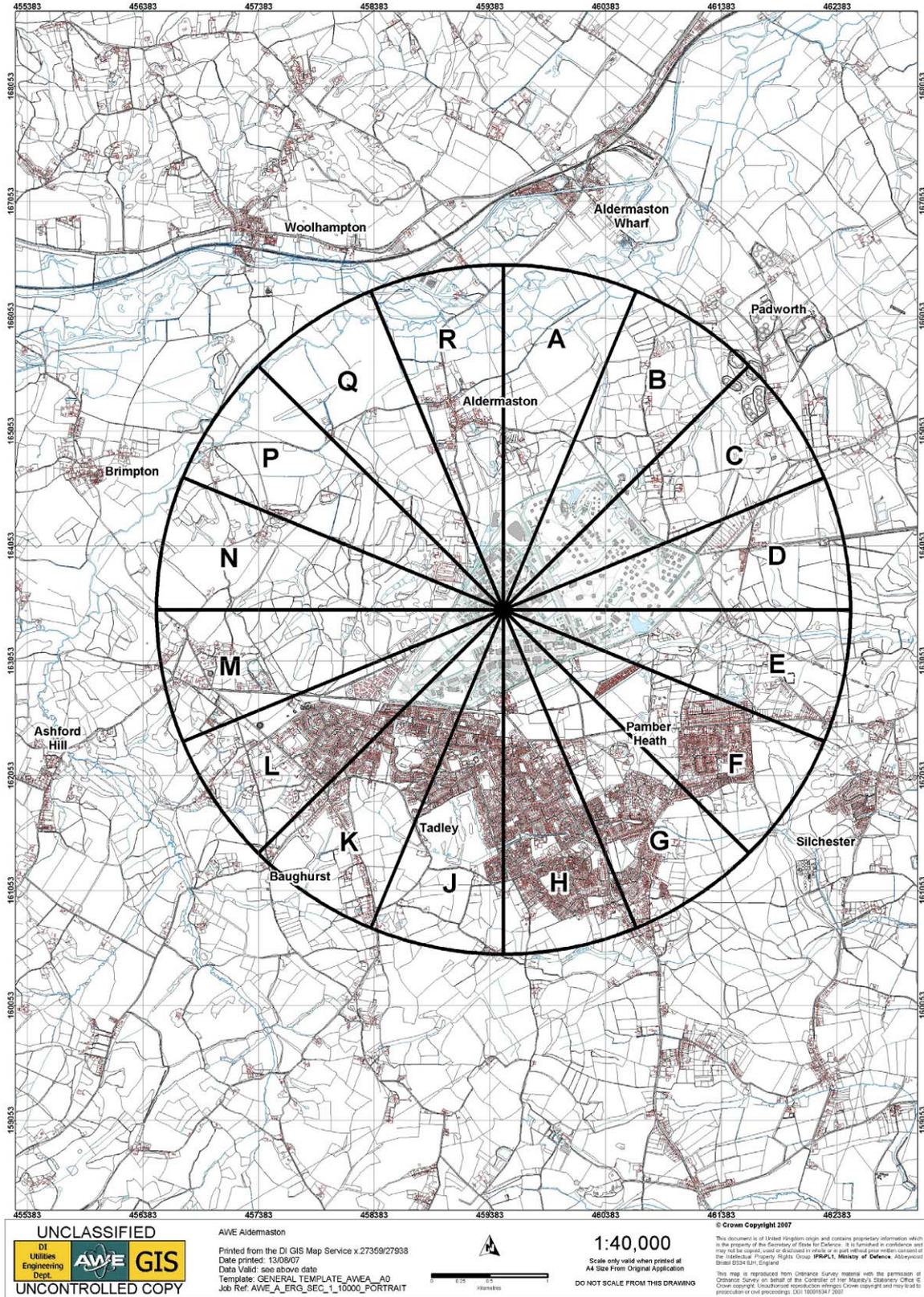
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Constituent members of Nuclear Strategic Co-ordinating Group (SCG)*

1. Police (Gold Commander)
2. Fire and Rescue Service
3. Ambulance Service
4. Local Authorities (Chair of the Recovery Advisory Group – Sub Group)
5. Strategic Health Authorities
6. Nuclear Operator (AWE)
7. Regional Government Office
8. Government Technical Advisor (appointed by DECC)
9. Government Liaison Team
10. Director of Public Health (Chair of the STAC Sub Group)
11. Lead Primary Care Trust
12. Health Protection Agency
13. Food Standards Agency
14. Joint Military Liaison Officer
15. Media Liaison Officer (Police – Chair of the Strategic Media Advisory Cell [SMAC])
16. Environment Agency
17. Nuclear Installations Inspectorate

Pending Government restructuring *

Glossary

ACPO	Association of Chief Police Officers
AWE	Atomic Weapons Establishment at Aldermaston
AWE ESOP	Atomic Weapons Establishment Emergency Offsite Plan
DECC	Department of Energy and Climate Change (NEPLG is part)
DEPZ	Detailed Emergency Planning Zone (around Site) divided into sectors
EPG	Emergency Planning Group (associated with AWE site)
HSE	Health and Safety Executive
LLC	Local Liaison Committee (associated with AWE site)
NII	Nuclear Installations Inspector (Division of HSE)
MOD	Ministry of Defence
NEPLG	Nuclear Emergency Planning Liaison Group (Government Group)
NPIA	National Police Improvement Agency
REPPiR	Radiation Emergency and Public Information Regulations
SCC	Strategic Co-ordination Centre (Police Control Centre)
SCG	Strategic Co-ordination Group (Sits within the SCC)
STAC	Scientific and technical Advice Cell (Advises SCG on health issues)
WBC	West Berkshire Council (Lead Local Authority for planning)

Date	From whom	Comment	Response
27/7/10	<p>Hampshire Constabulary</p> <p><i>Greg Snelgrove, Emergency Planning Officer</i></p>	<p>1. ES did not refer to other plans held by police in Hampshire e.g. Rest Centre Plan.</p> <p>2. Offsite Plan will need review if development goes ahead.</p>	<p>1. No need to refer to those plans as REPPIR is the core plan and relevant to public safety around the site. The other plans are generic and support the general response to any major incident. These are held by all response agencies.</p> <p>2. Any permanent change in community profile should be reflected in the off-site plan. This is normal practice and a minor information note only.</p>
12/8/10	<p>Basingstoke and Deane Borough Council</p> <p><i>Patricia Hughes, Emergency Planning</i></p>	<p>1. Firstly, the Environmental Statement appears to intimate that the off site plan does not refer to evacuation in the first 24 hours. In fact, due to the need to be flexible, the plan does refer to this being a possibility, whilst sheltering will be the more usual form of counter measure.</p> <p>2. Secondly, it infers that, no matter how many people lived in the area that the plan would remain the same. The plan is undoubtedly flexible and includes no "upper limit" to those it can deal with. However, this need to be flexible is, in part, due to the number of people the emergency services would have to deal with <i>during the day</i> with all the variables e.g. school term time, popular events at local venues. If the number of residents living in the area were to double or triple (with the commensurate increase in 'vulnerable' people) I am sure the plan would have to alter and the level of</p>	<p>1. This is addressed in the POE. Evacuation is not an automatic countermeasure. It is a slower time management decision. It is either a precautionary evacuation before an anticipated event or post incident when the situation is stable. In a reasonably foreseeable situation evacuation will not occur during an active plume as it is dangerous.</p> <p>2. They agree the plan does not have an upper limit on people. The plan describes a set of procedures, notifications, management structures and agreements between agencies in roles and responsibilities. That is not dependent on the number of people involved or consequences resulting. That is an issue for resource management and deployments. In a nuclear event this is achieved by initial automatic countermeasures followed by direction from the Strategic Co-ordinating Group chaired by the police. But the plan remains the same. This underpins the UK approach to major incident</p>

		<p>resources made available by the emergency planning community would also need to change.</p> <p>3. Thirdly, the Hampshire based emergency plans are not referred to within the report (mass evacuation etc.)</p>	<p>management as outlined in the Civil Contingencies Act 2004 – Emergency Response and Recovery Guidance and ACPO Guidance.</p> <p>3. See Greg Snelgrove above.</p>
<p>13 /7/10</p>	<p>Carollyn Murison West Berks BC</p>	<p>1. This chapter appears to be a critic of the HSE statement in relation to the appeal in relation to the Off-site Plan rather than an objective consideration of the proposal and the off-site planning arrangements.</p> <p>2. There appears to be over simplification in some of the statements e.g. Para 17.1.5 where it is stated that ‘evacuation will not be necessary within 24hrs’ whereas in the plan is states under Section 5, 5.2 that ‘Sheltering’ is normally the most effective countermeasure’ and under section 5, 5.4 it states that ;Exceptionally, evacuation within the first twenty four hours might be necessary. However this section then goes onto state about the evacuation situations. Therefore their point I believe is misleading.</p> <p>3. 17.5.5 of the chapter refers to the ‘fact’ that the LA Off-site plan would still be the same irrespective of the population data. This is incorrect. The DEPZ applies to both Hampshire and West Berkshire and if the population if this area was dense throughout then there would be an impact on the plan and the response of the</p>	<p>1. Noted .</p> <p>2. Noted this is addressed in the POE. Evacuation is an exception and not reasonably foreseeable hence it is not an automatic countermeasure. We can only plan for what is reasonable foreseeable. Complete explanations of evacuation v sheltering as set out in the plan is addressed. This will clarify this point.</p> <p>3. The current plan is configured around the current population profile within the DEPZ. The plan must also allow for fluctuations in population density due to transient populations. It is argued that the proposed development would not alter the structure or emergency arrangements of the current plan (save minor information points contained within it to reflect</p>

		<p>agencies would be different.</p> <p>4. There is repeated reference to the additional 268 people which over and above the 15000 already in the area is a minimal 2% increase, although from the chapter it is unclear as to whether this relates to just Hampshire or Hampshire & West Berkshire figures.</p> <p>a) This does not however reflect that they are going to be the closest residents to the site and due to the dense nature of the elements there is a potential risk that this site would be at greater risk with an increased impact on responders as a result to consider earlier evacuation.</p> <p>b) In addition there may be a number of vulnerable people within that 268 figure which again may have an additional impact on the responders.</p>	<p>the new development when next revised), as the increase in population would be accommodated within that flexibility built into the plan.</p> <p>4. Numbers need to be clarified as various figures appear. In evidence the figures used in the AWE Emergency Off-site plan are used including combined Tadley villages. The numbers resulting from the development still represent a small increase in overall population density.</p> <p>a) It is stated that this development presents additional risk in that it is nearer the site. We would say that following the advice given by AWE and the Local Authority – ‘even a serious incident at AWE... by staying indoors and closing windows and doors would “remove almost all the risk”. That must be the same for those living near the site.</p> <p>Emergency responder response is addressed in detail in the POE but essentially the emergency services would not enter an affected area unless in extremis to save life. Having a new development does not alter that policy. Evacuation would be initiated by media communication asking residents to leave their homes and make to a given location and/ or by asking residents to assemble in a given location to await collection. If safe to do so the police would assist in this ‘on the ground’ only to notify those most vulnerable. Evacuation is also assisted by helicopter (if there is no plume) so a relatively small area such as the new</p>
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		<p>Conclusion</p> <p>There are a number of questions and inaccuracies in the chapter relating to Emergency Planning.</p> <p>However should the proposal go ahead then as a minimum the impact for the Off-site Planning Group would be the requirement for the Off-site plan to be reconsidered and potentially rewritten. In so doing any additional impact on the responders would be determined in full.</p>	<p>development would make no significant difference in resource demand.</p> <p>b) 'Vulnerability' of a person is very difficult to quantify. It usually means mobility issues which are generally catered for in family or carer arrangement already in place. Decisions to assist those people will be taken dynamically based upon all prevailing circumstances.</p> <p>Final point – The plan would need on minimal review. This is normal with any material changes to DEPZ.</p>
<p>14 July 2010</p>	<p>Royal Berkshire Fire and Rescue Service</p> <p><i>Barry Hayward, Group Manager Support Services</i></p>	<p>1. Agree that the existing off-site plan for AWE should be regarded as fit for purpose. However placing more people in the DEPZ can only serve to increase pressures on the emergency responders and supporting agencies in the event of an incident.</p> <p>2. Of greater concern, accepting this development risks setting a precedent for future developments within the DEPZ potentially resulting in further significant increases in resident population.</p>	<p>1. People in the DEPZ will fluctuate throughout the day. The proposed increase will only be small and accommodated within the plan. The pressures on emergency responders will be driven by proactive actions in a safe environment such as potential precautionary evacuation or post incident recovery. It is anticipated that initial countermeasures, as recommended in the plan, are for sheltering with no responder input. Again, save in extremis to save life, which is a dynamically managed situation.</p>

			2. This is a siting policy issue to be resolved.
27 July 2010	Hampshire County Council <i>Julie James, Senior Emergency Planning Officer</i>	<p>1. There is no reference to Hampshire and Basingstoke’s Emergency Plans that would contribute to the response to an incident at AWE (5 specific plans listed)</p> <p>2. Summary at para. 17.10.1 Details the likelihood and not the impact of the risk assessment, which is equally as important. The overall risk rating is therefore medium.</p> <p>3. If the development were to proceed the Off-Site Emergency Plan would need to be reviewed</p>	<p>1. See Greg Snelgove above.</p> <p>2.. The comment is noted but the risk is given as ‘Low’ in the AWE Emergency Off-site plan and public information document ‘ REPPIR – ‘What to do’ 2010.</p> <p>3. Any changes to the plan will always require a review and in this case potentially minor amendments to update the population data.</p>