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# AWE Detailed Emergency Planning Zone

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<b>Decision Paper:</b>	Service Director Development & Regulation
<b>Date of Decision:</b>	19 <sup>th</sup> January 2023
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## 1 Purpose of the Report

- 1.1 To provide information and the decisions made in relation to the determination of the Detailed Emergency Planning Zones (DEPZ) around both Atomic Weapons Establishment (AWE) sites review process as required under Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPiR19).
- 1.2 To confirm the next steps to ensure compliance with REPPiR19.

## 2 Executive Summary

- 2.1 This report explains the need to determine the Detailed Emergency Planning Zones (DEPZ) around both Atomic Weapons Establishment (AWE) sites as required under the Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPiR19).
- 2.2 The DEPZ is the defined zone around the nuclear site where it is necessary to pre-define protective actions which would be implemented without delay to mitigate the likely consequences of a radiation emergency.
- 2.3 There are requirements in REPPiR19, the associated Approved Code of Practice (ACoP) and guidance detailing why, how and when to determine or review any DEPZ.
- 2.4 Under REPPiR19 the operator needs to undertake a review of hazard evaluation and consequence assessment within 3 years of the date of the completion of the last evaluation (or longer if agreed with the regulator or earlier should there be material changes in operations on the nuclear site).
- 2.5 The last determination for both AWE sites was in March 2020 with the last Consequence Report received in November 2019.
- 2.6 In undertaking this statutory review the Council has followed the legislation, ACOP and guidance.
- 2.7 The Council had two months to comply from the date of receipt of the information from AWE. This was received on the 18<sup>th</sup> November 2022 and therefore the date for completion of the process is 18 January 2023. In view of the timeframe over the festive period and the internal governance structure a request was made to the Regulators,

## AWE Detailed Emergency Planning Zone

Office for Nuclear Regulation, with a request for an additional day to complete the determination process.

2.8 The options considered are detailed in this report.

2.9 The decision was to:

(a) Amend the DEPZ for AWE Burghfield as detailed in Appendix A.

(b) Make no changes to the DEPZ for AWE Aldermaston.

## 3 Supporting Information

3.1 There is a legal process in place in order to allow the DEPZ to be determined by the Council which is clearly set out in the legislation, ACoP and guidance. This is summarised in this section with respect to the process for the AWE sites.

3.2 The role of the Council is to:

(a) To determine the boundary of the Detailed Emergency Planning Zone (DEPZ) for each site, based on a minimum area identified by the operator (AWE), taking into account those matters detailed within the legislation and guidance such as local communities, geographical features, etc. As noted above, the DEPZ is the geographic area that the AWE Off-Site Emergency Plan must cover in detail and the Council, along with the other agencies involved in the AWE Off-Site Emergency Plan, must be able to support.

(b) To provide information to the public within the DEPZ areas.

(c) To review and revise the AWE Off-Site Emergency Plan in compliance with REPP19 (taking into account any changes in the DEPZ).

3.3 The Council was required to comply with REPP19 by updating the DEPZ by the 18th January 2023. Officers therefore prepared the key actions and timeline in relation to this deadline. As a result of internal governance and the festive period a request was made to ONR for an additional day to finalise the process.

3.4 The primary focus for the Council in respect of REPP19 is public safety. All actions should be focussed around ensuring the Council protects its residents and businesses, mitigates risk where possible and works closely with AWE and other partners to deliver, in the event of an incident, a comprehensive off-site response by virtue of a good quality Off-Site Emergency Plan.

3.5 In order to undertake the requirements there are a number of steps required of the operator in advance as set out below.

### **3.6 Hazard Evaluation and Consequence Assessment (HECA) (Regulations 4, 5 & 6)**

3.7 The first part of the process requires AWE as the site operator to provide a Consequence Report to this Council and the Regulators. In order to do so, AWEs

technical experts undertook a Hazard Evaluation and Consequences Assessment (HECA).

- 3.8 AWE Aldermaston and AWE Burghfield have different inventories of radioactive and explosive materials and therefore different fault scenarios are applicable to each site under the legislation.
- 3.9 The process is undertaken within 3 years of the date of the completion of the last evaluation of where the operator proposes a material change, or where a material change occurs, in the work with ionising radiation to which an operator was required to make an evaluation pursuant to regulation 4(1).

### **3.10 Consequence Report (Regulation 7)**

- 3.11 Based on the results of the assessment, AWE, as the operator, must propose the minimum area for any Urgent Protective Actions (UPA) required in the unlikely event of a radiation emergency with an off-site impact.
- 3.12 The UPA forms the basis of the information provided to the Council and the regulators, ONR, in a document called the Consequence Report (CR). These reports, one for each AWE site, set out the minimum areas to be included in the DEPZ, what the urgent protective action(s) should be and how quickly it would need to be put in place in order to protect the public.
- 3.13 The latest Consequence Reports for each site were received by the Council on the 18th November 2022.
- 3.14 There has been **no change** to the UPA areas for either AWE site under the REPP19 HECA. It should also be noted that for both sites there has been no change in activity or risk.

### **3.15 AWE Aldermaston Consequence Report Summary:**

- (a) Urgent Protection Actions (UPA) area for the site is a 1540m radius. However based on analysis of vulnerable groups exposure to tritium it was further recommended to extend the minimum area out to 2000m.
- (b) Outline Planning Zone (OPZ) area for the site is a radius 15km.
- (c) The recommended Urgent Protective Action (UPA) is shelter.
- (d) Timescales for undertaking the UPA (Shelter) is as soon as possible.

### **3.16 AWE Burghfield Consequence Report Summary:**

- (a) Urgent Protective Actions (UPA) area for the site is a radius of 3160m.
- (b) Outline Planning Zone (OPZ) area for the site is a radius of 12km.
- (c) The recommended Urgent Protective Action (UPA) is shelter.

- (d) Timescales for undertaking the UPA (Shelter) is as soon as possible and no later than 25 minutes from the start of the incident.

### **3.17 Developing the DEPZ (Regulation 8)**

3.18 The distances identified in the Consequence Reports determine the **minimum** boundaries for the area to be included in the DEPZ and subsequent OPZ.

3.19 In addition to the minimum geographic extent, the UPA, then taking into account the details set out in the regulations, ACoP and guidance, there are additional requirements to consider when developing the DEPZ.

3.20 Reg 8 (1) requires that the local authority must determine the DEPZ on the basis of the operator's recommendation made under (paragraph 2) of Schedule 4 and may extend that area in consideration of:

- (a) local geographic, demographic and practical implementation issues;
- (b) the need to avoid, where practicable, the bisection of local communities; and
- (c) the inclusion of vulnerable groups immediately adjacent to the area proposed by the operator.

3.21 Those properties within the DEPZ are therefore afforded a means of warning and informing process to alert them to take shelter as soon as possible and minimise the risk to their health.

### **3.22 The ACOP provides further details to be considered:**

3.23 The DEPZ must be based on the minimum geographical extent proposed by the operator in the consequences report and should:

- a. be of sufficient extent to enable an adequate response to a range of emergencies; and
- b. reflect the benefits and detriments of protective action by considering an appropriate balance between;
  - i. dose averted; and
  - ii. the impact of implementing protective actions in a radiation emergency across too wide an area.

3.24 In defining the boundary of a DEPZ, geographic features should be used for ease of implementing the local authority's off-site emergency plan. Physical features such as roads, rivers, railways or footpaths should be considered as well as political or postcode boundaries, particularly where these features and concepts correspond with other local authority emergency planning arrangements.

### **3.25 Actions undertaken to determine the DEPZ**

3.26 The process for assessing and developing the DEPZs for both sites followed the legislative requirements and included:

- (a) A desk top exercise was initially undertaken to review maps and consider the options.
- (b) Site visits were subsequently conducted in the areas concerned to confirm what was shown on the map was the same in reality, having regard to any new developments, changes in features etc. This was jointly undertaken, where appropriate, with the Emergency Planning Officers from Wokingham, Reading and Hampshire Councils. These were undertaken in advance of receipt of the Consequence Report (CR) due to the timings involved in the process. If the CR had been significantly different then further site visits would have been undertaken.
- (c) A review of all the planning applications which have been approved but not developed which were still valid was undertaken in order to check they were not going to result in a bisection of the DEPZ should they be built in the next 3 years. At this time there are no developments with planning permission which will impact the DEPZ boundary as determined within this report.

3.27 The output of this process was a draft DEPZ with justifications as to why some suggested amendments to the DEPZ were offered, all of which were based on the legal requirements. These are shown in Appendix A.

### **3.28 Liaising with relevant organisations**

3.29 Although no formal consultation is required under the legislation and the ACoP, the guidance suggests that the Council may liaise with other organisations to consider the draft DEPZ.

3.30 In view of the cross border implications of the revised DEPZ area, liaising with the AWE Off-Site Planning Group (OSPG) was considered the best approach, since it was already a formed group of agencies with knowledge of the AWE sites and emergency planning in detail. As a result the AWE OSPG was consulted.

3.31 On the 24th November 2022 there was a meeting of the AWE OSPG where a presentation was provided giving background information and the proposed details of the DEPZs for each site, as well as access to map with the potential changes.

3.32 At the time of the meeting there was general agreement with the proposed changes.

3.33 The AWE OSPG was given a further two weeks to consider the proposals and provide any suggested changes by 9 December 2022.

3.34 The results of the consultation with the AWE OSPG confirmed that the group agreed with the proposals for the AWE Burghfield Site DEPZ changes.

3.35 There was some feedback in relation to the AWE Aldermaston proposed changes however as noted in Appendix A the implications are more in relation to formalising a situation which already happens by way of notifications etc. and not splitting a

community. The disadvantage to this however is there are properties to the south of the potential expansion, leading to the possibility of more properties being added into the DEPZ which is some distance away from the area where Urgent Protective Actions are necessary.

### 3.36 Proposed options with Rational

3.37 Following the receipt of the Consequence Reports and using the legislation, ACoP and guidance in undertaking the actions detailed in 5.25 to 5.35 the proposed options are:

- (a) Confirm the minor changes for AWE Aldermaston site as detailed in Appendix A to the AWE Aldermaston DEPZ.
- (b) Confirm one or both changes for the AWE Burghfield site as detailed in Appendix A to the AWE Burghfield DEPZ
- (c) Make no changes to one or both AWE site DEPZ.

3.38 There are no changes for the OPZs for either site.

## 4 Implications of Proposed DEPZs

4.1 Should options 3.37 (a) or (b) have been approved then the minor increases to both DEPZs will result in eight additional properties being included in the DEPZ. Therefore they would need to be formally written to in order to ensure they are aware of the changes regardless of the fact they have received the booklet and AWE Connect Newsletter previously.

4.2 There would also be some questions in relation to the above changes since there is no change in the UPA, no change in the risks etc. It could also be seen that it was not concluded effectively in 2020. It is however considered that that the options for changing either DEPZ is instead fine tuning the DEPZ following the first determination by this Council in 2020 which is what formal reviews should do.

4.3 There would be no changes to land use planning policies.

## 5 Feedback from Governance Consultation

5.1 In addition to the AWE Off-Site Planning Group the process and proposed outcomes were considered in advance of a final decision by the Councils Corporate Board, Ops Board and Opposition leaders were briefed.

## 6 Decision by Service Director – Development and Regulation

6.1 The Service Director- Development & Regulation reviewed the reports prepared and discussed with officers in relation to the proposals in advance of confirming the determination of the DEPZ as per his delegated authority under the Scheme of Delegation as:

- (a) Amend the DEPZ for AWE Burghfield as detailed in Appendix A.

- (b) Make no changes to the DEPZ for AWE Aldermaston. This decision was taken having regard to the details in Appendix A and in particular the potential further extension to the south of Baughurst as a result of more properties south of that area. Therefore the proportionate decision was to make no changes to the DEPZ for AWE Aldermaston.

## **7 Next Steps**

7.1 As a result of the DEPZ determination the following steps will be undertaken:

- (a) Revising the AWE Off-Site Emergency Plan in order to mitigate the impact for those people/properties now included in the DEPZ.
- (b) Informing the new properties within the DEPZ that they are in the DEPZ and what they should do in the event of an incident at either of the sites. A multi-agency Communications Plan lead by WBDC has already been developed to contact these properties, as well as the wider communities of the changes.
- (c) The DEPZ leaflet and website will also be updated and sent to all residents within the DEPZ before the 31<sup>st</sup> March 2023.

## **8 Conclusion**

8.1 The proposed changes to the DEPZs for both AWE sites as required have received careful consideration, with due consideration to the legislation, ACOP and guidance.

## **9 Appendices**

9.1 Appendix A – DEPZ options

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### **Document Control**

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### **Change History**

## AWE Detailed Emergency Planning Zone

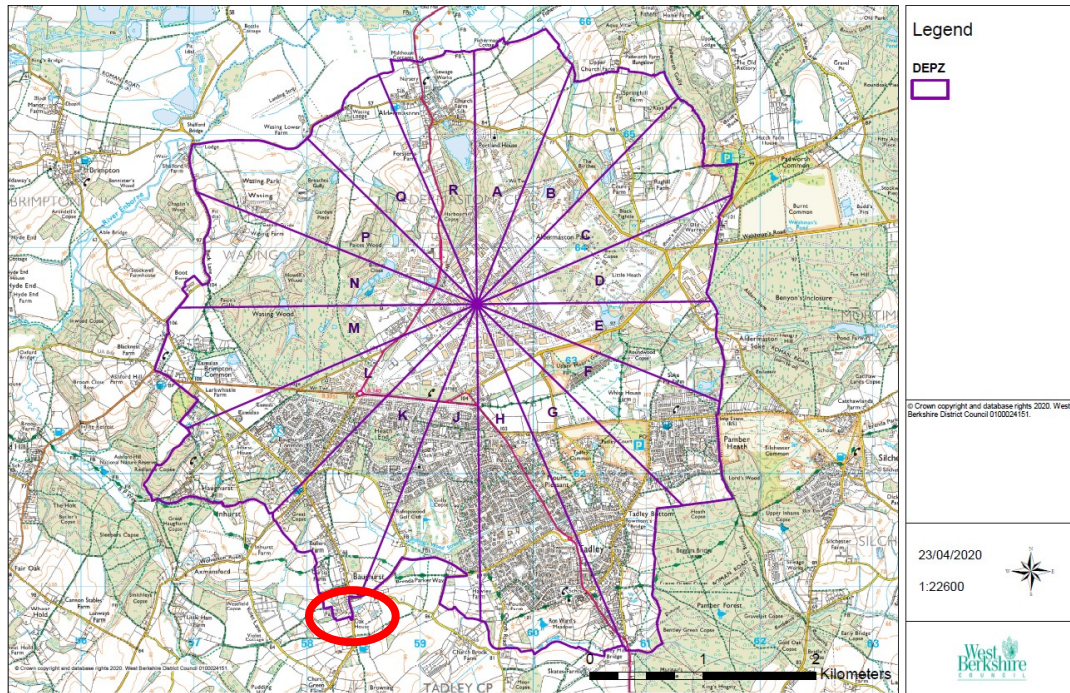
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## Appendix A DEPZ Amendment Options (Regulation 8 (2))

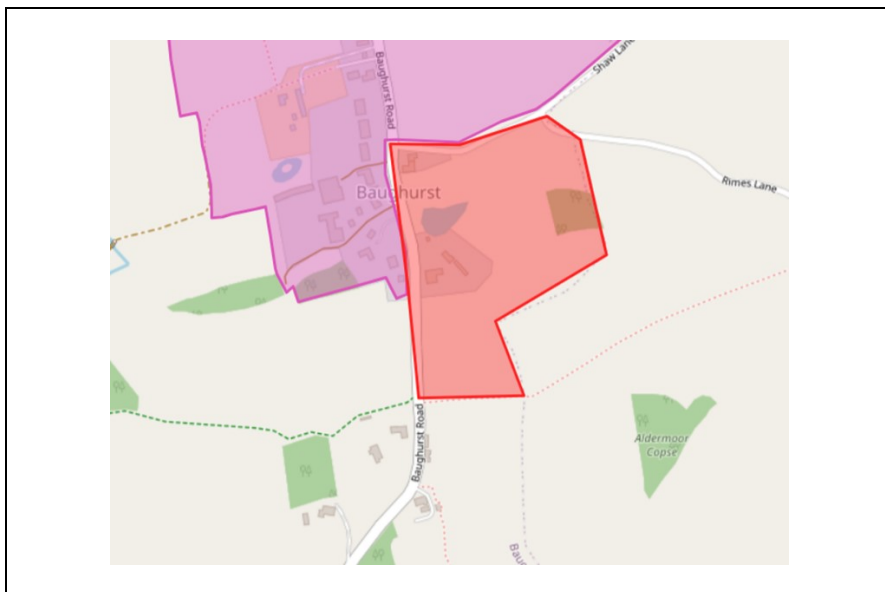
Set out in this appendix are the existing and proposed changes to the AWE Aldermaston and Burghfield DEPZs with relevant justifications. These are based on the requirements of the legislation, ACoP and guidance, site visits and consultation.

### Existing AWE Aldermaston site DEPZ (Mar 2020 – Jan 2023):



### Potential Changes to AWE Aldermaston site

On reviewing one area of the existing AWE Aldermaston DEPZ there was the potential for changes at the southern end as shown on the map below and as shown by the circle on the map above in the area of: Baughurst Rd, Tadley RG26 5LP



**Justification Comments:**

The map shows the bisection of the Baughurst community on the eastern side of the road.

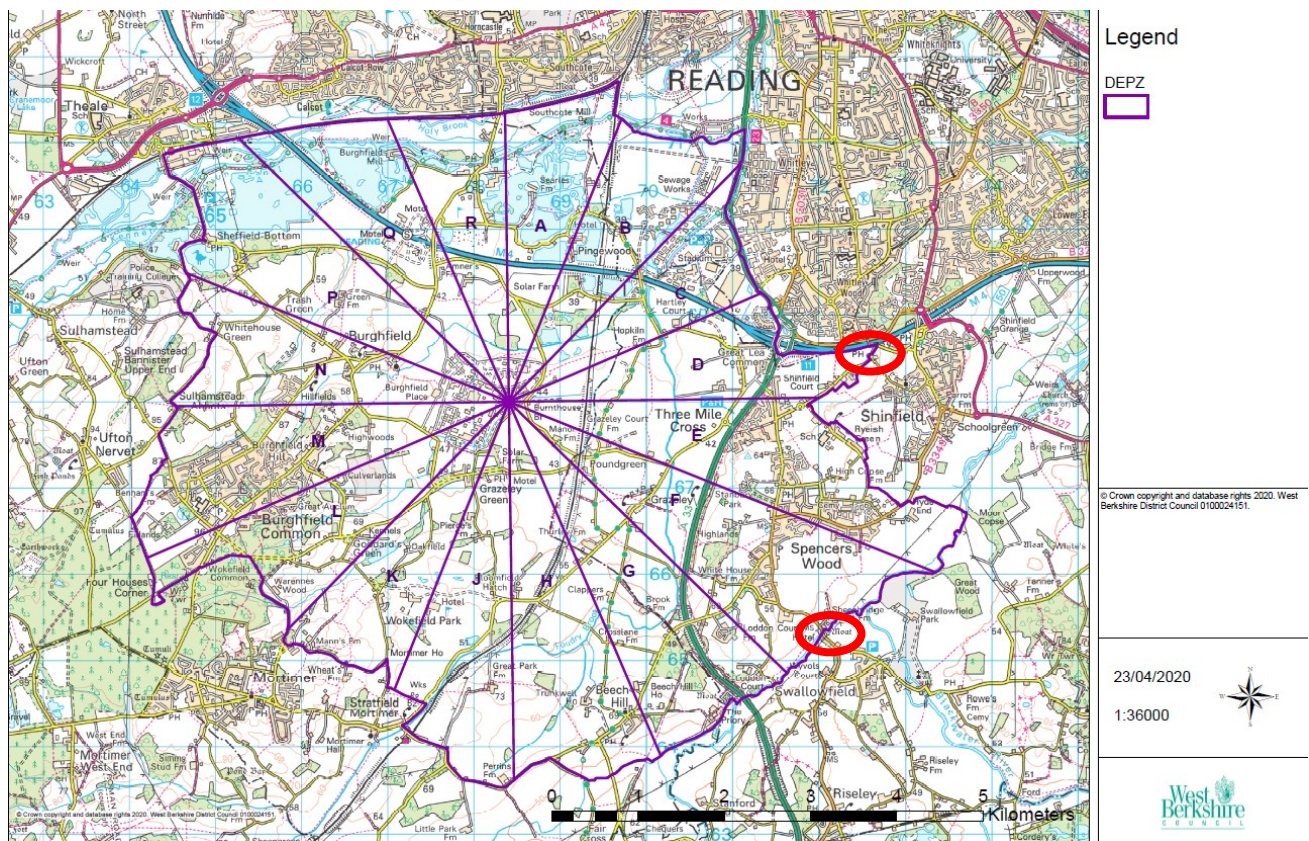
The potential option is to extend the DEPZ by following a public footpath which would act as a clearly visible defining feature.

Factors to consider are that:

- (a) The road, as per the DEPZ, acts as a clear boundary for the DEPZ.
- (b) The number of additional properties would be five.
- (c) Any additional developments proposed in the area would impact on the DEPZ for the future, should all other considerations remain the same, therefore the potential for additional significant development in the area would likely be advised against. Consideration to any such application would however be considered on a case by case basis.
- (d) It does not cut off any additional access routes to surrounding areas, though it would remove an alternative route of access to the area outside the DEPZ. The road may need to have a closure on it and therefore access in and out will be limited.
- (e) The 3 yearly booklet and the quarterly AWE Connect Newsletter is already distributed to the addresses so they could currently be considered to be part of the DEPZ.
- (f) The telephone alerting will also already include the properties within this area since it is based on postcodes.
- (g) There are however additional properties to the south of the potential extension of the DEPZ which could result in a further expansion to include these properties. This would mean expanding the DEPZ at some distance from the Urgent Protective Action area.

**Decision: On balance it was considered appropriate **not** to include the above option with the DEPZ for AWE Aldermaston remaining the same.**

Existing DEPZ for AWE Burghfield site (Mar 2020 – Jan 2023)

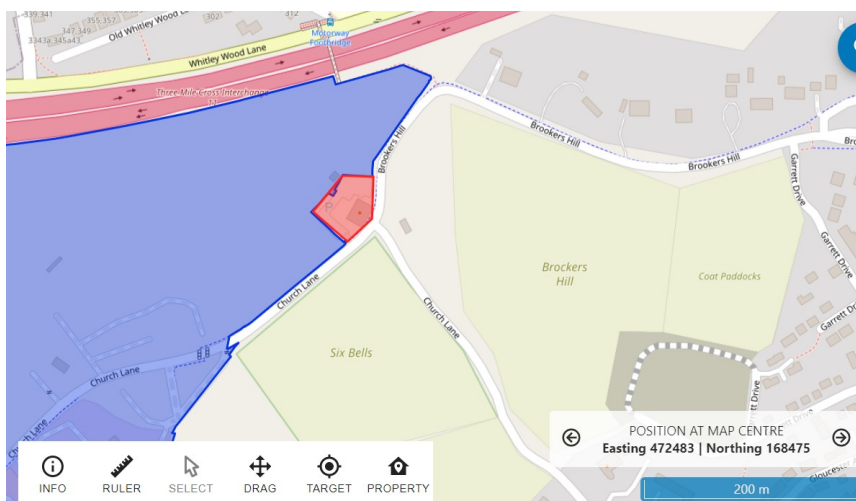


Potential Changes to AWE Burghfield site

On reviewing the area around the existing AWE Burghfield DEPZ there were 2 areas which were considered to be amended to correct minor areas of ambiguity as shown in the map above and sections of the maps below

## AWE Detailed Emergency Planning Zone

1. The Six Bells Shinfield, Church Lane, Shinfield, Reading, RG2 9DA - Easting 472593 | Northing 168524



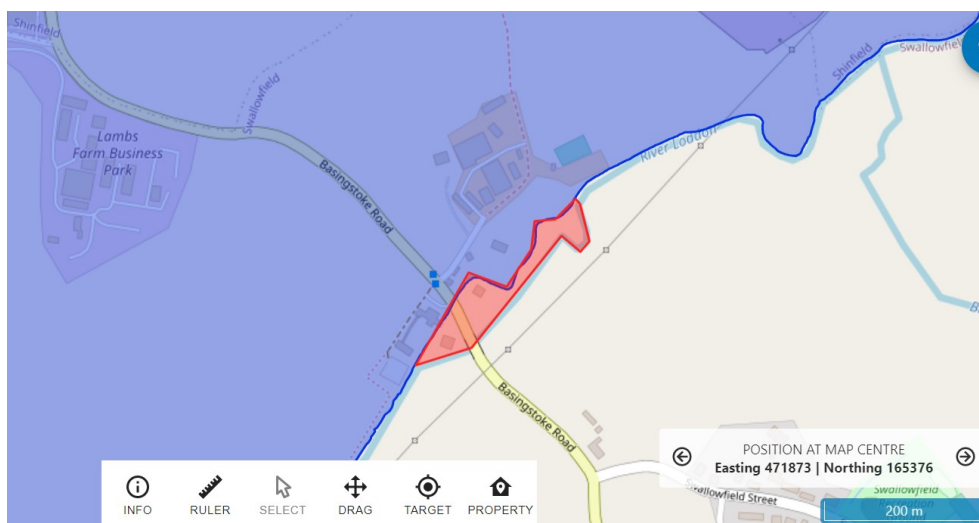
### Justification Comments

- a. Previously the site had been excluded since the building identifies with the Shinfield 'Community' and not Spencers Wood which is the rest of the area included in the DEPZ.
- b. This change would therefore use the full length of the road as the boundary rather than go around one property.
- c. The road, as per the DEPZ, acts as a clear boundary for the DEPZ.
- d. Any additional houses proposed in the area would impact on the DEPZ for the future, should all other considerations remain the same, therefore the potential for additional significant development in the area would likely be advised against. Consideration to any such application would however be considered on a case by case basis.
- e. The road may need to have a closure on it and therefore access in and out of the property will be limited.
- f. The 3 yearly booklet and the quarterly AWE Connect Newsletter is already distributed to the addresses so they could currently be considered to be part of the DEPZ.
- g. The telephone alerting will also already include the properties within this area since it is based on postcodes.

**Decision: On balance it was considered appropriate to include the above change to the DEPZ for AWE Burghfield.**

## AWE Detailed Emergency Planning Zone

2. Near Basingstoke Road, Swallowfield, Reading RG7 1PT - Easting 472105 | Northing 165364



### Justification Comments

- a. This change would redefine the DEPZ fully along the River Loddon and correct a mapping error as a result of a split in the flow of the river.
- b. The river acts as a clear boundary for the DEPZ.
- c. The change would result in the addition of two properties.
- d. Expanding the DEPZ to bring in the 2 properties would better identify them with the properties adjacent to them in their community, and improve the warning and informing in the event of an incident at AWE.
- e. Expanding the DEPZ will prevent the properties receiving different advice over sheltering in the event of an incident, which are in close proximity to each other, that differing advice could undermine their confidence and therefore safety in the warning messages.
- f. The 3 yearly booklet and the quarterly AWE Connect Newsletter is already distributed to the addresses so they could currently be considered to be part of the DEPZ.
- g. The telephone alerting will also already include the properties within this area since it is based on postcodes.
- h. Any additional houses proposed in the area would impact on the DEPZ for the future, should all other considerations remain the same, therefore the potential for additional significant development in the area would likely be advised against. Consideration to any such application would however be considered on a case by case basis.

**Decision: On balance it was considered appropriate to include the above change to the DEPZ for AWE Burghfield.**