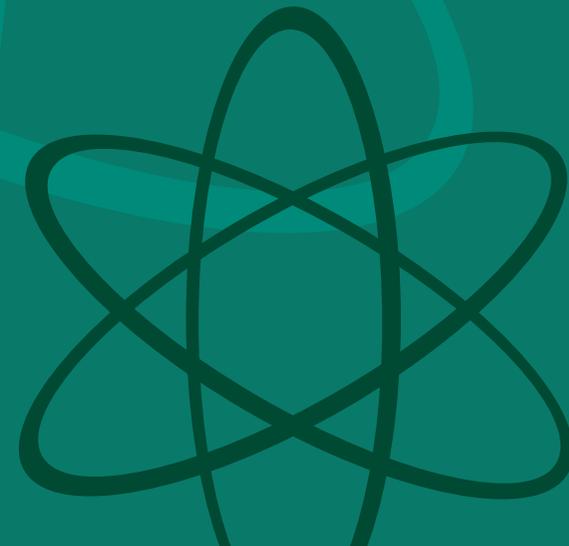
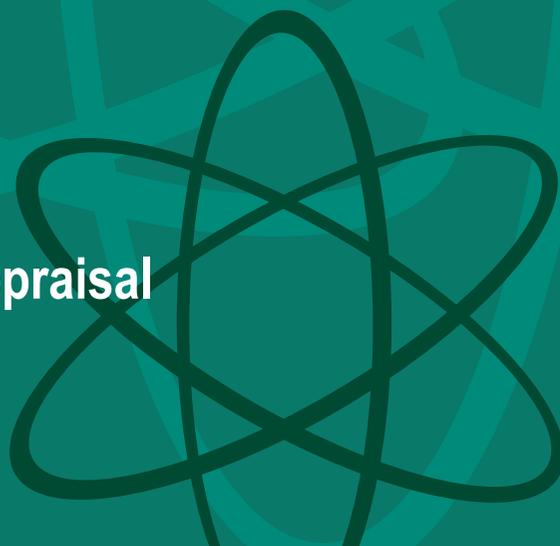


**AWE Burghfield
Project Mensa
Final**



**Defence Exempt Environmental Appraisal
Non-Technical Summary
December 2008**



ENVIRONMENTAL APPRAISAL NON-TECHNICAL SUMMARY

1. Introduction

The Ministry of Defence (MoD), hereafter referred to as ‘the Applicant’, is seeking detailed planning permission for the redevelopment of part of the Atomic Weapons Establishment (AWE) site at Burghfield, Berkshire (Figure 1).

The Mensa Application Site (hereafter referred to as ‘the Application Site’) encompasses an area of 21.2 hectares. The Application Site boundary also includes a private road called The Mearings, which lies beyond the site fence line between the AWE Burghfield Main Gate and the Reading Road. The Application Site boundary is shown in Figure 2.

The Proposed Development will provide a replacement warhead assembly, maintenance and disassembly facility along with an abutting Support Building, an Plant Building and associated electrical sub-stations (hereafter referred to as ‘the Proposed Development’. The Proposed Development is required to provide suitable workspace in a secure environment for the workforce that is necessary to service the continuing work of AWE. The Proposed Development will provide a total of 26573.6 square metres (m²) of gross floor space.

Figure 1: Site Location

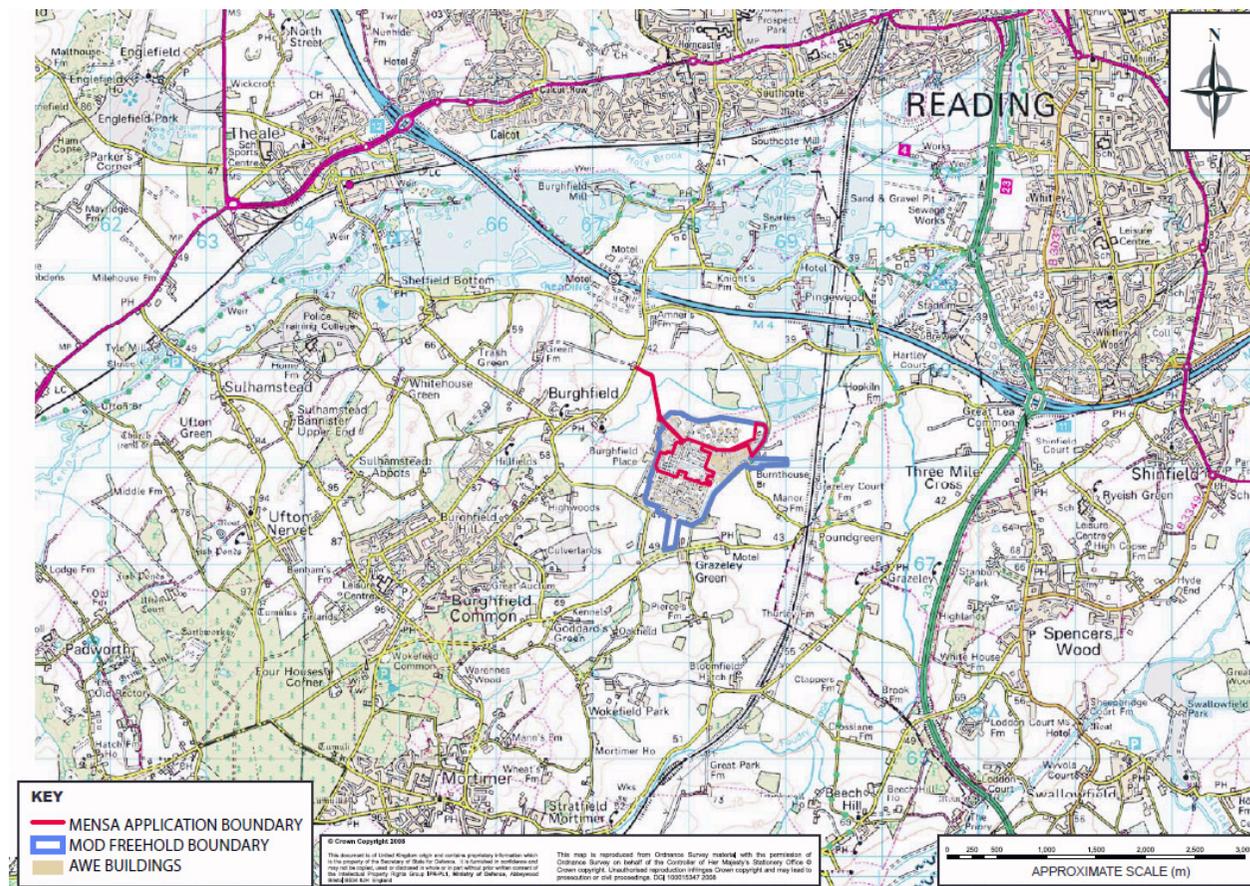
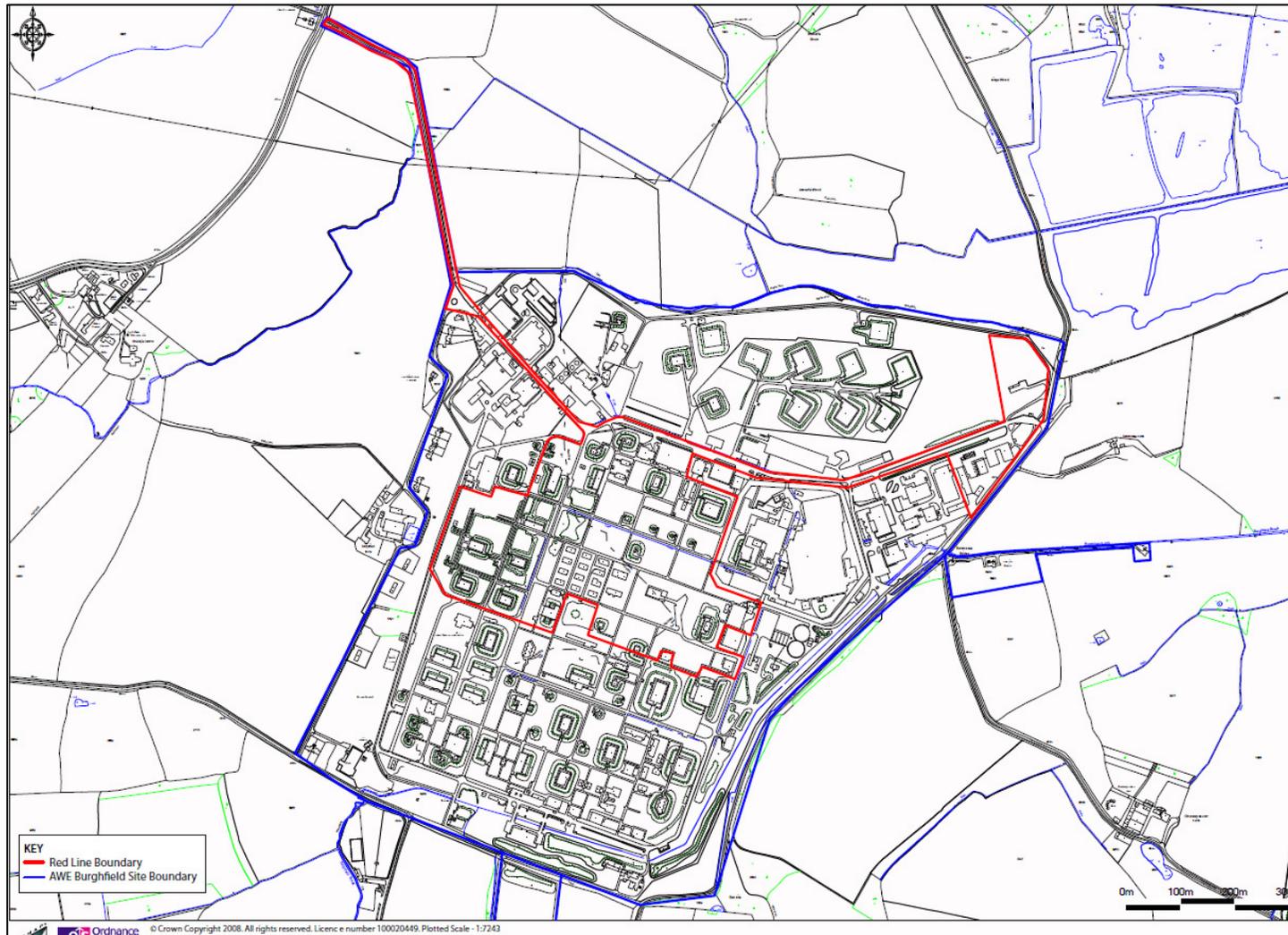


Figure 2: Application Site Boundary



Issue Date: December 2008	UNCLASSIFIED DIRECTORATE MAJOR PROJECT	Issue No:2
Environmental Appraisal Non-Technical Summary	Mensa Environmental Appraisal	

The Secretary of State for Communities and Local Government has considered the proposals for the Proposed Development and under direction of Regulation 4 (4)(a)(ii) of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (as amended 2006 and 2008), determined that the requirements of those Regulations shall not apply for this application. This Environmental Appraisal (EA) therefore presents the results of an Environmental Impact Assessment (EIA) conducted generally in accordance with the appropriate regulations to assess the potential impacts of the Proposed Development on existing baseline conditions within the Application Site and the local area.

The EA considers the environmental impacts of the Proposed Development during site preparation, construction and operational phases, and has considered the likely impact of the Proposed Development on its surroundings, neighbours, wider area and overall context. The EA also details a number of mitigation measures, which have been developed to avoid, remove or reduce any potential adverse impacts on the environment. Where mitigation measures have been identified, these have been incorporated into the project design wherever possible. In cases where no mitigation is required, this is stated. Impacts that remain following the implementation of mitigation measures are termed 'residual impacts'. These residual impacts are classified in accordance with a standard set of significance criteria.

The EA comprises two volumes:

Volume I - EA: This document forms the main body of the EA detailing the results of environmental investigations, impacts arising and proposed mitigation measures.

Volume II - EA Technical Appendices: The Technical Appendices provide detail on the assessments undertaken and information used to inform the EA Volume I. The Appendices provided are:

- Appendix A - Ground Conditions;
- Appendix B - Water Resources;
- Appendix C - Transport;
- Appendix D – Landscape and Visual;
- Appendix E - Cultural Heritage; and
- Appendix F - Sustainability.

This Non-Technical Summary (NTS) provides an overview of the findings of the EA.

The full assessment of the environmental impacts associated with the Proposed Development are presented within the EA Volumes I and II.

The EA is available for viewing by the public during normal office hours at the West Berkshire Planning Department. Comments on the planning application should be forwarded to West Berkshire Council at the address as follows:

Planning Department
West Berkshire Council
Council Offices
Market Street
Newbury,
RG14 5LD

Copies of the EA can be purchased from West Berkshire Council at a cost of £10 for the NTS, £100 for Volume I and £125 for Volume II.

2. EA Methodology

The EA process ensures that potential impacts of a new development are taken into account when considering a planning application. It provides a systematic analysis and presentation of information on the main anticipated environmental issues relating to the Proposed Development.

Whilst the Secretary of State for Communities and Local Government has determined that the Mensa proposals are exempt from the EIA Regulations, an EA has been undertaken which will include all of the necessary information to allow an informed decision to be made on the merits of the planning application. This commitment by AWE is in line with the Secretary of State for Defence Policy Statement within JSP 418, which states that "*where the Ministry of Defence (MOD) has been granted specific exemptions...from legislation...it will introduce standards and management arrangements that are, so far as reasonably*

Issue Date: December 2008	UNCLASSIFIED DIRECTORATE MAJOR PROJECT	Issue No:2
Environmental Appraisal Non-Technical Summary	Mensa Environmental Appraisal	

practicable, at least as good as those required by the legislation”.

The EA has been prepared in accordance with current guidance for the preparation of Environmental Impact Assessments (EIA), and is based on:

- The establishment of baseline environmental conditions in and around the Application Site;
- Consultation with statutory and non-statutory consultees;
- Review of secondary information, previous environmental studies and publicly-available information;
- Assessment of the relevant national, regional and local planning policy and guidance;
- Physical surveys and monitoring
- Preparation of desk-top studies;
- Modelling and assessment; and
- Expert judgement.

The EA has considered the positive and negative, short and long-term impacts of the Proposed Development on the baseline environmental and socio-economic conditions of the Application Site and its surrounds. The significance of any impacts has been identified and measures for avoiding or minimising adverse impacts have been incorporated into the final design.

The significance of residual impacts has been evaluated with reference to accepted criteria and legislation where available. Where it has not been possible to quantify impacts, qualitative assessments have been carried out, based on professional experience and judgement. Impacts have been classified as being adverse, negligible or beneficial in significance and of minor, moderate or major in magnitude.

3. Planning Policy Context

The Proposed Development has been assessed against relevant national, regional and local planning policies.

National policy and guidance emphasises the need to take environmental and social issues into consideration as a routine part of all Proposed Developments.

The overriding objective in national policy and advice is one of sustainable development with an emphasis on the efficient use of land and the location of development proposals where they can be close to good public transportation, pedestrian and cycle links/facilities.

Regional level policy takes these objectives further by encouraging new development in and around urban areas throughout the South East, ensuring that new developments are well designed and consistent with the overall strategy. The Proposed Development would meet these objectives.

Local policy was also assessed in regards to the adopted West Berkshire Local Plan, which is used for development control purposes throughout the District. The approach of the Local Plan is to support development relating to existing uses where it is needed to maintain continued use.

4. Alternatives and Design Evolution

Analysis of alternatives is a key part of the process and serves to ensure that environmental considerations are built into the project design at the earliest possible stage.

The consideration of alternative solutions to provide a continuation of AWE’s assembly/disassembly capability was addressed in three stages, as follows:

1. The approach to Project Mensa in the context of the overall AWE modernisation programme;
2. The broad options for the provision of the continued capability at AWE Burghfield; and
3. Siting and design considerations.

Over the course of each of the design stages, the Proposed Development has evolved through consultation and a progression of ideas that have lead to its present scale and form.

The consolidated design of the Proposed Development and its location within the AWE

Issue Date: December 2008	UNCLASSIFIED DIRECTORATE MAJOR PROJECT	Issue No:2
Environmental Appraisal Non-Technical Summary	Mensa Environmental Appraisal	

Burghfield site is considered the best option to ensure all of AWE's requirements are fulfilled.

5. Proposed Development

The Proposed Development covers the area of the red line boundary shown in Figure 2 and covers 21.2 ha of the AWE Burghfield site.

The Proposed Development will comprise four main components, as follows:

- 1) The permanent facilities located within the centre of AWE Burghfield include: the Main Process Facility and Support Building with 14 lightning conductor towers; a Plant Building with two lightning conductor towers; two gatehouses; two vehicle inspection bays; two electrical substations; associated roads and Operational Vehicle Waiting Area, two Sustainable Drainage Systems (SuDS) lagoons; associated access roads and an operational vehicle waiting area. Permanent features which will be located at Pingewood Gate in the north-east of the Application Site include a primary intake sub-station and SuDS lagoon.
- 2) The temporary construction enclave, implemented in order to isolate construction activities from the main AWE Burghfield site. Further details of the construction enclave, can be found in *Chapter 6: Construction Phase* of this EA.

- 3) A temporary car park and HGV marshalling area will be built at Pingewood Gate in the north-east of the Application Site. This area will enable vehicular access and egress to the construction enclave during the construction phase of the Proposed Development.
- 4) Landscape and Biodiversity proposals including; grassland erection and management areas, amenity shrub areas, hedgerow reinforcement, tree and copse planting around the new built development and the marginal planting of new surface water attenuation swales and ponds. Further details can be found within *Chapter 13: Landscape and Visual*.

The elements of the Proposed Development are shown in Figure 3, and Figure 4 shows the north elevation of the Main Process Facility and Support Building.

Figure 3: Proposed Development Layout



Issue Date: December 2008	UNCLASSIFIED DIRECTORATE MAJOR PROJECT	Issue No:2
Environmental Appraisal Non-Technical Summary	Mensa Environmental Appraisal	

Figure 4: North Elevation of the Main Process Facility and Support Building



Issue Date: December 2008	UNCLASSIFIED DIRECTORATE MAJOR PROJECT	Issue No:2
Environmental Appraisal Non-Technical Summary	Mensa Environmental Appraisal	

6. Construction Phase

It is envisaged that the Proposed Development will be constructed over a period of approximately 6 ½ years. The construction programme consists of:

- Enabling works prior to construction (month 1 to month 8);
- Construction of the Main Process Facility, Support Building, Plant Building, electrical sub-stations, gate houses, vehicle inspection bays and SuDS lagoons (month 8 to month 50); and
- Commissioning (month 45 to month 82).

Initial 'enabling works' for the Proposed Development will prepare the Application Site for the construction phase. Enabling works include: the creation of the construction enclave; the improvement of site access and egress at the north east of the site, an area known as Pingewood Gate; and the building of a car park and Heavy Goods Vehicle (HGV) marshalling area at Pingewood Gate.

Construction of the permanent features, principally the Main Process Facility, Support Building and Plant Building will follow a standard construction process:

- Substructure works;
- Superstructure works, cladding and roofing; and

- Fit-out and completion.

Environmental impacts can arise either from day-to-day construction operations, or from normal and abnormal operations, or accidents.

AWE has committed to a Code of Construction Practice (CoCP). This CoCP explains the overall approach of AWE to manage and control effectively overall environmental impact arising from the construction activities involved with the Proposed Development.

Throughout all phases of construction a 'good housekeeping' policy will be applied, as outlined in the AWE CoCP. All work areas will be kept tidy and road surfaces will be kept in a good condition and cleaned. Relevant dust suppression measures and controls will be employed on the site to minimise airborne dust. In addition, it is expected that hoardings and security fences will be frequently inspected, repaired and repainted as necessary.

7. Ground Conditions

A detailed appraisal of the baseline environmental conditions (ground and groundwater conditions and related land contamination) was undertaken at the Proposed Development site. The appraisal determined whether and to what extent the Proposed Development will be affected by current ground conditions including potential radiological, explosives and chemical contamination from either current or historic uses. Studies of the site have

comprised a desk study, geophysics survey and a review of intrusive investigation data from over 400 trial pits and boreholes and analysis of soil, sediment and groundwater samples. The results informed a 'Conceptual Site Model' thus enabling potential, residual and cumulative impacts to be determined.

The Application Site is considered to exhibit forms and general levels of contamination that are broadly typical of sites that have been in long term 'industrial' type use. The underlying geology and associated hydrological context of the site does not suggest that, in general terms, these levels of contamination raise any particular issues of concern in relation to mitigation of any potential health and environmental risks. It is therefore considered that the Proposed Development can be implemented without significant adverse impacts. As the Proposed Development offers the opportunity to better understand ground conditions and to deal with any individual cases of contamination, there are beneficial impacts for ground conditions at the Application Site.

The overall significance of the residual impact of the Proposed Development with respect to ground conditions, following mitigation, is assessed to be negligible.

8. Water

This chapter provides an assessment of the impacts of the Proposed Development on identified water

Issue Date: December 2008	UNCLASSIFIED DIRECTORATE MAJOR PROJECT	Issue No:2
Environmental Appraisal Non-Technical Summary	Mensa Environmental Appraisal	

environment features during both construction and operational phases.

Potential impacts to the water environment are associated with changes in surface water run-off rates (resulting from increases in hardstanding area) and potential for increased discharge rates to surrounding watercourses. In addition, the Proposed Development has the potential to reduce flood storage capacity, contaminate surface waters and groundwater and create additional water resource demands.

During construction, and in operation, the provision of Sustainable Drainage Systems (SuDS) has been assessed as providing betterment over existing baseline conditions through the effective management of surface water run-off to "greenfield" rates. The SuDS features also provide additional controls that will act to limit the potential for fine sediment and pollutants to enter the Burghfield Brook and downstream watercourses.

Through the provision of SuDS, long-term beneficial effects for on-site management of surface waters as well as off-site flood risk and water quality are identified. In operation, the provision of biological treatment measures in SuDS features (e.g. reedbeds) will potentially improve the water quality of discharges to the Burghfield Brook.

The assessment has identified only one adverse residual impact on the water environment. This impact relates to the additional water demand

placed on the Chalk aquifer during the construction period. This impact will only be of limited duration as it will only occur during periods of highest water demand. Cumulative impacts on water resources relate to additional water demand on the underlying Chalk aquifer from future AWE Burghfield and other consented and Proposed Developments.

9. Transport

An assessment of the impact of the Proposed Development on the surrounding transport network has been carried out.

Baseline transport data, including traffic data, pedestrian and cycle provision, passenger transport provision and personal injury accident data were identified from surveys and published data.

The Proposed Development will be a direct replacement for the existing assembly facility, and will be occupied by the same number of operational personnel. Accordingly, the application proposals will not generate any additional operational personnel vehicle movements over and above the existing facility. The only additional vehicle movements will be generated by construction activity which is scheduled for completion during 2013.

It is proposed that:

- the AWE Burghfield operational workforce, including the Proposed Development

operational personnel, will continue to access and exit AWE Burghfield via the Main Gate;

- construction HGV's will access and egress the Proposed Development via Pingewood Gate; and
- construction personnel cars and light vehicles will access and egress the Proposed Development via Pingewood Gate, and construction management personnel cars will access and egress the Proposed Development via Main Gate.

As the application proposals will not generate any additional operational worker vehicle movements over and above the existing facility, operational workers will continue to use existing car parking and it will not be necessary to provide any additional car parking.

It is proposed to provide 300 construction worker car parking spaces in a new car park located to the south of the Pingewood Gate. Such provision is considered adequate, having regard to peak estimated trip generation from the Proposed Development. A mini-bus service will take workers from the car park to the construction site.

Construction management will have appropriate security clearance to access the main site. Accordingly, the demand for 138 construction management car parking spaces will be satisfied through existing parking availability on the main site.

Issue Date: December 2008	UNCLASSIFIED DIRECTORATE MAJOR PROJECT	Issue No:2
Environmental Appraisal Non-Technical Summary	Mensa Environmental Appraisal	

HGV numbers vary throughout the construction period depending on site activities. However, there is a distinct peak over a short period of time when the average will be substantially exceeded. It is estimated that up to 182 HGV movements per day will be generated over 4-5 weeks during Winter 2010/2011. The average number of HGV movements throughout the construction period is 58 HGV movements per day. This is substantially lower than the peak.

Numbers of cars and vans also vary throughout the construction period depending on site activities. They are estimated to peak in Winter 2012/2013, with up to 1228 car and van movements being generated per day.

Existing pedestrian and cycle provision in the vicinity of the Burghfield site is generally poor, reflecting the relatively isolated location of the site. During the construction phase, it is predicted that HGVs will have an adverse impact on safety, severance, amenity and delay for pedestrians and cyclists on Burghfield Road. To mitigate the impact of these HGVs on pedestrians and cyclists, it will be necessary to implement improvements to foot / cycle provision, including the potential provision of foot / cycleways and crossing facilities, on Burghfield Road. Discussions will be held with West Berkshire Council (WBC) and Reading Borough Council to identify opportunities to improve facilities for pedestrians and cyclists.

Delays on key routes to and from the AWE Burghfield site in the morning and afternoon peak periods have been assessed. The assessments demonstrate that in the morning peak period, the traffic generated by the Proposed Development is predicted to increase delays by no more than 15 seconds over 4-5 weeks during Winter 2010/2011, and by no more than 30 seconds over 8-9 weeks during Winter 2012/2013. These delays are only predicted to occur on routes from the A4. In the afternoon peak period, the traffic generated by the Proposed Development is predicted to increase delays by no more than a minute over 4-5 weeks during Winter 2010/2011 and no more than 3 minutes over 8-9 weeks during Winter 2012/2013. These delays are only predicted to occur on routes out from Amners Farm Road.

Having regard to these predicted delays and their temporary nature, the delays are considered acceptable and no highway improvements are considered necessary to mitigate their impact.

The safety record on Burghfield Road, Goring Lane, James's Lane and Pingewood Road is poor, and the generation of construction vehicles on these links could exacerbate it. To mitigate this, localised road safety measures, such as anti-skid surfacing and improved signage, will be required.

10. Air Quality

An assessment of the potential changes in local air quality as a result of the construction and operation

of the Proposed Development has been undertaken. There are three aspects of the development that are assessed:

- dust emissions during construction operations;
- emissions from construction vehicles using the local roads; and
- once operational, the Plant Building gas-fired boiler emissions.

These assessments are set in the context of the relevant planning policies, the appropriate significance criteria and the existing ambient (or background) conditions.

The AWE Code of Construction Practice (CoCP) incorporates a range of precautionary dust mitigation measures and working procedures, which will be implemented to minimize impacts during the construction phase. The assessment concluded that the likely effects of dust emissions on dust deposition rates at the nearest sensitive receptors, Burghfield Place and Burghfield Cottages, would not be noticeable.

The impact on air quality of vehicular emissions on the local road network during construction was assessed. Overall peak vehicle movements and peak HGV movements in key years were evaluated for scenarios both with and without the Proposed Development. In all cases, the changes in pollutants known as nitrogen dioxide and particulate

Issue Date: December 2008	UNCLASSIFIED DIRECTORATE MAJOR PROJECT	Issue No:2
Environmental Appraisal Non-Technical Summary	Mensa Environmental Appraisal	

matter were found to be negligible at all residential locations throughout the local road network.

The Plant Building houses gas-fired boilers that discharge to the atmosphere via several flues. The effect of the minor quantities of pollutants known as oxides of nitrogen emitted in the flue gasses were assessed quantitatively using an atmospheric dispersion model. The likely changes in long-term and short-term nitrogen dioxide concentrations at the nearest residential properties were found to be very small and these effects are considered to be negligible.

None of the above negligible effects are considered to be capable of altering the significance of the environmental impacts of any other potential future development nearby.

In summary, with regard to air quality all the potential effects of the Proposed Development are assessed as being insignificant, and hence are of negligible impact.

11. Noise & Vibration

An assessment has been carried out to determine the impact of noise and vibration associated with the Proposed Development. The assessment was based upon the results of baseline noise monitoring around the site perimeter and at sensitive receptors, and the prediction of expected noise and vibration levels during the construction and operational phases of the Proposed Development.

The construction phase of the project was assessed to give rise to temporary/short term impacts with local geographic extent only. The impact of vibration during the construction phase was anticipated to be negligible. The impact of construction noise was considered to be negligible at all locations considered, except for three positions on The Mearings (which abuts the western perimeter of the AWE Burghfield site) where it was assessed as minor significant during weekend daytime periods. This rating was due to the increase in noise level predicted at these positions due the construction activities, rather than the resultant absolute noise levels, which were considered to be of negligible impact. Assessment of potential night-time construction activities were assessed as a minor significant impact at two positions on The Mearings, however, night-time construction activities were considered to be only occasional short-term activities, such as concrete pouring.

The impact of the operational phase of the Proposed Development was determined to be of negligible significance and only of local geographic importance, for both noise and vibration.

12. Socio-Economics

An assessment of the socio-economic impacts of the Proposed Development has been undertaken. The assessment involved an economic impact assessment, including impact of the employment on the labour market and on the aerospace and

defence sector. A review of other socio-economic impacts on supporting infrastructure such as the housing market, open space, libraries, retail and leisure facilities has also been undertaken.

It is estimated that the construction phase will generate approximately 174 new jobs for residents of the four surrounding local authorities – Basingstoke & Deane, Reading, West Berkshire and Wokingham – each year of the construction period (for approximately 3.5 years).

The Proposed Development will modernise and upgrade the capacities of old facilities, enabling the evolution of the AWE site into a centre of world-class scientific and technical excellence. It will therefore enable AWE to develop world-class facilities that will help attract and retain skilled staff in a competitive global marketplace. The Proposed Development is therefore likely to have a moderate beneficial long-term impact on the aerospace and defence sector in the UK.

The Proposed Development will not result in any additional operational employees, rather existing employees will be transferred to the new facility. Therefore the scheme will not impact on supporting infrastructure such as housing, open space, retail and leisure facilities. Local retail providers are likely to benefit from the short-term presence of construction workers in the area.

In summary, it is likely that the Proposed Development will have an overall positive socio-

Issue Date: December 2008	UNCLASSIFIED DIRECTORATE MAJOR PROJECT	Issue No:2
Environmental Appraisal Non-Technical Summary	Mensa Environmental Appraisal	

economic impact on the local and regional economy and would be a positive step towards meeting some of the strategic objectives of regional and local policy. The Proposed Development will help secure the long-term viability of AWE Burghfield for the local area, and enable the 'Western Wedge' of the M40 corridor to maintain its reputation as a world-class high-technology economy.

13. Landscape & Visual

Although the Proposed Development will introduce large scale new buildings it will be fairly centrally located within the existing AWE Burghfield site, the height of the new buildings will be in keeping with the height of other existing buildings on the site. The main addition impacts will arise from the new catenary towers which will be substantially taller than those already existing on the site. However the light lattice metal structure of these and their tapering form will ensure they are in keeping with other pylons and masts already located in the valley and local area and that the impact of the visibility is confined to short to middle distant views up to about 3km.

The significant new landscape structure that would be implemented as part of the Proposed Development would compensate for the initial tree loss and would mitigate the effects of introducing the new development in the longer term, from Year 10 onwards, by improving the landscape of the site and reinforcing the layering effect of the rural landscape elements found in the local area which

screen and absorb the whole AWE Burghfield site into the landscape.

There would be temporary adverse landscape and visual effects associated with the construction of the proposals however, the overall residual landscape effects would be Minor beneficial. The residual visual effects would be negligible to Minor adverse but also with some beneficial views.

14. Cultural Heritage

The recent programme of site clearance means that there will be no significant impact on the historic landscape character of the Application Site or any significant impacts relating to setting on the Gravel Gerties.

An archaeological evaluation was carried out in September 2008 within the main Application Site and north of Pingewood Gate within the proposed HGV marshalling area. Trial trenching resulted in no archaeological finds within the Pingewood Gate area, although, several former ROF building foundations which had been demolished previously, a medieval ditch and a further number of undated ditches were discovered within the construction enclave.

Based on the results of the archaeological evaluation for the Application Site and considering that the setting of the Gravel Gerties have already been affected by development, no further

archaeological work is proposed and no mitigation is required for the Application Site.

The impact of the Proposed Development on the buried archaeological resource and on the setting of the potentially listed / scheduled Gravel Gerties will be neutral.

15. Ecology

Residual impacts on semi-improved neutral and species-poor grasslands are considered to be significant and negative in the short term, within the context of the AWE Burghfield site, at a certain level of confidence. In the long term, landscape and biodiversity enhancement proposals in relation to grasslands will result in a positive impact that is significant at a local (parish) scale.

Residual impacts on young trees are considered to be significant and negative, within the context of the Application Site in the short term (up to 10 years), with a certain level of confidence. In the long term, it is anticipated that landscape and biodiversity (i.e number of species) enhancement proposals in relation to trees will result in a certain positive impact that is significant within the context of the AWE Burghfield site.

Residual impacts on middle-aged trees are considered to be significant and negative, within the context of the AWE Burghfield site in the short term. In the long term (20 years plus), it is anticipated that

Issue Date: December 2008	UNCLASSIFIED DIRECTORATE MAJOR PROJECT	Issue No:2
Environmental Appraisal Non-Technical Summary	Mensa Environmental Appraisal	

landscape and biodiversity enhancement proposals in relation to trees will result in a positive impact.

Residual impacts on mature trees are considered to be significant and negative, within the context of the AWE Burghfield site in the short- medium term (10-20 years). In the long term, it is anticipated that landscape and biodiversity enhancement proposals in relation to trees will result in a positive impact.

Residual impacts on Burghfield Brook are considered to be neutral in the short/medium term. In the long term, it is anticipated that the implementation of habitat enhancement, linked to the AWE Burghfield Flood Management Plan, in addition to the creation of reptile habitat and the erection of a barn owl box will result in a positive impact.

Residual impacts on bats are considered to be significant and negative, in the short term. In the long term, the extensive landscaping and biodiversity enhancement proposals for the AWE Burghfield site are considered to result in a positive impact.

Residual impacts on birds are considered to be significant and negative, within the context of the AWE Burghfield site, in the short term. In the long term, the extensive landscaping and biodiversity enhancement proposals for the AWE Burghfield site are considered to result in a positive impact on birds.

The implementation of large scale landscape and biodiversity enhancement proposals, the medium to long term impacts on the ecology of AWE Burghfield site are considered to be significant and positive. There is potential for grassland enhancement to result in a positive impact that is significant at a local (parish) scale. Compensation and enhancement measures broadly comprise the planting of woodland and hedgerows; the creation of ecologically sensitive Sustainable Drainage Systems (SuDS) lagoons; the management of grassland for biodiversity and creation of grassland within the Application Site; and in the long term, the creation of ecologically valuable habitats within the decommissioned AWE Burghfield NSPA area.

16. Sustainability

A sustainability appraisal has been completed for the Proposed Development in accordance with the Sustainability Appraisal Handbook for the MoD Estates, the results of which have fed into the development of the scheme and the Environmental Appraisal. In addition, a preliminary BREEAM assessment has been undertaken for the Proposed Development.

The key beneficial impacts of the scheme in relation to sustainability can be summarised as follows:

- Use of a previously developed site;

- Provision of modern building that is visually integrated into the context of AWE Burghfield;
- High quality environmental design, including good daylight, ventilation and acoustics;
- A development that uses energy efficient building techniques and a reduction in carbon emissions compared to Building Regulations Part L2A 2006;
- Provision of water-efficient water fittings;
- Minimisation of noise sources during demolition/construction and operation;
- The incorporation of pollution prevention measures such as oil separators/interceptors;
- Provision of a building that is accessible to all, including the disabled and promotes pedestrian and cycle access;
- Maximisation of recycling and implementation of the best practicable environmental options for non-recyclable residual waste;
- Commitment by constructor to:
 - Develop and implement a Site Waste Management Plan (SWMP);
 - Sign up to the Considerate Constructors Scheme; and
 - Reduce construction site impacts.

Issue Date: December 2008	UNCLASSIFIED DIRECTORATE MAJOR PROJECT	Issue No:2
Environmental Appraisal Non-Technical Summary	Mensa Environmental Appraisal	

- Provision of a Development that has no car parking and incorporates sustainable transport measures such as secure safe, waterproof cycle storage space and a travel plan; and
- Provision of a scheme that is economically sustainable in terms of job creation for the demolition/construction.

17. Cumulative Effects

An assessment of the potential effects of the Proposed Development in combination with other development has been undertaken. The cumulative impact assessment considered the incremental changes caused by reasonably foreseeable future developments together with the proposed scheme.

The cumulative scenario assessed comprises proposals detailed in the AWE Site Development Context Plan 2008 (SDCP08). A review of major planning applications within the parish of Burghfield and adjacent parishes did not identify any schemes likely to affect the assessment or contribute to cumulative impacts.

By addressing the cumulative impacts from the Proposed Development, it is considered that there will be temporary adverse impact interactions during the construction stage in relation to transport and noise.

When addressing the combined effects of the Proposed Development and the proposals

contained within the SDCP08, it is considered that the provision of the Proposed Development, along with a significant amount of manufacturing space, and modern buildings in a landscaped setting will have positive impacts particularly in relation to socio-economics, as well as providing benefits for ecology across the site. In addition, continued development will result in the remediation of any contamination on site within the development areas, leading to beneficial impact to ground conditions and groundwater.

18. Residual Impacts and Conclusion

The construction phase will lead to a number of short-term minor adverse residual impacts. Long-term operation of the Proposed Development will generally have a negligible impact upon the majority of environmental receptors, with a range of positive impacts including benefits in terms of socio-economics, landscaping and ecology.

The overall conclusion of the EA is that the Proposed Development will be a positive step towards meeting a number of the strategic objectives of regional and local policy. The Proposed Development will help secure the long-term viability of AWE Burghfield for the local area and will provide a number of employment opportunities during the construction phase, and will safeguard existing employment during the operational phase.