

Mr Clive Inwards  
West Berkshire District Council  
Development Control  
Council Office Market Street  
Newbury  
Berkshire  
RG14 5LD

**Our ref:** WA/2008/105836/01-L01  
**Your ref:** 08/02287/COMIND  
**Date:** 17 February 2009

Dear Mr Inwards

**CONSTRUCTION OF MAIN PROCESS FACILITY (MPF) AND SUPPORT BUILDING WITH 16 LIGHTNING PROTECTOR TOWERS, ASSOCIATED PLANT BUILDING, GATE HOUSES, VEHICLE INSPECTIONS BAYS, SUB-STATION BUILDINGS, SECURITY FENCE, ACCESS ROADS, HARDSTANDING AND SUSTAINABLE DRAINAGE SYSTEM (SUDS) INFRASTRUCTURE**

**AWE, BURGFIELD, READING, BERKSHIRE**

Thank you for your letter of consultation on this application. We have been involved in pre-application discussion with the applicant and we are pleased that this has led them to thoroughly investigate the potential environmental impact of this development.

We have reviewed the details of the application and do not object to the development. We wish to advise you that the proposal will only be acceptable if certain measures as identified within the Environmental Appraisal are implemented and further design detail is secured through planning conditions. I urge you to consider the following comments when making a decision on this application.

**Flood Risk**

Part of the development site is located within Flood Zones 2 & 3 as defined by our Flood Zone map. The applicant carried out a hydraulic modelling exercise in order to provide a better understanding of the flood extents and flood flows at the site. The outputs of the model were used to inform the Flood Risk Assessment ref 5057498 DG06 i6.doc that was submitted as an amended plan to support this application.

We have reviewed the Flood Risk Assessment in conjunction with Section 8 of the Environmental Appraisal and can advise that we find it compliant with the requirements of PPS25 Development and Flood Risk. The Assessment demonstrates that the development will remain safe during the 1 in 100 year plus climate change flood event (the design event) and will not increase risk elsewhere.

One of the policy aims of PPS25 is to secure, where feasible, a reduction in the cause and impact of flooding. We accept the findings of the Flood Risk Assessment that confirms additional flood storage will be provided through this development in

comparison to what was available prior to the demolition of existing buildings on site.

In addition, a comprehensive sustainable surface water drainage scheme, which allows for a reduction in the rates at which surface water runoff leaves the site, will result in a further reduction in flood risk elsewhere.

### **Condition**

The development permitted by this planning permission shall only be carried out in accordance with the approved Flood Risk Assessment (FRA) 5057498 DG06 I6 dated 23 December 2008 and the following mitigation measures detailed within the FRA:

1. Finished Floor Levels to be set at 45.7m AOD as specified in section 6.3
2. Flood risk mitigation during construction as outlined in section 6.7.3
3. Reduction in surface water runoff from the development as outlined in section 6.8

### **Reason**

To manage flood risk and to reduce the future risk and impact of flooding by ensuring that storage of flood water is provided on site and the satisfactory storage of/disposal of surface water from the site.

### **Condition**

Development shall not begin until a surface water drainage scheme for the site, based on sustainable drainage principles and an assessment of the hydrological and hydrogeological context of the development, has been submitted to and approved in writing by the local planning authority. The scheme shall include;

1. Detailed plans in accordance with the principles outlined within the Flood Risk Assessment 5057498 DG06 I6 dated 23 December 2008 and the SUDS detailed design report EDMS1/801457EC/B/ES/6005 Issue 1
2. Confirmation that there will be no infiltration of surface water drainage into the ground, other than with the express written consent of the Local Planning Authority, which may be given for those parts of the site where it has been demonstrated that there is no resultant unacceptable risk to controlled waters
3. Detailed plans to show a variation of water depths, variation in the width of the marginal shelves/aquatic bench to prevent uniformity and the use of native species of local provenance in all planting and seeding mixes around the ponds, planted in the appropriate locations relative to wetness/water level for each species. Cross sections shall be included to illustrate these points
4. A management plan to ensure the function of the balancing ponds to manage surface water runoff and landscaping is maintained in the long term

The scheme shall be fully implemented and subsequently maintained, in accordance with the timing/phasing arrangements embodied within the scheme, or within any other period as may subsequently be agreed, in writing, by the Local Planning Authority.

### **Reason**

To prevent the increased risk of flooding, to improve and protect water quality, improve habitat and amenity of the surface water drainage system in accordance with PPS1, PPS25, PPS23 and PPS9.

## **Land Contamination & Groundwater Quality**

We have reviewed Section 7 of the submitted Environmental Appraisal and the Ground Conditions Technical Report JER3860/Mensa/GCTR Revision 1 included in Appendix A of the Environmental Assessment.

We consider the reports provide a thorough assessment of ground conditions at the site. A significant number of exploratory boreholes have been constructed within the London Clay.

The London Clay is classified as a non aquifer which has limited capability for potable water supply and so is not routinely tested for groundwater quality. This means we are not able to assess the results of the investigations against a regional baseline. The report in appendix D produces a number of summary tables that show major ions (Sulphate, Magnesium, Chloride, Manganese, Calcium, Sodium, Iron and Potassium) are in excess of generic water quality standards in most cases. We do not find this surprising, especially if the groundwater encountered has been present within the London Clay for a long time. Slowly moving groundwater in contact with rock forming minerals of the London Clay (such as clays or pyrite etc). might be expected to be elevated in these major ions. We are not concerned about these results because we would expect these ions to be present.

However, we feel it is necessary to highlight that elevated levels of pesticides were observed within groundwater. These substances clearly have an anthropogenic source. Elevated levels of alpha and beta hexachlorocyclohexane and the isomers of DDT in particular are found within groundwater below the main development area. The levels within the deeper aquifer appear to be more elevated than those of the shallower aquifer. This could mean, as suggested within the text, that these contaminants have migrated from off site agricultural sources but, the applicant has not included any off site baseline data for comparison and so it is not possible to confirm this hypothesis. Also the most elevated values occur in the middle of the site rather than on the up gradient boundary.

An alternative possibility is that the contaminants have leached out of the upper layers over time and have concentrated at depth. Natural degradation processes may be slower than within the shallow aquifer. If this hypothesis is correct, there is some concern that these contaminants have already managed to migrate through 8 metres of London Clay, which is generally expected to be impermeable and a sufficient barrier to contaminant migration.

We are slightly concerned that this could have a negative impact on the underlying Chalk aquifer. The developer has not provided evidence of groundwater quality within the Chalk, or clearly established whether the Chalk aquifer is connected with the water table of the deep aquifer. This is not unreasonable given the presumed impermeable cover of London Clay but does make it difficult for us to form an opinion. The report also assumes that the MoD abstraction to the East of the site, at Burghfield pumping station, is not a receptor of contaminants due to the perceived Southerly direction of groundwater flow. Regional groundwater contours in this location (see: *The 1:100,000 Hydrogeological Map Sheet 7 of South West Chilterns, Berkshire and Marlborough Downs*) show groundwater flows in a more SE to ESE direction than that measured on site. In addition, the site is within the modelled source protection zone 1 of the Burghfield abstraction well. This tends to indicate that a cone of depression for the abstraction could extend as far as the Mensa footprint, causing groundwater in the Chalk aquifer to move in a more easterly direction. Given that groundwater is used for potable supply both to east and south of the Burghfield site, we think there is value in determining groundwater quality

within the Chalk Aquifer for these biocides.

In the first instance, the offsite abstraction well could be used for sampling and, depending on the results, plus those of a revised risk assessment (including one for hexachlorocyclohexane) a decision can then be made on whether future work is required. This may require the applicant to assess groundwater quality within the Chalk within the footprint of the Mensa site, to establish that these elevated levels of biocides pose no risk.

Based on the fact that further work is required, we consider you should impose the following conditions. You should note that the applicant has already carried out significant work on this issue so sections 1 and 2 of the following condition have already been largely satisfied. We would prefer sections 1 and 2 to remain within this condition to ensure you can request revised risk assessments and site investigations if necessary.

### **Condition**

Prior to the commencement of development approved by this planning permission (or such other date or stage in development as may be agreed in writing with the Local Planning Authority), the following components of a scheme to deal with the risks associated with contamination of the site shall each be submitted to and approved, in writing, by the local planning authority:

- 1) A preliminary risk assessment which has identified:  
all previous uses
  - potential contaminants associated with those uses
  - a conceptual model of the site indicating sources, pathways and receptors
  - potentially unacceptable risks arising from contamination at the site.
- 2) A site investigation scheme, based on (1) to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site.
- 3) The site investigation results and the detailed risk assessment (2) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.
- 4) A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in (3) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

Any changes to these components require the express consent of the local planning authority. The scheme shall be implemented as approved.

### **Reason**

The site is located within an Inner Source Protection Zone for a potable water supply and the Environmental Assessment has identified a potential risk of groundwater contamination of the deep aquifer that requires further assessment in line with PPS23. This is necessary to determine the source of the identified pesticides and to quantify the risk to identified receptors.

### **Condition**

Prior to occupation of any part of the development, a verification report

demonstrating completion of the works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to and approved, in writing, by the local planning authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met. It shall also include any plan (a long-term monitoring and maintenance plan) for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action, as identified in the verification plan, and for the reporting of this to the local planning authority.

**Reason**

To ensure there is no adverse impact on groundwater quality in line with PPS23.

**Condition**

If, during development, contamination not previously identified is found to be present at the site then no further development (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until the developer has submitted, and obtained written approval from the Local Planning Authority for, an amendment to the remediation strategy detailing how this unsuspected contamination shall be dealt with.

**Reason**

To ensure there is no adverse impact on groundwater quality in line with PPS23.

**Condition**

Piling or any other foundation designs using penetrative methods shall not be permitted other than with the express written consent of the Local Planning Authority, which may be given for those parts of the site where it has been demonstrated that there is no resultant unacceptable risk to groundwater. The development shall be carried out in accordance with the approved details.

**Reason**

To protect groundwater quality in line with PPS23.

**Ecology & Biodiversity**

We have reviewed Section 15 of the Environment Appraisal and the Mensa detailed SUDS design report. There appears to be some discrepancies between the designs and planting plans for the various balancing ponds shown in the detailed design report to those shown on the landscape plans. Whilst the SUDS report shows a reasonable design for the pond at Pingewood Gate, the details for the ponds by the Mensa building are unclear and appear to show marginal plants on dry slopes away from the permanent water. The principles contained within the various landscape documents in relation to the ponds are sound in description, but lack certain detail to make the plans entirely clear.

With regard to the plant schedule, we request that all species within the boundary hedges are native species of local provenance, to ensure planting fits into the surrounding landscape. One or two species were indicated as being cultivars.

The Landscape and Biodiversity Maintenance Report (JSL 1669\_610 Rev A), in Appendix 3 of the detailed SUDS report, states that 'estate hedges' should be 'cut back twice per year outside the bird breeding season'. We do not feel there will be enough growth in the September to March period to merit two cuts and would urge the applicant to amend this.

In addition we would like to suggest to the applicant that if dredging of the balancing ponds is necessary, then any aquatic/marginal plants should be removed first and reserved for replanting within the ponds upon completion. This comment is made in reference to point 16 of Appendix 3 (Wetland habitats (General)).

In conclusion, we consider it reasonable to seek these minor revisions and further design detail through the suggested surface water drainage condition cited earlier in this letter. This will ensure the developer maximises the nature conservation potential of the balancing ponds.

## **Planning Informatives**

In England, it is a legal requirement to have a site waste management plan (SWMP) for all new construction projects worth more than £300,000. The level of detail that your SWMP should contain depends on the estimated build cost, excluding VAT. You must still comply with the duty of care for waste. Because you will need to record all waste movements in one document, having a SWMP will help you to ensure you comply with the duty of care.

Further information can be found at <http://www.netregs-swmp.co.uk>

Due to the proximity of the site to Burghfield Brook and Sustainable Drainage Systems all works carried out in connection with this development should comply with Environment Agency pollution prevention guidelines (PPG5): 'Works and maintenance in or near water'. Copies and further information are available from your local Agency office or from [www.environment-agency.gov.uk/ppg](http://www.environment-agency.gov.uk/ppg)

The Control of Pollution (Oil Storage) (England) Regulations 2001 apply to all above ground commercial oil storage in tanks over 200 litres in volume. This means that tanks should be fit for purpose and have a secondary containment (or bund) sufficient to contain 110% of the tanks contents. The secondary containment must be impermeable to oil and water and not have any drainage valve. All the tanks ancillary equipment (valves, delivery hose, gauges, vent) must be within the curtilage of the secondary containment or bund. The regulations have other stipulations and full information can be found at [www.environment-agency.gov.uk/osr](http://www.environment-agency.gov.uk/osr) or from Pollution Prevention Guidance Note 2 for Above Ground Tanks or PPG26 for Drums and Intermediate Bulk Containers.

The Water Resources Act 1991, s85 makes it an offence to cause or knowingly permit poisonous, noxious or polluting matter to enter controlled waters unless you are in possession of a discharge consent or other relevant permit. Controlled waters include all water below the surface of the ground. This legislation is not restricted to any listed substances.

Discharge consents issued under the WRA1991 constitute authorisations for the purposes of the Groundwater Regulations provided the relevant conditions have been applied.

Erection of flow control structures or any culverting of a watercourse requires the prior written approval of the Environment Agency under s.23 of the Land Drainage Act 1991 or s.109 of the Water Resources Act 1991. The Environment Agency resists culverting on nature conservation and other grounds and consent for such works will not normally be granted except for access crossings.

If you wish to discuss anything raised in our response, please do not hesitate to contact me. We ask to be consulted on the details submitted for approval to your Authority to discharge conditions and on any subsequent amendments/alterations.

Yours sincerely

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