



Report No. SRL/EL/004.1

Objection to Radley Ash Disposal Scheme Lake E

Statement of Objections to RWE Npower's Application for
Planning Permission to fill Lake E at Radley with PFA.

by

Save Radley Lakes

OBJECTION STATEMENT

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Summary: This document sets out the details of the Objection, by Save Radley Lakes, to the January 2006 proposal, by RWE Npower, to drain Lake E, also known as Thrupp Lake, at Radley, and fill it with waste pulverised fuel ash (PFA) from Didcot A Power Station, and is submitted to Oxfordshire County Council on behalf of the Executive and Members of Save Radley Lakes.

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Statement of Objections by Save Radley Lakes to RWE Npower's Application for Planning Permission to fill Lake E at Radley with PFA submitted by B J B Crowley D.Phil. C.Phys. F.Inst.P., D M M Guyoncourt Ph.D., R M G Eeles B.Sc. Ph.D., Peter Harbour M.A. Ph.D., J Cartmell, J Dunleavy, L Pasquire and M White

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SUMMARY

This document sets out the details of the Objection, by Save Radley Lakes, to the January 2006 proposal, by RWE Npower, to drain Lake E, also known as Thrupp Lake, at Radley, and fill it with waste pulverised fuel ash (PFA) from Didcot A Power Station, and is submitted to Oxfordshire County Council on behalf of the Executive and Members of Save Radley Lakes.

INTRODUCTION

Who we are

Save Radley Lakes is an organisation that was formed by local people and formally constituted in 2005 to be the focus of public protest against plans by RWE Npower, operators of the Didcot Power Stations, to destroy two beautiful lakes at Radley and turn them into a waste dump for their unwanted fuel ash.

Currently, Save Radley Lakes has 576 paid-up members and has succeeded in raising approximately¹ 9,000 signatures on a petition asking RWE Npower to leave the lakes alone and find a more sustainable and less damaging solution to their fuel ash problem.

Save Radley Lakes is run by an executive whose members are the signatories to this document. A much larger core group has assisted directly by raising funds, collecting signatures, undertaking research and generally helping to raise the profile of the campaign, and then there is the huge number of people, including businesses and organisations, who have assisted by their support and patronage.

OBJECTION

Save Radley Lakes **objects** to the proposal by RWE Npower, in their Planning Application submitted to Oxfordshire County Council in January 2006, to construct and operate a landfill waste disposal site for surplus pulverised fuel ash (PFA) from Didcot A Power Station at Lakes E at Radley.

In June 2005, RWE Npower submitted a similar planning application pursuant to existing planning permission SUT/RAD/5948-12CM, which is a variation of earlier planning permission granted in 1983, to fill the two lakes at Radley know as Lake E, Thrupp Lake and Lake F, Bullfield Lake, with pulverised fuel ash (PFA) from Didcot Power Station. We understand that this application has been put in abeyance. Should this application be revived we would wish that Oxfordshire County Council consider and take account of these objections, as well as those already submitted in response to that earlier application, in their ensuing deliberations concerning this or any future planning application of a similar nature affecting these two lakes.

¹ 8870 signatures as of 11 April 2006

We understand that the current proposal (ENV/057/2006, January 2006, as summarised in Appendix 5) is a stand alone proposal and is not dependent upon any previously granted or applied for permissions.

WHY WE OBJECT

Supporting Documentation

RWE Npower's planning application of January 2006, hereinafter referred to as The Application, is supported by a voluntary Environmental Impact Assessment (EIA) which was carried out by the applicant, and the resulting Environmental Statement² (the ES) is a weighty document of some 428 pages. In responding to the contents of that document, Save Radley Lakes has itself gathered a considerable weight of evidence by which to refute or counter much of what is presented in the ES. This evidence is contained in the following reports, which accompany this objection:

Ref. No	Title	Authors	Topic Addressed	Relevant sections in the ES
SRL/FP/001.6	Evaluation of Increased Flood Risk as a Consequence of RWE Npower's Proposal...	D Guyoncourt B Crowley	Flood risk	Appendix 7A: Flood Risk Assessment
SRL/FP/002.2	Pollution Risks Associated with the Deposition of PFA Slurry into the Radley Lakes	D Guyoncourt, B Crowley R Eeles	Pollution risks	Section 6: Air Quality; Section 7: Hydrology and Hydrogeology
SRL/FP/003.1	Evidence of Ground- and Surface-Water Pollution...	R Eeles	Evidence of pollution caused	Section 7: Hydrology and Hydrogeology; Appendices 7B-E
SRL/WE/001.9	Evaluation of the Wildlife at...	R Eeles	Ecology	Section 5: Ecology; Appendix 5: Species List
SRL/WE/002.3	The Condition of the Pumney Brook	R Eeles	Ecology and evidence of pollution	Section 7: Hydrology and Hydrogeology
SRL/WE/003.2	A Comparison of the Biodiversity of Lakes A to D and Lakes E and F	R Eeles B Crowley J Cartmell	Ecology and restoration issues	Section 5.4: Design mitigation
SRL/WE/004.2	Otter, Water Vole, Badger and Bat Activity and Distribution ...	R Eeles B Crowley J Cartmell	Ecology (Mammals)	Section 5: Ecology;
SRL/WE/005.1	The Birds of The Radley Lakes	D Guyoncourt	Ecology (Birds)	Section 5: Ecology; Appendix 5: Species List
SRL/PFA/001.1	PFA from Didcot Power Station – A summary of Alternative Options...	R Riggs B Crowley I Kemp	Necessity of proposal and alternative options	Sections 3.2 – 3.3 (Statement of Need)

² RWE Npower, Radley Ash Disposal Scheme Lake E Environmental Statement, Ref: ENV/057/2006 (January 2006).

In the following, each report will be referred to by an abbreviation of its reference number, eg, SRL/FP1 for SRL/FP/001.6 etc. (The last digit in the reference number is the issue number and is not needed to identify the document title.)

Basis of our Objection

Save Radley Lakes Objects to The Application for the following reasons:

1. **The Environment Impact Assessment is inadequate. Apart from numerous significant errors and omissions with regard to disposal alternatives and the likely impact of those alternatives; ecology; flooding; road traffic; landscape and visual impacts; and impact on the community, which are listed in detail in Appendix 1, the EIA has been insufficiently thorough in its investigations of the likely impact on certain (legally protected) species present on the site and misrepresents the applicant's obligations under wildlife legislation, in particular, the European Habitats Directive.** The principal deficiencies in the Environmental Statement are:
 - a. The demonstration of need (Section 3) is weak, exaggerates the impact of transporting the surplus ash and fails to give due (open) consideration to more ecologically friendly disposal options which both utilise the ash and remove the need to destroy any lakes at Radley.
 - b. The ecological assessment (Section 5) fails to include a wider assessment and contains several unsupportable or invalid statements about the likely impact on legally protected species and those of raised conservation significance.
 - c. The ecological assessment (Section 5) fails to give proper consideration to species whose habitats are protected under the European Habitats Directive.
 - d. There is no Appropriate Assessment in the context of the European Habitats Directive.
 - e. The flood risk assessment (Section 7 and Appendix 7) contains typographical errors of a highly misleading nature and is based upon a model whose predictions appear to at variance with both the historic data and recent observations and measurements on the site.
 - f. Landscape and visual assessments (section 10) contain some remarkable statements about what constitutes a neutral change in scenery and fail to consider enough viewpoints overlooking the actual area subject to the development.
 - g. Omission of any assessment of impact on Lake M and its surroundings by proposed drainage works.
2. **The proposal contravenes government policies and guidelines with respect to the Green Belt, flooding, nature conservation, etc. These are set out in Appendix 2.** In particular, we contend
 - a. that the proposal is Inappropriate Development under section 3.12 of PPG2 and contravenes Oxfordshire Structure Plan 2016 policy G4, White Horse Local Plan policies G1 and G9 and Oxfordshire Minerals and Waste Local Plan (1996) policy W7(g);

- b. that the proposal contributes to increased flood risk and removes the possibility of mitigating flood risk from other development in the area, and thus contravenes PPG25 and the Oxfordshire Minerals and Waste Local Plan (1996) policy W7 (c);
- c. that the site, on account of its exceptional biodiversity, and the presence of several species receiving statutory protection or which are the subject of conservation action, should be protected under PPS9 sections 9-16. In this respect the proposal is also contrary to RPG29 Policy E2, Oxfordshire Structure Plan 2016 policy EN2, White Horse Local Plan 2001 policies NC2 and NC4 and Oxfordshire Minerals and Waste Local Plan (1996) policies E1 (f; g), PE14 and W7 (d);
- d. that the proposal infringes policy INF3 of RPG29 in that the waste could be disposed of closer to its source, the Power Station;
- e. that the proposal will cause pollution and degradation of water quality in local lakes and streams (SRL/FP2 and SRL/WE2) and thus contravenes Oxfordshire Structure Plan 2016 policy EN8;
- f. that the restoration will create an alien and entirely inappropriate environment for the location and is thus in contravention of Oxfordshire Structure Plan 2016 policy M1;
- g. that, since good alternatives for the waste disposal exist (SRL/PFA1), the proposal contravenes Oxfordshire Structure Plan 2016 policy WM2;
- h. that, since vehicular access to the site is via a narrow country lane that is single track over much of its length, which is part of the National Cycleway, is a local footpath and which is already dangerously overloaded with HGV traffic, the proposal contravenes Oxfordshire Minerals and Waste Local Plan (1996) policy W7(h).

3. The Lakes are a beautiful and essential part of the landscape. The proposal would turn one of them into a vast waste dump and the area would remain surrounded by unsightly security fences for decades to come, if not indefinitely.

- a. The proposal would have a major adverse impact on the local landscape due to the loss of a mature freshwater lake containing many arboreal islands. Both lakes are an important and essential part of the local landscape.
- b. There is a potential adverse landscape and ecological impact in area of Lake M, which has not been assessed.
- c. The proposal would have a severe detrimental visual impact on the area.
- d. There is a potential adverse visual impact on Lake M, which has not been assessed.
- e. The presence of unsightly fencing alongside the isthmus running between Lakes E and F will spoil an otherwise attractive and natural area.
- f. Protective fencing itself may cause damage to wildlife (rare plants) and may be inadequate to prevent damage by heavy machinery.
- g. Proposed working and protective fencing are much too close to the retained Lake F, particularly in the area of the SE corner of Lake E.

4. The proposal will harm wildlife, including legally protected species that have been identified on the site, and their habitats, in contravention of the European Habitats Directive, the Wildlife and Countryside Act and Government planning policy

- a. The proposals would result in the destruction of a large Lake area (Lake E) that is of substantive value to nature conservation (SRL/WE1, SRL/WE4, SRL/WE5 as well as the applicant's own assessments).
- b. The mitigation for loss of wildlife and its habitats is inadequate. The ES makes repeated reference to remaining lakes in the area as providing suitable replacement habitats for displaced species. This is not true. Lake E is the only remaining large waterbody in the area. Its loss cannot be mitigated by the retention of an existing waterbody less than a fifth of its size. Other waterbodies in the area are even smaller, and already saturated. The same applies to the wider locality, in which remaining waterbodies are ecologically immature, small in size and/or earmarked for landfill. Other large lakes in the district are too commercially exploited to be of value to many forms of wildlife.
- c. *We believe that insufficient thought has been given to the protection of areas outside the proposed disposal site from damage, particularly during the construction phase. In several areas, the use of machinery to carry out exterior profiling of the bunds will, almost certainly, damage sensitive areas. These include most particularly, the isthmus between lakes E and F and the extension of this into the west Bullfield area; and the row of beech and poplar trees along the western edge of Lake E, where the White Helleborines grow. We would like to add our concerns to those of BBOWT, in this respect, and ask Oxfordshire County Council to prohibit the use of heavy machinery, in these areas, and to prohibit vehicular access to all areas beyond the disposal site where such access is not already provided for.*

5. Draining and digging out Lake E will also drain and damage the adjoining Lake F, a lake that is known for the purity of its hard oligo-mesotrophic waters and the several species of stonewort (*Chara*) they contain. This will also result in the death of many aquatic species and other species dependent on the water.

- a. The unavoidable dewatering of Lake F will damage a wildlife site of recognised substantive value to nature conservation. This is contrary to several planning policies and guidelines as listed above.
- b. There is acknowledged vulnerability of certain species, such as waved black and great oak beauty moths, to loss of wetland and damp woodland habitats. The adequacy of the smaller lake on its own to retain these species is uncertain. What is certain is that the loss of the larger lake will severely damage the prospects for these and many other species.
- c. Damage to and loss of habitat, without adequate mitigation, of protected species, such as Kingfisher, bats, otters and Cetti's warbler, is contrary to planning policy as well as to wildlife protection legislation (Wildlife and Countryside Act and European Habitats Directive).
- d. There is a threat to many scarce and rare invertebrate species directly or indirectly dependent on the Lake(s) and loss of species diversity due to loss of habitat diversity.

- e. The construction of the access route alongside Lake M will damage the natural environment of this Lake.

6. Removal of the lake and the sealing of its contents with raised bunds will greatly reduce the capacity of the local flood plain, increasing the risk of severe river flooding in the Abingdon area.

- a. The Flood Risk Assessment included in the ES contains errors (Appendix 1) that (conveniently) conceal inadequacies of the modelling, and its conclusions are mistaken (SRL/FP1).
- b. Both lakes are part of the current operational flood plain, considered in the absence of existing 'temporary structures' such as bunds and dumped spoil, and have the capacity to absorb over 100,000 cubic metres of floodwater (SRL/FP1). The loss of either would contravene PPG25 and would significantly increase the risk of severe river flooding in the locality.

7. Discharge of water contaminated by PFA poses a potential pollution threat to the local groundwater, the Thames and people and wildlife downstream.

- a. The mere presence of List 1 toxic substances in the PFA discharge is a concern. These substances are highly toxic, bio-accumulative and persistent in the environment. The risk therefore comes, not from the rate of their release, but how much ultimately ends up in the wider environment. The method of disposal increases the risks to the environment from such substances, compared with other possible methods (SRL/FP2, SRL/PFA1).
- b. There is pollution risk due to presence of significant levels of certain substances, most notably: Boron, Arsenic and Chromium (SRL/FP2). The hexavalent form of chromium, which is present in PFA effluent, arsenic, and cadmium (which is not monitored) pose particular risks to wildlife as well as to humans. The method of disposal increases the risks to the environment from such substances, compared with other possible methods (SRL/FP2, SRL/PFA1).
- c. Significant pollution of ground and surface water in the phase 2 area has already occurred at levels that should be unacceptable for this type of environment (particularly when measured against EQS 1, which, we believe is the appropriate standard for this area) (SRL/WE2 and SRL/FP3). Because of this, and to prevent further pollution, no further ash disposal at Radley should be permitted.
- d. There is risk of airborne pollution from windblown PFA dust (SRL/FP2), particularly from "secondary" operations.
- e. Arrangements for cenosphere stockpiling are unsatisfactory. There is a high risk of cenosphere release sometime over the 9-year operating period of the site.
- f. *Should permission be granted, and even if not, Oxfordshire County Council should insist that future discharge limits from the Radley Disposal Site are set at the higher, more appropriate, EQS1 Environmental Quality Standard for the receiving watercourses.*

8. The construction phase will generate noise and traffic in detriment to the local environment.

- a. Construction noise and duration pose a source of disturbance for the residents of the Thrupp Farm community, and are unacceptable for this rural location. RWE Npower grossly overestimate the distance between this community and Lake E (they claim 330 metres whereas the actual distance to the nearest dwelling is 160 metres).
- b. Increased traffic levels in Thrupp Lane have been inadequately assessed, partly due to failure to establish a background baseline for this route. Thrupp Lane is already overloaded with heavy traffic, and becoming dangerous as a result. There are frequent conflicts between traffic flows, and cyclists and pedestrians often feel threatened or intimidated by frequent HGV traffic. The additional traffic that is proposed would represent an unacceptable increase.
- c. There will be temporary obstruction of the byway (BOAT No 9) for an unspecified period. This track is part of the National Cycleway and is frequently used by walkers and cyclists.
- d. There would be a significant increase in HGV traffic using other local roads at certain times of the day (The ES, p.169).

9. The need to dispose of PFA in the manner proposed has not been demonstrated. The Statement of Need in the ES is superficial and inadequate.

- a. The issues relating to the production and disposal of PFA are examined in SRL/PFA1. Options are found for its disposal or reuse that cause less harm to the environment, which, in this instance, is considered an important local asset by the community. Several such alternatives are suggested in the Environmental Statement, some of which merit further investigation. In too readily dismissing these alternatives and failing to consider others, the Power Station operators could be accused of a lack of creative thinking and/or a lack of will not to cause unacceptable damage to the environment by their operations.

10. There are clear detrimental effects on population and local assets. These lakes are priceless. Many people would be very upset if they were lost.

- a. PPS9 refers to the need to retain Local Nature Reserves and Local Sites of biodiversity interest for their contribution to the quality of life and the well being of the community; and in supporting research and education. All of these factors apply in the case of the Radley Lakes. No other sites of comparable quality and interest exist within the wider locality.
- b. It is the intention of SRL and the Community to try to acquire these lakes for conservation and educational purposes and for recreation consistent with these former aims. A Conservation Group of volunteers already exists who would take on the long-term management and care of the site.

11. The Restoration Plan is unsatisfactory and the timescale is too long.

- a. What assurances do Oxfordshire County Council have that the proposed restoration is achievable? There is evidence in the phase 1 area that the PFA surfaces will remain unstable indefinitely. The PFA in the sealed phase 2 lakes achieves an even lower initial consolidation density suggesting the possibility of sub-surface voids or that the PFA has settled into a very open porous structure. Given that a considerable amount of water is, by

implication, also trapped in these “lakes”, there must be long term risk of instability and potential collapse of the surfaces, and that they therefore represent a potential long-term hazard.

- b. We object to the statement by Npower, supported by BBOWT and Bioscan, that an alien PFA environment (however well “restored”) will increase local biodiversity. While this may be true, provided that such an environment can be created without destroying what is already there, it is certainly not true (SRL/WE3) if it involves the destruction of the sole remaining lake of any substantial size in the area. Those in the conservation community who wish to see such habitats created here should press for a restoration plan, of a similar nature, to be applied to the already destroyed ‘Lakes’ G and J/P. There is no need to destroy Lake E as well, to achieve this.
- c. *While there is a risk to the public from the operations, the security fences will no doubt be required to remain in situ. However, we would ask that, in the event that the Environment Agency and Oxfordshire County Council determine that the fences are no longer necessary, the fences should immediately be removed. This should be a condition of any planning approval. Any replacement fencing should be subject to future planning permission.*
- d. *In view of the very long term liability to the Power Station operators that the restoration will involve, Oxfordshire County Council should insist on an indemnity payment sufficient to cover the restoration costs should RWE Npower or its successors be unable to meet those commitments, and to cover possible long term remediation, if the restoration plan proves impossible within the proposed timescale, or if there are other unforeseen problems.*

Specific Reasons for Objection

The following specific aspects of the proposal are considered defective or unacceptable and offered as reasons for objection, both within and in addition to the general objections listed above.

Table 1: List of Grounds for Objection raised by the Environmental Statement

(Items are listed in the order in which they appear in the ES)

Reference to ENV/057/2006	Objection
Throughout	The presence of significant errors and omissions as listed in Table 2 (Appendix 1) points to an application that has been hurriedly assembled without due care and regard for the impact that the proposal will have on the environment. Indeed it is evident that, notwithstanding all the hype and spin that accompanied the submission of this application, caring for the environment was not in the forefront of the minds of those compiling the proposal.
Figure 1.1	The construction of the access route along the perimeter of Lake M (Orchard Pool) will inflict damage on the environment of this picturesque “lake”, which Npower and its predecessors have already promised to protect from further development (ES page 25) and, in particular, any damage appears likely to be detrimental to the very attractive views across the lake from the eastern shore. Moreover no assessment of this damage, ecological or visual, is provided.
Page 21 and Page 37 Installation of culvert under BOAT number 9 and proposed working across the byway.	There is the likelihood of temporary obstruction of the byway. (Npower give no indication of the duration of any temporary periods of total obstruction.)
Pages 40 and 43 Dewatering of Lake F	The unavoidable dewatering of and consequent damage to Lake F is unacceptable. The water level will be “reduced” for an estimated five months. Given the absence of remaining substantial lakes in the area to act as a reservoir for mobile species, and the absence of mitigation for non-mobile species, subsequent recovery of the lake is unlikely within a reasonable period. A fish rescue is proposed for both lakes. Such rescues have been witnessed in the past on other lakes on the site, and appear to have been largely ineffective in actually saving most of the fish. A cynic would say that their real purpose, beyond being merely placatory, is to remove any large fish of monetary value. In this context, it is notable (p.43) that there is no guarantee that any fish removed from Lake F, will be returned to that lake, despite their undoubted ecological importance to the lake.
Page 41 Fences	The presence of an unsightly security fence running alongside the isthmus between lakes E and F, currently a beautiful natural area, is an unacceptable visual intrusion.

Reference to ENV/057/2006	Objection
<p>Page 42 Protective fences</p>	<p>The line of protective fencing to protect the isthmus is unclear. The construction of any, even temporary, fencing along the northern edge of the isthmus would cause damage to rare plants growing along this bank. Given that heavy machinery will be operating in this area, we worry that chestnut paling fencing will offer insufficient protection.</p> <p>This also raises questions about protection of other areas beyond the perimeter of the proposed construction area, in particular anywhere along the southern and western edge of Lake E, including the row of beech and poplar trees where the White Helleborines grow.</p>
<p>Page 90, para.1 Critical implications for moths: waved black and great oak beauty</p>	<p>The vulnerability of these moths to loss of damp woodland and wetland habitat is cause for concern. The adequacy of the smaller lake to accommodate these, together with the many other species also affected, is uncertain.</p>
<p>Page 91 Protected species</p>	<p>Bats and Kingfishers, which are protected species under the Wildlife and Countryside Act and the European Habitats Directive, are dependent on both lakes for food. The loss of the larger lake will significantly (by ~85%) reduce this food supply. In the case of Kingfishers, the loss of the larger lake will also remove nesting sites. Contrary to para.5 on page 91, the main foci of Kingfisher activity are the northern and southern shore areas of Lake E.</p> <p>Otters, another protected species, also frequent the site (SRL/WE1 and SRL/WE4) and the loss of the lake represents a destruction of part of their habitat. Lakes are of critical importance to female otters and cubs as these spend 90% of their lives there. Male otters depend more upon rivers.</p>
<p>Page 92 <i>A significant number of nationally rare and nationally scarce invertebrate species have been recorded from the Radley Lakes Complex.</i></p>	<p>Although some of these rare and scarce invertebrate species may be reliant on habitats found on the wider site, many will be dependent, directly or indirectly on The Lakes. Species diversity is correlated with habitat diversity. As the sole remaining large lake on the site, Lake E must be retained for its contribution to that diversity.</p>
<p>Page 92 <i>Overall Lakes E and F are considered to have substantive value to nature conservation, and are probably of County importance.</i></p>	<p>Neither of them should therefore be destroyed. To do so would be contrary to PPS9 sections 9-16, RPG29 Policy E2, Oxfordshire Structure Plan 2016 policy EN2, White Horse Local Plan 2001 policies NC2 and NC4 and Oxfordshire Minerals and Waste Local Plan (1996) policies E1 (f; g), PE14 and W7 (d).</p>
<p>Page 98 (section 5.5.2) Bats</p>	<p>The loss of a major feeding site, Lake E, will have a direct impact on bats. Npower have carried out an inadequate assessment in respect of bats. None of the proposed mitigation measures address the fact that a feeding site of major importance to bats is being completely destroyed. Neither the assessment nor the proposed mitigation measures meet the requirements under the European Habitats Directive, which protects the entire habitat essential to the bats' survival.</p>
<p>Page 99 (section 5.5.2) Otter</p>	<p>The lakes are part of the habitat used by the local otter population. They are important to female otters while rearing cubs. Destruction of this lake, without adequate mitigation or meeting licensing requirements, would be contrary to the Wildlife and Countryside Act and the European Habitats Directive.</p>
<p>Page 125, section 6.1, para 2. <i>There is no opportunity for fugitive dust emissions to arise directly from the primary disposal operation.</i></p>	<p>The use of the words "directly" and "primary" suggest that there may be opportunities for dust emissions indirectly and from "secondary" operations.</p> <p>To illustrate the point, dry PFA was observed blowing about on the track to the south of H/I during 2005.</p> <p>The statement is untrue. The applicant cannot give any such guarantee.</p>

Reference to ENV/057/2006	Objection
Page 127 (Section 6.2.2)	There is opportunity for the lake surface to dry off during summer months when no pumping of slurry is occurring. With the 'lake' raised to over 5.5m, its surface will be exposed to wind. Active mitigation during dry periods, especially when wind is blowing towards residential areas, should be part of the operation plan.
Page 129 Cenosphere control	There is a high risk of cenosphere release sometime over the 9-year operating period of the site. Cenosphere stockpile arrangements are not satisfactory. The ramshackle arrangement at the corner of H/I is unsightly and the sheeting can be insecure.
Page 132-133 Dangerous substances in discharges.	The mere presence of List I substances in PFA effluent discharges is cause for concern. The presence of Cadmium at the limits of detection is not reassuring, as, even at these levels, it is toxic to wildlife. The US EBI consider 1 microgram per litre in hard water to be harmful to aquatic life. Cadmium, along with other heavy metals, is bio-accumulative and can therefore achieve concentrations in the environment above that of the primary source. An objection to the proposal is that this method of disposal increases the risks to the environment from such substances, compared with other possible methods. (SRL/FP2, SRL/PFA1)
Page 133 (Section 7.3) Baseline situation and existing operations	Npower give the impression that any pollution caused by their operations at Radley is within acceptable limits. What may be acceptable to them should not be considered so in the context of what used to be a pristine natural environment characterised by clear freshwater streams providing a high quality environment for a wide range of species. Even as late as 1999, an ecological survey, by Cresswell Associates ³ , of the Pumney Brook found it to be of Medium to High Conservation Value for macro-invertebrates, with the PFA Outfall Pool being in the higher category. Recent surveys of the Pumney Brook, and wider area, carried out during 2005-6 by SRL (SRL/WE2, SRL/FP3) have noted a significant deterioration in water, and associated habitat, quality throughout the existing phase 2 area. The Outflow Pool, previously of High Conservation Value is now polluted and eutrophicated and rates (using identical measurement techniques and assessments) as being of Low Conservation Value. Elevated levels of pollutants occur in all ground and surface water around the PFA lakes, with a temporal behaviour and spatial distribution that suggests (SRL/FP3) that their cause is not the phase 1 site, but rather operations associated with phase 2.
Page 136, Table 7.3 Water quality parameters for discharges into Pumney Farm Ditch.	This indicates the presence of significant levels of certain elements, notably Boron, Arsenic and Chromium. (Cadmium, although likely to be present, is not monitored.) Amounts discharged are estimated by quarterly sampling and are therefore very uncertain. The risk, to wildlife and humans, posed by these elements in the discharge, especially Arsenic, Cadmium and the hexavalent form of Chromium, are grounds to object to further ash disposal operations of this type at Radley.
Page 136, section 7.3.1.4 Current Measures for Flood Control	The figures given in the paragraph at the bottom of this page do not bear scrutiny and serve to discredit the Flood Risk Assessment (FRA) that forms an essential part of the ES. We therefore object on the grounds that the FRA has not been correctly carried out and its conclusions are invalid.

³ *Macroinvertebrate Study of the River Thames and the Pumney Farm Ditch, Radley Ash Disposal Site, Cresswell Associates (1999)*

Reference to ENV/057/2006	Objection
Page 145, section 7.5 Predicted Impacts <i>"The draining of Lake E is expected to cause Lake F to be temporarily de-watered for the period of Lake E construction."</i> (~ 5 months)	Having acknowledged that Lake F is of significant conservation importance, this impact is unacceptable and runs contrary to several planning guidelines and policies listed above: (PPS9; OxonSP2016, policy EN2; WHLP2001, policies NC2 & NC4; WHLP 2011 policy NE1; Oxon MWLP criterion W7(d).)
Page 160, Table 8.5 Noise from construction of Lake E Ash Lagoon.	Construction noise at Thrupp House (Farm and Cottages) is +11dB. This during 0700-1800 Monday to Friday and 0700-1300 Saturdays for 5 months is unacceptable for a rural location. This noise level is determined at the most distant point on the inhabited area. In fact, the nearest inhabited dwelling lies only 160m from the construction site.
Pages 166-167, Tables 9.1-9.3 and page 173 para.3. Traffic	Construction traffic during construction is significant: If a vehicle movement is counted as a one-way journey to or from the site, then the data indicate 56 vehicle movements per day (including 2 HGV) plus an additional 214 HGV movements over the five month construction period. The worst case scenario of 8 additional HGV movements per hour would be a very significant increase for Thrupp Lane in the light of already high use of the lane by HGVs (mainly concrete lorries and waste trucks). Considering that Thrupp Lane is a narrow lane, with several blind bends and is, over most of its length, single track and insufficiently wide to allow approaching traffic to pass each other, this is unacceptable. The lane is already carrying more traffic than it should and is becoming dangerous.
Page 169 Table 9.4 Increase in Traffic Flows associated with phase 1 construction	The table shows a significant (24% and 26% respectively) increase in HGV traffic using Twelve Acre Drive and Radley Road between 1100 and 1200.
Page 186, Table 10.2 Landscape Impacts.	The proposal would have major adverse landscape impacts: loss of a great number of existing trees, loss of existing lake and islands. Potential adverse landscape impact in M area has not been assessed.
Pages 188- , Section 10.5.2 Visual Impacts	The visual impacts to the site are severe. These include loss of views of Lake E from (a) The National Cycleway and BOAT (b) the northern edge of Lake F (c) the SW corner of Lake E and (d) the western edge of Lake E. (Not all these views are assessed in the ES). This section underplays the visual impact of the removal of Lake E. Changing a lake to a grassed area is not "neutral". One certainly would not get permission to cover over the Thames in Abingdon and replace it by parkland and flowerbeds, even though these "have visual merit"! Nor can one claim that, because a famous waterfall, for example, could only be viewed from one specific spot, that its destruction does not have much effect averaged over the entire locality. Potential adverse visual impact in M area has not been assessed.
Page 199, Figure 10.4 (for example) SE corner of Lake E	The proposed working, and siting of protective fence, are much to close to Lake F.

Reference to ENV/057/2006	Objection
<p>Pages 204-209 Population an Material assets</p>	<p>There are clearly detrimental effects on population and material assets, as listed, particularly during the construction phase, but also during the operational phase (predicted to last until 2015) and possibly beyond. The people of Radley and Abingdon regard these lakes as a priceless local asset and are doing their best to save them. One only has to visit the adjacent ash fill sites at H/I and G,J/P to see what is at stake. That these detrimental effects on the amenity value of the area can be balanced by a few extra packets of cigarettes sold in local shops, so as to somehow be considered to be neutral overall is quite staggering.</p> <p>The loss of the fish from lake F, as a consequence of its dewatering, would be a significant loss of a major material asset.</p>
<p>Appendix 7B, Page 2-13 Flood Risk Assessment</p>	<p>The flood model is seriously defective, as are its conclusions. Eyewitness accounts suggest that flooding in the E/F area most probably did occur in 1947. However flooding would not have occurred over most of the area currently occupied by Lake E, as the Lake did not exist at this time and the surrounding land here rises above 52.5m.</p> <p>Nevertheless, the E/F area is now connected to the floodplain by virtue of the embankment having been eroded, and by culverts running through it. Both lakes are therefore in the floodplain as their surfaces and the isthmus between them are all well below projected flood levels.</p> <p>The flood levels produced by the model used by Npower are inconsistent with historic data interpolated to the Radley Lakes site (SRL/FP1) and are approximately 0.2m too low.</p> <p>No evidence is provided that the model has been validated for this stretch of the river.</p> <p>Npower claim that the site is protected along its river frontage by raised ground to the south of the old railway embankment. However that raised ground is the result of "temporary spoil" from the gravel workings contemporaneous with the operation of the ash disposal site. This therefore ought to be removed in the course of overall restoration of the site. Aerial photographs of the 1947 flood, as well as figure 7 in appendix 7 of the ES, indicate that flooding approached the railway embankment virtually along the whole of its length. There was certainly no raised ground, at that time, of sufficient height to prevent water reaching the embankment. A recent levels survey of this area, commissioned by Save Radley Lakes, has confirmed this, and has determined that the average natural ground levels in this area are below peak flood levels. So Npower's flood-risk assessment is dependent on the fact that their operations on H/I, together with the preceding gravel workings, are obstructing the floodplain, and it is this obstruction that is preventing floodwater reaching Lakes E and F. These operations are therefore in contravention of PPG25.</p> <p>We believe that these lakes should be fully restored to the operational flood plain where they would have the capacity to absorb 100,000 cubic metres of flood water in a severe (1 in 100yr) event.</p> <p>The proposal would prevent this and therefore runs contrary to PPG25.</p>

CONCLUSIONS

We find plentiful and substantial grounds why the proposal by RWE Npower to fill Lake E at Radley with PFA should not be permitted.

Given the strength of this objection, and the weight of public opinion, we believe that Oxfordshire County Council has a duty to refuse planning permission for this proposal.

APPENDIX 1: Detailed comments on the Planning Application

Table 2: Comments on the Planning Application

Reference to ENV/057/2006	Comments
Introduction	
Page 10 (section 1.1) <i>“RWE npower already has planning permission to fill these voids”</i>	This is not strictly true, as they had a “Conditional Planning Permission” which imposed conditions requiring further approvals. Due to the Legislative changes that have come into European and UK Law since the Conditional Consent was issued in 1982, and due to the fact that Npower would be unable to comply with the original conditions, the original consent is now unimplementable. This state of affairs is fully acknowledged by the ES. Indeed it could be argued that it became unimplementable much earlier in the phase 2 operations, and, while Variation Orders have been granted for some of these, the outcomes of all of phase 2 operations fall well outside what was originally intended. The result is that damage has been inflicted on the landscape and its ecology, and still is, that would never have been permitted upon any new application, even at the time of the original permission.
Missing from opening section (Pages 1-50)	a) There is no mention of what will happen to the islands in the lake. b) There is no mention in the section about the Ecological factors, despite their supposed importance in shaping the application (“New Ecological Solution”) although they are discussed later. c) Npower’s argument rests upon Lake E being able to take the surplus PFA, after sales and stockpile, to the end of life of Didcot A. Given the Government’s Energy Policy, the assessment should contain a worst case scenario in which the life of Didcot A is extended for a further 5 – 15 years. What would the disposal policy be then? Npower would have to find an alternative means of utilisation or disposal. Are they absolutely certain that the power station will close by 2015?

Reference to ENV/057/2006	Comments
<p>Page 12 (section 1.4.2) <i>"The concentration of trace elements in leachate from the ash is typically similar to or lower to that found in drinking water."</i></p>	<p>Claims that concentrations of elements in leachate from PFA are similar to or lower than that found in drinking water are untrue. For example, the amount of arsenic in drinking water is limited, by The Water Supply (Water Quality) (England) Regulations 2000, to 10 µg/l, yet they exceeded 150 µg/l in the effluent discharged into the Pumney Brook (Figure 7.3, page 136). In January 2005, discharge levels into the Pumney Ditch are reported⁴ to have reached 491 µg/l – nearly 2.5 times their discharge limit. The average amount of arsenic in the effluent has not been less than 16 µg/l since 2000 and is typically very much more than this. Indeed the <i>average</i> level of arsenic in the discharges during 2000-2004 exceeds the drinking water limit by 600%. Levels of other substances are also notably higher than drinking water standards (e.g., boron, calcium, cadmium, sulphate, vanadium, chromium and potassium) as are levels of overall conductivity of the leachate (reaching 2,660 µS/cm in January 2002⁵ whereas the drinking water standard limit is 2,500 µS/cm). A comparison with drinking water standards for those substances listed in Figure 7.3 is given in Appendix 4.</p>
<p>Page 13 (section 1.5) First bullet <i>"100,000 tonnes of PFA pumped to Radley is equivalent to 5000 large lorry movements..."</i></p>	<p>This is one of several statements exaggerating the need for many lorries. In fact Didcot propose disposing of 500,000 tonnes of ash over a ~10 year period, so the annual average is closer to 50,000 tonnes. Disposal demands, due to fluctuations in generating capacity can be mitigated by on-site stockpiling, as is done now. Thus we should only worry about the average annual surplus over the period of operation.</p>
<p>Page 14 (section 1.5) final sentence: <i>"...the development of Lake E will provide a sustainable continuous ash disposal facility for the remaining life of the station."</i></p>	<p>They do not define sustainable, presumably because there is nothing sustainable in this proposal. The complete destruction of a wildlife rich resource and the creation of a short-lived disposal facility are not sustainable and in fact it would not prove to be so because several decades of aftercare will be required.</p>
<p>The Proposed Development</p>	
<p>Page 26 (section 3.1.2) 4th paragraph <i>"...there has been no public access to Lake E or its surroundings."</i></p>	<p>This statement is incorrect. The public has, for many decades, enjoyed access to much of the surroundings of Lake E, some of it unofficially. BOAT No 9, which comprises part of the National Cycleway, runs along most of the eastern shore. The surroundings, to which the public have had unofficial access, include the Bullfield area, the isthmus between the two lakes, and the western shore.</p>

⁴ RWE npower, Radley Ash Disposal Site IPPC Application, ENV/010/2005 (2005), page 31.

⁵ RWE npower Radley Ash Disposal Scheme – Phase II Environment Report ENV/019/2005 (June 2005)

Reference to ENV/057/2006	Comments
<p>Page 30, Table 3.1: Didcot A Power Station: Ash Production and Sales 2001-2005</p>	<p>The ash production includes Furnace Bottom Ash (FBA) which is not dumped at Radley, and all of which is sold. Since FBA is approximately 20% of the total ash production, its inclusion is misleading in the context of PFA recycling. For these purposes, the figures should be confined to PFA.</p> <p>The inclusion of the partial 2005 statistics is misleading, for two reasons: The absence of months 11 and 12 distorts the figures, as higher production accompanied by lower than average sales would be expected during these months; Also, the new ash beneficiation plant was commissioned in August 2005. Didcot should therefore state by how much the ash sales have been boosted by sales of the processed PFA.</p>
<p>Page 32, (Section 3.3.1) Alternatives to the Disposal at Radley</p>	<p>The applicant claims that they do not own or control other gravel pits. This statement may or may not be true, but did they investigate the purchase of other suitable sites, before paying £3.2 million for Lake E?</p>
<p>Page 32, (Section 3.3.1) Alternatives to the Disposal at Radley References to PFA transportation by road or rail.</p>	<p>The transportation of the 500,000 tonnes of PFA is over a 9 year period and represents only 2% of the total transportation demands of the power station over that period.</p>
<p>Page 33 (Section 3.3.1) Transport by Rail</p>	<p>Additional train demands would be negligible compared to that already required to supply coal to the power station. (Based on the figures given, an estimate is 1 train per week, on average.)</p>
<p>Page 33 (Section 3.3.1) Other Potential Gravel Workings in the Didcot Area Didcot state that suitable void space would not be available for 3-4 years.</p>	<p>We are aware of existing void space at Sutton Courtenay adjacent to the existing pipeline. Have Didcot investigated this option fully? (Or is this their reserve option?). What pressure can be applied to make this space available in the shorter term?</p>
<p>Page 33 (Section 3.3.1) Creation of Landscape Bunds within the Power Station site <i>"..a kilometre of bund would only accommodate some 150,000 m³ of PFA."</i></p>	<p>This statement requires further explanation. Didcot's original 1982 planning permission approved a 500,000m³ stockpile accommodated within a triangular bund enclosing about 60,000m³. The total bund length in this case was about 1 kilometre. More evidence is needed to support this statement.</p>
<p>Page 33 (Section 3.3.1) Creation of Landscape Bunds within the Power Station site <i>"..most of the land on the power station site is operational and is required for current and future uses."</i></p>	<p>Are we allowed to know what land is potentially available and what its current and future uses are? If the applicant has other plans for space that may be available, then we need to know what these plans are, and whether they are definite, so that a judgement on the relative merits can be made.</p>
<p>Page 34 (Section 3.3.1) paragraph 2 Infilling Voids on Closure of Didcot A Power Station</p>	<p>The applicant does not fully dismiss this option, which would have great benefits, not only for the Radley Lakes. Indeed RWE Npower should be obliged to make provision for filling the residual voids. Creation of a suitable stockpile, in the locality of the power station, would not necessarily be detrimental, if designed and managed properly. It could act as a sight-screen and sound attenuation barrier between any existing or proposed new development and the power station(s).</p>

Reference to ENV/057/2006	Comments
<p>Page 34 (Section 3.3.2) Areas not yet Developed for Ash Disposal <i>"... [Lakes E and F] being north of the Abingdon Branch Line embankment are outside the River Thames flood plain."</i></p>	<p>The evidence and modelling behind this statement are flawed. Save Radley Lakes can show, on the basis of historical flood data, and topographical data presented in the ES, as well as its own survey data, that the embankment is now insufficiently high to act as an effective barrier in times of severe flood.</p>
<p>Page 34 (Section 3.3.2) Areas not yet Developed for Ash Disposal</p>	<p>This section perpetuates the idea that there are other large gravel pits in the area. In fact, lakes E and F are the last two. Lake M constitutes a shallow scrape and it is not, as such, a proper lake. Lake L1 (Longmead) is a recent excavation is geologically totally unsuitable for turning into a PFA repository (there is almost no Kimmeridge Clay there) and lies, in the flood plain, adjacent to businesses at the Abingdon Science Park. This lake is small. The map on page 53 and elsewhere (Figures 3.1, 3.2) shows this lake to be significantly larger than it actually is – approximately twice as large as it is. Certain maps are still being used by RWE Npower, which show Lakes K and L2 as being in existence. In fact they do not exist and are unlikely ever to exist. The absence of any remaining gravel pits of significant size to provide habitats for potentially displaced species has important implications for any mitigation strategy. No new lakes will replace those already lost to the district. Additional lakes on the south side of Abingdon are recently dug, are not used by wildlife to any great extent and are ear-marked as landfill disposal sites.</p>
<p>Page 40 (section 3.4.7) Control of Water Level in Lake F <i>"As much of the ecological interest around Lake F is terrestrial, rather than aquatic ... [the retention of water in Lake F is not justified...]"</i></p>	<p>This is very misleading. Wildlife interest and significance of the water greatly exceeds that of the terrestrial areas for many taxonomic groups. The likelihood of <i>Ephemera lineata</i> (RDB 2) nymphs being found in F is very high. Moreover, the statement ignores ecological interdependencies between aquatic and terrestrial species.</p>
<p>Page 40 (section 3.5.1) Site Clearance <i>"...the timing of these works would be arranged to avoid the main bird nesting season (March – August)..."</i></p>	<p>The nesting season for several bird species extends beyond August and birds can still be breeding, or young may still be dependent upon parent birds into September or even October.</p>
<p>Planning Policy Context</p>	
<p>Page 68 (section 4.5) Regional Planning Guidance <i>"The ecological restoration plan for the site aims to ensure that ... the biodiversity of the area would be enhanced..."</i></p>	<p>The claim that biodiversity would be enhanced is spurious. In fact the complete opposite would be the case.</p>
<p>Page 74 (Section 4.7) Conclusions</p>	<p>These conclusions are highly questionable and not without controversy. Our interpretation of the planning policies and guidelines is given below in Appendix 2</p>

Reference to ENV/057/2006	Comments
Ecology	
Page 79 (Section 5.3.1)	This makes no reference to the site being designated an Ecologically Important Landscape (EIL). (The site is currently a pCWS)
Page 80 (Section 5.3.2) Waterbodies <i>"Charophyte communities appear significantly more developed and diverse in Lake F..."</i>	A reason why so few <i>Chara</i> species were located in Lake E could be because they were looked for too late in the year, late October (page 77, section 5.2.3.) and in the wrong places. The extensive shallows around the islands, as well as along the north-western banks of Lake E should have been investigated. We do not believe they were.
Page 83 (Section 5.3.2) Hedgerows <i>"The only true hedgerows within the site are species poor thin hedges to the south of Lake F."</i>	The hedgerows may be species poor and thin, but they are healthy and important as a valuable feeding resource for a host of birds, and insects and it is these same hedgerows that support the climbing foodplant of the Nb buttoned snout moth.
Page 83 (Section 5.3.2) Deciduous Woodland <i>"SRL have also recorded the uncommon moss <u>Aloina Ambigua</u> in woodland adjacent to the northern shore of Lake E."</i>	The location of the <i>Aloina ambigua</i> moss recorded by SRL is incorrectly given. In fact it was found to the west of the Lake E.
Page 84 (Section 5.3.3) Great Crested Newts <i>"..only a 'low' population [of Great Crested Newts] is likely to be present."</i>	Several ponds suitable for great crested newts exist to the west, including one in an adjacent garden where these newts were found in 2005, and these were not surveyed (See page 77, Section 5.2.3). Population size of this protected amphibian is therefore likely to be larger and more widely spread than was recognised by Bioscan. The implication of this is that mitigation proposed is inadequate to protect these amphibians. The entire western quadrant of the site must be properly surveyed and newts recovered using interception fences and pitfall traps which must be examined at least daily during the period when these newts are active – Spring to Autumn.
Page 85 (Section 5.3.3) Reptiles <i>"Despite background records for the locality of adder, grass snake and slow worm, no reptiles were found on the site..."</i>	The reptile surveys carried out by Bioscan were singularly unsuccessful. Save Radley Lakes members observed grass snakes on several occasions around the lakes and have photographed them. Conclusions based on the survey work undertaken are unreliable at best.
Page 85 (Section 5.3.3) Badgers	Npower fail to state the relevance of the Lake E site to local badgers. In fact the west boundary of Lake E is an important foraging area for them.
Page 86 (section 5.3.3) Otters	During 2006, otter field signs have been found on the site (in the general area of the western end of Lake F and the SW corner of Lake E) suggesting regular visits by an active otter population.

Reference to ENV/057/2006	Comments
<p>Page 86 (Section 5.3.3) Bats This section, which lacks a proper conclusion, seems to be trying to imply that, because few roosts were found, bats are not threatened by the proposal.</p>	<p>Overall, bat surveys have been inappropriately timed and have been of insufficient duration. Bat roost surveys were undertaken in October 2005 (Page 77, section 5.2.3). These would have missed most breeding roosts of virtually all bat species. The surveys, which were confined to the area immediately surrounding Lake E., should have been undertaken over a much wider area as bats roost in the wider countryside and fly to Lakes E and F for the purposes of feeding. The habitats of these species are protected under the Habitats Directive and this legislation is specific in including 'important feeding sites' as part of the habitats of bats and other species. The bat surveys were therefore, inadequate because they should have been undertaken more widely, covering surrounding habitats, and at other times of the year. They make no reference to searches being made in the mature trees along the northern side of Thrupp Lane, for example, or in the houses at nearby Thrupp. Many bats are present in these buildings. The fact that the environmental consultants make no reference to the obligations under the Habitats Directive concerning bats and their habitats is of great concern. Significant numbers of Daubenton's bats are probably dependant upon Lakes E and F as they almost exclusively feed over waterbodies. Surveys by Bioscan failed to locate high numbers of bat roosts (they found two, which may or may not have been occupied, as they do not tell us). However bats are present in the vicinity in large numbers. If bat roosts were not found this is likely to be because surveys were not undertaken properly.</p>
<p>Pages 87-88 (Section 5.3.3) Wintering birds <i>"Overall Lakes E and F do not appear to be of any more than District significance for wintering wildfowl."</i></p>	<p>Wintering birds have been seriously under assessed, due to no recent detailed surveys having been carried out prior to 2005 (Page 78, section 5.2.3). SRL have carried out such surveys during winter 2005/6 and summary results are published in SRL/WE1 (issues 8 and 9) and as well as in the more detailed bird survey report (SRL/WE5). Results indicate the area to be of County Significance to waterfowl.</p>
<p>Page 91 (Section 5.3.4) Evaluation <i>"The main focus of Cetti's Warbler and Kingfisher activity appears to be the smaller lake F and adjacent habitats."</i></p>	<p>Not so. Kingfishers probably nested at the N end of lake E in 2005 (a pair was regularly present and this was not the same pair as the ones on lake F and the southern end of lake E) and activity is focused both there and around the edge of lakes E and F. A second nest may be present along the southern long island of lake E as a possible nest in the bank has been identified. Kingfisher activity was very high in this area, and young were seen in 2005.</p> <p>There are no suitable Kingfisher nesting sites around Lake F.</p> <p>In 2005, Cetti's Warblers were calling from the long island on the south side of E and on the southwest corner of lake E. They have also been heard, more sporadically, calling from the eastern and western sides of lake F.</p>

Reference to ENV/057/2006	Comments
Page 91 (Section 5.3.4) Evaluation <i>"Numbers of no individual species [of bird] consistently attain levels of more than District Importance."</i>	Questionable. How would they know this, given that they have not carried out population surveys spanning a full year?
Page 92 (Section 5.3.4) Evaluation <i>"Of the two [lakes], Lake E appears to be the repository of the greater part of this ecological value."</i>	This statement has little basis: Lake E is the less well studied of the two lakes, and, in any case, is certainly of greater interest for overwintering waterfowl. Bats, hobbies and sand martins all make more use of Lake E. The isthmus between the two lakes, which contains much of the interest, belongs as much to Lake E as it does to Lake F.
Pages 94-96 (section 5.4.3) Site Restoration	This section contains much that seems to be speculation. Assertions are made about the enhanced value of the restored site to wildlife while producing little or no evidence to support them.
Page 98 (Section 5.5.2) Bats <i>Direct impacts on bats are only possible where roost sites are present in trees requiring to be removed as part of the site clearance.</i>	Removal of their feeding site (Lake E) is at least as much a direct impact. This section demonstrates Npower's failure to understand their obligations to bats under the European Habitats Directive, which protects all the essential aspects of the habitats of those species that are protected.
Page 99 (Section 5.5.2) Otters <i>"Licensing requirements [for this European Protected Species] would only be required if animals or their holts were present at the time of site clearance."</i>	We believe that this represents another example of failure to understand the European Habitats Directive. Recent observations indicate a local resident 'population' of otters. The Habitats Directive therefore applies.
Page 100 (Section 5.5.3) Assessment of Residual Impacts <i>"The ecological value of the wider Radley Lakes complex serves to buffer the magnitude of potential effects on many of the more important ecological resources."</i>	There is no potential for the loss of the largest lake, the only remaining large lake in the complex, being "buffered", as the species dependent on it will be unable to exploit similar habitats in the area. These have already been destroyed or are of insufficient size or are already saturated.
Page 100 (Section 5.5.3) Assessment of Residual Impacts <i>"The cumulative impact [of net loss of mature open water habitats] is considered to be of only minor significance at District and County Level."</i>	This is no doubt Npower's own opinion. The statement is otherwise unsupported. The loss of the best site in Oxfordshire for breeding birds, and one of the best sites in the County for Hymenoptera and Lepidoptera does not constitute "minor, negative significance at the county level". Likewise, numerous species of importance to conservation at a national and European scale (present in or breeding/feeding near Lakes E and F) is highly significant beyond the county boundary, as supported by the presence of European Protected Species.

Reference to ENV/057/2006	Comments
<p>Page 101 “Construction of new water surface drainage system to run along the western side of area N, through land north of H/I and to discharge into Lake M” is stated as being of negligible significance at local level.</p>	<p>No evidence is presented for this statement. In fact we wonder if a proper assessment of this has been carried out, and doubt if the affected area of Lake M and its surroundings was included in the ecological survey. (At the time the surveys were carried out, there was no proposal tabled that would have affected lake M.) Three things need to be considered: (i) the impact of construction work, eg damage to trees, vegetation, and possible species and their habitats, and (ii) the effect on the lake’s ecology as a result of altering the lake from being ground-water fed to being surface-water fed; (iii) the effect on the ecology of the Bruney Water which is the stream into which the outlet from Lake M would feed.</p>
<p>Pages 103-106 Table 5.1: Key Receptors Open water</p>	<p>The Lakes are inappropriately identified as “eutrophic standing waters”, when they are, in fact, in the rarer, and very much cleaner, “hard oligo-mesotrophic water” category. Sensitivity to the loss of either Lake would be “High” at local and district level. Remaining waterbodies in the locality are ecologically immature, small in size and/or earmarked for landfill. Other lakes in the district are too commercially exploited to be of value to many forms of wildlife.</p>
<p>Pages 103-106 Table 5.1: Key Receptors Wet woodland</p>	<p>The waved black moth <i>Parascotia fuliginaria</i> only occurs here (in Oxfordshire) in wet woodland. The impact is certain to be highly significant for this moth, which has very specialised habitat requirements. The moth has not been found in other woodland elsewhere in the vicinity, despite extensive searches by a local moth expert.</p>
<p>Pages 103-106 Table 5.1: Key Receptors Neutral Grasslands</p>	<p>This is plant species-rich and a hotspot for numerous very rare invertebrates such as bees, wasps and grasshoppers/crickets – including RDB, Na and Nb species. The impact on the county scale is highly significant if measured by Hymenoptera diversity and rarity alone.</p>
<p>Pages 103-106 Table 5.1: Key Receptors</p>	<p>The table is generally misleading in its assessment of the impacts on many of the more important species, for reasons already given above.</p>
<p>Pages 107-119 Table 5.2: Potential Impacts without additional mitigation Table 5.3: Residual Impacts</p>	<p>These tables consistently understate the significance of the potential and residual impacts (as perhaps might be expected.) Other general comments are as for Table 5.1 (above). In addition, the assessment of significance is misguided in that it dismisses the significance of habitat loss to European Protected Species and assumes alternative habitats exist, when they do not. These tables are particularly misleading and ecologically ill informed with respect to bats, otters, Cetti’s warblers and kingfishers. By any criterion, the impact of the loss of the only remaining large lake, in the once thriving Radley Lakes Complex, can only be described as significant.</p>
<p>Pages 113-119 Table 5.3: Residual Impacts</p>	<p>There is no recognition of the impacts on metapopulations, habitat connectivity (which are material considerations under the EHD and PPS9) and the significance of the site in the wider countryside to species inhabiting/nesting elsewhere but dependant upon the lakes.</p>

Reference to ENV/057/2006	Comments
Page 120 Figure 5.1: Habitat Map	This map does not show the true extent of marginal vegetation or 'neutral' grassland around the Lakes, and is thus misleading.
Page 122 Figure 5.3: Notable Species Map	This does not show the true extent of habitat used by kingfishers and gives very limited information on habitat use by bats. It provides little accurate information on plant distribution. There may be an additional Cetti's warbler 'territory' along the western edge of Lake E.
Pages 123-124 Figure 5.4: Restoration Plan Figure 5.5: Retained Habitats References to the White Helleborine (<i>Cephalanthera damasonium</i>) colony adjacent to the NW corner of Lake E.	There is a possible contradiction concerning the plans for protecting the White Helleborine colony along the NW shore of Lake E. Figure 5.4, which appears in the brochure and NTS, suggests that the colony will be translocated and the surrounding trees destroyed. Figure 5.5, which does not appear in the summary or publicity documentation, indicates that the colony and attendant trees will be retained. Transplanting white helleborines onto PFA will, with virtual certainty, be unsuccessful.
Appendix 5, Aggregate Species List	In attempting to segregate Save Radley Lakes data from older OBRC data, Bioscan have misrepresented many species, ie, by not indicating their presence in the E/F area or by denoting their presence as being pre 2000. Also some species are attributed to SRL when in fact they were not recorded by SRL. Admittedly SRL did not provide the spatial and temporal information with their data, but it would have been better to indicate where there was doubt. A list of species misrepresented in this way is given in Appendix 1
Air Quality	
Page 125 (Section 6.1.1) Health	There is no assessment of possible risk posed by radon emissions ⁶ .
Page 127 (Section 6.2.2) Potential for Dust Nuisance from the Radley Site	The risks appear to be understated. There is opportunity for the lake surface to dry off during summer months when no pumping of slurry is occurring. With the 'lake' raised to over 55.5m AOD, its surface will be exposed to wind. The operation plan does not seem to take account of these risks. The most significant risk of airborne dust pollution is during the restoration phase. The creation of a "dune" landscape on the 'lake' surface will potentially exacerbate wind erosion unless and until the surface is suitably stabilised.

⁶ Hoeksema, H.W. in proceedings of the International Symposium on Radiological Problems with Natural Radioactivity in the Non-Nuclear Industry, Amsterdam, 1997.

Reference to ENV/057/2006	Comments
Hydrology and Hydrogeology	
Page 132 (Section 7.2) Technical Requirements of the Landfill Regulations 2002 and the Groundwater Regulations 1998	The pollution risks from PFA slurry are seriously understated in these submissions. See SRL/FP2 and SRL/WE2 and SRL/FP3.
Page 136 (Section 7.3.1.4) Current Measures for Flood Control <i>"The design normal lagoon operating level [for lake H/I] was 52.0m AOD and the flap valves were set at 52.1m. The maximum recorded flood level (1947 – 1 in 100 year event) has been determined by the Flood Risk Assessment (FRA) at 52.2m. Hence under extreme flooding events, the flap valves will operate."</i>	If the FRA figures are to be believed, then, even at normal operating level, which can be exceeded, the capacity of lake H/I is equivalent to just 20cm of water which yields a floodwater capacity of only about 30,000m ³ . At the maximum permitted operating level, this falls to zero. In 2003, the flood control measures failed to operate because the water level in the lake exceeded that outside.
Page 143 (Section 7.4.4) Flood Risk Assessment	This bases its conclusions very much on the fact that the site did not flood in 1947, but fails to discuss why this was so, if indeed it was. The railway embankment would have been higher then, sufficient to stop a flood of up to ~52.5m AOD. Parts of this embankment are now as low as 52.1m AOD (ES, Appendix 7A, p.2-1; See also SRL/FP1). Another point, not made, is that the lakes were not there in 1947, and would have offered no spare flood capacity.
Noise	
Page 162 (Section 8.5.2) Operation of Lake E Ash Lagoon	This fails to mention noise from machinery used to harvest cenospheres.
Page 162 (Section 8.6) Summary of key Issues <i>"Noise from construction operations... would fall within the typical level of acceptability for daytime construction noise."</i>	What is acceptable depends upon the location. This is a tranquil rural setting (most of the time) and any noise at the levels proposed would be highly intrusive.
Page 164 Figure 8.1: Environmental noise monitoring locations	Why is the monitoring point (4) at Thrupp House placed so far from the construction site and behind the dwellings? The nearest inhabited dwelling is just 160m from the construction site, while the monitoring point is about 330m and behind the dwellings.
Traffic	
Pages 170-171 (Section 9.5) including tables 9.5 and 9.6. Extent of Impact	There is no proper assessment of the background flows in Thrupp Lane, despite this route being identified as being sensitive to if not unsuitable for heavy construction traffic.

Reference to ENV/057/2006	Comments
<p>Page 172 (Section 9.6) Baseline situation <i>"Pedestrian amenity:...the rural nature of [Thrupp Lane] makes walking quite pleasant."</i> <i>"Fear and Intimidation:...Nevertheless, as the overall traffic flow is not particularly high, existing levels of fear and intimidation for cyclists for cyclists are considered to be low."</i></p>	<p>Cyclists and pedestrians both are already fearful of this road, due to its very limited width, sharp bends, and already high usage by HGVs at certain times of the day.</p>
<p>173 (section 9.7) Predicted impacts <i>"...between 0700 – 0800 and 1700-1800 ...there could be 28 additional vehicles on the road."</i> <i>"worst case scenario, there could be 8 additional HGVs in a single hour..."</i></p>	<p>These are not negligible additional flows for this narrow lane, and would conflict with existing usage.</p>
<p>Landscape and Visual</p>	
<p>Page 177-178 (Section 10.2) Baseline Description – Area Description</p>	<p>This fails to mention the islands in Lake E and the trees on those islands. Several of these islands contain large and mature trees.</p>
<p>Page 181-182 (Section 10.2.4) Landscape Character – County Level Extract from OWLS (Oxfordshire Wildlife and Landscape Study) and concluding paragraph: <i>"It is noteworthy that the above descriptions and guidelines recognise the beneficial results of gravel pit restoration and appropriate after-uses such as grassland and plantations, and the need for restoration and sensitive management of hedgerows."</i></p>	<p>OWLS was a primarily desk-based exercise and statements in it are of a general nature, and not specifically applicable to the Radley Site, which is, in many ways, exceptional. The preservation of some large wetland/freshwater lake areas is ecologically desirable (SRL/WE1).</p>
<p>Page 188 (Section 10.5.1) Evaluation of Effects Note 5 <i>"The change from an open water area to a filled ash lagoon, both accessible to wildlife, is considered a neutral change."</i></p>	<p>The vast majority of people, we believe, would disagree with this!</p>
<p>Pages 189-203 (Section 10.5 and figures 10.1-10.8) Evaluation of Effects</p>	<p>This fails to consider all of the significant views, especially those across Lake E from the SW and W. Lake M is omitted from the assessment, despite likelihood of impact from roadway construction.</p>
<p>Page 204 (Section 11) Population and Material assets</p>	<p>The lake is closer to Abingdon than it is to Radley. Abingdon residents have an equal, if not greater, interest in its fate.</p> <p>Also this section omits to mention that the smaller lake, Lake F, which will be severely damaged by the construction work, is a fishing lake of national repute, and was, until recently, leased to a local angling club, who never really exploited it commercially. The lake was, during 2005, regularly fished and enjoyed by anglers from both near and far</p>

Reference to ENV/057/2006	Comments
<p>Archaeology</p>	
<p>Pages 211-215 (section 12) Archaeology</p>	<p>A casual glance at the journal <i>Oxoniensia</i> or the SMA newsletter CBA9 will provide a great deal more information than is provided here. This section discusses, for example, Iron Age occupation along the Thames but does not mention the significant Iron Age features either on site or close to it. The sections on e.g., Mesolithic and Neolithic archaeology are also worthless.</p> <p>In section 12.4, they say that a Watching Brief will be maintained, but do not say how this will be done, or who will be doing it.</p>
<p>Flood Risk Assessment</p>	
<p>Page 2-13 (Appendix 7) Table 2: Flood Levels in the River Thames Floodplain</p>	<p>The flood water level (52.04m) given for the 1947 flood is absurdly low and barely above the measured flood level at Abingdon Lock (51.8m AOD). This may be a misprint, but, if so, it is a grossly misleading because it makes it look as if there is considerable margin of error in their modelled flood level.</p> <p>The table lists a 1 in 20 year event as 52.00m. SRL measured 52.12m on the site in January 2003 and estimate the peak of this flood to be 52.15m, which is generally considered to be a 1 in ~20 year event.</p>
<p>Page 2-13 (Appendix 7, Section 2.7.1) Site Analysis <i>Results from the River Thames Model</i> <i>“The levels along the existing track to the south of the embankment formed by the disused Abingdon Branch Line railway vary between approximately 52.5 and 53.0 m AODN. Being higher than the flood levels detailed above this topographic feature generally precludes floodwater levels from directly affecting the existing development site area.”</i></p>	<p>Reference to a “raised track” underneath the temporary earth stockpile is spurious. All of the raised ground, apart from the stockpile itself, to the south of the railway embankment, is the result of spoil dumped there during the excavation of Lakes H and I. Save Radley Lakes has surveyed the natural ground level in this area and found it to be at an average of 52.19m AOD. The highest points in the “permanent” landscape are on the railway embankment itself, and these are generally between 52.1 and 52.3m AOD, with the exception of the level crossing, where it rises to 52.78m AOD. Pre-existing levels under the temporary earth stockpile will of course be rising towards this level at the approach to the crossing. It follows that Npower can honestly quote any values they like in this height range, but it means nothing. Further east, it is only lake H/I that obstructs the flood flow, and it is proposed that this be restored to 52.0m AOD. Section E-E on Gibb drawing 20115/500/P/102 Rev.0, 09/02/01 accompanying the planning application for H/I indicates the mean level of this “track” as being 52.4m at the western end of the northern edge of Lake I. This apparently contradicts statement in the ES that such levels are in the range 52.5m to 53.0m. Even at 52.4m, the land is below the 100yr + 20% extreme flood level. Moreover, any track beneath the stockpile, as well as all spoil deposited on the floodplain as a result of earlier gravel workings, will need to be removed as part of the overall restoration of the area, and as a contribution to carrying out improvements to flood defences.</p>

<p>Reference To: “Application to Carry Out Mineral working, Waste Disposal and Associated Development”, 30 January 2006</p>	<p>Comment</p>
<p>Section 3: Mineral Extraction and Related Development</p>	
<p>Q.3.7 (i) Commencement of site-preparation works: <i>August 2006</i></p>	<p>In 2005, the applicant gave an undertaking not to commence preparatory work (on E and F) until all permissions (including IPPC) had been obtained. In view of this, and the possibility that IPPC licensing may be refused, we would request that OCC make this a condition of any planning consent. Also, preparatory work should not commence during the (extended) nesting season (see comment in Table 1 re page 40, section 3.5.1) and while there is bat activity.</p>
<p>Section 4: Waste Disposal and Other Waste Related Development</p>	
<p>Q.4.11 (iii) Completion of site restoration (excluding aftercare): <i>Dec 2022</i></p>	<p>In view of the length of this timescale, the applicant should be required to indemnify the Local Councils, and land tenants, against the restoration costs should RWE Npower or its successors be unable to meet those commitments, and to cover possible long term remediation, if the restoration plan proves impossible within the proposed timescale, or if there are other unforeseen problems either during or post restoration.</p>

APPENDIX 2: Planning Policy Context

This appendix sets out relevant Government planning policy with comments as to how we think that policy applies the proposals contained in The Application.

Planning Policy Guidance

This provides guidance for local authorities in formulating planning policy.

PPG2 Green Belts

Mining operations and other development

3.12 *The statutory definition of development includes engineering and other operations, and the making of any material change in the use of land. The carrying out of such operations and the making of material changes in the use of land are inappropriate development unless they maintain openness and do not conflict with the purposes of including land in the Green Belt.*

Land use objectives

3.13 *When any large-scale development or redevelopment of land occurs in the Green Belt (including mineral extraction, the tipping of waste, and road and other infrastructure developments or improvements), it should, so far as possible contribute to the achievement of the objectives for the use of land in Green Belts (see paragraph 1.6). This approach applies to large-scale developments irrespective of whether they are appropriate development⁴, or inappropriate development which is justified by very special circumstances. Development plans should make clear the local planning authority's intended approach.*

Visual amenity

3.15 *The visual amenities of the Green Belt should not be injured by proposals for development within or conspicuous from the Green Belt which, although they would not prejudice the purposes of including land in Green Belts, might be visually detrimental by reason of their siting, materials or design.*

PPG25 development and Flood Risk

23. *...In functional floodplains, the Government considers that built development should be wholly exceptional and limited to essential transport and utilities infrastructure that has to be there. Such infrastructure should be designed and constructed so as to remain operational at times of flood, to result in no net loss of floodplain storage, and not to impede water flows and not to increase flood risk elsewhere.*

We believe and will argue that Lakes E and F are both on the operational flood plain well within the per 100 year range. Even were this not to be the case, failure to observe these guidelines for Lake H/I means that mitigation in the form of additional retained floodplain capacity must be provided.

PLANNING POLICY STATEMENTS

Planning Policy Statements (PPS) set out the Government's national policies on different aspects of planning in England.

PPS9 Biodiversity and Geological Conservation

Regional and Local Sites

9. Sites of regional and local biodiversity and geological interest, which include Regionally Important Geological Sites, Local Nature Reserves and Local Sites, have a fundamental role to play in meeting overall national biodiversity targets; contributing to the quality of life and the well-being of the community; and in supporting research and education. Criteria-based policies should be established in local development documents against which proposals for any development on, or affecting, such sites will be judged. These policies should be distinguished from those applied to nationally important sites.

11. Through policies in plans, local authorities should also conserve other important natural habitat types that have been identified in the Countryside and Rights of Way Act 2000 section 74 list, as being of principal importance for the conservation of biodiversity in England and identify opportunities to enhance and add to them.

Networks of Natural Habitats

12. Networks of natural habitats provide a valuable resource. They can link sites of biodiversity importance and provide routes or stepping stones for the migration, dispersal and genetic exchange of species in the wider environment. Local authorities should aim to maintain networks by avoiding or repairing the fragmentation and isolation of natural habitats through policies in plans. Such networks should be protected from development, and, where possible, strengthened by or integrated within it. This may be done as part of a wider strategy for the protection and extension of open space and access routes such as canals and rivers, including those within urban areas.

SPECIES PROTECTION

15. Many individual wildlife species receive statutory protection under a range of legislative provisions, and specific policies in respect of these species should not be included in local development documents (see also Part IV of ODPM/Defra Circular, ODPM 06/2005, Defra 01/2005).

16. Other species have been identified as requiring conservation action as species of principal importance for the conservation of biodiversity in England. Local authorities should take measures to protect the habitats of these species from further decline through policies in local development documents. Planning authorities should ensure that these species are protected from the adverse effects of development, where appropriate, by using planning conditions or obligations. Planning authorities should refuse permission where harm to the species or their habitats would result unless the need for, and benefits of, the development clearly outweigh that harm.

The proposal (ENV/057/2006) is contrary to the following planning guidelines:

REGIONAL PLANNING GUIDANCE FOR THE SOUTH EAST (RPG29)

Policy INF3 regarding waste management. (Page 67 of the ES refers) The *proximity principle* requires that the waste should be disposed of as near as practicable to its source. Applying this principle to waste from Didcot Power Station would require that the surplus PFA should be disposed of on the site or on neighbouring sites. By the same principle, household waste from the London area, which is currently being dumped as landfill in the neighbourhood of the power station, should be deposited elsewhere.

Policy E2. (p.68) *The Region's biodiversity should be maintained and enhanced with positive action to achieve the targets set in national and local biodiversity action plans through planning decisions and other measures.*

OXFORDSHIRE STRUCTURE PLAN 2016

Policy G4 (p.69) Development within the Green Belt will only be permitted if it maintains its openness and does not conflict with the purposes of the Green Belt or harm its visual amenities.

Policy EN2 (p.69 and section 5) requires that specially protected species be protected from damaging development. Mitigation is inadequate in several instances (eg, for bats, kingfishers and otters) and the additional effects of temporarily draining Lake F are not adequately addressed.

Policy EN8 (p.69) Development that will lead to an unacceptable deterioration in water quality will not be permitted. Similar development in the area has already caused unacceptable deterioration in water quality (SRL/WE2, SRL/FP3), and involves significant risk of water pollution (SRL/FP2).

Policy M1 (p.70) *...Mineral working will not be permitted unless there are satisfactory provisions for the land to be progressively restored within a reasonable timescale to an acceptable use that is appropriate to its location.* The restoration timescale (2022) is unreasonably long. There is no guarantee or evidence that acceptable restoration is achievable.

Policy WM2 (p.70) *Permission will only be granted for waste management facilities ... to ensure sufficient capacity for the management of that waste which needs to be managed within Oxfordshire, having due regard to the best practicable environmental option, including the waste hierarchy and the proximity principle...Permission will only be granted for landfill required for the disposal of waste which remains after reduction, reuse, recycling and recovery policies have been applied.*

By any standard, filling either of these lakes at Radley cannot be a Best Environmental Option. RWE Npower has failed to argue adequately why several apparently viable alternatives are not practicable. More PFA could be recycled if it were not classified as waste.

WHITE HORSE LOCAL PLAN 2001

Policy G1 (p.70) *Within the Greenbelt, there will be a general presumption against inappropriate development. Such development is, by definition, harmful to the Greenbelt. The proposed development is manifestly harmful to the Greenbelt.*

Policy G9 (p.71) *The presumption against inappropriate development in the Green Belt will be maintained in relation both to proposals for changes in land use and engineering or other operations affecting the land. Proposals will only be permitted where the council is satisfied that they:*

- (i) *will maintain the openness of, and not conflict with the purposes of including land within the Green Belt; or*
- (ii) *are for mineral extraction or tipping in conformity with the policies of the Mineral Planning Authority, where the high environmental standards will be maintained and the site well restored.*

Existing operations on this site over the years have seriously damaged the landscape. These guidelines need to be applied more rigorously to those operations. The new proposals will inflict further unacceptable damage.

Policy NC2 (p.71) *Development that would result in the destruction of, or damage to, any plant or animal species specially protected by law, or its habitat, will not be permitted unless the damaging impacts on wildlife or habitat can be prevented by the imposition of planning conditions, or by a planning obligation in connection with any permission granted.*

This policy is very clear in its intention to prevent, rather than mitigate, destruction or damage to protected species and their habitats. There is nothing in the planning application to *prevent* the destruction protected species, eg Kingfishers, inhabiting Lake E. That mitigation which is offered is over dependent on the retention of Lake F, which is unsuitable or too small to accommodate all species inhabiting Lake E. Many species populations will be severely depleted or rendered locally extinct. In any case, a habitat which is already present and in use, cannot be offered as mitigation for another which is destroyed.

Policy NC4 (p.71) *On sites of nature conservation importance, not covered by Policies NC1, Nc2 and NC3 above, development will not be permitted if it would result in damage to, or destruction of the nature conservation interest, unless such damage can be prevented by the use of conditions or planning obligations in connection with any permission granted.*

Again, the policy is unequivocal in its intention to prevent damage to, or destruction of, the nature conservation interest. That such damage will occur under the present proposals is both inevitable and undeniable, and the mitigation offered does not equate to prevention.

WHITE HORSE LOCAL PLAN 2011 (SECOND DEPOSIT DRAFT 2004)

Policy GS3 (p.72) *Within the Oxford Green Belt, development will only be permitted if it does not conflict with the purposes of including land in the Green Belt and if it preserves the openness of Oxford and its landscape setting...*

The visual amenities of the Green Belt will be protected from development within, or conspicuous from, the Green Belt, which might be harmful by reason of its siting, scale or design.

Policy NE1 (p.72) *Applications for development which are likely to affect a known or potential site of nature conservation value will not be permitted unless they are accompanied by an ecological appraisal which enables a proper assessment to be made of the impact of the proposed development on the ecological value of the site.*

The Ecological Assessment is based upon a species-by-species assessment, including other key receptors, but fails to consider interdependencies or the impact on the wider area. The conclusions of this assessment are heavily based upon the unsupportable statement that the restored PFA landscape will be of equal or higher ecological value than the existing lake.

The existing Radley Lakes E and F are an extant site of nature conservation value.

OXFORDSHIRE MINERALS AND WASTE LOCAL PLAN (1996)

Policy PE1 (p.72) *Proposals for mineral works will be considered in the light of the following criteria*

- a) the protection of local residential, landscape and natural amenities;*
- b) the provision of adequate buffer zones...*
- c) ...*
- d) That satisfactory access can be accommodated on roads which can safely accommodate the proposed traffic without material harm to the environment;*
- e) ...*
- f) Sites important for nature conservation ... are not seriously damaged*
- g) Woods, copses and belts of trees which are important to the landscape are protected;*
- h) ...*
- i) Water supplies and resources are protected and pollution avoided,...*
- j) ...*
- k) ...*
- l) ...the County Council will consider the feasibility of the restoration and aftercare proposals.*

The Lake E proposal fails to meet criteria *a*, *d* (Thrupp Lane cannot safely accommodate extra traffic); *f* and *g* (manifestly); and *i* (that it causes pollution has been demonstrated: SRL/WE2 and SRL/FP3). The County Council will have to satisfy itself as to the feasibility of the restoration and aftercare proposals.

Policy PE14 (p.73) *Sites of nature conservation importance should not be damaged.*

The proposal will damage a site of nature conservation importance.

Policy W7 (p.73) *To control the release and location of landfill sites in such a way as to ensure that satisfactory restoration is progressively achieved with the least possible harm to the environment. Proposals will therefore be assessed against the following criteria:*

- a) *there is a definite need for facilities which cannot be met by existing or permitted landfill sites.*
- b) *There should be no material damage or disturbance to the environment or to amenities or residential ... buildings ... by reason of noise, dust, vermin, smell, gas and other pollution, or long term damage to the visual amenities.*
- c) *The proposed filling should not raise or impede the floodplain of rivers and streams or create risk of pollution of surface or underground water courses.*
- d) *The proposal will cause no material damage to any feature of importance within a SSSI or other site of nature conservation importance which cannot be protected by measures incorporated in the proposal...*
- e) ...
- f) ...
- g) *In the case of proposals in the Green Belt, the development should not injure the visual amenities of the Green Belt or conflict with its purposes because of inappropriate siting, scale or design;*
- h) *The proposed access to the site and transport routes for carrying waste to it are suitable for the volume and nature of the traffic which may be expected;*
- i) *The site and the methods of operation proposed are capable of progressive restoration and completion within an acceptable period having regard to the particular circumstances in each case;*
- j) ...
- k) *Where waste disposal might damage the visual amenities of an area during the period of operation, the site will be screened by earth mounding and tree planting and other techniques appropriate to the area.*

Criterion a) is not met because the need could be met by other sites including some that are in closer proximity to the power station. Criteria b) and g) are not met because material damage will be caused to the natural environment and to a visual amenity currently enjoyed by the public (views of and across Lake E). Criterion c) is not met for reasons given above and in Save Radley Lakes reports SRL/FP1, SRL/FP2, SRL/FP3, SRL/WE1 . Criterion d) is not met because the proposal will cause material damage to Lake F, which is acknowledged as being of conservation importance. Criterion h) is not met because the type and volume of traffic is unsuitable for a narrow country lane already dangerously overloaded with HGV traffic. Criterion i) is not met because the duration of the period from starting operations to completing the restoration is unacceptably long. Restoration cannot be fully completed until the site is no longer designated a waste disposal site by the Environment Agency. Neither they nor the applicant can give any guarantees as to when this may be. (Fences around Lakes A-D still remain in place 24 years after operations began there.) Criterion k) is not met because unsightly security fences will not be screened from view.

APPENDIX 3: Supplementary Species Lists

This appendix lists some of the species recorded by Save Radley Lakes as being present at or near Lakes E&F during 2005-6 but whose status with respect to the site are misrepresented in the Aggregate Species List in the Appendix 5 of the ES or which are incorrectly attributed to Save Radley Lakes; and new species identified during surveys carried out in early 2006

Table 3: Supplementary List of Species Recorded at E&F during 2005 by Save Radley Lakes (SRL/WE1)

Group	Taxonomy	Scientific Name	Common Name
Insects	Coleoptera	<i>Propylea 14punctata</i>	14-spot ladybird
Insects	Coleoptera	<i>Psyllobora 22punctata</i>	22-spot ladybird
Insects	Coleoptera	<i>Rhagonycha fulva</i>	Soldier beetle
Insects	Diptera	<i>Lucilia caesar</i>	Green bottle
Insects	Diptera	<i>Scaeva pyrastris</i>	A hover fly
Insects	Hemiptera	<i>Coreus marginatus</i>	A shield bug
Insects	Odonata	<i>Enallagma cyathigerum</i>	Common blue damselfly
Insects	Orthoptera	<i>Chorthippus brunneus</i>	Field grasshopper
Insects	Orthoptera	<i>Chorthippus parallelus</i>	Meadow grasshopper
Other Invertebrates	Arachnida	<i>Agelena labyrinthica</i>	Labyrinth web spider
Other Invertebrates	Arachnida	<i>Araneus diadematus</i>	An orb weaver spider
Other Invertebrates	Arachnida	<i>Enoplognatha ovata</i>	A comb-footed spider
Other Invertebrates	Arachnida	<i>Nuctenea umbratica</i>	An orb weaver spider
Other Invertebrates	Arachnida	<i>Pisaura mirabilis</i>	Nursery web spider
Other Invertebrates	Arachnida	<i>Pardosa nigriceps</i>	A wolf spider
Other Invertebrates	Molluscs	<i>Lymnaea auricularia</i>	Ear pond snail
Vascular plants	Herbs	<i>Aster novi-belgii</i>	Michaelmas daisy
Vascular plants	Herbs	<i>Hypochoeris radica</i>	Cat's ear
Vascular plants	Herbs	<i>Chamaecyparis lawsoniana</i>	Lawson Cypress
Vertebrates	Birds	<i>Mergus merganser</i>	Goosander
Vertebrates	Mammals	<i>Neomys fodiens</i>	Water shrew

Table 4: List of Species that are, in the ES, Attributed to but Not Recorded by Save Radley Lakes at E&F.

Group	Taxonomy	Scientific Name	Common Name
Fungi	Fungi	<i>Armillaria mellea</i>	Honey fungus
Vascular plants	Herbs	<i>Brassica rapa</i>	Turnip

Table 5: Supplementary List of Species Recorded at E&F during 2006 by Save Radley Lakes (SRL/WE1)

Group	Taxonomy	Scientific Name	Common Name	Conservation Status
Vertebrates	Birds	<i>Charadrius dubius</i>	Little ringed plover	
Vertebrates	Birds	<i>Accipiter gentilis</i>	Goshawk	
Vertebrates	Birds	<i>Phylloscopus sibilatrix</i>	Wood warbler	Amber list
Insects	Hymenoptera	<i>Nomada ferruginata</i>	A cuckoo bee	RDB2, UKBAP
Insects	Hymenoptera	<i>Andrena praecox</i>	A mining bee	Local
Insects	Coleoptera	<i>Meloe sp.</i>	An oil beetle	At least RDB3
Insects	Coleoptera	<i>Laccobius biguttatus</i>	A water scavenger beetle	
Insects	Coleoptera	<i>Rhizophagus bipustulatus</i>	A narrow bark beetle	
Insects	Lepidoptera(moths)	<i>Biston strataria</i>	Oak beauty	
Insects	Lepidoptera(moths)	<i>Orthosia cruda</i>	Small quaker	
Insects	Lepidoptera(moths)	<i>Orthosia populeti</i>	Lead-coloured drab	Local
Insects	Lepidoptera(moths)	<i>Orthosia gracilis</i>	Powdered quaker	
Insects	Lepidoptera(moths)	<i>Orthosia stabilis</i>	Common quaker	
Insects	Lepidoptera(moths)	<i>Orthosia munda</i>	Twin-spotted quaker	
Insects	Lepidoptera(moths)	<i>Xylocampa areola</i>	Early grey	
Insects	Lepidoptera(moths)	<i>Trichopteryx carpinata</i>	Early tooth-striped	
Insects	Diptera	<i>Bombylius major</i>	Bee-fly	
Lower plants	Bryophyta	<i>Amblystegium serpens</i>	A moss	
Lower plants	Bryophyta	<i>Barbula convoluta</i>	A moss	
Lower plants	Bryophyta	<i>Barbula fallax</i>	A moss	
Lower plants	Bryophyta	<i>Bryum bicolor</i>	A moss	
Lower plants	Bryophyta	<i>Bryum capillare</i>	A moss	
Lower plants	Bryophyta	<i>Bryoerythrophyllum recurvirostrum</i>	A moss	
Lower plants	Bryophyta	<i>Ceratodon purpureus</i>	A moss	
Lower plants	Bryophyta	<i>Cryphaea heteromalla</i>	A moss	
Lower plants	Bryophyta	<i>Funaria hygrometrica</i>	A moss	
Lower plants	Bryophyta	<i>Grimmia pulvinata</i>	A moss	
Lower plants	Bryophyta	<i>Homalothecium lutescens</i>	A moss	
Lower plants	Bryophyta	<i>Hypnum resupinatum</i>	A moss	
Lower plants	Bryophyta	<i>Orthotrichum stramineum</i>	A moss	v.rare in Oxon
Lower plants	Bryophyta	<i>Radula complanata</i>	A liverwort	
Lower plants	Bryophyta	<i>Schistidium apocarpum</i>	A moss	
Lower plants	Bryophyta	<i>Ulota crispa</i>	A moss	

APPENDIX 4: Comparison of Trace Element Concentrations in PFA Effluent with Drinking Water Standards.

Table of (some) measured water quality parameters* for discharges into Pumney Stream during 2000-2004 and comparisons with consent limits and drinking water quality limits[†]. Results are colour coded as follows: **Amber** = exceedance of 50% of limit; **Red** = exceedance of 100% of limit.

Parameter	Units	Maximum in drinking water [†]	Consent limit*	Measured in discharge* Average (maximum)	% of Consent limit Average (maximum)	% of drinking water standard Average (maximum)
Arsenic	µg/l	10	200	77 (156)	39 (78)	700 (1,560)
Boron	µg/l	1000	8000	4350 (6705)	54 (84)	435 (670.5)
Chromium	µg/l	50	100	112 (202)	112 (202)	224 (404)
Copper	µg/l	2000	50	13.4 (32)	27 (64)	0.67 (1.6)
Nickel	µg/l	20	100	25 (48)	25 (48)	125 (240)
Zinc	µg/l	-	200	34 (44)	17 (22)	

[†] The Water Supply (Water Quality) (England) Regulations 2000.

* ES, Table 7.3, page 136.

APPENDIX 5: Summary of the Proposal

The following summarises the principal proposals in the Application by RWE Npower submitted to Oxfordshire County Council in January 2006:

- To dewater the large lake known as Lake E or Thrupp Lake.
- To remove all trees and other vegetation on the northern, eastern and western edges of this lake.
- To remove all islands and vegetation thereon.
- To store material, other than clay, extracted from Lake E, on Lake G, for future restoration purposes.
- Using material (clay mainly) excavated from the base of the lake, to surround the lake with earth bunds with crests at 56.2m AOD. These bunds would be roughly 7.2 metres above lake bed level - approximately 4.7m above ground level along the southern edge of the lake and 2 metres above ground level along the northern edge. The crest of the southern bund would be approximately 30m north of the isthmus currently separating Lake E from Lake F, thus creating a space for a small wetland area between the bund and the isthmus.
- To seal the lake bottom and sides with a 1.25m layer of Kimmeridge Clay extracted from the base of the lake.
- To surround the operational area with 3m high security fencing outside the line of the bunds.
- To pump PFA slurry conveyed from Didcot A Power station via an existing underground pipeline, currently serving lakes G, H/I, J/P on the existing phase 2 ash fill site to the east. The proposed operating water level in the lake is 55.50m AOD.
- To construct a return pipe to take the water decanted from the settled PFA, via Lake H/I, into the existing outflow system feeding into the Pumney Stream.
- To construct a new land drainage system consisting of a ditch along the western edge of N area (alongside the BOAT/cycletrack) which would run under the railway embankment, then westward and feed into Lake M (Orchard Pool). An outlet ditch would be constructed on the southern edge of Lake M connecting the lake to Bruney Water, which would take the surplus water to the River Thames. A vehicle access route would need to be constructed along the southern edge of Lake M.
- When filling is complete (2015) the filled lake E would be restored to a level of approximately 55.8m AOD.
- Restoration of the site would be for wildlife conservation in accordance with figures 10.4 and 10.5 in the ES. The house, with a by-now extended garden area, would be sold off. The projected date for restoration completion is 2022.
- The security fences would remain for (at least) as long as the Environment Agency say they should.