

For: PLANNING & REGULATION COMMITTEE – 4 MARCH 2013

By: DEPUTY DIRECTOR FOR ENVIRONMENT & ECONOMY (STRATEGY & INFRASTRUCTURE PLANNING)

Development Proposed:

Application for planning permission comprising a waste storage facility for intermediate level radioactive waste and associated infrastructure including surface water management system, hard standings, internal roads, landscaping, fencing and lighting

Division Affected: Sutton Courtenay and Harwell

Contact Officer: Taufiq Islam **Tel:** 01865815884

Location: Harwell Campus, Oxford

Application No: MW.0183/12

Applicant: RSRL

District Council Area: Vale of White Horse

**Date application:
Received** 31 October 2012

Consultation Period: 08 November – 13 December 2012

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Recommendation

The report recommends that the application be approved subject to conditions.

Part 1 – Facts and Background

Location (see site plan Annex 1)

1. The site for the proposed Intermediate Level Waste store (hereafter referred to as the 'ILW store') lies within the Harwell Campus in southern Oxfordshire.
2. The nearest villages are Chilton (1.75km to the south east), Harwell (2.5km to the north east and East Hendred (2km to the north west) of the application site. Didcot town is located 6km (3.75 miles) to the north east of the site.
3. The site forms part of a licenced nuclear site.

Site and Setting (see site plan Annex 1)

4. The application site is located to the north west of the Harwell Oxford campus and the Research Site Restoration Limited (RSRL) estate.
5. Harwell Oxford is a world leading location for science technology and business. It was previously known as Harwell Science and Innovation campus.
6. It extends over 300 hectares and provides a centre of excellence within Science Vale UK, an area specifically identified by Government for growth in science, technology and education.
7. The application site is approximately 0.7 hectare in area. It is currently grassland with some shrubs and trees having previously been occupied by a vehicle garage and workshop. The site is located outside of floodplain.
8. Directly to the north west of the site boundary is an area of immature planting, beyond which is a vacant land area currently laid to concrete and surrounded by perimeter planting. Beyond the RSRL estate to the north west the land is primarily in agricultural use.
9. To the south west of the site is an existing building for solid waste processing and storage complex (B462) and on the south eastern side of the site is an internal access road known as Rutherford Avenue.
10. The site is located within the North Wessex Downs Area of Outstanding Natural Beauty (AONB).
11. The nearest residential property outside of Harwell campus is located approximately 700 metres to the south west of the site (within East Hendred village).
12. Access to the application site is via the A4185 Rowstock to Chilton Road (Newbury Road) which has access to the wider network via the A417 and A34. The Harwell campus is a private estate and is served by a network of private roads.

History of Harwell Site

13. The Harwell site was originally an RAF station and was subsequently established as Britain's first Atomic Energy Research Establishment in 1946. Most of the nuclear reactors and research facilities were built between 1946 and 1960. Decommissioning of the facilities began during the 1990s.
14. RSRL's estate forms a significant proportion of Harwell Oxford at present. As RSRL's land is decommissioned and delicensed it is being progressively handed over to Harwell Oxford for further science and technology purposes.

Background to the Proposals

15. RSRL manages and operates the former United Kingdom Atomic Energy Authority (UKAEA) sites at Harwell in Oxfordshire and Winfrith in Dorset on behalf of the Nuclear Decommissioning Authority (NDA). RSRL is the site licence company responsible for the closure programme at both of these sites.
16. RSRL is responsible for decommissioning these sites, seeking to have them delicensed and releasing the land for alternative uses. Decommissioning will result in the generation of radioactive wastes including Low Level Wastes (LLW) as well as wastes with higher levels of radioactivity called Intermediate Level Wastes (ILW). ILW will ultimately be disposed of in a national Geological Disposal Facility (GDF) but this facility will not be available until after 2040. In the meantime the decommissioning of nuclear facilities will require the storage facilities to store ILW.

Planning Background

17. A number of planning permissions have been granted within the RSRL site at Harwell by the County Council. The permissions amongst other matters cover existing facilities for the storage of intermediate and low level radioactive waste which have been produced at Harwell since its establishment in 1946. The applicant has advised that it is intended that this existing stored waste (processing required) is to be removed over the period from April 2013 to 2021 for processing at Drigg near Sellafield, Cumbria.

Details of the Development

18. Planning permission is sought for a new Intermediate Level Waste (ILW) storage facility and associated infrastructure including a surface water management system, hard standings, landscaping, fencing and lighting.
19. The primary purpose of the ILW store is to provide temporary safe storage for the solid ILW arising from the decommissioning of RSRL's facilities at Harwell (Oxfordshire) and Winfrith (Dorset) and the JET (Joint European Torus) facility at Culham (Oxfordshire). As radioactive material the ILW will include

redundant equipment and structural materials from reactors and other nuclear facilities following their decommissioning.

20. It is anticipated that construction works would commence in 2015 and would take approximately 18 months. From 2017 material would be put into the store and it is expected that packages would be transferred to the store up to 2030.
21. The proposed development at Harwell is an interim storage solution for the ILW, pending the construction of a GDF elsewhere in the UK. The GDF is anticipated to be available by 2040 and it is proposed that all ILW stored at Harwell will be removed from site to the GDF by 2060. Following the removal of the ILW to the GDF, the ILW store would be decommissioned with the building demolished and the land provided to the Harwell Oxford Campus estate. It is expected that this decommissioned end state would be achieved by 2064 (see Annex 4 for details of the time period anticipated for the import and export of wastes).
22. The proposed storage facility measures 88.8m long by 29.6m wide (2628.5 m²). The maximum height of the building would be 13.9m with a 16.9m high stack located at the south west corner of the building; this would discharge emissions from the air management system.
23. The ILW store would be a steel portal frame building with the envelope formed from wooden cladding.
24. The waste would be transported to the store in Robust Concrete Boxes (RCB) measuring approximately 2.4m x 2.2m x 2.2m high (10.6 m³). Vehicles would approach the store via a main yard which would allow vehicles to reverse the trailer section into a reception hall.
25. The RCB would then be removed from the vehicle by an overhead gantry crane into a quarantine reception area. This area allows for the temporary storage of up to 4 RCBs at any one time while they are checked prior to being removed to the main storage area.
26. Once the RCBs had been checked they would be moved into the main storage area by means of the crane. This area is designed to accommodate 460 containers which would be stacked in rows of 23, two containers high. Decommissioning is expected to generate 411 boxes in total with 217 of these generated at Harwell, 94 from Culham and 100 from Winfrith. A 12% margin has been allowed for such that the store can accommodate 460 RCBs which equates to approximately 2,500m³ of ILW.
27. In the unlikely event that the number of RCBs produced by decommissioning at Harwell, Culham and Winfrith exceeded 460, the capacity of the store could be increased by stacking the RCBs three high in a limited number of locations within the store, necessitating modifications to the crane without increasing the height of the building. It could then accommodate up to 600 RCBs.

28. The site would be surrounded by a 2.3m high steel fence with vehicular access to the ILW store via a secure gate. The access gates would be monitored via a CCTV system. The ILW store would meet the requirement of the Nuclear Industries (Security) Regulations 2003. The ILW store would also be surrounded by a 10m exclusion zone around the building with only the store's perimeter fence being accommodated within that area.
29. Other ancillary works associated with the proposed development include surface water management which would be discharged to a soak away system on site via a petrol interceptor; while waste water would be discharged to the site's foul drainage system which eventually discharges into the Didcot waste water treatment works.
30. Off-site planting is proposed as part of the development in order to provide long term screening of the proposed development itself and the Harwell Oxford campus generally. The planting would take the form of two areas of native tree and shrub species covering a combined area of 20,500 square metres.

Traffic and Access

31. It is proposed that waste from Winfrith and Culham would be transported by road networks.
32. It is anticipated that two RCBs would arrive at the proposed ILW Store per week. The RCBs would be transported to site by HGVs. Given the scale of the load, only one RCB would be transported per HGV.
33. The export phase is expected to be similar to the import phase but a slightly increased frequency of movement (approximately four RCBs per week).
34. ILW from Winfrith would travel via the A352 onto the A351 followed by the A35, A3409 and A348 to the A31 until it merges with the M27. Vehicles would exit from the M27 onto the M3 until Junction 9 from where they would travel to the site via the A34 and then onto the A4185.
35. ILW from Culham would travel along the A415 to the A4074, from where they would use the A423 until joining the A34. Vehicles would travel along the A4130 until they reached the Harwell site.
36. ILW leaving Harwell would access the A34 Trunk Road via the A4185 to the south or A4185 and A4130 to the north.
37. All HGVs and vans associated with the construction of the store would enter and leave the site via the Fermi Avenue access (shown in Plan 1), as would HGVs delivering RCBs to the store.
38. It is proposed that operational movements associated with the import and export of the ILW would be undertaken outside of the AM and PM network

peak hours. A route (subject to agreement with the County Council) would be followed by operational vehicles transporting ILW.

39. The transportation of RCB would be in compliance with the International Atomic Energy Agency (IAEA) standards and would also meet Office for Nuclear Regulation (ONR) requirements.

Environmental Statement

40. The application is supported by an Environmental Statement (ES). This covers alternative site assessment, traffic and transportation, landscape and visual amenity, air quality, ecology, water and drainage, noise, land contamination and climate change. It proposes mitigation measures. The ES is summarised at Annex 2 to this report.

Options Study

41. As part of the decision-making process to determine the future strategy for interim storage of ILW arising from decommissioning of the remaining nuclear facilities at its Harwell and Winfrith sites, the applicant undertook an options study in mid-2011. The study built on the results of an earlier UKAEA study which had identified that a regional store to house the ILW arising from decommissioning of a number of sites situated in the same region of the country and producing similar wastes was the preferred strategy.

42. The study considered the various licensed sites which might be able to host stores for the RSRL and JET intermediate level radioactive waste. The options reviewed were limited to sites within the NDA estate because these represent a good geographical spread and NDA is able to control the strategies followed on these sites whereas it has no such influence on, for example, MOD or commercial nuclear power station sites. Culham was not considered because it is not a licensed site. The sites considered were therefore as follows:

- Harwell
- Winfrith
- Sellafield
- Dounreay
- Magnox Power Station sites

43. Winfrith was not preferred because it has the potential to be completely decommissioned and restored to heathland within the next ten years and siting the ILW store there would prevent that being achieved. The site forms about half of the Winfrith Heath SSSI and is also located in the Dorset Heathland RAMSAR site.

44. The existing WAGR box store at Sellafield has the capacity to store additional radioactive waste. However, the NDA have confirmed that any spare capacity in the WAGR box store at Sellafield has now been earmarked for ILW produced from future Sellafield decommissioning projects. In addition,

Sellafield is currently considered a possible site for the future location of the GDF. Although no decision regarding the final location of the GDF has been made yet, a new packaged ILW store would distract from its prime hazard reduction mission. In other words, storing the waste at Sellafield in the interim would prejudice the future siting decision for a repository. This would also not meet with the timescale for decommissioning work planned at RSRL sites.

45. Dounreay could not be considered seriously as an interim storage site for decommissioning ILW from RSRL sites due to the significant transport and cost issues associated with Dounreay's remote location on the north coast of Scotland.
46. The Magnox sites have built or are planning to build interim stores for the ILW generated in the initial stages of the decommissioning of their power stations which are all shut down with the exception of Wylfa which is due to close in 2014. In some cases these may be regional stores. The waste to be stored is different in character to that which will be generated at Harwell, Winfrith and Culham, being generally smaller items and resins which will be packaged in smaller containers than those planned by RSRL for packaging large components. The final decommissioning of the power stations, which will generate larger items similar to those from Harwell, Winfrith and Culham, is being deferred for several decades. The interim stores being developed for the Magnox ILW are therefore not suitable for the large waste boxes proposed for use at the RSRL and Culham sites.

Permitting Regime:

47. If permitted, the activities proposed in this planning application would also be regulated under the Environmental Permitting (England and Wales) Regulations 2010 (as amended) and licenced by the Office for Nuclear Regulation (ONR).
48. The Environment Agency is responsible for regulating all disposals of radioactive waste on and from Nuclear Licensed Sites (NLS) in England and Wales. Disposals of radioactive waste include discharges into the atmosphere, discharges into the sea, rivers, drains or groundwater, disposals to land and disposals by transfer to another site.
49. The keeping, use and transport of radioactive materials and the accumulation of radioactive waste are regulated by ONR.
50. In simple terms ONR ensures that the safety of workers and the general public is not compromised by the operations whereas the Environment Agency ensures that the operations comply with environmental statute and regulations and therefore that the associated risk of damage to the environment is minimised.

Part 2 – Other Viewpoints

Third Party Representations

51. One letter of concern has been received. A copy of the letter is available in the Members' Resource Centre. The points made are as follows:
- The proposal mentions a waste storage facility for intermediate level radioactive waste. However, it was understood that the site at Harwell was in the process of being de-commissioned for this type of waste. As a nearby resident this is of some concern.

Consultation Responses

52. Consultation responses have been received from a number of statutory and non-statutory consultees. The full text of these responses can be seen on the eplanning website. They are also summarised at Annex 3 to this report. There have been no objections from statutory consultees. However, two of the local Parish Councils are opposed to the proposal of receiving waste from Winfrith.

Part 3 – Relevant Planning Documents

Relevant planning documents and legislation (see Policy Annex to the committee papers)

53. Planning applications should be decided in accordance with the Development Plan unless material considerations indicate otherwise.
54. The Development Plan for this area comprises:
- The South East Plan (SEP)
 - The saved policies of the Oxfordshire Minerals and Waste Local Plan (OMWLP)
 - The Vale of White Horse Local Plan (VoWHLP)
55. The SEP forms part of the development plan. However, the Government has made it clear that it intends to abolish regional strategies. The Localism Act enables the Secretary of State to revoke the whole or any part of a regional strategy by order. Whilst no such order has been made at the time of writing, the published intention to revoke is a material consideration to which substantial weight should be given. The Strategic Environmental Assessment (SEA) into the abolition of the SEP was published for consultation recently.
56. The Oxfordshire Minerals and Waste Core Strategy (OMWCS) has not yet been adopted. However, the Proposed Submission Document (OMWCS) was agreed by Oxfordshire County Council Cabinet on 13 March 2012 and full Council on 3 April 2012 and submitted to the Secretary of State on 1 November 2012. Following the plan's independent examination and the receipt of the Inspector's report, the council will be able to adopt the final plan.

As this plan is now at an advanced stage, due weight should be given to its policies.

57. The National Planning Policy Framework (NPPF), Planning Policy Statement 10 (Planning for Sustainable Waste Management), Managing Radioactive Waste Safely (Government White Paper 2008) and Nuclear Decommissioning Authority (NDA) strategy 2011 are also material considerations.
58. The following policies are relevant to the consideration of this application:
- SEP – W2, W3, W15, W14, W16, W17, NRM1, NRM2, NRM9, NRM10 and C3.
 - OMWLP – PE3, PE18.
 - VoWHLP –E7, DC1, DC5, DC6, DC9, DC12, TR3 and NE6.
 - OMWCS – W6, W8, W9, C2, C3, C6 and C8.

Part 4 – Analysis and Conclusions

Comments of the Deputy Director for Environment & Economy (Strategy and Infrastructure Planning)

59. The key planning issues are:
- Acceptability of the proposal in principle;
 - Importation of radioactive waste from outside the County;
 - Traffic and Transportation;
 - Impact on the wider landscape (particularly AONB);
 - Impacts on neighbouring residents/properties; and
 - Pollution and contamination.
60. Other important issues include:
- Public perception;
 - Safety and security; and
 - Restoration and aftercare.
- (i) Principle:
61. The Government’s 2008 White Paper on the safe management of radioactive waste recognises that the national policy in respect of ILW should provide a robust programme of interim storage as an integrated part of the long term management strategy providing an extendable, safe and secure means to hold waste prior to the establishment of a geological facility. Such advice clearly establishes the need to provide interim storage for ILW.
62. The NDA Strategy 2011 promotes the investigation of a flexible multi-site approach to the management of all radioactive wastes. The Strategy specifically promotes moving materials and waste from one site to another where the facilities exist to best manage them.

63. Policies W2 and W3 of the SEP seek to see both regional and sub-regional self-sufficiency in the provision of waste management capacity. Policy W15 of the SEP seeks to see provision made for specialist hazardous waste facilities.
64. Policy W8 of the OMWCS states that permission will only be granted for the management of hazardous waste where it meets a requirement for the management of waste produced in Oxfordshire and that facilities that also provide capacity for such waste from a wider area should demonstrate that they will meet a need that is not adequately provided for elsewhere.
65. Policy W9 of the OMWCS specifically refers to the management of radioactive waste arising from Culham and Harwell. It states that provision will be made for the storage of Oxfordshire's intermediate level legacy radioactive waste at Harwell Oxford Campus, pending its disposal at a planned national disposal facility elsewhere.
66. Whilst policy W9 of OMWCS does not specifically mention bringing waste from outside the County, supporting text of the policy indicates that bringing waste from outside for storage at Harwell will be considered when detailed proposals are available in a planning application.
67. It will be discussed in the next section of the report whether there is a justifiable case to bring waste from outside the County i.e. from Winfrith (Dorset). However, the above Government strategies and guidance and the OMWCS support the principle of an interim ILW storage facility at Harwell for Oxfordshire's ILW.

(ii) Importation of waste

68. The ES (see Annex 2) concludes that building a single store for the ILW arising from decommissioning at Harwell, Culham and Winfrith is a better option environmentally and economically than building three separate stores.
69. The applicant has put forward justifications for building the single store at Harwell i.e. for bringing radioactive waste from Winfrith to Harwell. It is my view that there is a justifiable case for bringing waste from Winfrith for the following reasons:
 - Winfrith is capable of being completely returned to heathland by 2021, which could not happen if an ILW store were sited there.
 - The existing ILW storage at Harwell will be there until 2048 in any event (i.e. Harwell cannot be decommissioned until that date).
 - That approximately 50% of the ILW waste is at Harwell, 25% at Winfrith and 25% of waste at Culham, and it is desirable to move as little waste as possible.
 - Notwithstanding the fact that the Harwell site is in the AONB there are also environmental benefits to locate the ILW store at Harwell. The Winfrith site is also located within a SSSI. The early removal of the ILW would allow returning this site to its natural habitat, which would allow

the valued environmental characteristics. In contrast, the Harwell site (as currently permitted) will not reach its end state until 2048, and the likelihood is that the site will be developed for science purposes associated with Harwell Oxford. Therefore, there is less environmental benefit to be gained if the ILW store were not located at Harwell.

(iii) Traffic and Transportation Implications

70. SEP policy W16 encourages identifying waste transport infrastructure facilities, including sites for waste transfer and bulking facilities, essentials for sustainable transport of waste materials.
71. Policy C8 of the OMWCS states that waste development will be expected to make provision for adequate and convenient access to and along advisory lorry routes in a way that maintains and if possible leads to improvement in the safety of all road users including pedestrians, the efficiency and quality of road network and residential and environmental amenity.
72. Policy DC5 of the VoWHLP states that the development will only be permitted if the road network can accommodate traffic arising from the development without causing safety, congestion and environmental problems. Policy TR3 makes explicit reference to the Harwell Science and Innovation Campus in the context of developments which would be likely to increase congestion or safety risks in the vicinity of the A34 Milton interchange.
73. There has been concern raised by one of the Parish Councils regarding the number of transport movements from outside the County.
74. The proposal would generate the transportation of a maximum 100 vehicles from Winfrith. In total there would be movements of around 200 vehicles to Harwell (from Culham and Winfrith) over a period of 13 years (2017-2030). Annex 4 to this report shows that the spreads of movements is not likely to be regular over this 13 year period. Therefore, at maximum decommissioning rates there would be a maximum 2 RCB movements per week to Harwell.
75. There would be a slightly increased frequency of movements in the export phase of waste. Given the timetable at Annex 4, it would generate a maximum of 4 RCBs per week.
76. There is a possibility of a maximum 4 RCB movements in a day if only rail transport is used. However, the applicant has confirmed that rail transport is not an option for this development and therefore, the development needs to be considered on the basis of road transport only.
77. The issue of the safety of the transportation of radioactive waste is governed by the Office for Nuclear Regulation (ONR). They have raised no objection to this proposal.

78. It is my view that any highway impact associated with this proposal would be almost entirely during its construction phase (for 18 months). After that, the vehicle movements associated with the facility would be negligible. The existing road network can accommodate the traffic arising from the development without causing safety, congestion and environmental problems. The County Highways Development Control Officer has raised no objection subject to the imposition of a planning condition to control construction traffic. They have also proposed a routeing agreement for the operational phase of the development.

79. Therefore, I consider that subject to the proposed routeing agreement and the condition outlined above, the proposal is consistent with the relevant transport policies set out above.

(iv) Impact on the North Wessex Downs AONB

80. Policy W17 of the SEP states that small scale waste management facilities should not be precluded from AONBs where the development would not compromise the objectives of the designation. Policy C3 of the SEP puts a high priority on the conservation and enhancement of AONBs and that regard should be had to their settings. It goes on to state that the emphasis should be on small scale proposals that are sustainably located and designed.

81. Policy NE6 of the VoWHLP states that development in the North Wessex Downs AONB will only be permitted if the natural beauty will be conserved or enhanced and that visually prominent development will not be permitted. It goes on to say that major development will not be permitted in the AONB unless it is proven to be in the national interest and no alternative site can be found and all steps are taken to reduce its impact. Policies W6 and C6 of the OMWCS taken together require that developments in the AONBs should normally only be small-scale, and sensitively located and designed. Policy DC6 of the VoWHLP seeks to see landscaping provided to protect and enhance the existing landscape features.

82. Paragraph 115 of the NPPF states that great weight should be given to conserving landscape and scenic beauty in Areas of Outstanding Natural Beauty. Planning permission should be refused for major developments in this designated area except in exceptional circumstances and where it can be demonstrated that the proposal is in the public interest.

83. Paragraph 116 of the NPPF goes onto say that the consideration of such applications should include an assessment of:

- the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;
- the cost of, and scope for, developing elsewhere outside the designated area, or meeting the need for it in some other way; and

- any detrimental effect on the environment, the landscape and recreational opportunities and the extent to which that could be moderated.
84. The application is by definition major development as it would have a footprint of more than 1,000 m² and therefore in this respect is contrary to policies W17 and C3 of the SEP and W6 and C6 of the OMWCS set out above which support only small scale waste management facilities in the AONB. Accordingly, it is necessary to consider whether exceptional circumstances justifying the proposed development in the AONB have been demonstrated.
 85. The principle of locating an ILW store at Harwell has already been established elsewhere in the report. In addition, this facility should be considered as a nationally significant facility as the UK has accumulated a substantial legacy of radioactive waste from a variety of different nuclear programmes, both civil and defence-related.
 86. The applicant's assessment for alternative sites and options study did not present any viable alternatives outside the AONB. I would agree that, particularly with regard to the nature of the waste, there is no suitable site available that also meets other important criteria including minimising the overall distances over which the waste would be transported, given that much the larger proportion of the ILW requiring storage is located at the Harwell and Culham sites in Oxfordshire.
 87. The site and the immediate area are already characterised by existing and former development which also includes radioactive waste storage facilities. The District Council has designated the entire Harwell campus for appropriate future development. Whilst the Harwell Campus lies within the AONB, it is hard to argue that the existing built development makes any contribution to the purposes of the designation. Therefore, whilst the development must be viewed as major development contrary to development plan policies, in this context I consider it would be hard to demonstrate how it would result in any significant additional impact on the AONB. The design, materials and height of the proposed building would not be inconsistent with the existing building/structures of the site (the nearest building to the new ILW store site is 11.3 metres high). The proposed new planting along with existing planting should minimise any landscape and visual impact of the development.
 88. Members will note that neither the relevant AONB board nor the Ecologist Planner have raised any concerns about this development. It is my view, therefore, that the national need for further ILW storage capacity coupled with the site's location being such as to minimise the need for ILW transportation constitutes the exceptional circumstances necessary to justify the location of this development in the AONB and an exception to development plan policies W17 and C3 of the SEP and draft policies W6 & C6 of the OMWCS.
 89. I consider that as the proposed development is in the national interest, it is set amongst existing built up development (thus reducing its visual impact), there are no more acceptable alternatives and measures would be taken to

landscape the development, it would accord with the aims of policy DC6 & NE6 of the VoWHLP. I consider that it would also accord with the guidance set out in policies 115 and 116 of the NPPF.

(v) Impacts on neighbouring residents/properties

90. Planning policy requires that proposals including for minerals and waste development should not have unacceptable adverse impacts on residential amenity and other sensitive receptors and that appropriate buffer zones should be provided (Policies DC9 of the VoWHLP, PE3 of the OMWLP, C3 of the OMWCS and NRM9 and NRM10 of the SEP). Policy DC1 of the VoWHLP requires that development will not be permitted if it is not of high quality and in appropriate relationship with its surroundings. Policy E7 of the VoWHLP makes similar provision.
91. There is only one letter of concern from a local resident regarding this proposal. That letter has not described in detail the particular reasons for concern beyond stating that it had been understood the Harwell site was to be decommissioned for this type of waste.
92. There has been particular concern from East Hendred Parish Council that accepting waste from outside the county might in the future lead to waste from other sites being stored in the planned ILW store. The application is clear that the proposed storage facility is only to store ILW arising from the Harwell, Culham and Winfrith sites. This would be ensured through the use of an appropriate planning condition if any permission is granted.
93. The ILW packages would be delivered and subsequently stored in secure containers and would not be reworked (opened) during the operational phase. Therefore, it is predicted that there would be no measurable radioactive emissions from the store. This would be ensured through regular monitoring by the operator as well as the regulatory authorities such as the Environment Agency and the Office for Nuclear Regulation, neither of which has raised objection to the application.
94. However there is the potential that ILW transferred from the JET Facility (Culham) would emit small amounts of the radioactive gas tritium. Tritium is very difficult to contain completely and some leakage is likely to occur. The encapsulation of the tritium emanating waste would restrict its rate of release as required for transportation purposes and to meet the Radioactive Waste Management Directorate's (RWMD) requirements. The encapsulation process for such wastes is still being developed. If trials show that tritium emanation is likely to be sufficient to warrant it, the store's ventilation system would be specified such as to ensure that the tritium is discharged to atmosphere and dispersed in a safe manner. Any such emissions would be in accordance with the Environment Agency requirements and within the site's authorised discharge limits.

95. The District Council's Environmental Health Officer has not raised an objection to this application. The site is distant from the nearest residential property (700 metres) and other sensitive uses. Sufficient mitigation measures could be put in place to control noise, dust and other possible impacts to local amenity. Any potential radioactive emission would be controlled by the Environment Agency's permitting regimes. The design and scale of the development is proportionate to the surrounding environment. The proposal therefore accords with the aims of Policies PE3 of the OMWLP, E7, DC1 & DC9 of the VoWHLP, C3 of the OMWCS and NRM9 and NRM10 of the SEP.

(vi) Pollution and Contamination

96. Planning policy requires that proposals should not risk groundwater quality (OMWCS policy C2, VoWHLP policy DC12 and policies NRM1 and NRM2 of the SEP).
97. PPS 10 specifies that Waste Planning Authorities should not seek to duplicate other licensing regimes. This application if permitted would also need to be permitted by the Environment Agency, which would control pollution and contamination arising from the process of the proposed operations.
98. There have been no objections to the proposed development from any of the pollution control agencies. The Environment Agency has advised that if permission is granted conditions be attached to control the risks of pollution and contamination. These are pre-commencement conditions and would relate to the use of the land. Any potential pollution and contamination during the operational period of this development would be regulated by an Environmental Permit.
99. Therefore, I consider that this proposal accords with policies OMWCS C2, VoWHLP DC12 and NRM1 and NRM2 of the SEP.

(vii) Public Perception

100. The perception of harm is a material consideration in deciding this planning application. However, there is only one objection from a member of the public, who has not mentioned any particular perceived/actual harm from this development.
101. East Hendred Parish Council has raised concern about the release of tritium from the JET facility at Culham, which may cause environmental and health impacts for the surrounding area. This issue has already been discussed in paragraph 94 of this report.
102. There is no objection on actual harm from any of the relevant regulatory bodies.
103. Officers have discussed with the applicant the schedule for moving existing nuclear materials from Harwell to Sellafield for processing. It is now agreed that these movements of nuclear waste from Harwell would be started in 2013

and completed in 2021, four years before the commencement of the movement of waste from Winfrith to the Harwell ILW store. The date for the first reception of ILW from Winfrith to Harwell based on a suitable “milestone” having been reached for the transfer of material from Harwell to Sellafield can be controlled by a planning condition. It is my view that this would give some assurance to local residents.

104. I consider that the perceived harm from this development is very limited. With the use of planning conditions and control by the other regulatory authorities any perceived harm from the development can be controlled and mitigated.

(viii) Safety and Security

105. International Atomic Energy Agency (IAEA) safety standards state that the storage of radioactive waste must ensure that both human health and the environment will be protected, both now and in the future, without imposing undue burdens on future generations.
106. The various public consultation exercises (before the submission of the application) raised the issue of the safety of the transportation of ILW on the public highway. The applicant has addressed this concern in the application. It is confirmed that the transportation of ILW will comply with IAEA standards. The safety issue will also be governed by the Office for Nuclear Regulation.

(ix) Restoration and Aftercare of the site

107. Policy W14 of the SEP seeks to secure high quality restoration and aftercare of waste management sites. Policy DC6 of the VoWHLP seeks to maximise opportunities for nature conservation and wildlife habitat creation. The proposed store is designed to store ILW for a temporary period. The decommissioning phase would involve the removal of the built elements of the ILW store and return the land to a natural state. This is proposed to be completed by 2064.
108. It is the view of the ecologist planner of the County Council that the site should be subject to a 5 year aftercare period after restoration for biodiversity enhancement. The details of the aftercare scheme would be required through planning conditions if permitted. I am therefore satisfied that subject to this, the requirements of policies W14 of the SEP and DC6 of the VoWHLP would be met.

Other Issues:

109. County Council Arboriculture Officer has requested a further tree survey. The survey carried out by the applicant had just been received by the officer at the time of writing the report. Any further comments from the Arboriculture Officer will be reported to the Committee.

Conclusions

110. Government strategies and the emerging Oxfordshire Mineral and Waste Core strategy (OMWCS) support the principle of locating an interim ILW storage facility at Harwell.
111. The importation of waste from outside the County is an integral part of the NDA Strategy and the Integrated Waste Management Strategy Development Programme. There is a justifiable case for bringing waste from Winfrith.
112. I consider that the national need for storage of ILW and the benefits of minimising the distance this waste would be transported by locating the facility at the application site at Harwell constitute exceptional circumstances for making an exception to AONB policies set out above. Subject to a vehicle routing agreement and conditions as discussed above to control the impacts of the proposed development I consider that the application should be approved.

RECOMMENDATION

113. It is **RECOMMENDED** that subject to a routing agreement to ensure that vehicles related to this development follow specific routes proposed in the application that Application No. MW.0183/12 be approved subject to conditions to be determined by the Deputy Director (Strategy and Infrastructure Planning) to include the following matters:
- (1) Complete accordance with approved plans;
 - (2) Commencement within 3 years;
 - (3) The ILW store shall be removed and the site restored by 2064.
 - (4) The ILW store shall only be used for the storage of Intermediate Level Waste materials arising from Harwell, Culham and Winfrith;
 - (5) No radioactive waste from Winfrith shall be brought to Harwell until a set amount of radioactive waste from Harwell has been moved to Sellafield;
 - (6) No processing of waste on site
 - (7) Construction operations (including the manoeuvring, loading or unloading of vehicles) shall only take place between the hours of:
 - 07:00 - 18:00 hours Monday to Friday
 - 07:00 - 18:00 hours Saturdays
 - 07:00 - 14:00 hours Sundays and Bank Holidays;
 - (8) Measures to be taken to prevent the deposit of mud and dust on the highway;
 - (9) All vehicles, plant and machinery operated within the site shall be fitted with and use effective silencers;
 - (10) Submission of a scheme to deal with risks associated with the contamination of the site;
 - (11) Submission of verification report demonstrating completion of works set out in the approved remediation strategy;
 - (12) No piling or any other foundation designs using penetrative methods;

- (13) No infiltration of surface water drainage into the ground from vehicle delivery areas;
- (14) No night working;
- (15) Submission of a detailed landscaping planting scheme prior to commencement of development;
- (16) No works of decommissioning until submission of an updated ecological survey;
- (17) Submission of a 5 year aftercare scheme for biodiversity enhancement within 1 year of commencement of development;
- (18) Submission of samples of all external materials for the roof and walls of the building prior to commencement of development;
- (19) No external lighting;
- (20) Records shall be kept of waste importation and exportation and made available on request to the County Planning Authority;
- (21) Submission and approval of a Construction/Demolition Traffic Management Plan before commencement of development;
- (22) Submission and approval of SUDS compliant Drainage Strategy before commencement of development.

Reasons for Approval

1. Government strategies, the South East Plan and the emerging Oxfordshire Mineral and Waste Core strategy (OMWCS) support the principle of locating an interim ILW storage facility at Harwell. The proposal is consistent with policies W8 & W9 of the OMWCS and policies W2, W3 and W15 of the SEP.
2. The importation of waste from outside the County is an integral part of the NDA Strategy and the Integrated Waste Management Strategy Development Programme. There is a justifiable case for bringing waste from Winfrith.
3. Subject to the proposed routeing agreement and the conditions, the proposal is consistent with the relevant transport policies W16 of the SEP, C8 of the OMWCS and DC5 & TR3 of the VoWHLP.
4. There exist exceptional circumstances to locate this development in the AONB and any potential impact can be mitigated by proposed screen planting and landscaping and an exception to the provisions of policies W17 & C3 of the SEP and policies W6 & C6 of the OMWCS has been justified. The development accords with the aims of policies DC6 & NE6 of the VoWHLP.
5. The potential for noise and dust generation from this development is very minimal. Any potential radioactive emission could be controlled by the Environment Agency's permitting regime. The proposal is therefore, in accordance with the aims of policies PE3 of the OMWLP, E7, DC1 and DC9 of the VoWHLP, C3 of the OMWCS and NRM9 & NRM10 of the SEP.

6. The potential risk to the water environment from this installation should be minimal. Any potential risk of pollution and contamination can be controlled through planning conditions and the Environmental Permit. The proposal accords with the aims of policies C2 of the OMWCS, DC12 of the VoWHLP and NRM1 & NRM2 of the SEP.
7. The perceived harm about this development is negligible and the safety will be ensured by following IAEA standards. The site will also be regulated by the Office for Nuclear Regulation.
8. The development would provide opportunities for nature conservation and wildlife habitat creation as part of the restoration and aftercare scheme in accordance with the aims of policies W14 of the SEP and DC6 of the VoWHLP.
9. Therefore, this development is acceptable on its planning merits.

Compliance with National Planning Policy Framework

In accordance with paragraphs 186 and 187 of the NPPF Oxfordshire County Council take a positive and proactive approach to decision making focused on solutions and fostering the delivery of sustainable development. We work with applicants in a positive and proactive manner by:

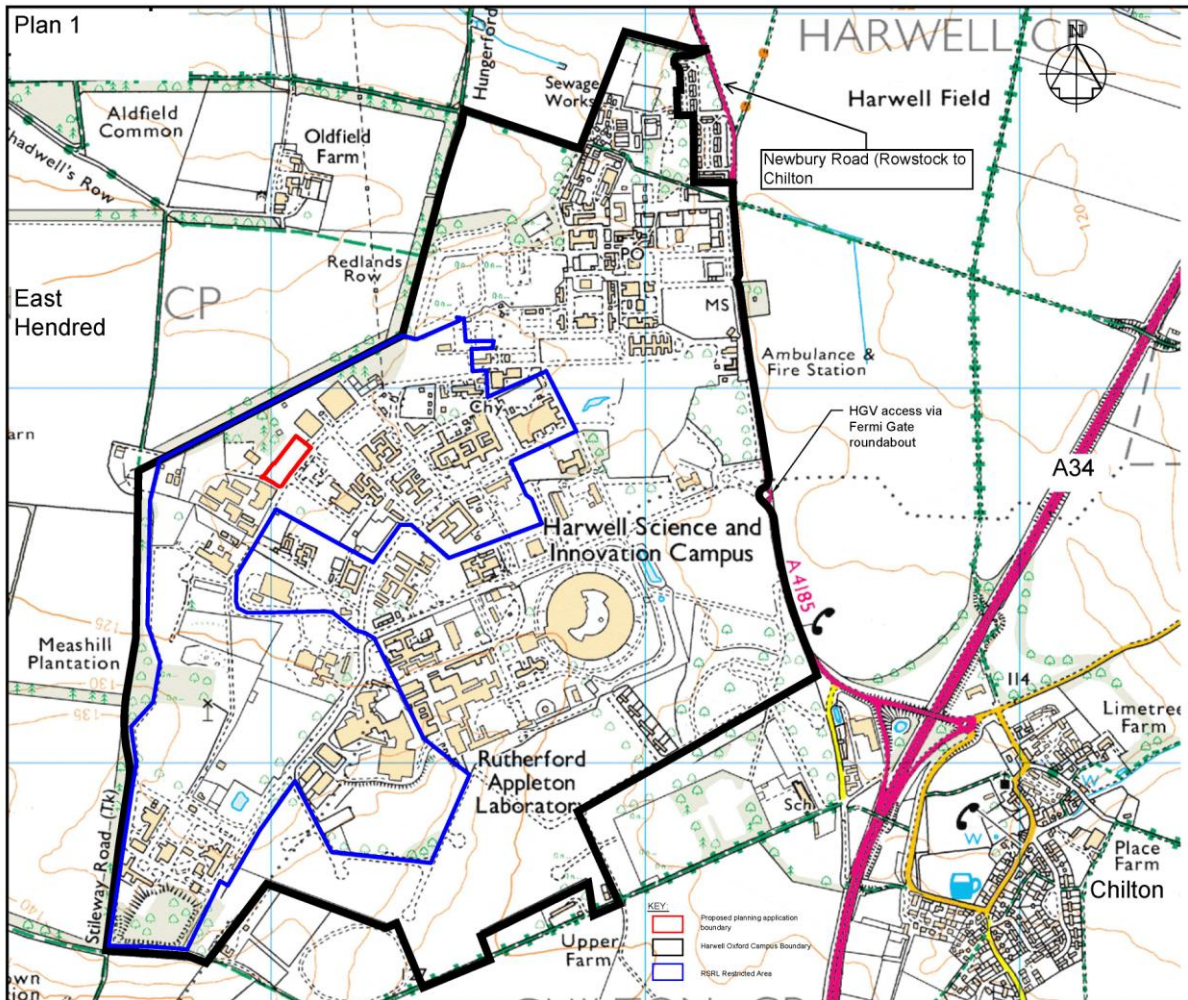
- offering a pre-application advice service, as was the case with this application, and
- updating applicants and agents of issues that have arisen in the processing of their application and where possible suggesting solutions as has occurred as part of this application process.

MARTIN TUGWELL

Deputy Director for Environment & Economy (Strategy & Infrastructure Planning)

February 2013

Plan 1



Summary of Environmental Assessment

1. **Alternative sites** – The alternative site assessment of the ES considers both alternative storage solutions and alternative sites for this proposal. The RCB was identified as the preferred container for the storage of ILW arising from three proposed sites. It is concluded that the proposal for a single ILW Store at Harwell would have a reduced impact in terms of resources required and economies of scale rather than the construction of separate facilities. Building a single building rather than three would save £5-£6m in capital expenditure. The majority of ILW would be produced at Harwell and so siting the store at the site would mean less material would need to be transported. Approximately 50% of the ILW waste is at Harwell, 25% at Winfrith and 25% of waste at Culham. The use of Harwell would also mean less environmental impact than the Winfrith and Culham sites. Culham site is located in Green Belt and the half of the RSRL site lies within the Winfrith Heath SSSI. The SSSI also lies within the Dorset Heathland RAMSAR site.
2. **Traffic and transportation** - The traffic and transport assessment in the ES considers the impact of the proposed development during the construction, operational and decommissioning phases. It identifies that the impact would be negligible and temporary and within the acceptable threshold. Although the predicted impact is not considered to be significant, some measures are proposed to minimise disruption to the local transport network such as preparation of a Construction Traffic Management Plan, following an agreed route, operational vehicle movements outside peak hours etc.
3. **Landscape and visual** - The landscape and visual impact assessment in the ES considers the landscape character of the area and the impacts on the surrounding landscape at all stages of the development. As the entire Harwell campus lies within the AONB boundary the proposed development would also be visible from parts of the surrounding AONB. The potential impact when viewed from within the AONB particularly from along the Ridgeway would be seen within the larger context of the wider Harwell Campus. For visual effects, a few nearby properties, public footpaths and roads would be subject to slight adverse effect during the construction and operational phases. It is predicted that following the completion of construction any adverse effects of the loss of woodland would diminish further overtime as new planting matures. In the longer term (15-20 years) the landscape and visual effects would reduce to negligible. The ES concludes that the impact of the development on the landscape and visual amenity is acceptable.
4. **Noise and vibration** – The impacts from noise and vibration from the proposed development are likely to be limited during the construction and decommissioning period. Mitigation measures to keep the noise levels below those recommended in government guidance are suggested. The predicted noise levels (with mitigation) during the construction period at the nearest property would be below the maximum level (65db LAeq during day time) outlined in government guidelines. However, if the works are undertaken

during evenings and weekends the relevant threshold level (55db LAeq) could be marginally exceeded at the nearest property (Ridgeway House Hotel within Harwell Campus). The noise assessment concludes that there would be no significant noise impact upon any of the nearby properties during the operational period of the development.

5. Air quality - The main sources of dust generation are identified as trackout from vehicles moving materials to and from the site during decommissioning. The ES concludes that due to the low number of receptors, vehicle number and use of paved roads the overall impacts of dust emissions would be very low and insignificant. The ES also states that there would be no emissions of radioactive material in the form of dust and gases during the construction and inactive commissioning stages of the store. The external (gamma) radiation field from the store would be at background levels and they are likely to be encountered by a member of the public at the ILW store exclusion zone fence line. Mitigation and control measures such as arrival of ILW conditioned for disposal (within RCBs), unload vehicle within the building, operate overhead gantry crane remotely from a central room, active air management system, sheeting vehicles, regular water spraying and sweeping etc. would be applied to minimise the impacts from the proposed development.
6. Ecology - The ecological impacts identified for this development are mainly confined to the construction phase. Mitigation measures to minimise any potential impact on ecology would include avoidance of key sensitive areas in the detailed planting design, precautionary method of working for reptiles in semi-improved grassland habitats, retention of mature trees and disturbance to existing scrub vegetation outside the breeding bird season. In addition, biodiversity enhancement measures are proposed to improve the overall biodiversity of the Harwell Campus. These measures include – planting of species that are of conservation to local UKBAP species, the installation of bird and bat boxes on mature trees and the installation of log piles and invertebrate hibernation boxes. Overall, the impact on ecology is assessed to be negligible and the biodiversity enhancement measures are considered to offer potential for a net ecological gain.
7. Land contamination- The Land Contamination study of the ES considers the potential effects of the proposed development on the underlying soils and geology. It also considers the potential for groundwater to be a source or receptor for contamination. It is predicted that there would be a slight increase in risk to controlled waters during the construction works if surface water run-off is not properly managed. Mitigation measures are proposed to control any potential risk of land contamination during the construction phase of the development. A number of potential risks have been identified which are associated with the operation of the ILW Store. These include direct contact of the building with contamination and the potential for explosive build-up of soil borne gas and human inhalation of soil borne gas. If future ground investigation and risk assessment confirm that these risks are present and require mitigation, measures would include the use of appropriate sulphate resisting concrete and the incorporation of gas protection measures within the building construction.

8. Water and drainage – The ES considers the baseline conditions of the water environment of the application area and surrounding area. It also considers the water resources, water quality and drainage issues relevant to the construction, operation and decommissioning phase of the development. Assessment of the baseline conditions and the construction, operational and decommissioning effects has concluded that the ILW Store would have an insignificant effect on the water environment provided the mitigation measures recommended are implemented.

9. Climate change – The ES concluded that given the scale of the development and the purpose that it serves, there is limited potential to incorporate specific sustainable solutions within the design. However sustainability has been considered where appropriate and feasible. The EIA of the development has also considered the risk posed due to flooding both now and in the future and concluded that there would be a negligible impact on the ILW Store in this regard.

Consultation Responses

1. *Vale of White Horse District Council:*

Planning – The proposal for radioactive waste storage is considered to be outside the area of expertise of district council officers and it is for the county as determining planning authority to come to their own decision on the acceptability of the proposal.

Environment Protection Team - The air quality and noise impact assessments are satisfactory. Matters relating to radiological safety and site restoration should be referred to the Environment Agency

2. *East Hendred Parish Council* – Support the facility to store waste from Harwell and Culham but object to moving radioactive waste from Winfrith to the Harwell Campus. Made the following comments:

- No objection to the planned store for storing waste from Harwell and Culham provided it is carefully designed to blend with the landscape as it is in an Area of Outstanding Natural Beauty.
- Accepted that there are benefits from releasing land on the Harwell Campus site for redevelopment, particularly as there are major plans for development of this area as a Science and Technology Centre.
- The case for moving radioactive waste from Winfrith to the Harwell campus for storage is not made in the application, as it appears to be based mainly on financial grounds and the fact that both sites happen to be managed by RSRL.
- There are other options for releasing the Winfrith site from storing waste, which are not properly explored in the application; in particular the option to move the Winfrith waste to Sellafield is not covered in this application.
- The application does not conform to the aim of the Draft Oxfordshire Minerals and Waste Core Strategy policy W8.
- Concerned that accepting waste from outside the county might in the future lead to waste from other sites being stored in the planned ILW store. There appears to be excessive storage capacity which is not fully explained in the application.
- The restriction of the proposed store to radioactive waste originated in Oxfordshire will eliminate 100 journeys of vehicles carrying such waste into this county, with clear benefits.
- Strongly propose that the new store is limited to storage of waste from only Harwell and Culham and that a condition should be placed on any approval excluding the import of waste from outside the county.
- When Culham waste would be stored in the new facility there is the possibility of the release of tritium, which may have to be vented to the atmosphere. An independent and specialist risk assessment of the environmental and health impacts of venting tritium need to be undertaken before it occurs.

- Expect mitigation measures to minimise risks to be considered and implemented if necessary before any venting takes place. Note that the Harwell site has been prosecuted in the past for venting tritium direct to the atmosphere, and do not regard it as necessarily safe.
3. *Chilton Parish Council* – Object to this application because it proposes to transfer radioactive waste from Winfrith to Harwell for storage. Made the following comments:
- The proposal to bring waste from Winfrith ignores the important and long-standing radioactive waste remediation principle of minimising the handling and transport of radioactive waste between the origin of the waste and its final disposal.
 - The amount of waste concerned is considerable (about 25% of the total by volume) and the overriding reason for this appears to be financial; to free up the Winfrith site for redevelopment by transferring its problem to Harwell.
 - The proper location for the Winfrith wastes should be at Sellafield, with the main store of other ILW awaiting ultimate deep disposal.
4. *CPRE* –Do not object to the erection and operation of a store at Harwell for ILW arising from Harwell and Culham but objects to receiving waste from Winfrith because of the following reasons:
- The proposal to import ILW from Winfrith does not satisfy the requirements of County policy as stated in the emerging Core Strategy.
 - Alternative site assessment has not been considered adequately in the application.
 - The site is within AONB and the proposed store could have been smaller and less obtrusive if it had not been designed to cater for the Winfrith material.
 - The excess capacity in the proposed store should not in any circumstances be regarded as available for waste from other sites.
5. *Harwell Stakeholder Group* - Fully accepts the principle of building a new Intermediate Level Waste Storage Facility for Harwell and Culham Waste but do not accept that a compelling case has been made in the planning application for the receipt of Intermediate Level Waste from the Winfrith Site in Dorset.
6. *Environment Agency* – No objection subject to conditions related to –
- Submission of a scheme to deal with risks associated with the contamination of the site
 - Submission of verification report demonstrating completion of works set out in the approved remediation strategy
 - No piling or any other foundation designs using penetrative methods
 - No infiltration of surface water drainage into the ground from vehicle delivery areas

Also made the following comments:

Although EA is the authorising body for disposal of radioactive waste from nuclear sites, their duties do not include permitting either of ILW or accumulation of radioactive waste on nuclear sites, since these are safety related rather than environmental matters. Regulation of safety on nuclear sites is for the Office for Nuclear Regulation. Consequently EA's radioactive substances regulation interest is restricted to disposal of radioactive waste from the store, for example: contaminated refuse or ventilation discharges.

7. *Natural England* – No objection
8. *Ministry of Defence (MOD)* – No safeguarding objection.
9. *Office for Nuclear Regulation* – No objection.
10. *Health and Safety Executive* - The Health & Safety Executive were consulted but have not replied.
11. *Health Protection Agency* – No response received yet.
12. *Highway Agency* – No objection
13. *North Wessex Downs AONB* – No objection subject to conditions over the use of the building and its external materials and lighting.
14. *Dorset County Council* – No objection.
15. *Highways Authority* – No objection subject to conditions related to the following matters:
 - Submission and approval of a Construction/Demolition Traffic Management Plan before implementation of any permission.
 - Completion of Routing Agreements with Oxfordshire County Council for the operational phase before commencement of the development.
 - Submission and approval of SUDS compliant Drainage Strategy before implementation of any permission.
16. *OCC Drainage* – No objection. The drainage work needs to be carried out in accordance with the submitted Environmental Statement but with additional consideration within the design for 100 year storm with climate change 30%.
17. *Ecology and Landscape* – No objection subject to following conditions:
 - Implementation of the ecological/landscape mitigation and enhancement scheme described in the Environmental Statement.
 - No night working
 - Submission of detail planting scheme before commencement of development

- Submission of 5 year aftercare scheme before commencement of development
- Submission of updated ecological survey/assessment prior to decommissioning

18. *Archaeology* – No objection.

19. *Arboriculture Officer* –Requested for further information in the form of a BS5837: 2012 Trees in relation to design, demolition and construction survey.

Annex 4 - the list of predicted dates of movements of wastes

Transfer of special nuclear materials (including CHILW) from Harwell to Sellafield	2013 - 2021
Construction of ILW store at Harwell commences (Subject to Planning Permission)	2015
ILW Store at Harwell becomes operational	2017
Transfer of ILW from Winfrith to Harwell	2018 - 2020
Transfer of ILW from Culham to Harwell	2022 - 2024
Decommissioning of Remaining Facilities at Harwell generating ILW	2018 – 2028
Interim End State (Minimum size nuclear island) achieved at Harwell	2030
GDF available to accept ILW	2040
All ILW moved from Harwell to GDF by	2048
Harwell decommissioned and site clearance	2050
Harwell Site Delicensed	2064