AN APPLICATION FOR PLANNING PERMISSION FOR
THE LANDFILL DISPOSAL OF LOW LEVEL
RADIOACTIVE WASTE IN PHASES 4B, 5A AND 5B OF
THE CURRENTLY PERMITTED HAZARDOUS WASTE
LANDFILL AT THE EAST NORTHANTS RESOURCE
MANAGEMENT FACILITY, NORTHAMPTONSHIRE

Report reference: AU/LL/MM/1517/01Application
July 2009
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GLOSSARY

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Appendices

Appendix A Planning permission reference EN/05/1264C

Appendix B Planning permission reference EN/06/01517/CRA

Appendix C Planning permission reference 07/00048/WAS and 07/01838/NCC

9. DESIGN AND ACCESS STATEMENT

10. STATEMENT OF LOCAL ENGAGEMENT including Appendices A to M
1. APPLICATION FORMS
Publication of applications on planning authority websites
Please note that the information provided on this application form and in supporting documents may be published on the Authority’s website. If you require any further clarification, please contact the Authority’s planning department.

Please complete using block capitals and black ink.
It is important that you read the accompanying guidance notes as incorrect completion will delay the processing of your application.

### 1. Applicant Name and Address

<table>
<thead>
<tr>
<th>Title:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>First name:</td>
<td>GENE</td>
</tr>
<tr>
<td>Last name:</td>
<td>WILSON</td>
</tr>
<tr>
<td>Company (optional):</td>
<td>AUGEAN PLC</td>
</tr>
<tr>
<td>Unit:</td>
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<tr>
<td>House number:</td>
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<tr>
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<td>House name:</td>
<td>EAST NORTHANTS RESOURCE</td>
</tr>
<tr>
<td>Address 1:</td>
<td>MANAGEMENT FACILITY</td>
</tr>
<tr>
<td>Address 2:</td>
<td>STAMFORD ROAD</td>
</tr>
<tr>
<td>Address 3:</td>
<td>KINGS CLiffe</td>
</tr>
<tr>
<td>Town:</td>
<td>PETERBOROUGH</td>
</tr>
<tr>
<td>County:</td>
<td>NORTHAMPTONSHIRE</td>
</tr>
<tr>
<td>Country:</td>
<td>UK</td>
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<tr>
<td>Postcode:</td>
<td>PEB 6XX</td>
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### 2. Agent Name and Address

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<tr>
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<tr>
<td>Unit:</td>
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<tr>
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<td></td>
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<tr>
<td>Country:</td>
<td></td>
</tr>
<tr>
<td>Postcode:</td>
<td></td>
</tr>
</tbody>
</table>

### 3. Description of the Proposal

Please describe the proposed development, including any change of use:

The landfill disposal of low level radioactive waste in Phases 4A, 5A and 5B of the currently permitted hazardous waste landfill at the East Northants Resource Management Facility, Northamptonshire.

Has the building, work or change of use already started?  
☐ Yes  ☑ No

If Yes, please state the date when building, work or use were started (DD/MM/YYYY):  
(date must be pre-application submission)

Has the building, work or change of use been completed?  
☐ Yes  ☑ No

If Yes, please state the date when the building, work or change of use was completed: (DD/MM/YYYY):  
(date must be pre-application submission)
4. Site Address Details
Please provide the full postal address of the application site.

- Unit: 
- House number: 
- House suffix: 
- Postcode: PE8 6XX
- Description of location or a grid reference.

5. Pre-application Advice
Has assistance or prior advice been sought from the local authority about this application?
- Yes
- No

If Yes, please complete the following information about the advice you were given. This will help the authority to deal with this application more efficiently. Please tick if the full contact details are not known, and then complete as much as possible:

- Officer name: PHIL WATSON
- Reference:
- Date (DD/MM/YYYY): 09/01/2009
- Details of pre-application advice received: PRE - APPLICATION MEETING HELD ON 29 JANUARY 2009. DISCUSSED THE IMPACTS THAT IT WAS NECESSARY TO ADDRESS IN THE ENVIRONMENTAL STATEMENT. A SCOPE OPINION WAS PROVIDED ON 18 JUNE 2009.

6. Pedestrian and Vehicle Access, Roads and Rights of Way
Is a new or altered vehicle access proposed to or from the public highway?
- Yes
- No

Is a new or altered pedestrian access proposed to or from the public highway?
- Yes
- No

Are there any new public roads to be provided within the site?
- Yes
- No

Are there any new public rights of way to be provided within or adjacent to the site?
- Yes
- No

Do the proposals require any diversions/requisitions and/or creation of rights of way?
- Yes
- No

If you answered Yes to any of the above questions, please show details on your plans/drawings and state the reference of the plan(s)/drawings(s)

7. Waste Storage and Collection
Do the plans incorporate areas to store and aid the collection of waste?
- Yes
- No

If Yes, please provide details:

Have arrangements been made for the separate storage and collection of recyclable waste?
- Yes
- No

If Yes, please provide details:

8. Neighbour and Community Consultation
Have you consulted your neighbours or the local community about the proposal?
- Yes
- No

If Yes, please provide details:

ENSIVE CONSULTATION HAS BEEN UNDERTAKEN WITH THE NEIGHBOURS AND THE WIDER COMMUNITY. THE CONSULTATION IS OUTLINED IN THE STATEMENT OF LOCAL ENGAGEMENT.

9. Authority Employee / Member
With respect to the Authority, I am:

- a member of staff
- an elected member
- related to a member of staff
- related to an elected member

Do any of these statements apply to you?
- Yes
- No

If yes please provide details of the name, relationship and role
### 10. Materials
If applicable, please state what materials are to be used externally. Include type, colour and name for each material:

<table>
<thead>
<tr>
<th>Material</th>
<th>Existing (where applicable)</th>
<th>Proposed</th>
<th>Not applicable</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walls</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Roof</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Windows</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Doors</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Boundary treatments (e.g. fences, walls)</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Vehicle access and hard-standing</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Lighting</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Others (please specify)</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

Are you supplying additional information on submitted plan(s)/drawing(s)/design and access statement?  

- Yes  
- No

If Yes, please state references for the plan(s)/drawing(s)/design and access statement:

### 11. Vehicle Parking
Please provide information on the existing and proposed number of on-site parking spaces:

<table>
<thead>
<tr>
<th>Type of Vehicle</th>
<th>Total Existing</th>
<th>Total proposed (including spaces retained)</th>
<th>Difference in spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cars</td>
<td>≠30</td>
<td>≠30</td>
<td>0</td>
</tr>
<tr>
<td>Light goods vehicles/public carrier vehicles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motorcycles</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Disability spaces</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Cycle spaces</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other (e.g. Bus)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other (e.g. Bus)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
12. Foul Sewage
Please state how foul sewage is to be disposed of:

☐ Mains sewer  ☐ Cess pit
☐ Septic tank  ☐ Other
☐ Package treatment plant

NO CHANGE TO CURRENT PROPOSALS

Are you proposing to connect to the existing drainage system?  ☐ Yes  ☐ No
If Yes, please include the details of the existing system on the application drawings and state references for the plan(s)/drawing(s):

13. Assessment of Flood Risk
Is the site within an area at risk of flooding? (Refer to the Environment Agency's Flood Map showing flood zones 2 and 3 and consult Environment Agency standing advice and your local planning authority requirements for information as necessary.)  ☐ Yes  ☐ No

If Yes, you will need to submit a Flood Risk Assessment to consider the risk to the proposed site.

Is your proposal within 20 metres of a watercourse (e.g. river, stream or beck)?  ☐ Yes  ☐ No
Will the proposal increase the flood risk elsewhere?  ☐ Yes  ☐ No

How will surface water be disposed of?
☐ Sustainable drainage system  ☐ Existing watercourse
☐ Soakaway  ☐ Pond/lake

THE CURRENT SURFACE WATER MANAGEMENT SYSTEM WILL NOT BE AFFECTED BY THE PROPOSALS

14. Biodiversity and Geological Conservation
To assist in answering the following questions refer to the guidance notes for further information on when there is a reasonable likelihood that any important biodiversity or geological conservation features may be present or nearby and whether they are likely to be affected by your proposals.

Having referred to the guidance notes, is there a reasonable likelihood of the following being affected adversely or conserved and enhanced within the application site, or on land adjacent to or near the application site?

a) Protected and priority species:
☐ Yes, on the development site
☐ Yes, on land adjacent to or near the proposed development
☒ No  NOT AS A RESULT OF THESE PROPOSALS

b) Designated sites, important habitats or other biodiversity features:
☐ Yes, on the development site
☐ Yes, on land adjacent to or near the proposed development
☒ No  NOT AS A RESULT OF THESE PROPOSALS

c) Features of geological conservation importance:
☐ Yes, on the development site
☐ Yes, on land adjacent to or near the proposed development
☒ No

15. Existing Use
Please describe the current use of the site:
Hazardous landfill site together with associated infrastructure.

Is the site currently vacant?  ☐ Yes  ☐ No
If Yes, please describe the last use of the site:

When did this use end (if known)?  DD/MM/YYYY
(date where known may be approximate)

Does the proposal involve any of the following:
Land which is known to be contaminated?  ☒ Yes  ☐ No
Land where contamination is suspected for all or part of the site?  ☐ Yes  ☐ No

A proposed use that would be particularly vulnerable to the presence of contamination?  ☐ Yes  ☒ No
If you have answered Yes to any of the above, you will need to submit an appropriate contamination assessment.

16. Trees and Hedges
Are there trees or hedges on the proposed development site?  ☐ Yes  ☒ No

And/or: Are there trees or hedges on land adjacent to the proposed development site that could influence the development or might be important as part of the local landscape character?  ☐ Yes  ☒ No

If either or both of the above, you will need to provide a full Tree survey, with accompanying plan before your application can be determined. Your Local Planning Authority should make clear on its website what the survey should contain, in accordance with the current BSS837: Trees in relation to construction - Recommendations.

17. Trade Effluent
Does the proposal involve the need to dispose of trade effluents or waste?  ☐ Yes  ☒ No

If Yes, please describe the nature, volume and means of disposal of trade effluents or waste:
THE CURRENT LEACHATE COLLECTION AND TREATMENT MANAGEMENT SYSTEMS WILL NOT BE AFFECTED BY THE PROPOSALS.

Please note: This application is for a development on land currently zoned as 'No Development'.
### Proposed Housing

<table>
<thead>
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<th>Market Housing</th>
<th>Not known</th>
<th>Number of Bedrooms</th>
<th>Total</th>
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</thead>
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<tr>
<td>Houses</td>
<td></td>
<td>1 2 3 4+ Unknown</td>
<td></td>
</tr>
<tr>
<td>Flats and maisonettes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Live-work units</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cluster flats</td>
<td></td>
<td>1 2 3 4+ Unknown</td>
<td></td>
</tr>
<tr>
<td>Sheltered housing</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Bedsit/studios</td>
<td></td>
<td>1 2 3 4+ Unknown</td>
<td></td>
</tr>
<tr>
<td>Unknown type</td>
<td></td>
<td>1 2 3 4+ Unknown</td>
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</table>

Totals \((a + b + c + d + e + f + g)\) =

### Existing Housing

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<th>Market Housing</th>
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<th>Number of Bedrooms</th>
<th>Total</th>
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<tbody>
<tr>
<td>Houses</td>
<td></td>
<td>1 2 3 4+ Unknown</td>
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<td>Flats and maisonettes</td>
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<td>Live-work units</td>
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<tr>
<td>Cluster flats</td>
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<tr>
<td>Sheltered housing</td>
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<tr>
<td>Bedsit/studios</td>
<td></td>
<td>1 2 3 4+ Unknown</td>
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<td>Unknown type</td>
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<td>1 2 3 4+ Unknown</td>
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Totals \((a + b + c + d + e + f + g)\) =

### Social Rented

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<tr>
<td>Flats and maisonettes</td>
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<tr>
<td>Live-work units</td>
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<td></td>
</tr>
<tr>
<td>Cluster flats</td>
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<td>1 2 3 4+ Unknown</td>
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<tr>
<td>Sheltered housing</td>
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</tr>
<tr>
<td>Bedsit/studios</td>
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<td>1 2 3 4+ Unknown</td>
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<tr>
<td>Unknown type</td>
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Totals \((a + b + c + d + e + f + g)\) =

### Intermediate

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<td>Flats and maisonettes</td>
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<td>Live-work units</td>
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<td>Cluster flats</td>
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<td>1 2 3 4+ Unknown</td>
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<tr>
<td>Sheltered housing</td>
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<td>Bedsit/studios</td>
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Totals \((a + b + c + d + e + f + g)\) =

### Key Worker

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<td>Flats and maisonettes</td>
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<td>Sheltered housing</td>
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<td>Bedsit/studios</td>
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<td>1 2 3 4+ Unknown</td>
</tr>
<tr>
<td>Unknown type</td>
<td></td>
<td>1 2 3 4+ Unknown</td>
</tr>
</tbody>
</table>

Totals \((a + b + c + d + e + f + g)\) =

### Total Proposed Residential Units

\((A + B + C + D)\) =

### Total Existing Residential Units

\((E + F + G + H)\) =
19. All Types of Development: Non-residential Floorspace

Does your proposal involve the loss, gain or change of use of non-residential floorspace?  Yes  No

<table>
<thead>
<tr>
<th>Use class/type of use</th>
<th>Not applicable</th>
<th>Existing gross internal floorspace (square metres)</th>
<th>Gross internal floorspace to be lost by change of use or demolition (square metres)</th>
<th>Total gross internal floorspace proposed (including change of use)/(square metres)</th>
<th>Net additional gross internal floorspace following development (square metres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 Shops</td>
<td></td>
<td></td>
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<tr>
<td>A2 Financial and professional services</td>
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<tr>
<td>A3 Restaurants and cafes</td>
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<tr>
<td>A4 Drinking establishments</td>
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<tr>
<td>A5 Hot food takeaways</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>B1 (a) Office (other than A2)</td>
<td></td>
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<td></td>
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<td>B1 (b) Research and development</td>
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<tr>
<td>B1 (c) Light industrial</td>
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<td>B2 General industrial</td>
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<tr>
<td>B3 Storage or distribution</td>
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<tr>
<td>C1 Hotels and halls of residence</td>
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<td>C2 Residential institutions</td>
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<td>D1 Non-residential institutions</td>
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<td>D2 Assembly and leisure</td>
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<tr>
<td>OTHER</td>
<td></td>
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<tr>
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<tr>
<td>Total</td>
<td></td>
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</tbody>
</table>

In addition, for hotels, residential institutions and hostels, please additionally indicate the loss or gain of rooms

<table>
<thead>
<tr>
<th>Use class</th>
<th>Type of use</th>
<th>Not applicable</th>
<th>Existing rooms to be lost by change of use or demolition</th>
<th>Total rooms proposed (including changes of use)</th>
<th>Net additional rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>Hotels</td>
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</tr>
<tr>
<td>C2</td>
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<tr>
<td>C .L</td>
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</tr>
<tr>
<td>Please Specify</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

20. Employment

Please complete the following information regarding employees:

<table>
<thead>
<tr>
<th></th>
<th>Full-time</th>
<th>Part-time</th>
<th>Total full-time equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing employees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proposed employees</td>
<td>NO INCREASE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

21. Hours of Opening

Please state the hours of opening for each non-residential use proposed:

<table>
<thead>
<tr>
<th>Use</th>
<th>Monday to Friday</th>
<th>Saturday</th>
<th>Sunday and Bank Holidays</th>
<th>Not known</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>THE LANDFILL WILL CONTINUE TO OPERATE DURING THE CURRENTLY PERMITTED OPERATING HOURS</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

22. Site Area

Please state the site area in hectares (ha) 6.07
23. Industrial or Commercial Processes and Machinery

Please describe the activities and processes which would be carried out on the site and the end products including plant, ventilation or air conditioning. Please include the type of machinery which may be installed on site:

Is the proposal a waste management development? Yes ☑ No □

If the answer is Yes, please complete the following table:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Not applicable</th>
<th>The total capacity of the void in cubic metres, including engineering surcharge and making no allowance for cover or restoration material (or tonnes if solid waste or litres if liquid waste)</th>
<th>Maximum annual operational throughput in tonnes (or litres if liquid waste)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inert landfill</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-hazardous landfill</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazardous landfill</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy from waste incineration</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other incineration</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landfill gas generation plant</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pyrolysis/gasification</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metal recycling site</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfer stations</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material recovery/recycling facilities (MRFs)</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household civic amenity sites</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open windrow composting</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-vessel composting</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anaerobic digestion</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any combined mechanical, biological and/or thermal treatment (MBT)</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sewage treatment works</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other treatment</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling facilities construction, demolition and excavation waste</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage of waste</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other waste management</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other developments</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Please provide the maximum annual operational throughput of the following waste streams:

- Municipal
- Construction, demolition and excavation
- Commercial and industrial
- Hazardous

If this is a landfill application you will need to provide further information before your application can be determined. Your waste planning authority should make clear what information it requires on its website.

24. Hazardous Substances

Does the proposal involve the use or storage of any of the following materials in the quantities stated below? Yes ☑ No □ Not applicable □

If Yes, please provide the amount of each substance that is involved:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Amount (tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylonitrile (tonnes)</td>
<td></td>
</tr>
<tr>
<td>Ethylene oxide (tonnes)</td>
<td></td>
</tr>
<tr>
<td>Phosgene (tonnes)</td>
<td></td>
</tr>
<tr>
<td>Ammonia (tonnes)</td>
<td></td>
</tr>
<tr>
<td>Hydrogen cyanide (tonnes)</td>
<td></td>
</tr>
<tr>
<td>Sulphur dioxide (tonnes)</td>
<td></td>
</tr>
<tr>
<td>Bromine (tonnes)</td>
<td></td>
</tr>
<tr>
<td>Liquid oxygen (tonnes)</td>
<td></td>
</tr>
<tr>
<td>Flour (tonnes)</td>
<td></td>
</tr>
<tr>
<td>Chlorine (tonnes)</td>
<td></td>
</tr>
<tr>
<td>Liquid petroleum gas (tonnes)</td>
<td></td>
</tr>
<tr>
<td>Refined white sugar (tonnes)</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
</tbody>
</table>

Amount (tonnes):
25. Ownership Certificates

One Certificate A, B, C, or D, must be completed, together with the Agricultural Holdings Certificate with this application form.

CERTIFICATE OF OWNERSHIP - CERTIFICATE A

Town and Country Planning (General Development Procedure) Order 1995 Certificate under Article 7

I certify: The applicant certifies that on the day 21 days before the date of this application nobody except myself/the applicant was the owner (owner is a person with a freehold interest or leasehold interest with at least 7 years left to run) of any part of the land or building to which the application relates.

Signed - Applicant: ___________________________  Or signed - Agent: ___________________________  Date (DD/MM/YYYY): ___________________________

CERTIFICATE OF OWNERSHIP - CERTIFICATE B

Town and Country Planning (General Development Procedure) Order 1995 Certificate under Article 7

I certify: The applicant certifies that I have/the applicant has given the requisite notice to everyone else (as listed below) who, on the day 21 days before the date of this application, was the owner (owner is a person with a freehold interest or leasehold interest with at least 7 years left to run) of any part of the land or building to which this application relates.

<table>
<thead>
<tr>
<th>Name of Owner</th>
<th>Address</th>
<th>Date Notice Served</th>
</tr>
</thead>
</table>

Signed - Applicant: ___________________________  Or signed - Agent: ___________________________  Date (DD/MM/YYYY): ___________________________

CERTIFICATE OF OWNERSHIP - CERTIFICATE C

Town and Country Planning (General Development Procedure) Order 1995 Certificate under Article 7

I certify: The applicant certifies that:

- Neither Certificate A or B can be issued for this application
- All reasonable steps have been taken to find out the names and addresses of the other owners (owner is a person with a freehold interest or leasehold interest with at least 7 years left to run) of the land or building, or of a part of it, but I have/ the applicant has been unable to do so.

The steps taken were:

<table>
<thead>
<tr>
<th>Name of Owner</th>
<th>Address</th>
<th>Date Notice Served</th>
</tr>
</thead>
</table>

Notice of the application has been published in the following newspaper (circulating in the area where the land is situated):

Signed - Applicant: ___________________________  Or signed - Agent: ___________________________  Date (DD/MM/YYYY): ___________________________
25. Ownership Certificates (continued)

CERTIFICATE OF OWNERSHIP - CERTIFICATE D

Town and Country Planning (General Development Procedure) Order 1995 Certificate under Article 7

I certify/ The applicant certifies that:
Certificate A cannot be issued for this application
All reasonable steps have been taken to find out the names and addresses of everyone else who, on the day 21 days before the date of this application, was the owner (owner is a person with a freehold interest or leasehold interest with at least 7 years left to run) of any part of the land to which this application relates, but I have/ the applicant has been unable to do so.

The steps taken were:

Notice of the application has been published in the following newspaper (circulating in the area where the land is situated):

On the following date (which must not be earlier than 21 days before the date of the application):

Signed - Applicant: ____________________________ Or signed - Agent: ____________________________ Date (DD/MM/YYYY):

26. Agricultural Holdings

AGRICULTURAL HOLDINGS CERTIFICATE

Town and Country Planning (General Development Procedure) Order 1995 Certificate under Article 7
Agricultural Land Declaration - You Must Complete Either A or B

(A) None of the land to which the application relates is, or is part of, an agricultural holding.

Signed - Applicant: ____________________________ Or signed - Agent: ____________________________ Date (DD/MM/YYYY):

(B) I have/ The applicant has given the requisite notice to every person other than myself/ the applicant who, on the day 21 days before the date of this application, was a tenant of an agricultural holding on all or part of the land to which this application relates, as listed below:

<table>
<thead>
<tr>
<th>Name of Tenant</th>
<th>Address</th>
<th>Date Notice Served</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Signed - Applicant: ____________________________ Or signed - Agent: ____________________________ Date (DD/MM/YYYY):

27. Planning Application Requirements - Checklist

Please read the following checklist to make sure you have sent all the information in support of your proposal. Failure to submit all information required will result in your application being deemed invalid. It will not be considered valid until all information required by the Local Planning Authority has been submitted.

- The original and 3 copies of a completed and dated application form: ✔
- The original and 3 copies of the plan which identifies the land to which the application relates drawn to an identified scale and showing the direction of North: ✔
- The original and 3 copies of other plans and drawings or information necessary to describe the subject of the application: ✔
- The correct fee: ✔
- The original and 3 copies of a design and access statement: ✔
- The original and 3 copies of the completed, dated Ownership Certificate (A, B, C, or D - as applicable): ✔
- The original and 3 copies of the completed, dated Article 7 Certificate (Agricultural Holdings): ✔
### 28. Declaration
I/we hereby apply for planning permission/consent as described in this form and the accompanying plans/drawings and additional information.

Signed - Applicant: [Signature]

Or signed - Agent: [Signature]

Date (DD/MM/YYYY): 21/07/2009 (date cannot be pre-application)

### 29. Applicant Contact Details

<table>
<thead>
<tr>
<th>Country code</th>
<th>National number</th>
<th>Extension number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>01937 846674</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country code</th>
<th>Mobile number (optional):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country code</th>
<th>Fax number (optional):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>01937 846674</td>
</tr>
</tbody>
</table>

Email address (optional): genewilson@augeanplc.com

### 30. Agent Contact Details

<table>
<thead>
<tr>
<th>Country code</th>
<th>National number</th>
<th>Extension number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country code</th>
<th>Mobile number (optional):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country code</th>
<th>Fax number (optional):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Email address (optional): 

### Site Visit

Can the site be seen from a public road, public footpath, bridleway or other public land?  

☑ Yes ☐ No

If the planning authority needs to make an appointment to carry out a site visit, whom should they contact? (Please select only one)

☐ Agent  ☑ Applicant  ☐ Other (if different from the agent/applicant’s details)

If Other has been selected, please provide:

Contact name: 

Telephone number: 

Email address: 

2. Introduction to the application

2.1 Augean PLC has developed new proposals for its East Northants Resource Management Facility (RMF) for the disposal of wastes such as soils and construction materials that arise from sources that include hospitals and the decommissioning of nuclear power stations. These wastes have small amounts of low level radioactivity which while of low risk means that they must be sent to specifically authorised and approved landfill sites. The East Northants RMF is located south east of Duddington and north of Kings Cliffe as shown on Figure 1. The current planning permission for the site reference EN/05/1264C permits the deposition of hazardous waste and inert materials used for restoration.

2.2 Many of the nuclear power stations in the UK which have provided power to the nation over the last 50 years have reached or will soon reach the end of their operational life and will need to be decommissioned to render the sites safe for the long term and protect the environment. The decommissioning process will produce large volumes of radioactive waste the vast majority of which has only small amounts of radioactivity. Dealing with the nuclear legacy is a pressing issue according to the Nuclear Decommissioning Authority and must be dealt with as a matter of urgency1.

2.3 An inventory of the radioactive waste present and likely to be generated in the UK carried out on behalf of the government identified that a substantial amount of Low Level Radioactive Waste (LLW) will arise in the UK as a result of current waste generation and the proposed programme of decommissioning of nuclear power generating sites. Based on the inventory it was concluded by government2 that the currently available supply of LLW disposal capacity cannot meet foreseen future demand. Landfill disposal to authorised landfill sites is an approved option for the


2 A Public Consultation on Policy for the Long Term Management of Solid Low Level Radioactive Waste in the United Kingdom. February 2006. DEFRA, DTI and the Devolved Administrations
disposal of solid LLW that contains limited amounts of low level radioactivity\(^3\). LLW comprises approximately 90 per cent of future radioactive waste arisings by volume but it contains less than 0.0003 per cent of the total radioactivity.

2.4 LLW comprises radioactive waste with a radioactive content not exceeding 4,000 becquerels per gram (Bq/g) of alpha activity or 12,000 Bq/g of beta or gamma activity. LLW includes waste described as Very Low Level Radioactive Waste (VLLW) which has a radioactivity content up to 4 Bq/g (40Bq/g for tritium) with other limits set for individual loads in some cases.

2.5 It is proposed that the designated wastes permitted for importation and deposition at the East Northants RMF are extended to include a subset of LLW comprising waste which has a level of radioactivity of up to 200Bq/g. The radioactivity of the wastes that will be accepted at the site is low and the site will be operated to ensure that exposures resulting from the disposal of the waste are significantly less than the exposure of the average person to naturally occurring radiation in the UK. The East Northants RMF is a suitable facility for LLW because of the specification of the engineering, the location and the specialised experience of Augean staff in managing wastes which are difficult to handle.

2.6 The proposed development the subject of the planning application which is accompanied by an Environmental Statement comprises the disposal of LLW at East Northants RMF in addition to the hazardous waste already permitted for disposal at the site. The proposed development will not change the rate or volume of waste deposited at the site or the physical features that were assessed during the decision process that resulted in the granting of the current planning permission for the site. There will be no change to the permitted vehicle movements or noise generating activities associated with the importation or landfilling of LLW at the site. The site will be capped and restored progressively in accordance with the conditions of the current planning permission and the current Environmental Permit.

There will be no change to the consented operational lifetime of the site and no change to the restoration and aftercare proposals for the site as a result of this application for planning permission.

2.7 The East Northants RMF is the subject of an Environmental Permit for the landfill disposal of hazardous waste. To permit the disposal of LLW the site will be the subject of an Authorisation under the Radioactive Substances Act 1993 for which the regulator is the Environment Agency. An application for an Authorisation is being submitted to the Environment Agency in parallel with the submission to Northamptonshire County Council of the planning application.

2.8 The proposed development is the subject of an Environmental Impact Assessment and the application for planning permission is accompanied by an Environmental Statement. The site, the surrounding area and the proposed development are described in section 3 and the site operations are described further in the Environmental Statement.
3. **Description of the proposed development**

3.1 The proposed area for the landfill disposal of LLW is centred at National Grid Reference TL 011 999 approximately 2.2km south east of Duddington, approximately 2.5km north of Kings Cliffe and 3.3km south south east of Collyweston. The proposed development occupies an area of approximately 6.07 hectares in the south eastern corner of the East Northants RMF including Phases 4B, 5A and 5B of the current hazardous waste landfill as shown on Figure 2. Landfilling operations are complete in Phases 1, 2 and 3 of the landfill site and landfilling currently is being carried out in Phase 4A.

3.2 The wastes containing low levels of radioactivity that will be disposed of at East Northants RMF typically will comprise construction and demolition waste such as rubble, soils, crushed concrete and metals from the decommissioning of nuclear power plants, buildings and infrastructure, lightly contaminated miscellaneous wastes from maintenance and monitoring at these facilities such as plastic and metal and wastes from manufacturing activities, science and research facilities and hospitals where radioactive materials are used. The wastes will be subject to acceptance criteria which are set out in the Authorisation. The waste that will be deposited at East Northants RMF will be a subset of LLW limited to material that has a level of radioactivity of up to 200 Bq/g.

3.3 The proposed development will use the current highway access to the East Northants RMF. The access is from Stamford Road which is an unclassified road that runs adjacent to the eastern boundary of the East Northants RMF from the A47 to the north and to Kings Cliffe to the south (Figure 2). The access road enters the reception area adjacent to and south east of the landfill.

3.4 The proposed development will not change the volume of waste deposited at the site or the physical features that were assessed during the decision process that resulted in the granting of the current planning permission for the site. The current operations at the hazardous waste landfill will continue. The rate of deposition of
waste at the site including LLW will continue at the currently permitted importation rate of up to 249,999 tonnes of waste per annum. There will be no change to the permitted vehicle numbers, transportation routes or other movements associated with transport or noise generating activities associated with the importation or landfilling of waste at the site.

3.5 As there will be no change to the number of vehicles delivering waste to the site, to the site access or to the use of the highway as a result of the proposed development there is no need to assess planning issues related to traffic. There are regulations\(^4\) addressing the safe transportation of radioactive waste. All wastes delivered to the site will be transported in accordance with the regulations.

3.6 The disposal of LLW at the site will not change the footprint of the landfill site or the restoration profile or restoration proposals for the site. The engineered containment, the leachate and gas management infrastructure of the landfill and the surface water management scheme will not change as a result of the acceptance of LLW and the phasing of the landfilling activities will remain the same.

3.7 Landfill operations at the site will cease in 2013 and the site will be restored by August 2013 in accordance with the approved scheme. The site will be capped and restored progressively in accordance with the conditions of the current planning permission and the current Environmental Permit. There will be no change to the operational lifetime of the site and no change to the restoration and aftercare proposals for the site.

3.8 As the predicted doses of radiation to which workers at the site will be exposed are below those specified under the Ionising Radiation Regulations 1999 no workers will be defined as Classified Persons. Specific personal protective equipment will not be necessary during normal site operations additional to the standard equipment used and worn by workers at the site currently. Passive dosemeters will

be worn by staff working in the LLW reception and disposal areas as reassurance to confirm that the exposures received are in accordance with the predictions.

3.9 A site wide radiochemical monitoring scheme will be prepared and will be subject to approval by the Environment Agency and the Health Protection Agency. The Health Protection Agency will carry out independent assessment and monitoring of the LLW disposal activities at the site. Radiochemical monitoring of the site leachate, gas emissions, surface water, groundwater and dust will be carried out in accordance with a scheme that will be agreed with the Environment Agency as part of the Authorisation. It is anticipated that the monitoring scheme will include regular reassurance monitoring of working areas for surface contamination such as wheel wash, traffic routes, the site access and site offices. As part of the Authorisation for the site emergency procedures will be prepared and agreed with the regulatory authorities.

3.10 Detailed procedures including for waste pre-acceptance checks, waste acceptance checks and quarantine arrangements for unacceptable waste that may be delivered to the site will be specified in accordance with a radiation protection plan for the site which will be established in accordance with the Authorisation in order to meet the requirements of the Ionising Radiation Regulations\(^5\).

3.11 The whole of the landfill area is the subject of the Environmental Permit. The management and engineering controls which are specified in the Environmental Permit will continue at the site following the cessation of waste acceptance and restoration. In accordance with the legislation the Environmental Permit will remain in place until in the opinion of the Environment Agency the site no longer represents a potential risk to the environment. In accordance with the Environmental Permit the site is the subject of Financial Provision which is a bond provided by the operator for use in the event that the company no longer exists.

\(^5\) The Ionising Radiations Regulations 1999. Statutory Instrument 1999 No. 3232
3.12 The site operations and monitoring schemes all are carried out currently and will continue to be carried out in accordance with the Augean Environmental Management System (EMS) which is externally certified and accredited to the ISO14001 standard. The EMS together with the health and safety and quality management systems are integrated in accordance with the PAS99:2006 integrated management system standard. The EMS comprises a cycle of setting targets and objectives, planning, implementation, auditing and review together with undertaking where necessary corrective action and setting new targets and objectives. Through the EMS and liaison with the local community Augean seeks to address potential environmental issues before they become a problem or nuisance.

3.13 The description is sufficiently detailed for development control purposes and for the assessment of environmental impact.
4. Planning history of the site

4.1 The proposed development is consistent with the established use of the site for waste management. The land owned by Augean at and around the application area has a long history of development associated with mineral extraction and waste management activities. The site has been the subject of a number of planning permissions over the last 50 years including permission for waste management operations for the last 16 years. The most recent permissions dating from 2006 ensure that the site is operated to modern standards with effective planning control.

4.2 The first planning permission for the site was granted on 27 August 1957 for the extraction of clay. Planning permissions for the extension of the extraction of clay were granted in December 1963 and in May 1967. In March 1994 planning permission reference EN/89/1250C was granted for the extension of the clay workings and infilling with inert waste materials. In June 1997 planning permission reference EN/97/113C was granted for the extraction of clay to a depth of 15m and for the restoration of the site to agriculture. In April 2000 planning permission reference EN/99/844C was granted for the reclamation of the clay pit by infilling with hazardous, non-hazardous and inert waste excluding waste food, vegetable matter, soap, cosmetic products, animal carcasses and domestic waste.

4.3 In November 2001 planning permission reference EN/00/883C was granted for a waste recycling and storage facility for the processing of waste defined in the application and the supporting statement. The waste recycling and storage activities were permitted for 11 years from the commencement of the development the subject of planning permission EN/99/844C.

4.4 Planning permission reference EN/02/166C was granted in June 2002 for the deposition of asbestos in the Kings Cliffe Landfill. In October 2002 planning permission reference EN/02/178C was granted for the importation to and storage on the site of soils.
4.5 On 3 July 2006 planning permission reference EN/05/1264C was granted for a hazardous waste landfill and associated operations (Appendix A). Planning permission reference EN/05/1264C superseded all previous planning permissions and supplanted all conditions in planning permissions references EN/99/844C, EN/00/883C, EN/02/166C and EN/02/178C. The application area is within the boundary of the area the subject of planning permission EN/05/1264C.

4.6 On 19 September 2006 planning permission reference EN/06/01517/CRA was granted for the installation and operation of a gas flare and a surface water pumping station in an area to the north west of the area the subject of this application (Appendix B).

4.7 On 10 January 2008 planning permission reference number 07/00048/WAS and 07/01838/NCC was granted for the installation and operation of a soil treatment facility (Appendix C).

4.8 It is concluded that the proposed development is consistent with the established use of the site for waste management.
5. **Review of the planning context of the development**

5.1 The fundamental objective of the planning system is to facilitate development which is appropriate in a particular context having regard to relevant planning policies, government guidance and other material planning considerations. In development control terms appropriate development is that which is suitable for the location in which it is proposed, does not conflict with surrounding land uses and which does not result in a significant detriment to the environment or amenity. The contribution which a particular development will make towards the achievement of strategic national, regional and local planning policy objectives is a relevant consideration that should be taken into account in determining applications.

5.2 Planning law in the UK is the subject of the Planning Act 2008 and associated regulations and the Planning and Compulsory Purchase Act 2004 and associated regulations. At a national level the objectives of the Planning Act and Planning and Compulsory Purchase Act together with government policy in respect of planning are explained in guidance published in Planning Policy Statements which gradually are replacing the Planning Policy Guidance Notes. In preparing the application for planning permission reference is made to the national guidance and in particular Planning Policy Statement 1 (PPS 1) Delivering Sustainable Development, Planning Policy Statement 9 (PPS 9) Biodiversity and Geological Conservation, Planning Policy Statement 10 (PPS 10) Planning for Sustainable Waste Management and Planning Policy Statement (PPS 23) Planning and Pollution Control.

5.3 In PPS 1 the government policy on the delivery of sustainable development is presented and the aims of sustainable development are described. In PPS 9 the government presents policy on the protection of biodiversity and geological conservation through the planning system. In PPS 10 the government presents policy on positive planning to deliver sustainable waste management. In PPS 23 the government presents policy on the protection of the quality of land through the planning system.
5.4 Land use planning in the UK is a plan led system. In accordance with Section 38 of the Planning and Compulsory Purchase Act 2004 all planning decisions should be in accordance with the development plan. In Section 38 of the Act it is stated that:

‘If regard is to be had to the development plan for the purpose of any determination to be made under the planning Acts the determination must be made in accordance with the plan unless material considerations indicate otherwise.’

5.5 Under the Planning and Compulsory Purchase Act 2004 as amended by the Planning Act 2008 a new system of development planning is being implemented. The development plan for the site comprises the East Midlands Regional Plan adopted in March 2009 (EMRP), the Northamptonshire County Council Structure Plan (SP) adopted in March 2001 as amended by the High Court in February 2002, the Northamptonshire Waste Local Plan adopted in March 2006 (WLP), the North Northamptonshire Core Spatial Strategy adopted in June 2008 (NNCSS) which includes the area of the District of East Northamptonshire and the East Northamptonshire District Local Plan adopted in November 1996 (DLP).

5.6 In accordance with the new planning system the development plan documents are being reviewed. Northamptonshire County Council published their Core Strategy Submission (NCCCS) for the Northamptonshire Minerals and Waste Development Framework in December 2008 and the hearing commenced on 31 March 2009. The hearing has been adjourned and in a Note to Northamptonshire County Council it is stated by the Inspector that additional material should be submitted by the Council in order to provide sufficient evidence and justification for choices made in the plan based on which it can be determined that the Core Strategy is sound. The hearing currently is scheduled to resume in October 2009.

6 LIBRARY DOC811. 8 April 2009
5.7 The development plan documents relevant to the East Northamptonshire District Council area are being produced by the North Northamptonshire Joint Planning Unit. The NNCSS was adopted in June 2008. East Northamptonshire District Council is preparing currently area plans together with supporting documents for the Local Development Framework. A number of the policies from the DLP that were saved following the adoption of the NNCSS are relevant to the proposed development. None of the saved policies from the SP are relevant to the proposed development.

5.8 The management of radioactive waste including the acceptance of LLW at landfill sites is controlled by the Radioactive Substances Act 1993. Radioactive waste is not defined as controlled waste hence is not the subject of the controlled waste management legislative regime. National policy for the long term management of LLW is set out in the document ‘Policy for the long term management of solid low level radioactive waste in the United Kingdom’ prepared jointly by DEFRA, DTI and the devolved administrations and published in March 2007.

5.9 There are no policies regarding radioactive waste including LLW and the disposal of LLW in the adopted regional or local plans. The Circular and Direction issued in 2009\(^7\) specifies the types of development that must be referred to the Secretary of State which include Green Belt development, development outside town centres, World Heritage Site Development, playing field development or flood risk area development as defined in the Direction. As the proposed development does not fall into one of the categories of development defined in the 2009 Direction the local Planning Authority can grant planning permission for development if it does not accord with the Development Plan. The proposed development is not contrary to nor does it prejudice the implementation of the policies and proposals of the Development Plan.

5.10 National policy for the management of solid LLW is presented in the Policy for the Long Term Management of Solid Low Level Radioactive Waste in the United Kingdom.

\(^7\) The Town and Country Planning (Consultation) (England) Direction 2009.
Kingdom dated March 2007 prepared jointly by DEFRA, DTI and the Devolved Administrations. It is stated in the document that the policy statement should be taken into account during the development of policies and plans by among others the regional planning bodies and planning authorities. The aim of the policy statement is to provide a high level framework within which individual LLW management decisions can be taken flexibly to ensure safe, environmentally acceptable and cost effective management solutions that appropriately reflect the nature of the LLW concerned. The national policy document on the management of radioactive waste comprises the most up to date policy on radioactive waste management. The Local Government Association (LGA) have published a position statement\(^8\) on LLW which endorses the main points in the government policy document. A review of the national policy specific to the management of solid LLW including the landfill disposal of LLW is provided in section 6. Since the publication of the National policy strategies for the disposal of solid LLW are being developed by the Nuclear Decommissioning Authority and the Non Nuclear Industries. The strategies are considered as part of the assessment of the need for the proposed development in section 8 of this document. The strategies support and reflect the policies set out in the National policy.

5.11 The policies in the regional and local plans relating to relevant potential environmental impacts have been reviewed. The principal issues associated with the development are potential impacts associated with population, ecology, water resources and air quality. A review of the relevant national policies together with policies in the regional and local plans is presented in section 7. The environmental impacts of the proposed development are assessed in the Environmental Statement which forms part of this application.

\(^8\) Position statement on low level radioactive wastes. Local Government Association. 2008
6. Review of national policy for the management of low level radioactive waste

6.1 The practicable options for the disposal of LLW are considered at paragraph 19 of Policy for the Long Term Management of Solid Low Level Radioactive Waste in the United Kingdom dated March 2007. It is stated that:

‘Government believes that disposal to an appropriately engineered facility, either below or above ground, with no intent to retrieve should be the end point for LLW that remains following the application of the waste hierarchy...on the basis that new disposal facilities will be of sufficiently robust design such that risks to the public in future will be within the post closure risk target, and therefore postponing final disposal to future generations is unjustified. With regard to LLW and VLLW disposal to landfill, Government sees no reason to preclude controlled burial of radioactive waste from nuclear sites from the list of options to be considered in any options assessment, provided the necessary safety assessments can be carried out to the satisfaction of the environmental regulators.’

The site is the subject of an application for an Authorisation from the Environment Agency under the Radioactive Substances Act 1993. In accordance with their guidance, the Environment Agency will not issue an Authorisation unless a proportionate radiological impact assessment has been prepared that demonstrates that the facility is of a sufficiently robust design.

6.2 The policy statement is addressed to a number of bodies for inclusion during the development process in their policies and plans including those responsible for the production and management of wastes, the regional planning bodies, planning authorities and waste disposal facility operators. It is stated in the policy document that in preparing programmes and plans for the management of LLW there should

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be a presumption towards management solutions which can be implemented early rather than late. The proposed development at the East Northants RMF will provide an appropriate disposal solution available at an early stage in the development of programmes and plans for the management of LLW. The need for the facility is described in section 8 of this document.

6.3 It is stated in the national policy document that arisings of LLW and the requirements for its disposal should be minimised by the implementation by the waste producers of the waste management hierarchy principles in Waste Strategy 2007. It will be necessary for waste producers to minimise the quantities of LLW arising and to consider the submission of wastes to processes such as re-use and recycling, decay storage and incineration prior to consideration of landfill disposal. The LLW that will be received at the East Northants RMF will be residual waste that cannot be subject to management measures higher up the waste hierarchy as determined by the waste producer.

6.4 As part of the review by the waste producer of the options for the management of LLW it is specified in the policy that it will be necessary to consider the proximity of the waste management facility to the location of the waste arising. It is stated that the use of centralised facilities such as the disposal facility at Drigg in Cumbria or any future facility may be the appropriate point of disposal. In the policy it is acknowledged that transportation of LLW will generate risks and environmental burdens no greater than those associated with the transportation of conventional waste. The environmental impacts of the transportation of LLW will be taken into account in the options assessment which will be carried out by waste producers. It is concluded in the Strategic Environmental Assessment\textsuperscript{10} for the draft NDA strategy for the disposal of solid LLW that for the nuclear industry LLW transport accounts for a small proportion of the transport associated with the operation of nuclear sites where waste is generated. At Figure 3 a plan is provided of the location of the development site and the locations of the nuclear power generating facilities which are scheduled for decommissioning together with the locations of
other significant waste arisings and sites which currently are authorised for the disposal of LLW. The East Northants RMF is located centrally for the wastes arising in the south of the country.

6.5 At paragraph 15 of the policy document it is stated that during the operational period of a landfill site in which LLW is deposited and the following period while the site remains under management control the exposure of members of the public to radioactivity must not exceed specified doses in order to ensure that their health is protected. As part of the preparation of the application for the Authorisation which will be issued by the Environment Agency a number of risk assessments have been carried out to determine the effective dose to members of the public during the operational period and the following management period of the life of the landfill which are summarised in section 12 of the Environmental Statement. The risk assessments demonstrate that the health of the public is protected. An Authorisation will not be issued by the Environment Agency unless they are satisfied that the proposals provide effective and robust protection of human health.

6.6 The risk assessments have been carried out based on conservative assumptions and the dose criteria used in the assessment of the acceptability of exposures are themselves based on considered and accepted risk assessment criteria. Given the nature of the risk assessments, the degree of confidence in the science underpinning the assessments and the dose criteria and the mitigatory measures proposed in the operation of the facility there is no need to invoke the precautionary principle as set out in EU guidance11.

6.7 In the policy document it is stated that plans for the provision of disposal facilities for LLW should take due account of the potential future effects of climate change in particular from rising sea levels and to other foreseeable long term environmental changes. The site is not located in an area which is identified by the Environment

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Agency as sensitive to flooding from rivers or the sea taking into account the predicted effects of climate change. Where necessary surface water management schemes prepared in accordance with the Environmental Permit take into account the change in rainfall volumes and intensity that are anticipated as a result of climate change.

6.8 Government policy states that local communities should be consulted to an extent that is commensurate with any proposals for the management of LLW. Extensive consultation has been carried out with local communities and key stakeholders as part of the development of the application proposals and is described in the Statement of Local Engagement that is included as part of the application documents.

6.9 The focus of the pre-application consultation was a public exhibition and surgery held in Kings Cliffe. A number of other measures were employed to inform the local community, elected representatives and others about the proposed development. An information pack and public information leaflets were distributed to elected representatives, local residents, journalists and relevant organisations such as the Primary Care Trust and local doctors’ surgeries. Presentations of the proposal were given to the local Liaison Group and Parish Councils.

6.10 In accordance with national and local authority guidance on public consultation Augean PLC will continue to engage with all those affected by the proposals in the period leading up to determination and thereafter should consent be granted. A further newsletter and a site open day are planned. A dialogue with the local community and their elected representatives will be maintained through the periodic distribution of the East Northants RMF newsletter, Local Liaison Group meetings, and the Augean PLC website.
7. **Review of the relevant environmental planning policies**

7.1 The principal issues associated with the development are potential impacts associated with population, ecology, water resources, air quality and risk of accidents. A review has been carried out of the relevant national policies together with policies in the regional and local plans.

**Sustainable waste management**

7.2 The Waste Strategy for England 2007 and PPS10 represent the most up to date policy on controlled waste management. The Waste Strategy for England was published in May 2007 and PPS10 was published in July 2005. The documents supersede the Waste Local Plan. The waste hierarchy included in the Waste Strategy for England 2007 and reflected in PPS 10 is incorporated in the government policy document for LLW. At paragraph 7 of PPS 10 it is stated that planners should take account of any waste management requirement identified nationally. The government policy document for the management of LLW identifies a need for national strategies for the management of radioactive waste and the need for landfill disposal facilities is demonstrated in section 8 of this document.

7.3 As the current waste planning policy for Northamptonshire was published before new government guidance contained in PPS10 was issued and as the new waste policy documents are not yet adopted the relevant key planning objectives presented in PPS10 have been considered with regard to the proposed development. At paragraph 23 of PPS10 it is stated that in determining applications:

> "In the interim period before the development plan is updated to reflect the policies in the PPS, planning authorities should ensure that proposals are consistent with the policies in this PPS and avoid placing requirements on applicants that are inconsistent".
7.4 In paragraph 3 of PPS10 six key waste planning objectives that are relevant to the proposed development hence that should be delivered are set out. Each of the key planning objectives is addressed with regard to the proposed development. The first key planning objective is that the strategy should:

"help deliver sustainable development through driving waste management up the waste hierarchy, addressing waste as a resource and looking to disposal as the last option, but one which must be adequately catered for."

7.5 The need to ensure that LLW is managed using methods as far up the waste hierarchy as practicable is specified in the national policy document for LLW. It is stated that arisings of LLW and the requirements for its disposal should be minimised by implementation by the waste producers of the waste management hierarchy principles set out in Waste Strategy 2007. It will be necessary for producers of LLW to minimise the quantities of LLW arising and to consider the submission of wastes to processes such as re-use and recycling, decay storage and incineration prior to consideration of landfill disposal. Accordingly the only LLW that will be received at the East Northants RMF will be residual waste that it has been determined by the waste producer cannot be subject to management measures higher up the waste hierarchy.

7.6 The second key planning objective is that the strategy should:

"provide a framework in which communities take more responsibility for their own waste, and enable sufficient and timely provision of waste management facilities to meet the needs of their communities;"

The provision of a framework in which communities take responsibility for their waste and for the availability of waste facilities to meet the needs of their
communities is necessary to manage effectively the wastes which arise as a result of the energy generated for the nation in nuclear power generating facilities since the 1950s as well as the wastes generated as a result of research and pharmaceutical manufacture that benefits the national community. The national policy and the LLW disposal strategies identify the urgent need for the development of final disposal solutions other than the repository at Drigg in Cumbria. At paragraph 22 of Annex B to the Waste Strategy for England entitled ‘Delivery Landscape and decision making framework’ it is stated that:

“The objectives underlying waste management decisions should be ...
disposing of waste at the nearest appropriate installation, by means of
the most appropriate methods and technologies.”

7.7 Before an authorisation for the transfer of LLW from a decommissioning site can be approved by the Environment Agency the consignor must undertake a Best Practical Environmental Option (BPEO) review of the options for management of the LLW. The BPEO review includes consideration of the disposal options for LLW that cannot be managed by means higher up the waste hierarchy including identification of the nearest appropriate installation. The options include disposal on site. While for some of the decommissioning sites such as Dounreay the development of an on site disposal facility will be the BPEO, for others due to resource issues, hydrogeological and other environmental constraints the BPEO will be to dispose of the LLW off site. While proximity will be an important consideration the selection of the appropriate facility must also take into account the nature of the waste and the suitability of the potential receptor sites to dispose of the waste. The government policy for the long term management of LLW states that as part of the review by the waste producer of the options for the management of LLW it will be necessary to consider the proximity of the waste management solution to the location of the waste arising and that the use of centralised facilities such as the disposal facility at Drigg in Cumbria or any future facility may be the appropriate point of disposal. There is a clear expectation that there will be centralised facilities serving a wide area. At Figure 3 a plan is provided of the location of the development site and the locations of the nuclear power generating facilities which are scheduled for decommissioning together with the locations of other significant
waste arisings and sites which currently are authorised for the disposal of LLW. Smaller volumes of LLW from non-nuclear industries will arise from local facilities such as hospitals. As shown on the figure the only currently available facilities for the disposal of LLW are at Dounreay at the northern tip of Scotland, LLWR in Cumbria and Clifton Marsh in Lancashire which accepts waste only from two specified sites. It is understood that a further site is being considered at Lillyhall in Cumbria. There is currently no facility in the south of the UK accepting decommissioning wastes. The East Northants RMF will provide a centralised facility for the wastes arising in particular in the south of the country but will potentially serve a wider market related to the specific nature of the site and the range of material the site is suitable for.

7.8 The third key planning objective is that the strategy should deliver planning strategies that:

“help implement the national waste strategy, and supporting targets, and are consistent with obligations required under European legislation and support and complement other guidance and legal controls such as those set out in the Waste Management Licensing Regulations 1994;”

As discussed in section 8 of this document the proposed development will provide a facility for the landfill disposal of LLW. The government policy document together with LLW strategy and review documents from the Nuclear Decommissioning Authority and Non Nuclear Industries identify that there is an urgent and national need for additional disposal capacity for solid LLW. The East Northants RMF will provide a new, fit-for-purpose alternative site for the disposal of LLW from the nuclear and non-nuclear industries that will contribute to the capacity necessary to address the identified shortfall. The facility will be operated and regulated in accordance with all relevant legislation and guidance implemented by the Environment Agency, the Health Protection Agency and the Health and Safety Executive.
7.9 The fourth key planning objective is that the strategy should:

"help secure the recovery or disposal of waste without endangering human health and without harming the environment, and enable waste to be disposed of in one of the nearest appropriate installations;"

The proposed development is the subject of an environmental impact assessment the results of which are presented in Volume 2 of the application documents. Mitigatory measures are included in the design to minimise the impact on human health and the environment. Detailed quantitative risk assessments have been undertaken as part of the application for the Authorisation which will be issued by the Environment Agency which demonstrate that the proposed development can be undertaken without harming human health or the environment. The results of the risk assessments demonstrate that the level of exposure to workers and the general public in normal and abnormal circumstances will be well below the exposures considered acceptable by the Environment Agency, the Health Protection Agency and the Health and Safety Executive.

7.10 The proposed development will form part of a national framework of authorised disposal facilities for low level radioactive material. The proposed development is in accordance with the proximity principle as expressed in PPS 10 as it comprises specialised provision for the disposal of low level radioactive materials which will form part of a national framework of appropriate installations.

7.11 The fifth key planning objective is that the strategy should:

"reflect the concerns and interests of communities, the needs of waste collection authorities, waste disposal authorities and business, and encourage competitiveness;"

The concerns and interests of the community are reflected in the design of landfill cells and the proposed handling methods for LLW to minimise risk and environmental impact. There is a need to manage and dispose of LLW nationally as
stated in the DEFRA long term management of LLW policy document. The facility will assist the authorities and businesses by providing an appropriate facility to dispose of LLW derived from local, regional and national activities and development including facilities which are essential to maintain the social fabric such as power stations, hospitals and pharmaceutical development and manufacture.

7.12 The sixth and final relevant key planning objective is that the strategy should:

“protect green belts but recognise the particular locational needs of some types of waste management facilities when defining detailed green belt boundaries and, in determining planning applications, that these locational needs, together with the wider environmental and economic benefits of sustainable waste management, are material considerations that should be given significant weight in determining whether proposals should be given planning permission”

The development is not located in the Green Belt and this objective is not directly relevant. The objective identifies as a material consideration of significant weight the wider environmental and economic benefits of sustainable waste management. The contribution that the proposed development will make to sustainable waste management is therefore an important positive consideration in the determination of the application. The landfill disposal of LLW provides a safe long term solution to the management of residual LLW where it has been determined that no other forms of waste management are practicable.

Population

7.13 Policy 15 of the WLP and NCSS Policy 13 address the impact on local amenity and infrastructure. The assessment of the impact of the proposed development on population is presented in section 12 of the Environmental Statement. The footprint of the landfill and the restoration proposals will not change from those already approved under planning permission reference EN/05/1264C as a result of the proposed development. The impact on amenity of the landfill development already
has been assessed in the Environmental Statement that supported the application for planning permission reference EN/05/1264C and was considered acceptable. With the exception of the change in waste types the waste management operations at the site will not change as a result of the proposed development therefore there will be no adverse impacts on local amenity due to noise, dust, litter, vermin, flies and light spillage. Due to the distance of the sensitive receptors from the proposed development there is no risk of the sensitive receptors being overlooked or losing light. The control of noise at the site currently is the subject of a planning condition which will remain in place. Dust will continue to be controlled by conditions and operational plans that are specified under the Environmental Permit and additional controls that are specific to the management of LLW will be imposed and regulated through the Authorisation. As the footprint of the landfill and the restoration proposals will not change from those already assessed and approved there will be no adverse impacts on visual amenity. As the LLW material being disposed of at the site will comprise predominantly rubble, soils, crushed concrete, bricks, metals from the decommissioning of nuclear power plant buildings and wastes from science and research facilities where radioactive materials are used it is highly unlikely that odours will be generated.

**Ecology**

7.14 In PPS9 is presented national guidance on planning policy in relation to biodiversity and geological conservation. The government objectives stated in PPS9 include the promotion of sustainable development by ensuring that biological and geological diversity are conserved, enhanced and restored and that contribution is made to rural renewal.

7.15 The northern boundary of the landfill site is adjacent to Collyweston Great Wood. To the east north east of the proposed development area is an area of woodland known as Easton Hornstocks. Part of Collyweston Great Wood and Easton Hornstocks comprise a Site of Special Scientific Interest (SSSI) and National Nature Reserve (NNR). Policy 11 of the WLP and Policy EN8 of the DLP address the protection of designated sites. Policy 10 of the WLP addresses the protection of
designated sites and protected species. Policy EN9 of the DLP addresses the protection of sites of local conservation interest. There will be no waste deposited or any other infrastructure or activities located any closer to the SSSI than is permitted currently under planning permission reference EN/05/1264C. Because of the distance of the proposed development from the SSSI and NNR it is concluded that there will be no harm or adverse impact on the designated site. There will be no additional land take due to the proposed development as the development is within the footprint of the current operational landfill.

7.16 The radiological exposure of non-human species has been assessed and it is demonstrated that the estimated radiation dose to wildlife is significantly below the screening criterion at which the need for more detailed assessment should be considered. The risk assessments form part of the Authorisation application which will be submitted to and reviewed by the Environment Agency.

Water resources

7.17 Policy 32 of the EMRP, Policy 13 of the WLP and Policy 13 of the NNCSS address the protection of water resources. The assessment of the impact of the proposed development on water resources is presented in section 14 of the Environmental Statement. The waste management operations at the site will not change as a consequence of the proposed development. The risks of contamination of surface water and groundwater due to the disposal of hazardous waste have been assessed during the application process resulting in the grant of planning permission reference EN/05/1264C. The surface water from the site will continue to be collected as currently and the surface water quality will continue to be monitored in accordance with the surface water management plan under the Environmental Permit. The surface water is collected in the surface water management system in place at the site prior to discharge to the watercourse. As currently the leachate generated at the site will be collected and stored in the leachate storage tank following which the leachate will be removed from the site by tanker for off-site treatment.
7.18 Quantitative risk assessments have been undertaken to assess the potential risks to surface water quality and groundwater quality from radioactive contaminants leached from the LLW. The potential contamination pathways that have been assessed include the removal and treatment of leachate off site and the spillage of leachate during transportation. The risk assessments are based on the assumption that the contaminated groundwater is used for drinking and for food crop irrigation and that soils are used for farming. It is assumed that contaminated surface water is used for fishing and that the fish are consumed. It is demonstrated that there will be no unacceptable impacts on groundwater quality or surface water quality. The risk assessments form part of the Authorisation application which will be submitted to and reviewed by the Environment Agency.

Air quality

7.19 Policy 36 of the EMRP addresses the need to assess the potential impacts of new development and increased traffic levels on air quality and internationally designated nature conservation sites. The site is not in a Local Air Quality Management Area. The proposed development will not lead to an increase in vehicle numbers compared with those already permitted therefore there will be no impact on air quality as a result of traffic associated with the proposed development. There are no internationally designated nature conservation sites in the vicinity of the proposed development.

7.20 Policy 15 of the WLP states that development will not be permitted if it creates an adverse impact on local residential amenity and where relevant should mitigate, attenuate and control air quality. Assessment of the impacts on air quality as a result of the disposal of LLW at the site has been carried out and is presented in section 15 of the Environmental Statement. The emissions from the gas flare at the site will continue to be monitored in accordance with the Environmental Permit. Quantitative risk assessments have been undertaken to assess the potential exposure of site workers and the public to radioactive gaseous emissions. The risk assessments demonstrate that there will be no unacceptable risk to air quality or to human health as a result of the disposal of LLW at the site. The risk assessments
form part of the Authorisation application which will be submitted to and reviewed by the Environment Agency.

**Sustainable development**

7.21 Sustainable development is the core principle underpinning land use planning. National policy in respect of sustainable development is provided in PPS1. The four aims for sustainable development are:

- social progress which recognises the needs of everyone
- effective protection of the environment
- the prudent use of natural resources and
- the maintenance of high and stable levels of economic growth and employment.

The aims were derived for the 1999 strategy document “A Better Quality of Life”¹² and are reflected in the review document “Securing the Future”¹³ published in 2005.

7.22 The aim most relevant to the proposed development is that of effective protection of the environment. The fundamental purpose of the nuclear decommissioning programme is the protection of the environment by the safe management of the legacy resulting from the generation of nuclear power for the nation. The Government policy for LLW has been developed to help identify suitable options for the safe management of LLW which will enable nuclear decommissioning. The proposals for LLW disposal at the East Northants RMF contribute to the Government objectives of decommissioning nuclear sites hence to achieving the long term protection of the environment. The development at the East Northants RMF is the subject of an environmental impact assessment in which the environmental characteristics of the area are defined and the impacts are assessed. It is demonstrated in the Environmental Statement that there will be no significant adverse environmental impacts as a result of the proposed development and that

¹² A Better Quality of Life May 1999, Department of the Environment, Transport and the Regions.
¹³ Securing the Future March 2005, Department for Environment, Food and Rural Affairs.
the proposals do not conflict with national, regional or local planning policy in respect of the environment. It is concluded that the proposed development is consistent with the protection of the environment.

7.23 There is a national need to address the management of the wastes which will be generated from the decommissioning of the nuclear power stations that have provided electricity to the nation since the 1950s. The majority of the wastes generated during the decommissioning process will comprise LLW. The need for the disposal of LLW is set out in section 8 of this document. Even with the application of the waste hierarchy the residual LLW represents a substantial volume for land disposal which there is insufficient capacity in the UK. The lack of suitable disposal capacity is a significant barrier to the decommissioning process therefore the proposed development will contribute to the urgent need identified for disposal capacity which will facilitate the reduction of the legacy from nuclear power generation and achieve environmental benefits for the future. The proposed development will provide a new, fit-for-purpose facility where the LLW can be disposed of appropriately and in an environmentally safe manner whilst ensuring that facilities such as power stations, hospitals, pharmaceutical producers, the oil and gas industry and research facilities which produce LLW can continue to undertake their necessary activities contributing to the needs of everyone.

7.24 The proposed development is located at a site already used for landfill and makes appropriate use of natural resources. The waste that will be disposed of at the site will be only the residue that remains following the removal of the components that can be recycled or recovered hence the proposals will not conflict with the need to optimise the use of natural resources.

7.25 The proposals will contribute significantly to the nuclear decommissioning programme providing a route for the management of substantial quantities of low risk waste which require safe disposal. It is estimated\(^\text{14}\) that the current costs for the management and disposal of solid LLW generated by the operation and

\(^{14}\) LLW Strategic Review. Issue 1. January 2009. NDA and LLWR.
decommissioning of NDA sites is approximately £9.8 billion. The objective of the NDA waste management strategy including the use of disposal locations other than LLWR for solid LLW is to achieve a cost reduction of approximately £1 billion. The provision of alternative disposal routes to the LLWR such as the East Northants RMF represents a significant financial saving to the nation. In addition the proposed development will facilitate the overall decommissioning programme thereby helping to secure the development and growth of businesses that support the decommissioning works. The proposals will provide a new market for Augean PLC with the associated additional security for the employment provided by the business together with the potential for growth.

7.26 In accordance with PPS 1 the proposed development will contribute to social progress, effective protection of the environment, the prudent use of natural resources and economic growth and employment.
8. **Assessment of the need for the proposed development**

8.1 Radioactive wastes are produced in the UK as a result of the generation of electricity in nuclear power stations and from the associated production and processing of the nuclear fuel, from the use of radioactive materials in industry, medicine and research and from military nuclear programmes. Many of the nuclear power stations have reached or will soon reach the end of their operational life and will need to be decommissioned. The decommissioning process will produce large volumes of radioactive waste. Dealing with the nuclear legacy is a pressing issue according to the Nuclear Decommissioning Authority and must be dealt with as a matter of urgency\(^\text{15}\).

8.2 Most Low Level Radioactive Waste (LLW) arises today from the operation of nuclear power stations, nuclear fuel reprocessing facilities and from the decommissioning and clean-up of nuclear sites. Decommissioning LLW is mainly soil, building materials and metal plant and equipment. LLW comprises approximately 90 per cent of future radioactive waste arisings by volume but it contains less than 0.0003 per cent of the total radioactivity\(^\text{16}\).

8.3 The purpose of the development the subject of the application is to facilitate the safe and secure disposal of waste containing low levels of radioactivity. The national policy statement ‘Policy for the Long Term Management of Solid Low Level Radioactive Waste in the United Kingdom’ dated March 2007 identifies that disposal routes should be made available for arisings from the nuclear and non nuclear industries. The need for this development has been considered based on the drivers influencing the production of waste containing low levels of radioactivity, the estimates of the volumes of wastes that are and will be generated and for which landfill disposal is the identified best practicable option following application of the


waste hierarchy principles together with consideration of the availability of disposal facilities in the country.

8.4 LLW is waste that contains very small amounts of radioactivity. LLW is characterised as radioactive waste having a radioactive content not exceeding 4000 becquerels per gram (Bq/g) of alpha or 12,000 Bq/g of beta or gamma activity. LLW includes a subset of material referred to as Very Low Level Radioactive Waste (VLLW). It is proposed that the waste which will be deposited at the East Northants RMF will be limited to that which has a level of radioactivity up to 200Bq/g. The subset of low level waste which it is proposed will be accepted for disposal at the East Northants RMF is shown in Diagram 1.
8.5 The waste which will be deposited at the East Northants RMF typically will comprise construction and demolition waste such as rubble, soils, crushed concrete, bricks and metals from the decommissioning of nuclear power plant buildings and infrastructure, lightly contaminated miscellaneous wastes from maintenance and monitoring at nuclear facilities such as plastic and metal and wastes from manufacturing activities, science and research facilities and hospitals where radioactive materials are used.

Current sources of LLW

8.6 Solid radioactive wastes have been produced, stored and disposed of by various industries in the UK since the 1920s. The main sources of waste generation since the 1950s have been nuclear energy development, nuclear power generation and the weapons industry. There are hundreds of non-nuclear industry users of radioactive materials that produce radioactive wastes such as universities, hospitals, the pharmaceutical industry, research establishments and the oil and gas industry. There are a limited number of producers of substantial volumes of LLW in the UK together with a large number of producers of small volumes of waste. The waste producers generally are divided into the nuclear industry and the non-nuclear industry and the locations of the facilities with the main waste arisings are shown on Figure 3. The nuclear industry comprises the following organisations:

- The Nuclear Decommissioning Authority (NDA) which has responsibility for the continuing operation, decommissioning and remediation of 20 nuclear sites. The sites include Sellafield, eleven Magnox power station sites of which nine are no longer operational and are being decommissioned, Springfields in Lancashire and Capenhurst in Cheshire which is being decommissioned. The NDA was set up to provide a UK-wide strategic approach to the decommissioning of nuclear facilities. In the Government policy document reference is made to the obligation of the NDA under the Energy Act 2004 to formulate and publish plans for LLW management and disposal. It is estimated\(^\text{17}\) that NDA sites generate approximately 80% of all LLW from the nuclear industry.

• British Energy which operates Advanced Gas-cooled Reactor (AGR) power stations at seven sites and the Sizewell B Pressurised Water Reactor (PWR) power station in Suffolk.

• The Ministry of Defence which is a major user of radioactive materials in the naval nuclear propulsion and atomic weapons programmes and in other activities.

• Urenco which carries out uranium enrichment at Capenhurst in Cheshire.

8.7 The Non-Nuclear Industry (NNI) is defined as those organisations that produce radioactive waste covered by the provisions of the Radioactive Substances Act 1993 that are not licensed under the Nuclear Installations Act 1965. The NNI organisations include hospitals, most of the pharmaceutical sector, oil and gas production together with research and education. The NNI generally creates small quantities of waste with low levels of radioactivity compared with the nuclear sector. The largest producer of radioactive waste in the NNI is GE Healthcare Limited which is a health science company providing products and services for use in healthcare and life science research. The company supplies radioisotopes for medical, research and industrial uses. The company has sites in Buckinghamshire, Cardiff and Oxfordshire. It is stated in the government policy document that a UK wide strategy is necessary for wastes arising from the non-nuclear industry which should be integrated with the developing NDA strategy.

**Current disposal routes for LLW**

8.8 Since 1959 most of the solid LLW generated in the UK has been transported to the near-surface disposal facility known as the Low Level Waste Repository (LLWR), near the village of Drigg in Cumbria. Between 1959 and 1995 approximately 800,000m$^3$ of waste was deposited in a series of clay-lined trenches and covered with soil$^{18}$. Since 1988 most waste has been packaged in large mild steel International Organisation for Standardisation (ISO) freight containers and placed in an engineered concrete vault known as Vault 8. At 1 April 2007 the containers at

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the LLWR occupied nearly 200,000m$^3$ of space. The annual consignments to the LLWR between 1997 and 2006 are shown in Table 1.

Table 1.

**Annual consignments to the LLWR between 1997 and 2006**\(^{19}\)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total volume of the waste including primary containment (m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>9,200</td>
</tr>
<tr>
<td>1998</td>
<td>12,600</td>
</tr>
<tr>
<td>1999</td>
<td>8,000</td>
</tr>
<tr>
<td>2000</td>
<td>8,400</td>
</tr>
<tr>
<td>2001</td>
<td>6,100</td>
</tr>
<tr>
<td>2002</td>
<td>10,800</td>
</tr>
<tr>
<td>2003</td>
<td>11,400</td>
</tr>
<tr>
<td>2004</td>
<td>12,900</td>
</tr>
<tr>
<td>2005</td>
<td>12,800</td>
</tr>
<tr>
<td>2006</td>
<td>12,900</td>
</tr>
</tbody>
</table>

8.9 Vault 8 reached full capacity at the end of 2008. The capacity of the LLWR is the subject of an Authorisation from the Environment Agency for further waste disposal. A planning application for the construction of Vault 9 was submitted on 29 June 2007 with planning consent granted by the Waste Planning Authority on 22 January 2008. The construction of Vault 9 commenced during the summer of 2008 and will provide approximately 100,000m$^3$ of void\(^{20}\). Temporary storage facilities are being used until Vault 9 is available for use. Historically a further series of vaults was planned which would have provided an additional capacity of 700,000m$^3$ in Vaults 9 to 15. The LLWR Lifetime Plan for 2008 included provision for fewer vaults based

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\(^{19}\) The 2007 UK Radioactive Waste Inventory. Main Report. March 2008. Defra and NDA. Table 4.9
on the projected reduction in volumes following implementation of volume reduction initiatives\textsuperscript{21}.

\textbf{8.10} The LLWR does not have the capacity to meet future national LLW needs\textsuperscript{22}. In the consultation draft of the UK Nuclear Industry LLW Strategy\textsuperscript{17} it is stated that it is necessary that the useful lifetime of LLWR is extended by using other disposal routes for waste at the lower end of the LLW activity range. The LLWR is engineered to provide containment of the full activity spectrum of LLW. The decommissioning and clean-up of nuclear sites will create large amounts of lightly contaminated soil and building rubble. Much of this material has small amounts of radioactivity and does not need the level of disposal engineering provided by LLWR\textsuperscript{23}. The diversion of VLLW and suitable LLW away from the LLWR is a key principle of the NDA 2009 LLW Strategy\textsuperscript{24}. In the consultation draft of the Strategy published in June 2009 it is stated in section 5.5.2 that the:

\begin{quote}
\textit{The use of alternative disposal routes for VLLW and suitable LLW through controlled burial, provides a significant opportunity for effectively managing suitable types of LLW and VLLW and extending the life of the LLWR. In many cases, particularly for VLLW, the level of safety, security and environmental protection offered through engineered vaults goes well beyond that needed to demonstrate protection and meet regulatory requirements. Consequently, where the necessary safety assessments can be carried out to the satisfaction of the environmental regulators, diversion of VLLW away from LLWR is critical to implementing Government Policy and extending the life of LLWR for waste that cannot be disposed of elsewhere.}'
\end{quote}

\textsuperscript{21} LLW Strategic Review Issue 1 January 2009. LLW Repository Ltd and NDA.
8.11 A total volume of approximately 33,600m$^3$ of material has been deposited at the disposal facility at the research reactor site at Dounreay, Caithness. The facility does not meet current disposal standards therefore the waste will be retrieved, packaged into containers and consigned to a planned new solid LLW disposal facility adjacent to the Dounreay site. Current LLW arisings are being stored on site as an interim measure while this new facility is developed.

8.12 Currently the only other route for disposal of LLW is at the commercial landfill site at Clifton Marsh in Lancashire. The site accepts domestic, commercial and industrial waste as well as quantities of VLLW and some LLW. The site currently accepts VLLW and LLW from the Capenhurst and Springfields nuclear fuel fabrication and uranium enrichment sites. Wastes with up to 100Bq/g of alpha activity are permitted for disposal at the site. The site currently has planning permission for operations up to 2012. Proposals are being developed for an application for permission to dispose of VLLW at a commercially operated non-hazardous waste landfill at Lillyhall near Workington in Cumbria. At the time of submission of this application with the exception of the LLWR and the in-house facility at Dounreay there are no operating or planned facilities for the disposal of LLW with levels of radioactivity up to 200Bq/g.

8.13 Most LLW generated by the NNI are sent to regional incinerators, local landfills where the wastes comprise material that does not need to be sent to specially authorised sites and to the LLWR for disposal for wastes which must be deposited at specially authorised sites. Disposal at the LLWR is regarded as a last resort for those wastes which cannot be dealt with by incineration or local landfill.

Quantities of future LLW arisings

8.14 An inventory of the radioactive waste present and likely to be generated in the UK carried out on behalf of the government identified that a substantial amount of LLW will arise in the UK as a result of current waste generation and the proposed programme of decommissioning of nuclear power generating sites. Based on the
inventory it was concluded by government\textsuperscript{25} that the currently available supply of LLW disposal capacity cannot meet foreseen future demand. Landfill disposal to authorised landfill sites is an approved option for the disposal of solid LLW that contains limited amounts of low level radioactivity\textsuperscript{26}.

8.15 The need for additional disposal capacity for LLW has been identified by the NDA as stated in the NDA 2006 Strategy:

‘Current estimates suggest that there would still be insufficient capacity at the LLW Repository for the anticipated arisings of LLW generated by decommissioning and clean-up. Without taking into account the more flexible LLW management arrangements we hope will arise from the Government’s LLW policy review, the estimated volume of future LLW arisings could not be accommodated in the LLWR’.

8.16 The NDA have updated their UK strategy for the management of LLW based on the 2008 review of the waste arisings and in June 2009 published the strategy as a consultation document\textsuperscript{27}. The consultation draft of the 2009 strategy highlights the national need for additional LLW capacity:

‘The UK will generate significantly more LLW than the potential capacity at LLWR. This will mean finding alternative ways to manage LLW, including both treatment and alternative disposal routes.’

8.17 The primary source of data on the quantities and status of radioactive waste and forecasts of future arisings in the UK is the UK Radioactive Waste Inventory which

\textsuperscript{25} A Public Consultation on Policy for the Long Term Management of Solid Low Level Radioactive Waste in the United Kingdom. February 2006. DEFRA, DTI and the Devolved Administrations

\textsuperscript{26} Policy for the Long Term Management of Solid Low Level Radioactive Waste in the UK. March 2007. Department for the Environment, Food and Rural Affairs (DEFRA)
is commissioned jointly by DEFRA and the NDA. The Inventory is updated and published in a 3 yearly cycle and provides a reference source of information for Government and its agencies and others with a role or interest in the management of radioactive waste. The Inventory includes information on the sources, quantities and properties of Low Level Waste (LLW), Intermediate Level Waste (ILW) and High Level Waste (HLW) in the UK. The current inventory provides information on the quantities and status of radioactive waste at 1 April 2007. The 2007 Inventory contains details of over one thousand individual waste streams that have been reported by organisations responsible for their management.

8.18 The summary of the NDA LLW Strategic Review was published in October 2008 and the full review was published in January 2009. As part of the NDA LLW strategic review process the LLW inventory was updated in 2008 by drawing together information in the NDA Lifetime Plan 2008 submissions and the 2007 National Radioactive Waste Inventory for each site to form a more complete picture of the wastes generated at the NDA sites in the UK. A draft of the National LLW Management Plan was published in February 2009 by the NDA and LLW Repository Limited and the consultation draft of the Nuclear Industry LLW Strategy was published in June 2009 by the NDA. The Strategic Environmental Assessment of the UK Strategy for the management of LLW was published in June 2009.

8.19 DEFRA have commissioned a UK wide survey of NNI LLW producers to collect and analyse primary data on LLW arisings and disposal routes. As of June 2009 this

[References]

study is currently ongoing. A scoping report for the Sustainability Appraisal of the proposed NNI waste strategy was published in January 2009\textsuperscript{32}.

\textbf{8.20} It is stated in the national policy document that arisings of LLW and the requirements for its disposal should be minimised by the implementation by the waste producers of the waste management hierarchy principles in Waste Strategy 2007. It will be necessary for waste producers to minimise the quantities of LLW arising and to consider the submission of wastes to processes such as re-use and recycling, decay storage and incineration prior to consideration of landfill disposal. The LLW that will be received at the East Northants RMF will be residual waste for which it has been determined that it cannot be subject to management measures higher up the waste hierarchy as determined by the waste producer. It is acknowledged in the policy document that there are limitations to the application of the waste hierarchy in the management of wastes which already are contaminated. The NDA LLW Strategic Review published in January 2009 confirms that the waste management hierarchy principles are applied as a core part of the waste strategies for each site. In the consultation draft of the Nuclear Industry LLW Strategy it is stated that the three themes that underpin the strategy are:

\begin{itemize}
\item[I.] application of the waste management hierarchy to extend the life of LLWR and ensure that waste is managed in a risk-based, fit-for-purpose manner
\item[II.] best use of existing assets
\item[III.] new fit-for-purpose waste management routes
\end{itemize}

\textbf{8.21} The projected future arisings of LLW from the major waste producers which are scheduled for disposal at the LLWR are presented in Table 2.

Table 2

Projected future consignments of LLW from the major waste producers to the LLWR 2009 to 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Total volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>14,600</td>
</tr>
<tr>
<td>2010</td>
<td>14,500</td>
</tr>
<tr>
<td>2011</td>
<td>14,900</td>
</tr>
<tr>
<td>2012</td>
<td>13,200</td>
</tr>
</tbody>
</table>

The volume is the packaged volume and reflects the effect of compaction and containerisation.

Table 3 shows the current and future arisings of LLW from the major LLW producers for the period 2008 to 2129.

Table 3

Current and future quantities up to 2129 of LLW from the major LLW producers

<table>
<thead>
<tr>
<th>Volume (m³)</th>
<th>Mass (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW as at 1 April 2007</td>
<td>196,000</td>
</tr>
<tr>
<td>Estimated future LLW arisings for the period up to 2129</td>
<td>3,000,000</td>
</tr>
<tr>
<td>Total</td>
<td>3,196,000</td>
</tr>
</tbody>
</table>

As at 1 April 2007 the volume of LLW in the UK was 196,000 m³. Approximately 156,000m³ of this total is waste that has already been conditioned and is placed in Vault 8 at the Low Level Waste Repository (LLWR) near Drigg. This waste remains

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listed as 'current' waste in the inventory until the vault is capped and closed. The larger volumes of the remaining LLW are at Sellafield (11,200m$^3$) and Capenhurst (10,700m$^3$). Most of this LLW is in temporary storage awaiting consignment to the LLWR or suitable disposal to landfill.

8.24 The forecast future arisings of LLW including VLLW from the major producers for the period up to 2129 are approximately 3,000,000m$^3$. 2,600,000m$^3$ or approximately 87% of all future arisings of LLW including VLLW are from the decommissioning of existing reactors and other facilities and the remediation of contaminated ground. 1,660,000m$^3$ or approximately 56% of all the forecast future LLW arisings is from Sellafield. Much of the other LLW is from Magnox power stations (425,000m$^3$) and Springfields (387,000m$^3$) with smaller contributions from AGR power stations (105,000m$^3$), Dounreay (91,000m$^3$) and Harwell (85,800m$^3$).

8.25 The raw annual arisings for LLW including VLLW up to 2129 from the nuclear industry are shown in Diagram 2 and the forecast cumulative arisings of LLW including VLLW between 2008 and 2129 from the nuclear industry are shown in Diagram 3. The most significant period of LLW generation is between 2008 and 2031 and arises from decommissioning.

8.26 The waste arising data forecast in the LLW inventory does not include much of the contaminated land at Sellafield which is yet to be characterised and which potentially comprises up to 13 million m$^3$ of material.

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Diagram 2.

The raw annual arisings of LLW including VLLW from the nuclear industry up to 2129

Diagram 3.

The forecast cumulative arisings of LLW including VLLW from the nuclear industry in the UK up to 2129
8.27 The distribution of the LLW including VLLW waste arisings in different bands of levels of radioactivity is shown in Diagram 4. The analysis of the activity data reported in the LLW strategic review carried out by LLW Repository Limited and the NDA identifies significant inconsistencies between data sources where some waste streams which are described as LLW should be categorised as VLLW and vice versa. Diagram 4 shows that there are large quantities of waste described as VLLW in the inventory but given the total radioactivity levels of 4Bq/g to 40Bq/g for these materials they should be described as LLW. Over 1,200,000m³ of waste described by consignors as VLLW lies in the 40MBq/g to 400MBq/g total activity band which is not in the VLLW category. The radioactivity data for the wastes provided in the inventory suggest that only 0.36 million m³ of the 1.8 million m³ of waste described in the inventory as VLLW is correctly categorised and that as a consequence the volume of other LLW wastes is underestimated by 1.4 million m³.  

Diagram 4

LLW including VLLW waste arisings from the nuclear industry in different bands of levels of radioactivity
8.28 Forecast annual arisings of LLW including VLLW from the major LLW producers are on average approximately 50,000m$^3$ in the period up to 2030. The estimated future arisings of LLW in the UK for the period up to 2019 are shown in Table 4.

Table 4

<table>
<thead>
<tr>
<th>Year</th>
<th>Total volume (m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008 to 2009</td>
<td>80,900</td>
</tr>
<tr>
<td>2010 to 2014</td>
<td>372,000</td>
</tr>
<tr>
<td>2015 to 2019</td>
<td>225,000</td>
</tr>
</tbody>
</table>

8.29 It is stated in the 2007 UK Radioactive Waste Inventory that there is reasonable confidence in the estimates of future arisings of LLW from the major waste producers operations over the next 5 years. It is stated that there is a degree of uncertainty with respect to the predictions of future arisings of LLW from the decommissioning and remediation of facilities particularly for wastes at the lower end of the LLW activity range which are the wastes which it is proposed will be accepted at the East Northants RMF. The uncertainty arises predominantly from the limited amount of detail in the current site decommissioning and remediation plans and it is estimated in the UK Radioactive Waste Inventory that the volumes of future arisings could be significantly higher than those reported in the 2007 UK Radioactive Waste Inventory.

8.30 The projected future consignments to the LLWR up to 2014 and the estimated arisings of LLW from the major LLW producers for the same period are shown in Table 5.

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36 LLW Strategic Review. Issue 1 2009. LLW Repository Limited and NDA. P.30
Table 5.

Projected future consignments of LLW to the LLWR and estimated arisings from the major LLW producers up to 2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimated arisings Volume (m³)</th>
<th>Projected consignments to the LLWR Volume (m³)</th>
<th>LLW disposal deficit / surplus Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>74,400</td>
<td>14,500</td>
<td>-59,900</td>
</tr>
<tr>
<td>2011</td>
<td>74,400</td>
<td>14,900</td>
<td>-59,500</td>
</tr>
<tr>
<td>2012</td>
<td>74,400</td>
<td>13,200</td>
<td>-61,200</td>
</tr>
<tr>
<td>2013</td>
<td>74,400</td>
<td>14,2002</td>
<td>-60,200</td>
</tr>
<tr>
<td>2014</td>
<td>74,400</td>
<td>14,2002</td>
<td>-60,200</td>
</tr>
<tr>
<td>TOTAL</td>
<td>372,000</td>
<td>71,000</td>
<td>-301,000</td>
</tr>
</tbody>
</table>

1 Annual volumes are averaged from the 2010 to 2014 total reported in the 2007 UK Radioactive Waste Inventory

2 The projected consignment volumes are a continuation of the average consignments from 2010 to 2012

8.31 The analysis shows that there will be a total shortfall of 301,000 m³ in disposal capacity for LLW including VLLW from the major LLW waste producers for the period 2010 to 2014 which is the operational life of East Northants RMF. Smaller quantities of LLW including VLLW are generated from numerous non-nuclear industry users of radioactive materials including hospitals, pharmaceutical, research and educational organisations and the oil and gas industry and are not included in the UK Radioactive Waste Inventory. A recent SNIFFER report estimated that in 2005 approximately 3,600 tonnes of VLLW was produced by non-nuclear organisations excluding the oil and gas industry.

8.32 A survey of VLLW producers in 2006 found that 680 organisations were authorised to consign VLLW for disposal in the UK. The survey showed that 52% of VLLW was incinerated and 48% was sent for landfill. Incineration produces approximately 20,000 tonnes of secondary VLLW comprising ash and off-gas treatment residues which are sent to landfill\(^{40}\).

8.33 The spatial distribution of the major producers of LLW in the UK is shown on Figure 3 together with the location of the East Northants RMF. The East Northants RMF is located centrally in England and will provide a closer disposal location for many producers of LLW than the only current option for landfill disposal which is at the LLWR in Cumbria. The LLWR at Drigg is the only dedicated engineered facility capable of taking the full activity range of LLW. Large amounts of waste produced by the decommissioning and clean up process will have low levels of radioactivity which do not require the engineered containment capability of the LLWR at Drigg. Low activity LLW will therefore arise from sites close to the LLWR but will need an alternative disposal option to the LLWR. The 2009 NDA Strategy for LLW Strategic Environmental Assessment supports the development of alternative disposal options. The conclusions of the assessment state:

\begin{quote}
‘As LLW encompasses a large range of radioactivity and a highly engineered facility such as LLWR is not necessarily required for lower activity waste and wastes containing short lived radioactivity, the use of conventional landfills presents potential benefits to the management of LLW.’
\end{quote}

Conclusion

8.34 The UK Nuclear Industry LLW Strategic Review\(^{41}\) presents a baseline inventory of all LLW waste to be managed over the projected lifetime of the NDA sites between 2008 and 2129. In the review it is demonstrated that the greatest generation of


\(^{41}\) LLW Repository LLW Strategic Review. Issue 1 2009. LLW Repository Ltd and NDA.
LLW will occur from 2008 to 2031 as a result of the planned decommissioning of many nuclear electricity generating sites. Historically almost all LLW has been deposited at the LLWR near Drigg in Cumbria. Large amounts of waste produced by the decommissioning and clean up process will have low levels of radioactivity which do not require the engineered containment capability of the LLWR at Drigg. It has been demonstrated that the LLWR has insufficient capacity to dispose of all the LLW being produced now and that it is forecast will be produced in the future.

8.35 The analysis shows that there will be a total shortfall of 301,000m³ in disposal capacity for LLW including VLLW from the major LLW waste producers for the period 2010 to 2014 which is the operational life of East Northants RMF. It is concluded that there is a significant and urgent national need for additional disposal capacity for LLW. The East Northants RMF will provide a new, fit-for-purpose alternative site for the disposal of LLW from both the nuclear and non-nuclear industries that will contribute to the national need for capacity to address the identified shortfall.
GLOSSARY

Abstraction
The removal of water or gas from any source either permanently or temporarily.

Aftercare
The steps necessary to bring land to the specified condition for the afteruse.

Aquifer
A geological stratum that is capable of storing and transmitting water.

Biodegradable
Materials which will be broken down by bacteria or other biological means.

Biodiversity
Range of variation in living organisms including genetic variation and ecosystem variation.

Bq/g
A Becquerel (abbreviated as Bq) is the unit for the activity of radioactive material. A Gram (abbreviated as g) is a unit of mass. A Becquerel per Gram (Bq/g) is therefore a measure of the concentration of radioactivity in a material.

Bund
A low bank or wall of material used to store soils or to provide a visual screen.

Cumulative impact
The combined positive and negative impacts on a specific receptor or medium.

Disposal
Emplacement of waste in an appropriate facility without the intention of retrieval.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dose</td>
<td>General term for a measure of the energy deposited by radiation in a target.</td>
</tr>
<tr>
<td>Environmental Impact</td>
<td>A process to assess the environmental implications of proposals.</td>
</tr>
<tr>
<td>Environmental Assessment</td>
<td>The document that reports the findings of an Environmental Impact Assessment.</td>
</tr>
<tr>
<td>Exposure</td>
<td>The act or condition of being subject to irradiation. Exposure can be either external exposure to sources outside the body or internal exposure due to sources inside the body.</td>
</tr>
<tr>
<td>Groundwater</td>
<td>Refers to all subsurface water as distinct from surface water. It is considered generally that groundwater is water which is in the zone of saturation and contained in porous soil or rock stratum (aquifer).</td>
</tr>
<tr>
<td>Hazardous waste</td>
<td>Waste which had properties which may make it harmful to human health or the environment.</td>
</tr>
<tr>
<td>Hydrogeology</td>
<td>The quality, quantity, storage and movement of water in rock and the interaction with geology.</td>
</tr>
<tr>
<td>Hydrology</td>
<td>The surface water system and its operation.</td>
</tr>
<tr>
<td>Hydraulic gradient</td>
<td>The change in total hydraulic head per unit distance of flow in a given direction.</td>
</tr>
<tr>
<td>Inert</td>
<td>Materials that will not dissolve, burn or react physically or chemically or undergo biodegradation.</td>
</tr>
<tr>
<td>Irradiation</td>
<td>The act of being exposed to radiation.</td>
</tr>
</tbody>
</table>
Landfill gas  An end product of the degradation of biodegradable wastes in a landfill site.

Leachate  Liquid which seeps through waste in a landfill and becomes contaminated by the deposited waste.

LLW  Low Level Radioactive Waste. With certain specific exceptions LLW is defined as waste which has an activity concentration in the range 0.4 – 4,000 Bq/g for alpha emitters and 12,000 Bq/g for beta-gamma emitters.

mSv  milli sieverts. One thousandth of a sievert.

Permeability  A measure of the rate at which a fluid will pass through a medium.

Radiation  Energy in the form of waves or particles propagated through space.

Radioactivity  The phenomenon whereby atoms undergo spontaneous random disintegration, usually accompanied by the emission of radiation.

Radionuclide  A nucleus (of an atom) that possesses properties of spontaneous disintegration (radioactivity).

Sievert  Symbol Sv. The unit of effective dose and equivalent dose.

Surface water  Whole or part of any river, stream, other watercourse natural or artificial, lake, pond, creek, estuary or arm of the sea except for
certain sewers and water mains. In effect all waters that are not groundwater.

**Sustainable Development**  Development which meets the need of current generations without compromising the ability of future generations to meet their own needs.

**VLLW**  Very Low Level Waste. Radioactive waste considered suitable by the regulatory body for authorized disposal, subject to specified conditions, with ordinary waste in facilities not specifically designed for radioactive waste disposal.

A comprehensive glossary with respect to radiological terminology is presented in the Authorisation application which is included at Appendix C to the Environmental Statement.
9. DESIGN AND ACCESS STATEMENT
10. STATEMENT OF LOCAL ENGAGEMENT