

The Highland Council

Planning, Development and Infrastructure Committee
19 August 2015

Agenda Item	17
Report No	PDI/ 55/15

Consultation on an Implementation Strategy for Scotland's Policy on Higher Activity Radioactive Waste

Report by Director of Development and Infrastructure

Summary

The Scottish Government is seeking a response to its proposed Strategy that has been prepared in support of Scotland's Higher Activity Radioactive Waste Policy published in 2011. The Policy supports long-term near surface, near site, storage and disposal facilities, that reduce the need for transportation, designed in such a way that enables waste to be retrieved.

The aim of the Strategy is to provide a framework within which waste management decisions can be taken to ensure that the Policy is implemented in a safe, environmentally acceptable and cost effective manner.

Members are asked to note the key issues highlighted in the report and agree to the response to the questions as set out within the **Appendix**.

1. Background

- 1.1 In October 2006, following consultation on the options for long term management of higher activity radioactive waste, the UK Government and devolved administrations of Scotland, Wales and Northern Ireland accepted the recommendations made by the Committee on Radioactive Waste Management (CoRWM) that higher activity radioactive waste should be disposed of in a deep geological facility. Until such a facility is available, waste would be suitably treated and stored within facilities that would be suitable for use for a period of up to 100 years.
- 1.2 In its response to that consultation, The Highland Council did not support deep geological disposal but instead preferred the option of long-term interim storage that is sub-surface and built at or near the current location of waste.
- 1.3 In June 2007 the Scottish Government announced that its policy for the long-term management of higher activity radioactive waste arising in Scotland is to *'support long-term near surface, near site storage facilities so that the waste is monitorable and retrievable and the need for transporting it over long distances is minimal.'*
- 1.4 In January 2010 the Scottish Government published its consultation document 'Scotland's Higher Activity Radioactive Waste Policy' with the aim of providing a more detailed statement of policy. This included the concept of disposal in

addition to long-term storage. Having said that, disposal in this context meant that facilities would have to be designed in such a way as to be able to retrieve the waste if required.

- 1.5 The reason that disposal was included as an option is understood to relate to the activity of the waste; principally short-lived graphite wastes (which account for around 45% of the current waste inventory). Given the relatively short half-life, such waste could decay to the point that it would be capable of being reclassified as low level waste within a relatively short period of time i.e. 300 years. In such circumstances, declaring at the outset that it is the intention to dispose of such waste therefore seemed a reasonable option.
- 1.6 At the time of the consultation the Council's policy was to '*...continue to support the above ground storage of intermediate level waste from Dounreay until a Scottish waste strategy is agreed and implemented and object to the use of Dounreay or any other site within the Highlands for a national nuclear waste repository*' (Strengthening the Highlands 2009-11, THC). The Scottish Government Policy was therefore generally consistent with the policy of The Highland Council with regard to the management of radioactive waste at Dounreay.
- 1.7 In its response to the consultation, the Council indicated that the Policy needed to explore the socio-economic side of the equation – particularly looking at inter-generational equity. On the basis that the Policy could effectively consign some waste in some locations to 'indefinite' storage i.e. at Dounreay, the Council argued that this imposition on a community would require some form of financial compensation. In addition, the Council considered that the implementation of the Policy is dependant upon the waste producers and owners and the production of a strong and clear Strategy.
- 1.8 The Policy was published in January 2011. While the Policy does not specifically require compensation to communities for the siting of new facilities, it does expect waste producers to engage with stakeholders when progressing with their plans and assess the impacts of their proposals on the community. It set out that an Implementation Strategy was required to support the Policy.

2. Consultation on the Implementation Strategy for Scotland's Policy on Higher Activity Radioactive Waste

- 2.1 On 11 May 2015, the Scottish Government published its consultation paper on an Implementation Strategy for Scotland's Higher Activity Radioactive Waste. The document can be viewed at <http://www.gov.scot/Publications/2014/12/8263>. The consultation closes on 7 August, but the Scottish Government has agreed to extend the time for the Council to submit its response to 24 August 2015.
- 2.2 The aim of the Strategy is to provide a framework within which waste management decisions can be taken to ensure that the Policy is implemented in a safe, environmentally acceptable, and cost effective manner.
- 2.3 The Strategy is split into three key stages: the first from 2015 - 2030, the second

post 2030, and the third post 2070. The initial phase will principally involve reviewing the waste that arises in Scotland, and the options available for future management with the aim of finally identifying credible options. The second phase will take these options forward. The third phase relates to waste arising from the decommissioning of reactors (Chapelcross, Hunterston A, Hunterston B and Torness).

- 2.4 The Strategy is designed to help set the strategic direction for higher activity waste producers and owners, and provide further clarity and detail to the 2011 Policy. The Strategy addresses additional considerations that may impact on how management options are taken forward including: demonstration of the safety and effectiveness of management options currently being considered, emergence of new technology, and ethical and societal attitudes to waste management options i.e. intergenerational equity.
- 2.5 The NDA is preparing the UK Inventory of Radioactive Waste and Materials on behalf of the UK Government. The Strategy sets out that the NDA will also be responsible for constructing a new baseline for higher activity waste for its sites in Scotland. To establish compatibility with Scottish Policy, this assumes that it will be stored on the site at which it arises for a period of approximately 300 years, with stores being maintained, refurbished, or replaced, as appropriate, throughout the storage period. This baseline is critical to providing initial assumptions for how waste will be managed in the future.
- 2.6 The Strategy recognises that plans for waste arising at facilities in Scotland in the period up to 2030 are already at an advanced stage. It is therefore likely that the first generation of storage facilities for waste arising in the next 10-15 years are likely to follow existing plans. Beyond this, owners and waste producers are expected to review their assumptions and provide information to support decision making regarding the need for near surface disposal facilities. The Strategy indicates that siting of a near surface disposal facility, if required, will be subject to further consideration taking account of the wider stakeholder community and the national interest.

3. Higher Activity Radioactive Waste in Highland

- 3.1 The Dounreay site licence company is the largest producer of radioactive waste in The Highland Council area. As with all Scotland's waste, Dounreay has no high level waste (HLW) i.e. heat emitting waste. All higher activity waste is intermediate level waste (ILW). This waste has arisen mainly from the reprocessing activities. It includes activated/contaminated metals, raffinates and sludges, the majority of which is long-lived radioactive waste i.e. waste that has a half-life of more than 30 years but could be several thousands of years.
- 3.2 There are other producers of higher activity radioactive waste in Highland, in particular HMS Vulcan and Raigmore hospital. While waste from Raigmore may be directed to Dounreay given proximity, the quantities involved will be extremely small. As the Policy excludes MOD waste the position is less clear for HMS Vulcan. The MOD already has a contract with the NDA to send the low level waste (LLW) produced at HMS Vulcan to the new LLW facilities at Dounreay. It is

conceivable that a similar contract arrangement could be agreed between the MOD and the NDA for ILW. Even so, it is estimated that Vulcan will produce only around 10% of the ILW that has been produced at Dounreay. Storing this at Dounreay may be preferable to transporting it long distances to a deep geological facility. Having said that, as the Policy does not cover defence waste streams, the Strategy does not address this particular issue.

- 3.3 It is understood that only somewhere in the region of 3-5% of the existing ILW at Dounreay would be suitable for near surface disposal i.e. has a short half-life that could decay to the point that it would be capable of being reclassified as low level waste within a relatively short period of time. However, given the low volumes and high cost of construction of such facilities, it is unlikely that this disposal route would be made available at Dounreay for this waste. The fact that Dounreay is not in proximity to other sites which would require and/or utilise a disposal facility, would suggest that in terms of the Policy, Dounreay would be an unlikely destination for short-lived wastes suitable for disposal.
- 3.4 The current assumption at Dounreay is that ILW created at Dounreay will be stored at Dounreay. Drums will be stored on site in purpose built facilities over the long-term. It is anticipated that this will be done within the first phase of the Strategy i.e. by 2030. This will require on-going maintenance, monitoring and possibly further new-build.
- 3.5 Given the fact that current and future generations will need to deal with this issue, with the stigma that it may create, consideration needs to be given to long-term community benefit. Not only should this be evident in supporting research and development and maintaining/enhancing the skills base required to implement the Policy, but also in direct financial reward to the host community. This has been secured for the existing Dounreay LLW vaults and there is therefore precedent for this. Unfortunately the Strategy does not advocate this approach, instead it leaves the discussion on the impacts and mitigation to the waste owner/producer and the host community.

4. Conclusions

- 4.1 The Strategy maintains flexibility for waste owners and producers. It recognises that each waste material may have to be dealt with differently, and that it may be inappropriate for each nuclear site to have facilities for each of its own wastes or those for other producers. While the expectation would be for near site management of waste the Strategy sets a broad framework for industry to determine the solutions. This means that all options, except for deep geological disposal of course, may be available.
- 4.2 The Strategy is consistent with the existing position of The Highland Council with regard to the management of radioactive waste at Dounreay. With the exception of Vulcan waste, the waste produced in the area will be covered by the Policy and Strategy. The Strategy reinforces the assumption that, for Dounreay, it is most likely that its ILW will be stored on-site for many generations to come. Given the distances involved, it is unlikely that wastes would be brought to Dounreay from other sites within Scotland.

4.3 The implementation of the Policy remains the responsibility of the waste producers and owners. The Strategy provides a strong desire and clear role for stakeholder engagement in dealing with waste now and in the future. It is essential that The Highland Council continues to engage in particular with the Dounreay site and the NDA to ensure that the best interests of its communities are secured.

5. Resource implications

5.1 There are no resource implications arising from this paper.

6. Fit with the Programme for the Highland Council 2012 - 2017

6.1 This supports the Council to deliver against stated action “to reap maximum social, community benefits from the decommissioning process” in its Programme for 2012-2017.

7. Equality and climate change implications

7.1 There are no equality or climate change implications allied to this paper.

8. Legal, risk, rural and Gaelic implications

8.1 There are no legal, risk, rural or Gaelic implications arising from this paper.

Recommendation

Members are asked to:

- (i) note the issues outlined in the report and the position with regard to the current policy of The Highland Council; and
- (ii) agree the response to the questions as set out in the Appendix.

Designation: Director of Development and Infrastructure

Date: 29 July 2015

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Background Papers:

Consultation on an Implementation Strategy for Scotland's Policy on Higher Activity Radioactive Waste, available online at: <http://www.gov.scot/Publications/2014/12/8263>

Appendix

Q1	Do you have any comments on the aims, scope and objectives of the proposed Implementation Strategy? It is understandable that the scope of the Strategy at this stage does not include specific waste management options however, as disposal or very long-term storage are likely options one would have expected the scope of the strategy to define a framework for community consultation and benefit.
Q2	Do you have any comments on establishing a new baseline? It is entirely appropriate that the baseline be realigned to reflect the 2011 Policy.
Q3	Do you agree that the plans to 2030 are compatible with the 2011 Policy? Yes. However, for Dounreay, where planning for facilities is at an advanced stage, such planning was initially done within a different context where the assumption was long-term storage pending disposal elsewhere. Facilities have been assessed on that basis. Should the facilities now be expected to remain longer term, or 'indefinitely', one would have considered further the question of intergenerational equity and the issue of compensation at the time.
Q4	Do you have any comments on the plans to take forward the work from 2015? See response to Q3.
Q5	Do you have any comments on the proposed key phases and decision points in sections 3.4, 3.5 and 3.6? See response to Q3 & Q4.
Q6	Do you have any comments on siting issues? It would seem appropriate for disposal facilities to be located as close to the site where the waste that is deemed suitable for disposal, has arisen. This may mean that more than one disposal facility may be required. It is unlikely that Dounreay would have disposal facilities. Nonetheless, the Council would not support the use of Dounreay or any other site within Highland for the disposal of radioactive waste.
Q7	Do you have any comments on the packaging strategy and the Letter of Compliance (LoC) process? This is an established practice which may assist in keeping future management options open.
Q8	Do you have any comments on monitoring and retrievability? The expectation for monitoring to be delivered in an open and participative way is welcomed. It would be helpful from the general public perspective to have an indication, in easily understood language, what this is likely to mean in practice.

Q9	<p>Do you consider that the current plans for information and knowledge exchange are sufficient and if not what would you propose?</p> <p>The Council welcomes the development of the NDA Archive centre in Wick and trust that the potential expertise within the facility will be well used for recording and assisting in the management of waste.</p>
Q10	<p>Do you have any views on issues of public and stakeholder engagement?</p> <p>For Dounreay, the opportunity may have come too late. Planning permission has been granted for storage facilities yet no discussion has been entered into about compensation for communities faced with hosting these facilities over a longer term than was initially anticipated. The NDA should re-dress this.</p>
Q11	<p>Do you have any views on the issues of skills and the supply chain?</p> <p>Given the advance stage of Dounreay decommissioning in comparison to other sites in Scotland, there is great opportunity for the workforce and Caithness/North Sutherland generally to capitalise on decommissioning activity elsewhere in Scotland, Britain and abroad. The Council welcomes the continued investment from the NDA, and DSRL, in the Caithness/North Sutherland economy.</p>
Q12	<p>Do you have any further comments on the proposed Implementation Strategy?</p> <p>No.</p>