

# Dounreay Solid Low Level Radioactive Waste Strategy Development

## New Low Level Waste Facilities Project

### Note on the Proposed Location of the Facilities

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#### Introduction

UKAEA has undertaken a transparent and consultative site selection process resulting in the decision being taken to go forward with a planning application for new LLW disposal facilities on a site adjacent to the eastern boundary of the existing Dounreay Site, as shown in Figure 1. The facilities are required to enable the decommissioning and restoration of the Dounreay Site.

The proposed facilities consist of a series of below ground concrete vaults. The vaults will be roofed to divert rain from the emplaced waste and will utilise fail-safe gravity drainage systems to ensure the facilities do not flood during the operational period.

UKAEA has consulted widely on the proposals, both in the option selection stage and during the preparation of the planning application and its associated Environmental Statement. A number of stakeholder views have arisen during this process, some of which are associated with the location choice:

- the facilities should be on or close to existing site and UKAEA should minimise the spread of the Dounreay Site footprint;
- the facilities should not be visually intrusive;
- more emphasis should be put on the more immediate impacts of the facilities rather than focussing on long-term safety.

This note summarises the rationale behind the selection of the preferred location and specifically addresses the commonly asked question “Why has it not been put to the west of Site at Isauld?”

#### Why the selected area was chosen

Details of the selection process are documented in 2 reports<sup>1</sup>. This work recognises that the optimum location for the new LLW Facilities would be within the existing Dounreay Site if space were available. However, suitable space is not available on site, as much of the site is within the zone categorised as potentially susceptible to coastal erosion and inundation from future sea level rise (shown as the area seaward of the red line in Figure 2). The presence of existing operational facilities and geological faulting make the remaining on-site areas unsuitable.

A discussion on the Isauld area, area 5, suggested by some consultees as a preferable location, and the selected area, area 2, is given below.

#### Area 5

Consultation to-date on the LLW facilities project has indicated that most stakeholders see visual intrusion as a significant issue.

A large part of area 5 has sufficient elevation to accommodate the proposed facilities. However, due to the local topography, area 5 is highly visible to much of the vicinity around Dounreay, including Buldoo and Achreamie. It is also clearly visible to motorists using the nearby A836.

Consultations to-date indicate a strong stakeholder preference for the facilities to be at or adjacent to the existing Dounreay site.

Locating the facilities in area 5 would lead to the creation of a separate “island” of isolated nuclear facilities over 600 m from the existing licensed site.

Highland Council Policy A1 on Safeguarding of Agricultural Land, states; ‘Development on prime quality or locally important agricultural land will not be permitted except where the development is essential to the interests of the local community and no reasonable alternative location is feasible’.

Area 5 is an area of relatively good agricultural land.

Proximity to local houses is a known strong stakeholder concern. However, area 5 has no significant advantage over other areas in terms of distance from local residents as there are a number of houses within 500-600m, as shown in Figure 3.

#### Area 2

The southern part of area 2 has sufficient elevation to accommodate the proposed facilities. Due to the local topography, facilities in area 2 would be visually unobtrusive, shielded from most of the surrounding area below the crest of slope at the east end of the Dounreay runway. Being some distance from the A836, it is largely unseen by motorists using the road.

Locating the facilities in area 2 allows the facilities to be placed adjacent to the existing Dounreay licensed site and helps minimise the spread in the footprint of the existing site.

<sup>1</sup> LLW906)S2/55 March 2006 – LLW Facilities Stage 2 Site Selection Paper & LLW(06)S2/60 March 2006 – LLW Facilities Site Selection Workshop Record January 2006.

Area 2 is an area of relatively poor agricultural land.

There are a number of houses within 400-600m as shown in Figure 3. Proximity to local houses is duly recognised as a strong area of concern for residents of Buldoo, the closest settlement to the selected location.

### **Summary**

UKAEA has assessed the areas on and around the existing Dounreay Site and selected an optimum location for the construction of the new LLW Disposal Facilities. The selected location is land immediately adjacent to the east side of the existing licensed site.

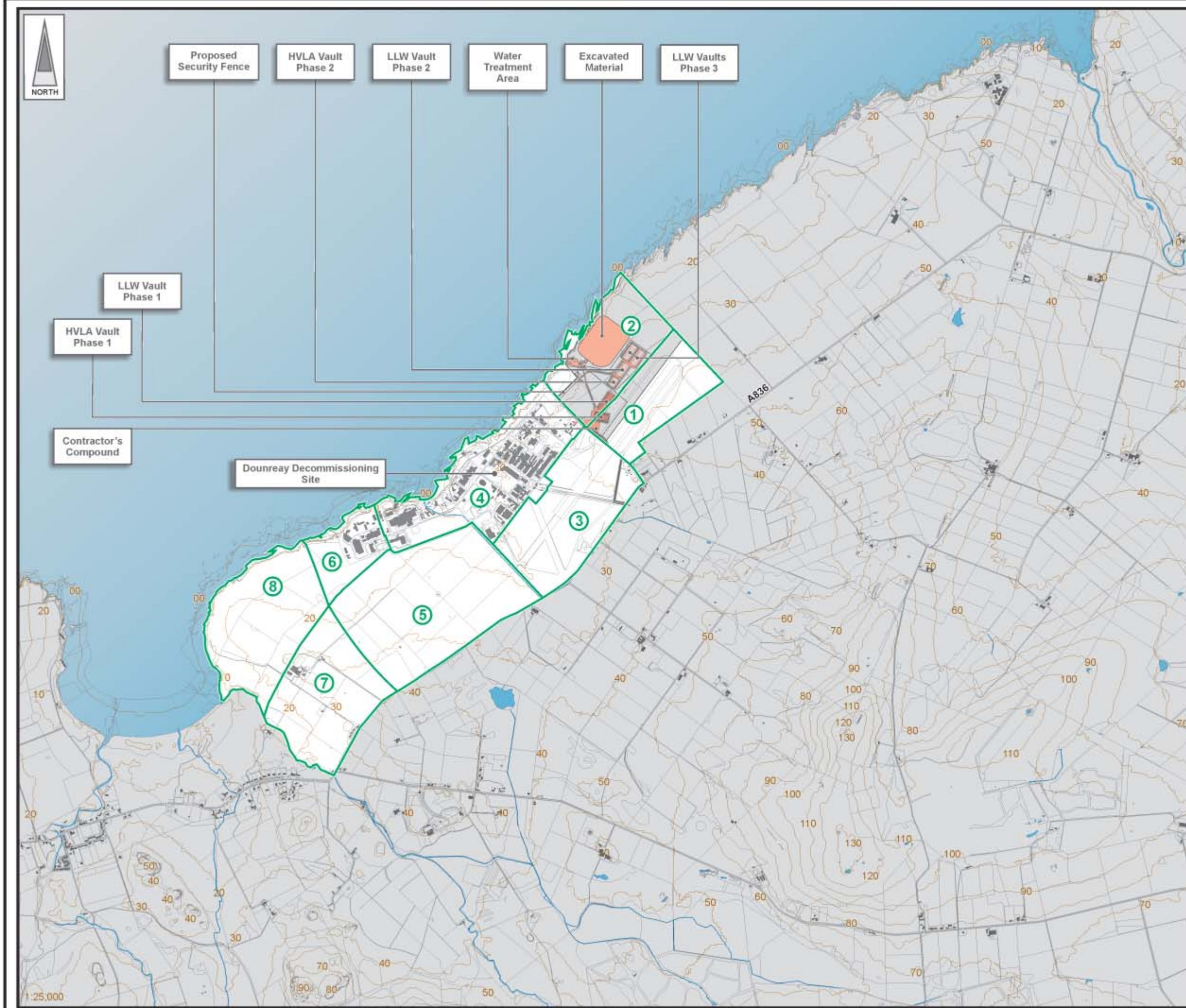
The land at Isauld to the west of the existing site was not selected, as facilities in this location would be visually intrusive both to neighbours and passing motorists, would be taking relatively good agricultural land and would spread the footprint of the Dounreay site to form a separate site more than 600 m from the existing site. A location at Isauld offers no significant advantage in maximising the distance between the new facilities and nearest dwellings.

The preferred location adjacent to the east side of the existing site is believed to achieve a balanced compromise between various physical constraints and a range of environmental and stakeholder issues. It minimises the spread of the Dounreay footprint, lies as close to the existing site and as far from nearest neighbours as is practical, is visually unobtrusive and utilises an area dominated by relatively poor agricultural land.

The site selection process has been documented and details are included in the Environmental Statement<sup>2</sup> accompanying the planning application for the New LLW Facilities.

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<sup>2</sup> LLW(06)S2/61 March 2006 – LLW Facilities Stage 2 Environmental Statement



**LEGEND**

- Footprint of Proposed Vaults and Associated Infrastructure (Phases 2 & 3 vaults shown as a lighter tone)
- Areas Considered for Site Selection

New buildings identified following walkover surveys of site and surrounding areas have been added to Ordnance Survey base data.

Rev	Date	Purpose of Revision	Drawn	Checked	App'd

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**Proposed Low Level Waste Disposal Facilities at Dounreay Environmental Statement**

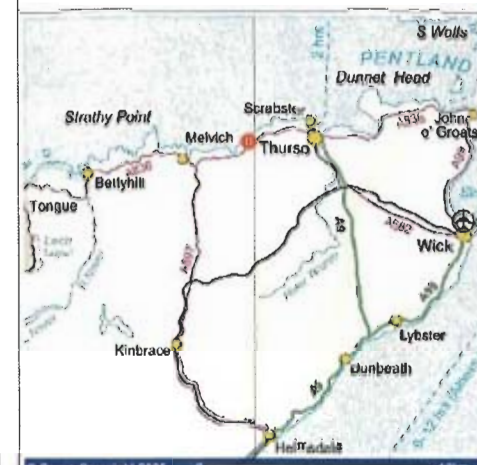
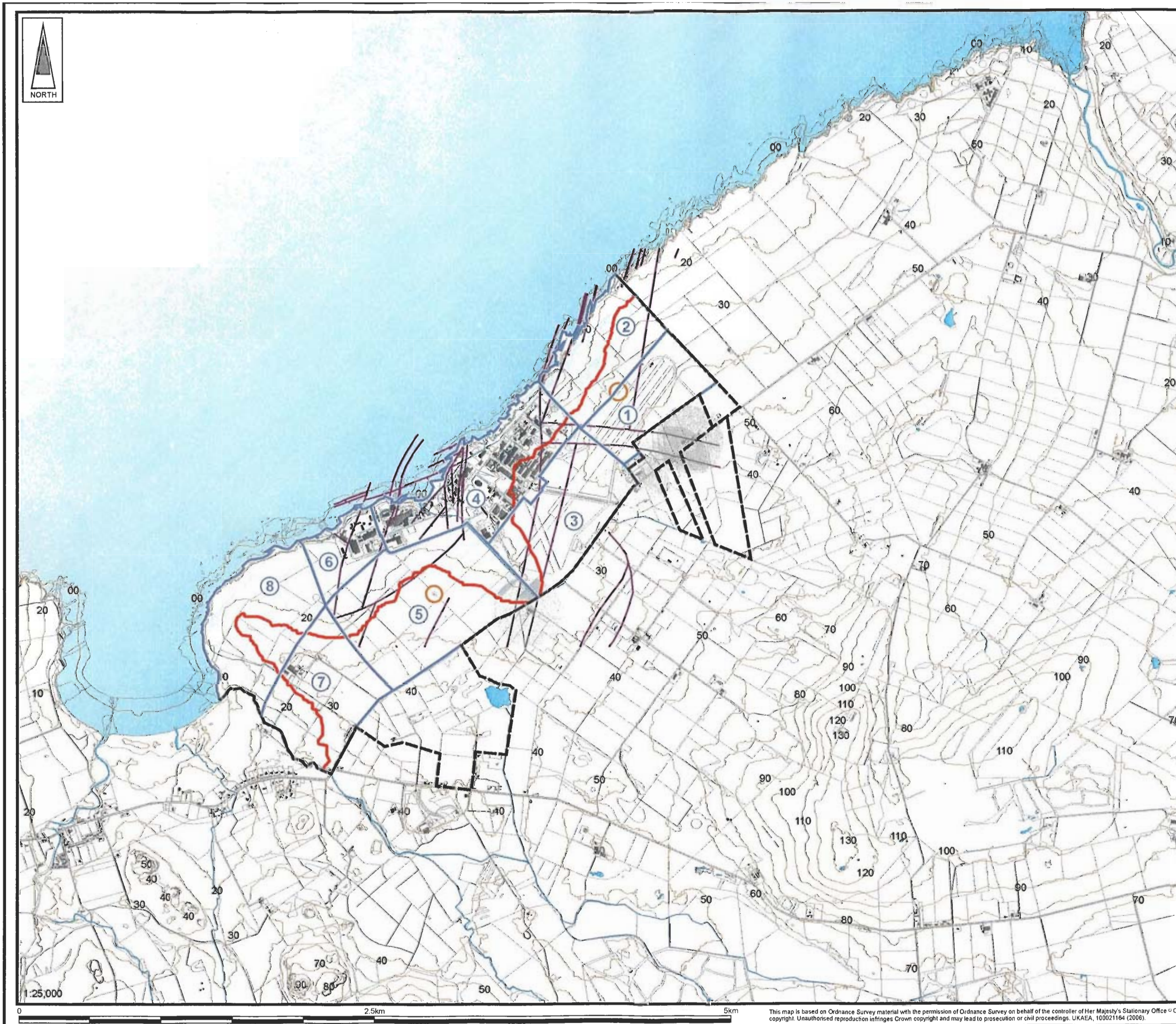
**Areas Considered for Site Selection**

Drawing Status	FINAL		
JB No.	0019563/7a		
Figure No.	1		
Scale	1:25,000 @ A3		
Drawn	KA	Checked	LS
		Approved	TK

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LLW(06)S2/123 FIGURE 2



**LEGEND**

- UKAEA Land Boundary
- Areas considered during site selection

**Environmental and Technical Constraints**

- Line based on 100m of Coastal Erosion combined with 10m allowance for Sea Level Rise and Inundation
- 250m clearance zone from local properties
- 50m statutory consultation zone at Scheduled Ancient Monument
- Known Geological Faults
- Contours at 10m intervals

Environmental Constraints and Areas Considered for Site Selection

Rev	Date	Purpose of Revision	Drawn	Checked	App'd

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Client: **UKAEA**

Project: **Proposed Low Level Radioactive Waste Disposal Facilities at the Dounreay Site**  
 Environmental Statement

Title: **Environmental Constraints and Areas Considered for Site Selection**

Drawing Status	DRAFT
JB No.	0019563/7a
Figure No.	2
Scale	1:25,000 @ A3
Drawn	KA
Checked	LS
App'd	TK
Date	Feb. 2006

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Illustration of Distances to Nearby Dwellings for Potential Facility Locations

