

**Dounreay Site
Restoration Ltd**

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Mr Bob Earnshaw
Dounreay Stakeholder Group
Via June Love

5 February 2013

Direct line
01847 803043

Dear Bob

PROPOSED NEW FIRING RANGE

Further to earlier communication regarding our plans to construct a new firing range at Dounreay. You are aware we held a community meeting in Reay Hall on 17 January. There were strong views that the chosen site was the wrong location, that the facility should be built on site and as close to the coast as possible.

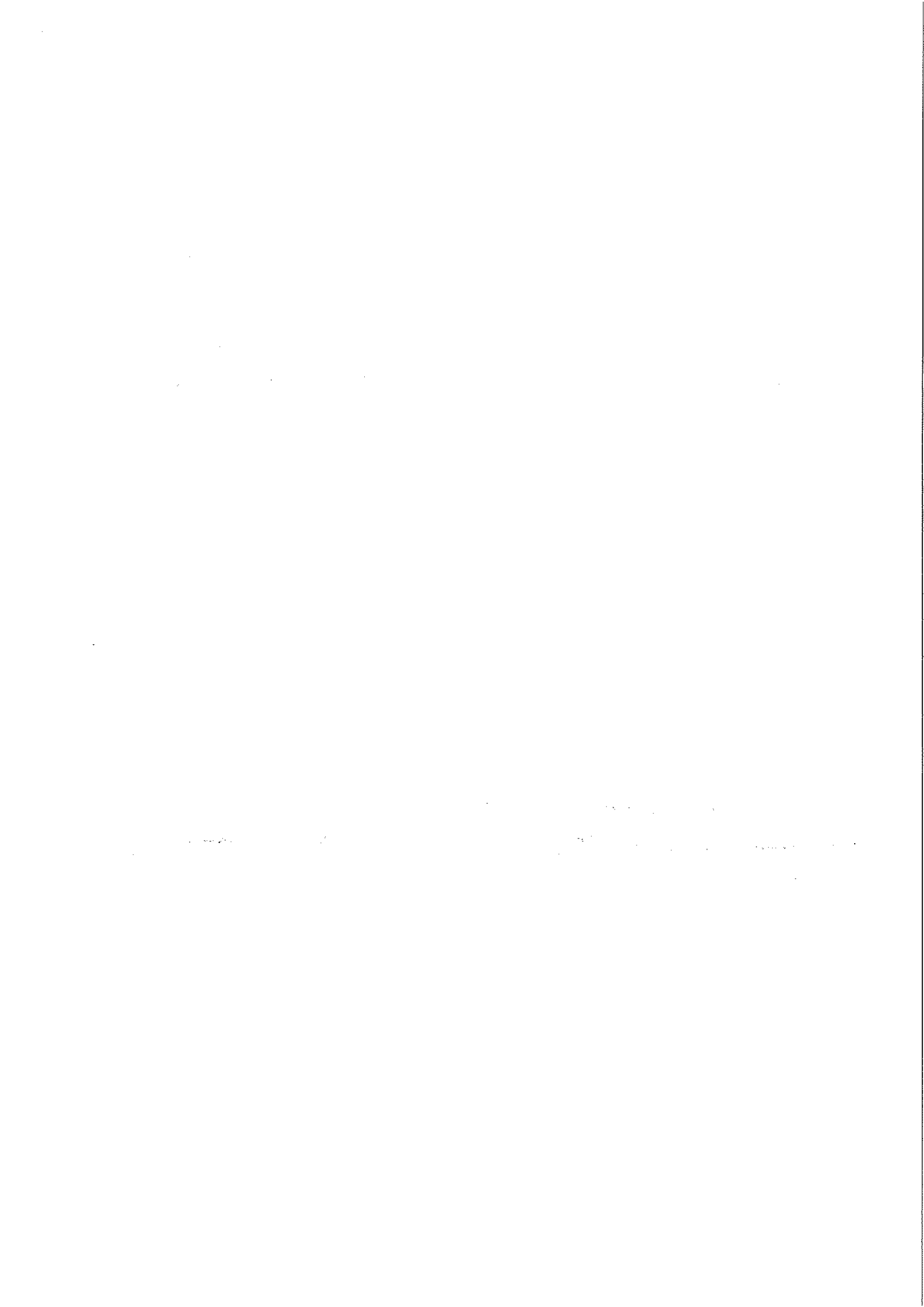
DSRL listened to this feedback and postponed the submission of the planning application until a review of the ten considered locations had been undertaken. I attach a paper that looks at these locations and explains the reasoning behind DSRL's preferred location. We have now concluded the review and our preferred option remains the Vulcan road end. We are now proceeding to submit the planning application to Highland Council.

DSRL will continue to keep you updated as this project progresses. However, should you require any further information or wish to discuss any aspect of the project in more detail then please contact Marie Mackay on telephone number 01847 803043.

Yours sincerely



Alastair Macdonald
Change Director, Dounreay



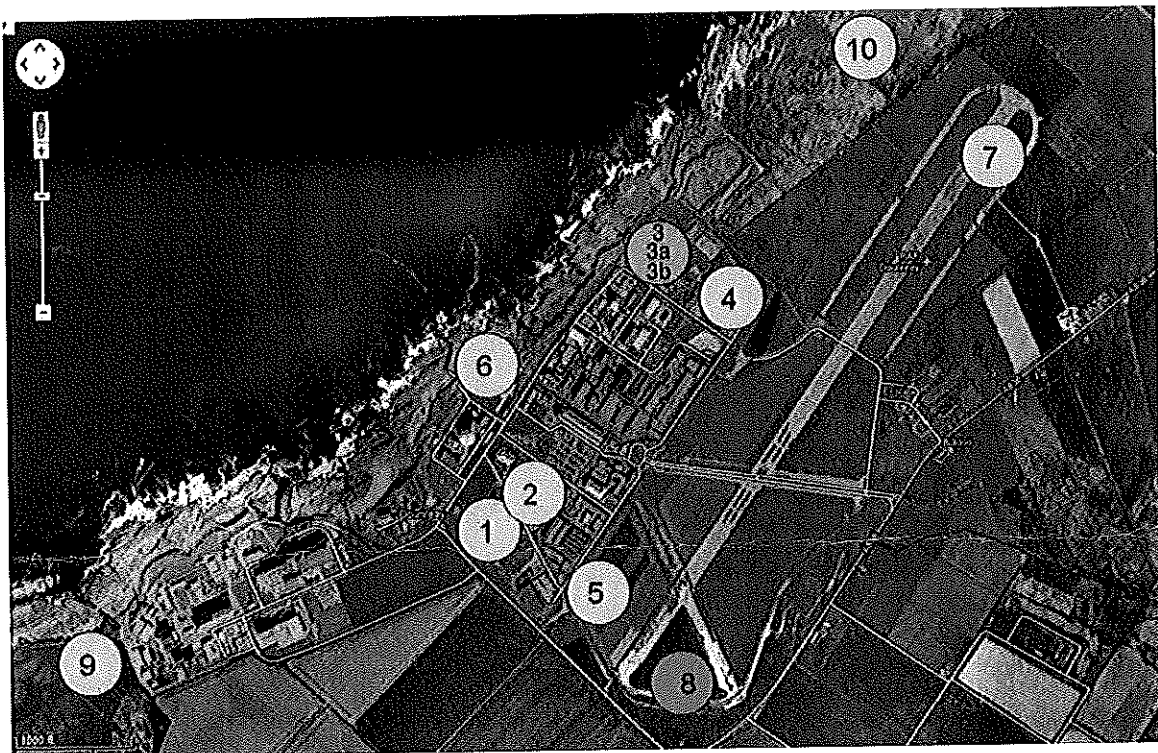
New Firing Range Site Selection

On 17th January 2013 a community meeting was held in Reay Hall to engage with the community on Dounreay's plans for a new firing range to be built near the A836 and Vulcan site road junction. This is off the nuclear licensed site on NDA owned tenanted land.

There was a strong view by some residents of Upper Dounreay and Buldoo that the chosen site was the wrong location, that the facility should be on site and as close to the coast as possible.

Given this feedback DSRL undertook a review of the ten locations considered. This paper looks at these locations and explains the reasoning behind DSRL's preferred location.

The image below indicates the ten locations considered.



Locations 1, 2, 3/3a, 4, 5, 6, 7, 9 and 10 were rejected for various reasons, eg land availability and cost, appendix A gives further detail on the reasons for this. The two remaining options were:

- Option 8 – the preferred location, at the Vulcan road end
- Option 3b – to the east of the FCA at the north end of the site

Option 8

This location is off-site near the A836 and Vulcan site road junction. The cost to build at this location is £2.4M on straight forward ground conditions (soil strip and build). This area is poorer agricultural land. Following the noise survey and taking into consideration the close proximity of residential properties, World Health Authority noise standards can be met at this location.

Option 3b

This location is on the north east corner of the existing site, a slightly smaller site and will not allow the optimum orientation for the training required. There are services crossing this site and a drainage outfall would require to be diverted. Some contamination is also present which would need to be dealt with prior to construction. The cost to build at this location is £2.9M. Following the noise survey, noise would have the potential effect on Buldoo residents and it is difficult to achieve the World Health Authority noise standards.

Noise Issues

The World Health Authority guidance states that the sound pressure outdoors should not exceed 50dB, however because the noise levels are low in this vicinity the maximum acceptable level has been reduced at four considered receptors.

	Location	Max Acceptable (dB)	Worst case gun (dB)
1	Closest Farm	47.1	45.4
2	Isauld	42.7	35.9
3	Upper Dounreay	41.5	40.0
4	Buldoo	59.9	41.0

The noise modelling is conservative, assumes wind is always from the range to the receptor and has been done in consultation with the environmental staff at the Highland Council.

Of all the on-site locations Option 3 would clearly be the best for noise but the impact on Buldoo would be greater, while it would be less on Upper Dounreay.

No noise modelling has been done for the on-site options. The noise model does not have the detail of the Dounreay buildings and topography so it would prove difficult to model accurately.

Conclusion

Taking all factors into consideration, Option 8 is the preferred option as it is the only one that can meet the World Health Authority noise standards.

Appendix A

Option	1	2	3	3a	3b	4	5	6	7	8	9	10
Cost	North of D3110	Between PCCB and D2003	NE Corner of site	As 3 but a smaller option	As 3 but smaller and rotated	Next to Encapsulation Plant	Off-site at Boundary/Vulcan Road	Existing Range	Next to NLLWF	Off-site at Vulcan junction	Off-site next to Vulcan at sea	Off-site east of Landfill 42 at sea.
On or off site Preferred Option	On site	On site	On site	On site	On site Neighbours' preferred option.	On site	Off site	On site	Off site	Off site	Off site	Off site
Cost £m (all exclude Downreay staff costs)	3.6	3.3	3.1	2.9	>2.9	4.3	7.8 (dependent on site security modifications).	Rejected as affects pits.	3.3	2.2		
Site Prep Impacts	Service diversions. Demolish Laundry.	Major service diversions including Low Active Drain. Traffic re-organisation.	Used for material storage - impact on Waste Management Licence.	As for option 3.	Services crossing this site. Drainage outfall to be diverted. Some contamination to be dealt with.	Demolish DN060		Too small an area.		Straight forward ground conditions. Soil strip and build.		
Build Ability	Close to labs.	Close to labs but okay otherwise.	OK	OK	OK		OK	Impossible - too small an area.		OK	Land is good quality.	No space, rock storage space - Waste Management Licence site.
Initial Screening	REJECT	REJECT	REJECT	REJECT	PURSUE	REJECT	REJECT	REJECT	REJECT	PURSUE	REJECT	REJECT
Life Time Plan Impact					Must be gone by Sept 2019							
Noise	Problems for on site office.	Problems for on site office.	Below Buidoo - difficult to achieve World Health Authority standard. However it is second ranked by the noise consultant.	Below Buidoo - difficult to achieve World Health Authority standard. However it is second ranked by the noise consultant.	Potential effect on Buidoo - difficult to achieve World Health Authority standard. However it is second ranked by the noise consultant.	Higher potential effect on Buidoo difficult to achieve World Health Authority standard.	Further from neighbours. Best from noise aspect.	No space to create bunds.	Far too close to neighbours.	Effect on Upper Downreay. World Health Authority noise standards can be met.	High quality agricultural land. Bad slope.	
Ballistics	Not ideal	Not ideal	Ideal	Ideal	Not optimum.		Ideal	Not ideal	Good land.	Ideal		
Tenant						Lots of concrete hard standings which need broken out.	Good land.			Poorer agricultural land but tenant wishes to use hard standing for renewable developments. Private discussions with the tenant.		

