



POLICY AND RESOURCES COMMITTEE - 18 APRIL 2013

BERVIE BRAES OPTIONS

1 Recommendations

1.1 It is recommended that the Committee:-

- 1 Agree to the implementation of Option 8.**
- 2 Agree to create an earmarked reserve for Bervie Braes and transfer £300,000 from the current revenue monitoring forecast to fund the costs of this project.**

2 Background/Discussion

- 2.1 At the Policy and Resources Committee meeting on 15 November 2012 (Minute reference page 1247, item 18) it was agreed to instruct officers to submit a further report to the Policy and Resources Committee incorporating consideration of all of the relevant safety, technical and liability issues associated with reopening the road to light vehicular traffic. Officers were also instructed to submit a report to Kincardine and Mearns Area Committee to seek the view of local members on the proposal to reopen the road.
- 2.2 Jacobs were commissioned to assess and report on the residual risk of slope instability to the users of the Braes, both motorised and non-motorised, for the alternative options for the upper slopes described in the Report to Policy and Resources Committee of 15 November 2012. This assessment has also taken account of the remaining un-stabilised sections of the lower slopes which remain following completion of the current stabilisation works.
- 2.3 On completion of the reduced scheme it had been anticipated that the road would re-open to pedestrians and cyclists only, as a residual slope instability risk will remain. However, to address concerns expressed by the local community, further assessment work has been undertaken to understand the implications of reopening the road to "light vehicular traffic", in a downhill direction only.
- 2.4 When considering the upper slopes, there are two issues relating to the re-opening of the road which require consideration:-
 - (i) the residual risk to traffic and
 - (ii) the likely cost of reducing the risk
- 2.5 Slope analyses of the lower slope indicates that the addition of light vehicular traffic loading, of say 3 tonnes, would have a minimal and insignificant impact in terms of increasing the risk of slope failure on the lower slope. In light of this all further options that consider reopening the road are on the following basis:-
 1. One way operation – downhill

2. Weight Restriction – 3 tonnes
 3. Speed Limit – 20mph
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- 2.6 None of the upper slope was treated under the initial contract and there remain several areas of relative instability. Over the last 12 months or so, there have been eight slips on the upper slope. While these have been of varying sizes, none of the debris flows extended significantly beyond the edge of the carriageway. However, they do confirm the instability of the upper slope.
 - 2.7 As the upper slope is the primary concern, for traffic, Jacobs were asked to review and revise their previous preliminary investigation of the potential options. A risk assessment exercise was carried out to derive a comparative Risk Rating for each of the options. A Risk Rating was derived for both motorists and other users of the road.
 - 2.8 The scores given are based on a combination of likelihood and consequence, and range from zero (no risk) to 25 (very high risk with high probability of occurrence and fatal consequences). The acceptance of any combined residual risk level in excess of 10 would require very careful consideration.
 - 2.9 Table 1 outlines the options considered, their respective costs and Risk Ratings:-

Table 1

	Option	Cost (£ 000)	Failure Size	Pedestrians	Vehicles
1	Earthworks Regrading	1,900	Minor	4	2
			Moderate	4	3
			Significant	5	4
2	Catch Fence	1,850	Minor	5	5
			Moderate	4	4
			Significant	3	3
3	Remote Monitoring with Barrier	250	Minor	10	5
			Moderate	16	12
			Significant	15	12
4	Modular Barrier	300	Minor	5	5
			Moderate	8	4
			Significant	15	12
5	Permanent “Part Time” Prohibition of Driving*	100	Minor	10	5
			Moderate	16	9
			Significant	15	8
6	Restrict Access – Prohibition of Driving	50	Minor	10	0
			Moderate	16	0
			Significant	15	0
7	Re-open Road	100	Minor	10	5
			Moderate	16	12
			Significant	15	12
8	Part Time Prohibition of driving + Modular Barriers*	300	Minor	5	5
			Moderate	6	3
			Significant	10	8

* Risk Factor scoring done by Council officers.



- 2.10 It must be emphasised that the estimates given above remain preliminary in nature and based on limited design input. They are provided primarily to give an indication of the comparative order of costs. Should any option be progressed, the estimate will required to be reviewed and refined.
- 2.11 This road is not the only route into Stonehaven from the south, and various alternative routes exist. However, the local community appears to feel strongly that this link is vital in terms of Stonehaven's economy, particularly the tourist offering. Dunnottar Castle is a major tourist attraction in the area, and the local business community feel that the direct link, down the Bervie Braes road, provides a valuable opportunity to draw more visitors into the town.
- 2.12 This may well be an accurate assessment of the importance of the road however no objective data is available to assess the historic usage of this route.
- 2.13 The legal position is complex but it can be concluded that if the road were opened without appropriate, reasonable, preventative measures being put in place and a landslide occurred, which resulted in loss or injury, those affected may pursue a claim against the Council. For such a claim to be successful it would be necessary for the claimant to prove that the Council was in some way negligent or breached a duty of care, and would need to demonstrate that the cause of the injury was foreseeable. Given the recent history of landslips affecting the road, the possibility of injury being caused might be regarded as foreseeable.
- 2.14 Should such an incident occur, irrespective of whether or not the Council was actually at fault, there may well be a perception that not enough was done to prevent it.
- 2.15 Ultimately, any decision must consider risk and affordability along with the other local factors. As outlined in Table 1 various levels of investment produce various reductions in the residual Risk Rating. Rather than simply focusing on the Risk Rating, the level of investment required to achieve the reduction must be taken into account.
- 2.16 While Options 1 and 2 reduce the risk considerably, the investment required is substantial for either option. On balance it would appear that the investment required is disproportionate to the level of risk reduction.
- 2.17 Option 4 produces reductions for pedestrians and motorists for both the moderate and minor slips classifications. This is achieved for a reasonably modest investment.
- 2.18 Option 8 involves adding a seasonal "Part time" prohibition of driving to Option 4. This will effectively close the road to vehicular traffic from, say, November to April, the periods of highest rainfall and therefore the most likely time for elevated ground water levels. During the "summer" open period, a protocol will also be established to trigger a closure of the road should the rain

pattern be unseasonably wet, and lead to concerns with regard to ground water levels and slope stability. These additional controls lead to a further, albeit slight, reduction in the Risk Rating for little, or no, additional cost compared to Option 4.

- 2.19 The remaining options all exhibit high levels of residual risk, for vehicles and pedestrians. While the costs of each are similar, or less, than Option 8 the investment does not achieve significant reduction in residual risk. The one exception to this is Option 6, effectively continuing the road closure, which produces a zero residual Risk Rating for motorist. However, as it is practically very difficult to prevent pedestrians from accessing the road this option does not reduce the residual risk for them.
- 2.20 While the assessment of “reasonableness” is subjective, and may ultimately have to be tested in court, the work done to date indicates that a significant reduction in risk can be achieved through implementation of Option 8 in all but the “significant” slope failure category.
- 2.21 Adopting Option 8 will allow further work to be undertaken to collect objective data on the usage levels of this particular route during the summer months. In addition further work will be done to assess the economic impact of the route on the town and the wider tourist offering.
- 2.22 The condition of the slope and the number, and volume, of any slips will also be monitored to add to the information held in relation to the behaviour of the slope. This will be beneficial in reviewing, and if need be, revising the current risk assessment.
- 2.23 While this report is not specifically addressing the current condition of the lower slope, it should be noted that several areas of the lower slope remain untreated due to the reduced scope of the works in that location. As such, these areas remain only marginally stable and the risk to road users and residents at the toe of these areas will remain high until such time as the lower slope is stabilised fully. For information, the cost of completing the outstanding soil nailing on the lower slope is currently estimated at approximately £1.2million.
- 2.24 The Head of Legal and Governance has been consulted and accounted for in the body of this report. The Head of Finance has also been consulted and draws the Committee’s attention to paragraph 3.4 and the budget restrictions.
- 2.25 A report was submitted to the Kincardine and Mearns Area Committee, on 26 March 2013, outlining the available options. The Area Committee agreed to recommend the adoption of Option 8 to the Policy and Resources Committee.

3 Equalities, Staffing and Financial Implications

- 3.1 An equality impact assessment is not required because the recommended actions do not have a differential impact on people with protected characteristics.
- 3.2 There are no staffing implications arising from this report.
- 3.3 The previous works to the lower slope were funded from a total financial allocation of £3,000,000 which has been fully utilised. This comprises £2,000,000 from the Scottish Government and a further £1,000,000 from Aberdeenshire Council's Revenue Budget. The latter is held in the Invest to Save Fund.
- 3.4 The comparative costs of the various alternatives are summarised as follows:-

	Option	Estimated Cost
1	Earthworks Re-grading	£1,900,000
2	Catch Fence	£1,850,000
3	Remote Monitoring System with barrier	£ 250,000
4	Modular Barrier	£ 300,000
5	Permanent "Part Time" Prohibition of Driving	£ 100,000
6	Restrict Access – Prohibition of Driving	£ 50,000
7	Re-Open Road	£ 100,000
8	Part Time Prohibition of driving + Modular Barriers	£ 300,000

- 3.5 There is no funding within the existing budget to allocate further cost to the Bervie Braes project. It is recommended that an earmarked reserve for Bervie Braes is created and £300,000 transferred from the current revenue monitoring forecast to fund the costs of this project

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