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Alison Wilson
Assistant Clerk to the Public Petitions Committee
T3.40, The Scottish Parliament
Edinburgh
EH99 1SP

Your ref:
PE1428

Our ref:
A3393160

Date:
2 July 2012

Dear Ms Wilson

Consideration of Petition PE1428

Thank you for your letter of 25 May about Petition PE1428 concerning improvements to the A83 trunk road. I have set out below our responses to the Committee's questions.

What are your views on what the petition seeks?

Transport Scotland (TS) is committed to the effective management and maintenance of the A83 trunk road and appreciates the importance of the route to the local economy and also the inconvenience and disruption caused by diversions.

The Petition seeks to urge the Scottish Government to address the 4 key points which are currently impacting upon the communities along the A83 which are:

(1) issues relating to the Rest and Be Thankful;

The Minister for Housing and Transport announced on 9 January 2012 there would be a detailed study and investigation into mitigation works which would look at potential contingency measures and solutions following the December 2011 landslip at A83 Rest & Be Thankful and safety concerns along the route. The consulting engineers undertaking the study will look closely at what more can be done in managing the effects of landslips. In particular, the study will look at longer term engineering options including alternative access routes to mid Argyll, rock shelters, slope stabilisation techniques using vegetation and potential road realignments away from the hillside. The study is programmed to be completed by Autumn 2012. As part of the

study the consulting engineers are required to carry out a public consultation exercise with local communities and to engage with key stakeholders.

The Minister also announced on the 9 February that an additional £1 million would be made available to develop additional contingencies and mitigation work to help deal with future landslips. We are using this additional funding to take forward two initiatives. £500,000 is being used to extend debris flow netting to protect the sites of the recent landslips that occurred on 1 December 2011 and 22 February 2012. Works have started and are programmed to be completed early in August 2012. This will allow the removal of the traffic management on the A83 and a return to two way unrestricted traffic flow.

The remaining £500,000, along with funding from The Forestry Commission Scotland, is being used to create an emergency diversion route. Detailed design of a preferred option is progressing which would allow works to start in August 2012 and be completed by November 2012.

Permanent monitoring equipment has also recently been installed at the Rest & Be Thankful to allow remote monitoring of rainfall, groundwater levels and any movement of the hillside.

(2) pinch points at Inveraray and between Lochgilphead and Tarbert (Lochfyne);

This issue will be looked at as part of the study that was announced by the Minister on 9 January 2012.

(3) safe crossing points at Ardrishaig and Tarbert (Lochfyne)

This issue will be looked at as part of the study that was announced by the Minister on 9 January 2012.

(4) formally trunk the road between Kennacraig and Campbeltown.

There are currently no plans to extend the A83 trunk road from Kennacraig to Campbeltown, however we will review our plans in light of any fresh information becoming available.

Can you confirm the investigations into longer term measures to prevent / mitigate landslips, removing pinch points and improving pedestrian safety along the A83 are still on course for completion by summer 2012?

There has been a slight slippage but we are now on programme to complete the study by Autumn this year.

Can you provide a timetable for how you propose to take forward any recommendations from the investigations?

It is too early to say what the likely timetables would be to implement the recommendations. We do not want to second guess the outcome of the investigation. We will review the consultants' recommendations on completion and then we will look to see how they can be taken forward.

To what extent do you believe that these improvements could address the issues raised in the petition?

The improvements that will be considered as part of the study have the potential to fully address the issues raised by the petitioners. However, we need to wait till the study has been concluded before we will be able to assess to what extent the issues have been addressed.

Have you carried out any work to determine the possible economic impact of improvement works on the road to the local area?

Transport Scotland has carried out an evaluation of the impact of the Rest & be Thankful landslide on the local economy and tourism, a copy of which is attached. I will also make arrangements for a copy to be provided to the petitioners.

I hope this is helpful.

Yours sincerely

GRAHAM EDMOND
Head of Network Maintenance

Ex-post economic evaluation of the impact of the Rest and be Thankful landslide

1. Summary

The Rest and Be Thankful pass on the A83, which is an important link from Argyll and Bute to the central belt, was closed for approximately twelve days between the 28th October and 10th November 2007, causing disruption to approximately 40,000 trips over the period.

The final cost of any landslide will depend on the number of journeys affected and the length of the alternative diversion route. In the case of the Rest and Be Thankful landslide, the national economic cost of the closure has been estimated at approximately £320,000 (2008 prices).

It was to some degree fortunate that the landslide occurred in the autumn rather than during the peak tourist season, when the disruption would have been greater. It is estimated that a similar landslide during the tourist season would have costs approximately 65% higher, at £540,000.

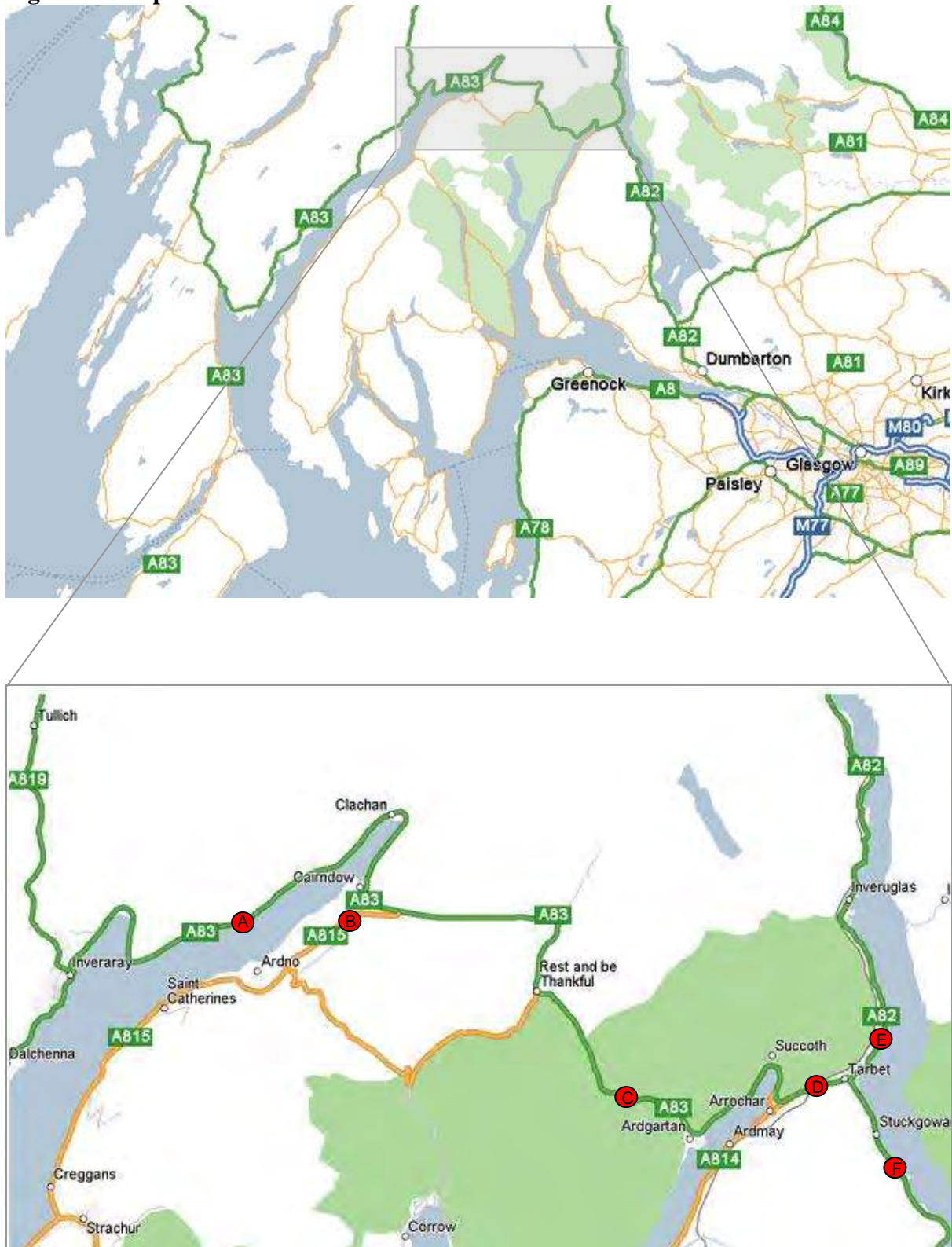
2. Introduction

The A83 is an important road in Argyll and Bute, which forms part of the principle route from Glasgow to the Kintyre and Cowal peninsulas in southern Argyll. The road was closed around the Rest and Be Thankful pass, due to a landslide which occurred at approximately 3 a.m. on October 28, 2007. The road was partially reopened on Monday 10 November.

This paper sets out an ex-post economic evaluation of the landslide. This focuses on the impact of the landslide at the national level, although it will include regional costs that occur to Argyll and Bute. As it is an ex-post evaluation, it has been informed by actual traffic data from the affected site, rather than forecasts based on traffic modelling. This traffic data has been obtained from automated traffic count sites from the surrounding area. Figure 1 below shows a map of the affected area, as well as the location of several of the count sites

Note that all costs in this paper are presented in 2008 prices.

Figure 1 - Map of the affected area



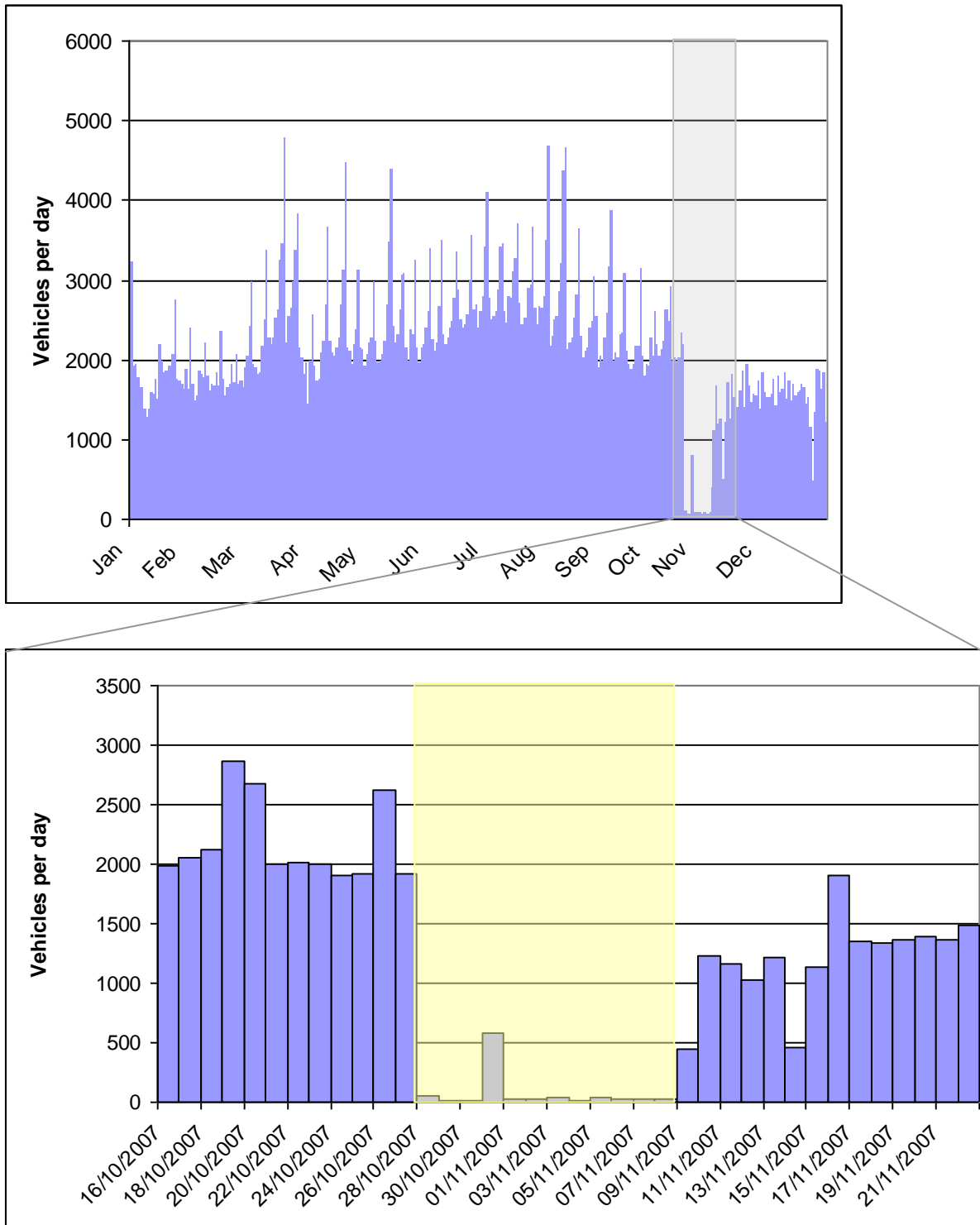
● indicates an automated traffic count site

Source: maps courtesy of multimap.com

3. Impact of the landslide

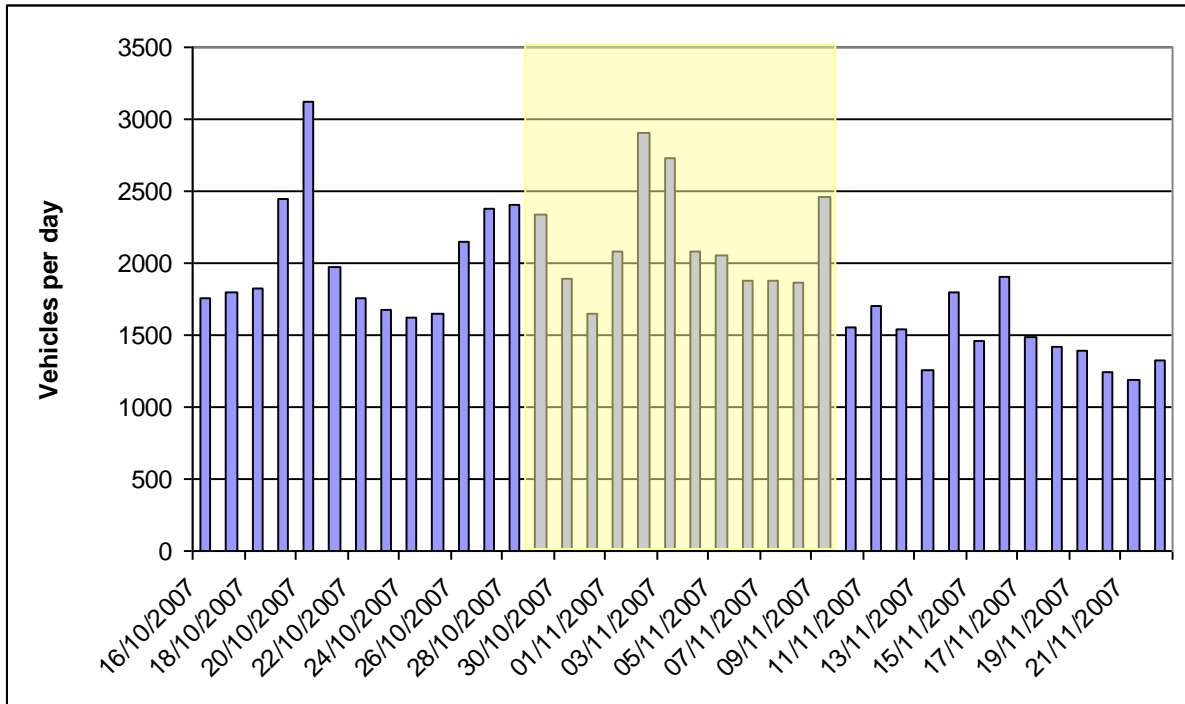
Evidence of the impact of the on travel patterns comes from the automated traffic counters located on the roads in the surrounding area. The figures below show the traffic data from count C, on the A83 slightly to the east of the landslide. It is obvious that there was a significant decline in trips along the route when the road was closed, with approximately 40,000 journeys affected over the period.

Figure 2 - Annual traffic counts at site C for 2007



For an economic evaluation, it is important to establish whether these trips were frustrated, i.e., did not occur at all or travelled to an alternative destination, or if they continued to be made but by an alternative route. This can be assessed through analyzing traffic counts for the primary alternative route, via the A82 and A85. The traffic count data for site E is shown below.

Figure 3 - Traffic count data at site E before, during, and after the landslide



The initial impression is that there may have been a slight increase in traffic on the route, but establishing this is complicated by the fact that traffic in the region varies significantly at weekends and is seasonal. Historical count data for the site shows a strong decline in traffic on a monthly basis from August to December. Average annual growth in traffic at the site for the month of October between 2003 and 2008 was 1.4%; traffic levels were some 10% higher in October 2007 than October 2006 and for November traffic levels were approximately 40% higher. This strongly suggests that the landslide caused rerouting of traffic. On average, daily flows through the site were between 400 journeys more than might have been expected in each direction. This pattern is repeated at three other sites further along the diversion route (not shown on map). This suggests that over the period of the road closure, some 12,000 (approximately 30%) of journeys used the alternative route.

It is also possible that some traffic may have diverted via a ferry route. In particular, traffic from Kintyre to Glasgow could take the ferry at Dunoon. This is considered more likely for trips to the Cowal peninsula or for long-distance journeys to the Glasgow or Ayr area. As origin-destination data is limited, it is difficult to be precise in estimating the amount of traffic that will use this route; however, roadside interview data for the A83 suggests that approximately 10% of journeys are to the Glasgow area. Capacity constraints at the ferry also need to be taken into account. After analyzing the available data, it is considered likely that slightly fewer journeys would be made via the ferry route than the alternative land route.

Traffic count data at site B also shows an increase in freight traffic in November relative to October, which is strongly suggestive of significant use of this route by freight.

Overall, approximately 50% of affected journeys are believed to have been made by an alternative route.

4. Economic evaluation

The economic evaluation has been conducted using standard economic welfare techniques. In essence, these state that the cost to the general economy of a change to the transport system can be approximated using the change in transport costs. For the Rest and Be Thankful landslide, these will vary depending on how many journeys are affected, what type of journeys they are (e.g. car, bus, freight), and whether or not they use the diversion route.

Data on vehicle types has been taken from the automated traffic counters on the A83 nearest to the landslide. Standard journey purpose splits have been assumed, although this is sensitivity tested against data from roadside interviews taken on the A83, albeit some distance to the west of Rest and Be Thankful.

Travel cost data has been calculated using travel times and distances from Direct Line's journey planner, which provides data on a link by link basis, and standard vehicle operating cost formulae have been applied to calculate fuel and non-fuel related costs. Standard values of time have been applied. Finally, trips which use the diversion are assumed to bear the full change in transport costs, whilst the cost for all other trips is assumed on average to be half this. Due to the fact that the landslide causes a very large change in costs, with the cost of the diversion route slightly more than twice that of the base cost, it is possible that this approach overestimates the impact of the landslide.

Using the assumption regarding the diversion routes discussed above, the cost of the landslide has been estimated at approximately £320,000.

5. Sensitivity analysis

5.1 High and low diversion rates

As a first step in the sensitivity analysis, two simple scenarios can be considered. In the first scenario, all the affected trips are made by the alternative route; in the second scenario, none of the affected trips are made at all. Comparing these shows the theoretical highest and lowest costs of the landslide for the given number of base trips, and therefore gives an indication of the importance of any assumption regarding diverted trips. This gives a high impact of £620,000 and a low of £180,000. The central assumption, with approximately 50% of trips diverting, is broadly in the middle of this range.

It should be noted, however, that the level of trips made by the diversion route is not independent of the cost of the landslide. Where the diversion route is short, a high level of trips will use the diversion route but the cost may still be relatively low; where the diversion route is long, fewer trips will use it but the cost should still be relatively high. It is considered

unlikely therefore that there will be high diversion rates when the alternative route is long, as in this case, and therefore the high and low impacts should be taken for illustrative purposes.

5.2 Impact of a landslide at different times of year

The scale of the economic impact is dependent on the number of people affected by the landslide, and therefore the results of the evaluation can be scaled to show the impact of a landslide occurring at different times of year, for example, during the peak tourist season. Traffic along the A83 is highly seasonal, as shown in Figure 2, and therefore the impact would be greatest during the summer months. Historical traffic count data for the A83 shows that August is the busiest month, with flows approximately 65% higher than those affected by the landslide. Assuming that the characteristics of these journeys is the same as those affected by the landslide in October, the central estimate of the impact would increase to £540,000.

5.3 Greater impact on businesses

The economic analysis has assumed that the composition of trips is the same during the disruption as during normal operation. In reality, it might be expected that the reduction in discretionary trips, such as leisure trips, is greater than non-discretionary trips, such as commutes or freight deliveries. Indeed, there is some evidence to support this suggestion, as vehicle data from site C shows that the relative decline in goods vehicle traffic is less than for other modes, and there is a slight increase in goods vehicles at site B. Given that, within the economic appraisal, there is little distinction between leisure and commuter trips, the most useful test may be to consider the impact on freight. This can be done by assuming that all the number of freight trips in the disrupted scenario is twice that than may be expected from the modal split of the base (offset by a comparative reduction in the number of trips by other modes). The central estimate of the impact increases to approximately £330,000 in this scenario, suggesting that the results are more sensitive to assumptions regarding the number of trips made in the disruption scenario than the type of trips made.

5.4 Roadside interview journey purpose data

The roadside interview (RSI) data suggest a slightly different composition of journey purposes from the standard splits for cars. This is shown in Table 1 below.

Table 1 - Comparison of standard and roadside interview purpose data

Journey purpose	Standard assumption	RSI data
Work	5%	6%
Commute	20%	37%
Other	75%	57%

In particular, they suggest a higher level of commuter traffic. Since the treatment of commuter and other traffic is similar in appraisal, changing from the standard journey purpose splits is not expected to significantly affect the results, and this is found to be the case, with the central estimate remaining at approximately £320,000.

5.5 Comparison with the benefits of rail provision

The results can be viewed as travellers' willingness-to-pay for a non-disrupted travel opportunity. On an annual basis, the £320,000 is equivalent to approximately £500 per year per journey. Although this may initially seem low, it is higher than estimate's of people's willingness to pay for a local rail station, which is placed at approximately £220 per year per household.

6. Conclusions

The landslide at the Rest and Be Thankful pass clearly had a significant impact on travel in the local area. 38,000 trips were affected, with a significant proportion diverting onto other local roads. The total economic impact of the disruption has been estimated at £320,000. Should a landslide occur during the peak tourist season, the impact would be significantly greater, and has been estimated at approximately £540,000.

4th August 2009

**Iain Pearce
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