

---

# Appendix 5 – A82 Full Road Closure - Assessment Report

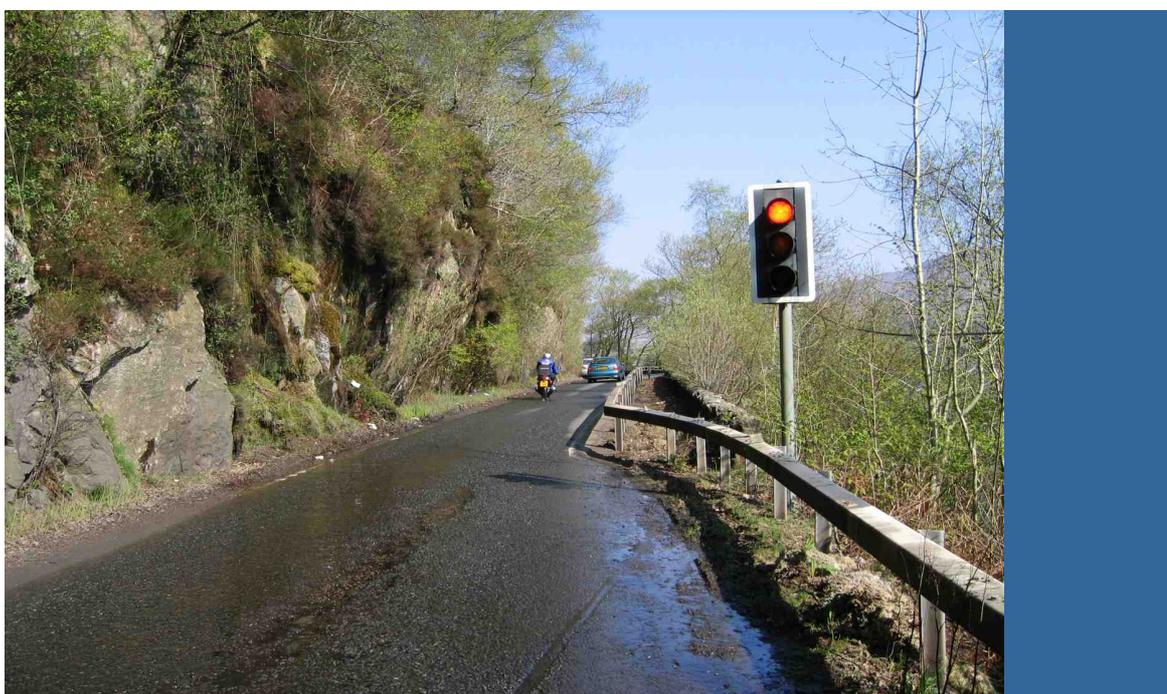
Transport Scotland

---

# A82 Pulpit Rock Improvement

## A82 Full Road Closure – Assessment Report

August 2010



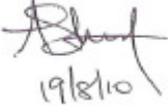
Prepared for:

## Revision Schedule

**S100785/SW/REP/H/020**

**A82 Full Road Closure – Assessment Report**

August 2010

Rev	Date	Details	Prepared by	Reviewed by	Approved by
	19/08/10	Final	Andrea Shirley  19/8/10	Ryan Hutchison  19/8/10	Ryan Hutchison  19/8/10

This document has been prepared in accordance with the scope of Scott Wilson's appointment with its client and is subject to the terms of that appointment. It is addressed to and for the sole and confidential use and reliance of Scott Wilson's client. Scott Wilson accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided. No person other than the client may copy (in whole or in part) use or rely on the contents of this document, without the prior written permission of the Company Secretary of Scott Wilson Ltd. Any advice, opinions, or recommendations within this document should be read and relied upon only in the context of the document as a whole. The contents of this document do not provide legal or tax advice or opinion.

© Scott Wilson Ltd 2008

**Scott Wilson**  
Citypoint 2  
25 Tyndrum Street  
Glasgow  
G4 0JY  
UK

Tel 0141 354 5600  
Fax 0141 354 5601

[www.scottwilson.com](http://www.scottwilson.com)

## Table of Contents

<b>1</b>	<b>General .....</b>	<b>1</b>
1.1	Purpose of Report.....	1
1.2	Background.....	1
1.3	Proposed Closure and Diversion Route .....	1
<b>2</b>	<b>Impact of Road Closure – Existing conditions and affected facilities and users .....</b>	<b>3</b>
2.1	Communities and local traffic .....	3
2.2	Long distance traffic including public transport.....	6
2.3	Pedestrians, cyclists and equestrians .....	6
2.4	Emergency Services .....	8
<b>3</b>	<b>Potential for other road closures .....</b>	<b>11</b>
3.1	Landslide Hazards .....	11
3.2	Probability .....	14
<b>4</b>	<b>Impact Assessment and Mitigation .....</b>	<b>15</b>
4.1	Traffic.....	15
4.2	Pedestrians, cyclists and equestrians .....	16
4.3	Emergency Services .....	17
4.4	Combination of road closures .....	20
<b>5</b>	<b>Conclusion .....</b>	<b>22</b>
<b>6</b>	<b>References .....</b>	<b>23</b>

### Appendix A

Figure 1: Scheme Location Plan

Figure 2: Road Network Plan

Figure 3: Emergency Services Divisional Areas

Figure 4: Hospitals, Air Ambulance and Ferry Terminal Location Plan

Figure 5: Landslide Sites

Figure 6: Alternative Diversion Route – A82 & A83 (Tarbet to A815 Junction) Closure

Figure 7: Alternative Diversion Route – A82 & A83 (A815 Junction to Inveraray) Closure

Emergency Services meeting notes

# 1 General

## 1.1 Purpose of Report

The purpose of this report is to assess the impact of the full road closure of the A82 at Pulpit Rock during the construction of the A82 Pulpit Rock Improvements. It considers the wider impacts of the potential for other road closures and assesses the impacts on local facilities and users of the proposed road closure. In addition, it also considers the impacts on emergency service providers in the area and contingency plans for ensuring the impact service provision is minimal.

## 1.2 Background

The A82 trunk road between Glasgow and Fort William is the principal road link to the west of Scotland. The tortuous geometry along the section of the A82 between Tarbet and Crianlarich is well recognised and results in considerable delays to road users, in particular, when a high number of tourists are attracted to the route during the summer months and when Heavy Goods Vehicles are required to negotiate the tight horizontal bends and narrow carriageway width.

Following a Route Action Plan Study of the A82 between Tarbet and Fort William, the Scottish Ministers announced, in 2006, the commencement of design work to remove the traffic lights at Pulpit Rock. This improvement will remove the notorious bottleneck at Loch Lomond and the traffic lights, which have been there for more than 20 years.

The scheme location plan is shown in Figure 1 of Appendix A.

## 1.3 Proposed Closure and Diversion Route

Traffic delays for the Scheme construction will be associated with the realignment of the existing road. In general, traffic will be controlled by an extension of the one-way system already in place over this section of the A82. It is expected that temporary traffic lights and a one-way working system will be installed for the full length of the re-alignment works including the construction of the off-line parts of the new alignment.

Full closure of A82 at Pulpit Rock will be required during the Scheme construction period to allow the tie-in of the new viaduct to the existing road and the rock cut.

A likely construction period of between 10 to 12 months for the Scheme construction is expected with temporary traffic management measures in place for the full period and full road closure for a period of up to 14 weeks.

During the temporary full road closure period, it is proposed that the primary diversion route would be from Tarbet to Tyndrum/Crianlarich via Inveraray (northbound traffic on the A83/A819/A85) and from Tyndrum/Crianlarich to Tarbet via Inveraray (southbound traffic on the A85/A819/A83).

Refer to Figure 2 of Appendix A for a road network plan and details of the proposed diversion route.

## 2 Impact of Road Closure – Existing conditions and affected facilities and users

### 2.1 Communities and local traffic

#### **A82 Tarbet to Crianlarich**

Those likely to be affected by the proposed A82 road closure are local communities, including businesses and school children, and local bus services which are highlighted below:

#### Local communities/ businesses

- Tarbet (Tarbet Hotel, Tarbet Tea Room, Residential properties and B&B/Guest houses)
- Inverhoulin (The Weaver Coffee Shop - Weavers Cottage, Bonny Braes Guest House)
- Inveruglas (Loch Lomond Holiday Park, Inveruglas Cottage accommodation, holiday homes)
- Sloy Power Station
- Ardvorlich (Ardvorlich House B&B, Ardvorlich cottage )
- Stuckendroin (Residential properties, Stukendroin Farm)
- Ardlui (Residential properties, Ardlui Hotel, self-catering Lodges, Holiday Home Park and a Marina , Ardlui shop, Loch Lomond Outdoor Education Centre (formerly McGregor's Landing)
- Inverarnan (The Drovers Inn, bar and restaurant and the Drovers Lodge, Beinglas Farm Campsite, Clisham Cottage B&B and one static caravan for let)

In addition, in March 2010, the former McGregor's Landing property in Ardlui re-opened as the Loch Lomond Outdoor Education Centre. The facility has been let on a long-term basis to West Dunbartonshire Council and offers residential outdoor provision for West Dunbartonshire pupils as well as other local authorities and organisations wishing to hire the use of the Centre. The Centre will operate on a year round basis including weekends and school holidays.

#### Schools

There are no schools between Tarbet and Crianlarich and the school catchment for this area falls under two local councils. Communities on the A82 north of Inverarnan fall under Stirling Council and south of Inverarnan fall under Argyll and Bute Council. During the full road closure, there could be potential disruption to pupils and staff who use this route.

Pupils travelling north to Crianlarich for primary school and to Callander for secondary school are unlikely to be affected by the full road closure as it will be to the south of the catchment area. Pupils travelling south to Arrochar for primary school and to Helensburgh for secondary school, if travelling from north of the works, could have major disruption. At this stage it is unknown if there are any children travelling to the school who currently pass through the A82 at Pulpit Rock.

#### Local bus services

There are two formal bus stops north of the Scheme between Pulpit Rock and Crianlarich at Ardlui and Inverarnan. There is one formal bus stop south of the Scheme between Pulpit Rock and Tarbet at Sloy Power Station.

Scottish Citylink operates a passenger boarding policy on the A82 between Tarbet and Crianlarich where scheduled national services (service no's 914, 915 and 916) will pick-up/set down passengers at any safe established unmarked stopping places.

#### **Tarbet to Tyndrum /Crianlarich via the proposed diversion route - A83/A819/A85**

The proposed diversion route along the A83, A819 and A85 traverses a predominant rural area with few settlements. The key community and business facilities and users are described below:

#### Arrochar

The village of Arrochar is connected to Tarbet by the A83. There are a number of community and business facilities accessed from the A83; (Tarbet & Arrochar Railway station, Arrochar Primary School, Arrochar Hotel, Arrochar Mountain Rescue Team, Loch Long Hotel, The Village Inn, Rest and Be Thankful restaurant, Royal Bank of Scotland, Glen Loin Caravan site, Ben Lomond Café & Gift Shop, B + B/Guest houses and Argyll & Sutherland Highlanders Cadet Training Centre).

#### Inveraray

The proposed diversion route would only access the east end of the village where the A83 connects with the A819. The redistributed traffic would not be required to drive through Inveraray (on the A83). There are several community facilities accessed from the A819; (Inveraray Youth Hostel, Inveraray Community Fire Station, Inveraray Police Station, Inveraray tennis court, Inveraray Shinty Club Clubhouse and parking, Inveraray Shinty Club pitch and Inveraray Woollen Mill car park)

### Dalmally

The village of Dalmally is located approximately one mile east of the A819/A85 junction. Part of the village is now by-passed by the A85. There are a number of community, business, recreation and tourism facilities located in Dalmally – all of which require access to/from the A85; (Dalmally Golf Course, Dalmally Hotel, Dalmally Primary School, Dalmally Police Station, Dalmally Health Centre & Pharmacy, Dalmally Railway Station, Glenorchy Lodge Hotel, Dalmally Village Hall, Dalmally Fire Station and “Highland Critters” Gift Shop)

### Tyndrum

Tyndrum is the smallest of the villages located along the proposed temporary diversion route. There is no primary school in the village – children from the village and surrounding area attend Crianlarich primary school. Tyndrum forms part of one of the major junctions in the Highlands – located c.500 metres south of the junction of the A82 (Glencoe/Fort William) and the A85 (Oban). The village earns much of its living by providing goods, services and accommodation to passing tourists and day visitors, mostly motorists heading up or down the busy A85 and A82 trunk roads. Businesses include; (The Royal Hotel and the Ben Doran Hotel, Tyndrum Lodge Hotel, The “By the Way” Youth Hostel & Camping site, Brodie’s Mini-Market, The Green Welly Shop and Café, The Real Food café, Two Railway Stations - Tyndrum Lower (Glasgow to Oban) and Upper (Glasgow to Fort William and Mallaig), Tyndrum Tourist Information Centre and Pine Trees Leisure Park camping & caravan site).

### Between Tarbet and Tyndrum (via Inveraray)

In addition to the above village locations, there are also other key community and business facilities accessed from, and located in proximity to, the temporary diversion route. There are several community and business facilities between Tarbet and Tyndrum including; (Ardgartan Visitor Centre/Camping & Caravan Site/Ardgartan Cycle trail (south of A83), Cairndow – Ardkinglas Woodland Garden; the Stagecoach Inn; Village Hall and Kilmorich Church (on minor road only accessible from the A83), Fyne Ales Achadunan micro-brewery and shop (A83), Loch Fyne Oyster Bar, Restaurant, Farm & Tree Shop (A83), Portsonachan Hotel & Country Club (on B840 accessed from A819), Loch Awe (fishing, sailing, canoeing, windsurfing, jet skiing activities – along B840 accessed from A819)).

## 2.2 Long distance traffic including public transport

The A82 links Glasgow to the north of Scotland therefore the closure of this road between Tarbet and Crianlarich will severely disrupt long distance traffic, which would be diverted via the proposed diversion route.

Those users likely to be affected by the proposed road closure include:

- Businesses and suppliers
- Public Transport - Scottish Citylink has scheduled national bus services (service no's 914, 915 and 916) which use the A82 daily between Glasgow and the north of Scotland
- Tourists

## 2.3 Pedestrians, cyclists and equestrians

### **Pedestrians/Walking**

There is no dedicated footpath provision for pedestrians at Pulpit Rock. Indeed the nearest sections of road-side footpath provision are at Ardlui (c.2km north of Pulpit Rock) and at Sloy Power Station (c.4.8km south of Pulpit Rock). Between these two locations, pedestrians are obliged to use the A82 verges for road-side walking with no physical separation from vehicular traffic.

The June 2010 adopted Loch Lomond & the Trossachs National Park Authority (LLTNPA) Core Paths Plan shows that there are no 'draft core paths' or 'other paths or routes proposed for the land covered by the A82 Pulpit Rock Improvement Scheme. The nearest adopted core path north of Pulpit Rock runs from Inverarnan before connecting to the West Highland Way over the River Falloch. The nearest adopted core path south of Pulpit Rock commences at Sloy Power Station, heading south along the A82 before heading west of the West Highland railway line towards Coiregrogain.

There are two sections of long distance walking routes within the diversion route:

- Dalmally to Tyndrum which follows the line of the A85 for most of the section with two sections of off-road walking along the old military road adjacent to the A85
- The West Highland Way which crosses over the A82 at the north end of Tyndrum village linking the section between Crianlarich and the Bridge of Orchy

The Argyll and Bute Council Core Paths Plan (Consultative Draft) indicates that there are a number of proposed core paths and aspiration either running along, in parallel to and crossing over both the A819 and the A85.

The Argyll Forest is accessed from the A83 and Glen Orchy and Glen Lochy Forests are accessed from the A85 all of which are managed by Forestry Commission Scotland and provide walking and other recreational opportunities.

### **Cycling**

The Scheme corridor is currently “cycleable” along its duration but there is no specific provision for cyclists e.g. on-road cycle lanes or adjacent off-road cycle paths. Cyclists therefore have to share the single carriageway with motorised vehicular traffic. The only cycling provision is the “Cyclists Push Button” facility connected to both sets of traffic lights at Pulpit Rock. Along the A82 between Tarbet (where the West Loch Lomond Cycle Path from Balloch ends) and Crianlarich, there is no off-road cycleway or “quieter” on-road cycling alternatives to take cyclists off the A82.

The proposed A83/A819/A85 diversion route is currently “cycleable” along its duration but there is no specific provision for cyclists who therefore have to share the “A class” single carriageway road with motorised vehicular traffic

The evolving National Cycle Network (NCN) of on-road and traffic-free cycle routes does not currently include the A82 between Tarbet and Crianlarich or the A83/A819/A85 between Tarbet and Tyndrum. However, the LLTNPA National Park Plan (2007-2012) identifies Tarbet to Crianlarich as a “Potential Strategic Link” which would fill a key “gap” in the National Park-wide network of access provision.

The nearest section of the NCN to the Scheme is the “Lochs and Glens North” route between Glasgow and Inverness and which passes through the Loch Lomond & the Trossachs National Park on the east side of the National Park between Balloch and Killin. In addition, a Regional Cycle Route runs from Balloch to Tarbet.

The nearest section of the NCN to the proposed diversion route is the Oban to Taynuilt section of the NCN between Oban and Campbeltown. There are no designated Regional Cycle Routes along the A83, A819 or A85.

### **Equestrians**

There are no riding centres within, or immediately adjacent to the proposed A82 Pulpit Rock Scheme location. The nearest British Horse Society (BHS) approved riding centre establishments are the Colgrain Equestrian Centre at Cardross and the Lomondside Stud & Equestrian Centre at Drymen. In addition there is a riding centre at Alexandria (Duncryne Equitation & Trekking Centre).

There are also no off-road bridleways within, or adjacent to the Pulpit Rock area, whilst the absence of any minor roads surrounding the A82 between Tarbet and Crianlarich negates the opportunity for “safe and quiet” on-road riding alternatives. The British Horse Society’s Scottish Development Officer stated in the Society’s EIA scoping consultation response that “*except in extreme circumstances horse riders and carriage drivers will rarely use this road*” (the A82).

The only BHS approved riding centre within, or immediately adjacent to, the proposed diversion route is at Invereray. However, this centre is located south of Invereray and would not be affected by the re-distribution of traffic due to the A82 road closures.

## **2.4 Emergency Services**

Meetings have been held with Strathclyde Police, Scottish Ambulance Service and Strathclyde Fire and Rescue Service, to determine their current operations, the potential impact of the road closure and their view on the proposed diversion route. Minutes of the meetings are presented in Appendix A.

The current emergency service areas for the Scottish Ambulance Service, Scottish Police Force and the Scottish Fire and Rescue Service are shown in Figure 3 of Appendix A.

### **Police**

Strathclyde Police maintain the policing of the area surrounding and including the A82 at Pulpit Rock with service covering Tarbet to north of Ardlui (approximately at Inverarnan). North of Ardlui (approximately at Inverarnan) to Crianlarich is serviced by Central Scotland Police.

The nearest police station south of the Scheme is located at Garelochhead (c.30km south-west of Pulpit Rock) which is a 24 hour station serving a wide catchment area including Tarbet, Inveruglas and Ardlui. The nearest police station north of the Scheme is located at Crianlarich (c.13km north of Pulpit Rock) and serves a wide catchment area which includes from Ardlui to Crianlarich. Crianlarich Police station is under the control of Central Scotland Police.

In addition, an agreement is currently maintained between Strathclyde Police and Western Ferries (Clyde) Ltd for the Dunoon to Gourock vehicle ferry, so that a ferry can be mobilised quickly and can be available when required.

In response to the proposed road closure, Strathclyde Police agreed that it is an important factor of the A82 improvements to re-instate 2 way flow at Pulpit Rock, but discourage speeding or overtaking. It was stated that it is essential that the problem, associated with negotiating difficult geometry on the A82, should not be removed from Pulpit Rock only to become transferred to the next bend. Strathclyde Police advised that their intention would be to utilise the proposed diversion route A83-A819-A85 during full road closures.

The potential impact of the A82 road closure on the Police is discussed in section 4.3 of this report.

#### **Fire and Rescue Service**

Strathclyde Fire and Rescue Service operate the fire and rescue service in the area of the A82 at Pulpit Rock with service covering Tarbet to north of Ardlui (approximately at Inverarnan). North of Ardlui (approximately at Inverarnan) to Crianlarich is serviced by Central Scotland Fire and Rescue Service.

The nearest fire station south of the Scheme is located at Arrochar (c.16km south-west of Pulpit Rock) which is a retained station with part time firefighters. The nearest full time fire station south of the Scheme is located at Helensburgh (c.39km south-west of Pulpit Rock). The nearest fire station north of the Scheme is located at Crianlarich (c.13km north of Pulpit Rock) which is a retained station. Crianlarich fire station is under the control of Central Scotland Fire and Rescue Service. The nearest full time fire station north of the Scheme is located at Oban (c.80km north-west of Pulpit Rock).

In response to the proposed road closure, Strathclyde Fire and Rescue Service have advised that they have no objections to the works but the preference would be for the road to remain open during construction. Strathclyde Fire and Rescue Service advised that their intention would be to utilise the proposed diversion route A83-A819-A85 during full road closures.

The potential impact of the A82 road closure on the Fire and Rescue Service is discussed in section 4.3 of this report.

### **Scottish Ambulance Service**

The Scottish Ambulance Service South West Division currently service the A82 at Pulpit Rock with coverage from Tarbet to north of Ardlui (approximately at Inverarnan). North of Ardlui (approximately at Inverarnan) to Crianlarich is serviced by East Central Division.

The nearest hospital south of the proposed Pulpit Rock Scheme is the Vale of Leven District General Hospital in Alexandria (c.40km south of Pulpit Rock) which includes a Minor Injuries Unit but not a full-scale Accident and Emergency Department. The nearest full Accident and Emergency Department is the Royal Alexandra Hospital in Paisley (c.65km south of Pulpit Rock).

The nearest hospital north of the Pulpit Rock Scheme is The Lorn & Islands Hospital in Oban (c.81km north-west of Pulpit Rock) which has a full Accident & Emergency Department. Stirling Royal Infirmary (c.86km east of Pulpit Rock) has a full Accident and Emergency Department and is currently an alternative to The Lorn & Islands Hospital. However, it should be noted that Stirling Royal Infirmary is due for building works in 2012-2013 with Accident and Emergency facilities being transferred to a new hospital.

All emergency calls are answered by a regional Emergency Medical Dispatch Centre that is responsible for co-ordinating the dispatch of ambulances including the Air Ambulance Service, which operates a helicopter based in Glasgow and a fixed wing aircraft based at Glasgow Airport.

In addition, an agreement is currently maintained between Scottish Ambulance Service and Western Ferries (Clyde) Ltd for the Dunoon to Gourock vehicle ferry, so that a ferry can be mobilised quickly and can be available when required.

Scottish Ambulance Service advised that their intention would be to utilise the proposed diversion route A83-A819-A85 during full road closures.

The potential impact of the A82 road closure on the Scottish Ambulance Service is discussed in section 4.3 of this report.

The locations of hospitals, Air Ambulance and ferry terminals are shown in Figure 4 of Appendix A.

## 3 Potential for other road closures

### 3.1 Landslide Hazards

The possibility of landslides on the A82 and A83 is high and there have been major landslides on these routes over the last 6 years, namely the A83 at Glen Kinglas and Glen Croe, which have resulted in road closures for a number of days.

Table 3.1 summarises some of the information from Transport Scotland's Scottish Road Network Landslides Implementation Study (October 2008), including landslide events, which looked at the risks to the trunk road network from potential landslide hazards. It should be noted that since the study was completed, a landslide occurred on the A83 Rest and Be Thankful in September 2009 following a prolonged period of heavy rainfall. In this instance the road was closed for two days.

In the study, the landslide hazards, consisting of a combination of debris flow, risk to road network and risk to road users, were assessed and then inspected on site. The data was then used to create a hazard ranking to determine how future management of the hazards should be taken forward. An explanation of the ranking scale is as follows:

- **Low Hazard**

The 'do-nothing' approach is intended to be applied to sites of low hazard ranking for which substantial expenditure is inappropriate. For such sites, whilst it is not possible to eliminate the chance of a debris flow event affecting such areas, it is seen as unlikely, largely unforeseeable and/or the exposure is less serious than at other locations where resources might be better expended.

- **Medium Hazard**

The 'do-minimum' option, with the potential to mitigate the impacts of debris flows to some extent, involves simply ensuring that forward plans are in place to ensure that diversion routes are available and may be exploited in an expedient and well-organised manner. Diversion route maps and contingency plans are currently held for many areas of the trunk road network. Whilst it is not possible to eliminate the chance of a debris flow event affecting such areas any occurrence is seen as unlikely and largely unforeseeable. Any residual exposure cannot readily be quantified and is unlikely to justify the commitment of additional resources which might be better expended at other locations.

- **High Hazard**

Site-specific action is contemplated. Such action is essentially exposure reduction by managing the access to the network and/or actions of road-users at times when events occur or precursor rainfall has indicated a high likelihood of debris flows occurring.

- **Very High Hazard**

Involves more major works in order to achieve hazard reduction (as opposed to exposure reduction). The approaches involved here entail physical measures such as the protection of the road, reduction of the opportunity for a debris flow to occur or realignment of the road away from the area of high hazard. Such options need to be considered in the context of the policy governing Transport Scotland's overall trunk road maintenance and construction programme. In general, these are likely to be of high cost, necessitating their restriction to the very few areas of highest hazard ranking.

The distinction that was made between Low and Medium Hazard Ranking sites has been superseded by the development of Traffic Scotland's Emergency Standard Diversion Routes. This means that the actions planned for Medium Hazard Ranking sites are in the process of being implemented for all sites, including Low Hazard Ranking sites; the 'do nothing' scenario thus becoming redundant.

According to the study the landslides indicated in Table 3.1, in proximity to the proposed A82 road closure, were determined to be of High or Very High Hazard Ranking. The reference numbers shown in Table 3.1 refer to Figure 5 of Appendix A.

Table 3.1 – Landslide Hazard Data

Route	Locality	Previous Landslide Event	Potential Length of Landslide (m)	Diversions Implications	Figure 5 Ref No.
A83	West of Succoth to Arrochar	unknown	1,760	Significant	1
A83	Ardgarten to Rest and Be Thankful – Glen Croe	January 2003 November 2003 January 2004 October 2007 April 2008 September 2009	6,310	Significant	2
A83	Glen Kinglas	August 2004	4,360	Significant	3
A83	Cairndow	August 2004	1,620	Significant	4
A83	Clachan to Strone Point	unknown	9,170	Significant	5
A83	East of Loch Shira	unknown	1,260	Significant	6
A82	South of Tarbet	unknown	4,610	Significant	7
A82	Inverbeg	unknown	3,300	Significant	8
A82	North and South of Luss	unknown	11,100	Significant	9
A82	North Loch Lomond	unknown	13,500	Significant	10

With reference to Table 3.1, the definition for the diversion implications are:

*Limited* - possible diversion was short and effective (e.g. by other trunk and/or 'A'-roads)

*More Significant* - diversion was long, by difficult means (e.g. 'C', 'D' and/or unclassified road) or does not exist (in practical terms).

*Significant* - represents the middle ground between these above two extremes.

Transport Scotland have advised that strengthening works are being carried out and a landslide warning system should be in place by 2012 which will assess and manage the hazards posed by debris flows. The warning system will rank the hazards on the network in terms of their relative potential effects on road users.

It is considered that although these works will not totally eliminate the potential for landslides, the consequences of a landslide event should be minimised.

## 3.2 Probability

Transport Scotland's Scottish Road Network Landslides Implementation Study concludes that the occurrence of landslides is normally in the periods July to August and November to January (with occasional events in October) and likely to be during or after periods of very heavy rainfall, especially if the ground is already saturated.

The proposed works on the A82 are currently scheduled to take place between November and February. This results in an overlapping period during which the probability of landslides, potentially closing the A83 at the same time as the A82 full road closure, is increased.

Despite this overlap, it is still considered that the likelihood of a significant landslide on the A83 occurring during the A82 full road closure is relatively low. The likelihood should be further minimised by ongoing works being undertaken on the A83 by Transport Scotland.

It is also worth noting that similar hazards also exist on the A82 between Taret and Crianlarich with the existing potential for a double road closure. Clearly in relation to the Pulpit Rock road closure this is however not an issue.

## 4 Impact Assessment and Mitigation

### 4.1 Traffic

There will be a significant impact on traffic during the A82 road closures. Both local and national traffic will be required to divert using the proposed diversion route as described in section 1.4.

Table 4.1 provides an indication of the average 24-hour 2-way traffic flows during the winter months, when the full road closure is scheduled, and the increase in traffic on the proposed diversion route during the A82 full road closure. Also, as an indication of summer traffic flows, the average 24 hour 2-way traffic flows have also been shown.

Table 4.1 – Traffic Flow Data

Route	Location	Average No. of vehicles (24hour/2-way flows)	Assumed Average No of vehicles during A82 closure (24hour/2-way flows)	Average No. of vehicles (24hour/2-way flows)
		Nov to Feb 2009		August 2009
A82	Tarbet to Crianlarich	2,500	-	5,450
A83	Tarbet to Inveraray	3,200	5,700	5,800

It can be seen that traffic flows are much higher in the summer months. As a consequence, it is proposed that the full road closure will occur during the quieter winter season between November and February.

As a result, the traffic flows that would be experienced on the proposed diversion route during the road closure should be comparable to that currently experienced during the peak summer months. In any case the traffic flows will be well within the capacity of the existing roads.

Nevertheless, various mitigation measures are proposed to minimise the impact of the road closure. The following mitigation measures are proposed during the temporary severance of A82 “through-access” at Pulpit Rock during the full closure period:

- Widespread publicity including advance warnings, local press notices, website postings, radio and television bulletins.

- Provision of advance signage information (e.g. signs at Tarbet and Crianlarich) warning users of temporary suspension of “through access” on the A82 at Pulpit Rock.
- Provision of advance signage information of the primary diversionary route from Tarbet to Crianlarich via Inveraray (and vice-versa) - using the A83/A819/A85 (and vice-versa). This mitigation should include signs at Tarbet and Crianlarich, radio station traffic bulletin updates and information displays on Traffic Scotland signs in the wider central Scotland road network.
- Early consultations between Transport Scotland and affected businesses and community facilities to restrict impacts of temporary severance.
- Scheduled Bus Services - Discussions will be held between Transport Scotland and Scottish Citylink to identify options for temporary amendments to affected scheduled services (914/915/916). Options will include revised timetable for these services during the full road closure period and temporary diversion of the affected services between between Tarbet and Crianlarich via Inveraray (and vice-versa) - using the A83/A819/A85 (and vice-versa).

## 4.2 Pedestrians, cyclists and equestrians

There will be temporary severance of A82 “through-access” at Pulpit Rock during the full closure period. The impacts on the pedestrian, cyclist and equestrian users along the A82 and the proposed diversionary route have the potential to be significant. Even with the implementation of best practice traffic management control mitigation measures, residual impacts during the temporary A82 Pulpit Rock road closure period e.g. longer local journey travel times and distances are inevitable.

As for traffic users mitigation measures during the closure period should include provision of advance signage information of the primary diversionary route from Tarbet to Crianlarich via Inveraray (and vice-versa) - using the A83/A819/A85 (and vice-versa). This mitigation should include signs at Tarbet and Crianlarich, radio station traffic bulletin updates and information displays on Traffic Scotland signs in the wider central Scotland road network.

## 4.3 Emergency Services

### **Police**

The potential impact of increased response times for the Police is the main issue arising from the A82 road closure.

In order to address this issue, a temporary new operating protocol between Strathclyde Police and Central Scotland Police would be put in place during the road construction period. It would be proposed that Strathclyde Police would cover the A82 from Tarbet to Pulpit Rock and Central Scotland Police would cover the A82 from Pulpit Rock north to Crianlarich. This ought to ensure that the police response times will be unaffected by the works.

In addition, Strathclyde Police will inform the Argyll and Bute Emergency Planning Unit in advance of the road closure to allow for contingencies to be put in place.

### **Fire and Rescue Service**

The impact of increased response time for the Fire and Rescue Service is the main issue arising from the A82 road closure. Although access for the Fire and Rescue Service to service the general public is the main priority, any incidents on the site is also an issue which needs to be addressed.

Mitigation measures would be similar to those for the Police by creating a temporary operating protocol between Strathclyde Fire and Rescue Service and Central Scotland Fire and Rescue Service to overcome the potential problems associated with response delays during the road closure period. It is proposed that Strathclyde Fire and Rescue Service cover the A82 from Tarbet to Pulpit Rock and Central Scotland Fire and Rescue Service cover the A82 from Pulpit Rock north to Crianlarich.

Strathclyde Fire and Rescue Service have specified a notification period, minimum of 4 weeks, for all closures to allow service boundaries to be changed and to ensure that the response system works.

### **Scottish Ambulance Service**

The A82 road closure will increase the potential for delays in reaching incidents and lengthy diversions to hospital for some patients at best.

Disruption for the Scottish Ambulance Services would impact 'Category A' patients (life threatening), 'Category B' patients (not life threatening) and the ongoing treatment of out-

patients such as dialysis and cancer patients. Due to the nature of their treatment some patients can only be treated in specialist units at hospitals in Glasgow.

Data received from the Scottish Ambulance Service details the number of ambulances, in 2009, dispatched from Oban and Inveraray responding to Category A and B patients in the region, and patient transport information on the A82. The data also identified the response to traffic accidents of Category A and B patients in 2008/2009 between Tarbet and Crianlarich

From Oban a total of 1093 ambulances were dispatched with 930 received by hospitals to the north of the proposed works, 118 received by hospitals to the south of the proposed works and 45 where the receiving hospital was unspecified. From Inveraray a total of 149 ambulances were dispatched with 82 received by hospitals to the north of the proposed works, 63 received by hospitals to the south of the proposed works and 4 where the receiving hospital was unspecified or was not required. The information on the dispatches does not however include the location of the accident, and we are unable to fully determine the route the ambulances have taken to the receiving hospitals.

Table 4.2 illustrates the patient transport which utilised the A82 via Tarbet to Crianlarich in 2009. Table 4.3 illustrates the response to A82 traffic accidents between Tarbet and Crianlarich in 2008/2009 including the receiving hospitals and whether the incident was north or south of the proposed A82 road works.

Table 4.2 – Scottish Ambulance Service A82 patient transport information in 2009.

Total No. of patients transported by A82	Patient Type	Patient Type No's
690	Renal, Oncology & Admission	137
	Scans, Day Surgery	53
	Outpatient	482
	Not classified	18

From the data in Table 4.2 we can determine that there may be a significant number of patients that will require transportation for treatment during the road closure period. While some of these patients may potentially be temporarily transferred to Oban or another hospital for treatment, others will still require to use the more lengthy route to Glasgow via the proposed diversion.

Table 4.3 – Scottish Ambulance Service response to A82 traffic accidents in 2008/2009

Patient Type	Total no. of incidents	Incidents by receiving Hospital		Air Ambulance Used	North of Works	South of Works
Category A life threatening	21	11	Royal Alexandra Hospital, Paisley	-	2	9
		2	Southern General Hospital, Glasgow	2	1	1
		1	Lorn & Islands District General Hospital, Oban	-	1	-
		2	Vale of Leven District General Hospital, Alexandria	-	-	2
		6	Treated at the scene, hospital unknown	-	6	-
Category B not life threatening	5	3	Royal Alexandra Hospital, Paisley	-	-	3
		1	Vale of Leven District General Hospital, Alexandria	-	-	1
		1	Treated at the scene, hospital unknown	-	-	1

From the data in Table 4.3 we can determine that the majority of traffic accidents occurred to the south of the proposed works and as such the road closure should not affect the response time to get the patient to the nearest hospital. However, a maximum of nine accidents to the north of the works were taken to hospitals to the south. On the assumption of an even spread of accidents throughout the year, this means that typically up to three accidents will be adversely affected.

In response to the impact, mitigation measures will be put in place such that the Scottish Ambulance Service and their Emergency Medical Dispatch Centres will be informed of the A82 road closure in advance to allow for the quickest ambulance response to an incident from any surrounding service area. Patients currently transported via the A82 to Glasgow will be temporarily transferred where possible to Oban or alternative hospital for treatment. Contingency plans, using air ambulances, ferries and alternate routes will be put in place to ensure any accident during the full road closure period can be covered to an acceptable level.

## 4.4 Combination of road closures

Whilst the A82 road closure at Pulpit Rock will cause disruption and delays, if it is combined with the unforeseen closure of the A83, the impact is much more significant. Whether it is due to a landslide or a traffic accident, a double road closure will mean significant disruption to local and national traffic, and emergency services. As a consequence, it is proposed to set in place a number of contingency plans in the unlikely event of such an occurrence.

### Road Users

For users of the A82 and/or A83, the impact would be significant in relation to increased journey times and disruption, however there is limited advance works that can be done to minimise the risk. In the event of a concurrent full closure of the A82 between Tarbet and Crianlarich and the A83 between Tarbet and Cairndow or Cairndow and Inveraray, the resultant diversion routes are shown on Figure 6 and 7 respectively in Appendix A. It can be seen that although the diversion routes would be significantly longer than existing journeys, alternative access routes are available.

As a minimum, the following mitigation measures are proposed in the event of the unforeseen closure of the A83 during the full A82 closure period at Pulpit Rock although further measures will continue to be discussed and developed with all stakeholders:

- Provision of advance signage information (e.g. signs at Tarbet and Crianlarich) warning users of temporary suspension of “through access” on the A82 at Pulpit Rock and the A83 road closure; and
- Provision of advance signage information of the alternative diversion routes shown on Figures 6 and 7 in Appendix A. This mitigation should include signs at strategic locations, radio and television station traffic bulletin updates and information displays on Traffic Scotland signs in the wider central Scotland road network.

Although re-opening the A82 or A83 as quickly as possible would be a priority, the course of action that would require to be taken would be largely dependent on the timing and circumstances of the closure events. The most appropriate action could therefore only be decided once the events occurred however contingency plans will continue to be discussed between Transport Scotland and other stakeholders, including the Transport Scotland Resilience Group.

### **Emergency Services**

With regard to the Emergency Services, the following mitigation measures are proposed:

#### **Police and Fire and Rescue Service**

Contingency plans currently adopted by the police assume that either the A82 or the A83 will remain open at all times and Strathclyde Fire and Rescue Service have raised concerns about the A83 closing due to a landslide during the A82 full road closure. Although Transport Scotland advised, during consultation meetings, that strengthening works are being carried out, both Strathclyde Police and Strathclyde Fire and Rescue Service noted that the consequences of a landslide event would be minimised but not removed entirely. They noted that medical services would likely be the main issue and mitigation measures must be put in place. These would be similar to those outlined in section 4.3 but would be more extensive and with different protocols.

#### **Scottish Ambulance Service**

The main issues for the Scottish Ambulance Service would be achieving acceptable response times in the event of an accident and the potentially lengthy diversions that would be required for hospital patients.

In order to address the issue of response times, contingency plan operating protocols will be developed. In addition, it is anticipated that an air ambulance would be put on 24 hour standby

For hospital patients, the ambulance service has advised that, in the event of a double road closure, alternative arrangements could be implemented for out-patients such as:

- Accommodation, e.g. a hospital apartment or hotel, can be given to dialysis out-patients who must travel to Glasgow multiple times a week. However, the accommodation can only be provided at short notice therefore it cannot be pre-planned and the maximum period that patients can be accommodated is a few weeks; and
- Patients who currently are transported south to Glasgow could be temporarily transferred to Oban Lorn and Islands District Hospital or to another alternative hospital for out-patient treatment.

In general, alternative arrangements will largely be dependent on individual circumstances however contingency plans will continue to be developed and agreed with the Scottish Ambulance Service.

## 5 Conclusion

This report has considered the potential impacts of the proposed full closure of the A82 at Pulpit Rock. It has identified those that will be affected and has considered the potential impact on each, with particular emphasis on local road users and the emergency services. It outlines a variety of proposed mitigation measures and how these will assist in minimising the impacts. Lastly, it also assesses the potential for, and the repercussions of, a double road closure involving the A82 and A83.

### **Road Users**

The proposed road closure will result in severe disruption and delay to local and national road users. Reasonable alternative routes are however available. In order to minimise the impact on road users and on the diversion route itself, it is proposed to implement the road closure between November and February when traffic volumes are at their lowest. At the same time, the closures will be extensively publicised and signed to allow road users to plan their affected journeys in advance and hence minimise their impact.

### **Emergency Services**

The proposed road closure potentially has a major impact on the level of service provided by the police, the fire and rescue service and the ambulance service. Meetings have been held with each to understand their operations and to discuss potential impacts. As a result, it is believed that advance plans can be put in place to ensure that services and response times are not significantly impacted. Consultations and close working with the emergency services will continue during the preparation of construction proposals and during construction to ensure that negative impacts are kept to a minimum.

### **Combined Road Closures**

The spectre of a concurrent road closure on the A82 and the A83 has been investigated. Whilst the impact would be severe, it is considered that there is a low likelihood of this occurring and this will be reduced further as a result of current Transport Scotland works on the A83. Nevertheless, contingency plans will be developed in order to manage the impacts.

## 6 References

### Landslide Data

Scottish Road Network Landslides Study: Implementation (October 2008) Transport Scotland

<http://www.scotlandtranserv.co.uk/news.html>

### School information

<http://www.ltscotland.org.uk/scottishschoolsonline/>

### Scheduled bus services and bus stops on A82

[www.citylink.co.uk](http://www.citylink.co.uk)

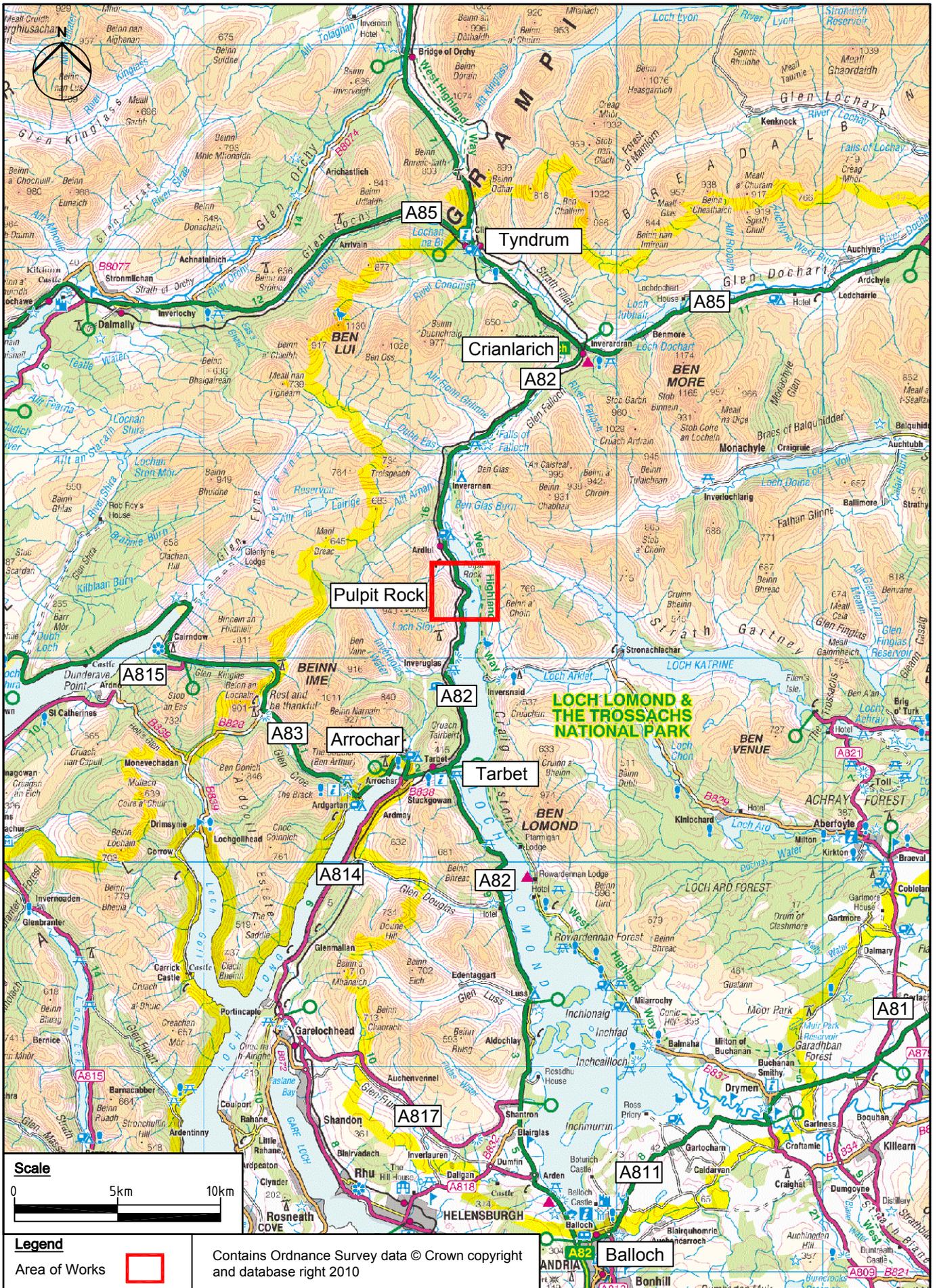
<http://www.lochlomond-trossachs.org/images/stories/Looking%20After/PDF/publication%20pdfs/Exploring%20the%20Park%202009.pdf>

### Emergency Service boundary lines

<http://www.scotland.gov.uk/Topics/Statistics/sns/BoundMap/PoliceStrath>

<http://www.scotland.gov.uk/Topics/Statistics/sns/BoundMap/PoliceCentral>

## Appendix A



**Scale**



**Legend**

Area of Works

Contains Ordnance Survey data © Crown copyright and database right 2010

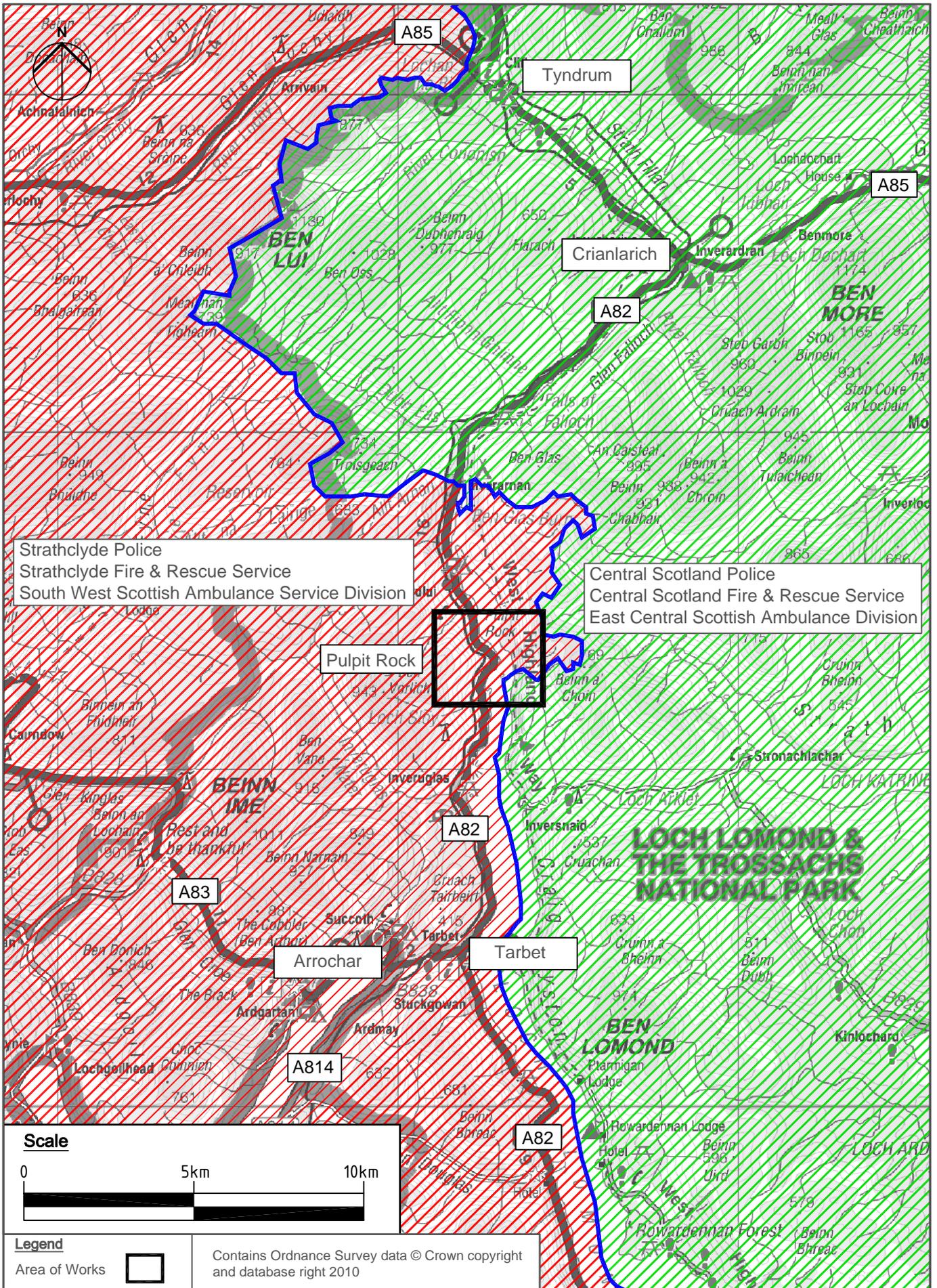
A82 PULPIT ROCK IMPROVEMENT  
FULL ROAD CLOSURE - ASSESSMENT REPORT

SCHEME LOCATION PLAN



FIGURE 1



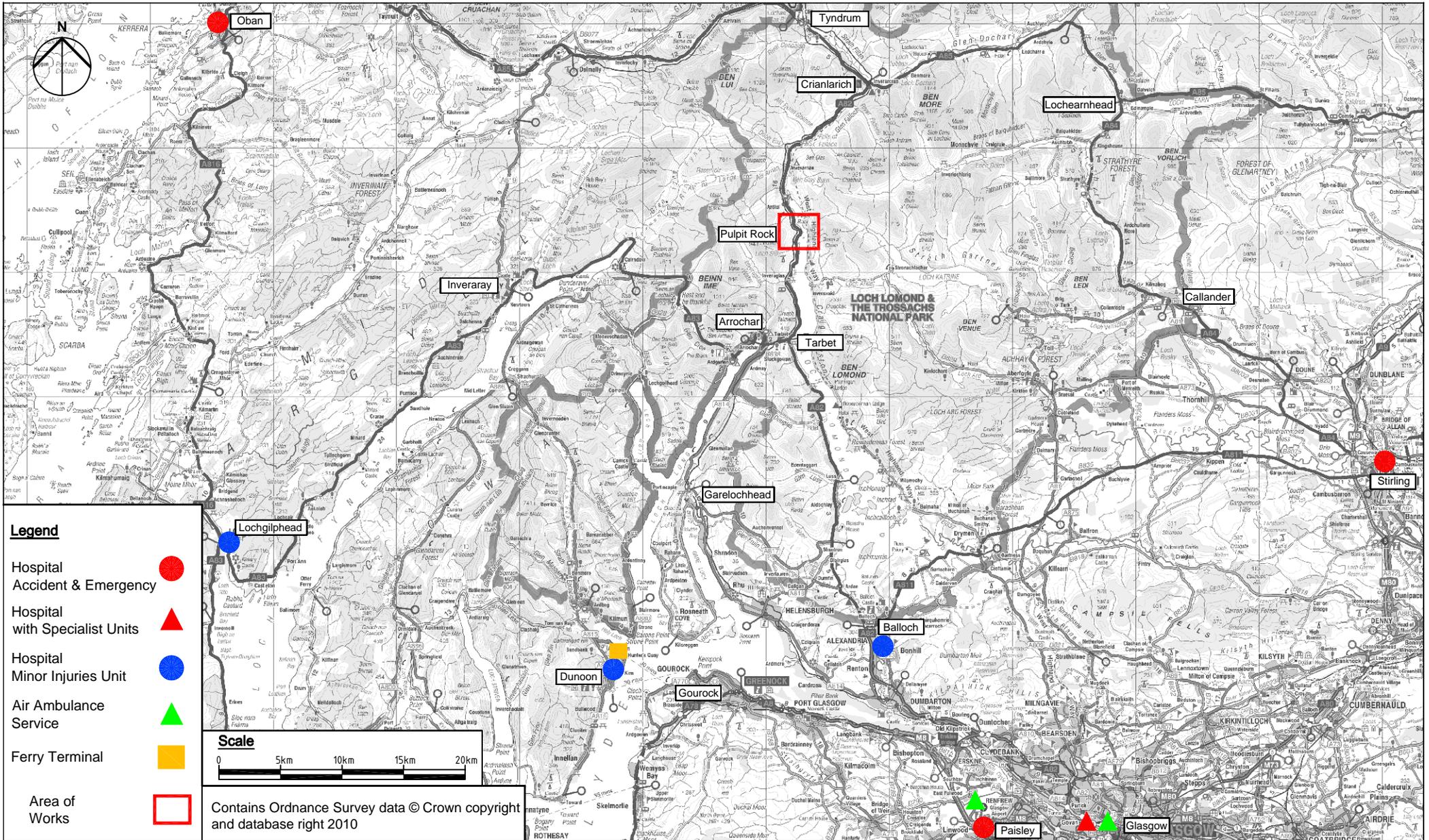


**A82 PULPIT ROCK IMPROVEMENT**  
**FULL ROAD CLOSURE - ASSESSMENT REPORT**

**EMERGENCY SERVICES**  
**DIVISIONAL AREAS**



**FIGURE 3**

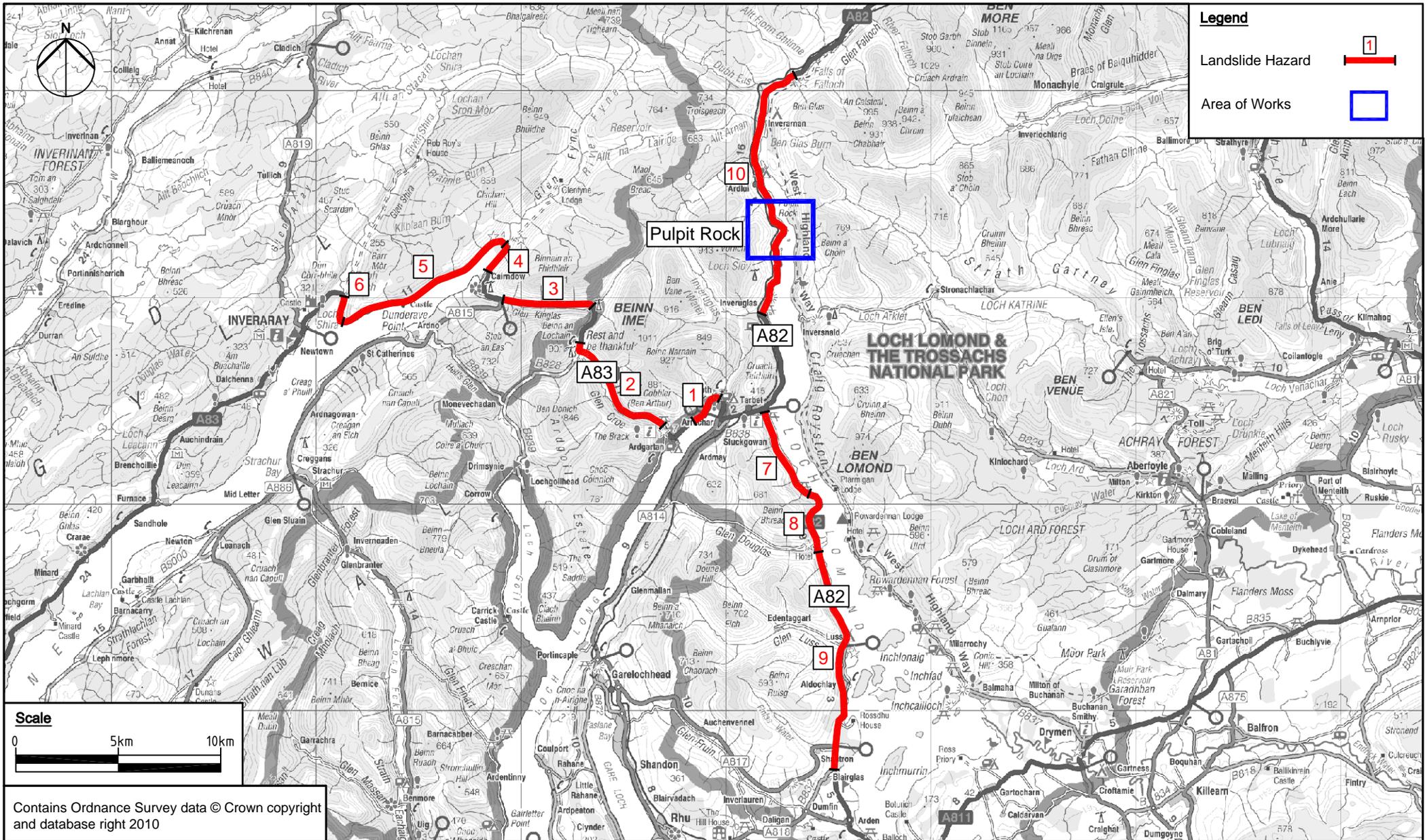


**A82 PULPIT ROCK IMPROVEMENTS  
FULL ROAD CLOSURE - ASSESSMENT REPORT**

**HOSPITALS, AIR AMBULANCE &  
FERRY TERMINAL LOCATION PLAN**



FIGURE 4

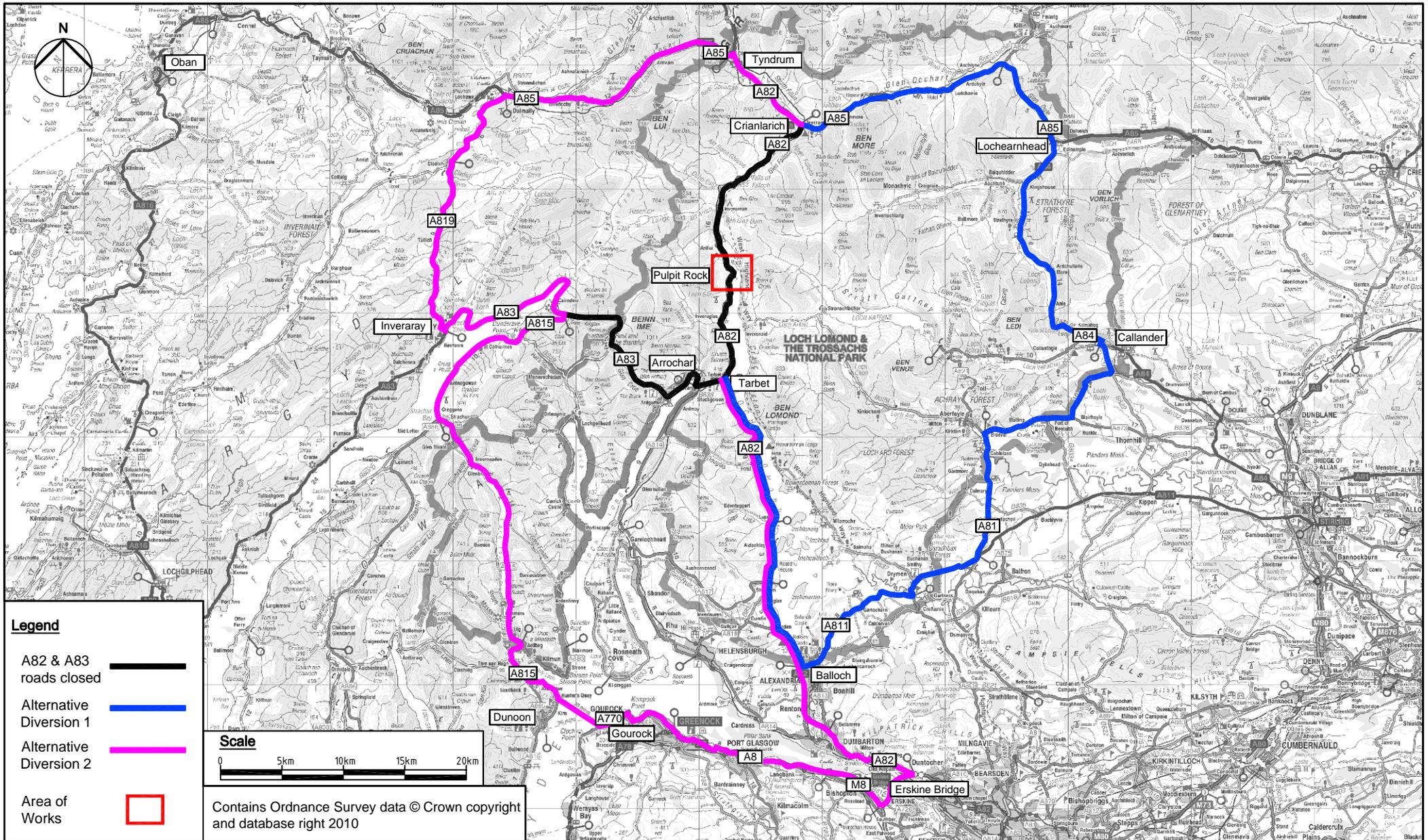


**A82 PULPIT ROCK IMPROVEMENTS  
FULL ROAD CLOSURE - ASSESSMENT REPORT**

**LANDSLIDE HAZARD LOCATIONS**



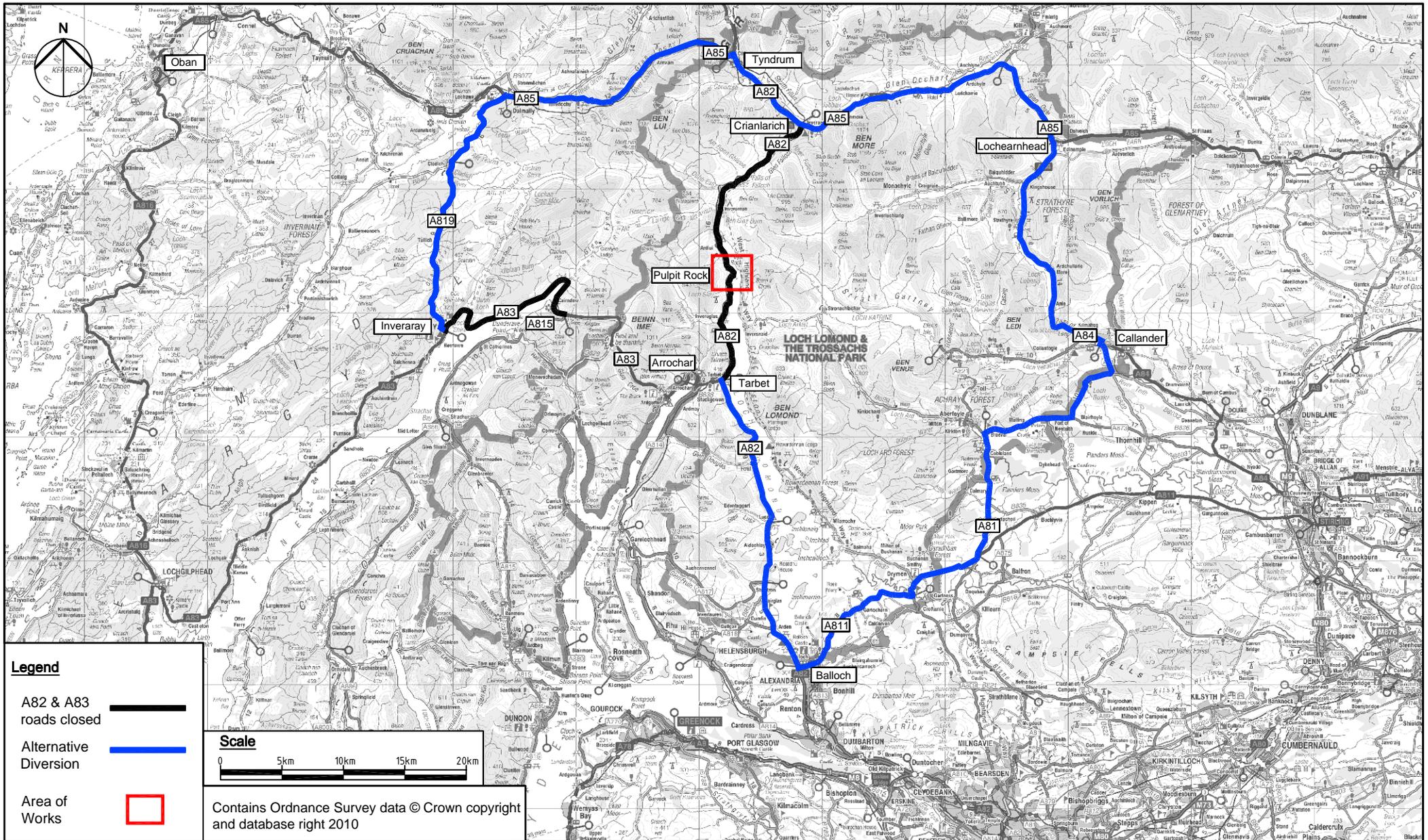
**FIGURE 5**



**A82 PULPIT ROCK IMPROVEMENTS  
FULL ROAD CLOSURE - ASSESSMENT REPORT**

**ALTERNATIVE DIVERSION ROUTE  
A82 & A83 (TARBET TO A815 JUNCTION) CLOSURE**





**A82 PULPIT ROCK IMPROVEMENTS  
FULL ROAD CLOSURE - ASSESSMENT REPORT**

**ALTERNATIVE DIVERSION ROUTE  
A82 & A83 (A815 JUNCTION TO INVERARAY) CLOSURE**



# Meeting Notes



Job Title <b>A82 Pulpit Rock</b>		<b>Job No. S100785</b>	
		Project No.	
Subject of Meeting	Meeting with Strathclyde Fire & Rescue Service to discuss access for emergency vehicles during the Scheme works.	Meeting No: 001	Date & Time: 15 March 10 – 10am
Attendees:	John Rae (JR) Strathclyde Fire & Rescue (SFR) Angus Kennedy (AK) Transport Scotland (TS) Duncan McCallum (DM) Transport Scotland (TS) Ryan Hutchison (RH) Scott Wilson (SW) Harlene O'Neill (HON) Scott Wilson (SW)	Venue: Helensburgh Station	Notes By: HON
		Distribution: Attendees	
<b>Item No.</b>	<b>Notes</b>	<b>Action</b>	
<b>1</b>	<b>Introductions</b>		
1.1	This was an informal meeting with JR, Head of Operations and Development, to give Transport Scotland and Scott Wilson the opportunity to meet and to inform the Strathclyde Fire & Rescue about the Scheme along the A82 at Pulpit Rock. JR can be contacted on 01436 655917 or by email <a href="mailto:John.Rae@strathclydefire.org">John.Rae@strathclydefire.org</a> .		
<b>2</b>	<b>Background</b>		
2.1	An email accompanied by the Scheme drawing was originally sent to JR, 26/01/10. JR requested the Scoping Report and expressed concerns relating to maintenance of access for emergency vehicles travelling North and South of the Scheme during the scheduled works. The Scoping Report was issued electronically 08/02/10. SW/TS felt that a meeting would be beneficial in order for SW/TS to answer any questions SFR may have and for SW/TS to gain a better understanding of how SFR's service works.		
<b>3</b>	<b>Discussion</b>		
3.1	Discussions were had regarding how the services would continue during any full closures that may be required during the Scheme construction works. It was advised that although it was estimated that the full closures extend for approximately 3 months, this was subject to change depending on the Contractor and their approach to the works. It was also emphasised that traffic management and short road closures would also take place over a 12 month construction period.		
3.2	JR pointed out that his preference would be for the road to remain open during the works but understood the difficult site constraints and the nature of the project. JR advised that although he has no definite objectives yet he highlighted that the service split would be just North of Ardlui. JR to liaise with colleagues in the Central region to share the response North and South of Ardlui. JR highlighted that Central Region (Head of Operations, Falkirk) will need to be notified about the works to ensure a smooth flow of emergency service availability during the works.  HON to forward all information available.	SW	
3.3	JR proposed that the following emergency services should also be consulted;  <ul style="list-style-type: none"> <li>Coastguard.</li> <li>Loch Lomond Lifeboat Trust – JR advised that Loch Lomond have their own rescue boat.</li> </ul> HON to forward the Scoping Report to Central.	SW	
3.4	It was agreed that access for the SFR to service the general public was a main priority but access for the Health and Safety of the workforce was also an issue which needs to be addressed.		

# Meeting Notes



3.5	JR queried the A83 at 'Rest and be Thankful', his concerns were related to the landslides along this section of road and whether this would pose further problems if not fixed by 2012. AK advised that strengthening works are being carried out at present and a warning system should be in place by then. It was acknowledged that this will not totally eliminate the potential for landslides.	
3.6	RH asked how much notice the SFR requires in order to allow for the changes in their service. JR advised that all closures, full and part-time, would have to be highlighted due to their requirements for response times. JR's preference for notification would be 4 weeks or longer if possible. JR also pointed out that the arrangements would be in place weeks before the works started to ensure that the system works. AK advised that SFR would be consulted when the contract documents were prepared and would be notified when the Contract is awarded.	SW/TS
4	<b>Date of next meeting</b>	
	No date has been set for a further meeting but it has been agreed that once the correspondence has been forward to the Central Division in Falkirk, HON will be in touch.	SW

Copy to: Job file

# Meeting Notes



Job Title <b>A82 Pulpit Rock</b>		<b>Job No. S100785</b>	
		Project No.	
Subject of Meeting	Meeting with Strathclyde Police to discuss access for emergency vehicles during the Scheme works.	Meeting No: 001	Date & Time: 19 March 10 – 15.00
Attendees:	Ian Kinning (IK)                      Strathclyde Police (SP) Angus Kennedy (AK)                  Transport Scotland (TS)	Venue: Policing Complex 433 Helen St, Glasgow	Notes By: HON
	Duncan McCallum (DM)              Transport Scotland (TS) Ryan Hutchison (RH)                  Scott Wilson (SW) Harlene O’Neill (HON)                Scott Wilson (SW)	Distribution: Attendees	
<b>Item No.</b>	<b>Notes</b>	<b>Action</b>	
<b>1</b>	<b>Introductions</b>		
1.1	This was an informal meeting with IK, Strategic Routes Liaison, to give Transport Scotland and Scott Wilson the opportunity to meet and to inform Strathclyde Police about the Scheme along the A82 at Pulpit Rock. IK can be contacted on 0141 532 6471 or by email <a href="mailto:Ian.Kinning@strathclyde.pnn.police.uk">Ian.Kinning@strathclyde.pnn.police.uk</a> .		
<b>2</b>	<b>Background</b>		
2.1	An email accompanied by the Scheme drawing was originally sent to SP, 26/01/10. SW/TS felt that a meeting would be beneficial in order for SW/TS to answer any questions SP may have and for SW/TS to gain a better understanding of how SP service works and what the full closures would mean operationally for them.		
<b>3</b>	<b>Discussion</b>		
3.1	IK advised that the SP service split was similar to that of Strathclyde Fire & Rescue Service. Strathclyde Police cover as far as Ardlui and west of Tyndrum with Central covering north of Ardlui.		
3.2	Discussions were had regarding how the services would continue during any full closures that may be required during the Scheme construction works. It was advised that although it was estimated that the full closures would extend for approximately 3 months, this was subject to change depending on the Contractor and their approach to the works. It was also emphasised that traffic management and short road closures would also take place over a 12 month construction period. During full closures, it would be the intention to utilise a diversion route along the A83, A819 and A85.		
3.3	IK pointed out that politically and in the interest of maintaining access to Argyll it would be best for the road to remain open during the works but he acknowledged the difficult site constraints and the limitations for safety zones.		
3.4	HON tabled the proposed Scheme design. AK talked through the design layout and highlighted how it is the project priority to achieve 2 way traffic flow by improving the cross section and removing the existing traffic lights currently in use for the section of one way working. It was also pointed out that the geometry was to be in keeping with the existing character of the road. AK stated that safety was an issue for consideration when introducing improvements over short stretches of road. The improvements have been made to allow 2 way flow but discourage speeding or overtaking. IK agreed that this is an important factor along this road and essential that the problem should not be removed and transferred to the next bend. IK advised that he is meeting with AMEY weekending 26/03/10 about remedial measures regarding similar issues.		
3.5	IK pointed out that that a high volume of motorcyclists use this stretch of the A82 and account for the highest number of casualties due to misjudging overtaking opportunities. IK also pointed out that a lot of tree clearance (non-native species) has taken place along this stretch of the A82 recently to improve visibility.		

# Meeting Notes

3.6	<p>IK raised concerns about the worst case scenario of the A83 being closed at the same time as the A82. For example, IK queried the A83 at the 'Rest and be Thankful', his concerns were related to the landslides along this section of road and whether this would pose further problems. AK advised that strengthening works are being carried out at present and a warning system should be in place by 2012. It was acknowledged that this will not totally eliminate the potential for landslides. IK pointed out that contingency plans in place at present assume that either the A83 or the A82 will be open at all times. If both roads are closed medical services for the public become an issue. The possibility of airlifts was mentioned but it was highlighted that some patients cannot be airlifted. IK advised that SP have an agreement with Western Ferries who have a spare ferry that can be used over night if required, although bad weather conditions may stop the ferry running, which could be an issue as the full closures are due to take place over the winter months.</p> <p>Another issue is the possibility of fatal crashes on the A83 which means the area would be treated as a crime scene allowing no public access along the road unless there is a serious threat to life. IK advised that Argyl &amp; Bute Emergency Planning would need to be contacted in case of this happening as a stacking situation may arise.</p> <p>Argyl &amp; Bute Emergency Planning to be consulted. AK to speak with Anne Armstrong of Resilience Team within TS.</p> <p>IK can provide a contact for the GP Services for the area if required.</p> <p>The NHS to be contacted once TS/SW have spoken with the Scottish Ambulance Service (Meeting to take place with Donald Morrison on the 7<sup>th</sup> April).</p>	<p>TS</p> <p>SW</p>
3.7	<p>Other issues of concerns highlighted by IK are as follows;</p> <p><u>SP service</u></p> <ul style="list-style-type: none"> <li>Higher traffic volumes on the diversion route may affect the SP response times in the area.</li> </ul> <p>IK advised that from a policing point of view a working agreement with Central Police should overcome this issue.</p> <p><u>Local Communities</u></p> <ul style="list-style-type: none"> <li>Traffic volumes will increase through the local communities along the A83 and A819 due to diverted traffic</li> <li>The effect of higher volumes of traffic on the deliveries for local businesses</li> </ul> <p>AK advised that the diversion will take place in the winter months making the traffic volumes similar to those the communities would experience during the summer months.</p> <p>SW to cover the risks to the communities due to increased traffic volumes in the 'Community Effects' chapter of the Environmental Statement.</p>	<p>SW</p>
3.8	<p>IK stated that he would like the Contract to state, where possible, that the road must retain one-way working. AK noted that the Contract will incorporate incentives for Contractors to keep access where possible but for now full closures must be assumed in order to prepare for the worst case scenario regarding diversion routes.</p> <p>Contingency plans should be incorporated into the Contract that in the event of the A83 being closed the A82 must be re-opened within a specified time. SW to consider what would be a realistic time period. This issue should also be covered in the ES.</p>	<p>SW</p>
3.9	<p>IK to retire in May but will forward another point of contact for the project.</p>	<p>SP</p>
4	<p><b>Date of next meeting</b></p>	
	<p>No date has been set for a further meeting.</p>	

Copy to: Job file

# Meeting Notes



Job Title		<b>A82 Pulpit Rock</b>		<b>Job No. S100785</b>	
		Project No.			
Subject of Meeting	Meeting with the Scottish Ambulance Service to discuss access for emergency vehicles during the Scheme works.			Meeting No: 001	Date & Time: 07 April 10 – 12.00
Attendees:	Donald Morrison (DM)	Scottish Ambulance Service (SAS)		Venue: RNLI lifeboat station, Oban	Notes By: HON
	Angus Kennedy (AK)	Transport Scotland (TS)			
	Duncan McCallum (DMc)	Transport Scotland (TS)		Distribution: Attendees	
	Sandy Jamieson (SJ)	Transport Scotland (TS)			
	Ryan Hutchison (RH)	Scott Wilson (SW)			
	Harlene O'Neill (HON)	Scott Wilson (SW)			
<b>Item No.</b>	<b>Notes</b>				<b>Action</b>
<b>1</b>	<b>Introductions</b>				
1.1	This was an informal meeting with DM, Area Service Manager – Argyll & Clyde North, to give Transport Scotland and Scott Wilson the opportunity to meet and to inform the Scottish Ambulance Service about the Scheme along the A82 at Pulpit Rock. DM can be contacted on 07775954004 or by email dmorrison3@nhs.net .				
<b>2</b>	<b>Background</b>				
2.1	An email accompanied by the Scheme drawing was sent to DM, 09/03/10. SW/TS felt that a meeting would be beneficial in order for SW/TS to answer any questions DM may have and for SW/TS to gain a better understanding of how the SAS works and what full road closures would mean operationally for them.				
<b>3</b>	<b>Discussion</b>				
3.1	AK gave a brief summary of our previous meetings with the Fire and Rescue Service (John Rae) and with Strathclyde Police (Ian Kinning).				
3.2	DM advised that the SAS service split is as follows: <ul style="list-style-type: none"> <li>• Crianlarich – covered by Central.</li> <li>• Tyndrum – covered by Oban and Glencoe</li> <li>• Ardlui and South of Ardlui – covered by Arrochar</li> </ul>				
3.3	Discussions were had regarding how the services would continue during any full closures that may be required during the Scheme construction works. It was advised that although it was estimated that the full closures would extend for approximately 3 months, this was subject to change depending on the Contractor and their approach to the works. It was also emphasised that traffic management and short road closures would also take place over a 12 month construction period. During full closures, it would be the intention to utilise a diversion route along the A83, A819 and A85.				
3.4	HON passed a copy of the diversion routes drawing to all and tabled the proposed Scheme design. AK talked through the design layout and highlighted how it is the project priority to achieve 2 way traffic flow by improving the cross section and removing the existing traffic lights currently in use for the section of one way working.				

# Meeting Notes

3.5	<p>DM highlighted that one of his main concerns would be the response time for the Ardlui Hotel as the service split is located around this area. DM proposed this could be solved by an operational order to change the limits of the service area for the period of the works.</p> <p>Concerns were highlighted for all persons with life threatening conditions and their need for treatment.</p> <p>The treatment of head injury patients were discussed, if both the A83 and A82 were closed, and their need to attend the Neurology Department in the Southern General, Glasgow. It was confirmed that some head injury patients cannot be flown. It was queried whether a team could come from Glasgow to treat the patient. DM pointed out that this is possible but only to stabilise the patient and accompany the patient en route to the hospital for treatment.</p> <p>In emergency situations the SAS have an arrangement with Western ferries which is currently in place for emergencies in the Dunoon area. The ferry used is a vehicle ferry which can take the ambulance. DM pointed out that mobilisation of the ferry is quick as it can be a daily occurrence for Dunoon.</p>	
3.6	DM pointed out that he has never experienced, in 26 years, the SAS not being allowed access through construction works during emergency situations.	
3.7	<p>DM suggested that SW contact the SAS Control Room in Cardonald as although he can offer a local perspective on the SAS, the Control Room will be able to provide more detailed information. It was agreed by all that a meeting at Cardonald would be very beneficial and should be set up asap. This would also include emergency head injury specialists.</p> <p>DM to forward contact details for either Stephen Hearn (Consultant Surgeon at the Southern General and RAH) or David Stoddard. It was noted that NHS 24 is located in the same building as the SAS Control Room.</p>	SAS/SW
3.8	RH requested information on the frequency of head injury emergencies. DM advised that this information will be accessible from the Control Room in Cardonald.	
3.9	DM highlighted that the poor condition of the surfacing along the A819 was a negative for using it as a diversion route re. the quality of the journey for patients. The geometry was not seen as an issue. TS advised that the A819 is not a trunk road but is maintained by Argyll & Bute Council.	
3.10	AK advised DM that the minutes of the meeting will be used to inform the EIA along with the minutes for any subsequent meetings.	
3.11	DM voiced concerns regarding the one way working currently in place along the Rest and be Thankful and if this would be an issue during construction. AK advised that the works are programmed to be on site financial year 2012/13. This is subject to change, but it is expected that 2 way working will be back in place to allow the A819 to be used as a diversion route.	
3.12	<p>To summarise:</p> <ul style="list-style-type: none"> <li>• DM welcomes the improvements at Pulpit Rock and pointed out that the original works along the A82 caused a lot of problems closure wise but the long term gain outweighed the short term problems;</li> <li>• The Arrochar service split, up to Ardlui and South of Ardlui, could be solved by an operational order to change the limits of the service area for the period of the works;</li> <li>• The SAS is familiar with the use of emergency plans which are currently in place and frequently used (Ferries or using alternative routes);</li> <li>• Patients that can be airlifted, in the case of both the A82 and A83 being closed, and the use of available aircraft can be discussed in greater detail with the SAS senior managers at the Control room in Cardonald. It was also pointed out that even in adverse weather conditions, the aircraft available can fly in most situations.</li> </ul>	
4	<b>Date of next meeting</b>	
	No date has been set for a further meeting.	

Copy to: Job file

# Meeting Notes



Job Title <b>A82 Pulpit Rock</b>		<b>Job No. S100785</b>	
		Project No.	
Subject of Meeting	Meeting with the Scottish Ambulance Service to discuss access for emergency vehicles during the Scheme works.	Meeting No: 002	Date & Time: 11 May 10 – 15.00
Attendees:	Ronnie Downie (RD) Scottish Ambulance Service (SAS)	Venue: 15 Craw Road, Paisley	Notes By: HON
	Mark Benton (MB) Scottish Ambulance Service (SAS)		
	Kirsteen Campbell (KC) Scottish Ambulance Service (SAS)	Distribution: Attendees, Garry Fraser	
	Duncan McCallum (DMc) Transport Scotland (TS)		
	Sandy Jamieson (SJ) Transport Scotland (TS)		
	Ryan Hutchison (RH) Scott Wilson (SW)		
	Harlene O'Neill (HON) Scott Wilson (SW)		
<b>Item No.</b>	<b>Notes</b>	<b>Action</b>	
<b>1</b>	<b>Introductions</b>		
1.1	Duncan McCallum – Transport Scotland – Project Sponsor Sandy Jamieson – Transport Scotland – Project Manager  Ryan Hutchison – Scott Wilson – Project Manager Harlene O'Neill – Scott Wilson - Assistant Engineer  Ronnie Downie - Scottish Ambulance Service – Clyde North Area Service Manager Mark Benton - Scottish Ambulance Service – Support Area Service Manager Kirsteen Campbell - Scottish Ambulance Service – Operation Room Assistant		
<b>2</b>	<b>Apologies</b>		
	Garry Fraser (GF) - Scottish Ambulance Service.		
<b>3</b>	<b>Background</b>		
2.1	This meeting was held as a follow up to that held with Donald Morrison (DM), 07/04/10. DM provided information based on a local perspective, but it was agreed that more detailed information was required.  An email including the original scoping information and minutes of Meeting 01 was sent to GF, 21/04/10.		
<b>4</b>	<b>Discussion</b>		
4.1	HON provided all with a copy of the Agenda, previous minutes, diversion routes drawing and proposed scheme design. SJ talked through the design layout and highlighted how it is the project priority to achieve 2 way traffic flow by improving the cross section and removing the existing traffic lights currently in use for the section of one way working. SJ pointed out that although it was estimated that the full closures would extend for approximately 3 months, this was subject to change depending on the Contractor and their approach to the works. It was also emphasised that traffic management and short road closures would also take place over a 12 month construction period. During full closures, it would be the intention to utilise a diversion route along the A83, A819 and A85.  RD queried when the works would go to site. DM advised that the works would start 2012 at the earliest.		
4.2	DMs concerns for the response time to the Ardlui Hotel was highlighted. SJ queried whether an operational order could be put in place to alter the limits for the service split. RD pointed out that areas are not specifically serviced within individual boundary limits. The control centre monitors the location of the nearest ambulance and dispatches accordingly.		
4.3	RD advised that notice of the full closures and re-opening will need to be forwarded to the emergency control centre once confirmed. The duty manager will then ensure that all the closures are logged onto their system. The system calculates duration times for proposed diversion routes to enable the dispatcher to organise the emergency call out.  RD to supply a contact for the Emergency Medical Dispatch Centre (EMDC).	SAS	

# Meeting Notes

4.4	The treatment of head injury patients was discussed and it was confirmed by RD and Stephen Hearn (emergency medicine consultant in the RAH – verbally to HON, 27/04/10) that there are no cases of head injury that cannot be flown.	
4.5	RH requested statistical information relating to emergency incidents. RD agreed to provide seasonal information covering a 5 year period for the area west and north of Tarbet. Information will show category of SAS accident, destination and injury.	SAS
4.6	<p>The worst case scenario of the A83 being closed at the same time as the A82 was discussed. It was acknowledged that emergency services for the following would impact some more than others.</p> <p>RD pointed out that patients were defined as Category A – Life threatening or Category B – not life threatening. At present there are approximately 10 patients per month in Arrochar as Cat A and 3-5 per month from Inveraray, many of these can be treated at Stirling/Mid-Argyle or Oban depending on the injury although serious burns need to be treated at Glasgow Royal and head injuries at the Southern General.</p> <p>Out patients were highlighted as a major concern as these patients, such as dialysis patients, need access to Glasgow for treatment. Some need to travel 3 times a week from Oban or Inveraray. Another issue relating to lengthy diversions was the connecting ferry back for patients travelling to Mull. The last ferry is at 4pm which may result in patients being stranded on the mainland. RD pointed out that hospitals may have to board patients but this may not be possible, another option would be to put them up in local hotels.</p> <p>Currently there are 4 dialysis patients travelling to Glasgow 4 times per week. RD advised that this number is not likely to increase as it is dictated by the machines available, although the location of the patients may change.</p> <p>Cancer patients also need to travel to Glasgow for treatment but RD advised that this matter may be alleviated by allowing patients to be treated at Oban or Stirling. This arrangement could only be put in place if a landslide occurred and not in advance.</p>	
4.7	DM advised RD that a report was being prepared which will consider diversion routes and contingency plans for implementation during the construction works. He also informed RD that TS have a Resilience Group which, comprising of the emergency services head people, meets every 6 months. The completed report will be considered by the Resilience Group.	
4.8	SJ advised that the minutes of all meetings will be used to inform the Environmental Statement and other reports.	
4.9	<p>To summarise:</p> <ul style="list-style-type: none"> <li>• RD welcomed the long term benefits that the proposed scheme would bring to the route and whilst temporary closure of the A82 would present operational challenges, these challenges were not insurmountable.</li> <li>• RDs preference would be a shorter duration of full closures but feels for the current proposals of 3 months that planning through the control centre, with the emergency planning department, will overcome any problems.</li> <li>• The dates of the full closures and re-opening of the road needs to be forwarded to the control room once confirmed.</li> <li>• The dispatch of emergency assistance is not specifically determined by the service area split. The control centre monitors the location of the nearest ambulance and dispatches accordingly.</li> <li>• Outpatients need to be given careful consideration as these will be impacted most.</li> <li>• RD to supply statistical data on emergency incidents for the past 5 years.</li> <li>• RD advised that there is no need to contact anyone else for information on the emergency services.</li> </ul>	
<b>5</b>	<b>Date of next meeting</b>	
	No date has been set for a further meeting.	

Copy to: Job file