URS

Stromeferry Options Appraisal

STAG Pre-Appraisal Report

March 2013

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Comhairle na Gàidhealtachd

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Stromeferry Options Appraisal
Pre-Appraisal Report

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1 EXCECUTIVE SUMMARY

Since the 'Stromeferry Bypass' was opened in 1970 the approximately 4.5km long section of mainly single track road from Ardnarff to Cuddies' Point has been subject to landslides and rock fall events, causing closure of the road for the duration of required remedial works to rock slopes and verges being carried out.

Following a rock fall event in December 2011, when the road had to be closed over a period of several months, The Highland Council presented a report to the Committee for Transport, Environmental and Community Services in August 2012, proposing a further options appraisal in connection with the Stromeferry Bypass. This resulted in the current commission of URS Infrastructure & Environment UK Ltd to carry out a full STAG Part 1 and 2 and DMRB Stages 1 and 2 appraisal of the project.

This Commission is to re-open the previous discussions and considerations on feasible route corridors and options, applying the processes of current Government Guidelines, with the aim to generate a robust solution. The report and presentation material is to detail the outcome and findings of the process, and allow consideration by The Highland Council in their determination of the preferred (route) option.

It was recognised throughout the Pre-Appraisal stages, that complying with the STAG processes will be paramount to the success of this project, as this will ensure that the current appraisal work is carried out in accordance with processes which are recognised and approved by the Scottish Government. This is assumed to provide crucial support for the project at funding stage, as well as when presenting the case through any Public Inquiry.

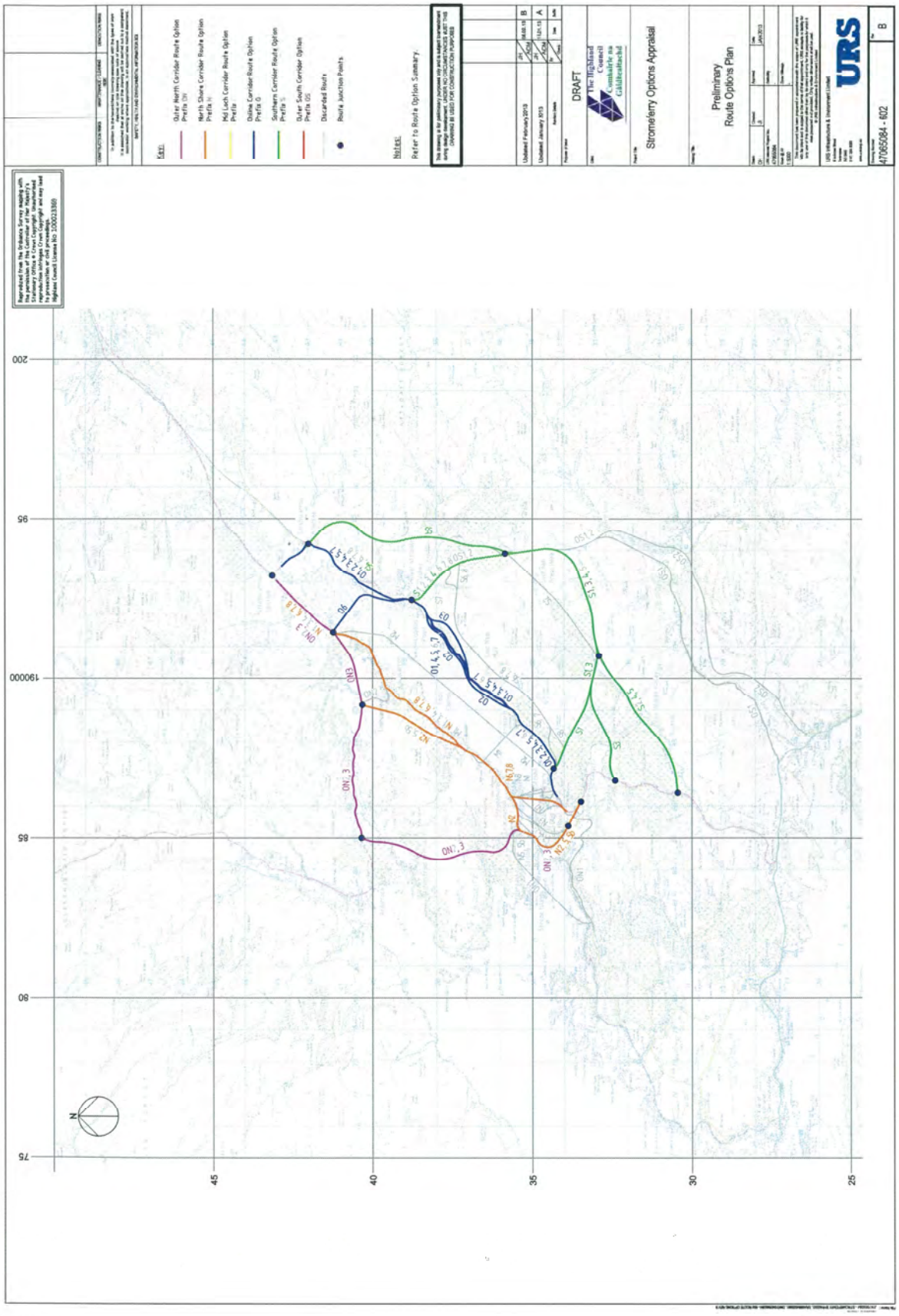
This Pre-Appraisal report summarises the findings of the first stage in the STAG appraisal process, developing Transport Planning Objectives suitable for this project and Route Options with active input from the Stakeholder groups throughout this process. Developed Transport Planning Objectives and Route Options are used to inform the Stage 1 / Part 1 appraisal.

This Pre-Appraisal process carried out in relation to the Stromeferry Bypass successfully resulted in providing a set of Transport Planning Objectives, as shown below, together with considered strategic objectives derived from collated Government Policies and Directives. These will be applied to appraise all considered route options during the STAG Part 1 appraisal.

Workshop discussions in relation to 'Options Generation, Sifting and Development', as stipulated in the STAG manual, were also successfully concluded as presented in the 'Route Options Summary – Final Table contained in Appendix E to this report, as well as the associated route options drawing prepared to summarise and illustrate the outcome from this Pre-Appraisal stage, Appendix D drawing No. 47065084-602 refers.

Final SMART Transport Planning Objectives (as agreed 31/01/13)

TRANSPORT PLANNING OBJECTIVES TRANSLATED INTO SMART OBJECTIVES (FINAL)							TABLE 4.7
			Appraisal Criteria Objective				
Ref.	**Draft SMART Objectives**		**Environment**	**Safety**	**Economy**	**Integration**	**Accessibility**
A(1)	Safeguard and, where possible and appropriate, enhance and provide access to the natural and built environment and areas of national, regional and local importance and heritage, during construction, maintenance and operation of the scheme (with reference to environmental appraisal)	a)	√				
B(2)	Minimise **all risk** during design, construction, operation and maintenance (with reference to Risk Register)	a) c)	√	√	√		
C(3)	Ensure deliverability of scheme within programme and to agreed capital cost and maintenance budgets, thus providing 'Value for Money'	f)			√		
D(4)	Deliver a safe and reliable, 2 lane carriageway, by applying appropriate / proportionate design standards	b)		√	√	√	√
E(5)	Solution reduces, or does not increase, the risk to and liability of the railway and maintains suitable access over the life of the scheme	d) j)		√	√		√
F(6)	Keep the A 890 and peripheral road network open during construction	g)			√	√	√
G(7)	Maintain and improve local social cohesion by improving accessibility for emergency services responding to call-outs, as well as for the local population making use of local and regional leisure, health and educational facilities	l)			√	√	√
H(8)	Maintain and improve choice of transport mode and integration of public transport links over the lifetime of the scheme	l)			√	√	√
I(9)	Scheme to take account of relevant local, regional and national planning policies (during the design stage)		√			√	
J(10)	(removed)	i)			√	√	√
K(11)	Maximise / improve network efficiency, sustainable connectivity and social cohesion in terms of journey times and journey reliability in the Wester Ross area	i) h) k)			√	√	√
L(12)	Deliver a scheme that assists both the local businesses to maximise opportunities for sustainable development and economic growth over the life of the scheme	e)			√	√	√


Outer North Corridor Route Option
Prefix ON
North Shore Corridor Route Option
Prefix N
Mid Loch Corridor Route Option
Prefix I
Online Corridor Route Option
Prefix O
Southern Corridor Route Option
Prefix S
Outer South Corridor Option
Prefix OS
Discarded Route
Route Junction Points
Refer to Route Option Summary
DRAFT
The Highland Council
Comhairle na Gaidhealtachd
Stromeferry Options Appraisal
Preliminary
Route Options Plan
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2 INTRODUCTION

2.1 History

The 'Stromeferry Bypass' is an approximately 12km long section of Public Road along the southern shore of Loch Carron, located in Wester Ross, in the western Highlands of Scotland. The road forms part of the A 890, between the Strathcarron Junction and the tie in with the A 87, Invergarry to Kyle of Lochalsh Trunk road, at Auchtertyre.

The Public Road and a single track railway line are sharing a tight corridor along the southern shores of Loch Carron, which is particularly restricted over an approximately 5 kilometre long section from Ardnarff to Attadale.

Up until 1970, when the bypass was opened to the Public, the transport link from Kyle of Lochalsh north towards Ullapool was provided by a ferry service crossing the Strome Narrows in between South and North Strome, with minor roads linking the crossing to the local road network at either end.

Since the 'Stromeferry Bypass' was opened, the approximately 4.5km long section of mainly single track road from Ardnarff to Cuddies' Point has been subject to landslides and rock fall events, causing the Local Authority to temporarily close the road at several occasions, in order to enable remedial works to the rock slopes to take place. These events also affected the railway line and forced road and rail users to accept 140mile temporary diversions during these closures.

Due to the ongoing problems with this section of public road, the Local Authority commissioned several feasibility studies in the 1990s, looking at various possible route options and schemes to bypass the problem areas. However, no final decision was reached on which option to take forward at that stage, and The Highland Council continued to maintain the route and carry out emergency works, as and when required.

2.2 Project Brief

Following a rock fall event in December 2011, when the road had to be closed over a period of several months, The Highland Council presented a report to the Committee for Transport, Environmental and Community Services in August 2012, proposing a further options appraisal in connection with the Stromeferry Bypass.

The recommendations of the report were granted and the commission tendered in September 2012. After a successful Tender, URS were appointed the Contract and commenced work in October 2012.

The Client's brief included the following stipulations.

The Consultant (URS) was to:

1. review and copy relevant historical information from The Highland Council archives;
2. carry out proportionate appraisal work following current Scottish Government Appraisal Guidelines and the DMRB;
3. to establish Stakeholder Groups and carry out Stakeholder workshops;
4. to develop the defined objectives for the scheme in consultation with Stakeholders and the Client;
5. to undertake an analysis of the existing and future problems;

6. to undertake a Stage 1, Option Generation, Sifting and Development process in accordance with the Scottish Transport Appraisal Guidelines (STAG) and the Design Manual for Roads and Bridges (DMRB);
7. to prepare material to allow presentations of the findings of the first appraisal stage to the public in March 2013.

During the first part of the work, the commission is to identify the 'Outline Options', thus concluding on the first phase of the appraisal process in accordance with the requirements of STAG Part 1 and DMRB Stage 1.

The commission also includes a second stage appraisal as follows:

8. carry out a second stage appraisal in accordance with STAG Part 2 and DMRB Stage 2;
9. complete the appraisal process by summarising the findings of both Part 1 and Part2 assessments of the options.

This Commission is to re-open the previous discussions and considerations on feasible route corridors and options, applying the processes of current Government Guidelines, with the aim to generate a robust solution. The report and presentation material is to detail the outcome and findings of the process, and allow consideration by The Highland Council Full Committee in their determination of the preferred (route) option.

It is recognised, that complying with the STAG processes will be paramount to the success of this project, as this will ensure that the current appraisal work is carried out in accordance with processes which are recognised and approved by the Scottish Government. This is assumed to provide crucial support for the project at funding stage, as well as when presenting the case through any Public Inquiry.

This Pre-Appraisal report summarises the findings of the first stage in the STAG appraisal process, developing Project Objectives and Route Options with active input from the Stakeholder groups throughout this process. Developed Project Objectives and Route Options are then used to inform the Stage 1 / Part 1 assessments.

2.3 The Pre-Appraisal Process

The appraisal process in accordance with STAG is to be an informed process, involving consultations with various Stakeholder groups from an early stage.

The Highland Council proposed two Stakeholder groups to be involved in this pre-appraisal stage of the process in relation to the Stromeferry Bypass, as outlined in chapter 3 of this report. Stakeholders were divided into 'Regulatory Stakeholders' and 'Economic Stakeholders' for the initial workshops due to differing responsibilities, agenda and in order to keep the numbers manageable.

The process involved the following workshops during the period November 2012 to January 2013:

No	Date	Stakeholder Group	Venue	Attendance
1	21st November 2012	1st Regulatory	Columba Hotel, Inverness	13
2	4th December 2012	1st Economic	Strathcarron Hotel, Strathcarron	15
3	12th December 2012	2nd Regulatory	Columba Hotel, Inverness	10
4	10th January 2013	2nd Economic	Strathcarron Hotel, Strathcarron	17
5	31st January 2013	Joint	Strathcarron Hotel, Strathcarron	24

All workshops were attended by staff from THC TEC Services as well as URS.

The aim of the Pre-Appraisal workshops was to:

- Introduce the Project to all Stakeholders;
- Introduce the processes under STAG and DMRB;
- Identify Problems and Constraints;
- Identify Opportunities;
- Develop Stakeholder objectives and develop these into Transport Planning / SMART Objectives.

In addition, workshop discussions were to:

- Develop possible route options;
- Sift developed route options;
- Propose (final) set of route options to be considered in Stage 1 assessment.
- Test options against Government and National (strategic) objectives.

3 STAKEHOLDER WORKSHOPS

This chapter outlines the contents of the workshops held as part of the Pre-Appraisal process in relation to the 'Stromeferry Bypass' and summarises discussions held and findings gained from this stage.

3.1 Presentation of 'The Project'

3.1.1 Study Areas

The Study Areas considered in relation to this project are shown on Figures 3.1 and 3.2 below.

Two study areas were considered in relation to the Stromeferry Bypass options appraisal work. Figure 3.1 covers a larger study area, reaching from Fort William in the south, to Kyle of Lochalsh and Applecross in the west, across east to include Inverness and Invergordon. This area would cover strategic objectives and wider, economic linkages. The local study area shown on Figure 3.2 provides an indication of the area considered in relation to route options and corridors, and thus focuses on the local Lochcarron area.

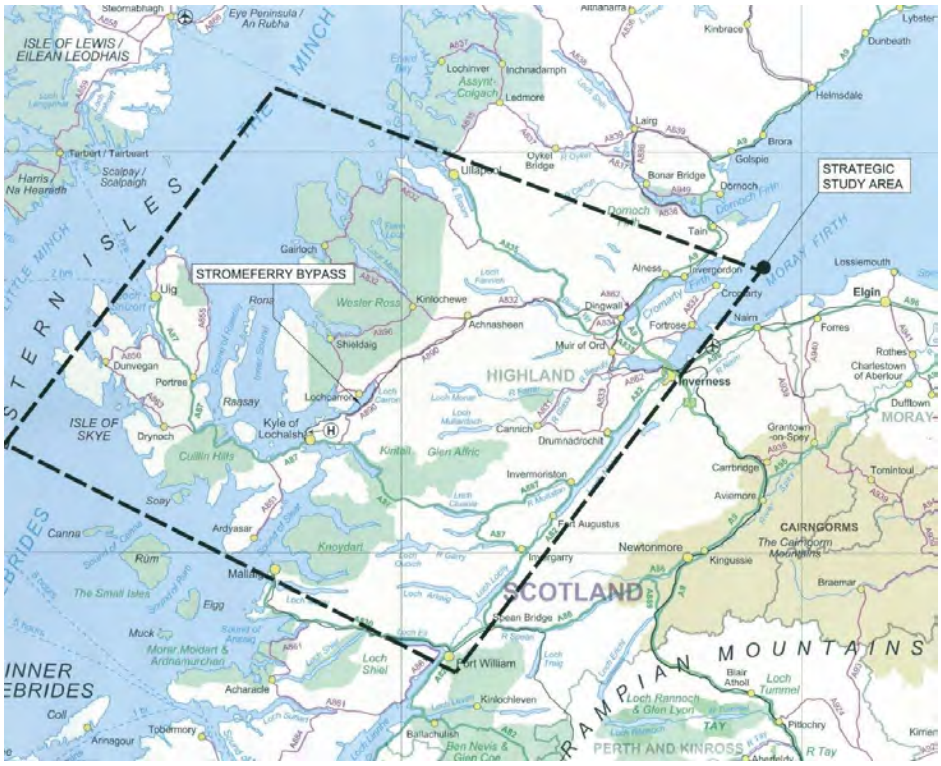

Figure 3.1 – Wider Study Area

Figure 3.2 – Local Study Area

3.1.2 Scope and Background

During research of existing archived information regarding the Stromeferry Bypass it was noted, that this project is particular in so far, as there is a long history of documented discussions concerning both the 'problems', as well as proposals for feasible solutions in connection with this section of public road. This required an in-depth review of all the historical material available to start an informed process.

This information could not be ignored and was generally in the public domain. However the study team were aware, to satisfy STAG guidelines and obtain the confidence of Stakeholders a balance was required between acceptance of historical work and the encouragement and development of new ideas. This was achieved by means of facilitated discussion at the Workshops.

In preparation of the Stakeholder workshops, the question '*why is the Stromeferry Bypass necessary and why is this considered a scheme worth spending public money on'* was considered with the following suggestions:

The Stromeferry Bypass is considered a,

- Strategic West Coast Route between Ullapool and the Isle of Skye;
- Important local Route between Kyle and Lochcarron / Strathcarron area;

- Importance of route to local business and tourism;
- Importance of route as a supply line between Inverness and the local area.

Stakeholders were encouraged during workshop discussions, to add to the above statements and the following amendments were made:

- Route is *vital* to local business and tourism;
- Supply line between Inverness North, Kyle / Skye *and Dingwall;*
- *School bus route to Plockton.*

During the early workshops, details of maintenance works carried out on the A890 Stromeferry Bypass over the past years were presented. These included emergency works carried out following the rockfall event along the bypass in December 2011, at a recorded total cost of £2.84m. In addition, The Highland Council estimates that around £250k is required to cover for the maintenance of rock slopes along this road on an annual basis, with future spend for emergency works unknown due to the unpredictable behaviour of the existing rock faces.

This was reported to be the case despite regular inspections carried out by The Highland Council and rigorous contingency planning.

Workshop presentations also included a brief overview of (historical) route options and the results from a previous questionnaire circulated around the Loch Carron communities in 1994, inviting local opinion on preferred route proposals, after a presentation made by the Council on various schemes considered at the time.

The above was included in the Stakeholder workshop presentations in order to demonstrate the variety of proposed options, as well as the diversity of public opinion and individual objectives regarding the scheme.

The conflicting and random output was used to illustrate the need for a rational appraisal process like the process offered by STAG.

3.2 Introduction of Processes under STAG

The Scottish Transport Appraisal Guidelines (STAG) require a particular process to be followed during an Options Appraisal:

- **1st Stage: Pre-Appraisal, Objectives, Options & Sifting**
- 2nd Stage: Part 1, Initial Options Appraisal on Selected Options
- 3rd Stage : Part 2, Detailed Appraisal
- 4th Stage: STAG report and Project Implementation

This report focuses and reports on the first stage of the process. The purpose of the STAG, Pre-Appraisal Workshops held in connection with this project during the period November 2012 to February 2013 was to:

- Engage Stakeholders, in order to discuss their key issues relating to study area in general, and any route corridors or locations in particular
- Highlight any *Problems* anticipated with a particular route corridor or location

- Highlight any *Opportunities* or *Ambitions* that Stakeholder may like to realise through this appraisal process
- Highlight any *Constraints* within the study area
- Stakeholders engaged to highlight any *Key Issues*, considering aspects under:
  - Environment
  - Safety
  - Economy
  - Integration
  - Accessibility and Social Inclusion

Following identification of Problems, Opportunities and Constraints, the key aim of the workshops was to develop these into Project *Objectives,* which were later to be developed further into Transport Planning Objectives. These will be used to inform the next stage of the appraisal / assessment process in Part 1.

The STAG process promotes an objective rather than solution led approach to avoid pre-conceived solutions being brought forward without considering all other possible options.

3.3 Programme

As part of the STAG Pre-Appraisal process a total of 5 Stakeholder Workshops were held in connection with the Stromeferry Bypass Options Appraisal during the period November 2012 to February 2013, as detailed in section 2.3 of this report.

This process allowed in-depth discussions and ensured adequate development of both the Project Objectives, as well as route options, with all affected parties.

Following the Pre-Appraisal stage, STAG Part 1 and DMRB Stage 1 assessments will be carried out, considering the Transport Planning Objectives and route options developed and sifted during the Pre-Appraisal stage. This 2nd stage will conclude with a public presentation and report to The Highland Council TECS Committee in April 2013.

The Part 2, detailed appraisal will then be carried out during the course of 2013, with a final report to be presented in April 2014.

3.4 Stakeholders

The following Stakeholders were invited and represented during the various Stakeholder Workshops held throughout the Pre-Appraisal stage:

<u>Regulatory Stakeholders</u>

- The Highland Council, Chief Executive's Service, Ward Manager (Wester Ross, Strathpeffer & Lochalsh)
- The Highland Council, Planning, Environment & Development Service
- Transport Scotland
- Highlands & Islands Enterprise

- Network Rail
- First Scotrail
- Scottish Natural Heritage (SNH)
- Scottish Environment Protection Agency (SEPA)
- Historic Scotland
- Marine Scotland

Economic Stakeholders

- Highlands & Islands Enterprise
- Kirkton Woodland & Heritage Group
- Lochcarron Community Council
- Stromeferry & Achmore Community Council
- Plockton Community Council
- Applecross Community Council
- Lochcarron and District Business Association
- Area Highland Councillors
- Forestry Commission

Also present during the workshop were:

- Colin Howell and Gary Smith, The Highland Council (THC) TEC Services, PDU Golspie, the Client.
- David Taylor, Jonathan Campbell, Jill Irving, Zoe McClelland and Anke Menzinger, URS Infrastructure & Environment UK Ltd, STAG Appraisal team.

A copy of all workshop registers taken during the events is enclosed in Appendix A of this document.

A Stakeholder Information Pack document was issued to all Stakeholders prior to the first round of workshops. This included a Stakeholder questionnaire, which all attending Stakeholders were asked to consider in preparation for the first workshop. A copy of this questionnaire can be found in Appendix B.

All information received and discussed throughout the workshops is summarised in chapter 4 of this report.

Not all the Stakeholders involved in the project were fully familiar with appraisal or feasibility processes in general, or the requirements under STAG in particular. It was therefore required

to ensure that the process adopted under this appraisal was conducted at a suitable pace and providing adequate information (technical and non-technical) to keep all Stakeholders fully involved.

This was achieved by means of several workshop stages, which formed part of a continuous process. Information issued to Stakeholders throughout this process was regularly updated and circulated to all involved.

3.3 Aim & Content

3.3.1 1st Round of Stakeholder Workshops

In order to ensure that Stakeholder involvement was successful, it was an important part of the process to inform Stakeholders adequately and keep them actively involved throughout the appraisal / assessment process.

Therefore, the aim of the first round of workshops was to provide a general introduction to all Stakeholders to both the project and the appraisal processes. The Workshops provided a forum in which the Stakeholders could consider and discuss the Pre-Appraisal requirements under the Scottish Transport Appraisal Guidance.

Details of the first Stakeholder workshops can be found in the respective summary reports issued to all Stakeholders following the discussions.

The first round of Stakeholder workshops was to:

- (Re)- Introduce the Project and engage Stakeholders in order to discuss their *Key Issues* in relation to this project;
- Highlight any current or future *Problems* anticipated with a particular route corridor or location;
- Highlight any *Opportunities* or *Ambitions* that Stakeholders may wish to realise through this appraisal process;
- Highlight any identified *Constraints* within the study areas;
- Commence setting of *Project Objectives (*Government, National and Local);
- Commence Options / Corridor Identification;
- Enable Stakeholders to understand the position of Others affected by this project.

Queries were raised at this point concerning the relevance of applying the STAG processes to the current project. Concerns were voiced that these processes could prolong the timescales to realise the project, and the urgency of a solution was clearly evident amongst workshop attendees.

The Highland Council representatives confirmed that complying with the STAG processes was paramount to the success of the project, as this would ensure that the current appraisal work was carried out in accordance with processes which are recognised and approved by the

Scottish Government. This is assumed to provide crucial support for the project at funding stage, as well as when presenting the case through any Public Inquiry.

3.3.2 2nd Round of Stakeholder Workshops

During the second stage of workshops , the process under STAG was re-iterated and discussions and findings from the previous workshops summarised. Further discussions followed to firm up on the list of proposed draft Project Objectives. A first step to developing general project objectives into 'SMART' (specific, measurable, attainable, relevant and timed) objectives was also taken.

In the second part of the workshop discussions, previously proposed route options were reviewed, starting with a further presentation of historically considered routes and corridors. The aim was to re-confirm current relevance of these historical routes and corridors and to add newly considered options where applicable.

3.3.3 3rd Round of Stakeholder Workshops

A final workshop was held in January 2013, involving both Stakeholder Groups, to conclude on the discussions and findings of this STAG Pre-Appraisal stage.

The workshop included a site visit, as well as further workshop discussions, which aimed to finalise wording of the developed (SMART) Project Objectives, and a detailed discussion and sifting of route options. Aiding the discussions were documents which had been issued to Stakeholders prior to and on the day of the workshop.

A list of all issued documents during this Pre-Appraisal stage can be found in Appendix C of this document.

4 SUMMARY OF WORKSHOP DISCUSSIONS

4.1 1st Round of Stakeholder Workshops

The first round Stakeholder Workshops focussed on three main discussion sessions, which aimed to fulfil the requirements stipulated in the STAG, under the Stage 1, Pre-Appraisal process.

The targets set for these discussions were:

- Discussion 1: to identify Problems, Opportunities and Constraints,
- Discussion 2: to set Objectives, and
- Discussion 3: to start considering feasible Route Corridors.

The following pages summarise the key issues noted during the above discussions.

Workshop attendees were also encourage to (re) consider the questionnaire issued as part of the information pack (refer to Appendix B of this document) and provide further feedback beyond the workshop discussions.

4.1.1 Discussion 1: Problems, Opportunities & Constraints

Introduction

The identification of existing and potential problems, opportunities and constraints within the transport and land-use system ('study area') forms the starting point for the development of a transport proposal.

A key element in the STAG process is to be able to recognise the root causes of any identified problems within the study area and to develop transport improvement options that address the underlying issues. Identified problems should be supported by an analysis of available opportunities and an understanding of the constraints and uncertainties that may impact on the success of a proposed transport improvement option. Wherever reasonably practical, problems should be quantified in order to gauge the scale of the problem and to assist in defining appropriate targets as part of the established transport planning objectives.

Existing Problems

The identification of existing problems within the current transport corridor and wider study area was considered an important process in the development of appropriate transport proposals in the future.

Items identified as 'existing problems' during the workshops for both Stakeholder groups are shown below.

- Existing road structure of poor standard and alignment, with existing bottlenecks, unsuitable for heavy traffic (considering Kishorn etc)
- Lack of reliability due to risk of future rock fall and associated road closures, with potential detours of 140 mile length, on existing route

- Potential for disruptions due to rockfall on railway line
- Potential of disruptions to crucial lifeline route from Lochcarron / Applecross area to Broadford hospital on Skye
- Potential delays due to disruptions of route could add to journey times, which would be particularly felt by school services, local business and haulage of livestock to Dingwall (added stress to animals)
- Existing route congested during summer months
- Poor access for young people in particular, to leisure facilities in Kyle, Plockton & Auchtertyre
- Isolation of Lochcarron Village due to existing route
- No direct link from Lochcarron south to Kyle, which was previously provided by ferry. Current journey times approximately 15 minutes longer
- Long term maintenance obligation of THC regarding existing corridor?
- Existing route crucial for postal services between Inverness and Potree (via Strathcarron)
- Existing route important for utility company access from Kyle north (services cut off during road closures)
- Potential road closures prevent forest operations in local areas due to risk of cut-off supply lines (site supervision, emergency access etc)
- Winter maintenance services based in Kyle, ie no services to Loch Carron during road closures
- No suitable crossing from North to South Strome at present, with difficult / restricted access routes at both ends
- Railway timetable unsuitable for local, regular and commuter use & currently not used to full potential
- Railway track unsuitable for heavy goods transport?
- No suitable public transport routes from Loch Carron area at present
- Low railway bridge at Lair and level crossings at Balnacra and Strathcarron
- Steep gradients on existing route
- No suitable access for timber extractions from Glen Udalain.
- Insufficient finance available from Local Government to sustain maintenance costs long term if further 2011 events occur
- Insufficient finance available from Local Government to realise new alignment scheme.

Future Problems

In addition to 'existing problems', 'future problems' were also identified during the discussions. These were as follows:

- Securing adequate funding of road scheme
- Potential difficulty to identify preferred solution
- Village of Lochcarron not suitable to take through traffic; bypass would be required if new route was to be along the north shore
- Causeway construction could have potential effects on existing environment
- Visual impact of a Strome bridge onto natural beauty of area
- Potential for increased journey times during road closures or if longer route was realised (Glen Udalain route)
- Attadale – Glen Udalain route may be affected due to its exposure during winter months
- Tunneling through potentially unstable rock appears unsafe. Tunnel option would not provide benefits to other sections (steep gradients, bottlenecks etc)
- Heavy traffic associated with future developments (Kishorn, renewables, Forestry etc)
- Bottleneck at Lair bridge restricts transport route from Lochcarron east
- Existing railway line not suitable for heavy goods transport (Kishorn, Forestry etc).

Opportunities

During the first round of workshop discussions, it was recognised that some of the problems identified could be developed into potential opportunities, as listed below:

- Provide a safe and reliable road to a better standard and lesser gradients, thus establishing A890 as recognised through route from Inverness to Skye with long term impact on local economic development
- Improve access to leisure facilities
- Improve access to and integration of Lochcarron Village
- Re-instating route via Strome would cut current journey times (in half)
- Improved access for forestry operations. If off-line route chosen, this would enable easier extraction of timber from South Strome and Stromeferry woodlands
- Kishorn Port development, providing adequate access north, south and east towards Invergordon

- General improved employment opportunities in the area
- Reduced journey times, in particular for school bus services
- Solution with integrated renewable option (if causeway bypass Lochcarron village)
- Potential for new developments, business and employment opportunities
- Explore options for renewable energy developments
- Explore opportunities for access to sea transport
- Explore opportunity for enhanced rail network to allow heavy transport and more regular services
- Improve accessibility through improved reliability of route
- Enhance Public Transport
- Positive effect on local businesses if journey times are reduced
- Opportunity to increase up-market tourism in the area (yachting)
- Opportunity to enhance experience by opening new areas, applying aesthetic design.

During the discussions it became clear that there is a strong feeling of opportunity amongst local communities with regards to the potential of development at Kishorn Port, as well as the wish to explore potential renewable energy developments in the area. In conjunction with discussions regarding potential for forestry developments in the area it was recognised, that suitable and reliable transport routes and journey times can be the deciding factor when it comes to the feasibility and financial viability of developments, particularly if these are considered to be marginal operations.

Constraints

The following constraints were identified during 'Discussion 1' for the study area:

- Identifying suitable funding for the project
- Existing topography
- Bridge clearance requirements
- Water voles, pine martins, eagles in Glen Udalain
- North / east facing ascent of southern routes (likelihood to cause problems during winter months)
- Crofting tenure on northern side of loch
- Landownership & current land use (crofting)
- Instability of rock

- No disruption of tourist and business traffic acceptable at any time (no road closures)
- Railway
- Bottlenecks on eastern road link (Lair bridge)
- Journey times and restricted timetable on ferry crossing
- Steep road gradients (cyclists, heavy goods transport etc).

The importance that all of the discussed 'Problems, Opportunities and Constraints' should receive due consideration in the development of the Project Objectives, which are to be used as part of the STAG appraisal process, was noted. To achieve this, all items were proposed to be grouped and allocated an action to ensure that no aspects were lost during the assessment process. A table was developed to cater for this process, and presented during the second round of workshop discussions for further refinement.

Please refer to Table 4.1 included at the end of this section of the report.

4.1.2 Discussion 2: Setting of Objectives

Introduction

Setting appropriate objectives is key to the development and appraisal of any planning proposals.

During the workshop discussions, it was proposed that the objectives should be categorised into 'strategic' and 'local' objectives.

Strategic objectives would consider Government and National objectives, policy directives and objectives led by legislation etc. This aspect was addressed at the first Regulatory Stakeholder workshop and Stakeholders provided base information that has now been compiled into the tables contained in chapter 5 of this report. These will be considered in Part 1 and 2 of the STAG appraisal.

It was also proposed that local objectives would develop out of aspirations and opportunities identified when considering the existing local conditions and problems within the study area.

All objectives set and appraised under STAG will then have to be considered under the following five categories:

- Environment
- Safety
- Economy
- Integration
- Accessibility and Social Inclusion

In order to deliver and measure performance against an objective, both categories of objectives will then be developed into 'SMART' (Specific, Measurable, Attainable, Relevant and Timed) transport planning objectives. This method of defining objectives is meant to

provide adequate transparency to the process of objective setting and assists in focussing on the key aspects of a project.

Transport Planning Objectives under STAG are aiming to:

- Provide all Stakeholders with a clear indication of what practitioners are trying to accomplish;
- Serve as a basis for directing and guiding the entire study process;
- TPO can provide motivation, unity and integration;
- Facilitate accountability of the decision maker throughout the STAG appraisal process;
- Introduce clarity where there may exist strong vested interests and entrenched views on priorities.

Objective Setting

The second discussion held during this workshop focused on the setting of local project objectives.

Table 4.1 lists the draft objectives discussed during this session. In addition, the results from the discussions have been, where applicable, set in relation to the relevant STAG criteria as listed above.

Stakeholders attending the workshop were issued with a questionnaire prior to attending the workshop. All Stakeholders were further encouraged to make their entries available to the appraisal team. Feedback was invited both verbally during the workshop, as well as in writing to URS personnel (refer to contact list included in Stakeholder Workshop Information).

In producing the summary of Discussion 2, 'Setting of Objectives', as shown in the following table 4.1, it was recognised, that most of the listed aspirations and objectives would fall under the category of 'local objectives'.

In addition to a summary of the above, results from both Stakeholder Workshops were presented during the first round of workshops, in order to inform both groups of objectives discussed previously by both groups. It was noted that there were various similarities between the two stakeholder group discussions.

It was proposed that all listed objectives, in addition to any strategic objectives to be identified and added, were to be developed into 'SMART' objectives during the pre-appraisal assessment process. These were proposed to be presented in a joint summary report / pre-appraisal report after completion of all pre-appraisal workshops.

TRANSPORT PLANNING OBJECTIVES DEVELOPED DURING WORKSHOP **TABLE 4.1**

		Appraisal Criteria Objective				
Ref.	**Draft Transport Planning Objectives**	**Environment**	**Safety**	**Economy**	**Integration**	**Accessibility**
1	Create a safe, reliable route to modern day standards, realised at reasonable timescales		√	√	√	√
2	Aspiration should be to provide a two lane route		√	√	√	√
3	Recognise THC long term ambition to upgrade whole route between Dingwall and Kyle to single carriage way standard					
4	Route to be sustainable & reliable, maximising opportunities for local sustainable development and economic growth, considering current and future housing requirements		√	√	√	√
5	Consider a reliable route to adequate, modern standards in between Kishorn Port and Invergordon, which would be of regional importance			√	√	√
6	Maximise the opportunities available to the Lochcarron and Lochalsh communities to access potential new regional economic activity such as at Kishorn, a potential base for wind turbine assembly			√	√	√
7	Reduce journey times			√	√	
8	Deliverability of scheme; identify feasible and affordable option			√		
9	Consider phased approach to allow integrated renewable energy solutions and to maximise the benefits at particular locations			√		
10	Consider renewable development as potential funding opportunity			√		
11	Improve accessibility and community integration, particularly for young people, considering leisure facilities, schools etc				√	√
12	Improve transport links (to forests) and markets to east and north			√		√
13	Ensure new route option does not restrict access to forestry areas					√
14	New route should improve tourist experience , considering West Coast link, Yachting etc			√		√
15	Improve access for people and equipment in order to exploit the potential renewable energy sector and sustainable energy provision that is possible at, for example, the Narrows scoped for tidal power, and also various potential wind farm sites in the area			√	√	√
16	Improve public transport links (consider bus, ferry, railway)			√	√	√

4.1.3 Discussion 3: Options & Route Corridors

As part of the STAG assessment process, it is important to derive a range of options. The process of considering and eliminating possible routes and options should be carried out in a logical, transparent and auditable manner.

During this part of the STAG process, both historical and new proposed routes and route corridors were considered. The Stromeferry Bypass project has a long history of feasibility considerations for both on-line and off-line route options given the ongoing problems associated with the existing route. This historical work was to be given due consideration, without prejudice for any particular option, alongside any new routes or options that may be proposed during the workshop discussions.

The first round of Stakeholder Workshops aimed to re-examine the local area of Stromeferry and Lochcarron with regards to existing transport links and present historical route corridors and routes, as well as open up discussions regarding the extent and suitability of a feasible study area which will be considered throughout the appraisal process.

Mapping which was presented during Discussion 3 of the workshop is enclosed in Appendix E of this document. Feedback from the Stakeholder Group regarding feasible route corridors and the overall study area was invited and it was proposed to continue these discussions as part of the next workshop.

At the discussions held during this part of the workshops, the following was taken note of and will be considered as the scheme develops:

- This project is potentially of international importance but restraint by the local road network
- Kishorn Port access should be included in considerations
- Recognition that route upgrade east of Strathcarron Junction (Balnacara level crossing, Lair bridge and single track road up to Lair bridge) is common to all options likely to be considered. Funding for an upgrade of this route would have to be sought independently of the Stromeferry considerations, and may become part of THC proposals for inclusion into the 10 year Capital Programme
- Study area considered for route options and corridors will be smaller than the area considered during the economic and traffic part of the appraisal
- Include route east of Glen Attadale connecting from Glen Udalain directly into Strathcarron
- Include route from Plockton across the Strome Islands towards the north shore of Loch Carron
- Consider cantilever structure along south shore to bypass existing rock fall areas
- Consider road on railway line
- Recognition that tunnel option dismissed too early in previous process.

4.1.4 Actions & Next Steps

Actions

The Stomeferry Options Appraisal 1st round of Stakeholder Workshops concluded with a brief presentation and discussion about where the process was to lead from here.

In order to keep all parties informed and involved, the results and outcome from this round of workshops was summarised in two separate summary reports, and issued to all Stakeholders who were invited to participate in this process. For this purpose, these document were compiled both for information and as a record of the proceedings.

Next Steps

1) Based on these summary of discussions and proceedings compiled from the 1st round of Stakeholder Workshops, URS was to:

- Develop Transport Objectives, considering all highlighted Problems, Opportunities and Constraints, as well as noted local and published strategic Objectives, using STAG criteria and SMART categories;
- Sift Objectives and outcome of discussions;
- Develop proposals for a study area and route corridors.

It was at this point proposed, to develop a set of summary tables (refer to table 4.2 at the end of this chapter), which were to be used to assess all aspects of 'Problems, Opportunities and Constraints' highlighted during the discussions, in order to develop these into relevant Project Objectives and to ensure, that none of the issues will be lost in the process.

An attempt to group the issues and to allocate a suitable action was to be made. This was proposed to be included into the 'sifting process' during the Pre-Appraisal stage of the project.

2) All Stakeholders were required to prepare for the next Workshop by means of:

- Reviewing the output from Workshop Number 1 and providing further feedback if possible;
- Considering possible Corridors, Route Options and emerging Routes, as well as a feasible Study Area;
- Staying in touch and informed, either through THC website, direct contacts with the appraisal team or further Stakeholder meetings.

3) Further Workshops were to be held as follows:

- Second Workshop for Regulatory Stakeholders on the 12th December 2012 in Inverness;

- Second Workshop for Economic Stakeholders on the 10th January 2013 at the Strathcarron Hotel;
- Joint Stakeholder Workshop towards the end of January 2013.

The following Agenda was proposed for the 2nd Round of Stakeholder Workshops:

1. Introduction
2. Presentation of Previous Workshop Findings & Discussions
3. Route Corridors & Options proposals
4. Open Discussions
5. Feedback, confirm Options & Route Corridors
6. Summary of Pre-Appraisal Workshops
7. Follow up / Way Forward

4.2 2nd Round of Stakeholder Workshops

The second round of Stakeholder workshops was aimed to re-confirm the appraisal processes to be applied under this project. It was also to be part of the continuous process to inform and engage the Stakeholder groups in the development of project objectives and the discussions regarding route options and corridors.

4.2.1 Discussion 2 Appraisal Process

After introductions and an update on progress, a facilitated discussion was held focused on the identified project objectives, and wording to be used in developing these into SMART Objectives. As mentioned in section 4.1, tables were generated in order to summarise the first round of workshop discussions and to further aid the development of identified problems and constraints into project objectives and SMART objectives during the second and third round of workshops.

These tables have been re-produced, as issued in January 2013, and can be found on the following pages in order to demonstrate, how the discussion process was recorded and illustrated.

The following tables are included:

Table 4.2:	Identified Problems (Existing Problems & Future Problems, making reference to identified actions and opportunities);
Table 4.3:	Identified Opportunities;
Table 4.4:	Identified Constraints;
Table 4.5:	Developed Objectives (Transport Planning Objectives developed during Stakeholder workshops 1 & 2);
Table 4.6a:	Developed Transport Planning Objectives translated into SMART Objectives (1st draft of SMART Objectives developed after workshop 2);
Table 4.6b:	Proposed SMART Objectives (as presented for discussions 31st January 2013, workshop 3).

4.2.2 Discussion 3 Route Corridors & Option Proposals

Workshop discussions also included further considerations on presented route options. The output was further developed in the last (joint) workshop, workshop 3.

In addition to options, the discussion addressed the study area giving consideration to the emerging objectives and alignments being considered. A comparison was made between the historical study area and that being proposed to take forward with this study as shown in Appendix E.

It was accepted a wider area would be required to assess particular soci- economic benefits and this would be addressed during the Traffic and Economic Assesssment to satisfy the DMRB Stage 1 work.

Several areas of potential development were discussed and it was accepted road improvements would benefit them They have not been included in the study area but are recorded on the drawings. It is assumed if appropriate they will be developed outwith this project. They are:

- Kishorn Port access
- Route upgrade east of Strathcarron Junction (Balnacara level crossing, Lair bridge and single track road up to Lair bridge
- Route from Plockton across the Strome Narrows

The alignment options discussed at this point are illustrated on 47065084 – 602 Rev A in Appendix D.

Identified Problems

Identified Existing Problems **Table 4.2**

Group	Item No	Item from List of identified 'Problems', 'Opportunities' and 'Constraints'	Action	Opportunity	Reference
Health & Safety	H1	Safety Concerns (risk of personal injury and damage to property from rock fall) & reliability of existing route (lack of local confidence in stability of rock face and high risk of future rock fall)	Will become Objective, to be addressed in study and solution made reliable. Condition of existing route (for any solution) will have to be addressed. Use to create opportunity	Improvement of whole road section between Strathcarron and Strome Create a suitable route using 'Best Practice' techniques	O13 O2
	H2	Poor Standard of existing road & alignment	Use to create opportunity	As above and O1	
	H3	Emergency vehicle and access to Broadford hospital on Skye potentially disrupted	Will be addressed by new route, including considerations during construction. Contingency plan currently in place.	Create a reliable access route	O14
	H4	Risk of rock fall onto railway line	Contingency plan currently in place. Refer to R1	Consider long term solution to make whole corridor safe; use existing road corridor for separation / rock ditch	

Identified Future Problems **Table 4.2**

Group	Item No	Item from List of identified 'Problems', 'Opportunities' and 'Constraints'	Action	Opportunity	Reference
Health & Safety	H5	Future weathering of rock face	Inter relationship with road and rail will become part of appraisal for on-line or off line route. Close working relationship to be built with railway colleagues to identify 'best' mutual solutions	Consider long term solution to make whole corridor safe; use existing road corridor for separation / rock ditch	
	H6	Potential of heavy transport movements through Lochcarron Village	Consider any on-line proposals through Lochcarron village carefully, to ensure safety and acceptability	Improve road corridor through and connectivity to Lochcarron	
	H7	H&S issues due to unstable rock faces, during maintenance & construction works	CDM considerations during Options appraisal	Provide safe, (off-line) route	

Identified Existing Problems (continued)					Table 4.2
Group	Item No	Item from List of identified 'Problems', 'Opportunities' and 'Constraints'	Action	Opportunity	Reference
Disruption	D1	Effectiveness of existing rock netting / protection	-	Long term solution not to depend on effective netting	
	D2	Journey times during diversion, cost to local businesses, tourists etc.	Journey times will become objective. Use to create opportunity	Reduce journey times	O9
	D3	Potential disruption of public transport links, school bus services, postal and other services in the area	Will be addressed by new route, including considerations during construction. Contingency plan currently in place.	Provide a reliable, safe route	1
	D4	Mitigation measures during disruptions limited; ferry availability very limited (daytime hours only)	Contingency plan currently in place Use to create opportunity	Opportunity to re-instate the ferry service on a reliable basis	O17
	D5	No guaranteed resilience of existing route / constant risk of road closure	See H1 Use to create opportunity	Identify best option and create route to modern, appropriate standard	O1 O5
	D6	Perceived lengthy journey time due to congestion during summer months	Journey times will become objective. Use to create opportunity	Reduce journey times	O9
	D7	Transport link for livestock movements between Kyle and Dingwall. Prolonged journey times cause added stress to livestock	As above	As above	

Identified Future Problems (continued)					Table 4.2
Group	Item No	Item from List of identified 'Problems', 'Opportunities' and 'Constraints'	Action	Opportunity	Reference
Disruption	D8	Potential disruptions and road closures during on-line construction works	Economic Stakeholder emphasis on 'no disruption' during construction. Consider this is assessment of options, but keep open mind to not be exclusive of on-line options	Consider minimal disruptions as strong objective throughout appraisal process. Find solution that will minimise disruption both short and long term	O3, O9, O21, O22

Identified Existing Problems (continued) **Table 4.2**

Group	Item No	Item from List of identified 'Problems', 'Opportunities' and 'Constraints'	Action	Opportunity	Reference
Landscape & Environmental	L&E1	Existing rock netting conceals SSI area of rock cut (site of geological importance)	Recognised but will need to link to R1	Enhance access to SSSI if feasible	
	L&E2	Problems with current route prohibit enjoyment of natural heritage and area	Benefit to Natural Heritage taken to Objective Create opportunity	Enhance driver / tourist experience on route Consider road cantilevered over lochside (Pulpit rock design) Potential for new loch side access	O3 O4 O7
	L&E3	Steep topography of area	Consider during Options appraisal	Consider routing alleviating problems with steep gradients	

Identified Future Problems (continued) **Table 4.2**

Group	Item No	Item from List of identified 'Problems', 'Opportunities' and 'Constraints'	Action	Opportunity	Reference
Landscape & Environmental	L&E4	Unscheduled archaeology uncovered during excavations	Investigations will be undertaken. Specification and Programme will address this during construction	-	
	L&E5	Strome Narrows bridge crossing would greatly impact on natural landscape	Apply best practice principles	Refer to Opportunity O3	O3
	L&E6	Areas of ecological value potentially effected by all routes	Apply best practice principles	Refer to Opportunities O1 & O4	O1, O4
	L&E7	Likelihood of future rock fall from cut faces along existing route due to geological nature of rock	Consider both on and off line solutions, not forgetting the longterm obligations to protect from rock fall along the existing route	Enhance cut slopes, applying sound engineering principles	O2
	L&E8	Potential for higher altitude road levels for off-line routes with impact on winter maintenance	Consider during route appraisal	Preferred route to result in reduced maintenance costs	O2
	L&E9	Potential impact on water environment and flood risk	Consider during route appraisal	Use opportunity to enhance water environment	O26
	L&E 10	Available corridor for land purchase not adequate to achieve full habitat / environmental mitigation	Consider under SMART objectives	Ensure best practice principles are applied	O2
	L&E 11	Existing deer and livestock management, as well as fish farming etc restricting development areas	Consider during route assessments	Ensure preferred routes have minimum impact	O1, O2
	L&E 12	Restricted clearance for ship movements underneath new bridge structure	Ensure adequate consultations conducted during appraisal process	Ensure all interested stakeholders adequately consulted. Potential for renewables incorporated into crossing	O15, O16
	L&E 13	Impact on scheduled monument of Strome Castle and it's surroundings	Apply best practice principles	Refer to Opportunities O1 & O4	O1, O4

Identified Existing Problems (continued) **Table 4.2**

Group	Item No	Item from List of identified 'Problems', 'Opportunities' and 'Constraints'	Action	Opportunity	Reference
Socio – Economics	S1	Southern routes would bypass village of Lochcarron, which is already isolated due to existing road network at present	Will be considered during study when considering options.	Enhance linkage and integration of Lochcarron Village	O23
	S2*	In the event of a rock fall and road closure, 140 mile detour required	Consider source and target of traffic	Preferred solution does reduce risks of regular road closures	O22
	S3*	Existing road is unreliable and alignment does not comply with modern standards	Carried to Objectives, will be addressed. Create opportunity	Refer to O1. Consider NMU particularly cyclists	O10
	S4*	Poor existing Community Transport (all transport links to and from the communities)	Create Objective. Traffic & Economic assessment to address this.	Enhanced community transport links through more reliable road & rail network	O22, O24
	S5*	Poor / restricted access to Community Services & Leisure Facilities	Consider good networking and linkages during route assessment	Improved access and integration	O19
	S6*	Poor vehicular access to and from South Strome ferry slipway	Consider all alternative route options, including adequate access to ferry slip ways	Improved ferry facilities	O17
	S7*	Forestry – unreliable road link with no feasible alternative routes adding to high transport costs	Consider adequate linkage to areas of potential forest harvesting	Open new areas for forest harvesting, providing reliable route to adequate standards	O1, O16, O21, O22
	S8*	Forestry – areas for potential timber extraction restricted due to lack of suitable road access	As above	As above	

Note: * denotes numbering amended

Identified Future Problems (continued) **Table 4.2**

Group	Item No	Item from List of identified 'Problems', 'Opportunities' and 'Constraints'	Action	Opportunity	Reference
Socio – Economics	S9*	Existing routes unsuitable to cope with traffic growth on road and rail (heavy traffic associated with future local developments at Kishorn etc) Reference Carron & Lair Bridges, Maman Hill etc	Make Objective. Traffic & Economic assessment will address this. Create opportunity	Design to consider future expectations as far as possible Enhanced Kishorn port access (local access as well as south towards Ft William) Potential for renewables schemes (tidal, wind etc) could open up further funding Opening new areas for forest harvesting, fish farming, walkers etc	O4 O8 15 16
	S10*	Community linkage during construction	Works Specification and Programme to address this during construction	Consider alternatives & contingency measures, including improved ferry links	O17
	S11*	Accessibility and social inclusion within the wider area of Scotland	Create Objective. Traffic & Economic assessment will address this. Consider as opportunity	Improved access to Broadford Airport, consider links between Skye and Wester Ross	O14
	S12*	Confidence in team to deliver project and potential difficulty identifying preferred solution	Create Objective	Active Stakeholder involvement and regular reporting to Client to ensure delivery of project	-
	S13*	Suitable access for Utility Companies	Consider all road users during appraisal and ensure emphasis on vital linkages / life line routes in existing road network	Enhance accessibility and journey times long term	O9, O21; O22
	S14*	Potential for extended journey times on new routes (inland route)	See also D6. This will be assessed as part of the traffic & economic exercise	Enhance reliability of route and consider (shorter) journey times	O9, O22

Note: * denotes numbering amended

Identified Existing Problems (continued)					Table 4.2
Group	Item No	Item from List of identified 'Problems', 'Opportunities' and 'Constraints'	Action	Opportunity	Reference
Financial	F1	Cost and maintenance of existing route	Will become assessment factor during route selection	Produce solution that is 'value for money' and reduce maintenance costs in relation to existing corridor to a minimum	O1, O2
	F2	Transport costs increased due to unreliable route / length of route / potential for disruptions & diversions	Consider economic impact of road closures; assess cost of delays, disruptions, journey length etc	Improved transport links along west coast, east and south from the area	O9, O21, O22

Identified Future Problems (continued)					Table 4.2
Group	Item No	Item from List of identified 'Problems', 'Opportunities' and 'Constraints'	Action	Opportunity	Reference
Financial	F3	Securing funding for scheme	Important point, which is to be consolidated later on in the appraisal process	Explore funding opportunities through renewable developments	O15

Identified Existing Problems (continued) **Table 4.2**

Group	Item No	Item from List of identified 'Problems', 'Opportunities' and 'Constraints'	Action	Opportunity	Reference
Railway Interface	R1	Existing road provides some protection to railway line. If road removed, residual risks for railway to be considered	Inter relationship with road and rail will become part of appraisal for on-line or off line route. Close working relationship to be built with railway colleagues to identify 'best' mutual solutions. Use to create opportunity	Provide a wider / standard cross section with adequate separation of road and rail by improving existing transport corridor	O5
	R2	Close proximity of road to railway and vulnerability of both to rock fall	As above	As above	O5
	R3	Railway line currently categorised as 'high risk' with the result of speed restrictions on this route to 30mph	As above	As above	O5
	R4	Railway line currently not used to full potential (transport of heavy goods, poor timetable etc)	Explore possibilities of future expansion / modernisation of route through discussions with NR	Opportunity to enhance rail to sea transport links and public transport routes	O20, O24
	R5	Existing railway line not suitable for heavy transport or higher speed?	As above	Opportunity to improve railway line and services	
	R6	Existing level crossing at Strathcarron	Consider in route assessments	Remove need for level crossing	O12

Identified Future Problems (continued) **Table 4.2**

Group	Item No	Item from List of identified 'Problems', 'Opportunities' and 'Constraints'	Action	Opportunity	Reference
Railway Interface	R7	Separation road / rail	Inter relationship with road and rail will become part of appraisal for on-line or off line route. Close working relationship to be built with railway colleagues to identify 'best' mutual solutions Consider as opportunity	Consider a level, shared road / rail solution long term Remove level crossings	O11 O12
	R8	If new route established, what happens to existing road corridor & railway line	Problem acknowledged and will be addressed at the route selection stage.	Create engineered separation between railway and rock face using road corridor for rock ditches	-

Identified Opportunities

Opportunities Identified during Stakeholder Workshops	Table 4.3
Item No	Opportunity
O1	Road design to an appropriate (design) standard and appropriate / proportionate for the area considering the value of the natural environment, with an aspiration to provide single carriageway width throughout
O2	Introduce Best Practice Principles
O3	Enhance driver / tourist experience on route
O4	Design to consider future expectations as far as possible
O5	Provide a wider / standard cross section with adequate separation of road and rail by improving existing transport corridor
O6	Consider road cantilevered over lochside (Pulpit rock design)
O7	Potential for new loch side access
O8	Enhanced Kishorn port access (local access as well as considering access south towards Ft William and with particular emphasis on access east towards Invergordon)
O9	Reduced journey times (*particularly considering school transport and business access)*
O10	Consider cyclists
O11	Consider a level, shared road / rail solution long term
O12	Remove level crossings
O13	Improvement of whole section between Strathcarron Junction and Strome
O14	Improved access to Broadford Airport, consider links between Skye and Wester Ross
O15	Potential for renewables schemes (tidal, wind etc) could open up further funding
O16	Opening new areas for forest harvesting, fishfarming, walkers, renewables etc
O17	Opportunity to re-instate the ferry service on a reliable basis
O18	Create new employment opportunities in the area
O19	Improved access to leisure facilities, in particular for young people
O20	Opportunity to create new links to sea transport from road and rail
O21	Improved accessibility – including for existing routes
O22	Improved reliability – including for existing routes
O23	Improved integration of Lochcarron Village
O24	Enhance Public Transport routes
O25	Create new business opportunities in the area (yachting etc) and enhance West Coast route
O26	Use opportunity to enhance the water and wider environment as part of design considerations

Identified Constraints

Constraints Identified during Stakeholder Workshops	Table 4.4
Item No	Constraint
C1	Nature of existing rock cuts could always lead to more failures and intervention would never be guaranteed to protect longterm
C2	Unknown stability of future rock cuts
C3	Topography of the area, hillside and steep sided shoreline, loch, *altitude, gradients* etc
C4	Potential level above OD of new routes
C5	Existing railway line
C6	Level crossing at Strathcarron (if road widening or re-alignment considered)
C7	Existing SSSI – rock faces are site of geotechnical importance
C8	Potential Flood risks (design consideration)
C9	Impact on peat and wetlands (design of new routes) and potential for peat bogs etc
C10	Available corridor for land purchase too limited to achieve full habitat / environmental mitigation measures
C11	Deer and livestock management
C12	Strome Narrows, site of national importance with regards to it's natural heritage and high quality landscape (but not designated site). Marine consultation area.
C13	Clearance / headroom requirements for bridge options
C14	Strome Castle, scheduled monument within area of natural beauty; listing of monument includes the setting of the castle
C15	High quality natural landscape – Natural Heritage of area
C16	Tides and currents, fish movements, fish farming
C17	Rail to sea at South Strome for Kishorn Port
C18	Forestry – unreliable road link with no feasible alternative routes adding to high transport costs
C19	Forestry – areas for potential timber extraction restricted due to lack of suitable road access
C20	Landownership & Land Use (Crofting etc)
C21	Finance to achieve objectives
C22	Environmental constraints (Attadale route; eagles, water voles, badgers etc)
C23	Unacceptable disruptions due to effect on tourism & local business during construction (road closures)
C24	Consider short term disruption to (rail) travellers to achieve long term solution and consider phased delivery to include renewable opportunity

Developed Objectives

TRANSPORT PLANNING OBJECTIVES DEVELOPED DURING STAKEHOLDER WORKSHOPS — **TABLE 4.5**

		Appraisal Criteria Objective				
Ref.	**Draft Transport Planning Objectives**	**Environment**	**Safety**	**Economy**	**Integration**	**Accessibility**
1	Safeguard the natural environment and areas of national importance (geological SSSI) and heritage by applying best practice principles to engineering solution	√				
2	Use the opportunity to enhance the natural & built environment & habitat (natural heritage) and driver experience by adopting best practice procedures in developing a solution	√	√			
3	Reduce / minimise risks during *design,* construction, maintenance, *and operation.*	√	√	√		
4	Deliverability of outcome with minimum of *all* risk, at reasonable timescale and feasible cost	√		√		
5	Provide a (new) safe and reliable *2 lane carriageway*, that users will have confidence in, now and in the future, by (~~means of providing a road to modern standards, considering local business, tourists, cyclists (NMU), community & strategic aspirations~~,) applying appropriate / proportionate design standards. ~~Aspiration to provide single carriageway width (2 way traffic) throughout~~ ~~Aspiration to c~~ Consider wider area *by* providing suitable route east to Dingwall and Invergordon, south to Ft William and along west coast (tourist route)		√	√	√	√
6	Solution does not increase (*reduces?*) the risk to the railway and maintains suitable access to the railway line		√			√
7	Reduce maintenance burden of existing route *by providing* 'Good value for money' *deliverable* solution ~~providing a deliverable solution~~ which is proportionate to location and needs and is 'future proofed'			√		
8	Work ~~effectively~~ to ensure speedy scheme delivery			√		
9	~~Consider~~ Maintain and enhance short and long term employment ~~in solution~~ *opportunities*			√		
10	Enable & enhance ~~economic /~~ social ~~development~~ *cohesion* ~~in local and wider area, including the Kishorn yard and potential for renewable developments~~ *and development and sustainable economic growth, locally , regionally and nationally, exploiting opportunities presented by Kishorn, Kylerhea and other potential renewable developments*			√	√	√
11	Maintain / enhance choice of transport & public transport links in the area			√	√	√
12	~~Minimise journey times long term~~ *Maximise network efficiency, considering* journey times and reliability			√	√	√
13	~~Provide direct transport link from Lochcarron to Lochalsh~~ *Improve longterm sustainable network connectivity along a north / soth corridor for the Wester Ross area*			√	√	√
14	~~Provide opportunity for sustainable development and economic growth to local area. Solution not to prohibit renewable energy opportunities and maximise benefits for tourism, local business and housing~~ *Sustain and maintain economic growth in the local area by exploiting opportunities provided by the renewable energy sector, tourism and other key sectors*			√	√	√
15	~~Improve~~ *Ensure policy* integration, *considering local and national planning strategies*				√	
16	~~Maintain continuous community transport links between Lochcarron and Kyle during construction~~ *Keep the A 890 and peripheral road network open during construction*				√	√
17	~~Improve accessibility & social inclusion~~ *Maintain and improve accessibility to local and regional leisure facilities, health and educational services, with particular emphasis on emergency services*				√	√

Note: Amendments made during workshop discussions on the 10th January 2013 are shown *italic.*
Deletions from the list are shown ~~xxxxxx.~~

Developed Transport Planning Objectives translated into proposed SMART Objectives

TRANSPORT PLANNING OBJECTIVES TRANSLATED INTO PROPOSED SMART OBJECTIVES TABLE 4.6			
Appraisal Criteria	Nr	Objective	Reference
Environment	a)	*Avoid* risk to the environment during delivery of project, including the construction and maintenance phase, safeguarding and, where possible and *appropriate*, enhancing the natural and built environment and areas of national importance and heritage, by applying best practice principles.	1, 2, 3, & 4
Safety	b)	Provide a long term safe and reliable two way route, that users will have confidence in, by means of using appropriate / proportionate design standards.	2, 5
	c)	Consider a route and design that reduces risks during construction, maintenance and decommissioning.	3
	d)	Solution does not increase the risk to the railway and maintains suitable access to the railway line.	6
Economy	*e)*	Maximise opportunity for sustainable development and economic growth to local area, considering community & strategic aspirations.	9, 11, 15
	f)	Ensure deliverability of scheme (giving due consideration to capital cost, programme & maintenance).	7, 8
	g)	Minimise short term disruption to local transport links to achieve long term solution and consider phased delivery.	10, 17
Integration	h)	Maintain / enhance choice of transport & public transport links in the local and wider area.	5, 11, 12, 13, 14, 16, 18
	i)	Reduce journey times by considering more direct links, and thus reducing transport costs and attracting through traffic from other routes.	13, 14
Accessibility	j)	Solution should recognise longterm aspiration for railway and maintain suitable access.	6
	k)	Ensure sufficient (transport) linkage to enable & enhance economic / social development in local and wider area.	11
	l)	Maintain / enhance choice of transport & public transport links in the area, during construction and long term, thus improving accessibility & social inclusion	12, 16, 18

Proposed SMART Objectives

TRANSPORT PLANNING OBJECTIVES TRANSLATED INTO PROPOSED SMART OBJECTIVES								TABLE 4.6B
		Appraisal Criteria Objective						
Ref.	**Draft SMART Objectives**			**Environment**	**Safety**	**Economy**	**Integration**	**Accessibility**
A(1)	Safeguard and, where possible and appropriate, enhance the natural and built environment and areas of national importance and heritage, during construction, maintenance and operation of the scheme (with reference to environmental appraisal)	a)		√				
B(2)	Minimise **all risk** during design, construction, operation and maintenance (with reference to Risk Register)	a) c)		√	√	√		
C(3)	Ensure deliverability of scheme within a set programme and to agreed capital cost and maintenance budgets, thus providing 'Value for Money'	f)				√		
D(4)	Deliver a safe and reliable, 2 lane carriageway, by applying appropriate / proportionate design standards	b)			√	√	√	√
E(5)	Deliver a solution that minimises the risk of damage to the railway line and disruption to railway operations, and meets the long term aspiration for the railway in terms of timetable performance and maintenance access over the life of the scheme	d) j)			√	√		√
F(6)	Keep the A 890 and peripheral road network open during construction	g)				√	√	√
G(7)	Maintain and improve social cohesion by improving accessibility for both emergency services responding to call-outs, as well as for the local population making use of local and regional leisure, health and educational facilities, by reducing journey times of the trips involved	l)				√	√	√
H(8)	Maintain and improve choice of transport mode and integration of public transport links over the lifetime of the scheme	l)				√	√	√
I(9)	Ensure scheme compatibility and policy integration with local and national planning strategies			√			√	
J(10)	Improve longterm sustainable network connectivity	i)				√	√	√
K(11)	Maximise / improve network efficiency and sustainable connectivity in terms of journey times and journey reliability in both the Wester Ross area and along a wider north / south corridor	i) h) k)				√	√	√
L(12)	Deliver a scheme that assists both the local businesses in the area to maximise opportunities for sustainable development and economic growth, as well as help local people exploit employment opportunities provided by the renewable energy sector, tourism and other key sectors over the life of the scheme	e)				√	√	√

4.3 3rd Round of Stakeholder Workshops

The last Stakeholder workshop was held as a joint Stakeholder group workshop, including both the 'Regulatory' and 'Economic' groups, at the Strathcarron Hotel in Strathcarron, Wester Ross.

The agenda for the day included a site visit for all interested parties in the morning, and joint Stakeholder discussions in the afternoon.

The aim of the site visit was to ensure all Stakeholders (some of which are remote from the site and had not previously had an opportunity to visit the site) appreciated the site and existing problems with regards to alignments, topography etc fully. It also endeavoured to introduce the areas proposed for new alignments / route options, which had been previously presented on plan only.

The Stakeholder Workshop focussed on two main discussion sessions, which aimed to fulfil and conclude the requirements stipulated in STAG, under the Stage 1, Pre-Appraisal process.

The purpose of these discussions were:

- To further discuss and agree final wording of proposed (SMART) Project Objectives,

and

- To further discuss, sift and agree Route Corridors and Options.

4.3.1 Final Discussion on Project Objectives

To aid the discussions regarding project objectives, tables 4.2 to 4.6 had been re-issued to all Stakeholders following the second round of Stakeholder workshops. Main focus was on table 4.6B, Transport Planning Objectives developed into SMART Objectives. This table and its contents were discussed in great depth, and final wording of draft Transport Planning Objectives agreed, as shown in table 4.7 of this report.

Attention had to be paid to the requirement to make individual objectives or the set of objectives 'SMART'

The objectives shown overleaf will be used to assess route options, applying a scale, rather than being exclusive when an option does not fully comply.

The Stakeholder discussions were concluded with the issue of the amended 'SMART Transport Planning Objectives' as per Table 4.7 to all Stakeholders following the joint workshop held on the 31st January 2013.

4.3.2 Final Discussions on Route Corridors and Options

The second part of the joint Stakeholder workshop held on the 31st January 2013 was aimed to finalise the Stakeholder discussions of proposed route corridors and options for all routes considered in relation to the Stromeferry Bypass.

Updated corridor and route drawings had been circulated to all Stakeholders prior to the meeting. In addition, a 'Route Options Summary' was prepared prior to the workshop to enable informed discussions during this part of the workshop. These tables included brief route descriptions, and offered an Engineer's comment on each route proposal, to aid the

discussions and provide a starting point, without prejudice or preference on any particular options presented. A sample of the route Options Summary' table is shown below:

Colour	Route Name	Main Corridor	Source	Length (km)	Route Description	Engineer's Notes, Pros/Cons (Pre – Workshop 31-01-13)
Purple	Outer North 1 (ON1) (bridge)	Outer North	New Route	15.7	A890 at Achmore - west online along existing road to Craig - Loch Carron crossing from Craig via Strome Islands to west of Lecanasigh - online through Stromemore to Strathcarron Junction	**Pros:** Opens access to Plockton area **Cons**: Major Loch Carron crossing of 3.1km length; Railway crossing south shore; Impact of bridge structure (potential restrictions on shipping; visually; environment) Long term maintenance obligation for existing road corridor remains.

A copy of the full table, as issued to all Stakeholders during the workshop discussions, is provided in Appendix F of this report.

A copy of the circulated drawings 47065084 601 Rev A and 602 Rev A, showing the proposed route corridors and options, as presented for the joint Stakeholder workshop discussions, is included in Appendix D.

The focus of these workshop discussions was to finalise the Stakeholder discussions of proposed routes, and to carry out a first sift of the route options presented, with an aim to reduce the amount of options and the extent of the route corridors, where possible.

Each route option was presented in detail and discussed in its own right, and then either discarded or marked to be carried forward to the Part1 / Stage 1 assessment work, which would appraise each route in further detail, applying engineering, environmental and economic principles.

The discussions were summarised and concluded with the production of a revised route options drawing, 47065084 602 Rev C and an amended Route Summary Table (Rev D). Copies of these documents are also included in Appendices D and E of this document. Route corridors remained as previously presented.

Final SMART Transport Planning Objectives (as agreed 31/01/13)

TRANSPORT PLANNING OBJECTIVES TRANSLATED INTO SMART OBJECTIVES (FINAL) **TABLE 4.7**

				Appraisal Criteria Objective				
Ref.	**Draft SMART Objectives**			**Environment**	**Safety**	**Economy**	**Integration**	**Accessibility**
A(1)	Safeguard and, where possible and appropriate, enhance and provide access to the natural and built environment and areas of national, regional and local importance and heritage, during construction, maintenance and operation of the scheme (with reference to environmental appraisal)	a)		√				
B(2)	Minimise **all risk** during design, construction, operation and maintenance (with reference to Risk Register)	a) c)		√	√	√		
C(3)	Ensure deliverability of scheme within programme and to agreed capital cost and maintenance budgets, thus providing 'Value for Money'	f)				√		
D(4)	Deliver a safe and reliable, 2 lane carriageway, by applying appropriate / proportionate design standards	b)			√	√	√	√
E(5)	Solution reduces, or does not increase, the risk to and liability of the railway and maintains suitable access over the life of the scheme	d) j)			√	√		√
F(6)	Keep the A 890 and peripheral road network open during construction	g)				√	√	√
G(7)	Maintain and improve local social cohesion by improving accessibility for emergency services responding to call-outs, as well as for the local population making use of local and regional leisure, health and educational facilities	l)				√	√	√
H(8)	Maintain and improve choice of transport mode and integration of public transport links over the lifetime of the scheme	l)				√	√	√
I(9)	Scheme to take account of relevant local, regional and national planning policies (during the design stage)			√			√	
J(10)	(removed)	i)				√	√	√
K(11)	Maximise / improve network efficiency, sustainable connectivity and social cohesion in terms of journey times and journey reliability in the Wester Ross area	i) h) k)				√	√	√
L(12)	Deliver a scheme that assists both the local businesses to maximise opportunities for sustainable development and economic growth over the life of the scheme	e)				√	√	√

5 STRATEGIC OBJECTIVES

5.1 Policy Statements & Directives

STAG stipulates that 'practitioners should take cognisance of the Government's purpose and the National Transport Strategy (NTS). The associated strategic outcomes and indicators, including the Governments National Outcomes, outlined in the Technical Database, should be recognised during the objective setting process and should contribute towards the appraisal of options'.

Discussion took place with Regulatory Stakeholders during the first and second workshops when reference to some of the objectives listed below was made.

URS will assess alignment options against these ‘strategic objectives’ together with the Transport Planning Objectives to ensure national and local criteria are satisfied, in the STAG Part 1 / DMRB Stage 1 appraisal following this Pre-Appraisal process.

Policy Statements and Directives, leading to the ‘strategic’ objectives developed in connection with this Stromeferry Bypass Options Appraisal, are shown in Table 5.1 below.

Table 5.1: Policy Statements and Directives

Regulating Body	Policy Statement or Directive
The Highland Council – Local Objective (as per THC Programme 2012 to 2017)	THC will deliver a transport and infrastructure programme fit for the 21st Century. THC will work with all governments and agencies to deliver infrastructure projects to support employment and connect their communities. ➢ The Council will develop options for a long term solution which provides a secure and effective transport link between Lochcarron and the Lochalsh area in consultation withpartners and the local community, and pursue the options for securing external funding.
The Highland Council – Local Transport Strategy Plan	Principal Themes: • Safety; • Sustainability; • Economic development; • Integration; The HC LTS Vision: Through its Local Transport Strategy, THC seeks to enable and facilitate sustainable development and economic growth; support, include and empower communities through transparent decision making, and establish an integrated transport network which supports safe and sustainable environments in which people can live, work and travel. The above is expressed in Local Transport Strategy Objectives: • Economy: provide a transport network to enable sustainable economic growth, noting the very different conditions between urban and rural locations and addressing the remoreness factor facing Highland trips to the rest of the UK; • Social Inclusion: Facilitate travel to enable economic/social involvement and improve access/travel choices to essential services for those without access to a private car; • Environment: manage/reduce the impacts of transport on the natural and built environment; • Health: Increase levels of cycling and walking to promote health improvement and modal shift; • Road Safety: Continue to improve road safety, addressing locations where road accidents are above average levels; • Personal Safety: Address issues of perceived safety and personal security particularly where they are a barrier to walking, cycling and public transport; • Policy Integration: Identify policy overlap across Council services, and with other public bodies (e.g.NHS), maximise benefits and minimise contradiction; • Investment Integration: Identify benefits and opportunities of combined transport procurement for all Council services; • Traffic Reduction: Where appropriate, consider targets for reducing traffic, although noting the variation in conditions and requirements between rural and urban areas.

Regulating Body	Policy Statement or Directive
Transport Scotland – National Transport Strategy	5 high level objectives are provided in the NTS: • Promote economic growth by building, enhancing managing and maintaining transport services, infrastructure and networks to maximise their efficiency; • Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network; • Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy; • Improve safety of journeys by reducing accidents and enhancing the personal safety of pedestrians, drivers, passengers and staff; and • Improve integration by making journey planning and ticketing easier and working to ensure smooth connection between different forms of transport. Three key issues / strategic outcomes identified in the NTS to achieve objectives: • Improving journey times and connections – to tackle congestion and the lack of integration and connections in transport which impact on (Scottish Government) high level objectives for economic growth, social inclusion, integration and safety; • Reducing emissions – to tackle the issue of climate change, air quality and health improvement which impact on our high level objective for protecting the environment and improving health, and • Improving quality, accessibility and affordability – to give people a choice of public transport, where availability means better quality transport services and value for money or an alternative to the car. Progress of these outcomes will be measured against a series of indicators, including: • Improved journey times and connections; • Reduced emissions; • Average distance walked and cycled per person per year; • Improved quality, accessibility and affordability; • Satisfaction of bus and rail passengers; • Access to key services.

Regulating Body	Policy Statement or Directive
Scottish Government - National Performance Framework 2007	To focus Government and public services on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth. Economic performance will be tracked by means of purpose targets: • Economic growth (GDP) • Productivity; • Participation; • Population; • Solidarity; • Cohesion and Sustainability
HITRANS	The promotion and development of cycling and active travel forms a core element of the HITRANS Regional Transport Strategy in which the following themes are identified as key objectives: • Promote the long-term development of active travel across the region; • Enable progress in active travel to be monitored; • Promote partnership working in promotion of active travel; • Achieve consistency of standards in infrastructure to support active travel. • Scottish Government targets of 10% of all journeys in Scotland to be made by bike.
Planning Authority	Town & Country Planning Regulations (Scotland) require that '**the final options chosen must be the one with the least significant environmental impact which emerges from the conclusion of the statutory process**'. The Environmental Impact Assessment Regulations (Scotland) would require that all options considered would have to be comparatively addressed in an EIA screening and scoping exercise.
Scottish Planning Policy	'Good quality, successful and sustainable places are achieved by making connections and understanding linkages – such places in urban and rural Scotland are vital to the success of the economy'
HIE - National Renewables Infrastructure Plan (N-RIP)	• to support the development of a globally competitive offshore renewables industry based in Scotland

Regulating Body	Policy Statement or Directive
HIE – Government Economic Strategy	• The primary aim of Highlands and Islands Enterprise is to focus all of its activities on achieving the Government's purpose which is to create opportunities for all in Scotland to flourish through increasing sustainable economic growth. Ministers will expect Highlands and Islands Enterprise to do this by pursuing the Government's Economic Strategy; Transport related Policy Statement (section C): • Focus investment on making connections across, within and to/from Scotland better, improving reliability and journey times, seeking to maximise the opportunities for employment, business, leisure and tourism; • Invest in maintaining our existing infrastructure to ensure it remains safe and reliable, so safeguarding current connectivity; • Facilitate the transition to a low carbon economy by providing integrated and cost-effective public transport and better connecting people, places and work; • Safeguard transport links to remote and rural communities and support economic growth in remote communities /.. / through encouraging tourism / ..
HIE – Operating Plan 2012-15	• supporting significant and high growth businesses and key sectors; • strengthening communities, especially in the fragile parts of the area; and • creating the infrastructure and conditions to improve regional competitiveness; • developing growth sectors, particularly distinctive regional opportunities
HIE – Local Objective	• Providing a better quality, reliable / resilient road links to the Lochcarron / Kishorn area has the potential to reduce community fragility and encourage new economic activity, (and could have significant role in encouraging development of Kishorn port for offshore renewables activity)
Historic Scotland – Corporate Plan 2012-15	• enhancing the local and national sense of place through building the quality of our/../rural areas/.. • growing understanding and appreciation of the value of the historic environment through optimising access to the most significant buildings and sites • enhancing pride in our national identity through workingcreatively to showcase Scotland

Regulating Body	Policy Statement or Directive
SEPA	Understanding, protecting and improving the environment. • Policy no5; the environment is protected and improved and harm to human health prevented; • protection of the water environment and groundwater dependant terrestrial ecosystems; • avoidance of flood risk, waste, disturbance of peatlands • minimise impact on the marine environment
Scottish Natural Heritage – Policy Aims	• safeguard and enhance those aspects of the natural heritage which are of national importance; • follow best practise in design, maximising positive opportunities for nature and local landscapes, also considering recovery of past damage; • raise awareness, understanding and enjoyment of the natural heritage and promote responsible recreational use; • support measures that enhance the socio-economic benefits provided by natural heritage
Marine Scotland	• Champion Scotland's interests to ensure a sustainable future for those who make a living from the sea; • Engage with all who have an interest in the future of Scotland's seas; Protect Scotland's marine environment; • Research and Monitor Scotland's seas to provide evidence to support sound decision making; • Advocate using Scotland's marine environment sustainably

5.2 Summary of Strategic National and Regional Objectives

Policy statements and Directives, collated in connection with this options appraisal as shown in Table 5.1 above, were summarised to provide 'strategic' objectives, to be considered together with developed Transport Planning Objectives during the route options appraisal following this Pre-Appraisal process.

Startegic National and Regional Objectivs can be summarised as follows:

- Improved safety of journeys by reducing accidents and enhancing personal safety;
- Improved journey times and reliability of connections;
- Promote social inclusion and accessibility by connecting and safeguarding transport links to remote and disadvantaged communities;
- Protect the environment and improve health by promoting multi modal transport;
- Support sustainable economic growth;
- Protect and enhance Scotland's natural and historical heritage and environment;

- Promote sustainable use of the natural environment (through tourism);
- Provide a better quality and more reliable transport link to Lochcarron and Kishorn with the potential to reduce community fragility and encourage new economic activity;

The above strategic National and Regional objectives are reflected in the Transport Planning Objectives developed for this project, as shown in table 4.7.

6 CONCLUSIONS AND NEXT STEPS

6.1 Conclusions

STAG

The Pre-Appraisal process carried out on behalf of The Highland Council in connection with the Options Appraisal for the Stromeferry Bypass, and as detailed in this report, was concluded with the detailed discussions held in the 3rd and final round of the Stakeholder (pre-appraisal) workshops.

Stakeholder workshops were conducted in accordance with the requirements of STAG, and as part of the whole appraisal process, incorporating Pre-Appraisal, Part1 Appraisal, Part 2 Appraisal and Post Appraisal work.

A robust Pre-Appraisal provides the foundation to the whole process, since it promotes the analysis of opportunities in parallel to the identification of transport problems.

The aim of this Pre-Appraisal process was to engage Stakeholders in the development of the Transport Planning Objectives, to capture the essence of the evidence based problems to be addresses and to identify opportunities to be potentially realised.

Planning or Project Objectives agreed throughout this stage of the process do not aim to prioritise between options, but rather be understood to be an aid to decision makers to allow them to make informed choices.

The Pre-Appraisal process carried out in relation to the Stromeferry Bypass successfully resulted in developing a set of Transport Planning Objectives suitable for this project, as outlined in table 4.7 of this report. These will be applied to appraise all considered route options during the Part 1 appraisal.

Whilst the Objectives were agreed by all Stakeholders there has been further correspondence from some Stakeholders primarily in two areas: keeping the road open rather than minimising closures and, disruptions and deliverability of the scheme suggesting prolonged timescales, to suit procurement and construction would not be considered acceptable, due to the urgency of the situation.

It has to be recognised in this regard the development and procurement of the preferred scheme must follow due process and necessary funding must be in place. In parallel with this The Highland Council have in place mitigation strategies should further rock falls occur causing disruption to the travelling public.

These points were adequately debated and recognised during the development of the Objectives, therefore no changes will be made

STAG & DMRB

In addition to the above, it was also noted that STAG is promoting an objective led, rather than solution led process, which avoids pre-conceived solutions being brought forward without considering other options which may meet the identified problems or opportunities.

In this context, historical information on previously proposed route options were reviewed and considered as part of the Pre-Appraisal Stakeholder workshops, together with new option proposals promoted and incorporated.

Each of the proposed route options was discussed in detail, and then either discarded on grounds of not meeting Objectives or feasibility (outline costs, buildability, environmental, topography etc) or noted to be taken forward to the STAG Part 1 / DMRB Stage 1 appraisal process. This was considered to be a 'first sift' in terms of the STAG Pre-Appraisal option generation, sifting and development processes.

Workshop discussions were successfully concluded as presented in the 'Route Options Summary – Final' table included in the appendices of this report, as well as the associated route options drawing prepared to summarise and illustrated the outcome from this Pre-Appraisal stage. The total number of route options of 31 was sifted and developed into 17 routes, some of which are alternative link routes, to be taken forward for further assessment.

6.2 Next Steps

The Pre-Appraisal process carried out on behalf of The Highland Council in connection with the Stromeferry Bypass forms part of a full STAG appraisal and DMRB assessment to be conducted as part of this commission.

The findings and conclusions presented in this report will inform Part 1 and Stage 1 work, the next step of the appraisal and assessment process; drawings and tables presented will be developed further and engineering considerations to assess each proposed route option as identified in the 'Route Options Summary – Final' table in Appendix F of this report be used to facilitate further sifting of routes.

Sifted route options will then be further appraised, considering the identified Transport Planning Objectives, as shown in table 4.7.

URS are to report on the findings of the Stage 1 work in April 2013, with Part 2 / Stage 2 work following to be concluded in spring of 2014.

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Appendix A

Workshop Register

Stromeferry Options Appraisal

Stakeholder Register

Name	Company	Stakeholder Workshops		
		1st	2nd	3rd
Douglas Walker	Marine Scotland	√		
Tim Roberts			√	√
John Kerr	First Scotrail	√		
David Grant	Network Rail	√	√	√
Steve North	SNH	√		
Mary Gibson		√	√	√
Pat Haynes	SEPA	√		
Susan Haslam				√
Alistair Galloway			√	
Nicki Hall	Historic Scotland	√		
Bob Mitchell	Transport Scotland	√	√	√
Tony Jarvis	HIE	√	√	√
Malcolm Macleod	THC Planning			
Scott Dalgarno				
Robbie Bain	THC Ward Manager	√ √	√ √	√
Iain Turnbull	NTS			√
Kristine Mackenzie	Lochcarron Development Officer	√	√	√
Helen Murchison	Lochcarron CC	√	√	√
Iain Matheson /Charlie MacRae	Plockton CC	√	√	
Mary Macbeth	Stromeferry & Achmore CC		√	√
Wilfar Matheson		√		
Neil MacRae			√	√
Alison Macleod	Applecross CC		√	(√)
Isabelle Campbell	Highland Councillor	√	√	√
Audrey Sinclair		√	√	√
Chris Nixon	Forestry Commission	√	√	√
Liam Matheson		√	√	√
Graham Sharpe	THC PLanning	√		√
David Summers	THC Public Transport			
Dorothy Gibb	THC Transport Officer		√	√
Norma Young	THC Area Education Manager			√
Alastair Baxter	Lochcarron and District Business Association	√	√	√
Martin Moran		√	√	
Jim Mould				√
Stuart MacPherson	HIE	√	√	
Colin Howell	THC TECS	√ √	√ √	√
Garry Smith		√ √	√	√
Sam MacNaughton			√	√
Jill Irving	URS	√ √	√ √	√
Zoe McClelland			√	√
Jonathan Campbell		√ √	√ √	√
David Taylor		√ √	√ √	√
Anke Menzinger		√ √	√ √	√

Appendix B

Stakeholder Questionnaire

Stromeferry Options Appraisal

Scottish Transport Appraisal Guidance – Pre-Appraisal Workshop
Stakeholder Questionnaire

Nr	Question	Answer	Notes / Comments
1	Consider the key issues affecting you or your organisation in relation to the ongoing discussions regarding the A 890 Stromeferry Bypass.		
2	Identify any problems you are aware of affecting the current route.		
3	Identify any problems you are aware of affecting any of the historical route corridors / route options.		
4	Consider any opportunities available to you with regards to a route improvement.		
5	Outline the Objectives you or your Organisation have in relation to this Options Appraisal (refer note below).		
6	Provide details of any constraints you are aware of that may affect the development of a particular route.		
7	State if you would have a preferred route corridor or route option, historical or any new proposals, and state your reasons why.		

Note: Objectives should include any considerations / wishes/ comments you may have concerning the affect of a proposal on the Environment, Safety, Economy, Integration and Accessibility and Social Inclusion.
Objectives can also be set by requirements of current legislation, legal agreements, policy directives etc.

Appendix C

Issue Register

(Information issued to Stakeholders during the Pre-Appraisal Process)

DOCUMENT REGISTER & ISSUE SHEET

SHEET NO. OO1
OF OO2

Job Title	Job no. 47065084
Strome Ferry, Options Appraisal	Project no.
	Design Element. ..

THE FOLLOWING DOCUMENTS ARE ISSUED:										
		Day	13	26	27	3	5	12	18	20	20
		Month	NOV	NOV	NOV	DEC	DEC	DEC	DEC	DEC	DEC
		Year	12	12	12	12	12	12	12	12	12
Size	No.	Title									
	Documents										
	Reg Stk Ws 01 rev 0	Summary Regulatory Workshop No.1				X			X		
	-	Handout Economic Stakeholders Workshop Presentation					X		X		
	Economic Stk Rev 0	Summary Economic Workshop No.1								X	
	-	Proposed SMART objectives Rev 1									X
	Reg Stk Ws Update 12-12	Update on Discussions & Findings						X			
	-	Stakeholders Workshop information pack	X								
	NEC 3										
	EW001	Delay of Pre-Appriasal Report			X						
	Project Mangement										
		Progess Report (Monthly) No.1		X							

Distribution:										
Name	**Company**									
Economic Stakeholders	Various						X			X	
Reg Stakeholder	Various					X		X			X
Gary Smith	THC			X	X	X	X	X		X	X
Colin Howell	THC			X	X	X	X	X		X	X
Sam MacNaughton	THC								X	X	
Carolyn Smith	THC	Type	X								
		P = paper copies						P			
		D = digital by email	D	D	D				D		
		CD = digital by post									
Reason for issue:	R =For Review C = For Construction										
	B = As Built P = Pricing										
		ISSUED BY:	ACM	ACM	ACM	ACM	ACM	ACM	ACM	ACM	ACM

DOCUMENT REGISTER & ISSUE SHEET

SHEET NO. OO2
OF OO2

Job Title	Job no. 47065084
Strome Ferry, Options Appraisal	Project no.
	Design Element. ..

THE FOLLOWING DOCUMENTS ARE ISSUED:																					
			Day	21	21	21	22	24	05												
			Month	JAN	JAN	JAN	JAN	01	02												
			Year	13	13	13	13	13	13												
Size	**No.**		**Title**																		
	Drawings	**Rev**																			
A1	47065084 - 001		Study Area Drawing																		
A1	47065084 - 101		STAG Appraisal - Identified Constraints																		
A1	47065084 - 201		Existing Infrastructure Layout																		
A1	47065084 - 301		Existing Utilities Layout																		
A1	47065084 -501	A	Land Ownership Plan		2																
A1	47065084 -601	A	Corridor Plans	1			1														
A3	47065084 -601	A	Corridor Plans	2		X	1	X													
A0	47065084 -602	A	Route Option Plans	1			1														
A3	47065084 -602	A	Route Option Plans	2		X	1	X													
	47065084 -603		Online Option 1 - Ardnarff to Attadale																		
	47065084 -604		Online Option 2 - Ardnarff to Attadale																		
	47065084 -605		Online Option 3 - Ardnarff to Attadale																		
	47065084 -606		Online Option 4 - Ardnarff to Attadale																		
	47065084 -607		Online Option 5 - Ardnarff to Attadale																		
	47065084 -608		Online Option 6 - Ardnarff to Attadale																		
	47065084 -609		Sifted Route Options																		
	Reports																				
A4	47065084	B	Update Discussions & Findings	1		X	1	X													
A4	47065084	-	Proposed SMART Objectives	1					C												
A4	47065084	-	Route Options Summary	1		X	1	X													
	Reg Stk Ws 01 rev		Summary Regulatory Workshop No.1					X													

Distribution:																					
Name		**Company**																			
Economic Stakeholders		K Mackenzie, H Murchison, I Mathieson, M Macbeth, A Macleod,	P					P													
		I Campbell, A Sinclair, A Baxter.	P																		
		I Turnbull					D														
Stakeholders		As attached list;			D			D													
		K Mackenzie		P																	
		J Mould				P															
			Type																		
			P = paper copies																		
			D = digital by email																		
			CD = digital by post																		
Reason for issue:		R =For Review C = For Construction																			
		B = As Built P = Pricing																			
			ISSUED BY:	ACM	ACM	ACM	ACM	ACM	ACM												

Anke Menzinger

From: Anke Menzinger
Sent: 05 February 2013 11:02
To: Timothy.Roberts@scotland.gsi.gov.uk; Grant David (Earthworks Engineer); Mary Gibson; alistair.galloway@sepa.org.uk; Nicola.Hall@scotland.gsi.gov.uk; bob.mitchell@transportscotland.gsi.gov.uk; Tony Jarvis; malcolm.macleod@highland.gov.uk; scott.dalgarno@highland.gov.uk; robbie.bain@highland.gov.uk; kristine mackenzie; [redacted] Alison Macleod (alison_macleod@applecrosscommunity.org.uk); Mary MacBeth; isabelle.campbell.cllr@highland.gov.uk; audrey.sinclair.cllr@highland.gov.uk; chris.r.nixon@forestry.gsi.gov.uk; 'dorothy.gibb@highland.gov.uk'; 'norma.young@highland.gov.uk'; 'Stuart Macpherson'; colin.howell@highland.gov.uk; Garry Smith; Sam MacNaughton; liam.matheson@forestry.gov.uk; graham.sharp@highland.gov.uk; John.kerr@firstgroup.com; 'Matheson, Liam'; Haslam, Susan; iturnbull@nts.org.uk; David Summers
Cc: steve.north@snh.gov.uk; pat.haynes@sepa.org.uk; Ron Mackenzie (ron.mackenzie@highland.gov.uk); Douglas.Walker@scotland.gsi.gov.uk; Jill Irving; Jonathan Campbell; Peter Morgan; Zoe McClelland; David Taylor
Subject: Stromeferry Options Appraisal, Joint Stakeholder Workshop
Attachments: Proposed SMART Objectives rev C 31-01-13 final.pdf

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Jonathan Campbell	
Peter Morgan	
Zoe McClelland	
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Dear All

Stromeferry Bypass Options Appraisal
Joint Stakeholder Workshop 31st January 2013
SMART Objectivesl

Thanks again for making the effort of attending our workshop regarding the above at the Strathcarron Hotel last thursday, and we hope you have all managed to get home safely, despite the turn in the weather!

As discussed last week, please find now attached a copy, of what we would envisage to be the final list of SMART Objectives, for your information and records. Please provide any further comments you may have as soon as possible, so these can be included into our Pre-Appraisal report.

It was suggested during the workshop discussions, that a bypass of Lochcarron village was not explicitly mentioned in any of the SMART objectives. However, no suggestions to add another objective to cover this was noted, and the issue could be considered to be covered by objectives A(1), B(2) and particularly D(4), with L(12) suggesting potential local benefit for direct routes.

We trust this is acceptable, but if you want to comment on this issue in particular, please feel free to do so.

Your input up to this stage in the process has been greatly appreciated, and we hope to welcome you all back to the Public Meeting proposed to be held in April 2013. Details of this are to follow closer to the time, once a date and venue is set.

Should you want to provide any further information at this stage, or have any queries regarding the appraisal process, please do not hesitate to get back in touch with us.

Thanks again,

Anke

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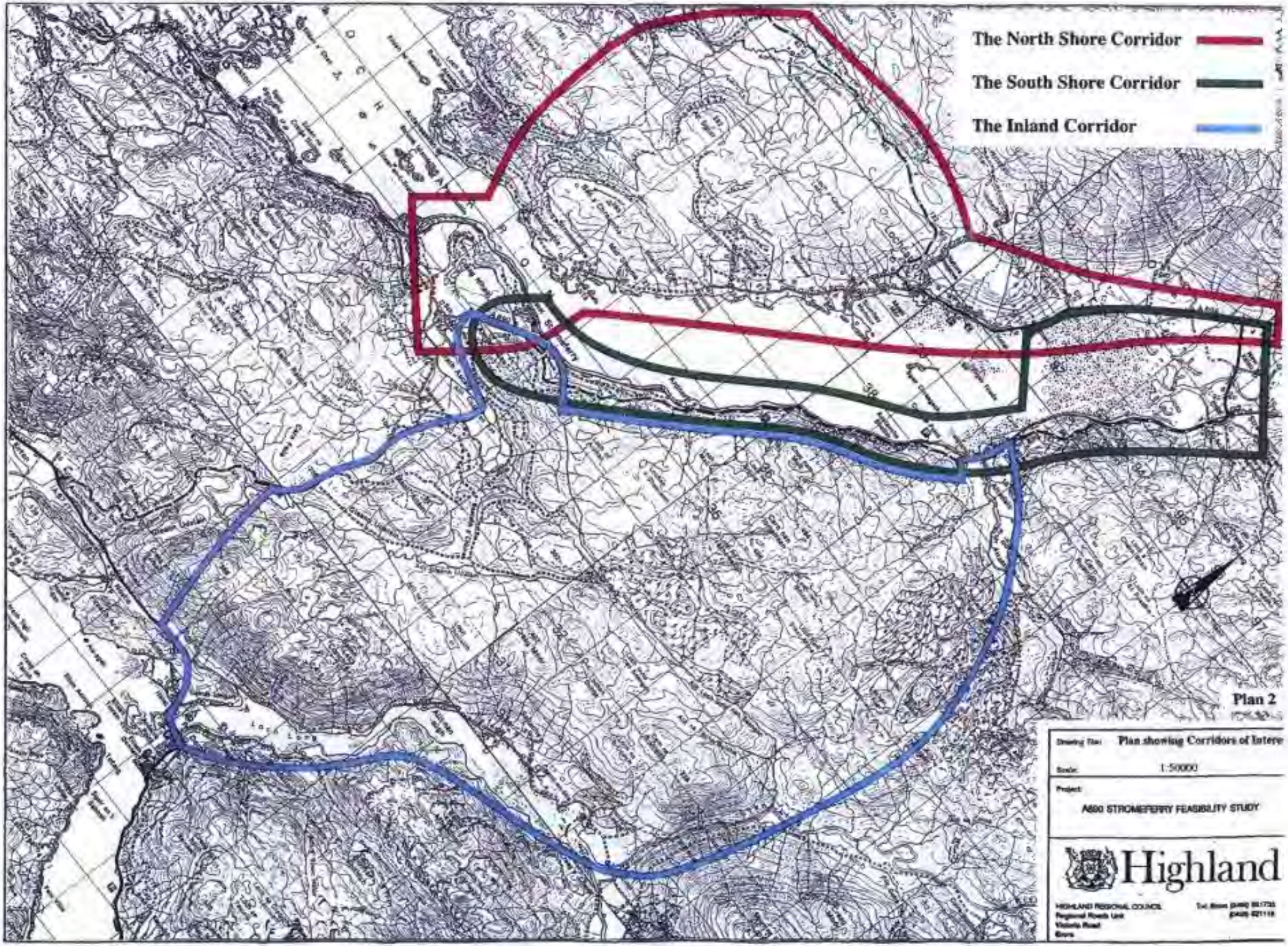
Appendix D

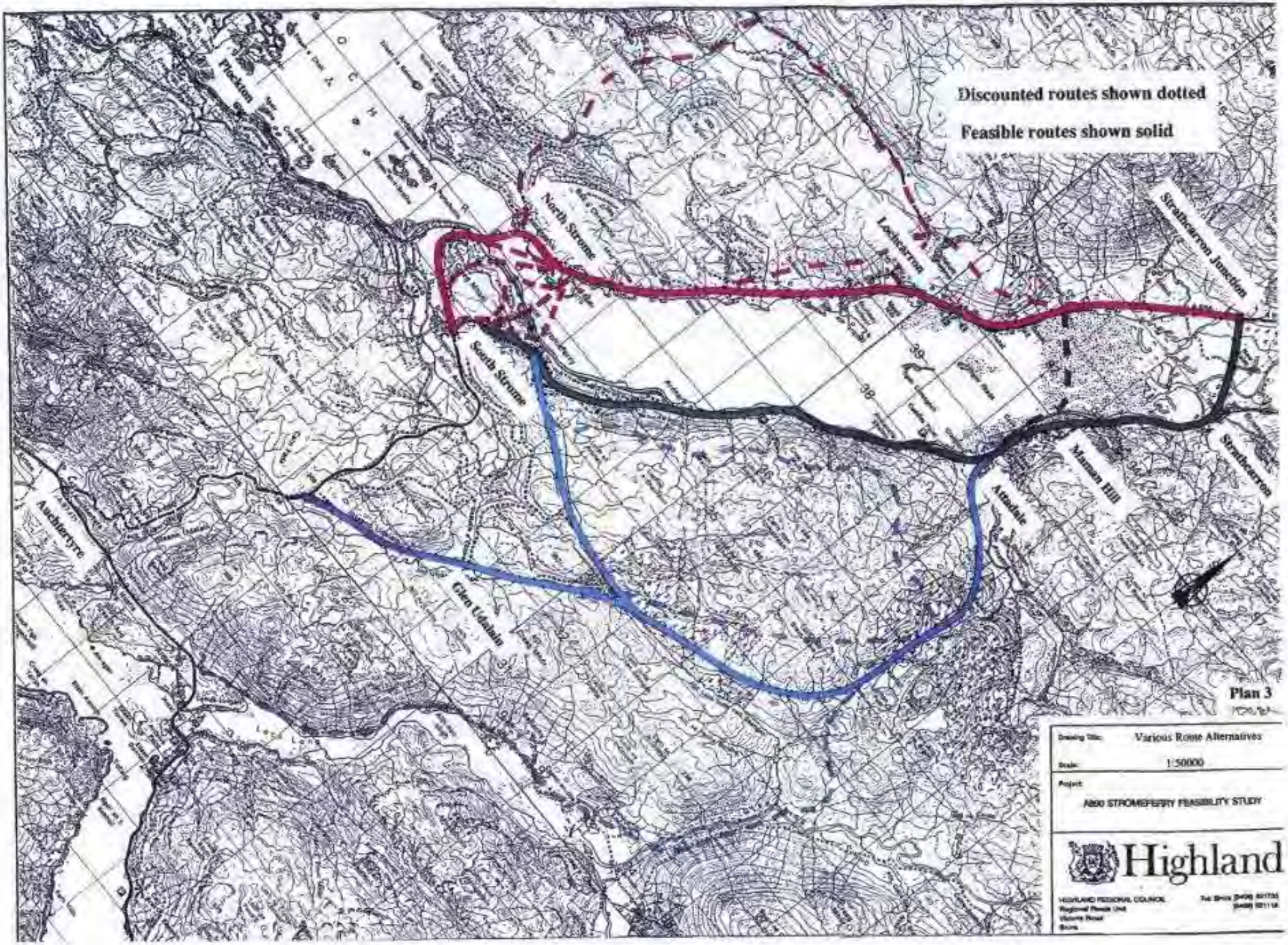
Drawings

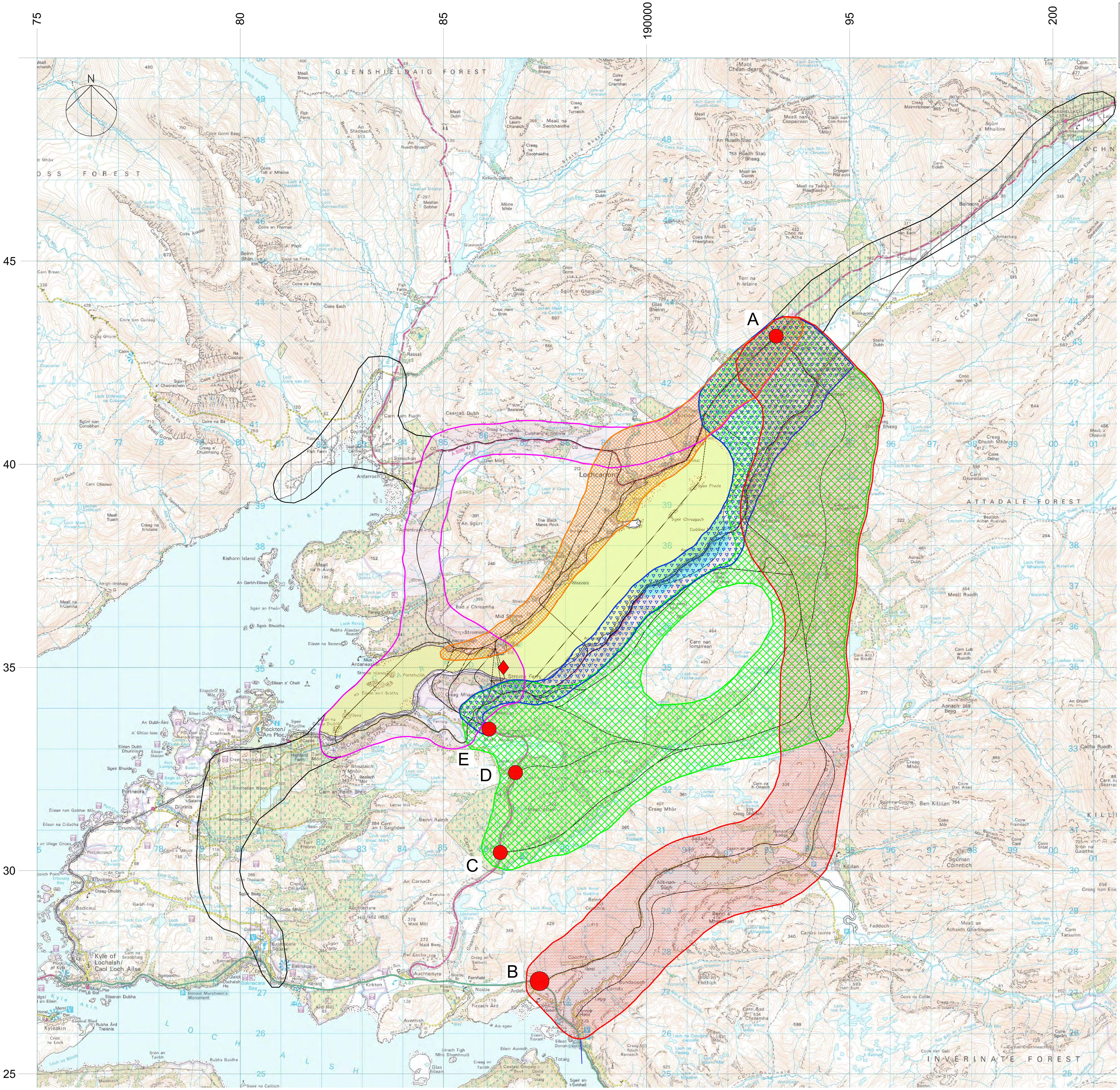
Historical Routes and Corridors (2)

Proposed Route Options (2)

Proposed Route Corridors (1)


The North Shore Corridor
The South Shore Corridor
The Inland Corridor
Plan 2
Drawing Title: Plan showing Corridors of Intere
Scale: 1:50000
Project:
A890 STROMEFERRY FEASIBILITY STUDY
Highland
HIGHLAND REGIONAL COUNCIL
Regional Roads Unit
Victoria Road
Elgin


Discounted routes shown dotted
Feasible routes shown solid
Plan 3
Various Route Alternatives
1:50000
A890 STROMEFERRY FEASIBILITY STUDY
Highland
Flockton
North Strome
South Strome
Lochcarron
Strathcarron Junction
Strathcarron
Maman Hill
Attadale
Auchtertyre
Glen Udalain



CONSTRUCTION RISKS	MAINTENANCE / CLEANING RISK	DEMOLITION RISKS

In addition to the hazard/risks normally associated with the types of work detailed on this drawing take note of above.
It is assumed that all works on this drawing will be carried out by a competent contractor working, where appropriate, to an appropriate method statement.

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION BOX

Key:

- Outer North Corridor
- North Shore Corridor
- Online Corridor
- South Corridor
- Outer South Corridor
- Loch Carron Corridor
- Rock Fall
- Start / End
- Tidal Option

Currently Excluded from Study Area:

- Lair & Balnacra
- Kishorn Access Scheme
- Kyle Link Corridor

This drawing is for preliminary purposes only and is subject to amendment during design development. UNDER NO CIRCUMSTANCES MUST THIS DRAWING BE USED FOR CONSTRUCTION PURPOSES

Revision Details	By / Check	Date	Suffix
Updated January 2013	JH / ACM	17.01.13	A

Purpose of issue

DRAFT

Client

The Highland Council
Comhairle na Gàidhealtachd

Project Title

Stromeferry Options Appraisal

Drawing Title

Route Options & Corridors Plan

Drawn	Checked	Approved	Date
JH	ACM	DT	NOV 2012

URS Internal Project No.	Suitability
-	-

Scale @ A1	Zone / Mileage
1:5000	-

URS Infrastructure & Environment Limited
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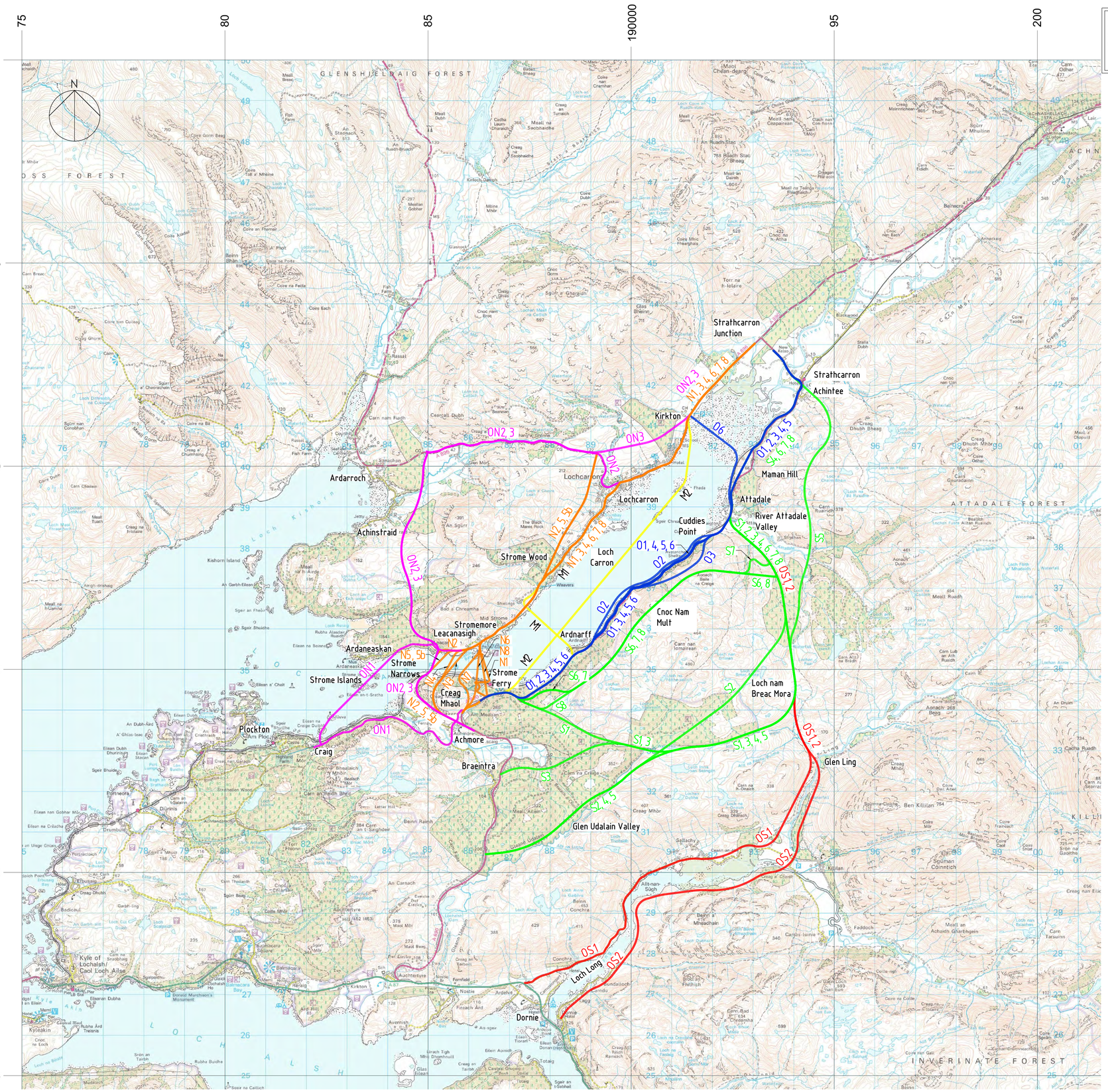
Drawing Number	Rev
47065084 - 601	A



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CONSTRUCTION RISKS	MAINTENANCE / CLEANING RISK	DEMOLITION RISKS

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It is assumed that all works on this drawing will be carried out by a competent contractor working, where appropriate, to an appropriate method statement.

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION BOX

Key:

- Outer North Corridor Route Option Prefix ON
- North Shore Corridor Route Option Prefix N
- Mid Loch Corridor Route Option Prefix M
- Online Corridor Route Option Prefix O
- Southern Corridor Route Option Prefix S
- Outer South Corridor Option Prefix OS

Notes:

Refer to Route Option Summary.

This drawing is for preliminary purposes only and is subject to amendment during design development. UNDER NO CIRCUMSTANCES MUST THIS DRAWING BE USED FOR CONSTRUCTION PURPOSES

Updated January 2013	JH / ACM	17.01.13	A
Revision Details	By / Check	Date	Suffix

Purpose of issue: DRAFT

Client: The Highland Council / Comhairle na Gàidhealtachd

Project Title: Stromeferry Options Appraisal

Drawing Title: Preliminary Route Options Plan

Drawn	Checked	Approved	Date
DH	JI		JAN 2013

URS Internal Project No. 47065084	Suitability -
Scale @ A1 1:5000	Zone / Mileage -

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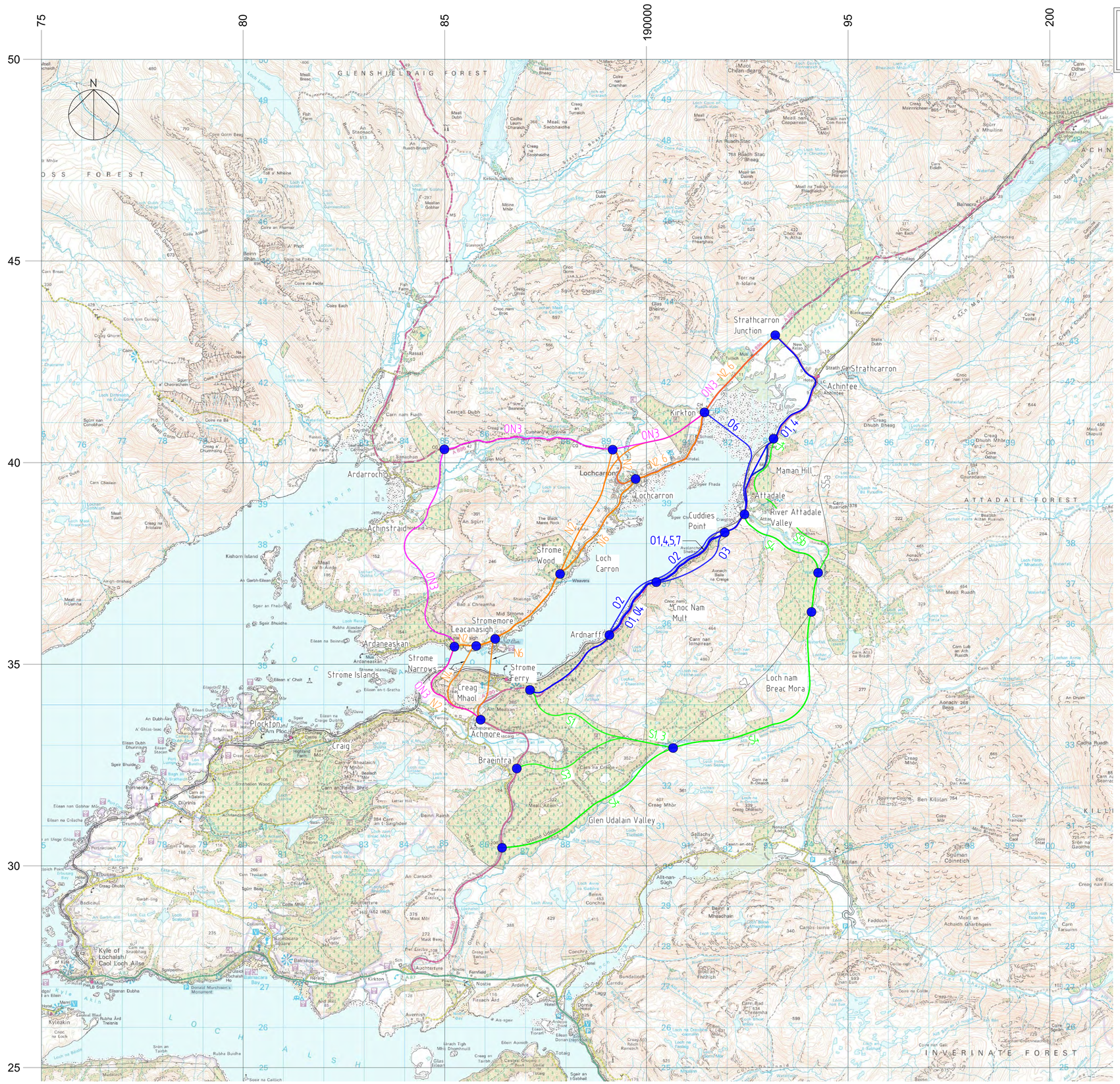
Drawing Number	Rev
47065084 - 602	A



Strome Narrow Crossings	
Former	Report Reference
ON3 / N2	Western Crossing (Bridge & Tunnel)
N4	Central Crossing (Bridge)
N6	Eastern Crossing (High & Low Level Bridge & Barrage).

On-line Routes	
01	"Do minimum plus", On-line improvements to 7.3m carriageway.
02	2 to 4Km causeway / cantilever section to bypass worst affected rockfall area.
03	Approx 2Km tunnel sections to bypass worst affected rockfall area.
04	"Do minimum" existing route maintained as is (Baseline case).
05	Joint road / rail solution on shared track; 2Km section to bypass worst affected rockfall area.
06	Alternative link route Attadale to Kirkton including upper Loch crossing.
07	Approx 2Km section of extended avalanche shelter in worst affected area.

CONSTRUCTION RISKS	MAINTENANCE / CLEANING RISK	DEMOLITION RISKS

In addition to the hazard/risks normally associated with the types of work detailed on this drawing take note of above.
It is assumed that all works on this drawing will be carried out by a competent contractor working, where appropriate, to an appropriate method statement.

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION BOX

Key:

- Outer North Corridor Route Option Prefix ON
- North Shore Corridor Route Option Prefix N
- Online Corridor Route Option Prefix O
- Southern Corridor Route Option Prefix S
- Discounted Routes
- Route Junction Points

Notes:
Preliminary Route Options following STAG Pre-Appraisal sifting.
Refer to Route Option Summary.
Retains original Route Option numbering convention adopted on drawing 47065084-602a

This drawing is for preliminary purposes only and is subject to amendment during design development. UNDER NO CIRCUMSTANCES MUST THIS DRAWING BE USED FOR CONSTRUCTION PURPOSES

Revision Details	By / Check	Date	Suffix
Updated route following team meeting 25/2/13 and 2nd SIFT	JH / ACM	26.2.13	A

Purpose of Issue: DRAFT

Client: The Highland Council / Comhairle na Gàidhealtachd

Project Title: Stromeferry Options Appraisal

Drawing Title: Stage 1 Assessment Route Options Plan Sifted Route Options

Drawn	Checked	Approved	Date
DH	JI		JAN 2013

URS Internal Project No.	Suitability
47065084	-
Scale @ A1: 1:5000	Zone / Milleage: -

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Drawing Number	Rev
47065084 - 609	A

Appendix E

Route Options Summary Table

Colour	Route Name	Main Corridor	Source	Length (km)	Route Description	Engineer's Notes, Pros/Cons (Pre – Workshop 31-01-13)	1st step of Route Sifting Process Workshop Discussion on 31-01-13 Should route be taken forward for to DMRB Stage 1 Assessment?
Purple	Outer North 1 (ON1) (bridge)	Outer North	New Route	15.7	A890 at Achmore - west online along existing road to Craig - Loch Carron crossing from Craig via Strome Islands to west of Lecanasigh - online through Stromemore to Strathcarron Junction	**Pros:** Opens access to Plockton area **Cons**: Major Loch Carron crossing of 3.1km length; Railway crossing south shore; Impact of bridge structure (potential restrictions on shipping; visually; environment) Long term maintenance obligation for existing road corridor remains.	○ Expensive structure due to its length; ○ Route doesn't help with social inclusion any more than shorter, more eastern crossings; ○ Environmental issues of island hopping Strome Narrows – seals known to be in area, this also applies to all loch crossing options. **Conclusion:** **Discard route ON1**
	Outer North 2 (ON2) (bridge)	Outer North	Historical Route – previously discounted	19.0	A890 at Achmore – west of Creag Mhaor - Strome Narrows bridge crossing towards Leaconasigh - north passing east of Achintraid and Ardarroch online on A896 through Lochcarron, Kirkton and tie in before Strathcarron Junction	**Pros**: Promotes north-south linkage; Route through Lochcarron Village (economic benefits); Opens access to Kishorn. **Cons**: Strome Narrows bridge crossing of 600m length; Impact of bridge structure (potential restrictions on shipping; visual impact; environmental impact) Various bridge crossings on northern green field route with difficult topography; Route through Lochcarron Village (additional traffic) Long term maintenance obligation for existing road corridor remains.	○ ON2 and ON3 similar routes ○ ON2 includes A896 online through Lochcarron (as existing), with potential to increase traffic through Lochcarron; ○ Route provides link to Kishorn yard. **Conclusion:** **Discard route ON2** – instead take ON3, which omits link through Lochcarron village, forward for further assessment
	Outer North 3 (ON3) (bridge)	Outer North	Historical Route – previously discounted	17.6	A890 at Achmore – west of Creag Mhaor – Strome Narrows bridge crossing towards Leaconasigh – north passing east of Achintraid and Ardarroch – online on A896 until north of Lochcarron – offline north of Lochcarron, online at Kirkton and tie in before Strathcarron Junction	**Pros**: Promotes north-south linkage; Route bypasses Lochcarron Village (potentially some traffic removed); **Cons**: Strome Narrows bridge crossing of 600 to 900m length; Impact of bridge structure (potential restrictions on shipping; visual impact; environmental impact) Various bridge crossings on northern green field route with difficult topography; Route bypasses Lochcarron Village (economic) Impact on SSSI at Allt nan Carnan; Long term maintenance obligation for existing road corridor remains.	○ Includes connection to A896 towards Ardarroch, therefore link would facilitate any future development at Kishorn etc; ○ Route bypasses Lochcarron village; ○ Raised beach on south shore; recognised site of interest. **Conclusion:** **Take ON3 forward for further assessment** (in favour of ON2)
Orange	North Shore 1 (N1) (ferry)	North Shore	Historical Route – discounted	12.1	A890 at Stromeferry – existing road into Stromeferry – Strome Narrows ferry crossing to Stromemore – online through Lochcarron and Kirkton – tie in to Strathcarron junction	**Pros**: Promotes north-south linkage Capital with maintenance costs likely to be favourable **Cons**: Ferry crossing, unpopular, time consuming; Existing road access substandard; steep approach gradients at 11% and tight bends on both sides; Long term maintenance obligation for existing road corridor remains.	○ Ferry crossing would not be reliable enough, due to potential breakdowns, weather dependency, restricted sailing times and resulting, unacceptable delays or restrictions to the traffic flow; ○ Any considered crossing of the Strome Narrows needs to be a fixed link option, ie discount ferry, airlink etc; ○ This route is on-line through Lochcarron – preference to bypass the village. **Conclusion:** **Discard route N1** and favour fixed link options
	North Shore 2 (N2) (bridge)	North Shore	Historical Route	16.0	A890 at Achmore – west of Creag Mhaor – Strome Narrows bridge crossing towards Leaconasigh – online through Stromemore – offline from Strome Wood north of Lochcarron tie into A896 – then online through Lochcarron village and to Strathcarron Junction	**Pros**: Promotes north south linkage Low level bridge crossing; Route avoids major gradients on south shore; Journey time similar to existing; **Cons**: Strome Narrows bridge crossing of 800m length; Impact of bridge structure (potential restrictions on shipping; visual impact; environmental impact) Lochcarron village bypass, steep gradient of 8% Long term maintenance obligation for existing road corridor remains.	○ Recognition that bypass of Lochcarron village would benefit linkage of Kishorn long term; ○ Local preference for bypass of Lochcarron village to on-line solution; engineering of on-line improvements should however be considered, although strong feeling that on-line would bring no (economical) benefit and road users may take alternative routes to mind the congestion in the village; ○ Consider alternative to fully bypass Lochcarron. **Conclusion:** **Take N2, bridge option, forward for further assessment**

Colour	Route Name	Main Corridor	Source	Length (km)	Route Description	Engineer's Notes, Pros/Cons (Pre – Workshop 31-01-13)	1st step of Route Sifting Process Workshop Discussion on 31-01-13 Should route be taken forward for to DMRB Stage 1 Assessment?
	North Shore 2 (N2) (tunnel)	North Shore	Historical Route – tunnel option previously discounted	16.0	A890 at Achmore – west of Creag Mhaor – Strome Narrows tunnel crossing towards Leaconasigh – online through Stromemore – offline from Strome Wood north of Lochcarron tie into A896 – then online through Lochcarron village and to Strathcarron Junction	**Pros**: Promotes north south linkage Route avoids major gradients on south shore; Similar journey Achmore to Strathcarron Junction **Cons**: Tunnel length of 2.5km required; associated earthworks and steep road gradients on approaches Lochcarron village bypass; gradient of 8%; Long term maintenance obligation for existing road corridor remains.	○ Tunnel crossing of Strome Narrows would potentially be more costly than bridge crossing; ○ Steep approach gradients would probably make this unfeasible? **Conclusion:** **Take N2, tunnel option, forward for further assessment,** concentrating on the tunnel section and assessment of approaches (remainder of route covered in N2 bridge option)
	North Shore 3 (N3) (tunnel)	North Shore	Historical Route – previously discounted	13.6	A890 at Achmore – through of Creag Mhaol – Strome Narrows tunnel crossing to Stromemore – online through Lochcarron Kirkton – tie in to Strathcarron junction	**Pros**: Promotes north south linkage Similar journey Achmore to Strathcarron Jct; Route through Lochcarron Village (economic benefits); **Cons**: Tunnel length of 2.5km required, associated earthworks and steep gradients on approaches; Long term maintenance obligation for existing road corridor remains. Route online through Lochcarron (additional traffc)	○ Route option proposals for N3(tunnel) and N4 (bridge) appear to be located at a less favourable location to N2 due to topography on southern shore; ○ Fixed link Strome Narrow crossings should be regarded in principle, with the ideal location being assessed at a later stage. **Conclusion:** **Discard route N3** (tunnel) and consider a wider assessment corridor for feasible fixed link Strome Narrow crossings between N2 and N6
	North Shore 4 (N4) (bridge)	North Shore	Historical Route	13.6	A890 at Achmore – through of Creag Mhaol – Strome Narrows bridge crossing to Stromemore – online through Lochcarron Kirkton – tie in to Strathcarron junction	**Pros**: Promotes north south linkage Similar journey Achmore to Strathcarron Jct; Route through Lochcarron Village (economic benefits); **Cons**: Strome Narrows bridge crossing at high level, length in excess of 600m length; Difficult access on south side with extensive excavations required; Steep approach gradients and potential impact on shipping if low level bridge considered; Impact of bridge structure (potential restrictions on shipping; visual impact; environmental impact) Long term maintenance obligation for existing road corridor remains.	○ Route option proposals for N3(tunnel) and N4 (bridge) appear to be located at a less favourable location to N2 due to topography on southern shore; ○ Fixed link Strome Narrow crossings should be regarded in principle, with the ideal location being assessed at a later stage. **Conclusion:** **Consider route N4** (bridge) as part of a wider assessment corridor for feasible fixed link Strome Narrow crossings between N2 and N6. Note: N4 remains only as a bridge crossing; route follows N6 on-line through Lochcarron village.
Orange	North Shore 5 (N5) (tunnel)	North Shore	Historical Route – previously discounted	15.9	A890 at Achmore – west of Creag Mhaol – Strome Narrows tunnel crossing to Leaconasigh – online through Stromemore – offline from Strome Wood north of Lochcarron tie into A896 – online to Strathcarron Junction	**Pros**: Promotes north-south linkage; Journey Achmore to Strathcarron Jct similar to existing. Route avoids steep gradients on south shore; Opens access to Kishorn. Route through Lochcarron Village (economic benefits); **Cons**: Tunnel length of 2.5km required, associated earthworks steep gradients Lochcarron village bypass; gradients of 8% Long term maintenance obligation for existing road corridor remains. Route through Lochcarron Village (potential additional traffic);	○ Tunnel option very similar to N2 (tunnel); ○ Tunnel crossing of Strome Narrows would potentially be more costly than bridge crossing; ○ Steep approach gradients would probably make this unfeasible? **Conclusion:** **Discard route N5** and favour a wider assessment corridor for feasible fixed link Strome Narrow crossings at N2 (bridge and tunnel)
	North Shore 5b (N5b) (ferry)	North Shore	Historical Route – previously discounted	9.6	as North Shore 5, but with New Route ferry crossing	**Pros**: Promotes north-south linkage; Route avoids major gradients on south shore; Route through Lochcarron Village (economic benefits); **Cons**: Ferry crossing, unpopular, time consuming; Railway crossing, major constraint; Restricted access to Kishorn; Steep slipway gradients on north shore; Lochcarron village bypass; gradients of 8%; Long term maintenance obligation for existing road corridor remains.	○ Ferry crossing would not be reliable enough, due to potential breakdowns, weather dependency, restricted sailing times and resulting, unacceptable delays or restrictions to the traffic flow; ○ Any considered crossing of the Strome Narrows needs to be a **fixed link** option, ie discount ferry, airlink etc; **Conclusion:** **Discard route N5b** and favour fixed link options

Colour	Route Name	Main Corridor	Source	Length (km)	Route Description	Engineer's Notes, Pros/Cons (Pre – Workshop 31-01-13)	1st step of Route Sifting Process Workshop Discussion on 31-01-13 Should route be taken forward for to DMRB Stage 1 Assessment?
Orange	North Shore 6 (N6) (bridge)	North Shore	Historical Route – previously discounted	12.2	A890 at Stromeferry – Strome Narrows bridge crossing from Stromeferry to Stromemore – online through Lochcarron to Strathcarron Junction	**Pros**: Promotes north south linkage Similar/slightly reduced journey Achmore to Strathcarron Jct. **Cons**: Difficult access to low level bridge on both sides restricted due to steep approach gradient (south) and Strome Castle location (north); Bridge at high level would require length of approx 1km; Impact of bridge structure (potential restrictions on shipping; visual impact; environmental impact) Long term maintenance obligation for existing road corridor remains.	○ Route options N6, N7 and N8 are all fixed Strome Narrow crossings, facing similar difficulties regarding access to low level structures, vicinity to Strome Castle etc; ○ Consider location for fixed crossing in principle, assessing various access route links on the south side; **Conclusion:** **Consider route options N6, N7 and N8 as one principal fixed link route (N6) from Strome Ferry to North Strome, continuing on-line through Lochcarron village, for further assessment**, including considerations for renewable option (barrage)
	North Shore 7 (N7) (bridge)	North Shore	Historical Route – previously discounted	12.4	A890 at Stromeferry – Alternative Strome Narrows bridge crossing from Stromeferry west to Stromemore – online through Lochcarron to Strathcarron Junction	**Pros**: Promotes north south linkage Slightly reduced journey Achmore to Strathcarron Jct **Cons**: Difficult access on south shore due to steep gradients; Impact of bridge structure (potential restrictions on shipping; visual impact; environmental impact) Close vicinity to Strome castle; Long term maintenance obligation for existing road corridor remains.	○ Route options N6, N7 and N8 are all fixed Strome Narrow crossings, facing similar difficulties regarding access to low level structures, vicinity to Strome Castle etc; ○ Consider location for fixed crossing in principle, assessing various access route links on the south side; **Conclusion:** **Consider route options N6, N7 and N8 as one principal fixed link route (N6) from Strome Ferry to North Strome, continuing on-line through Lochcarron village, for further assessment**, including considerations for renewable option (barrage)
	North Shore 8 (N8) (Tidal Barrage)	North Shore	Historical Route – previously discounted	12.4	A890 at Stromeferry – Strome Narrows crossing from Stromeferry east to Stromemore – online through Lochcarron to Strathcarron Junction	**Pros**: Promotes north south linkage Incorporates renewable energy solution; Similar/slightly reduced journey Achmore to Strathcarron Jct. **Cons**: Difficult access to low level structure at this location; Close vicinity to Strome castle; Impact of bridge structure (potential restrictions on shipping; visual impact; environmental impact) Long term maintenance obligation for existing road corridor remains.	○ Route options N6, N7 and N8 are all fixed Strome Narrow crossings, facing similar difficulties regarding access to low level structures, vicinity to Strome Castle etc; ○ Consider location for fixed crossing in principle, assessing various access route links on the south side; ○ Environmental issues at this location; ○ Potential restrictions to shipping (lock structures required); ○ Potential disruptions to traffic flow to allow ship movements. **Conclusion:** **Consider route options N6, N7 and N8 as one principal fixed link route (N6) from Strome Ferry to North Strome, continuing on-line through Lochcarron village, for further assessment**, including considerations for renewable option (barrage)

Colour	Route Name	Main Corridor	Source	Length (km)	Route Description	Engineer's Notes, Pros/Cons (Pre – Workshop 31-01-13)	1st step of Route Sifting Process Workshop Discussion on 31-01-13 Should route be taken forward for to DMRB Stage 1 Assessment?
Blue	Online 1 (O1) (existing route upgraded)	Online	Historical Route - feasible	13.1	A890 at Stromeferry - online along south shore of Loch Carron - through Strathcarron - tie in before Strathcarron Junction Secure rock face, or extend avalanche shelter	**Pros**: Online - 2 lane road (do minimum plus) Online therefore remains within existing route corridor **Cons**: Adopts existing steep gradients Concealed SSSI	Various on-line solutions are considered at this stage. These include, in principle: • 'Do minimum' (O4), (road remains single track); • 'Do minimum plus' (O1), (road upgraded to 2 lanes) • Causeway/ cantilever (O2) • Tunnels (O3) • Joint road rail solution (O5), (combined using same track) • Extended avalanche shelter (additional option O7). It was recognised, that all on-line solutions would result in some disruption to existing traffic flows on the A890 during construction. Early engagement with potential Contractors could aim at minimising this disruption to an acceptable level (consider traffic lights, convoy, night time working etc). Route Option O6 is an alternative link from Attadale to the A896 at Kirkton and can be considered as a means of by-passing the Maman hill, Strathcarron level crossing and river Carron bridge. The link can be applied to route options O1 to O7 and S4 to S8. Detailed Workshop discussions included: <u>Embankment (**O2**):</u> ○ Potential high cost associated with embankment/viaduct; ○ Problems associated with railway interface – either requires two bridges or that the railway is realigned in various locations; ○ Loch bed may be unstable/unsuitable for embankment/viaduct construction; **However, option is still deemed worthy of further investigation**. <u>Tunnel **(O3):**</u> ○ Online tunnel options - confirm if this would be various short tunnel sections or longer tunnel which would need secondary ventilation tunnel. ○ Determine if geology is suitable for tunnels; ○ Determine most suitable tunnel construction method; . **Online tunnel option deemed worthy of further investigation** <u>'Do Minimum' **(O4):**</u> ○ Least favoured option, as it does not provide anything different to the existing situation. **However, keep O4 as 'base-line' option for comparison.** <u>Link Route **(O6):**</u> ○ Alternative link to online options, which would bypass Maman Hill and steep gradients by means of an upper loch crossing; ○ Link would incur cost associated with upper loch crossing (raised Cromarty bridge type structure) and railway crossing; ○ Potential environmental issues associated with upper loch crossing; ○ Provides safer railway crossing Deemed worthy of further investigation at present. **<u>Conclusion:</u>** **Retain all considered on-line routes, with additional options O7 for shelter extension and O6 as a possible alternative link at the eastern end**
	Online 2 (O2) (embank-ment / viaduct)	Online	Historical Route – previously discounted due to buildability issues	12.8	A890 at Stromeferry - online to Ardnarff - offline on embankment/viaduct along Loch Carron lochside until Cuddies Point - online to Strathcarron Junction	**Pros**: Online therefore remains largely within existing route corridor Bypasses rock fall area; Opens scenic loch views; Potential to open up area of SSSI; **Cons**: Major structure along lochside - approximately 3.5-4.0km length; Two interfaces with railway – requiring bridges or railway realignment; Adopts existing steep gradients Potential short term disruptions to traffic flows during construction;	
	Online 3 (O3) (tunnel)	Online	Historical Route – previously discounted due to cost of tunnel	13.2	A890 at Stromeferry - online until Croc Nam Mult - tunnel inland returning overland/online at Cuddie's Point - continue online to Strathcarron Junction	**Pros**: Online therefore remains largely within existing route corridor Bypasses rockfall area; Does not impact on SSSI. **Cons**: Tunnel construction of approx 1.4 to 2.3km length; Adopts existing geometry including steep gradients	
	Online 4 (O4) ('Do minimum')	Online	Historical Route	13.1	A890 at Stromeferry – as per existing (single track with passing places), online along south shore of Loch Carron - through Strathcarron - tie in before Strathcarron Junction ~~Secure rock face, or extend avalanche shelter~~	**Pros**: Low cost option (do minimum) Online therefore remains within existing route corridor **Cons**: Single track (do minimum) remains - single track with passing places, therefore does not deal with existing problems Adopts existing steep gradients Maintains status quo regarding travel time and traffic flows; Concealed SSSI;	
Blue	Online 5 (O5) (Share road / rail solution)	Online	Historical Route	13.1	A890 at Stromeferry – online along south shore of Loch Carron sharing railway line from Ardnarff to Cuddies point – then online to Strathcarron Junction	**Pros**: Shared road/rail corridor; Online therefore remains largely within existing route corridor Increased safety due increased physical separation of road and rail; **Cons**: High cost solution; Buildability issues; Length of construction period of approx 2 years; Potential for disruptions of traffic flows during construction; Concealed SSSI; Adopts existing geometry including steep gradients	
Blue	Online 6 (O6) (North End link)	Online	Historical Route – previously discounted	11.2	A890 at Stromeferry – online along south shore of Loch Carron through to Attadale, then offline crossing upper shore of Loch Carron – tie in to A896 at Kirkton	**Pros**: By-passes Maman Hill; Online therefore remains largely within existing route corridor Omits tight bend and level crossing at Strathcarron. **Cons**: Concealed SSSI on existing route; New railway (bridge) crossing required; Difficult causeway construction on foreshore; Bypasses Strathcarron.	

Colour	Route Name	Main Corridor	Source	Length (km)	Route Description	Engineer's Notes, Pros/Cons (Pre – Workshop 31-01-13)	1st step of Route Sifting Process Workshop Discussion on 31-01-13 Should route be taken forward for to DMRB Stage 1 Assessment?
Green	South 1 (S1) (Link Route)	South	Historical Link Route – feasible	13.5	A890 at Stromeferry – inland south of Loch nam Breac Mora – through River Attadale valley – tie in to existing A890 at Attadale – online to Strathcarron Junction	**Pros**: Provides link to Stromeferry; Gentle gradients through Glen Udalain. **Cons**: Offline route – land take (Introduces new route through virgin ground); Tourist traffic may bypass Loch Carron area; Winter maintenance issues due to high level route; Extended journey time Achmore to Strathcarron Jct ; Long term maintenance obligation for existing road corridor remains;	Consider route options S1 to S4 as one principal inland route, with S1 and S3 being possible links to local communities. Consider travel time (to Plockton) associated with longer routes. Consider route with lowest possible altitude and gradients <u>S1:</u> ○ Would retain <u>vital</u> linkage through Achmore and Stromeferry, otherwise A890 dead end beyond Strome and access less attractive; ○ Area of steep gradients towards tie-in at Strome; ○ Deep burn gorges; ○ Stalking. <u>S2 / S4:</u> ○ Similar route to S4; good route with generally gentle gradients, but should follow line of lowest altitudes, ie favour route S4; ○ Forestry Commission would require alternative access to their properties if existing Glen Udalain track was utilised ○ ; **Retain S2 as an alternative link route worthy of further consideration, but may be discarded in favour of S4, which provides a route at lower altitude and similar length** <u>S3:</u> ○ Provides link from principal route east to minor road at Braeintra; ○ Area of steep gradients towards tie-in; ○ Deep burn gorges; ○ Stalking. **Retain S3 link at present and investigate alignment further; may be discarded due to little advantage and difficult topography**. **<u>Conclusion:</u>** **Consider a principal route(S4), assessing S1 and S3 as possible links and chose between S2 and S4 to provide route with feasible alignment and at lowest altitude**
	South 2 (S2) (Link Route via Loch Nam Braec Mora)	South	Historical Route – link previously discounted due to high ground	13.1	A890 south of Braeintra – along Glen Udalain valley – north west of Loch Nam Breac Mora – through towards River Attadale valley – tie in to A890 at Attadale – online to Strathcarron Junction	**Pros**: Gentle gradients through Glen Udalain. **Cons**: Offline route – land take (Introduces new route through virgin ground); Tourist traffic may bypass Loch Carron area; Winter maintenance issues due to high level route; Extended journey time Achmore to Strathcarron Jct; Large area of forest clearing required; Long term maintenance obligation for existing road corridor remains	
	South 3 (S3) (Link Route)	South	Historical Route – link previously discounted due to difficult tie-in to A890	13.3	A890 at Braeintra – along Glen Udalain valley heading towards Glen Ling valley – then turning north through River Attadale valley – tie in to A890 at Attadale – online to Strathcarron Junction	**Pros**: Gentle gradients through Glen Udalain. **Cons**: Offline route – land take (Introduces new route through virgin ground); Tourist traffic may bypass Loch Carron area; Winter maintenance issues due to high level route; Extended journey time Achmore to Strathcarron Jct; Long term maintenance obligation for existing road corridor remains;	
	South 4 (S4) (Main Glen Udalain Route)	South	Historical Route – feasible	18.8	A890 south of Braeintra – along Glen Udalain valley heading towards Glen Ling – then turning north through towards River Attadale valley – tie in to A890 at Attadale – online to Strathcarron Junction Glen Udalain route	**Pros**: Gentle gradients through Glen Udalain. **Cons**: Offline route – land take (Introduces new route through virgin ground); Tourist traffic may bypass Loch Carron area; Winter maintenance issues due to high level route; Extended journey time Achmore to Strathcarron Jct; Long term maintenance obligation for existing road corridor remains	
	South 5 (S5) (Alternative Link Attadale North)	South	New Eastern Link Route to Strathcarron	17.6	A890 at Braeintra – along Glen Udalain valley heading towards Glen Ling valley – then turning north crossing River Attadale valley - east of Maman Hill and Achintree – tie in to A890 at Strathcarron – online to Strathcarron Junction	**Pros**: Gentle gradients through Glen Udalain; Bypass of Attadale river valley; **Cons**: Offline route – land take (Introduces new route through virgin ground); Tourist traffic may bypass Loch Carron area; Winter maintenance issues due to high level route; Extended journey time Achmore to Strathcarron Jct; Long term maintenance obligation for existing road corridor remains	○ S5 should be considered as a possible link route for southern routes S1 to S4 and OS1 and 2, not a separate route; ○ Link route bypasses existing route at Maman Hill and therefore aims to avoid steep gradients; ○ Further alignment assessment required to confirm feasibility at tie-in Strathcarron. **<u>Conclusion:</u>** **Retain route S5 for further assessment,** consider as a link in conjunction with other southern route options

Colour	Route Name	Main Corridor	Source	Length (km)	Route Description	Engineer's Notes, Pros/Cons (Pre – Workshop 31-01-13)	1st step of Route Sifting Process Workshop Discussion on 31-01-13 Should route be taken forward for to DMRB Stage 1 Assessment?
Green	South 6 (S6)	South	Historical Route – previously discounted	15.6	A890 at Stromeferry – inland along southern side of Cnoc Nam Mult towards Attadale valley – then due north through Attadale valley to tie in to existing A890 at Attadale (online to Strathcarron Junction)	**Pros**: Elevated road providing outlook over Loch Carron Similar journey time Achmore to Strathcarron Jct to existing; **Cons**: Steep approach gradients east and west; 4 No major bridge structures required ; Potential difficulties with rock stability: Introduces new route through virgin ground; Tourist traffic may bypass Loch Carron area; Offline route – land take (Introduces new route through virgin ground); Winter maintenance issues due to high level route; Long term maintenance obligation for existing road corridor remains	Route options S6 to S8 are high level (link) routes across Cnoc Nam Mult. Challenging topography (at Stromeferry and at Attadale valley), as well as across the crest of the hillside, would result in steep gradients, deep cuttings/embankments and require various large bridge structures. High altitude would also potentially provide problems with winter and bridge maintenance. **<u>Conclusion:</u>** **Discard route S8 with link routes S6 and S7, and favour a lower level route through Glen Udalain**
	South 7 (S7)	South	Historical Route – previously discounted	15.4	A890 at Stromeferry – inland along southern side of Cnoc Nam Mult towards Attadale valley – then due north through Attadale valley to tie in to existing A890 at Attadale (online to Strathcarron Junction)	**Pros**: Elevated road providing outlook over Loch Carron. Similar journey time Achmore to Strathcarron Jct to existing; **Cons**: Offline route – land take (Introduces new route through virgin ground); Tourist traffic may bypass Loch Carron area; Winter maintenance issues due to high level route; Steep approach gradients east and west; 4 No major bridge structures required ; Potential difficulties with rock stability; Long term maintenance obligation for existing road corridor remains.	
	South 8 (S8)	South	Historical Route – previously discounted	15.8	A890 at Stromeferry – inland along southern side of Cnoc Nam Mult towards Attadale valley – then due north through Attadale valley to tie in to existing A890 at Attadale (online to Strathcarron Junction)	**Pros**: Elevated road providing outlook over Loch Carron Similar journey time Achmore to Strathcarron Jct to existing. **Cons**: Offline route – land take (Introduces new route through virgin ground); Tourist traffic may bypass Loch Carron area; Winter maintenance issues due to high level route; Steep approach gradients east and west; 4 No major bridge structures required ; Potential difficulties with rock stability; Long term maintenance obligation for existing road corridor remains:	
Red	Outer South 1 (OS1)	Outer South	Historical Route - previously discounted	17.0	A87 at Dornie - north shore of Loch Long - Attadale valley - tie in to existing A890 at Attadale -online to Strathcarron Junction	**Pros**: Feasible route using existing topography **Cons**: Extended journey times; Detrimental to local communities west of the route, in particular towards Plockton; Renders upgraded route between Auchtertyre and Strome redundant; Long term maintenance obligation for existing road corridor remains;	○ Outer South route options OS1 and OS2 provide an alternative south – north link, but do not follow the lines of existing traffic flows, as the southern tie in is displaced too far east; ○ Route would be remote from communities and cut off Stromeferry, Achmore and Plockton areasON2 and ON3 similar routes; ○ Increased length of route would result in a higher cost; ○ Route provides no advantage beyond southern route options. **<u>Conclusion:</u>** **Discard Route options OS1 and 2 and favour southern (inland) routes**
	Outer South 2 (OS2)	Outer South	New Route	17.3	A87 at Dornie - south shore of Loch Long - Attadale valley - tie in to existing A890 at Attadale - online to Strathcarron Junction	**Pros**: Feasible route using existing topography. **Cons**: Extended journey times; Detrimental to local communities west of the route, in particular towards Plockton; Renders upgraded route between Auchtertyre and Strome redundant; Long term maintenance obligation for existing road corridor remains	

Colour	Route Name	Main Corridor	Source	Length (km)	Route Description	Engineer's Notes, Pros/Cons (Pre – Workshop 31-01-13)	1st step of Route Sifting Process Workshop Discussion on 31-01-13 Should route be taken forward for to DMRB Stage 1 Assessment?
Yellow	Mid Loch 1 (ML1)	Mid Loch	New Route	13.4	Alternative Loch Carron crossing - from Ardnarff to south of Strome Wood	**Pros**: Promotes north south linkage Provides good linkage to existing road network; Promotes inclusion of Lochcarron village;. **Cons**: Mid loch bridge crossing, approx bridge span length 1.7km; Impact on loch (potential restrictions on shipping; visual impact, environmental impact) Complexity of construction due to depth of loch (100m); Long term maintenance obligation for existing road corridor remains	○ Alternative bridge crossing to Strome Narrows, but provides no advantages over more western crossings; ○ Deep loch levels will incur high costs (comparison to major structures of Skye bridge at £xxx, length of xxm, and ??????? ○ Consider impact on landscape and environment. **Conclusion:** **Discard Route M1**
	Mid Loch 2 (M2)	Mid Loch	New Route	12.1	Alternative Loch Carron crossing - diagonal structure from Stromeferry viewpoint to Kirkton	**Pros**: Provides a direct link from Strome to Strathcarron Jct, thus reducing journey times; Iconic structure; Scenic views over Lochcarron: Potential marketing tool for area;. **Cons**: Major loch crossing approx 7.7km length; Complexity of construction due to depth of loch (100m); Impact on loch (potential restrictions on shipping; visual impact, environmental impact) Undeliverable due to excessive cost of structure; Long term maintenance obligation for existing road corridor remains	○ Alternative bridge crossing diagonal across Loch Carron; ○ Deep loch levels will incur high costs (comparison to major structures of Milau bridge at £xxx, length of xxm; ○ Consider impact on landscape and environment. **Conclusion:** **Discard Route M2**

Notes
Refer to drawing 47065084-602.
All route descriptions from south to north.
All routes preliminary and indicative only. Routes designed in plan only, does not include transitions, geometry not to DMRB desirable minimum standard geometry
Vertical alignments to be confirmed, some preliminary routes as shown may not be feasible due to local topography.
Further Strome Narrows crossing options may be possible/feasible (i.e including tidal barrage etc.)
Feasibility of tunnel/bridge crossing also to be confirmed.
Route lengths approximate.
List not exhaustive

Issues raised during Workshop Route Option Sifting Discussion

- Strome Narrows crossing – discount ferry crossings, as not reliable, intermittent service, Strome Narrows Crossing should be a fixed link
- Online options through Lochcarron not popular, as having additional traffic on Lochcarron main street was not felt to help economically. Group would rather that Lochcarron was bypassed with good connection/signage into Lochcarron. However it was agreed that an online through Lochcarron option be taken forward for further consideration/assessment.
- Don't want Achmore severed by new route.
- Southern routes would incur additional mileage for journeys from Plockton & Achmore to Attadale. Assessment to include origin & destination, as well as travel time assessments to determine most favourable links / routes.
- Linkage to/through Achmore and Stromeferry should be maintained.
- Southern routes tying in at Stromeferry, Braeintra and Glen Udalin should all be taken forward for further consideration/assessment
- Avalanche shelter extension – impact during construction, cost in providing a 2-way shelter. (Make one of the options an avalanche shelter option)
- All off-line route options have to consider long term liability towards the railway line in respect of maintaining a safe corridor along the existing route