Innovative Intermodal Transport Solutions:

New Norway - Continent Route
(via Shetland and Rosyth), and
Elaboration of the MoS Concept

Annex 2.2.6 to the Final Report

June 2007

Napier University
Transport Research Institute
PREFACE

This paper has been elaborated as part of the SUTRANET project (Work Package 2: Motorways of the North Sea). SUTRANET (‘Sustainable Transport Research & Development Network in the North Sea Region’) is a project within the framework of the European Commission’s (EC’s) Interreg IIIB North Sea Programme.

The aim of the paper is to present and discuss a proposal for establishing a RoPax ferry service between mid-Norway and Scotland, with optional connections to the Continent and the Faroe Islands/Iceland, and to elaborate on the Motorways of the North Sea concept.

SUTRANET, June 2007

Jorgen Kristiansen, Aalborg University, Denmark
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1. **Introduction**

The proposal for a mid Norway (Kristiansund) to Rosyth ropax ferry service comes from Moregruppen, a business and government grouping representing the 4 counties of mid Norway. The proposal was selected during the Interreg IIIB Northern Maritime Corridor (NMC) project as one of 10 short sea shipping actions for regional actors to pursue, and is now pursued within the EU Interreg IIIB SUTRANET project as a conceptual intermodal transport solution. Moregruppen has since secured sufficient resources to enable it to complete market research studies, which will be followed by a tender process and/or direct industry approaches intended to identify and select an operator to develop the route. The SUTRANET project partners have supported these activities through coordination of meetings with User Groups, in Norway and in Scotland.

In this paper an interesting variation to the route is considered, with Lerwick in Shetland added in as a wayport between Kristiansund and Rosyth. This potentially opens up a range of new possibilities as discussed below.

2. **Scheduling issues**

A 3-port ropax ferry service between Kristiansund-Lerwick-Rosyth (see Fig 1) involves leg distances and transit times of, respectively, 325 miles/15.5 hours for the Kristiansund-Lerwick leg, and 278 miles/13.3 hours for the Lerwick-Rosyth leg (Table 1).

The overall voyage distance, including a call in Lerwick, is 603 miles; this compares favourably even with the direct sailing distance between Kristiansund-Rosyth of 578 miles. The deviation distance is therefore only 25 miles, equivalent to just over 1 hour extra steaming time.

<table>
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<tr>
<th>From</th>
<th>To</th>
<th>Distance (NM)</th>
<th>Time (Hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kristiansund</td>
<td>Lerwick</td>
<td>325</td>
<td>15.5</td>
</tr>
<tr>
<td>Lerwick</td>
<td>Rosyth</td>
<td>278</td>
<td>13.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>603</strong></td>
<td><strong>28.8</strong></td>
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Note: 23 knots service speed/10% sea margin

But does such a wayport call in Lerwick make business sense? On its own a twice-weekly direct Kristiansund-Rosyth service based on a single ship operation (i.e. avoiding Lerwick) would incur substantial slack time, whilst a service 3 times per week is too tight to consider, and would involve a rolling schedule, which tends to be less attractive to the market.
In addition, the market is unlikely to be sufficient to fill a 3-sailings/week direct UK-Mid Norway service. Moreover, as a direct Kristiansund-Rosyth service operating at say an average ship service speed of 21 knots would involve a 27-28 hour sea voyage, next day arrival/delivery for freight already becomes problematic, particularly with a later departure time.

A wayport stop more or less at the midpoint in the crossing (i.e. Lerwick) therefore fulfils a potentially important scheduling function, as well as helping to develop and cater for multiple markets.

Table 2 presents an indicative optimal schedule for a Kristiansund-Lerwick-Rosyth service. This starts with an evening departure (2000) ex Kristiansund, which would suit both the outbound passenger and freight markets. Boarding from say 1800 onwards will mean passengers are likely to buy dinner on board the vessel, and also use the ship’s entertainment/shopping/leisure facilities during the evening.

A mid-morning arrival time in Lerwick (1000) would give sufficient time for the Northlink ferry to move off the berth after its own discharging operations are completed. The late afternoon departure from Lerwick (1600) allows sufficient scope for coach trips in Shetland (for those returning to the vessel in time for the onwards trip to Rosyth), and also means the vessel departs with sufficient time remaining for the Northlink ship to return to the berth prior to loading for its southbound voyage to Aberdeen.

By maintaining specific arrival (0700) and departure times (0900) at Rosyth, this means that the ‘Shetland/Norway’ vessel can avoid the Superfast Ferries ship time of arrival and its need to access the single berth there (1030/1200). A day voyage back to Shetland gives passengers the option to travel to Lerwick without the need to buy cabin accommodation, which could be attractive to certain sectors of the market. A late evening arrival/departure (i.e. 2230/2400) the same day in Lerwick will suit returning Norwegian travellers who have stayed in Shetland for 1 night (and almost 2 full days) as part of a 3-day short break/cruise (i.e. 2 nights cruise on the ship, plus 1 night hotel/B&B accommodation in Shetland).
This schedule scenario offers potential for 2 roundtrip sailings per week between Lerwick and Rosyth, plus 2 roundtrip sailings per week between Lerwick and Kristiansund, as well as 2 roundtrips between Rosyth and Kristiansund. It suggests an overall total of 4 ship-calls per week in Lerwick, 2 calls in Kristiansund and 2 calls also in Rosyth.

3. Market issues

The service would seek to build upon the market that already exists between Shetland and Scotland/rest UK, plus developing new routes between Shetland and Mid Norway, and between Mid Norway and Scotland/rest UK, plus giving potential for transfers to/from the continent via the Superfast Ferries established Rosyth-Zeebrugge service. Additional transfer possibilities exist for Iceland and Faroe Islands using Smyril Line via Lerwick.

The Rosyth-Lerwick service would offer the UK market attractive short break options of 3 nights duration, of which 2 nights are at a hotel/B&B in Shetland (with a day voyage north ex Rosyth), whilst the 3rd and final night is spent on board the vessel sailing southbound back to Rosyth.

For freight, an early morning arrival in Rosyth would be very attractive for cargo coming down from Shetland as this avoids added road haulage costs/time via Aberdeen, notwithstanding a frequency of twice a week. The southbound stop in Lerwick therefore means that more freight can be taken on board there, in addition to passengers and cars. The fact that Northlink vessels now have insufficient cabin accommodation during peak months would mean the new service could also make an important contribution to the fast growing Shetland-UK travel market.

From Kristiansund, the southbound stopover in Lerwick does not really extend the delivery time for freight from Norway to the UK; as a direct Kristiansund-Rosyth service would take more than 24 hours anyway, this implies the direct service cannot readily offer next day delivery (i.e. daytime) for freight in any event. An early morning arrival in Rosyth therefore offers the possibility for Norwegian imports to be delivered throughout the UK during the same day that the vessel arrives.

Further opportunities for Mid-Norway freight include direct connections at Rosyth onto the Superfast service to Zeebrugge. Currently, Mid and North Norway freight heading for continental markets has a difficult and expensive transit, first by road via Oslo or Gothenburg ferry services and then onwards to the continent, and thereafter by road via the tolled German motorway system. Routing freight traffic by sea from Kristiansund to Rosyth and then on to Zeebrugge, will help reduce costs and at the same time maintain competitive transit times.

This option of using Rosyth for transhipment of Norway-Continent freight has been positively pre-checked with the EC’s DG TREN and is expected to qualify for support
under the EC Marco Polo Programme, equivalent to a subsidy of around €1.0 million total for the operator (depending on traffic volumes).

Shetland freight moving directly to Rosyth (instead of via Aberdeen) for destinations/origins in the central belt and further south could allow the service to qualify for UK Waterborne Freight Grant, based on the road to sea modal shift involved.

Operationally, there would seem to be some benefits in even Northlink itself operating, or participating in, a Kristiansund-Lerwick-Rosyth service, albeit with the need to deploy a specific separate vessel. For example:

- The extra cabin accommodation would come in very useful during the peak tourist season, allowing Northlink to further expand the Shetland-UK market; and
- The extra freight capacity provided on a ropax ship via Lerwick could mean that only one of Northlink’s two current roro vessels would need to be deployed.

The Kristiansund connection would offer Northlink (and any partner) the possibility to penetrate the Norwegian (and to some extent the Swedish/Finnish) market to/from the Northern Isles, with positive impacts also likely on the connecting Lerwick-Kirkwall route, as well as for the UK market in general. Other options here include collaboration with Fjord Line (e.g. Bergen-Newcastle, now operated by DFDS) and also Wideroe for cruise-fly packages.

Essentially, a twice-weekly Kristiansund-Lerwick-Rosyth service maintained by, or in cooperation with Northlink, offers significant synergy and market advantages which could benefit the existing Northlink operation. The high propensity for Norwegians to take by-sea vacations, plus their high disposable incomes, added to the fact this would be a Duty Free route, further enhances the commercial prospects.

In specific terms, for freight the Kristiansund-Lerwick-Rosyth ropax service would be aimed at the following markets:

- Mid Norway-UK and UK-Mid Norway
- Shetland-UK and UK-Shetland
- Norway-Shetland and Shetland-Norway
- Transit cargo for Sweden and Finland, plus Iceland and Faroe
- Transit cargo between Mid Norway and continent (via Rosyth)
- Transit cargo between Mid Norway and other international destinations (e.g. large wheeled freight shipped via ACL’s Liverpool service)

In terms of passengers, the main markets would be:

- UK-Mid Norway and Mid Norway-UK
- UK-Shetland and Shetland-UK
Further travel options, with the added attraction of Duty Free shopping on the Lerwick-Kristiansund leg, include cruise/fly possibilities, Shetland-Orkney packages, and at Kristiansund there is a very convenient direct connection to the daily Hurtigrute Norwegian coastal steamer service (both southbound and northbound). As Northlink vessels are currently running full during peak months, this new service option provides the dual benefits of extra capacity to cater for the existing Shetland-UK market, and at the same time helps to develop a range of new travel market options. A specific advantage relates to direct access to the Scottish central belt, which could be very attractive for both the freight and passenger markets.

Mid Norway offers access to a similar total population as Bergen/south-west Norway, plus in addition gives far better access to the Swedish and Finnish markets, plus the counties of north Norway. Mid Norway is the strongest high-value manufacturing region in Norway after the Oslo area, with seafood traffic also highly important, whilst Kristiansund itself is a major oil supply base.

The Mid Norway/Nordmore Region is a premium ski destination, which is in large part as yet untapped by the UK market. The service would be attractive in winter for UK skiers, giving UK travellers direct and fast access to the slopes more on less upon arrival in Norway, compared with the long drive through France to the Alpine ski resorts. There appear to be good prospects for potential collaboration with Fjord Line between Bergen-Newcastle, and also Wideroe/SAS for Fly-Cruise options.

Due to the short ship turnaround time needed in Rosyth there is no day trip option for Edinburgh/Scotland visits (for Norwegians), rather a package of 3 nights sea/3 nights hotel can be offered, or cruise/fly package options for Norway to Rosyth visitors, or the option of return via Newcastle/Fjord Line.

4. Next steps

The Moregruppen team, led by former Grieg Logistics director Lorentz Boxaspen, will be visiting Scotland on 27-29 September. The group will attend the Scottish Enterprise conference on Scotland’s sea links with Europe at the Old Course Hotel in St. Andrews, Fife, on Thursday 28th September. SUTRANET will be represented by Dr. Baird, Manager for Task 2 (MoS).

Meetings are currently being arranged during this period with ferry, port and other relevant industry actors, as well as public sector bodies, with a particular emphasis on the afternoon of Wednesday 27th September in St. Andrews.
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Fig 1: Proposed Kristiansund-Lerwick-Rosyth ferry route