

Report to Partnership Meeting 26 September 2014

RESEARCH AND STRATEGY DELIVERY

Branchliner

Purpose of Report

To provide Members with information on a proposed timber transport by rail project.

Summary

HITRANS has been working in conjunction with Highland Timber Transport Group for a number of years on ways to unlock the Flow Country timber problem. Last year we studied the issue of road timber transport in Upsticks. There is now an opportunity in the light the of the latest findings (see Annexe below) to bid for funds from the Strategic Timber Transport Scheme to provide funding for mode shift to rail, obviating heavy use of fragile road networks.

Using the template of Lifting the Spirit we wish to investigate a mechanism for providing a common user timber-rail service using both fixed sidings at Georgemas and the Kinbrace lineside loading facility. Network Rail is supportive of the concept. Match funding may be achieved by capitalising the lease charges for a train set, and diverting revenue costs from road haulage to rail haulage.

HITRANS could once again play the role of fund raiser and disburser of funds to its contracted suppliers for logistics and rail haulage.

A bid to STTS would need to be made in September for an awarding round in October, with project delivery in summer 2015. Forestry Commission Scotland may be able to assist with preparation funding.

Project Outline

The project aims to deliver a managed trial of rail haulage of timber between Caithness and the Flow country to Inverness in the summer of 2015. Key elements of the project are:

- Establishing a regular timber railfreight service for the duration of the project with the costs of the rail operation de-risked for the timber industry
- Delivery of a substantial volume of timber from sidings at Georgemas Junction, supplemented by railside loading from existing facilities at Kinbrace
- Establishing the logistical, cost and infrastructure barriers to providing a viable ongoing service for timber, with application to the Far North Line and other rail served forests in Scotland
- Delivery of a key element of the HTTG Strategy for the Flow Country 2014-16

Project Concept and Delivery

This project follows in the steps of two previous STTS Rail Projects, the Roundwood by Rail project in 2011 and the Strathrail project in 2012. Whilst both projects helped provide information they did not deliver their potential because of difficulty and risks of obtaining and commissioning a reliable rail service. Indeed, it is interesting to note that, amongst other things, this was a cause of the termination of the raiiside loading operation which operated out of Kinbrace between 2002 and 2005. Freight trains are highly capital intensive and need a high level of usage to be cost competitive. It is difficult to expect the private sector to take on such risks in the remote Far North, unless they can see their way to clear attractions, be they financial, operational or environmental.

In 2013 HITRANS carried out a major logistical project to encourage the whisky industry to consider rail as an alternative for long road hauls from Moray to the Central Belt. By commissioning the rail service from Elgin. HITRANS effectively de-risked the operation, enabling key industry players to find out the advantages, costs and indeed difficulties of mode shift to rail. Lifting the Spirit project has been viewed as a highly successful model of market intervention.

Given the major challenge faced by the forest industry and the roads authority in the North HITRANS now propose to carry out a similar exercise for conveying timber by rail from the Flow country. A rail operator will be sought to run a regular service from existing sidings at Georgemas Junction in Caithness, and calling at Kinbrace, to the intermodal terminal operated by John G Russell in Inverness. Russells, a major player in the logistics industry, is already familiar with the issues, having been involved in the two earlier STTS projects. Existing demountable ISO flatracks, modified for carrying timber in 2011 under the Roundwood by Rail project, will be used in this project, supplemented by the fabrication of others, to ensure that 500t trains can be provided. HITRANS will use appropriate procurement procedures based on their experience of Lifting the Spirit.

A significant problem with previous raiiside loading at Kinbrace has been the need for the unladen train to pass north beyond Kinbrace to Forsinard, where there is a passing loop and the engine can relocate to the other end. With raiiside loading being restricted to a track possession window between 2300-0300 it was always a challenge to load a 500t train in the limited time available. The solution developed for this project is for the empty train to continue northwards to Georgemas Junction, where there are existing sidings.

The use of sidings is believed to be one of the keys to securing a more efficient and reliable operation. The unladen wagons can be dropped off by the northbound train which can then pick up a set of fully laden (500t) wagons for return to Inverness, maximising utilisation of the resources.

Trains heading south will leave Georgemas only part laden, stopping off at Kinbrace to be supplemented by about 200t of timber pre-stacked at the loading bank, for onward haulage and delivery to Inverness. At Inverness Russells will be engaged to use their existing specialist plant to lift off the flatracks for onward travel to mills and return to the yard.

The ability to load the static wagons in sidings at Georgemas, directly from the incoming haulage truck, cuts out a significant additional handling cost. It is proposed that a stack of 1000t of roundwood will be maintained at Georgemas as backup in case of operational difficulties, breakdowns etc causing a shortage for the next train. Together with proper and active management of the supply chain this should ensure costly trains are fully utilised on every journey.

Potential end users such as Norbord and James Jones are major players in Scotland and have been involved in the gestation of the two previous projects. Indeed both firms were very much involved in the original 2002-05 project and understand the local area and its logistics.

Potential product suppliers have indicated their support for engaging in the trial by providing timber for consignment on a no loss basis. Informal discussions have also taken place with owners/managers of other forests to ensure that adequate crop will be available, but contracts can only be entered into when STTS award is made and train scheduling fixed.

The project will have two discrete stages:

Stage 1 (November 2014 – January 2015): Building on previous discussion and experience HITRANS will firm up the final cost of the rail operation on the basis of 4 trains per week. The service HITRANS will make available will be for timber loaded on to the train at Georgemas/Kinbrace and removed at Inverness. HITRANS will not be involved in the journey from the forest to rail or rail to mill, or any loading/unloading. A project manager will be appointed to manage the supply and logistic chain. Sources of timber supply have already been identified and the key partners will engage in purchasing contracts for supply. In addition, market testing will be carried out to ensure that other potential users of the service are not disadvantaged and it is not intended that the service will be exclusive, although the initial partners will take the lead. HITRANS will meet the train leasing costs and STTS funding will be used to ensure that these are not substantially above the equivalent road haulage costs. The difference will also be mitigated by the in-kind partner contributions of paying enhanced rates for rail delivered timber. Partners, and any other intending users, will have to meet all costs of loading/unloading and the forest/rail and rail/mill logistics.

Stage 2: (February 2015 – December 2015): This will be the active phase of the project when partners will plan and start harvesting. The train timetable will be arranged to take advantage of the best weather and light conditions between April and September. Delivery of 20,000t is expected to take 10 weeks (40x500t trains), with a greater amount proportionally longer.

Outputs

- Appoint Project manager, engage with partners and industry and finalise contracts and agreements.
- Establishment of a regular timber railfreight service for the duration of the project with the costs of the rail operation de-risked for the timber industry
- Delivery of minimum 20kt of timber from sidings at Georgemas Junction, supplemented by raiiside loading from existing facilities at Kinbrace
- Determination of the logistical, cost and infrastructure barriers to providing a viable ongoing service for timber, with application to the Far North Line and other rail served forests in Scotland
- Delivery of a key element of the HTTG Strategy for the Flow Country 2014-16
- Removal of 6 million tonne-km from the public road network.
- Removal of 800 truck movements from A897 Strath of Kildonan and 800 from A9 Berriedale Braes
- Creation of a longer term viable mode shift to rail alternative

Strategic Fit

Mode shift Mode shift from road to rail is supported by transport policies at European, national, regional and local levels. In addition, this project would deliver a key element of the Highland TTG Strategy for the Flow Country 2014-16.

Need for public sector intervention **Despite** widespread support experience over the last decade shows that this trial is crucial to any ambition to provide a regular rail service for timber on the Far North Line. It simply will not happen without a significant element of public assistance to de-risk it for both the rail and timber industries.

Lifetime viability/sustainability This is a short term trial project with the aim of providing information on cost and logistics which can then be used to confirm whether or not rail can be made economically viable in the longer term and what infrastructure and capital works would be necessary to deliver this. In the wider Caithness/Flow Country area there is some 3-4Mt of maturing timber, with the potential to provide feedstock for a rail service for 10-20 years.

Long-term benefits The project will encourage and possibly facilitate a freight service on the Far North Line for other users. In turn this could significantly reduce long term road use and damage in the area. The project has pan-Scotland potential to show how timber might be hauled by rail, with opportunities at places like Rannoch.

Competitive advantage The overall cost of the rail operation will not be mitigated below the level of existing road transport, forest to mill. The duration of the project is restricted to the period believed to be necessary to bottom out realistic longer term costs and logistical advantages and disadvantages. Partners will not be expected to gain financial benefit from the project. The charge for the rail service will be set at a level that would ensure that the overall journey costs matched the overall cost of conveying the timber by conventional road means from forest to mill. This will be ascertained on an "open book" basis.

Fit with Other Scheme Criteria

Community and Social benefits For the duration of the trial the project will divert a minimum of 20,000t of timber off the public road network, over a journey leg length of some 150km (Georgemas or Kinbrace to Inverness). This represents a reduction of 800 laden truck journeys, 1600 in total. This will reduce disruption and public road damage, to the perceived benefits of local communities.

Environmental benefits The project will deliver the normal benefits associated with mode shift to rail including the removal of 6 million tonne km off the public road network. Reduced damage and disruption to public roads. A report carried out for the previous Strathrail project suggested that the advantage of removing 20,000t from the A897 might be as much as £250,000 to £450,000, in terms of reduced road damage. As such expenditure would normally fall on the public purse it can be considered as an in kind contribution to offset the input of STTS into the project. Assuming the project picks up 10,000t of timber from Kinbrace, the pro rata figure is £60,000 - £110,000.

Improving access to landlocked forests The Highland TTG strategy for the area sets out the challenge faced by the need to extract some 170,000t per annum from the A897 catchment over the next decade and more, resulting in 30-40 laden trucks per day using a weak single track

road. With a single train being able to replace 20 trucks there are obvious advantages in the use of rail.

Ability to deliver to programme The trial is of relatively short duration, aimed for summer 2014. With an adequate lead in period allowed for, there are no known obstructions to satisfactory delivery, well in advance of the STTS closure date. HITRANS propose to appoint a local Project Manager to liaise with the timber supply chain for the duration of the trial, ensuring delivery of regular supplies to and from the railheads and early identification of any problems.

Partnership and leverage The project draws together a number of key partners with an interest in securing a reliable and economic rail service. Partners are being invited to participate on a “no benefit” basis where delivered costs on an “open book basis” will be no less than by using equivalent road transport. This project will run, and must be viewed, in parallel with a project to improve the B871 and A897 roads as delivering the two key strands of the Highland TTG strategy.

Economic sustainability The trial is intended to establish the cost and logistical obstacles in the way of the delivery of a competitive rail service. Looking to the longer term it is hoped that a regular rail service could be structured to be competitive with other means of transport, taking all factors into account including the inordinate cost of public road maintenance and inadequacy of the single track public roads serving the area.

Open Access The project will initially be structured round the needs of the key partners but it is intended to ensure access on an equitable basis is offered to other potential partners who might come forward.

Budget

- Budget Estimate: £500k
- Strategic Timber Transport Scheme support to be requested: £400k
- Third part funding £100k
- HITRANS commitment: Project Management and seedcorn funding

Recommendation

1. Members are asked to note the report and to approve HITRANS' involvement in leading the project.

Risk	Impact	Comment
RTS delivery	√	This project fits well with a number of RTS Horizontal themes.
Policy	√	This project has integration and environmental benefits.
Financial	√	This project is fully funded
Equality	-	No impact on equalities issues.

Report by: Frank Roach
Designation: Partnership Manager
Date: 12 September 2014

Annexe:

Highland Timber Transport Group

Flow Country Strategy 2014-16 DRAFT

15 July 2014

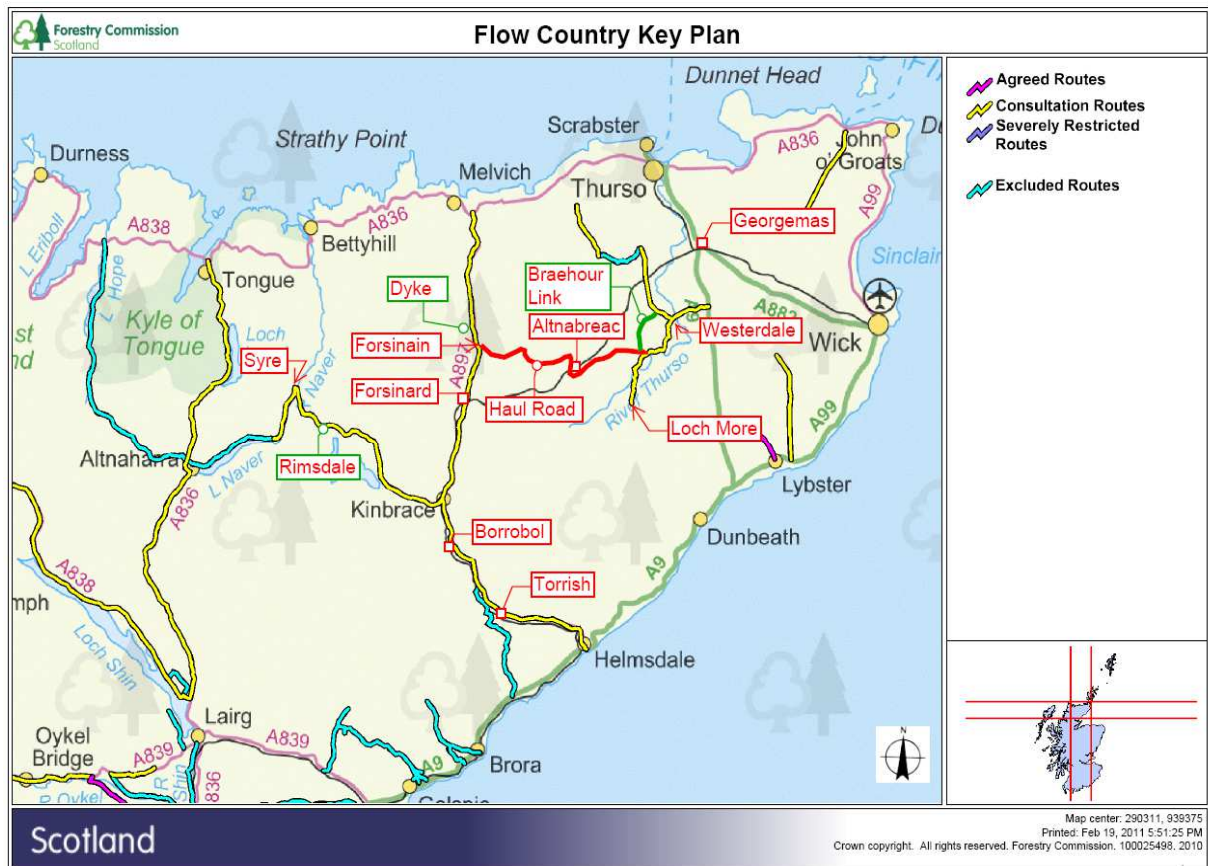


Figure 1 Flow Country Key Plan

Introduction

In 2007 the Highland Timber Transport Group (HTTG) produced a discussion document setting out the background to the extensive afforestation carried out in the Flow Country from the 1960's onwards. It also identified for the first time the full extent of the challenge faced in getting the large volumes of maturing timber to distant markets over the fragile and inadequate public road network serving the area.

The conclusions of the 2007 document have since been widely considered by public bodies and the industry, and have underpinned the HTTG strategy for the area. This strategy can be summarised as:

No	Strategy Element
1	Construction of a dedicated timber Haul Route from Forsinain on the A897 to Westerdale in Caithness, enabling timber from the catchment to flow east to the A9 Trunk Road or to local sea ports.
2	A range of improvements to the A897 and B871 roads to make them more capable of carrying current and residual timber traffic.
3	An ongoing effort to provide a viable and economic rail haulage service from the area to the Inner Moray Firth

Table 1HTTG 2007 Strategy Elements

Progress on the 2007 Strategy

Strategy Element 1: The Braehour Link and Flow Country Haul Road (FCHR).

For project delivery purposes the cross country road was split into two sections, the 7.4km Braehour Link and the 26.5km FCHR.

The Braehour Link was opened in the autumn of 2013 and is currently carrying large volumes of timber, mainly for export from Scrabster Port. It was completed on time and within budget by an STTS assisted partnership between Forest Enterprise and Summerleaze.

The project for the remainder of the Flow Country Haul Route (FCHR) was led by Summerleaze and involved negotiations with over a dozen legal owners and 10 partners. The project was awarded STTS funding and significant progress was made on the design and agreement. Unfortunately the lead partner has now withdrawn and the project is unlikely to proceed further.

Whilst the failure to proceed with the FCHR is disappointing, the completion of the Braehour Link at least ensures that the large volumes of timber to the south and east of the railway at Altnabreac can access the public road network at Westerdale. Indeed, if constructive agreements can be put in place over

access rights, some of the forests adjacent to the railway north of Altnabreac may also choose to go this way to market.



Picture 1: [Picture 2 Flow Country peatland restoration proceeding using Braehour Link](#)

Strategy Element 2: Public road improvements.

A number of projects have already been carried out to upgrade the A897 and B871 and have successfully been delivered with STTS funding support. However it has to be realised that the underlying condition of these roads is such that, whilst they can cope with day to day local traffic, they are still unsuited to sustained timber traffic. The key advantage of the FCHR was that it would have removed all timber traffic from the north end of the A897, and the majority of that south of Kinbrace, enabling limited Council maintenance funding to be concentrated on a shorter length of network. This element of the strategy has now to be reviewed.

Strategy Element 3: The Rail Option

The difficulties of initiating a viable and economic rail service are well understood by all who have tried. The concept of railside loading was successfully demonstrated at Kinbrace in 2002, with a total of some 50kt consigned to Inverness, but this had to be abandoned by 2005 on cost and logistical grounds.

With the Far North Line running parallel to the A897 for some 45km, before heading east to Altnabreac, the use of the rail line still makes obvious strategic sense, provided the obstacles could be overcome. In 2011 the Roundwood by Rail project, led by major Haulier John G Russell was awarded STTS assistance for innovative conversion of ISO standard flatracks to carry timber, aimed at cutting the cost of rail/road transfer. Unfortunately this project had to be truncated because of the difficulties of creating the logistical chain from forest to mill, although the flatracks are understood to be still available.



Picture 3 JG Russell truck with trial ISO flatrack

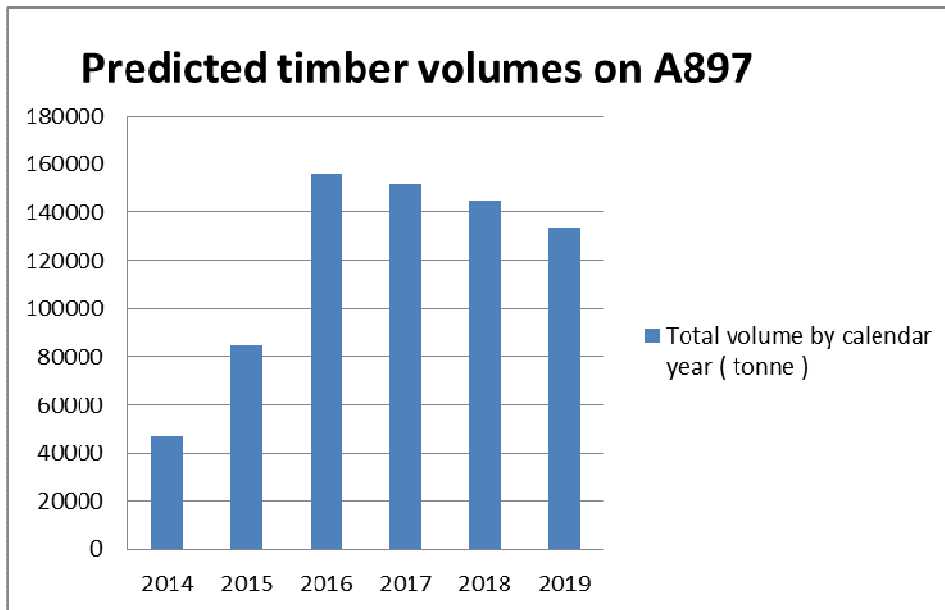
This was followed in 2012 by the Strathrail project, led by Scottish Woodlands supported by other key industry partners. This project envisaged use of the flatracks on a single 500t train from Kinbrace each Saturday night, when rolling stock was most readily available. This project was also awarded STTS funding but had to be abandoned at the last hurdle owing to difficulties with accessing the track on a Saturday night and finding a willing rail operator.

Review of the 2007 Strategy

In the light of the developments outlined above, it has become clear that a review of the 2007 strategy is urgently needed and that this should be based on the most reliable information currently available.

Although the HTTG had commissioned a strategic report on expected timber volumes from the area in 2012, and updated it in 2013, there was still a gap in the understanding on exactly when the production ramp would occur. In March 2014 the Conservator for the Highlands and Islands invited all owner/agents from forests in the A897 catchment to a meeting in Dingwall. There was a high level of cooperation and all parties agreed to participate in providing more detailed felling programmes than had previously been available. Whilst such information has to be viewed in the light of caveats about prevailing market conditions, disease, windblow etc, it is the most robust that is available.

The following graph shows how timber output from the area is expected to behave in the next 6 years, based on the figures received.



The decline in output shown in this graph after 2016 is believed to be misleading as the data is focused on the near term future. Merging it with data for other forests collected by CJ Piper & Co in 1012/13 gives a better impression of the longer term output up to 2026.

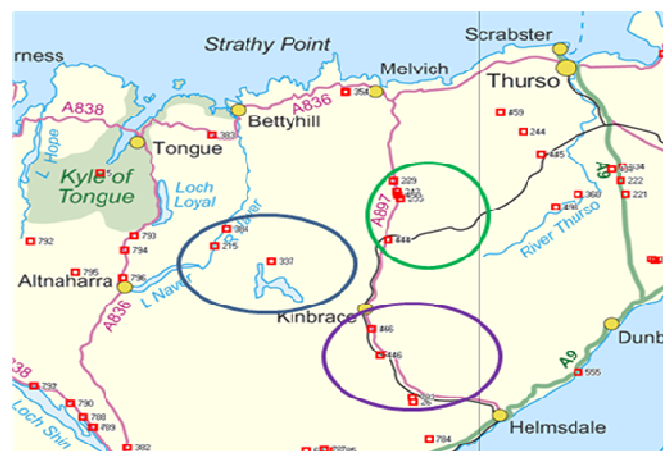
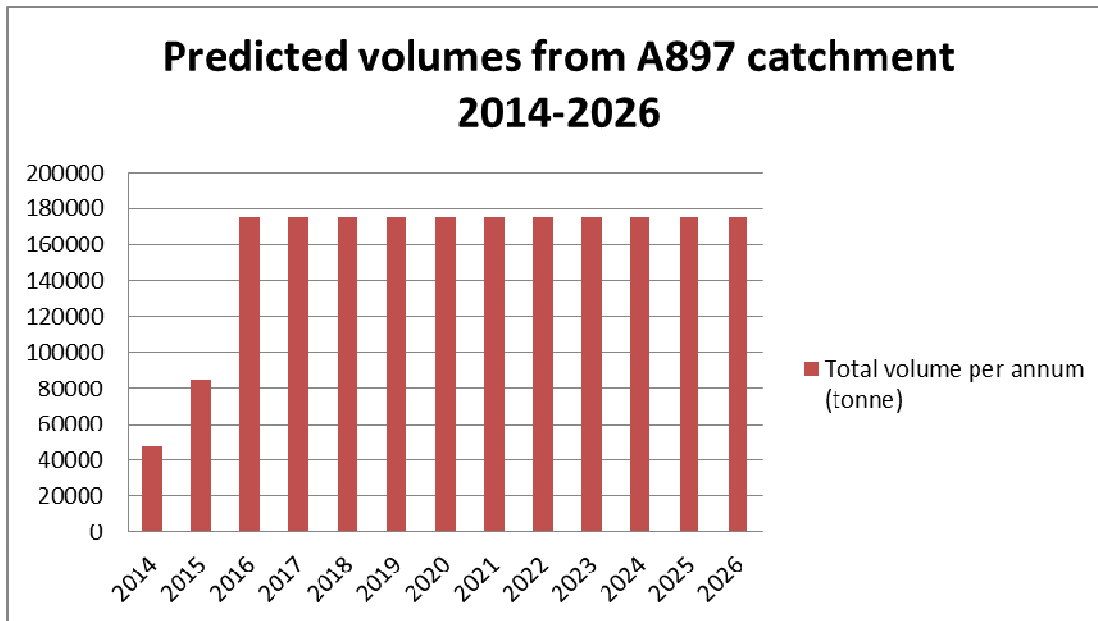


Figure 2: Map of sub-catchments served by A897

Sub catchment	Data Source	Timescale	Tonneage
South of Kinbrace	Agents returns 2014	By 2020	255,000
Naver, West of Kinbrace	CJ Piper Report 2013	By 2026	657,000
West of Altnabreac	CJ Piper Report 2013	By 2026	1,152,000
		Total	2,064,000

The following graph reflects the agent’s returns for the years 2014 and 2015, with the whole of the remaining volume averaged over the period 2016-26. It is unreasonable to expect the extraction profile to be exactly as shown, but it does clearly demonstrate the very large annual volumes that can be expected to come out.

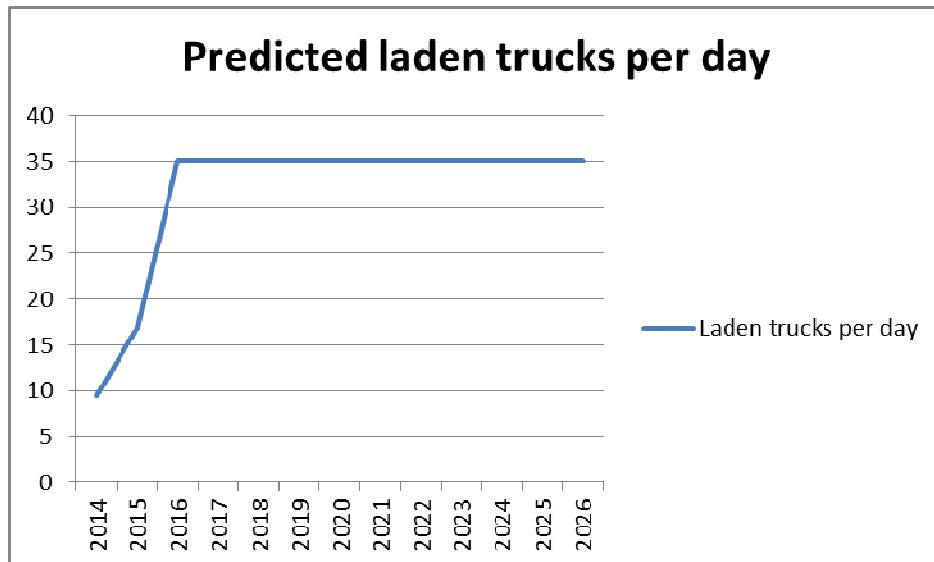


For the purposes of discussion with the Roads Authority the number of laden trucks per day is felt to give the best understanding of what these volumes mean in reality. For simplicity, calculations are based on the following assumptions:

- 25tonne truck payload
- 40 working weeks per annum
- 5 working days per week

There is a deliberate margin in these figures to allow for the many variable factors which will conspire to reduce the efficiency of the haulage operation and make it “peakier” in nature, rather than the assumed average flow. Such factors are, for example, restrictions due to snow and freeze- thaw conditions in winter, other operators using the agreed road capacity, breakdown, holidays, rate of harvesting etc.

On the basis of these assumptions a single truck journey will take 5,000t from the area per annum. In other words the volumes now predicted will require 30-40 truck laden journeys per day from the catchment over the 11 year period between 2016 and 2026. No single track road in the Highlands is known to carry such timber volumes over such distances.



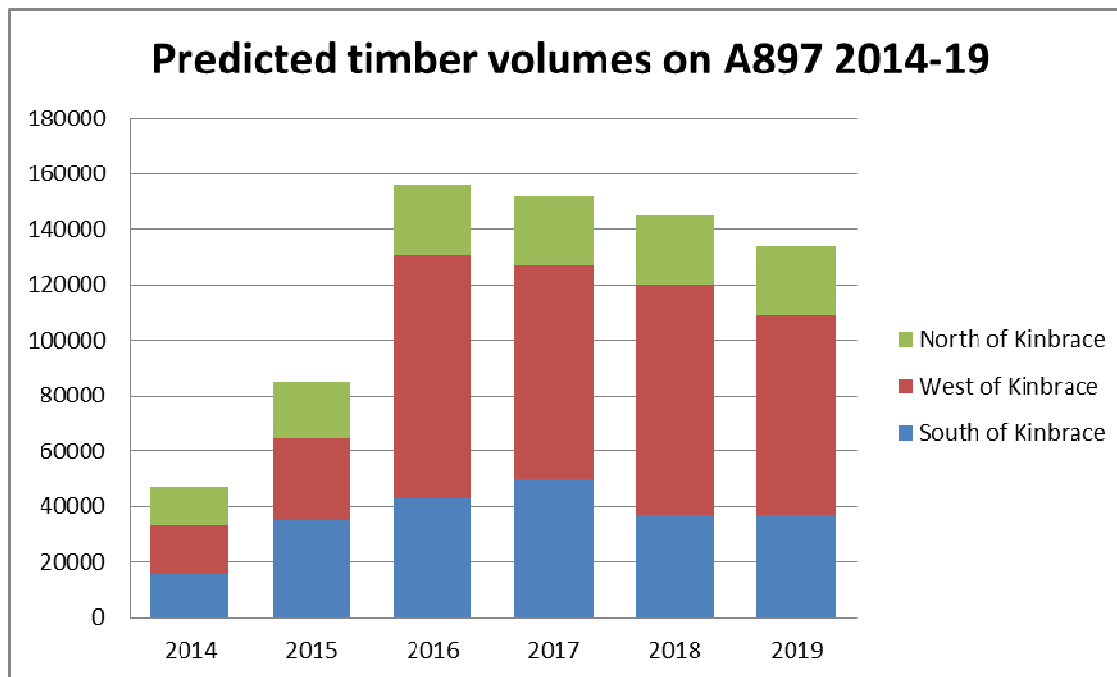
To put this in context the timber to come from the catchment to date has mainly been from the National Forest Estate at Rosal and Syre, both now privately owned. It is understood that an average of 15,000 tonnes per annum has been harvested over a period of seven years, the resulting traffic being an average of less than 4 trucks per day taken over the year. On occasion there have been peaks in timber traffic, when private sector forests have also been harvesting but the volumes removed do not bear comparison with what is now required. Instead of the 15,000 tonnes per annum in previous years the step change in 2016 will require the removal of an average of 175,000 tonnes per annum, over ten times as much; and this must be sustained for a decade or more.

This matter was discussed at the HTTG meeting on 3 June 2014, when it was felt that the current position was unsustainable and avenues of funding and support needed to be explored to deliver a solution. Key issues needing further information are:

1. The Rail Option must be bottomed out for once and for all as it would still seem to be able to provide a major component of the solution
2. Further discussion should take place with the Roads Authority regarding the capacity of the roads in the area to take timber traffic.

Assessment of the Public Road Capacity

The output information from agents for 2014-2019 period was analysed by sub-catchment location in order to assess the likely capacity demand on the various public road links. This is shown on the following graph:



The vast catchment area is served by only three roads, providing exit as follows:

- The A897, running 60km from Helmsdale to Melvich, providing exit for timber at both ends.
- The B871, running from the A897 at Kinbrace to Syre (25km) and on towards Bettyhill (15km). Exit for timber only allowed at Kinbrace.
- The B873, running from Syre to Altnaharra (20km). No exit for timber traffic

The immediate challenge is to enable timber subject to agreed felling plans in 2014-2016 to get to market, recognising the more difficult future position. A meeting was held with senior Council management of the Sutherland and Caithness area on 14 July 2014 to discuss these developments and review the information available. Agreement has now been reached with the Council as follows:

Road	From/to	Length	Consultation route status
A897	Helmsdale-Kinbrace		The section from Kinbrace to Helmsdale had previously been agreed at 4 trucks per day, 20kt per annum. This will now be increased to a maximum of 6 trucks per day, subject to road improvements. (30ktpa)
	Kinbrace - Forsinain		In the absence of the Syre to Bettyhill section being improved, some trucks could go north from Kinbrace, although this would be restricted by the need to share capacity on the Forsinain to Melvich section.
	Forsinain - Melvich		Traffic has previously been discouraged from using this section, in support of the FCHR. However, subject to agreement over improvements, 4 trucks per day will be permitted. (20ktpa)
B871	Syre – Kinbrace		A limit of six trucks per day is proposed although this will be restricted by the need to share capacity on the A897 beyond Kinbrace. This road will require considerable works to make this sustainable (30ktpa in total)
	Syre - Bettyhill		Timber traffic has traditionally been excluded from this route. It is narrow and winding and would require considerable upgrading before timber traffic would be allowed. A limit of 4 trucks per day is proposed were this to happen.
B873	Syre - Altnaharra		Timber traffic continues to be excluded except for forest access, and, when agreed, for empty return loads to Syre/Rosal/Rimsdale

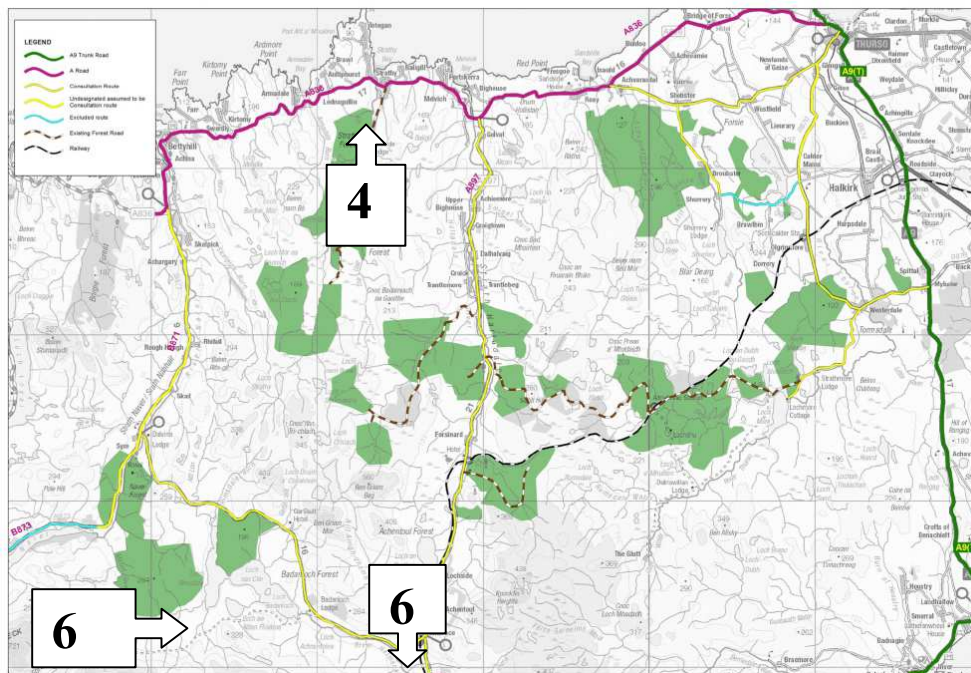


Figure 3: Map indicating currently permitted timber truck flows

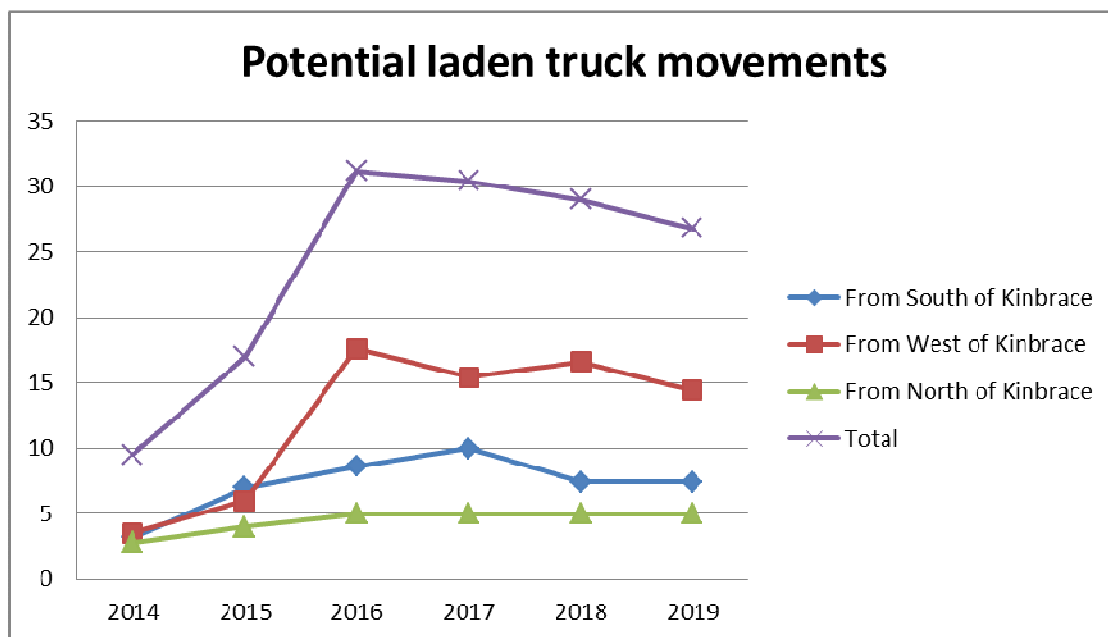
In agreeing to these limits the Council proposes to apply to the STTS for assistance to carry out a series of improvements to the A897 and B871, as an alternative solution to the failed FCHR project. It is hoped that these works will enable the limits to be relaxed somewhat after the works have been completed and subject to satisfactory performance of the roads. Timber Transport Management Plans will be strictly enforced, and it will be important for the industry to cooperate with the Council and other operators to ensure success

Review of Capacity Constraints

It is clear that there is a major gap between the currently agreed road capacity out of the catchment and the demand in the decade from 2016:

	Currently agreed	Potential demand	Deficiency
Trucks per day	10	35	25
Tonnes per annum	50,000	175,000	125,000

The following graph shows the expected demand for capacity, from the different parts of the catchment:



Using the above information the following table assesses where the constraints will be felt most. Market forces will influence where the timber is sent, but in the short to medium term the availability of access capacity is likely to be the determining issue:

Location of timber	Potential demand (trucks per day)		Permitted	Remarks
	2014-2015	2016 and on		
From South of Kinbrace, expected to go South	4-6	7-10	6	Appears to be possible in the short term. Difficult beyond 2016 without rail.
From West of Kinbrace, expected to go North or South depending on access availability	4-6	15	6	Short term may be possible with capacity sharing. Extremely difficult beyond 2016. Even if the B871 to Bettyhill route is upgraded providing an extra 4 trucks per day, there will remain a capacity problem on A897 north and south. This area would be the key candidate for rail uplift from Kinbrace
From North of Kinbrace, expected to go North	4-5	5	4	Appears to be possible, with good cooperation and management

The Potential for Rail

The deficiency between the agreed exit capacity of the road network and the demand in 2016 is 125,000 tonnes per annum, requiring an increase beyond the agreed limits of 25 trucks per day. This presents a huge challenge to the Council and industry and at present it remains unclear how this gap can be bridged, without the use of the rail network. A 500t train operating 6 days per week for 40 weeks would solve the matter but whether or not this can be economically achieved will be the subject of additional work by the HTTG in association with HITRANS, the Council, FCS and the industry.

The above volumes do not include the wider Flow Country area East of Aultnabreac where there are substantial additional rail accessible timber reserves, as well as the wider Caithness area which has access to rail sidings at Georgemas Junction.



Picture 4: Railside timber waiting uplift at Kinbrace 2003

Summary

This Strategy has been time limited to the period up to 2016, after which it will be reviewed. It has sought to take a longer term view but, at this moment in time, it is simply not possible to define how the huge volumes of timber maturing in the area will eventually get to market. With the Flow Country Haul Road off the table the only realistic options are the public road and rail networks.

The vital elements of the strategy for the next two years are:

- A series of STTS assisted improvement works to the A897 and B871
- A study and possible trial of rail alternatives to establish logistics and costs

The outcome of the works and rail study will define what happens in 2016 and beyond. If the improved roads are found to respond reasonably well to the increased traffic it may be possible for the Council to relax the currently agreed limits to some extent. Rail has the potential to resolve the problem but it remains to be seen if it can deliver. There is now an urgent need to get answers to these unknowns.