Item:
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HI TRANS
THE HIGHLANDS AND ISLANDS TRANSPORT PARTNERSHIP

Report to Partnership Meeting 23 August 2013

RESEARCH AND STRATEGY DELIVERY

UPSTICKS- Timber Transport Survey

Purpose of Report

To provide Members with background on the study undertaken by Frank MacCulloch of Arvika Consulting to determine the origin and destination of raw timber in the Highland area and thus provide a clear view of the use of the public road network and the deployment of the timber transport fleet.

Executive Summary

The aim of this study was to gain an understanding of the number of timber trucks operating in the Highland Timber Transport Group (HTTG) area and their usage of the public road network. To achieve this all trucks moving timber on routes from the forest to the processor on three specific dates in March 2013 were recorded. This study complements an earlier HITRANS Timber Transport Scoping Study carried out by Aecom in 2011. The geographical area covered by this study, and the area covered by the HTTG, matches the boundaries of the Highland Council.

Loaded timber truck movements on all classes of the public road network were measured however the results provided in the study focus on A and B class roads. Truck movements on C and minor class roads are specific to identifiable harvesting operations and are not fully representative of year round traffic flows. The study is a snap shot in time and may not represent the complete picture with regard to truck movements and number of loads however it does show how timber haulage impacts on the public road network in the HTTG area and contributes to the overall efficiency of the haulage fleet. The study results were presented by those routes managed by Transport Scotland and those that are managed by Highland Council due to the different funding and management regimes on these roads.

On one of the study days, Norbord was closed for planned maintenance. This enabled the study to investigate the impact on truck movements and whether the other processors were able to take advantage of the spare truck capacity. The data for three of the study days was used to analyse truck movements into and out of the processors and two days data used for recording the routes used when all processors were operating.

The information requested for the study is data that is collated and used by the processors on a day to day basis and during their normal course of business. The data supplied included truck arrival and departure time to and from the processor, truck registration details, originating location, destination and product. This information enabled the number of timber truck movements on any section of the public road network within the HTTG area to be measured and the most frequently used routes identified. In addition this snap shot in time can provide a monetary value of the timber hauled within the Highland area.

The key results from the study show that:

- 154 individual trucks were involved in the delivery of round timber to the major processors in Highland area.
- The spare truck capacity available on the 28th March due to a planned closure of Norbord appears not to have been utilised.
- The Inverness to Norbord section of the A96 experienced the highest number of loaded truck movements on Trunk Roads in the area, with an average of 96 trucks on two of the study days.

- The Bonar Bridge to Glenskiach section of the A836/B9176 (more commonly referred to as the Struie road) experienced the highest number of loaded timber trucks on the Highland Council road network with 24 and 37 trucks on the selected days.
- The daily total timber volume hauled was approximately 7,500 tonnes with a value at the Processor gate of £225,000. This suggests an estimated annual throughput of over 1.5 million tonnes with a gate value of some £50 million.

Based on the results of this study it is predicted that in 2020:

- The Inverness to Norbord section of the A96 route may experience approximately 180 loaded truck movements per day.
- The Struie road may experience approximately 48 to 80 loaded timber trucks each day.

The results of this study can be used to inform and develop management regimes and funding strategies within both Transport Scotland and Highland Council for the public road network.

Recommendation

1. Members are asked to comment on the report and approve the draft which is included as Appendix A.

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: 9th August 2013

APPENDIX A – Upsticks Timber Transport Study Draft Report

 ARVIKACONSULT	**HITRANS Upsticks Timber Transport Study August 2013 Draft**

HITRANS would like to thank all those who contributed to the study and freely provided the information requested. Special thanks go to Jonathon Ritchie James Jones and Sons, Ewan McKinnon Balcas Ltd, Tim Perkin Gordons, Kevin Thomas Norbord Ltd, Philip Blake Munro Sawmills and Mick Bottomley BSW.

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- The daily total timber volume hauled was approximately 7,500 tonnes with a value at the Processor gate of £225,000. This suggests an estimated annual throughput of over 1.5 million tonnes with a gate value of some £50 million.

Based on the results of this study it is predicted that in 2020:

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The results of this study can be used to inform and develop management regimes and funding strategies within both Transport Scotland and Highland Council for the public road network.

1. Background

At the December 2012 meeting of the HTTG it was agreed that a timber traffic survey of the Highlands would be of use. The purpose of the survey would be to provide an understanding of the actual number of timber truck movements across the public road network and their pattern of use in the Highlands. This study will enable HITRANS and Local Authorities to try to anticipate problems that might arise in the future and to develop strategies for best use of the limited resources available to maintain and improve the public road network.

HITRANS conducted a similar survey recently of the whisky industry which has greatly raised the profile of transport as an industry issue at Scottish Government level. It is the intention that the HITRANS Timber Transport Survey will follow on from the Timber Access Scoping Study carried out by Aecom in 2011 and provide a much clearer picture of the timber traffic movements in the HTTG area at a time when it is anticipated that timber production will increase significantly. In the past this information has been estimated from generalised data available from the timber processors.

It was agreed within the HTTG that to ensure that timely and accurate data could be collated that the study should focus on single day inputs at the main processors. It was recognised that any single day might give a skewed result and it was therefore agreed that three separate days would be used to ensure that the survey picked up journeys from a variety of origin forests. In addition it was agreed that the study should focus on truck movements on A and B class routes and not on minor C class public roads. The information for C class routes can be identified and made available if required however its relevance is limited as movements on these routes is very operationally dependant.

2. Study period and data requested.

The study involved the following processors.

- Balcas, Invergordon.
- Munro, Dingwall.
- Norbord, By Inverness.
- Gordons, Nairn.
- James Jones Ltd, Mosstodloch.
- BSW, Ft William and Boat of Garten.

The specific study dates and details were finalised following individual scoping meetings with representatives of the individual processor. This avoided any site specific haulage contract which may have skewed the results. The dates selected were:

- 12th March 2013
- 20th March 2013
- 29th March 2013.

Norbord planned a shut down for maintenance operations on the 29th March 2013 and this provided valuable information on truck movements on a day when a major processor does not operate.

The following data was requested from each processor.

Deliveries to the Processor:

- Lorry arrival time at the processor.
- Registration number of haulage vehicle.
- Configuration of haulage vehicle.
- Originating location.
- Product, round wood or chips.

Loaded trucks leaving the Processor: (*If the following information could not be supplied then the number of vehicles leaving the processor and general destination was considered sufficient*)

- Departure time from the processor.
- Registration number of haulage vehicle.
- Configuration of haulage vehicle.
- Destination, this could be general and as simple as south.
- Product, sawn, board/chips.

3. Data

The data has been provided in confidence, no commercially sensitive data has been requested and the results have been summarised in a manner which avoids the identification of individual processors and truck operators.

4. Methodology

Each processor provided the data in an Excel format which permitted the information to be collated and analysed efficiently. The following explains how the specific data was analysed and interpreted and used in the study:

Deliveries to the processor

- *Lorry registration and arrival time:* This information enabled the number of daily loads delivered by vehicle on the selected dates to be calculated. It is important to note that the number of loads per day is by vehicle and not by driver.
- *Vehicle configuration:* The vehicle description used by each processor differed and the compilation of a comprehensive list of vehicle configuration was not possible. However from comparing originating location, lorry registration and arrival time it was possible to identify the number of curtain sider vehicles used to deliver chips/bark.
- *Originating Location:* This information enabled the route from the forest to the processor to be identified. The route was broken down into specific sections and the number of vehicles using each section of the route summarised. Each truck journey started from the forest location as using the vehicle starting point on the day added a further level of data which otherwise may not have been available. If the originating location was outwith the HTTG boundary the starting point was taken from the point when the vehicle crossed the boundary. James Jones, Mosstodloch mill is located outwith the HTTG boundary and loads going to this processor which did not enter the HTTG area were not included in the study. However loads to this processor which entered and subsequently left the area were included in the study.

NB. Forest locations can have several locally used names and identifying the starting point required an element of local knowledge and the use of the following mapping systems:

- The Timber Transport Agreed Routes maps provided by Forestry Commission.
- The latest draft Timber Transport Agreed Route maps provided by the Timber Transport Forum.
- Google Maps.
- ESRI Web view.

- *Product; round wood or chips:* This information provided clarity on the processor inputs and outputs. If one processor received chips from another processor then this was included as an input for the receiving processor and the load deducted from the sending processors output. This could be checked using the registration and times of vehicle and avoided a load contributing to both input and output.

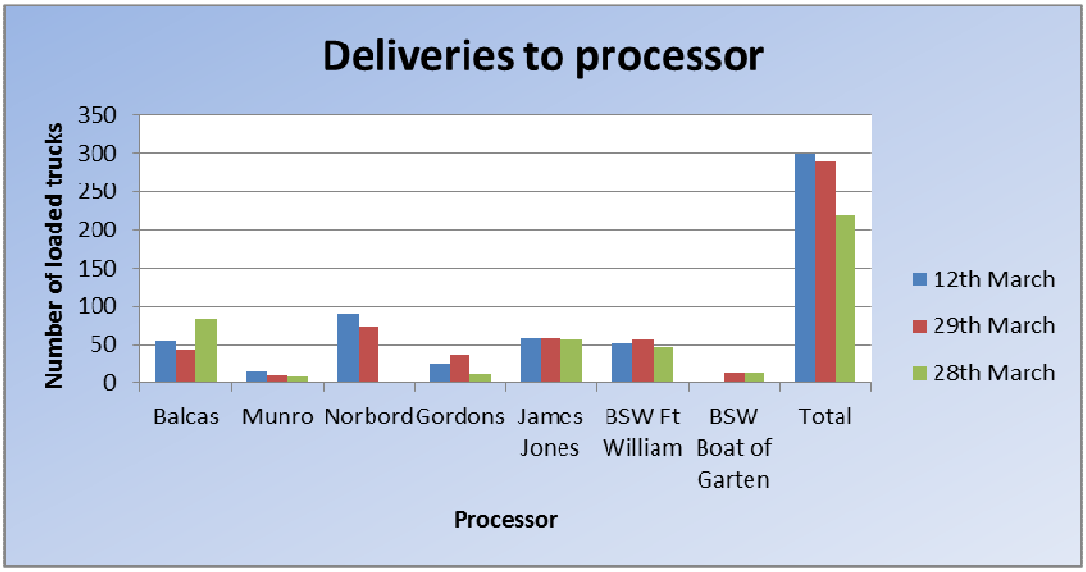
Loaded trucks leaving the processor

- *Departure time from the processor and truck registration number:* this data helped identify if vehicles were able to deliver a load and then accept a back load. Not all the processors were able to provide a registration number of the vehicle leaving with a finished product and this element of the study was difficult to quantify. However if the product such as bark or chips was destined to another processor then this load picked up as an input.
- *Configuration of vehicle:* as per Input data.
- *Destination:* this was seen as important if delivering to another processor or within HTTG area but less so if the finished product headed south and the route was easily identified.
- *Product:* this data helped identify chip/bark deliveries to other processors and finished products heading south.

5. Results:

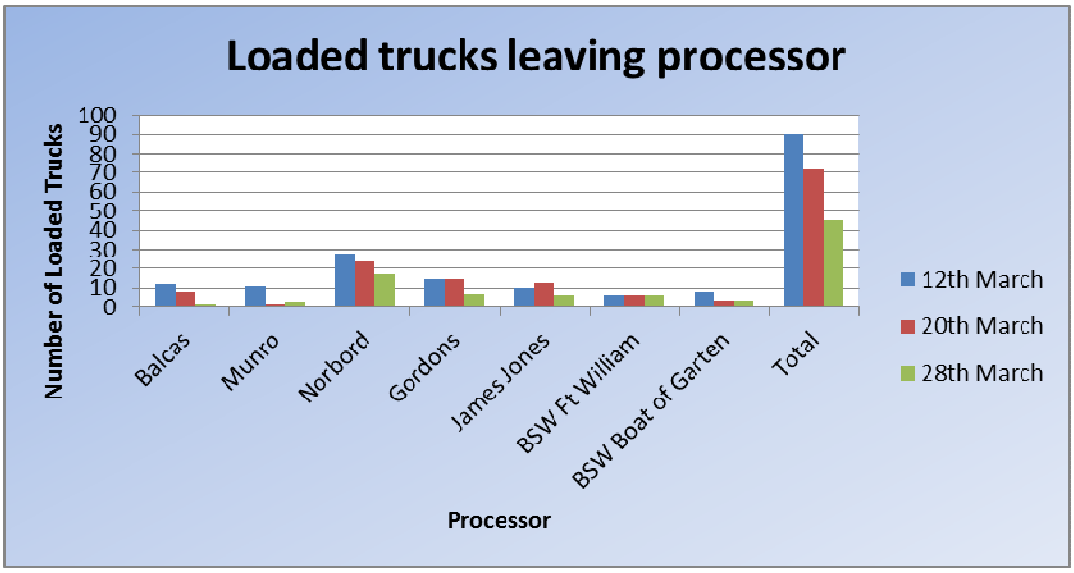
The following graphs identify the total numbers of loaded trucks in and out from each of the major processors associated within the HTTG Area on the selected dates. (Detailed tables are provided in the appendix.)

Graph 1



From the information above it can be seen that on the 29Th March when Norbord planned a shut down the other processors did not take up the spare truck capacity equating to approximately 70-80 loads.

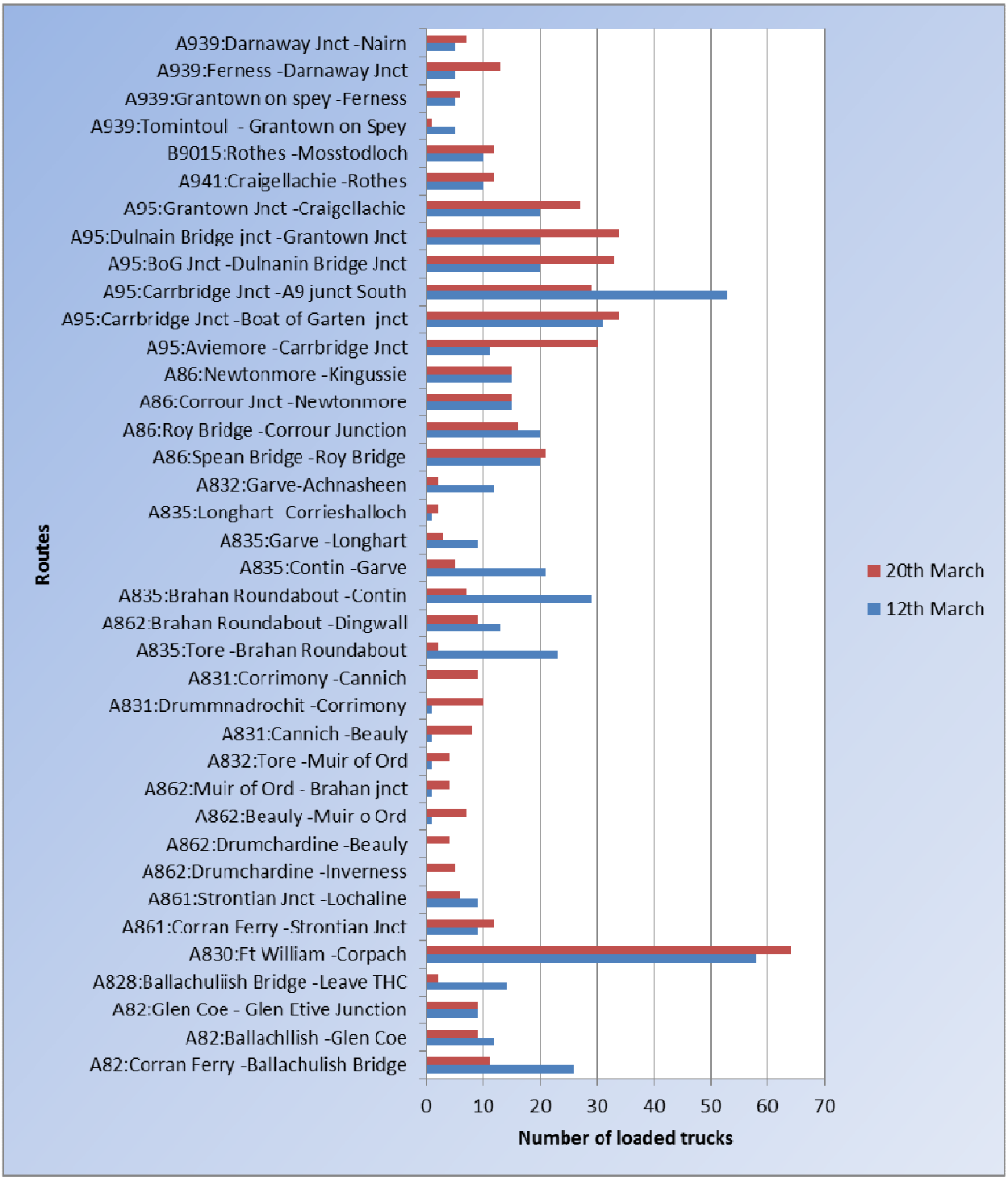
Graph 2



For clarity the output numbers above do not include chips or bark deliveries to other processors as this was included as an input by the receiving processor. The outputs shown for

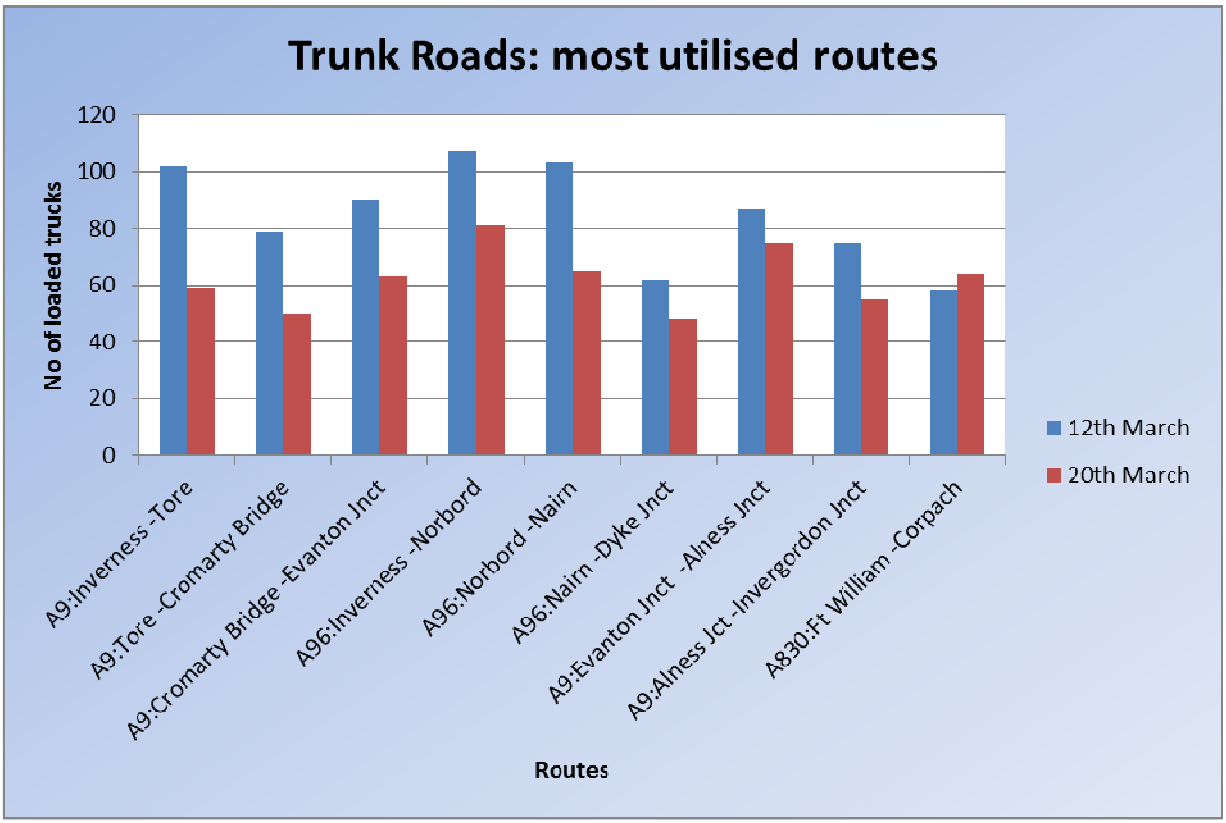
BSW Ft Willam are not typical and BSW have confirmed a numer of approximatly 20 vehicles per day is more accurate.

Graph 3. This indicates the total number of loaded timber trucks travelling on specific routes within the HTTG area and further detail is provided in table 6 within the appendix.


A939:Darnaway Jnct -Nairn
A939:Ferness -Darnaway Jnct
A939:Grantown on spey -Ferness
A939:Tomintoul - Grantown on Spey
B9015:Rothes -Mosstodloch
A941:Craigellachie -Rothes
A95:Grantown Jnct -Craigellachie
A95:Dulnain Bridge jnct -Grantown Jnct
A95:BoG Jnct -Dulnanin Bridge Jnct
A95:Carrbridge Jnct -A9 junct South
A95:Carrbridge Jnct -Boat of Garten jnct
A95:Aviemore -Carrbridge Jnct
A86:Newtonmore -Kingussie
A86:Corrour Jnct -Newtonmore
A86:Roy Bridge -Corrour Junction
A86:Spean Bridge -Roy Bridge
A832:Garve-Achnasheen
A835:Longhart Corrieshalloch
A835:Garve -Longhart
A835:Contin -Garve
A835:Brahan Roundabout -Contin
A862:Brahan Roundabout -Dingwall
A835:Tore -Brahan Roundabout
A831:Corrimony -Cannich
A831:Drummnadrochit -Corrimony
A831:Cannich -Beauly
A832:Tore -Muir of Ord
A862:Muir of Ord - Brahan jnct
A862:Beauly -Muir o Ord
A862:Drumchardine -Beauly
A862:Drumchardine -Inverness
A861:Strontian Jnct -Lochaline
A861:Corran Ferry -Strontian Jnct
A830:Ft William -Corpach
A828:Ballachuliish Bridge -Leave THC
A82:Glen Coe - Glen Etive Junction
A82:Ballachllish -Glen Coe
A82:Corran Ferry -Ballachulish Bridge
Routes
0
10
20
30
40
50
60
70
Number of loaded trucks
20th March
12th March

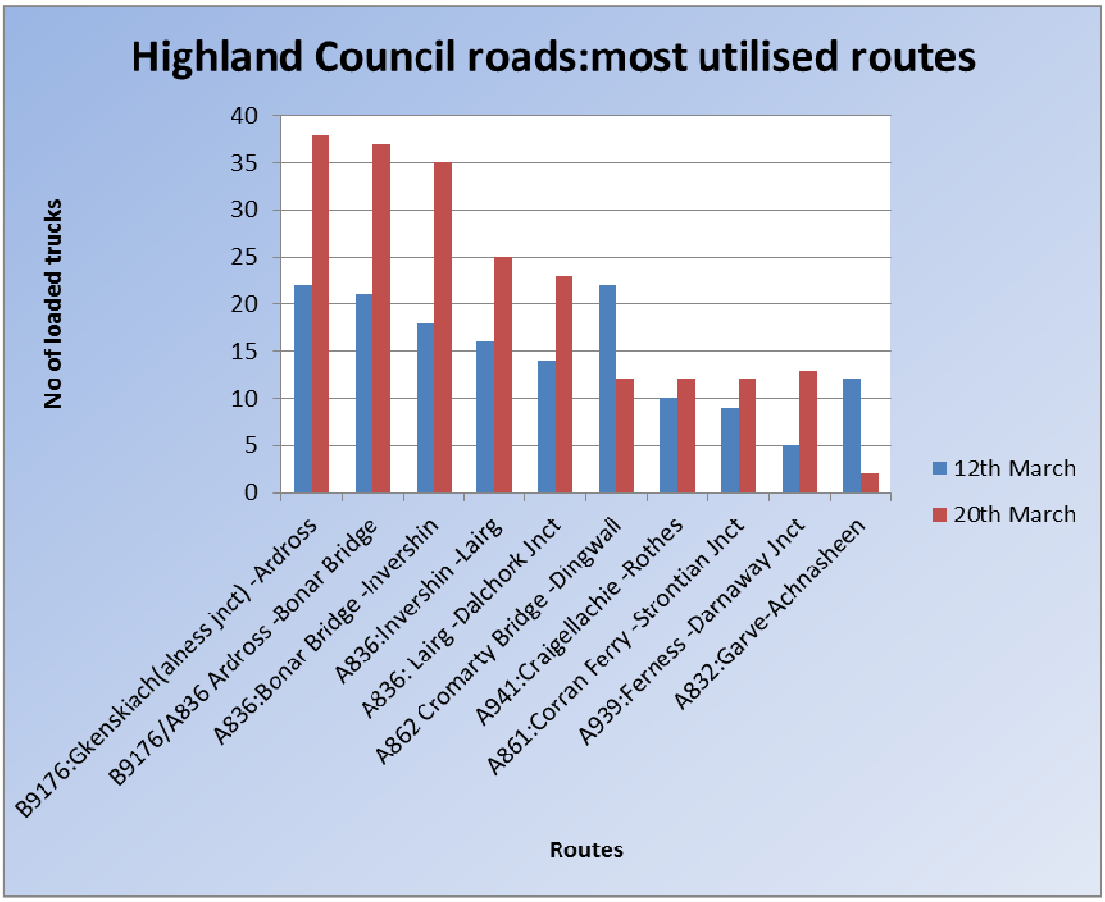
Graph 4

During the study period the following sections of Trunk Road experienced the highest number of loaded trucks journeys:



Graph 5

During the study period the following sections of the Highland Council road network experienced the highest number of loaded trucks journeys:



Truck Data

The data collected enabled the number of trucks delivering round wood timber and associated co-products to be quantified. This information is useful as it provides a base line for the number of trucks utilised for the present annual production figures of approximately 1.8 million tonnes. From the data received 154 individual timber trucks were utilised throughout the study period to deliver round wood to the processors and 21 trucks utilised to deliver chips/bark on the selected dates:

The contribution of timber to the efficiency of the general haulage fleet can be seen in the following table which shows the number of round wood timber loads hauled by individual trucks. The total number of individual trucks involved on the day is also shown.

Table 1

Dates	Total number of trucks	1 load/day	2 loads per day	3 loads per day	4 loads per day	5 loads per day	6 loads per day	7+ loads per day
12th March	115	28	37	22	18	2	2	1
20th March	114	31	32	29	14	4	1	3
29th March	97	36	28	19	6	1	5	2

Conclusion

A recent HTTG study on timber output predicted that timber volume in the HTTG area will roughly double from 1.5 million tonnes per annum in 2013 to around 3 million tonnes in 2020. The data on truck numbers along with the predicted increase in timber volume provides an element of confidence for hauliers to consider further investment in haulage equipment and the employment and training of drivers.

The entry of a new processor or major biomass plant into the area may present a different scenario by increasing traffic flows on routes not identified in this study. For example it is expected that the new BSW mill at Fort William will markedly increase the traffic flows on the A82 and A830 in and around Ft William. In addition it is expected that there may be some increase in the volume of timber travelling by rail and sea, however traffic flows within the Highland area are expected to increase significantly.

Significantly for the road managers in Transport Scotland and the Highland Council this study offers an understanding of existing and predicted timber traffic flows in the HTTG area and its economic impact on the area and provides information to enable the development of strategies and the allocation of resources to continue to support and develop the Highland timber industry.

Appendix

Table 2

Loaded trucks entering Processors			
Processor	12th March (no)	20th March (no)	28th March (no)
Balcas	55	44	86
Munro	16	9	7
Norbord	89	73	0
Gordons	25	37	11
James Jones	59	56	57
BSW Ft William	52	56	47
BSW Boat of Garten	2	13	12
Total	299	288	220

Table 3

Loaded Trucks departing Processor			
Processor	12th March (no)	20th March (no)	28th March (no)
Balcas	12	8	2
Munro	11	2	3
Norbord	28	24	17
Gordons	15	15	7
James Jones	10	13	6
BSW Ft William	6	6	6
BSW Boat of Garten	8	4	4
Total	90	72	45

Table 4

Route No	Transport Scotland: routes most utilised.	Loaded Truck Numbers 12th March	Loaded Truck Numbers 20th March
A96	Inverness-Norbord	99	68
A96	Norbord-Nairn	84	52
A9	Inverness-Tore	81	51
A9	Evanton-Alness	81	65
A9	Cromarty Bridge-Evanton	77	53
A9	Alness -Invergordon	65	45
A9	Tore–Cromarty Bridge	65	42
A830	Fort William-Corpach	60	58
A9	Inverness-Aviemore	51	15
A96	Nairn-Forres	55	46

Table 5

Route No	Highland Council: routes most utilised.	Loaded Truck Numbers 12th March	Loaded Truck Numbers 20th March
B9176	Gkenskiach (Alness jnct) - Ardross	22	38
B9176/A836	Ardross -Bonar Bridge	21	37
A836	A836:Bonar Bridge - Invershin	18	35
A836	Invershin -Lairg	16	25
A836	Lairg -Dalchork Jnct	14	23
A862	Cromarty Bridge - Dingwall	22	12
A835	Brahan Roundabout - Contin	29	7
A835	Tore -Brahan Roundabout	23	2
A862	Brahan Roundabout - Dingwall	13	9
A835	Contin -Garve	21	5

Table 6

Route	Loaded Truck Numbers 12th March	Loaded Truck Numbers 20th March
A9:Inverness -Tore	102	59
A9:Tore -Cromarty Bridge	79	50
A9:Cromarty Bridge -Evanton Jnct	90	63
A862:Cromarty Bridge -Dingwall	34	16
A9:Evanton Jnct -Alness Jnct	87	75
A9:Alness Jct -Invergordon Jnct	75	55
A9:Invergordon Jnct -Lower Tulloch	14	0
A9:Lower Tullich -Dornoch bridge	10	0
A9:Dornoch Bridge - Golspie	10	0
A9:Golspie -Brora	5	0
B9176:Gkenskiach(alness jnct) - Ardross	22	38
B9176/A836 Ardross -Bonar Bridge	21	37
A836:Bonar Bridge -Invershin	18	35

A836:Invershin -Lairg	16	25
A836: Lairg -Dalchork Jnct	14	23
A836 Dalchork Jnct -Altnaharra	2	2
A836: Altnaharra -Tongue	2	1
A836:Tongue -Borgie	2	1
A839:Lairg -Rosehall	2	3
A839:Rosehall -Oykel Bridge	3	9
A837:Rosehall -Invershin	2	11
A96:Inverness -Norbord	107	81
A96:Norbord -Nairn	103	65
A96:Nairn -Dyke Jnct	62	48
A96:Dyke Jnct-Forres	52	48
A9:Inverness -Farr/Daviot Jnct	56	45
A9: Farr Jct -Carrbridge Jnct A9 North	56	36
A9:Carrbridge -Aviemore	53	31
A9:Aviemore -Kingussie Jnct	54	54
A9:Kingussie - Dalwhinnie	39	39
A9:Dalwhinnie -South	39	39
A82:Inverness - Drumnadrochit	20	16
A82:Drumnadrochit - Invermoriston	19	21
A82:Invermoriston - Invergarry	19	21
A82:Invergarry -Spean Bridge	21	25
A82:Spean Bridge -Torlundy	28	46
A82:Torlundy -Ft William	33	46
A82:Ft William - Corran Ferry	40	28
A82:Corran Ferry -Ballachulish Bridge	26	11
A82:Ballachllish -Glen Coe	12	9
A82:Glen Coe - Glen Etive Junction	9	9
A828:Ballachuliish Bridge -Leave THC	14	2
A830:Ft William -Corpach	58	64
A861:Corran Ferry -Strontian Jnct	9	12
A861:Strontian Jnct -Lochaline	9	6
A862:Drumchardine -Inverness	0	5
A862:Drumchardine -Beauly	0	4
A862:Beauly -Muir o Ord	1	7
A862:Muir of Ord - Brahan jnct	1	4
A832:Tore -Muir of Ord	1	4

A831:Cannich -Beauly	1	8
A831:Drummnadrochit - Corrimony	1	10
A831:Corrimony -Cannich	0	9
A835:Tore -Brahan Roundabout	23	2
A862:Brahan Roundabout - Dingwall	13	9
A835:Brahan Roundabout - Contin	29	7
A835:Contin -Garve	21	5
A835:Garve -Longhart	9	3
A835:Longhart -Corrieshalloch	1	2
A832:Garve-Achnasheen	12	2
A86:Spean Bridge -Roy Bridge	20	21
A86:Roy Bridge -Corrour Junction	20	16
A86:Corrour Jnct -Newtonmore	15	15
A86:Newtonmore -Kingussie	15	15
A95:Aviemore -Carrbridge Jnct	11	30
A95:Carrbridge Jnct -Boat of Garten jnct	31	34
A95:Carrbridge Jnct -A9 junct South	53	29
A95:BoG Jnct -Dulnain Bridge Jnct	20	33
A95:Dulnain Bridge jnct - Grantown Jnct	20	34
A95:Grantown Jnct - Craigellachie	20	27
A941:Craigellachie -Rothes	10	12
B9015:Rothes -Mosstodloch	10	12
A939:Tomintoul - Grantown on Spey	5	1
A939:Grantown on spey - Ferness	5	6
A939:Ferness -Darnaway Jnct	5	13
A939:Darnaway Jnct -Nairn	5	7