

FAR NORTH EXPRESS



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THE MAGAZINE OF THE FRIENDS OF THE FAR NORTH LINE

For news and views about rail in the North of Scotland

Cairdean Na Loine Tuath

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Cover Photo: On 2 February 2023 158713 slows down as it enters the new loop on the approach to Inverness Airport Station, bringing officials and guests to the opening ceremony.

Photo: **Sandy Colley**

AGM - Please note: This year's papers will be sent out by email. If you wish for a hard copy please contact Ian Budd.

IMPORTANT NOTE TO OUR MEMBERS

Our Treasurer, David Start, has requested that we make sure to fill in the 'reference' box on **all** bank transactions. The ideal format would be **full name + membership number**.

If we don't do it ourselves the bank generates a reference, and data protection legislation prevents the bank from being allowed to inform David to which name the reference is attached. This can cause confusion when two or more members share a surname.

HEADCODE

It is remarkable that in these economically straitened times MSPs of almost all parties are content to continue with the albatross of A9 and A96 dualling round the neck of transport investment.

The passion with which demand to spend a massive proportion of a limited budget on these projects is expressed is completely out of kilter with the situation we are in.

As described in this issue, the Welsh Government takes a very different, and more enlightened view.

The Far North Line, along with our neighbouring routes, is in need of quite a lot of investment to bring it to a position where travellers are happy to give up their cars and use the railway. It is not necessary here to enumerate all the shortcomings of the infrastructure, especially in terms of capacity and journey time, yet it seems an endless task to convince those who represent us. While Scottish Government policy is to bring about very significant modal shift towards rail, both passenger and freight, there is little evidence that the decision makers themselves realise what this involves. The Rail Directorate of Transport Scotland has a very clear view of the task but is completely constrained by financial decisions imposed by the Government, which of course is made up of individual MSPs - if only they demonstrated the same passion for investing in rail as so many of them do for road widening.

Additionally, the Highlands always struggle to be treated on a par with the heavily populated

areas of Scotland. As Kate Forbes MSP said during her SNP leadership campaign, "We cannot be the party that just delivers for the Central Belt. You're either a party that delivers for all of Scotland, and therefore maintains trust and continues with ongoing election success, or not." Unfortunately election success may also seem to some MSPs to be tied to keeping on-side members of the public unwilling to participate in modal shift. Bravery on this issue is required from our elected representatives.

Delmore Loop

The FNL's most useful and largest current project is the building of the Delmore Loop, something for which FoFNL has been campaigning since 2005*. This was agreed to be a necessity in the findings of the FNL review Team which reported in 2019. Here we are 18 years since campaigning began and four years since the basic decision was made, and the latest news is that Network Rail is still working up an outline design and costs for the loop which will be submitted to Transport Scotland in the middle of the year for authority and funding for construction. Worryingly it seems that the building of the loop is now seen as part of the package of work to enable an enhanced passenger service pattern on the line and the possible extra costs of that venture will be used as part of the decision to build the loop. FoFNL's campaign was always about service reliability and freight capacity, essential to the achievement of modal shift.

Ian Budd

*when 25 mins was added permanently to the end-to-end timings to improve reliability.

FOFNL AGM & CONFERENCE

This year's AGM & Conference will be held on Friday 23 June, in **Timespan**, Helmsdale, a few minutes walk from the station.

The day begins with our AGM for FoFNL members at **10:30**. Our Conference follows at **11:15** and is open to the public.

This year we have three guest speakers covering various aspects of railways:

Chris Gibb was the first CEO of Scottish Rail Holdings having had a railway career of 40+

years, over 25 of which were at board level, both executive and non-exec.

James McCaffery, who is Programme Lead at Stadler Rail Services UK.

Martin Bignell, the Scottish and Northern Representative for the Rail Freight Group.

There will be plenty of opportunities for questions and there is a cafeteria at the venue.

As always **Frank Roach** will conclude the conference by giving us an update on the work of HITRANS.

See note on P2 about AGM papers.

PANDORA IN LIMBO

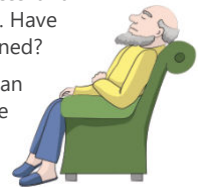
limbus (small l) is the Latin for *border*. *Limbus* (graced with a capital) in classic times was the border of Hell. *In limbo* therefore meant *waiting* - as those on the border of Hell were supposed to be waiting for admission (doubtless in no great hurry).

The railway generally is *in limbo*, waiting for parliamentary time to ease the massive freight train that is the proposed structure of the post-Williams railway out onto the main line, where progress might be expected to take place. Pandora would caution the more excitable of his readers not to give in to their driving emotion. Far sexier things than this elephant in the room will divert the attention of Ministers while this Parliament lasts. And there is no evidence that an incoming Labour Government will not wish to do its own tinkering.

But up here - are things different? A few months ago one might have been confident that they were: as they usually have been. After all, funds have been made available for several years for upgrades, station openings, electrification and so on. But lately: silence. Pandora is well aware that funds are tight, that competing claims for a bit of spending are loud, and coming from sources likely, were they given more publicity, to sell newspapers. It is the ambition of all railway managers that the railway is dull, as far as news is concerned. That means trains on time and of a standard which no-one is complaining about - everything doing what it's meant to do without excitement. Nothing to see here.

But occasionally the lack of news isn't good news. A great deal of time - and therefore money, if on no more than staff salaries - has been spent on plans for improvements to the service and infrastructure on the Far North Line. The Review Team set up by Fergus Ewing MSP in December 2016 published its conclusions a little under three years later. Much of what is in it has been delivered, but the higher-hanging fruit remains on the tree, tantalisingly visible, but still out of reach. Preliminary work has been carried out to replace some double track between Inverness and Beaulay, but the money to complete the installation seems yet to be provided. Have the plans to centre the operation of six trains a day at Helmsdale been abandoned?

Pandora, no longer of an age to count down the sleeps until Santa arrives, can cope with bad news: if things promised can no longer be delivered he can live with that. A little grumbling might ensue, but sleep will not be lost. Waiting however, *in limbo*, isn't fun.



To add a little perspective to the amount of time this process has been taking, here are some extracts from an editorial carried by the *Ross-shire Journal* at the end of 2017 (five years ago!) in response to fares increases announced then:

"Given the well-publicised problems with train reliability, rail passengers in Ross-shire will feel more than a little aggrieved at the idea that fares are on the rise yet again. The frustration is almost palpable...the trains are simply not reliable enough for locals to consider them instead of the car.

"The problem partly stems from the limited places in which trains can pass each other on these mainly single-track routes.

"One of the solutions is simple and not overly expensive to implement. Reinstalling the "Lentran Loop" [now the "Delmore Loop"] would be a significant step forward - a section of track between Beaulay and Inverness which was once dualled before someone in their infinite wisdom decided to rip up one of the tracks for scrap. But, as short-sighted as it was, the presence of the remaining track has ensured that the land is still unused - and therefore ripe for a little track-laying investment.

"Rail operators have defended the price rise, saying it will help them to reinvest in the railways. How about you start by sending some of that cash our way please? It might make the cost a little easier to swallow."

NEW MINISTERS

Inside Transport

Humza Yousaf told me he missed transport after he was promoted to Justice Secretary. I'm not surprised, because it's become increasingly important politically, economically and now environmentally – in addition to involving fascinating technological developments and the appeal of the simple joy of travel. It's also a fiendishly complicated and diverse sector – I regularly describe the railways as a parallel universe – and a tough gig for any minister to quickly master.

Why Humza Yousaf knows the importance of transport even though he omitted it from Màiri McAllan's Cabinet title

Thus it's disappointing that the first former transport minister to become First Minister has chosen to move two of the three ministers previously responsible for transport as part of his government reshuffle.

While Patrick Harvie stays on at active travel – walking, wheeling and cycling – transport minister Jenny Gilruth has been elevated to the Cabinet as Education Secretary and transport secretary Michael Matheson has been shifted to health.

Replacing Ms Gilruth is former mental well-being and social care minister and Aberdeen Central MSP Kevin Stewart. Transport will be handled in Cabinet by Clydesdale MSP Màiri McAllan, although it has been omitted from her title of Net Zero and Just Transition Secretary and the Scottish Government only confirmed to me it was part of her portfolio a day after her appointment.

I'm hoping for a minimum hiatus as the new two get up to speed – lots of reading for them over the Easter recess. I'll be keeping a close eye on things to see that there is no let-up in progress

on the crucial work Ms Gilruth launched a year ago on improving women and girls' safety on public transport, which I'd expect Ms McAllan to now champion – and equally Mr Stewart.

Meantime, perhaps her new role will provide Ms Gilruth with an opportunity to tackle the core of the problem – male attitudes – from the earliest age, as I have advocated several times. Regardless of whether transport is added to Ms McAllan's title, her boss will be mindful of the crucial role it plays, having been transport minister from 2016 to 2018.

As his predecessor Derek Mackay also found before him, the job involves all the tough stuff like ScotRail and CalMac. Glitzy projects were reserved for Cabinet Secretaries, like Keith Brown for the Queensferry Crossing.

But it's also been a bit of a rite of passage to the top – Mr Mackay went on to be Finance Secretary before his fall from grace, while I imagine Nicola Sturgeon wanted to put Mr Yousaf through his paces, perhaps even seeing him back then as a potential future First Minister, in appointing him to the role.

However, the jibes Mr Yousaf has faced about his time as transport minister are misplaced.

For SNP leadership rival Kate Forbes to criticise him because "the trains were never on time" was a cheap shot over a complex problem. Most of the ScotRail delays at the time were also caused by track and signalling problems which are the responsibility of UK Government-owned Network Rail.

I believe ministers should rightly be taken to task for specific decisions they make, but that reproach was as fatuous as Mr Yousaf being criticised months after taking over the job for admitting he wasn't a transport expert. I've been covering it for 20 years and still wouldn't call myself one.

Alastair Dalton

This article originally appeared in The Scotsman on 31 March 2023. It is reprinted with permission.

PARLIAMENTARY QUESTIONS

Question S6W-14798: Monica Lennon, MSP for Central Scotland, Scottish Labour, answered on 6 March 2023

To ask the Scottish Government whether it can commit to setting a (a) start date and (b) timetable for its national conversation on rail services, as announced by the Minister for Transport in the Scottish Parliament on 9 February 2022.

Jenny Gilruth: The National Rail Conversation will be formally launched in April to mark the one year anniversary of ScotRail coming in to public ownership. Through the National Rail Conversation, we will listen to feedback from passengers, staff and stakeholders to shape a vision for ScotRail which best meets the needs of the people of Scotland. I will announce the timetable for the conversation at the launch.

Question S6W-15855: Graham Simpson, MSP for Central Scotland, Scottish Conservative and Unionist Party, answered on 28 March 2023

To ask the Scottish Government what plans it has to increase the amount of freight delivered by (a) water and (b) rail.

Jenny Gilruth: Scottish Ministers and officials have been working with industry stakeholders to explore the data on routes key Scottish exports take to market. Officials plan to annually update and publish this data on the modes and routes through which exports leave Scotland, including the commodity gaps in relation to the rest of the UK, to better inform exporters on the flows of Scottish goods to the EU and the rest of the world, as we continue to explore opportunities to increase exports from Scotland.

The Scottish Ministers have set a further rail freight growth target* for rail control period seven (2024-2029) through their recent High Level Output Specification.

*"net growth in CP7 of 8.7% net tonne kilometres in rail freight on the Scottish network"

[There is a link to the HLOS on this issue's companion web page]

Question S6W-15856: Graham Simpson, MSP for Central Scotland, Scottish Conservative and Unionist Party, answered on 22 March 2023

To ask the Scottish Government what discussions it has had with Network Rail regarding the use of any spare capacity on passenger trains to freight goods into Scotland's cities.

Jenny Gilruth: There have been no recent discussions with Network Rail on this specific point. Rather discussions have focussed on futureproofing stations for potential dedicated express logistics services.

Question S6W-14784: Rhoda Grant, MSP for Highlands and Islands, Scottish Labour, answered on 16 March 2023

To ask the Scottish Government, further to the answer to question S6W-13023 by Jenny Gilruth on 9 January 2023, when it will fulfil its commitment to reduce train journey times between Inverness and Edinburgh to 2 hours 45 minutes, as referred to in the original question.

Jenny Gilruth: Transport Scotland, alongside industry partners, is exploring options for lengthening passing loops on the line to enable longer and more frequent freight and passenger services.

Enabling the transfer of freight traffic, particularly from the adjacent A9 to the Highland Main Line,

will produce significant carbon savings and improve safety and traffic flow on the A9.

We will fund the infrastructure enhancements necessary to produce further journey time savings on the Highland Main Line once a robust business case has been established for this expenditure.

HIGHLAND MAIN LINE QUESTIONS

Ever since the then First Minister, Alex Salmond, promised in August 2008 to reduce the journey times between Inverness and Edinburgh to an average of three hours, with a quickest service taking a maximum of 2 hrs 45 mins by 2012, there has been a mixture of denial (of the promise, at first) and later, obfuscation, about what has actually happened. So far no explanation has been given and Parliamentary Questions' answers have been somewhat unhelpful.

Rhoda Grant, one of our Vice Presidents has asked several questions about this. On 15 January 2019 she tabled a question asking why the target date was missed, what had been done so far, and when to expect the promised service level to be achieved.

The answer given said that the 2011 Infrastructure Investment Plan stated that the "Highland Main Line Rail Improvement project" would be completed in phases between 2014 and 2025. It then listed the first two Phases - Phase one, completed by the end of 2012 which had given an average 6 min reduction in journey time, and Phase two delivering a reduction of 10 minutes on the average journey time. (It wasn't clear whether that 10 minutes was on top of the 6 mins or included those minutes). The last sentence stated that the "long term aspiration" was the timings mentioned in the question.

Nearly four years later Rhoda asked again about progress to meet Alex Salmond's promise. Surprisingly, her actual question was replaced in parliament records by an altered version of her 2019 question.

The answer this time talked about lengthening several passing loops "to enable longer and more frequent freight and passenger services".

The only way that lengthening a loop will allow a more frequent service is if the original length was too short to accommodate a long freight train, causing the passenger train to be the one that has to wait in the loop. Or perhaps this implies some double-tracking: a higher frequency can be achieved either by adding more passing loops or providing double track sections long enough for more than one train to pass another, known as 'dynamic loops' and ideally at least four miles long.

Rhoda followed this up with a further question (see above) requesting a timescale for the journey time reductions promised in 2008. The answer, whilst repeating the intention of "lengthening passing loops on the line to enable longer and more frequent freight and passenger services" gave no timescale but did say, "We will fund the infrastructure enhancements necessary to produce further journey time savings on the Highland Main Line once a robust business case has been established for this expenditure."

Meanwhile the Transport Scotland website lists the Highland Main Line as "Under construction" and simply gives 2025 as the target date for the 2008 commitment. The page has a link entitled "View the Highland Main Line details" which says that TS expects the key outputs of an hourly service between Perth and Inverness "extended to Glasgow or Edinburgh" and a reduction of 10 mins on the average journey time, by May 2020. There is another link on that page: "Find out more at Network Rail's Highland Main Line site". Unfortunately this is a dead link and the NR website contains no HML page. On the general "Scotland Route" page it says, "Similar [to A21] connectivity, journey choice and journey time improvements will be delivered by new infrastructure, new trains and new timetable for Inverness and for communities along the Highland Main Line to Perth and onto [sic] the Central Belt."

It is good to know that as far back as 2008 and 2015 respectively, the last two First Ministers fully appreciated the need for radical improvement of rail in the Highlands. Alex Salmond said in

Inverness, "Railways must at least compete with the roads", and Nicola Sturgeon echoed that, saying that she believes people in the North should not have to choose between good rail links or better roads. The new First Minister, Humza Yousaf, once held the post of Transport Minister, so will be well aware of Highland railways' shortcomings.

The mention above of a "robust business case" still raises a warning flag for us. Until recently business cases seemed to require value for money in terms of the population served – a calculation which can never produce a good enough result in less-populated areas, with lengthy routes, such as the Highlands. We have been assured recently that that method has been superseded by something which takes many more factors into account. We would hope that factors such as the great reduction in pollution gained by transferring freight to rail would be included, along with the strategic object for the whole of Scotland of achieving fast, safe, environmentally-friendly communication between all parts of the country, and the economic benefits that would bring.

The passionate campaigning for dualling the A9, at a staggering cost for one length of road of at least £3000m, has overshadowed the needs of people in the Highlands who wish to travel by rail, and has ignored the declared government aim of substantial modal shift away from road transport.

That £3000m+ would go a long way to solving the capacity problems of the HML and speeding up the journey on the Far North Line enough to remove the temptation to drive.

Ian Budd

[The full questions and answers are on the [companion web page](#) for this issue of Far North Express.]

[www](#)

THE WELSH PERSPECTIVE

On 14 February the Welsh Government published a report from the Roads Review Panel, an independent body appointed by the government entitled "The Future of Road Investment in Wales". As this issue's contribution to the ongoing debate about the dualling of the A9 and A96 this excerpt addresses the safety claims of those MSPs who are determined to see the dualling take place. Section 5 of the report, entitled "Principals for Future Road Development" contains these general recommendations:

1. The Panel recommends that in future, schemes that modify the form of a road should only be for these four purposes:

- Shifting trips to sustainable transport to reduce carbon emissions
- Reducing casualties where they are high, through small-scale changes
- Adapting roads to the impacts of climate change
- Supporting prosperity by providing access to development sites that will achieve high sustainable transport mode share

2. The Panel recommends that road schemes that are consistent with current policy (i.e. schemes that achieve mode shift, reduce casualties, adapt roads to impacts of climate change, or provide access to development sites that will achieve high sustainable transport mode share) should meet four conditions:

- The scheme should minimise carbon emissions in construction
- The scheme should not increase road capacity for cars
- The scheme should not lead to higher vehicle speeds that increase emissions
- The scheme should not adversely affect ecologically valuable sites

This subsection talks about the second purpose listed above under Recommendation 1 - Reducing casualties where they are high, through small-scale changes.

5.4 The Panel considered that capital enhancements that change road or junction layouts may be appropriate where there are concerns in relation to safety, evidenced by a significantly higher rate of personal injury collisions than anticipated for the type of road, traffic volume or location.

However, before making changes to a road or junction layout, non-infrastructure measures to reduce casualties should be fully appraised, including lower speed limits; speed enforcement; enhanced road markings; and warning and other signs. These measures may achieve a sufficiently large reduction in casualties, and be more cost effective than changes to the road or junction layout. Speed limit reduction can provide a safety benefit over the length of a route, and may complement even lower limits at discrete locations. These measures also have low or zero embodied carbon emissions; and measures to reduce speeds have the added benefit that they reduce carbon dioxide emissions in use. Evidence should be provided that these non-infrastructure interventions are not as effective as required before beginning to consider more significant infrastructure interventions.

When appraising schemes that reduce speeds to improve safety, the Panel recommends that the resulting small increases in journey time should not be treated as a disbenefit in cost-benefit calculations. This will remove the possibility that safety is traded against journey time reductions in appraisal.

Where changes to road or junction layouts are necessary, the Sustainable Transport Hierarchy should be used to inform design development and decision-making. This means that priority must be given to changes to layout that reduce risk for people walking and cycling (who are at higher risk of death or serious injury) while providing more direct and convenient routes for these road users.

The above recommendations relate to capital safety enhancements, which change the form of the road asset, and not to routine maintenance and asset renewal which change its condition.

The Lugg Review of "Strategic Road Network Programmes in Relation to Meeting Statutory Duties" makes recommendations as to how the "safety-critical elements" of maintenance and asset renewal programmes should be prioritised and progressed.

Setting an objective to reduce road casualties does not, on its own, make a scheme consistent with current policy. An assessment is needed as to whether the scheme, in its entirety, is the most effective option to achieve that objective, and whether it may have the unintended effect of making other policy aims, particularly in relation to modal shift and carbon emissions, more difficult to achieve.

As Transform Scotland points out on its website, "The report recommends that road schemes should only be for the purposes of promoting sustainable transport, adapting to climate change, serving sustainable development or improving road safety. This is a very high bar for road schemes to pass, representing a revolution in the way that schemes are considered, and few existing road proposals in Wales will meet these new criteria."

Clearly the A9 and A96 dualling projects would not be justifiable if the Scottish Government were to commission and adopt a similar report.

HLOS PUBLISHED

The Scottish Ministers' High Level Output Specification (HLOS) was published in February. The document is a legal requirement to inform the UK Office of Rail and Road (ORR) of "what the Scottish Ministers require the rail industry to achieve with regard to Scottish railway activities during the review period covering 1 April 2024 to 31 March 2029." i.e. Control Period 7 (CP7).

It is largely a set of instructions to Network Rail. This is not the place to look for details of specific projects in the 'pipeline' for 2024-29.

The following excerpts are of particular interest to railways in the North of Scotland. (Our emphasis added)



3.4 to establish and operate (with ScotRail Trains Ltd.) a joint Scotland-based timetabling team to deliver all activity on the Scottish network. The team should be operational by the start of CP7 and co-located, with one management structure responsible for the delivery of the timetable product, with a **demonstrable understanding of Scotland's geography**, economy and network operating characteristics;

3.14 ensure train connectivity, during unperturbed periods, between services and **other modes, such as bus** or tram. Such connectivity must result in timetables demonstrating good connections from one service to another with a focus on the needs of passengers.

Maintaining and Improving Journey Times

3.15 Rail travel, especially on Scotland's increasingly electrified rail network, offers passengers and business a highly attractive mode of transport which is quick and efficient but also has low or net zero emissions. To retain those advantages over other modes (including the growing electric car market), the rail network must continue to modernise and in Scotland will be required to **deliver competitive journey times**.

3.16 On parts of the Scottish Network, speed limits reflect the historic capability of previous trains rather than the current capability of both trains and infrastructure. It is recognised that this provides opportunities to improve journey times without the need for further enhancement works. As a result, the Scottish Ministers require Network Rail to take full advantage of maintenance and renewal works and timetable development processes to enable ScotRail Trains Ltd. to **achieve improved journey times**. This should be based on a decrease in the average minutes per mile measured across all ScotRail services in the current timetable (at January 2023). Maintaining safety, Scottish Ministers expect that Network Rail will work with Scottish Rail Holdings and ScotRail Trains Ltd. on a plan to deliver this outcome, to be in place for the start of Control Period 7.

Facilitating Efficient Electrification

3.45 Electric passenger and freight trains offers zero emission transport which cost less to purchase and operate, are more reliable and faster and attract more passengers than existing diesel or **alternative technology trains**.

Infrastructure Readiness for Rolling Stock

4.23 It is expected that during CP7 it will be necessary to introduce new fleets of **electric and battery-electric trains** to replace life-expired diesel trains and the older parts of the existing ScotRail electric fleet.

This HLOS contains the evidence that we are lucky to be part of Scotland's Railway. Roger Ford, of *Modern Railways* magazine writes: "When the Scottish Minister's High Level Output Specification (HLOS) for Control Period 7, which starts on 1 April 2024, was published, I wondered how it would compare with the pitiful England & Wales version. It turned out to be a breath of fresh air, showing that the Scottish Ministers, or rather their rail team in Transport Scotland, are informed customers for Network Rail.

"They have very clear views of what Network Rail is to deliver in CP7 – plus catching up what they failed to deliver in the current CP6. Behind the text is the firm stamp of command."

[www](#)

FLYING IN THE FACE OF MODAL SHIFT

In our January issue we reported that France has banned flights between cities linked by rail with a journey time of less than 2½ hours. Other countries in Europe have already enacted, or are considering enacting, similar policies. For example, as part of the Austrian government's pandemic bail-out deal Austrian Airlines is now forbidden from providing flights between cities connected by a train journey of under three hours. This affected the carrier's route between Vienna and Salzburg.

Meanwhile, the UK is travelling in the opposite direction from Europe with the aptly timed 1 April announcement of a 50% cut in Air Passenger Duty (APD).

In June 2021 the Rail Delivery Group (RDG) warned the UK Government that "Cutting APD in half would see an estimated 222,000 passengers a year shift from rail to air, equivalent to over 1,000 extra flights".

A *Which? Magazine* report in the summer of 2021 found that a large selection of domestic journeys in the UK were nearly 50% cheaper by plane than by train, whilst having a per-passenger carbon footprint six times higher. However, once the cost of travel to and from airports, along with parking charges, are added in, it is true that the difference is smaller, and flying is often not significantly faster between city centres than going by train.

The UK Government ran a consultation before going ahead with the APD cut. In its response RDG had called on the government to:

- Make rail the mode of choice for long distance journeys under five hours by not reducing APD where a journey can be made by rail in that time
- Level the playing field on transport taxes so that travellers are encouraged to use greener modes of transport. Taxes now make up almost 40% of the total electricity costs for train operators to power trains whereas studies have shown that compared to other modes of transport air passengers pay a much smaller proportion of the climate costs associated with their travel
- Make it easier for people to choose the train for long distance journeys by making fares simpler so that passengers have a wider range of walk up prices and it's easier for people to get a seat as demand is spread more evenly throughout the day
- Conduct a study to fully understand the impact on other transport modes and climate change by decreasing domestic ADP

This appears to have fallen on deaf ears and the UK Government is currently travelling in the wrong direction.

Ian Budd

LETTER TO THE EDITOR



Photo: iknow-uk (CC BY-NC-ND 2.0)

In 1996 I departed from the island fastness of Hoy where what purports to be my luxury home is located. Together with my bicycle we travelled first on one ferry, a small one, and then on a larger vessel to The Scottish Mainland. Arriving at Thurso there was time to take a leisurely cycle ride through the town, stopping to purchase a portion of fish and chips before boarding the Inverness train. My trusty bicycle, safely ensconced in the guard's van, I was able to settle onto the well upholstered seat and begin to banish what can only be described as the familiar warm and comforting odour of carriage seating with my fish and chips. A connection at Inverness took me to Edinburgh, where in the "wee small hours" I boarded a train bound for Cornwall. The next day, with my bicycle, I stepped down from the train in Penzance. We had travelled the whole length of the country from the Far North to the Far South in a fraction over 24 hours, at a cost of £137.50, plus £3.00 for my bicycle. This was the return fare, I have the framed tickets before me now. "Oh, what date?" you ask, well it was 20 May 1996, the last day before the railway system was irrevocably broken up. Now, more than twenty five years later, nothing meets up anymore and it takes me two days and an overnight stay in a hotel to get from Inverness to my home on Hoy.

In the January *Far North Express* (88) there is an article detailing how it has taken nearly nine months to replace the roof on what can only be described as a "bus shelter" at Muir of Ord. Another article informs us that "Logs on Lines" is delayed because there are still no wagons available. There is a mention of "private waiting rooms" from the past glory days of train travel, and on another page a photo of the waiting passenger accommodation at Conon Bridge; Yet another of those joyless bus shelters with walls that finish four inches above the ground and chill the ankles. Finally on the back page there is a brief biography of Robert Garrow and what he achieved. Reading it tells us all we need to know really.

As a pensioner I now can travel anywhere in Scotland by bus, free gratis and for nothing.

"Yes, but we still need an expensive, time consuming, consultation exercise to discover how we can attract more customers for the railways."

O tempora, O mores.

Paul Tiney (FoFNL member)

WE COULDN'T HAVE PUT IT BETTER!

This is from Network Rail's website. It inadvertently describes very eloquently the current situation on the Far North Line, the Highland Main Line and the Inverness to Aberdeen (A2I) route. There is an imminent need to provide extra capacity for passengers, and especially freight, on these lines too, so that modal shift can take place.



The Hope Valley Railway Upgrade

We're upgrading the railway between Manchester and Sheffield to provide more reliable and faster journeys for passengers.

The Hope Valley Railway Upgrade will remove several bottlenecks between Manchester and Sheffield to allow passenger trains to overtake slower freight trains along the line.

The main improvements include:

- A new platform and accessible footbridge with lifts at Dore & Totley station
- A railway loop between Bamford and Hathersage
- A new overbridge at Hathersage West, replacing the current foot crossing to improve safety
- Signalling improvements along the line to improve reliability
- Platform extensions to allow for more carriages on services

Once complete, this project will deliver real benefits for passengers in the North of England, with improved train reliability and an upgraded network to help meet future demands.

The work to upgrade the route is being undertaken on behalf of Network Rail by a joint venture of VolkerRail and Story Contracting Ltd - the VolkerRailStory Joint Venture (VRSJV).

RETB IMPROVEMENTS

In December Network Rail announced the completion in Spring 2023 of the roll-out of Request to Stop kiosks at eight Far North Line stations, with the final two being at Altnabreac and Dunrobin Castle.

Geoff Marshall of *All the Stations* fame and Roger French, writer of the *Bus and Train User* blog, made a special visit in February to experience the new kiosk at Invershin for themselves and were surprised to be sharing the platform with a couple of peacocks.

The kiosks have been well received by the public, although the demise of having to stop the train by putting out an arm has become instantly nostalgic for some!

In another element of the £5m package of investment in the line's radio signalling system, Telent, working for Network Rail, has upgraded existing radio communication masts and antennas and installed new equipment at Muir of Ord, Invergordon, Kildonan and Wick stations to enhance radio coverage on the line.

FoFNL hopes that Transport Scotland and Network Rail keep up the momentum of improvements to the RETB system while they have such a skilled team available.



HERE AT LAST!

Inverness Airport Station finally opened on 2 February 2023 after a slight delay while construction work was completed. A plaque was unveiled by the Transport Minister, Jenny Gilruth MSP and represented the culmination of a project, the seeds of which were sown by Frank Roach of HITRANS 25 years ago.

In one sense the wait has been worthwhile since the original plan was for a single platform. The new station is a much more substantial facility, the two platforms being built on a newly-installed passing loop which gives some much needed extra flexibility and capacity to the largely single-track Inverness-Aberdeen railway. We see this loop as the next stage in transforming the line and hope we don't have to wait another 25 years to see the construction of another loop to break up the 18 miles of single track between Elgin and Keith. This would give enough capacity for an hourly passenger service between the cities as well as more freight, and would enable the line to handle emergency diversions, especially of freight trains.



Frank Roach of HITRANS speaking at the pre-opening reception in Inverness



The opportunity was taken, as described elsewhere in this issue, to provide signalling, points and a headshunt for the nearby West Fraser OSB (Oriented Strand Board) manufacturing site. This will enable that company to meet its modal shift aspirations, at least in terms of its Far North Line traffic from the new facility to be built at Altnabreac.

The station also serves the rapidly expanding new town of Tornagrain, which will eventually host 5000 new homes.



Initial reaction to the new station has been largely positive although the 10+ mins walk from the station to the airport has received plenty of comment. It is to be hoped that HIAL (Highland and Islands Airports Limited) will make the obvious decision to construct its proposed new terminal beside the railway station.

The £42m cost of the new station and the other infrastructure works was funded by Transport Scotland, with a contribution from HITRANS.

The opening event also saw the welcome involvement of children from Croy Primary School who planted a tree and buried a time capsule containing a teddy bear, a school tie, and letters to their future selves.

Ian Budd



Photos:

Inverness Airport Station - **Frank Roach**

Croy Primary School Children with Jenny Gilruth MSP - **Network Rail**

WELCOME TO RAIL

Things are certainly happening near the new Inverness Airport Station! In scenes reminiscent of the recent coming of rail to Highland Spring at Blackford, preparation work by Network Rail for the linking of the West Fraser (formerly Norbord) factory near Dalcross to the rail network has been completed.

The work was carried out in conjunction with the installation of the long passing loop for Inverness Airport Station. This means that track and signalling is in place ready for West Fraser to complete the necessary trackwork to allow reception of timber from Altnabreac and elsewhere and loading of Sterling Board for its journey to the rest of the UK and abroad.

This would be excellent news for the Far North Line, and for users of the roads leading to and from Inverness. West Fraser anticipates two trains every day being required - those would replace very many lorries.



The headshunt beside the main line, looking east. The siding will link to the yard behind the large building on the right where loading and unloading will take place.



Looking towards Aberdeen, the siding stub and headshunt linked to the main line.

These pictures were taken by **Bill Moger** with the help and permission of West Fraser, and first appeared in the magazine of the Highland Railway Society. The signalling and associated TPWS (Train Protection & Warning System) equipment are easily seen.



The point where the track will leave Network Rail property and enter the WF yard. The signal for trains leaving the siding is in place.

HIGHLAND COUNCIL OPPORTUNITY

A new waste transfer station has been opened in Inverness. It is located on the former Longman Landfill Site and is described by The Highland Council (THC) as "State of the Art". The plant is expected to process around 65,000 tonnes of waste annually.

Chair of Highland Council's Communities and Place Committee, Councillor Graham MacKenzie said, "By sending our mixed waste to an Energy from Waste plant, we will start seeing significantly lower carbon emissions from waste management activities in the Highlands, even with the additional transport requirements, which is brilliant news in contributing to achieving our Net Zero goals."

The decision THC had to face was whether to build its own Energy from Waste (EfW) plant on the site, which had a large capital cost and an expected timeline of 2027 before being operational, or to send processed waste to a plant elsewhere. To assist them in this decision they employed environmental consultants SLR Consulting, whose tagline is "Making Sustainability Happen".

SLR's assessment laid out the options and gave a presentation of key findings in July 2020.

The assessment is heavily weighted towards rail transport being used - "rail haulage appears to potentially offer significant cost benefits, particularly for long-distance haulage (although this option requires a rail-head at the destination plant and therefore is not

universally available)." Under the heading of "Carbon Cost Assessment of Shortlisted Options" the assessment states, "if the haulage of waste over long distances is unavoidable, transport by rail is better than transport by road."

THC made the decision to build the waste transfer station and send the processed waste to Viridor's EfW plant in Dunbar. A key attraction of Viridor's site is that it is already rail connected. Given the Scottish Government's policy of modal shift of freight to rail this is a huge potential benefit.

How the waste transfer is done will be a very public test of The Highland Council's awareness of the urgent need for modal shift of freight to rail. With the Dunbar site being rail connected it's hard to imagine that the waste would not be sent by rail. The best option would be to construct a siding from the Inverness-Aberdeen railway which runs past the end of the site near the Raigmore Interchange, this would encourage future businesses operating from the site to use rail too.

We understand that although the plant is now operational, the bidding process for the contract to move the waste is still open (at the end of April 2023) and that interest has been expressed by rail freight companies.

Given Transport Scotland's financial support for the construction of the necessary trackwork for a siding to the West Fraser site at Dalcross, it is reasonable to expect consideration of a similar contribution at the Longman site.

Ian Budd

Councillor Mackenzie welcoming the sensitively designed and architecturally attractive new building.

Photo: Highland Council



FREIGHT IN SCOTLAND



Achieving 20% of freight by rail by 2030

Photo: Sandy Colley

Rail Freight Group's Scottish Representative, Martin Bignell, highlights the need to shift freight from road to rail and outlines how this can be achieved. Martin will be speaking to us about freight at our conference on 23 June.



Decarbonising transport must be a primary objective to reach Scotland's climate target goals and rail freight has a big role to play. To reach these goals, the focus needs to be on modal shift from road freight, so it's useful to understand where this achievement will come from by looking at how road freight currently breaks down.

Scottish Transport Statistics 2021 tell us:

- **93.3m tonnes of freight were lifted in 2020.** 44% (41m tonnes) travelled less than 100km (62 miles), of which 17% (15.9m tonnes) of that freight travelled fewer than 25km.
- Of a **total 11.6 billion tkm of Scottish road freight**, 65% (7.5b tkm) was entirely domestic and 35% (4.1b tkm) was cross border.
- Cross border road freight entering Scotland totalled 15.6m tonnes, of which 70% (10.9m tonnes) originated from the North East, Yorkshire and Humberside and North West of the UK. 12m tonnes left Scotland destined broadly for the same regions in similar proportions.
- In 2020/2021, **3.8m tonnes of freight was lifted by rail in Scotland, just 4% of the total by road.**

In this context, tonnes lifted are a more useful measure than tkm as it can provide a clue as to the number of actual freight vehicle road journeys this equates to. Assuming every vehicle was loaded to its maximum weight, that's about 6m individual truck journeys. Clearly, it is far more than this as freight includes lighter weight commodities, small consignment loads and awkward cargos where weight isn't the limiting

factor for road transport.

But while statistics are a useful measure, to achieve modal shift goals we must stop just talking about it and willing it to happen, but get on with trying to make it happen. *It doesn't take a statistician to realise there's plenty of traffic to go at if an attractive rail offer can be made.*

Next steps for rail freight

The reality is that, unlike a very large proportion of the transport journeys made by people, almost no freight, whether by road, rail or maritime, is discretionary. It is a derived demand of another requirement, typically to either make things or to get them to places where they will be sold, or reprocessed for another purpose. And there are thousands of individual companies involved in these supply chains each seeking to optimise their businesses and succeed in a competitive marketplace.

- **Increased awareness:** Raising awareness of rail freight within the freight and logistics sector, where it operates, what services are running, what opportunities are available.
- **Efficient facilities:** Ensuring the facilities are in place to that allow efficient rail freight services to operate. Besides network capacity and capability, this means having efficiently configured terminal capacity where freight can transfer between modes and value-adding services can be offered to enable the rail offer to be integrated into the supply chain.
- **Attention to smaller customers:** Developing improved ways for smaller customers to buy rail freight solutions as easily as they can road or maritime solutions.



Photo: David Spaven

Therefore, to achieve modal shift and climate change goals, we need to recognise that rail freight customers are commercial customers; pulling on emotive heart strings is unlikely to be sufficient.

Rail freight has to offer a solution that is compatible with modern-day logistics networks and is as competitive, or even better than road in terms of cost, performance, reliability, predictability, and resilience. And that comes down to:

- **Market understanding:** Understanding the overall freight market to appreciate what is addressable for rail and where there are optimal opportunities for rail freight to be successful.

Cross border vs domestic rail freight

Cross border rail freight is well established. It has the distance and volume to enable efficient rail freight services to thrive. Rail freight to and from Scotland benefits from competition between operators, which drives service improvements

and encourages them to find and develop new partnerships with major logistics operators and shippers. We are seeing innovation in the use of low carbon fuels where lines are yet to be electrified and, in Scotland, a clear routemap to further electrified routes.

Scotland's Railways for the next control period has a new growth target of 8.7%. This period will take us to 2029. Growth can be expected on cross border traffic as operators are investing in assets, services, terminal capacity, marketing and sales effort and commercial relationships to capture road freight. Before too long, companies will find it increasingly difficult and expensive to undertake long distance freight journeys as efficiently as today when zero emission HGV's with different duty-cycle characteristics are the only trucks available to buy. As the transport statistics tell us, this could amount to a tidal wave of new demand ramping up in the next 15 years that the rail network and wider industry can prepare for now. Where this freight gets onto and off the rail network will need national-level strategic thinking as infrastructure takes many years to plan and deliver, making recent planning decisions against new terminal capacity a particular setback to accommodating this potential future demand.

But Scotland's transport statistics tell us something else. There is a huge domestic road freight market that is almost untouched by rail freight. Over 50m tonnes of freight is lifted in Scotland and travels more than 100km, within Scotland. The challenge to achieving 20% of freight by rail would appear to be understanding what this freight is, and developing rail freight solutions that meet its requirements in a commercially viable way. It is clear, fast, frequent, shared user shuttle type services to Aberdeen and Inverness, and beyond, or reaching across the central belt, must have a role. Services that can maximise

asset use for operators and provide attractive options for customers, but these must be developed.

Public sector influence

The public sector cannot deliver rail freight services, but it may have other enabling roles. It is a huge procurer of goods and is, indirectly through its suppliers, a freight customer. The public sector could, if it wished, develop its procurement and reporting policies to influence its suppliers to look more favourably at rail or zero carbon freight transport in their supply chains, favouring suppliers who use rail freight somewhere in their supply routes. The public sector could also develop its data and understanding of freight movements as it does with passenger movements when planning passenger services. Freight operating companies, quite understandably, will deploy their resources and assets where they find best return on a UK-wide basis. Investing time and money in lower volume, highly fragmented markets that are challenging to sell into is expensive. As modal shift to rail brings about mostly social and environmental benefits, there is an argument that public investment in better understanding the overall freight market such that new services along key corridors, especially domestically, can be more easily packaged and presented to freight operating companies to develop into commercial propositions, is a sensible investment. And a very modestly priced one when compared to developing and delivering infrastructure.

20% rail freight market share, however it's measured, is an ambitious target and will require thinking differently, perhaps taking a few risks, and being prepared to accept a bit of failure in the process. But there has never been a better opportunity to achieve it as companies today are responding to climate change and actively looking at all opportunities to decarbonise their businesses and supply chains.

This article originally appeared on Transform Scotland's website.

Transform Scotland is holding a Zero-Carbon Public Transport Summit in Inverness on Monday 26 June from 13:30 - 16:30 at the Spectrum Centre.

For details, and to attend, please visit:

www.tickettailor.com/events/transformatiscotland/881390#



*This is **Stewart Nicol's** final Executive Column for the Inverness Courier Executive Magazine, printed here with permission. During his tenure as Chief Executive of the Inverness Chamber of Commerce he has been a constant voice expressing the need for the Highlands transport infrastructure to be upgraded. With the Scottish Government's policy of modal shift as we move towards Net Zero CO₂ emissions there is an urgent need to increase rail capacity in and out of Inverness. Let's hope that the fears in Stewart's final comment are not realised and that politicians soon get a grip on what needs to be done.*

It is probably inevitable as I step down later this month as Chief Executive after almost fifteen years leading the organisation that I indulge in a degree of reflection. I sign off with an enormous sense of satisfaction for all that I have been allowed to engage in, the people and organisations I have met and dealt with and, I trust, the difference I have been able to make to businesses and their leaders across this fabulous city and amazing region. Though those of you who know me well will recognise I am a kind of driven individual and, as such, will reflect more than most on what I could have done better during my tenure?

Which instantly takes me back to my very first day in the role. Before I had even reached the office, I had an appointment with BBC Radio Highland's erstwhile correspondent, Iain MacDonald. As the renowned 'Voice of the Highlands', Iain had seized on the opportunity for a live interview with me at Inverness railway station for their morning news bulletin. While I remember the interaction with Iain well, the detail is a bit fuzzy, though the trains weren't running and I'm glad those days are well behind us.

My induction into all matters relating to our city and region's rail connectivity was immediate and, as it transpired, long lasting. Given our location in relation to the rest of Scotland, the UK and the world, it was perhaps fated that transport infrastructure would be a recurring theme and focus for my tenure? I quickly made the public assessment that our city and region's businesses flourished and were successful despite, rather than because of, our region's transport infrastructure. It also became abundantly clear that our city and region's air

connectivity was the one part of our transport base that was delivering exceptionally for all of us who lived and worked in Inverness and the Highlands. This is undoubtedly down to the steadfast work done by Inglis Lyon at HIAL and Graeme Bell at Inverness Airport and their colleagues. To this small, but focused and effective team, we all owe a huge debt of gratitude.

As with the dualling of our road connectivity between the Central Belt and Aberdeen, politics has played a significant role in the development, or otherwise, of our rail connectivity. A few weeks before I met Iain MacDonald on that draughty rail platform, the then First Minister, Alex Salmond, met interested parties in Inverness Town House and 'promised' hourly services from Inverness to the Central Belt, along with journey times slashed by over 20% to around 2 hours 45 minutes. For the avoidance of doubt, nothing has changed. Halfway through my term of office in July 2016, I wrote to the then Transport Minister, Humza Yousaf, expressing concerns around lack of progress with the Highland Main Line (HML) and inviting him to meet with me and representatives of the business community, 'to begin a process of meaningful engagement with the Highland business community'. I'm still awaiting a response and suspect he now has a bigger in-tray than he had then?

In the meantime, much of Scotland's railway infrastructure has been transformed, not surprisingly across the Central Belt with all of the routes now fully electrified. A year before I wrote to Humza, the Borders Rail Line opened and quickly became a victim of its own success, with plans to expand the route to Carlisle now

under active consideration and campaigning. The Levenmouth rail link in Fife is currently underway with the laudable aim of 'providing the area with a major boost to economic sustainability and connectivity'. At last month's Scotland's Railway Advisory Panel, we were advised that the bridges on the Aberdeen to Dundee rail line were due to be modified to enable electrification and service improvements on that route. All of this is absolutely laudable given the economic and business benefits that will follow to those cities and regions; their

businesses and communities. It is also an absolute imperative, given our collective drive to decarbonise our modes of travel.

But in the meantime nothing, absolutely nothing, changes on the HML. It is unacceptable and an absolute failing of too many consecutive governments. Our city and region demands more, even deserves more. Convincing our politicians of this will now fall to my successor and, I fear, too many of his successors.

Stewart Nicol

As Liz Cameron, CEO of Scottish Chambers of Commerce said in a 2016 press release: "Single track sections on the railways linking Inverness, Aberdeen and the Central Belt are unacceptable in the 21st century!"

INVERNESS HYDROGEN HUB

[www](http://www.h2green.co.uk)

On 30 March H2 Green, a wholly owned subsidiary of the geoenery and green hydrogen company Getech, announced their successful application to the UK Government's Net Zero Hydrogen Fund. They have been awarded £500,000 to support the development of a green hydrogen hub in Inverness.



Last year H2 Green and the gas network and distribution company SGN Commercial Services worked together to demolish the gas holder next to the railway's Millburn Yard near Inverness Station. The cleared site will be used to build a production, storage and dispensing facility which will be able to supply trains, lorries and buses. The hub will be able to produce more than 8 tonnes of hydrogen every day.

According to Getech, "The Inverness site will supply green hydrogen to large-volume commercial transport customers, such as trains, buses, trucks and heavy goods vehicles. In line with these goals, we secured agreements with Eversholt Rail to facilitate the wide-scale deployment of their hydrogen-powered trains on the Far North and West Highland Lines of Scotland." The mention of the West Highland Line is puzzling unless there are secret plans to build the Tulloch-Newtonmore link!



At the DeCarbScotland Conference on 2 February, Luke Johnson, Managing Director of H2 Green said that the company has been working with Eversholt to map train movements in the Highlands against projected hydrogen demand. "Instead of a truck receiving 10-20 kilograms of hydrogen, a train would receive 200-300 kg, all of which needs to be dispensed within half an hour, which has a significant impact on the way we design that distribution system."

Ian Budd

OPPORTUNITY CROMARTY FIRTH



On 13th January the UK Government announced the two successful Scottish bids for freeport status. One is the Forth Green Freeport but the other has many implications for the Far North Line and its residents, businesses and visitors: The Inverness & Cromarty Firth Green Freeport includes the ports of Invergordon and Nigg, as well as the Port of Inverness and Inverness Airport. The successful bid was led by Opportunity Cromarty Firth (OCF), a partnership of organisations including participants from industry, academia and the public sector. The list includes the port authorities, Inverness Airport Business Park, HITRANS, The Highland Council, organisations such as Inverness Chamber of Commerce and companies ranging from local businesses to Scottish Power Renewables and Shell. It is now their task to set up the governance structure needed to run the new freeport.

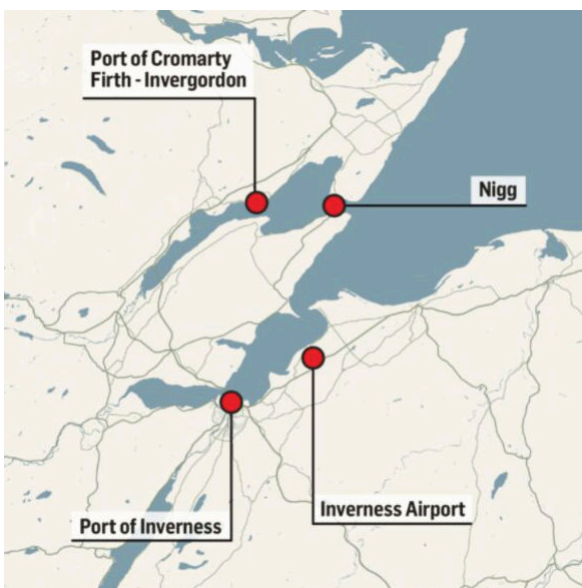
The Scottish Parliament Information Centre (SPICe) explains the potential benefits as:

- Up to 25,000 green jobs
- Add £6bn to region's economy
- Attract £2.6bn in inward investment
- Focus on creating a new innovation cluster

OCF explains that the focus of the bid was on the opportunities from offshore renewables and green hydrogen, aiming to maximise the business opportunities and employment for the region.

The mechanism and rules for setting up the freeport have been agreed by the UK and Scottish Governments. The key policies and reliefs that companies and local authorities within the Green Freeports can benefit from include:

- Taxation policy: including land and building transactions tax, enhanced structures and buildings allowance relief, enhanced capital allowances relief, national insurance contributions on salaries of new employees in the green freeport tax sites and business rates relief.
- Customs policy: authorised businesses within Green Freeport customs site will be able to import goods for storage or processing with import duties suspended, only paying these if goods are declared for home use in the UK.
- Seed capital: successful applicants can access seed funding of up to £25 million, subject to project approval by the Green Freeport programme board.
- Retained non-domestic rates: Increased non-domestic rates income arising from increased activity linked to the Green Freeport will be retained by the relevant local authorities, rather than redistributed centrally.



The Scottish Green Party however does not accept the freeport model, commenting that, "Freeports are mini tax havens where big corporations can get off the hook from paying their fair share" and "When freeports have been tried in the past across the UK, they only made regional inequality worse by moving jobs around the country rather than creating new ones."

Given the chronic problem of depopulation in the Highlands the establishment of the Inverness & Cromarty Firth Green Freeport should be good news for the area, and in turn good news for the Far North Line. Fortunately the railway is already there to be developed and used. Possibilities include a rail freight terminal at Invergordon, perhaps using the old aluminium smelter site, as well as the extension of overhead electrification from Inverness to Tain, as listed in Transport Scotland's Rail Decarbonisation Plan. This, along with HML electrification and loading gauge enhancements, would provide a valuable freight link from the freeport area to the rest of Scotland. The Far North Line also requires some new capacity in the form of additional passing loops, such as the planned loop at Delmore near Inverness. A much improved electric train service between Tain and Inverness would provide access to rail for the new housing which will be required. Alness, Invergordon and Evanton are likely to see new homes built, and the long requested station at the latter may well come to fruition.

It is very important that the new freeport lives up to the 'Green' in its name and ensures that all planning is done with public transport and active travel at its heart.

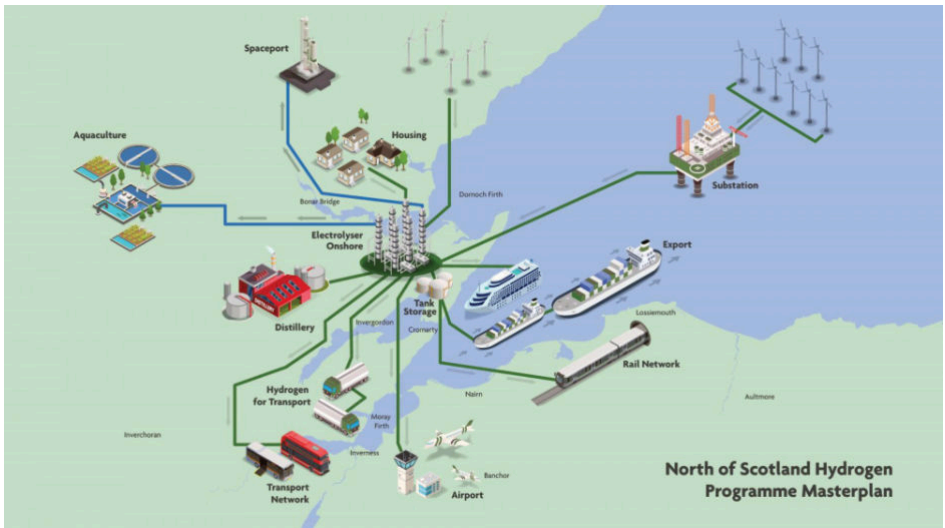
The freeport developments at Invergordon and Inverness will inevitably involve considerable construction work. Now is the time to be planning how to make the most possible use of rail and sea transport for the inevitable increase in traffic this will cause.

North of Scotland Hydrogen Programme

The Cromarty Firth's ideal location for a state-of-the-art hydrogen hub has seen the establishment, through OCF, of the North of Scotland Hydrogen Programme. This is because of its proximity to a large-scale off-shore renewable electricity supply, and a high level of demand locally from industry, transport and domestic applications. The longer-term ambition is to develop the hub to produce, store and distribute green hydrogen at scale not only to the region but to the rest of Scotland and other parts of the UK and Europe.

[www](#)

Ian Budd





ROLLING STOCK DEVELOPMENTS

Photo: Transport for Wales

Electric & Hybrid Rail Technology magazine recently published this article based on an interview Stadler Rail's Achilles Brecht gave to its editor. One of the speakers at our AGM & Conference this year is Stadler's James McCaffery - Programme Lead – Stadler Rail Services UK, so this gives some interesting background. Reprinted with permission.

Swiss rolling stock manufacturer Stadler has been developing battery-powered vehicles since the early 1940s. The firm, which currently holds the Guinness World Record for completing the longest journey with a battery multiple unit in pure battery mode, spent many decades operating as a small family-owned business based in Switzerland, focusing mainly on manufacturing highly customised rail vehicles for its clients.

In the late 1990s, however, the business grew exponentially to become one of the fastest growing and most innovative train manufacturing companies operating in Europe. A key area it has always been committed to for innovation is sustainability. From its early days in the 1940s up until the present day, the firm has continued to improve its battery-powered trains and is now also exploring hydrogen-powered locomotives.

Stadler Rail's Achilles Brecht, an engineer and specialist in alternative drives, with a focus on battery technology, has played an important part in the company's development of battery electric multiple units (BEMU) for passenger operations. Reflecting on recent achievements, he says, "In 2008 Stadler set its first battery-related world record when it expanded a Stadler Variobahn light rail vehicle for Munich's public transport company, MVG, to enable it to cross a non-electrified section of track called the English Garden in the Bavarian capital using battery power.

"Then, in 2018 Stadler presented its first BEMU – the FLIRT (Fast Light Intercity and Regional Train) Akku, which in 2021 set the Guinness World Record for completing the longest journey, 224km, with a battery multiple unit in pure battery mode. In 2022 the first serial FLIRT Akku, which typically has an operational range of around 100km, was presented at the world's largest railway exhibition InnoTrans, alongside the FLIRT tri-mode, which has been developed for Transport for Wales, as well as the UK's first independently powered electrical multiple unit (IPEMU) for the Liverpool City Region," Brecht added.

To date, Stadler has sold 113 FLIRT Akku BEMUs in Germany for three different regional rail networks – Schleswig-Holstein, Rhineland-Palatinate, and Mecklenburg-Western Pomerania – two of which will be operated by Deutsche Bahn. "The first serial trains will start operations this year," adds Brecht.

Meanwhile, the FLIRT tri-mode, being developed for Transport for Wales, can run on lines with overhead electric wires as well as with battery power and diesel. The use of batteries on the tri-modes

will enable a fully electric service north of Cardiff, to prevent costly infrastructure upgrades for the client. The FLIRT tri-modes are part of the contract signed by Stadler and Transport for Wales in January 2019, comprising 35 FLIRT vehicles in total and 36 CITYLINK tram-trains. 24 of the FLIRTs will be tri-modes.

Furthermore, the IPEMU (Independently Powered Electric Multiple-Unit) for the Liverpool City Region, is equipped with a battery-based energy storage system. New battery traction equipment is mounted in the underframe and the cooling system is located on the roof. While an IPEMU is running on the electrified network, the batteries can be charged from the third rail, as well as through regenerative braking. IPEMUs can be recharged in less than 15 minutes, and batteries are able to undergo more than 10,000 charge/discharge cycles. IPEMUs can reach speeds of 80 km/h when fully charged and cover 55km on one battery load.

US presence

“Interest in local CO₂-neutral solutions to replace diesel trains is very high at the moment,” adds Brecht. And that interest is not just coming from Europe, either. In February this year, Stadler reported that it is working with Utah State University (USU) and the ASPIRE Engineering Research Center to develop and test a battery-powered passenger train, based on Stadler’s FLIRT concept, for the North American market.

According to Stadler, before the battery-powered train can be rolled out in North America, which has few to none electrified lines on public rail, extensive research and development (R&D) work is required to adapt the vehicle to the American infrastructure and national regulations.

Back in Europe, the firm has teamed up with DLR (Deutsches Zentrum für Luft- und Raumfahrt [German Aerospace Centre]) Institute for Vehicle Concepts and the DLR Institute of Networked Energy Systems to look at how it can improve its battery-train offering further. The firms are currently in the second year of a three-year project to develop a modular and scalable battery system for passenger trains, which can be adapted to meet route-specific applications.

The battery system is being developed as part of the MOSENAS project, which stands for “modular, scalable energy storage for sustainable local rail passenger transport.” Stadler, alongside its partners, is currently developing a demonstrator of the concept based on the FLIRT Akku by undertaking comprehensive tech monitoring and computer simulations for battery life and components.

“Stadler presented its first battery electric multiple unit in 2018,” Brecht continues. “Since then, we have focused on testing and proving battery technology in modern trains. Working together with the DLR gives both partners the opportunity to increase insights in forward-looking technologies.

“We are seeking to develop a modular and scalable battery which can be adapted to the local conditions,” he continues. “Each railway route or network has its own specialties so the battery should be tailored exactly to the specific needs of that route or network. Thus, we analysed route-dependent factors which are required for the suitable dimensioning of the modular energy storage system. The performance and capacity of the battery system should be optimally adapted to typical operational scenarios. If the operational area of the train changes or the route is further electrified after some years, the battery system can be adapted to changing needs at a later point. This can help to optimise the trains’ weight and installation space and to reduce costs.”

As part of this project Stadler and DLR have undertaken a thorough screening of future battery technologies and accelerated battery design through model-based simulation. “This also involves the modelling of traction and auxiliary power demand at different operational, infrastructural and climatic conditions to better characterise the requirements on future battery systems in highly dynamic conditions,” adds Brecht.

The MOSENAS project team is also developing concepts for warning indicators, which detect and monitor critical battery conditions, and creating efficient fire protection strategies by investigating the correct storage of battery modules. It is also exploring the optimal charging infrastructure,

including looking at how second-use batteries in stationary storage systems can be used and how, with the help of “sector coupling” systems for generating renewable energy can be integrated.

“The second-use batteries research is being carried out on a theoretical basis, so no physical tests are undertaken in the project,” comments Brecht. “Meanwhile, using renewable energies for recharging battery trains in decentral rail networks is a key challenge and is addressed in our project through a combined energy system and rail model.”

Future technologies

With decades worth of experience in battery-powered train development, Stadler offers railway network operators support in analysing routes and networks and examining feasibility. “In doing so, we consider the desired timetables and schedules and determine whether the existing electrification is sufficient or whether additional charging stations may be necessary,” Brecht says.

This analysing process is extremely important for operators seeking to decarbonise their networks, according to Brecht, as “every route network has its own special features and challenges”. He continues, “In Schleswig-Holstein, for example, you have to expect a lot of wind and salt water. So Stadler took the possible headwind into account when designing the battery and kept larger reserves and paid special attention to corrosion protection against salt water. In the route network in Rhineland-Palatinate, the vehicles to Pirmasens must cope with an incline of up to 35%. Therefore, an additional electrification of about 5km in length will be set up at the beginning of the climb, so that the BEMUs can manage the ascent with fully charged batteries. On the way down, braking energy is fed back into the batteries.”

Looking at how battery technology will change in the future, he concludes, “Battery technology is developing at very high speed. Depending on the technology, future developments will focus on increased life spans which will add to the economic advantage of battery trains compared to a full electrification of secondary lines. Also, improvements in terms of energy density and fast charging capabilities can be observed. More compact designs and advanced cooling solutions are possibilities to improve battery technology on a system level.”

Hydrogen trains on test in the US

Alongside its battery-powered trains, Stadler is also developing America’s first-ever hydrogen-powered train. In November 2019, Stadler teamed up with the San Bernardino County Transportation Authority (SBCTA) to design and build the first hydrogen-powered FLIRT.

The FLIRT H2 multiple unit, which was first unveiled at InnoTrans last year, will be “instrumental in bringing zero-emission rail technology to the USA,” according to Stadler. The hydrogen-powered train is intended for passenger service on the Redlands Passenger Rail Project in California. The Redlands Passenger Rail Project is a 14km link between Redlands and the San Bernardino Metrolink station.

Furthermore, at InnoTrans 2022, Stadler also signed a Memorandum of Understanding (MoU) with the California State Transportation Agency and Caltrans for 25 hydrogen-powered trains, building on its work with SBCTA.

FLIRT H2 is currently undergoing testing on Swiss rails before it’s transported to the US in early summer 2023. It is due to enter passenger service with SBCTA at the start of 2024. The train consists of two cars and a middle section referred to as the powerpack. This holds the fuel cells and the hydrogen tanks. In the powerpack, hydrogen is converted into electric current, which is stored in a traction battery. The battery then supplies the vehicle’s drive system, HVAC system and other comfort facilities with power.

In this configuration, the train can also recover kinetic energy when braking, so that this can also be re-used to drive the train. The train can reach a maximum speed of 130 km per hour (79 mph).

Helen Norman

CAIRNGORM MOUNTAIN RAILWAY

After a four-year closure for major repairs the Cairngorm Mountain Railway is open again. The 2km journey on the 2m gauge funicular railway takes around five minutes and lifts passengers to the newly-refurbished Ptarmigan building at a height of over 1,065m (3,500') - the highest restaurant and railway in the UK.



Opened in 2001 the condition of the viaduct carrying the line had deteriorated to a point where major work was required. The line was saved from demolition as it was cheaper to repair it than to remove it.

The opportunity was taken to replace the railway's control system and to improve the facilities in the Ptarmigan building. The Cairngorm Mountain Railway website explains, "The newly designed restaurant has been transformed into a light, contemporary space with an open plan gin bar, cosy log fire and floor to ceiling windows for guests to enjoy the spectacular views of the mountain range."

CORADIA IN CANADA

Four years ago we carried a feature about the Chemin de fer de Charlevoix in Quebec. The railway has an interesting history, part of it having been electrified in 1904 but when passenger services ended in 1959 it was 'de-electrified'. With a couple of false starts passenger services recommenced in 2011, running only from June to October.

Railways in North America are largely diesel operated with very little electrification. Canada and the United States are now hurrying to find ways of running the railways without emitting CO₂.

With this in mind, a return service on part of the line is to be operated between Wednesdays and Saturdays by a Coradia *iLint* hydrogen train. This is a first in America and the green hydrogen needed will be produced at a plant in Quebec.

Running the train in passenger service will give Alstom, the train manufacturer, an insight into how to proceed in developing the use of hydrogen in the North American market.

This demonstration service is a joint venture between the Quebec Government, the railway, the train operator, the hydrogen production technology company HTEC and Harnois Énergies.



Photo: Alstom

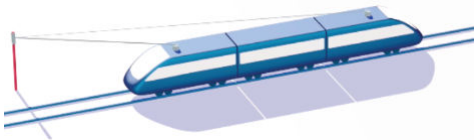
EXPRESS INTERNET

These days passengers like to be connected to the internet at all times, whether for work, checking social media or just looking things up.

The current Wi-Fi provision on trains is a valiant and very welcome effort. However, speeds are such that it's often better to use your mobile phone data instead of the on-train Wi-Fi, especially if many passengers are competing for scarce bandwidth.

After extensive testing in 2021 on the Isle of Wight (using the 83-year-old 1938 ex-tube stock) Evo Rail is now providing a real alternative with 500 megabit to 1 gigabit speeds shared between the passengers, rather than the 5-30Mb currently found on trains.

Fibre-optic cable is laid along the track and self-powered 5-metre-tall poles are set up along the railway, typically between 1 and 2 kms apart. They receive the internet connection from the fibre-optic cable, which is then broadcast to the trains, received by at least two antennas.

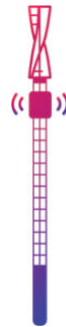


Although using very advanced technology, the system itself is similar to domestic internet provision: the trackside cable forms one network, which is attached at various points to the internet, the train's interior wireless equipment forms the other network and the trackside poles provide the link between the two, using the ultra short-wave mmWaves (Millimetre Waves - wavelengths between 1 and 10 mm) which can be concentrated into directional 'pencil' beams. These extremely high frequency waves require line-of-sight to work, so the poles beside the railway have to be placed accordingly. The winding nature of the Far North Line would require significantly more poles than, for example, the East Coast Main Line in England.

This system is far more reliable than the present

method of obtaining the internet connection from mobile phone masts, which also require a large amount of power, whereas the Evo Rail poles have built-in solar panels, wind turbines and batteries to enable them to function where there is no electricity supply. The current on-train equipment can be used to connect to the new installation.

The provision of high-speed internet on trains has been part of UK government policy since 2017, with a planned completion date of 2025. Telecommunications in the UK are reserved to



No power connection

Zero CO₂ emission

Fully integrated solar and wind within pole

Highly integrated technology

Westminster and mobile network rollout is commercially led. Worryingly for Scotland the UK Government's 5G strategy only mentions the rail network in England and Wales. The Scottish Government's 5G strategy meanwhile contains this comment: "We continue to press the UK Government to give us the powers and resources which would allow us to reap the significant benefits that we could see from enhanced 5G provision in Scotland."

It is certainly true that high-speed internet on trains will be a game-changer for many potential travellers when deciding whether to leave their cars at home.

Ian Budd

LMS 100

The 'Early 2023' edition of the Highland Railway Society's (HRS) excellent journal contained a fascinating section to mark the centenary of 'The Grouping', when most of the railway companies in mainland Britain were merged into one of four new companies, as laid down in the Railways Act 1921. The comparatively small railway companies had suffered greatly from the requisitioning of the railways to support the WWI war effort under state control, which lasted until 1921. On 1st January 1923 the Highland Railway, along with its southern neighbours, the Caledonian Railway and the Glasgow & South Western Railway, were absorbed into the London Midland & Scottish Railway, whose headquarters were in London.

Many at the time, whilst lamenting the passing of the Highland Railway, saw this as an opportunity for Highland tourism with the advertising reach down south of the new large company being able to far exceed anything the HR could have afforded. There was also much optimism for a better railway in the future with the greater resources which would be at the disposal of the new large companies. These companies were unfortunately destined for the same wartime fate less than 17 years in the future, which would result in railway nationalisation in 1948. A flavour of the optimism felt at the time can be found in this newspaper extract unearthed by HRS:

Aberdeen Press & Journal, 26 January 1923

HIGHLAND RAILWAY - Electrification Plans Discussed.

With the new railway groups, air is full of new electrified schemes which are being mapped out in the engineers' departments.

Proposals now under consideration foreshadow a vast network of electric railways between London and the south coast, the Midlands and Manchester, and York and Newcastle. Scotland is not left out of account, and already there is talk of electrifying the Highland Railway, that Communication between the south and Inverness and the North of Scotland can be improved.

Details of numerous schemes have been given by the railway managers to the Government as a result of their interview with the Prime Minister a few weeks ago.

It's easy to imagine what the visionary railway engineers who talked of electrifying the Highland Main Line would have said if someone had told them that 100 years would pass and the

line would still not be electrified. Politicians often speak proudly of Britain in terms of "world class", or even "world leading", one has to wonder how they can justify such sentiments.

Highland Railway Society

[www](http://www.hrs.org.uk)

If your desire to see the Far North Line improved has piqued your interest in the history of the line, and the other Highland Railway routes, you couldn't do better than to join the Highland Railway Society. Formed in 1987, its own description tells you everything you need to know:

"The aims of the Highland Railway Society are to support and assist all with an interest in the Highland, be they historical researchers, modellers or simply lovers of the railway. All periods are covered, right up to the present day.

"The *Highland Railway Journal* is published four times a year and contains a broad and fascinating mix of historical articles, drawings, reminiscences, model features, news from the line and letters."



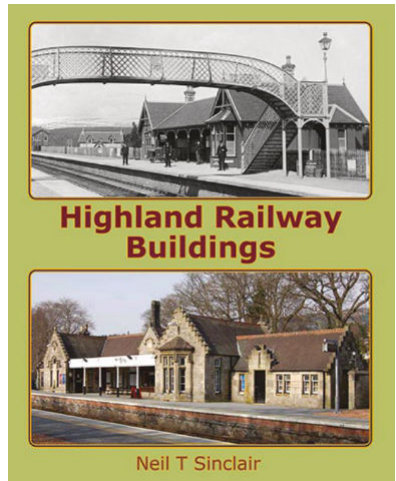
BOOK REVIEW

Highland Railway Buildings

Neil T. Sinclair, Lightmoor Press and the Highland Railway Society, 2022.

ISBN: 978-1-915069-04-7

Hardback: 160pp, 274x215mm. **£27.50**



By its very nature going by train gives the lucky traveller every opportunity to marvel at the care that was lavished, even by the impecunious Highland Railway Company, on the various structures needed by a railway.

Nowadays almost everything that is newly built for the railway must prove how "well the money was spent" i.e. how little it cost, by its totally utilitarian appearance. *Highland Railway Buildings* shows that it was once well understood that 'value' is not only a monetary quality. It is easy to imagine the reactions of Highland Railway board members were they to have been shown the tiny, cold and uncomfortable 'bus shelters' which would pass for passenger waiting facilities in the 21st Century.

Reading this book will transform idle gazing out of the train window, or along the platform, into an appreciation of the care that went into how the railway environment should look.

Although we have lost many of the buildings described here, as they were no longer needed, many remain. The Far North Line still has plenty to see, from the nearly-twin northern termini, via the pioneering concrete Helmsdale Station, now beautifully restored, and the successful restaurant occupying Tain Station to the fine building at Dingwall.

This reader especially enjoys seeing how the same basic design was utilised for more than one station, sometimes with different materials, such as Thurso/Wick and Helmsdale/Golspie/The Mound, and sometimes with several iterations of almost identical buildings, such as the Italianate Alness/Kildary/Fearn/Meikle Ferry/Bonar Bridge (Ardgay).

Neil Sinclair's book is a complete survey and is divided into sections, either by area, such as "Lines to the West and Far North" or time, e.g. "1875-1889". There is so much to see that you'll find yourself returning to it many times, but it is also well worth reading the narrative which covers the whole process of procuring buildings, from board decisions to individual architects and contractors, and the intricacies of working with local landowners.

There are also over 300 photographs, illustrations and plans, and the large format allows them plenty of space.

Anyone with even a passing interest in railways or architecture would be delighted with this superb book.

Ian Budd

This book is a joint publication by Lightmoor Press and the Highland Railway Society. Both of these publishers have a catalogue of fascinating books about railways where you can find intriguing new angles and deep insights into specific lines and particular subjects.

<https://lightmoor.co.uk/>

<http://www.hrsoc.org.uk/>

[www](http://www.hrsoc.org.uk/)

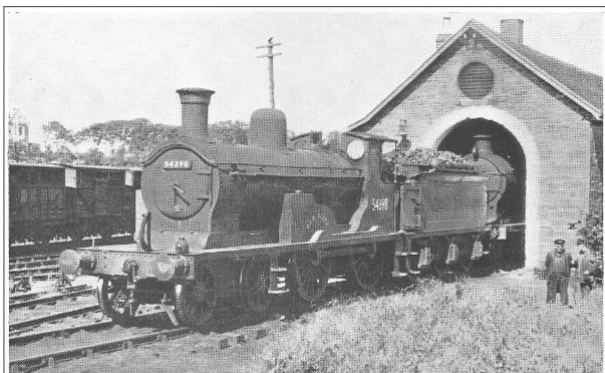
70 YEARS AGO

At the beginning of the year your editor received a copy of the January 1953 edition of Railway Magazine as a birthday present. No prizes for guessing the reason! He soon spotted the items below which he thought provided an enjoyable glimpse of the past.

Ben Alder, Highland Railway No. 2, was the second locomotive of the first batch of "Small Bens" built in 1898-9 in Glasgow. A few of this class were based in Wick.

It was withdrawn in February 1953, set aside for preservation and stored at various locations, including Boat of Garten. Sadly those plans came to nothing and the locomotive was cut up in 1966.

A new build project, which aims to create a working replica of this engine, has been set up by a team based at Bo'ness.



Photo]

[Dr. G. D. Parkes

A scene outside the locomotive shed at Thurso, the most northerly station on British Railways, in August, 1952

Former Highland Railway 4-4-0 locomotive No. 54398, "Ben Alder," built in 1898

Electric Horses for Road Services

A WIDESPREAD experiment in the operation of electric battery vehicles is being undertaken by British Railways for road cartage services. One hundred four-wheel electric horses which are being set to work in sixteen cities and towns will be compared with the familiar mechanical horse, of which 8,000 are in service on railway duties. The electric horses are nominally 2-tonners, have a normal range of 25 miles per battery charge, a maximum speed loaded and on the level of 18 m.p.h., and haul a standard mechanical-horse type of trailer.

This announcement has resonance today. There is much discussion about how to get freight off the roads, which leads to the inevitable question, "Yes but...how do we get it from the freight terminal to its destination?" A new version of the vehicles mentioned here will probably be the answer.

Battery road vehicles are hardly new - 'milk floats' could be heard every morning, along with the (probably deliberate) crashing of empty bottles into crates, in my suburban childhood.

It's a long time since any train ran from Dornoch. Had more enlightened minds, and some prescience about the future need for modal shift, been around in 1987, a Dornoch Station would now be on the through route from Inverness to Thurso and Wick.

A mixed passenger and freight train as seen here may also be a clue to future developments, insofar as the next trains for the Scottish rural routes may well have space allocated for parcels and light goods.



Photo]

[W. A. Camwell

The 1.15 p.m. train for The Mound at the terminus of the former Highland Railway Dornoch branch

Drummond class "1P" 0-4-4 tank locomotive No. 55051

KYLE STATION MUSEUM

All photos:
Andrea Brown Photography

The Kyle Station Museum in Kyle of Lochalsh reopened on 8 April after an extensive refurbishment supported by Museums Galleries Scotland.

The museum, which is run by volunteers from the Friends of the Kyle Line, tells the intertwined stories of Kyle Harbour, West Coast fishing and the Kyle Line.

The museum, housed in the original 1897 Highland Railway station building, is home to hundreds of railway objects, maritime exhibits and a collection of black and white photographs depicting life in the area, including many by Duncan MacPherson, 1882-1966, a renowned Kyle photographer.

There are two exhibition galleries, the first featuring the photographic collection also includes a video viewing 'carriage' which shows archive footage of the railway, the harbour and the fishing industry.

The second gallery has been redisplayed to explore the history of the railway itself. At the time of construction this was the world's most expensive railway project, with its 31 rock cuttings and 29 bridges in just 10 miles!

There is a working model of Kyle of Lochalsh Station as it was in the 1960s, along with various railway items, including the station's original clock and various old tickets, pamphlets and posters.

There are children's activities, an archive room, a gift shop, and takeaway refreshments.

Tom Campbell, Trustee of the charity





that runs the museum, said: "It is exciting to see the hard work of our charity's volunteers and partners come to fruition. We look forward to sharing our redeveloped displays, maritime exhibits, artworks and films with new audiences. We are also pleased to share again many much-loved exhibits including our working model trains and railway artefacts. The museum is conveniently situated at the 'gateway to Skye', so whether you're travelling on the Kyle Line or heading for the Skye Bridge we look forward to welcoming you at the end of the platform."

Lucy Casot, CEO of Museums Galleries Scotland, said: "We are pleased to have been able to support Kyle Station Museum's refurbishment. The new displays and activities will help bring local history to life and broaden the range of opportunities for people to engage with the collections. Kyle Station Museum is an important heritage asset with fascinating stories to tell, and we look forward to seeing this new chapter in the museum's history unfold."

Alasdair Smart, Tourism Manager at ScotRail, said: "The Kyle Line is widely acknowledged as one of the world's great train journeys. We are proud to be custodians of this spectacular stretch of railway which carries more than 100,000 passenger journeys a year. The refurbished museum will be a valuable addition to the visitor experience for all those who travel on this line or pass through Kyle of Lochalsh. We look forward to continuing our collaboration with the museum and the Friends of the Kyle Line and their excellent work promoting the railway and its history."



It's hard to imagine a more stunning location for a railway station, or a museum.

The reopening of the museum gives an excellent excuse to travel the wonderful railway to see for yourself!

Ian Budd

[www](http://www.kylestationmuseum.org.uk)

COMING AND GOING AT ROGART

Giving a touch of exotic colour under a dramatic sky on 19 February this year, Network Rail's Plain Line Pattern Recognition (PLPR) infrastructure monitoring train passes through Rogart Station.



Photos: Frank Roach