

Positive achievements on climate change taking place on Scotland's tracks

Getting more freight off the roads and onto rail, along with more electrification, is making a difference to carbon emissions, says **Phil Smart**



Only time will judge whether COP26 was a success. To many it achieved real progress, to others not enough, and to some it was all 'blah, blah, blah'. Whatever camp you are in, one thing is for sure, all eyes were on Scotland and the hospitality industry had much to cheer about after the covid lockdowns.

I was delighted to represent the Rail Freight Group at the Low Carbon Logistics event held at Mossend. This was a great opportunity to showcase the latest innovations in the rail freight sector and was well attended by freight operating companies, customers, suppliers, and stakeholders from across the railway and political spectrum.

Transport Minister Graeme Day MSP opened the event by describing how getting more freight on rail was both a political and personal priority, stressing the need to reduce congestion as well as carbon in serving the economy.

Alex Hynes, Managing Director for Scotland's Railway reminded us that, besides being environmentally benign, the railway is also a climate change victim, and we owe it to those who lost their lives in the Stonehaven derailment to redouble our efforts to make the railway more resilient as well as climate friendly. He reminded us that most of the electrification undertaken in the UK in recent times had been in Scotland, but that there was more to do and that to keep costs down it was important to run electrification as a production line and not as individual projects.

There was an inspiring presentation from Highland Spring, in partnership with the Russell Group and WSP, to transport bottled water by rail from a new terminal at Blackford. This alone saves 3,200t of CO2 and will remove 8,000 lorry movements a year from the local village, good news for them and for the haulage firm struggling to find drivers!

Perhaps the most innovative talk was from Tarmac who in partner-

ship with Furrer and Frey are trialing a 'First of A Kind' project to install demountable overhead electrification into one of their terminals allowing electric trains right into the loading area. One possible site is Dunbar but it will only be a matter of time before this technology is widely adopted. Other notable achievements are the 40 per cent fuel savings using double length 'Jumbo' trains and the use of Hydrotreated Vegetable Oil as alternative fuel.

Bill Reeve, Director of Rail, Transport Scotland, reminded delegates that 80 per cent of HGV emissions in Scotland were along the M74 corridor and this was driving Transport Scotland's thinking around rail freight. He hoped to be making announcements soon about electrification of the Glasgow and South Western Route to Carlisle and about moving more timber by rail in future. The conclusion from many speakers was that road and rail need to work as partners in future provided there were sufficient terminals available.

The Scottish Engineering Cluster Builder led the second day. I presented on 'Decarbonising the Railway' including opportunities for smaller enterprises to supply sustainable installations at depots and terminals. Scottish engineering can build on its proud railway history if we inspire more people to take up engineering. Dr Susan Scurlock from the Primary Engineer project showed us what is being done in primary schools to promote STEM subjects and to encourage our children to become future problem solvers. Most of all, this must appeal to girls as well as boys and Heather Waugh gave an inspiring account of her life as Scotland's only female freight train driver and how other women had inspired her along the way.

Mossend was certainly the place to be if you want to celebrate real action and achievement and not just future promises.

Phil Smart, Assistant Policy Manager, Rail Freight Group



More to UK catches than haddock

It is up to consumers to seek out the wide variety of fish available, and fishermen to market them, says **Christopher Trotter**



I am lucky enough to live in Fife where farms produce every type of food that it is possible to grow in Scotland. Additionally, it is surrounded on three sides by water yet while the seasonal rhythms on land of sowing, harvesting, stock-rearing and berry-picking are plain to see, you cannot glimpse beneath the waves and see the progress and seasonality of our rich seafood crops.

We can celebrate with farmers if the crops are standing tall, proud and golden and commiserate if they are flattened by weeks of rain, but how many of us knew that our reliable fish stocks cleared off to the other side of the North Sea this summer because it was so warm?

It is now well known that before the UK left the EU we exported around 80 per cent of our fish and seafood, as is the fact that the Covid-19 lockdown stopped the restaurant and hotel market overnight, with the result that many fishermen are struggling to survive.

But there is so much that we can do. The top five fish that we consume by weight are salmon, tuna (which is non native), prawns (which are likely to come from the Pacific), haddock and cod, yet the top five fish that UK vessels land by weight are mackerel at around 150,000t, herring 75,000t, langoustines, haddock and cod – the latter three at only around 30,000t (according to UK Sea Fisheries statistics).

People are understandably giddy about food sustainability at the moment but we can eat fish sustainably. We may tuck into tuna sandwiches and Pacific prawns, but if our fisherman haul in catches that

can't be sold, that is an absolute disaster.

And yet, when did you last eat catfish, dogfish or hake? Fishmongers often tell me about customers who admire their magnificent display before saying, "Two fillets of haddock, please". We have a nutrient-rich source of lean protein all around us, which is delicious, easy to cook and can be thrifty too.

I am also happy to wave the flag for good farmed fish, which can be done sustainably. There are outstanding fish farms in Shetland and the Outer Hebrides where the fish are stocked in lower numbers and subject to the currents of the open sea.

This keeps them clean and makes them swim, building muscle and texture. They are kept with wrasse, which are also native and eat salmon lice.

The supermarket chain Morrisons has also taken the bold step of buying its own fishing vessel but I would still encourage anyone who shops there to engage with the staff at the fish counter and to dare to try something new.

At the other end of the production scale is my hero, Guy Grieve, whose hand-dived Mull scallops are the acme of quality and sensitive fishing practice.

Both examples are at the vanguard of the revolution that needs to take place in the fishing industry, similar to that driven by farmers and which has really gathered pace recently with new routes to market created through direct selling, farm shops and farmers' markets as well as sophisticated collaboration and cooperation.



Local and national governments must play a meaningful role here too, particularly around public procurement and teaching our children how to cook.

The problems and solutions are intertwined but ultimately can be resolved: it is up to consumers to seek out the wide variety of fish available, to fishermen to collaborate and market it anew and for those involved in large-scale food

procurement to work harder and be more sophisticated with their buying and supply strategies.

We would do well to update the cliché about there being plenty more fish in the sea with plenty more varieties of fish!

Christopher Trotter is a chef, writer and a Fife Food Ambassador. His new book, Coasts and Waters is available at www.christophertrotter.co.uk.

↑ Customers often admire magnificent counter displays before saying, "Two fillets of haddock, please".



Hedging bets when it comes to carbon

The familiar plants in our hedgerows have surprising environmental benefits, writes **Dr Dave Parish**

Hedgerows through the winter provide food and shelter for many of our farmland birds and their leaf litter provides habitat for insects and invertebrates. Hedgerows also prevent soil erosion, water run-off and flooding and have benefits for pollinators through the warmer months. But the drive particularly towards more intensive farming since the 1950s has seen many hedgerows lost. From late November, the blackthorn, hawthorn and holly cling on to their berries. Hedgerows, farm woodland, field margins, stubbles and headlands, provide a semi-natural habitat in which many farmland birds have come to rely when the cold sets in.

And work is underway now to bring hedgerows back and promote and enhance them on farms and elsewhere

because of the benefits they deliver in capturing and storing carbon too. Hedgerows are efficient at sequestering carbon because of their three-dimensional structure and GWCT, supported by a Government grant in England, is developing a Hedgerow Carbon Code which will become the quality assurance standard for hedgerows and generate independently verified hedgerow carbon credits.

This new "matrix" will allow accurate calculation of any hedge according to its plant species, height, width, length and depth below ground. Carbon also builds up on the soil surface through hedge leaf litter and is drawn down and stored in the soil by earthworms.

But a careful balance must be struck in that the introduction of attractive schemes for farmers to manage their hedgerows, improve them and plant

more for carbon must pay dividends for wildlife too. Defra's report Wild Bird Populations in the UK 1970-2016 showed that farmland bird species have been hit hard in the last 40+ years, with corn bunting, grey partridge, turtle dove and tree sparrow identified as being in "strong decline". Generalist species too, including yellow wagtail, kestrel and greenfinch, once common over farmland, are also struggling.

The Scottish Government has contributed over £32 million through the SRDP to create some 2,700 km of on-farm hedgerows. And GWCT, whilst pressing for more action, has developed a bank of science tracking how habitat – hedges, field margins and woodland – provides food and cover for birds and wildlife.

Good hedges take up to ten years to become properly established and, cut

to an "A shape", provide shelter and allow the growth of herbaceous plants beneath. Wider hedges deliver more benefits for both biodiversity and for carbon storage than tall ones.

And the field margins below the hedge provide valuable food, shelter and nesting cover for grey partridge, yellowhammers, warblers, white-throat and other species.

And we shouldn't forget the visitors. The hawthorn's dark red berries might be staple diet for blackbirds



Aiming for net zero is great but it's going to cost you

The promise of a more attractive Scotland is key to getting the public on board when it comes to more expensive boilers, pipes and cookers, writes **Stephen Vere**



With COP26 behind us and many commitments having been made, there is wide consensus across Scotland that the move from a fossil fuel intensive society to a net zero one should be a "just transition".

Scotland has done incredibly well at decarbonising its electricity supply, with about 97 per cent of our electricity consumption coming from renewable sources, with onshore wind delivering about 70 per cent of capacity, followed by hydro and offshore wind.

Although we've made great strides in decarbonising our electricity, decarbonising our heat and transport will be a far bigger challenge. As we switch from gas to renewables, we'll need to convert our boilers and, in many cases, replace our pipes and gas cookers too.

Whilst it could be argued that many of the technologies we require are "proven" to work, they currently cost a lot more to buy, install and operate than our current, polluting technologies. These costs will inevitably come down, as we've seen with solar power and wind turbines as efficiencies and economies of scale are achieved. But the fact remains that this transition is going to cost more than we currently pay – what is not often discussed is: who is going to pay?

So, how do you pay? Raising taxes is one lever; household bills is another. Governments can regulate around this and no doubt a combination of approaches will be required. However, consumer engagement and education and personal responsibility is central to bringing the nation on the net zero transition journey. Carbon reduction is still perceived as someone else's problem by many and therefore someone else's responsibility when it comes to paying for it.

Difficult decisions are going to have to be made which will need to balance the economy, wellbeing and sustainability of our planet.

Given the additional cost, this transition isn't going to happen without the public's support and we're not going to have this support without the transition being viewed as "just". By this we mean creating high value secure jobs, fair wages and solutions that work. But we also have to ensure this reduces fuel poverty and costs are not borne by those least able to pay. The Net Zero transition isn't in itself going to solve fuel poverty or fully address inequalities, but it has an important role to play in it.

What we must also do is focus on "place". People won't pay more if they can't see any benefits beyond carbon reduction, which is largely invisible. Therefore, in tackling the challenge we must also make the transition about improving our lives, our communities and making our towns, cities and villages more desirable places to live, work and bring up families.

For this reason, the Scottish Futures Trust has developed a toolkit for the public sector and put "place" at the heart of our Net Zero Public Sector Buildings Standard which helps deliver net zero-ready buildings.

Working closely with central and local government we're emphasising the importance of "place" – because only by making Scotland an attractive place to live and work will we attract the inward investment and skilled jobs that will make this transition much easier to fund. It's a hard nut to crack but without doing so we're unlikely to achieve those commitments made at COP26.

Stephen Vere, Programme Director – Net Zero, the Scottish Futures Trust

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