

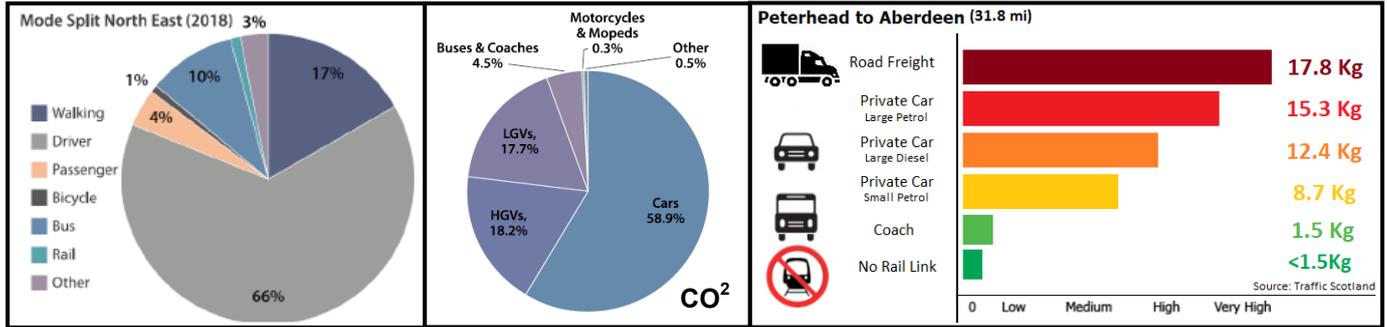
Buchan Railway



Key Facts

29 Mile Railway, Dyce to Peterhead **5** New Stations **2** Freight Depots **450,000** Trips shifted from private car to rail **32,000** Tonnes of CO₂ equivalents saved

- Fraserburgh and Peterhead are the furthest major settlements from the UK rail network.
- Both towns are recognised as a regeneration priority, and the entire route is within Strategic Growth Area identified in the Aberdeen City and Shire Strategic Development Plan.
- Evidence shows they have lost businesses and jobs to areas closer to the workers they need.
- HMP and YOI Grampian is the worst connected prison in Scotland by public transport.
- Formartine & Buchan Way can be retained for active travel with **only 7.1 miles** of path work.



Car usage higher than the national average Private cars and freight account for 94.8% of CO₂ Modal shift is a key goal of NESTRANS

“Almost half of Aberdeenshire residents travel further than 10 km to work. This is an increasing trend - since 2011, total vehicle kilometres travelled annually in both Aberdeen City and Aberdeenshire has increased by 3% and 8% respectively” - NESTRANS

Previous Studies and their shortcomings

The tables below show issues raised by the two previous studies on the left, and how things have changed, or our response on the right.

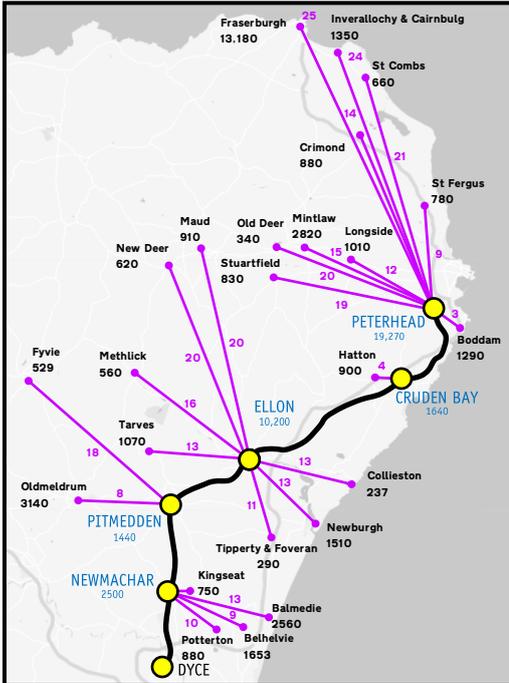
2016 Fraserburgh and Peterhead to Aberdeen Strategic Transport Study	
Formartine and Buchan Way route would not compete with car.	CNER propose using the Boddam branch, which was not studied.
Poor environmental score due to assumption of Diesel Traction.	Scotland's Railway will be fully decarbonised by 2035.
Predicted patronage will not justify cost of construction.	Borders Railway data now available and favourable to our proposals.
High car ownership may further limit railway uptake.	Borders Railway data shows 64% of rail users previously drove.
2017 Ellon Rail Study	
Project assigned cost of Aberdeen station and tunnels.	An unreasonable £42.4m burden on a Buchan Railway.
Half hourly service requires double track Dyce - Newmachar.	CNER propose a diversion to Pitmedden, negating doubling req.
Borders data available at time and unfavourable to Ellon only.	Evidence stations further from the city outperform those closer.
Small population surrounding Park n' Ride, likely poor uptake.	Congestion on the A90 and A952 is a problem north of Ellon. The A90 Ellon to Aberdeen is dual carriageway. Additionally, the road journey to Ellon from Fraserburgh and Peterhead is longer than the rail journey to Aberdeen from Ellon.
Questionably high estimated cost of construction.	A railway to Peterhead should be cheaper than the Borders Railway. ACC own the former trackbed to Ellon, there is no development along the length of the route and tunnels under the AWPR and A947 are not required as was under the A720. The Buchan railway also has 3 less stations than that of the Borders. CNER propose an alignment that requires only 7.1mi of retained cycle path. The cost of Aberdeen Tunnel and Station upgrades should not be a burden for a Buchan railway to bear. Raising the gauge to W12 benefits freight services on the line, and widens the capability of the existing link to the Harbour. STPR2 tasks Network Rail with increasing rail freight, plans are in place for W12 to Aberdeen, this work should be part of that remit.
12.5 miles Dyce to Ellon. Borders style railway, no cycle path - £15.9m per mile. Borders style railway, with cycle path - £21.8m per mile. Borders style railway, with cycle path and P&R - £30.5m per mile. Options 2 & 3 include Aberdeen Station and Tunnel Upgrades. Actual Borders Railway Cost - £13.5m per mile. (adjusted for inflation)	
Rail connection is useless to the Fish Industry due to the deadline nature of shipping, and to the Oil Industry due to freight bulk.	Fish on ice haulage in the North East already works to a deadline. HGVs leave at a set time every day with the load available. Much of the Oil cargo is shipped in containers and suitable for rail transport.



Aberdeen Tunnel and Station Upgrades.

- CNER propose a hybrid solution, redoubling from Aberdeen Station to the mouth of the Hutcheon Street tunnel, then realigning the track to the centre of the Hutcheon Street Tunnel, some lowering or slab track may be required. This can be achieved by removing the Schoolhill Tunnel entirely, or replacing it with a horizontal concrete ceiling using the cut and cover construction method.
- This solution provides a balance between cost and benefit, producing 17tph through the single line section, much more than the 11tph required for a half hourly Buchan service. TPH of this magnitude future proofs the line against any foreseeable increase in services.
- CNER propose making use of part (£39m) of the £200 million available alongside the Aberdeen City Region Deal to achieve this work.

Patronage and Modal Shift



The Borders Railway saw 1,457,142 single trips in it's first year. The population along the Buchan Railway is 79.22% of that along the Borders. Since these two railways have significant comparability, we would expect a Buchan Railway to see **1,154,348** trips. However, several factors will further boost the patronage along this Buchan Proposal.

1. Stations further away outperform stations closer to the city, patronage at Galashiels was **812%** higher than expected. The furthest station on the Buchan line is Peterhead, with a larger population of **19,270** to Galashiels' 14,632.
2. HMP/YOI Grampian adds a potential **28,080** further annual single trips.
3. Aberdeenshire sees **1.3 million** tourists a year, of these, **78%** come from the UK. These medium length journeys are perfectly suited to rail.

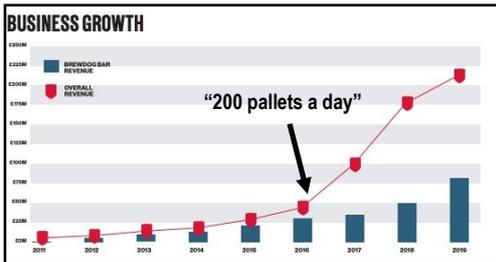
A Buchan railway will result in significant modal shift from private car to rail. This railway will save **450,658** car trips on the A90 alone in it's first year, this constitutes a **9.23%** modal shift, saving **3,658 tonnes** of CO^{2e} emissions. Further significant modal shift will be saved on other roads, such as the A947 from Newmachar, Fyvie and Methlick.

Additional CO² will be saved as these cars no longer need to travel into the city centre on congested urban roads, emitting higher carbon at the tailpipe.

Rail Freight Potential

Expansion of rail freight is a key ambition of the Scottish Government, with two freight terminals, one in Ellon, and another in Peterhead, we can shift tonnes of freight from road to rail and help to deliver on this in a very significant way.

Freight Case 1 - Brewdog		Freight Case 2 - Fish		Freight Case 1 - ASCO	
Brewdog has grown significantly since 2016.		Peterhead is the largest fishing port in Europe.		"World's busiest offshore support facility."	
Annual Tonnage	73,000 pallets (2016)	Annual Tonnage	146,719 (Peterhead) 21,091 (Fraserburgh)	Annual Tonnage	910,000
Potential Modal Shift	1,664 HGVs annually	Potential Modal Shift	5,085 HGVs annually	Potential Modal Shift	20k+ HGVs annually
Destination	Medium-Long distance (Motherwell and EU)	Destination	Very long distance (London and France)	Destination	Various
Estimated Annual CO ^{2e} Saved (Diesel Trains)	721 Tonnes	Estimated Annual CO ^{2e} Saved (Diesel Trains)	19,270 Tonnes	Estimated Annual CO ^{2e} Saved (Diesel Trains)	8,240 Tonnes



Freight Case 4 - Cereals (Animal Feed)	
Annual Tonnage	24,000
Potential Modal Shift	1043 HGVs annually
Estimated Annual CO ^{2e} Saved (Diesel Trains)	434 Tonnes

Peterhead port handles 9.3m tonnes of cargo annually. Much of the cargo from the Oil industry is not suitable due to gauge, shape, or destination. Much however, is shipped in containers. For this reason we have halved the potential modal shift at ASCO. A task force should be established to maximise rail freight uptake on a Buchan line.

Cost

In our view, estimates for the cost of a Buchan railway have been overstated in previous studies. For reasons already detailed, the Buchan Railway should not cost more than the Borders Railway, at £426.28m. CNER estimate the cost of our proposals to be **£400.79m**

The proposed alignment and stations sites can be viewed here: <https://tinyurl.com/wn7k3def>