

# Scottish Association for Public Transport

## Bus Plus Train: The Benefits of Transport Integration

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*This paper issued February 2021 develops the transport integration concept outlined in "Rail and Bus Recovery" issued by SAPT in October 2020*

### 1 **Public Transport Funding**

Bus and rail usage are not expected to recover fully to pre-covid levels in the foreseeable future. The commercial basis for rail franchising and bus operations is no longer viable.

The future of rail franchising is awaiting publication of the UK Williams Review. ScotRail is a self-contained network so unification of train operations and infrastructure as a concession or state-owned corporation is a likely outcome. But re-instating train services to pre-Covid levels while carrying fewer commuters will need higher subsidy irrespective of organisational changes.

Higher subsidy would also be needed if existing patterns of bus routes and services were to be maintained, at a time when government and local authority funds are under pressure. Rural transport is likely to be most vulnerable. Some councils, for instance Argyll and Bute, are now consulting on bus cutbacks.

A recovery strategy is needed urgently. Public funding for transport will need to be restructured to ensure that every town and village has access to a bus or train service regardless of geographic location.

**This paper focuses on rural transport. A separate paper on urban public transport is planned.**

### 2 **The Need for Change**

The STPR2 Update (February 2021) confirms the future importance of bus and rail travel to achieving four prime objectives:

- 2.1 **Equality:** With around 30% of households having no access to a car, good public transport is essential for equality of travel opportunities
  - 2.2 **Rural depopulation:** The population of many rural council areas is declining. For instance the number of young people, many of whom have no cars, has fallen by 34% in the last 20 years in Argyll & Bute. Lack of rural public transport is an incentive to move to cities.
  - 2.3 **Net zero carbon:** Transport produces 37 % of CO<sub>2</sub> emissions. Hitting the government's 2045 net-zero target depends on a rapid switch to electric and hydrogen power. The unhealthy growth of SUVs, using up to 15% more energy than cars, highlights the need to attract modal switch to electric or hydrogen trains and zero-emission buses which are much more energy efficient per seat than cars and SUVs.
  - 2.4 **Green Tourism:** Good rail and bus services across the country will attract more "green" tourism and leisure travel, boosting the rural economy and cutting road traffic congestion at tourism hot spots.
- A new approach to funding and co-ordinating rural public transport, informed by best continental practice, is outlined in this paper.

### 3 Continental Transport Integration

The SAPT paper “Rail and Bus Recovery” (October 2020) contrasted sustained growth of postbus travel in Switzerland (Swiss Postbus) with the steady decline in Scottish bus use:

		Swiss	Scotland
Annual bus passenger numbers	2014	141M	421M
	2019	167M	380M
Change over 5 years		+18%	-10%

The Swiss public transport system is a co-ordinated network of bus and rail routes. In rural areas, buses are operated by Postbus (or under contract). Bus timetables are designed to give connections between routes. Buses also connect with trains at interchange stations designed for easy passenger transfer. The buses provide local journeys for school, work, shopping etc but also can be used by local people, day trippers and tourists to travel by connecting services to anywhere on the national transport network. Swiss public transport is a successful alternative to the car.



*International bus co-ordination: Italian, Austrian and Swiss local buses connect at Martina on the Swiss/Italian border. Reliable connections are fundamental to integrated public transport networks. Photo: J.McCormick*

### 4 Integrating Scottish Public Transport

In Scotland, commercial operation of most buses means competition considerations have limited transport co-ordination. Co-operation on timetables or fares can fall foul of the Competition and Markets Authority.

Following the Covid drop in bus and rail patronage, it’s time to evaluate transport integration as a promising way out of the current usage and revenue crisis.

To ensure every community has access to a cohesive national transport network, as in many continental countries, better co-ordination between bus operators, ScotRail, local transport authorities and the Scottish Government is needed.

#### 4.1 Interchanges

Multi-modal hubs making it easy to change from bus to train, tram or ferry have been provided in some locations in Scotland (as at Lanark below). Building more interchanges with co-ordinated timetables and multi-modal ticketing across Scotland will make using public transport easier and more accessible.



*Bus rail interchange at Lanark.*

Photo: J.McCormick

#### 4.2 Route Numbering

Bus route numbers are allocated by bus companies. In many cases route numbers are retained historically for many years to maintain customer familiarity. However this can cause confusion when different companies use the same route number for different routes.

In a national transport network, each route should have a unique national route number. This helps people to search for routes and timetables when planning unfamiliar journeys.

## 5 Funding

Changed travel patterns, less commuting and lower revenue in the immediate post-Covid period means more bus routes will be dependent on financial support. The bus industry already received £314M in Local or Central Government support in 2018-19.

Local government supports socially necessary but unviable local bus services including school transport (£57M in 2018/19).

The Scottish Government supports bus more broadly through the Bus Services Operators Grant (BSOG, £55M in 2018-19) and the concessionary fares scheme (£202M). This support is available to all bus services, including profitable routes like the Citylink Edinburgh-Glasgow service.

The majority of BSOG and concessionary fares support is therefore concentrated on Central Belt bus services where operational bus miles and concessionary journeys are highest. Unless this method of allocation is changed, the future of many bus services outside the Central Belt is at risk unless local councils can (improbably) increase annual bus support.

An alternative approach would be to scrap the general BSOG and reallocate the government funding to a subsidy focused on maintaining a strategic network of co-ordinated bus routes which would integrate with rail services. The objective of this **Bus Integration Grant** would be to support:

- Strategic bus services for towns of >1k population with no station
- Strategic bus routes connecting with trains at regional interchanges
- Local bus or demand responsive transport for smaller communities

In most cases it is likely that existing bus routes could be modified by bus operators in partnership with local transport authorities to conform to these strategic objectives. The Bus Integration Grant would give financial stability to the strategic network.

Based on the current £1.83 per bus kilometre operating costs (Scottish Transport Statistics 2019), reallocating the BSOG fund of £55M to route specific subsidies would fully pay the cost of operating 30M bus km per year. Taking into account passenger revenue and concessionary scheme rebate increases the extent of the strategic network that could be supported, though the extent would depend on passenger loadings.

There are further potential benefits from integrating transport:

1. Duplication of bus and train on some routes would be reduced, increasing rail revenue and reducing emissions and public subsidy
2. Continental statistics show that co-ordinating buses and trains attracts long-term growth in passenger numbers and revenue

## 6 Transport (Scotland) Act 2019

The approach to transport integration advocated here for rural areas needs local transport authorities to agree improvements with bus operators and ScotRail and arrange funding from Transport Scotland.

The Transport Act 2019 provides local authorities with options to improve bus services in their area, including franchising, partnership working or running their own buses.

As most rural bus routes are unlikely to be profitable, route-specific funding through the suggested Scottish Government Bus Integration Grant (or alternative), reallocating BSOG, would be required. A legislative change may be needed for this.

The strategic bus network and Bus Integration Grant advocated in this paper would ensure bus operators have a dependable financial framework guaranteeing a long term role for buses in rural transport.

Preliminary analysis of transport benefits for three rural areas follows:

1. The Scottish Borders (section 5)
2. Dumfries and Galloway (section 6)
3. Argyll and Bute (section 7)

Other predominantly rural areas involving more extensive route networks will need further analysis applying the same principles.

## 7 The Borders

The Borders population is around 115,000 in an area of 4732 sq km. The Borders Transport Corridors Study<sup>1</sup> identified low public transport use and poor connections as shortcomings in the area, with low population density a hurdle to providing frequent public transport. The ongoing study will assess future developments including extension of the Borders Railway and road upgrades.

The table (right) shows 18 towns with over 1000 inhabitants in the Borders. The strategic integrated transport network should serve all these towns. Smaller communities not on strategic routes would could be served by demand responsive transport (DRT) which would connect into the strategic network.

### 7.1 Borders Integrated Network

The economic regeneration brought by the Borders Railway can be spread by improving the reliability of bus/rail connections at the Galashiels Transport Interchange. Fourteen of the nineteen Borders towns in the table opposite are linked by bus routes to the interchange.

Eight strategic bus routes in the proposed integrated national transport network would radiate from Galashiels (suggested national route numbers 100 to 107 in the table). These should be eligible for support through the proposed Bus Integration Grant and have fully integrated bus/rail ticketing.

Other interchanges of strategic importance with the UK rail network are Berwick and Carlisle where the reliability of bus/train connections could be improved.

Eyemouth would be linked by suggested national route 110 to the proposed Reston station (6 miles) but in the meantime could use the railhead at Dunbar, bringing Edinburgh 40 minutes closer than now.

West Linton is on the Dumfries-Edinburgh bus route (Section 6).

### 7.2 Borders Tourism Initiatives

Many regions on the continent offer passes giving unlimited travel on public transport in tourist areas. These are typically available for tourists residing in the area for periods of from one day to seven days. For instance in South Tyrol in Italy, with the *Mobilcard* you can use all public transport of the South Tyrol Integrated Public Transport network. This area also offers a *Museomobil* card covering travel and entry to museums and other tourist attractions.

A **Freedom of the Borders** ticket could be offered on the Borders integrated public transport network. Including one return journey on the Borders railway with this ticket would facilitate trips round the Borders from Edinburgh which would be a massive boost to tourism.

## Towns in the Borders with population > 1,000

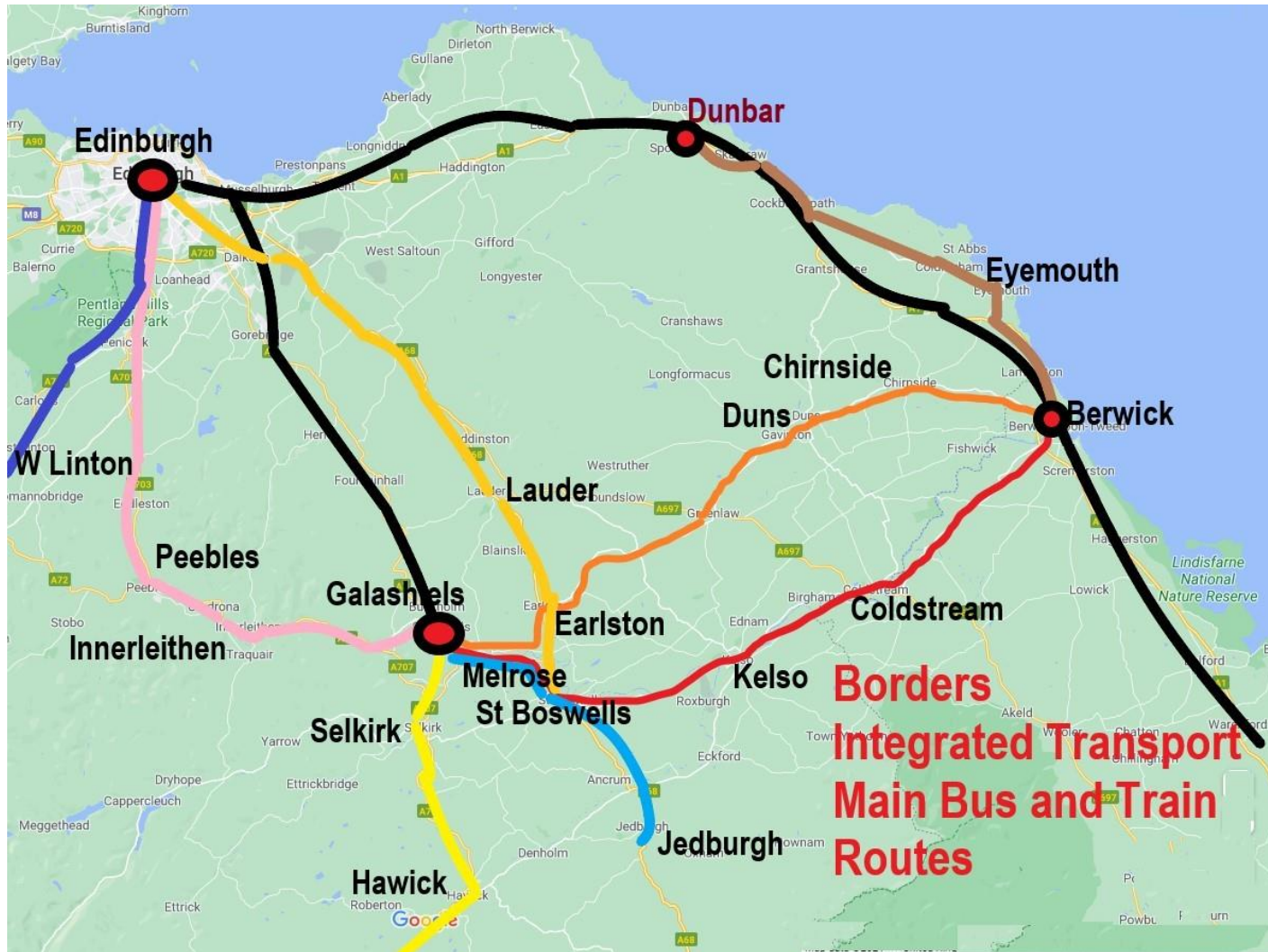
Town	Population	National route number (see below)	Route interchanges
Chirnside	1459	101	Galashiels, Berwick
Coldstream	1946	100	Galashiels, Berwick
Duns	2753	101	Galashiels, Berwick
Earlston	1779	101	Galashiels, Berwick
Eyemouth	3546	107	Dunbar, Berwick
Galashiels	14994	NR243	Edinburgh
Hawick	14294	104	Galashiels, Carlisle
Innerleithen	3031	105	Galashiels, Edinburgh
Jedburgh	4030	102	Galashiels
Kelso	5639	100	Galashiels, Berwick
Lauder	1699	106	Edinburgh
Maxwellheugh	1220	100	Galashiels, Berwick
Melrose	2307	102	Galashiels, Berwick
Newton St Boswells	1279	100	Galashiels, Berwick
Peebles	8376	105	Galashiels, Edinburgh
Selkirk	5784	103	Galashiels
St. Boswells	1494	100	Galashiels, Berwick
West Linton	1547	204	Edinburgh, Dumfries

*Population figures from National Records of Scotland*

**Routes 100 to 204 should be eligible for support by the Bus Integration Grant.**

Proposed National Route Number	Existing Route Number
NR26	NR26
NR243	NR243
100	BB67
101	BB60
102	BB68
103	BB73
104	BB95
105	BB62
106	BB51
107	BB253
204	SW101




Abbreviations:  
 NR National Rail  
 BB Borders Buses  
 SW Stagecoach Western  
 \*Bus-Rail interchange



Map shows strategic bus and rail routes serving towns of more than 1000 inhabitants that could be supported by the proposed Bus Integration Grant. Railways are shown in black.

Local bus services and Demand Responsive Transport would connect into this strategic integrated transport network.

**KEY**

-  Railway
-  St. Boswells-Lauder-Edinburgh
-  Berwick-Eyemouth-Dunbar
-  Galashiels-Peebles-Edinburgh
-  Galashiels-Kelso-Berwick
-  Galashiels-Jedburgh
-  Galashiels-Hawick-Carlisle
-  Galashiels-Duns-Berwick
-  Dumfries-West Linton-Edinburgh



## 8 Dumfries and Galloway

With a population of around 149,000 in an area of 6427 km<sup>2</sup>, Dumfries and Galloway's largely rural nature means most public transport needs public funding. The South West Scotland Transport Study<sup>1</sup> in January 2020 identified better bus/rail connections and improved rail services as objectives. The need for a post-pandemic public transport recovery increases the urgency to review bus and rail provision in the area.

### 8.1 South-West Integrated Network

Public transport serving the 19 towns with more than 1k population (see Table on right) should be part of the network of co-ordinated routes to be supported by the Bus Integration Grant. The 19 towns would be served by rail and the seven strategic bus routes listed (lower right).

Bus/rail interchange to link bus routes in the area with the national rail network would be via Dumfries, Girvan and Lockerbie stations. Bus and train timetables would be optimised to give travellers reliable bus/rail connections, a feature notably absent in the current timetables.

Glasgow/Ayr-Stranraer trains could also usefully link with local buses and the Stranraer-Dumfries bus route but this would be easier if the station is relocated as envisaged in the South West Scotland Transport Study.

Local routes and communities of less than 1k inhabitants not on strategic bus routes would be served by local buses or demand responsive transport supported by local councils, and timetabled where possible to connect with the strategic bus and rail network.

### 8.2 South-West Tourism Potential

A **Freedom of the South-West** ticket could enable visitors to explore the area's attractions: Wigtown Book Festival, Maclennan's Castle and Broughton House in Kirkcudbright, Threave Gardens near Castle Douglas, Burns House and Moat Brae (Peter Pan) in Dumfries, Sweetheart Abbey in New Abbey, the picturesque villages of Kippford and Portpatrick, etc.

A rail+freedom pass from the Central Belt via Stranraer and Dumfries could attract day trippers and generate optional leisure trips by public transport.

### Towns in Dumfries and Galloway with > 1k population

Town	Population	National route number (see below)	Route interchanges
Annan	8960	NR216	Glasgow,Carlisle
Cairnryan	Port	205	Girvan,Stranraer
Castle Douglas	4174	200	Dumfries,Stranraer
Dalbeattie	4227	201	Dumfries
Dumfries	32914	NR216	Glasgow,Carlisle
Eastriggs	1876	206	Annan,Carlisle
Gatehouse of Fleet	1255	200	Dumfries,Stranraer
Gretna	3147	NR216	Glasgow,Carlisle
Kirkconnel	2141	NR216	Glasgow,Carlisle
Kirkcudbright	3352	201	Dumfries
Langholm	2227	106	Galashiels,Carlisle
Locharbriggs	6031	Local	Dumfries bus
Lochmaben	1942	207	Dumfries,Lockerbie
Lockerbie	4287	NR65	Glasgow,Edinburgh,Carlisle
Moffat	2582	204	Dumfries,Edinburgh
Newton Stewart	4092	202	Girvan
Sanquhar	2021	NR216	Glasgow,Carlisle
Stranraer	10593	NR218	Glasgow
Thornhill	1674	203	Dumfries, Sanquhar
Wigtown	1000	202	Girvan

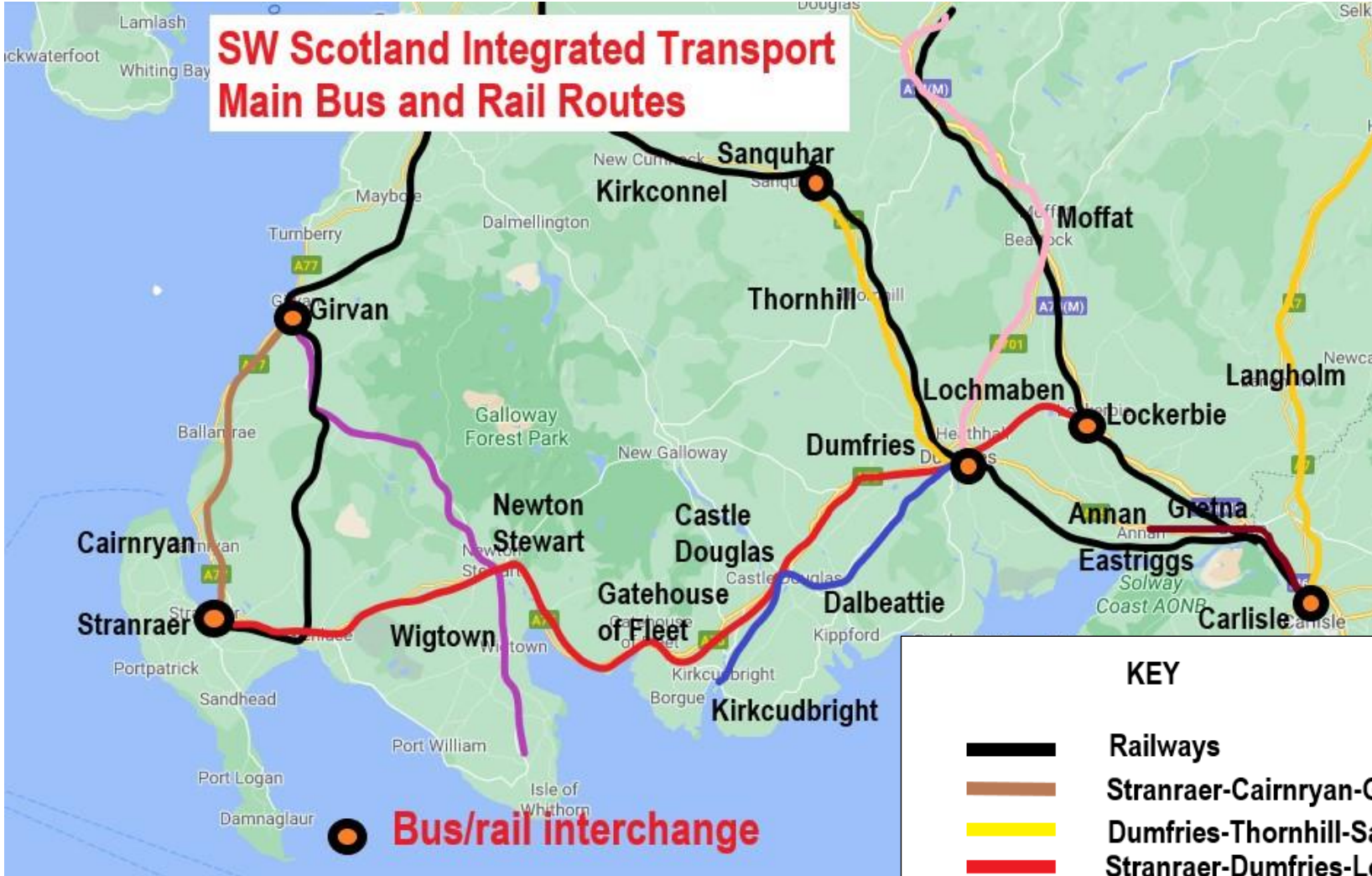
*Population figures from National Records of Scotland*

**Routes 200 to 207 should be eligible for support by the Bus Integration Grant.**

Proposed national Route Number	Existing Route Number
NR65 Glasgow-Lockerbie-Carlisle	NR65
NR216 Glasgow-Kilmarnock-Dumfries-Carlisle	NR216
NR218 Glasgow-Ayr-Girvan-Stranraer	NR218
104 Galashiels*-Hawick-Langholm-Carlisle*	BB95
200 Dumfries*-Castle Douglas-Gatehouse-N Stewart-Stranraer*	SW500
201 Dumfries*-Dalbeattie-Castle Douglas-Kirkcudbright	SW501
202 Whithorn- Wigtown- Newton Stewart- Girvan*	SW259+415
203 Dumfries*-Thornhill-Sanquhar*	SW246
204 Dumfries*-Moffat-West Linton-Edinburgh*	SW101
205 Stranraer*-Cairnryan ferry terminals-Girvan*	SW258
206 Annan*-Eastriggs-Carlisle*	SW79
207 Dumfries*-Lochmaben-Lockerbie*	SW81

Abbreviations: NR National Rail BB Borders Buses  
\*Bus-Rail interchange SW Stagecoach Western

# SW Scotland Integrated Transport Main Bus and Rail Routes



Map shows strategic bus and rail routes serving towns of more than 1000 inhabitants that could be supported by the proposed Bus Integration Grant. Railways are shown in black.

Local bus services and Demand Responsive Transport would connect into this strategic integrated transport network.

KEY	
	Railways
	Stranraer-Cairnryan-Girvan
	Dumfries-Thornhill-Sanquhar
	Stranraer-Dumfries-Lockerbie
	Dumfries-Kirkcudbright
	Dumfries-Moffat-Edinburgh
	Carlisle-Langholm-Galashiels
	Annan-Eastriggs-Carlisle
	Whithorn-Newton Stewart-Girvan

## 9

### Argyll and Bute

Argyll and Bute (A&B) has a population of only around 86k spread across an area of 6909 sq km and 23 inhabited islands with over 20 public ferry routes. Remarkably, it is impossible to travel directly by bus between any of the main towns (Campbeltown, Helensburgh, Oban, Rothesay and Dunoon). The indented coastline means many mainland road routes are circuitous.

Between 1998 and 2018 the population of A&B decreased by 5.9%. The drop in age group 25 to 44 was 33.7%. (National Records of Scotland). Poor public transport is one factor that affects quality of life for non-car owners.

Transport Scotland's recent consultation *Access to Argyll and Bute (A83)* looks at options for resolving the A83 Rest and be Thankful landslide problem.

**Public transport links to and within Argyll & Bute also need to be improved.**

#### 9.1 Strategic Network

The main transport links in Argyll and Bute are to Glasgow: Rothesay via Wemyss Bay and Dunoon via Gourock by ferry and train, Campbeltown to Glasgow by bus, and Oban and Helensburgh to Glasgow by train and also bus. Local buses in Bute and Cowal generally connect with ferry services.

Some of the rural bus routes have low usage. Focusing more public bus funding through the proposed Bus Integration Grant to rural routes would allow local services to be integrated into a strategic network linking A&B towns.



**Ferries** are an integral part of travel in A&B. Dunoon-Colintraive and Rothesay-Rhubodach bus routes could be merged to link Dunoon and Rothesay directly via bus (over the ferry). Dunoon-Inverary buses could be extended to Oban (replacing Oban-Glasgow buses which duplicate trains). Dunoon-Gourock and Gourock-Kilcreggan ferries (being upgraded by CalMac) could offer some through Dunoon-Gourock-Kilcreggan sailings, extended to Helensburgh if modest pier repairs are funded. This package would **cut overall bus costs** due to the Oban rationalisation.

**CHORD link:** These changes would link Dunoon, Rothesay, Oban and Helensburgh at least four times per day by public transport, connecting at Inverary for Lochgilpead, Tarbert and Campbeltown. Other local buses or DRT would connect with this strategic network. This would be a big boost for "green travel and tourism" in A&B and cost less overall to run than current bus and train services.

### Towns in Argyll and Bute with > 1k population

Town	Population	National route Number (see below)	Route interchanges
Ardriishaig	1349	300	Glasgow
Campbeltown	4852	300	Glasgow
Cardross	2193	NR	Glasgow
Dunoon	8454	CAL	Gourock
Garelochhead	2277	NR227	Glasgow
Helensburgh	14220	NR226	Glasgow
Innellan	1195	304	Dunoon
Kilcreggan	1309	305	Helensburgh
Lochgilphead	2392	300	Glasgow
Oban	8574	NR227	Glasgow
Port Bannatyne	1210	302	Rothesay
Rhu	1646	305	Helensburgh
Rothesay	4637	CAL	Wemyss Bay
Sandbank	1108	304	Dunoon
Tarbert	1179	300	Glasgow

*Population figures from National Records of Scotland*

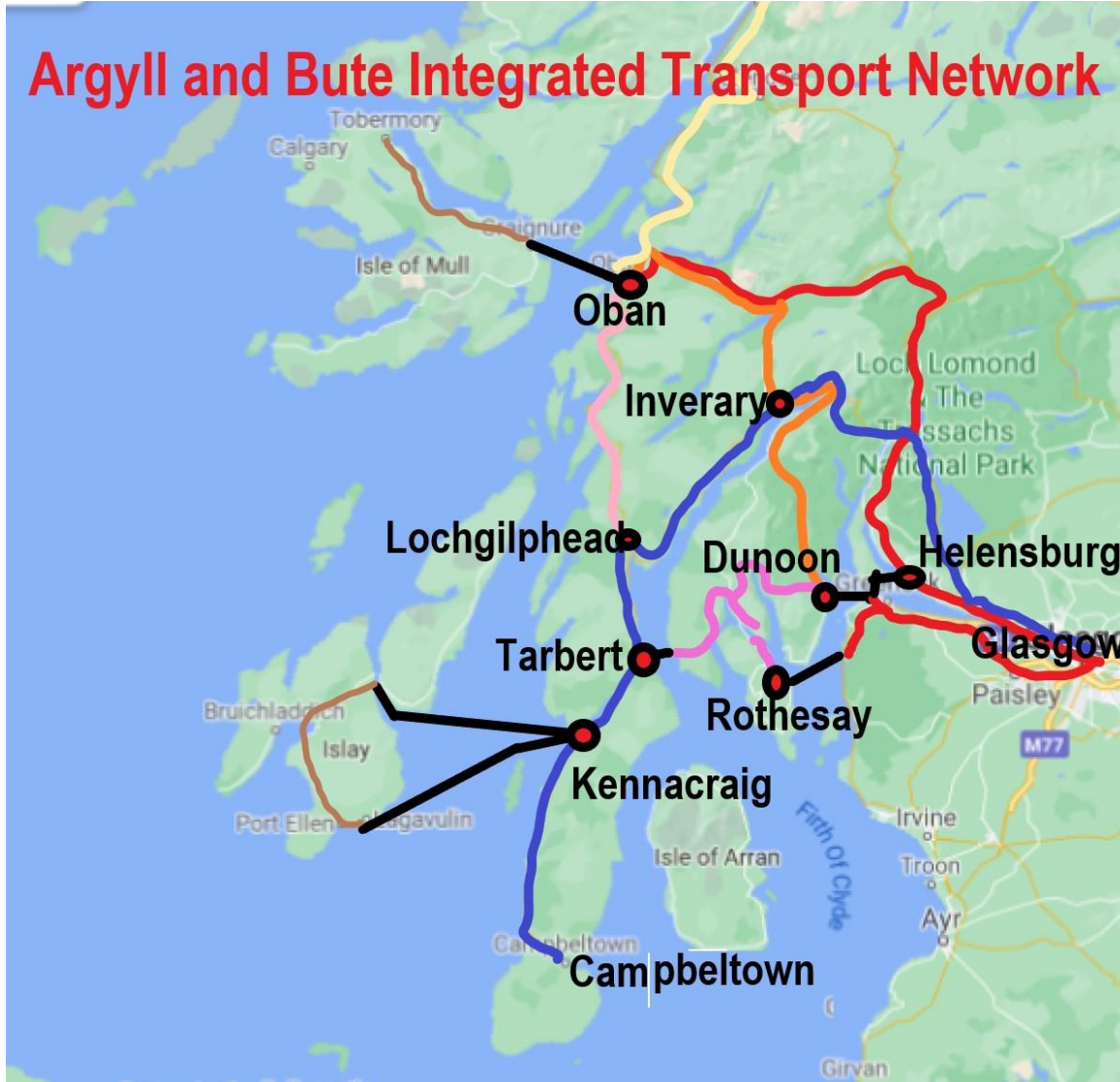
**Routes 300 to 306 should be eligible for support by the Bus Integration Grant.**

Proposed National Route Number	Existing Route number
NR227 West Highland Line	NR227
NR226 Helensburgh-Glasgow-Edinburgh	NR226
300 Campbeltown-Tarbert-Ardriishaig-Lochgilphead-Glasgow*	WC926
301 Dunoon-Inverary-Oban*	WC486+WC976
302 Dunoon-Colintraive-Port Bannatyne-Rothesay	WC478+WC490
303 Dunoon-Portavadie(-Tarbert)	WC478
304 Ardentinny-Sandbank-Dunoon-Innellan	WC489
305 Helensburgh*-Rhu-Garelochhead-Kilcreggan-Coulport	GM316
306 Oban*-Benderloch (extended to Ballachulish/Fort William*)	WC405

Abbreviations: NR National Rail  
 CAL CalMac  
 WM West Coast Motors  
 GM Garelochhead Motors/Wilsons of Rhu  
 \*Bus-Rail interchange



# Argyll and Bute Integrated Transport Network



Map shows strategic bus and rail routes serving towns of more than 1000 inhabitants that could be supported by the proposed Bus Integration Grant. Railways are shown in dark red and ferry routes in black. (Helensburgh-Kilcreggan not shown)

Ferries, local bus services and Demand Responsive Transport would connect into this strategic integrated transport network.

## KEY

- Rail routes to Oban, Gourock, Wemyss Bay
- Campbeltown-Inverary-Glasgow
- Oban-Inverary-Dunoon
- Dunoon-Colintraive-Rothesay/Portavadie (Tarbert)
- Oban-Lochgilphead
- Oban-Benderloch-Balachulish (Fort William)
- Ferry routes
- Bus routes Mull and Islay