

3 Determination of Potential Demand

3.1 Introduction

- 3.1.1 This Chapter will consider Task 2 from the Study Brief, which aims to analyse data from the Census and the Scottish Household Survey to try to understand the pattern of travel in the corridor between Beauly and Inverness.

3.2 Existing Car Ownership

- 3.2.1 Car and van ownership for the settlement of Beauly and for Inverness was extracted from Table KS17 from Scottish Census Data and is represented in below.

Ownership	Beauly	Inverness
NO car or van	27.95%	34.18%
1 car or van	54.26%	48.29%
2 cars or vans	14.7%	14.82%
3 cars or vans	2.36%	2.21%
4 or more cars or vans	0.73%	0.51%
Total	100%	100%

Table 3.1: Car and Van Ownership (Percentage of Households) in Beauly and Inverness

- 3.2.2 The Census data reveals that the residents of Beauly are more dependent on vehicles than people living in Inverness and that there are also more cars per head of population in Beauly. Beauly is also above the national average for car ownership (in Scotland 34.23% of households do not own a car and 43.35% of households own one car or van).

3.3 Travel to Work

3.3.1

Scottish Census Data Table KS15 provides a breakdown of the mode of travel used to reach the place of work or study, and this is summarised in table 3.2 below. This relates to the travel pattern of all people aged 16-74 who are in employment or studying.

Travel Mode	Beauly	Inverness
Work or Study mainly at home	5.05%	5.59%
Underground, Tram or Rail	0.67%	1.00%
Bus, minibus or coach	7.84%	8.71%
Powered two-wheel vehicle	0.00%	0.66%
Car – as driver	54.36%	47.17%
Car – as passenger (includes Taxi)	13.77%	10.50%
Bicycle	1.74%	5.64%
On Foot	15.33%	19.67%
Other	1.22%	1.06%
Total	100%	100%

Table 3.2: Travel to Work and Place of Study from Beauly and Inverness

3.3.2

The Census data shows that for people studying at home and using public transport to get to work, Inverness and Beauly have similar patterns. However, there is a considerable difference between settlements in driving to work: in total, nearly 70% (68.13%) of people drive or are driven to work in Beauly compared to nearly 60% (57.67%) in Inverness. Both settlements have high levels of residents walking to work or study. The greatest difference between the settlements is residents who cycle to work or study. Beauly is below the national average of 2% of all journeys by bicycle, whereas Inverness has relatively high levels of cycling at nearly 6%.

3.4 Travel Destinations

3.4.1 The Scottish Census Database was interrogated to output Trip Origin/Destination for travel to work and study purposes. This considered trips originating from Census Output Zones comprising of the Beauly settlement, the immediate hinterland around Beauly, and the A862 Corridor. The interrogation was re-run to identify all commuting trips into these Census Output Zones, to establish the overall travel to work/study pattern and mode characteristics for the Study Corridor.

ALL TRIPS	To Beauly Hinterland	To Beauly Town	To A862 Corridor	To Inverness West	To Inverness East	To External Zones	Total
From Beauly Hinterland	36	46	9	42	65	105	303
From Beauly Town	6	271	9	94	162	129	671
From A862 Corridor	0	9	185	231	329	153	907

Table 3.3: All Trips to Work or Study

CYCLE TRIPS	To Beauly Hinterland	To Beauly Town	To A862 Corridor	To Inverness West	To Inverness East	To External Zones	Total
From Beauly Hinterland	0	0	0	3	0	0	3
From Beauly Town	0	3	0	0	0	0	3
From A862 Corridor	0	0	0	3	3	0	6

Table 3.4: All Cycle Trips to Work or Study

3.4.2 Table 3.3 shows the number of trips originating in Beauly, its hinterland and the A862 Corridor, showing trips within these zones, trips to Inverness, and trips to destinations elsewhere (external). A total of 1881 person trips originated within Beauly, the Hinterland or the A862 Corridor. Table 3.4 shows the actual number of trips made by cyclists to work or study within the Study Area.

- 3.4.3 The second interrogation, considering trips which end in the A862 Corridor, Beauly Town and the Hinterland returned very few results. Table 3.5 shows these trips by origin/destination and mode of travel.

	To A862 Corridor	To Beauly Hinterland	To Beauly Town	Total
From Inverness East	0	3 by Bus 3 by Car as Driver	9 by Car as Driver	15
From Inverness West	30 by Bus 3 by Walk	0	3 by Car as Driver 3 by Car as Passenger	39
Total Trips	33	6	15	54

Table 3.5: All Trips from Inverness into Study Area

- 3.4.4 From the above data it is clear that the vast majority of people are travelling from Beauly and the hinterlands to Inverness and that most of these people are making this trip by car with only a very small percentage (0.6%) travel by bicycle. These figures can also give an indication of the potential for modal shift. Currently, 271 trips are within the town of Beauly and only three of these journeys are by bicycle. For journeys made in such a small and flat geographical area, there is real potential for a change to a more sustainable mode. Journeys from the hinterlands and the A862 corridor to Beauly are not a significant proportion at only 55 journeys. There is a substantial amount of trips from the A862 corridor to Inverness at 560 journeys. Currently the census data shows that only three people cycle from Beauly and six people from the A862 corridor to Inverness.
- 3.4.5 One of the key sites for major employers in Inverness is the Beechwood Business Park and the adjacent Raigmore Hospital. The hospital employs approximately 3,200 staff and LifeScan, another major employer, employs 1400 people. Beechwood Business Park is also home to Westminster Healthcare, the North of Scotland Water Authority, the Scottish Tourist Board, BT and the Highlands and Islands Enterprise. Other major employment sites in Inverness are Harbour Road (Weldex International Offshore and Morrison Construction), Longman Industrial Estate (Strathaird Salmon), the Highland Council main office, Inverness College and Scottish Natural Heritage.
- 3.4.6 Appendix D shows all of these employment and educational sites along within Inverness City Centre and their journey time in relation to Beauly. The maximum accepted distance for commuting by bicycle is approximately five miles and the diagram shows five mile isochrones from these various employment sites. The diagram shows that realistically, it would be very difficult to persuade returning or novice cyclists to cycle to employment sites in Inverness from anywhere further west of Bunchrew.

3.5 Survey of Cycle Demand

- 3.5.1 A survey of Cycle and Pedestrian Demand on the A862 at Clachnaharry/Bunchrew was undertaken on Thursday 5th July 2007. The results are shown in Figure 3.1.

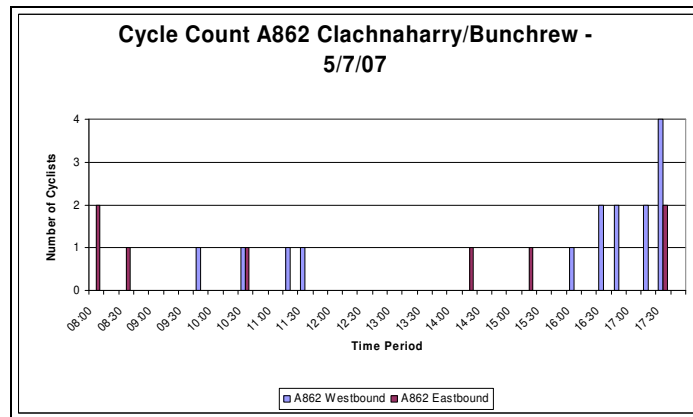


Figure 3.1: Table of Cycle Count on A862

- 3.5.2 The results of the survey show that the majority of cyclists using the A862 are travelling towards Beauly in the afternoon at peak times. For people travelling to Inverness, they are also making their journey during the AM and PM peaks. During the same survey, two pedestrians were recorded heading east, and two heading west.

3.6 Public Transport Provision

- 3.6.1 Thirty public transport services including rail and bus operate every weekday from Beauly to Inverness. By train the total journey time is fourteen minutes whereas travelling by bus to Beauly can take up to an hour. On average two services an hour operate from 8am to 7pm from Beauly to Inverness, although four of these trips by bus are not direct and require passengers to change once. During the off peak one service an hour is typical. These off peak journeys are all direct from Beauly to Inverness. The last train in the evening to run from Beauly to Inverness is at 10:41pm.
- 3.6.2 There are an almost equal numbers of public transport services from Inverness to Beauly with similar journey times. There is at least one service an hour although not all of these are direct and three services require users to change. The last bus to Beauly is at 11.20pm and the last evening train departs from Inverness at 8.39pm.

3.7 Summary

- 3.7.1 Leisure and shopping trips represent the most likely source of increases in cycling levels along the Inverness to Beauly corridor.
- 3.7.2 For leisure cycling there is a network of existing quiet roads that could form part of a circular route (See Appendix E.) The unclassified road on the northern shore of the Beauly Firth from Charlestown to Milton is ideal for cycling and links into the National Cycle Network at Kessock Bridge. A circular route around the firth has the potential to be tourist attraction in itself that would bring more trade to pubs, cafés and restaurants on route. The value of cycle tourism to the Highlands has been estimated at £30 million per year and 'The Value of Cycling in the Highlands and Islands of Scotland' published by The Highland Cycle Forum, states that 'future investment should be able to cover its cost to maintain or increase this (cycle routes)'.
- 3.7.3 Five to six miles is an acceptable commuting distance by bicycle and over a flat terrain will take even the most sedentary of adults no more than thirty to thirty five minutes to complete, but it is unrealistic to expect novice or returning cyclists to travel the ten miles between Inverness and Beauly as a regular work journey without a gradual introduction to cycling, hence it likely that modal shift can only really be achieved on journeys between Bunchrew and Inverness. It is however a distance that is attractive for leisure cycling.
- 3.7.4 The vast majority of journeys on the A862 for work purposes are from Beauly to Inverness and as stated, these ten miles may not be attractive by bike, but there are settlements closer to Inverness where a shorter commute of say five miles or less has the potential to be an desirable alternative for many people if a safer cycle route was available. A daily total of 58 public transport services is not a high level of service for a settlement situated only around ten miles from a city centre and with infrequent bus and rail services that have erratic departure times, the bicycle can be a dependable and viable alternative.
- 3.7.5 For the residents of Kiltarlity, the nearest settlement is Beauly which as the crow flies is less than three miles away. Public consultation for this study and for the Beauly crossing study carried out on behalf of the Highland Cycle Campaign (see chapter 5) uncovered a considerable latent desire for a direct route between the two settlements that was supported for both practical and leisure trips by many individuals and organisations.

4 Public Consultation

4.1 Kirkhill and Bunchrew Community Council

- 4.1.1 On Tuesday 8th May 2007, the members of the Kirkhill and Bunchrew Community Council were invited to make comments on current conditions for walking and cycling between Inverness and Beauly. All of the members at the meeting agreed that a safe walking and cycling route was needed on the A862 due to its narrowness and fast traffic. The group agreed that the pinch point where the road passes over the railway in Clachnaharry was very restrictive and daunting for pedestrians and cyclists, even though passage is controlled by traffic lights.
- 4.1.2 The group also suggested that the safest and quickest way to Beauly would be via a new bridge across the Beauly between Ferrybrae and Ferry Road. For many centuries a ferry from Beauly Priory and then later between Ferrybrae and Ferry Road (also a drovers route) provided a key link for anyone travelling north or west from Inverness. Use of the ferry declined when Lovat Bridge was built, but it was still in operation until the 1950s when operation ceased completely.
- 4.1.3 Further suggestions to make the A862 safer for cyclists and pedestrians included improved maintenance on the sides of the road to prevent vegetation growth onto the carriageway and more lay-bys to allow overtaking, particularly of slower farm vehicles.
- 4.1.4 Overall, the group were supportive of any measures to encourage more people to walk and cycle and for the provision of an off road route to tie into the existing track from Inchmore to Easter Moniach.

4.2 Kirkhill and Bunchrew Community Trust

- 4.2.1 The Kirkhill and Bunchrew Community Trust is a charitable trust formed in 1999 to carry out and encourage educational, economic, environmental and recreational activities within the area. Members of the Trust met on Wednesday 9th May 2007 with a representative of Halcrow to discuss options to encourage walking and cycling provision.

- 4.2.2 The group have considerable experience and knowledge of the area in terms of walking and cycling and spearheaded the development of the off road walking and cycling path between Inchmore and Easter Moniac (See Chapter 5 for more details.) It was clear the group are concerned about the sustainability of their community and improving the quality of life and see transport as an integral tool to reduce their carbon footprint. Members of the group revealed that two pedestrians had been struck by vehicles when walking to the bus stop at Inchmore, (although the accident statistics used within this report do not reflect this information). Furthermore, the Trust are working with Kirkhill Primary School in the development of their school travel plan as discussed in chapter 5.
- 4.2.3 The main issues for the group with regard to cycling or walking on the A862 are:
- Narrow carriageway means that motorists sometimes drive too close to pedestrians or cyclists;
 - Cycling or walking across Lovat Bridge is intimidating due to its narrow width;
 - People using the caravan site at Bunchrew often walk along the sea wall to reach Inverness;
 - Current conditions on the A862 prevent all but the most dedicated of cyclists; and,
 - The A862 is seen as a barrier to the surrounding area and the associated opportunities for physical exercise.
- 4.2.4 The group would welcome any interventions to improve safety of the road, but highlighted that the priority should be for measures from **Bunchrew to Inverness** and from **Easter Moniac/Kirkhill to Beauly**.

4.3 Public Feedback

- 4.3.1 News of the route options study was circulated in the Highland Cycling Campaign newsletter and a local newsletter for the area 'Crannog'. The articles generated six emails and one letter from the general public, all of which expressed support and the necessity for a safe cycle route between Inverness and Beauly from people who make this journey regularly by bicycle. A selection of summary of responses is included within Appendix F but the main points of the comments received were:
- Respondents are 'put off' cycling between Beauly and Inverness because of the increasing volume and speed of traffic;
 - Traffic lights at Lovat Bridge would make it safer for pedestrians and cyclists;
 - A new bridge into Beauly from Ferrybrae is the best route into the town;
 - The route is flat, but inconsiderate drivers are demoralising to cyclists;
 - Clachnaharry is 'scary' as there is no run off area;
 - Many more people would cycle if there was a safe route;
 - Beauly is the nearest town to Kirkhill and a safe route between the two settlements is needed;
 - Cycle parking should be installed in Beauly;

- A cycle route through Kirkhill may help to improve the local economy;
- Commuter cyclists want the shortest possible route between Inverness and Beauly;
- Children are prevented from cycling to school (Charleston Academy) because of the traffic, even though the distance and terrain is acceptable;
- Advisory cycle lanes in Clachnaharry are not maintained and are mostly covered by parked cars;
- The surface quality of the walking/cycling track between Inchmore and Easter Moniac is not suitable for a fast commuter cyclist, any off road path should be tarmac;
- Any cycle route between Inverness and Beauly would also support tourism;
- A signed circular route around the Beauly Firth would help to promote tourism and physical activity in the area; and,
- An off road cycle track is unacceptable – the road should be widened to provide on road cycle lanes.

4.3.2 A request was received from the headteacher at Kirkhill Primary School to involve the pupils in the study as they will be future road users. This request was passed to the School Travel Advisor at The Highland Council.

4.4 Core Paths Plan Consultation

4.4.1 Recent consultations for the Core Paths Plan have taken place which has shown support and a desire for walking and cycling routes within the study area. Responses from consultations in and around The Aird revealed the desire for a bridge across the River Beauly and a traffic free route between Beauly and Inverness. The bridge at Beauly was the most popular suggestion in the Core Paths consultation in either Inverness or Nairn.

5 Community Involvement

5.1 Introduction

- 5.1.1 This chapter outlines current and previous studies of relevance to the development of options for a cycle route along the Inverness to Beauly corridor.

5.2 Kirkhill and Bunchrew Community Trust – Aird Community Links

- 5.2.1 In 1998 Kirkhill and Bunchrew Community Trust carried out a planning exercise which identified paths for walking and cycling as a community need with a link between Inchmore and Easter Moniach highlighted as a priority with a path from Kirkhill to Beauly as the route the community would like to see made safer. The Trust then received funding from Scottish Natural Heritage and the Inverness and Nairn Enterprise to carry out a feasibility study for a route. The development of the route took three years in total and was paid for from funding from a number of sources including Fresh Future (National Lottery), Paths for All, Scottish Natural Heritage, the Highland Access Project, The Highland Council and the Co-operative Society. The total cost of the 1km path was £63,270 with additional in kind contributions of £6,580 from The Highland Council and the Trust.
- 5.2.2 The land needed for the path was not purchased, but used by entering into legal agreements with landowners who were supportive of the proposals. The Highland Council have now agreed to maintain the path, but subsequently, volunteers from the Trust agreed to maintain the path for ten years.
- 5.2.3 The path was formally opened in 2003 as part of a wider network of signed routes, including interpretation boards through Kirkhill, Cabriach, Moniach and Inchmore. A pneumatic counter was installed in May 2003 and the monitoring results have shown a steady increase in pedestrians and consistent use by cyclists since the path was introduced, as shown in table 5.1 below. The counts show seasonal variations, but this is consistent with walking and cycling which tend to reduce during the winter months.

Monitoring Period	Total number of Cyclists	Total number of Pedestrians
May 2003 – December 2003	1408	1985
May 2004 – December 2004	1198	2253
May 2005 – December 2005	1135	2889

Table 5.1 Survey results from Inchmore to Easter Moniack path

5.2.4

In 2006 a survey was distributed to households in the community via the community newsletter 'Crannog'. There were 57 respondents to the survey, the results of which are shown below in table 5.2.

Question	Yes	No	Percentage of total respondents answering positively
Do you use the paths?	55	2	96%
Which paths do you use?			
Inchmore/Moniack	31	2	54%
Signed minor roads	22	3	39%
Woodland paths	40	3	70%
All of these	15	3	26%
Since the paths opened, do you:			
Walk more	29	12	51%
Cycle more	16	16	28%
Ride more (horses)	2	13	4%
How often do you use the paths?			
Daily	7		12%
Weekly	19		33%
Monthly	6		11%
Several times a year	11		19%
Very occasionally	1		2%
Never	1		2%
Would you support further development of:			
More roadside paths	37	2	65%
More minor/off road routes	31	2	54%
Roadside path from Beauly to Inverness	40	0	70%
Are you pleased with the network of paths?	43	1	75%

Table 5.2 Results from Household Survey

- 5.2.5 Overall, the results of the survey reflect very positively on the work the Trust has carried out to create a network of paths in the area. Nearly all the respondents use the paths with the least popular being the signed minor roads. Over half of the respondents are now walking more and nearly a third are cycling more often. The majority of respondents use the path weekly and there is overwhelming support for more paths in the area, and the survey results show that there is the greatest demand and support for a route from Inverness to Beauly.

5.3 Kirkhill Primary School Travel Plan

- 5.3.1 In 2001 a School Safety Team was established to help develop a school travel plan. The Travel Plan includes a list of the local concerns and problems, a costed Action Plan and the results of a school travel survey. The travel survey had an excellent response rate at 83% and was analysed by The Highland Council Road Safety Team.

- 5.3.2 Some of the main points of the travel survey were:
- The majority of pupils live within three miles of the school (67%) which is an ideal distance for cycling;
 - There are currently very high levels of sustainable transport being used by pupils and parents:
 - Walking – 43%
 - Bus – 33%
 - Cycling – 2%
 - Car – 21%
- 5.3.3 The most common factors affecting parents' decision to let their children walk or cycle to school:
- Safe crossings on busy roads (63%)
 - Reduce vehicle speeds (61%)
 - Knowing that other children are walking and cycling to school (44%)
 - More road safety education for children (44%)
- 5.3.4 The survey did not ask what the preferred mode of transport was for pupils and parents, so it is difficult to ascertain patterns of latent demand for walking and cycling. For children less than eight years of age who live more than two miles from the school and children over eight who live more than three miles from the school free transport is provided.
- 5.3.5 Through the travel plan a number of schemes have been implemented such as an advisory 20mph speed limit outside the school and traffic calming. The plan also has a prioritised list for implementation including advisory cycle lanes within Kirkhill and Inchmore and the path between the two settlements to be designated to allow cyclists to use it.

Beauly River Crossing Feasibility Study – The Highland Cycle Campaign

- 5.3.6 In 1996, the Highland Cycle Campaign was awarded funding from the Royal Incorporation of Architects in Scotland's' Community Projects Fund to undertake a feasibility study into a potential pedestrian and cycle route between Beauly and Ferry Brae. The brief required engineers to keep the proposed crossing as close to the location of the former Beauly ferry crossing as possible as well as provide cost estimates, advice on project and construction management, funding and planning as well as consultation with local residents and relevant organisations.
- 5.3.7 The study was carried out by the Highland Council Transport Services Consultancy Design Office and incorporates a 2m wide, bitumen cycle track following consideration of six routes across the Beauly Firth as follows:
- ***Route 1*** – use existing roads from Kirkhill with a new bridge over the railway and another bridge over the Beauly all to the east of Ferrybrae.

- **Route 2** – use existing roads from Kirkhill and existing level crossing with new bridge over the Beauly, all to the east of Ferrybrae.
- **Route 3** – use existing roads from Kirkhill with a new bridge over the railway and another bridge over the Beauly all to the west of Ferrybrae.
- **Route 4** – use the flood relief span underneath the railway bridge, a new bridge to cross a burn and another new bridge to cross the Beauly, all to the west of Ferrybrae.
- **Route 5** – use existing bridge at Wester Lovat to cross the railway with a new cycle track to the north of the railway and a new bridge over the Beauly.
- **Route 6** – new cycle track to the south of the railway from Ferrybrae to Beauly train station with a new bridge adjacent to the railway bridge over the Beauly.

5.3.8 The study also consulted various landowners, statutory and non-statutory bodies including:

- Lovat Estates
- Planning Authority
- Scottish Natural Heritage
- Railtrack
- Local Councillor
- Highland Council Roads Maintenance
- Beauly Community Council
- Beauly Angling Club
- Beauly Tourism Trust/Traders Association
- Owner of cottage at Ferrybrae

5.3.9 The proposals were well received with only Lovat Estates disapproving because the route would 'generate high public usage and therefore the cyclists would be considered as additional hazards on the narrow public roads approaching the crossing.' The owner of the cottage at Ferrybrae who would be most affected by the proposals said he understood the desire to have a crossing at that point but would like it positioned away from his property for fear that youths may congregate on the bridge. Letters of support for the new link were received from:

- Inverness Area Countryside Project
- Cruivend Holiday Park
- Petition from residents of Kirkhill (10 signatures)
- Petition from residents of Newton hill and Altnachardich (38 signatures)
- Highland Cycle Campaign
- Scottish Wildlife Trust (Inner Moray Firth members)
- The HEP Club
- Scottish Natural Heritage
- Eight employees of the doctor's surgery in Beauly
- Beauly Camanachd Club
- Inchmore School Board

- CTC (National Cyclists Organisation)

5.3.10

The study concluded that there was overwhelming public support for a new crossing which would no doubt be well used by the local community and that there were no issues, either engineering, environmental or statutory that could prevent a new link being built. The study outlined that the preferred location for a new bridge was east of Ferrybrae and that Route 5 would have the least effect on the principal landowners (Lovat Estates).