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Safer Active Travel Back Road, Dunbar Final Report

On behalf of East Lothian Council



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- Appendix C Land Designations
- Appendix D List of Identified Issues
- Appendix E Online Feedback Form Results
- Appendix F Vehicle Tracking
- Appendix G Road Safety Audit and Response



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1 Introduction and Background

1.1 Introduction

- 1.1.1 East Lothian Council (ELC) commissioned an active travel study that will provide options to address road safety concerns and local transport related issues, that may be actual or perceived barriers to encouraging sustainable trips within the Council area. They have appointed Peter Brett Associates LLP (PBA), now part of Stantec, to undertake these studies with one study focusing on Back Road, Dunbar.
- 1.1.2 This element of the study, entitled "Safer Active Travel: Back Road, Dunbar", will examine the existing walking and cycling infrastructure, identifying barriers, weaknesses, local issues and concerns. The study report will also consider the impact of current, or planned developments in and around the study area, as shown in Figure 1.1 below and will highlight key issues and constraints in respect of the existing local road, footway and footpath network.

1.2 Background

- 1.2.1 Back Road Dunbar is part of an extended route that includes North Road and Bayswell Road which provides a two-way traffic route that runs east/west & west/east across the north of Dunbar. The route follows the line of the A1087 and connects with Shore Road on the west side and High Street / Victoria Street on the east side and Duke Street in between.
- 1.2.2 Back Road forms part of National Cycle Network (NCN) 76 and the John Muir Way for cycling; the walking route of the John Muir Way goes along the coast; it also allows access towards the coast, Winterfield Golf Club and onwards towards John Muir Country Park and Belhaven Beach.
- 1.2.3 The study focuses on Dunbar Back Road between John Muir Country Park at Shore Road, to beyond the Winterfield Golf Club, but also includes nearby roads and junctions shown below.



Figure 1.1 Study Area

1.2.4 East Lothian Council has included the Back Road area as part of an active travel study due to the fact that it is only functioning as a traffic route and that pedestrians and cyclists are not currently accommodated within the carriageway extents. In particular, there is a lack of continuous footway and the road is of variable width, which allows low volume two-way travel by car, but is not ideal for safely accommodating the needs of pedestrians & cyclists.

now part of) Stantec

1.3 Purpose of the Report

- 1.3.1 The study will identify safety issues and concerns both on Back Road and on roads that connect with it, whilst being aware of the historical nature of the routes in the area and physical limitations, such as boundary walls, land ownership and local character. The study included engagement with the local community and sought feedback in terms of local knowledge and typical experiences in respect of regular & local road users.
- 1.3.2 This report will inform an Action Plan which will create audited and costed interventions and proposals for ELC to use to support any proposed infrastructure alterations and / or funding application(s) that aligns with the criteria and outcomes set out by Sustrans.
- 1.3.3 ELC is committed to promoting and encouraging safer active travel across the Council, as a whole and within East Lothian's Local Transport Strategy 2018 2024 which includes an Active Travel Improvement Plan. This study will contribute to delivering key outcomes from that Plan.
- 1.3.4 The final conceptual design outputs and recommendations will be incorporated into an Action Plan that lists interventions scored against strategic objectives, affordability and deliverability. The Action Plan will include timescales (in respect of short, medium and long-term), outline costs and responsibilities. It will also produce a range of measures from low cost, "easy-win" (which can be implemented relatively quickly) and higher value, more ambitious projects (likely to be implemented in the medium to long-term). A consultation summary (including a summary of wider issues), financial estimates and a photo library will also be provided to the Council.

1.4 Benefits

- 1.4.1 There are many overarching advantages of encouraging active travel / sustainable trips:
 - the physical exercise can help to improve health and well-being;
 - the environment and safety can be improved by considering segregation / reducing conflicts;
 - mode share transfer resulting in less reliance on motor vehicles for local trips;
 - air quality improvements; and

there are opportunities for the Council to direct resources and funding to the areas which will generate the best returns.

1.5 Methodology

- 1.5.1 The study follows an objective-led approach with stakeholder engagement considered a key aspect. A full Communication / Engagement Strategy has been prepared to support the study and is included for reference in Appendix A.
- 1.5.2 The following guidance documents have been considered in developing the methodology
 - The Sustrans Community Links Programme Route Option Appraisal & Feasibility Study Minimum Requirements.
 - Sustrans Design Manual Handbook for cyclefriendly design
 - Scottish Transport Appraisal Guidance (STAG)¹



) Stantec

- Cycling by Design²
- 1.5.3 Monitoring and evaluation will be given consideration as it is an often a neglected stage of the project lifecycle, yet it is as important, if not more important, than any other stage in the project to ensure that any measures implemented are fully assessed.

1.6 Wider Issues

1.6.1 As a result of the positive engagement with the local community, a number of key issues and concerns were raised that were beyond the study extents but are still important in respect of understanding active travel barriers and opportunities. The study focussed on identifying potential actions to tackle the issues within the defined study area, but the wider issues have been recorded, such that they can be considered at a later date.

¹ <u>https://www.transport.gov.scot/media/41507/j9760.pdf</u>

² https://www.transport.gov.scot/media/33803/cycling by design 2010 rev 1 june 2011 .pdf



2 Study Objectives

2.1 Introduction

- 2.1.1 Developing a robust set of objectives is a key part of this study and demonstrating that an objective-led and evidence-based approach has been followed, which will help when submitting and securing future funding applications.
- 2.1.2 This process will benefit from being broadly aligned with the Scottish Transport Appraisal Guidance (STAG). Whilst not a STAG-based study as such, following an objective-led and evidence-based process will add credibility that will be beneficial in later funding bids.
- 2.1.3 It is expected that new opportunities will be provided for walked and cycle trips in a safe manner that encourages additional users and behaviour change, whilst attempting to maintain the traditional character of the local area.

2.2 East Lothian Objectives

- 2.2.1 The study objectives should broadly align to those included in the East Lothian Local Transport Strategy (LTS) 2018 -2024, which identifies the following:
 - To deliver a more attractive and safer environment for pedestrians and cyclists;
 - To reduce the overall dependence on the car and the environmental impact of traffic;
 - To promote the availability and use of more sustainable means of travel;
 - To locate new development where it reduces the need to travel;
 - To maximise accessibility for all and reduce social exclusion;
 - To promote integration and interchange between different means of travel; and
 - To maintain the transport network to a suitable standard to ensure it meets the needs of all users.

2.3 Study Objectives and Outcomes

- 2.3.1 The LTS objectives form the basis of the identified study objectives, which are:
 - To deliver a more attractive and safer environment for pedestrians and cyclists;
 - To reduce the overall dependence on cars and environmental impacts of traffic;
 - To promote the availability and use of more sustainable means of travel;
 - Improve physical and mental well-being through the associated benefits of active travel; and
 - To maximise accessibility for all and reduce social exclusion.
- 2.3.2 It should be noted that as the study progressed the objectives were discussed amongst the client team and stakeholders before being confirmed.





Figure 2.1 Study Outcomes



3 Policy Context

3.1 Introduction

3.1.1 It is important to consider the relevant national, regional and local policy context and how this relates to local issues in the context of this study.

3.2 National Policy

Scottish National Transport Strategy³

- 3.2.1 The National Transport Strategy (NTS) for Scotland was published in 2006 and sets out the long-term vision for Scotland's transport policies up to 2026. The Strategy is based around three Strategic Outcomes for transport. These are:
 - Improve journey times and connections between our cities and towns and our global markets to tackle congestion and provide access to key markets;
 - Reduce emissions to tackle climate change, air quality and health improvement; and
 - Improve the quality, accessibility and affordability of transport, to give people the choice of public transport and real alternatives to the car.
- 3.2.2 The NTS is currently being updated.

Active Travel

- 3.2.3 There are a number of key documents that set out the national policy in respect of active travel, the key ones being;
 - Let's Get Scotland Walking, 2014⁴
 - A long-term vision for Active Travel to 2030⁵; and
 - Active Travel Task Force Report, 2018⁶
- 3.2.4 These documents set out the ambitions to promote walking & cycling as a community led solution that provides health benefits, attractive safe communities and increased economic activity and promotes active travel as part of people's everyday lives.
- 3.2.5 These documents also seek to reduce inequalities and to promote integration across travel modes with well connected links that aim to encourage sustainable local trips.

⁵ <u>https://www.transport.gov.scot/media/33649/long-term-vison-for-active-travel-in-scotland-2030.pdf</u>

³ https://www2.gov.scot/Resource/Doc/157751/0042649.pdf

⁴ <u>https://www.gov.scot/publications/lets-scotland-walking-national-walking-strategy/</u>

⁶ https://www.transport.gov.scot/media/42284/active-travel-task-force-june-2018.pdf



Designing Streets⁷ and the National Roads Development Guide⁸

3.2.6 Designing Streets and the National Roads Development Guide (NRDG) follow the same basic principles, whereby a user hierarchy to the design process is implemented with pedestrians being prioritised first. This means considering the needs of pedestrians first when designing (or amending) any new road layout, as shown in Figure 3.1 extracted from the NRDG.



Figure 3.1 Road Hierarchy

Cycling by Design⁹

3.2.7 Cycling by Design was originally published in 1999 with revisions up until 2011. The purpose of the document was to specify how cycling can contribute to the national and local policy objectives of reducing emissions, tackling congestion and improving physical and mental health, while also aiding in accessibility and social inclusion objectives. It highlights measures to plan and attract more cyclists onto local networks through design and inclusive planning, while also providing methods of appraisal.

Handbook for Cycle Friendly Design¹⁰

- 3.2.8 Sustrans Design Manual, "Handbook for Cycle-Friendly Design" was published in 2014 and provides key principles for user friendly cycling design through illustrations and technical guidance relating to everything from design issues through to the management and maintenance of routes.
- 3.2.9 It aims to provide guidance which will address the current imbalance on Scotland's streets which has resulted in motorised vehicles becoming the dominant mode of transport in urban environments.

⁷ <u>https://www.gov.scot/binaries/content/documents/govscot/publications/publication/2010/03/designing-streets-policy-statement-scotland/documents/0096540-pdf/0096540-pdf/govscot%3Adocument</u>

⁸ http://www.scotsnet.org.uk/documents/national-roads-development-guide.pdf

⁹ https://www.transport.gov.scot/media/14173/cycling_by_design_2010_rev_1_june_2011_.pdf

¹⁰ <u>https://www.sustrans.org.uk/sites/default/files/images/files/Route-Design-</u> Resources/Sustrans_handbook_for_cycle-friendly_design_11_04_14.pdf

3.3 Regional and Local Policy

East Lothian Local Development Plan¹¹

3.3.1 The Local Development Plan contains technical evidence on the effects of land use planning throughout ELC and takes account of future population projections and policy direction.

East Lothian Local Transport Strategy, 2018 to 2024¹²

- 3.3.2 The East Lothian LTS, 2018 to 2024 has been designed to support the Council's Plan to provide for "an even more prosperous, safe and sustainable East Lothian, with a dynamic and thriving economy, that enables our people and communities to flourish". The LTS focuses on enabling economic competitiveness and growth, by delivering reliable and efficient transport networks; reducing transport's emissions of carbon dioxide and other greenhouse gases through reducing the dependency on the cars. This will be achieved through a range of measures and will include encouraging people to switch to public transport, cycling or walking.
- 3.3.3 In association with the LTS, the Council has developed four associated plans and strategies to assist in the delivery of key themes under the strategy;
 - The Active Travel Improvement Plan (to increase walking and cycling)
 - The Parking Management Strategy (to encourage modal shift and balance parking supply and demand).
 - The Road Asset Management Plan (to provide a suite of maintenance strategies).
 - The Road Safety Plan (to encourage improved safety)

¹¹

https://www.eastlothian.gov.uk/download/downloads/id/27791/local_development_plan_2018_adopted_270918.p

¹² https://eastlothianconsultations.co.uk/policy-partnerships/east-lothian-local-transport-strategy/



4 Desktop Review and Site Visit

4.1 Influencing Factors

- 4.1.1 There are many local issues that influence the number of and timing of vehicular / person trips on Back Road. In particular, the members and visitors of Winterfield Golf Club have to use Back Road to gain access to the golf clubhouse and car park (circa 65 spaces). This can cause seasonal fluctuations in respect of car trips and higher levels of demand at peak playing times.
- 4.1.2 The existing route of the John Muir way (leading to and from the clifftop trail) surrounds the outer edges of the golf club and presents an element of danger in respect of conflicts and hazards from errant golf balls.
- 4.1.3 Visitors to the golf course from the west will most likely arrive via Shore Road which has a very constrained junction at Edinburgh Road The traditional character of the area influences the speed of traffic and on Shore Road the carriageway width and reduced forward visibility encourages slower speeds (for most users). Duke Street is also very constrained which limits movements and speeds.
- 4.1.4 The blanket 20mph limit (and compliance with it) is also an issue as drivers adapt their speeds according to the available road width, as opposed to the posted speed limit.
- 4.1.5 The discontinuous footway provision may be discouraging walked trips and are offering a very confusing message for users. Safe refuge that is available in short sections only emphasises the level of risk when stepping on to the carriageway.
- 4.1.6 Some drivers may choose to use Back Road as opposed to High St / Edinburgh Road as it affords a parallel link to the centre of Dunbar without any parked vehicles, controlled crossings or traffic islands and therefore may suit some users.

Census Data

4.1.7 A review of 2011 Census data, using the Datashine website¹³, has been undertaken to understand key demographic characteristics impacting on the study area. Outputs are included in Appendix B, with the key findings as shown in Table 4.1, below.

Data	Sub-Categories	Study Area Characteristics
Population Basics	Age Structure Mean age	The mean age of residents in the surrounding area of Back Road is 41 years old.
Travel to Work	Method of travel to work or study Driving a car or van	The majority of residents living close to the Back Road drive to work or study.

Table 4.1 Census Data Overview

¹³ <u>http://scotland.datashine.org.uk</u>

Cultural Heritage Designations

- 4.1.8 A review of land designations has been undertaken with the outputs are included in Appendix C with the key considerations as follows:
 - The southern area adjacent to Back Road is a designated Conservation Area; and
 - The northern area adjacent to Back Road is also in a Conservation Area and further to the north is a Site of Special Scientific Interest (SSSI).
- 4.1.9 It was evident through the consultation event that residents are proud of the area that they live in and that any changes, especially heavily engineered ones (that could damage the traditional character of the area) are unlikely to be welcomed.

Dunbar 20mph Zone

- 4.1.10 In the summer of 2018, an experimental 20mph zone was introduced in Dunbar for an 18month period (Proposed 20mph Experimental Order 2018¹⁴) covering most of Dunbar, north of the railway line, including Back Road. There are known issues with enforcement throughout the town and it may be that Back Road is viewed as an area less likely to be enforced, making it more appealing for rat-running or risk taking.
- 4.1.11 The blanket 20mph zone has also to be considered in respect of the previous attempts at traffic calming in Dunbar as a whole, with many vertical features (usually speed cushions) on many surface residential roads. As a result, any roads that do not have traffic calming measures will likely find that speeds increase.

¹⁴ <u>https://www.tellmescotland.gov.uk/notices/east-lothian/traffic/00000181840</u>





Figure 4.1 20mph Experimental Order 2018

East Lothian on the Move



- 4.1.12 During the *East Lothian on the Move Study*, the following key issues were identified for Dunbar:
 - More priority for pedestrians and cyclists at key junctions and town centres with provision of good walking and cycling routes to be a key feature of new development.
 - A maintenance plan for walking routes and more segregated cycle paths, for example, alongside the A1.
 - Promote the benefits of walking.
 - Enforce on-street parking restrictions to prevent parking which makes it dangerous to cycle. Provide more segregated cycle routes with some suggesting cars should be banned in certain areas or streets.
 - Promote the benefits of cycling.
- 4.1.13 Installation of a footway on the western end of Back Road (as Shore Road) was identified as a physical intervention.

Strava Data

4.1.14 Strava is a social fitness network where users track their cycling and running using GPS. A review of Strava Data, shown in Figure 4.2, shows that the Back Road is well used for active travel. The data is limited to Strava users and covers all modes of active travel.





Figure 4.2 Strava Movements (All Active Travel Modes)

4.1.15 Figure 4.2 shows that Back Road is the main active travel route for east / west movements in Dunbar along with the A1087. It is more heavily used than the John Muir Way coastal route.

Land Ownership

4.1.16 Figure 4.3 highlights the areas were identified as requiring clarification on land ownership.





Figure 4.3 Land Ownership Query

4.1.17 For the purposes of this study, the Council are assumed to have control over the land between the walls on the south side of Back Road and the boundary wall to Winterfield Golf Club. The other areas marked around the junction of the A1087 / Shore Road junction are in Council ownership.



5 Consultation

5.1 Introduction

- 5.1.1 At this stage, a number of emerging issues have been identified through:
 - Discussion with ELC Officers on 10th January;
 - Site visits and direct observations on 24th January and 19th February;
 - Public Consultation event held on 4th March;
 - Some engagement with Winterfield Golf Club¹⁵ who have been kept up-to-date on the study. Formal discussions still require to take place once a preferred option is identified although there is not likely to be any impact on Golf Club owned land;
 - Engagement with key stakeholders via online survey, and
 - Desktop review of the Dunbar area.
- 5.1.2 A further public engagement event was also held for Dunbar Primary School and information relative to Back Road (and wider issues) was also gained from that event.

5.2 **Opportunities and Constraints**

5.2.1 Through site visits, direct observations and discussions with local stakeholders and groups several opportunities and constraints have been identified. There are a variety of infrastructure and policy issues and Figure 5.1 maps some of those that were identified.

¹⁵ Representative from Winterfield was at the public engagement event

Exchanged emails with Julie Less 15th March

Spoke to another representative (John Medely) 19th March and exchanged email on same day with both John and Julie.

Emailed Bill Axon (who runs the actual golf course not the clubhouse like the other representatives) on 19th March with project update and request for input (no reply)

Follow up email on 29th March (no reply).





Figure 5.1 Mapped Opportunities and Constraints

- 5.2.2 The most obvious issue and constraint for active travel trips is that there is no continuous footway along either side of Back Road. On the south side there are residential properties that mostly have a narrow verge in front of them (other than a short length of remote footway) and on the north side there is poor definition (lack of boundary treatment) between the golf course land and the roadside verge.
- 5.2.3 A new length of footway (1.8m wide) has been constructed on the north side, but this is quite a short section of the route up to the junction with Knockenhair Road, details of which is shown below.



Figure 5.2 Back Road, Footway Works





Figure 5.3 Back Road, looking East

- 5.2.4 In addition to this, it appears that there is no fixed surface water drainage system and that over-the-edge drainage exists, with a crossfall leading surface water off the carriageway to the verge. There are no road kerbs in place, although a system of streetlights is in place.
- 5.2.5 The extent of public adoption needs to be carefully considered so that the extents of the roadside verges are known. This will be significant in respect of the ability to convert verges to footways and in particular defining the boundary with Winterfield Golf Course. The boundary wall defining the edge of the course has been deteriorating over the years and in many places has fallen over resulting in poor definition between golf course and the public road.
- 5.2.6 The width of the carriageway is variable and therefore any transfer of road space for other users (pedestrians and cyclists) will require to ensure that vehicle passage and access is not compromised, if retained. This will form part of the options appraisal.

Opportunities

- 5.2.7 The following opportunities have emerged at this stage:
 - Improve connections for walkers from John Muir Way and for local access;
 - Provide consistent width footways;
 - Cut back overhanging foliage from trees and bushes;
 - Review direct access points / recessed openings (see Figure 5.4, below);
 - Consider reduced junction and private access visibility;
 - Consider rear gates / garage accesses onto Shore Road;
 - Consider improvements to Shore Road / Edinburgh Rd junction (see Figure 5.5, below);
 - Improve permeability between Beveridge Row, Shore Road and Back Road;



- Create improved active travel routes and safer crossing facilities and connections across the area; and
- Promote the benefits of active travel to the local community.
- Consider how any improvements will link in with the existing road and footway infrastructure, including development impacts and / or planning conditions.



Figure 5.4 Back Road looking West



Figure 5.5 Shore Road / Edinburgh Rd Junction (Looking North)



5.2.8 These opportunities and constraints will be used to provide outputs for the recommendations report incorporating an Action Plan of interventions scored against strategic objectives, affordability and deliverability along with any other issues raised through the consultation events.

5.3 Public Event

5.3.1 A public engagement event was held at the Bleachingfield Centre on Monday 4th March between 17:00-19:00. This event was well attended by local residents, with a wide-ranging discussion of the issues around Back Road.

Feedback

5.3.2 Concerns, ideas and issues were recorded in a variety of ways, with the most popular means through annotations on a map of the area, one such map can be seen below in Figure 5.6.



Figure 5.6 Annotated Map from Public Engagement Event

5.3.3 All the feedback from the public engagement event, along with feedback from other meetings and discussions have been recorded and a full list can be found in Appendix D

5.4 Online Feedback Form

- 5.4.1 An online feedback form (Survey Monkey) was live from 19/02/2019 until the 10/03/2019.
- 5.4.2 A total of 135 responses were received from a fairly wide geographical extent, as shown below.



Figure 5.7 Home Location of Respondents

- 5.4.3 The survey included 122 (90% of respondents) people who drive along the Back Road, 108 (80% of respondents) who walk along it and 68 (50% or respondents) who cycle along it.
- 5.4.4 Full results of the online feedback form are included in Appendix E with the following key considerations identified:
 - The survey captured a good geographical spread of respondents including a number of people living in close proximity and people living further afield in Dunbar. It also included a good mixture of people who travel along the Back Road by different modes (driving / walking / cycling).
 - The survey captured a good spread of people who use the Back Road every / most days, weekly and only monthly.
 - The majority of respondents want to walk or cycle along the Back Road more often.
 - The two most commonly cited issues by respondents are the lack of a footway on the Back Road and high vehicle speeds. These will be considered at the option identification stage along with other issues raised.
 - Half of respondents think that more space on the Back Road should be dedicated to
 pedestrians and cyclists even if it reduces the available space for vehicles. The other half
 think either the road space for vehicles should not be reduced at all, or not be reduced
 significantly.
 - Key consideration: a number of well thought out solutions for the Back Road were received and these will be considered at the option identification stage along with other issues raised.



5.5 Other Feedback and Wider Considerations

- 5.5.1 On top of the feedback received through the above channels, additional views and documents were provided to PBA and these have been considered when identifying potential actions. Where they relate to locations outwith the study area it has been incorporated into Appendix E.
- 5.5.2 Concerns were raised at various Royal Burgh of Dunbar Community Council meetings. Issues included:
 - Perceived speeding along Duke Street, Shore Road and Duke Street which were raised with Police Scotland;
 - Anti-social behaviour in the Shore Road car park (could be linked to above);
 - Safety of Shore Road / Beveridge Row junction;
 - Dispersed traffic through Belhaven if Back Road was blocked off; and
 - Parking restrictions on Shore Road



6 Traffic Data

6.1 Introduction

- 6.1.1 A traffic data collection exercise was undertaken, which included:
 - Automatic Traffic Counters (ATCs) which determine the volume and speed of local traffic over a 7-day period from Thursday the 21st February to Wednesday the 27th February 2019;
 - Junction Turning Counts to provide traffic data to populate local junction models (Thursday the 21st February and Saturday the 23rd February 2019). These also provide survey footage which will provide a visual record of pedestrian movements and evidence of potential risks / issues or conflicts.
- 6.1.2 Figure 6.1, below, presents an overview of the data collection sites.



Figure 6.1 Data Collection Overview

6.1.3 An Automatic Traffic Counter (ATC) was placed on the Back Road from Thursday the 21st February to Wednesday the 27th February 2019; this recorded the flow of vehicles, by type and direction, as well as speed.

6.2 Back Road

- 6.2.1 Table 6.1 presents an overview of vehicle speeds and shows that:
 - over 83% of vehicles travel over the 20mph speed limit in both directions; and

• the 85th percentile speed is 33.5 mph eastbound and 33.4 mph westbound.

Mph	No. Vehicles (Weekly)			
	Eastbound	Westbound	Eastbound	Westbound
0-10	8	5	0%	0%
11-15	54	69	3%	2%
16-20	313	450	15%	15%
21-25	781	974	37%	33%
26-30	652	960	30%	33%
31-35	331	453	15%	16%
36-40	95	118	4%	4%
41-45	23	18	1%	1%
45+	7	5	0%	0%
Mean Speed			25.9	25.8
85%ile Speed			33.5	33.4

Table 6.1 Overview of Vehicle Speeds on Back Road

- 6.2.2 Figure 6.2 presents the breakdown of vehicle speeds in more detail and shows that:
 - The greatest proportion of vehicles travel between 20mph and 30mph; and



Vehicle speeds are generally lower at the weekend.



- 6.2.3 Table 6.2 presents an overview of vehicle types and shows that:
 - The percentage of larger vehicles is 6% eastbound and 7% westbound; and
 - On average, more vehicles travel westbound along Back Road than eastbound.

Table 6.2 Overview of Traffic Flows on Back Road

	Daily Average			
	Eastbound	Westbound	Eastbound	Westbound
Car / LGV /	303	407	94%	93%
OGV1 / Bus	20	29	6%	7%
OGV2	0	0	0%	0%
	323	436		

- 6.2.4 Figure 6.3 and Figure 6.4 presents the daily traffic flow profile for the weekday average, Saturday and Sunday in each direction and show:
 - The westbound movements are higher than the eastbound; and
 - The Saturday and Sunday flows are generally higher with the busiest periods during the day.



Figure 6.3 Daily Traffic Flow Profile - Eastbound (Back Road)





Figure 6.4 Daily Traffic Flow Profile - Westbound (Back Road)

6.3 Duke Street

- 6.3.1 Table 6.3 presents an overview of vehicle speeds and shows that:
 - Over 92% of vehicles travel at 20mph or below, in both directions; and
 - The 85th percentile speed is 18.5mph eastbound and 19.2mph westbound.

Table 6.3 Overview of	Vehicle	Speeds	on	Duke Street
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Mph	No. Vehicles (Weekly)			
	Eastbound	Westbound	Eastbound	Westbound
0-10	53	56	15%	12%
11-15	163	196	48%	41%
16-20	104	165	30%	34%
21-25	22	53	6%	11%
26-30	1	12	0%	2%
31-35	-	1	0%	0%
36-40	-	-	0%	0%
41-45	-	-	0%	0%
45+	-	-	0%	0%
Mean Speed			13.8	15.2
85%ile Speed			18.5	18.4

6.3.2 Figure 6.5 presents the breakdown of vehicle speeds in more detail and shows that:

- The greatest proportion of vehicles travel between 11mph and 20mph; and
- The majority of speeding events were recorded for vehicles travelling westbound.





Figure 6.5 Vehicle Speeds on Duke Street

- 6.3.3 Table 6.4 presents an overview of vehicle types and shows that:
 - The percentage of larger vehicles is 12% eastbound and 6% westbound; and
 - On average, more vehicles travel eastbound along Duke Street than westbound.

Table 6.4 Overview of Traffic Flows on Duke Street

	Daily Average			
	Eastbound	Westbound	Eastbound	Westbound
Car / LGV /	43	65	88%	94%
OGV1 / Bus	6	4	12%	6%
OGV2	-	-	0%	0%
	49	69		

- 6.3.4 Figure 6.6 and Figure 6.7 present the daily traffic flow profile for the weekday average, Saturday and Sunday in each direction and show:
 - The traffic flows are very low with no defined peaks; and
 - The busiest periods for traffic are Saturday and Sunday afternoon suggesting the trips are associated with leisure / tourism, rather than local access.



Eastbound No. of Vehicles 13 14 15 16 17 Hour Ending Saturday -Sunday -----Weekday Average

Figure 6.6 Daily Traffic Flow Profile - Eastbound (Duke Street)





Figure 6.7 Daily Traffic Flow Profile - Westbound (Duke Street)

6.4 Winterfield Golf Club Junction

6.4.1 Table 6.5 displays the daily vehicle arrivals at the Winterfield Golf Club / Back Road junction and shows that most trips through the junction actually pass the golf club access and so Back Road is predominantly being used as a route to avoid the main roads within Dunbar. Figure 6.8 shows the location of the junction in the context of the study area.





Figure 6.8 Winterfield Golf Club Junction Location

Table 6.5 Junction	n Movements at	Winterfield	Golf Club	Junction
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	Το Α	Το Β	To C	Total	
From:	Daily Total (07:00 to 19:00)				
A - Winterfield Golf Club	-	69	43	112	
B - (East) Back Road	72	4	349	425	
C - (West) Back Road	36	281	1	318	
Total	108	354	393	-	
From:	AM Peak (08:00 to 09:00)				
A - Winterfield Golf Club	-	4	2	6	
B - (East) Back Road	9	-	18	27	
C - (West) Back Road	6	12	-	18	
Total	15	16	20	-	
From:	PM Peak (15:30 to 16:30)				
A - Winterfield Golf Club	-	14	7	21	
B - (East) Back Road	5	-	31	36	
C - (West) Back Road	2	46	-	48	
Total	7	60	38	-	

6.4.2 Figure 6.9 shows the arrivals and departures at the Golf Course on the day of the survey.



Figure 6.9 Winterfield Golf Club Arrivals and Departures

6.4.3 Table 6.6 shows the breakdown of arrivals and departures by direction. It shows that the majority of vehicles arrive and depart to / from the east.

Table 6.6 Winterfield Golf Club Arrivals and Departures by Direction

	West	East
Arrive	33%	67%
Depart	38%	62%

6.5 Edinburgh Road / Castle Bay Development Junction

6.5.1 Table 6.7 displays the vehicles movements at Edinburgh Road / Castle Bay Development junction and shows that there are very few movements into Caste Bay as it is not currently occupied. Nevertheless, this data is useful as it represents a baseline which can be compared against in the future. Figure 6.10 shows the location of the junction in the context of Dunbar.





Figure 6.10 Castle Bay Development Junction Location

	To A	To B	То С	Total	
From:	Daily Total (07:00 to 19:00)				
A - (East) A1087 Edinburgh Rd	-	51	2,605	2,656	
B - Castle Bay	42	-	46	88	
C - A1087 Edinburgh Rd	2,628	38	-	2,666	
Total	2,670	89	2,651	-	
From:	AM Peak (08:00 to 09:00)				
A - (East) A1087 Edinburgh Rd	-	5	250	255	
B - Castle Bay	5	-	8	13	
C - A1087 Edinburgh Rd	235	5	-	240	
Total	240	10	258	-	
From:	PM Peak (15:30 to 16:30)				
A - (East) A1087 Edinburgh Rd	-	2	256	258	
B - Castle Bay	1	-	2	3	
C - A1087 Edinburgh Rd	292	5	-	297	
Total	293	7	258	-	

Table 6.7 Junction Movements at Edinburgh Road / Castle Bay Development

6.6 Edinburgh Road / Beveridge Row / High Street / Shore Road Junction


6.6.1 Table 6.8 displays the daily vehicles movements at Edinburgh Road / Beveridge Row / High Street / Shore Road junction and shows that a low proportion arrive via Shore Road or Beveridge Road. Figure 6.11 shows the location of the junction in the context of Dunbar.



Figure 6.11 Edinburgh Road / Beveridge Row / High Street / Shore Road Junction Location

6.6.2 Table 6.8 Junction Movements at Edinburgh Road / Beveridge Row / High Street / Shore Road.



	To A	To B	To C	To D	Total		
From:	Daily Total (07:00 to 19:00)						
A - Shore Road	-	64	52	363	479		
B - A1097 High Street	46	1	226	2,235	2,508		
C - Beveridge Row	63	241	-	59	363		
D - A1087 Edinburgh Road	282	2,340	50	3	2,675		
Total	391	2,646	328	2,660	-		
From:		AM Pe	ak (08:00 to	09:00)			
A - Shore Road	-	5	3	22	30		
B - A1097 High Street	2	1	16	224	243		
C - Beveridge Row	6	42	-	5	53		
D - A1087 Edinburgh Road	11	221	4	1	237		
Total	19	269	23	252	-		
From:		PM Pe	ak (15:30 to	16:30)			
A - Shore Road	-	8	7	31	46		
B - A1097 High Street	8	-	30	224	262		
C - Beveridge Row	6	32	-	5	43		
D - A1087 Edinburgh Road	34	252	6	-	292		
Total	48	292	43	260	-		

Table 6.9 Junction Movements at Edinburgh Road / Beveridge Row / High Street / Shore Road Junction

6.6.3 Figure 6.12 displays the hourly weekday vehicle movements along Shore Road itself and shows that southbound movements are generally higher than northbound movements.





Figure 6.12 Weekday Vehicle Numbers on Shore Road

6.7 Duke Street / High Street / Brewery Lane Junction

6.7.1 Table 6.10 displays the vehicles movements at Duke Street / High Street junction and shows that a low proportion of vehicles arrive via the minor arms of the junction. Figure 6.13 shows the location of the junction in the context of Dunbar.



Figure 6.13 Duke Street / High Street / Brewery Lane Junction Location

	To A	To B	То С	To D	To E	Total	
From:		Daily Total (07:00 to 19:00)					
A – Duke Street	-	29	1	16	1	47	
B - A1097 High Street	23	9	48	2,315	50	2,445	
C - Beveridge Row	-	33	-	163	9	205	
D - A1087 Edinburgh Road	24	2,456	157	7	14	2,658	
D - A1087 Edinburgh Road	-	41	12	11	-	64	
Total	47	2,568	218	2,512	74	-	
From:		A	M Peak (08	:00 to 09:0	0)		
A – Duke Street	-	3	-	2	-	5	
B - A1097 High Street	4	-	10	214	2	230	
C - Beveridge Row	-	-	-	24	-	24	
D - A1087 Edinburgh Road	3	250	17	-	1	271	
D - A1087 Edinburgh Road	-	7	1	2	-	10	
Total	7	260	28	242	3	-	
From:		PI	M Peak (15	:30 to 16:3	0)		
A – Duke Street	-	-	-	-	-	-	
B - A1097 High Street	2	1	2	239	7	251	
C - Beveridge Row	-	3	-	22	1	26	
D - A1087 Edinburgh Road	-	268	23	-	1	292	
D - A1087 Edinburgh Road	-	5	1	1	-	7	
Total	2	277	26	262	9	-	

Table 6.10 Junction Movements at Duke Street / High Street / Brewery Lane Junction

6.7.2 Figure 6.14 displays the hourly vehicles movements along Duke Street and shows that neither southbound nor northbound movements dominate and there are low traffic volumes, with no significant peaks or troughs.





Figure 6.14 Vehicle Numbers on Duke Street

6.8 A1087 Belhaven Road / Knockenhair Road

6.8.1 Table 6.11 displays the vehicles movements at Belhaven Road / Knockenhair Road and shows that a low proportion arrive via Knockenhair Road. Figure 6.15 shows the location of the junction in the context of Dunbar.



Figure 6.15 Belhaven Road / Knockenhair Road Junction Location

	To A	To B	To C	Total		
From:	Daily Total (07:00 to 19:00)					
A - Knockenhair Road	1	99	165	265		
B - (East) A1087 Belhaven Road	104	4	1,761	1,869		
C - (West) A1087 Belhaven Road	127	2,025	6	2,158		
Total	232	2,128	1,932	-		
From:		AM Peak (08	:00 to 09:00)			
A - Knockenhair Road	-	16	18	34		
B - (East) A1087 Belhaven Road	5	3	205	213		
C - (West) A1087 Belhaven Road	6	176	1	183		
Total	11	195	224	-		
From:		PM Peak (15	:30 to 16:30)			
A - Knockenhair Road	-	6	24	30		
B - (East) A1087 Belhaven Road	9	-	165	174		
C - (West) A1087 Belhaven Road	14	230	-	244		
Total	23	236	189	-		

Table 6.11 Junction Movements at Belhaven Road / Knockenhair Road

6.8.2 Figure 6.16 shows the northbound and southbound movements on Knockenhair Road on the day of the survey. It shows that the flows during the AM and PM peaks are not much higher than flows in the period in between (off-peak).



Figure 6.16 Knockenhair Road Arrivals and Departures



6.9 Accident History – Road Traffic Collisions

6.9.1 A review of road traffic collisions in the local area has been considered by assessing <u>www.crashmap.co.uk</u> that identifies personal injury incidents up to a 19-year period. The information shown below is the last 5 years, which is deemed suitable for the purposes of assessing any trends / patterns.



Figure 6.17 Crashmap - Personal Injury Incidents over the previous 5 years

6.9.2 There are no recorded incidents over the latest 5-year data set available via <u>www.crashmap.co.uk</u> on Back Road itself. In the wider local area however there were 13 incidents, with the only cluster of note being found at the junction of Shore Road and Edinburgh Road (the A1087).



Table 6.12 Summary of Road Traffic Collisions

Incident No. / Location	Date (Time)	Vehicles (Casualties)	Description
1 / Knockenhair Road	24/05/2017 (8:10am)	1 (1)	The crash took place on a single carriageway and the vehicle was proceeding normally along this carriageway. The casualty was a pedestrian, who was crossing from the driver's nearside. The severity of their injury was serious.
2 / A1087 Pumpkin Patch Nursery	03/03/2016 (5:10pm)	3 (1)	The crash took place on a crossroad. One vehicle was proceeding normally, but the other two were held up. The casualty was in a vehicle and the severity of their injury was slight.
3 / Shore Road / Edinburgh Road (1)	19/04/2018 (8:00am)	2 (1)	One vehicle was proceeding normally along the carriageway and the other was in the act of turning right. The casualty was in the vehicle and the severity of their injury was marked as slight.
4 / Shore Road / Edinburgh Road (2)	09/02/2015 (11:00am)	2 (2)	The crash took place on a cross roads. One vehicle was proceeding normally along the carriageway and the other was in the act of turning right. Both casualties were in a vehicle and the severity of their injuries were marked as serious and slight.
5 / A1087 Edinburgh Road	10/08/2014 (11:00pm)	1 (1)	The crash took place on a single carriageway. The casualty was a pedestrian, who was walking along in carriageway, with back to the traffic. The severity of this injury was marked as slight.
6 / Beveridge 30/08/2019 Row (10:55am)		2 (1)	The crash took place on a single carriageway. One vehicle proceeded normally along the carriageway on the right-hand bend, whereas the other proceeded normally along the carriageway, on a left-hand bend. The casualty was in the vehicle and the severity of their injury was slight.

- 6.9.3 There was also a collision at the Shore Road / Edinburgh Road junction on 18/09/13 which involved 3 vehicles (a van, a bus and a car) with 12 casualties (5 deemed serious and 7 slight). The crash took place on the uncontrolled crossroads in daylight hours, on a dry day.
- 6.9.4 It is obvious that whilst Back Road is compromised in terms of technical standards it is not demonstrating that road safety is a particular issue. This may be due to the fact that it is mostly used by locals and therefore road users are aware of the constraints and risks which will influence their behaviour.
- 6.9.5 The junction of Shore Road and Edinburgh Road is exhibiting a higher number of road traffic collisions albeit not in a significant number. This is potentially due to the limited road space and visibility restrictions (particularly on exit for right-turning vehicles heading towards Edinburgh). Further scrutiny of this junction is recommended.



7 **Option Identification**

7.1 Introduction

- 7.1.1 When seeking to identify options, consideration would be given to the following measures (amongst others):
 - Traffic management improvements including new crossing facilities, parking management, 20mph zones, traffic calming, signs and road markings;
 - Construction of cycleways and active travel facilities; and
 - Physical constraints, such as topography / perceived danger / potential conflicts.
- 7.1.2 A full set of options would be identified based on the following principles, qualities and measures:

Cycle Design Core Principles (from Cycling by Design)

- Safe;
- Direct;
- Coherent;
- Comfortable;
- Attractive; and
- Adaptable.

Accessible Qualities of successful places (from Designing Streets)

- Distinctive;
- Safe and pleasant;
- Easy to move around;
- Welcoming; and
- Adaptable.

Resource efficient helpful quality measures, highlighted at 'Raising the Standards Day' 2017

- Traffic related safety;
- Surface quality;
- Social safety;
- Flow; and
- Route signage quality.



7.2 General Design Principles

7.2.1 For the purposes of this study, it has been assumed that the available width is between the walls on the southern and northern (Golf Club boundary) side of Back Road. Figure 7.1 shows the available width, as measured using OS MasterMap.



Figure 7.1 Available Widths (graphical representation)

- 7.2.2 Figure 7.1 shows that the widths are variable throughout and generally there is more width at the eastern end with the western end being more constrained. It can be seen that the available width drops below seven metres over around a 60 metres length near the western end (Shore Road). Detailed widths should be confirmed via a more detailed topographical survey along with the location of infrastructure, such as lighting columns.
- 7.2.3 Figure 7.2 also show the available widths in context.





Figure 7.2 Available Widths (aerial view)

Conclusion: a detailed topographical survey is required to confirm available widths.

Footway / Cycle Lane Widths

Footway

7.2.4 A key aim of the study is to provide a continuous footway along the length of Back Road and the minimum acceptable footway provision is assumed to be 2.0 metres to meet Equality Act requirements and acceptable construction standards.

Segregated Cycle Lane

- 7.2.5 While the preference would be for a segregated cycle lane, it is not possible to provide this and a footway, whilst maintaining two-way traffic operation (even with priority working / passing places).
- 7.2.6 The Sustrans Design Manual requires the minimum width for a segregated two-way cycle lane to be 2.5 metres; 2.0m absolute minimum for short lengths. Where a 2.0m footway and 2.0m segregated cycle lane are provided, the available road width at some locations is beyond what is acceptable, even for one-way operation (2.9m minimum).

Shared Footway

- 7.2.7 For a shared footway the guidance stipulates:
 - For semi-rural traffic free routes, 2.5m is possible on lesser secondary cycle routes and access links; and



- For rural traffic free routes, 2.0m is possible on lesser route and links.
- 7.2.8 Where a shared footway is provided, it should be expected that more confident cyclists will prefer to stay on the road; cycle clubs / groups of riders typically use the route. However, a shared footway would still be required for less competent cyclists (including family groups and / or children).

Conclusion: It is not possible to provide a segregated cycle lane alongside a footway and maintain the route for vehicles (even one-way). A shared footway, for less confident cyclists, should be provided.

7.3 Back Road Options

- 7.3.1 A number of options have been considered for the Back Road which can be summarised as follows:
 - Option 1 No through traffic (pedestrians / cyclists only);
 - Option 2 One-way operation;
 - o 2a One-way from Winterfield Gardens to Golf Course Access
 - o 2b One way from Shore Road to Golf Course
 - Option 3 Priority working operation (signals)
 - 3a Back Road and Winterfield Place; and
 - o 3b Back Road, Shore Road and Winterfield Place.
- 7.3.2 Issues relating to each of these are considered below. All should be considered in relation to likely signalisation of the A1087 / Shore Road / Beveridge Road Junction (explained later).
- 7.3.3 A network model was built using LinSig3¹⁶ with surveyed traffic flows entered directly and used to create an origin-destination matrix. Some links were then removed / made one-way to simulate how traffic might be diverted for the different scenarios.
- 7.3.4 Vehicle Tracking of a refuse vehicle is included in Appendix F.

Stakeholder Opinion

7.3.5 Around 50% of responses to the online survey said space for vehicles should not be reduced significantly or it is more important than space for active travel.

Option 1 - No Through Road (pedestrians / cyclists only)

7.3.6 Through engagement with stakeholders there was no common consensus on whether Back Road should be closed to vehicles. While some saw the merit of making it a car-free, active travel route, others questioned where traffic would be displaced to and what impact it would have on surrounding roads / junctions. Traffic data shows that this would be in the region of 323 daily vehicles eastbound and 436 westbound; of these there are around 110 daily arrivals and departures to/from the golf course.

¹⁶ Industry standrad Design and Assessment Tool for Traffic Signal Junctions and Urban Networks



Local Access

- 7.3.7 If Back Road were to be blocked to traffic then access to the Golf Course, North Street and Winterfield Place would require to be retained. At the western end of Back Road, around North Street and Winterfield Place off Shore Road, it would not be possible to create a footway and accommodate two-way traffic given the available width. Instead, a short section of priority working would be required with the carriageway reduced to a minimum of 3.0m over a length of around 30 metres; footway 2.5m (2.0m minimum). This would benefit from being lightly trafficked with local access only. Alternatively, this section could operate as shared space.
- 7.3.8 Traffic also requires to access Winterfield Golf Course.

Diverted Traffic Impact

- 7.3.9 Table 7.1 shows the predicted changes in wider traffic flows with Back Road as no through route for traffic and it is assumed that:
 - Winterfield Golf Course arrivals / departures as current but diverted via Knockenhair Road; and
 - Wider diverted traffic movements use the A1087 with none routing via Knockenhair Road as they are more likely to stay on the A1087 and / or use Park Avenue.

Table 7.1 Diverted Traffic Impact – No Through Road

Link Name	Base Flow	Change /	New Flow
A1087 High Street (EB) adjacent to Back Road	2741	+324	3065
A1087 High Street (WB) adjacent to Back Road	2597	+369	2966
High Street Total	5338	+693	6031
Knockenhair Road (NB)	219	+117	336
Knockenhair Road (SB)	275	+132	407
Knockenhair Road Total	494	+249	743
Shore Road (NB)	367	-224	143
Shore Road (SB)	460	-269	191
Shore Road Total	827	-493	334
Back Road (EB) West of Golf Course	324	-324	0
Back Road (WB) West of Golf Course	369	-369	0
Back Road West of Golf Course Total	693	-693	0
Back Road (WB) East of Golf Course	357	-245	112
Back Road (EB) East of Golf Course	398	-290	108
Back Road East of Golf Course Total	755	-535	220
North Road (EB)	501	-207	294
North Road (WB)	598	-237	361
North Road Total	1099	-444	655



- 7.3.10 Table 7.1 shows that there is an increase on flows on the A1087 High Street and Knockenhair Road increase in both directions but decrease on the other local roads.
- 7.3.11 Figure 7.3 and Figure 7.4 show the extent of the section where traffic would not be permitted.



Figure 7.3 No Through Road Option







- 7.3.12 To ensure compliance, physical measures would be required to prevent through traffic on Back Road (rather than signage). The form of the measures should be considered, including options to allow emergency access, such as collapsible bollards.
- 7.3.13 One option would be to block Back Road as a through route on a temporary basis to trial what impact it had and to allow a measure of the operational impacts.



7.3.14 Summary of features:

- Retained two-way access to Golf Course and local residents;
- Traffic free section between Winterfield Place and Golf Course (controlled by collapsible bollards);
- Shared footway of 2.5m (2.0m) between Golf Course and Kirk Park (lightly trafficked Golf Course access only);
- Shared footway of 2.5m (2.0m minimum over approximately 30m) between Winterfield Place and Shore Road (lightly trafficked – local access only).
- 7.3.15 Figure 7.5 shows a visualisation of how the Back Road might look at the Shore Road end.



Figure 7.5 Back Road / Shore Road Visualisation – No Through Traffic

7.3.16 Any left turning vehicles from Winterfield Place (south) have the potential to turn onto oncoming vehicles on Back Road (eastbound) which see the road ahead is clear. However, flows will be light and limited only to access / egress to the few properties on Winterfield Place (south).

Option 2 - One-way operation

7.3.17 One-way operation would allow the available space for vehicles to be reduced and for active travel to be increased. Again, traffic would be displaced, and this would impact on surrounding roads / junctions as well as local access for residents.



- 7.3.18 To the east the extent of the one-way operation could only be as far as the Golf Course access. However, advance warning signs would be required east of Knockenhair Road to minimise the likelihood of vehicles having to turn at the Golf Course access.
- 7.3.19 One concern is that one-way operation would increase vehicles speeds without any associated traffic calming measures being provided. This could be provided in the form of appropriately designed horizontal calming measures.
- 7.3.20 The permitted direction of travel needs also be considered; hereafter it is presented as eastbound, up the hill, however, this could be reversed.
- 7.3.21 Contra-flow cycling is unlikely to be accommodated, due to the constrained widths, especially at the western end near Shore Road (around Winterfield Place and North Street). Therefore, a 3.0m wide shared footway should be provided. At the western end it would need to narrow to a minimum of 2.4m over a distance of around 30m.
- 7.3.22 The extent of the one-way operation should be considered, and two options have been presented:
 - In Option 2a the one-way section would be limited to east of Winterfield Place; and
 - In Option 2b it would include the whole the area to the west from Shore Road (encapsulating North Street and Winterfield Place).

Option 2a – Partial One-Way

- 7.3.23 At the western end of Back Road, around North Street and Winterfield Place off Shore Road, a short section of priority working would be required with the carriageway reduced to a minimum of 3.0m over a length of around 30 metres; footway 2.5m (2.0m minimum). Alternatively, this section could operate as shared space.
- 7.3.24 Figure 7.6 shows the layout for Option 2a.





Figure 7.6 Option 2a One-way Operation (Partial)

7.3.25 Summary of features:

- Retained two-way access to Golf Course and local residents;
- One-way section between Winterfield Place (south) and Kirk Park with 3.0m shared footway and minimum 3.0m carriageway;
- Shared footway of 2.4m (2.0m minimum over approximately 20m) between Winterfield Place and Shore Road.
- 7.3.26 Figure 7.7 shows a visualisation of how the Back Road might look at the Shore Road end.





Figure 7.7 Option 2a One-way Operation (Partial) Visualisation

Option 2b – Full One Way

7.3.27 At the western end of Back Road, around North Street and Winterfield Place off Shore Road, the carriageway reduced to a minimum of 3.0m to accommodate a footway of 2.5m (2.0m minimum). Residents of North Road and Winterfield Place will be impacted in that they will not be able to exit their properties and travel west (left) onto Back Road instead routing via Knockenhair Road.





Figure 7.8 Option 2b One-way Operation (Full)

- 7.3.28 Summary of features:
 - Retained two-way access to Golf Course;
 - One-way section between Winterfield Place and Kirk Park with 3.0m shared footway and minimum 3.0m carriageway; and
 - One-way section between Shore Road and Winterfield Place with 2.4m shared footway (2.0m minimum) over approximately 20m.
- 7.3.29 Figure 7.9 shows a visualisation of how the Back Road might look at the Shore Road end.





Figure 7.9 Option 2b One-way Operation (Full) Visualisation

Diverted Traffic Impact

- 7.3.30 Table 7.2 shows the predicted changes in wider traffic flows with this option and it is assumed that:
 - The number of vehicles accessing North Street and Winterfield Gardens has not been quantified, but is assumed to be minimal
 - Winterfield Golf Course arrivals / departures diverted via Knockenhair Road depending on one-way direction; and
 - Wider diverted traffic movements use the A1087 with none routing via Knockenhair Road as they are more likely to stay on the A1087, or use Park Avenue instead.

Table 7.2 Diverted Traffic Impact – One Way Operation

l inte Norma	Base	Change / New Flow					
LINK NAME	Flow	One-Way I	Vestbound				
A1087 High Street (EB) adjacent to Back Road	2741	-13	2728	+303	3044		
A1087 High Street (WB) adjacent to Back Road	2597	+373	2970	+4	2601		
High Street Total	5338	+360	5698	+307	5645		
Knockenhair Road (NB)	219	+7	226	+106	325		
Knockenhair Road (SB)	275	+77	352	-10	265		
Knockenhair Road Total	494	+84	578	+96	590		
Shore Road (NB)	367	+19	386	-292	75		
Shore Road (SB)	460	-364	96	+8	468		
Shore Road Total	827	-345	482	-284	543		
Back Road (EB) West of Golf Course	324	-13	311	-324	0		
Back Road (WB) West of Golf Course	369	-369	0	+7	376		
Back Road West of Golf Course Total	693	-382	311	-317	376		
Back Road (WB) East of Golf Course	357	+31	388	-287	70		
Back Road (EB) East of Golf Course	398	-325	73	+44	442		
Back Road East of Golf Course Total	755	-294	461	-243	512		
North Road (EB)	501	+2	503	-215	286		
North Road (WB)	598	-284	314	0	598		
North Road Total	1099	-282	817	-215	884		

7.3.31 Table 7.2 shows that both options results in an increase in traffic on the A1087 High Street and Knockenhair Road, but elsewhere there is generally a reduction except on the Back Road east of the Golf Club to accommodate access.

3 - Priority working operation (signals)

7.3.32 The benefit of a priority working system is that it would allow two-way traffic operation to be retained alongside the provision of a continuous active travel route (shared footway). The priority working would operate at sections where the carriageway is too narrow to accommodate two-way flow; estimated at a road length of around 100m.



- 7.3.33 Summary of features:
 - Retained two-way access to Golf Course and local residents;
 - Continuous 2.5m wide shared footway (minimum 2.0m over short sections) with minimum carriageway width of 4.8m; and
 - Priority working controlled by signals between North Street and Winterfield Place and could incorporate Back Road / Shore Road junction (Option 3b).
- 7.3.34 LinSig3 models have been built for each of the priority working options with the following assumptions made:
 - Intergreens measured using the quickGreen package;
 - Geometric parameters (i.e. road widths) measured from OS MasterMap or estimated; and
 - Cycle time set to 120 seconds with Back Road and Winterfield Place called once per cycle (assumed worst-case).

Option 3a Back Road Signalised Only

- 7.3.35 For this option key features are as follows:
 - Winterfield Place (north) northbound only;
 - North Street southbound only;
 - Back Road and Winterfield Place (south) controlled by traffic signals;
 - North Street southbound only;
 - Advanced Stop Lines for cyclists on Back Road approaches (optional);
 - Shared footway on Shore Road, west side, 2.5 metres wide (could be remote), tying into NCN and John Muir Way;
 - Shared footway on Back Road northern side, 2.5 metres (2.0m minimum over short distances);
 - Three stage traffic signal control with priority to Back Road eastbound approach and Winterfield Place and Back Road westbound approaches called on demand only; and
 - Footway crossover layout at Winterfield Place (north) to be confirmed.





Figure 7.10 Option 3a

- 7.3.36 The LinSig3 model shows that this layout would operate well with minimal delaying or queuing for vehicles.
- 7.3.37 Figure 7.11 shows a visualisation of how the Back Road might look at the Shore Road end.





Figure 7.11 Option 3a Priority Working Visualisation

Option 3b Shore Road / Back Road Signalised Junction

- 7.3.38 On overview of this option is provided in Figure 7.12. Key features are as follows:
 - Winterfield Place (north) northbound only;
 - North Street southbound only;
 - Back Road, Shore Road (north), Shore Road (south) and Winterfield Place (south) controlled by traffic signals;
 - Pedestrian crossing stage across Shore Road (north)
 - North Street southbound only;
 - Advanced Stop Lines for cyclists on Back Road, and Shore Road approaches (optional);
 - Shared footway on Shore Road, west side, 2.5 metres wide (could be remote) tying into NCN and John Muir Way;
 - Relocation of Shore Road Car Park access south of Back Road junction;
 - Shared footway on Back Road northern side, 2.5 metres (2.0m minimum over short distances);
 - Four stage traffic signal control with priority to Shore Road approaches and Winterfield Place and Back Road approaches called 'on demand' only; and



• Footway crossover layout at Winterfield Place (north) to be confirmed.



Figure 7.12 Option 3b

7.3.39 The LinSig3 model shows that this layout would operate well with minimal delaying or queuing for vehicles.

Summary

7.3.40 Table 7.3 summarise the strength and weaknesses of each option, thinking about different road users, the sensitivity of design and wider impact through traffic being displaced.



Table 7.3 Strengths and Weaknesses Summary

	Strengths	Weaknesses
	Creates off-road active travel route in both directions, including for novice cyclists.	
No Through Traffic (pedestrians /	Traffic free, on-road cycle provision in sections, lightly trafficked in other sections	
cyclists only)	Reduced traffic volumes	Wider impact via displaced traffic
	Access for local residents and Golf Club retained but affected	
	Sensitive design	
	Creates continuous off-road active travel route in both directions, including for novice cyclists.	
	On-road cycle provision improved in sections through contra-flow cycling	Contra flow cycling not provided on- road
One-way operation	Reduced traffic volumes	Wider impact via displaced traffic Potential vehicle speed increases unless traffic calmed
	Access for local residents and Golf Club minimally affected	Wider impact via displaced traffic (minimal)
	Sensitive design	
	Creates continuous off-road active travel route in both directions, including for novice cyclists.	
Priority working		On-road cyclists potentially delayed with no infrastructure improvements
operation (signals)	No / minimal traffic displaced	
	Access for local residents and Golf Club retained	Likely more delay to traffic
		Intrusive / over-engineered design

7.3.41 Table 7.4 scores each of options against the agreed study objectives on a scale of +3 to -3; major positive to minor positive.



Table 7.4 Option Scoring

Study Objectives (linked to LTS)	No Through Traffic (pedestrians / cyclists only)	One-way operation	Priority working operation (could include signals)
To deliver a more attractive and safer environment for pedestrians and cyclists;	3 Traffic free section, elsewhere shared footway and lightly trafficked	2 Continuous shared footway, potential increased vehicle speeds	2 Continuous shared footway but on-road cycle provision safety not improved
To reduce the overall dependence on cars and environmental impacts of traffic;	3 Removes wider traffic movements (some displaced, some discouraged)	2 Removes some wider traffic movements (some displaced, some discouraged)	1 Current traffic movements accommodated
To promote the availability and use of more sustainable means of travel;	2 Clearly promotes sustainable travel	2 Clearly promotes sustainable travel	1 Accommodates vehicular traffic
To maximise 1 2 accessibility for all Reduces accessibility and reduce social exclusion. 1 2 residents and wider destinations by car and wider		2 Reduces accessibility to Golf Course and local residents by car	3 Retains accessibility for all by car
Total	9	8	7

7.3.42 Table 7.4 assesses the options against the study objectives only. No consideration has been given to wider issues such as equality, sensitivity of design, impact on car drivers etc. The Council may wish to consider these further. It shows that each option scores better in some regards and less in others, although all have a positive contribution overall.

7.4 Actions

7.4.1 In order to identify potential infrastructure actions, the study area has been split into different segments, as shown in Figure 7.13.





Figure 7.13 Potential Action Locations

- 7.4.2 There are overarching potential actions which apply to a number of areas, as follows:
 - BR1 Considered as part of wider changes to Back Road; and
 - BR2 Monitor traffic over time against baseline data (collected as part of this study).
- 7.4.3 The remainder of this section discusses the issues within each segment and presents potential actions to resolve them.

A1 A1087 / Shore Road / Beveridge Road Junction

Issues	Vehicle Speeds	Parking	Footway / footpath provision	Cycle User Provision Conflict		ay / Cycle User th Provision Conflict ion		Traffic Operation
	\checkmark		\checkmark	✓	~	✓		
Details: The alignment of this junction is known to be an issue. The corner radii are tight and mak difficult for vehicles to pass, typically they have to wait on the A1087 until Shore Road is clear if turning in. Some stakeholders felt that vehicle speeds are too high (there is no available traffic speed data). There is limited provision for pedestrians with no / narrow footways and no properly formed drop kerbs. The crossing would benefit from being signalised with the provision of pedestrian crossin infrastructure (including drop kerbs and tactile paving) and stages. This would likely have the added effect of reducing vehicle speeds. Two options could be explored; one which involves minimal works and one which involves a full upgrade (see below). Potential Action: Considerations:								
Initial Intervention(s	s)		N	/A				
Longer-term Intervention(s	A1.1 – Signalise Crossing tervention(s) Concept Design (minimal works)		Crossing P minimal si m fo ex N	g Plans could be drawn up for the signalisation of the crossing with minimal changes to the existing junction footprint (to minimise cost). Seek external funding as improves links to				
	A1.2 – Signalise Crossing Plans could be drawn up for a full Concept Design (full Equality Act complaint upgrade of t upgrade) junction. External funding could be sought given high emphasis on improving active travel. Seek external					a full ide of the uld be on c external NCN		



Current road layout looking North to Shore Road



Current road layout looking East

A1.1 – Signalise Crossroads Concept Design (minimal works)

- 7.4.4 The minimal works option would involve the installation of traffic signals within the current junction footprint (as much as possible) without the need for additional land take. The following should be considered:
 - The stop line on Shore Road would require to be set further back from the junction to allow space for vehicles turning into this link (see Figure 7.14);



The footway widths are below the desired 2.0 metres at some locations.



Figure 7.14 A1087 / Shore Road / Beveridge Road Junction Minimal Works

A1.2 – Signalise Crossing Concept Design (full upgrade)

- 7.4.5 The full upgrade would require the junction footprint to be increased with some land take required on both sides of Shore Road, where it meets the A1087. This option could be fully Equality Act compliant and offer operational benefits by widening lanes and reducing intergreen (wasted) time between stages. The following should be considered:
 - Junction radii increased to at least 6 metres with land take required from north-east (car park) and north-west corners;
 - Footways revised as follows:
 - A1087 Edinburgh Road, both sides, minimal widening required to achieve widened to 2.0 metres width
 - Shore Road, west-side, minimal widened required at southern end to achieve 2.0m metres. Could be widened to 2.5 metres to create shared footway, if possible;
 - Shore Road, east-side, 2.0 metre footway provided at junction, could be extended further;
 - A1087 High Street north-side minimal widening required to achieve widened to 2.0 metres width,

- A1087 High Street south creation of a new 2.0 metre footway stretching east to Brewery Lane,
- Beveridge Road west-side, widened to 2.0 metres (currently narrows to around 1.45 metres);
- Beveridge Road likely to be one-way for traffic, southbound only.
- 7.4.6 Figure 7.15 presents an overview of the proposed changes, vehicle tracking is included in Appendix F.



Figure 7.15 A1087 / Shore Road / Beveridge Road Junction Full Upgrade

- 7.4.7 A LinSig3 model has been built for both layout options, with the following assumptions:
 - Intergreens measured using the quickGreen package;
 - Geometric parameters (i.e. road widths) measured from OS MasterMap or estimated; and
 - Cycle time set to 60 seconds with a pedestrian all green (traffic all red) stage called once per cycle.
- 7.4.8 The LinSig3 results show queues of around 7 vehicles on Edinburgh Road and 5 vehicles on High Street could form at peak times and the total delay per vehicle is, on average, 40 seconds.
- 7.4.9 Initial tests show the queues are no greater than this in any of the of the options to make Back Road a no through route for vehicles, or one-way (either direction). This is because the total number of vehicles passing through the junction remains the same and turning movements (which cause the most delay) are reduced. Total delay per vehicle is, on average, 54 seconds on the High Street approach in the PM peak hour when Back Road is no through route to vehicles (assuming pedestrian stage called every cycle), although this is based on estimated



arrivals / departures at the Shore Road car park (no junction turning count data was available at this time).

A2 Beveridge Row

Issues	Vehicle Speeds	Parking	Footway / footpath provision	Cycle Provision		sion Conflict Ope		
	~	\checkmark	✓	✓		✓	✓	
Details: This road is narrow for two-way traffic operation and has a narrow footway on one side only (not continuous). On-street parking typically takes place on the western side of the carriageway. Consideration has been given to making this route one-way (southbound) and widened in the carriageway. Residents would exit onto the A1087 via Castle Bay once the link through the Cala development is complete.								
Initial Interve	ntion(s)	N/A			N/A			
Longer-term	Intervention(s)	A2.1 – N widen fo	N/A A2.1 – Make one-way and widen footway		N/A Potential external funding given focus on active travel and onward link to NCN. Could be undertaken in conjunction with A1 1 / A1 2			



Existing road layout looking south along Beveridge Row

Existing road layout looking north along Beveridge Row

A3 A1087 High Street

Issues	Vehicle Speeds	Parking	Footway / footpath provision	Cycle Provision	User Conflict	Traffic Operation	
	✓	~	\checkmark	\checkmark	\checkmark	✓	
Details: The road width is generous but there is a footway only on the northern side of the carriageway. Stakeholders suggested that school pupils have to cross to the northern side of the carriageway to access this footway and then back to the southern side. A footway on the southern side of the link between Beveridge Row and Brewery Lane could be provided. Any measures to reduce traffic on Back Road would lead to increased flows on this road and they should be measured over time. Estimates of the traffic impact for the different options for Back Road on this road have been estimated and are outlined in Table 7.1 and Table 7.2							
Potential Ac	tion:			Con	siderations:		
Initial Interver	ntion(s)	N/A		N/A			
Longer-term Intervention(s) BR2 – monitor traffic over time against baseline data Nonitor traffic levels to ensure counts undertaken in 2019 as baseline.							
		A3.1 – Ir	nstall footway	on Exte	rnal funding co	ould be emphasis	
		carriage	way	on e	ncouraging ac	tive travel.	



Existing road layout looking west along A1087

Existing road layout looking west along A1087

A4 A1097 Edinburgh Road

Issues	Vehicle Speeds	Parking	Footway / footpath provision	Cyc Pro	le vision	User Conflict	Traffic Operation	
	✓				✓			
Details: There were only a small number of issues identified with regards this link. Some stakeholders suggested vehicle speeds are typically above 20mph, but no vehicle speed data is available. The NCN / John Muir Way runs parallel to his route.								
Potential Act	ion:				Consid	derations:		
Initial Interven	tion(s)	N/A			N/A			
Longer-term Intervention(s) N/A time ag data			onitor traffic o inst baseline	tor traffic over t baseline Monitor traffic levels to en no significant adverse imp Counts undertaken in 201 baseline.			to ensure se impact. n 2019 as	

A5 Shore Road

Issues	Vehicle Speeds	Parking	Footway / footpath provision	Cycle Provision	User Conflict	Traffic Operation					
			\checkmark			✓					
Details: This carriageway is narrow with a footway provided on the western side; both are variable width. The narrow carriageway has the effect of slowing vehicles. The entrance to the Shore Road Car Park could be moved south minimising the impact on the junction with Back Road. Depending on land ownership, it may be possible to widen the footway from the rear or provide a remote footway. The existing footway is constructed on top of a drainage channel, so a remote footway is likely more achievable. The NCN joins Shore Road from the west and then runs parallel to the north. Any changes should be considered in the context of any other changes being proposed for the surrounding area.											
Potential Action:					Considerations:						
Initial Intervent	ion(s)	N/A		N/A							
Longer-term In	ntervention(s)	A5.1 – W remote fo	iden footway ootway	/ Exter NCN active	External funding given part of NCN and high emphasis on active travel						
		A5.2 – Re Road Car	elocate Shore r Park Entrand	ce Exter ACN active	External funding given part of NCN and high emphasis on active travel						









Shore Road

A6 Duke Street

Issues	Vehicle Speeds	Parking	Footway / footpath provision	Cycle Provisio	User n Conflict	Traffic Operation				
	✓	✓	✓		✓	✓				
Details: This link is constrained in width with narrow carriageway and footway widths and on-street parking. A number of local residents raised concerns about vehicle speeds (typically by non-residents using it to avoid the junction of Shore Road / A1087) and a review of data recorded shows that 85 th percentile speeds are around 19 mph in each direction. Some residents asked for traffic calming measures to be considered, though consideration would have to be given to impeding emergency access / refuse vehicles. Daily average traffic flows are around 120 vehicles on this road.										
Potential Ac	tion:	С	Considerations:							
Initial Intervention(s)		A6.1 – T	A6.1 – Traffic calming		External funding as part of wider scheme of works to prevent increase in traffic on this link.					
Longer-term Intervention(s)) BR2 – N	R2 – Monitor traffic		Monitor traffic levels to ensure no significant adverse impact. Counts undertaken in 2019 as baseline.					
A7 A1087 / Duke Street / Brewery Lane Junction

Issues	Vehicle Speeds	Parking	Footway / footpath provision	Cycle Provisio	on	User Conflict	Traffic Operation				
	✓		✓		✓ _ ✓						
Details: This junction is unconventional in layout with poor provision for pedestrians but only lightly trafficked in terms of movements in and out of Duke Street. Converting North Street to one-way, southbound, would potentially divert a small number of additional vehicular trips through this junction but the impact would be minimal and traffic counts show it operates well below operational capacity. Measures to improve the alignment of this junction in traffic terms have not been recommended as they may encourage more vehicles to use Duke Street. The junction could benefit from improved pedestrian provision (wider footways / defined crossings / improve visibility) but this should be in the context of the character of the area (i.e. traffic signals can be considered as intrusive).											
Potential Act	ion:			C	Cons	iderations:					
Initial Interver	ntion(s)	N/A		Ν	J/A						
Longer-term I	ntervention(s)	A7.1 – F improve provisior	easibility Stuc pedestrian າ	ibility Study to External funding given high estrian emphasis on active travel.							

A8 Shore Road at Belhaven Beach Caravan Cabins

Issues	Vehicle Speeds	Parking	Footway / footpath provision	Cycle Provisio	on	User Conflict	Traffic Operation				
			✓			\checkmark	✓				
Details:											
This link provides local access to Belhaven Beach Holiday Cabins, the Surfside Chalet,											
Curlew Cab	Curlew Cabin and the Shore Road Car Park. It forms part of the John Muir Way. Relocating										
the Shore R	oad Car Park	entrance sout	th of Back Roa	ad would i	reduo	ce vehicle mo	vements on				
this part of t	he road. Any i	emote footwa	y running fror	n the NCN	l aloi	ng Shore Roa	nd could be				
extended pa	arallel to the ro	ad at this loca	ation.			0					
Potential A	ction:				Con	siderations:					
Initial Interve	ention(s)	N/A			N/A						
Longer-term	Intervention	s) A8.1 –	Shore Road C	Car	External funding given high						
-	,	Park ac	Park access relocation /			hasis on activ	e travel and				
		remote	remote footway impro				nproves part of John Muir				
					Wav						

A9 North Street and Manor Gardens

Issues	Vehicle Speeds	Parking	Footway / footpath provision	Cycle Provisio	User n Conflict	Traffic Operation					
		√	✓			✓					
Details: These routes are constrained in width with the majority of vehicle trips accessing residential properties or servicing / deliveries. Some identified options for Back Road would require North Street to be one-way southbound, either for the full length or for the part north of Manor Gardens. The latter would impact only on access to the properties north of Manor Gardens on North Street											
Potential Act	ion:			С	onsiderations:						
Initial Interver	rvention(s) A9.1 – Potential one-way Minimal cost but rec operation to accommodate change to TRO, whi changes on Back Road be objected to.				Minimal cost but requires change to TRO, which could be objected to.						
Longer-term I	ntervention(s)	N/A		N	/Α						





Existing road layout northern end of North Street

Existing road layout at Winterfield Place / Back Road junction

A10 Back Road (West)

Issues	Vehicle Speeds	Parking	Footway / footpath provision	Cycle Provision	User Conflict	Traffic Operation			
	~		✓	~	✓	✓			
Details:									
This part of Back Road is generally capable of accommodating a footway while retaining two- way operation for vehicles (albeit a narrow road width of minimum 4.8 metres). Lighting levels at this section could be reviewed as part of the process with the preference for a sensitive solution that does not lead to light pollution for nearby residents / wildlife. Eighty-fifth percentile vehicle speeds at this location are 33.5 mph eastbound and 33.4 mph westbound. Estimates of the traffic impact for the different options for Back Road on this road have been estimated and are outlined in Table 7.1 and Table 7.2									
Potential Ac	tion:			Со	nsiderations:				
Initial Interver	ntion(s)	A10.1 – Review lighting Sensitive solution							
Longer-term	Intervention(s) BR1 – C	onsidered as	part See	7.4.2.				

of wider changes to Back

Road





Existing road layout looking east along Back Road

Existing road layout looking east along Back Road

A11 Winterfield Golf Course Access from Back Road

Issues	Vehicle Speeds	Parking Footway Cycl / footpath Prov provision		Cycle Provis	ion	User Conflict	Traffic Operatio n					
			✓	4		✓	✓					
Details: Consideration should be given to alterations to incorporate pedestrian crossing facilities as part of a revised junction layout which retains a degree of priority for pedestrians / cyclists (i.e. drop kerbs and surface markings or raised crossing). Observations show that a number of golfers using the course also cross the Golf Course access at this location.												
Potential Action:				С	Considerations:							
Initial Intervention	(s)	A11.1 – Peo crossing as junction lay	destrian part of new out	Pa to C W re	Part of wider changes subject to external funding (Golf Course). Consultation with Winterfield Golf Course required, if pursued.							
Longer-term Interv	vention(s)	BR1 – Considered as part of wider changes to Back Road			See 7.4.2.							



Existing road layout looking east along Back Road

Golfers Desire Line looking west

7.4.10 Figure 7.16 shows an example of how the Winterfield Golf Course might look, in this case, with one-way operation to the west (westbound only).





Figure 7.16 Winterfield Golf Course Visualisation

A12 Back Road (East)

Issues	Vehicle Speeds	Parking	Footway / footpath provision	Cycle Provision	User Conflict	Traffic Operation				
	✓		✓	✓	✓	✓				
Details: This part of the Back Road is generally wider and flatter than the western section. It is assumed that any new footway would not extend beyond the existing boundary wall, however, consideration of screening may be required. Estimates of the impact of the different options for Back Road on this road have been estimated and are outlined in Table 7.1 and Table 7.2										
Potential Action	on:			Con	siderations:					
Initial Interventi	ion(s)	N/A		N/A						
Longer-term In	tervention(s)	BR1 – 0 of wider Road	BR1 – Considered as part See 7.4.2. of wider changes to Back Road							



Existing road layout looking east along Back Road



Existing road layout looking east along Back Road

A13 Knockenhair Road

Issues	Vehicle Speeds	Parking	Footway / footpath provision	Cycle Provision	User Conflict	Traffic Operation						
		~				✓						
Details:												
This link is two v	vay with on-s	treet parking	g and traffic c	alming (spee	d cushions).	It is lightly						
trafficked with around 250 vehicles daily in each direction. In capacity terms, there is no												
requirement to upgrade this link though it should be subject to monitoring over time.												
Estimates of the	traffic impac	t of the diffe	rent options f	or Back Road	d on this road	have been						
estimated and a	re outlined in	Table 7.1 a	nd Table 7.2.	These are p	rimarily as a	result of						
changes to the v	vay Winterfie	d Golf Cour	se is accesse	ed.	2							
Potential Action	n:			Con	siderations:							
Initial Interventio	on(s)	N/A		N/A								
Longer-term Inte	ervention(s)	BR2 – M	lonitoring of tr	affic Moni	tor traffic leve	els to						
-	re no signific	ant adverse										
	impact. Counts undertake											
				2019	as baseline.	1						

A14 Knockenhair Road / A1087 Junction

Issues	Vehicle Speeds	Parking	Footway / footpath provision	Cycle Provision	User Conflict	Traffic Operation					
			✓			\checkmark					
Details: This is a three-way priority junction. The Knockenhair approach is poorly aligned but capable of accommodating the current number of vehicles passing through it. Closure or one-way operation for Back Road is likely to divert a relatively small number of vehicles through this junction partly because the junction with the A1087 is poorly aligned and partly because Park Avenue is a wider and more direct route. therefore, in capacity terms, there is likely no requirement to upgrade this junction, but it may be beneficial for road safety.											
Potential Action:				Cor	Considerations:						
Initial Intervention	A14.1 –	Monitor traffi	c flows Unc any ope aga	Undertake traffic counts after any changes to Back Road operation and compare against baseline.							
Longer-term Intervention(s) A14.2 – Consider junction layout (Concept Design) Only if required. Extern funding required and sh incorporate improved fa for pedestrians.						external and should ved facilities					

A15 A1087 Belhaven Road

Issues	es Vehicle Speeds		Footway / footpath provision	Cycle Provision	User Conflict	Traffic Operation				
	✓		✓	~		√				
Details: This link is a main thoroughfare which runs parallel to the Back Road and carries most of the traffic into and out of Dunbar; it carries over 5,000 vehicles daily. There is on-street parking throughout, with pedestrian refuge islands at a number of locations. Any measures to reduce traffic on Back Road would lead to increased flows on this road and they should be measured over time.										
estimated and	are outlined l	oelow.	-							
Potential Acti	on:			Co	nsiderations:					
Initial Intervent	ion(s)	N/A		N/A	L.					
Longer-term Intervention(s) BR2 – Monitoring of traffic ensure no significant ad										



Existing road layout leading to Dunbar Grammar from Belhaven Road

Existing road layout at Summerfield Road and Belhaven Road junction

2019 as baseline.



A16 Back Road / Shore Road Junction

Issues	Vehicle Speeds	Parking	Footway / footpath provision	Cycle Provision	User Conflict	Traffic Operation					
						✓					
Details: This part of Back Road is particularly constrained and it not possible to provide a footway and retain two-way operation. Most options require priority working at this section (either signals or not) but a shared space environment might also work well where the volume of traffic is reduced. This should be considered in consultation with stakeholders, such as											
Potential Acti	on:			Con	siderations:						
Initial Intervent	tion(s)	N/A		N/A							
Longer-term Ir	ntervention(s)	BR1 – C of wider Road	Considered as changes to B	part See Back	See 7.4.2.						



Existing road layout looking west form Back Road to Shore Road

Existing road layout looking east form Shore Road along Back Road



8 **Option Appraisal**

8.1 Introduction

8.1.1 The full set of identified potential actions (options) are shown in Table 8.1.

Table 8.1 Potential Actions

Location	Action	Action Description
A1087 / Shore Road / Beveridge Road Junction	A1.1	Signalise Crossing Concept Design (minimal works)
A1087 / Shore Road / Beveridge Road Junction	A1.2	Signalise Crossing Concept Design (full upgrade)
Beveridge Row	A2.1	Make one-way and widen footway
A1087 High Street	A3.1	Install footway on southern side of the carriageway
Shore Road	A5.1	Widen footway / remote footway
Shore Road	A5.2	Relocate Shore Road Car Park Entrance
Duke Street	A6.1	Traffic calming
A1087 / Duke Street / Brewery Lane Junction	A7.1	Feasibility Study to improve pedestrian provision
Shore Road at Belhaven Beach Caravan Cabins	A8.1	Shore Road Access Relocation / remote footway
North Street and Manor Gardens	A9.1	Potential one-way operation to accommodate changes on Back Road
Back Road (West)	A10.1	Review lighting
Winterfield Golf Course Access from Back Road	A11.1	Pedestrian crossing as part of new junction layout
Back Road (East)	A12.1	Consider crossing
Knockenhair Road	A13.1	Monitoring of traffic
Knockenhair Road / A1087 Junction	A14.1	Monitor traffic flows
Knockenhair Road / A1087 Junction	A14.2	Consider junction layout (Concept Design)
A1087 Belhaven Road	A15.1	Monitoring of traffic

8.1.2 The next step is prioritisation; often a difficult task as initiatives will have their own supporters keen to see this as the top local priority. In order to give this process some structure, a high-level objective-led prioritisation methodology has been utilised.



8.1.3 The process was used to classify each of the recommendations in order to identify a realistic set of interventions for the short (0 to 2 years), medium (2 to 5 years) and long-term (more than 5 years), as follows:

Strategic Objectives

- 8.1.4 Each of the potential actions have been scored against the objectives identified earlier in the study, as follows:
 - 1) To deliver a more attractive and safer environment for pedestrians and cyclists;
 - 2) To reduce the overall dependence on the car and the environmental impact of traffic;
 - 3) To promote the availability and use of more sustainable means of travel; and
 - 4) To maximise accessibility for all and reduce social exclusion.
- 8.1.5 The objective to improve physical and mental well-being through the associated benefits of *active travel* has been dropped as it is considered that, where achieved, the other objectives contribute to this. The scores against the strategic objectives are as follows:
 - 1 No impact;
 - 2 Small impact;
 - 3 Medium impact;
 - 4 High impact; and
 - 5 Very high impact.
- 8.1.6 Where a feasibility study is a potential action, the objective scores are based on what benefits any physical interventions could achieve.
- 8.1.7 The scores against objectives 1 to 4 were summed to create a total score for contribution to the strategic objectives.

Value for Money

- 8.1.8 Importantly, the methodology takes account of the bias towards large schemes in such scoring exercises (i.e. large expensive schemes typically tend to perform best simply because they are larger and cost more), by also scoring each option in terms of its deliverability and affordability. The two scores for these criteria will then be combined to create a broad "Value for Money" score for each option.
- 8.1.9 The deliverability scores are as follows:
 - 1 Very challenging;
 - 2 Challenging;
 - 3 Neutral;
 - 4 Easy; and
 - 5 Very easy.



- 8.1.10 Deliverability is influenced by the extent of physical works, land ownership uncertainty, public acceptability and required changes to Traffic Regulation Orders.
- 8.1.11 The affordability scores are as follows:
 - 1 Very high cost (greater than ~£50k);
 - 2 High cost (between (~£20k and ~£50k);
 - 3 Moderate cost (between ~£10k and ~£20k);
 - 4 Minor cost (less than ~£10k); and
 - 5 No cost.
- 8.1.12 Where feasibility studies have been identified, the cost is for undertaking the study rather than any physical works which may then be identified.

Total Score

- 8.1.13 Finally, the score for the contribution to the strategic priorities will be multiplied by the value for money score to provide a total score, with the highest scoring option assuming the highest rank.
- 8.1.14 From previous studies, it is known that typically a range of low cost, "easy-win" measures which can be implemented relatively quickly should be identified. These often include softer and low-cost measures such as, improving active travel route signage, providing more secure cycle storage, promoting a range of active travel routes / bus services available, on-line journey planners, cycle hire or pool bikes / cars.

Responsibility and Cost

8.1.15 The Action Plan includes a column on responsibility and while this predominantly falls to the Council, external funding (or match funding) will be required for many of the actions to be delivered (see Section 9.2).

Risk

8.1.16 The Action Plan also gives an indication of the level of risk associated with not implementing some of the actions; this reflects both safety and public acceptability and is scored low, medium or high.

8.2 **Prioritised Action Plan**

8.2.1 The fully prioritised Action Plan is presented on the next page.



							Ob	jective Sc	ores		Value	for Mone	ey Score			
Area Name	Action	Action Description	Responsibility	Timescale	Indicative Cost Estimate	 Safer Environment for active 	2. Reduce car dependence	3. Promote sustainable travel	5. Maximise accessibility (including	Total	Deliverability	Affordability	Total	Weighted Score	Rank	Risk
A1087 / Shore Road /	A1.1	Signalise Crossing Concept Design (minimal	ELC (External	Short	~£20k to ~£50k	4	2	2		12		4		104	2	
Beveridge Road Junction		works)	funding)			4	2	3	4	13	4	4	ð	104	2	Lliab
A1087 / Shore Road /	A1.2	Signalise Crossing Concept Design (full	ELC (External	Short	~£20k to ~£50k	-	2	_	F	10	2	2		100	1	нıgn
Beveridge Road Junction		upgrade)	funding)			5	5	5	5	10	5	3	0	108	T	
Beveridge Row	A2.1	Make one-way and widen footway	ELC (External funding)	Medium	>£50k	5	2	4	4	15	2	1	3	45	11	Medium
A1087 High Street	A3.1	Install footway on southern side of the carriageway	ELC (External funding)	Long	>£50k	5	3	5	5	18	3	1	4	72	7	Medium
Shore Road	A5.1	Widen footway / remote footway	ELC (External funding)	Medium	>£50k	5	3	5	3	16	4	1	5	80	5	
Shore Road	A5.2	Relocate Shore Road Car Park Entrance (related to A8.1)	ELC (External funding)	Medium	>£50k	4	1	1	1	7	4	1	5	35	12	Nedium
Duke Street	A6.1	Traffic calming	ELC	Medium	~£10k to ~£20k	4	2	1	1	8	5	3	8	64	10	High
A1087 / Duke Street / Brewery Lane Junction	A7.1	Feasibility Study to improve pedestrian provision	ELC (External funding)	Long	~£20k to ~£50k	4	2	4	4	14	2	3	5	70	9	Medium
Shore Road at Belhaven Beach Caravan Cabins	A8.1	Shore Road Access Relocation / remote footway (related to A5.2)	ELC (External funding)	Medium	>£50k	4	1	1	1	7	4	1	5	35	12	Low
North Street and Manor Gardens	A9.1	Potential one-way operation to accommodate changes on Back Road	ELC	Short	~£20k to ~£50k	5	1	1	1	8	1	3	4	32	14	Medium
Back Road (West)	A10.1	Review lighting	ELC	Short	<£10k	5	1	4	3	13	3	4	7	91	4	High
Winterfield Golf Course Access from Back Road	A11.1	Pedestrian crossing as part of new junction layout	ELC (External funding) / Golf Club	Medium	~£20k to ~£50k	5	3	4	5	17	3	3	6	102	3	High
Knockenhair Road / A1087 Junction	A14.1	Monitor traffic flows	ELC	Ongoing	<£10k (annually)	3	2	2	2	9	5	3	8	72	7	High
Knockenhair Road / A1087 Junction	A14.2	Consider junction layout (Concept Design)	ELC (External funding)	Long	~£20k to ~£50k	5	3	4	4	16	3	2	5	80	5	Low



8.3 Road Safety Audits

- 8.3.1 A Stage 1 Road Safety Audits of the design options for Back Road has been undertaken to inform which options could be taken forward. This is included as Appendix G, along with a Design Team response.
- 8.3.2 None of the issues identified rule out any of the options presented.



9 Conclusions and Recommendations

9.1 Conclusions

- 9.1.1 East Lothian Council has commissioned this study due to the fact that Back Road is only functioning as a traffic route and that pedestrians and cyclists are not currently accommodated within the carriageway extents. In particular, there is a lack of continuous footway and the road is of variable width, which allows low volume two-way travel by car, but is not ideal for safely accommodating pedestrians and cyclists.
- 9.1.2 An extensive consultation exercise has been undertaken to inform the study, as summarised in Figure 9.1.



Figure 9.1 Summary of Consultation Feedback

- 9.1.3 ELC is committed to promoting and encouraging safer active travel across the Council, as a whole and within East Lothian's Local Transport Strategy 2018 2024 which includes an Active Travel Improvement Plan. This study contributes to delivering key outcomes contained within the Plan.
- 9.1.4 The final conceptual design outputs and recommendations are incorporated into an Action Plan that lists interventions scored against strategic objectives, affordability and deliverability. The Action Plan includes timescales (in respect of short, medium and long-term), outline costs and responsibilities. It includes a range of measures from low cost, "easy-win" (which can be implemented relatively quickly) and higher value, more ambitious projects (likely to be implemented in the medium to long-term).
- 9.1.5 Through site visits, direct observations and discussions with local stakeholders and groups several opportunities and constraints have been identified.
- 9.1.6 As a result of the positive engagement with the local community, a number of key issues and concerns were raised that were beyond the study extents but are still important in respect of understanding active travel barriers and opportunities in the local area. The study focussed on identifying potential actions to tackle the issues within the defined study area, but the wider issues have been recorded such that they can be brought to the attention of the council and considered further at a later date.
- 9.1.7 The most obvious issue and constraint for active travel trips is that there is no continuous footway along either side of Back Road. On the south side there are residential properties that mostly have a narrow verge in front of them (other than a short length of remote footway) and on the north side there is poor definition between the golf course land and the road side verge.



- 9.1.8 In addition to this, it appears that there is no surface water drainage system for the carriageway and that only over-the-edge drainage exists, with a crossfall leading surface water off the carriageway, to the verge. There are no road kerbs in place, although a system of street lights is in place.
- 9.1.9 The extent of public adoption needs to be carefully considered so that the extents of the roadside verges are known. This will be significant in respect of the ability to convert verges to footways and in particular defining the boundary with Winterfield Golf Course. The boundary wall defining the edge of the course has been deteriorating over the years and in many places has fallen over resulting in poor definition between golf course and the public road.
- 9.1.10 The width of the carriageway is variable and therefore any transfer of road space for other users (pedestrians and cyclists) will require to ensure that vehicle passage and access is not compromised, if retained.

9.2 **Recommendations**

9.2.1 Potential funding sources are outlined below.

Sustrans – Places for Everyone¹⁷

- 9.2.2 The aim of *Places for Everyone* is to create safe, attractive, healthier places by increasing the number of trips made by walking, cycling and wheeling for everyday journeys. The minimum criteria for a successful *Places for Everyone* bid are:
 - Develop ideas collaboratively and in partnership with communities.
 - Facilitate independent walking, cycling, and wheeling for everyone, including an unaccompanied 12-year old.
 - Design places that provide enjoyment, comfort and protection.
 - Ensure access for all and equality of opportunity in public space.
 - Ensure all proposals are developed in a way that is context-specific and evidence-led.
 - Reallocate road space, and restrict motor traffic permeability to prioritise people walking, cycling and wheeling over private motor vehicles.
- 9.2.3 These are closely aligned with the strategic objectives identified for this study meaning all of the potential actions identified are suitable for this type of funding.

Paths for All – Smarter Choices, Smarter Places Local Authority Fund¹⁸

- 9.2.4 The Smarter Choices, Smarter Places programme supports Scottish local authorities to encourage more journeys by foot, bike and public transport. The projects encourage and promote active and sustainable transport in a number of innovative ways including:
 - Maps, apps, real time passenger information and guides;
 - Work with schools, businesses and local communities;

¹⁷ https://www.sustrans.org.uk/scotland/places-for-everyone

¹⁸ <u>https://www.pathsforall.org.uk/smarter-choices-smarter-places/local-authority-fund</u>



- Community and workplace active travel challenges;
- Walking and cycling festivals; and
- Support to voluntary and community organisations supporting active travel.

Community Organisation Funding

- 9.2.5 Beyond the above, there are a number of funding streams open to community organisations (such as the Community Council), including:
- 9.2.6 Paths for All Community Path Grants¹⁹ scheme which provides communities with the resources they need to create, promote and maintain community paths close to where they live. Projects must be well planned and ready to start as soon as funding is confirmed.
- 9.2.7 The Scottish Government's Climate Challenge Fund (CCF)²⁰ provides grants and support for community-led organisations to tackle climate change by running projects that reduce carbon emissions.

9.3 Equality

- 9.3.1 As a public sector organisation, ELC are required to assess the impact of their decisions and policies on equalities groups.
- 9.3.2 The Council have recently launched a new way of undertaking Equalities Impact Assessments (EqIA) which sets equality considerations alongside their social policy objectives e.g. tackling poverty. It also considers the impact of their decisions in relation to the environment and the economy. The new process is called Integrated Impact Assessment (IIA), which will be used by the East Lothian Partnership and the Integrated Joint Board.
- 9.3.3 EqIA should be prepared before actions are taken forward.

9.4 Monitoring and Evaluation Framework

9.4.1 As the Action Plans are intended to guide investment, a supplementary framework covering monitoring and evaluation has been developed.

Monitoring

9.4.2 The importance of monitoring is enshrined in H.M. Treasury's Green Book: Appraisal and Evaluation in Central Government, the key document for scheme appraisal and evaluation in the UK. The Green Book stresses the importance of the 'ROAMEF' cycle as is illustrated below:

¹⁹ <u>https://www.pathsforall.org.uk/cmp-grants</u>

²⁰ <u>https://www.keepscotlandbeautiful.org/sustainability-climate-change/climate-challenge-fund/</u>



Objectives

Appraisal

Rationale

IMPLEMENTATION

Monitoring

Feedback

Evaluation

- 9.4.3 The ROAMEF cycle recommends that all schemes should be based on:
 - A rationale (i.e. tackling problems and realising opportunities);
 - Objectives, which reflect the rationale (i.e. those identified by stakeholder consultation and approved by East Lothian Council); and
 - Appraisal.
- 9.4.4 The figure shows that as an organisation moves towards the implementation stage, they should implement a monitoring programme designed to collect evidence on the performance of an investment.



- 9.4.6 Monitoring is an often-neglected stage of the project lifecycle, yet it is as important, if not more important, than any other stage in the project. The developed monitoring and evaluation framework relies on low-cost measures or existing data to minimise the financial burden on the Council.
- 9.4.7 This report in itself, represents a good baseline of data for the area and Table 9.1 presents a monitoring framework.

Element	Baseline	Purpose	Frequency
Traffic flow data	Collected as part of	Identify any change in traffic flows (i.e. increased / decreased reliance on the car)	Biennial area-wide or locally after any specific changes to junctions / streets
Traffic speed data		Monitor compliance with speed limits	After any specific changes to street layouts
Road traffic collisions	Presented in this study	Monitor any changes over time	Review annually
Non-motorised user surveys	None	Measure the impact of specific interventions	Collect at localised site before and after any specific infrastructure changes

Table 9.1 Monitoring Framework

Evaluation

9.4.8 A well-designed monitoring framework provides a basis for undertaking the next stage of the ROAMEF cycle, evaluation. An outcome evaluation should attempt to determine the extent to which an investment has delivered against its initial goals – i.e. has it delivered the objectives?

9.4.9 The collection of good quality monitoring data would allow ELC to carry out a robust evaluation and understand both quantified and behavioural impacts of their investment. It will also make it possible to gauge the extent to which the objectives have been achieved, spell out what has worked and what has not, and provide a basis for future prioritisation exercises. The process evaluation would aim to identify lessons that could be learned for delivering similar schemes in the future. It will aim to gather a collection of qualitative and quantitative data to understand what worked well and what didn't.

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9.4.10 Reference should be made to Sustrans Design Manual Chapter 16 Monitoring and evaluation of walking and cycling (draft), November 2014²¹.

Element	Example		
	To deliver a more attractive and safer environment for pedestrians and cyclists		
	To reduce the overall dependence on the car and the environmental impact of traffic;		
Objective	To promote the availability and use of more sustainable means of travel;		
	Improve physical and mental well-being through the associated benefits of active travel; and		
	To maximise accessibility for all and reduce social exclusion.		
Input	Infrastructure improvement		
Output	Physical route		
Outcome	Increased active travel / improved perception of safety		
Impact	Increase in cycling, improved perception of safety, reduction in car use / emissions, visibility of active travel route options, increased accessibility		

Table 9.2 Evaluation Plan Example

²¹ <u>https://www.sustrans.org.uk/sites/default/files/images/files/Route-Design-Resources/Monitoring-31-10-14.pdf</u>



Appendix A Communication / Engagement Strategy



Appendix B Census Data (Datashine)



Appendix C Land Designations



Appendix D List of Identified Issues



Appendix E Online Feedback Form Results

9.5 Respondent Details

- 9.5.1 An online feedback form (Survey Monkey) was live from 19/02/2019 until the 10/03/2019.
- 9.5.2 A total of 135 responses were received across a fairly wide geographical area, as shown below.



Figure 9.2 Home Location of Respondents

9.5.3 The survey included 122 (90% or respondents) people who drive along the Back Road, 108 (80% or respondents) who cycle along it and 80 (50% or respondents) who cycle along it. Table 9.3 presents an overview of how respondents use the Back Road.

Mode of Travel Used	No. of Respondents	% Respondents	
Drive/Walk/Cycle	59	44%	
Drive/Cycle	5	4%	
Drive	21	16%	
Drive/Walk	37	27%	
Walk / Cycle	4	3%	
Walk	8	6%	
None	1	1%	

Table 9.3 Respondents Use of Back Road



Total	135	
10101		

- 9.5.4 Table 9.3 shows that:
 - The greatest proportion (44%) of respondents drive, walk and cycle along Back Road;
 - The next highest proportion (27%) drive or walk along Back Road; and
 - Around 16% only drive along Back Road.

Key consideration: the survey captured a good geographical spread of respondents including a number of people living in close proximity and people living further afield in Dunbar. It also included a good mixture of people who travel along the Back Road by different modes (driving / walking / cycling).

9.6 Current Use of Back Road



9.6.1 Figure 9.3 shows the frequency of how respondents currently use Back Road.

Figure 9.3 Current Use of Back Road

Figure 9.3 shows the following:

- Respondents are more likely to drive along the Back Road every day, most days or weekly than walk or cycle;
- Respondents were most likely to never cycle alone the Back Road, then walk along the Back Road with fewest never driving along the Back Road; and
- Most respondents drive or walk along the Back Road weekly and most never cycle along the Back Road.

9.6.2 Figure 9.4 presents the same frequency data in a different way.





Figure 9.4 Current Use of Back Road

Key consideration: the survey captured a good spread of people who use the Back Road every / most days, weekly and only monthly.

9.7 Demand for More Use

9.7.1 Respondents were asked if they would like to walk or cycle along the Back Road more often and Figure 9.5 shows the results.



Figure 9.5 Demand for More Use

- 9.7.2 Figure 9.5 shows:
 - Overall, the majority of respondents want to walk or cycle along the Back Road more often (70% overall; 92 out of 132);

- Of those who only drive, only 21% want to walk or cycle along the Back Road more often; and
- Of those who only drive or cycle, only 20% want to walk or cycle along the Back Road more often.

Key consideration: the majority of respondents want to walk or cycle along the Back Road more often.

9.8 Current Issues

9.8.1 Respondents were asked to pick their top three choices, in order of importance, for what the current issues with Back Road are; these are summarised in Table 9.4

Table 9.4 Overview of Current Issues

	Most important	Second most important	Third most important	Total	% of All Respondents Chosen By
Vehicle Speed	26	26	25	77	57%
Lack of footway	67	29	12	108	80%
Too much traffic	7	9	10	26	19%
Lack of crossing facilities	1	5	13	19	14%
Personal security (including insufficient lighting)	9	28	27	64	47%
Condition of footway (including leaves etc)	12	21	27	60	44%
None		13		13	10%

9.8.2 Table 9.4 shows that:

- Most respondents (80%) think the lack of a footway is an issue;
- 57% of respondents think that vehicle speeds are an issue;
- 47% think that personal security is an issue;
- 44% think condition of the footway is an issue; and
- Around 10% felt there are no issues.
- 9.8.3 Figure 9.6 presents an overview of the responses.





Figure 9.6 Current Issues

Other Issues

- 9.8.4 Other issues identified by respondents were as follows:
 - Bad driving behaviour;
 - Congestion a variety of road users (cars, pedestrians, cyclists) all jostling for the same space;
 - Potholes;
 - Road is too narrow in places;
 - The increasing number of cycling clubs who use North Road/Back Road travelling in large groups are quite intimidating to pedestrians; and
 - Unclear traffic priorities at junction with Shore Road.
- 9.8.5 Further, two respondents commented that there should be no additional lighting as it will create more light pollution.

Key consideration: the two most commonly cited issues by respondents are the lack of a footway on the Back Road and vehicle speeds. These will be considered at the option identification stage along with other issues raised.

9.9 Relocation of Space

- 9.9.1 Respondents were told that the available road width is limited and asked if think the Council should pursue changes to devote more space to accommodate people walking and cycling. They were given the following options:
 - Yes, even if it significantly reduces space for vehicles;
 - Yes, but not if it reduces space for vehicles significantly; and



- No, space for vehicles on this route is more important.
- 9.9.2 Figure 9.7 provides an overview of the responses.



Figure 9.7 Relocation of Road Space

9.9.3 Figure 9.7 shows the greatest proportion of people are in favour of relocating space to pedestrians and cyclists even if it means reducing space for vehicles (50%). By contrast, 16% feel that space for vehicles is more important. The remainder (34%) feel there should be some balance.

Key consideration: half of respondents think that more space on the Back Road should be dedicated to pedestrians and cyclists, even if it reduces the available space for vehicles. The other half think either the road space for vehicles should not be reduced at all or not be reduced significantly.

9.10 Other Issues / Concerns / Opportunities

9.10.1 Respondents were asked to explain more about any issues / concerns they have with Back Road as a route for pedestrians and cyclists or make suggestions for improvements. Table 9.5 presents an overview of the issues most commonly identified.



Table 9.5 Other Issues / Concerns / Opportunities

Location	No. of Respondents	Summary
Vehicle Speed	15	A mixture of opinions on vehicle speed with some thinking a high number of vehicles travel to fast, others saying they do not and some suggesting only a small minority travel too fast.
Footway	20	General support for inclusion of a footway
Lighting	7	While some respondents said that lighting is poor and hinders visibility others said no additional should be provided because of light pollution and impact on wildlife.
Priority working system	7	Most of these respondents in favour of a priority working system
One-way Operation	6	Most of these respondents were in favour of one-way operation but some queried what impact it would have on traffic elsewhere
Road Surface	3	These respondents noted the road surface is in poor condition
Proximity to golf course	2	These respondents noted that proximity of any footway to the golf course should be considered (i.e. stray balls)

Key consideration: a number of well thought out solutions for the Back Road were received and these will be considered at the option identification stage along with other issues raised.

9.10.2 Some example opinions are illustrated below.

"Congestion - a variety of road users (cars, pedestrians, cyclists) all jostling for the same space. I don't like walking my dog there as we end up being forced up into muddy side. There is no way I would cycle there with my 6 year old daughter but I want to be able to use that route with her. "

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"I would suggest creating a single lane with priority to vehicles going up the Back Road from Belhaven at the pinch point created by the high wall. This would be similar to the bridge going into Tyninghame Village and would allow room for the creation of a pedestrian footpath."

"A footpath would be useful for pedestrians but cycling does not seem to be a problem. When driving by car I occasionally come across pedestrians but not very often. I don't think it is an issue if drivers stick to the 20mph limit. I'm not convinced that by having a footpath the route would be used more often as I think anyone wanting to use that route would do so anyway as it's a quiet road. Maybe the bushes at the bottom end of the road (near Belhaven) could be pruned so they don't overhang the road."

"The section of road which goes down the hill can be particularly dark and is also narrow making it difficult to see cyclists and walkers. Drivers think there is enough space to pass another car going in the opposite direction which brings them dangerously close to pedestrians and cyclists. If the road was narrowed with passing places or priority given to one carriageway it may slow drivers down."



Appendix F Vehicle Tracking



Appendix G Road Safety Audit and Response