

# Additional Routes Final Report

Levenmouth Connectivity Project

CO25000351/ 002

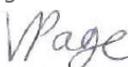
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## Document Control Sheet

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## Executive Summary

The Levenmouth Connectivity Project forms part of the Leven Programme Partnership, a multi-partnership group working to deliver improvements to connect communities to and along the River Leven and the surrounding area. These partners include Fife Council, Sustrans, SEPA and Network Rail.

Amey Consulting was commissioned by Fife Council to assess and develop the active travel network in the Levenmouth area, *Levenmouth Connectivity Final Report*, completed October 2020. At the time of the original study, rail station locations at Cameron Bridge and Leven had not been confirmed, so connectivity of the network to the transport hubs could not be undertaken.

This report summarises additional routes to the network that help link surrounding communities to the proposed rail line upgrades. The aim of this study was to develop the concept design of additional routes to connect into the wider connectivity network.

The concept design was developed based upon the core design principles used within the original network assessment, as outlined within Sustrans' Places for Everyone (PfE) guidance and other relevant design guidance. A hierarchy of provision was adopted of:

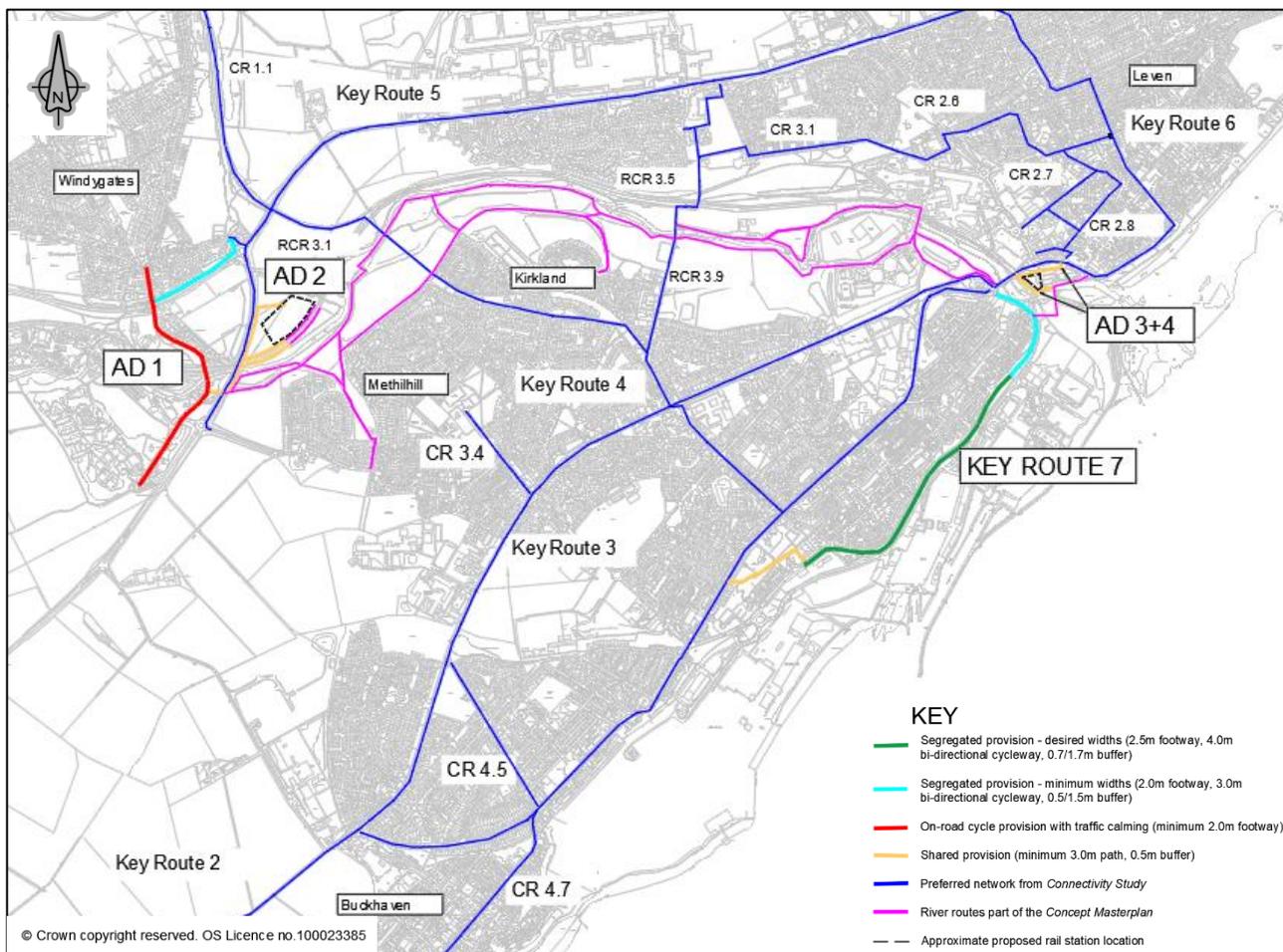
Segregated, bi-directional provision using desirable widths and buffers – widths are outlined in Table 3;

1. Segregated, bi-directional provision using minimum widths and buffers, where space was limited by constraints – widths are outlined in Table 3;
2. On-road cycle provision with traffic calming where the speed limit is 20mph and traffic flows do not exceed 2000 vehicles/day plus widening of footway to desired width, but if not possible to minimum width; and
3. Shared provision only considered along short sections where no other provision could reasonably be accommodated or within green spaces/ park areas.

Where appropriate, road narrowing, and land purchase has been considered in the concept design. The minimum road width considered has been 6m as many of the routes run along key distributor roads which are also bus routes.

Five routes have been appraised to identify available opportunities and constraints that restricted providing active travel improvements to meet Places for Everyone (PfE) requirement. A pinch point appraisal was undertaken at locations where constraints affected the type of provision that could be provided. A total of 15 options at five locations were assessed.

A summary of the types of provision provided within the network are shown below:



Route	Provision Type	Length
Additional Route 1 (AD1)	Segregated – desired width	0.4km
	On-road	1.1km
	Shared	0.1km
Additional Route 2 (AD2)	Shared	0.79km
	Tie in to IGLU Studio Concept Masterplan	0.9km
Additional Routes 3+4 (AD3 + AD4)	Shared	0.4km
	Tie in to IGLU Studio Concept Masterplan	0.3km
Key Route 7 (KR7)	Segregated – desired width	1.1km
	Segregated – minimum width	0.4km
	Shared	0.4km

Construction costs with a 44% optimum bias have been developed and are shown below:

Route	Initial Cost Estimate
AD1	£1,190,000
AD2	£2,675,000
AD3+4	£140,000
KR7	£1,920,000
<b>Total</b>	<b>£5,920,000</b>

An accompanying Equality Impact Assessment (EqIA) is included showing positive benefits and no significant adverse findings.

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## 1. Introduction

### 1.1. Introduction

In March 2020, Amey Consulting were appointed by Fife Council to assess the current active travel provision in the Levenmouth area to conclude a preferred network that would provide improvements for walking, wheeling and cycling. The study provided a network that linked communities (such as Methil, Leven and Buckhaven) to trip generators (such as areas of employment, retail and education). The *Levenmouth Connectivity Final Report*, to be referred to as the *Connectivity Study* within this report, was concluded in October 2020, and Amey Consulting provided the preferred active travel network and levels of provision that could be provided.

At the time of the original study, Network Rail were developing the location of two proposed rail stations as part of a project to reopen a section of derelict rail line between Leven and Cameron Bridge. However, the Network Rail study was in the early stages, and several options for station locations were being developed at that time. This unknown resulted in the Levenmouth Connectivity preferred network not having direct links to rail stations.

This study looks at the connectivity of the network to the rail stations due to progression in the station locations being made. The project has been awarded funding through the Sustrans 'Places for Everyone' (PfE) programme, which aims to support and fund infrastructure improvements that make it easier for people to walk and cycle for everyday journeys.

### 1.2. Project Partners

Collaboration with key partners and other consultants in the project has been undertaken, including:

- Fife Council;
- Sustrans;
- SEPA; and
- Iglu Studio.

This partnership has maintained discussion between independent projects underway within the Levenmouth area, including rejuvenation of the riverside path network and surrounding habitats. Iglu Studio are consultants within the project and are creating the project masterplan which discusses all elements of the project, including the surrounding river paths, an attraction for educational purposes and tourism and upgrade to surrounding vacant and derelict land for community use. The work undertaken by Iglu will be referred to as the *Concept Masterplan* within this report. Discussion with Iglu Studio has been undertaken throughout the additional route design to join the river path masterplan and the connectivity network together.

### 1.3. Study Area

The original study area for the Levenmouth Connectivity study includes the communities of East Wemyss, Kennoway, Windygates, Buckhaven, Methil and Leven, as shown in Fig. 1. The area has a population of approximately 37,000 as disclosed within the Local Strategic Assessment for the Levenmouth area (2018). Amongst its key employers is Diageo, the beverages company.



**Figure 1** Study area

The additional route study area considers connection from surrounding communities to the two proposed rail stations and the wider connectivity network, shown in Fig. 2:

- Cameron Bridge rail station – additional routes consider connection to Windygates, Cameron Bridge and Methilhill to the rail station as well as Key Routes 4 and 5 and Connecting Route 1.1. Includes consideration of crossing provision at the A911 and A915; and
- Leven rail station – additional routes consider connection to Leven High Street, Key Routes 2 and 3, as well as connection from Buckhaven to Leven via Key Route 7, which was not progressed during the original *Connectivity Study* and has been considered within this study.

Key Route 7 was not taken forward previously as it was not ranked highly within the feasibility appraisal. This was due to its location not serving as many communities as other routes such as Key Route 2 or 3, and also due to the fact that it predominantly travels through the industrial area of Fife Energy Park. However, with the Leven rail station location confirmed to be adjacent to the Leven Sports Centre, the link has been reintroduced as part of the additional routes study to provide connection from Buckhaven to the station, while also serving East Fife Football Club and other businesses in Fife Energy Park.

The A915 is the main north-south distributor road that serves the area, and the A911 provides a link to Glenrothes and the A92 which is the main north-south trunk road.

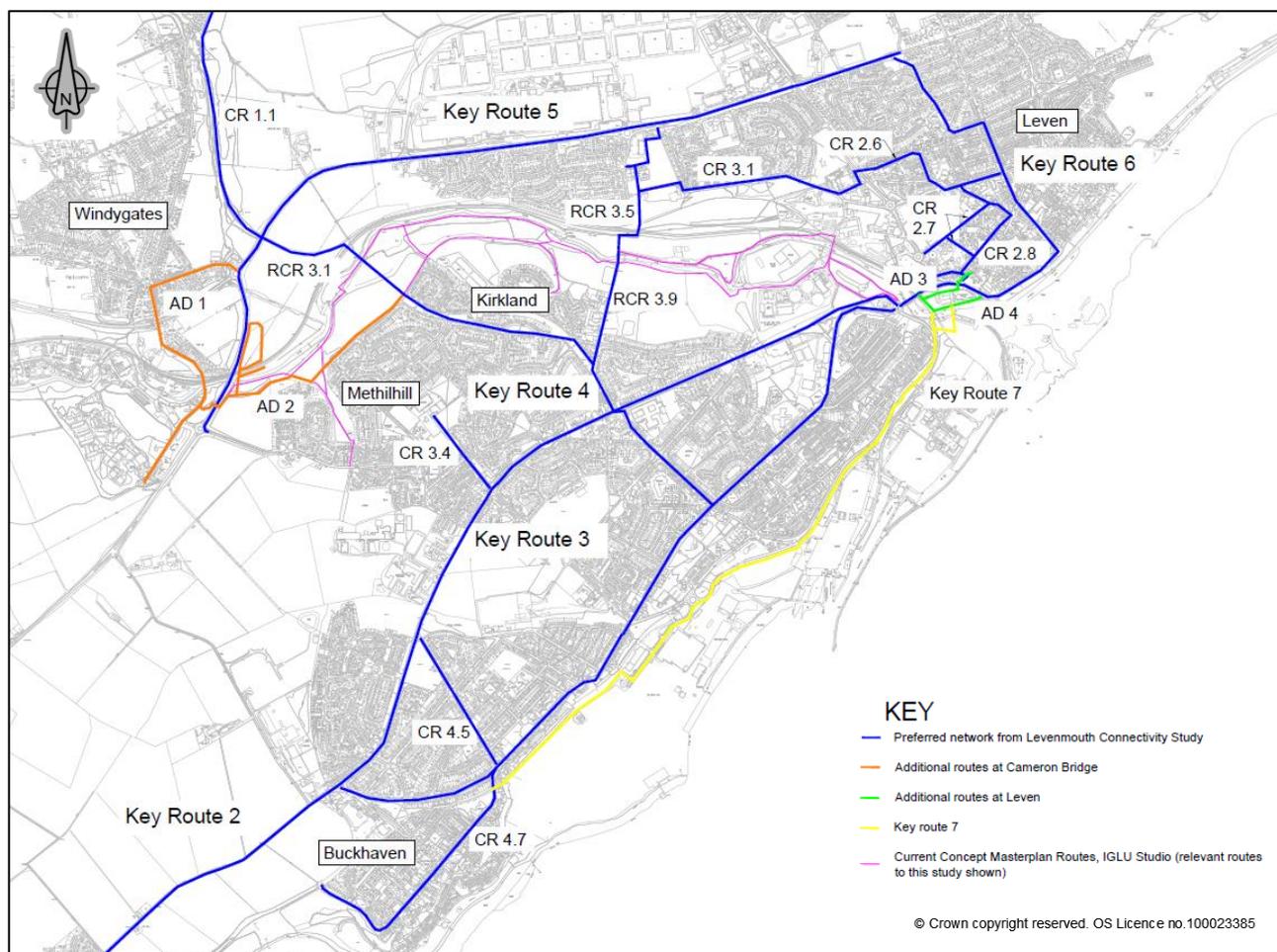


Figure 2 Study area network

## 1.4. Methodology

The development of the concept design was sub-divided into the two stage appraisal processes using the same methodology as the original network assessment, which was broken down into the following key stages:

First stage appraisal – areas where preferred levels of provision in Sustrans guidance could be met:

- Creation of an appraisal matrix for determining the preferred levels of provision;

- Assessment of the additional network using the appraisal matrix to determine the location and level of provision that could be provided

This first stage of the appraisal process also highlighted areas of constraint (pinch points) where levels of provision in Sustrans guidance could be met. The second stage appraisal considered these pinch point areas:

- Creation of an appraisal matrix to consider options at pinch point locations;
- Assessment of constraints in pinch point locations to determine the optimal proposals; and

The concept design of the additional routes was then undertaken following the outcome of these appraisals.

## 2. Background and Context

### 2.1. Summary

This section summarises information provided in the *Levenmouth Connectivity Final Report, CO25000351/001* (Amey Consulting, October 2020). For further detail on transport links and trip attractors, see *Levenmouth Connectivity Final Report*.

### 2.2. Public Transport Links

Network Rail are working towards reopening a section of rail line travelling through Levenmouth, with the creation of two stations to serve the community and provide a connection to the Fife Circle network. The rail line runs alongside the River Leven, located west to east between Leven and Windygates. The approximate rail station locations are shown in Fig. 3.

The purpose of assessing the additional routes is to provide connectivity between the rail stations and the network, as the new stations will be key transport infrastructure in the Levenmouth area. Although the exact locations have not been confirmed, it is known that there will be one station serving Leven and the other at Cameron Bridge to the east side of the A915. The locations highlighted in Fig. 3 have been used to assess the connection and benefits of additional routes.

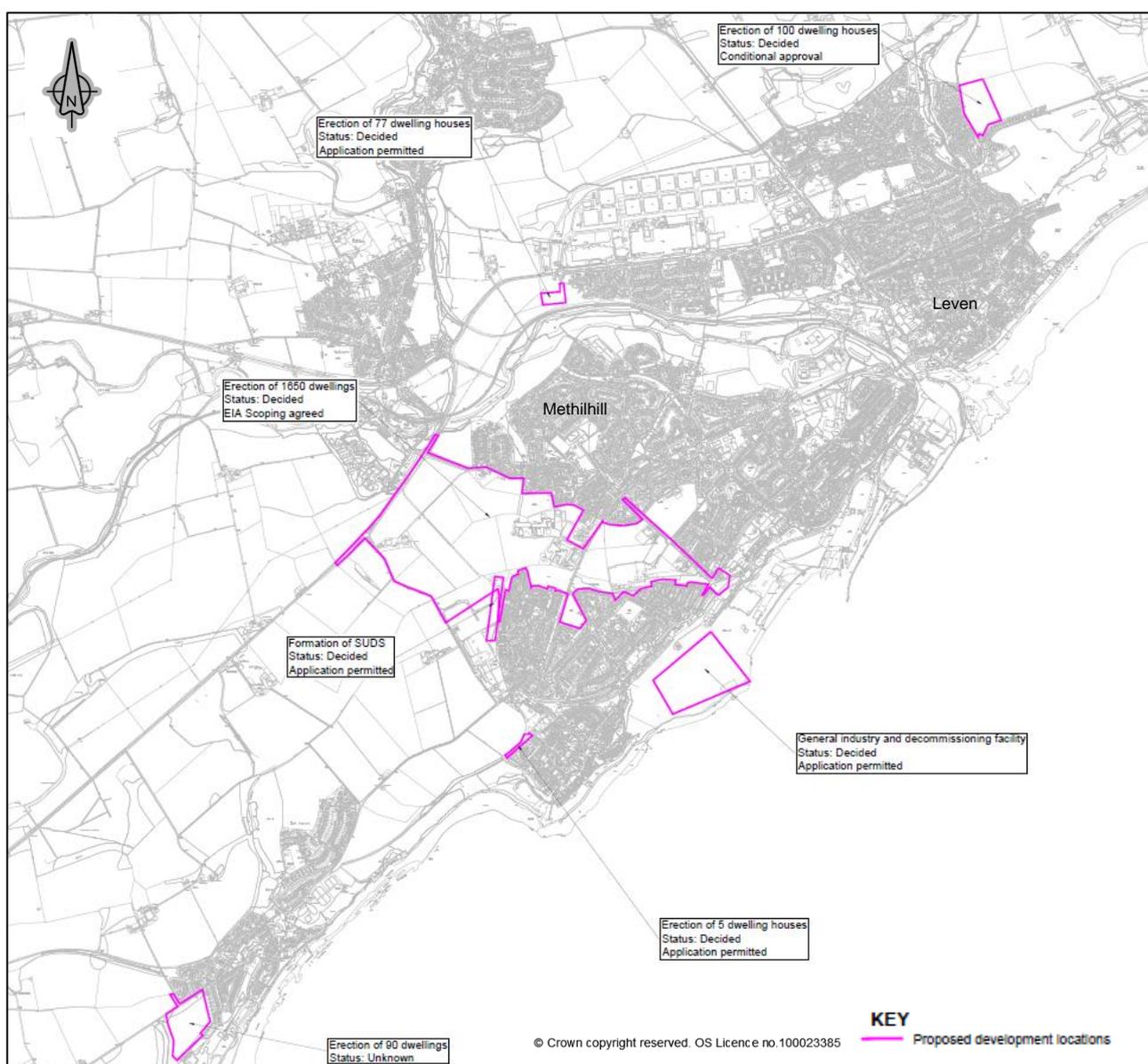


**Figure 3** Proposed rail station locations

### 2.3. Planned Developments

Data was collected from Fife Council’s planning permission database to summarise planning applications submitted within the last five years (2015-2020), shown in Fig. 4.

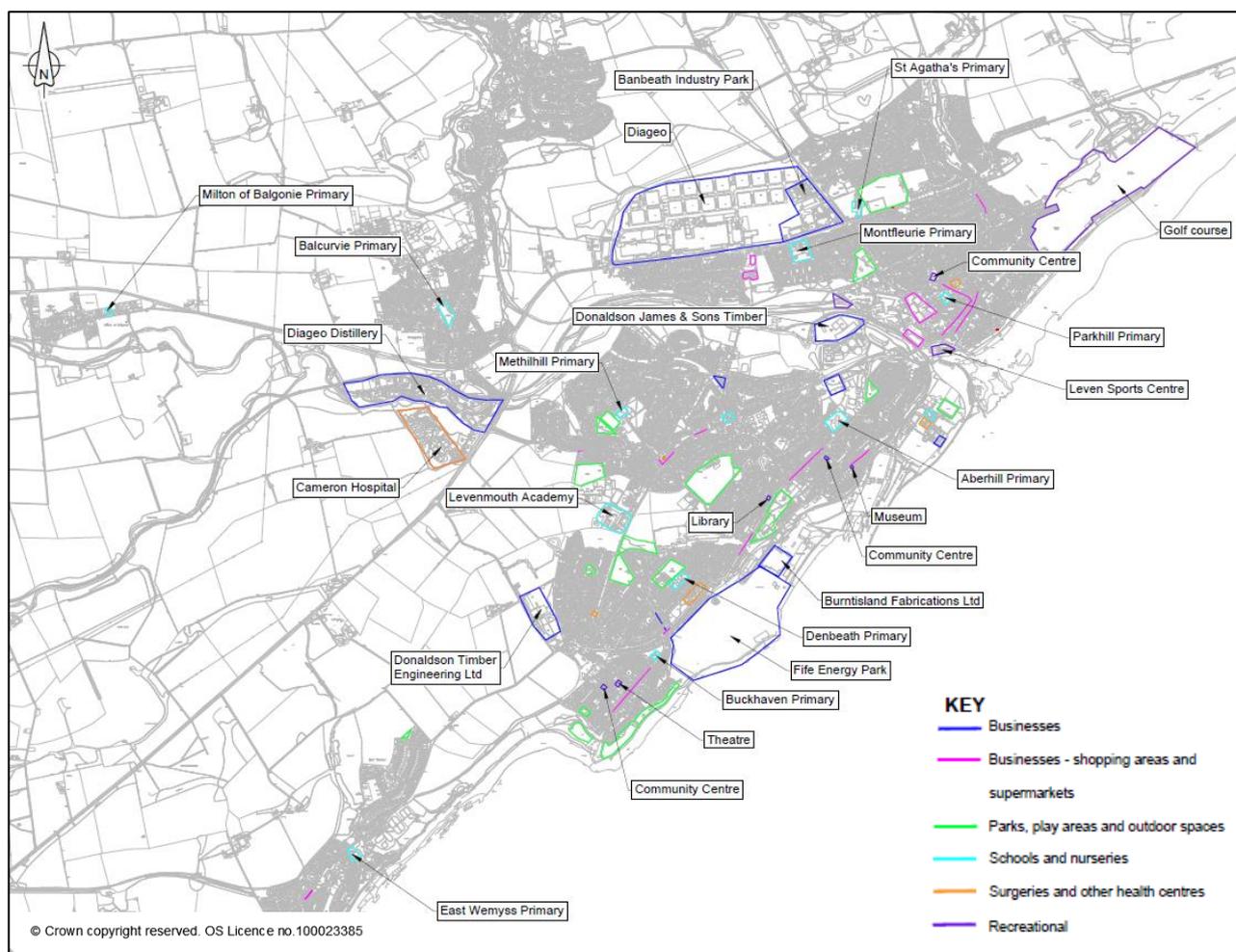
New developments for residential and employment opportunities will increase trip generators in the project area. A large mixed-use development in Methilhill (107.5ha) will have an impact on usage and desire lines as well as usage of the Cameron Bridge rail station.



**Figure 4** Land development applications approved (2015-2020) – Refer to Appendix A for larger version of this Figure

## 2.4. Trip Generators

The following areas have been highlighted as key locations and amenities that will contribute to community movements and everyday trips in Levenmouth, as shown in Fig. 5.

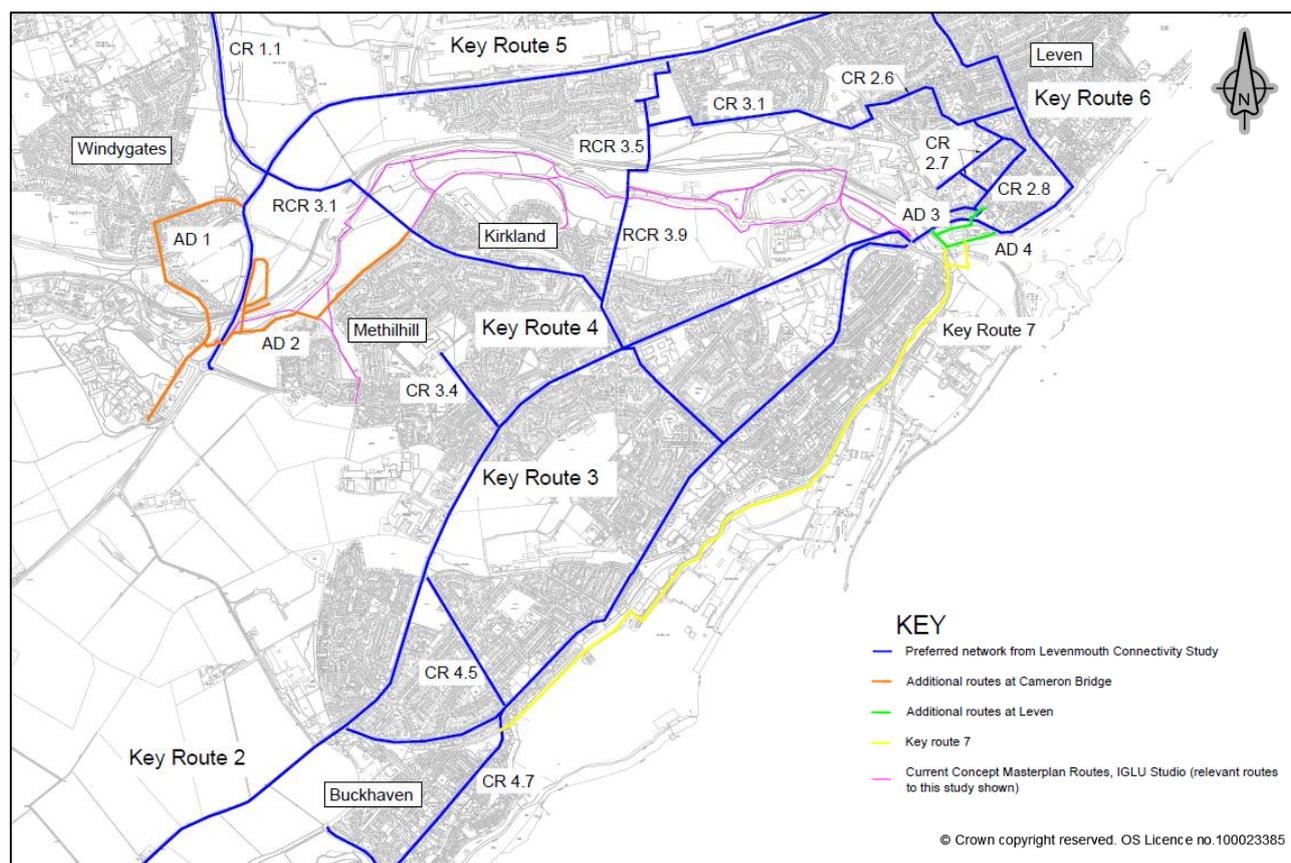


**Figure 5** Levenmouth area trip generators – Refer to Appendix A for larger version of this Figure

### 3. Active Travel Network

#### 3.1. Network Arrangement

Figure 6 shows the location of additional routes and their connection into the preferred network from the *Connectivity Study*. Routes shown provide links to Windygates and Cameron Bridge on the western side, denoted as AD1 and AD2 on Fig. 6, and the coherence between Leven rail station into the network on the eastern side, denoted as AD3 and AD4. Key Route 7 has also been considered at this stage as a connection between Buckhaven, Fife Energy Park and Leven.



**Figure 6** Additional routes to be considered

Additional riverside and riverside connecting routes have been identified within the master planning element of the Connectivity Project, undertaken by Iglu Studio. Details of all traffic free paths and routes surrounding the river can be found in the *Concept Masterplan*, developed by Iglu Studio. Key river paths are shown in Fig. 8, although this is not the full *Concept Masterplan* extents.

The additional paths considered within this study have overlap with the *Concept Masterplan*. Discussion with IGLU Studios has been undertaken to help provide cohesive connection when assessing the additional routes as part of this report.

AD2 (see Fig. 7) routes to the south side of the River Leven will be considered in the *Concept Masterplan* developed by Iglu Studio. Further detail and expansion on the paths and traffic free routes within the river park can be found within the *Concept Masterplan* document. These routes include river connecting routes.

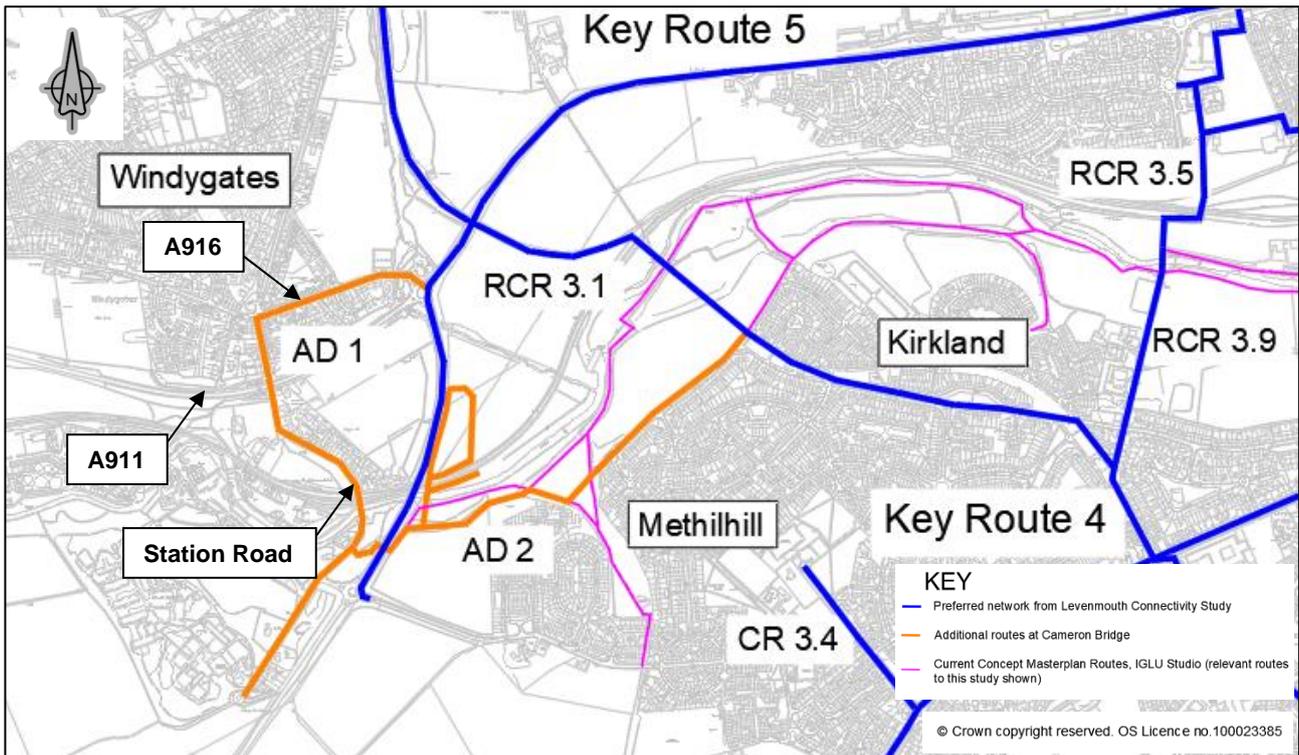


Figure 7 Additional routes at Cameron Bridge

AD4 (see Fig. 8) is also not considered in full within this report. The section from the A955 crossing the River Leven to South Street is considered within the *Concept Masterplan*.

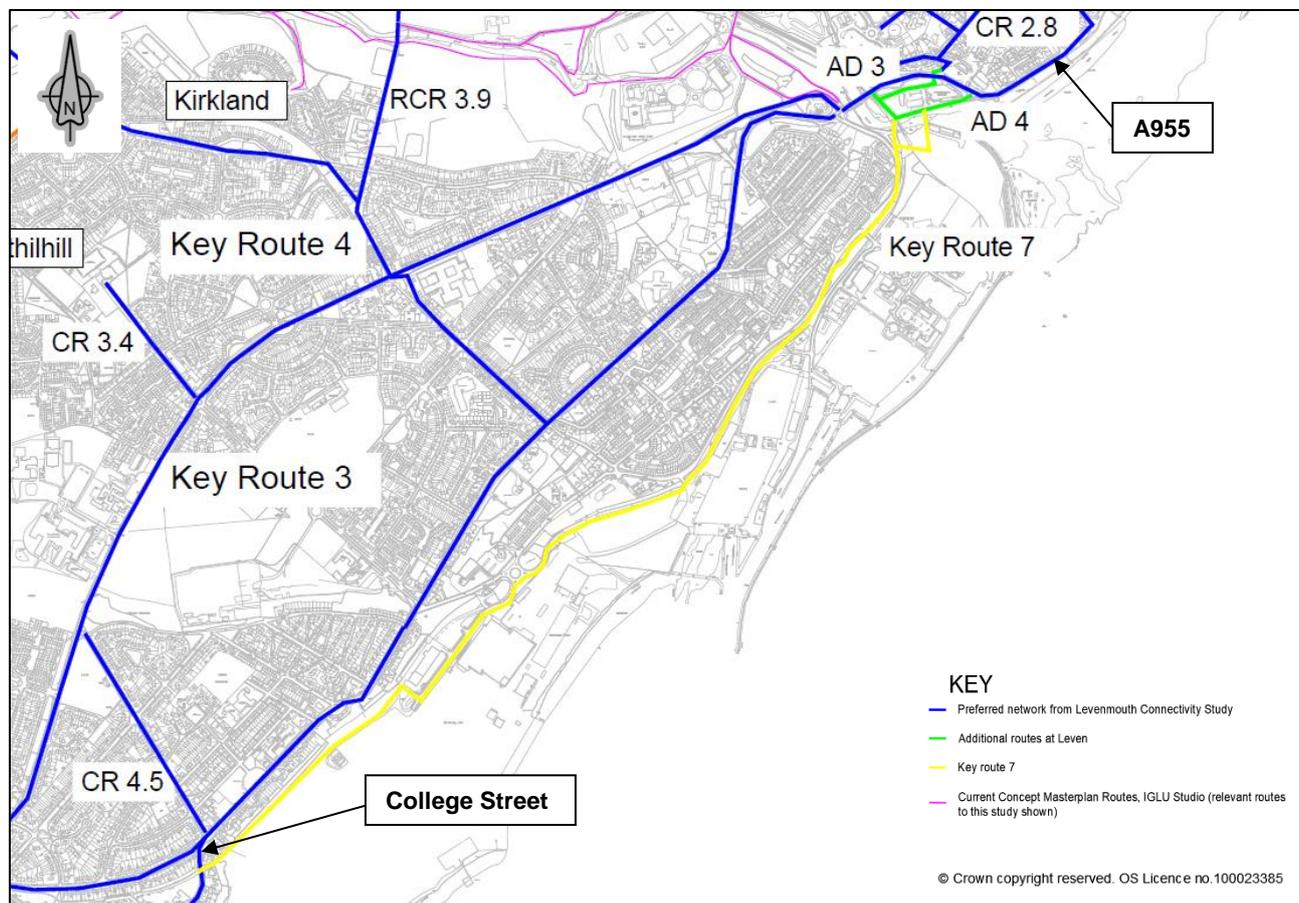


Figure 8 Additional routes at Leven

### 3.2. Route Descriptions

A general summary and the existing type of active travel provision of each route is shown in Table 1. Routes are shown in Fig. 7 and 8.

Additional Route 1 (AD1) and Additional Route 2 (AD2) provide connections from communities located in west Levenmouth (Windygates, Cameron Bridge, Methilhill) to Cameron Bridge rail station, river paths and the wider network. Additional Route 3 (AD3) and Additional Route (AD4) are located in proximity to Leven Sports Centre and connect the Leven rail station to Leven and Methilhill. Key Route 7 provides a connection from Buckhaven to Leven, passing Fife Energy Park.

**Table 1** Levenmouth active travel additional routes descriptions

Route	Start and End points	Length (km)	Current Provision
Additional Route 1 (AD1)	Windygates Roundabout to Station Road at Cameron Bridge Hospital.	1.6km	No cycle provision. Footpaths available on both sides along the A916 and Station Road north of the A911, varying in width from 0.5 to 2.3m. Users must then use an existing stepped pedestrian overbridge or an uncontrolled crossing to cross the A911. Footways then present along the south part of Station Road, approximate widths 1.3 to 3.0m.
Additional Route 2 (AD2)	From the A915 uncontrolled crossing to Oakvale Road.	1.7km	No surfaced provision for active travel use – dirt path approximate width 2.0m adjacent to the river, and footway on the south side of Poplar Road width 1.7m.
Additional Route 3 (AD3)	Bawbee Bridge to the A955.	0.3km	Ramp 0.9m in width from Leven Sports Centre car park to the A955. No further active travel provision.
Additional Route 4 (AD4)	A955 from Swimming Pool entrance to South Street.	0.4km	2.0m footway adjacent to the Leven Sports Centre. Remainder of route is not currently for active travel use.
Key Route 7 (KR7)	South Street from Bawbee Bridge to College Street.	1.9km	No designated cycle provision. Continuous footpath provided along South Street on the north side. Footway provided along the south side, varying width 1.6 to 1.9m.

## 4. Appraisal and Concept Design

### 4.1. Standards and Guidance

Following best practice guidance within the Places for Everyone (PfE) project pack, segregated provision is best practice in designs within urban settings. This influences the provision hierarchy considered. Design aspects that have been used in design decisions are as follows:

- Footways should be 2m wide at a minimum, wherever possible;
- Continuous footways and cycleways across side roads and accesses should be prioritised, clearly defined and unambiguous for all users;
- Where cycling is proposed on carriageways (ie. not segregated), traffic speeds are expected to be 20mph or less and vehicle numbers are expected to be reduced to <2000 vehicles per day. On these streets, projects are likely to require other 'quietway'-style interventions and/or traffic restrictions in order to meet the standards expected;
- Dependent on local setting and context, best practice widths for urban cycleways are 2.5m for one way and 4m for bi-directional routes;
- Cycleway materials are expected to be clearly visible, contrasting to the footway, and durable, especially at junctions; and
- On primary arteries next to cycleways in towns and cities (used by buses and HGVs) two-way carriageway widths are expected to be a maximum of 6m on straight sections of road and 6.5m on corners. On other routes, widths are expected to be considerably narrower.

In conjunction with the PfE documents, 'Cycling by Design', 'Roads for All', LTN 1/20 have been utilised. Cycling by Design 2010 is currently being revised. To maintain up to date requirements within the concept design, reference to the draft Cycling by Design has also been undertaken.

### 4.2. Provision Hierarchy

Assessment was undertaken to determine if segregated provision could be accommodated within the space available within urban areas. Where the desired type and width of provision could not be accommodated, other provision types were assessed in the order of:

- Segregated, bi-directional provision using minimum (where applicable) widths and buffers;
- On-road cycle provision with traffic calming (20 mph speed limit and traffic flows less than 2000 veh/day) and widening of footway to desired width, but if not possible to minimum width; and
- Shared provision (only to be considered along short sections where no other provision can be accommodated/ out with urban locations).

### 4.3. Cross-Section Widths

The desired widths for bi-directional cycleway provision sought within the design are shown in Table 2. Minimum widths follow guidance set out in PfE and Cycling by Design.

**Table 2** *Bi-directional provision measurements*

Type of Provision	Desired Width	Minimum Width
Footway	2.5m	2.0m
Cycleway	4.0m (bi-directional)	3.0m (bi-directional)
Buffer	0.7m (where speed limit is 30mph or less) 1.7m (where speed limit is 40mph or more)	0.5m (where speed limit is 30mph or less) 1.5m (where speed limit is 40mph or more)

Where appropriate, road narrowing or land purchase has been considered. The minimum road width considered has been 6m as many of the routes run along key distributor roads which are also bus routes.

To tie into primary provision provided within the river path network, where shared provision is recommended, a width of 3.5m has been proposed to increase coherence within the network. Shared provision has been recommended where path alignments run through green space or locations that are not urban, aligning with guidance set out in the PfE Pack.

### 4.4. Concept Design Development

Design of the network was undertaken as two mini-appraisals – sections where provision types aligning with PfE could be implemented and areas with constraints restrict potential, denoted as pinch points.

The first mini-appraisal considered the design of areas where provision types aligning with PfE could largely be implemented. The appraisal considered which side of the carriageway that provision should be provided, and the cross-sections that could be achieved. The preferred option was based upon:

- Speed limit and anticipated traffic flow of the routes;
- Available verge width or road space width (with potential to narrow the road space);
- Trip generators on either side of the route;
- Health, safety and environmental impacts; and
- Number of access crossings required.

- Figures 9 to 12 illustrate the proposal arising from this assessment, providing an overview of provision types for each route. For full details of the assessment of the additional routes outwith the pinch points, see Appendix B.

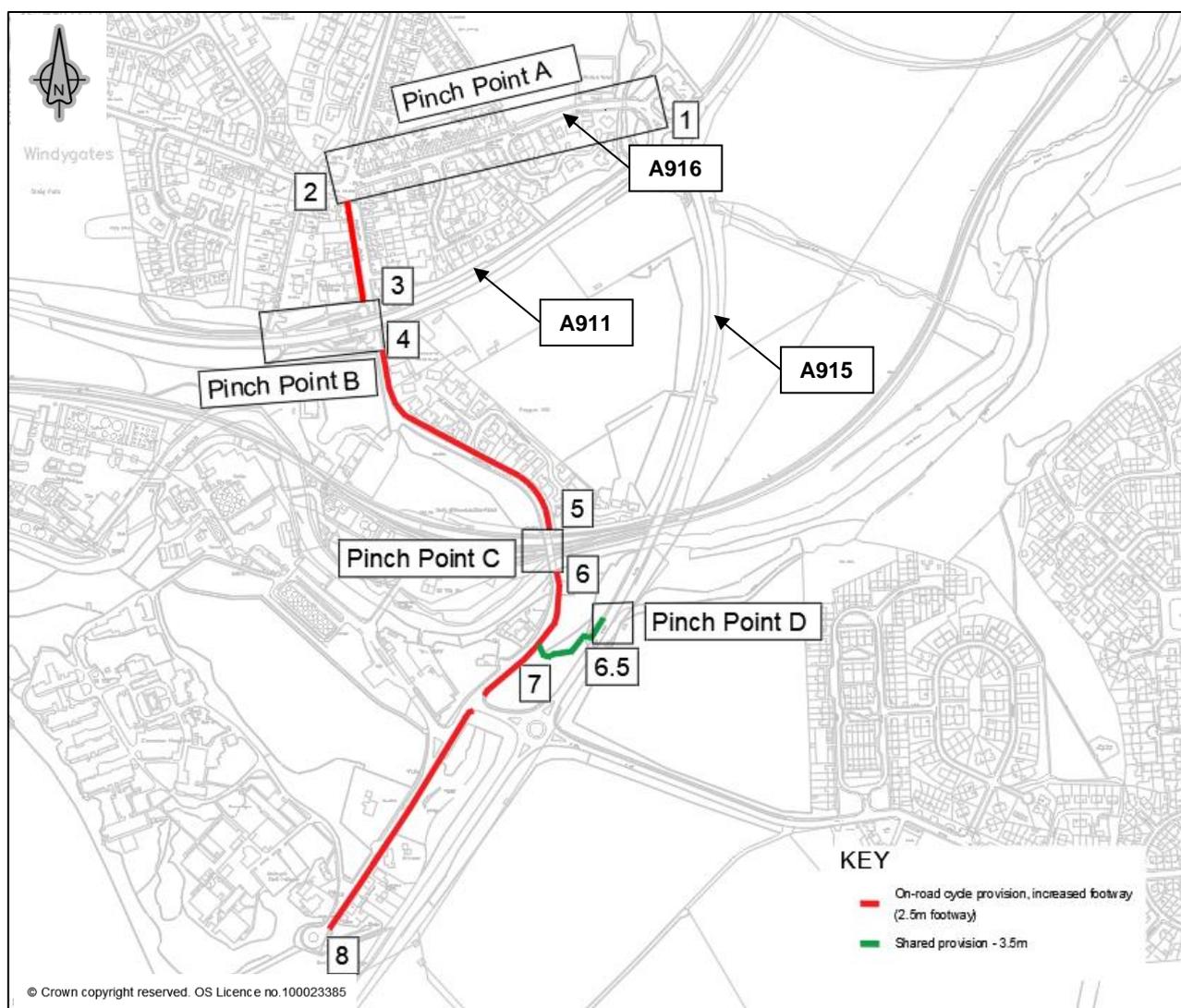


Figure 9 Additional Route 1 (AD1) proposals (excluding pinch points)

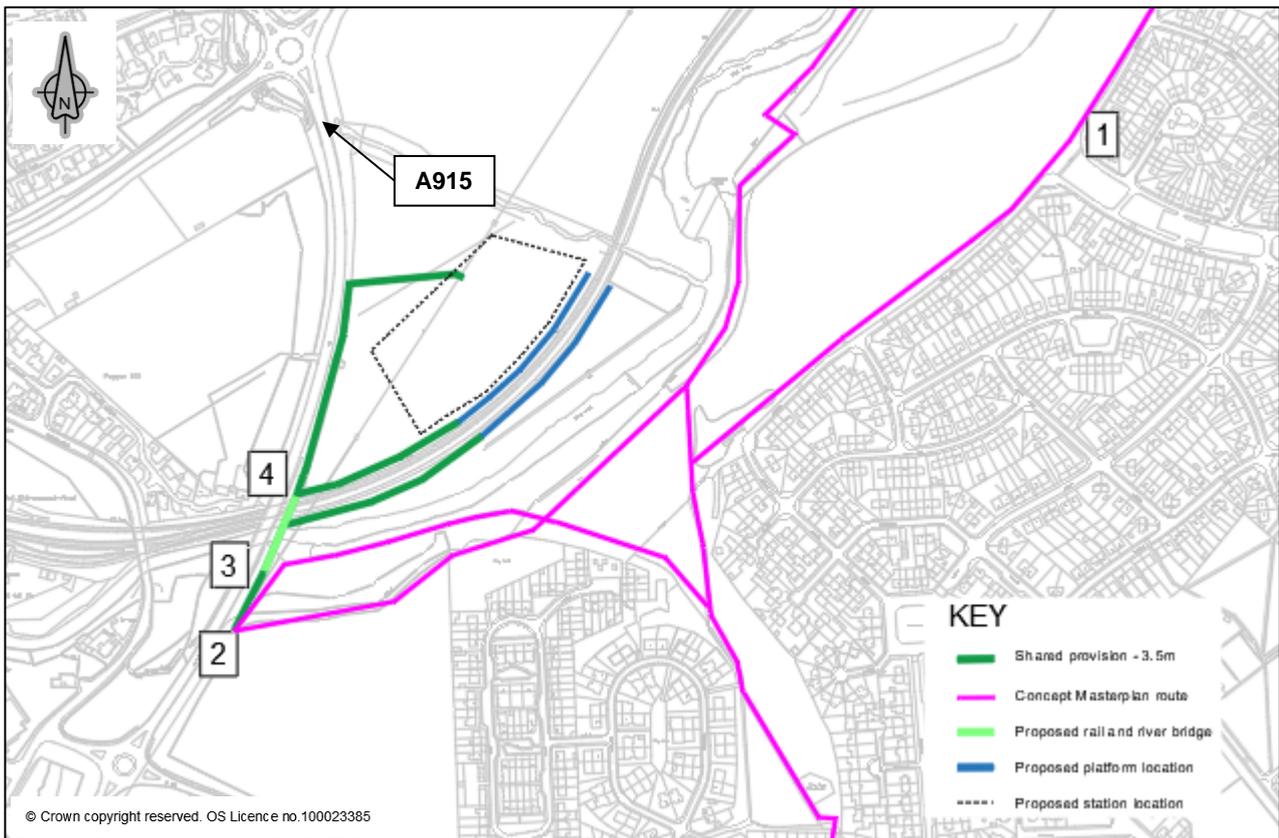


Figure 10 Additional Route 2 (AD2) proposals (no pinch points)

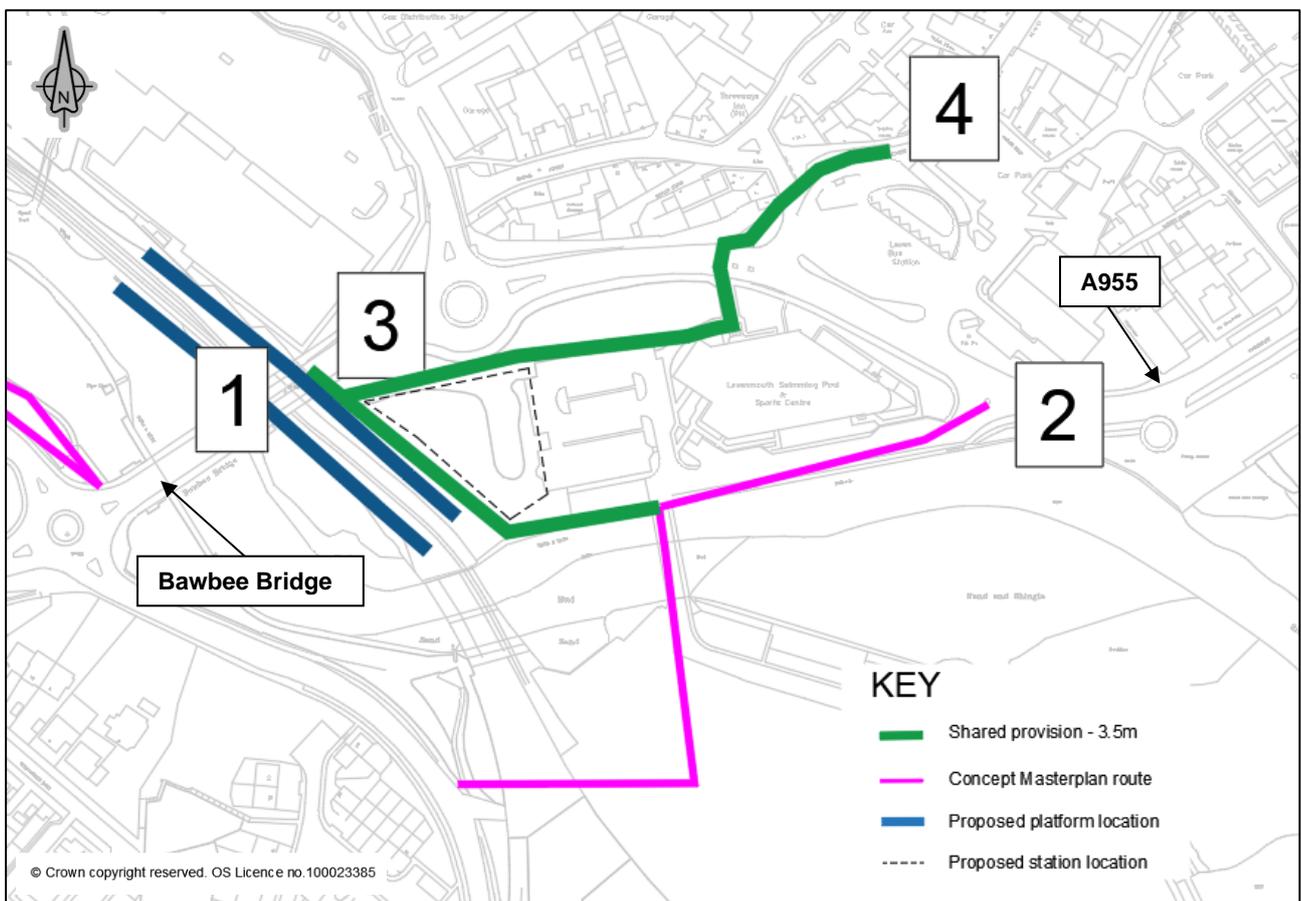
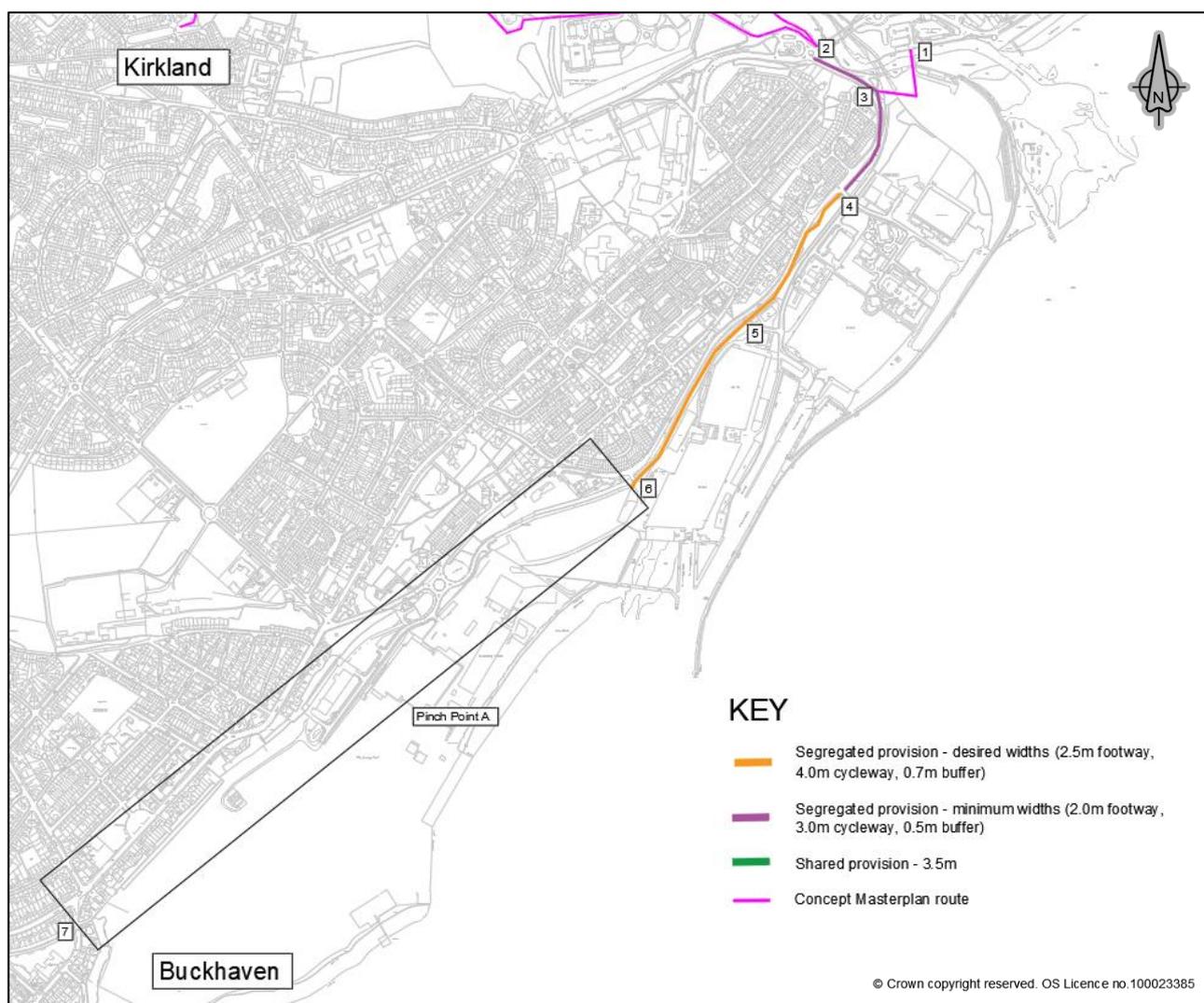


Figure 11 Additional Routes 3 and 4 (AD3 and AD4) proposals (no pinch points)



**Figure 12** Key Route 7 (KR7) proposals (excluding pinch points)

#### 4.5. Pinch Point Appraisals

The second stage of the appraisal for the concept design assessed pinch point locations (shown in Figures 9 to 12) where there were constraints affecting the type of provision. Options in these areas were generated and reviewed by the project partners. An appraisal of the remaining options at each pinch point was undertaken comprising a total of 15 options at five locations. The appraisal allowed a comparison between options to assess their deliverability, cost and benefits to active travel users. A design matrix was created using the following criteria:

- Safety;
- Coherence;
- Directness;
- Hierarchy of Transport Modes;
- Comfort;

- Attractiveness;
- Health and Safety/ CDM/ Environmental;
- Deliverability; and
- Indicative Value Range.

Figures 9 to 12 highlight pinch point locations for each route while Table 3 summarises the outcomes from pinch point appraisals. The full pinch point assessment, including individual objective summaries and scores is included in Appendix C.

**Table 3** Pinch Point appraisal summary

Pinch Point	Location	Description	Preferred Option	Description
AD1 A	A916 from Windygates Roundabout to Station Road	Constrained cross-section limiting active travel improvements	Option C	Construct new segregated provision on the north to minimum widths along the A911, connecting to Station Road and A915 at Windygates Roundabout. Segregated provision would consist of 3m bi-directional cycle path, 2m footway and increased 1.7m buffer. Extend 40mph speed limit by 200m.
AD1 B	A916 crossing to Station Road	Improvement to current crossing provision for active travel users	Option C	Construct new signalised crossing 100m east of existing uncontrolled crossing at Station Road. Reduce speed limit from National. Extend 40mph speed limit by 200m.
AD1 C	Station Road overbridge	Limited width for active travel provision	Option A	Reduce current two-way traffic provision to one-lane (approx. 3.5m) with priority signal system in place. Reallocate remaining width to provide shared-use (approx. 3m) active travel provision on the east side of the bridge.
AD1 D	A915 crossing to river path network	Improvement to current crossing provision for active travel users	Option B	Upgrade current uncontrolled crossing – provide signalised crossing for users.
KR7 A	From Heritage Way at South Street to College Street	Initial KR7 alignment not preferred	Option C	Continue segregated provision along Station Road and High Street, and then through Memorial Park, connecting to Wellesley Road. Construct segregated provision along High Street, and shared provision through Memorial Park.

#### 4.6. New Bridge Crossing on Route AD2

As part of additional route AD2, a new river and rail bridge crossing is required to connect Methilhill south of River Leven to the new rail station, and links into Key Route 5. Land purchase is required to provide connections. The location of a new crossing has been subject to high level consideration as part of the concept design of the additional routes. Figures 13 to 15 show the indicative alignments considered, and a summary of advantages and disadvantages of each option is summarised in Table 4.

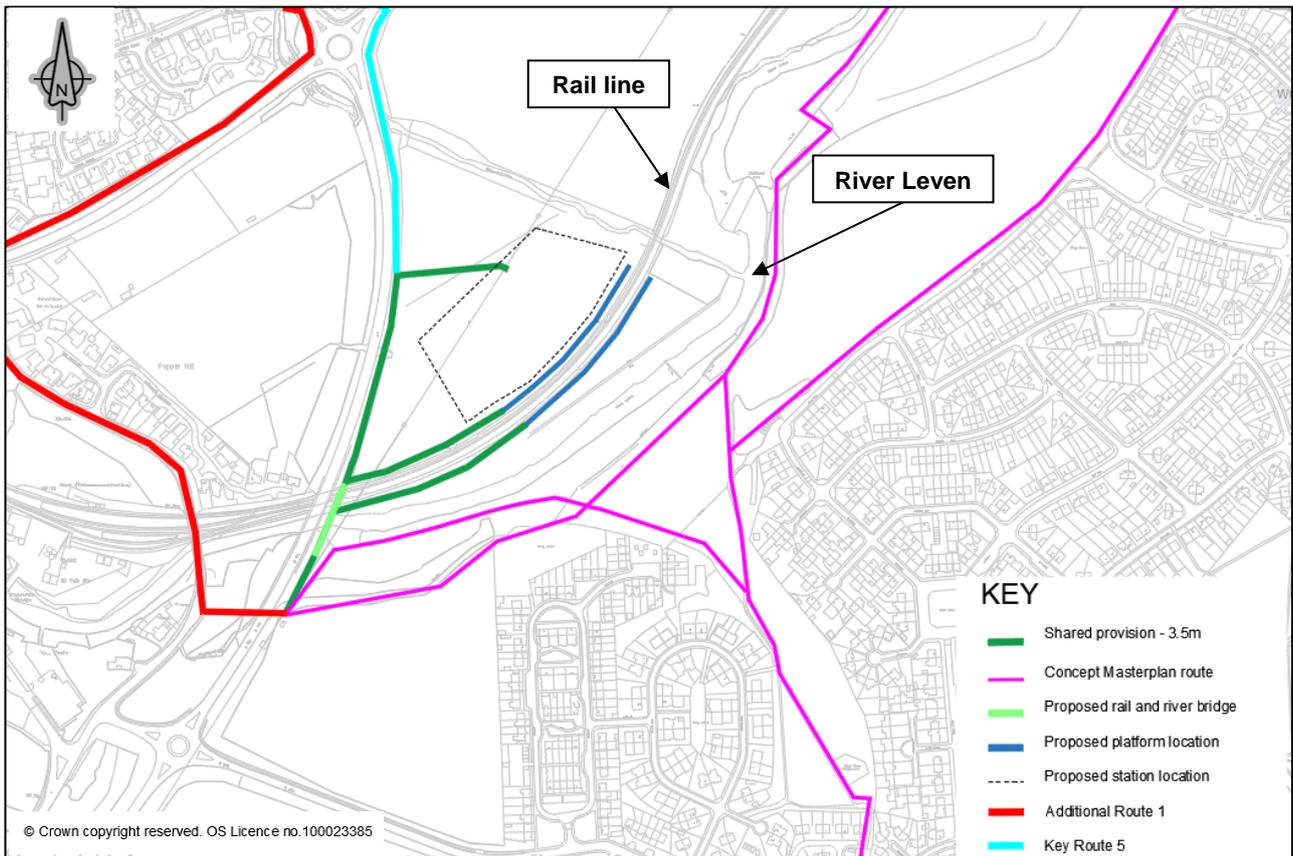


Figure 13 Option A proposal for bridge crossing on Additional Route 2

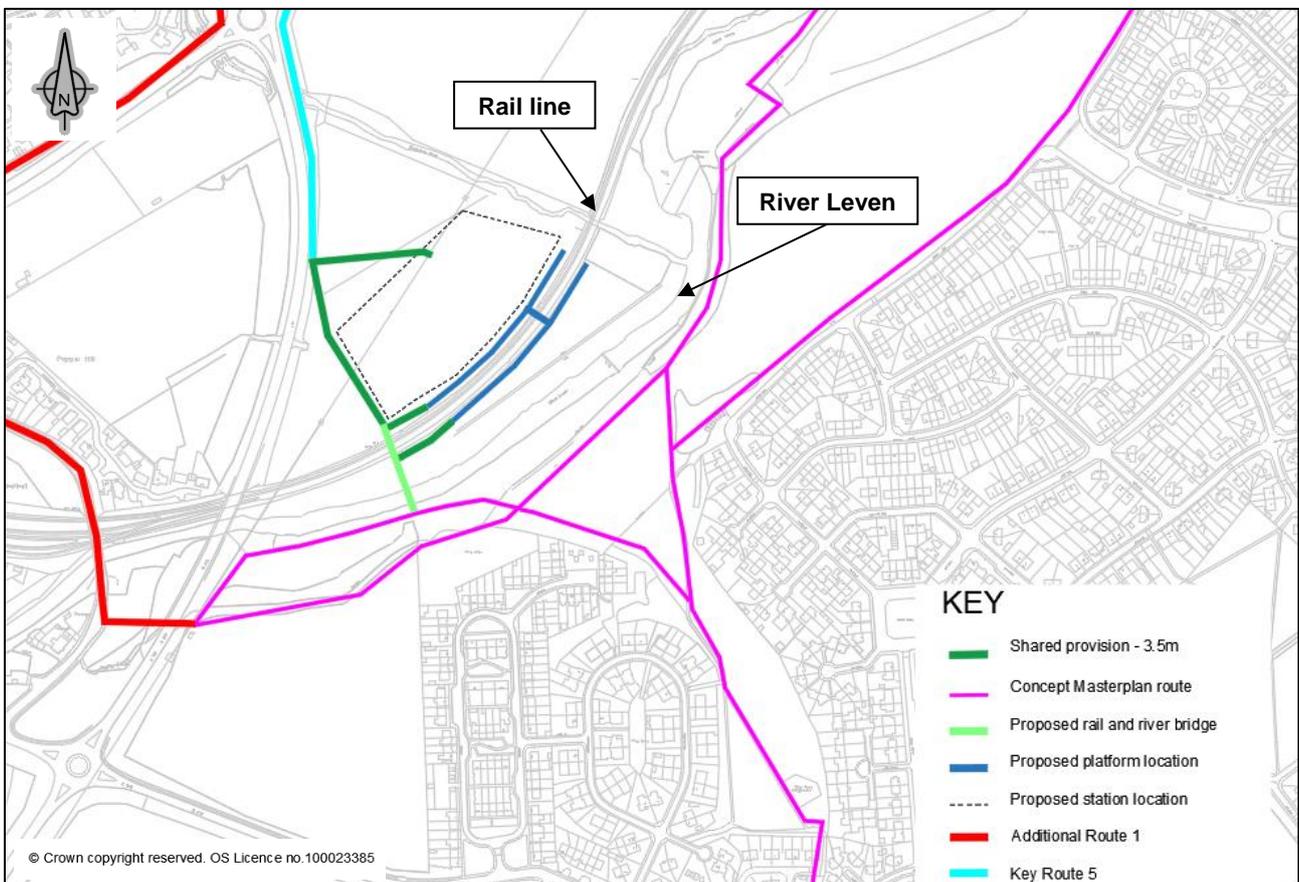


Figure 14 Option B proposal for bridge crossing on Additional Route 2

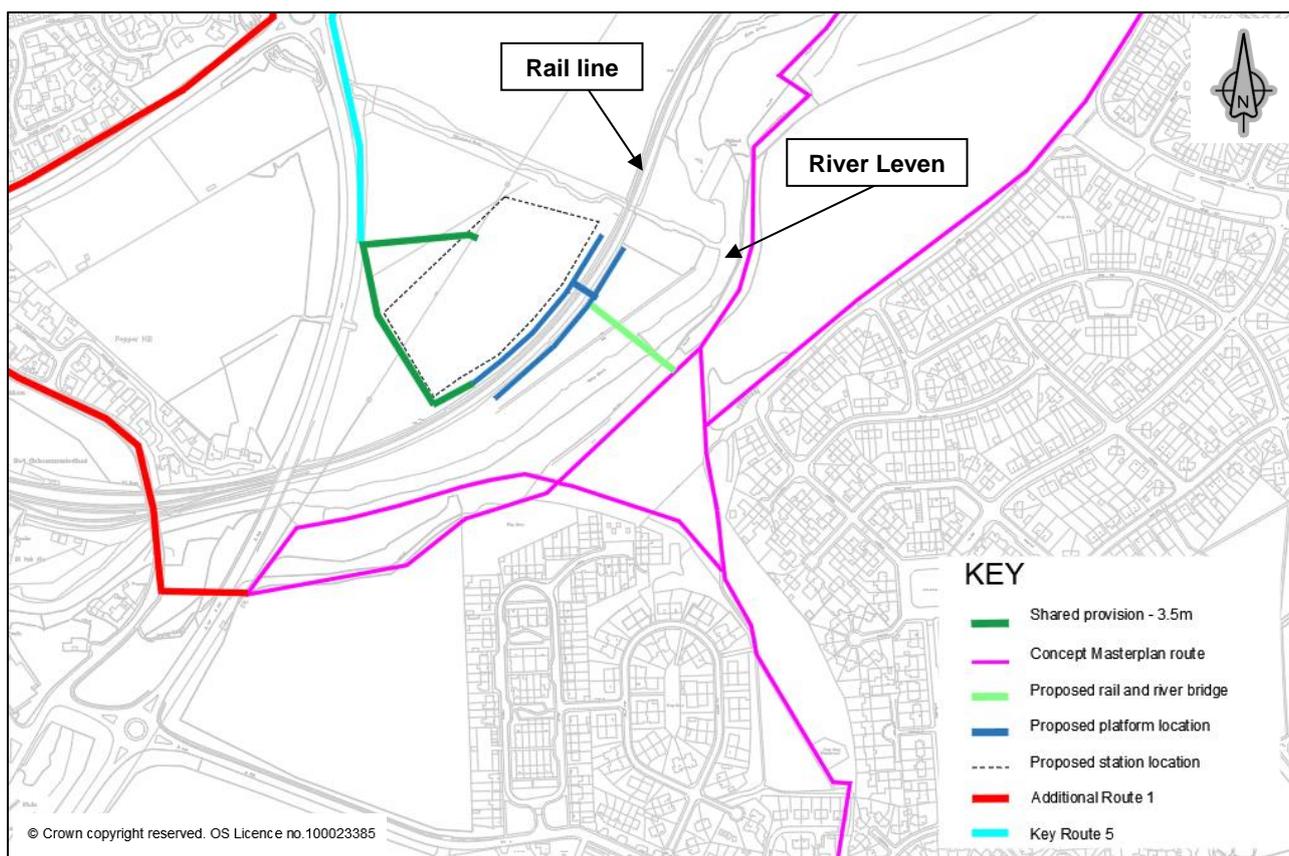


Figure 15 Option C proposal for bridge crossing on Additional Route 2

Table 4 Crossing proposals

Option A	Option B	Option C
<ul style="list-style-type: none"> <li>✓ River and rail line close together, therefore minimising structure length</li> <li>✓ Less visual impact on the surrounding view as it is adjacent to an existing structure</li> <li>✓ Can run parallel to the current A915, allowing for rail line clearances</li> <li>✓ New housing being built to the south of the B932 will connect into the station and also have a direct link to the A915</li> <li>✓ Potential to widen the current A915 structure instead of constructing a parallel bridge</li> </ul>	<ul style="list-style-type: none"> <li>✓ New housing being built to the south of the B932 will connect into the station and have a direct link to the A915</li> <li>✓ Reduced distance for users travelling to and from Methilhill</li> <li>✓ Single structure required to cross river and rail – more coherent</li> <li>✗ Location increases impact on surrounding view and river habitats</li> <li>✗ Two bridges required to cross the railway (including the rail line platform bridge)</li> </ul>	<ul style="list-style-type: none"> <li>✓ Reduced distance for users travelling to and from Methilhill</li> <li>✓ One bridge crossing the rail line</li> <li>✗ Location increases impact on surrounding view and river habitats</li> <li>✗ Less direct connection for users using the crossing to connect to Key Route 5</li> <li>✗ Distance between structure and platforms may require lift/ switch back ramp</li> <li>✗ Users required to use Network Rail bridge – reduces coherence of the route.</li> </ul>

<ul style="list-style-type: none"> <li>✓ Landscaping can be undertaken on piers and abutments to blend into the surrounding environment</li> <li>✓ Reduced impact on habitats further along river</li> <li>× Commuters from Methilhill have to travel approx. 150m longer to reach platforms as opposed to a bridge further west</li> <li>× Two bridges required to cross the railway (including the rail line platform bridge)</li> <li>× Rest areas required to connect bridge to platforms</li> <li>× Scour implications on pier locations</li> <li>× Use of higher levels for bridge construction will result in higher costs</li> </ul>	<ul style="list-style-type: none"> <li>× Less direct connection for users using the crossing to connect to Key Route 5</li> <li>× Distance between structure and platforms may require lift/switch back ramp</li> </ul>	
--	---	--

To accommodate active travel users from Cameron Bridge and Windygates, it was deemed that a structure parallel to the A915 (Option A) would provide a linear link across the river and rail line, and also provides connection for residents at Methil Brae to access Key Route 5 as well as the station platforms. Connection between the overbridge and platforms in Option A can be provided using ramps. Option C would result in users needing to cross the river and rail line separately, reducing the coherence of the link. Option B would decrease from the visual appearance of the river through construction of a new stand along structure.

Some key active travel criteria to be adhered to in the subsequent design stages include:

- Recommended ramp gradient should be 1:20 or shallower where possible;
- For any gradient below 1:22, intermediate horizontal landings will be required;
- Landings must be a minimum of 2m in length; and
- The width of the overbridge to be cohesive with the approach and exit provision.

## 4.7. Concept Design Summary

Table 5 summarises the design decisions made within the concept design appraisals. See Appendix D for concept design drawings. See Fig. 16 for route locations.

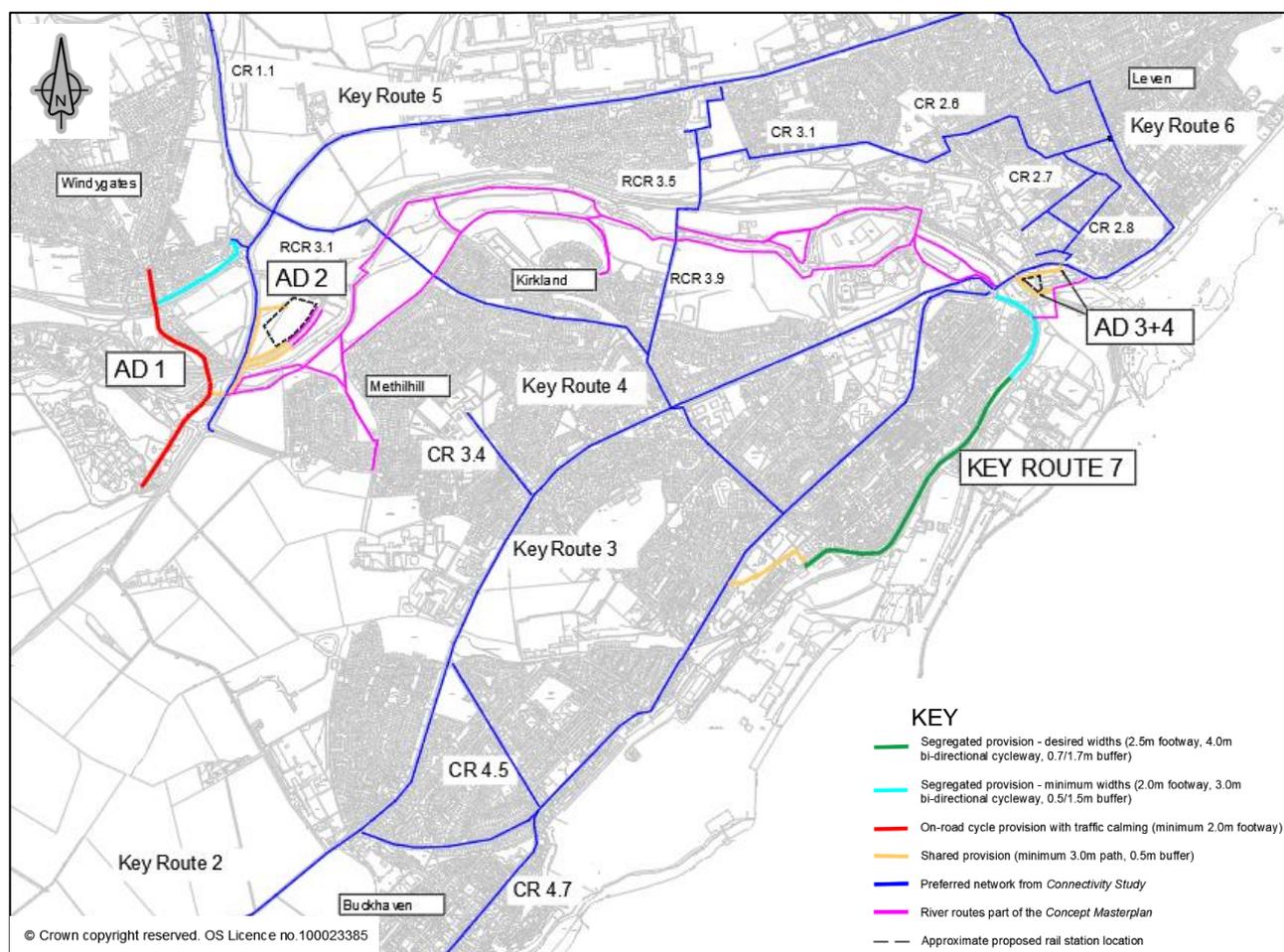


Figure 16 Concept design overview

Table 5 Network design decision summary

Route	Total Length	Trip Generators	Communities Linked	Connection to Other Routes	Proposed Provision type	Length of Provision Type
Additional Route 1	1.6km	Cameron Bridge Hospital, Diageo Distillery	Windygates, Cameron Bridge, Methilhill	KR5	Segregated – desired width	0.4km
					On-road	1.1km
					Shared	0.1km
Additional Route 2	1.7km	Cameron Bridge Train Station	Methilhill	KR4, KR5, CR1.1	Shared	0.8km
					Tie in to IGLU Studio Concept Masterplan	0.9km
Additional Routes 3+4	0.7km	Leven Swimming Pool, Leven High Street, Leven Bus Station	Leven, Innerleven	KR6, KR7	Shared	0.4km
					Tie in to IGLU Studio Concept Masterplan	0.3km

Route	Total Length	Trip Generators	Communities Linked	Connection to Other Routes	Proposed Provision type	Length of Provision Type
Key Route 7	1.9km	Fife Energy Park, Methil High Street, Methil Docks, Memorial Park	Innerleven, Methil	KR2, KR3, AD4	Segregated – desired width	1.1km
					Segregated – minimum width	0.4km
					Shared	0.4km

## 4.8. Other Design Considerations

### *Upgrade of Junctions and Crossings*

Continuous footways are recommended at side street junctions to help slow vehicles and help active travel users manoeuvre junction crossings. These have been shown on the concept design drawings for the additional routes.

Existing and proposed toucan crossings are to be widened to minimum width of 5m to minimise potential conflicts between cyclists and pedestrians.

The crossing points to be provided at Windygates roundabout should be assessed at the detailed design stage. The concept design includes two controlled crossings on the A916 and A915 east arms are proposed to accommodate active travel movements. However, potential to signalise the roundabout, or remove the roundabout to provide a signalised junction should be considered.

### *Traffic Regulation Orders*

Traffic Regulation Orders (TROs) are required at locations where parking is recommended for removal and where the speed limit requires reduction to accommodate the concept design. This is applicable to the A911, where it is recommended to extend the 40mph speed limit 200m west, and Station Road from the A916, where it is proposed to reduce the speed limit to 20mph and remove approximately 4 parking spaces. Confirmation of parking removal and speed limit reduction within the concept designs will require consultation to determine community perception and acceptance of the proposals. No further TROs have been identified at this stage.

## 4.9. Land Purchase

Some routes require land purchase to provide sufficient space for improvements. Additional land requirements are shown on concept design drawings and detailed in Table 6.

**Table 6** Land purchase requirements summary

Route	Location	Area of Land Purchase Required	Reason for Land purchase	Landowner Details (if known)
AD1	Station Road south of Station Road	200m <sup>2</sup>	Desire line currently runs through this green space. It is more direct	Trustees of Michael John Wemyss

Route	Location	Area of Land Purchase Required	Reason for Land purchase	Landowner Details (if known)
	Overbridge to connect to A915		between Station Road and the A915 than the current available provision.	
AD2	Connection across the River Leven and rail line at the A915.	400m <sup>2</sup>	Land required to construct new overbridge for active travel users	Trustees of Michael John Wemyss
Key Route 7	Land at High Street, adjacent to Methil Brae junction	500m <sup>2</sup>	Land purchase required to provide segregated provision, increasing cohesion of the route.	Unknown

#### 4.10. Cost Estimates

Table 7 highlights the initial cost estimate of each route with a 44% optimum bias included. Key considerations for undertaking cost calculations are as follows:

- Rates have been taken from SPONS and review of similar schemes;
- A lighting assessment is required to confirm the location and frequency of street lighting;
- Drainage survey and assessment to be undertaken to confirm the impact on the existing drainage system improvements will have;
- Further detail into carriageway joints and milling needed to confirm the quantities for widening active travel provision into the carriageway;
- Further detail into carriageway joints and milling needed to confirm the quantities for widening active travel provision into the carriageway; and
- No utility costs have been included at this stage given the proposals predominantly involve widening of existing footways and creation of new running surfaces at existing verge level.

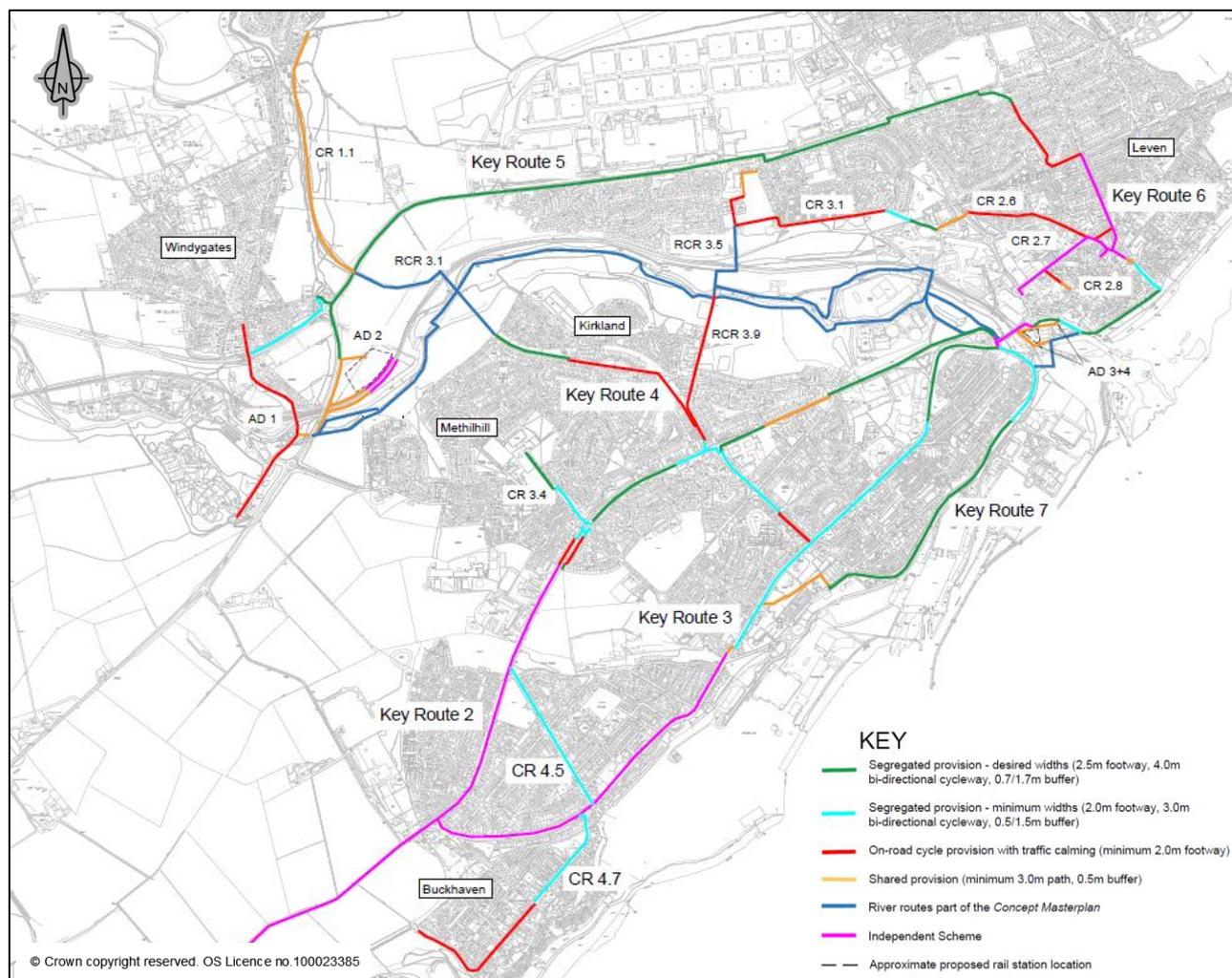
*Table 7 Capital Cost estimates per route*

Route	Initial Cost Estimate
AD1	£1,190,000
AD2	£2,675,000
AD3+4	£140,000
Key Route 7	£1,920,000
<b>Total</b>	<b>£5,920,000</b>

## 5. Combined Preferred Network

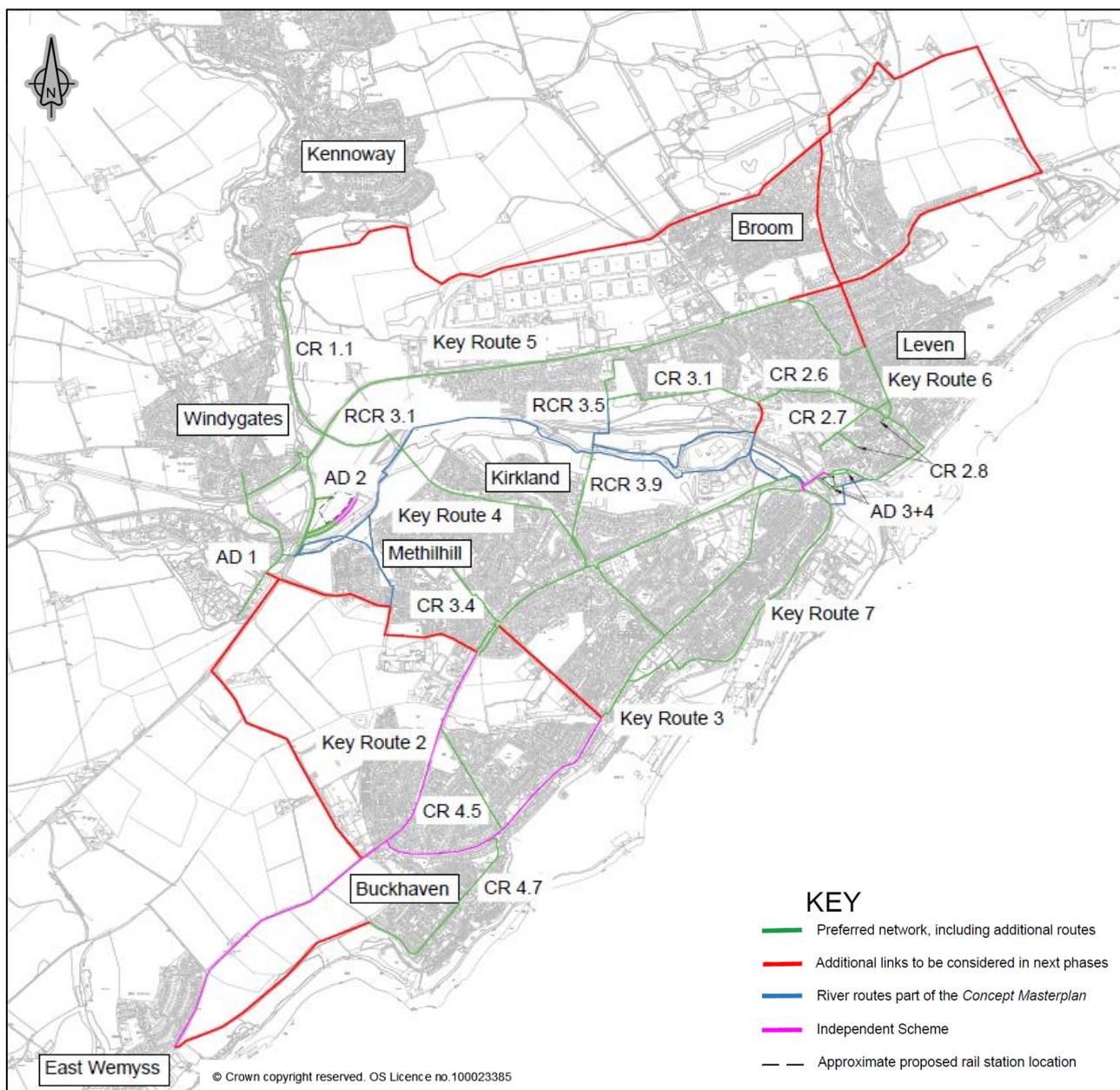
### 5.1. Overview

Figure 17 summarises the provision recommended for the Levenmouth Connectivity preferred network as well as the additional routes considered within this report. This shows the combined preferred network to date.



**Figure 17** Combined network concept design summary – for full size overview, see Appendix D

From consultation undertaken as part of the *Levenmouth Connectivity Study*, public engagement feedback via an online survey highlighted routes that would benefit the network connections. These links are shown in Fig. 18, see Appendix D for a full-size plan. It is recommended that these connections are considered in the next phase of the project to integrate public engagement results into the network. Routes included help provide more connection between East Wemyss and Buckhaven to Cameron Bridge rail station and the River Leven.



**Figure 18** Additional links from public engagement to be considered in the next phase

## 5.2. Cost Estimate Summary

### Capital Costs

Table 8 summarises costs for the preferred network, including the additional routes. Note key considerations highlighted in Section 4.10 are applicable for all routes.

**Table 8** Preferred network cost estimate including additional routes

Route	Initial Cost Estimate
Key Route 2	£2,125,000
Key Route 3	£1,765,000
Key Route 4	£1,315,000
Key Route 5	£3,965,000

Route	Initial Cost Estimate
Key Route 6	£1,020,000
Key Route 7	£1,920,000
Connecting Route 1.1	£410,000
Connecting Route 3.1	£840,000
Connecting Route 2.6	£275,000
Connecting Route 2.7	£40,000
Connecting Route 2.8	£75,000
Connecting Route 3.4	£310,000
Connecting Route 4.5	£490,000
Connecting Route 4.7	£710,000
River Connecting Route 3.9	£230,000
Bawbee Bridge	£545,000 (no structural costs included as part of separate scheme)
AD1	£1,190,000
AD2	£2,675,000
AD3+4	£140,000
<b>Total</b>	<b>£20,040,000</b>

### *Maintenance and Renewal Costs*

At this stage, an estimate of time frames which the key elements on new infrastructure will require maintenance is shown in Table 9. Assets will be added to Fife Council's existing infrastructure list, therefore additional routine maintenance requirements will be necessary and new features will require added to typical cyclic maintenance schemes currently in place.

**Table 9** Network maintenance requirements

Infrastructure	Maintenance Assumptions	Quantity (unit)	Estimated Maintenance Cost
Active Travel Surfacing	To be confirmed at detail design based on pavement layers – typical design life of 20 years. Will require resurfacing once in the time frame.	2.78 km	£259,800
Markings/ white lining	Typical relining required every 7 years. This may vary due to lighter traffic footprint due to active travel use only – potential for increased design life. Will be required twice in maintenance period.	3.78 km	£15,550
Sign Upgrades	Sign faces will require cleaning, recommended interval between cleaning varies from 3 to 5 years. Typical design life for signs is around 20 years. Will require sign face upgrade once in the time frame.	17 number	£640

Infrastructure	Maintenance Assumptions	Quantity (unit)	Estimated Maintenance Cost
Barrier and Fencing	Typical barrier and fencing have a design life of 20 years for metal components. Will require replacement once in the time frame.	0.3km	£37,650
Drainage	Typical design life of 20 years. Anticipated maintenance will require unblocking of gullies where debris collects. Will require replacement of gullies once in the time frame.	329 number	£241,500
Traffic Signals	Typical design life of 20 years or if newer components become available for upgrade. Will require replacement once in the time frame.	8 number	£320,000
Street Lighting	Typical design life of 20 years for the street lighting column. Typical design life of lighting luminaire approximately 100,000 hours (approximately 20-25 years based on 4,100 hours a year usage). Will require replacement once in the time frame.	75 number	£229,500
Winter Maintenance Requirements	Winter months identified as October to April (7 months, 211 days). Assume daily operation between December and mid-March, with 50% operation remaining months (approximately 160 days). Required annually. This cost includes for plant, labour and materials to grit and maintain operation of segregated active travel provision during the winter months. Assumed plant will have to run the length of provision twice due to its width compared to machinery.	2.78 km	£274,550

One new major structure is proposed within AD2, parallel to the A915. It is recommended this structure will be added to any current maintenance plans. It is recommended that the buffer is surfaced to reduce maintenance required if this was to be a grass strip. This reduced cyclic maintenance requirements along the new active travel network.

### 5.3. Programme of Works Summary

Table 9 considers the additional routes alongside the preferred network outlines in the *Levenmouth Connectivity Study*. Routes have been organised into a preferred programme of delivery, highlighting the estimated time it would take to complete investigation, design and construction. However, it should be noted that budgetary constraints, land purchase requirements and any future public consultation feedback could have an impact on the projected time frames, and that a staggered approach to investigation, design and construction may be required to suitably resource the project. Construction estimation includes for tender document creation and tender period, subject to review.

The following factors have been used to prioritise the routes into three categories:

- Priority 1 – links providing connection to the new rail stations (estimated opening date December 2023)
- Priority 2 – remaining Key Routes
- Priority 3 – remaining Connecting and River Connecting Routes

**Table 10** Preferred recommendations

Route	Description for priority rating	Investigation/ Design Requirements	Estimated Investigation/ Design Timeline	Estimated Construction Timeline
<b>Priority 1</b>				
Additional Route 1	Route provides connection to new rail station and connects several communities such as Windygates and Cameron Bridge to the network.	Pavement, geotechnical (along A911 where construction recommended in current verge), drainage, lighting, signal.	9 months	9 months
Additional Route 2	Route provides key connection across the River Leven, connecting Methilhill to north of the river. Provides connection to new rail station.	Pavement, geotechnical (for bridge construction), structural, drainage, lighting, signal.	15 months	12 months
Key Route 5	Provides connection to Diageo and the rail station as well as residential properties and other areas of employment and education.	Pavement, geotechnical (for widening into verge and adjacent land), drainage, lighting, signal.	15 months	12 months
Additional Routes 3+4	Provides connection from Leven High Street to the new rail station.	Pavement, drainage, lighting, signal.	2 months	2 months
Key Route 2	Serves several communities, areas of education and health centres. Key connection through Methilhill.	Pavement, geotechnical (for widening into verge and adjacent land), drainage, lighting, signal.	12 months	12 months
Bawbee Bridge	Key link between Methilhill and Leven, connecting between several communities in Methilhill and areas of retail and employment in Leven. Also situated near new rail station.	Pavement, structural, drainage, lighting, signal.	15 months	9 months

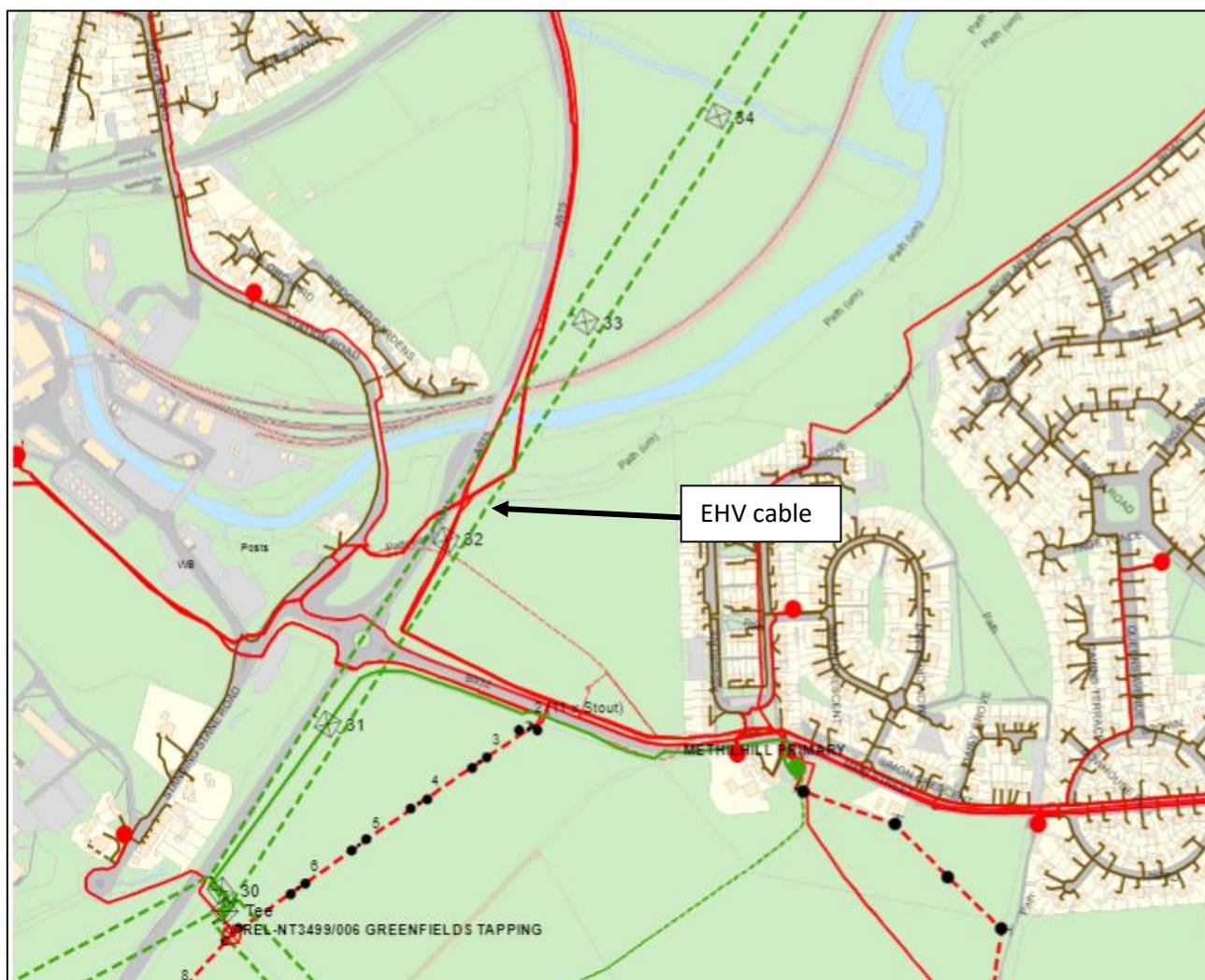
Route	Description for priority rating	Investigation/ Design Requirements	Estimated Investigation/ Design Timeline	Estimated Construction Timeline
<b>Priority 2</b>				
Key Route 3	Connects residential areas to areas of education and retail/ employment through Methilhill.	Pavement, drainage, lighting, signal.	15 months	12 months
Key Route 6	Provides connection to areas of employment and retail through Leven. Connects to Bawbee Bridge and new rail station.	Pavement, drainage, lighting, signal.	15 months	12 months
Key Route 4	Connects Kirkland to the river path network and connects residential areas to other Key Routes.	Pavement, drainage, lighting, signal.	15 months	12 months
Key Route 7	Connects Fife Energy Park to Bawbee Bridge and Key Route 3.	Pavement, drainage, geotechnical (Memorial Park embankment), structural, lighting, signal.	18 months	12 months
<b>Priority 3</b>				
Connecting Route 4.7	Connects Buckhaven to the wider network and passes several areas of retail, education and employment.	Pavement, drainage, lighting, signal.	9 months	9 months
River Connecting Route 3.9	Provides a link at the River Leven for users between Kirkland/ Methilhill and Leven.	Pavement, drainage, lighting.	9 months	6 months
Connecting Route 4.5	Connects Buckhaven and other residential areas to the wider network.	Pavement, drainage, lighting, signal.	9 months	6 months
Connecting Route 2.7	Links areas of education, retail and employment to the wider network in Leven.	Pavement, drainage, lighting, signal.	9 months	6 months
Connecting Route 2.8	Links areas of education, retail and employment to the wider network in Leven.	Pavement, drainage, lighting.	2 months	6 months
Connecting Route 2.6	Connects residential areas in Leven to the wider network.	Pavement, drainage, lighting, signal.	9 months	6 months

Route	Description for priority rating	Investigation/ Design Requirements	Estimated Investigation/ Design Timeline	Estimated Construction Timeline
Connecting Route 3.1	Connects residential areas in Leven to the wider network and areas of retail and employment.	Pavement, drainage, lighting, signal.	12 months	9 months
Connecting Route 1.1	Provides a link from Kennoway to the wider network.	Pavement, drainage, lighting.	18 months	12 months
Connecting Route 3.4	Provides link to areas of employment within Methilhill.	Pavement, drainage, lighting, signal.	6 months	6 months

## 6. Deliverability

### 6.1. Site Constraints and Deliverability Considerations

Construction will impact existing utility equipment, including pipes, underground and overhead cables and cabinets along the routes. Stakeholders with apparatus in the vicinity of improvements are outlined in Section 5.10, and C2 and C3 notices must be issued to determine if diversions are required. In particular, discussion with Scottish Power required concerning an extra high voltage (EHV) cable located on the east side of the A915 at the new bridge location, see Fig. 19 for location.



**Figure 19** Scottish Power EHV cable location

Land purchase on certain routes is recommended to provide enough width for active travel improvements. This has potential to delay project implementation due to discussions with landowners. Where possible, land purchase requirements have been minimised. The deliverability impact of landowner consultation and agreement will need considered in the detailed design.

Some routes recommend removal of parking spaces and reduction in speed limits to accommodate active travel widening. Further consultation will be required to optimise road space reallocation on routes where additional width is required through carriageway narrowing. This is the case for routes such as Key Route 3.

Discussions with Network Rail are required to determine the detailed design requirements for the proposed overbridge to be constructed over the railway parallel to the A915. The final location of the overbridge will need confirmed through further investigation of the area and structural assessment.

## 7. Equality Assessments

### 7.1. Equality Impact Assessment

The Equality Impact Assessment (EqIA) has been updated to assess how the network will impact all users, including those with protected characteristics. The updated EqIA can be found in Appendix E. Some of the positive impacts the scheme will have include:

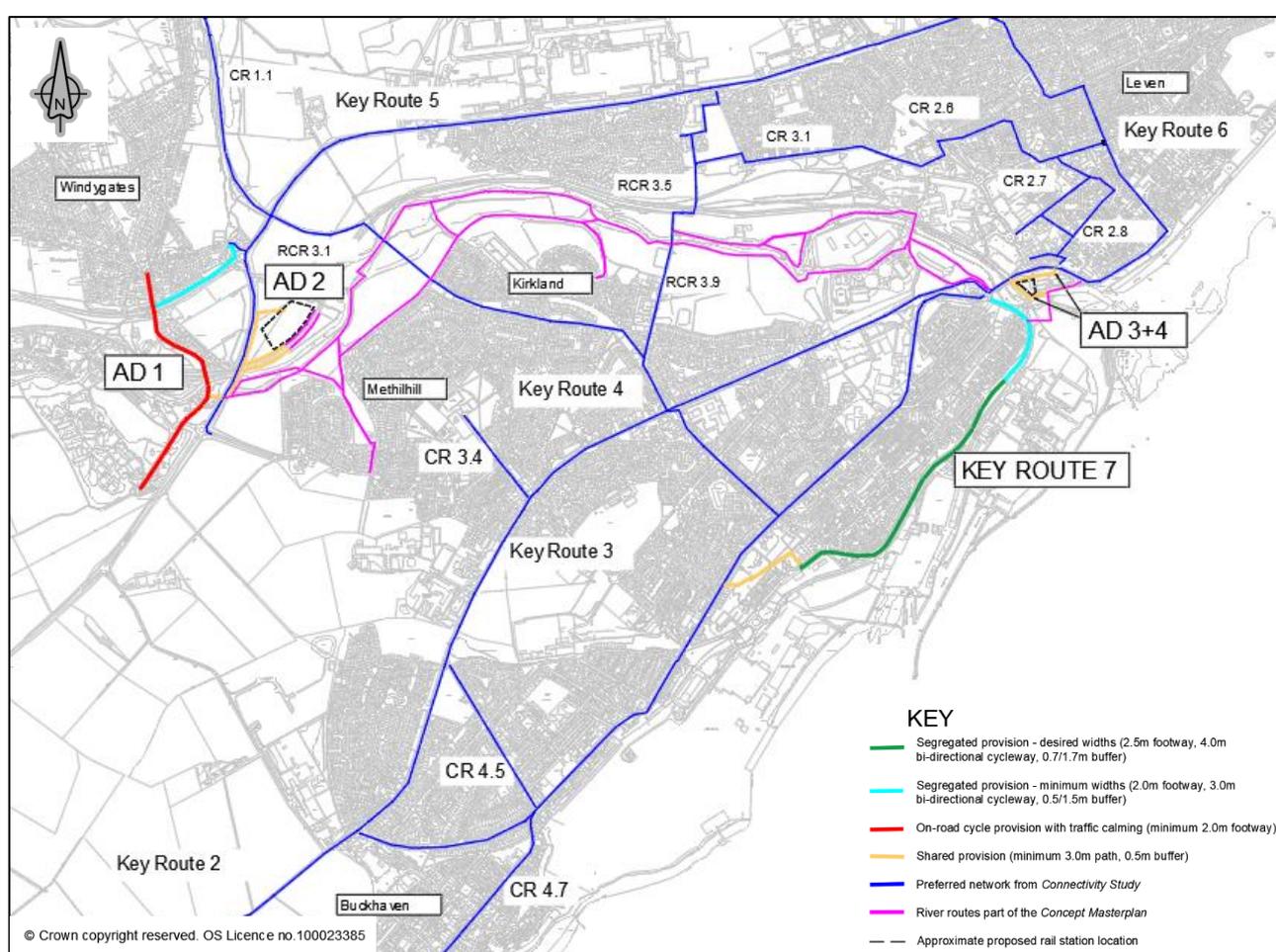
- Continuous footways, tactile paving and dropped kerbs at junctions to help users identify crossings and safely cross the road;
- Improve signage will improve wayfinding within the network;
- Access to new rail stations – provision of ramps that provide sufficient width for active travel users;
- Signalised, at-grade crossings – provides cyclists and pedestrians a more direct, easy to manoeuvre crossing provision
- Width of provision – wider footways and cycleways help provide enough width for two users to pass, such as those with wheelchairs or pushchairs; and
- Routes parallel to carriageways – this will promote passive surveillance and increase safety perceptions of the routes.

## 8. Conclusion and Recommendations

This report summarises additional routes assessed to help provide connectivity from the wider Levenmouth network to the proposed rail stations. At the time of the initial Levenmouth Connectivity project, rail station locations were not known, and therefore links between the network and stations could not be analysed.

From this additional assessment, five routes have been appraised to identify available opportunities and constraints that restricted providing active travel improvements to meet Places for Everyone (PfE) requirement. A pinch point appraisal was undertaken at locations where constraints affected the type of provision that could be provided. A total of 15 options at five locations were assessed.

A summary of the types of provision provided within the network are shown below:



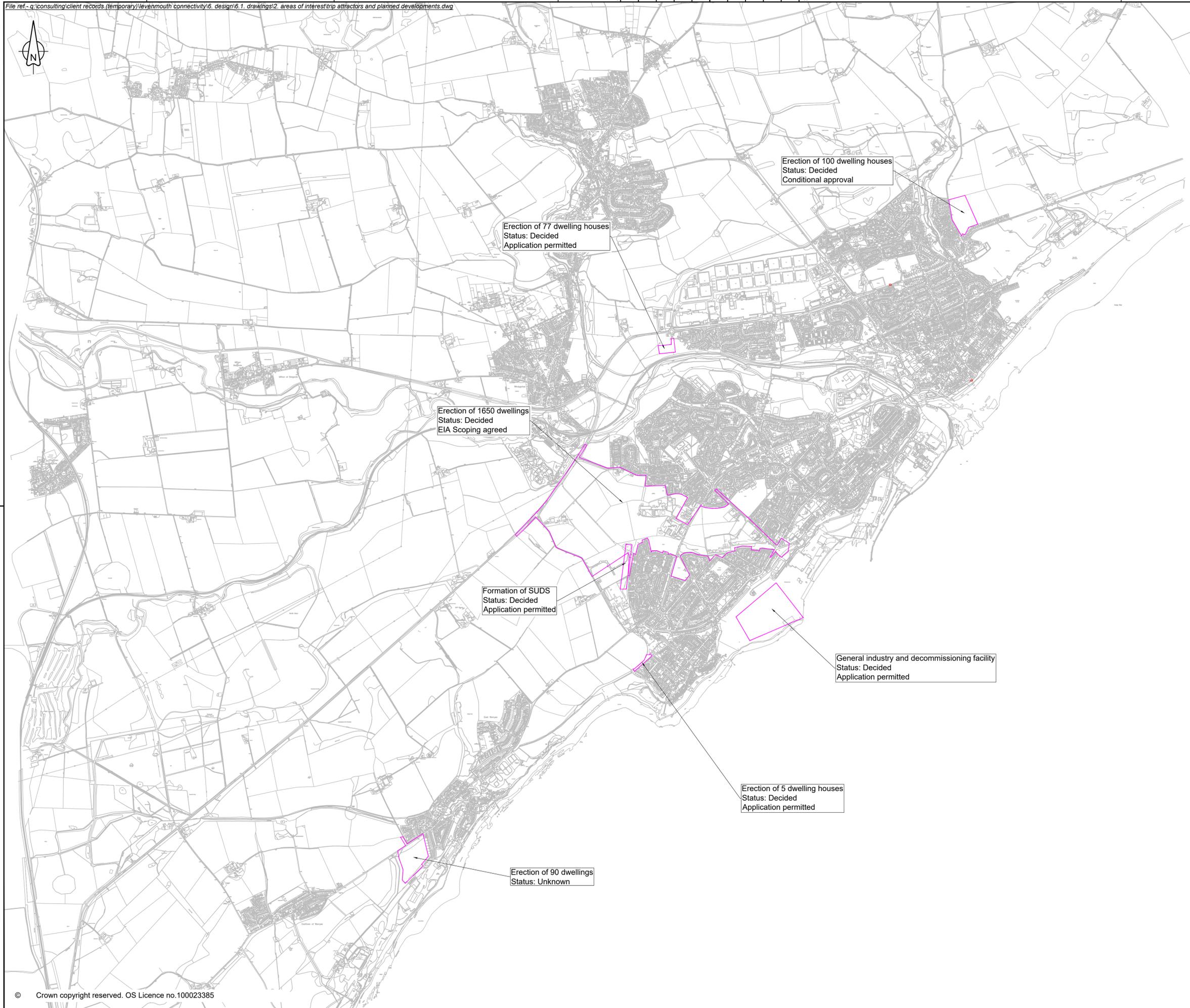
Route	Provision Type	Length
Additional Route 1 (AD1)	Segregated – desired width	0.4km
	On-road	1.1km
	Shared	0.1km
Additional Route 2 (AD2)	Shared	0.79km
	Tie in to IGLU Studio Concept Masterplan	0.9km
Additional Routes 3+4 (AD3 + AD4)	Shared	0.4km
	Tie in to IGLU Studio Concept Masterplan	0.3km
Key Route 7 (KR7)	Segregated – desired width	1.1km
	Segregated – minimum width	0.4km
	Shared	0.4km

Construction costs with a 44% optimum bias have been developed and are shown below:

Route	Initial Cost Estimate
AD1	£1,090,000
AD2	£2,675,000
AD3+4	£195,000
KR7	£1,920,000
<b>Total</b>	<b>£5,880,000</b>

An accompanying Equality Impact Assessment (EqIA) is included in Appendix E showing positive benefits and no significant adverse findings.

## Appendix A: Trip Attractors



**NOTES**

1. Planning development applications for the past five years have been reviewed. Applications where alteration to housing or employment opportunities are proposed have been highlighted. Proposals with potential impact on proposed routes are also indicated.
2. No known timescales for construction of shown applications, last known application status update known only.

**KEY**

Development locations

Rev	Revision details	Drwn	Chkd	Appd	Date
Designed: VP					Date: 21/10/2020
Drawn: AF					Date: 21/10/2020
Checked: CB					Date: 21/10/2020
Approved: GM					Date: 21/10/2020

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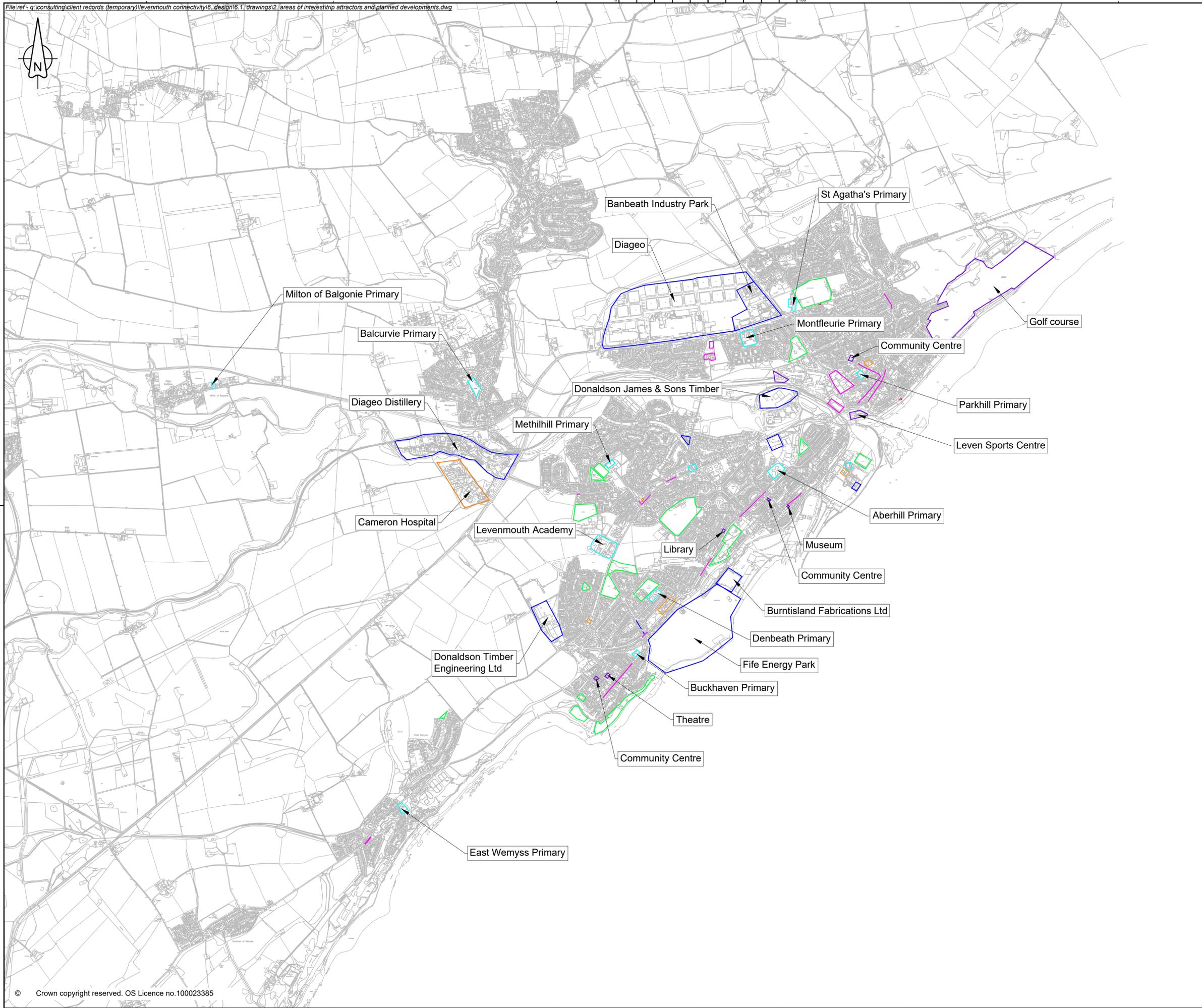
Project Name  
**Levenmouth Connectivity Project**

Drawing Title  
**Planned Developments (2015-2020)**

Original Drawing Size : A1      Scale : NTS  
Dimensions : m

Drawing Status  
**FOR INFORMATION**      Suitability  
S0

Drawing No  
**CO25000351/REP/001**      Rev  
-



- KEY**
- Businesses
  - Businesses - shopping areas and supermarkets
  - Parks, play areas and outdoor spaces
  - Schools and nurseries
  - Surgeries and other health centres
  - Recreational

Rev	Revision details	Drwn	Chkd	Appd	Date
Designed: VP					Date: 21/10/2020
Drawn: AF					Date: 21/10/2020
Checked: CB					Date: 21/10/2020
Approved: GM					Date: 21/10/2020



Project Name  
**Levenmouth Connectivity Project**

Drawing Title  
**Trip Attractors**

Original Drawing Size : A1      Scale : NTS  
Dimensions : m

Drawing Status  
**FOR INFORMATION**      Suitability  
S0

Drawing No  
**CO25000351/REP/003**      Rev  
-

## Appendix B: Concept Design Assessment excluding Pinch Points

## Route Discussion – Excluding Pinch Points

### Introduction

This document discusses cross section proposals for additional routes excluding pinch point areas. This summarises the proposed provision location and cross-section widths. The following have been summarised:

- Location and description – of the section being analysed;
- Location of proposed provision (north side/ south side or east side/ west side);
- Trip attractors, crossing points and discussion related to the potential provision location;
- Cross section proposal; and
- Preferred option.

Where the location is a pinch point, no decision has been made on cross sections or preferred options with options in these locations subject to separate appraisal.

The discussion colours denote the following:

- **Green** – benefit of the side of provision;
- **Orange** – disbenefit of the side of provision; and
- **Black** – neutral point for additional information.

### Provision Hierarchy

Assessment to determine if segregated, bi-directional provision can be designed has been undertaken to provide desired provision where possible. See *Cross-section widths* for measurements used. Where the desired type and width of provision cannot be accommodated, the following other provision types have been assessed in the order shown, and recommended at locations where constraints prevent desired provision:

- Segregated, bi-directional provision with desired widths (as outlined below);
- Segregated, bi-directional provision with minimum widths (as outlined below);
- On-road cycle provision with traffic calming (where the speed limit is 20mph and traffic flows do not exceed 2000 veh/day) and widening of footway to desired width, but if not possible to minimum width; and
- Shared provision (only to be considered along short sections where no other provision can be accommodated/ out with urban locations).

The number of crossings is also considered when assessing the optimal provision location. This includes junctions and accesses as well as private driveways.

Cross-section widths

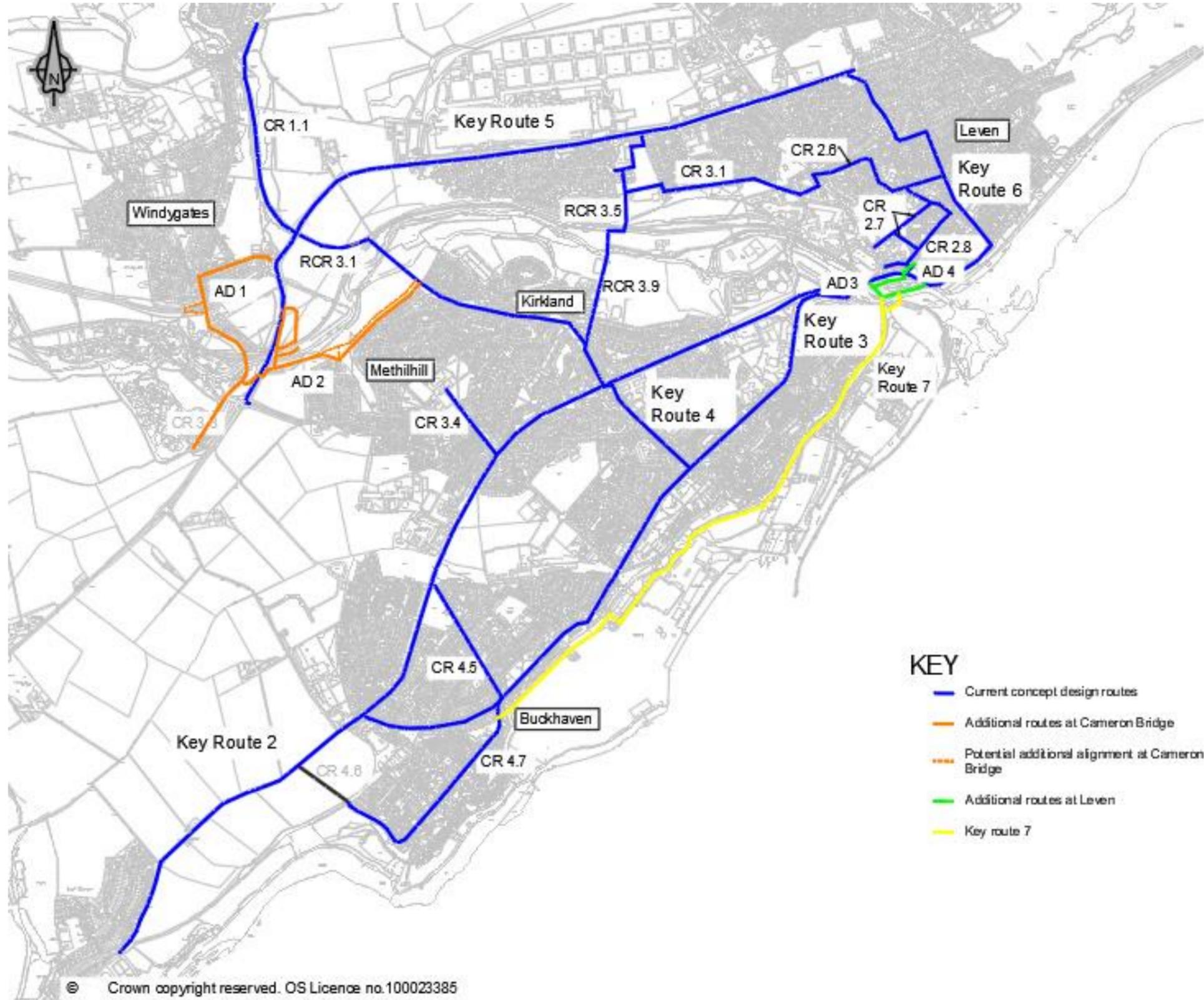
Cross-section widths achievable are dependent on the surrounding environment. The desired widths for bi-directional cycleway active travel provision sought within the design is shown below. Minimum widths for segregated provision with a bi-directional cycleway are also shown.

	<b>Desired Width</b>	<b>Minimum Width</b>
Footway	2.5m	2.0m
Cycleway	4.0m (bi-directional)	3.0m (bi-directional)
Buffer	0.7m (where speed limit is 30mph of less) 1.7m (where speed limit is 40mph or more)	0.5m (where speed limit is 30mph of less) 1.5m (where speed limit is 40mph or more)

Footway and buffer widths have been increased where possible when desired widths can be implemented in design. Where land purchase is required to allow for provision improvement, additional land to accommodate desired widths is recommended to help reduce sections designed with minimum widths.

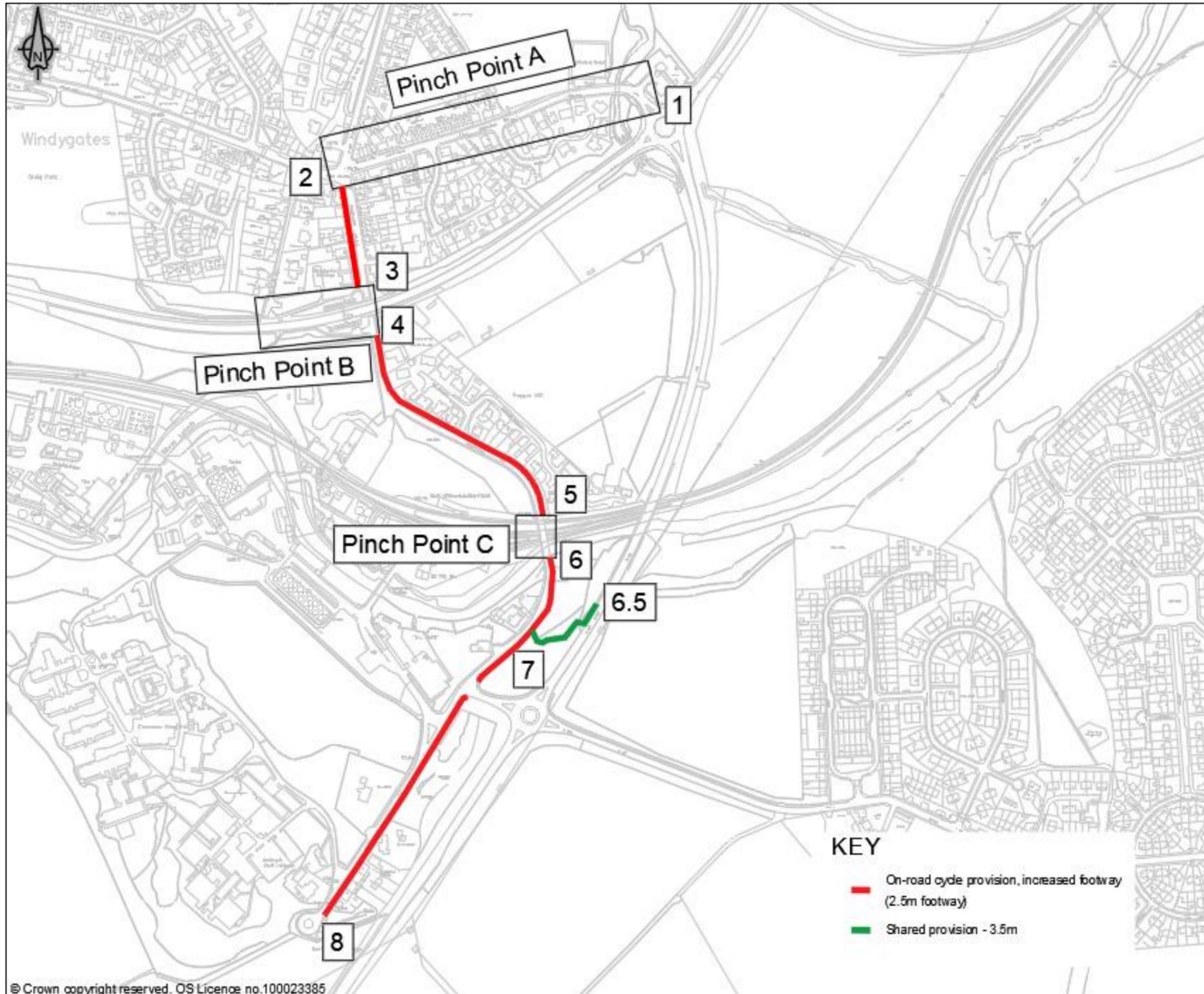
To tie into primary provision provided within the river path network, where shared provision is recommended, a width of 3.5m has been proposed to increase coherence within the network. Shared provision has been recommended where path alignments run through green space or locations that are not urban, aligning with guidance set out in the Places for Everyone Pack.

Network Overview



Additional Route 1 (AD 1)

Overview



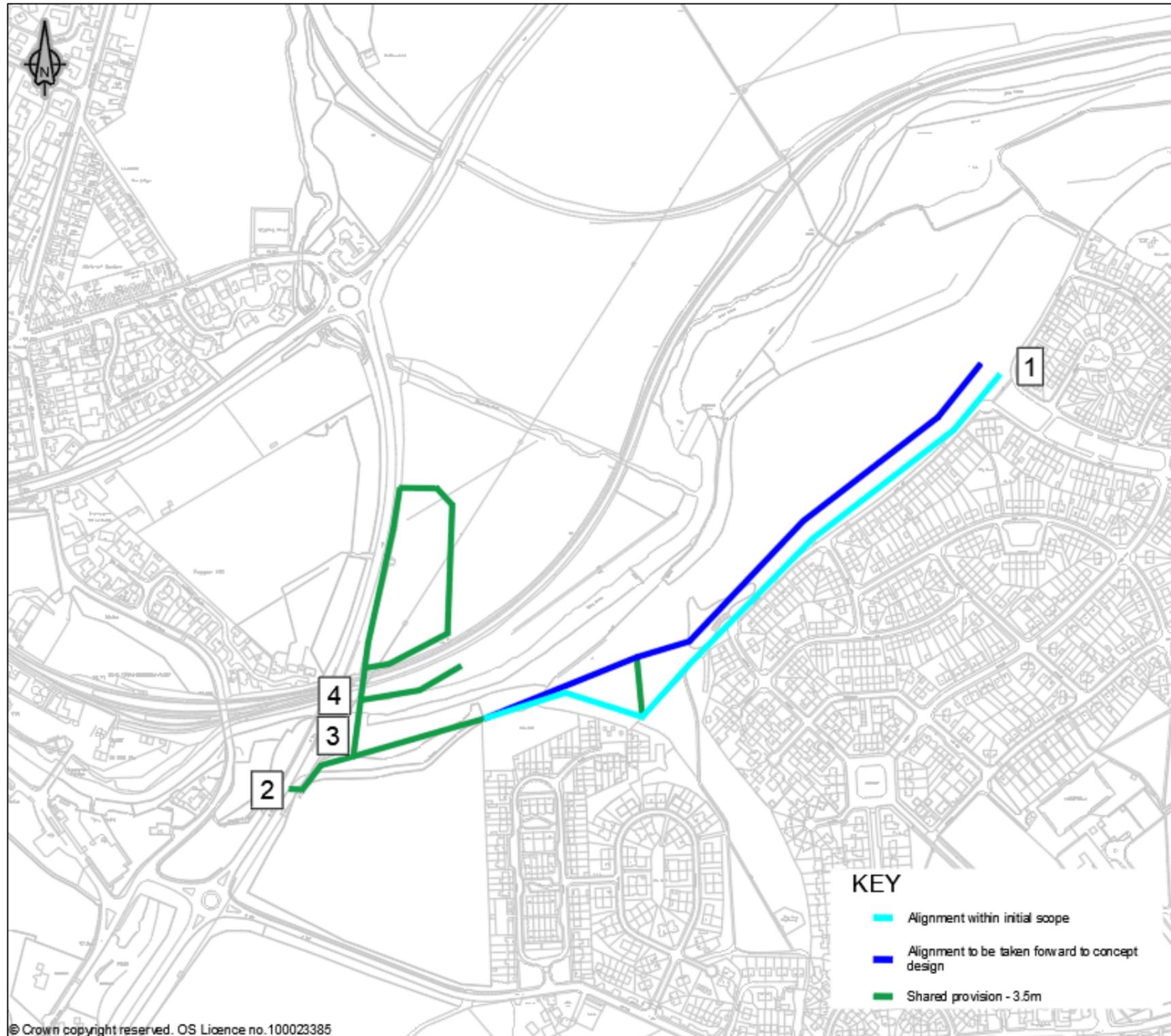
Provision Direction Discussion

Location (Description)	Location	Trip Attractors	Crossing points	Discussion	H&S/CDM/Environmental	Cross section	Proposal								
1.1 to 1.2 Length = 370m (Windygates RBT to Station Road)	North side	- Windygates Bowling Sports Club - Residential properties	- 4 minor accesses (private residential parking)	Pinch point – refer to pinch point appraisal for options considered. Route is constrained by housing boundaries, Kennoway Burn overbridge and Windygates Bowling Club. Current carriageway width is approximately 7.9m, and footways 1.7m on the north side and 1.5m on the south side. Vehicles currently park on the north side of the carriageway.											
	South side	- Residential properties	- 2 minor junctions												
1.2 to 1.3 Length = 125m (Station Road)	East side	- Shops and amenities - Residential properties	- 2 minor accesses (private residential parking)	- Creation of parking bays to decrease conflicts between cyclists and motorised vehicles. - Removal of on street parking to provide provision outside two properties. - Two crossings increase potential conflict for pedestrians and motorised users.	- BT underground cables running parallel to footway - SP LV underground cables	<table border="1"> <tr><td>Preferred Direction</td><td>NA</td></tr> <tr><td>Footway</td><td>2.0m</td></tr> <tr><td>Cycleway</td><td>On-road (20mph)</td></tr> <tr><td>Buffer</td><td>NA</td></tr> </table> <p>It is recommended that the speed limit of Station Road is reduced to 20mph (current speed limit 30mph) to accommodate on-road cycling provision. Footway on the west side to be upgraded.</p>	Preferred Direction	NA	Footway	2.0m	Cycleway	On-road (20mph)	Buffer	NA	<p><b>Preferred Option: Upgrade west side footway and provide on-road cycle provision.</b></p> <p><b>Current Speed Limit: 30mph, would need to be reduced to 20mph to accommodate on road cycle provision.</b></p> <p>It is recommended to reduce the speed limit of Station Road to 20mph and provide on-road cycle provision. Parking bays to be lined to minimise conflicts, and the east side footway to be widened or narrowed to 2.0m minimum width. Upgrade of current crossing provision at Station Road/ A911 also required.</p>
	Preferred Direction	NA													
Footway	2.0m														
Cycleway	On-road (20mph)														
Buffer	NA														
West side	- Residential properties	- 1 minor access (overflow residential parking)	- Creation of parking bays to decrease conflicts between cyclists and motorised vehicles.	- BT underground cables perpendicular to the carriageway - SGN LP and MP gas mains running parallel to the carriageway - SP LV underground cables	Available width for upgrade constrained by on-street residential parking and housing boundaries.										
1.3 to 1.4 Length = 75m (Crossing of A911)	East side (existing overbridge)	- N/A	- N/A	Pinch point – refer to pinch point appraisal for options considered.											
	West side (uncontrolled crossing).	- N/A	- 1 Major Road (A9115)												
1.4 to 1.5 Length = 60m (Station Road)	East side	- Residential properties	- 1 minor access (Bridgend Gardens)	- Would result in additional conflicts due to private driveways. - Land purchase would be required to widen active travel provision.	- SGN LP and MP gas mains running parallel to the carriageway - SP HV underground cables	<table border="1"> <tr><td>Preferred Direction</td><td>NA</td></tr> <tr><td>Footway</td><td>2.0m</td></tr> <tr><td>Cycleway</td><td>On-road (20mph)</td></tr> <tr><td>Buffer</td><td>NA</td></tr> </table>	Preferred Direction	NA	Footway	2.0m	Cycleway	On-road (20mph)	Buffer	NA	<p><b>Preferred Option: Upgrade east side footway and provide on-road cycle provision.</b></p> <p><b>Current Speed Limit: 20mph</b></p> <p>This road has a 20mph speed limit and is residential so not expected to exceed 2000 vehicles/ day. It is recommended to widen footways on the east side to 2.0m, and then implement traffic calming to allow for on-road cycle use.</p>
	Preferred Direction	NA													
Footway	2.0m														
Cycleway	On-road (20mph)														
Buffer	NA														
West side	- Diageo access	- 1 minor access (Diageo access point) -	- Potential to widen into verge. - Removal of mature trees. - Land purchase would be required to widen active travel provision.	- BT underground cables running parallel to the carriageway - SGN LP and MP gas mains running parallel to the carriageway - Vegetation removal required	Footway to be upgraded on the east side.										

Location (Description)	Location	Trip Attractors	Crossing points	Discussion	H&S/CDM/Environmental	Cross section	Proposal								
					- SP LV underground cables										
1.5 to 1.6 Length = 70m (Station Road Bridge)	East side	- N/A	- N/A	Pinch point – refer to pinch point appraisal for options considered.											
	West side	- N/A	- N/A												
1.6 to 1.8 Length = 420m (Station Road to A915)	East side	- Residential properties	- 1 major access (A915) - 1 minor access (private residential parking)	- Can widen into the verge to provide increased footway width. - Connects into AD 2 - Access to the potential train station - Would result in additional conflicts due to private driveways	- BT underground cables on the east and west side of the carriageway - SP HV underground cables	<table border="1"> <tr><td>Preferred Direction</td><td>NA</td></tr> <tr><td>Footway</td><td>2.0m</td></tr> <tr><td>Cycleway</td><td>On-road (20mph)</td></tr> <tr><td>Buffer</td><td>NA</td></tr> </table>	Preferred Direction	NA	Footway	2.0m	Cycleway	On-road (20mph)	Buffer	NA	<p><b>Preferred Option: Upgrade east side footway and provide on-road cycle provision.</b></p> <p><b>Current Speed Limit: 20mph</b></p> <p>This road has a 20mph speed limit and is residential so not expected to exceed 2000 vehicles/ day. It is recommended to widen footways on the east side to 2.0m, and then implement traffic calming to allow for on-road cycle use.</p>
	Preferred Direction	NA													
Footway	2.0m														
Cycleway	On-road (20mph)														
Buffer	NA														
West side	- Cameron Hospital - Diageo Distillery - Residential properties	- 1 major access (Diageo Distillery) - 1 minor access (Cameron Hospital, private residential parking)	- Would result in additional conflicts due to private driveways. - Limited space to widen without realigning the carriageway on both sides.	- BT underground cables on the east and west side of the carriageway - SGN LP gas main - SP LV underground cables	Footway to be upgraded on the east side.										
1.65 Length = 90m (Station Road to A915)	North side	- N/A	- N/A	- Traffic free route – no side required.	- Vegetation removal - Earthworks required - SP HV underground cables	<table border="1"> <tr><td>Preferred Direction</td><td>NA</td></tr> <tr><td>Footway</td><td>3.5m</td></tr> <tr><td>Cycleway</td><td>NA</td></tr> <tr><td>Buffer</td><td>NA</td></tr> </table>	Preferred Direction	NA	Footway	3.5m	Cycleway	NA	Buffer	NA	<p><b>Preferred Option: Create shared use path.</b></p> <p><b>Current Speed Limit: NA</b></p> <p>Create shared use path to connect to provision east of the A915 river path network.</p>
	Preferred Direction	NA													
Footway	3.5m														
Cycleway	NA														
Buffer	NA														
South side	- N/A	- N/A	Create shared use path to connect to the A915 and the river paths on the east of the A915.												

Additional Route 2 (AD 2)

Overview

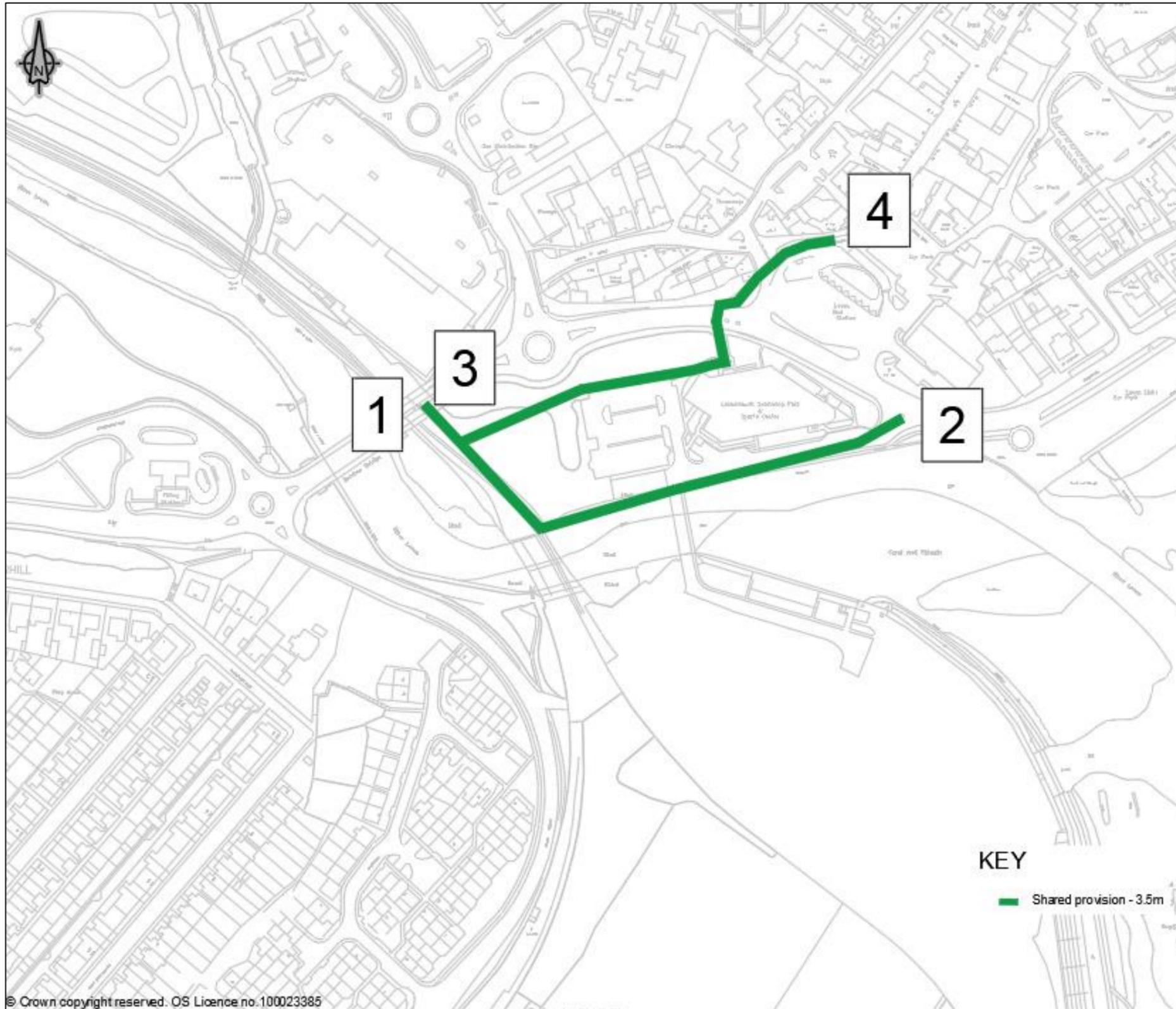


Provision Direction Discussion

Location (Description)	Location	Trip Attractors	Crossing points	Discussion	H&S/CDM/Environmental	Cross section		Proposal								
<b>2.1 to 2.2</b> Length = 965m (Kirkland Walk to A915)	North side	<ul style="list-style-type: none"> <li>- Green space</li> <li>- River Leven</li> <li>- River path network</li> </ul>	- NA	<ul style="list-style-type: none"> <li>- Connects to KR4.</li> <li>- Utilises green space.</li> <li>- Connects into river routes</li> <li>- Attractive route.</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>- Potential removal of mature trees required</li> <li>- SP EHV overhead line</li> </ul>	<table border="1"> <tr> <td>Preferred Location</td> <td>North side</td> </tr> <tr> <td>Footway</td> <td>3.5m</td> </tr> <tr> <td>Cycleway</td> <td>NA</td> </tr> <tr> <td>Buffer</td> <td>NA</td> </tr> </table>	Preferred Location	North side	Footway	3.5m	Cycleway	NA	Buffer	NA	Provide shared use provision within the tree line. Shared use will connect into the provision type proposed for the river path network.	<b>Preferred Option: Use alternative alignment to create shared use path north side.</b>  <b>Current Speed Limit: NA</b>  Create shared use path to connect to river path network.
	Preferred Location	North side														
Footway	3.5m															
Cycleway	NA															
Buffer	NA															
South side	<ul style="list-style-type: none"> <li>- Residential properties</li> </ul>	- 3 minor accesses (residential streets)	<ul style="list-style-type: none"> <li>- Connects into KR4.</li> <li>- Potential conflict with motorised vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>- SGN LP mains adjacent to housing</li> <li>- SP EHV overhead line</li> </ul>												
<b>2.3 to 2.4</b> Length = 190m (River Leven to Proposed train station)	NA	<ul style="list-style-type: none"> <li>- Proposed train station</li> <li>- River path network</li> <li>- Station Road (Diageo distillery, Cameron Bridge Hospital)</li> </ul>	- NA	- Traffic free route – no side required.	- SP EHV overhead line	<table border="1"> <tr> <td>Preferred Location</td> <td>NA</td> </tr> <tr> <td>Footway</td> <td>3.5m</td> </tr> <tr> <td>Cycleway</td> <td>NA</td> </tr> <tr> <td>Buffer</td> <td>NA</td> </tr> </table>	Preferred Location	NA	Footway	3.5m	Cycleway	NA	Buffer	NA	Bridge to cross River Leven and the railway line required. Bridge will accommodate active travel users only, with width 3.5m. Shared use to be provided to connect into the river path network.	<b>Preferred Option: Create shared use path.</b>  <b>Current Speed Limit: NA</b>  Create shared use overbridge across the River Leven and rail line to connect to river path network.
Preferred Location	NA															
Footway	3.5m															
Cycleway	NA															
Buffer	NA															
<b>2.4</b> Length = 495m (Proposed train station loop)	NA	<ul style="list-style-type: none"> <li>- Proposed train station</li> <li>- Windygates</li> <li>- Connection to KR5</li> <li>- River path network</li> </ul>	- NA	- Traffic free route – no side required.	<ul style="list-style-type: none"> <li>- SP EHV overhead line and tower running within train station area</li> <li>- SP HV underground line</li> <li>- Vegetation removal required</li> </ul>	<table border="1"> <tr> <td>Preferred Location</td> <td>NA</td> </tr> <tr> <td>Footway</td> <td>3.5m</td> </tr> <tr> <td>Cycleway</td> <td>NA</td> </tr> <tr> <td>Buffer</td> <td>NA</td> </tr> </table>	Preferred Location	NA	Footway	3.5m	Cycleway	NA	Buffer	NA	Provide shared use provision to the rail station, connecting to KR5 as well as the river path network.	<b>Preferred Option: Create shared use path.</b>  <b>Current Speed Limit: NA</b>  Create shared use provision, serving the proposed rail station as well as connection to KR5, river path network, Windygates and Cameron Bridge.
Preferred Location	NA															
Footway	3.5m															
Cycleway	NA															
Buffer	NA															

Additional Route 3+4 (AD 3 + AD 4)

Overview

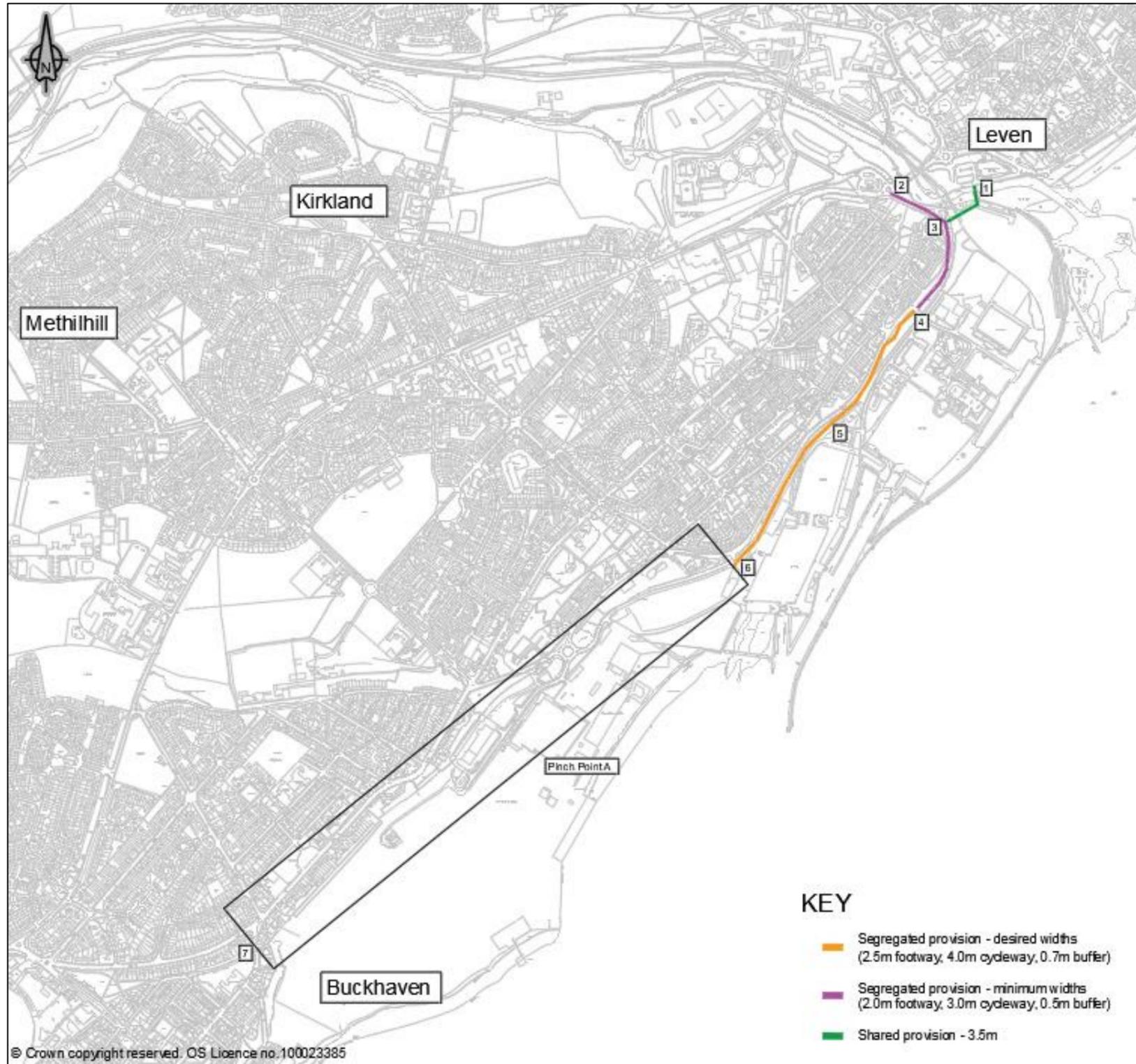


Provision Direction Discussion

Location (Description)	Location	Trip Attractors	Crossing points	Discussion	H&S/CDM/Environmental	Cross section	Proposal								
3.1 to 3.2 Length = 260m (Proposed Train Station to Swimming Pool Access)	North side	- Swimming Pool	- Swimming pool car park	<ul style="list-style-type: none"> <li>- Connection to swimming pool.</li> <li>- Access to proposed train station location.</li> <li>- Reconfiguration of service access area for swimming pool.</li> <li>- Potential conflict with motorised users.</li> <li>- Required removal of parking provision.</li> </ul>	- SP EHV and LV underground cables.	<table border="1"> <tr> <td>Preferred Location</td> <td>NA</td> </tr> <tr> <td>Footway</td> <td>3.5m</td> </tr> <tr> <td>Cycleway</td> <td>NA</td> </tr> <tr> <td>Buffer</td> <td>NA</td> </tr> </table>	Preferred Location	NA	Footway	3.5m	Cycleway	NA	Buffer	NA	<p><b>Preferred Option: Create shared use path.</b></p> <p><b>Current Speed Limit: NA</b></p> <p>Create shared use provision at 3.5m width to tie into widths proposed as part of the river path network.</p>
	Preferred Location	NA													
Footway	3.5m														
Cycleway	NA														
Buffer	NA														
South side	- Promenade	- NA	<ul style="list-style-type: none"> <li>- Access to proposed train station location.</li> <li>- Access to the waterfront.</li> <li>- Additional safety measures at water edge required.</li> <li>- Potential conflict with motorised users.</li> <li>- Required removal of parking provision.</li> </ul>	<ul style="list-style-type: none"> <li>- Required removal of ship bollards.</li> <li>- Working near water.</li> </ul>	<p>Create shared use provision. Potential requirement to minimise available parking.</p>										
4.3 to 4.4 Length = 260m (Proposed Train Station to Leven Bus Station)	NA	- Shops and Amenities	- Major Road (A955)	<ul style="list-style-type: none"> <li>- Connection to swimming pool.</li> <li>- Access to proposed train station location.</li> <li>- Would provide connection to transport hub.</li> <li>- Reconfiguration of swimming pool entrance required.</li> </ul>	- Vegetation removal required.	<table border="1"> <tr> <td>Preferred Location</td> <td>NA</td> </tr> <tr> <td>Footway</td> <td>3.5m</td> </tr> <tr> <td>Cycleway</td> <td>NA</td> </tr> <tr> <td>Buffer</td> <td>NA</td> </tr> </table>	Preferred Location	NA	Footway	3.5m	Cycleway	NA	Buffer	NA	<p><b>Preferred Option: Create shared use path.</b></p> <p><b>Current Speed Limit: NA</b></p> <p>Create shared use provision, to tie into current available provision north of A955, adjacent to Bus Station.</p> <p>Create shared use provision, tying into current shared use provision north of A955. No major constraints, green space can be used for upgrades.</p>
Preferred Location	NA														
Footway	3.5m														
Cycleway	NA														
Buffer	NA														

Key Route 7

Overview



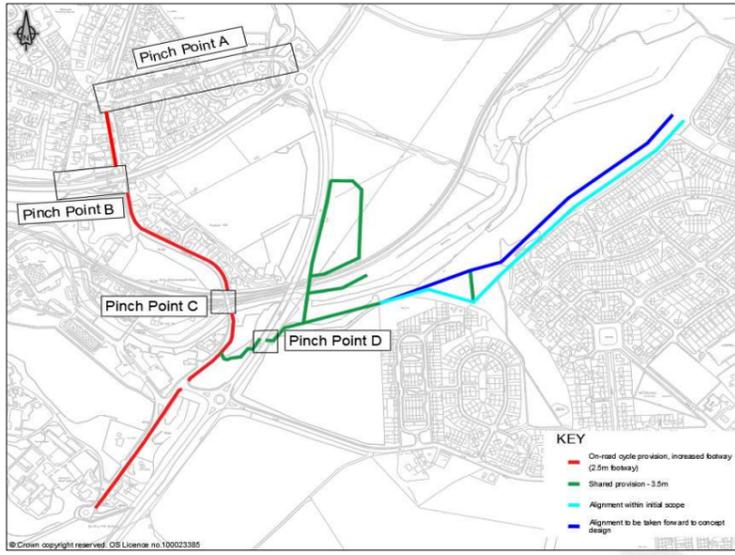
Provision Direction Discussion

Location (Description)	Location	Trip Attractors	Crossing points	Discussion	H&S/CDM/Environmental	Cross section		Proposal								
<b>7.1 to 7.3</b> Length = 145m <i>(Swimming Pool to South Street)</i>	NA	<ul style="list-style-type: none"> <li>- Swimming pool</li> <li>- Leven rail station</li> <li>- Leven bus station</li> <li>- Leven High Street</li> </ul>	- NA	<ul style="list-style-type: none"> <li>- Traffic free route – no side required.</li> <li>- Earthworks required.</li> <li>- Land purchase required.</li> <li>- Structural assessment of existing bridge needed.</li> </ul>	<ul style="list-style-type: none"> <li>- SP EHV and LV underground cables</li> <li>- BT Underground cables</li> </ul>	<table border="1"> <tr> <td>Preferred Location</td> <td>NA</td> </tr> <tr> <td>Footway</td> <td>3.5m</td> </tr> <tr> <td>Cycleway</td> <td>NA</td> </tr> <tr> <td>Buffer</td> <td>NA</td> </tr> </table>	Preferred Location	NA	Footway	3.5m	Cycleway	NA	Buffer	NA	Shared use provision to be created.	<p><b>Preferred Option: Create shared use path.</b></p> <p><b>Current Speed Limit: NA</b></p> <p>Create shared use provision. This section is part of the IGLU Masterplan.</p>
Preferred Location	NA															
Footway	3.5m															
Cycleway	NA															
Buffer	NA															
<b>7.2 to 7.3</b> Length = 160m <i>(Bawbee Roundabout to South Street)</i>	East side	<ul style="list-style-type: none"> <li>- Shell garage</li> <li>- Connection to KR6 (Bawbee Bridge)</li> <li>- Connection to river path network</li> <li>- Rail Station</li> </ul>	- NA	<ul style="list-style-type: none"> <li>- Connects to KR6 of the connectivity network with no road crossing required.</li> <li>- Provision can be upgraded within the existing road boundary.</li> <li>- Vegetation removal required.</li> <li>- Carriageway reduction required.</li> </ul>	<ul style="list-style-type: none"> <li>- BT underground cables</li> <li>- SGN MP mains</li> <li>- SP HV underground cables</li> <li>- Vegetation removal required</li> </ul>	<table border="1"> <tr> <td>Preferred Location</td> <td>East side</td> </tr> <tr> <td>Footway</td> <td>2.0m</td> </tr> <tr> <td>Cycleway</td> <td>3.0m</td> </tr> <tr> <td>Buffer</td> <td>0.5m</td> </tr> </table>	Preferred Location	East side	Footway	2.0m	Cycleway	3.0m	Buffer	0.5m	This section can utilise the existing green space on the east side, providing a link to KR6 and Bawbee bridge.	<p><b>Preferred Option: East side</b></p> <p><b>Current Speed Limit: 30 mph</b></p> <p>Upgrade provision on the east side to create segregated provision for users.</p>
	Preferred Location	East side														
Footway	2.0m															
Cycleway	3.0m															
Buffer	0.5m															
West side	<ul style="list-style-type: none"> <li>- Shell garage</li> <li>- Residential areas</li> </ul>	- NA	<ul style="list-style-type: none"> <li>- Connects into residential areas.</li> <li>- Connects to KR3.</li> <li>- Provision can be upgraded within the existing road boundary.</li> <li>- Potential reduction in c/way for provision.</li> <li>- Carriageway reduction required.</li> </ul>	- SGN LP mains												
<b>7.3 to 7.4</b> Length = 250m <i>(South Street to Harbour View)</i>	North side	<ul style="list-style-type: none"> <li>- Residential properties</li> <li>- Methil High Street</li> </ul>	- 1 minor junction (residential)	<ul style="list-style-type: none"> <li>- Provides connection to residential area.</li> <li>- Carriageway reduction required (narrow to 6.5m).</li> </ul>	<ul style="list-style-type: none"> <li>- BT underground cables at residential junction</li> <li>- SP LV underground cables at junction access</li> </ul>	<table border="1"> <tr> <td>Preferred Location</td> <td>South side</td> </tr> <tr> <td>Footway</td> <td>2.0m</td> </tr> <tr> <td>Cycleway</td> <td>3.0m</td> </tr> <tr> <td>Buffer</td> <td>0.5m</td> </tr> </table>	Preferred Location	South side	Footway	2.0m	Cycleway	3.0m	Buffer	0.5m	This section can utilise the existing green space on the south side, providing a link to KR6 and Bawbee bridge.	<p><b>Preferred Option: South side</b></p> <p><b>Current Speed Limit: 30 mph</b></p> <p>It is recommended that provision widening is undertaken on the south side to create segregated provision for road users. C/way at this point requires narrowing to accommodate provision widening.</p>
	Preferred Location	South side														
Footway	2.0m															
Cycleway	3.0m															
Buffer	0.5m															
South side	<ul style="list-style-type: none"> <li>- Fife Energy Park</li> <li>- East Fife Football Club</li> <li>- Rail Station and Leven</li> </ul>	- 1 minor junction (Harbour View)	<ul style="list-style-type: none"> <li>- Provides connection to Energy Park.</li> <li>- Provides connection to rail station via proposed river Leven crossing.</li> <li>- Reduction in c/way required (narrow to 6.5m).</li> <li>- Residents would have to cross the road to join provision.</li> </ul>	<ul style="list-style-type: none"> <li>- BT underground cables running parallel to the c/way</li> <li>- SGN MP main parallel to the c/way</li> <li>- SP HV underground cables parallel to c/way</li> <li>- Removal of mature trees required</li> </ul>												
<b>7.4 to 7.5</b> Length = 380m <i>(Harbour View to Overbridge)</i>	North side	<ul style="list-style-type: none"> <li>- Residential properties</li> <li>- Methil High Street</li> </ul>	- 1 minor junction - 2 minor access (residential)	<ul style="list-style-type: none"> <li>- Increased connection to Methil High Street and residential properties.</li> <li>- Additional conflicts with motorised vehicles (private driveways, parking areas).</li> </ul>	- BT underground cables	<table border="1"> <tr> <td>Preferred Location</td> <td>South side</td> </tr> <tr> <td>Footway</td> <td>2.5m</td> </tr> <tr> <td>Cycleway</td> <td>4.0m</td> </tr> <tr> <td>Buffer</td> <td>0.7m</td> </tr> </table>	Preferred Location	South side	Footway	2.5m	Cycleway	4.0m	Buffer	0.7m		<p><b>Preferred Option: South side</b></p> <p><b>Current Speed Limit: 30 mph</b></p> <p>Would require vegetation clearance and removal or shortening of existing full-height hedge to increase passive surveillance of the section.</p>
	Preferred Location	South side														
Footway	2.5m															
Cycleway	4.0m															
Buffer	0.7m															
South side	<ul style="list-style-type: none"> <li>- Industrial Estate</li> <li>- Methil Docks</li> <li>- East Fife Football Club</li> </ul>	- NA	<ul style="list-style-type: none"> <li>- No accesses or junctions to cross, increasing coherence.</li> <li>- Reduction in full-height hedge to increase passive surveillance.</li> <li>- Connection to Methil Docks.</li> </ul>	<ul style="list-style-type: none"> <li>- BT underground cables</li> <li>- SGN MP mains</li> </ul>	This section can be upgraded to provide segregated active travel provision. Requires some vegetation removal and crossings											

Location (Description)	Location	Trip Attractors	Crossing points	Discussion	H&S/CDM/Environmental	Cross section	Proposal								
				<ul style="list-style-type: none"> <li>- Connection to existing CLEAR Buckhaven provision.</li> <li>- Green space utilisation – potential for additional placemaking.</li> <li>- Crossing required to connect residential properties to provision.</li> </ul>		to allow for residents on the west side to connect to the provision.									
<b>7.5 to 7.6</b> Length = 470m (Overbridge to Heritage Way)	North side	<ul style="list-style-type: none"> <li>- Residential properties</li> <li>- Methil Post Office</li> <li>- Methil High Street</li> </ul>	- NA	<ul style="list-style-type: none"> <li>- Increased connection to Methil High Street and residential properties.</li> <li>- No accesses or junctions to cross, increasing coherence.</li> <li>- Additional conflicts with motorised vehicles (parking areas).</li> <li>- Lack of passive surveillance – vegetation removal and reduction required.</li> </ul>	- NA	<table border="1"> <tr> <td>Preferred Location</td> <td>South side</td> </tr> <tr> <td>Footway</td> <td>2.5m</td> </tr> <tr> <td>Cycleway</td> <td>4.0m</td> </tr> <tr> <td>Buffer</td> <td>0.7m</td> </tr> </table> <p>This section can be upgraded to provide segregated active travel provision. Requires extensive vegetation removal and crossings to allow for residents on the west side to connect to the provision.</p>	Preferred Location	South side	Footway	2.5m	Cycleway	4.0m	Buffer	0.7m	<b>Preferred Option: South side</b>  <b>Current Speed Limit: 30 mph</b>  It is proposed to upgrade the existing CLEAR Buckhaven to provide wider active travel provision. Required extensive vegetation removal and increased passive surveillance from South Street through reduction or removal of hedge.
	Preferred Location	South side													
Footway	2.5m														
Cycleway	4.0m														
Buffer	0.7m														
South side	<ul style="list-style-type: none"> <li>- Industrial Estate</li> <li>- Methil Docks</li> <li>- East Fife Football Club</li> </ul>	- NA	<ul style="list-style-type: none"> <li>- Green space utilisation – potential for additional placemaking.</li> <li>- No accesses or junctions to cross, increasing coherence.</li> <li>- Upgrades existing CLEAR Buckhaven path.</li> <li>- Crossing required to connect residential properties to provision.</li> </ul>	- Vegetation removal required											
<b>7.6 to 7.7</b> Length = 1705m (Heritage Way to College Street)	North side	- Residential properties	- 6 minor accesses (within industrial area)	Pinch point – refer to pinch point appraisal for options considered.											
	South side	<ul style="list-style-type: none"> <li>- Industrial Park</li> <li>- Methil Docks</li> </ul>	- 6 minor accesses (within industrial area)												

## Appendix C: Pinch Point Appraisals

**Additional Route 1  
Active Travel Route Design Optioneering Summary**



Pinch Point	Location	Description	Options	Description	Objective	Rating	Total Score	Preferred Option
AD1 A	A916 from Windygates Roundabout to Station Road	Constrained cross-section limiting active travel improvements	A	Upgrade Dunolly Gardens to provide shared-use provision. Create new path parallel to the back of the Bowling Club through existing field, and connect to A916 east of the Bowling Club. Provide shared-use provision (3.5m width).	Safety	3	27	Option C
			B	At the northern point of Dunolly Gardens, create new shared-use provision perpendicular to the residential street, across the existing field. Cross Kennoway Burn and connect to CR 1.1. Provide shared-use provision (3.5m width).	Safety	3		
			C	Provide new segregated provision on the north to minimum widths along the A911, connecting to Station Road and A915 at Windygates Roundabout. Segregated provision would consist of 3m bi-directional cycle path, 2m footway and increased 1.7m buffer. Current National Speed Limit to be reduced prior to Station Road to 40mph.	Safety	4		
					Coherence	3		
					Directness	3		
					Hierarchy of Transport Modes	3		
					Comfort	3		
					Attractiveness	4		
					Health and Safety/ CDM/ Environmental	2		
					Deliverability	3		
					Indicative Value Range	3		
					Safety	3	24	Option C
					Coherence	3		
					Directness	2		
					Hierarchy of Transport Modes	3		
					Comfort	3		
					Attractiveness	5		
					Health and Safety/ CDM/ Environmental	2		
					Deliverability	1.5		
					Indicative Value Range	1.5		
					Safety	4	33.5	Option C
					Coherence	4		
					Directness	4		
					Hierarchy of Transport Modes	4		
					Comfort	5		
					Attractiveness	3		
					Health and Safety/ CDM/ Environmental	2		
					Deliverability	3		
					Indicative Value Range	4.5		
AD1 B	A916 crossing to Station Road	Improvement to current crossing provision available for active travel users	A	Upgrade existing overbridge – provide ramps (same width as existing provision) and lighting.	Safety	2	20.5	Option C
			B	Upgrade current uncontrolled crossing – provide signalised toucan crossing for users. Reduce speed limit from National Speed Limit to 40mph for an additional 320m.	Safety	4		
			C	Construct new signalised crossing 100m east of existing uncontrolled crossing at Station Road. Reduce speed limit from National Speed Limit to 40mph for an additional 200m.	Safety	5		
			D	Replace existing overbridge with new, compliant structure.	Safety	3		
					Coherence	3		
					Directness	2		
					Hierarchy of Transport Modes	2		
					Comfort	2		
					Attractiveness	2		
					Health and Safety/ CDM/ Environmental	3		
					Deliverability	1.5		
					Indicative Value Range	3		
					Safety	4	32.5	Option C
					Coherence	3		
					Directness	4		
					Hierarchy of Transport Modes	3		
					Comfort	3		
					Attractiveness	4		
					Health and Safety/ CDM/ Environmental	4		
					Deliverability	4.5		
					Indicative Value Range	3		
					Safety	5	36.5	Option C
					Coherence	4		
					Directness	5		
					Hierarchy of Transport Modes	4		
					Comfort	4		
					Attractiveness	5		
					Health and Safety/ CDM/ Environmental	2		
					Deliverability	4.5		
					Indicative Value Range	3		
					Safety	3	24.5	Option C
					Coherence	3		
					Directness	4		
					Hierarchy of Transport Modes	3		
					Comfort	3		
					Attractiveness	2		
					Health and Safety/ CDM/ Environmental	2		
					Deliverability	3		
					Indicative Value Range	1.5		
AD1 C	Station Road overbridge	Limited available width for active travel provision	A	Reduce current two-way traffic provision to one-lane (3.5m) with priority signal system in place. Reallocate remaining width to provide shared-use (3m) active travel provision on the east side.	Safety	3	41	Option A
			B	Widen the current structure to provide footway on the east side for pedestrians and on-road cycle provision. Widen structure by approx. 2.5m.	Safety	3		
			C	Construct parallel active travel overbridge.	Safety	4		
					Coherence	4		
					Directness	5		
					Hierarchy of Transport Modes	5		
					Comfort	4		
					Attractiveness	5		
					Health and Safety/ CDM/ Environmental	3		
					Deliverability	4.5		
					Indicative Value Range	7.5		
					Safety	3	33.5	Option A
					Coherence	4		
					Directness	5		
					Hierarchy of Transport Modes	3		
					Comfort	3		
					Attractiveness	5		
					Health and Safety/ CDM/ Environmental	3		
					Deliverability	4.5		
					Indicative Value Range	3		
					Safety	4	35	Option A
					Coherence	4		
					Directness	4		
					Hierarchy of Transport Modes	4		
					Comfort	5		
					Attractiveness	5		
					Health and Safety/ CDM/ Environmental	3		
					Deliverability	4.5		
					Indicative Value Range	1.5		
AD1 D	A915 crossing to river path network	Improvement to current crossing provision available for active travel users	A	Construct a new overbridge to replace current uncontrolled crossing on A915.	Safety	3	32	Option B
			B	Upgrade current uncontrolled crossing – provide signalised crossing for users.	Safety	5		
					Coherence	4		
					Directness	5		
					Hierarchy of Transport Modes	5		
					Comfort	4		
					Attractiveness	5		
					Health and Safety/ CDM/ Environmental	3		
					Deliverability	4.5		
					Indicative Value Range	7.5		
					Safety	5	44.5	Option B
					Coherence	5		
					Directness	5		
					Hierarchy of Transport Modes	5		
					Comfort	5		
					Attractiveness	5		
					Health and Safety/ CDM/ Environmental	4		
					Deliverability	4.5		
					Indicative Value Range	6		

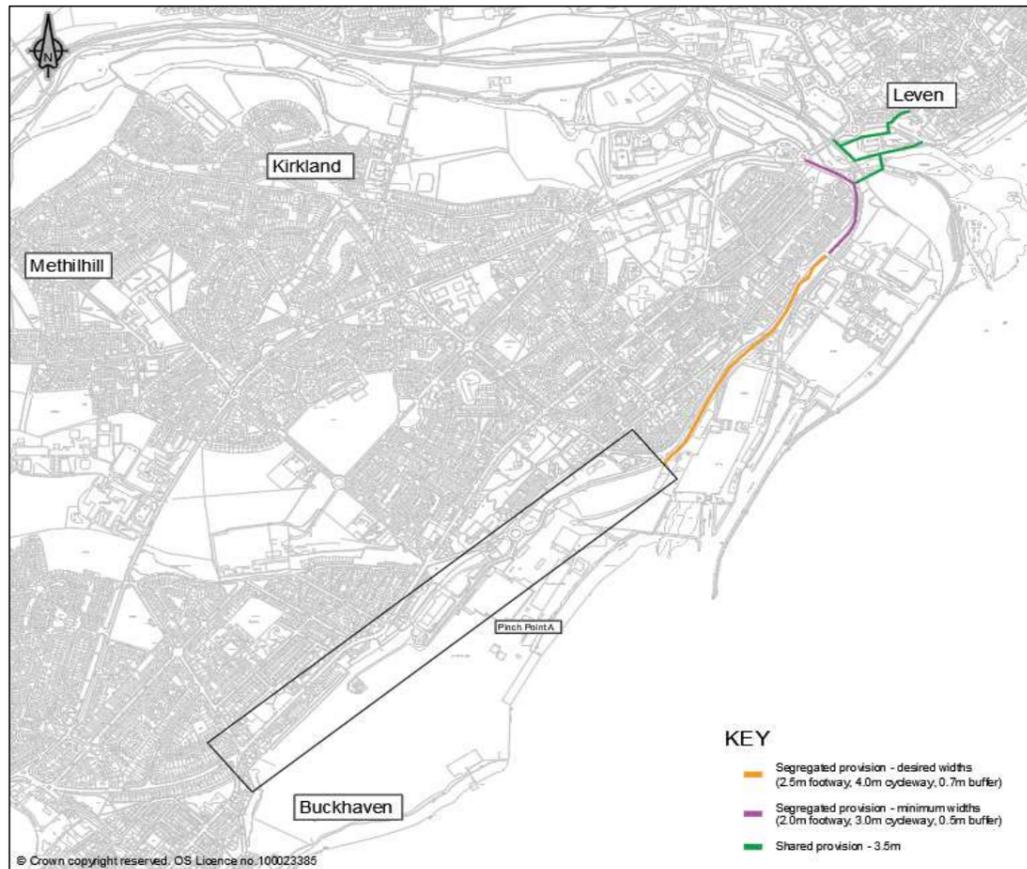
Active Travel Route Design Objectives		Additional Route 1 A Location: A916 from Windygates Roundabout to Station Road Description: Constrained cross-section limiting active travel improvements					
Objective	Objective Criteria	Option A Description	Rating	Option B Description	Rating	Option C Description	Rating
		Upgrade Dunolly Gardens to provide shared-use provision. Create new path parallel to the back of the Bowling Club through existing field, and connect to A916 east of the Bowling Club. Provide shared-use provision (3.5m width).	<b>High, Medium, Low</b>	At the northern point of Dunolly Gardens, create new shared-use provision perpendicular to the residential street, across the existing field. Cross Kennoway Burn and connect to CR 1.1. Provide shared-use provision (3.5m width).	<b>High, Medium, Low</b>	Provide new segregated provision on the north to minimum widths along the A911, connecting to Station Road and A915 at Windygates Roundabout. Segregated provision would consist of 3m bi-directional cycle path, 2m footway and increased 1.7m buffer. Current National Speed Limit to be reduced prior to Station Road to 40mph.	<b>High, Medium, Low</b>
<b>Safety</b>	Route is safe and perceived as safe; Provides personal security; Limits conflict between cyclists and pedestrians and other modes of travel; Provides consistency of design and avoids ambiguity	Route would run parallel to residential properties along Dunolly Gardens. However, this is not a through road, and will have minimal passive surveillance for users, which could result in some users not feeling safe using this route. Shared use provision recommended due to the nature of the location. Some conflict may arise from lack of segregation between pedestrians and cyclists.	<b>M 3</b>	Route would lack any passive surveillance as it does not run parallel to any main carriageways. Some users may feel unsafe using this provision. Shared use provision recommended due to the nature of the location. Some conflict may arise from lack of segregation between pedestrians and cyclists.	<b>M 3</b>	Route would be parallel to the A911, which would increase passive surveillance of the route. Wide buffer and reduced speed limit would increase safety for active travel users. Segregated provision reduces any potential conflict between pedestrians and cyclists.	<b>M/H 4</b>
<b>Coherence</b>	Be continuous and recognisable; Integrate cycling with other modes of travel; routes should be continuous from origin to a destination, easy to navigate and of a consistently high quality	Shared provision would differ from segregated provision at KR 5. Route is continuous with no crossings required. Does not connect to Station Road provision.	<b>M 3</b>	Shared provision connects into CR 1.1, increasing coherence between these two routes. No crossings required along the section, so route is continuous. Does not connect to Station Road Provision.	<b>M 3</b>	Segregated provision connects to KR5, increasing coherence for users. No crossing required between Station Road and Windygates Rbt. Connection provision to Station Road at Cameron Bridge and A915.	<b>M/H 4</b>
<b>Directness</b>	Route to match desire lines; Route should have minimal detours or delays; Provide a positive advantage in terms of directness	Route would be less direct for users travelling from west Windygates, but provide a more direct connection to Kennoway and north Windygates. For users travelling from A911 at Station Road to Windygates Rbt, length of Option A is approx. 610m. From Station Road, users would need to travel along A916 Kennoway Road to reach Dunolly Gardens, increasing journey times.	<b>M 3</b>	Route would be less direct for users travelling from west Windygates, but provide a more direct connection to Kennoway and north Windygates. For users travelling from A911 at Station Road to Windygates Rbt, length of Option B is approx. 870m. From Station Road, users would need to travel along A916 Kennoway Road to reach Dunolly Gardens, increasing journey times.	<b>L/M 2</b>	Route travels along key route (A911) and would provide connection for users from Cameron Bridge and Windygates to KR5 at the A915. For users travelling from A911 at Station Road to Windygates Rbt, length of Option B is approx. 520m. Would provide similar alignment to A916 route for users travelling from west Windygates.	<b>M/H 4</b>
<b>Hierarchy of Transport Modes</b>	Provide a positive advantage in terms of priority (hierarchy of transport modes)	No road space reallocation for active travel. However, new provision for cyclists and pedestrians is being created.	<b>M 3</b>	Same as Option A.	<b>M 3</b>	A911 road space will be narrowed to approx. 7.3m minimum to allow for active travel provision to be constructed. Reduction in road speed also proposed.	<b>M/H 4</b>
<b>Comfort</b>	Routes should be sheltered, smooth, uninterrupted, well maintained surfaces with gentle gradients; Have sufficient width for the level of use; Be designed to avoid complicated manoeuvres; Enable cyclist to maintain momentum	Gradient varies through adjacent field land and parallel to Dunolly Gardens. Width of shared-use provision may cause some momentum issues for cyclists.	<b>M 3</b>	Same as Option A.	<b>M 3</b>	Route would have minimal gradients for users, and have enough width for segregated use.	<b>H 5</b>
<b>Attractiveness</b>	Be attractive and interesting; Integrate with and compliment their surroundings; Contribute to good urban design	Route would be traffic free and travel through green space.	<b>M/H 4</b>	Route would be traffic free and travel through green space. Option B would also cross Kennoway Burn.	<b>H 5</b>	Route may be as attractive for all users due to close proximity to high-speed road.	<b>M 3</b>
<b>Health and Safety/ CDM/ Environmental</b>	Are there any health and safety implications with the option?	Would require earthworks, working near water and vegetation removal. No known utilities present.	<b>L/M 2</b>	Same as Option A.	<b>L/M 2</b>	Would require earthworks, working near water and vegetation removal. Vegetation removal may increase noise pollution for residents nearby the A911. No known utilities present.	<b>L/M 2</b>
<b>Deliverability (Weighted x1.5)</b>	Scale of Low to High. L= No prospect of delivery/ large impact to residents and users of the route as existing, challenging constraints, high design requirements. H = No challenges to delivery, all required information and agreements in hand	Land purchase and landowner buy in would be required to construct new provision. Structure crossing Kennoway Burn would need to be widened. Earthworks would be needed to improve the gradient through the green space.	<b>L/M 3</b>	Land purchase and landowner buy in would be required to construct new provision. New structure to cross Kennoway Burn would need to be widened. Earthworks would be needed to improve the gradient through the green space significant level difference at Kennoway Burn ad CR 1.1.	<b>L 1.5</b>	New provision would remove several mature trees on the north side, currently providing a barrier between housing and the A911. Not anticipated that all trees will need removed, but this might cause some negative feedback from residents who may be impacted. Potential pushback related to lowering the speed limit by increasing the 40mph section by 200m.	<b>L/M 3</b>
<b>Indicative Value Range (Weighted x1.5)</b>	Appraise construction required to achieve the option. Scale of low to high comparative to options. L = High cost, low economic value H = Low cost, high economic value	350m of widening for shared-use provision 1190m <sup>2</sup> of land purchase required. 135m of fence removal 1190m <sup>2</sup> of vegetation removal and earthworks 10m widening of current Kennoway Burn overbridge (A916)	<b>L/M 3</b>	310m of widening for shared-use provision 1085m <sup>2</sup> of land purchase required. 85m of fence removal 1085m <sup>2</sup> of vegetation removal and earthworks 40m creation of Kennoway Burn overbridge	<b>L 1.5</b>	350m of widening for segregated-use provision 2450m <sup>2</sup> of vegetation removal and earthworks 10m widening of current Kennoway Burn overbridge (A916)	<b>M 4.5</b>
			27		24		33.5

Active Travel Route Design Objectives		Additional Route 1 B Location: A916 crossing to Station Road Description: Improvement to current crossing provision available for active travel users									
Objective	Objective Criteria	Option A Description	Rating	Option B Description	Rating	Option C Description	Rating	Option D Description	Rating		
		Upgrade existing overbridge – provide ramps (same width as existing provision) and lighting.	<b>High, Medium, Low</b>	Upgrade current uncontrolled crossing – provide signalised toucan crossing for users. Reduce speed limit from National Speed Limit to 40mph for an additional 320m.	<b>High, Medium, Low</b>	Construct new signalised crossing 100m east of existing uncontrolled crossing at Station Road. Reduce speed limit from National Speed Limit to 40mph for an additional 200m.	<b>High, Medium, Low</b>	Replace existing overbridge with new, compliant structure.	<b>High, Medium, Low</b>		<b>High, Medium, Low</b>
<b>Safety</b>	Route is safe and perceived as safe; Provides personal security; Limits conflict between cyclists and pedestrians and other modes of travel; Provides consistency of design and avoids ambiguity	No interactions between active travel users and motorised vehicles. Current walkway is narrow (1.9m wide) and has potential to cause conflict between active travel users. Lighting will improve passive surveillance of the route.	L/M 2	A one-stage signalised crossing improves safety of active travel users, limiting their time crossing the road and preventing the requirement to use ramps or steps. Toucan crossing will be wide and prevent conflict between active travel users. Users must walk along path to reach crossing, which is not overlooked by properties or parallel to cways.	M/H 4	A one-stage signalised crossing improves safety of active travel users, limiting their time crossing the road and preventing the requirement to use ramps or steps. Toucan crossing will be wide and prevent conflict between active travel users. Cut back of vegetation on approach required to ensure sight lines are reached.	H 5	A new active overbridge would minimise conflict between users through providing a bridge wide enough to comply with DDA requirements. However, users would still need to navigate steps and ramps to access the crossing.	M 3		
<b>Coherence</b>	Be continuous and recognisable; Integrate cycling with other modes of travel; routes should be continuous from origin to a destination, easy to navigate and of a consistently high quality	Utilising the current structure the route is a known crossing point for users. However, this decreases the continuity of the route as users must navigate the ramps/ steps to reach the overbridge.	M 3	The crossing is not as direct as the overbridge, with a current location approximately 100m further west. However, this crossing location provides access to other residents.	M 3	This crossing will connect more cohesively to provision north and south of the crossing at Station Road. This makes the crossing easier to location and more recognisable for users utilising the further network.	M/H 4	Utilising the current structure location the route is a known crossing point for users. However, this decreases the continuity of the route as users must navigate the ramps/ steps to reach the overbridge.	M 3		
<b>Directness</b>	Route to match desire lines; Route should have minimal detours or delays; Provide a positive advantage in terms of directness	This route crosses over the A911 more directly from Station Road. Upgrade to provide a ramp will allow users with wheelchairs and buggies to utilise the bridge. However, there may be some delays due to the width of the bridge restricting potential for two users to pass comfortably.	L/M 2	Minor detour due to the crossing 100m further west than to the overbridge.	M/H 4	Route follows a desired line to Station Road and the ramped steps will be removed hence everyone will be able to utilise it.	H 5	This route crosses over the A911 more directly from Station Road. However, users must still navigate the ramp or steps, making this option less direct than an at-grade crossing at the same location.	M/H 4		
<b>Hierarchy of Transport Modes</b>	Provide a positive advantage in terms of priority (hierarchy of transport modes)	No road space is reallocated to active users. Provision would still be sub standard for active travel users.	L/M 2	Reduction in speed limit required, providing greater priority to active travel users. Signalised crossing also increases priority to cyclists and pedestrians.	M 3	Reduction in speed limit required, providing greater priority to active travel users. Signalised crossing also increases priority to cyclists and pedestrians. Removal of approx. 2 parking bays to prioritise active travel.	M/H 4	Same as Option A. However, provision will adhere to standards for active travel use.	M 3		
<b>Comfort</b>	Routes should be sheltered, smooth, uninterrupted, well maintained surfaces with gentle gradients; Have sufficient width for the level of use; Be designed to avoid complicated manoeuvres; Enable cyclist to maintain momentum	Cyclists will need to dismount to go up the stairs or proposed ramp or use alternative crossing points. This disrupts momentum. Pedestrians may not feel comfortable using the ramp at the same time as cyclists.	L/M 2	Gradients will be consistent as there is no change in levels also cyclists will not have to dismount due to it being a level crossing. Controlled crossing will increase active travel user comfort.	M 3	Gradients will be consistent as there is no change in levels also cyclists will not have to dismount due to it being a level crossing. Controlled crossing will increase active travel user comfort. Route is linear and connects between Station Road without having to navigate further paths.	M/H 4	Similar to Option A, however there will be minimised conflict between cyclists and pedestrians due to the wider provision.	M 3		
<b>Attractiveness</b>	Be attractive and interesting; Integrate with and compliment their surroundings; Contribute to good urban design	The route is not attractive to cyclists as they must dismount and navigate stairs on approach and egress to the overbridge.	L/M 2	Route is more attractive as it is at grade, and does not require use of stairs or ramp.	M/H 4	Similar to Option B, but the proposed location of this crossing point will be more attractive to users due to its connection to Station Road.	H 5	Same as Option A.	L/M 2		
<b>Health and Safety/ CDM/ Environmental</b>	Are there any health and safety implications with the option?	Underground BT cables on the south side. Vegetation removal required to lengthen ramp and stairs. Lighting on the structure may cause disturbance to surrounding residents. Working at height. High volume of materials required to upgrade structure.	M 3	Vegetation removal required to improve sight lines. Underground BT cables on the south side. MP SGN gas mains runs through crossing location, perpendicular to the A911.	M/H 4	Vegetation removal required to improve sight lines. BT underground cables run parallel to proposed crossing location. LP and MP SGN gas mains runs through crossing location, perpendicular to the A911.	L/M 2	Old structure to be demolished and new structure to be constructed - high volume of materials required and noise disruption high for surrounding residents. Vegetation removal required. Working at height.	L/M 2		
<b>Deliverability (Weighted x1.5)</b>	Scale of Low to High. L= No prospect of delivery/ large impact to residents and users of the route as existing, challenging constraints, high design requirements. H = No challenges to delivery, all required information and agreements in hand	Would require removal and replacement of access and egress to the structure. Disruption to the A911 and surrounding residents high, for low improvements as bridge deck will still be sub standard.	L 1.5	This would require the installation of a new signalised crossing, this would involve reconfiguration of the existing road, verge and provision. This is proposed at the current uncontrolled location. Police and other stakeholder support needed to reduce speed limit.	M 4.5	This would require the installation of a new signalised crossing, this would involve reconfiguration of the existing road, verge and provision. This requires wall removal to create through-road at Station Road. Police and other stakeholder support needed to reduce speed limit. Potential increased support due to more direct crossing. Parking spaces require removal - potential for resident push back.	M 4.5	This would require the installation and construction of a new overbridge, involving reconfiguration of the existing road, verge and provision. High disruption to the A911 and surrounding residents likely to receive pushback from surrounding residents.	L/M 3		
<b>Indicative Value Range (Weighted x1.5)</b>	Appraise construction required to achieve the option. Scale of low to high comparative to options. L = High cost, low economic value H = Low cost, high economic value	Upgrade of current shallow stepped provision to reach the bridge deck. Would require longer provision to reach acceptable gradients and replacement of current access and egress. Lighting the bridge deck (30m)	L/M 3	Provide new toucan crossing, 1000m^2 vegetation removal required on approach to crossing. TRO required for speed limit reduction.	M 3	Provide new toucan crossing, 1000m^2 vegetation removal required. 20m of wall removal 50m reconfiguration of VRS TRO required for speed limit reduction and parking removal.	M 3	Would require demolition of existing and construction of new active travel bridge and access/ egress points. 500m^2 vegetation removal also required.	L 1.5		
			20.5		32.5		36.5				24.5

Active Travel Route Design Objectives		Additional Route 1 C Location: Station Road overbridge Description: Limited available width for active travel provision								
Objective	Objective Criteria	Option A Description	Rating		Option B Description	Rating		Option C Description	Rating	
		Reduce current two-way traffic provision to one-lane (3.5m) with priority signal system in place. Reallocate remaining width to provide shared-use (3m) active travel provision on the east side.	<b>High, Medium, Low</b>		Widen the current structure to provide footway on the east side for pedestrians and on-road cycle provision. Widen structure by approx. 2.5m.	<b>High, Medium, Low</b>		Construct parallel active travel overbridge.	<b>High, Medium, Low</b>	
<b>Safety</b>	Route is safe and perceived as safe; Provides personal security; Limits conflict between cyclists and pedestrians and other modes of travel; Provides consistency of design and avoids ambiguity	Active travel users would be separated from motorised users. However, some conflict may arise between cyclists and pedestrians.	<b>M</b>	<b>3</b>	Cyclists would utilise the carriageway (speed limit is 20mph and traffic flows <2000 veh/day). Pedestrians would have adequate width to cross the bridge without conflict.	<b>M</b>	<b>3</b>	Full provision provided to active travel users. No potential conflict with motorised users. Some users may not feel safe using a parallel structure due to reduced passive surveillance (note current bridge is not well overlooked).	<b>M/H</b>	<b>4</b>
<b>Coherence</b>	Be continuous and recognisable; Integrate cycling with other modes of travel; routes should be continuous from origin to a destination, easy to navigate and of a consistently high quality	Provides a linear solution to allow pedestrians and cyclists to continue along Station Road. East side footway connects to proposed provision on either side of the bridge.	<b>M/H</b>	<b>4</b>	Same as Option A.	<b>M/H</b>	<b>4</b>	This route would be less recognisable, however would be positioned parallel to the existing bridge and would provide a high-quality active travel provision.	<b>M/H</b>	<b>4</b>
<b>Directness</b>	Route to match desire lines; Route should have minimal detours or delays; Provide a positive advantage in terms of directness	This route is the most direct and would follow the existing bridge footprint.	<b>H</b>	<b>5</b>	Same as Option A.	<b>H</b>	<b>5</b>	This route would be direct and run parallel to the existing bridge structure.	<b>M/H</b>	<b>4</b>
<b>Hierarchy of Transport Modes</b>	Provide a positive advantage in terms of priority (hierarchy of transport modes)	Road space will be reallocated to improve and accommodate active travel provision.	<b>H</b>	<b>5</b>	Improvements would be made to active travel provision. However, no road space reallocation included in this option.	<b>M</b>	<b>3</b>	Improvements would be made to active travel provision through creation of new provision. However, no road space reallocation included in this option.	<b>M/H</b>	<b>4</b>
<b>Comfort</b>	Routes should be sheltered, smooth, uninterrupted, well maintained surfaces with gentle gradients; Have sufficient width for the level of use; Be designed to avoid complicated manoeuvres; Enable cyclist to maintain momentum	The route allows for cyclists and pedestrians to continue uninterrupted by motorised users, separated from vehicles. Some potential momentum loss due to shared-use proposal.	<b>M/H</b>	<b>4</b>	The route would provide uninterrupted pedestrian provision. Some cyclists may not feel comfortable using on-road provision.	<b>M</b>	<b>3</b>	A separate footbridge would provide uninterrupted provision, and would be designed with high quality surfaces. Linear provision with no dismount requirements of cyclists.	<b>H</b>	<b>5</b>
<b>Attractiveness</b>	Be attractive and interesting; Integrate with and compliment their surroundings; Contribute to good urban design	Minimal impact to the current surroundings. Travelling across the bridge allows users to appreciate the surroundings.	<b>H</b>	<b>5</b>	Minimal impact to the current surroundings. Travelling across the bridge allows users to appreciate the surroundings.	<b>H</b>	<b>5</b>	Attractive to users as they will be segregated from motorised vehicles. Travelling across the bridge allows users to appreciate the surroundings.	<b>H</b>	<b>5</b>
<b>Health and Safety/ CDM/ Environmental</b>	Are there any health and safety implications with the option?	Current parapet height - to be assessed for active travel use. Working at height and over water. Stop/start for motorised vehicles may increase noise and pollution at this location. BT underground service on the west of the bridge. LV on the west and HV on the east underground SP cables.	<b>M</b>	<b>3</b>	Structure assessment will be required to check the options for widening the bridge. Parapet height to be assessed. Working at height and over water. Vegetation removal required on approach to the structure. BT underground service on the west of the bridge. LV on the west and HV on the east underground SP cables.	<b>M</b>	<b>3</b>	Significant vegetation removal required. Working at height and over water.	<b>M</b>	<b>3</b>
<b>Deliverability (Weighted x1.5)</b>	Scale of Low to High. L= No prospect of delivery/ large impact to residents and users of the route as existing, challenging constraints, high design requirements. H = No challenges to delivery, all required information and agreements in hand.	Residents and Diageo Distillery may not have a positive response to priority system implementation. No anticipated structural issues.	<b>M</b>	<b>4.5</b>	This will require structural alterations to the existing bridge. Earthworks would be required. Alterations to the bridge would result in diversions/ phased improvements during construction - structure is only entrance to residential properties.	<b>M</b>	<b>4.5</b>	This option is deliverable, but would require extensive surveys, earthworks and the design of a new bridge structure.	<b>M</b>	<b>4.5</b>
<b>Indicative Value Range (Weighted x1.5)</b>	Appraise construction required to achieve the option. Scale of low to high comparative to options. L = High cost, low economic value H = Low cost, high economic value	Signals to be installed. Would require Xm resurfacing and separation between road users and active travel provision installation.	<b>H</b>	<b>7.5</b>	50m of structural widening by 2.5m in width.	<b>M/L</b>	<b>3</b>	75m of new construction. 300m2 of vegetation removal. Significant earthworks to accommodate level differences.	<b>L</b>	<b>1.5</b>
			41		33.5			35		

Active Travel Route Design Objectives		Additional Route 1 D Location: A915 crossing to river path network Description: Improvement to current crossing provision available for active travel users			
Objective	Objective Criteria	Option A Description	Rating	Option B Description	Rating
		Construct a new overbridge to replace current uncontrolled crossing on A915.	<b>High, Medium, Low</b>	Upgrade current uncontrolled crossing – provide signalised crossing for users.	<b>High, Medium, Low</b>
<b>Safety</b>	Route is safe and perceived as safe; Provides personal security; Limits conflict between cyclists and pedestrians and other modes of travel; Provides consistency of design and avoids ambiguity	Route separates active travel users from motorised vehicles, and also provides adequate width to reduce potential conflict between people walking, wheeling or cycling.	<b>H 5</b>	Same as Option A.	<b>H 5</b>
<b>Coherence</b>	Be continuous and recognisable; Integrate cycling with other modes of travel; routes should be continuous from origin to a destination, easy to navigate and of a consistently high quality	Crossing type results in users having to use ramps/steps to cross the main carriageway.	<b>M 3</b>	Increases coherence by providing an at-grade, one stage crossing.	<b>H 5</b>
<b>Directness</b>	Route to match desire lines; Route should have minimal detours or delays; Provide a positive advantage in terms of directness	Route follows the desired line active travel users use to join onto paths following along River Leven. Requirement to use steps or ramps may increase journey time for some users, in particular those with mobility problems.	<b>M 3</b>	Provision is direct at the current desire line.	<b>H 5</b>
<b>Hierarchy of Transport Modes</b>	Provide a positive advantage in terms of priority (hierarchy of transport modes)	No road space is reallocated to active users. However, active travels users are accommodated to provide high quality provision.	<b>M/H 4</b>	Road space and priority reallocated to active travel users through implementation of a toucan crossing.	<b>H 5</b>
<b>Comfort</b>	Routes should be sheltered, smooth, uninterrupted, well maintained surfaces with gentle gradients; Have sufficient width for the level of use; Be designed to avoid complicated manoeuvres; Enable cyclist to maintain momentum	Cyclists will only need to give way to people using the ramp due to limited mobility. Gradients will adhere to standards, providing a comfortable crossing for users.	<b>M/H 4</b>	Gradients will be consistent as there is no change in levels also cyclists will not have to dismount due to proposed provision being an at-grade toucan.	<b>H 5</b>
<b>Attractiveness</b>	Be attractive and interesting; Integrate with and compliment their surroundings; Contribute to good urban design	The route is desirable to cyclists as they will not loose momentum unless another user is utilising the ramp.	<b>M/H 4</b>	It is attractive to people with limited mobilities as they will not be intimidated by the overbridge. Similarly, the route is more desirable as there is no stairs or ramp to go up and down to access the other side of the road.	<b>H 5</b>
<b>Health and Safety/ CDM/ Environmental</b>	Are there any health and safety implications with the option?	Implementation of a new structure will cause significant delays to road users. Requires vegetation removal and earthworks. Underground HV and overhead EHV SP cables in close proximity of crossing location. Working at height.	<b>M 3</b>	Requires vegetation removal and earthworks. Underground HV and overhead EHV SP cables in close proximity of crossing location.	<b>M/H 4</b>
<b>Deliverability (Weighted x1.5)</b>	Scale of Low to High. L= No prospect of delivery/ large impact to residents and users of the route as existing, challenging constraints, high design requirements. H = No challenges to delivery, all required information and agreements in hand	This would require the installation and construction of a new overbridge, which would involve reconfiguration of the existing road, verge. Post construction, minimal implication for road users, so no anticipated community pushback.	<b>M 4.5</b>	New signal installation is a deliverable solution at this location. However, some potential impact to road users possible, so potential for pushback from commuters, residents and other motorised users.	<b>M 4.5</b>
<b>Indicative Value Range (Weighted x1.5)</b>	Appraise construction required to achieve the option. Scale of low to high comparative to options. L = High cost, low economic value H = Low cost, high economic value	20m length, 5m width overbridge structure required. Earthworks and vegetation clearance required.	<b>L 1.5</b>	Signal installation.	<b>M/H 6</b>
			32		
				44.5	

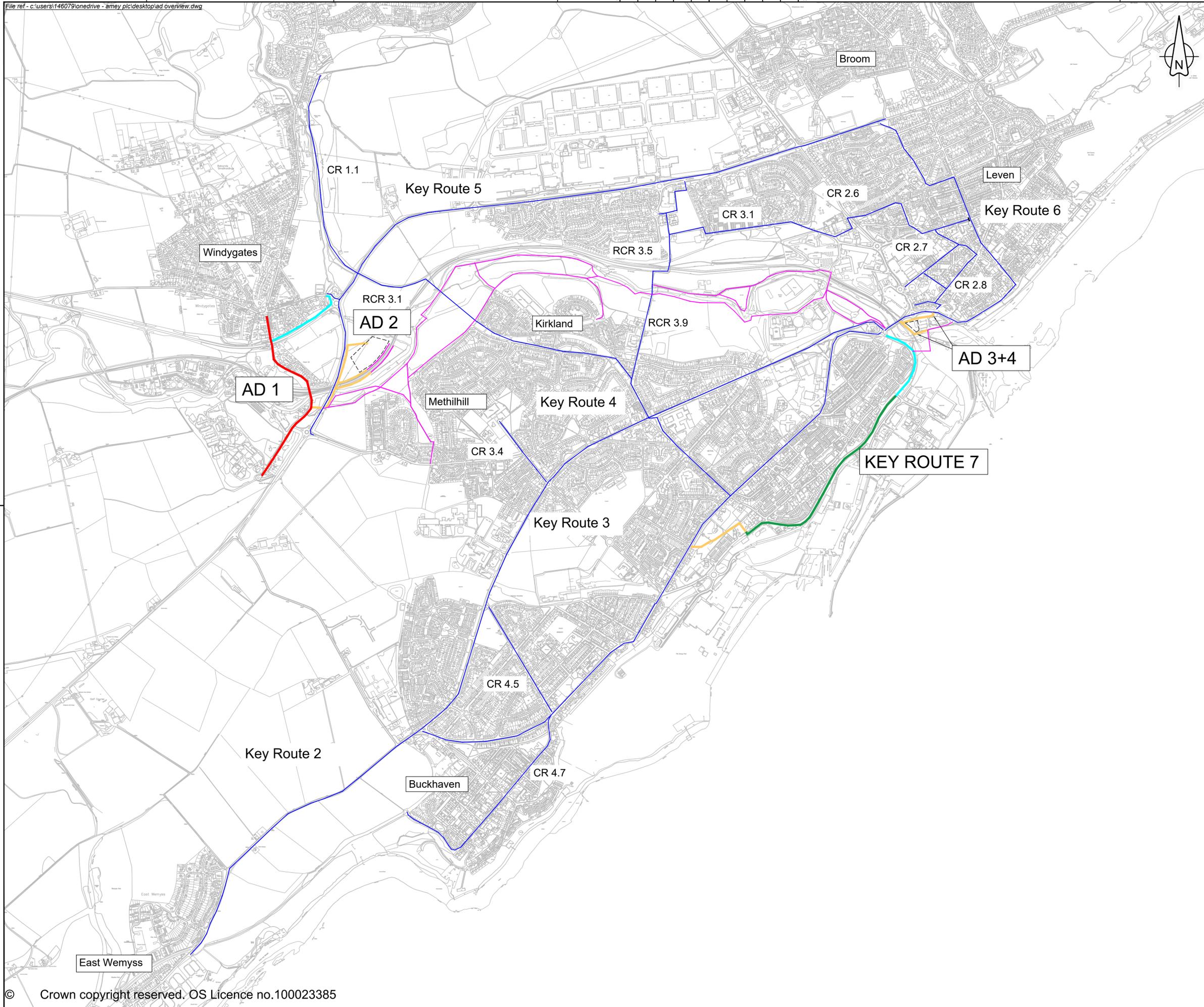
**Additional Route - Key Route 7  
Active Travel Route Design Optioneering Summary**



Pinch Point	Location	Description	Options	Description	Objective	Rating	Total Score	Preferred Option
KR7 A	From Heritage Way at South Street to College Street	Initial KR7 alignment not preferred	A	Continue segregated provision along Station Road, and then north along Methil Brae to connect into Wellesley Road. Methil Brae currently has a 20 mph speed limit. Provide on-road cycle provision and upgrade footways to 2m along Methil Brae.	Safety	3	32.5	Option C
					Coherence	3		
					Directness	4		
					Hierarchy of Transport Modes	3		
					Comfort	3		
					Attractiveness	3		
					Health and Safety/ CDM/ Environmental	3		
					Deliverability	4.5		
					Indicative Value Range	6		
			B	Continue segregated provision along Station Road and High Street to connect to Wellesley Road at Sea Road junction. Provide segregated provision on the south side to minimum widths.	Safety	5	33.5	
					Coherence	4		
					Directness	4		
					Hierarchy of Transport Modes	3		
					Comfort	4		
					Attractiveness	3		
C	Continue segregated provision along Station Road and High Street, and then through Memorial Park, connecting to Wellesley Road. Provide segregated provision along High Street, and shared provision through Memorial Park.	Safety	4	35				
		Coherence	4					
		Directness	4					
		Hierarchy of Transport Modes	3					
		Comfort	4					
		Attractiveness	4					
Health and Safety/ CDM/ Environmental	3							
Deliverability	4.5							
Indicative Value Range	4.5							

Active Travel Route Design Objectives		Key Route 7 A Location: From Heritage Way at South Street to College Street Description: Initial KR7 alignment not preferred								
Objective	Objective Criteria	Option A Description	Rating		Option B Description	Rating		Option C Description	Rating	
		Continue segregated provision along Station Road, and then north along Methil Brae to connect into Wellesley Road. Methil Brae currently has a 20 mph speed limit. Provide on-road cycle provision and upgrade footways to 2m along Methil Brae.	<b>High, Medium, Low</b>		Continue segregated provision along Station Road and High Street to connect to Wellesley Road at Sea Road junction. Provide segregated provision on the south side to minimum widths.	<b>High, Medium, Low</b>		Continue segregated provision along Station Road and High Street, and then through Memorial Park, connecting to Wellesley Road. Provide segregated provision along High Street, and shared provision through Memorial Park.	<b>High, Medium, Low</b>	
<b>Safety</b>	Route is safe and perceived as safe; Provides personal security; Limits conflict between cyclists and pedestrians and other modes of travel; Provides consistency of design and avoids ambiguity	Route will have passive surveillance along its entirety. Potential conflict at High Street/ Methil Brae junction - upgraded crossing provision would be required. Some conflict likely between cyclists, motorised vehicles and parked cars along Methil Brae.	M	3	Segregated provision will improve safety for active travel users.	H	5	Segregated provision will improve safety for active travel users. Some users may feel unsafe using provision through Memorial Park at night or in the winter.	M/H	4
<b>Coherence</b>	Be continuous and recognisable; Integrate cycling with other modes of travel; routes should be continuous from origin to a destination, easy to navigate and of a consistently high quality	Route would vary in provision type through on-road provision along Methil Brae.	M	3	Segregated provision connects to provision of the surrounding network in this area. Connection to provision at Wellesley Road results in additional crossings required.	M/H	4	Shared use provision in Memorial Park decreases coherence of the route (although shared-use provision through green space satisfies PFE requirements). Users connect to Wellesley Road provision with no crossings required.	M/H	4
<b>Directness</b>	Route to match desire lines; Route should have minimal detours or delays; Provide a positive advantage in terms of directness	Length between Heritage Way and College Street is approx. 1.9km. Route requires crossing at Methil Brae/ High Street junction and across Station Road to connect in to proposed South Street provision.	M/H	4	Length between Heritage Way and College Street is approx. 1.8km. Requires crossing at Energy Park Rbt and at Wellesley Road.	M/H	4	Length between Heritage Way and College Street is approx. 1.8km. Crossing on High Street to reach Memorial Park required.	M/H	4
<b>Hierarchy of Transport Modes</b>	Provide a positive advantage in terms of priority (hierarchy of transport modes)	No road space reallocation for active travel. However, new provision for cyclists and pedestrians is being created.	M	3	Same as Option A.	M	3	Same as Option A.	M	3
<b>Comfort</b>	Routes should be sheltered, smooth, uninterrupted, well maintained surfaces with gentle gradients; Have sufficient width for the level of use; Be designed to avoid complicated manoeuvres; Enable cyclist to maintain momentum	Cyclists are required to navigate the route alongside motorised vehicles, and residents parked on the street, which might not be comfortable for cyclists of all experience. Gradients of Methil Brae could cause issues for cyclists travelling uphill.	M	3	Comfort for active travel users increased as provision is segregated from motorised users. Gradient of High Street is steep, and may not suit cyclists of all experience levels.	M/H	4	Comfort for active travel users increased as provision is segregated from motorised users. Gradient of Memorial Park is steep, and may not suit cyclists of all experience levels. However, use of Memorial Park means users do not have to navigate vehicles as well as the gradient.	M/H	4
<b>Attractiveness</b>	Be attractive and interesting; Integrate with and compliment their surroundings; Contribute to good urban design	Use of Methil Brae may not be attractive to all users. Provides connection to trip attractors located on Wellesley Road.	M	3	Route travels parallel to housing, although does provide connection to amenities on Wellesley Road.	M	3	Part of route travels through green space, which could increase attractiveness of the route. Provides connection to trip attractors located on Wellesley Road.	M/H	4
<b>Health and Safety/ CDM/ Environmental</b>	Are there any health and safety implications with the option?	BT underground cables located on the west side of Methil Brae. LP SGN mains located on the east side of Methil Brae. SP LV and HV underground cables present along north side Station Road, at the Methil Brae/High Street junction and along the west side of Methil Brae.	M	3	BT underground cables located on the south side of High Street. LP SGN mains located on the north side of High Street. SP LV underground cables present along north side High Street.	M	3	Vegetation removal required to accommodate provision implementation. BT underground cables located on the south side of High Street. LP SGN mains located on the north side of High Street. SP LV and HV underground cables present along north side High Street.	M	3
<b>Deliverability (Weighted x1.5)</b>	Scale of Low to High. L= No prospect of delivery/ large impact to residents and users of the route as existing, challenging constraints, high design requirements. H = No challenges to delivery, all required information and agreements in hand	Option is deliverable, no anticipated push back from stakeholders or residents.	M	4.5	Land purchase required along High Street to accommodate proposal.	M	4.5	Same as Option B.	M	4.5
<b>Indicative Value Range (Weighted x1.5)</b>	Appraise construction required to achieve the option. Scale of low to high comparative to options. L = High cost, low economic value H = Low cost, high economic value	200m of widening by 5.5m. Junction reconfiguration at High Street/ Methil Brae.	M/H	6	820m of widening by 5.5m 850m <sup>2</sup> of land purchase required. 155m of fence removal. 2750m <sup>2</sup> of vegetation removal.	L/M	3	610m 365m of widening by 5.5m, 250m widening by 3.5m. Toucan crossing on High Street required. 850m <sup>2</sup> of land purchase required. 155m of fence removal.	M	4.5
			32.5		33.5		35			

## Appendix D: Concept Design Drawings



- NOTES**
- This drawing is indicative and outlines the proposals at concept design stage.
- KEY**
- Segregated provision - desired widths (2.5m footway, 4.0m bi-directional cycleway, 0.7/1.7m buffer)
  - Segregated provision - minimum widths (2.0m footway, 3.0m bi-directional cycleway, 0.5/1.5m buffer)
  - On-road cycle provision with traffic calming (minimum 2.0m footway)
  - Shared provision (minimum 3.0m path, 0.5m buffer)
  - Preferred network from Connectivity Study
  - River routes part of the Concept Masterplan
  - Approximate proposed rail station location

A	Key updated	VP	CB	GM	21/05/2021
Rev	Revision details	Drwn	Chkd	Appd	Date
Designed:	VP	Date:	23/04/2021		
Drawn:	AF	Date:	23/04/2021		
Checked:	CB	Date:	23/04/2021		
Approved:	GM	Date:	23/04/2021		



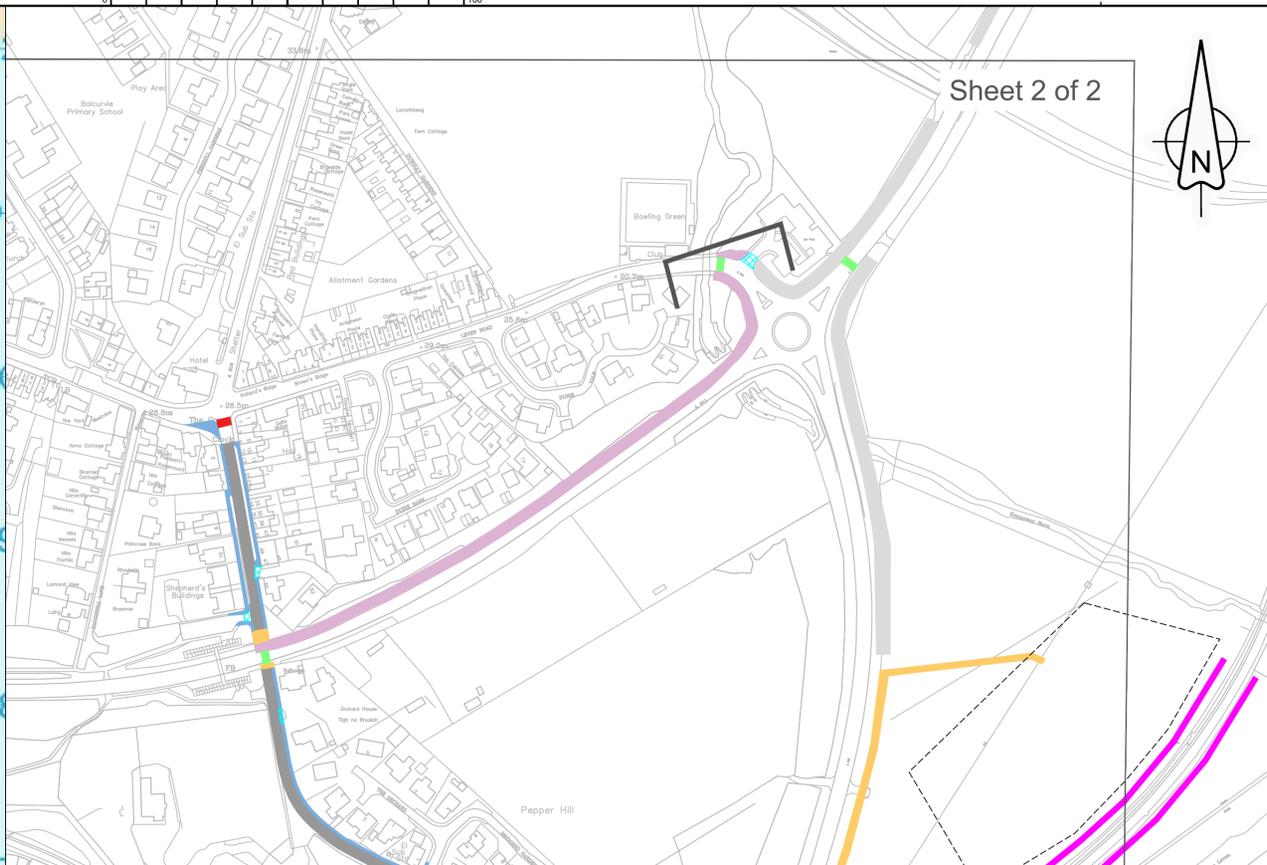
Project Name  
Levenmouth Connectivity Project

Drawing Title  
Additional Routes  
Concept Design Overview

Original Drawing Size : A1      Scale : NTS  
Dimensions : -

Drawing Status  
**FOR INFORMATION**      Suitability  
S0

Drawing No  
CO25000351/AD/001      Rev  
A



- NOTES**
- This drawing is indicative and outlines the proposals at concept design stage.
- KEY**
- Segregated provision to be provided with desired widths (2.5m footway, 4.0m bi-directional cycleway, 0.7m buffer) - see cross section Dwg. CO25000351/100/002 for detail
  - Segregated provision to be provided with minimum widths (2.0m footway, 3.0m bi-directional cycleway, 0.5m buffer) - see cross section Dwg. CO25000351/100/002 for detail
  - Shared provision to be provided (minimum 3.0m with 0.5m buffer) - see cross section Dwg. CO25000351/100/003 for detail
  - On-road provision to be provided see cross - section Dwg. CO25000351/100/003 for detail
  - Footway to be widened (minimum 2.0m) - see cross section Dwg. CO25000351/100/003 for detail
  - Continuous footway to be constructed
  - Raised table to be constructed
  - Toucan crossing to be constructed - see Dwg. CO25000351/100/004 for detail
  - Toucan crossing to be installed, current crossing to be realigned
  - Proposed rail and river bridge to be constructed
  - Tie in to independent scheme
  - Approximate proposed rail station location

Rev	Key updated	VP	CB	GM	20/05/2021
	Revision details	Drwn	Chkd	Appd	Date
Designed:	VP	Date:	21/04/2021		
Drawn:	AF	Date:	21/04/2021		
Checked:	CB	Date:	21/04/2021		
Approved:	GM	Date:	21/04/2021		

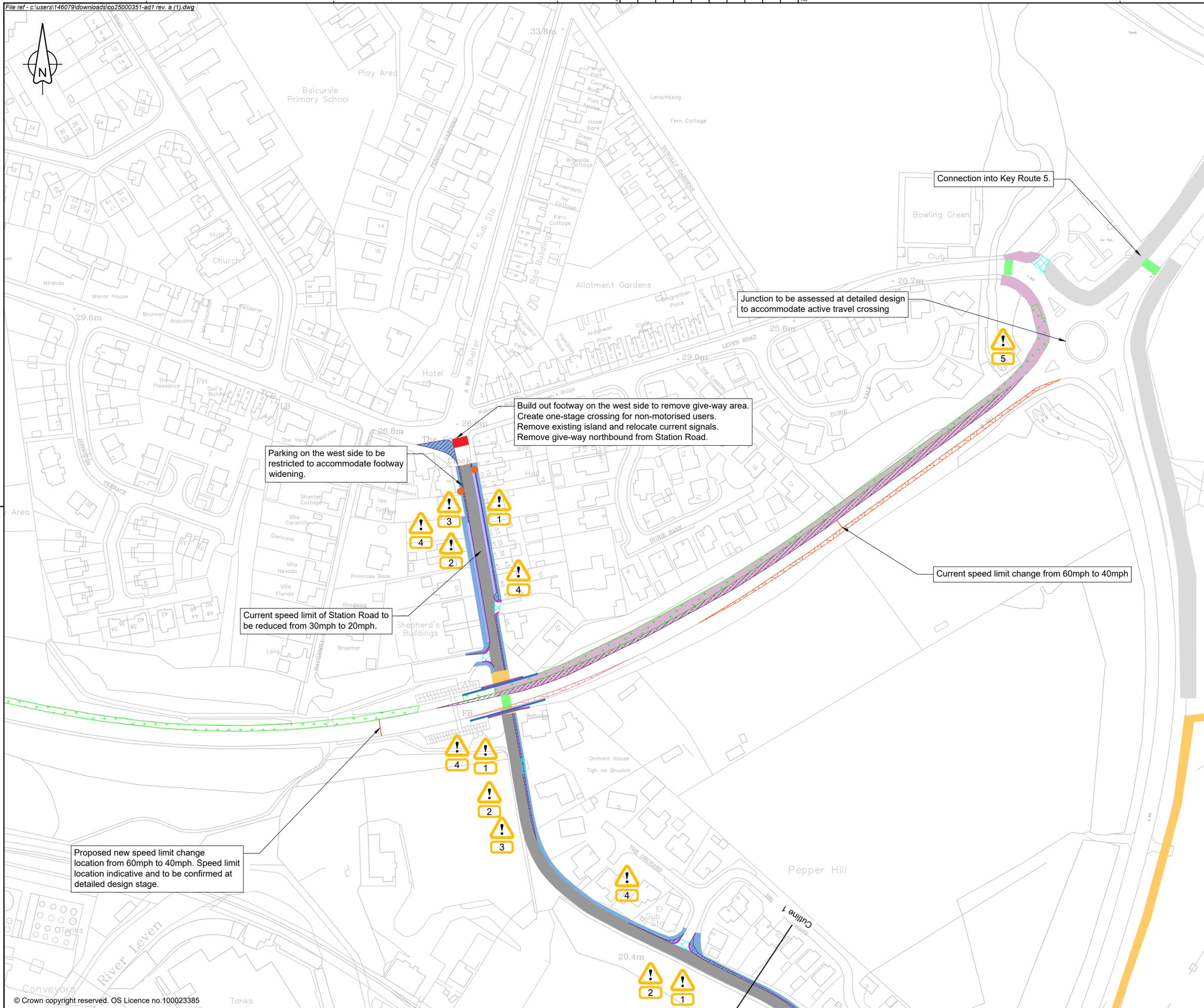


Project Name  
**Levenmouth Connectivity Project**

Drawing Title  
**Additional Route 1  
Concept Design Overview**

Original Drawing Size : A1	Scale : As Shown
Dimensions : m	
Drawing Status <b>FOR INFORMATION</b>	Suitability S0
Drawing No <b>CO25000351/AD1/001</b>	Rev A





**RESIDUAL DESIGN HAZARDS**  
 (The following information has been collected from Preconstruction Information and the Arney CDM Hazard Management Process.)

- BT Services
- Scottish Water Underground Services
- SGN Underground Services
- SP Underground Services
- Working near water (Kennoway Burn)

- NOTES**
- This drawing is indicative and outlines proposals at concept design.
  - Measurements in metres unless otherwise stated.
  - Hatching has been broken down to individual elements in the key, various combinations present in drawings.
  - For cross-sections, please see Dwg. CO25000351/100/002&003.
  - For standard details, please see Dwg. CO25000351/100/004&005.
  - Public utilities have been highlighted, and a series of plans will be provided.
  - Pinch point designs to be appraised and confirmed prior to completion.
  - New signage location for active travel provision to be confirmed at detailed design stage.
  - Drainage surveys and design to be confirmed at detailed design stage. Alterations to provide adequate drainage for increased provision to be confirmed.
  - Kerbing to be repositioned where carriageway is to be narrowed. Final alignment to be confirmed at detailed design.
  - Street lighting to be confirmed at detailed design. Street lighting assessment required to confirm lighting viability.
  - Where the carriageway is to be narrowed to widen active travel provision, a minimum of 6.0m on straight sections and 6.5m on corners for the remaining carriageway width shall be met.

**KEY**

- Segregated provision to be provided with desired widths (2.5m footway, 4.0m bi-directional cycleway, 1.7m buffer) - see cross section Dwg. CO25000351/100/002 for detail
- Segregated provision to be provided with minimum widths (2.0m footway, 3.0m bi-directional cycleway, 1.5m buffer) - see cross section Dwg. CO25000351/100/002 for detail
- Shared provision to be provided (minimum 3.0m with 0.5m buffer) - see cross section Dwg. CO25000351/100/003 for detail
- On-road provision to be provided see cross - section Dwg. CO25000351/100/003 for detail
- Footway to be widened (minimum 2.0m) - see cross section Dwg. CO25000351/100/003 for detail
- Carriageway to be narrowed to be widen provision
- Continuous footway to be constructed
- Vegetation to be removed
- Parking bays to be lined
- Toucan crossing to be constructed
- Existing verge to be narrowed to realign carriageway
- Tactile paving to be installed
- VRS to be removed
- Fence to be removed
- Toucan crossing to be installed, current crossing to be realigned
- Sign to be removed and relocated - mounting height to adhere to Traffic Signs Manual

Rev	Key updated	VP	CB	GM	20/05/2021
	Revision details	Drwn	Chkd	Appd	Date

Designed: VP	Date: 21/04/2021
Drawn: AF	Date: 21/04/2021
Checked: CB	Date: 21/04/2021
Approved: GM	Date: 21/04/2021

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Client

**Fife COUNCIL**

Project Name  
**Levenmouth Connectivity Project**

Drawing Title  
**Additional Route 1  
Concept Design  
Sheet 2 of 2**

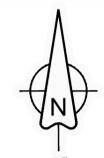
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Dimensions : m	

Drawing Status	Suitability
<b>FOR INFORMATION</b>	S0

Drawing No	Rev
<b>CO25000351/AD1/003</b>	A



**Additional Route 2 Overview NTS**



- NOTES**
- This drawing is indicative and outlines the proposals at concept design stage.
- KEY**
- Segregated provision to be provided with desired widths (2.5m footway, 4.0m bi-directional cycleway, 1.7m buffer) - see cross section Dwg. CO25000351/100/002 for detail
  - Segregated provision to be provided with minimum widths (2.0m footway, 3.0m bi-directional cycleway, 1.5m buffer) - see cross section Dwg. CO25000351/100/002 for detail
  - Shared provision to be provided (minimum 3.0m with 0.5m buffer) - see cross section Dwg. CO25000351/100/003 for detail
  - On-road provision to be provided see cross - section Dwg. CO25000351/100/003 for detail
  - Footway to be widened (minimum 2.0m) - see cross section Dwg. CO25000351/100/003 for detail
  - Continuous footway to be constructed
  - Toucan crossing to be constructed
  - Proposed rail and river bridge to be constructed
  - Tie in to independent scheme
  - Approximate proposed rail station location
  - Proposed platforms

A	Key updated	VP	CB	GM	20/05/2021
Rev	Revision details	Drwn	Chkd	Appd	Date
Designed:	VP	Date:	23/04/2021		
Drawn:	AF	Date:	23/04/2021		
Checked:	CB	Date:	23/04/2021		
Approved:	GM	Date:	23/04/2021		



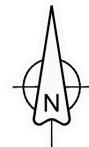
Project Name  
**Levenmouth Connectivity Project**

Drawing Title  
**Additional Route 2  
Concept Design Overview**

Original Drawing Size : A1      Scale : 1:2000m  
Dimensions : -

Drawing Status  
**FOR INFORMATION**      Suitability  
S0

Drawing No  
CO25000351/AD2/001      Rev  
A



**RESIDUAL DESIGN HAZARDS**  
 (The following information has been collected from Preconstruction Information and the Amey CDM Hazard Management Process.)

- BT Services
- SP Services
- Working near water (River Leven)

- NOTES**
- This drawing is indicative and outlines the proposals at concept design stage.
  - Measurements in metres unless otherwise stated/
  - Hatching has been broken down to individual elements in the key, various combinations present in drawings.
  - For cross-sections, please see Dwg. CO25000351/100/002&003.
  - For standard details, please see Dwg. CO25000351/100/004&005.
  - Public utilities have been highlighted, and a series of plans will be provided.
  - New signage location for active travel provision to be confirmed at detailed design stage.
  - Drainage surveys and design to be confirmed at detailed design stage. Alterations to provide adequate drainage for increased provision to be confirmed.
  - Kerbing to be repositioned where carriageway is to be narrowed. Final alignment to be confirmed at detailed design.
  - Street lighting to be confirmed at detailed design. Street lighting assessment required to confirm lighting viability.
  - Where the carriageway is to be narrowed to widen active travel provision, a minimum of 6.0m on straight sections and 6.5m on corners for the remaining carriageway width shall be met.
  - Traffic modelling required to determine the impact of signals proposed.
  - Where the active travel provision is not directly adjacent to the carriageway, no buffer is provided.
  - Environmental assessment required to assess the removal of trees along the route.

- KEY**
- Shared provision to be provided (minimum 3.0m with 0.5m buffer) - see cross section Dwg. CO25000351/100/003 for detail
  - Segregated provision to be provided with desired widths (2.5m footway, 4.0m bi-directional cycleway, 0.7m buffer) - see cross section Dwg. CO25000351/100/002 for detail
  - Toucan crossing to be constructed
  - Proposed rail and river bridge to be constructed
  - Earthworks and vegetation clearance required
  - Tie in to independent scheme
  - Approximate proposed rail station location
  - Proposed platforms

Rev	Key updated	VP	CB	GM	20/05/2021
	Revision details	Drwn	Chkd	Appd	Date
Designed:	VP	Date:	23/04/2021		
Drawn:	AF	Date:	23/04/2021		
Checked:	CB	Date:	23/04/2021		
Approved:	GM	Date:	23/04/2021		

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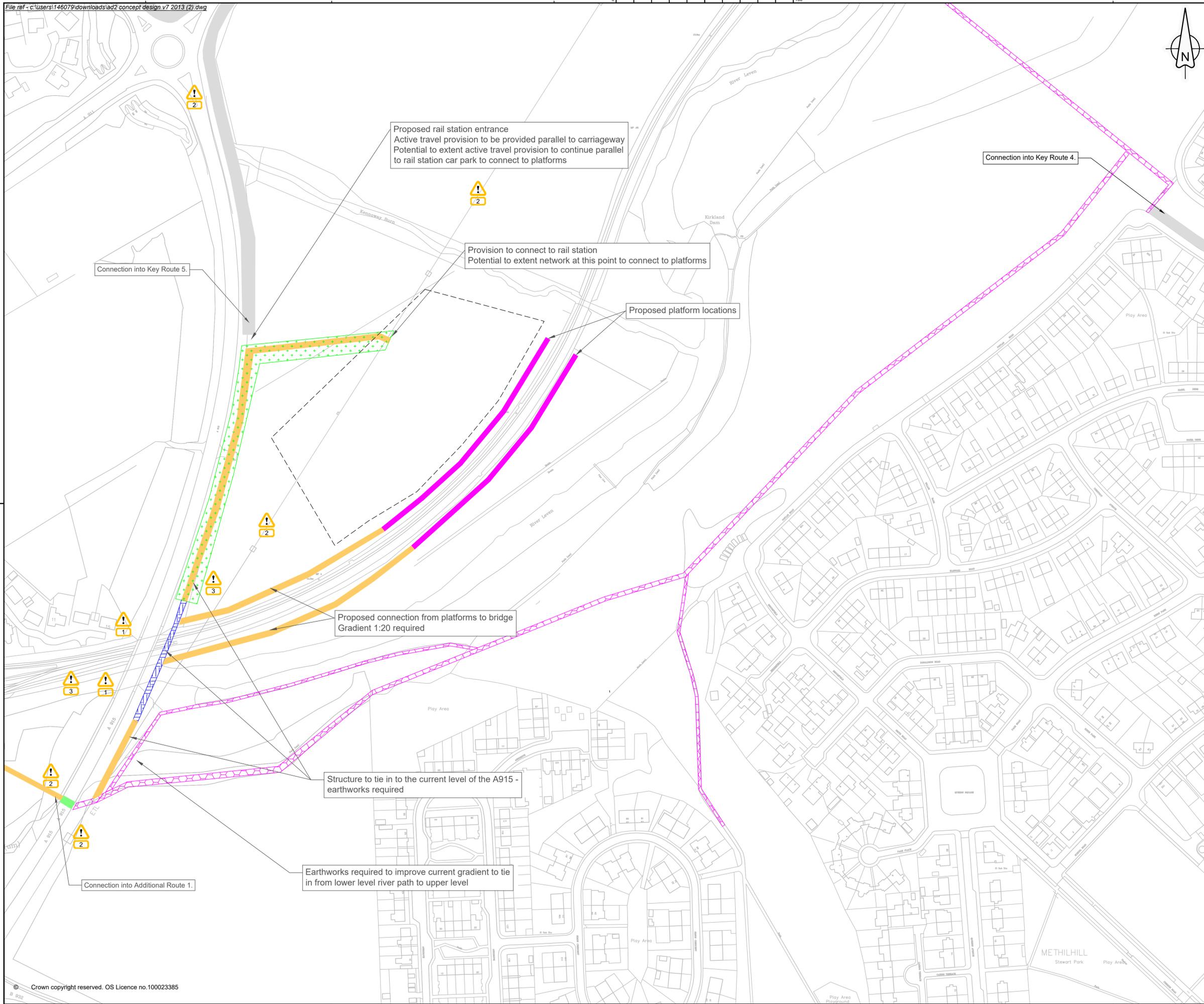
Project Name  
**Levenmouth Connectivity Project**

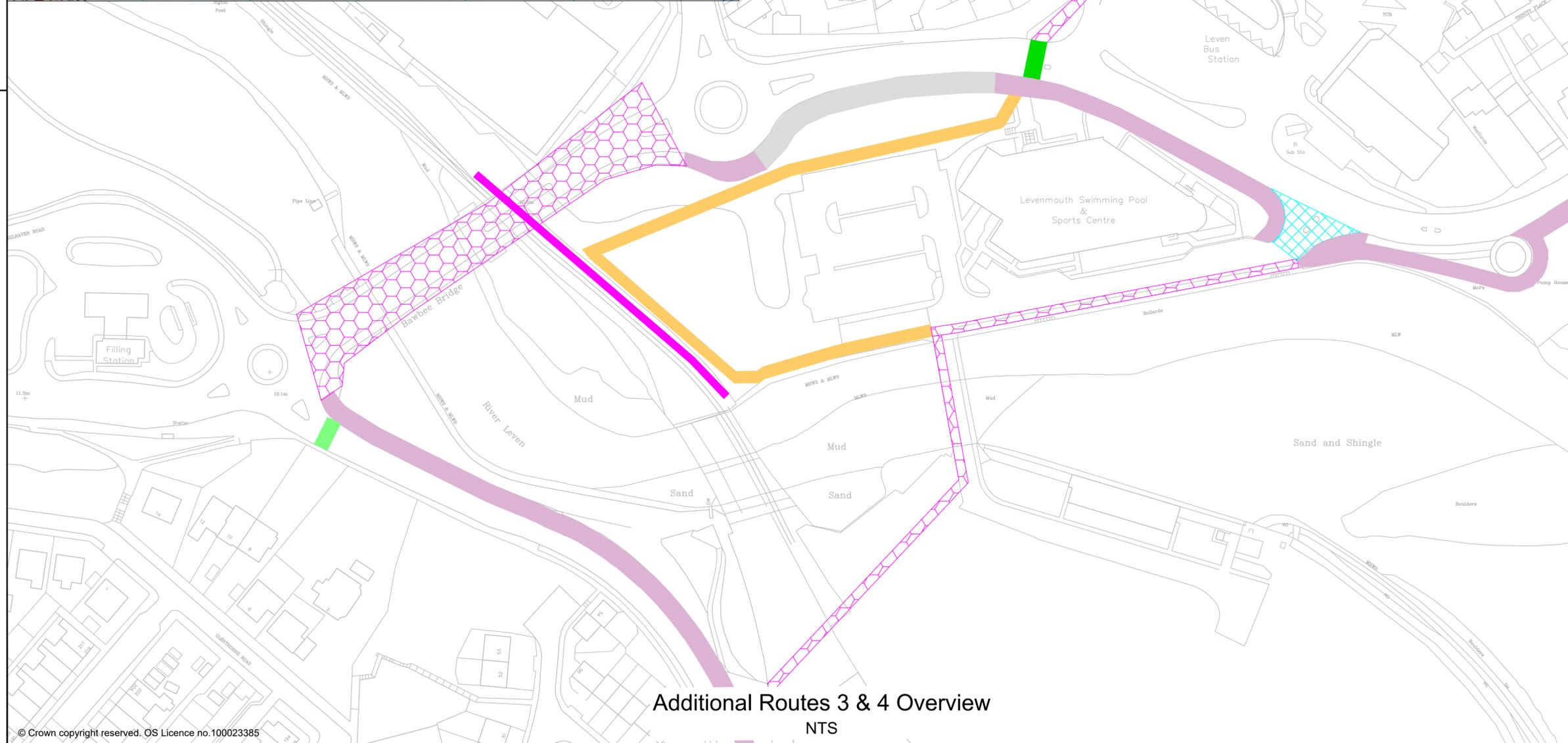
Drawing Title  
**Additional Route 2  
 Concept Design**

Original Drawing Size : A1	Scale : 1:1250m
Dimensions : -	

Drawing Status	Suitability
<b>FOR INFORMATION</b>	<b>S0</b>

Drawing No	Rev
<b>CO25000351/AD2/002</b>	<b>A</b>





- NOTES**
- This drawing is indicative and outlines the proposals at concept design stage.
- KEY**
- Segregated provision to be provided with desired widths (2.5m footway, 4.0m bi-directional cyclway, 0.7m buffer) - see cross section Dwg. CO25000351/100/002 for detail
  - Shared provision to be provided (minimum 3.0m with 0.5m buffer) - see cross section Dwg. CO25000351/100/003 for detail
  - Shared provision to be provided (minimum 3.0m with 0.5m buffer) - see cross section Dwg. CO25000351/100/003 for detail
  - Toucan crossing to be upgraded - see Dwg. CO25000351/100/004 for detail
  - Toucan crossing to be constructed - see Dwg. CO25000351/100/004 for detail
  - Tie in to independent scheme
  - Proposed platform
  - Continuous footway to be constructed

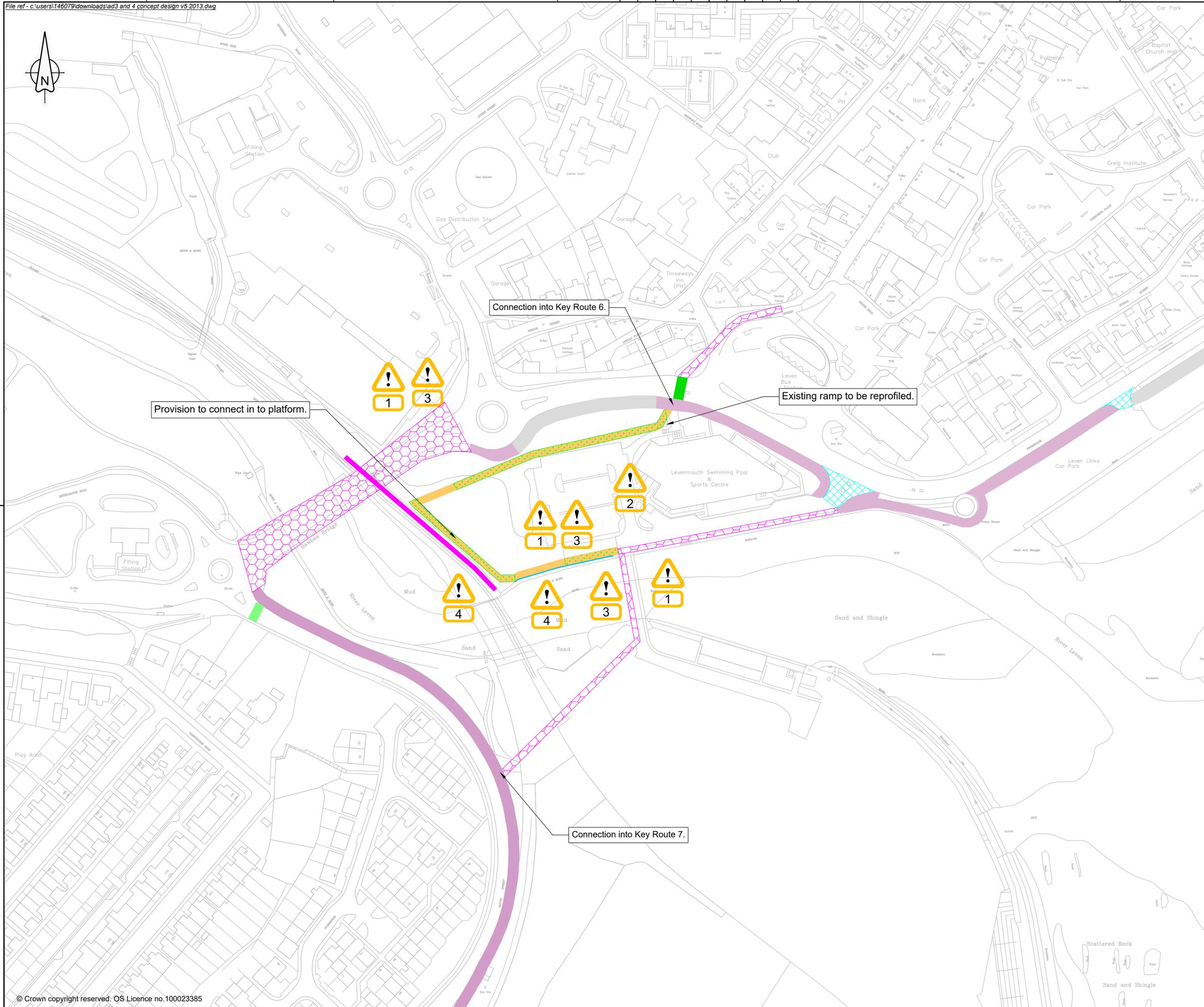
Rev	Key updated	VP	CB	GM	21/05/2021
	Revision details	Drwn	Chkd	Appd	Date
Designed:	VP	Date:	21/04/2021		
Drawn:	AF	Date:	21/04/2021		
Checked:	CB	Date:	21/04/2021		
Approved:	GM	Date:	21/04/2021		



Project Name  
**Levenmouth Connectivity Project**

Drawing Title  
**Additional Route 3 & 4  
Concept Design Overview**

Original Drawing Size : A1	Scale : As Shown
Dimensions : m	
Drawing Status <b>FOR INFORMATION</b>	Suitability S0
Drawing No <b>CO25000351/AD3+4/001</b>	Rev A



**RESIDUAL DESIGN HAZARDS**  
 (The following information has been collected from Preconstruction Information and the Amey CDM Hazard Management Process.)

- BT Services
- Scottish Water Underground Services
- SP Underground Services
- Working near Water (River Leven)

- NOTES**
- This drawing is indicative and outlines the proposals at concept design stage.
  - Measurements in metres unless otherwise stated
  - For cross-sections, please see Dwg. CO25000351/100/002&003.
  - For standard details, please see Dwg. CO25000351/100/004&005.
  - Public utilities have been highlighted, and a series of plans will be provided.
  - New signage location for active travel provision to be confirmed at detailed design stage.
  - Drainage surveys and design to be confirmed at detailed design stage. Alterations to provide adequate drainage for increased provision to be confirmed.
  - Kerbing to be repositioned where carriageway is to be narrowed. Final alignment to be confirmed at detailed design.
  - Street lighting to be confirmed at detailed design. Street lighting assessment required to confirm lighting visibility.
  - Where the carriageway is to be narrowed to widen active travel provision, a minimum of 6.0m on straight sections and 6.5m on corners for the remaining carriageway width shall be met.
  - Traffic modelling required to determine the impact of signals proposed.
  - Where the active travel provision is not directly adjacent to the carriageway, no buffer is provided.
  - Environmental assessment required to assess the removal of trees along the route.

- KEY**
- Segregated provision to be provided with desired widths (2.5m footway, 4.0m bi-directional cycleway, 0.7m buffer) - see cross section Dwg. CO25000351/100/002 for detail
  - Shared provision to be provided (minimum 3.0m with 0.5m buffer) - see cross section Dwg. CO25000351/100/003 for detail
  - Shared provision to be provided (minimum 3.0m with 0.5m buffer) - see cross section Dwg. CO25000351/100/003 for detail
  - Toucan crossing to be upgraded - see Dwg. CO25000351/100/004 for detail
  - Toucan crossing to be constructed - see Dwg. CO25000351/100/004 for detail
  - Tie in to independent scheme
  - Proposed platform
  - Continuous footway to be constructed
  - Vegetation to be removed
  - Fence to be replaced to provide a compliant system

A	Key updated	VP	CB	GM	21/05/2021
Rev	Revision details	Drwn	Chkd	Appd	Date
Designed:	VP	Date:	21/04/2021		
Drawn:	AF	Date:	21/04/2021		
Checked:	CB	Date:	21/04/2021		
Approved:	GM	Date:	21/04/2021		

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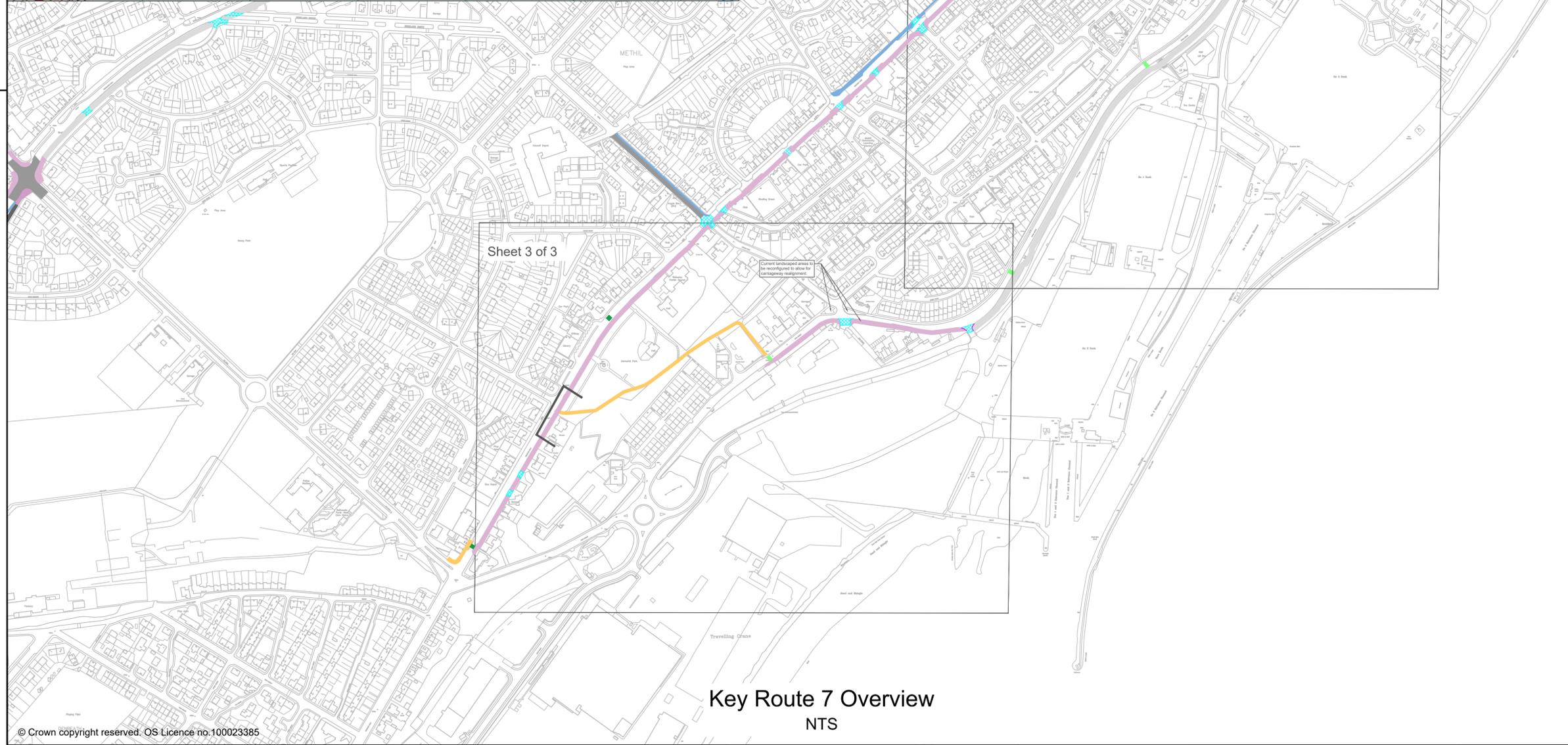
Project Name  
**Levenmouth Connectivity Project**

Drawing Title  
**Additional Route 3 & 4  
 Concept Design**

Original Drawing Size : A1      Scale : 1:1000m  
 Dimensions : m

Drawing Status  
**FOR INFORMATION**      Suitability  
 S0

Drawing No  
**CO25000351/AD3+4/002**      Rev  
 A



- NOTES**
- This drawing is indicative and outlines the proposals at concept design stage.
- KEY**
- Segregated provision to be provided with desired widths (2.5m footway, 4.0m bi-directional cycleway, 0.7m buffer) - see cross section Dwg. CO25000351/100/002 for detail
  - Segregated provision to be provided with minimum widths (2.0m footway, 3.0m bi-directional cycleway, 0.5m buffer) - see cross section Dwg. CO25000351/100/002 for detail
  - Shared provision to be provided (minimum 3.0m with 0.5m buffer) - see cross section Dwg. CO25000351/100/003 for detail
  - On-road provision to be provided see cross - section Dwg. CO25000351/100/003 for detail
  - Footway to be widened (minimum 2.0m) - see cross section Dwg. CO25000351/100/003 for detail
  - Continuous footway to be constructed
  - Toucan crossing to be upgraded - see Dwg. CO25000351/100/004 for detail
  - Toucan to be constructed - see Dwg. CO25000351/100/004 for detail
  - Tie in to independent scheme

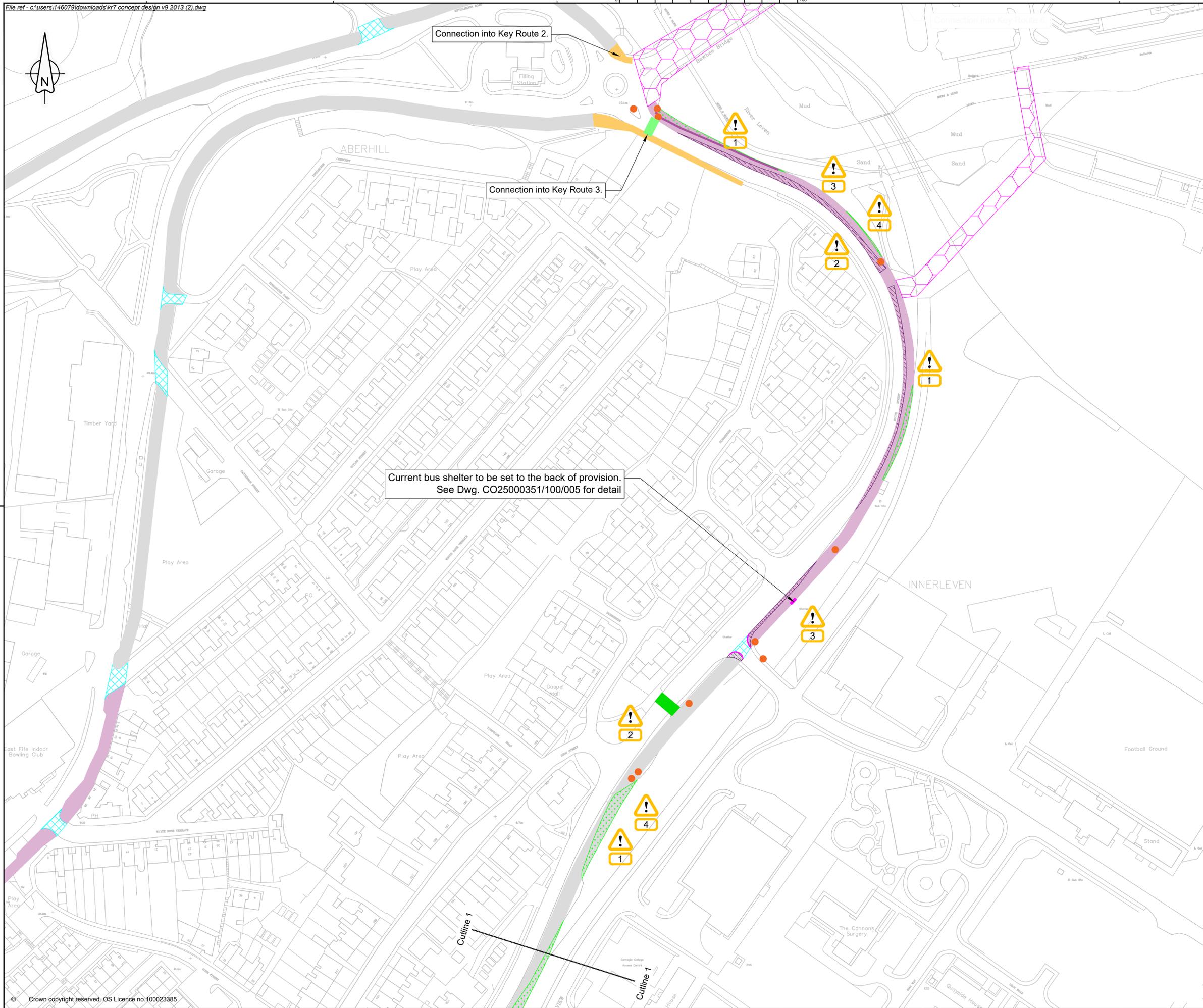
A	Key updated	VP	CB	GM	21/05/2021
Rev	Revision details	Drwn	Chkd	Appd	Date
Designed:	VP	Date:	23/04/2021		
Drawn:	AF	Date:	23/04/2021		
Checked:	CB	Date:	23/04/2021		
Approved:	GM	Date:	23/04/2021		



Project Name  
**Levenmouth Connectivity Project**

Drawing Title  
**Key Route 7  
Concept Design Overview**

Original Drawing Size : A1	Scale : As Shown
Dimensions : m	
Drawing Status <b>FOR INFORMATION</b>	Suitability S0
Drawing No <b>CO25000351/KR7/001</b>	Rev A



**RESIDUAL DESIGN HAZARDS**  
 (The following information has been collected from Preconstruction Information and the Amey CDM Hazard Management Process.)

- BT Services
- Scottish Water Underground Services
- SGN Underground Services
- SP Underground Services

- NOTES**
- This drawing is indicative and outlines the proposals at concept design stage.
  - Measurements in metres unless otherwise stated.
  - Hatching has been broken down to individual elements in the key, various combinations present in drawings.
  - For cross-sections, please see Dwg. CO25000351/100/002&003.
  - For standard details, please see Dwg. CO25000351/100/004&005.
  - Public utilities have been highlighted, and a series of plans will be provided.
  - New signage location for active travel provision to be confirmed at detailed design stage.
  - Drainage surveys and design to be confirmed at detailed design stage. Alterations to provide adequate drainage for increased provision to be confirmed.
  - Kerbing to be repositioned where carriageway is to be narrowed. Final alignment to be confirmed at detailed design.
  - Street lighting to be confirmed at detailed design. Street lighting assessment required to confirm lighting viability.
  - Where the carriageway is to be narrowed to widen active travel provision, a minimum of 6.0m on straight sections and 6.5m on corners for the remaining carriageway width shall be met.
  - Traffic modelling required to determine the impact of signals proposed.
  - Where the active travel provision is not directly adjacent to the carriageway, no buffer is provided.
  - Environmental assessment required to assess the removal of trees along the route.

- KEY**
- Segregated provision to be provided with desired widths (2.5m footway, 4.0m bi-directional cycleway, 0.7m buffer) - see cross section Dwg. CO25000351/100/002 for detail
  - Segregated provision to be provided with minimum widths (2.0m footway, 3.0m bi-directional cycleway, 0.5m buffer) - see cross section Dwg. CO25000351/100/002 for detail
  - Shared provision to be provided (minimum 3.0m with 0.5m buffer) - see cross section Dwg. CO25000351/100/003 for detail
  - Carriageway to be narrowed to be widen provision
  - Continuous footway to be constructed
  - Vegetation to be removed
  - Toucan crossing to be upgraded - see Dwg. CO25000351/100/004 for detail
  - Toucan crossing to be constructed - see Dwg. CO25000351/100/004 for detail
  - Existing fence to be removed and relocated at the back of provision
  - Sign to be removed and relocated - mounting height to adhere to Traffic Signs Manual
  - Tactile paving to be installed
  - Bus shelter to be relocated
  - Tie in to independent scheme

Rev	Key updated	VP	CB	GM	21/05/2021
	Revision details	Drwn	Chkd	Appd	Date

Designed:	VP	Date:	23/04/2021
Drawn:	AF	Date:	23/04/2021
Checked:	CB	Date:	23/04/2021
Approved:	GM	Date:	23/04/2021

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Client

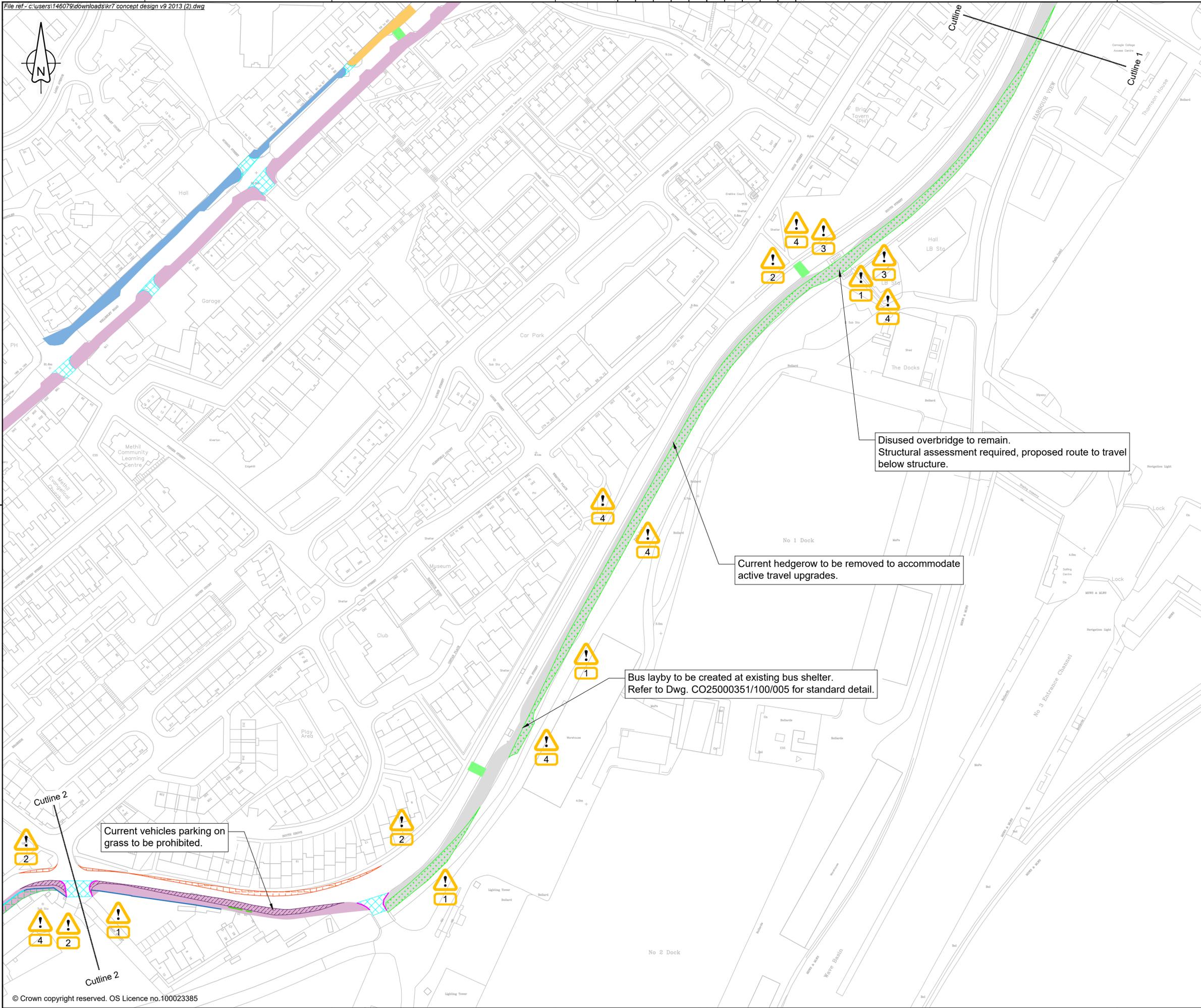
Project Name  
**Levenmouth Connectivity Project**

Drawing Title  
**Key Route 7  
 Concept Design  
 Sheet 1 of 3**

Original Drawing Size : A1	Scale : 1:1000m
Dimensions : m	

Drawing Status	Suitability
<b>FOR INFORMATION</b>	S0

Drawing No	Rev
<b>CO25000351/KR7/002</b>	A



**RESIDUAL DESIGN HAZARDS**  
 (The following information has been collected from Preconstruction Information and the Arney CDM Hazard Management Process.)

- BT Services
- Scottish Water Underground Services
- SGN Underground Services
- SP Underground Services

- NOTES**
- This drawing is indicative and outlines proposals at concept design. Measurements in metres unless otherwise stated.
  - Hatching has been broken down to individual elements in the key, various combinations present in drawings.
  - For cross-sections, please see Dwg. CO25000351/100/002&003.
  - For standard details, please see Dwg. CO25000351/100/004&005.
  - Public utilities have been highlighted, and a series of plans will be provided.
  - New signage location for active travel provision to be confirmed at detailed design stage.
  - Drainage surveys and design to be confirmed at detailed design stage. Alterations to provide adequate drainage for increased provision to be confirmed.
  - Kerbing to be repositioned where carriageway is to be narrowed. Final alignment to be confirmed at detailed design.
  - Street lighting to be confirmed at detailed design. Street lighting assessment required to confirm lighting viability.
  - Where the carriageway is to be narrowed to widen active travel provision, a minimum of 6.0m on straight sections and 6.5m on corners for the remaining carriageway width shall be met.

- KEY**
- Segregated provision to be provided with desired widths (2.5m footway, 4.0m bi-directional cycleway, 0.7m buffer) - see cross section Dwg. CO25000351/100/002 for detail
  - Segregated provision to be provided with minimum widths (2.0m footway, 3.0m bi-directional cycleway, 0.5m buffer) - see cross section Dwg. CO25000351/100/002 for detail
  - Shared provision to be provided (minimum 3.0m with 0.5m buffer) - see cross section Dwg. CO25000351/100/003 for detail
  - Footway to be widened (minimum 2.0m) - see cross section Dwg. CO25000351/100/003 for detail
  - Vegetation to be removed
  - Carriageway to be narrowed to widen active travel provision
  - Continuous footway to be constructed
  - Existing footway to be narrowed to realign carriageway
  - Toucan crossing to be constructed - see Dwg. CO25000351/100/004 for detail
  - Tactile paving to be installed
  - Existing pedestrian guardrail to be removed
  - Existing wall to be maintained

Disused overbridge to remain.  
 Structural assessment required, proposed route to travel below structure.

Current hedgerow to be removed to accommodate active travel upgrades.

Bus layby to be created at existing bus shelter.  
 Refer to Dwg. CO25000351/100/005 for standard detail.

Current vehicles parking on grass to be prohibited.

A	Key updated	VP	CB	GM	21/05/2021
Rev	Revision details	Drwn	Chkd	Appd	Date
Designed:	VP	Date:	19/10/2020		
Drawn:	AF	Date:	19/10/2020		
Checked:	CB	Date:	19/10/2020		
Approved:	GM	Date:	19/10/2020		

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Client

**Fife COUNCIL**

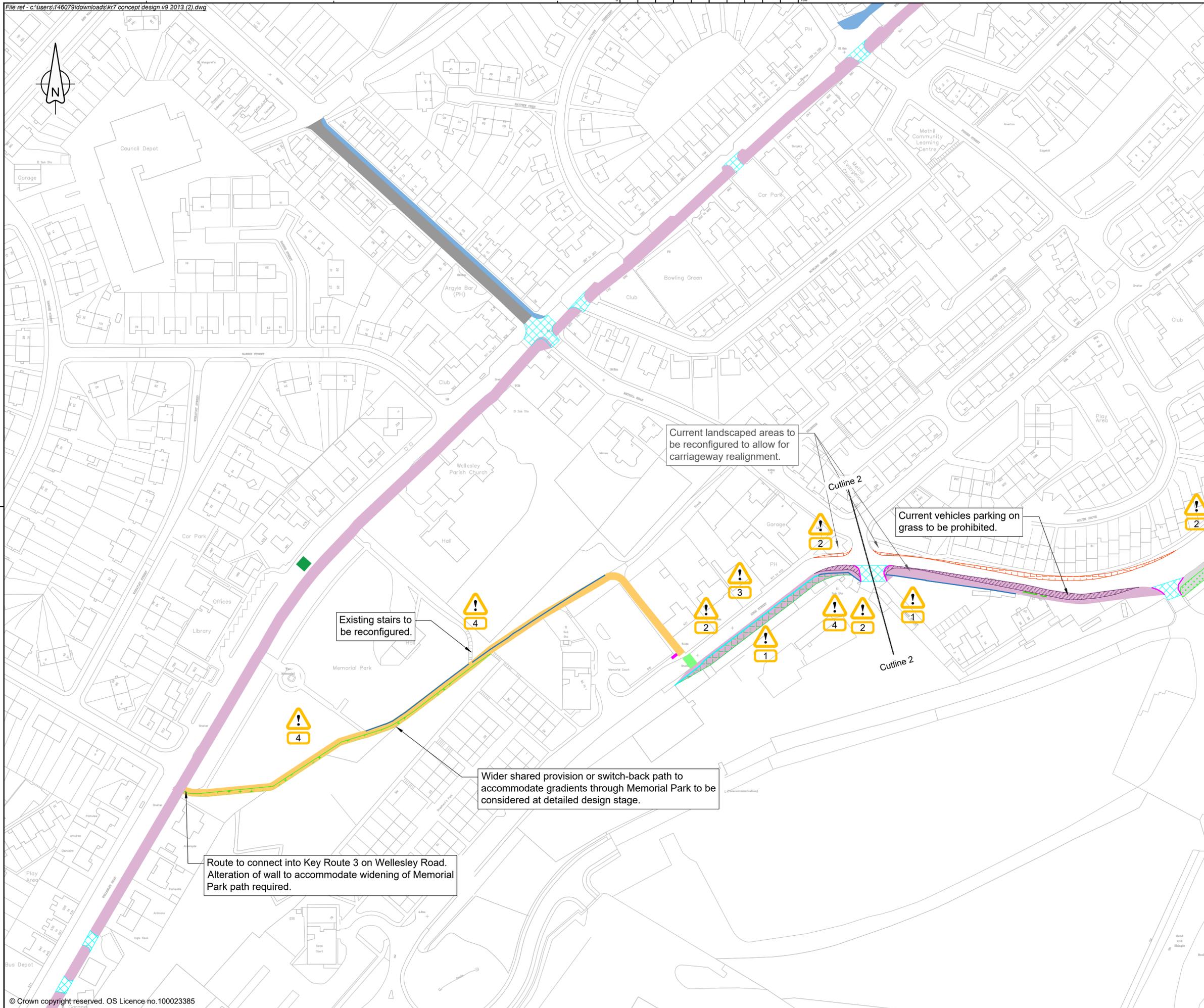
Project Name  
**Levenmouth Connectivity Project**

Drawing Title  
**Key Route 7  
 Concept Design  
 Sheet 2 of 3**

Original Drawing Size : A1	Scale : 1:1000m
Dimensions : m	

Drawing Status <b>FOR INFORMATION</b>	Suitability S0
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Drawing No <b>CO25000351/KR7/003</b>	Rev A
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**RESIDUAL DESIGN HAZARDS**  
 (The following information has been collected from Preconstruction Information and the Amey CDM Hazard Management Process.)

- BT Services
- Scottish Water Underground Services
- SGN Underground Services
- SP Underground Services

- NOTES**
- This drawing is indicative and outlines the proposals at concept design stage.
  - Measurements in metres unless otherwise stated.
  - Hatching has been broken down to individual elements in the key, various combinations present in drawings.
  - For cross-sections, please see Dwg. CO25000351/100/002&003.
  - For standard details, please see Dwg. CO25000351/100/004&005.
  - Public utilities have been highlighted, and a series of plans will be provided.
  - New signage location for active travel provision to be confirmed at detailed design stage.
  - Drainage surveys and design to be confirmed at detailed design stage. Alterations to provide adequate drainage for increased provision to be confirmed.
  - Kerbing to be repositioned where carriageway is to be narrowed. Final alignment to be confirmed at detailed design.
  - Street lighting to be confirmed at detailed design. Street lighting assessment required to confirm lighting viability.
  - Where the carriageway is to be narrowed to widen active travel provision, a minimum of 6.0m on straight sections and 6.5m on corners for the remaining carriageway width shall be met.
  - Where the active travel provision is not directly adjacent to the carriageway, no buffer is provided.
  - Environmental assessment required to assess the removal of trees and vegetation along the route.

- KEY**
- Segregated provision to be provided with minimum widths (2.0m footway, 3.0m bi-directional cycleway, 0.5m buffer) - see cross section Dwg. CO25000351/100/002 for detail
  - Shared provision to be provided (minimum 3.0m with 0.5m buffer) - see cross section Dwg. CO25000351/100/003 for detail
  - Land purchase, earthworks and vegetation removal required
  - Vegetation to be removed
  - Carriageway to be narrowed to widen active travel provision
  - Continuous footway to be constructed
  - Existing footway to be narrowed to realign carriageway
  - Toucan crossing to be upgraded - see Dwg. CO25000351/100/004 for detail
  - Toucan crossing to be constructed - see Dwg. CO25000351/100/004 for detail
  - Tactile paving to be installed
  - Existing pedestrian guardrail to be removed
  - Existing wall to be set back, earthworks required
  - Existing fence to be replaced and relocated
  - Bus shelter to be relocated

Rev	Key updated	VP	CB	GM	21/05/2021
	Revision details	Drwn	Chkd	Appd	Date

Designed: VP	Date: 23/04/2021
Drawn: AF	Date: 23/04/2021
Checked: CB	Date: 23/04/2021
Approved: GM	Date: 23/04/2021

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Client

**Fife COUNCIL**

Project Name  
**Levenmouth Connectivity Project**

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Drawing Title  
**Key Route 7  
Concept Design  
Sheet 3 of 3**

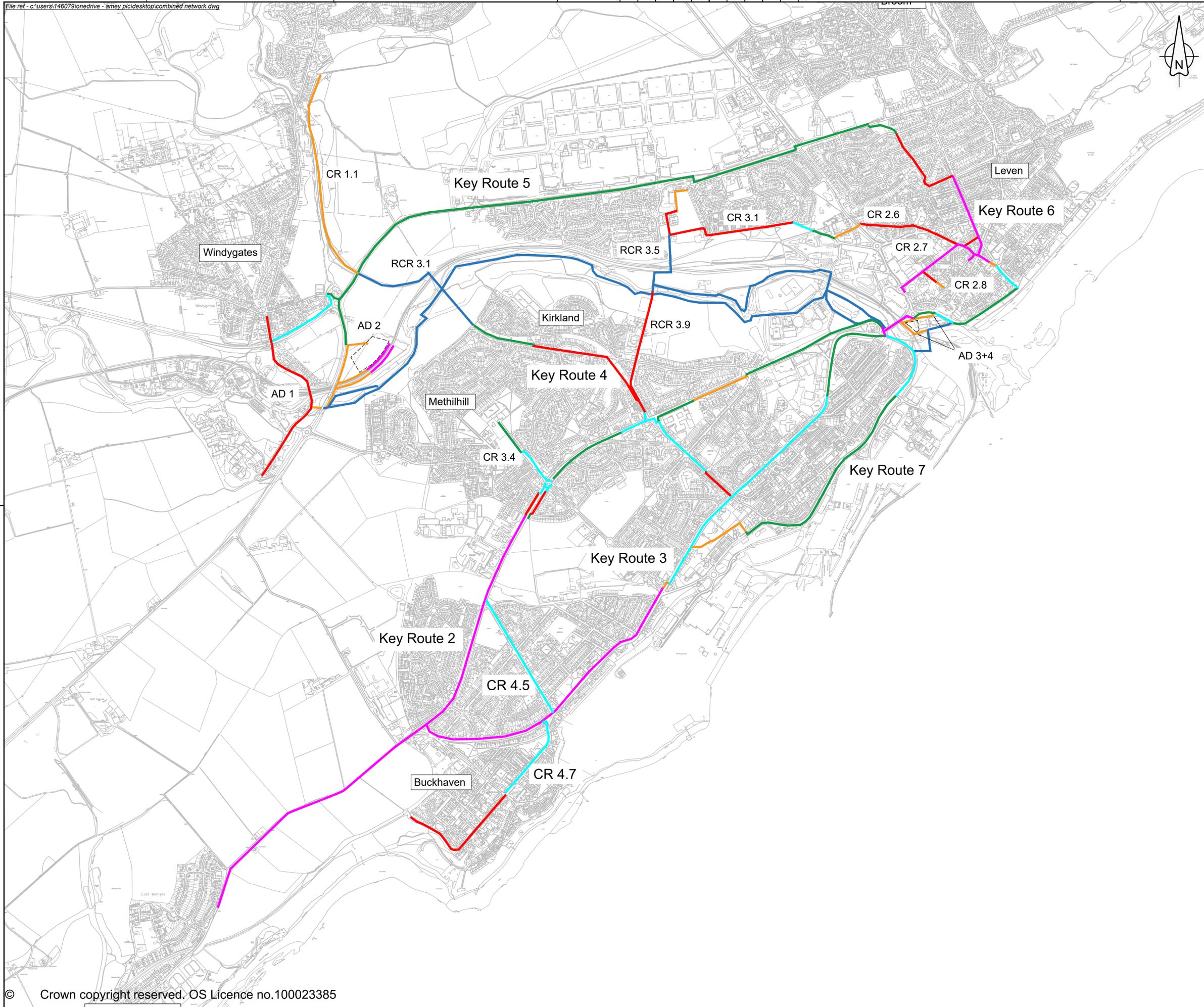
Original Drawing Size : A1	Scale : 1:1000m
Dimensions : m	

Drawing Status  
**FOR INFORMATION**

Suitability  
S0

Drawing No  
**CO25000351/KR7/004**

Rev  
A



- NOTES**
- This drawing is indicative and outlines the proposals at concept design stage.
- KEY**
- Segregated provision - desired widths (2.5m footway, 4.0m bi-directional cycleway, 0.7/1.7m buffer)
  - Segregated provision - minimum widths (2.0m footway, 3.0m bi-directional cycleway, 0.5/1.5m buffer)
  - On-road cycle provision with traffic calming (minimum 2.0m footway)
  - Shared provision (minimum 3.0m path, 0.5m buffer)
  - River routes part of the *Concept Masterplan*
  - Independent Scheme
  - Approximate proposed rail station location

A	Additional Routes included	VP	CB	GM	13/05/2021
Rev	Revision details	Drwn	Chkd	Appd	Date
Designed:	VP	Date:	13/05/2021		
Drawn:	AF	Date:	13/05/2021		
Checked:	CB	Date:	23/04/2021		
Approved:	GM	Date:	13/05/2021		



Project Name  
**Levenmouth Connectivity Project**

Drawing Title  
**Combined Network  
Concept Design Summary Overview**

Original Drawing Size : A1      Scale : NTS  
Dimensions : -

Drawing Status  
**FOR INFORMATION**      Suitability  
S0

Drawing No  
**CO25000351/100/001**      Rev  
A



- NOTES**
- This drawing is indicative and outlines the proposals at concept design stage.
- KEY**
- Preferred network, including additional routes
  - Additional links to be considered in next phases
  - River routes part of the Concept Masterplan
  - Independent Scheme
  - Approximate proposed rail station location

A	Amendments based on Fife Council and project partner comments	VP	CB	CB	31/05/2021
Rev	Revision details	Drwn	Chkd	Appd	Date
Designed:	VP	Date:	13/05/2021		
Drawn:	AF	Date:	13/05/2021		
Checked:	CB	Date:	13/05/2021		
Approved:	GM	Date:	13/05/2021		



Client  
Levenmouth Connectivity Project

Project Name  
Levenmouth Connectivity Project

Drawing Title  
Next Phase Links to Consider

Original Drawing Size : A1      Scale : NTS  
Dimensions : -

Drawing Status  
**FOR INFORMATION**      Suitability  
S0

Drawing No  
CO25000351/REP/005      Rev  
-

## Appendix E: Equality Impact Assessment

<p><b>1.7</b></p>	<p>What is the purpose and aims of the Scheme/proposal</p>	<p>The aim of this study is to progress the wider active travel network within Levenmouth through option development and appraisal of the existing feasibility study undertaken by Fife Council. Following on from appraisal, a priority network has been recommended that creates a safe and attractive network, promoting the number of trips made by walking, cycling and wheeling for everyday journeys in Levenmouth and better connects communities in Levenmouth with key trip attractors such as areas of employment, education and retail.</p> <p>The following provides a general breakdown of the key design elements of the project:</p> <ol style="list-style-type: none"> <li>1. Appraisal of the network provided within the project scope. Undertaken through appraisal using scheme specific objectives, focusing on areas of deprivation, key trip attractors such as transport hubs, areas of employment, leisure and shopping as well as the location of schools and other education centres. From here, a priority network was established.</li> <li>2. Concept design – excluding design appraisal sections. This involved using guidance within Cycling by Design, Sustran’s Places for Everyone (PfE) Project Pack, LTN 1/20, Road for All guidance and DMRB standards to design new provision to improve active travel along the network. These sections had clear design outputs to design segregated provision for active travel users as this is the standard sought for Places for Everyone.</li> <li>3. Concept design – appraisals. Some sections of the network required a design appraisal to help sift through options that could be implemented and taken forward in designs. At these locations, segregated provision was not readily accommodated, and factors such as parking space removal, traffic flow restrictions and purchasing of private land had to be considered.</li> </ol>
<p><b>1.8</b></p>	<p>Who does the scheme impact?</p>	<p>The scheme will impact residents and surrounding communities in the Levenmouth area, including but not restricted to Kennoway, Windygates, Broom, Leven, Methil, Methilhill, Buckhaven and East Wemyss. The project will impact local businesses, schools and connection to other developments such as the reopening of the disused rail line, construction of two rail stations and improvements to be made along the river path network. It is hoped that all relating projects in the Levenmouth area will provide and support social, economic and environmental growth.</p>
<p><b>1.9</b></p>	<p>Are there any aspects which <b>explicitly address discrimination, victimisation or harassment?</b> Please detail</p>	<p>Lighting has been recommended for routes – a well-lit network will help increase safety and comfort of those using paths at night, which would help reduce harassment. Consideration into using routes parallel to the main road and alternative more secluded routes has also been undertaken – safety of users is the key driver in this assessment. In terms of age discrimination, designs consider use by 12-year olds independently through the type of provision suggested (segregated, where possible) and on-road with traffic calming to help facilitate the range and experience of potential users. Crossings are also designed to ensure consideration of protected characteristics. This includes tactile paving, dropped kerbs and raised tables.</p>
<p><b>1.10</b></p>	<p>Are there any aspects which <b>explicitly promote equal opportunities?</b> Please detail</p>	<p>By improving active travel throughout the Levenmouth area, this helps connect communities in areas of known deprivation, providing key links to amenities and employment, which helps to provide equal improvements to the area. Widening footways and providing segregated cycleways will help provide opportunities for those who share a protected characteristic and those who do not. Other features to help promote equality for users includes, raised tables at junctions, tactile paving where required, dropped kerbs (where raised tables are not recommended) and wider crossings/ islands.</p>

<p><b>1.12</b></p>	<p>Are there any aspects which <b>explicitly foster good relations</b>? Please detail</p>	<p>Improvement to provision connecting areas of employments, residential locations and schools will help foster good relations. The network helps connect several communities, some with high levels of deprivation, and links them together, to amenities and to other projects such as the riverside and rail line improvements. Diageo, a major employer in the area is a partner in the Leven Programme, showing that businesses in the area are also in favour of improvements. Consultations have been held to promote the improvements while also gathering feedback on the thoughts and desires of the local community.</p>
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Section 2 – Evidence																																																		
Please outline <b>what is known currently</b> about the experiences of people under each characteristic		Source																																																
<p><b>2.1</b></p> <p><b>Age</b></p> <p><i>Including the experiences of young people (age 18 and under) and older people.</i></p>	<p>Currently, 17% of the Levenmouth population consists of children. Schools within the area promote walking and cycling to schools through independent school travel plans. Some measures to promote this include parking restrictions and traffic management plans outside the schools during school hours, and restrictions to use of car parks at pick up and drop off. Fife Council data shows that most of the area is entitled to free transport to schools (East Wemyss, Methil, Kennoway, Buckhaven). Data below outlines how Levenmouth compares to Fife and Scotland in reference to school leavers with qualifications (2017):</p> <table border="1"> <thead> <tr> <th></th> <th>Levenmouth</th> <th>Fife</th> <th>Scotland</th> </tr> </thead> <tbody> <tr> <td>% 16-64 year olds: No Qualifications</td> <td>10.2%</td> <td>7.3%</td> <td>8.7%</td> </tr> <tr> <td>% 16-64 year olds: NVQ4 or above</td> <td>22.5%</td> <td>45.0%</td> <td>43.9%</td> </tr> </tbody> </table> <p>Source: ONS Annual Population Survey Geography: Levenmouth Area Committee</p> <p>61% of the Levenmouth population are within the working age category. Employment rates are approximately 55% full-time and 22% part-time. From 2011 census data, it is known that the primary means of travel to work in the area is by car.</p> <table border="1"> <thead> <tr> <th colspan="2">ECONOMY</th> <th colspan="2">MAIN EMPLOYMENT AREAS</th> </tr> </thead> <tbody> <tr> <td>64.7% Economically active of which</td> <td></td> <td>24.0% Education &amp; Health</td> <td></td> </tr> <tr> <td>55.0 % Employed Full Time</td> <td></td> <td>19.5% Wholesale Retail and Transport</td> <td></td> </tr> <tr> <td>22.1 % Employed Part Time</td> <td></td> <td>15.1% Finance &amp; Professional</td> <td></td> </tr> <tr> <td></td> <td></td> <td>13.9% Manufacturing</td> <td></td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">WELFARE AND BENEFITS</th> <th colspan="2">WELFARE REFORM CHANGES: Expected loss to local economy per year by 2020</th> </tr> </thead> <tbody> <tr> <td>2.2% Universal Credit</td> <td></td> <td>£20.3 million</td> <td>per year</td> </tr> <tr> <td>4.4% Universal Credit (16-24)</td> <td></td> <td>£865</td> <td>per working age adult</td> </tr> <tr> <td>17.1% Employment deprivation</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p><small>Figure 3.1 – Overview Profile for the Area</small></p>		Levenmouth	Fife	Scotland	% 16-64 year olds: No Qualifications	10.2%	7.3%	8.7%	% 16-64 year olds: NVQ4 or above	22.5%	45.0%	43.9%	ECONOMY		MAIN EMPLOYMENT AREAS		64.7% Economically active of which		24.0% Education & Health		55.0 % Employed Full Time		19.5% Wholesale Retail and Transport		22.1 % Employed Part Time		15.1% Finance & Professional				13.9% Manufacturing		WELFARE AND BENEFITS		WELFARE REFORM CHANGES: Expected loss to local economy per year by 2020		2.2% Universal Credit		£20.3 million	per year	4.4% Universal Credit (16-24)		£865	per working age adult	17.1% Employment deprivation				<p>Fife Council Research Team, 2018. <i>Local Strategic Assessment 2018 – Levenmouth Area</i>. <a href="https://know.fife.scot/wp-content/uploads/sites/44/2018/12/LSA-2018-Levenmouth-FINAL.pdf">https://know.fife.scot/wp-content/uploads/sites/44/2018/12/LSA-2018-Levenmouth-FINAL.pdf</a></p> <p>National Records of Scotland, 2015. <i>DataShine Scotland - Interactive Mapping of Scotland's Census 2011</i>. &lt;<a href="https://scotland.datashine.org.uk/#table=QS302SC&amp;col=QS302SC0002&amp;ramp=RdYlBu&amp;layers=BTTT&amp;zoom=13&amp;lon=-3.2100&amp;lat=55.9400">https://scotland.datashine.org.uk/#table=QS302SC&amp;col=QS302SC0002&amp;ramp=RdYlBu&amp;layers=BTTT&amp;zoom=13&amp;lon=-3.2100&amp;lat=55.9400</a>&gt;</p> <p>Fife Council, 2018. <i>Economic Profile – Levenmouth</i>.</p>
	Levenmouth	Fife	Scotland																																															
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<p><b>2.2</b></p>	<p><b>Disability</b></p> <p><i>Including the experiences of people with long term limiting health conditions.</i></p>	<p>In 2017, it was estimated that 45% of adults and 17% of children has a long-term condition or illness. 32% of adults and 10% of children had a long-term illness or condition that was also limiting. Based on this data, 32% of the adult population would be considered disabled. Types of long-term limiting conditions are shown below:</p> <p><b>Figure 1.2 Type of limiting long-term condition – as a percentage of all limiting long-term conditions – among disabled adults. Source: Scottish Health Survey 2017</b></p> <table border="1"> <thead> <tr> <th>Condition</th> <th>Percentage</th> </tr> </thead> <tbody> <tr><td>Other complaints</td><td>3%</td></tr> <tr><td>Blood &amp; related organs</td><td>2%</td></tr> <tr><td>Infectious Disease</td><td>0%</td></tr> <tr><td>Musculoskeletal system</td><td>41%</td></tr> <tr><td>Skin complaints</td><td>5%</td></tr> <tr><td>Genito-urinary system</td><td>5%</td></tr> <tr><td>Digestive system</td><td>15%</td></tr> <tr><td>Respiratory system</td><td>19%</td></tr> <tr><td>Other circulatory system</td><td>3%</td></tr> <tr><td>Other heart problems</td><td>7%</td></tr> <tr><td>Hypertension</td><td>9%</td></tr> <tr><td>MI / angina</td><td>4%</td></tr> <tr><td>Stroke</td><td>2%</td></tr> <tr><td>Ear complaints</td><td>4%</td></tr> <tr><td>Eye complaints</td><td>4%</td></tr> <tr><td>Nervous System</td><td>14%</td></tr> <tr><td>Mental disorders</td><td>30%</td></tr> <tr><td>Other endocrine &amp; metabolic</td><td>10%</td></tr> <tr><td>Diabetes</td><td>8%</td></tr> <tr><td>Neoplasms &amp; benign growths</td><td>3%</td></tr> </tbody> </table> <p>3/5 of those surveyed had a musculoskeletal condition, which would impact mobility.</p> <p>It is known in Scotland that disabled people are more likely to be victims of crime compared to non-disabled people (14.9% to 11.8%), and that they have less access to blue and green spaces too.</p> <p>From the 2011 census, 14.6% of people in Fife were inactive economically sure to long-term sickness or disability.</p>	Condition	Percentage	Other complaints	3%	Blood & related organs	2%	Infectious Disease	0%	Musculoskeletal system	41%	Skin complaints	5%	Genito-urinary system	5%	Digestive system	15%	Respiratory system	19%	Other circulatory system	3%	Other heart problems	7%	Hypertension	9%	MI / angina	4%	Stroke	2%	Ear complaints	4%	Eye complaints	4%	Nervous System	14%	Mental disorders	30%	Other endocrine & metabolic	10%	Diabetes	8%	Neoplasms & benign growths	3%	<p>Scottish Government, 2019. <i>Scotland's Wellbeing – Measuring the National Outcomes for Disabled People.</i></p> <p>National Records of Scotland, 2011. <i>Scotland's Census.</i></p>
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<p><b>2.3</b></p>	<p><b>Ethnicity</b></p> <p><i>Including impact relating to skin colour, nationality, language</i></p>	<p>The below outlines how people in specific community categories within the Levenmouth area compare to other areas throughout Scotland. Negative values are less favourable – it can be seen that white suburban communities, deprived neighbourhoods, eastern European communities, retired communal city dwellers and transitional eastern European neighbourhoods had the largest negative change.</p>	<p>Fife Council Research Team, 2018. <i>Local Strategic Assessment 2018 – Levenmouth Area.</i> <a href="https://know.fife.scot/wp-">https://know.fife.scot/wp-</a></p>																																										

<p><i>spoken and country of origin. 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Colours show red as poorest performing to green, best performing.</p> <p>Change shows direction of change from 2012 to 2016, no arrow indicates no significant change.</p>	Community Category	RPG	Change	<b>Rural Residents</b>	-5.9		Ageing Rural Flat Tenants	-13.8		Agricultural Communities	-7.8		Detached Rural Retirement	-0.1		Established Farming Communities	1.3		Older Farming Communities	-16.7	↓	Renting Rural Retirement	-2.8	↑	Rural Employment, and Retirees	-4.5		Rural Life	5.1	↑	Rural White-Collar Workers	5.4	↑	Rural Workers and Families	-4.5		<b>Urbanites</b>	-12.8		Communal Retirement	-23.1	↑	Families in Terraces and Flats	10.3	↑	Sell-Sufficient Retirement	-12.0		White Professionals	-8.5	↑	<b>Suburbanites</b>	-9.6		Ageing in Suburbia	-3.7		Comfortable Suburbia	-3.0		Detached Retirement Living	-0.7		Older Workers and Retirement	-14.2		Semi-Detached Ageing	-12.6		White Suburban Communities	-27.6	↓	<b>Constrained City Dwellers</b>	-19.2		Ageing Communities and Families	-16.9		Challenged Transitionaries	-19.0		Constrained Young Families	-16.1		Deprived Neighbourhoods	-25.6		Eastern European Communities	-20.3		Endeavouring Flat Dwellers	-3.0		Hamppered Aspiration	-8.5	↑	Outer City Hardship	-20.6	↓	Retired City Hardship	5.9	↑	Retired Communal City Dwellers	-31.9	↓	Retired Independent City Dwellers	-3.5	↓	Transitional Eastern European Neighbourho	-28.5	↓	<b>Hard Pressed Living</b>	-11.3		Ageing Industrious Workers	-5.6		Ageing Rural Industrious Workers	-12.2		Deprived Blue-Collar Terraces	-23.1		Hard-Pressed Rented Terraces	-15.6	↓	Industrious Hardship	-8.7		Industrious Transitions	-4.4		Renting Hard-Pressed Workers	-9.9		Young Hard-Pressed Families	-1.6		<b>Levenmouth Area</b>	-13.6		<p>content/uploads/sites/44/2018/12/LSA -2018-Levenmouth-FINAL.pdf&gt;</p>
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<p><b>2.4</b></p>	<p><b>Gender</b></p>	<p>Employment rates for males and females was found to be higher than the Fife and Scottish averages:</p> <table border="1" data-bbox="645 276 1541 400"> <thead> <tr> <th></th> <th>Levenmouth</th> <th>Fife</th> <th>Scotland</th> </tr> </thead> <tbody> <tr> <td>Employment rate</td> <td>79.2%</td> <td>75.8%</td> <td>74.5%</td> </tr> <tr> <td>Employment rate - Female</td> <td>73.0%</td> <td>71.4%</td> <td>70.7%</td> </tr> <tr> <td>Employment rate - Male</td> <td>85.0%</td> <td>80.5%</td> <td>78.5%</td> </tr> </tbody> </table> <p>Source: ONS Annual Population Survey Geography: Levenmouth Area Committee</p>		Levenmouth	Fife	Scotland	Employment rate	79.2%	75.8%	74.5%	Employment rate - Female	73.0%	71.4%	70.7%	Employment rate - Male	85.0%	80.5%	78.5%	<p>Scottish Government, 2019. <i>Scotland's Wellbeing – Measuring the National Outcomes for Disabled People.</i></p>
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<p><b>2.5</b></p>	<p><b>Gender Reassignment</b></p> <p><i>Where someone is living part / full time as the opposite gender to their assigned sex at birth.</i></p>	<p>A study undertaken in Scotland in 2007 found that 62% of respondents had experienced transphobic harassment from strangers in public places who perceived them to be transgender. 31% through transphobic threatening abuse, 17% through physical assault, 4% transphobic sexual assault, and the remainder through verbal abuse.</p>	<p>Scottish Transgender Alliance, 2008. <i>Transgender Experiences in Scotland.</i></p>																
<p><b>2.6</b></p>	<p><b>Marriage and Civil Partnership</b></p> <p><i>This characteristic is only applicable in contexts where the scheme relates to employment / employees. An employee or job applicant must not receive unfavourable treatment because they are married or in a civil partnership.</i></p>	<p>Not applicable to this scheme.</p>																	

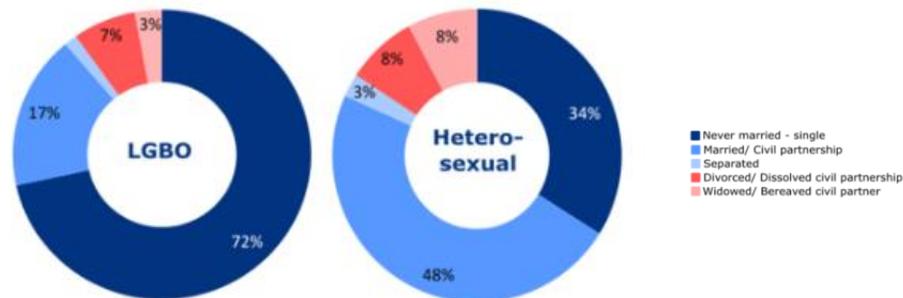
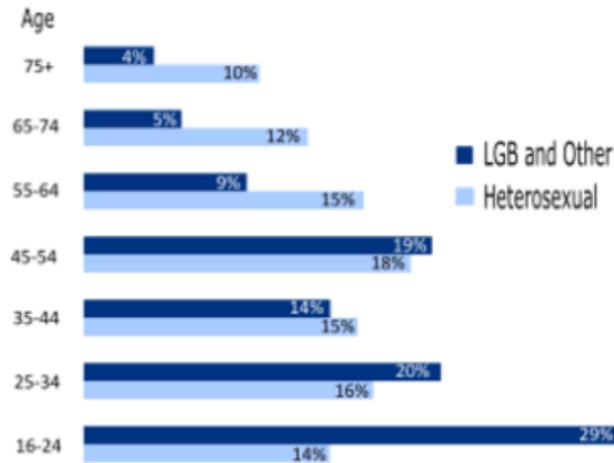
<p><b>2.7</b></p>	<p><b>Pregnancy / Maternity</b></p> <p><i>This covers women as soon as they become pregnant. In the workplace this includes pregnancy-related illness. When a woman gives birth or is breastfeeding, this characteristic protects them for 26 weeks.</i></p>	<p>In 2019, the total number of maternities recorded in Fife was 10,277. In 2019, most pregnancies are in the age category of 30-34, and the lowest under 20. 24.9% of Scottish pregnancies in 2019 were found to reside in areas with the highest social deprivation.</p>	<p>NHS Scotland, 2019. <i>Births in Scottish Hospitals – Technical Report.</i></p> <p>Public Health Scotland, 2019. <i>Births in Scottish Hospitals – Maternity and Births.</i></p>
<p><b>2.8</b></p>	<p><b>Religion / Belief</b></p> <p><i>Including the experiences of people with no religion or belief.</i></p>	<p>In 2011, 84% of Scotland’s population reported their ethnicity as ‘White: Scottish’ and a further 8% as ‘White: Other British’. Together, minority ethnic groups and white non-British groups (including ‘White: Irish’, ‘White: Polish’, ‘White: Gypsy/ Traveller’ and ‘White: Other white’) made up 8% of the total population.</p> <p>The percentage of people in Scotland from minority ethnic groups had doubled to 4%, up from 2% in 2001.</p> <p>The Asian population is the largest minority ethnic group (3% of the population or 141,000 people), representing an increase of one percentage point (69,000) since 2001.</p> <p>The proportion of the population reported as belonging to a minority ethnic group varied by council area. The highest figures were in the four council areas containing the large cities: in Glasgow City it was 12%, in the City of Edinburgh and in Aberdeen City it was 8%, and in Dundee City it was 6%.</p> <p>In 2011, of the 1.5 million households containing more than one person, 84% (1.3 million) contained members who shared the same ethnic group. The other 16% of households included multiple ethnic groups.</p> <p>The proportion of the population aged 3 and over reported as not being able to speak English well or at all was 1.4% overall, and 11% for those born outside the UK. This</p>	<p>National Records of Scotland, 2011. <i>Scotland’s Census – Ethnicity, Identity, Language and Religion.</i></p>

		<p>proportion generally increased with age of arrival into the UK: for those who arrived aged under 16 it was 5% while for those who arrived aged 65 and over it was 31%.</p> <p>The proportion of Scotland’s population aged 3 and over who could speak, read and write English was 94%. This proportion was lowest for those born in the EU Accession countries (75%) or in the Middle East and Asia (89%).</p> <p>In 2011, most (93%) people in Scotland aged 3 and over reported that they used only English at home. Scots and Polish (each 1%) and Gaelic (0.5%) were the most common languages other than English reported as being used at home. British Sign Language was used at home by 13,000 people aged 3 and over (0.2% of the total population aged 3 and over).</p>	
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**2.9 Sexual Orientation**

The following figures highlight sexual orientation by age and sexual orientation by marital status in Scotland.

**Figure 2: Sexual Orientation by Age - Scotland**



Scottish Government, 2017. *Sexual orientation in Scotland 2017 – A summary of the evidence base.*

LGBT Health and Wellbeing, 2016. *Fife LGBT Community Needs Assessment Report.*

		<p>A lack of LGBT community in Fife was highlighted in 2016, indicating the resulting isolation that some LGBT people living in the area feel. 28% of LGBT people in Fife have rare or no contact with other LGBT people in their area, with 61% stating that this is due to the limited opportunities to meet up with people socially.</p> <p>A study conducted in Fife by LGBT Health and Wellbeing reported that 9% of respondents stated that their work colleagues did not respect their LGBT identity.</p>	
<b>2.10</b>	<p><b>Other marginalised groups</b></p> <p><i>Including but not exclusive to the experiences of unpaid carers, homeless people, current and ex-offenders, people with addictions, care experienced people, people living in rural areas.</i></p>	No further comments for other groups at this stage.	
<b>2.11</b>	<p>Have people who identify with any of the characteristics been involved in the development of the scheme?</p>	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<b>2.12</b>		Details	<p>Date</p> <p>Summary of Findings</p>

Please outline any involvement or consultation which has been carried out or is planned.	Online consultation	21/08/2020	<p>In total, there were 49 responses for this consultation. It was in the form of an online survey due to restrictions with COVID-19. The public were presented with the priority network to determine their thoughts on the routes selected. Age of respondents varied between 25 and 84, with the largest percentage (32.65%) falling into the 55-64 age category.</p> <p>53.06% of respondents were male, 42.86% female and 2.04% preferred not to say. No students or unemployed members of the public completed the survey. 55.10% were employed, 8.16% unable to work and 22.45% retired. Responses were in favour of network improvements overall. Most of the responses were related to the location of routes, and missing links the community felt were valuable have been highlighted.</p> <p>Comments typically were general and indicated wider paths and family friendly provision would be welcomed. One respondent highlighted their desire for new provision to accommodate disabled power chairs and scooters. Some comments highlighted the importance of promotion and education within the local schools. One comment highlighted their concern that the construction of better active travel routes would affect school children’s bus passes.</p>
	Online consultation	21/10/2020	<p>This consultation event was attended by locals familiar with the Levenmouth area. No major concerns were raised, more comments were provided relating to improvements at the river path. One point raised was relating to the use of quad bikes and the general speed of traffic and how this was going to be addressed within the designs.</p>
	Online consultation	22/10/2020	<p>This consultation event was attended by locals familiar with the Levenmouth area. No negative comments received, and general positive thoughts on the project. Queries into the level of response to current consultation methods – highlighted the elderly population in the area and that these demographics may not be able to access online methods of consultation to leave feedback.</p>

<b>Section 3 – Impact</b>			
Based on what is known in Section 2, please outline the impact you expect the scheme to have	Possible positive (+) impact	Possible adverse (-) impact	Neutral impact likely (✓)

<p><b>3.1</b></p>	<p><b>Age</b></p> <p><i>Including impact relating young people (age 18 and over) and older people.</i></p>	<p><u>Improved provision at schools</u> KR5, 3, CR3.4, 4.7 Segregated provision recommended at school locations. Aberhill Primary School (Key Route 3) is recommended for shared use at the gate with crossing to south side provision (removal of 3 parking bays recommended here).</p> <p><u>Segregated provision</u> KR2, 3, 4, 5, 6, 7, CR4.5, 3.4, 4.7 Segregated provision will provide additional safety for cyclists as they will not have to manoeuvre and be aware of motorised vehicle movements.</p> <p><u>Connection between various communities and key trip attractors</u> All routes The network provides connection between key communities in the Levenmouth area such as Kennoway, Buckhaven, Methilhill, Leven and Methil. Trip attractors such as health surgeries, schools, shops, education centres and other areas of employment.</p> <p><u>Improved junction crossings</u> All routes Raised tables, tactile paving and dropped kerbs are recommended for junction crossings.</p> <p><u>Improved signage along the network</u> All routes Signage will help with wayfinding along the network, helping users identify each connection.</p>	<p><u>Narrowed provision near school</u> KR3 At Aberhill Primary School, it is recommended to narrow part of the northside provision to allow for segregated south side provision. It is anticipated that users north of the school will use the back entrance, and users south will use the segregated provision and crossing to be provided. This will have a negative impact on houses directly adjacent to the narrowed provision (65m in length).</p>	<p><u>Bi-directional provision</u> KR2, 3, 4, 5, 6, 7, CR3.1, 3.4, 4.5, 4.7 Where segregated provision can be provided, bi-directional cycleways have been designed to provide coherence along the network and reduce changes in the type of provision. Bi-directional provision does not allow for cycleways to travel directly parallel to road users in the same direction, which could increase potential confusion in users of varying age. However, adequate signage, crossings to allow users provision to access trip attractors along the route (shops, surgeries, schools, residential areas) have been included in the design to help ensure users can utilise the network and improve provision in the most efficient and useful manner. Where there is no existing footway, a parallel footway would be required to remove the potential for pedestrians to walk in a cycle lane.</p> <p><u>Give-way at toucan crossings, parallel crossings and bus stops with no bypass</u> For routes with the above features, cyclists must give-way. This may cause issues for younger users who do require additional education, or elderly members who are trying to navigate between cyclists.</p>
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<p><b>3.2</b></p>	<p><b>Disability</b></p> <p><i>Including impact relating to long term limiting health conditions.</i></p>	<p><u>Segregated provision or on-road provision with 2m footways</u>                  KR4, 5, CR2.6, 3.4, 3.9, 4.5                  These routes have been designed with segregated provision or on-road cycle facilities with minimum footway width of 2m. This width of footway and segregation between pedestrians and cyclists will allow for to users with protected characteristics such as wheelchairs or other mobility issues to pass each other comfortably.</p> <p><u>Raised tables, dropped kerbs and tactile paving</u>                  All routes                  This will help those with disabilities cross the road safely.</p> <p><u>Longitudinal delineation</u>                  All routes                  Routes have been designed with a raised longitudinal delineation between cyclists and pedestrians on segregated routes. This is to help those that are mobility impaired if they are required to cross the provision.</p> <p><u>Bus Bypasses</u>                  For routes with bus stops                  Bus bypasses will allow cyclists to continue. In conjunction with no upstand provided, this will help those with mobility issues to cross to the bus stop area.</p> <p><u>Coloured surfacing of segregated cycle lanes</u>                  KR2, 3, 4, 5, 6, CR 3.4, 4.5                  Segregated cycle provision to be surfaces using green or red chips. This helps</p>	<p><u>Reduced footway below 2m</u>                  KR2, 3, CR4.7                  300m of KR2 is recommended for shared provision. This may cause conflict between pedestrians and cyclists along this stretch. Although provision will be shared, width will vary between 3.5 to 5m (with 0.5m buffer) so there is additional width for users. Potential adverse impact as traffic flows are high along this route, so cyclists may not feel comfortable using the road and will utilise shared provision, narrowing the remaining width for two wheelchair users to pass.</p> <p>350m of KR3 is recommended for segregated provision south side. However, to maintain parking provision on both sides at a reduced width of 1.8m, the northside footway must be reduced to below 2m (approx. 150m of the footway would be 1.7-1.8m). Although below the minimum recommendation of 2m, the existing south side footway recommended for widening is currently below 2m.</p> <p>Approx. 100m of the CR4.7 requires the south side footway to be reduced to approx. 1.8m. This is below the 2m minimum footway requirements, so may cause some</p>	<p><u>Shared provision – traffic free</u>                  CR1.1, AD2, AD3, AD4                  This traffic free route is to be upgraded to shared provision, increased from the existing 2m width. No segregated between pedestrians and cyclists, so neutral impact likely. Enough width for two wheelchairs to pass.</p> <p><u>Shared provision, low speed limits</u>                  CR2.7 and 2.8                  Routes to utilise independent schemes being designed by the Council to shared provision standards. Likely neutral impact since routes are 20mph currently with traffic calming in place, so cyclists may decide to use the road to minimise potential conflicts with pedestrians and allow for sufficient width for two protected characteristics such as two wheelchairs to pass.</p>
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		<p>distinguish between different provision types along the route.</p> <p><u>Give-way at toucan crossings, parallel crossings and bus stops with no bypass</u> Give-ways to be ramped and tactile paving to be installed to allow adequate warning to those with visual impairments of the change in provision available.</p> <p><u>Ramped connection from overbridge to Cameron Bridge rail platforms</u> AD2 Provision of ramped access and egress between AD2 and the rail station platforms allows users of all mobility comfortably connect between the two.</p>	<p>issues if two users with protected characteristics (such as wheelchairs) are trying to pass each other. However, at this section segregated provision is recommended for construction north side, outside the existing Primary School, which will provide better active travel routes.</p> <p><u>Shared provision</u> KR6, CR3.1, 2.7, 2.8 These routes have sections of shared provision recommended. Sections are all short (maximum length 160m). Potential conflict between pedestrians and cyclists, although width is wide enough for two individuals of protected characteristics to pass.</p>	
<p><b>3.3</b></p>	<p><b>Ethnicity</b></p> <p><i>Including impact relating to skin colour, nationality, language spoken and country of origin. People identifying as Gypsy / Travellers are protected by this characteristic.</i></p>	<p>No major positive impacts for this characteristic group.</p>	<p>No major adverse impacts for this characteristic group.</p>	<p>No major neutral impacts for this characteristic group.</p>

<p><b>3.4</b></p>	<p><b>Gender</b></p>	<p><u>At-grade crossings as alternative to underpasses or overbridges</u> KR5, CR3.1, AD1, AD2 Creation and upgrade of at-grade crossings as alternatives to underpasses will remove the requirement to use remote connection between routes. This will increase safety and comfort of users.</p>	<p><u>Traffic-free, quieter routes</u> KR7, CR1.1, CR3.1, AD2 The remote nature of these routes and lack of passive surveillance may not appeal to all users.</p>	<p><u>Routes adjacent to carriageway</u> KR2, 3, 4, 5, 6, 7, CR3.4, 2.6, 2.7, 2.8, 4.5, 4.7, RCR3.9, AD1 These routes are improving upon existing provision than run adjacent to the carriageway. Routes are lit, and through passive surveillance user safety is increased.</p>
<p><b>3.5</b></p>	<p><b>Gender Reassignment</b>  <i>Where someone is living part / full time as the opposite gender to their assigned sex at birth.</i></p>	<p><u>At-grade crossings as alternative to underpasses/ overbridges</u> KR5, CR3.1, AD1, AD2 Creation and upgrade of at-grade crossings as alternatives to underpasses will remove the requirement to use remote connection between routes. This will increase safety and comfort of users.</p>	<p><u>Traffic-free, quieter routes</u> KR7, CR1.1, CR3.1, AD2 It was found through previous studies undertaken that those in this protected group are more likely to be harassed in public places. These more remote routes could increase their apprehension of such assaults occurring due to the lack of passive surveillance.</p>	<p><u>Routes adjacent to carriageway</u> KR2, 3, 4, 5, 6, 7, CR3.4, 2.6, 2.7, 2.8, 4.5, 4.7, RCR3.9, AD1 These routes are improving upon existing provision than run adjacent to the carriageway. Routes are lit, and through passive surveillance user safety is increased.</p>
<p><b>3.6</b></p>	<p><b>Marriage / Civil Partnership</b>  <i>This characteristic is only applicable in contexts where the scheme relates to employment / employees. An employee or job applicant must not receive unfavourable treatment because they are married or in a civil partnership.</i></p>	<p>Not applicable.</p>	<p>Not applicable.</p>	<p>Not applicable.</p>

<p><b>3.7</b></p>	<p><b>Pregnancy / Maternity</b></p> <p><i>This covers women as soon as they become pregnant. In the workplace this includes pregnancy-related illness. When a woman gives birth or is breastfeeding, this characteristic protects them for 26 weeks.</i></p>	<p><u>Connection to health care and other community centres</u></p> <p>The network improves active travel provision to key locations such as health surgeries and other community centres. This will appeal to pregnant persons who may have increased requirements of such facilities (relevant for young and elderly residents too). By providing better standard of provision, it can encourage users to walk, wheel or cycle instead of utilising private vehicles.</p>	<p>No major adverse impacts for this characteristic group.</p>	<p>No major neutral impacts for this characteristic group.</p>
<p><b>3.8</b></p>	<p><b>Religion / Belief</b></p> <p><i>Including the experiences of people with no religion or belief.</i></p>	<p>No major positive impacts for this characteristic group.</p>	<p>No major adverse impacts for this characteristic group.</p>	<p>No major neutral impacts for this characteristic group.</p>
<p><b>3.9</b></p>	<p><b>Sexual orientation</b></p>	<p><u>At-grade crossings as alternative to underpasses</u></p> <p>KR5, CR3.1, AD1, AD2</p> <p>Creation and upgrade of at-grade crossings as alternatives to underpasses will remove the requirement to use remote connection between routes. This will increase safety and comfort of users.</p>	<p><u>Traffic-free, quieter routes</u></p> <p>KR7, CR1.1, CR3.1, AD2</p> <p>The remote nature of these routes and lack of passive surveillance may not appeal to all users.</p>	<p><u>Routes adjacent to carriageway</u></p> <p>KR2, 3, 4, 5, 6, 7, CR3.4, 2.6, 2.7, 2.8, 4.5, 4.7, RCR3.9, AD1</p> <p>These routes are improving upon existing provision than run adjacent to the carriageway. Routes are lit, and through passive surveillance user safety is increased.</p>

<p><b>3.10</b></p>	<p><b>Other marginalised groups</b></p> <p><i>Including but not exclusive to the experiences of unpaid carers, homeless people, current and ex-offenders, people with addictions, care experienced people, people living in rural areas.</i></p>	<p>No major positive impacts for this characteristic group.</p>	<p>No major adverse impacts for this characteristic group.</p>	<p>No major neutral impacts for this characteristic group.</p>
<p><b>3.11</b></p>	<p><b>Cross Cutting</b></p> <p><i>Where two or more characteristics overlap and the scheme affects those people in a specific way</i></p>	<p>No major positive impacts for this characteristic group.</p>	<p>No major adverse impacts for this characteristic group.</p>	<p>No major neutral impacts for this characteristic group.</p>

<b>Section 4 – Assessment</b>			
<b>4.1</b>	Select the assessment result, 1-4, which applies and give a brief justification	1. No major change <input type="checkbox"/> <i>If this is selected you are confirming that the EQIA demonstrates the proposal is robust and there is no possible adverse impact.</i>	Justification: <i>If this is selected you must demonstrate that all opportunities to promote equality have already been taken.</i>

		<p>2. Continue the scheme <input checked="" type="checkbox"/></p> <p><i>If this is selected, you are confirming that the EqIA identifies possible adverse impact or missed opportunities, but the scheme can be justified.</i></p>	<p>Justification:</p> <p><i>If this is selected, you must set out the justifications for continuing with the scheme in terms of proportionality and relevance.</i></p> <p>The scheme covers 24km of the Levenmouth area and aims to upgrade and provide high quality active travel provision within the existing infrastructure available. Where possible, through narrowing of the carriageway, purchasing of land or utilising existing greenspaces, segregated provision is recommended. However, some locations are constrained in the available space due to boundary with buildings, private gardens or restrictions due to infrastructure such as overbridges and underpasses. These constraints have been assessed, and locations where the requirements to provide segregated or on road provision is likely to result in negative public perception (removal of parking spaces outline housing, purchase of residential gardens, build-outs and traffic restrictions along key routes). At such locations, assessment of connection to key trip attractors, communities, served, available width and the maximum provision that can be provided, passive surveillance and use of alternative, sometimes more remote routes and crossings required have been assessed to provide evidence and reasoning for design decisions. Conclusions summarised in Section 3 highlight the residual impacts on different characteristic groups within network design.</p> <p>Some findings within the appraisals and design proposals that have resulted in other design decisions being preferred are as follows:</p> <ul style="list-style-type: none"> <li>• KR2-A (Bawbee Bridge to Stagecoach Depot) – alternative route using parallel desire line was assessed that would provide a traffic free route. However, due to the lack of passive surveillance, this route was not favoured in terms of safety and attractiveness</li> <li>• KR2-B (Den Walk to Paxton Nursery), KR3-A (Aberhill Primary School) – build outs were considered for some routes.</li> </ul>
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			<p>However, this would result in priority systems for motorised users on key routes through Methil and Buckhaven. This would increase stop/start motion of road users, increasing potential noise and pollution in the area.</p> <ul style="list-style-type: none"> <li>• KR7-A (Heritage Way to College Street) – use of the industrial park to provide a connection was considered, however the lack of passive surveillance and remote nature of this alignment was not favoured in terms of safety or attractiveness.</li> </ul>
		<p>3. Adjust the scheme <input type="checkbox"/></p> <p><i>If this is selected you are confirming that the EqIA identifies possible adverse impact or missed opportunities which suggest the scheme needs to be adjusted.</i></p>	<p>Justification:</p> <p><i>If this is selected you must set out the reasons why an adjusted scheme is required. For example to remove unjustifiable barriers or address opportunities that cannot be missed on the balance of proportionality and relevance.</i></p>
		<p>4. Stop and remove the scheme <input type="checkbox"/></p> <p><i>The scheme shows actual or possible unlawful discrimination. It must be halted or significantly changed.</i></p>	<p>Justification:</p> <p><i>If this is selected you must set out the reasons for halting the scheme or significantly changing it to avoid unlawful discrimination.</i></p>

<b>Section 5 – Actions</b>				
<b>5.1</b>	Please outline how you will monitor the impact of the scheme	The monitoring of the scheme will be led by Fife Council. Further consultation is required to determine public acceptance and feedback on the proposals designed. Monitoring such as pedestrian and cyclist counts and further feedback from the community through questionnaires or discussion will help determine the impacts of the scheme.		
<b>5.2</b>	Please outline action to be taken in order to: <ul style="list-style-type: none"> <li>• Mitigate possible adverse negative impact (listed under Section 3);</li> <li>• Promote possible positive impacts and;</li> <li>• Gather further information or evidence</li> </ul>	<b>Action</b>	<b>Lead</b>	<b>Timescale</b>
		For reduced footways and shared provision (where parking is being retained) – consult with residents and users of the routes to determine their opinion on parking removal. Assess current usage and potential other parking in the vicinity.	Fife Council	To be discussed and outlined to residents as part of future consultations.
		For traffic-free routes – assess the potential for surveillance or lighting to be provided along these routes to increase user comfort, in particular at night-time.	Fife Council	To assess the requirement and viability of implementing added security to traffic free routes.
<b>5.3</b>	When is the scheme/proposal due to be reviewed?			

<b>Section 6 – Approval</b>		
<b>6.1</b>	Senior Officer who this scheme will be reported by	Name: Job Title:
<b>6.2</b>	Signature	
<b>6.3</b>	Date	