Appendix C – Actions – Options and Reasonable Alternatives Assessment

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Cultural Heritage  To protect, conserve, and where appropriate enhance in historic environment.  To protect, centance, create and where necessary record biodiversity and encourage hatter to constitute to environment or conservation areas?  To protect, enhance, create and where necessary record biodiversity and encourage hatter to constitute the constitute of the constit	Health		Enhance connectivity for people to access amenities and services in East Dunbartonshire and in other local authority areas?
Cultural Heritage  To protect, conserved, and where appropriate channels that the fall age areas, including flacet buildings and their setting, Conservation Areas, gardens & designed landscapes, archaneological slees? Have an infect on non-designated areas of local built heritage areas, including flowers buildings and their setting, Conservation Areas, gardens & designed landscapes, archaneological slees? Have an infect on non-designated areas of local built heritage interest, including Townscape Protection Areas?  To protect, cehanics, create and where necessary readers building and emocrage has been accommended and emocrage has been accommended and emocrage and emocrage has been accommended and emocrage and emocrage and emocrage has been accommended and emocrage and emocra			Encourage active travel and outdoor leisure?
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and natural resources in East Dunbartonshire.			Encourage and improve the safe use of Core Path Networks, Rights of Way and heritage paths?
	Material Assets		Consider the sustainable use and protection of natural resources?
		and hadden resources in East Sumburtonsime.	Promote changes to the current transport infrastructure to a more sustainable network?

Assessme	nt Table Key		
++	Major Positive		CEA Bushavand Oution
+	Minor Positive		SEA Preferred Option
0	Neutral		
X	No Significant Effect	<b>Y</b>	ATS Preferred Alternative Option
-	Minor Negative		
	Major Negative		
?	Uncertain		

# Alternative Actions for the Active Travel Strategy: Increasing Active Travel through Delivery of Infrastructure

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.1	Proposed Action: Enhancement of		network - Bearsde	n						
	Assessment Comn Until such time a available at this s the action has inc	s the intended estage to carry ou	ıt an appropriate	assessment. In or	der to ensure tha	at potential enviro	onmental implica	tions are taken in		

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.2	Assessment Community Until such time a available at this	Path and Cycle nentary:  as the intended estage to carry ou	it an appropriate	sibility studies hav assessment. In or	der to ensure tha	ut for this action t at potential enviro ications as part of	onmental implica	itions are taken in		

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.3	++	+/-	+/-	?/-	X	?/-	++	++	++	
Alternative 1	Proposed Action:					-				
	Twechar Towpat	h and Crossing In	nprovements.							

# **Assessment Commentary:** The anticipated effects of this action are, in general, likely to be positive in nature with the environmental effects predicted for: Population and Human Health, Air Quality, Climatic Factors and Material Assets – By carrying out improvements to the towpath in Twechar, provision to facilitate active travel in Twechar will be promoted and improvements will respond to the result of the audit carried out in the development of the ATS highlighting poor surfacing and crossing provision. In addition, crossing improvements are likely to ensure that safe use of the towpath for residents and potential visitors to the area and provide the means to connect with the wider natural environment and countryside. It would also be a safer option than implementing cycle provision on the main A8023 road in Twechar which has high volumes of traffic. By removing physical barriers on the network and providing appropriate crossing facilities this action ensures that residents, commuters and visitors have improved access to a safe, secure and attractive active travel network while also providing opportunities to access public transport interchanges, local amenities, leisure and recreational opportunities while also increasing the areas physical activity levels and health and wellbeing of its residents. This will also contribute to a model shift away from vehicular based travel in an area with recognised high volumes of traffic and promote active travel alternatives. There are potential positive and negative impacts in relation to: Cultural Heritage and Biodiversity, Flora and Fauna – Whilst this action is likely to encourage access to the wider environment which includes a Local Nature Conservation Site through Twechar and the Antonine Wall, there are potential negative impacts that may arise as a result of increased access to the wider environment particularly in areas of sensitive and protected/designated sites of importance by resulting in direct disturbance to the site or its setting. At this stage the impacts to Water Quality and Soil and Geology are unclear, there are potential negative impacts from maintenance and infrastructure changes to the towpath and crossings, as well as an increase in access to the network, which may result in soil erosion and compaction. Effects such as temporary discharge or changes to drainage are also predicted; this is particularly important with the vicinity to the Forth and Clyde Canal. Although Twechar is a settlement situated within the green belt, it is not predicted that improvements to the towpath and crossings will impact on this designation and therefore the effects to Landscape are likely to be insignificant in terms of settlement character or local distinctiveness. **Proposed Mitigation: Cultural Heritage** Minimise and monitor any ground disturbance and incorporate design measures in order for required infrastructure improvements and maintenance to be carried out in a sensitive and sustainable manner to avoid or minimise any impacts on the historic environmental assets or their setting. **Biodiversity, Flora & Fauna** Ensure that removal of topsoil, trees and vegetation is minimal Potential Protected Species Surveys, Licences or mitigation if considered necessary to avoid adverse impacts particularly in sensitive areas Control and treatment of surface runoff. Soil & Geology Implement soil erosion prevention measures outlined in good practice guidance **Water Quality** Control and treatment of surface runoff. Adoption of best practices to avoid pollution of watercourses. X ?/-+/-+/-?/-**Proposed Action 1.3 Proposed Action:** Alternative 2 Provision of advisory cycle lanes on the B8023 and Main Street carriageways in Twechar, ensuring access to Forth and Clyde Towpath in Twechar is provided.

This option is likely to have a positive impact to **Population and Human Health** as providing advisory cycle lanes on the main carriageways in Twechar will promote cycling and the active travel agenda. Furthermore, it will ensure that residents, visitors and commuters will have a direct link to the strategically important cycle/footpath along the Forth and Clyde Canal with wider connections to Kirkintilloch and the rest of East Dunbartonshire. However, potential negative impacts might arise in terms of safety since it is recognised that the B8023 has high volume traffic and this might discourage cyclists to use this route due to an increased risk of accidents. Furthermore, the audit carried out in the development of the ATS highlighted crossing issues along the towpath. This action fails to address such issues; therefore physical barriers for walkers will not be removed and walkers might be discourage/disengaged to increase walking rates.

It is anticipated that there will be minor positive impacts to Air Quality, Climatic Factors and Material Assets as this action will encourage cycling rates in the area and promote a shift from vehicular-based travel to active travel with benefits in improving air quality and reductions in emissions.

There are potential positive and negative impacts in relation to:

Cultural Heritage and Biodiversity, Flora and Fauna – Whilst this action is likely to encourage access to the wider environment which includes a Local Nature Conservation Site through Twechar and the Antonine Wall, there are potential negative impacts that may arise as a result of increased access to the wider environment particularly in areas of sensitive and protected/designated sites of importance by resulting in direct disturbance to the site or its setting.

At this stage the impacts to Water Quality and Soil and Geology are unclear, there are potential negative impacts from maintenance and alterations to the B8023, as well as an increase in access to the wider network, which may result in soil erosion and compaction. Effects such as temporary discharge or changes to drainage are also predicted; this is particularly important with the vicinity to the Forth and Clyde Canal.

Although Twechar is a settlement situated within the green belt, it is not predicted that improvements to the towpath and crossings will impact on this designation and therefore the effects to Landscape are likely to be insignificant in terms of settlement character or local distinctiveness.

# **Proposed Mitigation:**

# **Population and Human Health**

- Use of appropriate lighting and signage to reduce safety risks.

#### **Cultural Heritage**

 Minimise and monitor any ground disturbance and incorporate design measures in order for required infrastructure improvements and maintenance to be carried out in a sensitive and sustainable manner to avoid or minimise any impacts on the historic environmental assets or their setting.

# **Biodiversity, Flora & Fauna**

- Ensure that removal of topsoil, trees and vegetation is minimal
- Potential Protected Species Surveys, Licences or mitigation if considered necessary to avoid adverse impacts particularly in sensitive areas
- Control and treatment of surface runoff.

# Soil & Geology

- Implement soil erosion prevention measures outlined in good practice guidance

# **Water Quality**

- Control and treatment of surface runoff.
- Adoption of best practices to avoid pollution of watercourses.

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option

# **Proposed Action 1.4**



# **Proposed Action:**

Bishopbriggs / Forth and Clyde Canal access.



# Assessment Commentary:

Until such time as the intended exploration or feasibility studies have been carried out for this action there is an insufficient level of detailed information available at this stage to carry out an appropriate assessment. In order to ensure that potential environmental implications are taken into consideration the action has incorporated the identification of likely environmental impacts or implications as part of the study process.

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.5	Assessment Comr Until such time a available at this	nectivity Improvenentary: as the intended estage to carry or	ıt an appropriate	sibility studies hav assessment. In or	ve been carried or der to ensure that		onmental implica	icient level of deta ations are taken in		

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.6	available at this	ents. mentary: as the intended e stage to carry ou	it an appropriate	assessment. In or	der to ensure th		onmental implica	icient level of deta ations are taken in ss.		

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.7	++	X		-	X	X	++	++/-	++	
Alternative 1	positive benefits connectivity between residential devel	ef Road (BRR) / nentary: that this action for Population ween settlemer opments. It wou	to create an active and Human Headston Bishopbrigg	ve travel corridor alth, Air Quality, s as well as implactive travel optic	connecting Wes Climatic Factors roved active travens	s and Material As vel connections b ves to car-based t	ssets. It is pred etween Strathk cravel in the eas	Relief Road will pricted that there welvin Retail Park at of Bishopbriggs well a viable active t	vill be improved and surrounding with potential to	

Bishopbriggs, there is the potential that this will encourage people in the community to partake in more active pursuits which has recognised health benefits. In addition, this action is likely to influence a modal shift in transport and travel choices to walking and cycling which will promote a change to a more sustainable behaviour change. This will contribute to a reduction in emissions locally with benefits to improving areas of poor air quality and meeting local and national carbon reduction targets. In particular, this will have a positive effect on improving the AQMA in Bishopbriggs and reducing congestion.

There are also potential negative impacts predicted for the following environmental factors:

Biodiversity, Flora and Fauna, Soil and Geology and Climatic Factors – Low Moss and High Moss Plantation are located to the north and south of Westerhill Road. Both are designated as LNCS for biodiversity and existing woodland. Peatland (lowland raised bog) has been identified within the surrounding Plantations to Westerhill Road. Low Moss is currently being restored from a degraded state so is extremely vulnerable to disturbance. Any increase in use such as walking and cycling could be damaging to the state of these sites and hinder its restoration project. Furthermore, disturbance to peatland has the potential to result in the significant release of carbon into the atmosphere. In general, both the implementation and use of a new active travel route has the potential to result in temporary compaction of soil and soil erosion. However, Westerhill Road is used for vehicle traffic currently so should this action use the existing route with minimal construction/additional infrastructure the effects to biodiversity and soil and geology will have a more minimal effect on these assets.

# **Proposed Mitigation:**

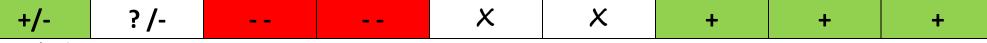
# **Biodiversity, Flora and Fauna**

- Additional surveys to determine level and type of species/habitats that will be potentially impacted from the action such as bat surveys/extended habitat surveys etc.
- Where access route requires lighting to ensure that the route is safe for users, lighting design should follow best practice guidance Bat Conservation Trust 'Bats and Lighting in the UK'.
- Any infrastructure changes/improvements should aim to retain features of ecological value within the design and ensure the highest priorities for protection such as woodland, riparian habitats, ponds, wetlands etc. should be considered and any impact prevented.

# **Soil and Geology and Climatic Factors**

- Implement soil erosion prevention measures outlined in good practice guidance.
- Action should avoid the disturbance of peatland and Low/High Moss Plantation in order to minimise the impact of use/implementation of active travel route on these assets.

# Proposed Action 1.7 Alternative 2



# **Proposed Action:**

Provide advisory cycle lanes on the existing carriageway of the Bishopbriggs Relief Road (BRR).

#### **Assessment Commentary:**

The impacts predicted resulting from this action for the following environmental factors include:

- Population and Human Health This option is likely to provide an opportunity for cyclists to use the north/south route along the BRR for leisure and commuting purposes. The location of the BRR enables direct access into Glasgow as well as the wider natural environment in East Dunbartonshire so this option is likely to encourage residents and visitors to access their surrounding environment. There is potential that this option would increase active pursuits and leisure activities locally with benefits for health and wellbeing. However, the BRR is a fast moving route with a 60 mph limit set. This has the potential to reduce safety for cyclists in terms of accidents and discourage use of the route for cycling, particularly at peak times. It is also likely that there would be additional safety concerns in terms of lighting and signage required.
- Air Quality and Climatic Factors This option is likely to see minimal modal shift in travel from car-based to cycling which will have a positive impact on improving localised air quality which is important as an AQMA has been designated in Bishopbriggs due to traffic levels through the town centre reducing associated carbon emissions from vehicles. This would demonstrate a commitment to national carbon emission reduction targets and will contribute to reducing the effects of climate change, including flood risks, as well as reducing noise levels. However, for the above safety issues the improvements to air quality and climatic factors are likely to be reduced with the implementation of Advisory Cycle Lanes as opposed to segregated cycle lanes along the route.

Conversely, negative impacts have the potential to arise for Cultural Heritage, Biodiversity, Flora and Fauna and Soil and Geology including:

- Cultural Heritage The route of the BRR connects to the Torrance Roundabout in the north of Bishopbriggs which is on the line of the Antonine Wall, and part of the road is within in the buffer zone for this World Heritage Site. Although it is unlikely that the creation of an advisory cycle lane along the BRR will have a significant impact on the setting of this cultural heritage site, it is important that consideration should be given to its designation.
- Biodiversity, Flora and Fauna and Soil and Geology Low Moss Plantation borders the BRR to the west of the road. This site is designated as a LNCS for biodiversity and its existing woodland. Lowland raised bog peatland has been identified at Low Moss and is currently being restored from a degraded state so is extremely vulnerable to disturbance. Human intervention, such as cycling, could be damaging to the state of the site and hinder its restoration. Furthermore, disturbance to peatland has the potential to result in the release of carbon to the atmosphere. A LNCS for geodiversity has also been designated to the east of the BRR which has the potential to be degraded in value from this action.

# **Proposed Mitigation:**

# **Population and Human Health**

- Implementation of appropriate lighting and signage to improve the safety for cyclists.

# **Cultural Heritage**

- Minimise and monitor any ground disturbance and incorporate design measures in order for required infrastructure improvements and maintenance to be carried out in a sensitive and sustainable manner to avoid or minimise any impacts on the historic environmental assets or their setting.

# **Biodiversity, Flora and Fauna and Soil and Geology**

- See above assessment.

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.8	++	-	+ +/-	-	+/-	-	++	+/-	++	
Alternative 1	Proposed Action Torrance to Bird		r Kelvin Railway P	ath.						
	- Cultural any action Wall itse - Biodivers disused responsitive in as it alreed that pear excess can be compared to reduce to	Heritage – The ron (infrastructure) If will have an ad sity, Flora and Frailway which are walkers and cycle that this action impact and direct and and/or care arbon from disturbe – The River Kenavel has the pote y encroachment	oute of the River oute of the River e improvements overse impact on it auna and Soil are likely to host a rists will impact not will help to impact link to the wider is potential for so bon rich soils existing bance of the land livin Railway Path of the green belt	Kelvin Railway Pa or increased use to its setting and histo ad Geology - Varia number of importa- egatively on these rove habitat confi- green network wo oil erosion and const in the area so to its set within a Spe- ne scenic value of to ensure that val	th is partially in the hrough active trace or the constant of the constant of the constant of the constant of the consideration where the consideration with neuron with neuro	odiversity and geo ecies and habitats. In the loss or dama in Torrance and Bi rtonshire. Althoug increased access on in should be taken rea and within the egative impacts to land is retained. H	Buffer Zone nead cinity of the Buffer diversity are detended age to wildlife a firdston within the disused ration account so the greenbelt. Upgo landscape charal sowever, the upgoing in the upgoing a sowever, the upgoing in the divergence of the landscape charal sowever, the upgoing in the landscape charal sowever.	ar Torrance. There fer Zone or route signated near to total that increased and habitats. Howe he wider environmilway would provide degradation of so as not to result increased acter. It is important grade also presente, Birdston, Milton	of the Antonine the route of the access along the ver, there is also nent and have a de an ideal route soil. It is possible in the release of railway path for at that the action is an opportunity	



- Water Quality and Climatic Factors It is anticipated that there are likely negative impacts as a result of potential infrastructure improvements for access and increased footfall to drainage; compacting soil might restrict drainage of rainfall which might further enhance the flood risk that is present in the area from the River Kelvin and minor watercourses such as Red Burn. This could have additional effects on flooding to the east and west of the Railway Path, with adverse effects to settlements such as Torrance and the north of Kirkintilloch.
- Air Quality and Climatic Factors The environment from Torrance to Birdston and connections to the north of Kirkintilloch currently rely on vehicular based travel. Upgrades to the Railway Path is likely to present active travel friendly infrastructure to the local area which has benefits in reducing a reliance on vehicular travel contributing to a modal shift to active travel. Furthermore, this will contribute to alleviating congestion levels in the area by reducing carbon emissions, potentially improving air quality.
- Population and Human Health and Material Assets A lack of connectivity between Torrance, Birdston and the north of Kirkintilloch has been identified through audit processes in the development of the ATS. This action is likely to improve connectivity, allowing people to have direct access to the wider environment, including the Campsie Fells, and towns such as Kirkintilloch and present a more sustainable network for the local community to take advantage of. For those who are encouraged to increase their walking and cycling uptake there are associated health benefits anticipated. Current active travel access from Torrance to Birdston meanders through the Hayston and Kirkintilloch Golf Clubs; a change in route will prevent degradation of the golf courses for recreation and further promote the participation and use of more sustainable forms of transport infrastructure (Core Path Network etc).

# **Proposed Mitigation:**

### **Cultural Heritage**

- Minimise and monitor any ground disturbance and incorporate design measures in order for required infrastructure improvements and maintenance to be carried out in a sensitive and sustainable manner to avoid or minimise any impacts on the historic environmental assets or their setting.

# **Biodiversity, Flora and Fauna**

- Additional surveys to determine level and type of species/habitats that will be potentially impacted from the action such as bat surveys/extended habitat surveys etc.
- Where network improvements require lighting to ensure that the route is safe for users, lighting design should follow best practice guidance Bat Conservation Trust 'Bats and Lighting in the UK'.
- Any infrastructure changes/improvements should aim to retain features of ecological value within the design and ensure the highest priorities for protection such as woodland, riparian habitats, ponds, wetlands etc. should be considered and any impact prevented.

#### Soil and Geology

- Further surveys of peatland/carbon rich soils should be carried out to determine whether the upgrade of the disused railway will result in the loss or devalue protected soil.
- Implement soil erosion prevention measures outlined in good practice guidance

#### Landscape

- Integration of high environmental and design standards that maintain existing landscape distinctiveness and will be consistent with the area as a Special Landscape Area and within the greenbelt.

#### **Water Quality**

- Control and treatment of surface runoff.
- Adoption of best practices to prevent/minimise adverse impacts to drainage.

## **Climatic Factors**

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- Further Flood Risk Assessments to determine extend of flood risk in the area and the implementation of flood risk management measures, if required.

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Proposed Action 1.8
Alternative 2

# Proposed Action:

Provide segregated cycle lanes on the main A807 and A803 carriageways or a shared use footway connecting Torrance and Kirkintilloch.

This option is anticipated to have positive impacts to the following environmental factors:

- Population and Human Health and Material Assets Through the provision of a segregated cycleway along the A807 and A803 or shared use footway, residents, commuters and visitors are more likely to be able to cycle or walk using this route, giving them active travel options to access Kirkintilloch and the Forth and Clyde Canal from Torrance which currently has poor connectivity and improve viability for active travel. By ensuring that the active travel route is segregated against the main route of traffic, this would be a viable and safe option for active travel users, which will benefit those in Torrance and other residents, visitors or commuters in East Dunbartonshire. Consideration should be given as to whether safety could be further enhanced with appropriate lighting and signage. However, it should be noted that the audit process in the development of the ATS did not reveal a demand for connectivity between Torrance and Kirkintilloch which may influence a lesser improvement in active travel.
- Air Quality and Climatic Factors Upgrading the existing carriageways with encourage a modal shift from vehicular based travel to active travel. Although many will opt to continue travelling with unsustainable methods, active travel is likely to increase and reduce a reliance on car-based travel. This will contribute to mitigating the effects of climate change through a reduction in related carbon emissions.

However, negative impacts have been predicted for the following environmental factors:

- Cultural Heritage, Landscape and Material Assets The A807 and A803 are within the Antonine Wall Buffer Zone, and the A803 is situated along the line of the Antonine Wall. This action will involve the construction of infrastructure improvements to the existing carriageways which has the potential to significantly impact on the setting and value of the Antonine Wall as a key tourist attractor and historical asset for East Dunbartonshire. At this stage the effects to landscape are uncertain but there are potential adverse impacts that will encroach or alter the setting of the green belt in which this route is situated depending on the nature of the design and change to the carriageways.
- Biodiversity, Flora and Fauna, Soil and Geology, Water Quality and Climatic Factors A LNCS for geodiversity has been designated between Torrance and Bishopbriggs and borders the A807. An increase in active travel along this route has the potential to have a negative effect on this designation through the removal or damage of features. There is also potential that construction activity will result in soil erosion/degradation/compaction as well as influence the temporary discharge of pollutants into nearby watercourses and the water table and potential drainage issues. It is anticipated that there are likely negative impacts as a result of potential infrastructure improvements which might further enhance the flood risk that is present in the area south of Torrance from the River Kelvin.

# **Proposed Mitigation:**

# **Cultural Heritage**

- Minimise and monitor any ground disturbance and incorporate design measures in order for required infrastructure improvements and maintenance to be carried out in a sensitive and sustainable manner to avoid or minimise any impacts on the historic environmental assets or their setting.

## **Biodiversity, Flora and Fauna**

- Additional surveys to determine level and type of species/habitats that will be potentially impacted from the action such as bat surveys/extended habitat surveys etc.
- Where access route requires lighting to ensure that the route is safe for users, lighting design should follow best practice guidance Bat Conservation Trust 'Bats and Lighting in the UK'.
- Any infrastructure changes/improvements should aim to retain features of ecological value within the design and ensure the highest priorities for protection such as woodland, riparian habitats, ponds, wetlands etc. should be considered and any impact prevented.

#### Soil and Geology

- Further surveys of peatland/carbon rich soils should be carried out to determine that construction activities to achieve this option will not result in the loss or devalue protected soil.
- Implement soil erosion prevention measures outlined in good practice guidance

# Landscape

- Integration of high environmental and design standards that maintain existing landscape distinctiveness and will be consistent with the greenbelt and sensitive to the surrounding area.

# **Water Quality**

Control and treatment of surface runoff.

- Adoption of best practices to prevent/minimise adverse impacts to drainage.

#### **Climatic Factors**

- Further Flood Risk Assessments to determine extend of flood risk in the area and the implementation of flood risk management measures, if required.

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# **Material Assets**

- Reuse of materials where appropriate/sustainable use of resources.
- Waste Management Plan implemented to reduce the impact of waste.

# Proposed Action 1.8 Alternative 3

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# **Proposed Action:**

Provide segregated cycle lanes on the main A807 and A803 carriageways or a shared use footway connecting Torrance and Bishopbriggs.

### Assessment Commentary:

This option is anticipated to have significant positive impacts to the following environmental factors:

- Population and Human Health Through the provision of a segregated cycleway along the A807 and A803 or shared use footway, people are more likely to be able to safely cycle or walk using these infrastructure improvements, giving them active travel options to access Bishopbriggs and additional opportunities to link with Kirkintilloch and the Forth and Clyde Canal from Torrance which currently has poor connectivity and viability for active travel. By ensuring that the active travel route is segregated against the main route of traffic, this would be a viable and safe option for active travel users, which will benefit those in Torrance and other residents, visitors or commuters in East Dunbartonshire. Consideration should be given as to whether safety could be further enhanced with appropriate lighting and signage. This option will potentially improve connections to Bishopbriggs Train Station which may be beneficial to commuters to Glasgow linking active travel and public transport interchanges.
- Air Quality and Climatic Factors Upgrading the existing carriageways with encourage a shift from vehicular based travel to active travel. Although many will opt to continue travelling with unsustainable methods, active travel is likely to increase and reduce a reliance on car-based travel. This will contribute to mitigating the effects of climate change and will play a part in reducing the flood risks identified in the area from the River Kelvin.
- ➤ Material Assets It is likely that this action will influence a change to more sustainable transport infrastructure enhancing the existing active travel infrastructure provision.

However, negative impacts have been predicted for the following environmental factors:

- ➤ Cultural Heritage, Landscape and Material Assets The A807 and A803 are within the Antonine Wall Buffer Zone, and the A803 is situated along the line of the Antonine Wall. This action will involve infrastructure changes and construction to the existing carriageways which has the potential to significantly impact on the setting and value of the Antonine Wall as a key tourist attractor and historical asset for East Dunbartonshire. At this stage the effects to landscape are uncertain but there are potential negative impacts that will alter the setting of the green belt in which this route is situated depending on the nature of the design and change to the carriageways.
- Biodiversity, Flora and Fauna, Soil and Geology, Water Quality and Climatic Factors There are a series of environmental designations for biodiversity and habitats between Torrance and Bishopbriggs town centre including a LNCS for geodiversity and Low Moss/High Moss Plantation which are both a LNCS for biodiversity with identified lowland raise bog peatland. An increase in active travel along this route has the potential to have a negative effect on these designations through the removal or damage of features and it is important that consideration is given to the effects of changing the infrastructure of the carriageway on these. There is also potential that construction activity will result in soil erosion/degradation/compaction as well as influence the temporary discharge of pollutants into nearby watercourses and the water table and potential drainage issues. It is anticipated that there are likely negative impacts as a result of potential infrastructure improvements which might further enhance the flood risk that is present in the area south of Torrance from the River Kelvin.

#### **Proposed Mitigation:**

#### **Cultural Heritage**

- Minimise and monitor any ground disturbance and incorporate design measures in order for required infrastructure improvements and maintenance to be carried out in a sensitive and sustainable manner to avoid or minimise any impacts on the historic environmental assets or their setting.

# **Biodiversity, Flora and Fauna**

- Additional surveys to determine level and type of species/habitats that will be potentially impacted from the action such as bat surveys/extended habitat surveys etc.
- Where access route requires lighting to ensure that the route is safe for users, lighting design should follow best practice guidance Bat Conservation Trust 'Bats and Lighting in the UK'.
- Any infrastructure changes/improvements should aim to retain features of ecological value within the design. The highest priorities for protection such as woodland, riparian habitats, ponds, wetlands etc. should be considered and any impact prevented.

# **Soil and Geology**

- Further surveys of peatland/carbon rich soils should be carried out to determine that construction activities to achieve this option will not result in the loss or devalue protected soil.
- Implement soil erosion prevention measures outlined in good practice guidance

# Landscape

- Integration of high environmental and design standards that maintain existing landscape distinctiveness and will be consistent with the greenbelt.

# **Water Quality**

- Control and treatment of surface runoff.
- Adoption of best practices to prevent/minimise adverse impacts to drainage.

#### **Climatic Factors**

- Further Flood Risk Assessments to determine extend of flood risk in the area and the implementation of flood risk management measures, if required.

# **Material Assets**

- Reuse of materials where appropriate/sustainable use of resources.
- Waste Management Plan implemented to reduce the impact of waste.

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.9	++	?/-	X	X	X	X	+	+	+	
	implementation. motorised vehicl  This action is like with the aims of increase particip enhancing the p good surfacing o quality, noise rec walking and cycle creating the pote.  In relation to Cu	mentary: itself already extends already extends already extends a from the town and the Masterplan action levels in a public realm to confective travel reduction, congesting friendly town and aller and a for more a factural Heritage,	kists and is currenupport the Master on centre.  Distinct impacts for by increasing provinctive travel within create a more plead outes and result in the impacts at until the impacts at unit	Population and Fivision for active transition for active transitions as an environment reduced traffic legarbon emissions ovide better links journeys to the active train at this stansicertain at the stansicertain at the stansicertain at the stansicertain at the st	duman Health, Aid avel and improving the centre. This will the for walkers, cyclevels in the town and a more please with the Forth area.	and as a result the perspective with a perspective	the aim of remonstrate to the aim of remonstrate to a more sure districts to the lid generate posity. Delivery of this Strathkelvin Rails on the hosts a rangement of the lides.	aterial Assets as it ove active travel in stainable travel ne town. This action ive benefits on le action is likely to way Path and oth	the proportion of twould be in line of the proportion of twould be in line of the proportion of two lines. The proportion of two lines of the proportion of	

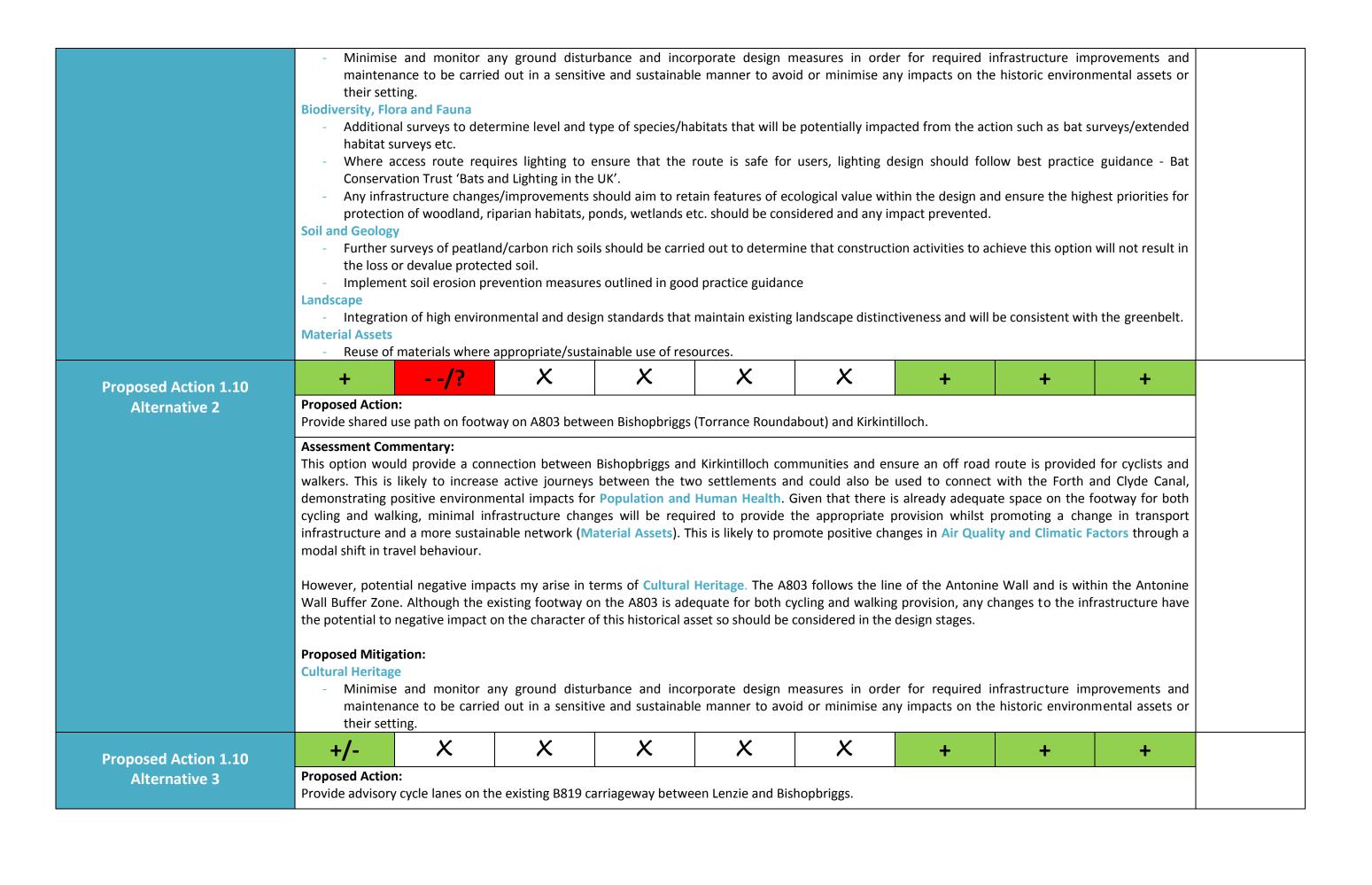
centre is designated as a Conservation Area. This action could adversely impact on these assets through active travel infrastructure improvements which could potentially degrade their value.

# **Proposed Mitigation:**

# **Cultural Heritage**

- Minimise and monitor any ground disturbance and incorporate design measures in order for required infrastructure improvements and maintenance to be carried out in a sensitive and sustainable manner to avoid or minimise any impacts on the historic environmental assets or their setting

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferre Alternative Option
Proposed Action 1.10	++	?/-	/+		+/-	X	++	++	+ +/-	
Alternative 1	Proposed Action Kirkintilloch/Lenz		ggs off-road active	travel route.						
	audit carried out facilitate active to travel between so natural environme promote changes infrastructure will.  In terms of Air Coalternative to care a reduction in cale.  In relation to Cull and Kirkintilloch/Consideration will degrade their values.  However, negative infrastructures infrastructures in the LNCS for levalued and has the potential providing.	ely to present sin the develop ravel in Bishopk rettlements and rent in a sustain sto the current lineed to be instituted and Climber and Climber and Elements and Climber and Elements and Climber and detraction empacts have ity, Flora and ture required) and ture required and protected specification of the content of the central to rest to detract from enhanced scential content and the central to rest to detract from enhanced scential content and content and content and central to rest to detract from enhanced scential content and content and central ce	ment of the ATS horiggs being of a look access Bishopbright access Bishopbright able and safe mand transport infrastructure.  matic Factors, it is swell as improve on the impacts at under the impacts at under the through an arrowen to these designing from the character been predicted for Fauna, Landscap and the result of invegetation and valuering Glasgow and ecies and potential ult in harm to the	ighlighting the lack with state and soil and see and Soil and and see	ik of connectivity fore, active traveland Lenzie Train his action is likely Bishopbriggs and a new route be olic transport interair quality in the nat has been destinappropriate den centre.  Invironmental fact Geology — Both from the use of the soils. Furtherm I Local Nature Reference of the soils. There is some pets. Much of the there is some personal travelands.	et ween Bishopke would be promo Station. This route to contribute to ind Kirkintilloch/Le etween Bishopbrigerchanges, contribe designated AQM proposed route alignated as both a evelopment or information. The implementation ore, the route for active ore, the route of eserve at Lenzie Meefore, the construction of the proposed route prop	origgs and Kirkin of the decision of an offection of an offection and implementation and	would respond to tilloch/Lenzie and esidents, visitors are allow people to health and wellbe sustainable network loch/Lenzie will prements in air qualities.  Trailway line between and Townscape ges in these areas road active trave potential to cause is adjacent to Higare likely to be host mentation of an active greenbelt. The bitat connectivity	infrastructure to add commuters to access the wider sing statistics and rk, although new rovide a realistic ty and leading to een Bishopbriggs Protection Area. could potentially  I route (i.e. the soil erosion and h Moss LNCS, and st to a number of ctive travel route e action has the	
	Proposed Mitiga Cultural Heritage									



In general, it is likely that this option would not have a significant environmental impact. However, it would provide an opportunity for people to cycle between Bishopbriggs and Lenzie which is likely to present benefits in terms of Human Health and wellbeing through active travel provision. However, the route of the B819 is not straight so there are safety concerns in terms of the viability of the route for cycling and potential conflicts with traffic on this B road. Furthermore, adequate lighting and signage for the safety of cyclists would be required in order to reduce the likelihood of and prevent accidents. Despite these constraints predicted, this option would likely present minor positive impacts for Air Quality, Climatic Factors and Material Assets by contributing to a shift from car-based travel to a more sustainable form, with benefits in reducing resultant carbon emissions and improving air quality.

# **Proposed Mitigation:**

**Population and Human Health** 

- Implementation of appropriate lighting and signage to improve the safety for cyclists.

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.11		rkintilloch – Actinentary: Is the intended estage to carry or	exploration or fea ut an appropriate	assessment. In or	der to ensure th	at potential enviro	onmental implica	itions are taken in	ailed information ato consideration	

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.12	available at this	o Milngavie/Bear mentary: as the intended e stage to carry ou	exploration or feas	assessment. In or	rder to ensure th	ut for this action t at potential environ ications as part of	onmental implica	ntions are taken in		

SE	A Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
	Proposed Action 1.13	+ + Proposed Action	<b>?/</b>	?//+	?/	?/-	?/	+	+/-	++	
	Alternative 1	East Dunbartons	hire Loop (Circul	ar Route)							

This action would create a circular route around the full perimeter of East Dunbartonshire, providing links between settlements where gaps in the network have been identified. This will provide positive benefits for Population and Human Health in terms of linking the majority of settlements with active travel in mind and for facilitating regular active travel journeys as a realistic alternative throughout East Dunbartonshire. The benefits will be particularly important for the rural villages where public transport provision and infrastructure that is active travel friendly is lacking. Connectivity to the wider environment, including key attractors such as Mugdock Country Park, the Campsie Fells, the West Highland Way and town centres for services, facilities and amenities with potential tourism benefits. Furthermore, there is potential for this action to take advantage of existing off-road infrastructure which represents a safe option for a modal shift from vehicular travel to walking and cycling. However, there are settlements such as Torrance that will not benefit from this opportunity. There is likely to provide benefits for improving Air Quality and Climatic Factors with a contribution towards carbon emission reductions. However, it should be noted that improvements to existing infrastructure and upgrades are required to address gaps in the existing network has the potential to have a negative impact on areas prone to flooding which exist around the areas of the Forth and Clyde Canal, River Kelvin and the Glazert Water. In terms of Material Assets, the Loop is likely to encourage and improve the safe use of core paths throughout East Dunbartonshire to promote a change to a more sustainable travel network for East Dunbartonshire.



This Council-wide action will encompass a range of different environmental designations and constraints and as such some of the effects are uncertain at this stage, without detailed plans and designs of the proposed 'loop', although there are potential positive and negative impacts anticipated for the following environmental factors:

- ➤ Cultural Heritage It is likely that providing connectivity around the perimeter of East Dunbartonshire for the promotion of active travel will improve connections to cultural assets such as the Antonine Wall, Craigend Castle and the Forth and Clyde Canal. In addition to this, there are a number of designated sites for their historical value throughout the area including:
  - Gardens and Designed Landscapes such as around Clachan of Campsie and Lennoxtown
  - Townscape Protection Areas such as near Bardowie and Langbank Farm
  - Conservation Areas in Milngavie, Bearsden, Kirkintilloch, Lenzie, Twechar, Bardowie and Clachan of Campsie
  - Antonine Wall and Antonine Wall Buffer Zone
  - Forth and Clyde Canal Scheduled Monument.

There are potential significant negative effects to these historical designations in terms of degrading their value through inappropriate access detracting from their character as a result of required infrastructure improvements.

- Biodiversity, Flora and Fauna and Soil and Geology The impact of increased access via walking and cycling has the potential to result in negative impacts to the setting and value of designated sites such as the 3 LNR sites, LNCS such as Douglas Muir, Craigmaddie Muir and Bardowie, SSSI such as South Braes, Mugdock Wood and Cadder Wilderness. Furthermore, increased footfall to sites where protected and non-protected species can be found has the potential to result in disturbance to habitats, breeding and nesting. This includes sites designated for their geodiversity value such as Auld Wives' Lifts and along the Crow Road on the Campsie Fells. Conflicts between access and soil quality have the potential to arise, resulting in soil degradation/erosion and potential disturbance to peatland/carbon rich soils. Conversely, it is also likely that this action could also help to improve habitat connectivity, with links to the wider green network in East Dunbartonshire.
- ➤ Landscape East Dunbartonshire hosts a number of Local Landscape Areas which have been designated around the Kilpatrick Hills, Campsie Fells, south of Waterside and through the centre of the boundary area from Birdston to Milngavie. The effects at this stage are uncertain as the exact improvements to be carried forward are subject to further investigation as to design and feasibility, but there is potential that minor negative impacts to these designations without consideration of landscape setting, character and appropriate design.
- ➤ Water Quality and Climatic Factors In terms of water quality, active travel improvements on existing infrastructure has the potential to result in drainage issues, particularly where the route is near to watercourses, from the result of increased footfall and changes to soil quality and quantity. Where drainage issues arise, there is the potential for secondary effects of flooding, particular if the intended route of the EDC loop will be within or in the vicinity of the SEPA designated Flood Risk Area.

# **Proposed Mitigation:**

# **Cultural Heritage**

- Minimise and monitor any ground disturbance and incorporate design measures in order for required infrastructure improvements and maintenance to be carried out in a sensitive and sustainable manner to avoid or minimise any impacts on the historic environmental assets or



#### their setting.

#### **Biodiversity, Flora and Fauna**

- Additional surveys to determine level and type of species/habitats that will be potentially impacted from the action such as bat surveys/extended habitat surveys etc.
- Where access route requires lighting to ensure that the route is safe for users, lighting design should follow best practice guidance Bat Conservation Trust 'Bats and Lighting in the UK'.
- Any infrastructure changes/improvements should aim to retain features of ecological value within the design. The highest priorities for protection such as woodland, riparian habitats, ponds, wetlands etc. should be considered and any impact prevented.

# **Soil and Geology**

- Further surveys of peatland/carbon rich soils should be carried out to determine that construction activities to achieve this option will not devalue protected soil.
- Implement soil erosion prevention measures outlined in good practice guidance

# Landscape

- Integration of high environmental and design standards that maintain existing landscape distinctiveness and will be consistent with the greenbelt.

#### **Water Quality and Climatic Factors**

- Control and treatment of surface runoff.

?/- -

- Adoption of best practices to prevent/minimise adverse impacts to drainage.
- Further Flood Risk Assessments to determine extend of flood risk in the area and the implementation of flood risk management measures, if required.
- Use of construction SUDS and adoption of best practices to avoid pollution of watercourses.

?/- **-**

#### **Material Assets**

+ +/-

- Reuse of materials where appropriate/sustainable use of resources.
- Waste Management Plan implemented to reduce the impact of waste.

?/- -/+

# Proposed Action 1.13 Alternative 2



Ensure all settlements in East Dunbartonshire are connected to neighbouring settlements by some form of active travel infrastructure, with minimum standards of advisory cycle lanes for cyclists or footways adjacent to carriageways for pedestrians. This approach would create a radial web of routes with connections from the centre of the area outwards.

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++/-

### **Assessment Commentary:**

This action is likely to present significant positive impacts to **Population and Human Health** as it will promote active travel between all settlements in East Dunbartonshire, including radial routes to rural villages in the centre of the local authority area such as Torrance and Balmore. Provision of active travel routes will also encourage residents who are able to commute to their place of work, either by active travel completely or using the routes partially before accessing public transport interchanges in a nearby settlement e.g. cycling from Torrance to Bishopbriggs and travelling by train to Glasgow. Overall, this will enable people to lead a more active lifestyle with health and wellbeing benefits and provide opportunities for them to connect to the wider natural environment and open spaces throughout East Dunbartonshire. However, there are potential concerns over safety as advisory lanes or footways alongside carriageways with potential high volumes of traffic providing risks of accidents which could potentially discourage active travel, as opposed to off-road active travel provision.

There is potential for this action to encourage a modal shift from vehicular travel to walking and cycling. This is likely to present benefits for improving Air Quality and Climatic Factors with a contribution towards carbon emission reductions. However, it should be noted that improvements to existing infrastructure and network upgrades are required to address gaps in the existing routes has the potential to have a negative impact on areas prone to flooding which exist around the areas of the Forth and Clyde Canal, River Kelvin and the Glazert Water. In terms of Material Assets, this action is likely to encourage and improve the safe use of core paths throughout East Dunbartonshire for a change to a more sustainable travel network. However, there are many routes in rural areas that will require additional infrastructure due to physical issues in accommodating both footways/advisory cycle lanes and traffic, resulting in waste and resource use.

This Council-wide action will encompass a range of different environmental designations and constraints and as such some of the effects are uncertain at this stage without specific plans and designs of required improvements and upgrades, although there are potential positive and negative impacts anticipated for the following environmental factors:

- Cultural Heritage It is likely that providing connectivity as a radial web of routes throughout East Dunbartonshire for the promotion of active travel will improve connections to cultural heritage assets such as the Antonine Wall, Craigend Castle and the Forth and Clyde Canal. In addition to this, there are a number of historical sites of value designated throughout the area including:
  - Gardens and Designed Landscapes such as around Clachan of Campsie and Lennoxtown
  - Townscape Protection Areas such as near Bardowie and Langbank Farm
  - Conservation Areas in Milngavie, Bearsden, Kirkintilloch, Lenzie, Twechar, Bardowie and Clachan of Campsie
  - Antonine Wall and Antonine Wall Buffer Zone through the centre of the Council area
  - Forth and Clyde Canal Scheduled Monument.

There are potential significant negative effects to these historical designations in terms of degrading its value and detracting from its character as a result of impacts from access to these sites.

- ▶ Biodiversity, Flora and Fauna and Soil and Geology The impact of increased access via walking and cycling has the potential to result in negative impacts to the setting and value of designated sites such as the 3 LNR sites, LNCS such as Douglas Muir, Craigmaddie Muir and Bardowie, SSSI such as South Braes, Mugdock Wood and Cadder Wilderness. Furthermore, increased footfall to sites where protected and non-protected species can be found has the potential to result in disturbance to habitats, breeding and nesting. This includes sites designated for their geodiversity value such as Auld Wives' Lifts and along the Crow Road on the Campsie Fells. Conflicts between access and soil quality have the potential to arise, resulting in soil degradation/erosion and potential disturbance to peatland/carbon rich soils. However, it is likely that this action could also help to improve habitat connectivity, with links to the wider green network in East Dunbartonshire.
- ➤ Landscape East Dunbartonshire hosts a number of Local Landscape Areas which have been designated around the Kilpatrick Hills, Campsie Fells, south of Waterside and through the centre of the boundary area from Birdston to Milngavie. In order to accommodate both active travel and vehicular travel on some routes in East Dunbartonshire, significant changes to the existing infrastructure may be required including the widening of carriageways. This will potentially encroach further into the green belt and have a negative effect on landscape character in high valued areas.
- ➤ Water Quality In terms of water quality, active travel improvements on existing infrastructure has the potential to result in drainage issues, particularly where the route is near to watercourses, from the result of increased footfall and changes to soil quality and quantity. Where drainage issues arise, there is the potential for secondary effects of flooding.

#### **Proposed Mitigation:**

#### **Population and Human Health**

- Implementation of appropriate lighting and signage to improve the safety for cyclists and walkers.

# **Cultural Heritage**

- Minimise and monitor any ground disturbance and incorporate design measures in order for required infrastructure improvements and maintenance to be carried out in a sensitive and sustainable manner to avoid or minimise any impacts on the historic environmental assets or their setting.

## **Biodiversity, Flora and Fauna**

- Additional surveys to determine level and type of species/habitats that will be potentially impacted from the action such as bat surveys/extended habitat surveys etc.
- Where access route requires lighting to ensure that the route is safe for users, lighting design should follow best practice guidance Bat Conservation Trust 'Bats and Lighting in the UK'.
- Any infrastructure changes/improvements should aim to retain features of ecological value within the design. The highest priorities for protection such as woodland, riparian habitats, ponds, wetlands etc. should be considered and any impact prevented.

#### Soil and Geology

- Further surveys of peatland/carbon rich soils should be carried out to determine that construction activities to achieve this option will not devalue protected soil.
- Implement soil erosion prevention measures outlined in good practice guidance

#### Landscape

- Integration of high environmental and design standards that maintain existing landscape distinctiveness and will be consistent with the greenbelt.

# **Water Quality and Climatic Factors**

- Control and treatment of surface runoff.
- Adoption of best practices to prevent/minimise adverse impacts to drainage.
- Further Flood Risk Assessments to determine extend of flood risk in the area and the implementation of flood risk management measures, if required.
- Use of construction SUDS and adoption of best practices to avoid pollution of watercourses.

# **Material Assets**

- Reuse of materials where appropriate/sustainable use of resources.
- Waste Management Plan implemented to reduce the impact of waste.

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.14	++	?/-/+	?/-/+	?/	?/-	?/-	++	+ +/-	+/-	
Alternative 1	Proposed Action:									
7 1100111011100 2		-	o green network a	assets/open space:	S.					
	Assessment Com	•	vill procent signific	cant positive impa	sts for the followi	ing anvironmental	factors			
				•		-		t Dunbartonshire	as it will enable	
				•				uits, enjoyment of		
								petter connected w		
	The Ope	n Space Strategy	for East Dunbart	onshire highlighte	d inadequacies i	n how accessible	the open space	/play parks in East	Dunbartonshire	
				n the ATS will proa	•	•				
					-	-	-	ire likely to result		
			•	_				able network. In tu	• •	
				s an issue such as pate and utilise ac			e able to impro	ve as vehicle carbo	on emissions are	
	likely to	be reduced as mic	ne people partici	pate and utilise ac	live traver afterno	atives.				
	Open spaces an	d green network	assets in East D	unbartonshire are	vast and are pro	otected by several	different envir	onmental designat	cions, constraints	
		_			•	•		tive and negative i	-	
	arise for the env	vironmental facto	rs including:							
			=				=	al environment as		
				•				ardens and Desig	•	
				_				as the potential to		
		_		s these sites of his	• • •		value and chara	acteristics. Howeve	er, people will be	
	•						nat connectivity	throughout the gre	een network and	
		• •		•	•		•	ential to increase		
		•	•			•	•	e including LNCS, I		
		= = = = = = = = = = = = = = = = = = = =						between access		
								ntially have a direc		
		• •		o peatland or carb						
					•		•	d the Kilpatrick Hill	•	
			_			_	•	orove active travel	-	
	areas gre	een network and	open spaces par	ticularly in rural a	reas, signiticant o	changes to the exi	isting infrastruct	ture may be requir	red including the	

widening of carriageways. This will potentially encroach further into the green belt and have a negative effect on landscape character in high valued areas.

- Water Quality and Climatic Factors Flood risk areas have been identified around much of East Dunbartonshire. Active travel infrastructure improvements in the natural environment are likely to have a direct impact on drainage, particularly in Flood Risk Areas and near waterbodies which has the potential to be exacerbated by the potential loss of vegetation and soil erosion.
- Climatic Factors and Material Assets Although there is existing infrastructure and provision to allow for active travel in East Dunbartonshire, it is likely that infrastructure will need to be upgraded in areas to ensure that it is of a high standard or new infrastructure implemented where necessary. This may result in extensive use of materials and waste generation such as aggregate waste and pollution. Through this action it is likely that sustainable transport infrastructure will be increasingly utilised as a realistic alternative to vehicular based travel which will contribute to modal shift.

# **Proposed Mitigation:**

# **Cultural Heritage**

- Minimise and monitor any ground disturbance and incorporate design measures in order for required infrastructure improvements and maintenance to be carried out in a sensitive and sustainable manner to avoid or minimise any impacts on the historic environmental assets or their setting.

# **Biodiversity, Flora and Fauna**

- Additional surveys to determine level and type of species/habitats that will be potentially impacted from the action such as bat surveys/extended habitat surveys etc.
- Where access route requires lighting to ensure that the route is safe for users, lighting design should follow best practice guidance Bat Conservation Trust 'Bats and Lighting in the UK'.
- Any infrastructure changes/improvements should aim to retain features of ecological value within the design. The highest priorities for protection such as woodland, riparian habitats, ponds, wetlands etc. should be considered and any impact prevented.

# **Soil and Geology**

- Further surveys of peatland/carbon rich soils should be carried out to determine that construction activities to achieve this option will not devalue protected soil.
- Implement soil erosion prevention measures outlined in good practice guidance

# Landscape

- Integration of high environmental and design standards that maintain existing landscape distinctiveness and will be consistent with the greenbelt.

# **Water Quality and Climatic factors**

- Control and treatment of surface runoff.
- Adoption of best practices to prevent/minimise adverse impacts to drainage.
- Further Flood Risk Assessments to determine extend of flood risk in the area and the implementation of flood risk management measures, if required.
- Use of construction SUDS and adoption of best practices to avoid pollution of watercourses.

#### **Material Assets**

- Reuse of materials where appropriate/sustainable use of resources.
- Waste Management Plan where necessary.

# Proposed Action 1.14 Alternative 2

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# **Proposed Action:**

Improve access by active travel to green network assets/open spaces in urban areas only

# **Assessment Commentary:**

The anticipated positive impacts for the following environmental factors include:

> Population and Human Health – This action is likely to present benefits for residents and visitors within urban areas as it will enable accessibility

to local open spaces which is shown to have health benefits in terms of increased active pursuits, enjoyment of the environment and community wellbeing. However while this is likely to promote the use of local open spaces through improved connectivity it excludes connectivity to large rural open spaces leaving significant gaps in the green network. This would represent a significant missed opportunity to provide access for urban dwellers to assets like the Campsie Fells and Mugdock Park.

Air Quality, Climatic Factors and Material Assets – There are potential positive impacts from a localised perspective that are likely to result from improved networks in East Dunbartonshire by facilitating a shift from existing transport infrastructure to a more sustainable network. In turn, air quality in areas, particularly where poor air quality is an issue such as Bearsden and Bishopbriggs, will be able to improve as vehicle carbon emissions are likely to be reduced as more people participate and utilise local active travel alternatives.

At this stage, some of the environmental impacts are uncertain but it's likely that there will be both positive and negative impacts that may arise for the environmental factors including:

- ➤ Cultural Heritage The green network and many open spaces in urban areas are located in or near the vicinity of cultural assets such as the Antonine Wall and Buffer Zone, Forth and Clyde Canal Scheduled Monument, Conservation Areas and Gardens and Designed Landscapes. Increasing opportunities for active travel in urban settings to open spaces/the green network has the potential to have an adverse effect on the setting of many of these historical sites without appropriate consideration to their value and characteristics. However, people will be provided with more opportunities to access these sites of historic value by sustainable means.
- ➤ Biodiversity, Flora and Fauna and Soil and Geology This option has the potential to ensure that connectivity to open spaces within the urban area with potential benefits for habitat connectivity. However, there is potential that use of active travel routes and the impact of increased footfall will have an adverse effect on natural sites of importance including LNCS, LNR and TPOs as well as disturbance to species. There is also the potential that, through increased footfall and conflicts between access and biodiversity conservation, a loss of biodiversity, flora, fauna and geodiversity will result. This could have a direct impact on soil erosion and compaction, and disturbance to peatland or carbon rich soils.
- Water Quality and Climatic Factors Flood risk areas have been identified in urban locations such as Kirkintilloch, Bishopbriggs, Bearsden and Milngavie. Active travel improvements will potentially have a direct impact on drainage, particularly in Flood Risk Areas and near waterbodies which has the potential to be exacerbated by the potential loss of vegetation and soil erosion.
- Material Assets Although there is existing infrastructure and provision to allow for active travel to open spaces throughout urban locations it is likely that infrastructure will need to be upgraded in areas to ensure that it is of a high standard or new infrastructure implemented. This might result in extensive use of materials and waste generation such as aggregate waste and pollution.

#### **Proposed Mitigation:**

# **Cultural Heritage**

- Minimise and monitor any ground disturbance and incorporate design measures in order for required infrastructure improvements and maintenance to be carried out in a sensitive and sustainable manner to avoid or minimise any impacts on the historic environmental assets or their setting.

#### **Biodiversity, Flora and Fauna**

- Additional surveys to determine level and type of species/habitats that will be potentially impacted from the action such as bat surveys/extended habitat surveys etc.
- Where access route requires lighting to ensure that the route is safe for users, lighting design should follow best practice guidance Bat Conservation Trust 'Bats and Lighting in the UK'.
- Any infrastructure changes/improvements should aim to retain features of ecological value within the design. The highest priorities for protection such as woodland, riparian habitats, ponds, wetlands etc. should be considered and any impact prevented.

# **Soil and Geology**

- Further surveys of peatland/carbon rich soils should be carried out to determine that construction activities to achieve this option will not devalue protected soil.
- Implement soil erosion prevention measures outlined in good practice guidance

# **Water Quality and Climatic Factors**

- Control and treatment of surface runoff.
- Adoption of best practices to prevent/minimise adverse impacts to drainage.

- Use of construction SUDS and adoption of best practices to avoid pollution of watercourses.

# **Material Assets**

- Reuse of materials where appropriate/sustainable use of resources.
- Waste Management Plan where necessary.

# Proposed Action 1.14 Alternative 3

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# **Proposed Action:**

Improve access by active travel to green network assets/open spaces in rural areas only.

## **Assessment Commentary:**

The anticipated positive impacts for the following environmental factors include:

- Population and Human Health – This action is likely to present benefits for residents and visitors within rural areas as it will enable accessibility to local open spaces which is shown to have health benefits in terms of increased active pursuits, enjoyment of the environment and community wellbeing. However while this is likely to promote the use of local open spaces as people will be better connected to open spaces it excludes connectivity to urban open spaces leaving significant gaps in the green network and to urban open spaces such as Peel Park, Lennox Park and Colguboun Park. This would represent a significant missed opportunity for those living in rural areas to access assets in urban areas.

+/-

+/-

- Air Quality, Climatic Factors and Material Assets — There are potential significant positive impacts that are likely to result from improved networks in East Dunbartonshire by facilitating a shift from existing transport infrastructure to a more sustainable network. In turn, air quality in areas will be able to improve as emissions are likely to be reduced as more people have access to active travel provision. This would see a notable change in rural areas as there is currently a reliance on car-based travel.

At this stage, some of the environmental impacts are uncertain but it likely that there will be both significant negative and positive impacts that may arise for the environmental factors including:

- Cultural Heritage The green network and many open spaces in rural areas are located in or near the vicinity of cultural assets such as the Antonine Wall and Buffer Zone, Forth and Clyde Canal Scheduled Monument, Conservation Areas and Gardens and Designed Landscapes. Increasing opportunities for active travel in rural settings to open spaces/the green network has the potential to have an adverse effect on the setting of many of these historical sites without appropriate consideration to their value and characteristics. However, people will be more likely to access these sites of historic value by sustainable means.
- Biodiversity, Flora and Fauna and Soil and Geology This option has the potential to ensure that connectivity to open spaces within rural areas with potential benefits for habitat connectivity. However, there is potential that the increased use of active travel routes and the impact of increased footfall will have an adverse effect on natural sites of importance including LNCS, LNR and TPOs as well as disturbance to species. There is also the potential that, through increased footfall and conflicts between access and biodiversity conservation, a loss of biodiversity, flora, fauna and geodiversity will result. This could have a direct impact on soil erosion and compaction, and disturbance to peatland or carbon rich soils.
- Landscape East Dunbartonshire hosts a number of Local Landscape Areas which have been designated around the Kilpatrick Hills, Campsie Fells, south of Waterside and through the centre of the boundary area from Birdston to Milngavie. In order to improve active travel provision to the areas green network and open spaces in rural areas, significant changes to the existing infrastructure may be required including the widening of carriageways. This will potentially encroach further into the green belt and have a negative effect on landscape character in high valued areas.
- Water Quality and Climatic Factors Flood risk areas have been identified in rural areas such as Twechar, Milton of Campsie and Lennoxtown, as well as in throughout the green belt. Active travel improvements will potentially have a direct impact on drainage, particularly in Flood Risk Areas and near waterbodies which has the potential to be exacerbated by the potential loss of vegetation and soil erosion.
- Material Assets Although there is existing infrastructure and provision to allow for active travel to open spaces throughout rural locations it is likely that infrastructure will need to be upgraded in areas to ensure that it is of a high standard or new infrastructure implemented. This may result in extensive use of materials and waste generation such as aggregate waste and pollution.

#### **Proposed Mitigation:**

**Cultural Heritage** 

- Minimise and monitor any ground disturbance and incorporate design measures in order for required infrastructure improvements and maintenance to be carried out in a sensitive and sustainable manner to avoid or minimise any impacts on the historic environmental assets or their setting.

# **Biodiversity, Flora and Fauna**

- Additional surveys to determine level and type of species/habitats that will be potentially impacted from the action such as bat surveys/extended habitat surveys etc.
- Where access route requires lighting to ensure that the route is safe for users, lighting design should follow best practice guidance Bat Conservation Trust 'Bats and Lighting in the UK'.
- Any infrastructure changes/improvements should aim to retain features of ecological value within the design. The highest priorities for protection such as woodland, riparian habitats, ponds, wetlands etc. should be considered and any impact prevented.

# **Soil and Geology**

- Further surveys of peatland/carbon rich soils should be carried out to determine that construction activities to achieve this option will not devalue protected soil.
- Implement soil erosion prevention measures outlined in good practice guidance.

### Landscape

- Integration of high environmental and design standards that maintain existing landscape distinctiveness and will be consistent with the greenbelt.

# **Water Quality and Climatic Factors**

- Control and treatment of surface runoff.
- Adoption of best practices to prevent/minimise adverse impacts to drainage.
- Use of construction SUDS and adoption of best practices to avoid pollution of watercourses.

#### Material Assets

- Reuse of materials where appropriate/sustainable use of resources.
- Waste Management Plan where necessary.

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.15	++	+	+	X	X	X	+	+	+	
Alternative 1	Proposed Action Cycling in EDC pa				,					
	Population a cycle throug Milngavie tratown centres where approaccess the people to enconnections	effects of this act and Human Heal th parks in EDC, ain Station. This s, public transpo ppriate, this optic ark by active tra ijoy the parks mo to other Core F	th, Cultural Herita providing addition will provide newer trinterchanges are on will increase via evel and securely ore flexibly. This o	age, Biodiversity, onal off-road, tra additions to the and other attraction ability and acceptalock their bicycle option facilitates in abartonshire while	Material Assets, affic free options active travel netwins. Operating on ance of cyclists as should they wincreased active joine for the should they wincreased active joine free should the should be s	ng environmental factor Quality and Class to reach another works for cyclists at a 'Share with care's a mode. Provisions is a to continue into ourneys and access active travel access.	limatic factors — r destination e.g nd provide enha e' principle, poss n of cycle parkin to the park on fo s to services and	g. through Lennox anced connections libly with separating in parks will also bot, proving additi	to open spaces, and lines on paths of allow people to ional options for ell as encourages	
	+	0/+	0/+	X	X	X	+	+	+	

# Proposed Action 1.15 Alternative 2

# **Proposed Action:**

Provide cycling provision such as sheltered cycle parking at all EDC parks to encourage active travel to parks.

# **Assessment Commentary:**

This option is anticipated to have an overall neutral or minor positive impacts to the following environmental factors:

Population and Human Health, Cultural Heritage, Biodiversity, Flora and Fauna, Air Quality, Climatic Factors and Material Assets - This option would allow people to securely park bicycles at EDC parks and therefore access the parks by bicycle with confidence that they securely leave their bicycles while enjoying the park. Cycling will still be prohibited in parks but enhanced access to parks facilitated by provision of parking. This would represent an enhancement as no provision currently exists. It is likely therefore that this action would facilitate an increase in active travel journeys. However by failing to allow cycling in the parks only journeys to parks are facilitated which might discourage people as they will not be able to complete their journey by cycling. An example of this could be having to cycle on the carriageway to Milngavie Rail Station because it is not permitted to cycle through Lennox Park — this creates a desire line barrier in some cases and could hinder some active journeys. This option facilitates increased active journeys and access to services and attractions, as well as encourages connections to other Core Paths in East Dunbartonshire while increasing the active travel access to the areas natural and historic environment designated network for leisure and recreational purposes. This option is likely to promote the role and use of active travel in enhancing air quality and will contribute towards a shift in cultural behaviour towards active travel alternatives which will present benefits in reducing car based journeys and the resultant carbon emissions.

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.16	++	X	X	X	X	X	++	+	X	
Alternative 1	Proposed Action: Secure cycle stora	age at rail statio	ns and town centres.		l					
	that enhanced far train stations hav lock bikes to enal Dunbartonshire's for longer journey	is option would cilities for cycliste sheltered and ble short trips for settlements for ys. It is anticipat	present significant pots will be put in placed secure cycle storage or social and more sign work or further educed that increasing acts an AQMA), reduci	e as not all town e. This is likely to gnificantly for co Ication. This is als tive travel journe	centres, services encourage peop mmuting purpos so likely to have eys will contribute	s and amenities supple to increase actions in the high a positive influence to improving air	uch as leisure ce tive travel journe proportion of co ce on commuter quality (particul	ntres, doctors a eys by allowing ommuters to Gl s wishing to col ar in Bearsden	and libraries, and people to safely asgow from East nnect with trains and Bishopbriggs	
Proposed Action 1.16 Alternative 2	+ Proposed Action:		X	X	X	X	++	+	X	
	Assessment Come It is likely that the enhanced facilities people to safely I from East Dunbar trains for longer Bishopbriggs which	mentary:  nis option woul  es for cyclists at  ock bikes to en-  rtonshire's settl  journeys. It is  ch are currently	ns only – provision of  d present positive in all rail stations in Ea able short trips for so ements for work or f anticipated that incr designated as an A in nature as cycle sto	npacts to Popula st Dunbartonshir ocial purposes an urther education easing active tra QMA) and redu	e. This is likely to d significantly fo . This is likely to vel journeys will cing emissions, a	n Health, Air Qua o encourage peop or commuting give have a positive in I contribute to im along with the pro	ality and Climation of sustantial control of the high proper of the high proper of the high proving air quantion of sustantial control	ctive travel jour ortion of common muters wishing lity (particular ainable transpo	neys by allowing uters to Glasgow to connect with in Bearsden and rt infrastructure.	

	· ·	to acknowledge an	d cater for other touters which could	•				ure centres, docto	ors and libraries,
roposed Action 1.16	+	X	X	X	X	X	+	+	X
Alternative 2	Proposed Action Secure cycle stor		es only – provision	of sheltered cycle	e parking racks at	all town centres	in EDC.		
	enhanced faciliti active travel jou increasing active AQMA) and red	this option would es for cyclists in Lurneys by allowing travel journeys wucing emissions, a	present positive in enzie, Kirkintilloch, people to safely will contribute to in long with the proposity, which has the	Bishopbriggs, Be secure bikes to mproving air qual motion of sustair	earsden and Milng enable short trip lity (particular in nable transport in	gavie town centi os for social pur Bearsden and B frastructure. Ho	res. This is likely poses and for consistent of the constant of the impact of the impa	to encourage peo ommuting. It is a h are currently d cts are minor in	ople to increase anticipated that esignated as an nature as cycle

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.17 Alternative 1	assessed through	nd Developmen nentary: Transport Policy on the SEA proces ment within thes	within the Local ss. This action rel	ates to the delive	ry of active trave	l throughout East	Dunbartonshire	from a planning p	e currently being perspective. The and as such this	

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.18 Alternative 1	Proposed Action: Town Centre Stra									
	•	of Town Centre S	_	ir long-term vision entary Guidance /		•	ublic realm impro	ovements will be a	assessed through	

SEA Environmental Factors	Population & Human Health		Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option	
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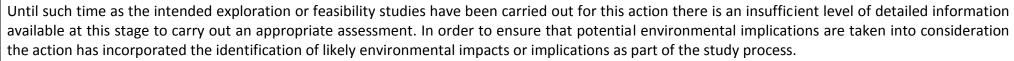
# **Proposed Action 1.19**



# Proposed Action:

20 MPH Zones.

# Assessment Commentary:





EA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.20	+	X	X	X	X	X	+	+	+	·
Alternative 1	Proposed Action: Signage Review:		out Healthy Habi	ts signage to ensu	re consistency o	f provision across t	he area.			
	some locations.  new network are easily recognisals of Healthy habit awareness of the There is likely to production and throughout East	ntified that havi Kirkintilloch and ea wide it repre ble colour schem as throughout Ea e active travel ne b be a minor pos implementation t Dunbartonshir	I Bishopbriggs alresents better optione and information st Dunbartonshire etwork and reap the litive impact in relation of a signage relation and the potential	eady has a cohere on to continue the on so users know in e will provide a str one befits of further ation to Population	ent network of F rollout of the e mmediately they rong base of sup ractive travel pro on and Human F ntly due to the	create visitor confidealthy habits signal existing Healthy habits are using the EDC opport and local known comotion.  Health, Air Quality, increased awaren participation as a	age and rather to bits theme. This active travel ne bwledge about to Climatic Factor dess and promo	than duplicate work will ensure unifor twork. Using the he initiative which as and Material Astion of the active	rk by providing a m provision with existing branding a should increase sets through the e travel network	
	commuting and	leisure journeys	. X	X	X	X	+	+	+	
Proposed Action 1.20 Alternative 2	which ensures countries and a regular aud Assessment Command This option would inconsistencies it and is likely to in However there is and efficient op	review and audiconsistency of produce developmentary: Id represent a lander to delive acrease the number of the salready good partion to continue entified strong p	ovision across all eloped.  rge scale enhance er a fully consistent ber of active journ erovision of Health er the branding an rovision in Kirkint	ment to signage part suite of active treeys.  y Habits signage and active travel precible.	strategy should provision. The fulction are signage. The across various are omotion through briggs therefore	lit results to inform deliver enhanced Il review would iden nis would improve it eas in East Dunbart th healthy habits are east it seems sensible	ntify defects, en nformation availationshire and it was to continue roles.	sure repair and we lable to people was yould represent a existing provision ll out of healthy h	ould also identify alking and cycling more sustainable of signage. The nabits signage to	

There is likely to be a minor positive impact in relation to Population and Human Health, Air Quality, Climatic Factors and Material Assets through the production and implementation of a signage review predominantly due to the increased awareness and promotion of the active travel network throughout East Dunbartonshire and the potential for increased active travel participation as a realistic alternative to vehicular based travel for commuting and leisure journeys.

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.21	++	+/-	+/-	?/-	X	?/-	++	++	++	
Alternative 1	Proposed Action: Maintenance Rev	view. Ensure a h	igh standard of ma	aintenance of rou	tes is provided th	nrough an on-going	g annual audit ar	nd review process.		
	and resurfacing ensures carriage lighting, fencing,  The anticipated of Population relation to provide a countrysis shift away.  There are likely to Cultural Hoprovision through a of direct in Soil & Geimpacts purpose carries and provision through a country in the provision through a country in the cultural Hoprovision through the country in the cultural Hoprovision through	it varying quality was identified to ways and active surfaces etc. in effects of this action and Human to the surfacing a safe and secured, open spaces of from vehicular to be both positive travel active travel infrest on the surfacing and water articularly in relosion or damage	travel routes are good state, and value in are likely to be Health, Material of routes, lighting are active travel in based travel and ve and negative producersity, Flora & for access to East astructure improvites or their setting ation to maintenate to soil, land contents are even are setting to the setting at the sett	nis approach emplifit for purpose. It indalism and fault e mainly positive in Assets, Air Quality and fencing which the for residues and public trapromoting the role of the fauna — There are Dunbartonshire's ements in the vicing. In a fauna in a fauna can a	loys a pragmatic Physical enhance is are repaired print in nature, particulty and Climatic the positively implements, commuter ansport interchaine and use of activities relation to:  The positive effect natural and historial and historial inity of sensitive on on water qualing of the network impaction from historial and hi	ularly related to the factors — In term act on the safety or and visitors and represent the safety of the safety o	ed to remove pheed to remove pheed to remove pheed to remove pheed to the continuor of active travel red enable users east Dunbartons res.  Esult of this action assets. There is otected or design this stage, how a multiple impact	onmental factors: ual programme of oute users. This is to connect and a hire while contribution a through increase a also potential for nated sites of imp	maintenance in maintenance will access the wider uting to a modal adverse impacts ortance in terms	
	Proposed Mitiga			J	,		. ,			
	maintena their sett	and monitor and monitor and monitor and monitorial	· -			measures in orde oid or minimise ar	<del>-</del>	-		
	- Potential	tree, vegetation	<del>-</del>		considered nece	essary to avoid adv	erse impacts.			
		nt soil erosion pi	evention measure	es outlined in good	d practice guidan	ce				

- Pre-construction surveys and application of good practice.

#### **Water Quality**

- Control and treatment of surface runoff.
- Use of construction SUDS and the adoption of best practices to avoid pollution of watercourses.

#### **Material Assets**

- Reuse of materials where appropriate/sustainable use of resources.
- Waste Management Plan where necessary.

# Proposed Action 1.21 Alternative 2

Reuse of materials where appropriate/sustainable use of resources.

++ ?/--/+ ?/--/+ ?/-- × ?/- ++ ++

# **Proposed Action:**

Carry out a full review and audit of every route (carriageway, footway, core path and cycleway) in East Dunbartonshire and use audit results to inform development of comprehensive Maintenance Strategy which ensures consistency of provision across all settlements. The strategy should deliver enhanced routes and consistent provision, all defects quickly repaired and a regular audit schedule developed.

++/-

# **Assessment Commentary:**

This option would represent large scale enhancement to delivery of maintenance. The full review would identify defects, ensure repair and would also identify inconsistencies in order to deliver an active travel network of a consistent outstanding standard. This would improve surfaces for walking and cycling and is likely to increase the number of active travel journeys. The audit identified the inconsistent standard of route surfaces as a major barrier to active travel which is likely to present significant positive impacts to **Population and Human Health**. This maintenance will provide a safe and secure active travel network for residents, commuters and visitors and enable users to connect and access the wider countryside, open spaces, amenities, services and public transport infrastructure throughout East Dunbartonshire while contributing to a modal shift away from vehicular based travel and promoting the role and use of active travel alternatives with significant positive effects for **Air Quality and Climatic Factors**.

The effects to Cultural Heritage, Biodiversity, Flora and Fauna, Soil and Geology and Water Quality are uncertain although there is potential for positive and negative effects including:

- ➤ Cultural Heritage and Biodiversity, Flora and Fauna There are potential positive effects predicted as a result of this action through increased and improved provision of active travel for access to East Dunbartonshire natural and historic environmental assets. However, there is also potential for significant adverse impacts through extensive active travel infrastructure improvements in the vicinity of sensitive and vulnerable protected or designated sites of importance in terms of direct impacts on the sites or their setting.
- > Soil and Geology and Water Quality The impacts of this action on water quality are uncertain at this stage, however, there is potential for adverse impacts particularly in relation to maintenance and resurfacing of the network which could have multiple impacts, including:
  - Erosion or damage to soil, land contamination, soil compaction from heavy machinery as well as from increased footfall along footways/cycleways/core paths.
  - Temporary discharge, run off or drainage issues if necessary works are carried out in close proximity to watercourses.

Although a full review and audit for the maintenance of all routes throughout East Dunbartonshire will help to significantly promote changes to the current transport infrastructure to a more sustainable network suitable for cycling and walking, this action will require resurfacing and possible widening/changes to existing infrastructure which is likely to require vast resources and also generate significant waste, dust and pollution. This is likely to present some minor negative impacts for Material Assets.

# **Proposed Mitigation:**

# **Cultural Heritage**

- Minimise and monitor any ground disturbance and incorporate design measures in order for required infrastructure improvements and maintenance to be carried out in a sensitive and sustainable manner to avoid or minimise any impacts on the historic environmental assets or their setting.

# **Biodiversity, Flora & Fauna**

- Minimise tree, vegetation or topsoil removal.

- Potential Protected Species Surveys, Licences or mitigation if considered necessary to avoid adverse impacts.
- Control and treatment of surface runoff.

# Soil & Geology

- Implement soil erosion prevention measures outlined in good practice guidance
- Pre-construction surveys and application of good practice.

# **Water Quality**

- Control and treatment of surface runoff.
- Use of construction SUDS and the adoption of best practices to avoid pollution of watercourses.

# **Material Assets**

- Reuse of materials where appropriate/sustainable use of resources.
- Waste Management Plan where necessary.

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 1.22	+	X	Х	X	X	X	+	+	+	
Alternative 1	Proposed Action Crossing Improv									
	identified the new but deemed unseed in terms of cross following environ Population at throughout recrossing facion network which increasing the Air Quality, active travel contribute to Material Asseed the core pat	mploys a pragmated for increased uitable and looks ing facilities being facilities being facilities deity and Human Health esidential communities this action le also providing e areas physical Climatic Factors network through owards a modal state – Improvement h network and providing the sets – Improvement of the set of t	crossing provisions to provide adequate reviewed in line of the Through this funities in East Duensures that respond to activity levels and and Material Assemble to more sustains to fift to more sustains to the active to	on at some location uate crossings at rewith the on-goin action there is like inbartonshire with sidents, commute access public translements actionshire this action inable means of the ravel network and iff towards more	ns. It was furthenew development g maintenance.  The self to be a position the active travents and visitors has port interchangeing of its resident provision of crown could have a pransport to, from the infrastructure to	ropriate, proportion identified that mets. This action is distributed in relation is distributed in relation in the impact in	rectly linked with ction is likely to he con to the increase moving physical lites to a safe, so so, leisure and recents providing furthelation to increase the area.	ations have alreaded action 1.21: Main ave minor positive ed provision and laborriers and province and attractional opportunities are connections as a sing active travel further encourage	dy been assessed intenance Review impacts on the ink between and ding appropriate cive active travel unities while also and access to the participation and the the safe use of	
Proposed Action 1.22	++	X	X	X	X	X	+	+	+	
Proposed Action 1.22 Alternative 2	Proposed Action:  Carry out a review of each crossing in East Dunbartonshire and use audit results to inform development of comprehensive Crossings Strategy which ensures consistency of provision across all settlements. The strategy should deliver enhanced crossing facilities and consistent provision, ensure all defects are quickly repaired and a regular audit schedule developed. This review will be extended to all new developments to ensure EDC's high environmental and design standards are upheld. Reviews will take place for crossings whenever any infrastructure changes occur within 25m of an existing crossing to ensure facilities are still effective and not adversely affected.									



In general, this action will present positive impacts to Population and Human Health, Air Quality, Climatic Factors and Material Assets. This option will facilitate improvements to existing crossing facilities and at new developments which will improve connections and remove physical barriers which currently discourage people to walk or cycle. The process may identify new locations for suitable crossings which may further improve facilities for crossing busy carriageways. Individually this action is likely to have minor positive impacts on the following environmental factors:

- Population and Human Health Through this action there is likely to be a positive impact in relation to the increased provision and links between and throughout residential communities in East Dunbartonshire with the active travel network. By removing physical barriers and providing appropriate crossing facilities this action ensures that residents, commuters and visitors have improved access to a safe, secure and attractive active travel network while also providing opportunities to access public transport interchanges, local amenities, leisure and recreational opportunities while also increasing the areas physical activity levels and health and wellbeing of its residents. There is also the potential for significant positive impacts due to the identification of new locations for suitable crossings which has the potential to benefit a greater number of people and will improve the safety for active travel along busy routes. This is one of the direct differences between the two alternative actions, providing additional benefits for Population and Human Health.
- Air Quality, Climatic Factors and Material Assets Through the provision of crossing improvements providing further connections and access to the active travel network throughout East Dunbartonshire this action could have a positive impact in relation to increasing active travel participation and contribute towards a modal shift to more sustainable means of transport to, from and throughout the area.
- Material Assets Improvement of the active travel network and infrastructure through crossing improvements will further encourage the safe use of the core path network and promote modal shift towards more sustainable transport alternatives by linking communities through the active travel network, services and public transport interchanges.

# Alternative Actions for the Active Travel Strategy: Developing Behavioural Change - Schools

EA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferre Alternative Option	
Proposed Action 2.1	++	X	X	X	X	X	++	++	+		
Alternative 1	Proposed Action: Ensure all Primary and Secondary Schools provide School Travel Plans or Active Travel Co-ordinator.										
	Assessment Commentary:  This action offers a more pragmatic approach to the provision of travel plans acknowledging that it is challenging to ensure all schools have a travel plan or dedicated co-ordinator. This action could be implemented through the provision and circulation of travel plan data directly to schools, parents and pupils or provided along with assistance by a co-ordinator post. This promotion of active travel alternatives includes combinations with public transport so that families can incorporate some element of active travel into their school journey regardless of how far they live from the school. This option represents an opportunity to develop positive healthy habits early in school life through primary and secondary school which may be engrained habits by the time children reach adulthood.										
	This action is likely to have positive impacts related to its implementation. Specific impacts are related to the following environmental factors:  Population and Human Health, Air Quality, Climatic factors and Material Assets – Positive impacts are anticipated through the provision of school travel plans and / or an Active Travel Co-ordinator to encourage pupils and parents to access school services and facilities using the existing active travel network (and improved network through this Strategy). This along with some funding to ensure physical facilities like sheltered secure bike parking would represent an improvement on the current state, facilitate more active journeys and promote more sustainable forms of transport infrastructure (including linkages with the public transport network and interchanges) and particularly during peak times reducing congestion levels, carbon emissions and potentially improving air quality in the vicinity of school facilities (with a particular emphasis on the existing AQMA's in Bearsden and Bishopbriggs).										
Proposed Action 2.1 Alternative 2	+ + Proposed Action		X School Travel	X Plan or Active Train	X vel Co-ordinator	X	+	+	+		
	Assessment Commentary: This action is intended to ensure that all children at primary school in East Dunbartonshire and their parents are aware of and provided with information regarding their potential travel options to access the school estate. This could be in combination with the public transport network to incorporate multiple sustainable transport alternatives. Focussing solely on primary school pupils and locations could limit the potential of this ATS by limiting the number of pupils and parents receiving such bespoke travel planning knowledge and lose momentum of active travel support as children progress through to secondary school.										
	This action is likely to have positive impacts related to its implementation. Specific impacts are related to the following environmental factors:  Population and Human Health, Air Quality, Climatic factors and Material Assets – Positive impacts are anticipated through the provision of school travel plans and / or an Active Travel Co-ordinator for all primary schools to encourage pupils and parents to access school services and facilities using the existing active travel network (and improved network through this Strategy). This promotion of the active travel network and linkages with public transport interchanges could facilitate more active journeys and promote more sustainable forms of transport infrastructure and particularly during peak times reducing congestion levels, carbon emissions and potentially improving air quality in the vicinity of school facilities (with a particular emphasis on the existing AQMA's in Bearsden and Bishopbriggs). By limiting the scope of the Action the relevant impacts are also likely to be affected, reducing the long-term potential positive impacts on air quality and climatic factors.										
	++	X	X	X	X	X	+	+	+		

# Proposed Action 2.1 Alternative 3

# Proposed Action:

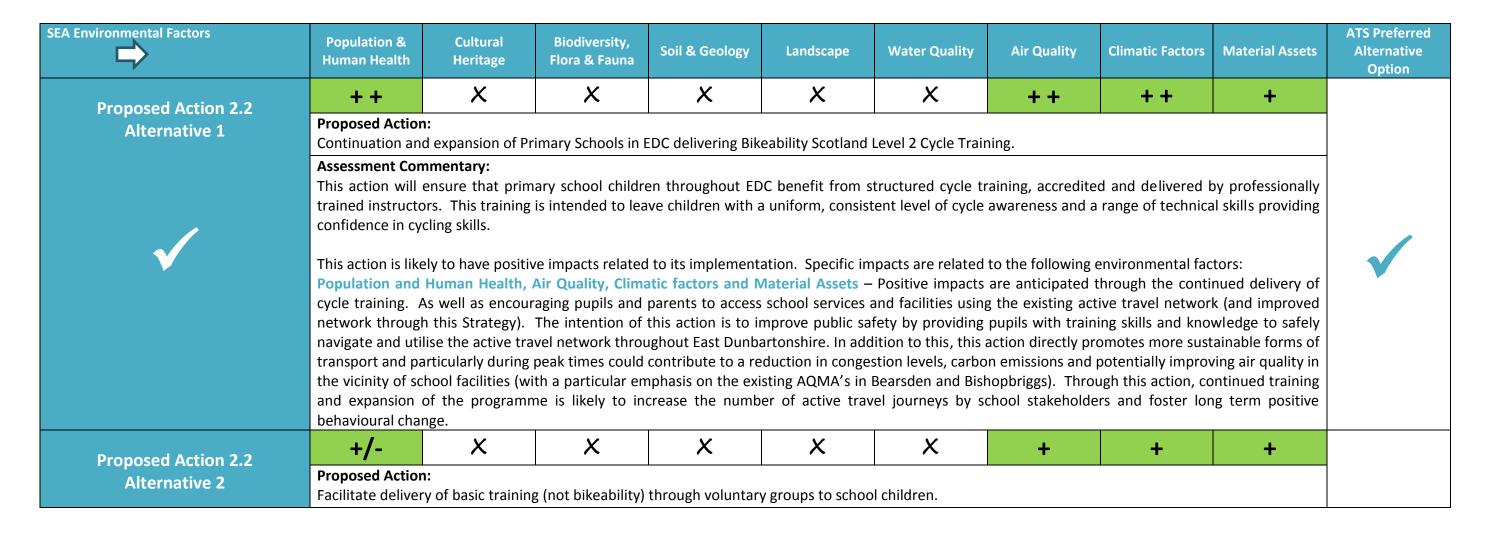
Ensure all secondary schools provide a School Travel Plan or Active Travel Co-ordinator.

# **Assessment Commentary:**

This action is intended to ensure that all children at secondary school in East Dunbartonshire and their parents are aware of and provided with information regarding their potential travel options to access the school estate. This could be in combination with the public transport network to incorporate multiple sustainable transport alternatives. Focusing solely on secondary school pupils and locations could limit the potential of this ATS as active travel / healthy habits will not be in place at an earlier age. With an uncoordinated advice throughout school life, pupils and parents may develop less active travel habits and fail to capitalise active travel options ad a realistic alternative to car based journeys.

This action is likely to have positive impacts related to its implementation. Specific impacts are related to the following environmental factors:

Population and Human Health, Air Quality, Climatic factors and Material Assets – Positive impacts are anticipated through the provision of school travel plans and / or an Active Travel Co-ordinator for all secondary schools to encourage pupils and parents to access school services and facilities using the existing active travel network (and improved network through this Strategy). This promotion of the active travel network and linkages with public transport interchanges could facilitate more active journeys and promote more sustainable forms of transport infrastructure and particularly during peak times reducing congestion levels, carbon emissions and potentially improving air quality in the vicinity of school facilities (with a particular emphasis on the existing AQMA's in Bearsden and Bishopbriggs). By limiting the scope of the Action the relevant impacts are also likely to be affected, reducing the long-term potential positive impacts on air quality and climatic factors.

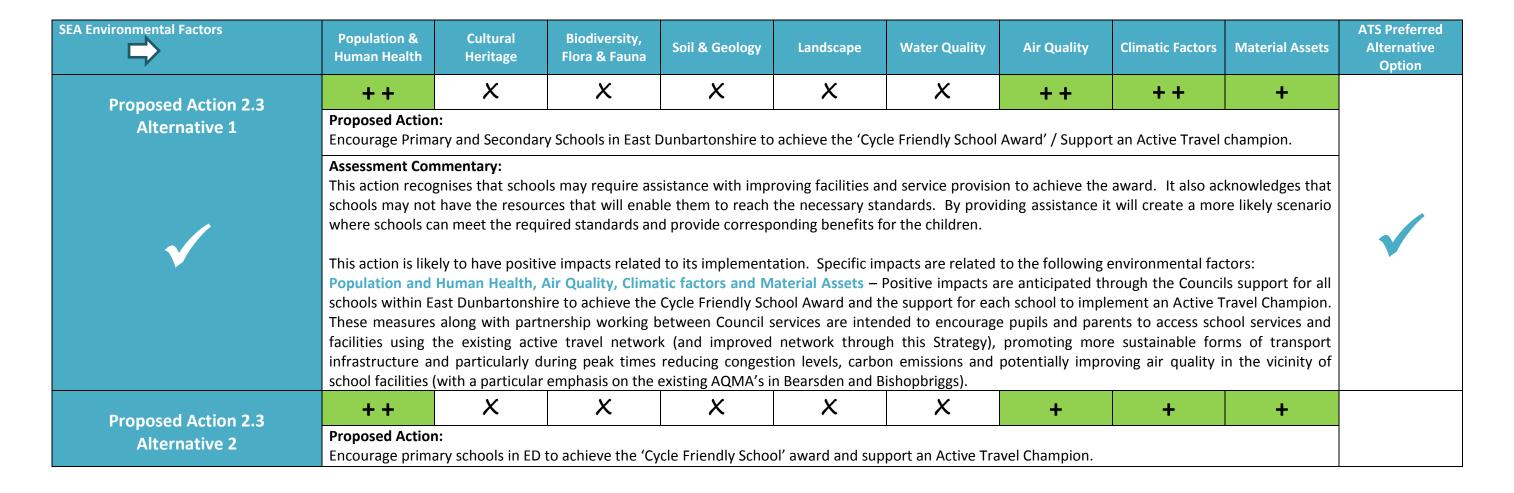


This action will ensure that some cycling training is provided to children through enthusiastic members of the local community. This is intended to increase confidence in use of the active travel network to access the school estate, develop basic technical skills to increase the likelihood of physical activity and active travel participation levels increasing. Through this action training is unlikely of a uniform standard and delivered by professionals.

This action is likely to have positive impacts related to its implementation. Specific impacts are related to the following environmental factors:

Population and Human Health, Air Quality, Climatic factors and Material Assets – Positive impacts are anticipated through the continued delivery of cycle training. As well as encouraging pupils and parents to access school services and facilities using the existing active travel network (and improved network through this Strategy). This action directly promotes more sustainable forms of transport and particularly during peak times could contribute to a reduction in congestion levels, carbon emissions and potentially improving air quality in the vicinity of school facilities (with a particular emphasis on the existing AQMA's in Bearsden and Bishopbriggs). Through this action, continued training and expansion of the programme is likely to increase the number of active travel journeys by school stakeholders and foster long term positive behavioural change.

Through this action there is a possibility that the lack of coordinated training and professional guidance may lead to poor cycling skills development and potentially increasing the risk of accidents. Relying on volunteers to run and deliver the training may result in some schools not being able to be facilitated leading to a risk that some schools and pupils not receiving the relevant training and falling behind in terms of skills and safety levels relevant to active travel.



This action recognises that primary schools may require assistance with improving facilities and service provision to achieve the award in the form of secure cycle parking etc. This assistance will also be through the appointment and support of an Active Travel Champion. Without such assistance the likelihood is that primary schools may not have the time or resources to develop the facilities and skills required to achieve the expected standards.

This action is likely to have positive impacts related to its implementation. Specific impacts are related to the following environmental factors:

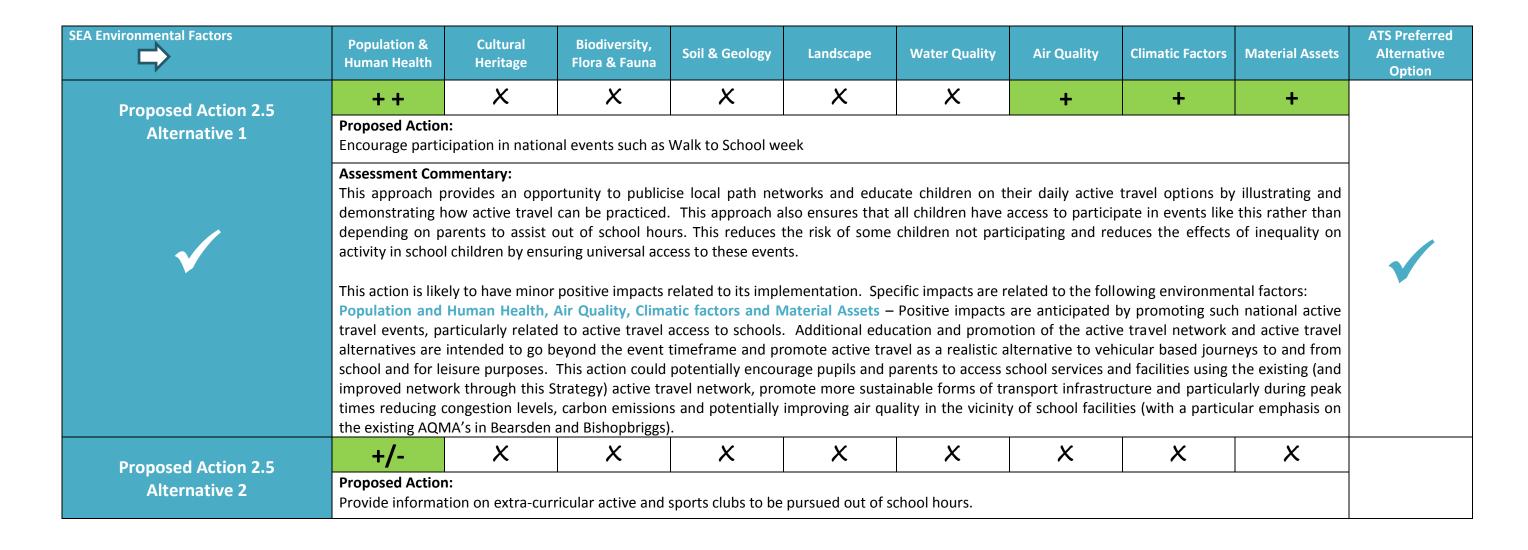
Population and Human Health, Air Quality, Climatic factors and Material Assets — Positive impacts are anticipated through the Councils support for primary schools within East Dunbartonshire to achieve the Cycle Friendly School Award and the support for school to implement an Active Travel Champion. These measures along with partnership working between Council services are intended to encourage pupils and parents to access school services and facilities using the existing active travel network (and improved network through this Strategy), promoting more sustainable forms of transport infrastructure and particularly during peak times reducing congestion levels, carbon emissions and potentially improving air quality in the vicinity of school facilities (with a particular emphasis on the existing AQMA's in Bearsden and Bishopbriggs). The scope of the action will limit the potential positive impacts by overlooking the need to expand the same facilitation into secondary schools which could lead to an increased risk that momentum and the loss of healthy habits gained at an early stage within primary school.

Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option	
Proposed Action 2.4	++	X	X	X	X	X	++	++	+		
Alternative 1	Proposed Action: Educate the Scho		n Active Travel by ir	ncorporating into t	he School Curricu	ulum.					
	Step Guide' into the behaviour change This action is likel Population and Heschool curriculum parents to access sustainable forms quality in the vice	buld increase print the school curricule into daily school ly to have positive tuman Health, Am. Additional edus school services of transport inficinity of all school services of active transport in the school sc	mary and secondary ulum. This will encount of life continued throw impacts related to the life continued throw impacts related to the life continued throw it is and facilities using frastructure and particular of facilities (with a ravel through education.	ourage developme ough to secondary o its implementation factors and Materials the existing active the tricularly during perparticular emphas	ent of healthy had y school. on. Specific impa rial Assets – Posi travel network ar ive travel network ask times reducing sis on the existing	bitats at an early so acts are related to itive impacts are a nd active travel all ork (and improved og congestion levels og AQMA's in Bear	the following en inticipated by inc ternatives are in network throug s, carbon emissic	has the potent nvironmental factor corporating activatended to encount this Strategy ons and potentic pbriggs). In ad	ctors: ive travel into the ourage pupils and v), promote more ially improving air ddition to this, by		
Proposed Action 2.4	++	X	X	X	X	X	+	+	+		
Alternative 2	Proposed Action:  Educate primary school community on active travel by incorporating into the school curriculum using the 'Six Week, Step by Step Guide' from Sustrans.  To help promote the health benefits of cycling.  Assessment Commentary:										
	Assessment Commentary:  This approach would increase primary school children's awareness of active travel through integration of the SUSTRANS Six Week, Step by Step Guide' into the primary school curriculum. This will encourage development of healthy habitats at an early school age which has the potential to engrain this behaviour change into daily school life.										

This action is likely to have positive impacts related to its implementation. Specific impacts are related to the following environmental factors:

Population and Human Health, Air Quality, Climatic factors and Material Assets — Positive impacts are anticipated by incorporating active travel into the primary school curriculum. Additional education and promotion of the active travel network and active travel alternatives are intended to encourage pupils and parents to access school services and facilities using the existing active travel network (and improved network through this Strategy), promote more sustainable forms of transport infrastructure and particularly during peak times reducing congestion levels, carbon emissions and potentially improving air quality in the vicinity of primary school facilities (with a particular emphasis on the existing AQMA's in Bearsden and Bishopbriggs). In addition to this, by raising the awareness of active travel through education it is hoped that active travel participation levels outwith school commutes will be utilised for leisure and recreational purposes.

However, there is a risk that not progressing such further education and promotion of active travel, through the curriculum, into secondary school level that behavioural change may be restricted and healthy habits for pupils may be lost by secondary school age limiting the positive impacts of this action.



This approach will provide children with information on opportunities to get active out of school by joining sports and active clubs. This is likely to be beneficial to children not already participating in sport or physical activities out of school but fails to identify obvious opportunities to integrate active events such as 'Walk to School Week' into the school year and curriculum.

This action is likely to have minor positive and negative impacts related to its implementation. Specific impacts are related to Population and Human Health — Positive impacts are anticipated by promoting extra-curricular clubs enhancing young children's participation levels in active and sports clubs throughout East Dunbartonshire. It is likely that some families will not facilitate their children to participate in activity out of school and thus some children may be adversely affected which could have continued adverse effects on inequality. There would also be no scope for using the event as an opportunity to publicise the local path networks and educate children on their daily active travel options by demonstrating how active travel can be practised.

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 2.6 Alternative 1	available at this	ess to all new buinmentary:  as the intended estage to carry ou	xploration or feasit an appropriate	assessment. In or	der to ensure th	ut for this action t at potential enviro ications as part of	nmental implica	itions are taken in		

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 2.7 Alternative 1	Assessment Con Until such time a available at this	ded personnel to nmentary: as the intended e stage to carry ou	exploration or feas	sibility studies hav	ve been carried o		there is an insuff onmental implica	icient level of deta		

# Alternative Actions for the Active Travel Strategy: Developing Behavioural Change - Workplaces

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 2.8	?/++	X	X	X	X	X	?/+ +	?/++	?/++	
Alternative 1	Travel Co-ordinate  Assessment Come This approach point informs employee  This action is like employers to unce Population and workplace travel active travel net increase the number employers are possible vicinity of workplace travel place.	mployers in East tor / Champion.  mentary:  pints employer in the benefit of the	n the direction of s of active travel for the impacts related asures and accept Air Quality, Clir he appointment coved network the cravel journeys are ions and cannot be and particularly on centre locations ound base on wh	the information for their workforce of to its implement assistance. Spectors and of an Active Travel rough this Strates and induce long to be forced into adduring peak times (with a particula ich private emplo	that allows theme and why it may tation. These implication and the second in the secon	to produce a tra- be beneficial for to be beneficial for to bacts are uncertain acts are related to s - Positive impa- encourage staff to ng links with publi avioural change. that facilitate incition levels, carbon e existing AQMA's East Dunbartonsh	vel plan and prothem.  In at this stage use the following elects are anticiped access/commulic transport into This pragmatic creased active the emissions and in Bearsden and thire can use as	avel Plans or apportunition of agreements are nvironmental factor ated through the ated through the approach identificated, promoting a potentially improved Bishopbriggs). Lea guide to develous a guide to d	g facilities. It also e confirmed with ors: development of using the existing action is likely to fies the fact that more sustainable ving air quality in Using the existing p their own plan	
Proposed Action 2.8	++	X	X	X	X	X	++	++	++	
Proposed Action 2.8 Alternative 2	Proposed Action: Provide dedicated officer to provide training and to assist major employers with developing a Workplace Travel Plan or appointing an Active Travel Coordinator / Champion									



### **Assessment Commentary:**

This approach would provide employers with skills and information in order to allow each employer to deliver a bespoke travel plan and active travel champion to deliver actions specific to the respective employer. This action would if implemented, increase the number of active commuting journeys and facilitate a behavioural change.

This action is likely to have positive impacts related to its implementation. Specific impacts are related to the following environmental factors:

Population and Human Health, Air Quality, Climatic factors and Material Assets — Positive impacts are anticipated through the development of workplace travel plans and / or the appointment of an Active Travel Co-ordinator to encourage staff to access/commute to workplaces using the existing active travel network (and improved network through this Strategy) and promoting links with public transport interchanges. This action is likely to increase the number of active travel journeys and induce long term positive behavioural change. This approach identifies the fact that employers are private organisations and cannot be forced into adopting measures that facilitate increased active travel. However the appointment of a dedicated officer and the addition of training provision and assistance in producing workplace travel plans will ensure that the active travel agenda is driven and additional support and assistance will be available for East Dunbartonshire's employers promoting more sustainable forms of transport infrastructure and particularly during peak times reducing congestion levels, carbon emissions and potentially improving air quality in the vicinity of workplaces in town centre locations (with a particular emphasis on the existing AQMA's in Bearsden and Bishopbriggs). Using the existing Council travel plan provides a sound base on which private employers throughout East Dunbartonshire can use as a guide to develop their own bespoke plan without allocating considerable resources which is likely to encourage employers to implement the process themselves in order to reap the benefits of active travel.

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 2.0	?/++	X	X	X	X	X	?/++	?/++	?/++	
Proposed Action 2.9 Alternative 1	Proposed Action: Promote Cycle Fr	iendly Employe	r Status for EDC e	mployers		1	-			
	likely that some of publicity.  This action is like	to actively proemployers will of	engage with this p ive impacts relate	rocess in order to	gain accreditation	tatus but does no on as a cycle friend pacts are uncertain acts are related to	lly employer as it n at this stage ur	t has obvious beno ntil agreements ar	efits for staff and	
	Population and I cycling within ED existing active trawith the process	Human Health, OC private organ avel network (a s to gain accre	Air Quality, Climanisations as an alternal improved network ditation there is	etic factors and Mernative to encour ork through this Spotential for an	rage employees trategy) and pro increase in activ	Positive impacts a to access/commu moting links with per travel journeys on emissions and	re anticipated the to workplaces oublic transport in promoting mo	nrough the increases throughout the sinterchanges. If e re sustainable for	sed promotion of district using the mployers engage rms of transport	
	workplaces in to	wn centre loca organisations o	tions (with a part could also has the	icular emphasis o	n the existing A	QMA's in Bearsde erms behavioural	n and Bishopbrig	ggs). This action,	if implemented,	
Proposed Action 2.9	++	X	X	X	X	X	++	++	++	
Alternative 2	Proposed Action: Provide dedicate	d officer to pro	mote and develop	Cycle friendly Em	ployer designatio	n and scheme.				



#### **Assessment Commentary:**

This approach will ensure that employers have focussed support enabling them to achieve Cycle Friendly Employer status and that the status is well developed and has criteria which can be monitored. A dedicated officer would be able to assist employers to implement the changes necessary to achieve the status.

This action is likely to have positive impacts related to its implementation. Specific impacts are related to the following environmental factors:

Population and Human Health, Air Quality, Climatic factors and Material Assets – Positive impacts are anticipated through the provision of a dedicated officer to focus on promoting and developing cycle friendly schemes, awards and accreditation into EDC organisations to encourage staff to access/commute to workplaces using the existing active travel network (and improved network through this Strategy) and promoting links with public transport interchanges. This action is likely to increase the number of active travel journeys and induce long term positive behavioural change. This approach identifies the fact that employers are private organisations and cannot be forced into adopting measures that facilitate increased active travel. However the appointment of a dedicated officer and the addition of training provision and support will ensure that the active travel agenda is driven and additional support and assistance will be available for East Dunbartonshire's employers promoting more sustainable forms of transport infrastructure and particularly during peak times reducing congestion levels, carbon emissions and potentially improving air quality in the vicinity of workplaces in town centre locations (with a particular emphasis on the existing AQMA's in Bearsden and Bishopbriggs). The inclusion of the action would encourage employers to implement the required measures to gain accreditation in the knowledge that the Council will support and help develop the procedures necessary without allocating considerable resources.

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Dranged Action 2.10	?/++	X	X	X	X	X	?/++	?/++	?/+	
Proposed Action 2.10 Alternative 1	Proposed Action: Assist employers	to support/des	ignate an Active T	ravel Ambassador	or a Workplace (	Cycling Instructor	-		1 - 2	
	Workplace cycle journeys. Providing due to the fact to assistance and guardinary This action is like	ints employers instructor who ng this assistanthat most empluidance may be	would be able to be is likely to inductory oyers are private provided to those ive impacts relate	then deliver training te long term positions and employers that a do to its implement	ing to colleagues ive behavioural colling to cannot be force re willing to engatation. These imparts in the colling to the se imparts in the setting to the setting the setting to the setting the	e training and design which should have hange. This approated into adopting noting and induce behaves are uncertainacts are related to	e a beneficial effects identifies that he measures that fall avioural change on at this stage ur	fect on the number of a pragmatic apposition of cilitate increased within their organ	oroach is required active travel but nisation.  e confirmed with	
	Population and A cycling and active district using the employers engag transport infrast vicinity of works	Human Health, e travel within existing active ge with the procuructure and paparaces in town roughout EDC of	Air Quality, Clima EDC private organ travel network (and cess to gain accred rticularly during pa centre locations organisations could	ntic factors and Manisations as an alternal improved network litation there is possible times reducing the particular	laterial Assets – ernative to enco ork through this otential for an inc ng congestion le emphasis on th	Positive impacts a urage employees Strategy) and procrease in active travels, carbon emisted to long terms	re anticipated the to access/commoting links with avel journeys prosions and poter is in Bearsden and the control of the contr	nrough the increase nute to workplaces h public transport omoting more sust ntially improving a and Bishopbriggs)	sed promotion of s throughout the interchanges. If tainable forms of air quality in the i. This action, if	
	++	X	X	X	X	X	++	++	+	

## Proposed Action 2.10 Alternative 2

### **Proposed Action:**

Provide dedicated officer to work as Active Travel ambassador or a workplace Cycling Instructor.

### **Assessment Commentary:**

This approach would provide employers with a dedicated member of staff who would be able to visit worksplaces deliver cycle skills instruction and information. This action would likely if implemented, increase the number of active commuting journeys through delivery of training and could increase confidence and facilitate a behavioural change.

This action is likely to have positive impacts related to its implementation. Specific impacts are related to the following environmental factors:

Population and Human Health, Air Quality, Climatic factors and Material Assets – Positive impacts are anticipated through the provision of a dedicated officer to focus on promoting, developing and providing professional Cycle training into EDC organisations to encourage staff to access/commute to workplaces using the existing active travel network (and improved network through this Strategy) and promoting links with public transport interchanges. This action is likely to increase the number of active travel journeys and induce long term positive behavioural change. This approach identifies the fact that employers are private organisations and cannot be forced into adopting measures that facilitate increased active travel. However the appointment of a dedicated officer and the addition of training provision and support will ensure that the active travel agenda is driven forward and additional support and assistance will be available for East Dunbartonshire's employers promoting more sustainable forms of transport infrastructure and particularly during peak times reducing congestion levels, carbon emissions and potentially improving air quality in the vicinity of workplaces in town centre locations (with a particular emphasis on the existing AQMA's in Bearsden and Bishopbriggs).

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Droposed Action 2 11	?/++	X	X	X	X	X	?/++	?/++	?/+	
Proposed Action 2.11 Alternative 1	Proposed Action: Promote adult ar	nd commuter cy	cle training to bus	sinesses	I		-			
	employers delive likely to induce lo effects are uncer.  This action is like and use the infenvironmental fare population and locycling and active district using the employers imple infrastructure and workplaces in to	ints employers ring training to ong term positivation at this staged by to have positivation proving tarent the alth, existing active ment the sugged particularly own centre local organisations of the suggestion of the suggestio	employees which we behavioural chare.  tive impacts related ided to install be a compact.  Air Quality, Climate organization travel network (and ested training their during peak times tions (with a part could also have the could be also have the could be a could be also have the could be also have the could be a could be also have the could be a could be also have the could be a could be	should have a berange if take up was ed to its impleme chaviour change entic factors and Maisations as an alternal improved network is potential for a reducing congesticular emphasis of	neficial effect on shigh. However that ion. These in into their organisaterial Assets — ernative to encorork through this an increase in a tion levels, carbon the existing A	the number of act the number of act this approach pla mpacts are uncert hisations. Specific Positive impacts a burage employees Strategy) and pro ctive travel journe on emissions and QMA's in Bearsde terms behavioura	tive travel journed ces the initiative ain at this stage potential import anticipated the access/commoting links with ys promoting mand Bishopbrices	eys. Providing this with employers a until employers that acts are related through the increase the public transport ore sustainable for roving air quality aggs). This action,	assistance is also nd therefore the ake the initiative to the following sed promotion of a throughout the interchanges. If the interchanges in the vicinity of if implemented,	
	++	X	X	X	X	X	++	++	++	

# Proposed Action 2.11 Alternative 2



#### **Proposed Action:**

Provide adult cycle training to businesses directly.

#### **Assessment Commentary:**

This approach would directly deliver cycle training to businesses and would increase skills and confidence of employees. This is likely to increase the number of active journeys to work by bicycle and foster long term behavioural change within organisations throughout EDC.

This action is likely to have positive impacts related to its implementation. Specific impacts are related to the following environmental factors:

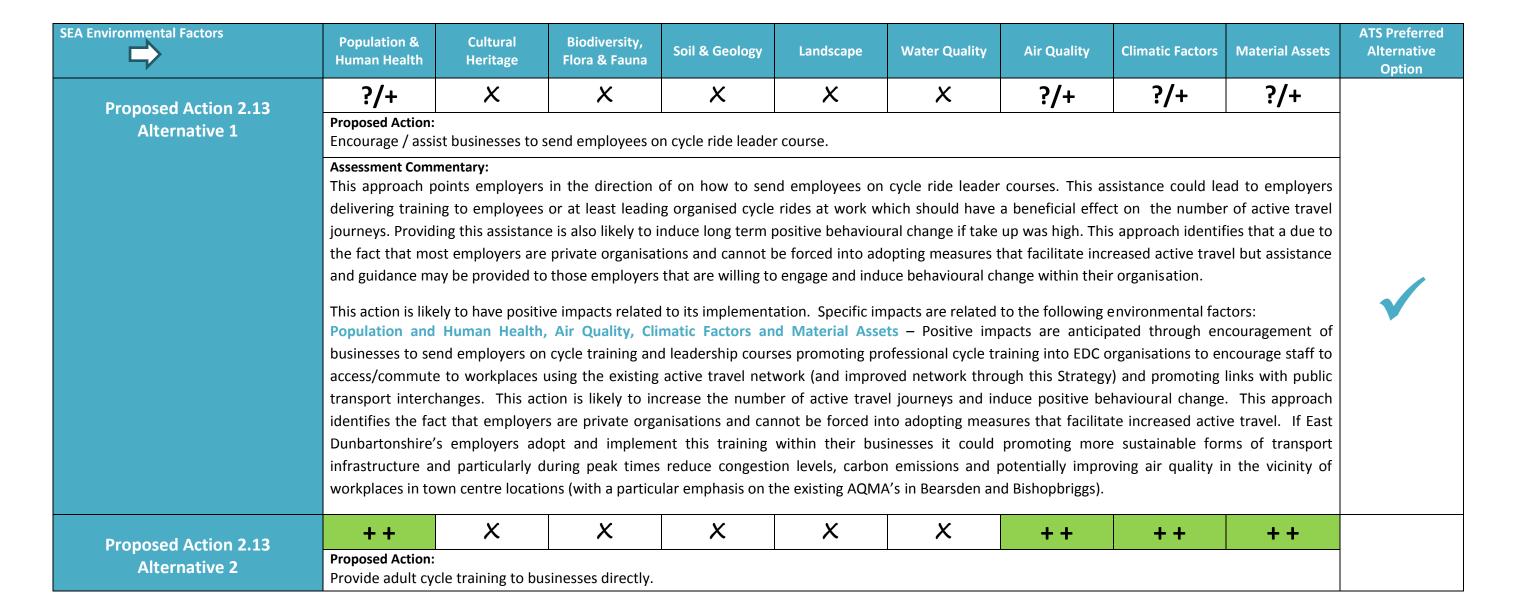
Population and Human Health, Air Quality, Climatic factors and Material Assets — Positive impacts are anticipated through the direct delivery of cycle training to EDC organisations with a focus on promoting, developing and providing professional Cycle training into EDC organisations to encourage staff to access/commute to workplaces using the existing active travel network (and improved network through this Strategy) and promoting links with public transport interchanges. This action is likely to increase the number of active travel journeys and induce long term positive behavioural change. This approach identifies the fact that employers are private organisations and cannot be forced into adopting measures that facilitate increased active travel. However the direct delivery of a specific training provision and support will ensure that the active travel agenda is driven forward and additional support and assistance will be available for East Dunbartonshire's employers promoting more sustainable forms of transport infrastructure and particularly during peak times reducing congestion levels, carbon emissions and potentially improving air quality in the vicinity of workplaces in town centre locations (with a particular emphasis on the existing AQMA's in Bearsden and Bishopbriggs).

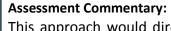
SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 2 12	++	X	X	X	X	X	+	+	+	
Proposed Action 2.12 Alternative 1	Proposed Action: Promote dedicate Assessment Come This approach per how active trave parents to assist children by ensure the children by ensure the challenges more sustainable long term behalinfrastructure it	red workplace active travel for work travel for work travel could lead to reduced to reduced to the reduced to	tive challenges to tunity to publicise ed. This approach ours. This reduces cess to these ever we impacts related Air Quality, Climbel network and population, leisure or recreathrough promotion eductions particular	local employers.  e local active travers also ensures that is the risk of some onts.  d to its implement atic Factors and provide education tion purposes. The on of the active larly during peak	el networks and it all children has children not paration. Specific in Material Assets on active travel his action is likely travel network. times in terms	educate people or ve access to particular tricipating and recompacts are related — Positive impacts alternatives as recompacts the number of congestion leves the aparticular emitted to increase the number of congestion leves the aparticular emitted to increase the number of congestion leves the aparticular emitted to the congestion leves the aparticular emitted to the congestion leves the aparticular emitted to the congestion leves the congestion	their daily activity ipate in events luces the effects to the following are anticipated alistic choices thumber of active to motion of motion of motion of motion of motion and resultant	ve travel options be like this rather that s of inequality on environmental fact through the pro- iroughout East Du travel journeys and re sustainable for carbon emissions	oy demonstrating an depending on activity in school ctors: motion of active inbartonshire for d induce positive cms of transport is and potentially	
Proposed Action 2.12	+	X	X	X	X	X	+	+	+	
Alternative 2	Proposed Action: Provide information		note local active tr	ravel and sports cl	ubs events to lo	cal employers.				

#### **Assessment Commentary:**

This approach will provide employers and employees with information on opportunities to get active out of work by joining sports and active clubs. This is likely to be beneficial to people not already participating in sport or physical activities out of work but fails to identify obvious opportunities to integrate active events such as 'Cycling Scotland Annual Cycling Challenge' into the work environment. It is likely that some people will not participate in activity out of work and thus could have continued adverse effects on inequality. There would also be no scope for using the event as an opportunity to publicise the local path networks and educate people on their daily active travel options by demonstrating how active travel can be practised.

This action is likely to have positive impacts related to its implementation. Specific impacts are related to the following environmental factors: **Population and Human Health, Air Quality, Climatic Factors and Material Assets** – Positive impacts are anticipated through the promotion of sports clubs and facilities within workplaces for employers and employees. This action is likely to increase the level of active travel participation, active travel journeys and induce positive behavioural change. Through the promotion of more sustainable choices and transport options through this option it could lead to reductions particularly during peak times in terms of congestion levels and resultant carbon emissions and potentially improving air quality in the vicinity of workplaces in town centre locations (with a particular emphasis on the existing AQMA's in Bearsden and Bishopbriggs).





This approach would directly deliver cycle training to businesses and would increase skills and confidence of employees. This is likely to increase the number of active journeys to work by bicycle and foster long term behavioural change.

This action is likely to have positive impacts related to its implementation. Specific impacts are related to the following environmental factors:

Population and Human Health, Air Quality, Climatic factors and Material Assets — Positive impacts are anticipated through the direct delivery of cycle training to EDC organisations with a focus on promoting, developing and providing professional Cycle training into EDC organisations to encourage staff to access/commute to workplaces using the existing active travel network (and improved network through this Strategy) and promoting links with public transport interchanges. This action is likely to increase the number of active travel journeys and induce long term positive behavioural change. This approach identifies the fact that employers are private organisations and cannot be forced into adopting measures that facilitate increased active travel. However the direct delivery of a specific training provision and support will ensure that the active travel agenda is driven forward and additional support and assistance will be available for East Dunbartonshire's employers promoting more sustainable forms of transport infrastructure and particularly during peak times reducing congestion levels, carbon emissions and potentially improving air quality in the vicinity of workplaces in town centre locations (with a particular emphasis on the existing AQMA's in Bearsden and Bishopbriggs).

## Alternative Actions for the Active Travel Strategy: Developing Behavioural Change – Marketing, Promotions and Awareness

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 2.14	+	X	X	X	X	X	+	+	+	
Alternative 1	Proposed Action: Create and prom		active Travel section	on on EDC website		,				
	people would id to assist individu and facilities wh change. As there necessity for add	entify with East uals, employers a nich would likely e is already a we dition publicity t	Dunbartonshire Co and schools with o increase active t ell maintained and o advertise a new	ouncil. It would be relevant informati ravel participation d well used/public website, it is likel	e possible to list on on active trans on on active trans on in East Dunbar ised EDC websit by that a section	ve travel and could links to other helpfore. The website set on the website set on the existing site significant user numbers.	ul websites and ection could produced have a positively incorporate as would serve the	organisations which vide information of ve effect on long to an active travel sections are same purpose in	ch would be able on events, routes term behavioural ction without the ncluding ensuring	
	Quality, Climatic directly related t Increased pa The potentia reduce conge	c Factors and Mato: orticipation levels of contribution to estion levels and on of change to	s of the active travewards modal shift	rel network with re away from car ba eduction in carbon	esultant physical sed travel, with emissions levels	following environm areness raising of tactivity, health and the potential to ims.	he active traveld community we prove air quality	network the likely ellbeing benefits. y levels within East	y impacts will be Dunbartonshire,	
	+ X X X X + + +									

# Proposed Action 2.14 Alternative 2

#### **Proposed Action:**

Create and promote a dedicated Active Travel website for EDC.

### **Assessment Commentary:**

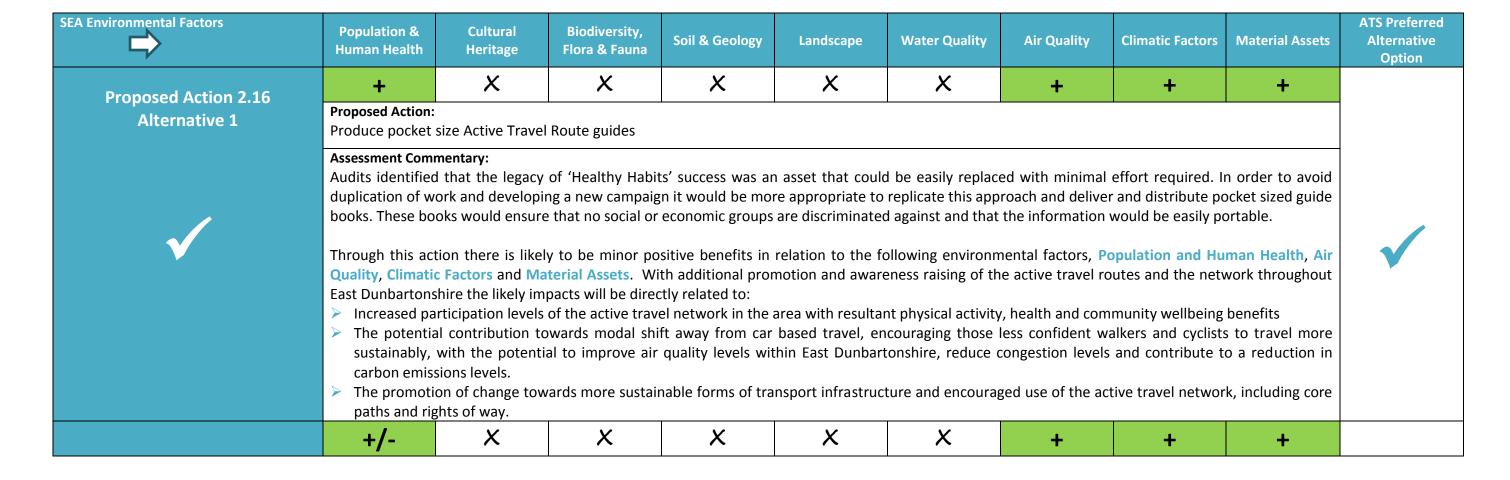
This approach is likely to act as a catch all 'one stop shop' for all things related to active travel and could be identified with an active travel brand or slogan which people would identify East Dunbartonshire with. A single point of reference for active travel information would provide a single source of information for those interested in learning more about active travel in East Dunbartonshire. It would be possible to list links to other helpful websites and organisations which would be able to assist individuals, employers and schools with relevant information on active travel. The website could provide information on events, routes and facilities which would likely increase active travel participation East Dunbartonshire and could have a positive effect on behavioural change.

Through this action there is likely to be minor positive benefits in relation to the following environmental factors, Population and Human Health, Air Quality, Climatic Factors and Material Assets. With additional promotion and awareness raising of the active travel network the likely impacts will be directly related to:

- Increased participation levels of the active travel network with resultant physical activity, health and community wellbeing benefits.
- The potential contribution towards modal shift away from car based travel, with the potential to improve air quality levels within East Dunbartonshire, reduce congestion levels and contribute to a reduction in carbon emissions levels.
- > The promotion of change towards more sustainable forms of transport infrastructure and encouraged use of the active travel network, including core paths and rights of way.

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
Proposed Action 2.15	++	X	X	X	X	X	++	++	++	
Alternative 1	Proposed Action: Continue 'Health		mme across East I	Dunbartonshire.						
	Commonwealth inspire some incomposed groups could hawhich to build it active lifestyles.  Healthy Habits is	recent Healthy Games in order dividuals to take eve a positive eff therefore seems with good health	to foster active lift up active travel affect on behaviour good practice to .  ed, successful bra	estyles with a con and lead a more a and lead to an indevelop the existing and and programn	ntemporary them active lifestyle. An active in active ing brand of Healthe. By developin	e. The campaign he successful campa journeys. There at thy Habits incorposed and rolling out t	nad some succes ign that engages are already exist orating recent tre	lopments and events previously and if sometimes with various societing branding, logoends and events in across East Dunbar	continued could al and economic is and a base on order to identify	
	<ul> <li>Population a         the promoti         wellbeing be         includes hea</li> <li>Air Quality a         levels within         encouragem</li> </ul>	and Human Heal on and encoura enefits are also a lthy eating and e and Climatic Fact a East Dunbarton ent of the use re	gement to use anticipated through xercise elements. ors - The potentianshire, reduce coralistic active trave	erticipation in phy ctive travel alter in this rolling out of all contribution town ingestion levels are	sical activity leven natives to access f the Healthy Hab wards modal shift and contribute to	Is resulting from is local amenities oits campaign as a away from car ba a reduction in ca	and services. ctive travel is on sed travel, with rbon emissions	the active travel of the last through the last through the last through the last last last last last last last last	and community orand which also prove air quality e promotion and	

	network, inc	luding core paths	and rights of way	to access local a	menities and ser	vices.					
Proposed Action 2.15	++	X	X	X	X	X	++	++	++		
Alternative 2	Proposed Action:  Create a campaign for active travel with a new brand name aimed at increasing active travel in East Dunbartonshire.										
	contemporary the engages with value acknowledged the By developing a following enviro  Population at the promotion facilities/opp  Air Quality alevels within encouragem  Material Ass	n could provide and neme. A new came arious social and that the recent He and rolling out a numental factors: and Human Healt on and encourage portunities.  In East Dunbarton ent of the use reast provided in the course of the use reast provided in the course of the use reast provided in the course of the course of the use reast provided in the course of the course	paign could inspireconomic groups althy habits camp new active travels the Increased pagement to use a shire, reduce coralistic active travels tion of change to	re some individuals could have a popular was relatived brand across Earticipation in physicitive travel alternation towns active travels are alternatives.	als to take up actorsitive effect on all successful and ast Dunbartonshi visical activity lever rnatives to accessful and contribute to stainable forms	tive travel and lead behaviour and lead lead lead lead lead lead lead lea	ealth Games in ordered a more active life and to an increase may represent unit to be significant particles, services, employees, services, with the carbon emissions leastructure and encodered	estyle. A succession active journed necessary duplicates on the active traveloyment, leisure the potential to indevels through the evels through the evels through the potential to indevels through the potential to indevel the potential to indevelopment.	ful campaign that eys. However it is ation.  in relation to the network through and recreational approve air quality e promotion and		



## Proposed Action 2.16 Alternative 2

#### **Proposed Action:**

Produce interactive mapping web tool as an Active Travel route guide for all towns.

#### **Assessment Commentary:**

This approach would provide a cost effective method of providing active travel information over the web. Information on active travel routes and events could be provided quickly and cheaply and changes implemented almost in real time as users interact using the tool. There is also scope for better defect reporting on active travel routes allowing for improved response time in dealing with defects on routes. There is a risk that some groups who are less confident using technology could feel disenfranchised and disengage from active travel in the area. Some groups who have no access to the internet could even feel discriminated against and a lack of provision for these groups could be perceived negatively by various groups and the press media.

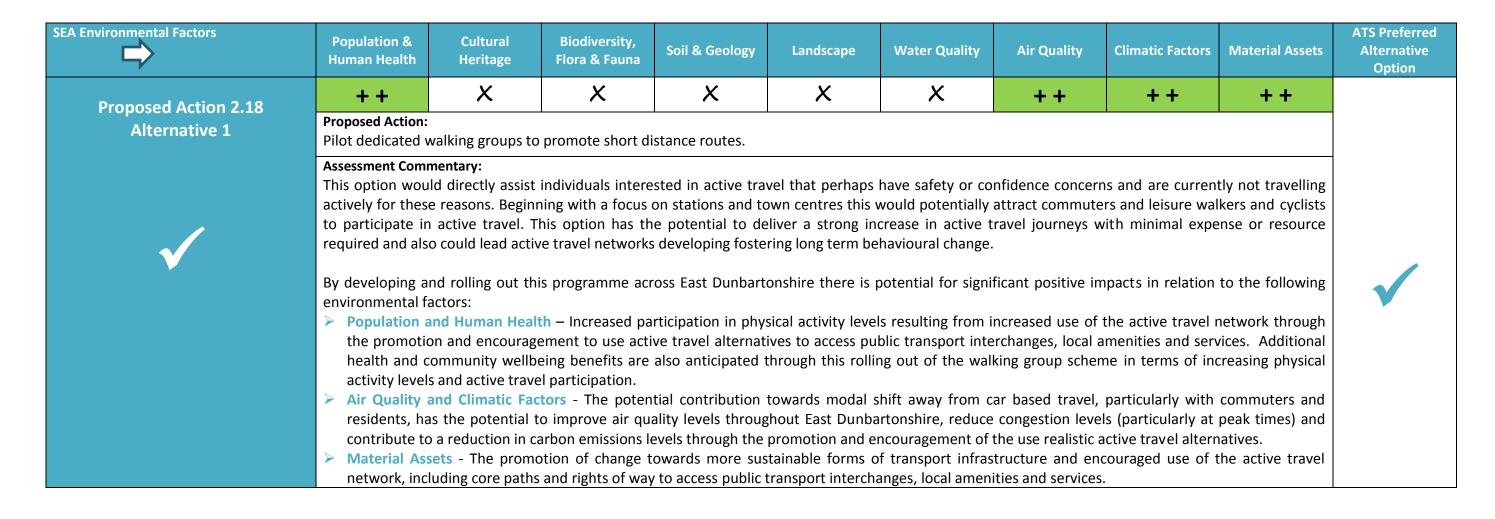
Through this action there is likely to be minor positive benefits in relation to the following environmental factors, **Population and Human Health**, **Air Quality**, **Climatic Factors** and **Material Assets**. With additional promotion and awareness raising of the active travel routes and the network throughout East Dunbartonshire the likely impacts will be directly related to:

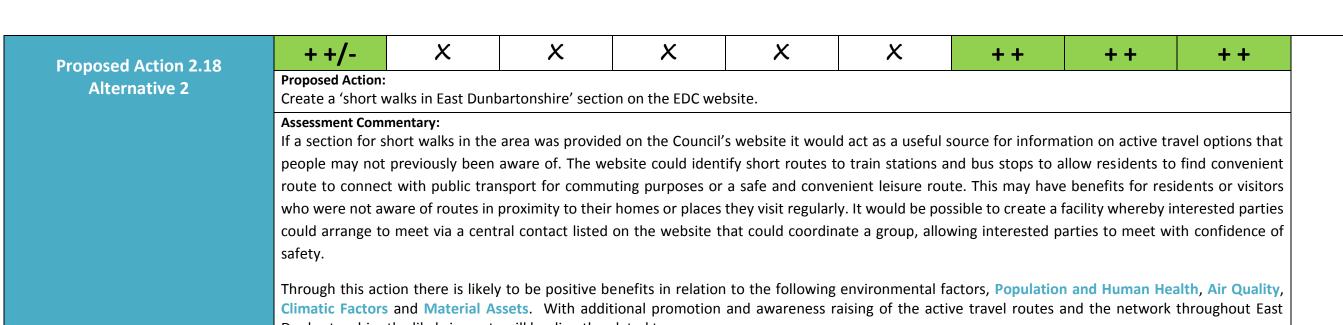
- Increased participation levels of the active travel network in the area with resultant physical activity, health and community wellbeing benefits
- The potential contribution towards modal shift away from car based travel, encouraging those less confident walkers and cyclists to travel more sustainably, with the potential to improve air quality levels within East Dunbartonshire, reduce congestion levels and contribute to a reduction in carbon emissions levels.
- The promotion of change towards more sustainable forms of transport infrastructure and encouraged use of the active travel network, including core paths and rights of way.

There is potential for an adverse impact on **Population and Human Health** from an equalities perspective which could also potentially limit the positive impacts on **Air Quality, Climatic factors and Material Assets**. There is a risk through this action that some groups who are less confident using technology could feel disenfranchised and disengage from active travel in the area. Some groups who have no access to the internet could even feel discriminated against and a lack of provision for these groups could be perceived negatively by various groups and the press media.

EA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferro Alternative Option
Proposed Action 2.17	++	X	X	X	X	X	+	+	+	
Alternative 1	Proposed Action: Develop an annu		of Active Travel Ev	vents' calendar.	I					
	provision. Event stimulate intere- and establishme travel actively. I	es such as bike be st in active trave ent of an active of Developing a ca	breakfasts and DR el for commuting a community which of llendar of events i	bike session whe and leisure purpo could create a sup is likely to attract	ere free mainten ses. There is sco portive network people who do	nance is provided in the properties of walkers and cyling not usually walk	is likely to attrag momentum and clists that could or cycle to do s	n the private or voluct extra active transfer med campaigns for meet and encoura so for either charit stone for inducing	vel journeys and nore active travel age each other to ty or fun events,	
	Population and travel events thr intended to ext	Human Health, roughout East Do tend beyond th	Air Quality, Clima unbartonshire. Ad ne events themsel	atic Factors and M Iditional promotio Ives and promote	laterial Assets – n and awareness e active travel a	Positive impacts a s raising of the acti is a realistic alter	are anticipated b ive travel netwo native to vehicu	g environmental fac by developing and pork and active trave cular based journer astructure there is	promoting active alternatives are ys for residents,	

	action to reduce car based journeys throughout East Dunbartonshire, improving air quality level and reduce resultant carbon emissions.										
Proposed Action 2.17	+	X	X	X	X	X	+	+	+		
Alternative 2	Proposed Action:  EDC promote AT events as they arise via Council newsletter, Facebook, Twitter and Council website.										
	100 subscribers groups and cycli  This action is like Population and updates on ever and active trave journeys for res	to the LDP newsl ng/walking organ ely to have minor Human Health, nts, potentially led I alternatives are idents, commute	etter and it is like isations.  positive impacts  Air Quality, Clir ading to an incre intended to exters and visitors to	related to its imp natic Factors and ase in active travend beyond the everyone transfer one	of events would be lementation. Spend Material Assets and its least themselves as shire. Through the	cific impacts are in a Positive impactional promotion and promotion of	s with relevant eventher interested parther interested parterested to the followants are anticipated and awareness rave travel as a realismore sustainable roving air quality less than the sustainable r	arties including wing environmed through the ising of the actistic alternative to forms of transp	ental factors: Council providing ve travel network to vehicular based port infrastructure		
	• •	<u> </u>			ganisation of taild on to have a long l		st Dunbartonshire ravel behaviour.	. There is a risk	that without the		





Dunbartonshire the likely impacts will be directly related to:

Increased participation levels of the active travel network in the area with resultant physical activity, health and community wellbeing benefits

The potential contribution towards modal shift away from car based travel, encouraging those less confident walkers and cyclists to travel more sustainably, with the potential to improve air quality levels within East Dunbartonshire, reduce congestion levels and contribute to a reduction in carbon emissions levels.

The promotion of change towards more sustainable forms of transport infrastructure and encouraged use of the active travel network, including core paths and rights of way.

There is potential for an adverse impact on Population and Human Health from an equalities perspective which could also potentially limit the positive impacts on Air Quality, Climatic factors and Material Assets. There is a risk through this action that some groups who are less confident using technology could feel disenfranchised and disengage from active travel in the area. Some groups who have no access to the internet could even feel discriminated against and a lack of provision for these groups could be perceived negatively by various groups and the press media.

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	A7
Proposed Action 2.19	++	+/-	+/-	?/-	+	./-	++	++	++	
Alternative 1	Proposed Action Encourage school		nd community gro	ups to 'befriend';	sections of local	Active Travel Rout	es.			
	burdens on scho children with act partnership with	online facility to ool staff. If assistation tive organisation on other organisation ents has been d	ance is provided be as and foster long t tions to develop a	oy other stakeholo term behavioural greater communit	ler organisations change. If assista y interaction an	rdinate this activith it is possible this of the needs of empower other local authors.	could stimulate the maintenance, verment. Particip	higher membershi there is scope for pation in commun	p rates of school school groups in hity clean up and	
	Population a	nd Human Heal	th, Material Asset	ts, Landscape, Air	<b>Quality and Clin</b>	ularly related to the natic factors – This o maintain and en	concept is inter	nded to give local o	communities and	

enhancement could be in the form improvement to surfacing of routes, lighting and fencing which positively impact on the safety of active travel route users. This action could provide a safe and secure active travel network for residents, commuters and visitors and enable users to connect and access the wider countryside, open spaces, amenities and services while contributing to a modal shift away from vehicular based travel and promoting the role and use of active travel alternatives.

There are likely to be both positive and negative potential effects in relation to:

- Cultural Heritage and Biodiversity, Flora & Fauna Through this action positive impacts are likely through increased and improved provision of active travel access to East Dunbartonshire natural and historic environmental assets. There is also potential for adverse impacts through active travel infrastructure improvements in the vicinity of sensitive and vulnerable protected / designated sites of importance in terms of direct impacts on the sites or their setting.
- > Soil & Geology and Water Quality The impacts of this action on soil and water quality are uncertain at this stage, however, there is potential for adverse impacts particularly in relation to maintenance and resurfacing of the network which could have multiple impacts, including:
  - Erosion or damage to soil, land contamination, soil compaction from heavy machinery
  - Temporary discharges, run off or drainage issues if necessary works are carried out in close proximity to watercourses.

### **Proposed Mitigation:**

#### **Cultural Heritage**

- Minimise and monitor any ground disturbance and incorporate design measures in order for required infrastructure improvements and maintenance to be carried out in a sensitive and sustainable manner to avoid or minimise any impacts on the historic environmental assets or their setting.

#### **Biodiversity, Flora & Fauna**

- Minimise tree, vegetation or topsoil removal.
- Potential Protected Species Surveys, Licences or mitigation if considered necessary to avoid adverse impacts.

?/-

- Control and treatment of surface runoff.

#### Soil & Geology

- Implement soil erosion prevention measures outlined in good practice guidance
- Minimise topsoil removal.
- Pre-construction surveys and application of good practice.

#### **Water Quality**

Control and treatment of surface runoff.

+/-

Use of construction SUDS and the adoption of best practices to avoid pollution of watercourses.

## Proposed Action 2.19 Alternative 2

## Proposed Action:

Assign sections of active travel routes to school and provide time during school hours for pupils to commence maintenance of routes with assistance from Council officers.

?/-

#### **Assessment Commentary:**

This approach would ensure that pupils are provided with assistance to start their own adoption of local routes and instill a sense of 'pride of place' in their communities. Provision of assistance would ensure school children gain skills and training is provided in a safe and secure environment. Regular maintenance on routes could attract school children and their families to use the routes more often and increase active journeys and induce long term behavioural change. There is a risk however that school may not be able to guarantee the time required to commence such programmes and the time constraint is too great. There is further risk that schools may not be willing to devote adequate staff resource to this and that perception of a safety risk deters participation.

The anticipated effects of this action are likely to be mainly positive in nature, particularly related to the following environmental factors:

Population and Human Health, Material Assets, Landscape, Air Quality and Climatic factors – This concept is intended to give local communities and provide opportunities for school pupils to maintain and enhance active travel routes and provide further education regarding active travel and safety.

This maintenance and enhancement is intended to positively impact on the safety of active travel route users. This action could provide a safe and secure active travel network for residents, commuters and visitors and enable users to connect and access the wider countryside, open spaces, amenities and services while contributing to a modal shift away from vehicular based travel and promoting the role and use of active travel alternatives. The significance of these positive impacts is likely to be reduced without a high number of schools taking part in the scheme and offering this element as part of their curriculum during school hours.

There are likely to be both positive and negative potential effects in relation to:

- ➤ Cultural Heritage and Biodiversity, Flora & Fauna Through this action positive impacts are likely through increased and improved provision of active travel access to East Dunbartonshire natural and historic environmental assets. There is also potential for adverse impacts through active travel infrastructure improvements in the vicinity of sensitive and vulnerable protected / designated sites of importance in terms of direct impacts on the sites or their setting.
- > Soil & Geology and Water Quality The impacts of this action on soil and water quality are uncertain at this stage, however, there is potential for adverse impacts particularly in relation to maintenance and resurfacing of the network which could have multiple impacts, including:
  - Erosion or damage to soil, land contamination, soil compaction from heavy machinery
  - Temporary discharges, run off or drainage issues if necessary works are carried out in close proximity to watercourses.

#### **Proposed Mitigation:**

## **Cultural Heritage**

- Minimise and monitor any ground disturbance and incorporate design measures in order for required infrastructure improvements and maintenance to be carried out in a sensitive and sustainable manner to avoid or minimise any impacts on the historic environmental assets or their setting.

## **Biodiversity, Flora & Fauna**

- Minimise tree, vegetation or topsoil removal.
- Potential Protected Species Surveys, Licences or mitigation if considered necessary to avoid adverse impacts.
- Control and treatment of surface runoff.

#### Soil & Geology

- Implement soil erosion prevention measures outlined in good practice guidance
- Minimise topsoil removal.
- Pre-construction surveys and application of good practice.

#### **Water Quality**

- Control and treatment of surface runoff.
- Use of construction SUDS and the adoption of best practices to avoid pollution of watercourses.