Appendix 4: SEA Transport Planning Objectives Assessments

Environmental Factor (Annex 1 of EC Directive)	SEA Objective					
Population and Human Health	To improve human health and community wellbeing.					
Cultural Heritage	To protect, conserve and, where appropriate, enhance the historic environment.					
Biodiversity, Flora and Fauna	To protect, enhance, create and where necessary restore biodiversity and encourage habitat connectivity.					
Soil and Geology	To maintain or improve soil quality, prevent any further degradation of soils and conserve recognised geodiversity assets.					
Landscape	To protect, enhance and, where appropriate, restore landscape character, local distinctiveness and scenic value.					
Water Quality	To protect and enhance the state of the water environment					
Air Quality	To maintain or improve air quality and reduce emissions of key pollutants.					
Climatic Factors	To contribute towards the reduction of Scottish greenhouse gas outputs in line with Government targets in order to reduce or prevent the overall effects of climate change including those related to flood risk.					
Material Assets	To promote the sustainable use of community assets and natural resources in East Dunbartonshire.					

	ASSESSMENT TABLE KEY					
++	Major Positive	1	SEA Preferred Option			
+	Minor Positive	•	SEA Preferred Option			
0	Neutral		T00 0 (10 ii			
X	No Significant Effect	V	TOR Preferred Option			
-	Minor Negative					
	Major Negative					
?	Uncertain					

Proposed				SEA EN	VIRONMENTAL FA	CTORS				SEA Preferred
Objectives and Alternatives	Population and Human Health	Cultural Heritage	Biodiversity, Flora and Fauna	Soil and Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	Option
posed Objective 1										
Alternative 1.1	++	?/+	?/+	?/0	?/+	?/+	++	+	++	
	Proposed Objective: Increasing modal shift towards more sustainable modes of travel for both travel to work/study and leisure trips.									
√	Assessment Commentary: Through this objective and the intention to increase sustainable modes of travel for both commuting and leisure journeys it will result in the potential for positive effects in relation to Population and Human Health, Air Quality, Climatic Factors and Material Assets. This objective will focus on increasing the proportion of everyday journeys by public transport, walking or cycling and create a realistic, natural option and alternative to private car use throughout East Dunbartonshire. This objective could contribute towards a behavioural change throughout the Council for accessing key attractors, reduce traffic congestion and related harmful carbon emissions levels. The significant positive effects will be mainly focussed around the increased provision and participation in sustainable transport alternatives throughout East Dunbartonshire which will have a significant impact on air quality levels through modal shift away from private car use, physical activity, and health and community wellbeing improvements. The effects on the remaining environmental factors are uncertain at this stage with the potential to provide a positive impact on these factors but this will be dependent on sustainable									
	transport infrastruc	cture improvements o	or transport options to n which in turn could re	deliver this objective	e. Modal shift towa	rds sustainable transp		·		
	Proposed Mitigation	•								
	Cultural Heritage									
			d disturbance and inco or minimise any impa				mprovements and m	aintenance to be carri	ied out in a sensitive	
	- Ensure appropriate and responsible access to heritage assets.									
	Biodiversity, Flora and Fauna - Additional surveys to determine level and type of species/habitats that will be potentially impacted from the intended outcomes such as bat surveys/extended habitat surveys etc.									
		•	• • • • • •					•	-	
			ovements should aim t onsidered and any imp		cological value withii	i the design. The nighe	est priorities for prote	ection such as woodiai	na, riparian nabitats,	
	Soil and Geology	ianas etc. snoaia be e	onsidered and any min	bact prevented.						
		veys of peatland/carb	on rich soils should be	carried out to ensure	e construction activi	ties achieve outcomes	which will not deva	lue protected soil.		
	- Implement	soil erosion prevention	on measures outlined i	n good practice guida	ance where necessar	y.				
	Landscape									
	•	•	al and design standard	s that maintain existi	ng landscape distinc	tiveness and will be co	nsistent with the Lo	cal Development Plan	•	
	Water Quality and		runoff							
	 Control and treatment of surface runoff. Adoption of best practices to prevent/minimise adverse impacts to drainage. 									
			to determine extend or	,		ation of flood risk ma	nagement measures	, if required.		
	- Use of cons	struction SUDS and ad	option of best practice	es to avoid pollution o	of watercourses.					
Alternative 1.2	+	?/+	?/+	?/0	?/+	?/+	+	+	+	
	Proposed Objective	e: Increase modal shif	t towards more sustaiı	nable modes for leisu	re trips by improving	g public transport to a	ttractions.			
	Health, Air Quality These would reduce However this object	cive and the intention	is to increase sustaina I Material Assets. Thi King pressures at attract the potential for realisine the ctive, are likely to be rective.	s objective is likely to ctions like Mugdock C ng the benefits of mo	generate measures country Park, potent	which may reduce prally increasing visitor	rivate vehicle trips a rates with positive ir	round attractions in E	ast Dunbartonshire. rowth.	
	transport infrastruc	cture improvements o	ntal factors are uncer or transport options to n which in turn could r	deliver this objective	e. Modal shift towa	ds sustainable transp		-		

Proposed Mitigation Measures: The same proposed mitigation measures as Alternative 1.1. **Alternative 1.3** ?/+ ?/+ ?/+ ?/0 ?/+ + Proposed Objective: Increase modal shift towards more sustainable modes for travel to work and study by improving public transport. **Assessment Commentary:** This objective is likely to generate measures which may reduce private vehicle trips on the key cross boundary routes in East Dunbartonshire. These would reduce congestion on radial corridors, relieve parking pressures at transport hubs, improve journey times, reduce harmful emissions levels and reduce noise. However, this objective fails to address the potential for realising the benefits of modal shift from leisure journeys by increasing sustainable travel to main attractions. There is potential for minor positive effects in relation to Population and Human Health, Air Quality, Climatic Factors and Material Assets. The effects on the remaining environmental factors are uncertain at this stage with the potential to provide a positive impact on these factors but this will be dependent on sustainable transport infrastructure improvements or transport options to deliver this objective. Modal shift towards sustainable transport modes could potentially contribute to a reduction in road based travel and related run-off pollution which in turn could reduce potential detrimental effects on Water Quality. **Proposed Mitigation Measures:** The same proposed mitigation measures as Alternative 1.1. **Proposed Objective 2 Alternative 2.1** Proposed Objective: Reducing inequality by providing high quality access for all. **Assessment Commentary:** Through this objective and the intention to use and improve sustainable transport modes as an enabler to improve opportunities for all by increasing access to essential services and facilities

that are both affordable and easily realised, there is potential for positive effects specifically in relation to Population and Human Health, Air Quality, Climatic Factors and Material Assets.

This objective will focus on social inclusion and intends to benefit the most deprived areas of East Dunbartonshire while also encouraging active travel, healthy travel habits, outdoor leisure and improve health and wellbeing throughout the local authority area. This objective is anticipated to increase the proportion of everyday journeys by public transport, walking or cycling and create a realistic option and alternative to private car use throughout East Dunbartonshire. This objective could contribute towards a behavioural change throughout the Council for accessing essential services and facilities, reducing traffic congestion and related harmful carbon emissions levels. The significant positive effects will be mainly focussed around the increased provision and participation in sustainable transport alternatives throughout East Dunbartonshire which will have a significant impact on air quality levels through modal shift away from private car use, physical activity, and health and community wellbeing improvements.

The effects on the remaining environmental factors are uncertain at this stage with the potential to provide a positive impact on these factors but this will be dependent on sustainable transport infrastructure improvements or transport options to deliver this objective.

Proposed Mitigation Measures:

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.
- Ensure appropriate and responsible access to heritage assets.

Biodiversity, Flora and Fauna

- Additional surveys to determine level and type of species/habitats that will be potentially impacted from the intended outcomes such as bat surveys/extended habitat surveys etc.
- 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 ensure construction activities achieve outcomes which will not devalue protected soil.
- Implement soil erosion prevention measures outlined in good practice guidance where necessary.

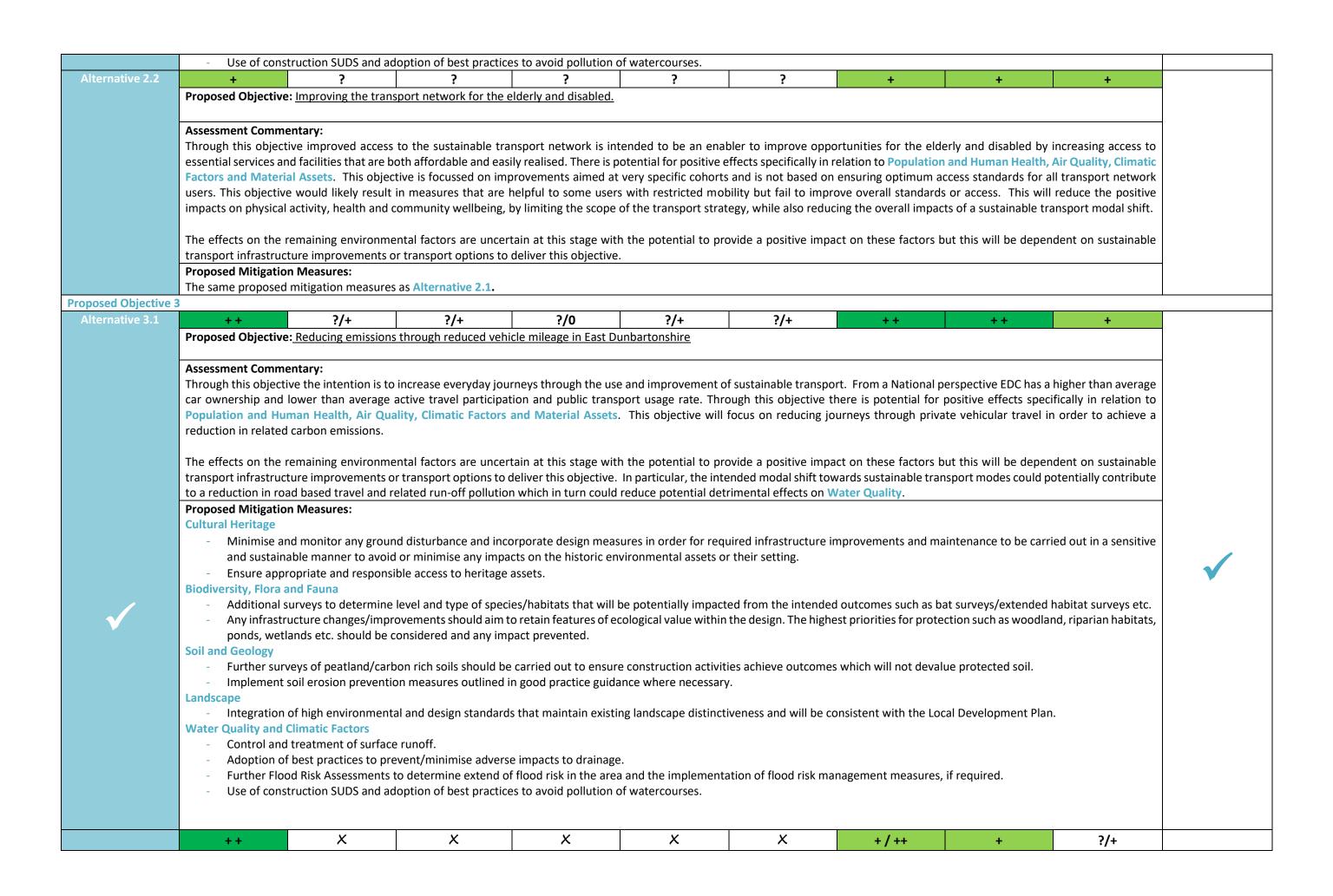
Landscape

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

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.





Alternative 3.2

Proposed Objective: Impose stricter emission standards for vehicles travelling in East Dunbartonshire.

Assessment Commentary:

Through this objective it is likely that older vehicles, which usually have the worst emissions standards, would be removed. Higher emissions standards are likely to be imposed on the Council fleet and taxis. However, enforcement of the private vehicles standards would not be financially feasible or deliverable, given the staff resources/costs required which will limit the significance of the positive impacts through this objective. It may be possible to restrict entry to certain geographical zones to zero emissions vehicles only but it would not be practical to restrict entry to the whole authority area. There is potential for positive effects specifically in relation to Population and Human Health, Air Quality and Climatic Factors. These effects will be mainly through the related health and wellbeing benefits of improved air quality, reductions in harmful emissions through vehicular travel and potential positive impact on the two existing designated Air Quality Management Areas in Bishopbriggs and Bearsden by creating zero emissions zones.

Proposed Mitigation measures:

Proposed Objective 4

Alternative 4.1

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Proposed Objective: Facilitating sustainable economic growth by improving connections across our boundaries and between our communities.

Assessment Commentary:

This objective is intended to encourage improvements to transport connectivity between East Dunbartonshire's communities and with other neighbouring authorities across our boundaries. Through this objective there is potential for positive effects specifically in relation to Population and Human Health, Air Quality, Climatic Factors and Material Assets. Whilst the development of sustainable transport infrastructure has an overall positive effect on many environmental factors the encouraged improvements of the road network could offset the positive effects anticipated through this objective and cause a net neutral or possibly even negative impact on a number of factors, particularly Air Quality and Climatic Factors. This objective will focus on mixed transport interventions to encourage inward investment and economic growth, including the development of vibrant, well-connected town centres and active destinations.

This objective could contribute to improved transport linkages between communities, particularly rural areas, while also encouraging behavioural change throughout the Council for accessing essential services and facilities, reducing traffic congestion and related harmful carbon emissions levels. The significant positive effects will be mainly focussed around the increased provision and participation in sustainable transport alternatives throughout East Dunbartonshire which will have a significant impact on air quality levels through modal shift away from private car use, physical activity, and health and community wellbeing improvements.

The effects on the remaining environmental factors are uncertain at this stage with the potential to provide a positive and negative impact on these factors but this will be dependent on sustainable transport or road based infrastructure improvements and selected transport options to deliver this objective.

Proposed Mitigation measures:

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.
- Ensure appropriate and responsible access to heritage assets.

Biodiversity, Flora and Fauna

- Additional surveys to determine level and type of species/habitats that will be potentially impacted from the intended outcomes such as bat surveys/extended habitat surveys etc.
- 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 ensure construction activities achieve outcomes which will not devalue protected soil.
- Implement soil erosion prevention measures outlined in good practice guidance where necessary.

Landscape

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

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.

Air Quality and Climatic Factors

- Ensure road improvements are designed with due regard to areas of poor air quality e.g. AQMAs.

	Should changes in read alignment he proposed it is important to ensure where practicable that the distance between read traffic and consitive recentors is not significantly reduced.	4						
	- Should changes in road alignment be proposed, it is important to ensure, where practicable, that the distance between road traffic and sensitive receptors is not significantly reduced Where the opportunity presents itself, the distance between road traffic and sensitive receptors with poor air quality should be increased in order to improve local air quality							
	these receptors.							
Alternative 4.2	- ?/- ?/- ?/- ?// ?/-							
	Proposed Objective: Stimulate economic growth by increasing road capacity to reduce congestion.							
	Assessment Commentary:							
	An increase in the road capacity would reduce congestion in the short term and reduce commuting journey times but is likely to exacerbate the long term problem by signalling to commuters							
	and travelling public that the council is primarily seeking to accommodate car drivers rather than sustainable modes of transport. While increasing capacity may relieve some congestion it							
	is likely to increase overall emissions levels and have negative impacts on Population and Human Health, Air Quality and Climatic Factors. Increasing road capacity will be contrary to							
	Councils intention of increasing modal shift, contribute to an increase in carbon emissions and poor air quality and create an overall less attractive and pleasant environment to live, work							
	and visit.							
	The effects on the remaining environmental factors are uncertain at this stage with the potential to provide negative impact on these factors but this will be dependent on the road bas							
	infrastructure improvements and selected transport options to deliver this objective.	eu						
	Proposed Mitigation Measures:	_						
	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 sensiti	/e						
	and sustainable manner to avoid or minimise any impacts on the historic environmental assets or their setting.							
	- Ensure appropriate and responsible access to heritage assets.							
	Biodiversity, Flora and Fauna							
	- Additional surveys to determine level and type of species/habitats that will be potentially impacted from the intended outcomes such as bat surveys/extended habitat surveys et							
	- Any infrastructure changes/improvements should aim to retain features of ecological value within the design. The highest priorities for protection such as woodland, riparian habita	S,						
	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 ensure construction activities achieve outcomes which will not devalue protected soil.							
	- Implement soil erosion prevention measures outlined in good practice guidance where necessary.							
	Landscape - Integration of high environmental and design standards that maintain existing landscape distinctiveness and will be consistent with the Local Development Plan.							
	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.							
	Air Quality and Climatic Factors							
	- Ensure road improvements are designed with due regard to areas of poor air quality e.g. AQMAs.							
	- Should changes in road alignment be proposed, it is important to ensure, where practicable, that the distance between road traffic and sensitive receptors is not significantly reduced to the contract of t							
	Where the opportunity presents itself, the distance between road traffic and sensitive receptors with poor air quality should be increased in order to improve local air quality	at						
Alternative 4.3	these receptors. ++ ?/+ ?/+ ?/+ ?/+ ?/+ ++ ++ ++							
Alternative 4.5	++ ?/+ ?/+ ?/+ ?/+ ?/+ ?/+ ++ ++ ++ Proposed Objective: Stimulate economic growth by focussing solely on improving public transport infrastructure.							
	Assessment Commentary:							
	This objective would lead to improvements to bus and rail infrastructure which would make public transport journeys a more attractive and realistic alternative throughout East							
	Dunbartonshire. This objective in combination with the Councils Active Travel Strategy would form a strong alliance to drive the improvements in the sustainable transport network in Ea	st						
	Dunbartonshire. This objective is likely to provide positive impacts on all environmental factors, most significantly concerning Population and Human Health, Air Quality, Climatic Factor							
	and Material Assets.							
	Proposed Mitigation Measures:							
	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 sensiti	⁄e						
	and sustainable manner to avoid or minimise any impacts on the historic environmental assets or their setting.							
	- Ensure appropriate and responsible access to heritage assets.							
	Biodiversity, Flora and Fauna							

- Additional surveys to determine level and type of species/habitats that will be potentially impacted from the intended outcomes such as bat surveys/extended habitat surveys etc.
- 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 ensure construction activities achieve outcomes which will not devalue protected soil.
- Implement soil erosion prevention measures outlined in good practice guidance where necessary.

Landscape

Integration of high environmental and design standards that maintain existing landscape distinctiveness and will be consistent with the Local Development Plan.

Water Quality and Climatic Factors

Control and treatment of surface runoff.

X

- 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.

X

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

X

Proposed Objective 5

Alternative 5.1

Proposed Objective: Improving health by increasing walking and cycling rates.

Assessment Commentary:

Through this objective the intention is to increase everyday journeys through the use and improvement of sustainable transport. From a National perspective EDC has a higher than average car ownership and lower than average active travel participation and public transport usage rate. Through this objective there is potential for positive effects specifically in relation to Population and Human Health, Air Quality, Climatic Factors and Material Assets. This objective will focus on reducing journeys through vehicular travel in order to achieve a reduction in related carbon emissions.

X

X

+ +

The national policy framework for increasing activity levels is clearly set out in the Cycling Action Plan for Scotland and the National Walking Strategy and Lets Get Scotland More Active. There is substantial evidence that increasing physical activity levels contribute to a healthier lifestyle bringing numerous benefits including: a higher quality of life for the people in East Dunbartonshire, reducing health inequalities; reduced risk of developing health problems like heart disease, stroke, Type 2 Diabetes and cancer. Changing travel habits by helping people who are able to do so, get out of the car and travel actively by walking or cycling would go some way to improving the health of the residents of East Dunbartonshire. Increased walking and cycling at the expense of private car journeys would also contribute to reduced emissions levels with positive impacts on human health, air quality and contributing towards National emissions reduction targets.

Proposed Mitigation Measures:

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.
- Ensure appropriate and responsible access to heritage assets.

Biodiversity, Flora and Fauna

- Additional surveys to determine level and type of species/habitats that will be potentially impacted from the intended outcomes such as bat surveys/extended habitat surveys etc.
- 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

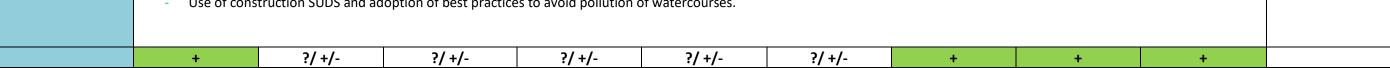
- Further surveys of peatland/carbon rich soils should be carried out to ensure construction activities achieve outcomes which will not devalue protected soil.
- Implement soil erosion prevention measures outlined in good practice guidance where necessary.

Landscape

Integration of high environmental and design standards that maintain existing landscape distinctiveness and will be consistent with the Local Development Plan.

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.



Proposed Objective: Improve health in East Dunbartonshire by providing attractive walking and cycling routes. **Assessment Commentary:** Through this objective the intention is to provide attractive waking and cycling routes to improve health in East Dunbartonshire. Through this objective there is potential for positive effects specifically in relation to Population and Human Health, Air Quality, Climatic Factors and Material Assets. However, the objective relates to provision of routes as a means to improving health but not an actual increase in rates of cycling or walking. Thus if this objective were fulfilled, its success would be measured by the number of attractive routes delivered which if located in unsuitable locations could be under-utilised and have a very low impact on human health due to low uptake. It is likely that provision of routes would contribute to increased activity levels undertaken by residents, however it would be difficult to link rates with new routes. Through this objective there is potential for positive effects specifically in relation to Population and Human Health, Air Quality, Climatic Factors and Material Assets. However, the effects on the remaining environmental factors are uncertain at this stage with the potential to provide positive and negative impact on these factors but this will be dependent on the location and natural and historic environmental constraints present for proposed walking and cycling infrastructure projects to deliver this objective. **Proposed Mitigation Measures: 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. Ensure appropriate and responsible access to heritage assets. **Biodiversity, Flora and Fauna** Additional surveys to determine level and type of species/habitats that will be potentially impacted from the intended outcomes such as bat surveys/extended habitat surveys etc. 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 ensure construction activities achieve outcomes which will not devalue protected soil. Implement soil erosion prevention measures outlined in good practice guidance where necessary. Landscape Integration of high environmental and design standards that maintain existing landscape distinctiveness and will be consistent with the Local Development Plan. **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. **Proposed Objective 6 Alternative 6.1** X X X X X X X Proposed Objective: Improve safety by slowing vehicle speeds. **Assessment Commentary:** This objective is likely to have a positive effect on safety but is focussed solely on reducing speeds to reduce accident levels. There are a range of other measures that could reduce accidents which are not focussed on slowing vehicle speeds, such as promotional campaigns, advanced driver training, improved crossing facilities, protected separate cycle lanes etc, which may improve safety without necessarily reducing vehicle speeds. **Alternative 6.2** X X X X X X X **Proposed Objective:** Improve safety on all modes of transport. **Assessment Commentary:** Taking measures to reduce the risk of accidents and improve safety is likely to have the greatest impact on improving safety on East Dunbartonshire's transport network. While the rate of casualties in East Dunbartonshire is currently falling, it is still imperative for the Council to strive for a zero casualty rate on its roads, cycle ways and paths in order to minimise injuries and deaths on the roads. This objective is anticipated to have significant positive impacts on Population and Human Health through a mix of measures including physical improvements to reduce vehicle speeds and promotional campaigns for safer driving, reduced drink driving, advanced driver training etc.