

Technology & Innovation: Apply innovative and technological approaches to achieving sustainable outcomes.				
Plan Outcomes	Plan Policies	Proposed VFM Indicators	Effect	Assessment vs SEA Objectives - Technology & Innovation
1. Economic growth & minimised congestion	Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.	Is the scheme directly connected with delivering development?	0	The early consideration of opportunities for technology and innovation can promote a range of sustainable outcomes such as better access to jobs in related industries.
		Does the scheme have impacts in one of the most deprived Lower Super Output Areas using the Index of Multiple Deprivation?	0	
		Congestion – what impact will the scheme have on congestion and journey time?	0	
		Climate resilience - how will the scheme contribute to improved climate resilience in Kent?	+	
2. Affordable and accessible door-to-door journeys	Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.	Accessibility – what impacts will the scheme have on access to key services (jobs, education, healthcare, etc.)?	+	Door to door journeys and public transport can be promoted through the use of technology eg: sustainable travel apps.
		Connectivity – what impact will the scheme have on creating connected door-to-door journeys?	+	
		Local Masterplanning - has accessibility and reduced journey time been designed into the overall plan for the scheme area?	+	
3. Safer travel	Provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.	Safety – are there any secondary benefits to safety (road, cycleway, footway)?	+	The early consideration of opportunities for technology and innovation can promote a range of sustainable outcomes such as the use of new technology in sustainable travel and in engineering materials and techniques.
4. Enhanced environment	Deliver schemes to reduce the environmental footprint of transport, and enhance the historic and natural environment.	Sustainable travel – what impact will the scheme have on sustainable travel (e.g. modal shift)?	+	
		Townscape and heritage – what impacts will the scheme have on the historic and built environment (including severance)?	0	
		Environment – what impact will the scheme have on...	++	Much of the potential for technology and innovation will come out of discussions between design engineers and environmental consultants, in discussing emission reduction technology, innovations in ecological survey techniques, developments in low noise road surfaces, equipment and machinery, smart use of asset management systems and software, and so forth. Early preliminary assessment of this potential will permit early identification of such approaches.
		Biodiversity?		
		Carbon Emissions?		
		Water quality and resources?		
		Natural & Cultural Heritage Landscape & Visual Impact?		
		Noise & Tranquility?		
		Material assets (i.e. materials, energy, waste & water resource use in construction & maintenance)?		
		Technology & innovation (i.e. approaches to achieving sustainable outcomes)?		
5. Better health and wellbeing	Promote active travel choices for all members of the community to encourage good health and wellbeing, and implement measures to improve local air quality.	Air quality – what impact will the scheme have on air quality?	+	Remote monitoring of air quality as part of transportation schemes - combining sustainable transport with technology enabling data collection.
		Active travel – what impact will the scheme have on promoting active travel?	+	See above

Appendix G Assessment Matrices – LTP4 Policies

Plan Outcomes	Plan Policy	Effects	Biodiversity, flora & fauna: Protect and enhance the county's habitats, biodiversity levels, and species of international, national, regional and local importance.	Assessment key
1. Economic growth & minimised congestion	Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.	-	Overall, LTP4 aims to alleviate congestion in urban areas, and along major trunk roads. It also opens areas up for other types of development with potential consequent cumulative impact. Effects of reduced congestion on biodiversity will be low; impacts to biodiversity from increased land take without habitat replacement and degradation of existing habitat is possible and should be avoided where practicable. One of the key issues with transport and ecology is ecological connectivity and potential barriers to habitat networks. The drive for economic growth with community and economic prosperity at its heart may be at variance with ecological protection. Opportunities for enhancement of biodiversity should be taken wherever possible.	++ Major positive
2. Affordable and accessible door-to-door journeys	Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.	0	LTP4 aims to provide affordable and accessible door to door journeys. It is assumed that this would increase the use of public transport, by the public, to gain access to services. A modal shift from car occupancy to public transport would reduce congestion and vehicle emissions and in the long term could prevent the need for future large-scale congestion-relief schemes. A reduction in emissions may slightly reduce negative impacts on biodiversity and the prevention of future schemes would reduce land-take and the associated impacts on biodiversity.	+ Minor positive
3. Safer travel	Provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.	0/+	Improved safety does not in itself provide benefits to biodiversity. The issues in 1, above, in respect of potential negative impacts arising from schemes forming barriers to habitat connectivity and causing habitat degradation, may apply.	0 None identified
4. Enhanced environment	Deliver schemes to reduce the environmental footprint of transport, and enhance the historic and natural environment.	0/+	Reduction of the vehicle transport footprint will benefit natural areas from removal of the threat to individual and threat to habitat quality. Safeguarding the land and aquatic environments is explicit in KES and can create positive benefits when enacted - however to do so these schemes will need to go beyond 'avoidance of impact' and produce significant environmental enhancement. Biodiversity is a key determinant of environmental quality and will be considered under LTP4 within the VFM decision matrix for funding individual schemes under the Integrated Transport Programme (ITP).	- Minor negative
5. Better health and wellbeing	Promote active travel choices for all members of the community to encourage good health and wellbeing, and implement measures to improve local air quality.	0	LTP4 is committed to promoting active travel choices and encouraging modal shift from car use to walking and cycling. The promotion of active modes may reduce car use and therefore (as 2, above) reduce emissions and the need for future congestion-relief schemes.	-- Major negative

Plan Outcomes	Plan Policy	Effects	Air Quality: Improve air quality in urban areas and achieve the NAQS and AQMA objectives across the county.
1. Economic growth & minimised congestion	Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.	0	Air quality improvement may result from reduced vehicle congestion. Increased economic activity can however introduce increased levels of traffic to areas not previously experiencing such activity. The requirement to build climate resilience into the schemes does not in itself demonstrate that climate-affecting emissions will also be targeted. Scheme construction can increase local air pollutants if not properly managed.
2. Affordable and accessible door-to-door journeys	Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.	0/+	Reduction of single occupancy car journeys and a move towards integrated transport systems with affordable journeys will have a positive impact on air quality by the reduction of PM10, NOx etc. It should be noted that most buses and some trains are associated with emissions which will in themselves contribute to the local air pollution burden - therefore clear benefit would only be seen if there is investment in these modes to improve their environmental performance (e.g. electric trains and road vehicles; hydrogen fuel cell-powered buses etc.); although normalised emissions per passenger would still be less than single car occupancy, even without investment.
3. Safer travel	Provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.	0	Improved safety does not in itself provide benefits to air quality, although changes to traffic flow, density and average speed may affect emissions.
4. Enhanced environment	Deliver schemes to reduce the environmental footprint of transport, and enhance the historic and natural environment.	0/+	Reduction of the vehicle transport footprint may benefit air quality during scheme operation if designed to go beyond 'avoidance of impact' and produce significant environmental enhancement. There should also be a focus on emission reduction during construction phase as this can cause local increase in air pollution. Air quality is a key determinant of environmental quality and will be considered under LTP4 within the VFM decision matrix for funding individual schemes under the Integrated Transport Programme (ITP).
5. Better health and wellbeing	Promote active travel choices for all members of the community to encourage good health and wellbeing, and implement measures to improve local air quality.	0/+	LTP4 promotes modal shift from car use to active and sustainable modes such as walking and cycling. If successful such modal shift will result in reduced emissions to air and thereby locally improved air quality. It should however be noted that achieving significant modal shift is difficult, and it is accepted within LTP4 that cars will remain a primary method of personal transportation for the duration of the plan.

Plan Outcomes	Plan Policy	Effects	Human Health: Support transport solutions that promote positive health outcomes through active and sustainable travel choices and improved road safety.
1. Economic growth & minimised congestion	Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.	0	LTP4 aims to promote economic growth by improved management of the transport network. A focus of LTP4 is to promote schemes that reduce congestion, thereby having a positive impact on human health as a result of the associated reduction in vehicle emissions.
2. Affordable and accessible door-to-door journeys	Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.	+	LTP4 promotes affordable, accessible and connected transport and recognises that transport plays a key role in access to employment, education health and other services. Access to these services has a significant impact on mental and physical wellbeing and improved affordability and connectivity of the network would result in positive health outcomes especially for those residing in areas of deprivation.
3. Safer travel	Provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.	++	LTP4 commits to providing a safer road, footway and cycleway network to reduce the likelihood of casualties, in addition to encouraging other transport providers to improve safety on their networks. LTP4 will reduce road casualties through the Crash Remedial Measures (CRM) Programme which targets safety critical schemes. In addition, LTP4 also highlights commitment to education and enforcement activities.
4. Enhanced environment	Deliver schemes to reduce the environmental footprint of transport, and enhance the historic and natural environment.	+	Environmental factors form part of the wider determinants of health and wellbeing, and as such schemes that deliver enhanced environmental outcomes will promote positive health outcomes.
5. Better health and wellbeing	Promote active travel choices for all members of the community to encourage good health and wellbeing, and implement measures to improve local air quality.	++	LTP4 outlines the aspiration to make active travel an attractive and realistic choice for short journeys in Kent. Walking and cycling will be encouraged by integrating active travel into planning by providing and maintaining appropriate routes for walking and cycling and supporting young people through training and building skills. A shift from car travel to active modes would result in numerous positive health impacts, including, a reduction in, obesity, cardio vascular disease and diabetes and improved mental wellbeing.

Plan Outcomes	Plan Policy	Effects	Climatic factors: Reduce vulnerability to climate change-related extreme weather events by creating a resilient transport infrastructure and identifying appropriate adaptation and mitigation measures.
1. Economic growth & minimised congestion	Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.	0	It is possible that more development will simply lead to the introduction of more concrete and tarmac and therefore potentially more flooding due to increased runoff. Schemes need to consider their own resilience - i.e. whether the new or improved infrastructure will be impacted by flooding/extreme weather events - and also their impact on the resilience of surrounding areas - i.e. has their run-off and drainage been designed to protect nearby residents, infrastructure, services and habitats. Green house gas emissions are a significant direct impact of industrial and commercial activity, thus increased economic activity can introduce increased levels of emissions. Efficient transport networks will support the aim to improve efficiency but not necessarily reduce overall emissions. It is not enough to design climate resilient schemes - they need to incorporate mechanisms by which to reduce carbon emissions as well, for example by also promoting Outcomes 2 and 5.
2. Affordable and accessible door-to-door journeys	Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.	0/+	LTP4 aims to provide a affordable and accessible door to door journeys. It is assumed that this would increase the use of public transport, by the public, to gain access to services. A modal shift from car occupancy to public transport would reduce carbon emissions and in the long term could prevent the need for future large-scale congestion-relief schemes. It should be noted that most buses and some trains are associated with emissions which will in themselves contribute to carbon emissions - therefore clear benefit would only be seen if there is investment in these modes to improve their carbon performance (e.g. electric trains and road vehicles; hydrogen fuel cell-powered buses etc.); although normalised emissions per passenger would still be less than single car occupancy, even without investment.
3. Safer travel	Provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.	0	In itself, safer travel networks will not provide climate change resilience, although smart design should incorporate this for all schemes irrespective of lead outcome.
4. Enhanced environment	Deliver schemes to reduce the environmental footprint of transport, and enhance the historic and natural environment.	0/+	Reduction of the vehicle transport footprint may reduce carbon emissions during scheme operation if designed to go beyond 'avoidance of impact' and produce significant environmental enhancement; this is caveated as per 2, above. Climatic factors are a key determinant of environmental quality and will be considered under LTP4 within the VFM decision matrix for funding individual schemes under the Integrated Transport Programme (ITP).
5. Better health and wellbeing	Promote active travel choices for all members of the community to encourage good health and wellbeing, and implement measures to improve local air quality.	0/+	Promotion of health and wellbeing via the delivery of improved air quality and more walking and cycling has potential to reduce carbon emissions. It should however be noted that achieving significant modal shift is difficult, and it is accepted within LTP4 that cars will remain a primary method of personal transportation for the duration of the plan.

Plan Outcomes	Plan Policy	Effects	Population: Promote accessible, integrated and sustainable transport networks that support the needs of the economy and local communities
1. Economic growth & minimised congestion	Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.	+	Access and connectivity are the key elements of the KES and will be supported by the commitment of LTP4 to deliver schemes that reduce congestion and improve journey time reliability to enable economic growth. LTP4 recognises the need to meet demand from a growing population. Slight gains may be made from access to employment opportunities as a result of network development.
2. Affordable and accessible door-to-door journeys	Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.	+	LTP4 promotes affordable, accessible and connected transport and recognises that transport plays a key role in access to employment, education health and other services. Improved access to these services will have a significant positive impact on the economy and local communities.
3. Safer travel	Provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.	++	LTP4 commits to providing a safer road, footway and cycleway network to reduce the likelihood of casualties, in addition to encouraging other transport providers to improve safety on their networks. LTP4 will reduce road casualties through the Crash Remedial Measures (CRM) Programme which targets safety critical schemes. In addition, LTP4 also highlights commitment to education and enforcement.
4. Enhanced environment	Deliver schemes to reduce the environmental footprint of transport, and enhance the historic and natural environment.	+	A slight benefit may be achieved by the protection and enhancement of the environment. Primarily this is potentially via air quality improvements but also by the provision of and access to quality open space as a result of schemes specifically designed to enhance public places.
5. Better health and wellbeing	Promote active travel choices for all members of the community to encourage good health and wellbeing, and implement measures to improve local air quality.	+	Active travel choices, affordable sustainable travel options and a reduction in transport emissions will - if successful - have a positive impact on the mental and physical wellbeing of affected communities.

Plan Outcomes	Plan Policy	Effects	Water: Coordinate across the county in parallel with other planning policy, in order to address water catchment quality and resource issues.
1. Economic growth & minimised congestion	Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.	-	LTP4 aims to promote schemes that focus on economic growth - these new schemes have potential to negatively impact water quality (e.g. by permitting run-off of contaminated water from the carriageway into surface water bodies - with possible consequences for compliance with the Water Framework Directive); and water resources (e.g. with increased impermeable surface area decreasing recharge to groundwater).
2. Affordable and accessible door-to-door journeys	Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.	0	No direct link between water and accessibility - however there may be some slight indirect benefit arising from the promotion of more sustainable forms of transport and therefore fewer vehicles on the road, in terms of less pollution events occurring.
3. Safer travel	Provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.	0	Improved safety does not in itself provide benefits to the water environment.
4. Enhanced environment	Deliver schemes to reduce the environmental footprint of transport, and enhance the historic and natural environment.	0/+	Reduction of the vehicle transport footprint may benefit natural areas from removal of the threat to habitat quality; safeguarding the aquatic environment is explicit in KES and can create positive benefits when enacted - however to do so these schemes will need to go beyond 'avoidance of impact' and produce significant environmental enhancement. Water is a key determinant of environmental quality and will be considered under LTP4 within the VFM decision matrix for funding individual schemes under the Integrated Transport Programme (ITP).
5. Better health and wellbeing	Promote active travel choices for all members of the community to encourage good health and wellbeing, and implement measures to improve local air quality.	0/+	No clear link to KES or the SEA objectives. Minor benefits may arise from the promotion of more sustainable forms of transport in terms of fewer pollution events.

Plan Outcomes	Plan Policy	Effects	Cultural Heritage: Protect and enhance cultural heritage, and access to areas and features of historic, architectural or archaeological importance.
1. Economic growth & minimised congestion	Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.	-	Effects of reduced congestion on cultural heritage will be low; impacts from increased land take is possible and should be avoided where practicable and otherwise mitigated. The drive for economic growth with community and economic prosperity at its heart may be at variance with cultural heritage protection. Opportunities for enhancement of cultural heritage resources and their setting should be taken wherever possible.
2. Affordable and accessible door-to-door journeys	Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.	+	Some potential to improve public access to cultural heritage resources and settings, and therefore encourage their appreciation and thus preservation.
3. Safer travel	Provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.	0	No clear impacts arise from improvements to safety, although safer networks may encourage increased access to the historic environment.
4. Enhanced environment	Deliver schemes to reduce the environmental footprint of transport, and enhance the historic and natural environment.	0/+	Reduction of the vehicle transport footprint is unlikely to benefit cultural heritage. Schemes designed solely with the aim of enhancement may achieve benefits if designed to go beyond 'avoidance of impact' and produce significant environmental enhancement. Cultural heritage is a key determinant of environmental quality and will be considered under LTP4 within the VFM decision matrix for funding individual schemes under the Integrated Transport Programme (ITP).
5. Better health and wellbeing	Promote active travel choices for all members of the community to encourage good health and wellbeing, and implement measures to improve local air quality.	0/+	No clear impacts arise from improvements to affordability and access. Improved air quality has potential to benefit the preservation of built heritage features.

Plan Outcomes	Plan Policy	Effects	Landscape: Protect and enhance the character and diversity of all landscape assets through planning and policy decisions and ensure development does not decrease visual and recreational amenity.
1. Economic growth & minimised congestion	Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.	-	Effects of reduced congestion on landscape will be low; impact from increased land take is possible and should be avoided where practicable and otherwise mitigated. The drive for economic growth with community and economic prosperity at its heart may be at variance with landscape protection. Opportunities for enhancement of landscape and visual impact should be taken wherever possible.
2. Affordable and accessible door-to-door journeys	Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.	+	Some potential to improve public access to landscape resources, and therefore encourage their appreciation and thus preservation.
3. Safer travel	Provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.	0	No clear impacts arise from improvements to safety.
4. Enhanced environment	Deliver schemes to reduce the environmental footprint of transport, and enhance the historic and natural environment.	0/+	Both KES and the LTP support the enhancement and protection of the landscape through planning and decision making. Reduction of the vehicle transport footprint is unlikely to significantly benefit landscape and visual impact. Schemes designed solely with the aim of enhancement may achieve benefits if designed to go beyond 'avoidance of impact' and produce significant environmental enhancement. Landscape is a key determinant of environmental quality and will be considered under LTP4 within the VFM decision matrix for funding individual schemes under the Integrated Transport Programme (ITP).
5. Better health and wellbeing	Promote active travel choices for all members of the community to encourage good health and wellbeing, and implement measures to improve local air quality.	0	No clear impacts arise from improvements to health and wellbeing.

Plan Outcomes	Plan Policy	Effects	Noise & Tranquility: Seek to reduce noise at source, particularly in existing Noise Important Areas, and to prevent the creation of new Noise Important Areas; protect tranquil areas from impact, including cumulative impact.
1. Economic growth & minimised congestion	Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.	-	Economic growth may add to both noise sources and receptors; however, a reduction in congestion could decrease noise and associated disturbance.
2. Affordable and accessible door-to-door journeys	Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.	+	Sustainable travel can have a lower noise impact than motorised vehicles; but would require careful design to maximise this, including other measures such as excluding non-sustainable transport modes from certain locations.
3. Safer travel	Provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.	0	No clear plans to support noise reduction, although future scheme design can specify noise reduction measures.
4. Enhanced environment	Deliver schemes to reduce the environmental footprint of transport, and enhance the historic and natural environment.	0/+	Reduction of the vehicle transport footprint may benefit noise levels during scheme operation if designed to go beyond 'avoidance of impact' and produce significant environmental enhancement. There should also be a focus on noise reduction and mitigation during construction phase as this can cause local increases. Noise is a key determinant of environmental quality and will be considered within the VFM decision matrix for funding individual schemes under the Integrated Transport Programme (ITP).
5. Better health and wellbeing	Promote active travel choices for all members of the community to encourage good health and wellbeing, and implement measures to improve local air quality.	0/+	Walking and cycling have lower noise impact than motorised vehicles; however significant modal shift - or segregation of modes to create more tranquil 'sustainable transport' locations - would be required for this to be reflected in noise monitoring results.

Plan Outcomes	Plan Policy	Effects	Material Assets: Maximise resource efficiency in materials, energy, waste and water use by utilising sustainable construction and procurement methods, and ensuring appropriate ongoing maintenance of assets.
1. Economic growth & minimised congestion	Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.	0/+	Opportunity to promote the use of sustainable materials and supply chain, especially in the re-use of vacant and derelict assets. This will rely on policy direction, which at present only explicitly supports resource efficiency and not building and construction standards. Economic Growth and a growing population may however offset such gains via the generation of waste. Whole life costs are not explicitly addressed within LTP4 but are considered within the VFM matrix.
2. Affordable and accessible door-to-door journeys	Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.	0/+	No direct link between material assets and accessibility - however there may be some slight indirect benefit arising from the promotion of more sustainable forms of transport and therefore fewer vehicles on the road, in terms of decreased fuel/energy demand.
3. Safer travel	Provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.	0/+	Potential for addressing resource efficiency in improvement schemes, although this is not explicit.
4. Enhanced environment	Deliver schemes to reduce the environmental footprint of transport, and enhance the historic and natural environment.	+	Policy outcomes are specifically to reduce the transport footprint of the county. Waste, resources and efficiency figure in the KES strongly. Material assets are a key determinant of environmental quality and will be considered under LTP4 within the VFM decision matrix for funding individual schemes under the Integrated Transport Programme (ITP).
5. Better health and wellbeing	Promote active travel choices for all members of the community to encourage good health and wellbeing, and implement measures to improve local air quality.	0/+	No clear route to addressing the issues material assets use, procurement and disposal create. Minor benefits may arise from the promotion of more sustainable forms of transport in terms of this leading to less reliance on cars, less demand for fuel, and knock-on impacts in terms of health benefits and less reliance on the health care sector.
Plan Outcomes	Plan Policy	Effects	Technology & Innovation: Apply innovative and technological approaches to achieving sustainable outcomes.
1. Economic growth & minimised congestion	Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.	+	The early consideration of opportunities for technology and innovation can promote a range of sustainable outcomes such as better access to jobs in related industries.
2. Affordable and accessible door-to-door journeys	Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.	+	The early consideration of opportunities for technology and innovation can promote a range of sustainable outcomes such as the use of new technology in sustainable travel and in engineering materials and techniques.
3. Safer travel	Provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.	+	
4. Enhanced environment	Deliver schemes to reduce the environmental footprint of transport, and enhance the historic and natural environment.	+	Much of the potential for technology and innovation will come out of discussions between design engineers and environmental consultants, in discussing emission reduction technology, innovations in ecological survey techniques, developments in low noise road surfaces, equipment and machinery, smart use of asset management systems and software, and so forth. Early preliminary assessment of this potential will permit early identification of such approaches.
5. Better health and wellbeing	Promote active travel choices for all members of the community to encourage good health and wellbeing, and implement measures to improve local air quality.	+	

Appendix H Assessment Matrices – LTP4 Priorities

Type	Scheme	Biodiversity	Air Quality	Human Health
Strategic	Port Expansion	Q/+ - Potential for localised loss of habitat & connectivity due to scheme; mitigation and enhancement will be required. Q/+ Reduced congestion and therefore more free-flowing traffic can be beneficial to air quality, which in turn can positively impact biodiversity. + Climate resilience and the impacts on biodiversity are linked. Resilience is important to reduce the impact on flooding, which can have a significant impact on biodiversity. Also, planting can have a positive impact on resilience to flooding but also impacts on biodiversity.	+ Areas of deprivation often coincide with areas of poor environmental quality, therefore schemes in such locations have potential to reduce environmental inequality. + Reduced congestion and therefore more free-flowing traffic can be beneficial to air quality. + Early preliminary assessment of potential air quality impacts will allow sustainable design to be maximised and the least climate-impeding option to be selected. - Scheme construction can temporarily increase local air pollutants if not properly managed.	++ Deprived areas are associated with health inequalities, as well as environmental inequality which contributes to the wider determinants of health; therefore schemes in such locations have potential to reduce health inequality and improve human health outcomes. + Reduced congestion has potential to result in reduced noise and air pollution, which in turn can improve health and wellbeing. Improved journey time can have wellbeing benefits. + Climate change resilience is important for wellbeing - access to healthcare, education and employment is important - transport system that can cope in times of extreme weather is essential to health and wellbeing.
	International Station Signalling (Aldford Square)	Q Q/- Potential for temporary disturbance and localised loss of habitat due to scheme; mitigation and enhancement may be required.	- Scheme construction can temporarily increase local air pollutants if not properly managed.	0
	Rail & Bus Improvements	+ Q/- Potential for temporary disturbance and localised loss of habitat due to route enhancement schemes; mitigation and enhancement may be required. Q/+ Reduced congestion and therefore more free-flowing traffic can be beneficial to air quality, which in turn can positively impact biodiversity. + Climate resilience and the impacts on biodiversity are linked. Resilience is important to reduce the impact on flooding, which can have a significant impact on biodiversity. Also, planting can have a positive impact on resilience to flooding but also impacts on biodiversity. + Connected door to door journeys should result in increased use of public transport which means lower emissions and decreased requirement for future congestion relief schemes, having positive impacts on biodiversity.	+ - Scheme construction can temporarily increase local air pollutants if not properly managed. + Areas of deprivation often coincide with areas of poor environmental quality, therefore schemes in such locations have potential to reduce environmental inequality. + Reduction of single occupancy car journeys and a move towards integrated transport systems with affordable journeys will have a positive impact on air quality by the reduction of PM10, NOx etc. It should be noted that most buses and some trains are associated with emissions which will in themselves contribute to the local air pollution burden - therefore clear benefit would only be seen if there is investment in these modes to improve their environmental performance (e.g. electric trains and road vehicles, hydrogen fuel cell powered buses etc.), although normalised emissions per passenger would still be less than single car occupancy, even without investment. ++ Modal shift away from motorised vehicles reduces emissions and therefore can contribute to locally improved air quality.	++ ++ Deprived areas are associated with health inequalities, as well as environmental inequality which contributes to the wider determinants of health; therefore schemes in such locations have potential to reduce health inequality and improve human health outcomes. + Reduced congestion has potential to result in reduced noise and air pollution, which in turn can improve health and wellbeing. Improved journey time can have wellbeing benefits. + Climate change resilience is important for wellbeing - access to healthcare, education and employment is important - transport system that can cope in times of extreme weather is essential to health and wellbeing. + Access to services forms part of the wider determinants of health, and as such can affect health and wellbeing. + Connected door to door journeys include public transport so means transport is accessible for all (accessing services etc.) and reduce vehicle emissions. ++ Early preliminary assessment of potential safety benefits will result in improved human health outcomes. Outcomes as a result of fewer fatalities, but also knock on health impacts as a result of people using sustainable modes. + Environmental factors form part of the wider determinants of health and wellbeing, and as such schemes that deliver enhanced environmental outcomes will promote positive health outcomes. + Increasing cycling and walking has direct mental and physical health benefits; reducing vehicle emissions has indirect health benefits by improving noise and air quality.
Non-Strategic, Key-Node	Road Safety	0 Q/- Improved safety does not in itself provide benefits to biodiversity. The issues in 1, above, in respect of potential negative impacts arising from schemes forming barriers to habitat connectivity and causing habitat degradation, may apply. Q/+ Safety improvements in relation to cycleways and footways could result in increased uptake of active modes. This would reduce single car occupancy, reduce emissions and reduce demand/congestion, all of which may be beneficial to biodiversity.	0 Q/- Improved safety does not in itself provide benefits to air quality, although changes to traffic flow, density and average speed may affect emissions. Q/- Potential deleterious to safety in using low emission vehicles such as electric cars.	++ ++ LTPN commits to providing a safer road, footway and cycleway network to reduce the likelihood of casualties, in addition to encouraging other transport modes to improve safety on their networks. LTPN will reduce road casualties through the Crash Remedial Measures (CRM) programme which targets safety critical schemes. In addition, LTPN also highlights commitment to education and awareness activities. + Early preliminary assessment of potential safety benefits will result in improved human health outcomes. Outcomes as a result of fewer fatalities, but also knock on health impacts as a result of people using sustainable modes.
	Highways Maintenance & Asset Management	Q/+ Q/+ Potential to enhance biodiversity through maintenance of landscaped areas for wildlife	Q/+ Sustainable design and construction should have a positive impact on air quality and early assessment will allow for the identification of methodologies to reduce impact on air quality.	0 Q/- Minor benefits may arise from the promotion of more sustainable forms of transport in terms of the leading to less reliance on cars, less demand for fuel, and knock-on impacts in terms of health benefits and less reliance on the health care system.
	Home to School Transport	+ + Increased use of active modes means lower emissions and decreased requirement for future congestion relief schemes, having positive impacts on biodiversity. + Connected door to door journeys should result in increased use of public transport which means lower emissions and decreased requirement for future congestion relief schemes, having positive impacts on biodiversity.	+ + LTPN promotes modal shift from car use to active and sustainable modes such as walking and cycling. If successful such modal shift will result in reduced emissions to air and thereby locally improved air quality. It should however be noted that achieving significant modal shift is difficult, and it is accepted within LTPN that cars will remain a primary method of personal transportation for the duration of the plan. Q/- Connected door to door journeys should result in increased use of public transport which means lower emissions. Q/- Reduction of single occupancy car journeys and a move towards integrated transport systems with affordable journeys will have a positive impact on air quality by the reduction of PM10, NOx etc. It should be noted that most buses and some trains are associated with emissions which will in themselves contribute to the local air pollution burden - therefore clear benefit would only be seen if there is investment in these modes to improve their environmental performance (e.g. electric trains and road vehicles, hydrogen fuel cell powered buses etc.), although normalised emissions per passenger would still be less than single car occupancy, even without investment.	++ + LTPN promotes affordable, accessible and connected transport and recognises that transport plays a key role in access to employment, education health and other services. Access to these services has a significant impact on mental and physical wellbeing and improved affordability and connectivity of the network would result in positive health outcomes especially for those most in need. + LTPN outlines the aspiration to make active travel an attractive and realistic choice for short journeys in Kent. Walking and cycling will be encouraged by integrating active travel into planning by providing and maintaining appropriate routes for walking and cycling and supporting young people through training and building skills. A shift from car travel to active modes would result in numerous positive health impacts, including a reduction in obesity, cardiovascular disease and diabetes and improved mental wellbeing. + Connected door to door journeys include public transport so means transport is accessible for all (accessing services etc.) and reduce vehicle emissions. + Increasing cycling and walking has direct mental and physical health benefits; reducing vehicle emissions has indirect health benefits by improving noise and air quality.
	Active Travel	+ + Increased use of active modes means lower emissions and decreased requirement for future congestion relief schemes, having positive impacts on biodiversity.	+ + LTPN promotes modal shift from car use to active and sustainable modes such as walking and cycling. If successful such modal shift will result in reduced emissions to air and thereby locally improved air quality. It should however be noted that achieving significant modal shift is difficult, and it is accepted within LTPN that cars will remain a primary method of personal transportation for the duration of the plan.	++ + LTPN outlines the aspiration to make active travel an attractive and realistic choice for short journeys in Kent. Walking and cycling will be encouraged by integrating active travel into planning by providing and maintaining appropriate routes for walking and cycling and supporting young people through training and building skills. A shift from car travel to active modes would result in numerous positive health impacts, including a reduction in obesity, cardiovascular disease and diabetes and improved mental wellbeing.

Type	Scheme	Cultural Heritage			Landscape			Noise & Vibration		
		Q/+			+			+		
Strategic	Port Expansion	<p>0 Preliminary assessment of cultural heritage assets potentially impacted by the scheme must be undertaken to allow mitigation and enhancement to be incorporated into the design if necessary.</p> <p>+ Congestion during busy periods may deter people from visiting such sites.</p> <p>+ Climate change resilience is important as the transport network provides access to areas and features of historic, architectural or archaeological importance.</p>			<p>+ Identifying impacts on congestion can have a knock on impact on visual and recreational amenity. Reducing congestion is likely to have a positive impact on recreational amenity.</p>			<p>+ Areas of deprivation often coincide with areas of poor environmental quality, therefore schemes in such locations have potential to reduce environmental inequality.</p> <p>+ Reduced congestion and therefore more free-flowing traffic can be beneficial to noise levels.</p>		
	International Station Signalling (Ashford Square)	0			0			0		
	Rail & Bus Improvements	<p>+ Congestion during busy periods may deter people from visiting such sites.</p> <p>+ Climate change resilience is important as the transport network provides access to areas and features of historic, architectural or archaeological importance.</p> <p>+ Availability of access to cultural heritage resources is as important as their protection - early preliminary assessment will permit this to be taken into account.</p> <p>+ Door to door journeys implies improved public transport provision which would assist in access to areas and features of historic, architectural or archaeological importance.</p> <p>+ Availability of access to cultural heritage resources is as important as their protection - early preliminary assessment will permit this to be taken into account.</p> <p>+ If a scheme brings about an improvement in sustainable travel accessibility of areas and features of historic, architectural or archaeological importance could be improved.</p>			<p>+ Identifying impacts on congestion can have a knock on impact on visual and recreational amenity. Reducing congestion is likely to have a positive impact on recreational amenity.</p> <p>+ Access to diverse landscapes and recreational amenity is important. Early preliminary assessment of this will enable access to these features to be taken into account.</p> <p>+ Door to door journeys implies increased use of public transport. Increased use of public transport may reduce the requirement for further largescale transport schemes which could have a significant impact on visual and recreational amenity.</p> <p>+ Enhanced safety especially for pedestrians and cyclists could encourage recreation and reduce negative impacts on visual amenity as a result of car use.</p> <p>+ Increased use of sustainable transport modes may reduce the requirement for further largescale transport schemes which could have a significant impact on visual and recreational amenity.</p>			<p>+ Areas of deprivation often coincide with areas of poor environmental quality, therefore schemes in such locations have potential to reduce environmental inequality.</p> <p>+ Reduced congestion and therefore more free-flowing traffic can be beneficial to noise levels.</p> <p>+ Sustainable travel can have a lower noise impact than motorised vehicles, but would require careful design to maximise this, including other measures such as excluding non-sustainable transport modes from certain locations.</p> <p>+ Understanding the impacts of accessibility in the context of new planning and impact on noise important areas could help to reduce noise impacts.</p>		
Non-Strategic, Non-rail	Road Safety	Q/+			Q/+			0		
	Highways Maintenance & Asset Management	0			0			0		
	Home to School Transport	<p>Q/+ Reducing direct effects of emissions and indirect impact of climate change on assets.</p> <p>Q/+ If a scheme brings about an improvement in sustainable travel accessibility of areas and features of historic, architectural or archaeological importance could be improved.</p>			<p>Q/+ Increased use of sustainable transport modes may reduce the requirement for further largescale transport schemes which could have a significant impact on visual and recreational amenity.</p>			<p>Q/+ Reduced congestion and therefore more free-flowing traffic can be beneficial to noise levels.</p> <p>Q/+ Sustainable travel can have a lower noise impact than motorised vehicles, but would require careful design to maximise this, including other measures such as excluding non-sustainable transport modes from certain locations.</p>		
	Active Travel	<p>Q/+ Reducing direct effects of emissions and indirect impact of climate change on assets.</p> <p>Q/+ If a scheme brings about an improvement in sustainable travel accessibility of areas and features of historic, architectural or archaeological importance could be improved.</p>			<p>Q/+ Increased use of active modes may reduce the requirement for further largescale transport schemes which could have a significant impact on visual and recreational amenity.</p>			<p>Q/+ Reduced congestion and therefore more free-flowing traffic can be beneficial to noise levels.</p> <p>Q/+ Active travel can have a lower noise impact than motorised vehicles, but would require careful design to maximise this, including other measures such as excluding non-sustainable transport modes from certain locations.</p>		

Type	Scheme	Climate Factors	Population	Water
Strategic	Part Expansion	<p>+</p> <ul style="list-style-type: none"> • Care needs to be taken to ensure the scheme will not simply lead to the introduction of more concrete and tarmac and therefore potentially more flooding due to increased runoff. The scheme needs to consider its own resilience - i.e. whether the new or improved infrastructure will be impacted by flooding/extreme weather events - and also its impact on the resilience of surrounding areas - i.e. run-off and drainage needs to be designed to protect nearby residents, infrastructure, services and habitats. • It is especially important to understand the impacts on areas of deprivation. Car ownership is lower in deprived areas and people are often more reliant on public transport, so it is important that climate change resilient infrastructure is available during times of extreme weather. • Reduced congestion and therefore more free-flowing traffic can be beneficial to carbon emissions. • Early preliminary assessment of potential climate impacts will allow sustainable design to be maximised and the least climate-impacting option to be selected. • Scheme construction can temporarily increase local carbon emissions if not properly planned. 	<p>+</p> <ul style="list-style-type: none"> • Access and connectivity are the key elements of the KES and will be supported by the commitment of LTP4 to deliver schemes that reduce congestion and improve journey time reliability to enable economic growth. LTP4 recognises the need to meet demand from a growing population. Slight gains may be made from access to employment opportunities as a result of network development. • Assessment of whether the need for development is in line with economic and community needs. • Deprived areas are associated with health, environmental and economic inequalities; early preliminary assessment to identify such locations will enable schemes to provide appropriate assistance to the local economy and communities in these areas. • Early preliminary assessment of climate resilience, congestion and journey time will allow sustainable design to be maximised and the options best suited to the local economy and communities to be selected. 	<p>0</p> <ul style="list-style-type: none"> • Care needs to be taken that the scheme does not negatively impact water quality (e.g. by permitting run-off of contaminated water from the carriageway into surface water bodies - with possible consequences for compliance with the Water Framework Directive) and water resources (e.g. with increased impermeable surface area decreasing recharge to groundwater). • Reduced congestion can mean reduced vehicle emissions and improved air quality, thereby improving water quality. • Early preliminary assessment of climate resilience will allow sustainable drainage to be designed and flood risk to be mitigated.
	International Station Signalling (Additional Capacity)	0	0	0
	Rail & Bus Improvements	+	++	+
Non-Strategic / Key Route	Need Safety	<p>0</p> <p>Q/+ It is possible that route enhancement schemes simply lead to the introduction of more concrete and tarmac and therefore potentially more flooding due to increased runoff. Design must consider its own resilience and its impact on the resilience of surrounding areas - i.e. has their run-off and drainage been designed to protect nearby residents, infrastructure, services and habitats.</p> <p>• It is especially important to understand the impacts on areas of deprivation. Car ownership is lower in deprived areas and people are often more reliant on public transport, so it is important that climate change resilient infrastructure is available during times of extreme weather.</p> <p>• Early preliminary assessment of connectivity and accessibility impacts will allow sustainable design to be maximised and the least climate-impacting and the most climate-resilient options to be selected.</p> <p>• Work needs to be undertaken with colleagues in the County and District Local Planning Authorities, to ensure that new developments come with a provision of provision of all necessary services within reasonable walking distance, in order to reduce journey numbers.</p> <p>Q/+ Reduction of the vehicle transport footprint may reduce carbon emissions during scheme operation if designed to go beyond 'avoidance of impact' and produce significant environmental enhancement.</p>	<p>++</p> <ul style="list-style-type: none"> • Access and connectivity are the key elements of the KES and will be supported by the commitment of LTP4 to deliver schemes that reduce congestion and improve journey time reliability to enable economic growth. LTP4 recognises the need to meet demand from a growing population. Slight gains may be made from access to employment opportunities as a result of network development. • Deprived areas are associated with health, environmental and economic inequalities; early preliminary assessment to identify such locations will enable schemes to provide appropriate assistance to the local economy and communities in these areas. • Early preliminary assessment of climate resilience will allow sustainable design to be maximised and the options best suited to the local economy and communities to be selected. • LTP4 promotes affordable, accessible and connected transport and recognises that transport plays a key role in access to employment, education health and other services. Improved access to these services will have a significant positive impact on the economy and local communities. • Early preliminary assessment of connectivity and accessibility impacts will allow sustainable design to be maximised and the options best suited to the local economy and communities to be selected. • Working with LPA, early preliminary assessment of connectivity impacts will allow sustainable design to be maximised and the options best suited to the local economy and communities to be selected. • A slight benefit may be achieved by the protection and enhancement of the environment. Primarily this is potentially via air quality improvements but also by the provision of and access to quality open space as a result of schemes specifically designed to enhance public spaces. 	<p>0</p> <p>Q Improved safety does not in itself provide benefits to the water environment.</p>
	Highways Maintenance & Asset Management	+	Q/+	+
	Home to School Transport	+	+	Q/+
	Active Travel	Q/+	+	Q/+
		<p>• Promotion of health and wellbeing via the delivery of more walking and cycling has potential to reduce carbon emissions. It should however be noted that achieving significant modal shift is difficult, and it is accepted within LTP4 that cars will remain a primary method of personal transportation for the duration of the plan.</p> <p>• LTP4 aims to provide affordable and accessible door to door journeys. It is assumed that this would increase the use of public transport, by the public, to gain access to services. A modal shift from car occupancy to public transport would reduce carbon emissions and in the long term could prevent the need for future large-scale congestion-relief schemes. It should be noted that more buses and some trains are associated with emissions which will in themselves contribute to carbon emissions - therefore clear benefit would only be seen if there is investment in these modes to improve their carbon performance (e.g. electric buses and road vehicles; hydrogen fuel cell-powered buses etc.); although nominal emissions per passenger would still be less than single car occupancy, even without investment.</p>	<p>• Active travel choices, affordable sustainable travel options and a reduction in transport emissions will - if successful - have a positive impact on the mental and physical wellbeing of affected communities.</p> <p>• LTP4 promotes affordable, accessible and connected transport and recognises that transport plays a key role in access to employment, education health and other services. Improved access to these services will have a significant positive impact on the economy and local communities.</p>	<p>Q/+ Sustainable travel requires less fuel and oil to be transported than in conventional motorised road transport, and its promotion therefore potentially reduces the likelihood of spillage and consequent pollution incidents, with consequent potential minor benefits to water quality.</p>

Type	Scheme	Physical Assets	Innovation & Technology	Overall	Comments
Strategic	Port Expansion	+	0	0	This scheme has potential to have minor positive impacts providing there is appropriate mitigation/enhancement following proper assessment of environmental aspects at outline design stage.
	International Station Signalling (Ashford Spur)	0	0	0	Resignalling scheme is to permit the perpetuation of the status quo - i.e. continued international rail services at Ashford - therefore this scheme represents 'business as usual'. There is potential for temporary negative impacts during construction - these must be properly managed and mitigated through scoping assessment plus ES/22/1/2/3/4 construction assessments if deemed necessary.
	Rail & Bus Improvements	+	0	0	This Priority has potential to have minor positive impacts providing there is appropriate mitigation/enhancement of any related route enhancement schemes, following proper assessment of environmental aspects at outline design stage.
Non-Strategic Rail & Road	Road Safety	0/+	0	0	Although significantly beneficial in terms of direct impact on human health, and thus having inherent value for that reason alone, there are few additional benefits. Care must be taken that schemes do not cause negative impacts to the environment during construction or operation, through proper assessment of environmental aspects at outline design stage.
	Highways Maintenance & Asset Management	+	0/+	0	Minor benefits may be achieved through lifecycle thinking and a holistic approach.
	Home to School Transport	0/+	0	0	Minor benefits may arise from the promotion of active travel modes and the provision of additional buses - there is potential for significant positive impact if this Priority focuses on the promotion of School Travel Plans and the encouragement of sustainable modes amongst school-age children and their parents/guardians. Attending school - irrespective of how they get there - is a significant benefit therefore the positive impact to individuals of transport being facilitated - whether sustainable or not - must not be overlooked.
	Active Travel	0/+	0	0	Minor benefits may arise from the promotion of active travel modes - there is potential for significant positive impact however this is dependent on the level of uptake by the population and consequent knock-on effects.
		0/+	0	0	

Assessment key
++
Minor positive
+
Minor positive
0
None significant
-
Minor negative
--
Major negative

Appendix I HRA Screening Report



Habitats Regulations Assessment (HRA) Screening Report: Kent County Council's Draft Fourth Transport Plan (LTP4)

CO04300448/HRA/REV 0

July 2016



Local

Document Control Sheet

Project Name:	LTP4 SEA Post-Scoping
Project Number:	CO04300448
Report Title:	Habitats Regulations Assessment - Screening Report
Report Number:	CO04300448/HRA1

Issue Status/Amendment	Prepared	Reviewed	Approved
Rev 0 Draft for SEA Environmental Report for Public Consultation	Name: Rhiannon Ferguson Signature:  Date:	Name: Andrew Warwick Signature:  Date: 10/07/2016	Name: Jenefer Taylor  Date: 13/07/2016
Rev 1	Name: Signature: Date:	Name: Signature: Date:	Name: Signature: Date:
Rev 2	Name: Signature: Date:	Name: Signature: Date:	Name: Signature: Date:
	Name: Signature: Date:	Name: Signature: Date:	Name: Signature: Date:

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1 Introduction

1.1 Overview

- 1.1.1 Amey have been commissioned by Kent County Council (KCC) to undertake Habitat Regulation Assessment (HRA) Screening in order to determine whether the Local Transport Plan (LTP4) will have Likely Significant Effects on the Natura 2000 sites present. If Screening deems that Appropriate Assessment is required, this will be commissioned separately by KCC and will be incorporated into the SEA's Environmental Report prior to LTP4 consultation.
- 1.1.2 Natural England will be a statutory consultee when the LTP4 goes for public consultation.

1.2 Scope of this Report

- 1.2.1 This report investigates the potential impact of the LTP4 on Natura 2000 sites in the context of the Conservation of Habitats and Species Regulations 2010 (as amended) ('the Habitats Regulations'), which transpose the European Habitats Directive 1992 and Wild Birds Directive 2009 ('the Directives') into English law and hereafter referred to as the 'Habitats Regulations'.
- 1.2.2 The purpose of this Habitats Regulations Assessment (HRA) Screening Report is to look at the scheme proposals in the context of the requirements of Council Directive 92/43/EEC (Ref 1) on the conservation of Natural Habitat and Wild Fauna and Flora and Council Directive 79/409/EEC on the conservation of Wild Birds. The report outlines whether the plan is likely to have a significant effect upon any Natura 2000 sites by determining if a site's conservation objectives will be compromised.

1.3 Habitats Directive – Article 6 (3)

1.3.1 Article 6(3) of the Habitats Directive requires competent authorities, before deciding to undertake, or give any consent, permission or other authorisation to any project which is likely to have a significant effect on Natura 2000 sites, either individually or in combination with other plans or projects, to undertake an appropriate assessment provided the project is not directly connected with or necessary to the management of the site.

1.3.2 Regulation 61(1) of the Habitats Regulations requires that:

A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which—

(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and

(b) is not directly connected with or necessary to the management of that site. An appropriate assessment of the implications for that site in view of that site's conservation objectives must then be made.

1.4 The Habitats Regulations Assessment Process

Overview – the Four Stages

1.4.1 The European Commission Methodological guidance on the provision of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC recommends a four stage approach in carrying out a Habitats Regulations Assessment as follows:

Stage 1 – Screening:

- 1.4.2 Determines whether a plan or project, either alone or in combination with other plans or projects, is likely to have a significant effect upon a Natura 2000 site.
- 1.4.3 If the screening process identifies effects to be significant, potentially significant or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2.
- 1.4.4 Screening is undertaken without the inclusion of detailed mitigation, unless potential impacts clearly can be avoided through the modification or redesign of the plan or project, in which case the screening process is repeated on the altered plan or project.

Even if the project is not considered to have likely significant effects alone, the in-combination effects of other plans and projects must also be considered at the screening stage.

Stage 2 – Appropriate Assessment:

- 1.4.5 Considers the impact on the integrity of the Natura 2000 sites of the project or plan either alone or in combination with other plans or projects with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, it assesses the potential mitigation of those impacts.

Stage 3 – Assessment of Alternative Solutions:

- 1.4.6 Examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 sites.

Stage 4 – Assessment where no Alternative Solutions Exist and where Adverse Impacts Remain:

- 1.4.7 Assesses compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the plan or project should proceed.
- 1.4.8 Each stage determines whether the next stage in the process is required. If for example, it is concluded that at the end of Stage 1 there will be no significant impacts on the Natura 2000 sites, there is no requirement to proceed to Stage 2.

1.5 Layout of the Report

1.5.1 This report is structured as follows:

- **Chapter 2: Natura 2000 Sites.** This Chapter describes each Natura 2000 site for which an HRA screening matrix is to be completed, including details on qualifying features and conservation objectives.
- **Chapter 3: Kent County Council LTP4.** This Chapter describes the policies and strategies of LTP4 and states any previous consultations with Natural England.
- **Chapter 4: Potential Effects.** Highlights the key potential effects that could arise through future projects.
- **Chapter 5 Screening Assessment.** This Chapter discusses the potential likelihood and significance of effects of the LTP4 on each Natura 2000 site.
- **Chapter 6: Conclusions and Recommendations.** This Chapter summarises the findings of the report, detailing whether there are any likely significant effects on each Natura 2000 site and whether or not the next stage of assessment is required.
- **Chapter 7: References**
- **Appendix A: Drawing.** This shows the Natura 2000 sites within Kent County Council.

1.6 Guidance and Methodology

1.6.1 The assessment has been completed using the following guidance:

- The European Commission's '*Management of Natura 2000 Sites*' (The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC) (Ref. 3);
- Natural England Habitats Regulations Assessment (HRA) Standard. (Ref. 4);
- Volume 11, Section 1, Part 1 of the Design Manual for Roads and Bridges (DMRB) (Ref. 5); and
- The Habitats Regulations Assessment Handbook. (Ref.6)

1.7 Previous LTP [LTP3]

- URS, 2011. Sustainability Appraisal and Habitats Regulations Assessment of Kent's Local Transport Plan 3 (LTP3). (Ref. 8)

Conclusions of LTP3

- 1.7.1 There are two possible aspects of the Integrated Transport Programme (ITP) (Implementation of Cycle routes in Sittingbourne and Sheerness area and Network Management Plan) which may produce schemes that have the potential to impact a Natura 2000 site. Any future schemes arising from these aspects of the ITP will be subject to project level HRA assessment.
- 1.7.2 Kent International Airport Parkway Station and the Lower Thames Crossing schemes will require project-level HRA when more detailed proposals are developed, prior to them being permitted. However, in both cases the LTP3 only identifies the Councils support for the schemes (and in the case of the Parkway Station a bid for funding to develop concepts further) rather than confirming they will proceed.
- 1.7.3 Although there is potential from impacts on Natura 2000 Sites from future projects there is nothing in the LTP3 proposals to suggest a likely significant effect on the Natura 2000 sites and therefore the LTP3 itself can be screened out and an 'Appropriate Assessment' will not be required at strategic level.
- 1.7.4 A detailed in-combination assessment was not undertaken at this stage.

2 Natura 2000 Sites

2.1 Background

- 2.1.1 In May 1992 European Union governments adopted legislation designed to protect the most seriously threatened habitats and species across Europe. This legislation is called the Habitats Directive and complements the Birds Directive adopted in 1979. These directives implemented the creation of a network of sites called Natura 2000. The Birds Directive requires the establishment of Special Protection Areas (SPAs) for birds. The Habitats Directive similarly requires Special Areas of Conservation (SACs) to be designated for other species and for particular habitats. Together, SPAs and SACs make up the Natura 2000 series. All EU Member States contribute to the network of sites in a Europe wide partnership. Ramsar Sites (Wetlands of International Importance) receive protection under the Ramsar convention; however as the majority of Ramsar sites are SPA's they also receive protection under the Birds Directive.

2.2 Natura 2000 Sites within Kent County

Kent contributes significantly to the value of the regional biodiversity resource, with numerous sites of European and International Importance including 14 Special Areas of Conservation (SACs), 6 Special Protection Areas (SPAs), and 6 Ramsar Sites. This is significant as the presence of these sites triggers the requirement for Habitats Regulations Assessment (HRA) Screening to be undertaken for LTP4.

- 2.2.1 All Natura 2000 Sites within or adjacent to the Kent County Council area were assessed as part of this HRA, and are shown in Appendix A. Table 1 provides a description of the qualifying features for each SAC and SPA.

Table 1: Summary of Natura 2000 sites qualifying features

Natura 2000 Sites	Qualifying Features
Sandwich Bay SAC, UK0013077	<p><u>Annex I habitats that are a primary reason for selection of this site</u></p> <p>2110 Embryonic shifting dunes</p> <p>2120 "Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)</p> <p>2130 "Fixed coastal dunes with herbaceous vegetation (grey dunes)</p> <p>2170 Dunes with <i>Salix repens</i> ssp. <i>argentea</i> <i>Salix arenariae</i></p> <p><u>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</u></p> <p>2190 Humid dune slacks</p>
Lydden and Temple Ewell Downs SAC, UK0012834	<p><u>Annex I habitats that are a primary reason for selection of this site</u></p> <p>6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) This site hosts the priority habitat type "orchid rich sites". This site consists largely of CG4 <i>Brachypodium pinnatum</i> and CG5 <i>Bromus erectus</i> – <i>Brachypodium</i></p>
Folkstone to Etchinghill Escarpment SAC, UK0012835	<p><u>Annex I habitats that are a primary reason for selection of this site</u></p> <p>6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) This site hosts the priority habitat type "orchid rich sites". This site consists of extensive CG4 <i>Brachypodium pinnatum</i> and CG5 <i>Bromus erectus</i> – <i>Brachypodium pinnatum</i> calcareous grasslands, together with smaller areas of short-turf CG2 <i>Festuca ovina</i> – <i>Avenula pratensis</i> grassland. The site contains an important assemblage of rare and scarce species, including early spider-orchid <i>Ophrys sphegodes</i>, late spider-orchid <i>O. fuciflora</i> and burnt orchid <i>Orchis ustulata</i>.</p>
Stodmarsh SAC,	<p><u>Annex II species that are a primary reason for selection of this site</u></p> <p>1016 Desmoulin's whorl snail <i>Vertigo moulinsiana</i></p>

Natura 2000 Sites	Qualifying Features
UK0030283	A sizeable population of Desmoulin's whorl snail lives beside ditches within pasture on the floodplain of the River Stour, where reed sweet-grass <i>Glyceria maxima</i> , large sedges <i>Carex spp.</i> and sometimes common reed <i>Phragmites australis</i> dominate the vegetation. Stodmarsh is a south-eastern outlier of the main swathe of sites and is important in confirming the role of underlying base-rich rock (chalk) as a factor determining this species' distribution.
Blean Complex SAC, UK0013697	<u>Annex I habitats that are a primary reason for selection of this site</u> 9160 Sub-Atlantic and medio-European oak or oak-hornbeam forests of the <i>Carpinion betuli</i> At Blean in south-east England, hornbeam <i>Carpinus betulus</i> coppice occurs interspersed with pedunculate oak <i>Quercus robur</i> stands and introduced sweet chestnut <i>Castanea sativa</i> . Great wood-rush <i>Luzula sylvatica</i> is locally dominant in the woodland, and the characteristic greater stitchwort <i>Stellaria holostea</i> is found in more open patches. The stands have traditionally been managed as coppice, and are one of the British strongholds for the heath fritillary butterfly <i>Mellicta athalia</i> .
Queendown Warren SAC, UK0012833	<u>Annex I habitats that are a primary reason for selection of this site</u> 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) This site hosts the priority habitat type "orchid rich sites". Queendown Warren consists of CG3 <i>Bromus erectus</i> grassland. It contains an important assemblage of rare and scarce species, including early spider-orchid, burnt orchid and man orchid <i>Aceras anthropophorum</i> .
Peters Pit SAC, UK0030237	<u>Annex II species that are a primary reason for selection of this site</u> 1166 Great crested newt <i>Triturus cristatus</i> Peter's Pit is an old chalk quarry situated in the North Downs in north Kent, with large ponds situated amongst grassland, scrub and woodland. The ponds have widely fluctuating water levels and large great crested newt populations have been recorded breeding here.
Tankerton Slopes and Swalecliffe SAC,	<u>Annex II species that are a primary reason for selection of this site</u> 4035 Fisher's estuarine moth <i>Gortyna borelii lunata</i> Fisher's estuarine moth has a localised population distribution in the UK, due to its specific habitat requirements and is only found in two areas, the north Essex

Natura 2000 Sites	Qualifying Features
UK0030378	coast and the north Kent Coast. Tankerton slopes and Swalecliffe supports the majority of the north Kent population of this moth which is approximately 20% of the UK population. The site's north facing slopes are composed of London Clay and support a tall herb community dominated by its food plant hog's fennel <i>Peucedanum officinale</i> , together with areas of neutral grassland also required by the species for egg laying.
Wye and Crundale Downs SAC, UK0012831	<p><u>Annex I habitats that are a primary reason for selection of this site</u></p> <p>6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia)</p> <p>This site hosts the priority habitat type "orchid rich sites". Wye and Crundale Downs consists mostly of NVC types CG4 <i>Brachypodium pinnatum</i> and CG5 <i>Bromus erectus-Brachypodium pinnatum</i> grasslands, although small areas of CG2 <i>Festuca ovina-Avenula pratensis</i> grassland also occur. It has an important assemblage of rare, scarce and uncommon orchids, including early spider-orchid, late spider-orchid, burnt orchid and lady orchid <i>Orchis purpurea</i>. The site contains the largest UK colony of <i>O. fuciflora</i>, representing about 50% of the national population.</p>
Thanet Coast SAC, UK0013107	<p><u>Annex I habitats that are a primary reason for selection of this site</u></p> <p>1170 Reefs</p> <p>Thanet Coast in the extreme south-east of England has been selected on account of the unusual communities that are found on this, the longest continuous stretch of coastal chalk in the UK. It represents approximately 20% of the UK resource of this type and 12% of the EU resource. This site contains an example of reefs on soft chalk along the shore. Thanet has sublittoral chalk platforms that extend into the littoral and form chalk cliffs. The sublittoral chalk reefs within the site are comparatively impoverished, owing to the harsh environmental conditions in the extreme southern area of the North Sea, but they are an unusual feature because of the scarcity of hard substrates in the area. Infralittoral kelp forests are characteristically absent, owing to the high turbidity of the water. The subtidal chalk platforms extend offshore in a series of steps dissected by gullies. Species present include an unusually rich littoral algal flora, essentially of chalk-boring algae, which may extend above high water mark into the splash zone in wave-exposed areas. Thanet remains the sole known location for some algal species.</p> <p>8330 Submerged or partially submerged sea caves</p> <p>Thanet Coast provides the second most extensive representation of chalk caves in the UK on the extreme south-east coast of England. The site is bordered by about 23 km of chalk cliffs with many caves and stack and arch formations. Partially submerged caves around Thanet vary considerably in depth, height and</p>

Natura 2000 Sites	Qualifying Features
	<p>aspect and hence in the algal communities present. Some caves extend for up to 30 m into the cliffs and reach 6-10 m in height, although many are much smaller. They support very specialised algal and lichen communities containing species such as <i>Pseudendodonium submarinum</i> and <i>Lyngbya spp.</i>, some of which were first described from Thanet and have never been recorded elsewhere.</p>
<p>Dungeness SAC, UK0013059</p>	<p><u>Annex I habitats that are a primary reason for selection of this site</u></p> <p>1210 Annual vegetation of drift lines</p> <p>The Dungeness foreland has a very extensive and well-developed shoreline, although with sparse vegetation and in places some human disturbance. It is one of two representatives of Annual vegetation of drift lines on the south coast of England. The strandline community on this site comprises Babington's orache <i>Atriplex glabriuscula</i>, which occurs mostly on the accreting eastern shoreline, although it is also present on the eroding southern shoreline.</p> <p>1220 Perennial vegetation of stony banks</p> <p>Dungeness is the UK's largest shingle structure and represents the habitat type on the south-east coast of England. The total area of exposed shingle covers some 1,600 ha, though the extent of the buried shingle ridges is much greater. Despite considerable disturbance and destruction of the surface shingle, the site retains very large areas of intact parallel ridges with characteristic zonation of vegetation. It still has the most diverse and most extensive examples of stable vegetated shingle in Europe, including the best representation of scrub on shingle, notably prostrate forms of broom <i>Cytisus scoparius</i> and blackthorn <i>Prunus spinosa</i>. A feature of the site, thought to be unique in the UK, is the small depressions formed within the shingle structure, which support fen and open-water communities.</p> <p><u>Annex II species that are a primary reason for selection of this site</u></p> <p>1166 Great crested newt</p> <p>Dungeness in south-east England has the largest shingle expanse in Europe and contains a large number of waterbodies within its 2,000 ha. This extensive site hosts a large and viable great crested newt population in a range of natural and anthropogenic habitats. These include natural pools and those resulting from gravel extraction and other activities. Terrestrial habitat of importance for feeding and shelter is provided by a range of open shingle vegetation with scrub in the vicinity of some of the waterbodies.</p>

Natura 2000 Sites	Qualifying Features
<p>North Downs Woodlands SAC, UK0030225</p>	<p><u>Annex I habitats that are a primary reason for selection of this site</u></p> <p>9130 <i>Asperulo-Fagetum</i> beech forests</p> <p>This site consists of mature <i>Asperulo-Fagetum</i> beech forests and also yew 91J0 Yew <i>Taxus baccata</i> woods on steep slopes. The stands lie within a mosaic of scrub and other woodland types and are the most easterly of the beech woodland sites selected.</p> <p>91J0 Yew woods of the British Isles</p> <p>Yew woodland at this site is associated with 9130 beech forests, scrub and small areas of unimproved grassland on thin chalk soils. Where the shade is not too dense dog's mercury <i>Mercurialis perennis</i> predominates in the ground flora. The site is the most easterly of those selected.</p> <p><u>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</u></p> <p>6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia)</p>
<p>Parkgate Down SAC, UK0030338</p>	<p><u>Annex I habitats that are a primary reason for selection of this site</u></p> <p>6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia)</p> <p>This site hosts the priority habitat type "orchid rich sites". Parkgate Down is situated on the chalk of the North Downs and consists largely of NVC type CG4 Brachypodium pinnatum grassland. The site contains an outstanding assemblage of orchids including the nationally rare monkey orchid <i>Orchis simia</i> and late spider orchid <i>Ophrys fuciflora</i> together with the nationally scarce musk orchid <i>Herminium monorchis</i> and lady orchid <i>Orchis purpurea</i>.</p>
<p>Dover to Kingsdown Cliffs SAC, UK0030330</p>	<p><u>Annex I habitats that are a primary reason for selection of this site</u></p> <p>1230 Vegetated sea cliffs of the Atlantic and Baltic Coasts</p> <p>Dover to Kingsdown cliffs support a full zonation of maritime cliff communities found on chalk substrates, reflecting different levels of exposure to wind and salt spray. The most exposed, lowest parts of the cliff face support rock-crevice communities with rock samphire <i>Crithmum maritimum</i>, rock sea-lavender <i>Limonium binervosum</i> and thrift <i>Armeria maritima</i>, with the rare hoary stock <i>Matthiola incana</i> in places. On more sheltered slopes there is a community restricted to south-facing chalk cliffs characterised by wild cabbage <i>Brassica oleracea</i>. There are good paramaritime grassland transitions to chalk grassland.</p>

Natura 2000 Sites	Qualifying Features
	<p>The endangered oxtongue broomrape <i>Orobanche artemisiae-campestris</i>, confined in the UK to unstable coastal chalk cliffs of southern England, has a stronghold on this site. The cliffs are internationally important as a stratigraphic reference site for chalk cliff exposures.</p> <p><u>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</u></p> <p>6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia)</p>
Dungeness Romney marsh and Rye bay SPA, UK9012091	<p><u>This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:</u></p> <p>During the breeding season; Common Tern <i>Sterna hirundo</i>, 266 pairs representing at least 2.2% of the breeding population in Great Britain (5 year mean, 1993-1997) Little Tern <i>Sterna albigula</i>, 35 pairs representing at least 1.5% of the breeding population in Great Britain (5 year mean, 1993-1997) Mediterranean Gull <i>Larus melanocephalus</i>, 2 pairs representing at least 20.0% of the breeding population in Great Britain (5 year mean, 1993-1997).</p> <p>On passage; Aquatic Warbler <i>Acrocephalus paludicola</i>, 30 individuals representing at least 44.8% of the population in Great Britain (Count as at 1997)</p> <p>Over winter; Bewick's Swan <i>Cygnus columbianus bewickii</i>, 179 individuals representing at least 2.6% of the wintering population in Great Britain (5 year peak mean, 1992/3-1996/7)</p> <p><u>This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:</u></p> <p>Over winter; Shoveler <i>Anas dypeata</i>, 419 individuals representing at least 1.0% of the wintering Northwestern/Central Europe population (5 year peak mean 1991/2 - 1995/6)</p>
Medway Estuary and Marshes SPA, UK9012031	<p><u>This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:</u></p> <p>During the breeding season; Avocet <i>Recurvirostra avosetta</i>, Little Tern <i>Sterna albigula</i>,</p> <p>Over winter; Avocet</p> <p><u>This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:</u></p>

Natura 2000 Sites	Qualifying Features
	<p>On passage; Ringed Plover <i>Charadrius hiaticula</i></p> <p>Over winter; Black-tailed Godwit <i>Limosa limosa islandica</i>, Dunlin <i>Calidris alpina alpina</i>, Grey Plover <i>Pluvialis squatarola</i>, Pintail <i>Anas acuta</i>, Redshank <i>Tringa totanus</i>, Ringed Plover <i>Charadrius hiaticula</i>, Shelduck <i>Tadorna tadorna</i>.</p> <p>Assemblage qualification: A wetland of international importance.</p> <p><u>The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl</u></p> <p>Over winter, the area regularly supports 65,274 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: Little Grebe <i>Tachybaptus ruficollis</i>, Dark-bellied Brent Goose <i>Branta bernicla bernicla</i>, Shelduck, Pintail, Ringed Plover, Grey Plover, Dunlin, Avocet <i>Recurvirostra avosetta</i>, Redshank, Curlew <i>Numerius arquata</i>, Great Crested Grebe <i>Podiceps cristatus</i>, Cormorant <i>Phalacrocorax carbo</i>, Wigeon <i>Anas penelope</i>, Teal <i>Anas crecca</i>, Oystercatcher <i>Haematopus ostralegus</i>, Lapwing <i>Vanellus vanellus</i>, Black-tailed Godwit, Whimbrel <i>Numerius phaeopus</i>.</p>
The Swale SPA, UK9012011	<p><u>This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:</u></p> <p>During the breeding season; Avocet, Marsh Harrier, Mediterranean Gull <i>Larus melanocephalus</i>.</p> <p>Over winter; Avocet <i>Recurvirostra avosetta</i>, Bar-tailed Godwit, Golden Plover <i>Pluvialis apricaria</i>, Hen Harrier.</p> <p><u>This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:</u></p> <p>On passage; Ringed Plover <i>Charadrius hiaticula</i>,</p> <p>Over winter; Black-tailed Godwit, Grey Plover, Knot, Pintail, Redshank, Shoveler <i>Anas clypeata</i></p> <p>Assemblage qualification: A wetland of international importance.</p> <p><u>The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl</u></p> <p>Over winter, the area regularly supports 65,390 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: White-fronted Goose Anser, Golden Plover, Bar-tailed Godwit, Pintail, Shoveler, Grey Plover, Knot, Black-tailed Godwit, Redshank, Avocet, Cormorant, Curlew <i>Numerius arquata</i>, Dark-bellied Brent Goose,</p>

Natura 2000 Sites	Qualifying Features
	Shelduck, Wigeon, Gadwall <i>Anas strepera</i> , Teal, Oystercatcher, Lapwing, Dunlin, Little Grebe <i>Tachybaptus ruficollis</i> .
Thanet Coast and Sandwich Bay SPA, UK9012071	<p><u>This site qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:</u></p> <p>Over winter; Turnstone <i>Arenaria interpres</i>.</p>
Stodmarsh SPA, UK9012121	<p><u>This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:</u></p> <p>Over winter; Bittern <i>Botaurus stellaris</i>, Hen Harrier.</p>
Thames Estuary and Marshes SPA, UK9012021	<p><u>This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:</u></p> <p>Over winter; Avocet, Hen Harrier</p> <p><u>This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:</u></p> <p>On passage; Ringed Plover</p> <p>Over winter; Ringed Plover</p> <p>Assemblage qualification: A wetland of international importance.</p> <p><u>The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl</u></p> <p>Over winter, the area regularly supports 33,433 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: Redshank, Black-tailed Godwit, Dunlin, Lapwing, Grey Plover, Shoveler, Pintail, Gadwall, Shelduck, White-fronted Goose <i>Anser albifrons</i>, Little Grebe, Ringed Plover, Avocet, Whimbrel.</p>

3 Kent County Council Local Transport Plan LTP4

3.1 Introduction

- 3.1.1 Kent County Council (KCC) has a statutory duty under the Transport Act 2000, as amended by the Local Transport Act 2008, to produce a LTP for the administrative county of Kent. This strategy clearly identifies transport priorities for the county, as well as highlighting to national Government and the South East Local Enterprise Partnership (SELEP) the investment required to support growth. The LTP is informed by national and local policies and strategies, and is delivered through supporting strategies, policies and action plans.
- 3.1.2 LTP4 sets out KCC's policies to deliver strategic outcomes for transport and is accompanied by a series of implementation plans for funding streams and a methodology for prioritising funding. LTP4 is designed to deliver 'Growth without Gridlock'.

3.2 Policies and strategies

- 3.2.1 KCC's LTP4 consists of five key policies which are in place to *"To deliver safe and effective transport, ensuring that all Kent's communities and businesses benefit, the environment is enhanced and economic growth is supported"*.
- Outcome 1: Economic growth and minimised congestion.
Policy: Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.
 - Outcome 2: Affordable and accessible door-to-door journeys.
Policy: Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.
 - Outcome 3: Safer travel.
Policy: Provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.

- Outcome 4: Enhanced environment.

Policy: Deliver schemes to reduce the environmental footprint of transport, and enhance the historic and natural environment.

- Outcome 5: Better health and wellbeing.

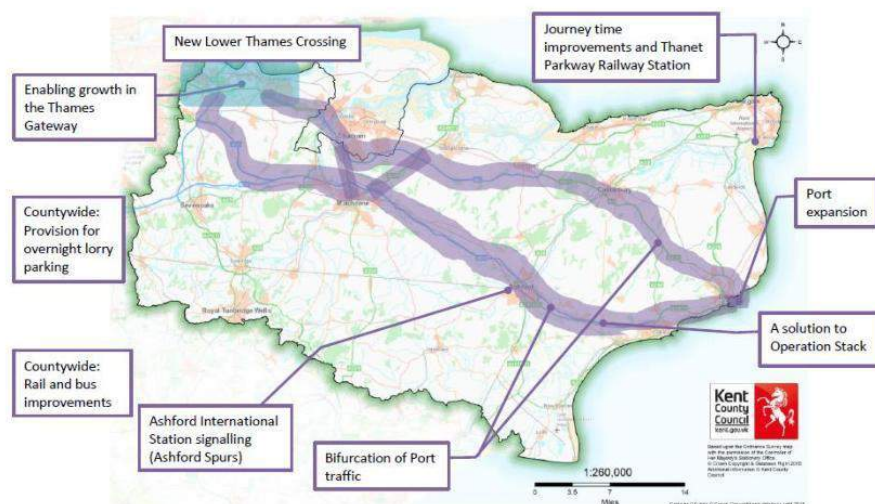
Policy: Promote active travel choices for all members of the community to encourage good health and wellbeing, and implement measures to improve local air quality.

Table 2 highlights the strategic priorities of the LTP4 and the schemes within them, which are required to deliver 'Growth without Gridlock'; Figure 1 presents these spatially.

Table 2: Strategic priorities of the LTP4

Strategic Priorities		Local
National	Countywide	
Enabling Growth in the Thames Gateway New Lower Thames Crossing Port Expansion A Solution to Operation Stack	Bifurcation of Port Traffic Provision for Overnight Lorry Parking Ashford International Station Signalling (Ashford Spurs) Journey Time Improvements and Thanet Parkway Railway Station Rail and Bus Improvements	District Priorities consisting of various schemes.

Figure 1: Spatial Distribution of LTP4's Strategic Priorities



4 Potential effects of LTP4's Strategic Priorities

4.1.1 Some of the potential effects which may arise as part of the strategies future schemes are highlighted in Table 3 below.

Table 3: Potential effects

Source	Effect
Road transport infrastructure construction Changes in traffic flows and volumes Greenhouse gas emissions Dust emissions from construction plant	Reduction in air quality Reduction in habitat quality and associated species due to global warming
Removal of vegetation Habitat loss or disturbance from land take	Loss, physical disturbance and/or fragmentation of habitat and species
Increase in noise levels from construction plant	Disturbance to local wildlife from noise pollution
Inadvertent movement of invasive plant species	Spread of invasive species leading to a reduction in biodiversity
Presence of chemical/oil on site – with the potential for spillages	Pollutants entering the water system resulting in a decrease in quality, degradation of ecosystems, damage to vegetation, Soil quality
Increased road traffic or introduction of traffic into new area	Increase in wildlife road mortalities

4.1.2 It should be noted that there will be opportunities for the LTP4 to improve biodiversity through habitat enhancement and as such not all impacts will be negative.

5 Screening Assessment

5.1 Screening matrix

- 5.1.1 Table 4 below sets out the HRA screening of the strategic priorities and identifies any likely significant effects that may undermine conservation objectives for any of the SAC/SPA qualifying species or habitats. If a likely Significant Effect cannot be ruled out (with basic mitigation) for a Natura 2000 site, an Appropriate Assessment is likely to be required.
- 5.1.2 Likely significant effects are identified by using the source-pathway-receptor model, where there would need to be a source of potential impact and a pathway to the European site to enable the impact to occur.

Table 4: Screening matrix

Designated Site	Approximate minimum distance of Natura 2000 site from LTP4 ¹	Relevant strategic priority	Connectivity between the Natura 2000 site and the LTP4 strategy	Potential impacts	Avoidance or mitigation measures ²	Screening in/out (with mitigation)	Project level HRA required
Sandwich Bay SAC, UK0013077	750m	Journey Time Improvements and Thanet Parkway Rail Station (countywide and district scheme)	Elements of the strategy could have both indirect and direct effects on the qualifying features due to the proximity of the site. There is the potential for other district schemes to impact upon this SAC.	Pollutants entering the habitat via groundwater contamination or from surface water.	Standard pollution prevention measures in line with Environment Agency.	Out	Yes
Lydden and Temple Ewell Downs SAC, UK0012834	Adjacent	Bifurcation of port traffic, Dover's transport priorities	Elements of this countywide strategy (Specifically duelling sections of single carriageway on the A2 north of Dover along Jubilee Way to Whitfield and near Lydden) will be delivered within a close proximity of the site, which could result in a direct effect. There is the potential for other district strategies to have an indirect effect on the SAC.	Contamination from chemical/oil spills Noise and air pollution Reduction in soil quality	Standard pollution prevention measures in line with Environment Agency.	Out	Yes
Folkstone to Etchingham Escarpment SAC, UK0012835	8km	A solution to Operation Stack, Dover transport priorities	The qualifying features of this site are unlikely to be vulnerable (indirectly or directly) from elements of the strategy.	No likely significant effect predicted	None required.	Out	Yes
Stodmarsh SAC, UK0030283	1km	Canterbury's transport priorities	The SAC could be indirectly impacted by the strategy through district schemes. The Great Stour watercourse flows close to these schemes and is linked to Stodmarsh SAC.	Contamination (from pollutants entering water system) of habitat leading to detrimental effect on snail species	Standard pollution prevention measures in line with Environment Agency.	Out	Yes
Blean Complex SAC, UK0013697	1.6km	Canterbury's transport priorities	This SAC could be indirectly affected by the strategy through direct schemes. This SAC is linked to other areas via surface waterbodies.	Reduction in soil quality from pollutants entering groundwater.	Standard pollution prevention measures in line with Environment Agency.	Out	Yes
Queendown Warren SAC, UK0012833	1.9km	Swale's transport priorities	The qualifying features of this SAC are unlikely to be impacted (directly or indirectly) by the strategy due to distance and lack of potential pollution pathways.	No potential effects predicted.	None required.	Out	Yes
Peters Pit SAC, UK0030237	2km	Tonbridge and Malling's Transport Priorities	The qualifying species (GCN) are unlikely to be impacted by district schemes of the strategy (Specifically study into traffic flows on A229 Bluebell Hill). There is a lack of waterbodies in close proximity and barriers present.	No potential effects predicted.	None required.	Out	Yes
Tankerton Slopes and Swalediffe SAC, UK0030378	5km	Canterbury's transport priorities	The qualifying features are unlikely to be affected by the strategy across this distance.	No potential effects predicted.	None required.	Out	Yes

¹ This distance is based the closest point of the Natura 2000 site to any of the strategies.

² Mitigation measures may need to be increased/modified when further scheme details are available.

Designated Site	Approximate minimum distance of Natura 2000 site from LTP4 ¹	Relevant strategic priority	Connectivity between the Natura 2000 site and the LTP4 strategy	Potential impacts	Avoidance or mitigation measures ²	Screening in/out (with mitigation)	Project level HRA required
Wye and Crundale Downs SAC, UK0012831	4.6km	Bifurcation of port traffic, Ashford's transport priorities	The qualifying features are unlikely to be impacted across this distance.	No potential effects predicted.	None required.	Out	Yes
Thanet Coast SAC, UK0013107	500m	Journey time improvements and Thanet Parkway Railway Station, Thanet's transport priorities	There is potential for the strategy to have an indirect impact on the SAC via district schemes (Margate junction improvements).	Damage to habitats from pollutants entering via surface water/ drains	Standard pollution prevention measures in line with Environment Agency.	Out	Yes
Dungeness SAC, UK0013059	Adjacent	Shepway's transport priorities	The strategy has the potential to impact the qualifying features (including GCN) of the SAC via district schemes (Highway improvements to support Lydd Airport). This matter has already been considered through the ecological assessments which accompanied the London Ashford Airport planning applications Y06/1647/SH and Y06/1648/SH. These conclude that, "there would be a negligible habitat impact on the SAC and the SSSI as a result of the land use change, and this change would not adversely affect the integrity of the SAC". In respect of the highways improvements, these are located at the junction formed by the B2075 (Romney Road) and the A259 (Lydd Road). The assessments state, "the land required for the proposed roundabout is not located within the SSSI and the ecological survey demonstrated that the land is of low ecological value. However, it is considered that the land (i.e. the present T-junction) is in the potential zone of influence for the SSSI. Accordingly, prior to the submission of a planning application for the roundabout, further detailed surveys would be carried out. These surveys, and any mitigation measures identified, would then be submitted in support of the planning application at the relevant time."	Disturbance/damage to habitat and species through habitat loss/fragmentation. Air/noise pollution	Modifications at design stage to ensure that GCN breeding ponds and surrounding habitat are not disturbed. Consider habitat enhancement if damage to habitat is unavoidable. Standard pollution prevention measures in line with Environment Agency.	Out	Yes
Dungeness Romney marsh and Rye bay SPA, UK9012091	1.9km	Shepway's transport priorities	The strategy has the potential to indirectly impact breeding birds.	Disturbance via noise pollution.	Standard pollution prevention measures in line with Environment Agency. Noise barriers and/or exclusion zones must be in place to reduce the disturbance to birds	Out	Yes
North Downs Woodlands SAC, UK0030225	3.4km	Tonbridge and Malling's Transport Priorities	The qualifying features are unlikely to be impacted by the strategy over this distance.	No potential effects predicted.	None required.	Out	Yes
Parkgate Down SAC, UK0030338	7.4km	Shepway's transport priorities	The qualifying features of the SAC are unlikely to be impacted across this distance.	No potential effects predicted.	None required.	Out	Yes
Dover to Kingsdown Cliffs SAC, UK0030330	170m	Port expansion, Dover's transport priorities	Despite the close proximity of the SAC, the qualifying features are unlikely to be impacted as the cliffs act as a natural barrier.	No potential effects predicted.	None required.	Out	Yes