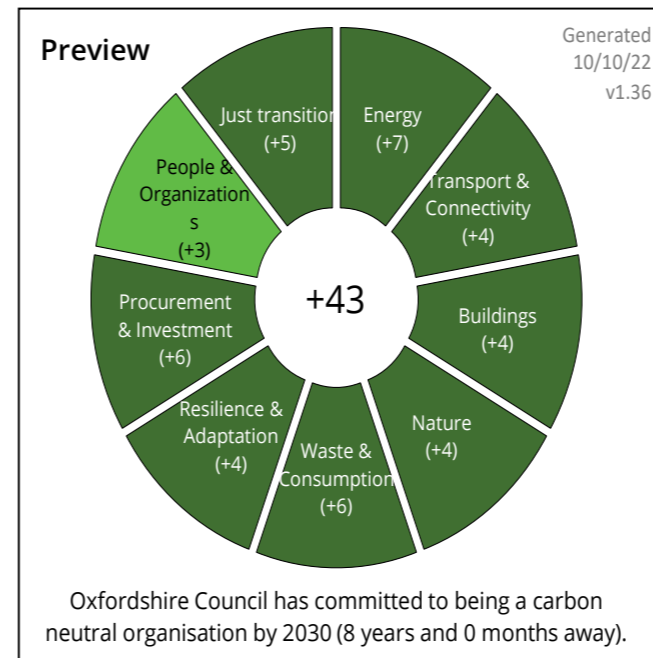


Climate Impact Assessment

Summary

Directorate and Service Area	Environment & Place
What is being assessed	Street Lighting and Illuminated Asset Policy Statement, and overall maintenance approach.
Is this a new or existing function or policy?	Existing Policy document This is a revision of the existing Street Lighting & Illuminated Assets policy
Summary of assessment	The revised Street Lighting & Illuminated Asset Policy approach defines the strategy and plan for how Oxfordshire will be looking at providing new street lighting in the future on a site by site basis to minimize the number of electrical assets and to reduce overall energy and carbon emissions. The County Council will continue to maintain the existing highway electrical assets but ensure that they deliver operational efficiencies saving and value for money in a risk-based
Completed by	Anthony Palman-Brown
Climate action sign off by	Tim Shickle
Director sign off by	Paul Fermer
Assessment date	44841



Detail of proposal

Context / Background	<p>Oxfordshire County Council aim to reduce their overall energy consumption and carbon emissions. The new cabinet members for Climate & Change are promoting as part of the climate contribution and our zero mission target by 2030. The Street Lighting has an impact on the current environment through the consumption of the electricity and the carbon that it produces via energy. Therefore, it is important to assess the existing highway electricity consumption of energy to show the potential ways of reducing this. The proposal is a new policy by a risk assessment on a site-by-site basis to demonstrate if street lighting is required at each site. The revised</p>
Proposal	<p>The new policy seeking approval at cabinet is to support an approach whereby street lighting infrastructure is only provided when justified and firstly considering reduction of our energy bill, reduce light pollution and the impact on the environment and biodiversity.</p> <p>The highway network provides a wide variety of habitats for plants and animals, and it is our legal duty under the Natural Environment and Rural Communities Act 2006 to protect this environment when carrying out works on the infrastructure. The lighting is to be designed to provide a balance between maintaining a safe network for highway users, improving the visual amenity of the street scene, and protecting the local habitants. There are a few nature designations, landmarks and conservation areas and lighting have a potential impact on these areas. There is also a range of protected species that occur in the area, of particular concern for lighting are bats. To ensure that the correct considerations and mitigations are made we must ensure closer working partnerships with the planning and ecology officers. The plan is not to install any lighting and demonstrate if</p>
Evidence / Intelligence	<p>The revised policy has been developed by a member led joint Steering Group to reflect a change in approach by the council. The council's long-term objective is to reduce its reliance on energy usage and becoming more sustainable, hence the reduction in carbon and looking at alternative solutions to lighting. The steering group was made up of a representative from Thames Valley Police , Community Safety Officer, Road Safety Officer, Head of Highway Maintenance, CRPE Dark Sky's rep, Director, Group Manager - Traffic & Road Safety and Principal Officer - Lighting. It is proposed that we will provides and/or maintains electrical assets only where necessary and where a need has been clearly identified which demonstrates that lighting is required. Examples of such locations and needs include but are not limited too.</p> <ul style="list-style-type: none"> • on major road junction and at roundabouts as part of a suite of safety measures to reduce the risk of night-time accidents.
Alternatives considered / rejected	<p>Oxfordshire County Council looked at providing and certify that a provision of adequate and appropriate levels of lighting to ensure safe passage to all users of the highway network. Option's including further dimming of equipment during low traffic periods and enables the reduction in running hours due to the instant switch on of LED equipment. Dynamic (real-time demand/usage) were investigated. The external control of the lighting can be introduced and retrofitted where required. Where appropriate, de-illuminate or provide off-grid solutions for signage where possible and practical. Low level lighting was considered as an option. However, this was contemplated not to provide a suitable outcome, due to the increased numbers of low-level bollards that would be required to replicate a streetlight plus the increased energy consumption as you would need more of them to deliver a system which would not comply to the relevant standard.</p> <p>The considered solar lighting and battery power solution as an innovative alternative approach for both efficiency and environmental reasons.</p>

Category	Impact criteria	Score (-3 to +3)	Description of impact	Actions or mitigations to reduce negative impacts	Action owner	Timeline and monitoring arrangements
Energy	Increases energy efficiency	3	Focussing capital spending on the use of new energy efficient technologies such as LED street lighting & Traffic Signals, plus the dimming & trimming of energy useage on projects to reduce future energy costs	Further energy efficiency gains could be made in traffic light systems and highways depots	Sean Rooney	2022 to 2027
Energy	Promotes a switch to low-carbon or renewable energy	2	#REF!	Source and procurement of energy supply for electrical highway assets maintenance is not currently considered within the updated approach and sits outside the remit of street lighting, however we do have an input into discussions with the relevant colleagues who look into the current market place through an energy framework agreement. However Oxfordshire highways we are considering solar lighting and battery power solution as an alternative. We had also considered low level lighting as a option. However, this was considered not to be appropriate, due to the increased number of bollards required to replicate a street light plus the increased energy consumption as you need more of them.		
Energy	Promotes resilient, local, smart energy systems	2	Energy supply is considered as part of this approach, to look at reductions and areas where these can be achieved.			
Transport & Connectivity	Reduces need to travel and/or the need for private car	N/A				
Transport & Connectivity	Supports active travel	2	The promoted approach may see an improvement with additional street lighting and safety of the active travel network, by prioritising investment to support walking and cycling.	Increase overall investment in footways, cycleways and parts of the network which have high active travel use, not just prioritise from existing maintenance budgets.	Sean Rooney	2022 to 2027

Transport & Connectivity	Increases use of public transport		<p>The promoted approach should see an improvement in condition and safety of the active travel network, by prioritising investment in parts of the network which support public transport.</p>	<p>On footways, cycleways and parts of the network which have high active travel use. This will be investigated on a case by case basis to the type of lighting ensure that no negative effects to the biodiversity, Health and wellbeing is</p>	Sean Rooney	2022 to 2027
Transport & Connectivity	Accelerates electrification of transport		<p>The street lighting will support electricity charging infrastructure as it develops but does not directly influence the speed of growth of electrification within transport. We are working in partnership with our District Council's to develop a technical strategy for new new developments etc.</p>	<p>Provide technical advise and support delivery of ev charging points across the network.</p>	Sean Rooney	2022 to 2027
Buildings	Promotes net zero new builds and developments		<p>With reference to our street lighting maintenance approach it does not include new builds. However, with new housing developments we will keep the proposed street lighting to a minimum and where it is needed on a case by case basis. However, this will have large areas of the adopted highway in darkness which may not be appreciated by the local residents on these private developments.</p>	<p>The complaints from local residents will need be address when the new developments (sites) are adopted. These maybe a number of years prior to this happening that may not be a satisfactory outcome to local residents.</p>	Sean Rooney	2022 to 2027
Buildings	Accelerates retrofitting of existing buildings	N/A				
Nature	Protects, restores or enhances biodiversity, landscape and ecosystems		<p>The street lighting, if it is poorly designed can cause a impact by over illuminating an area plus the resultant may have an impact on biodiversity and have an effect on dark skys with sky glow over an site in rural areas by its very nature we will maintain an existing asset and extreme care should be taken not to encroach on green space We have taken steps to improve biodiversity on areas where these have had prior survey's carried out every effort will be made to reduce the impact by only lighting areas that are required to be illuminated on a case by case</p>	<p>Where lighting improvements are necessary every effort will be made to ensure that damage to the natural environment is kept to a minimum. Only illuminate areas where are necessary. We will use this as an opportunity to enhance biodiversity, landscape and ecosystems by keeping these areas as dark as possible.</p>	Sean Rooney	2022 to 2027

Nature	Develops blue and green infrastructure	1 Green infrastructure are incorporated into the street scene with tree planting to give a visual aid of a avenue of a green landscape within an urban area.	An increase in overall investment in project/schemes to develop a forward programmes of work to identify opportunities for more green infrastructure and drainage improvements to reduce flooding and encourage biodiversity.	Sean Rooney	2022 to 2027
Nature	Improves access to nature and green spaces	1 The promoted approach should see an improvement in the safety of active travel and public rights of way network , by prioritising investment to support walking, cycling routes public rights of way. This will in turn improve access to green spaces	Increase overall investment in from third parties, to improve footways, cycle routes and parts of the network which have high active travel use, not just prioritise from existing maintenance budgets.	Sean Rooney	2022 to 2027
Waste & Consumption	Reduces overall consumption	2 We have made a commitment to transform service delivery to having the lowest possible environmental impact, with a particular emphasis on developing the circular economy of re-using existing second-hand equipment on maintenance wherever possible. We will do this by delivering environmental, carbon and sustainability improvement plans focussing on four key business areas of the service; a. New Scheme Design b. Contractor Plant & Fleet c. Materials	The street lighting have a LED project to replace all our luminaires to a LED solution, thus reducing energy consumption by 60% and carbon reduction targets, which are linked to key performance indicators, to reduce consumption of fuel, energy and material usage etc.	Sean Rooney	2022 to 2027
Waste & Consumption	Supports waste prevention and drive reuse and recycling	2 Oxfordshire highways has already reduced the amount of hazardous lamp waste, containing sodium, plus recycling plastic's, electronic etc.	Further waste savings could be made through collaborative planning sessions involving working with other contractors, supply chains to create programme specifically for recycling steel and precious metals and electronic components etc.	Sean Rooney	2022 to 2027

Resilience & Adaptation	Increases resilience to flooding	1	<p>We have identified the strategically critical links and critical assets, and have recorded these as our 'Resilient Network'. We will prioritise the management and maintenance of infrastructure on this network to minimise the impact on economic activity of any 'loss of service' that might arise from occurrences such as severe weather and other disruptive events, includes electrical supply & cable faults, wind damage, flooding and heat damage.</p> <p>We have identified the strategically critical links and critical assets, and have recorded these as our 'Resilient Network'. We will prioritise the management and maintenance of infrastructure on this network to minimise the impact on economic activity of any 'loss of service' that might arise from occurrences such as severe weather and other disruptive events, including flooding and heat damage.</p> <p>We will prioritise the management and maintenance of infrastructure on our defined "Resilient Network" which will minimise the impact of climate change, protect supply corridors and strategic routes, which are vital for transport and commerce.</p>	<p>We will review the capability of this network on a regular basis (particularly after any severe weather events) and in the light of emerging patterns of climate change. We will consider how we can reduce the number of supply faults with the location electricity distribution network operator's flooding incidents through engineered and nature-based solutions etc.</p> <p>We will review the capability of this network on a regular basis (particularly after any severe weather events) and in the light of emerging patterns of climate change and the age and condition of the highway electrical assets.</p> <p>We will consider engineered and nature-based solutions to mitigate the impact of rising temperatures.</p> <p>Regularly review and stress test the defined resilient network to ensure it is current, effective and relevant</p>	Sean Rooney	2022 to 2027
Resilience & Adaptation	Increases resilience to other extreme weather events (e.g., storms, cold snaps, heatwaves, droughts)	1			Sean Rooney	2022 to 2027
Resilience & Adaptation	Increases resilience of council services, communities, energy systems, transport infrastructure and/or supply chains	2			Sean Rooney	2022 to 2027
Procurement & Investment	Procurement practices prioritise low-carbon options, circular economy and sustainability	2	<p>We have developed and agreed to a Carbon Reduction Action Plan with our maintenance contractor who will focus on; the top works activities i.e. our LED lantern and column replacement schemes, supply chain partners and materials to deliver the most significant carbon and cost savings.</p>	<p>Constant review of the progress of the implementation of the LED project/carbon reduction project and to re-profile the delivery as necessary whilst updating the Medium Term Financial Plan 22/23.</p>	Sean Rooney	2022 to 2027

Procurement & Investment	Investment being considered supports climate action/ is consistent with path to net zero	<p>The Electrical - Lighting Team has developed an business case, which funding has been approved to replace it aging assets that have come to the end of it serviceable life and to upgrade the lanterns to a LED option to help mitigate increasing energy costs to those key assets and infrastructure to contribute to an improved environmental condition and a more sustainable network offering. Our street lighting maintenance contractor and supply-chain have also made commitments to net-zero.</p>	<p>Capital funding has been allocated for the asset improvements, that are required to meet the net zero and accompany the emerging carbon reduction strategy and current carbon reduction plan. This is to ensure that carbon reduction targets are met and if not that mitigation measures can be put in place.</p>	Sean Rooney	2022 to 2027
People & Organizations	Drives behavioural change to address the climate and ecological emergency	<p>The revised Street Lighting and Illuminated Asset Policy approach which will drive behavioural change by delivering a reduced/departure from the standards service level which will not be compliant in accordance with Bristish Standard 5489, but for one which contributes towards, enables, and facilitates the achievement of the county council's corporate priorities of net zero and help reduced energy useage on a economic and environmental basis. The approach sets the principals and guidance for officers to follow, in a consistent manor, in how they provide lighting design the future approach for new projects.</p>	<p>Ensure that whole service is informed of and encouraged to adopt the updated approach, as our objective is not to illuminate all areas.</p>	Sean Rooney	2022 to 2027
People & Organizations	Drives organizational and systemic change to address the climate and ecological emergency	<p>Environment, Climate and Sustainability is a core strategic area within the Highways Asset Management Strategy and Plan and officers' will have to develop their own life-cycle plans, asset specific maintenance strategies, processes and procedures for managing</p>	<p>Carry out regular review of this policy, procedures and maintenance strategies alongside the core strategic of the Climate & Energy Insight team to ensure that the Environment, Climate, Energy and Sustainability, are detailed within the approach.</p>	Sean Rooney	2022 to 2027

Just transition	Promotes green innovation and job creation	<p>The new approach incentivises innovation and carbon reduction 2 through contract performance targets and the award of work to companies that perform well on these measures.</p> <p>The revised Street Lighting & Illuminated Asset policy is to help promote the environment, biodiversity, walking and cycling, the health and wellbeing of Oxfordshire's residents by giving an increasingly greater priority to those assets and parts of the network where more</p>	<p>Regularly review carbon savings and adopt successful innovations into our procedures and working practices</p> <p>Monitor the number of active travel sections of the network, where night time usage has increased, to gauge if the approach has been successful or not and the prioritisation has been the correct measures to fund maintenance prioritisation.</p>	Sean Rooney	2022 to 2027
Just transition	Promotes health and wellbeing	<p>2 active and sustainable modes of transport can be supported to offer a realistic alternative to, and a lower dependency on private car use / ownership. In particular footways, cycleways (on and off carriageway) and the facilities that better allow all network users to share the space that is available.</p>	<p>Changing the lighting design safety priority away from all highway routes that is predominantly used by car/cycle use and towards active travel and sustainable transport could adversely affect a number groups which are reliant on private car use, for example; people with disabilities and mobility/health issues, womens groups, pensioners, rural communities with poor public transport links, healthcare professionals and blue light services. We have engaged with these stakeholders and will continue to do so, to ensure that they are not unfairly disadvantaged.</p>	Sean Rooney	2022 to 2027
Just transition	Reduces poverty and inequality	<p>1 work will be determined by the use of the asset. By providing a safe and serviceable network which will improve residents access to employment, services and green space will ultimately lead to economic benefits for local businesses and residents</p>	<p>The revised policy does not have any bias or discriminate against any gender or ethnic groups or minority, as street lighting benefits all that are using the public highway for safety reasons in a equal measure and the method at which we prioritise the</p>	Sean Rooney	2022 to 2027