

ESSEX COUNTY COUNCIL HIGHWAYS AND TRANSPORTATION

EXECUTIVE DECISION

Short Title of Decision:	Part Night Lighting Pilot in Maldon District
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*Tick the relevant box below

Key Decision by Cabinet Member for Highways and Transportation

- in consultation with another Cabinet Member
- in consultation with the Service Director Highways and Transportation

*

✓

Non Key Decision by Cabinet Member for Highways and Transportation

- in consultation with another Cabinet Member
- agreed with the Service Director Highways and Transportation

*

Non Key Decision by Service Director Highways and Transportation

- in consultation with the Cabinet Member for Highways and Transportation
- on own account

*

*

Recommendation - Decision(s)

Commencing on 20 February 2007 the street lights owned and operated by the County Council in the district of Maldon and shown as blue on the plans, will be switched off between the hours of 12 midnight and 5 a.m. GMT. The street lights shown as red on the plans will remain on all night. The effects of this pilot will be monitored in accordance with the attached report. The plans are available on request from Highways and Transportation.

Background

This decision implements in detail the proposals outlined in the key decision taken on 24 July 2006 for the district of Maldon. The attached report gives details of the background to the decision; the results of the consultation exercise undertaken; a risk assessment of the proposals; and details of the proposed monitoring arrangements. The attached report summarises legal advice received at Appendix 4. The proposals meet the objectives of the Corporate Plan in 'ensuring service improvement' and 'guaranteeing value for money'.

Views of the Local County Member

Councillors Bass, Mead and Boyce have been consulted and all accept the proposals.

Views of other Consultees

The attached report Appendix 2 gives a summary of the consultation responses received during the period 14 July 2006 to 22 January 2007. Also attached are summaries of correspondence received in respect of the district of Maldon.

Financial Implications

Budget Reference:

Highways & Transportation Capitalised Maintenance Budget 2006/07

The direct cost of the proposals is £75,000 and revenue energy savings from implementing the proposals are estimated at a value of £27,000 per annum. The cost of the work will be funded from the Highways and Transportation Capital Budget for 2006/07. The staff and associated costs on developing the proposals and the consultation exercise have also been met from the 2006/07 Capital budget for Highways and Transportation. This has been the subject of a separate authorisation by the Cabinet Member for Finance and Property.

Policy Fit / Reasoning

*Tick the relevant Yes/No box below

Policy Reference:

H&T Policy Development Gp Nov. 2005 Min. 74/05 – Revised St. Lighting Policy

Is a departure from policy needed? Yes * No ☒ Is a Cabinet Decision needed? Yes * No ☒

Recommended change in policy to be made with this decision:

In accordance with the Council's Statement of Intent.

Originating Officer Bob Cook

I certify that:

- there is an approved budget for the expenditure arising from this decision
- guidance and protocol has been followed as per attached checklist

Details		Signature	Date
Name	Bob Cook		
Designation	Group Manager, Highways Maintenance		
Extension	51209		

Consultation

Designation	Signature	Date
* Delete when not relevant to the decision		
* Cabinet Member for Highways and Transportation (for a decision by the Service Director)		
* Service Director for Highways and Transportation (for a decision by the Cabinet Member)		
* Other (insert details of person consulted)		

Decision

* Tick approval / non-approval in the relevant box below

With regard to the recommended decision: I approve ☒ I do not approve ☐ *

Reasons for the decision (to be completed by the decision taker):

The Council has already taken a Key Decision involving a clear intention to proceed with pilot schemes for Part Night street lighting in Maldon and Uttlesford. This Key Decision provides the detail for the Maldon pilot.

Designation	Signature	Date
* Delete when not the decision maker		
* Cabinet Member for Highways and Transportation		
* Service Director for Highways and Transportation		

Originating Officer's Checklist

*Tick the relevant box below or enter N/A if not applicable

No	Action	*Completed
1.	I have read and complied with the relevant guidance, protocols and decision checklists for preparing this decision document I have read and complied with the Governance Team document "Nine Steps to Decision Taking" and other documents mentioned in that document, as well as Highways & Transportation protocols	✓ ✓
2.	I have determined the correct type of decision Key Decision? Non Key Decision by Cabinet Member? Non Key Decision by Service Director?	✓
3.	For a Key Decision, I have requested an amendment to the Cabinet Forward Plan.	✓
4.	I have included only just enough in the "Background" section for the decision taker to make the recommended decision I have attached supplementary information as necessary	✓ ✓
5.	I have made clear in the "Background" section the options open to the decision taker and why I have recommended the decision	✓
6.	I have obtained legal advice and summarised it in the "Background" section, or explained why I don't believe that legal advice is needed	✓
7.	I have cross-referenced to the Corporate Plan in the "Background" section	✓
8.	I have consulted the local member(s) and summarised the results in the "Views of the Local Member" section	✓
9.	I have consulted district, borough and parish councils and other relevant people and organisations, and summarised the results in the "Views of other Consultees" section	✓
10.	I have made sure that expenditure arising from the decision is covered by an approved budget, or I have proposed action by the Decision Taker to allocate a budget. I have inserted the budget account number and amount in the "Budget Reference".	✓
11.	I have obtained financial advice and summarised the relevant budget, staffing and other resource implications in the "Financial Implications" section, or explained why I don't believe that financial advice is needed	✓
12.	I have ensured that I have not avoided recommending a decision just because it is not covered by existing policy. I have read the relevant policy and entered details, in the "Policy Reference" box, of where the policy is documented.	✓
13.	I have determined whether the recommended decision is consistent with policy or would be a departure from policy, and answered yes or no on the form.	✓
14.	If I believe that a departure from policy might be needed, I have formulated and recommended the needed change in policy and determined whether Cabinet or Cabinet Member can approve the change ¹ . I have included this recommended change in policy, and reasons for the change, in the "Policy Fit / Reasons" section.	✓
15.	I have made the Service Director aware of the existence and nature of any Personal Interest the Cabinet Member may have in the decision as defined in the Council's Code of Conduct	N/A

¹ Generally the making or changing of policy has to be by full Cabinet. In very limited circumstances, a Cabinet Member acting alone may have the necessary authority to do this, and where this is the case, the specific delegation to the Cabinet Member should be recorded in the "Policy Fit / Reasoning" section.

Proposed Part-Night Lighting Pilots in Maldon and Uttlesford Districts

Introduction

This report gives further details of the proposals to pilot the use of part-night street lighting in the districts of Maldon and Uttlesford and work undertaken since the Cabinet Member for Highways and Transportation's decision on 24th July 2006 to

- give a clear statement of intent to switch off street lights at midnight GMT and on again at 0500 GMT.
- seek approvals for an investment of £1.8 million over the next two years to yield annual savings of £1 million.
- introduce the new practice progressively by piloting in Maldon and Uttlesford in the first instance, measuring local reaction, and evaluate the success of this initiative to the rest of the county over the next two years.
- ask the Highways and Transportation Policy Development Group to oversee the initiative and measure public acceptability.

The purpose of the report is to inform the Cabinet Member's impending decisions on how to proceed in each of the districts concerned. The report focuses primarily on the issues raised during the period of consultation running from 14th July 2006 to 22nd January 2007, a risk assessment of the proposals and legal issues.

Background

In 2005 the County Council revised its Street Lighting policy to reflect growing environmental concerns. Measures included the introduction of 'white light' (SON) lighting with downward reflectors in all new schemes and for replacement lighting (as opposed to the old undirected 'yellow light' (SOX) lighting) and a more rigorous approach to evaluating whether street lights are required at all in new developments.

This policy will not deliver the significant reductions in energy consumption in the short term as the replacement programme will take many years to accomplish. Consequently further changes in practice are urgently required.

The County Council funds the majority of street lights across Essex, which totals about 120,000 lights and the current County Council Street Lighting practice is to keep street lights on throughout the hours of darkness, regardless of where they are located. The revised Street Lighting practice will introduce alternative technology (part night photocells) which will enable the light source to be switched off for part of the night. The part night photocell has the same physical dimensions as a standard photocell and can be fixed to a light without any modification.

Benefits

The proposals have significant environmental benefits in reducing the level of light pollution attributed to street lighting and saving energy. The annual energy consumption of the 120,000 street lights is 44 million kilowatt hours of electricity which equates to 19,000 tonnes of carbon emissions. The proposals also have sound economic benefits. Because of rising energy prices, the cost of supplying electricity for the county's street lights rose by 65% over 2005/06 levels in 2006/07 when the new contract for supply was let to EDF in April 2006. This increase in the energy budget (now £3.9 million in total) is being borne by the Highways and Transportation service by postponing other work. The new photocells are guaranteed for ten years, which is in

excess of a standard one which is six years. There should therefore also be benefits in the long term associated with savings in maintenance cost.

The cost of introducing the new technology if introduced over the whole county is £1.8 million pounds. This will allow street lights to be turned off during the least busy part of the night, which it is estimated will realise savings of £1.0 million per annum on energy costs.

In the pilot districts of Maldon and Uttlesford the costs and benefits are as follows.

District	Direct cost of installation	Estimated Energy Savings %	Estimated value of Energy Savings per annum	Estimated Equivalent Tonnes of Carbon Saved p.a.	Estimated Equivalent Tonnes of CO ₂ Saved p.a.
Maldon District	£75,000	30%	£27,000	42	156
Uttlesford District	£65,000	28%	£27,000	42	156
Both Districts	£140,000	29%	£54,000	84	312

Potential Risks

It was recognised at the outset that there were potential risks associated with the proposals which if not carefully considered and mitigated could detract from the benefits outlined above. The most significant of these was deemed to be Road Safety and the following measures were taken at the outset to reduce these risks.

- Only street lights will be part night controlled. Signs, bollards, beacons and underpasses/subways will continue as full night lighting.
- At traffic accident sites, where improved lighting has been chosen as the preferred method for accident reduction, consideration will also be given to leaving these areas as full night operation.

In addition, it is generally accepted that Street Lighting has an important role to play in deterring crime and in ameliorating fear of crime by the public. The Council has a duty under Section 17 of the Crime and Disorder Act to exercise its functions with due regard to their effect on crime and disorder and to do all it reasonably can to prevent crime and disorder in its area. With this in mind, it was proposed at the outset that further exceptions to the general principle would be determined in consultation with the District/Borough Councils and the police on a district by district basis taking into account the views of Parish Councils and local organisations.

A two stage consultation exercise on the proposals was thus carried out and meetings held at a senior level with both affected district councils and Essex Police. These resulted in the development of a broader list of exception criteria which is given at Appendix 1.

Results of consultation and public awareness

The consultation and public awareness processes undertaken and their results are summarised in Appendix 2. This exercise has demonstrated that there is a significant amount of public support for and/or acceptance of the proposals although, as anticipated, there were a number of reservations expressed about the potential adverse effects. The main concerns expressed related to:

- Road and Personal Safety
- Crime and Fear of Crime
- Concerns for the Elderly

There was also significantly more opposition to the proposals in Uttlesford than Maldon district and from Saffron Walden town in particular. A number of alternative suggestions to the proposals for saving energy were also put forward of which the most frequent mentioned was switching off alternate lights.

Risk Assessment

A risk assessment of the proposals has been carried out and is included at Appendix 3. This identifies the risks into the following broad categories:

- Road and Personal Safety (including increased crime)
- Public Perception (including increased fear of crime)
- Litigation and Liability Risks
- Technical Risks

For each risk identified a rationale is provided for the assessments made of probability and impact and mitigation measures given to minimise the risk.

Legal Advice

During the course of the developing the proposals a number of legal issues have been identified. These are summarised in Appendix 4.

Discussion of key issues

The fundamental question to be considered with respect to the proposals is whether or not the environmental and economic benefits of the proposals outweigh the risk associated with the proposals. It has been shown above that serious consideration has been given to the concerns raised during the consultation exercise and efforts made to minimise any adverse impact. Accompanying this report is a set of plans which modify the original proposals consulted upon to take account of the comments made by Essex Police and other respondents to ensure that for this pilot scheme all the areas where the Police have highlighted concerns remain in full night operation. All comments on the detail of the proposals have been assessed against the exception criteria in Appendix 1 and adjustments made to the plans where appropriate. The strength of feeling against the proposals in Saffron Walden and to a lesser extent in Great Dunmow has also been recognised. It is proposed that Saffron Walden town is considered to be a special sub-pilot in which other options are being looked at namely:

- Delaying the switch off until 1.00 a.m. GMT fixed in certain locations
- Recognising additional areas where people congregate late at night
- Switching one in two lights off permanently where appropriate
- Switching off, say, two out of three lights on a part night basis in certain locations

At the time of writing this report, details of the sub-pilot for Saffron Walden are still being considered.

In Great Dunmow discussions have been held with the Town Council to identify some locations where delaying the switch off time until 1.00 a.m. GMT could also be considered. These two towns are exceptions. It is not considered appropriate to generally delay the switching off time beyond midnight GMT as this will begin to undermine the overall benefits associated with the scheme.

It has also to be recognised that the proposals as they stand are innovative in that in recent years very few other authorities have tried to introduce part-night lighting against a background and history of some years of full night lighting which is the prevailing position in Essex. There is no comparable research into the effects of taking such an action. Devon County Council has historically had some areas of part-night lighting but these have been in place for some years. They are actively considering extending its use. West Sussex County Council currently has about 50% of its street lighting operating in this way and has used this approach since the 1970's. Although they have not undertaken any detailed analysis on the effects on road safety and crime, anecdotally they do not consider it a problem. County Council officers have consulted West Sussex officers and their comments are included at Appendix 5. Gloucestershire County Council are also undertaking trials using the same technology as Essex (see Appendix 6).

Given the unique nature of the proposals to Essex and the strength of the feeling expressed against the proposals, it is considered that careful and considered monitoring of the proposals is essential to ensure that the Council meets its responsibilities for road safety and its duty under the Crime and Disorder Act whilst at the same time trying to realise the environmental and economic benefits associated with this proposal. Given the comments of both Essex Police and the other Emergency Services it is felt that close dialogue with these organisation must form a key feature of the monitoring. This will allow early indications of any problems to be picked up and appropriate action taken. It is therefore proposed that:

- A joint monitoring group will be set up with representatives of Essex Police, Essex County Fire and Rescue and East of England Ambulance Service
- This group meets at monthly intervals for the first 3 months of the proposed pilots to review their effects and thereafter quarterly.
- Crime and traffic accident statistics are base lined before the start of the pilots, monitored monthly for the first three months and three monthly thereafter and reviewed by the joint monitoring team.
- A report on progress of the pilots is made to the Council's Highways and Transportation Policy and Development Group six months after the start of the pilots.
- A full review of the pilots is undertaken after one year of operation.

These monitoring arrangements are a strengthening of the mitigation measures proposed in the risk assessment and should enable sufficient data and experience to be obtained to fully inform any further decisions to extend the arrangements to the rest of Essex.

Final Proposals

That the proposed trial of part night lighting in Maldon District proceeds on the basis of this report and the detailed plans for each community prepared in accordance with the principles outlined above.

ESSEX COUNTY COUNCIL
PART NIGHT OPERATION OF STREET LIGHTS
EXCEPTION CRITERIA

Proposed principles for determining the exemptions to the part night street lighting operation

The general presumption will be that all street lights will be altered to part night operation unless covered by the exemptions.

1. Major lit inter urban dual carriageway traffic routes
2. Conflict sites e.g. roundabouts, lit by columns greater than 6m high.
3. Sites where street lights installed for accident remedial measures
4. Town Centre type development where there is one or more of the following features:
 - a) CCTV sites
 - b) High proportion of high security premises e.g. banks, jewellers etc.
 - c) High crime risk
 - d) High concentration of people at night such as - Transport interchanges, nightclubs etc.
5. Main approaches to areas defined in 4 above where there is a mix of development between residential and commercial/industrial i.e. not exclusively residential
6. Sites where the police can demonstrate that there will be an increase in crime if the lights are switched off.
7. Remote alleys linking residential streets
8. Where there is a statutory requirement.
9. Where the configuration of street lighting columns is considered excessive consideration is to be given to removing 1 in 2 lights with the remaining lights left on full night operation.

Summary of Public Reaction and Consultation Responses**Consultation and Public Awareness Process**

The Table below shows the consultation and public awareness process that has been undertaken on the proposals:

Date	Consultation
14 th July 2006	A press release was issued and information on the proposed pilots circulated to: <ul style="list-style-type: none"> • All Town/Parish Councils in the districts of Uttlesford and Maldon • Leaders of all District and Borough Councils in Essex • Essex Association of Local Councils • Essex County Fire and Rescue Service • Essex Police • British Astronomical Association Campaign for Dark Skies
13 th September 2006	A further consultation letter was sent to Maldon and Uttlesford District Councils, Essex Police, Essex County Fire and Rescue Service, East of England Ambulance Service and the Campaign for Dark Skies. This letter included copies of the proposed exception criteria.
13 th November 2006	A follow up consultation letter was sent to Maldon and Uttlesford District Councils, Essex Police, Essex County Fire and Rescue Service, East of England Ambulance Service and all Parish Councils in Uttlesford and Maldon. This letter included copies of plans showing which street lights were proposed for part night operation.

For the purposes of this paper responses have been divided into two stages. Stage 1 deals with the generality of the proposals and the proposed exception criteria. Stage 2 deals with the detail of the proposals.

Responses - Stage 1 from 14th July to 12th November 2006

We received the following specific responses from organisations we directly consulted:

- Essex Police responded on 29th September 2006 raising a number of concerns about the adverse effect on the proposals on crime and fear of crime. This is clearly an important issue for the County Council and we have responded by examining crime statistics for the areas concerned, liaising further with the police and will take account of their comments in preparing the final proposals and setting up the monitoring arrangements for the pilot areas.
- Maldon District Council responded on 27th September 2006 requesting that all sites where there is a significant accident record to be exempt. We have responded by including an analysis of all accidents as part of developing our proposals. They also asked that the status of the road be included in our deliberations. The Cabinet Member and Officers of the Council met with Maldon District Council on 5th November to agree the roads which would be included in the next round of site specific consultation.
- Uttlesford District Council did not respond to the letter of 13th September 2006.
- British Astronomical Society Campaign for Dark Skies responded on 15th July 2006 and 1st October 2006. Their comments support the proposal and recommending comparisons of public perception of crime before and after trial. They agreed with the proposed exception criteria but raised concerns about a potential increase in badly designed domestic security lighting.

In addition to the above a number of representations have been received and these are summarised in the additional documentation accompanying this report. Of 59 other respondents received in this initial period 24 supported the proposal, 7 supported the proposal but had reservations and 28 opposed the proposals.

Of those respondents who opposed the proposals or supported with reservations the key concerns raised were as follows.

Issue/Concern	Maldon	Uttlesford	Outside pilot districts	Total
Crime/Fear of Crime	9	2	7	18
Road/Personal Safety	5	4	8	17
Alternative suggestions to achieve energy savings	2	4	8	14
Concerns for the elderly	3	1	2	6
Consultation process	0	4	0	4
Selective streets	1	1	1	3
Value for money	0	0	1	1

During this period the Essex Chronicle conducted an opinion poll which asked the following question:

'Street lights will be switched off between the hours of midnight and 5 a.m. under a new scheme unveiled by Essex County Council this week. QUESTION: Do you think street lights should be switched off overnight?

The result published on 28th July 2006 was as follows:

- Yes 80.2%
- Maybe 1.9%
- No 17.9%

8 Town/Parish Councils in the two districts responded to Stage 1.

Responses – Stage 2 13th November 2006 to 22nd January 2007

The second stage of the consultation involved seeking views on the detailed proposals to switch off street lights for part night in specific streets in the two districts. The detailed proposals were derived by applying the agreed exception criteria. Maldon and Uttlesford District Councils, Essex Police, Essex County Fire and Rescue Service and East of England Ambulance Service were consulted directly. All Parish Councils in Maldon and Uttlesford districts were invited to send in their comments via the District Councils. In the event a mixture of representations were received directly and via the district councils as well as a number of responses from the public.

We received the following responses from organisations we directly consulted.

- Essex Police responded on 3rd January 2007, in confidence, highlighting general concerns with the proposals and some specific locations which they wished to see exempt.
- Essex County Fire and Rescue Service responded on 28th November 2006 and 19th January 2007. They are broadly supportive of the aims of the initiative although raised some concerns that key junctions should continue to be lit. The wish to be involved in reviewing the impact of the changes.
- East of England Ambulance Service responded on 19th January 2007 expressing support but raising some concerns and requesting further information.
- Maldon District Council responded on 13th December 2006 highlighting some additional locations where they would like the lights to be left on and including comments from their 'Fifty plus Forum'.
- Uttlesford District Council responded on 14th December 2006 saying that they were not opposed in principle to energy savings and sustainability. However, they were concerned with the timescale for the consultation and requested an extension of the period for responses. They also resolved to prepare a case for judicial review of the proposals on the grounds of Section 17 of the Crime and Disorder Act. We have also received further representations from Uttlesford District Councils South West Area Panel.

In addition to these specific responses the following responses were received from Town/Parish Councils, other organisations and the public. (Note: Only those Town and Parish Councils with Essex County Council owned street lights were consulted)

- Maldon District Of 21 Town/Parish councils consulted in Maldon district 7 responded to the second stage of the consultation. 6 of these either supported the proposals with some reservations or requested that particular lights in their parish council areas remained on. 1 of these expressed opposition to the proposals. (Tillingham Parish Council had expressed its opposition to the proposals at Stage 1). We also received 3 letters of opposition from residents of Tollesbury.

- Uttlesford District Of 31 Town/Parish councils consulted in Uttlesford district, 15 responded to the second stage of the consultation. 8 of these expressed opposition to the proposals, 5 supported the proposals and 2 had reservations and/or requested some lights to remain on all night.

In addition we received 19 letters from residents and organisations in Uttlesford 12 of which came from Saffron Walden. Of these 19 letters, 5 supported the proposals with some reservations and 14 opposed.

We have also received a petition of 101 signatures and 16 other Saffron Walden residents sent in slips circulated by the Town Council registering opposition.

- Other responses We have received 5 other responses from members of the public living outside the 2 proposed trial areas, 1 supporting, 4 against the proposal.

Concerns and issues raised during the second stage of consultations are summarised below.

Issue/Concern	Maldon	Uttlesford	Outside pilot districts	Total
Road/Personal Safety	8	19	1	28
Crime and Fear of Crime	5	15	3	24
Selective streets	7	14	0	21
Alternative suggestions for saving energy	0	8	1	9
Concerns for the elderly	6	2	0	8
Consultation process	0	3	0	3
Value for money	0	0	1	1

The pattern of concerns raised in the second stage was similar to the first stage. The greater emphasis on selective streets was due to the nature of the consultation.

Conclusion

Viewed in the round the results of the responses received overall appear to show a significant amount of public support for the proposals although some very real concerns about crime and public safety have been raised. The second round of consultation too has provided valuable information about the detail of proposals at individual level all of which have been considered against the exception criteria. A number of alternative suggestions have been made of which by far the most common was switching off 1 in 2 lights. The third biggest concern raised after crime and public safety was for the elderly. The proposals seem generally more acceptable to the public in Maldon than in Uttlesford with Saffron Walden being by far the most vocal in its opposition to the proposals.

Risk Assessment of Part Night Operation of Street Lights in the County of Essex

Introduction

This paper outlines the risk assessment undertaken of a proposal to pilot switching off street lights between the hours of 12.00 a.m. and 5.00 a.m. GMT in the districts of Maldon and Uttlesford. The assessment has been made using the principles of the County Council risk assessment procedure.

Methodology

Key risks have been identified from an analysis of the proposal and the consultation responses received and these are listed below. The probability of the risk has been assessed on a scale of 1 to 4 and the impact should the risk be realised has been assessed on a similar scale. The risk factor is calculated as the product of the probability and impact. This is standard risk management practice. The tables on page 20 show the basis for the assessment. Table 1 shows the result of the assessment together with any mitigation measures for each risk. The rationale for the assessments made of each key risk and further comments are given below.

Rationale for risk assessments

Increased crime (Probability = possible, Impact = major)

It is considered possible that crime could increase although there is no definitive research into the effect of switching off street lights. There is research (e.g. *Home Office Research Study 251- Farrington and Walsh August 2002*) which indicates that improved street lighting targeted at high crime areas as part of a situational crime reduction programme can lead to reduced crime levels but this is not fully conclusive and has been criticised for its methodology (e.g. *Outdoor Lighting and Crime; Part 1 Little or No Benefit – BAJ Clark Astronomical Society of Victoria, Inc. Australia*). In the light of the available information, a conclusion that an increase in crime is possible is probably a cautious assessment.

The impact of an increase in crime is considered to be major given its detrimental social effects and the potential consequences to personal safety and the community. It is felt that a score of 4 cannot be justified given that the analysis of crime statistics in the pilot areas of Maldon and Uttlesford show that these are relatively low crime areas.

Increased pedestrian casualties (Probability = Unlikely, Impact = Moderate)

The probability of this happening is considered unlikely because generally pedestrian and traffic flows are much lower during the hours when the lights will be switched off. An analysis of all pedestrian casualties in the Maldon and Uttlesford districts for the 3 years, 1/1/03 to 31/12/06 shows that there were only 6 pedestrian casualties, 4 in Maldon district and 2 in Uttlesford, which occurred between the hours of 12.00 and 5.00 am. This compares to an overall total of 2145 casualties in the two districts over the period. The impact is considered as moderate bearing in mind that any increase in pedestrian casualties, however small, is undesirable.

Increased traffic accident casualties (Probability = Possible, Impact = Moderate)

It is considered that an increase in traffic casualties is more likely than an increase in pedestrian casualties. However, traffic flows are still much lower during the hours in which the lights will be

switched off than at other times of the day. It is recognised that any increase in traffic accident casualties will have an adverse impact. However, an analysis of all traffic accident casualties in the two districts over the 3 years 1/1/03 to 31/12/06 shows that there was a total of 71 traffic accident casualties between the hours of 12.00 am and 5.00 am and in terms of overall traffic accident casualties in the County during the period this comprised 3.3%. The impact of any increase is therefore considered moderate.

Increased collisions with parked vehicles (Probability = Unlikely, Impact = Minor)

The probability is considered unlikely because the majority of streets where parked vehicles are to be found are in residential areas where traffic movements will be very light during the hours in which the lights will be out. Traffic speeds on these types of roads are low. The impact is considered minor.

Increased fear of crime (Probability = Likely, Impact = Moderate)

The reaction to the public of the announcement of the proposals and the consultation responses received seem to indicate that there will initially at least be an increased fear of crime. This is supported to some extent by the research which appears to indicate that fear of crime reduces as a result of improvements to street lighting. The probability of this risk is therefore assessed as likely. The impact is assessed as moderate because although any increase in fear of crime is undesirable, it is likely to be confined to a small proportion of the population. In addition it is considered that the public will become used to the new lighting arrangements once the pilots begin.

Lack of general acceptance of the proposal (Probability = Unlikely, Impact = Minor)

The announcement and consultation exercise on the proposals has generated considerable debate but there has been a considerable amount of support. It is considered that the majority of the public either support or would be willing to accept the proposal.

Unlawful action by the County Council (Probability = Unlikely, Impact = Minor)

Legal advice has been sought and is discussed elsewhere. The conclusion is that the proposals can be legally implemented. The impact of the County Council undertaking an unlawful act in itself would be minor although it could have insurance and liability consequences which are discussed elsewhere.

Inability to enforce speed limits (Probability = Unlikely, Impact = Moderate)

Legal advice confirms that this is unlikely. The impact would be moderate because of the potential safety implications if speeding increased.

Failure to meet statutory and advisory technical standards (Probability = Possible, Impact = Minor)

There may be some older traffic signs in areas which will be subject to part night lighting which do not have reflectorised sign faces or separate internal/external lighting. The numbers of these are likely to be very small in the areas affected and although there is a possible risk of not meeting the required standards the impact is considered minor.

Increase in insurance claims (Probability = Possible, Impact = Minor)

It is possible that insurance claims will increase as the proposal will introduce a further factor to cite as contributory to any accident or incident. The impact is considered as minor because the level of the increase is likely to be low and few if any are likely to be successful.

Increase in successful insurance claims (Probability = Unlikely, Impact = Moderate)

The legal position appears a robust one provided we have carried out an appropriate level of risk assessment. This is discussed further in Appendix 4. The impact is considered moderate because the majority of Highways and Transportation claims are of relatively low value.

Non-compliance by Essex County Council with its insurance contract
(Probability = Unlikely, Impact = Major)

The probability of non-compliance is unlikely as the legal advice is quite robust. The impact is major because of the potentially high cost of a single claim.

Difficult to reverse action quickly if problems occur (Probability = Likely, Impact = Major)

The probability is likely because in order to bring lights back into all night lighting, the photocell would need to be changed back to an all night cell. The speed with which this could happen would depend upon the contractor resources available. The impact would be major because any problems would continue until the lights were restored to all night lighting.

Failure of technology (Probability = Unlikely, Impact = Moderate)

The photocells are new to Essex but have been used elsewhere successfully so failure is unlikely. The impact is moderate as the mode of failure if it happens is unlikely to be catastrophic i.e. not all cells will fail at once.

TABLE 1 - SUMMARY OF RISK ASSESSMENTS

ROAD AND PERSONAL SAFETY

Risk Description	Probability Scale of 1-4	Impact Scale of 1-4	Risk Factor	Mitigation/Treatment
Increased crime	2	3	6	Lights will not be turned off in areas where there is likely to be a high level of crime. Exception Criteria numbers 4,6, and 7 are specifically targeted at mitigating this risk. In addition the advice of the police has been sought and considered in respect to the sites where lights will operate part-night. Crime statistics will be monitored on a quarterly basis.
Increased pedestrian accidents	1	2	2	Risk will be mitigated by advanced publicity of the proposals. Those areas where pedestrian flows are higher such as town centres will remain in full night operation. See exception criteria 4.
Increased traffic accidents	2	2	4	Lights will not be turned off in areas where traffic flow and speeds are high and additionally at sites with lower traffic flows where traffic is likely to conflict e.g. major junctions. Exception Criteria numbers 1 and 2 apply. In addition, lights will not be turned off at sites where street lights have been installed as an accident remedial measure in response to a proven traffic accident problem (Exception Criteria number 3). Sites where there is a statutory requirement to light such as traffic calming measures have also been excluded as have safety camera sites.
Increased collisions with parked vehicles	1	1	1	High speed routes are excluded (Exception Criterion number 1)

PUBLIC PERCEPTION RISKS

Risk Description	Probability Scale of 1-4	Impact Scale of 1-4	Risk Factor	Mitigation/Treatment
Increased fear of crime	3	2	6	Lights will not be turned off in areas where there is likely to be a high level of crime. Exception Criteria numbers 4,6, and 7 are specifically targeted at mitigating this risk. In addition the advice of the police has been sought and considered in respect

Risk Description	Probability Scale of 1-4	Impact Scale of 1-4	Risk Factor	Mitigation/Treatment
				to the sites where lights will operate part-night. Crime statistics will be monitored on a quarterly basis and public reaction assessed after a month of implementation. The results of this monitoring will be publicised to allay public concerns.
Lack of general public acceptance of proposal	1	1	1	Advance publicity.
Damage to County Council reputation	1	1	1	Advance publicity.

LITIGATION AND LIABILITY RISKS

Risk Description	Probability Scale of 1-4	Impact Scale of 1-4	Risk Factor	Mitigation/Treatment
Unlawful action by Essex County Council	1	2	2	Legal advice sought – See Appendix 4
Inability to enforce speed limits	1	2	2	Legal advice sought – See Appendix 4
Failure to meet statutory and advisory technical standards	2	1	2	Legal advice sought – See Appendix 4
Increase in insurance claims	2	2	4	Legal advice sought – See Appendix 4
Increase in successful insurance claims	1	2	2	Legal advice sought – See Appendix 4
Non-compliance by Essex County Council with insurance contract	1	3	3	Legal advice sought. Appropriate level of risk assessment carried out and mitigation measures taken.

TECHNICAL RISKS

Risk Description	Probability Scale of 1-4	Impact Scale of 1-4	Risk Factor	Mitigation/Treatment
Difficult to reverse actions if problems occur	3	3	9	The contractor will retain stocks of the old photocells and contingency arrangements made for a rapid response if problems occur.
Failure of technology	1	2	2	The contractor will retain stocks of the old photocells and contingency arrangements made for a rapid response if

				problems occur.
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Risk Scoring Guidelines

(Projects/Programmes)

Likelihood/Probability (Threats)		
Almost Certain	4	The event is expected to occur in most circumstances > 80%
Likely	3	More likely to occur than not: 51% to 80%
Possible	2	Fairly likely to occur: 21% to 50%.
Unlikely	1	Low but not impossible: 1% to 20%

Risk Matrix (Threats)

			Impact (Negative)			
			Minor	Moderate	Major	Critical
			1	2	3	4
Probability	4	Almost Certain	Medium (4)	High (8)	VeryHigh (12)	Very High (16)
	3	Likely	Medium (3)	High (6)	Very High (9)	Very High (12)
	2	Possible	Low (2)	Medium (4)	High (6)	High (8)
	1	Unlikely	Low (1)	Low (2)	Medium (3)	Medium (4)

Risk Appetite (Threats)

Level of Risk	Consequences	Action Required
Very High 9 - 16	Disastrous (negative) impact. The Council is very concerned with this kind of threat (Unacceptable).	Treatment/Mitigation Action is required within the first ¼ of the Project/Programme
High 6 - 8	Severe (negative) impact. The Council is concerned with this kind of threat (Considerable).	Treatment/Mitigation Action is required in the second ¼ of the Project/Programme
Medium 3 - 4	Medium (negative) Impact. The Council is uneasy with this kind of threat (Manageable).	Managed via contingency plans. Treatment/Mitigation Action is required in the third ¼ of the Project/Programme
Low 1 - 2	Relatively light negative impact. The Council is content with this kind of threat (Acceptable).	The Council is content accept this risk, but should be reviewed before the end of the Project/Programme.

Risk Score = Likelihood/Probability × Impact/Consequences

Summary of Legal Advice on Part Night Lighting Proposal

Some legal questions have been raised as part of the development of the Part-night street lighting proposals of which the most significant are:

- Does the Council have the necessary statutory powers to carry out the proposals?
- Will switching off street lights part night render 30 mph speed limits invalid and hence unenforceable if those limits do not have a separate traffic order?
- Does the proposal conflict with the County Council's duties under the Crime and Disorder Act?
- Is the decision to implement the pilot 'Wednesbury' unreasonable?

Under the County Council's Insurance Policy the Council are expected to act reasonably to reduce the exposure with regard to the subject matter at risk. If the Council fails to do this then it could be held liable or partly liable should a claim be made. More specifically, the County Council's insurance contract requires that the Council is:

- taking all reasonable precautions to prevent or diminish losses or liability arising in connection with actions
- complying with all statutory obligations and regulations imposed by any authority.

The above issues have been considered by the County Council's Legal and Insurance professionals. The conclusions are that in order to minimise the risk to the authority of the proposals the County Council should:

- Take account of the comments of the police with respect to Crime and Disorder
- Undertake risk assessments of the sites where lights are to be switched off on a case by case basis

With regard to the second point the safest way to minimise risk to the County Council is to undertake risk assessment on a site by site basis. This is impractical but the further away from a case by case, site specific approach that the risk assessment is made the greater the risk to the County Council.

An overall risk assessment has been undertaken on the part-night proposals and this is the subject of a separate document. The extent to which this takes account of site specific factors is as follows:

- Sites of major traffic conflict e.g. major roundabouts and junctions and pedestrian crossings will continue. These sites were identified from plans and by knowledge of locations where 8m, 10m or 12m are installed. National guidance says that these size columns are necessary on major traffic routes. (Exception criterion 2)
- All sites where street lighting had been installed to specifically address an established record of traffic accidents in the dark were included. (Exception criterion 3).
- An analysis of the 5 year traffic accident records of each district was carried out and sites where this showed an established safety problem were also excluded from the part-night proposal.
- A further assessment of the 5 year traffic accident record for locations included in the part-night proposal was carried out and all accidents occurring between the times of 12.00 midnight and 5.00 am were analysed to assess whether switching the lights off would have materially affected the accident circumstances.
- Within the proposed part-night lit areas, sites where Safety Cameras are installed were assessed to see whether switching off the lights would have a significant impact on safety.

It is considered that this represents a reasonable approach to taking account of site specific factors in relation to assessing the risk of the proposals. It is based on risk measured by traffic accident history. Moreover, during the times when part night lighting operates traffic using the routes will still have the benefit of headlights to illuminate the road ahead and any residual site based risk is therefore considered low.

It is believed that the approach adopted above will provide a robust defence in relation to any potential claims arising as a result of the proposals.

Summary of discussions with West Sussex County Council

West Sussex Part Night Questions - By phone 04/08/06

A street lighting officer of West Sussex (WS) street lighting department stated

Have used part night since the oil crisis in the 70's
50% of their lighting is part night

30mph - Street lighting and built up area

No one has mention this before
No repeaters used
No special measure in place (as far as they are aware)
Not been challenged by any one

Energy Charges – Part Night

No additional charges just the normal unit rate x burning hours x lamp type etc

Additional items

WS use a three year bulk clean and change as standard but four years for part night areas for both lamp types

WS also find the SS9 (part night cell) very reliable.

WS use the part night in residential areas,

Note: residential areas are lit to S class lighting levels for subsidiary roads (residential roads, footpaths and cycle ways) not the ME series of lighting classes used for traffic routes

West Sussex County Council Lighting Engineer – by phone 23/01/07 and 26/01/07

No part lighting used on traffic routes

Part night lighting is used on 2/3rd of residential roads which is approximately 50 % of total stock

In the town of Crawley, there are 17 neighbourhoods where 43.81% of the stock on residential roads is part night. The 3 highest crime rate areas within Crawley are in areas with all night lighting

Other large towns like Horsham and East Grinstead have a large proportion of part night lighting on residential roads

They receive as many complaints converting to all night as they do for converting to part night

Gloucestershire Part Night Questions – Street Lighting Manager by phone 26/01/07

The pilots are 4 parishes which asked for part night lighting. The total is approximately 1500 units with 750 part night cells already ordered.

1 parish request all lights to be part night and 3 others requested 1 in 2

They are using the SS9 (same as Essex) with switching times of 12-5:30am

Their exception criteria are similar to Essex. They have included shelter housing and in 30 mph area where there is no TRO in place, a column will remain lit every 200m (legal argument/request)

Their target is to achieve 50% part night

There has been lots of press interest with front page headlines like “over our dead bodies”

Their “report” is still not completed but are convinced that there will be no increase in accidents and crime