

# A Sustainable Lighting Strategy for Edinburgh Finalised Version

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**Planning Committee**  
**14 June 2012**

## **1 Purpose of report**

- 1.1 To seek Committee approval of the finalised version of A Sustainable Lighting Strategy for Edinburgh.

## **2 Summary**

- 2.1 In October 2011, Committee approved the Edinburgh Lighting Strategy for consultation.
- 2.2 Twenty three responses were received from a range of individuals and organisations. These responses sought:
- to bring greater recognition for retaining a contrast between lighting and dark skies;
  - to focus on minimising light pollution;
  - to champion local distinctiveness where applicable; and
  - to focus on design quality to match any requirement to respond to safety.
- 2.3 The strategy has been amended to reflect these responses. The title has similarly been altered. Objectives 2 and 3 have been combined to ensure quality in design is thought about alongside requirements for safety.
- 2.4 Further work-streams are added in Section 5 of the Strategy, Next Steps. These include: establishing a champion and working group to lead on delivering projects, providing greater detail on lighting in the World Heritage Site and across the rest of the city and the preparation of a good practice technical guide.

## **3 Main report**

### **Consultation Process**

- 3.1 The Edinburgh Lighting Strategy was approved for consultation in October 2011. Committee's consideration of the strategy noted concerns amongst

- 3.2 The consultation period ran from November to 31 December 2011. Consultation letters were sent to a range of parties by e-mail, including commercial companies, statutory bodies, amenity groups, professionals and residents. The strategy and covering report were placed on the public realm pages of the Council's web-site. In addition a direct link to the strategy was also provided through the Council's home page via the *Have Your Say* box on current consultations. The consultation was also announced in 'Planning News'.
- 3.3 Consultees were asked to provide feedback on the four objectives of the strategy in particular.
- 3.4 Twenty three responses were received. The majority of these responses were received from those who were consulted directly; however two were as a direct result of individuals visiting the council web-site.
- 3.5 The responses have been collated and the issues raised by each consultee presented as a table. This table is attached as Appendix 1. The table provides a response to each issue raised.

#### **Issues arising from the consultation**

- 3.6 An overwhelming number of the responses wanted the lighting strategy to address the balance between keeping the skies dark as well as lighting the city. This very much reflected the recent campaign for promoting 'dark skies' running through the media. There was support for retaining the atmospheric nature and character of Edinburgh's streets, rather than lighting every street and building.
- 3.7 Responses to *Objective 1 Edinburgh's Role as economic, cultural and ceremonial capital of Scotland* included a desire to consider local distinctiveness, where appropriate. There were suggestions for additional key buildings that should be lit in the city centre. Concerns were raised about over lighting of buildings, preferring the features of buildings to be highlighted, rather than whole frontages floodlit. This approach would create the more atmospheric effects most people sought, would reinforce the important visual image of the city in the dark and would reveal the architectural detailing of buildings at night. The introduction of a calendar of events was supported as a mechanism to focus the use of lighting on particular events and as a way of linking lighting with city dressing activities.
- 3.8 *Objective 2 To enhance community safety, security, amenity and circulation for both pedestrians and road users.* This objective was thought to underpin all of the other objectives. The objective focusses on establishing a hierarchy for street lighting. Technical and design suggestions were made that help to inform the hierarchy. There was support for the preparation of an inventory of historic lighting and its extension to other parts of the city beyond the World Heritage Site and Leith. Importantly, there was a call to avoid the hierarchy being too

prescriptive. The consultees considered it important to allow lighting designs to respond to local character and embrace innovation where appropriate.

- 3.9 There were four strands to the responses to *Objective 3: To develop a coordinated and coherent approach to lighting so that lighting design becomes an intrinsic part of the street and place*. Firstly, there was a call for greater detail to be provided in relation to the technical requirements needed for lighting. This could be addressed by establishing a good practice guideline. Secondly, there was a desire for greater control to be exercised through the planning process. Thirdly, it was proposed that a management process should be put in place to improve the existing internal processes to deliver greater co-ordination. Fourthly, it was suggested that the use of the strategy would establish a clearer and more consistent approach to replacement and upgrading of fittings.
- 3.10 *Objective 4: To encourage lighting designs that will reduce energy use, cost and minimise light pollution* was considered to have the greatest importance and should therefore be considered a priority in the strategy. The Next Steps section should make commitments for further work streams to look in more detail at options and opportunities for switching off lights/ reducing light levels and using alternative technologies.

#### **Proposed Changes and Improvements to the Strategy**

- 3.11 The revised strategy is attached at Appendix 2. It is recommended that the strategy title is changed to *A Sustainable Lighting Strategy for Edinburgh*. This reflects the desire to make a clear distinction between the use of light against the desire to protect the dark night sky.
- 3.12 To ensure that safety and other considerations are considered in the context of coordinated and well designed proposals, the revised strategy merges Objectives 2 and 3.
- 3.13 Revisions to Objective 2 allow for innovation and for lighting designs to reflect local character in the context of the overarching hierarchy.
- 3.14 In paragraph 4.29, references are made to seeking greater guidance on lighting through the planning process. An amendment has been made which will require certain key applications to submit a lighting design statement where it is considered they may have an impact on the city skyline or key views within the city.
- 3.15 Appendix A of the strategy includes a map showing key buildings and features that could be lit in the city centre, making reference to the particular part or feature that should be highlighted with light. This will bring a focus to the use of light and ensure it has greater strategic impact while avoiding unnecessary floodlighting of numerous buildings.

#### **Next Steps: further work streams**

- 3.16 Section 5 of the Strategy sets out the next steps to be taken in delivering the objectives.

3.17 The Council will take the following actions over the next 12 months to address the objectives.

3.18 To deliver *Objective 1: To support Edinburgh's role as the economic, cultural and ceremonial capital of Scotland:*

- Develop a programme for lighting schemes that will support city dressing. The programme will be developed in partnership with Essential Edinburgh to bring forward proposals in the BID area, working with owners to encourage them to light key buildings and with Marketing Edinburgh to promote the city at night.
- Work with Historic Scotland and Edinburgh World Heritage to produce a lighting design plan. This would set out agreed principles for lighting and use tools such as the urban model to inform the proposals.
- Develop a calendar of lighting and night time events for the city. This programme will be developed in partnership with Essential Edinburgh and Marketing Edinburgh in the context of the city dressing strategy (as above).
- Work with Edinburgh World Heritage to continue the work on the historic lighting inventory for the city centre and extend the process to other city areas in partnership with community groups such as Greener Leith and the Edinburgh Street Lighting Group.

To deliver *Objective 2: To Develop a well designed, co-ordinated and coherent approach to lighting so that lighting design becomes an intrinsic part of the street and place without compromising community, safety, security, amenity and which assists orientation for both pedestrians and road users:*

- Promote reduced lighting levels within the parameters of the British Standards in new lighting schemes.
- Develop a Good Practice Guide as a technical appendix to the strategy.
- Work with applicants, particularly for major developments, to deliver lighting as part of the overall proposal. This will be managed by the planning and streetscape delivery processes.

To deliver *Objective 3: To encourage lighting designs that will reduce energy use, cost and minimise light pollution:*

- Provide more detail to customers on the maintenance and improvement programme for lighting.
- Continue to address energy reduction measures through the city wide programme of maintenance and replacements and address light spillage and pollution through the design of light fittings.

3.19 Adoption of the strategy provides an opportunity to consider Edinburgh's potential role in the organisation Lighting Urban Community International (LUCI) whose members include Paris, Rome and Glasgow. Such an association could help with promoting best practice and knowledge around lighting for Edinburgh.

3.20 A report on progress with the Strategy will be submitted to Planning Committee after it has been in operation for one year.

## **4 Financial Implications**

- 4.1 Delivery of the lighting strategy Next Steps will be funded from existing Council budgets and complementary funding from external parties and developers. The majority of street lighting improvements will continue to be funded from Services for Communities capital budget and through developer contributions.

## **5 Equalities Impact**

- 5.1 There is no relationship between the matters described in this report and the public sector general equality duty.
- 5.2 There is no direct equalities impact arising from this report.
- 5.3 There will, however, be improvements to the quality and consistencies of street lighting as new schemes are implemented, which will assist in navigating around the city.

## **6 Environmental Impact**

- 6.1 There are no significant adverse impacts arising from this report. There will be improvements to the level and scope of environmental impacts that arise from lighting. The guidance will help to improve the way lighting is used, for instance through the introduction of energy saving equipment.

## **7 Conclusions**

- 7.1 The consultation exercise for the lighting strategy has drawn considerable interest from a range of individuals and organisations, reflecting the wider media interest in night time skies and the control of light pollution. A number of key changes to the strategy have been recommended that will reinforce local distinctiveness in the way lighting is used. Further studies and work streams will provide sufficient and suitable detail on the delivery of lighting proposals while maintaining opportunities for innovation. A report on progress will be submitted after one year.

## **8 Recommendations**

- 8.1 It is recommended that the Committee approves the finalised version of *A Sustainable Lighting Strategy for Edinburgh*.

**Mark Turley**  
Director of Services for Communities

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Appendices	<ol style="list-style-type: none"> <li>1 Table of Consultation responses</li> <li>2 A Sustainable Lighting Strategy for Edinburgh (including appendix A, B and C)</li> </ol>
Contact/tel/Email	<p>Karen Stevenson/0131 469 3659/ <a href="mailto:karen.stevenson@edinburgh.gov.uk">karen.stevenson@edinburgh.gov.uk</a>  Susan Horner/0131 529 3762 /<a href="mailto:susan.horner@edinburgh.gov.uk">susan.horner@edinburgh.gov.uk</a></p>
Wards affected	All
Single Outcome Agreement	<p>Supports Edinburgh Outcome: Edinburgh is a thriving, growing city with a high quality of life and environment and a prosperous economy.</p> <p>Supports National Outcome 10: We live in well-designed, sustainable places where we are able to access the amenities and services we need.</p> <p>Supports National Outcome 12: We value and enjoy our built and natural environment and protect it and enhance it for future generations</p> <p>Supports Edinburgh Outcome: Edinburgh’s natural and built environment is supported and enhanced.</p>
Background Papers	<ol style="list-style-type: none"> <li>1 Edinburgh Public Realm Strategy, CEC, 2009</li> <li>2 Report to Planning Committee 6 October 2011, Edinburgh Lighting Strategy- draft for consultation</li> </ol>

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**APPENDIX 1**

**TABLE OF CONSULTATION RESPONSES**

The following table summarises the comments made and sets out how each issue will be addressed. The responses and/ or issues are not ranked.

No	Respondent	Summary of Comments	Recommended Action
<b>Statutory Consultees</b>			
1	Edinburgh Airport Ltd	<p>Supported in Principle.</p> <p>Seeks that the <b>technical requirements</b> for lighting design proposes the use of flat glass, full cut off design with horizontal mountings. The guidance should seek to control the effects from lighting to ensure there is no unreasonable light spill above the horizontal.</p> <p>Make suggestions in relation to the <b>planning process</b>. Support the consideration of lighting design as part of any detailed application and to avoid leaving as a ‘suspensive’ planning condition. Any subsequent alterations to the approved lighting scheme should be approved by the planning authority before implementation and ratified by the aerodrome safeguarding officers where appropriate.</p> <p>Specific reference should be made in the strategy to <b>aerodrome safeguarding (with supporting Safeguarding of Aerodrome advice notes)</b>.</p>	<p>Noted. The preparation of a technical appendix- <i>Good Practice Guideline</i> would include these technical requirements.</p> <p>A schedule of requirements for lighting designs will be set out in the technical appendix (as proposed).</p> <p>Noted. The safeguarding requirements will be outlined in the technical appendix.</p>
2	Edinburgh World Heritage	<p>Supports to strategy aim to <b>reproduce old designs where appropriate</b>. Highlights the success of the tungsten halogen down lights in the Lawnmarket in the 1960’s and how these</p>	Noted

No	Respondent	Summary of Comments	Recommended Action
		should be used in combination with reproduction oil or gas lighting in the closes. This combined approach could be applied to the New Town.	
3	Scottish Natural Heritage	<p>Welcome the strategy and the benefits that reducing light pollution can have on Edinburgh's natural heritage.</p> <p>Note in relation to proposals in the strategy that could impact on specific designations:</p> <p>Designated sites within Edinburgh, Calton Hill and Castle Rock are protected for their geology and would not anticipate and adverse impact.</p> <p>European protected Species- bats. Welcome the reference to potential effects from lighting on bats and refer to publications on this matter published by the Bat Conservation Trust. The design and specification of light fittings, controls and lighting times are outlined as best practice. These approaches should be referenced in the strategy in the context of lighting for canal and river corridors or parks and greenspace.</p>	<p>Noted</p> <p>Agreed. The proposed technical appendix would include best practice details for wildlife/ bats. Reference will be added to the Principles section of the strategy as advised.</p>
4	Historic Scotland (HS)	<p>Set out the context to HS involvement in the preparation of the strategy. HS has worked closely with the council and confirmed that suggestions made during the development of the strategy have been taken on board.</p> <p><i>'...content with the proposed city wide strategy in its current form and feel it will be of benefit to the city, not only as a standalone document, but also as part of the wider public realm guidance the council is producing and updating'.</i> HS wish to continue working with the council on streetscape and public realm issues.</p> <p>Earlier correspondence confirmed HS approach to listing original</p>	<p>Noted.</p> <p>Once the inventory of original/ historic fittings is complete</p>

No	Respondent	Summary of Comments	Recommended Action
		lamp columns and features. Supported the completion of an inventory of historic lighting in the first instance. Would prefer to use this mechanism to preserve and highlight lighting over listing.	a review of existing listings for buildings and structures will be undertaken to ensure they include sufficient reference to any original/ historic feature lighting.
5	The Cockburn Association	<p>Welcomed the lighting strategy considers all lighting design aspects. Number of aspects overlooked and recommends 13 Action Points.</p> <ol style="list-style-type: none"> <li>1. assess, through planning, the illumination of glass buildings</li>   <li>2. seek to achieve and set out <b>minimum light levels</b> that will achieve safety for pedestrians and road users.</li> <li>3. consider commissioning a <b>city centre design plan</b> to set out the context/ principles for lighting in more detail (similar to the key views study). This would be the basis on which to judge proposals.</li> <li>4. control through the planning process <b>the effect of new lighting on traditionally floodlit carved masonry structures</b> to ensure the proposals enhance and complement.</li> <li>5. to encourage innovation and utilise the dramatic urban setting consider a '<b>winter festival of light</b>'</li> <li>6. support a restriction to use <b>only white floodlighting in WHS/ conservation areas</b></li> </ol>	<p>Agreed. A requirement for a lighting design from applicants on proposals that may affect key views/ elevations in section 4.29 is being proposed. This will allow the full effect of lighting to be assessed. Further advice on switching off lights/ intelligent lighting systems and general best practice is proposed through the supporting technical guidance.</p> <p>The proposal for best practice guidance will include greater detail on light levels, taking account of British Standards requirements.</p> <p>Recommend a further study to develop the Lighting Principles in Appendix A of the Strategy. This study will provide the detailed guidance required.</p> <p>The proposal to develop best practice guidance on lighting of buildings, combined with a requirement for a lighting proposal to be provided with a planning submission will provide control through the planning process.</p> <p>Noted.</p> <p>Noted.</p> <p>It is difficult to control the colour of light through the</p>

No	Respondent	Summary of Comments	Recommended Action
		<p>7. <b>control the use of coloured floodlighting through the planning process.</b></p> <p>8. identify <b>Leith Western Harbour as an area of special character</b> to encompass more bold uses of coloured and face/ fixed direct lighting including signage (not supported in other parts of the city).</p> <p>9. reduce illumination of roads/ carpark with limited pedestrian use to save energy and minimise light pollution.</p> <p>10. adopt a strategy to co-ordinate new fittings design across the city- perhaps in liaison with other authorities, to avoid early obsolescence.</p> <p>11. co-ordinate replacement programme for orange sodium lighting on street by street basis- rather than piecemeal as fittings fail.</p> <p>12. avoid using pastiche ‘gas lamp style’ lighting and use either modern designs or accurate reproduction. Tall street lamps should not be used in historic environments. Propose a <b>3-4m unit</b> is used and not a 5-6m in WHS and conservation areas.</p> <p>13. incorporate original fittings into new lighting designs</p>	<p>planning system. It is anticipated that the adoption of the strategy combined with the proposed supporting guidance and plans will assist the planning process and the council in setting an agenda for avoiding the use of coloured lighting on a permanent basis.</p> <p>Noted. The council are committed to undertaking trial and considering intelligent lighting systems that can help and assist in reducing light spill. The recommendation for best practice guidance will further assist in reducing the over lighting of new developments.</p> <p>The hierarchy of street lighting, Appendix B of the strategy will be used to co-ordinate a minimum palette of new fittings.</p> <p>The council reports on its annual maintenance programme, currently focussing on replacement of the concrete columns stock across the city annually as part of a 3 year rolling programme. These replacements are planned on a street/ area basis.</p> <p>The hierarchy of street lighting, appendix B of the strategy seeks to use either reproduction and/ or new fittings with a focus for height towards a pedestrian priority. Consideration will be given to review the height of historic fittings and bring forward lower heights where appropriate.</p> <p>The strategy sets out a requirement to incorporate existing/ original fittings into new schemes. A recent example of this can be seen on Market Street.</p>

No	Respondent	Summary of Comments	Recommended Action
		<p>and consider statutory listing or scheduling fittings that survive (across the city and not just WHS and Leith).</p> <p>In general support the four objectives, but would prefer to see objective 2- community safety being used to <b>ensure all other aspects are enhanced without compromising safety.</b></p> <p>The Principles should <b>place emphasis on lighting cultural buildings and monuments</b> and not individual buildings and terraces. Suggestion to utilise the effect of <b>illumination of windows in the 'wall'</b> and not the old town ridge in its entirety.</p>	<p>Agree that the inventory should extend city wide, however the initial work will concentrate on the WHS and Leith.</p> <p>Agreed. Proposal to amalgamate objective 2 and 3 in the final version of the strategy.</p> <p>The final strategy will include a plan which provides more detail as to what part of the building should be lit, tower, dome or spire, for example. The bullet point under the New Town section of the Principles that refers to lighting set piece frontages is proposed to be removed in the final version of the strategy.</p>
6	The Architectural Heritage Society of Scotland	<p>Supports the overarching principles of the draft strategy. Refer to the success of Glasgow's Radiance Festival and Durham's Lumiere events and supports Edinburgh in achieving a similar weekend.</p> <p>Notes the need for sensitive management and curation, using lighting for events and well as the opposite, extinguishing lighting as already happens in <b>Earth Hour</b> in March.</p> <p><b>Not supporting of floodlighting.</b> Lighting should be used to reveal something not possible in daylight, for example the Walter Scott statue, and lighting the Dome of old college rather</p>	<p>Noted.</p> <p>Noted.</p> <p>Refer to note above, citing proposal to include a plan in the final strategy to illustrate the part of the building to be revealed.</p>

No	Respondent	Summary of Comments	Recommended Action
		<p>than revealing it in its entirety. This extends to being wary of lighting the Old Town elevation and revealing key features instead. This also applies to charlotte Square frontages, retaining the effect of the more subtle railing lighting.</p> <p>Supports improvement to lighting the Old Town closes, but would seek low level lighting to avoid elevations being lit.</p>	<p>A more detailed study of the WHS will provide greater level of guidance on the lighting levels being sought in particular areas.</p>
7	West End Community Council	<p>Gives its general backing to the purposes of this report and welcomes the depth of study undertaken.</p> <p>Consider that the objective' to encourage designs which minimise energy use, cost and light pollution' is of greatest importance.</p> <p>Considers that there is a lack of coherence in the west end area and would support efforts to co-ordinate designs, on the basis that particular reference and attention should be given to individual crescents and streets.</p> <p>Make suggestions that Palmerston Place Church and Melville Statue could be added to features to be highlighted.</p> <p>Noted importance of sensitivity in lighting, with over use potentially detracting from the effect intended to achieve.</p> <p>Some support for the use of a calendar of events as a method to control the use of lighting.</p>	<p>Noted. Further details is proposed in the under this objective for the final version of the strategy.</p> <p>Noted. Where street lighting renewals, in particular, are programmed, they would be planned on a street by street or area basis. The introduction of a hierarchy and providing further technical guidance should assist in streamlining future changes and improvements.</p> <p>The strategy aims to improve how lighting is used and promote best practice in lighting designs.</p> <p>Noted.</p>
8	Savile Area Residents Association	<p>Welcomed the opportunity to comment and saw the strategy as generally positive. Set out comments in the context of 'user experience'.</p>	

No	Respondent	Summary of Comments	Recommended Action
		<ul style="list-style-type: none"> <li>▪ Raised concern about the lighting effect of new columns/ fittings creating dark/ light patches. This effects objectives 2.3 and 4 and perhaps requires more columns to be fitted?</li> <li>▪ Support local distinctiveness in lighting schemes across the city and not just city centre and Leith. Avoid the 'European' style columns that do not express Edinburgh's unique qualities.</li> <li>▪ Support the opportunity to use local lighting design and manufacturers.</li>   <li>▪ Opportunity to use lighting in bus stop design, particularly important in more outlying areas. Incorporating down lighting into bus poles for example.</li>   <li>▪ Remove street clutter and where new lighting required ensure it is- hidden, inconspicuous, aesthetically pleasing, locally distinctive, and few in number.</li> <li>▪ Support the 'campaign for dark skies' in the context of this strategy.</li>   <li>▪ Strategic objectives <ul style="list-style-type: none"> <li>○ Objective 1 should be secondary to others with wider local relevance.</li> </ul> </li> </ul>	<p>Noted. The use of new technology in lighting design may lead to changes in the way a street appears to be lit. Limiting the spill of light will alter the way the street appears to be lit and how the light hits the ground. This may appear to be different from the current situation. Trials will be undertaken by the lighting section to test the effects of new equipment and the way this appears to light the street.</p> <p>The supply of modern lighting equipment is dictated by the councils tendering procedures. Historic reproductions offer the opportunity to use local manufacturers, particularly where original patterns are held by local companies.</p> <p>Noted. The renewal of the contract for the supply of street furniture in 2014 will provide and opportunity to consider adopting such an approach.</p> <p>The council's guidance for streets- Edinburgh Standards for Streets- seeks to address street clutter and co-ordinate features through design. This approach will be applied to new lighting.</p> <p>A revised introduction to the strategy is proposed that will emphasise the importance of dark skies.</p> <p>The strategy is structured under objective 1 to consider lighting in a city wide context down to a local level.</p>

No	Respondent	Summary of Comments	Recommended Action
		<ul style="list-style-type: none"> <li>○ Objective 2 should be preceded with 'aesthetically' to ensure there is quality control to lighting design.</li> <li>○ Objective 3 should not rely on prescriptive guidance and encourage experiment and innovation, and allow for future adaptation and improvement.</li> <li>○ Objective 4 should not be supported in its current form. Sustainability should not outweigh the desired outcomes to respond to local distinctiveness.</li> </ul>	<p>Propose to add a note to the introduction for clarity.</p> <p>Refer to note above in response to the Cockburn Association. Agreed to combine objective 2 and 3. The wording will reflect the need for design quality.</p> <p>The strategy refers to setting a legible framework to street lighting in the context of a hierarchy. Within this structure there will be opportunity for innovation. Proposal to add wording to reflect this aspiration.</p> <p>Proposal to add a section linking objective 4 with other desired outcomes, such as local distinctiveness.</p>
9	New Town and Broughton Community Council.	<p>Support the 4 objectives. Comments refer to how the strategy would affect the NTBCC.</p> <ol style="list-style-type: none"> <li>1. <b>safe night time environment.</b> Highlight those streets that have inadequate lighting- Gloucester Street.</li> <li>2. <b>promotion of the city</b> is important at night. Consider incentives to encourage key buildings to be lit.</li> <li>3. <b>Support the replacement of 'goose neck columns and sodium lighting.</b> Preference for white halide or halogen in lieu of even high pressure sodium. Support the installation of railing mounted lighting.</li> <li>4. <b>Lighting principles-</b> key buildings and monuments. The list should include <b>St Stephens Church</b> and <b>St Mary's Church</b> in Bellevue. Also the spires of <b>St Andrews and St Georges</b> and the iconic dome of <b>West Register</b></li> </ol>	<p>Clearer details on the replacement and repair programme will be prepared.</p> <p>The council will work with owners and organisations in the city to prioritise the use of lighting for key buildings.</p> <p>The hierarchy for street lighting sets out an aspiration for the type and style of lighting to be used in different parts of the city. A new technical 'best practice guide' will assist in providing consistent approach.</p> <p>A map will be used to highlight key buildings in the city centre. This information will be used to prepare a more</p>

No	Respondent	Summary of Comments	Recommended Action
		<p><b>House.</b> Would add <b>Dugald Stewart Monument and Old Observatory House</b> added to those lit on Calton Hill. Support the setting up of a co-ordinated programme of lighting, perhaps through the <b>calendar</b> to avoid hit and miss lighting.</p> <ol style="list-style-type: none"> <li>5. All floodlighting should <b>cease at midnight</b></li> <li>6. low energy fitting must be <b>used with shields</b> to prevent light pollution</li> <li>7. bulbs must be <b>replaced on like for like basis</b> to avoid destroying overall effect.</li> <li>8. Support the use of <b>planning process to control the form and positioning of lighting.</b></li> </ol>	<p>detailed city design plan, into which these additional locations will be added.</p> <p>Further work streams set out in section 5.0 of the strategy, Next Steps, will consider opportunities for new approaches to lighting.</p> <p>Improved technical guidance and a requirement to provide a lighting design statement will assist in ensuring lighting proposals reflect the strategy aims and objectives.</p>
10	Fettes Row Association- incorporating Royal Crescent	<p>Find certain of the strategies recommendations particularly welcome.</p> <ol style="list-style-type: none"> <li>1. pleased to see the value placed on the city's legacy of historic lighting. Particular note- street lighting as building and railing mounted</li> <li>2. support the recommendation that the new Town should be lit with cool white light.</li> <li>3. welcome objective 3- co-ordinated and coherent approach to lighting so that lighting design becomes and intrinsic part of the street and place.</li> </ol> <p>Highlight in greater detail the importance of consistent maintenance and an improved system and the inconsistent effect of lighting in a key area and approach to the WHS.</p>	<p>Noted</p> <p>Clearer details on the replacement and repair programme will be prepared.</p>

No	Respondent	Summary of Comments	Recommended Action
		Important to control lighting through the planning process.	Noted
11	Great King Street Association	<ul style="list-style-type: none"> <li>▪ Support the proposal to develop a co-ordinated and coherent approach to lighting.</li> <li>▪ Prefer shorter columns</li> <li>▪ Support a coherent lighting approach</li> <li>▪ Commitment to a better maintenance regime</li> <li>▪ Welcome a continue dialogue as the strategy is developed.               <ol style="list-style-type: none"> <li>1. supports the 4 objectives</li> <li>2. seeks a coherent approach to lighting, sighting poor experiences in local streets, such as St Vincent Street.</li> <li>3. set out experience of lighting renewal back in 1980's. Sighted preference for lower columns, which at the time were not supported. Hope this would be acceptable within the context of this strategy and approach. Would like to pursue the option to introduce railing mounted lighting in combination with smaller columns.</li> <li>4. Highlighted outstanding defects to lighting in the New Town and city centre, seeking resolution.</li> </ol> </li> </ul>	<p>Noted</p> <p>The Hierarchy and proposal for Best Practice Guide should bring coherence to lighting.</p> <p>The experience of the Association highlights how the introduction of a hierarchy and having a strategy in place can help to bring consistent approach to street lighting. The height of columns in the WHS and streets that are not arterial routes can have more pedestrian scale lighting columns. Streets in the New Town part of the WHS will be encouraged to utilise railing mounted lighting where a historic precedent can be demonstrated.</p> <p>The defects highlighted in the city centre relate to streets along the tram route. There has been minimal repair of lighting along the tram route. The new lighting scheme will be installed in the city centre during the tram construction period.</p>
<b>Professionals/ Designers</b>			
12	Malcolm Fraser	Referenced previous correspondence with the council regarding the lighting of the Outlook Tower.	It is difficult to control the colour of light through the planning process. With a strategy in place and more detailed guidance on lighting in the WHS will arm partner

No	Respondent	Summary of Comments	Recommended Action
		Seeking to <b>control lighting through the planning process</b> . The use/ control of coloured lighting are a concern.	organisations and the council to encourage a better use of colour as outlined in the strategy.
13	Lighting Design Partnership (Australia)	<p>Comments based on experience and involvement in the original lighting vision for Edinburgh.</p> <p>Outlines importance of lighting design in securing a cogent night-time image. Recommends the use of a <b>technical appendix- good lighting practice guidelines</b>:</p> <ul style="list-style-type: none"> <li>▪ Fundamental- importance of controlling ‘brightness’. Edinburgh’s image and character founded in its visual ‘moodiness’- a play of light and shade and contrast.</li> <li>▪ The operational control of lighting installations.</li> <li>▪ All lighting elements should be approved through the <b>planning process</b>. Important to control the potential damage from poorly sited and balanced lighting.</li> <li>▪ The importance of having suitable expertise to advise on lighting- for example a <b>city lighting manager</b>.</li> <li>▪ Include greater detailed advice and guidance on the avoidance of night sky light pollution and wasted energy. This can be used to inform the design process.</li> </ul>	<p>Section 5.0 Next Steps sets out further work streams for the lighting strategy. A Good Practice Guide will be prepared that will pick up on the issues raised here.</p> <p>Lighting designs will be requested for schemes and sites that affect the skyline or key view in Edinburgh. Proposals will be expected to reflect the requirements of the approved Lighting Strategy.</p> <p>Planning already provides design advice through design officers within the planning teams. These officers will consider proposals for building lighting. The Council’s Streetscape Working Group and streetscape officer also work with the street lighting teams in considering proposals for new street lighting.</p>
<b>Individuals and residents</b>			
14	Manager Hanover Health Foods	<p>Welcomed the strategy as <i>‘a good idea, particularly where you have the natural theatre of the Princes Street/ Castle Rock space’</i>.</p> <p>Proposed a <b>theatrical proposal</b> that could be a talking point for Edinburgh. Suggested the use of QR codes on street lighting to change the lighting effect to reflect people’s moods or emotions.</p>	Noted
15	The Broughton Spurtle	Broadly welcomed the strategy.	It is recommended that the strategy aims and objectives

No	Respondent	Summary of Comments	Recommended Action
	magazine- December 2011.	Suggests looking at <b>embracing the darkness</b> as well as lighting: <ul style="list-style-type: none"> <li>▪ <i>'There is nothing wrong with the dark</i></li> <li>▪ <i>Edinburgh has long thrived on shadows</i></li> <li>▪ <i>Less lighting rather than more will always be cheaper'.</i></li> </ul>	make better reference to this issue.
16	Gica Loening	Support and agree with the strategic objectives. Seeking <b>greater resources</b> being placed on implementing the change to white light from orange lighting in residential streets in Portobello.	Clearer details on the replacement and repair programme will be prepared.
17	Caroline	Suggestion to look at <b>alternative technologies as power sources</b> for lighting. Pointed to proposal to site windmills on top of the lighting post to power the lights.	The council keep up to date with new technologies for lighting and will consider how these can be deployed to reduce costs.
18	Marlena Valles	Seeking <b>increased street lighting provision</b> /levels to help protect individuals walking around the city at night. Specific reference to the Meadows in response to the recent incidents.	The lighting on the Meadows has recently been converted to white light to improve visibility at night.
19	Peter Verity	Seeking increase in <b>quantity of street lighting provision</b> . Specific reference to Scotland Street.  Recommendation to consider <b>reduce the street lighting at night</b> between midnight and 6am (every second light could be switched off) using sensors to pick up where they may be needed.	The introduction of white light will help to improve the lighting quality in local streets.  Street lighting has an initiative to trial reducing street lighting at night. These measures will be tested and presented to the council for further consideration in due course.
20	Richard Wood	Concerned about the effect of lighting of shopfronts/ retail units on wider vistas and views, with particular reference to Princes Street.	The council recommends more detailed guidance on lighting is produced for the city centre. This will consider the effects of shop front and other building lighting on key views and vistas.
21	Steven Oliver	Provides detailed information on the manufacturers of original lighting columns in Edinburgh and the locations where these can be found.	This information will be used to supplement the historic street lighting inventory being prepared by Edinburgh World Heritage.

No	Respondent	Summary of Comments	Recommended Action
		<p>Welcomed proposal in the strategy to provide reproduction columns in some streets. Makes a recommendation for some suitable locations, including Waverley bridge, Harrison Road and Heriot Row.</p>	<p>Note these locations for future replacement schemes.</p>
22	Patricia Eason	<p>Too many street lights causing pollution. Consider the context and use as part of the hierarchy/ design. The effects from street lighting on neighbouring residential areas is a concern. The height of columns should be kept low.</p> <p>The legislation and context to security lighting should be considered, as they create nuisance effect.</p>	<p>Noted</p>
23	Edinburgh University students Association(EUSA)	<p>The Associations main concern is representing the needs of students in regards to their safety.</p> <ul style="list-style-type: none"> <li>▪ Would wish to see commitment to increasing lighting levels in areas that could be considered unsafe (for example recent surveys have highlighted South Bridge and the Cowgate).</li> <li>▪ Concern about the level of lighting at the Meadows and the surrounding areas, seeking an increase in lighting levels.</li> <li>▪ The strategy should take account of women’s perception of safety. Refer to the 2010 NUS report Hidden Marks and the need to improve lighting around university accommodation and residential areas.</li> </ul>	<p>Improving safety is an objective of the strategy and the council notes the issues highlighted in relation to women’s safety. Delivering coherent and well designed lighting schemes with new white lighting schemes will address these issues.</p> <p>The lighting on the Meadows has recently been converted to white light to improve visibility at night.</p>

## **APPENDIX 2**

### A Sustainable Lighting Strategy for Edinburgh FINALISED VERSION

#### CONTENTS:

1. Introduction
2. Aim
3. Objectives
4. Achieving the Objectives
5. Delivery and Next Steps

#### APPENDIX A: LIGHTING PRINCIPLES

#### APPENDIX B: STREETLIGHTING HIERARCHY

#### APPENDIX C: HISTORIC LIGHTING

# A SUSTAINABLE LIGHTING STRATEGY FOR EDINBURGH FINALISED VERSION

## 1 Introduction

- 1.1 Lighting can transform the appearance and image of a place. This is especially true of Edinburgh where the physical form of the city and the grandeur of its buildings can be dramatically revealed through the use of well designed lighting. This becomes particularly significant in the dark winter months when lighting can have a powerful influence on the appearance and atmosphere of the city.
- 1.2 Protecting darkness and dark skies is also important. The mission of the International Dark-Sky Association (IDA) is *to preserve and protect the night time environment and our heritage of dark skies through environmentally responsible outdoor lighting*. Global Initiatives like Earth Hour bring awareness to the effects of consumption. Adopting a lighting strategy can assist in co-ordinating and helping to reduce the impact of lighting; protecting the contrasts created by the atmospheric character of the city.
- 1.3 The vision for the Edinburgh Public Realm Strategy states that:  
  
‘Edinburgh will develop and maintain a high quality public realm to complement the outstanding built and natural qualities of this unique capital city’.  
  
Lighting is a critical component in the design of high quality public realm and it has an important role in supporting place-making across the city. The public realm strategy identified the need for the development of a city lighting strategy. This requirement has also been highlighted in other Council reports, notably the Edinburgh Standards for Urban Design and the Edinburgh Standards for Streets.
- 1.4 The City of Edinburgh Council has a significant role to play in lighting the city. It is responsible for road and street lighting, stair lighting, festival lighting, the lighting of key buildings and features within the city centre, housing amenity lighting, park lighting and city dressing projects, including Christmas lighting and tree lighting. However, greater value could be achieved by developing a more strategic approach to lighting across the city.
- 1.5 Other cities across Europe and the United Kingdom have developed lighting strategies to help promote their cities. They enhance safety, highlight landmarks, encourage light as an art form, add focus to regeneration projects and enhance amenity.
- 1.6 In the early 1990s, Edinburgh took a lead in city lighting by commissioning the Edinburgh Lighting Vision. This set out a Vision for lighting the city and a series of proposals that capitalised on Edinburgh’s architectural and townscape qualities. The design principles set out in the document provided the basis for reviewing the current situation and suggesting opportunities for enhancement.

- 1.7 Once finalised, the strategy will become Edinburgh Planning Guidance. It will be used to help deliver a coherent and coordinated lighting regime across the city and to identify where lighting can additionally be used to reinforce and highlight the special characteristics of the city.

## **2 Aim**

- 2.1 The aim of the strategy is to reinforce the atmospheric nature and character of this unique capital city, improving the balance between lighting and darkness, and provide a safe environment for its use and enjoyment by achieving coherent lighting schemes that are well conceived, designed and maintained.

## **3 Objectives**

- 3.1 In order to achieve the Aim, three broad objectives have been identified:

- 1. To reinforce Edinburgh's character and support its role as the economic, cultural and ceremonial capital of Scotland.**
- 2. To develop a well designed, coordinated and coherent approach to lighting so that lighting design becomes an intrinsic part of the street and place without compromising community safety, security, amenity and which assists orientation for both pedestrians and road users.**
- 3. To encourage lighting designs that will reduce energy use, cost and minimise light pollution.**

- 3.2 The objectives have been developed to reflect the range of roles that lighting can play in the life of a city. The objectives apply to Edinburgh at a local level to reflect local distinctiveness as well as on a strategic city wide basis.

## **4 Achieving the Objectives**

- 4.1 The following section sets out how the Council will seek to achieve these objectives.

***Objective 1: To reinforce Edinburgh's character and support its role as the economic, cultural and ceremonial capital of Scotland.***

- 4.2 Edinburgh is the nation's capital. Edinburgh castle is an iconic structure that holds a symbolic position in the minds of the residents and visitors of the city. Lighting is used to reinforce this image of the castle. It can play a similar role in other areas, showcasing different parts of the city, reflecting local identity, supporting the place-making agenda and reinforcing Edinburgh's status as an economic, cultural and processional capital.

- 4.3 Lighting of buildings or providing feature lighting effects for special events, such as Hogmanay and the Edinburgh Festival, provides a mechanism for promoting the beauty of the city. This helps to reinforce the outstanding built heritage and natural qualities of Edinburgh.

- 4.4 Today, the city is fortunate to inherit a legacy of historic lighting. The historic lighting fixtures and the tone of the light contribute to the particular atmosphere of the city, reinforcing its overall historic authenticity and integrity, setting it apart from other cities which do not have such an historic legacy.
- 4.5 Lighting can be used to support regeneration of an area. A refreshed lighting scheme can engender new found confidence and support other regeneration mechanisms.
- 4.6 This objective will be progressed by using the following approaches:

#### **Areas of Darkness**

- 4.7 Lighting will be used to reinforce the atmospheric nature and character of the cities streets and spaces and to enhance the impact of lighting key views and vistas. Retaining darker and contrasting areas and spaces, such as Princes Street Gardens against the brighter streets and facades of Princes Street will be important.

#### **Lighting of Buildings and Monuments**

- 4.8 The permanent lighting of key buildings and monuments help to highlight the cultural assets of the city. Working with owners, this needs to be carried out in a structured way so the overall impact is coherent. The focus will be on highlighting particular features and details on buildings and allowing facades to be read using lighting emitted from windows, for example. Permanent floodlighting will be avoided. The effects of light emitted from glass facades and shop fronts will be considered where they relate to a key view or vista.

#### **City Dressing, Special Event Lighting and Lighting as an Art Form**

- 4.9 City Dressing involves the temporary enhancement of the street and public realm to highlight particular places and events. Image projection, building illumination and Christmas lighting are identified as key lighting techniques within the City Dressing Strategy.
- 4.10 Hogmanay, the Edinburgh Festival, the Winter Festival, celebrations such as the Moon Walk and Beltane are annual events where the atmospheric impact of lighting is used. A limited number of key public buildings and monuments are lit in association with these events. The use of coloured lighting can add a dynamic tone to these celebrations. Opportunities exist to highlight events such as the night time sky (equinox moon) as well as temporary lighting of certain routes and spaces in the city on certain nights. A calendar of lighting events will be developed to support this.
- 4.11 Art installations often use coloured lighting and imagery. The lit image installation at the Modern Art Gallery and the coloured lighting used at the Scottish Power site on the western approach road are award-winning examples of this approach.

## **Historic Lighting**

- 4.12 Historic Lighting includes both original street lighting and special lighting designed as an integral part of a set piece of architecture or building. This forms a key part of Edinburgh's streetscape, one of the defining elements of the World Heritage Site's Outstanding Universal Value. Retaining, and in some cases reproducing, these original features can add significantly to the townscape quality of parts of the city. The railing mounted lights in Charlotte Square, for example, are important features that add to the quality of the setting to the square.
- 4.13 It is important to have a complete picture of the historic lighting in the city. An early task is to complete the surveying and mapping of all the historic lighting columns with the assistance of Edinburgh World Heritage. This will complete the historic Lighting Report contained in Appendix C. Once this is done, consideration needs to be given to where reproduction lighting can be introduced to supplement original lighting columns.

## **Regeneration Areas**

- 4.14 New street lighting and feature lighting are an important part of regeneration projects and the overall improvement of public realm. Lighting can be used as part of a toolkit for regeneration literally casting new light on an area and demonstrating a renewed confidence through investment. The Waterfront regeneration area, for example presents an opportunity to use lighting in a modern and innovative way.

## **Lighting Design Principles**

- 4.15 It is important that lighting designs are developed to bring coherence and support place-making across the city. Lighting should be considered alongside all other aspects of new developments and help to establish local identity.
- 4.16 Currently lighting standards and quality varies. The range of street light fittings results in a variety of light colours and intensities. The fittings in place for lighting of buildings and monuments are not being consistently maintained resulting in varied lighting effects.
- 4.17 The Council has therefore set out a series of design principles developed from a review of the Edinburgh Lighting Vision. These principles should guide the lighting of new development, any special lighting proposals and also guide street lighting design across the city. The principles are set out in Appendix A.
- 4.18 New schemes for lighting will be required to respond to these principles. General principles set out requirements for the type and colour of lighting, the type of buildings or features that should be lit and the approach that should be taken to light them and also reinforces the role of city dressing and event lighting.
- 4.19 The principles identify particular approaches for different parts of the city, including: the World Heritage Site and the city centre, Leith, conservation

areas, urban and rural villages and residential areas, the canal and river corridors and parks and green spaces.

- 4.20 Prominent cultural buildings and features that reinforce the structure of the city and key parts of the city skyline are identified. These buildings are identified on the map in Appendix A. Detailed guidance in the form of a city centre design plan will provide further information on design principles for the city centre and WHS.
- 4.21 The principles will be used to establish a set of priorities for the city. These priorities will need to be co-ordinated through a steering group, the details for which are set out in section 5.0, Delivery and Next Steps.

**Objective 2: To develop a well designed, coordinated and coherent approach to lighting so that lighting design becomes an intrinsic part of the street and place without compromising community safety, security, amenity and which assists orientation for both pedestrians and road users.**

- 4.22 Street lighting defines how parts of the city are experienced and is a particularly important aspect of the World Heritage Site and conservation areas. However, at its most simple level, street lighting must provide a safe and comfortable environment for pedestrian and road users. Road users must also have acceptable lighting levels that comply with national standards. In most parts, street lighting is the sole method of lighting our streets. However, in some cases this can be supplemented with other sources, such as building or special effect lighting.
- 4.23 Government policy, *Designing Streets*, outlines an approach to the way in which street design and layout should be addressed. The policy recognises that the general urban design and geometry of streets can be influenced by detailed design issues such as lighting.
- 4.24 The Edinburgh Standards for Streets set the context for lighting in relation to street design and reflects the aspirations of government policy. This guidance provides additional context to street design, highlighting particular street patterns and relationships. In Edinburgh, many streets have conservation area status and individual buildings are listed. This requires greater consideration of the effects of new features such as lighting.
- 4.25 A hierarchy for street lighting has been developed for the city. A range of different lighting standards and designs is proposed depending on the type and location of the street and/or space. Details of the hierarchy and an outline of styles, designs and lighting effects are outlined in Appendix B.
- 4.26 A supporting *Best Practice Guide* will provide the technical requirements for lighting designs. The guideline will also set out the level of information that will be required by the council and planning authority for any new scheme.
- 4.27 Generally new lighting schemes will need to consider the following:

- its location within the street hierarchy which will determine the type of equipment and level and tone of lighting;
- historic research evidence produced to inform the lighting design solution
- the family of columns and lamps to be used;
- the need to retain or replace or replicate any historic or original street light fittings;
- the mounting height, column and lantern style;
- the source type and luminance of the lighting. In most cases a warm white light colour will be used within a given range of temperatures; and
- lighting levels, which should seek achieve the minimum light levels that will achieve safety for pedestrians and road users. Lighting should generally be in accordance with BSEN 13201-2, BSEN 13201-3, and BSEN 13201-4. Guidance on lighting design is given in BS 5489-1, *Code of Practice for the Design of Road Lighting*, to comply with the requirements of BSEN 13201. This is a guidance document only and local circumstances may require different approaches.

4.28 An organised and structured approach to lighting is essential if it is to have an effective role in the development and promotion of the city. New lighting schemes should be developed within a legible framework and the principles and hierarchy for lighting the city are set out in Appendices A and B. Innovation will be encouraged within this context. An efficient delivery and management process is an important part of delivering co-ordinated lighting across the city.

### **Joint Working, Delivery and Management Process**

4.29 For the most part, an in-house process ensures coherence across lighting renewal programmes. Planning permission and/or listed building consent may be required for new lighting schemes within a conservation area or where they affect the character of a listed building.

4.30 Lighting should be considered as an integral part of the design in any new proposal (from the pre- application/ planning in principle stages through to the detailed planning stage as well as at the road construction consent stage and listed building consents). The Council will therefore expect lighting to be considered through planning and road construction consent processes in parallel. Clear objectives and quality audit processes will be expected to be applied. Planning, transport and roads teams will consult with the lighting team from the initial planning stage.

4.31 The Council operates a Streetscape Working Group comprising representatives from across the Council and also external partners, Historic Scotland and Edinburgh World Heritage. This group provides a mechanism to review and advise on the details of schemes without the need for a formal planning process.

- 4.32 The Council will adopt the government policy recommendation from Designing Streets to use Street Engineering Review and Quality Audits which should be used to draw various audit processes together and test them against objectives. The technical requirements will be delivered in the context of quality management systems the Council has in place.
- 4.33 The form and positioning of lighting will be a material consideration in the assessment of planning applications and conditions will be used to control the installation of lighting equipment. The Edinburgh Lighting Strategy will be adopted as supplementary planning guidance. A lighting design statement will be sought for applications that are considered to affect key views or elevations in the city.
- 4.34 Good policy advice can help to avoid the detriment to amenity. The Good Practice Guide will provide technical advice. Control of light pollution is provided by planning conditions e.g. to prevent light spillage, guided by environmental health advice and controls. Further controls are possible if light pollution constitutes a statutory nuisance through statutory powers in the Environmental Protection Act 2008.
- 4.35 The Council will take the lead in co-ordinating event and feature lighting, working with Council services (including events, planning and lighting teams) along with stakeholder groups. It is intended to establish a programme for improvements beyond the existing capital maintenance programme. This programme will form part of Edinburgh's city dressing strategy, highlighting key views across the city.

**Objective 3: To encourage designs which minimise energy use, cost and light pollution.**

- 4.36 The Council will consider the impact that lighting equipment and design has on energy consumption. Care will be taken to ensure efficient systems are used that minimise energy use and can be easily maintained. Modern equipment can focus light where it is required thereby minimising light pollution. Guidance is contained within *Controlling Light Pollution and Reducing Lighting Energy Consumption*, PAN 51: *Planning, Environmental Protection and Regulation* and PAN 77: *Designing Safer Places*.
- 4.37 Street lighting takes account of energy conservation and light spillage issues by using modern lanterns with good optical control. Trials are underway in the city for both adaptive lighting and the use of emerging technology with LED street lighting.

**5.0 Delivery and Next Steps**

- 5.1 The strategy will be delivered through a number of partners, including property owners and developers. In addition to this, a key role in the delivery of street lighting improvements will be played by the Council's lighting team which has responsibility for the provision of street lighting across the city. While it is expected that the more ambitious city dressing/ special event lighting schemes and artistic lighting will have to be funded as opportunities arise, the Council

will consider how public investment could assist in realising an agreed programme.

- 5.2 Experience from other cities suggests that having a leader or champion who can promote the objectives and suggested approaches will succeed in bringing the next steps and future projects together. A next step will be to establish a working group and champion to deliver the aims of the strategy.
- 5.3 Maintenance of lighting schemes is essential, with specific measures put in place to ensure that the scheme requirements and therefore impacts are not altered. Detail will be provided on the maintenance and improvement programme for street lighting. A review mechanism will also be put in place to monitor building lighting schemes.
- 5.4 The role of the strategy is to provide greater coherence around lighting issues in the city. Addressing the objectives will achieve this. While some objectives will be addressed through the day-to-day operations of the Council working with its partners, there are key early actions arising from the strategy. The Council will take the following actions over the next 12 months to address the objectives.

### Next Steps

Objective	Actions
<p><b>1</b> To support Edinburgh's role as economic, cultural and ceremonial capital of Scotland.</p>	<p><i>Promotion</i></p> <ul style="list-style-type: none"> <li>▪ Develop a programme for lighting schemes that will support city dressing. The programme will be developed in partnership with Essential Edinburgh to bring forward proposals in the BID area, working with owners to encourage them to light key buildings and with Marketing Edinburgh to promote the city at night.</li> <li>▪ Work with Historic Scotland and Edinburgh World Heritage to produce a lighting design plan. This would set out agreed principles for lighting and use tools such as the urban model to inform the proposals.</li> <li>▪ Develop a calendar of lighting and night time events for the city. This programme will be developed in partnership with Essential Edinburgh and Marketing Edinburgh in the context of the city dressing strategy (as above).</li> </ul> <p><i>Hierarchy</i></p> <ul style="list-style-type: none"> <li>▪ Work with Edinburgh World Heritage to continue the work on the historic lighting inventory for the city centre and extend the process to other city areas in partnership with community groups such as Greener Leith and the Edinburgh Street Lighting Group (who feature reports and photos of Edinburgh Street Lighting).</li> </ul>
<p><b>2</b> To develop a well designed, coordinated and coherent approach to lighting so that</p>	<p><i>Street Lighting</i></p> <ul style="list-style-type: none"> <li>▪ Promote reduced lighting levels within the parameters of the British Standards in new</li> </ul>

	<p>lighting design becomes an intrinsic part of the street and place without compromising community safety, security, amenity and which assists orientation for both pedestrians and road users.</p>	<p>lighting schemes. Development proposals that may affect key views and vistas and major developments will be required to provide detailed lighting design proposals as part of an application.</p> <ul style="list-style-type: none"> <li>▪ Develop a Good Practice Guide as a technical appendix to the strategy.</li> <li>▪ Work with applicants, particularly for major developments, to deliver lighting as part of the overall proposal. This will be managed by the planning and streetscape delivery processes.</li> <li>▪</li> </ul>
<p><b>3</b></p>	<p>To encourage lighting designs that will reduce energy use, cost and minimise light pollution.</p>	<p><i>Dark skies/ energy reduction</i></p> <ul style="list-style-type: none"> <li>▪ Provide more detail to customers on the maintenance and improvement programme for lighting.</li> <li>▪ Continue to address energy reduction measures through the city wide programme of maintenance and replacements and address light spillage and pollution through the design of light fittings.</li> <li>▪</li> </ul>

## **Appendix A: Lighting Principles**

### ***General***

- All lighting should conform to specific technical requirements set out by the Council. An associated Good Practice Guide will set out these requirements.
- The general approach to lighting the World Heritage Site and the city should focus on providing a safe level of lighting for pedestrians augmented, as necessary, for vehicular circulation.
- Priority will be focussed on lighting the lower portions of the street to establish a natural effect that will reveal the skyline of the city against the dark sky
- Lighting of buildings, monuments, etc. and street lighting should be white. Coloured lighting will only be considered for art installations, special celebrations and events.
- An emphasis will be placed on lighting cultural buildings and monuments not individual buildings and terraces. Formally sited statues and monuments could be lit to emphasise their strategic locations.
- Building lighting should be used to bring out architectural form, carved masonry structure and avoid general floodlighting.
- Shop front and retail lighting should be considered in the context of its effect on the overall lighting theme for the street (reference should be made to the *commercial frontages* planning guidance).
- City dressing and special event lighting should be carefully programmed and, by its very nature, should be temporary.
- Coherent lighting of key spaces, the east/ west ends of Princes Street, Haymarket and Picardy Place, for example, should highlight focal points and entrances to the city centre.
- The hierarchy of street lighting set out in Appendix B should determine the nature of lighting in any given part of the city.
- Creative opportunities to highlight other features in public spaces, such as archaeology, trees and public information will be considered.

### ***World Heritage Site and the City Centre***

A city centre design plan will be prepared to set out the context and principles for the World Heritage Site and City Centre in greater detail.

#### **Old Town:**

- The Old Town will be lit with a warmer white light than the classical New Town.

- The Royal Mile closes should be adequately lit to both retain their character and ensure a safe environment.
- Architectural features/ details of key individual buildings should be lit (such as domes/ spires)
- Utilise the effect of illumination of windows in the Old Town elevation and limit other lighting effects to key monuments and cultural buildings.

#### New Town:

- The New Town should be lit with cool white light.
- Priority will be given to highlighting features on buildings and monuments that are situated as focal points to streets or spaces or that are formally sited. Statues and monuments that are sited formally or in prominent positions, eg monuments on Calton Hill.

#### Waverley Valley:

- The Waverley Valley between the Old Town and New Town should not generally be lit and only punctuated with lit features (statues, monuments and garden tree lights). The Castle should remain the dominant feature against a dark backdrop.

#### **Leith**

- Lighting will prioritise safety for the pedestrian, augmented as necessary for vehicular circulation.
- Within the historic core, individual buildings important to the historic commerce of the area should be lit and certain areas, such as the Water of Leith basin by the Shore, should be lit as integrated areas.
- Bridges over the Water of Leith should be lit.
- Historic lighting columns should be retained. Consideration will be given to reproductions.

#### **Urban/ Rural Villages and Conservation Areas**

- The effects of lighting outside the built up areas should generally be minimised.
- Lighting of urban/ rural villages and conservation areas will be directed at safety for the pedestrian augmented as necessary for vehicular circulation.
- Village character should be reinforced through use of traditional lighting columns and by lighting key public buildings.

### ***Residential areas***

- Street lighting will be the main light source and should ensure pedestrian safety as well as vehicular circulation.

### ***Canal and river corridors***

- Rural or non-urbanised sections of rivers and canals and the promenade should not normally be lit with the exception of well-used sections that may be of benefit to both the community and character of the area. Lighting should normally be restricted to sections where the urban areas interface with the water space.
- Opportunities exist for using lighting as an art form in key locations.

### ***Parks and green space***

- Lighting should be kept to a minimum and priority given to pedestrian level lighting.
- Lighting design should take account of wildlife (particularly bats) and reduce light spill, siting of equipment and minimise siting particularly close to water and along woodlands and tree lines.

### ***Rural Roads, Off Road Routes and Parkland***

- The introduction of lighting may be detrimental to the character of these places. Consideration should be given to suitable lighting proposals that retain the character of the area.

### ***Key public and cultural buildings***

- Lighting should be used to highlight the identity of these buildings within the city structure. Such buildings would include museums, galleries, theatres, libraries and churches.

### ***Highlighting approaches and views to Edinburgh***

- Lighting can be used to highlight cultural buildings, bridges and landscaping, for example at gateways and entry points on the approaches to Edinburgh.
- The prominent public/ cultural buildings/ spires within the views of Edinburgh as seen from the principal approaches should be revealed with light.

### ***Skyline and prominent buildings***

- The groups of towers, domes and spires on the city skyline should be lit for their distant views to create a dramatic night-time sky line. Key buildings also have a role in views at a local level.
- The towers, domes spires and roofs that could be lit include the following (of which many are already lit to varying degrees).



## APPENDIX B: STREET LIGHTING HIERARCHY

To assist with classifying particular streets this schedule will be used in conjunction with a street hierarchy which will set out classifications for streets. This street hierarchy will form part of the new street design guidance for Edinburgh.

Part of city	Lighting approach	Detail
Arterial routes	10m columns	<p><b>10m column with bracket</b></p> <ul style="list-style-type: none"> <li>▪ 10m high column with 1m integral arm and lantern</li> <li>▪ Aluminium- not painted.</li> <li>▪ High pressure sodium light source is acceptable (reflecting existing units), but new routes would use white light source.</li> <li>▪ Where arterial routes pass through village and local town centres (outside the city centre) consideration should be given to reduce to 8m to respond to a more pedestrian focussed environment, taking into account the scale of the area.</li> </ul> <p>Different column designs have been used at the Waterfront/ Granton and are likely to be acceptable for new parts of the city, such as West Edinburgh. Unlike traditional streets in Edinburgh, boulevard style streets can use a post mount system (as illustrated by the lantern at Waterfront Avenue).</p>
Link roads	8 m columns	<p><b>8m column with bracket</b></p> <ul style="list-style-type: none"> <li>▪ 8m column with 1m bracket and modern lantern or integral arm/ or post mount in new development areas</li> <li>▪ Aluminium column- painted in some cases for a coherent design (Grey RAL7043)</li> <li>▪ Lantern- family of units used</li> </ul>
Rural Roads,	5-6m column or	<b>5-6m columns with post top lantern or alternative low level lighting</b>

Part of city	Lighting approach	Detail
<b>Off Road Routes and Parkland</b>	lower level lighting	<ul style="list-style-type: none"> <li>▪ 5-6m high columns with post top</li> <li>▪ Standard unit</li> <li>▪ Consider bollards or ground mounted options</li> </ul>
<b>Residential - general</b>	5-6 m columns	<p><b>5-6m column with bracket or post top lantern</b></p> <ul style="list-style-type: none"> <li>▪ 5-6m column</li> <li>▪ Aluminium tapered column</li> <li>▪ Lantern- post top style or post mount with globe</li> <li>▪ The source type and luminance used should ensure the lantern is a feature in the street</li> </ul>
<b>World Heritage Site</b>	<p>Inventory identifies existing historic features in certain streets to be retained/ and will inform where these should be replicated.</p> <p><b>New Town</b> Principle streets, squares etc, columns- combination of 8m or 5-6m columns Mews/ lanes Wall brackets</p> <p><b>Old Town</b> Principle approach-</p>	<p><b>General</b> Where practicable street lighting should be provided through building mounted (railing and wall mounted) lights, in contrast to standards placed on the footway. Where there is evidence of original lighting standards, then reproduction lighting scheme may be suitable.</p> <p><b>New Town</b></p> <ul style="list-style-type: none"> <li>▪ Railing mounted oil lanterns onto standards made of cast iron (original or reproductions)</li> <li>▪ Free standing lighting column (original and reproduction) based on the original gas lantern styles- post top and bracket- 6-8m (10m)</li> <li>▪ Building mounted, using modern flood lighting/ bulkheads</li> <li>▪ Siting of railing mounted fittings and new lamp columns should conform to original relationships with the street. This should be on the outside edge of the footway in the case of columns, respecting the original pattern and townscape relationships (building facades and especially palace frontages)- and linked to</li> </ul>

Part of city	Lighting approach	Detail
	wall brackets.	<p>locations of original lighting columns stones where suitable.</p> <p>In squares and crescents and architectural set pieces, a formal approach to design should be used taking following order of importance: railing mounted lights, free standing columns and wall mounted lighting.</p> <p>In lanes and back streets wall mounted fittings should be used.</p> <p><b>The Old Town</b></p> <ul style="list-style-type: none"> <li>▪ Columns may be used where it is not possible to light from the building or where they form part of an architectural arrangement, such as Chambers Street</li> <li>▪ Siting of the columns should be on the outside of the footway, respecting the original pattern and townscape relationship.</li> <li>▪ Original set piece arrangements will require original column reproductions (Waverley Bridge, for example).</li> <li>▪ Integrating original columns into a street design where reproductions are not required should use modern finial columns with a matching lantern (as per Market Street).</li> <li>▪ In closes and courtyards wall mounted reproduction gas lanterns – gloss black. New courtyards in modern developments should use modern low level wall mounted lighting.</li> </ul> <p><b>Wall mounted bracket</b></p> <ul style="list-style-type: none"> <li>▪ Wall mounted 8-10m or 3-5 m typically</li> <li>▪ Traditional gas style lamp (this would be used to respond to the more pedestrian role of the street or area where the globe of the light is an</li> </ul>

Part of city	Lighting approach	Detail
		<p>important feature of the place).</p> <ul style="list-style-type: none"> <li>▪ Floodlighting or bulkhead should be used on small through routes/ lanes, where there is no dominant frontage or gables</li> </ul>
<b>Leith</b>	<p>Inventory identifies existing historic features in certain streets to be retained/ and will inform where these should be replicated.</p> <p><b>Central area</b> Principle approach-wall brackets</p> <p><b>Grid pattern streets</b> Principle approach-8m or 5-6m columns</p>	<p>Lighting designs will vary in different parts of historic Leith and the conservation areas and should reflect the principles set out in the sections of the WHS above.</p> <ul style="list-style-type: none"> <li>▪ A number of original lighting columns remain in Leith.</li> <li>▪ At the Shore, for example, these are sited as a coherent grouping. These groupings and original fitting should be retained and restored.</li> <li>▪ Lighting should be provided by building mounted fittings where possible.</li> <li>▪ Local colours can be used for lighting columns and features where they form part of a set piece (such as at the Shore). All other original columns should be painted grey.</li> </ul>
<b>Conservation Areas:</b>	<p><b>Rural villages</b> Balerno Dalmeny Ratho Kirkliston Currie Morton Mains Swanston Hermiston</p>	<ul style="list-style-type: none"> <li>▪ Traditional vernacular domestic scale townscape.</li> <li>▪ Mix of standards and building mounted lighting.</li> <li>▪ 5-6m columns/ mounting height should prevail.</li> </ul>
	<p><b>Urban Villages</b> Duddingston</p>	<ul style="list-style-type: none"> <li>▪ Historic features may exist and should be retained/ inform lighting designs.</li> </ul>

Part of city	Lighting approach	Detail
	Thistle Foundation Colinton Gilmerton Juniper Green Dean	<ul style="list-style-type: none"> <li>▪ Mix of traditional vernacular domestic scale townscape and more significant villa development.</li> <li>▪ Mix of standards and building mounted lighting</li> <li>▪ 5-6m columns/ mounting height should prevail with 8m considered on through routes</li> </ul>
	<b>Coastal</b> Queensferry Cramond Newhaven Portobello	<ul style="list-style-type: none"> <li>▪ Mix of traditional vernacular domestic townscape layout with closes and wynds running back from the coast. This is combined with more formal grid street layouts with a tenemental scale.</li> <li>▪ Street lighting to play a formal role on the waterfront, while the remaining areas would be a mix of standards and building mounted lighting.</li> <li>▪ 5-6m columns/ mounting heights should prevail, although 8m columns may be suitable on the main routes</li> <li>▪ Historic features may exist and should be retained/ inform lighting designs.</li> </ul>
	<b>Suburbs</b> Barnton Blacket Coltbridge and Wester Coates Corstorphine Craiglockhart Craigmillar Park Inverleith	<ul style="list-style-type: none"> <li>▪ Mix of organic and formal/ rectangular grid/ street block layouts.</li> <li>▪ A unity of materials and boundary treatments prevail with buildings set back from the footway.</li> <li>▪ Areas often prominent in skyline views.</li> <li>▪ 5-6m columns should prevail, although 8m columns may be suitable on main routes.</li> </ul>

Part of city	Lighting approach	Detail
	Grange Morningside Merchiston and Greenhill Plewlands Shandon	
	<b>Tenemental</b> Marchmont and Meadows South Side West End	<ul style="list-style-type: none"> <li>▪ Rectangular grid/ street block layouts with building line at the rear of the footway.</li> <li>▪ Pockets of domestic scale townscape where a unity of boundary treatments prevail.</li> <li>▪ 8m column/ mounting heights should prevail, reducing to 5-6m in more domestic areas.</li> </ul>

**EXAMPLES OF LIGHTING HIERARCHY**

**1 10m column with bracket:**



2 8m column with bracket:



**3 5-6m column with bracket or post top lantern:**



4 Wall mounted bracket:



## **APPENDIX C: HISTORIC LIGHTING**

### **Images and summary from World Heritage Site lighting study 2010- Edinburgh World Heritage**

Edinburgh World heritage has published- A history of Lighting in the Old and New Towns of Edinburgh. This provides details original gas and electric lighting. A link to this report can be found on the lighting page-public realm pages of the council's web site.

The following details provide a summary.

#### **Styles and types**

There are a variety of examples of original gas lamp type standards and fittings sited around Edinburgh.

Original wall mounted bracket fitting gas style lamps are located in closes and side streets.



Special buildings such as the McEwan Hall and the RSA for example, have individually designed light fittings. Bridges and walkway lighting are also specially designed. (Dean Bridge for example)



Street columns and lanterns tend to be more consistent in design.



Special lighting columns and fittings were designed for the original tram route and these can be seen at the Mound, Waverley Bridge etc. These are a more ornate and curved design similar to the designs found in Leith, at the Shore. The Leith columns were designed specifically and have a thistle motif as a central element of the design (see Appendix C on Leith lighting).



The designs were typically an ornamentally detailed cast iron column, with a base plinth and a ladder rest plate below the lantern, which has the name of the street printed into it. The columns were plain or embellished with fluting. The base of the column would have an access door and this would be marked with details of the makers name and often and emblem for the city (or Leith).

For main streets the columns would have an ornamental bracket arm, the finest of these are the Leith examples. The lantern would hang from this bracket. For smaller, residential streets the columns would be a more traditional post top style column and lantern.



In the New Town the introduction of railing mounted lighting, typified in Charlotte Square became popular. The designs for the mounting brackets are often unique to certain streets.



The Council in conjunction with and private owners and Edinburgh World Heritage have provided reproduction lighting for areas in the WHS, often using original patterns.



## **Historic Column Paint Colour**

### **Summary from historic painting research paper- Historic Scotland- 2010**

Research was undertaken to establish the original paint colours used for street lighting and in Edinburgh, the results of which have been used to inform the strategy.

In 2010 Historic Scotland Conservation team carried out investigations of original paint colours, looking at original lighting columns in the Council's depot, original columns in the city centre and in Leith.

The findings in both cases found an original grey colour was used, but in the case of Leith there is evidence that more ornamental colours, gold, were used for ornament and embellishment.

### **Original lamps from the Council's depot and in the city centre**

Paint samples were taken from older lamp posts in the City of Edinburgh's Bankhead yard in order to give an indication of earlier paint colours used. The posts all showed cream and green layers, but the oldest post had clearly been painted dark- grey several times during first years of service. More recent examples show, perhaps near 1890, the use of dark- grey was abandoned and the posts painted a bluish dark-green shade. This was superseded by a more grassy green, perhaps around 1920. Before the post went out of commission they were painted cream and grey.

### **Kirk Street and Casselbank Street**

The lamp posts at Kirk Street and Casselbank Street were most recently painted cream and green. Before this, perhaps during the first part of twentieth century the pillars were white. Previous decorations were green.

A paint sample from the edge of the shield of the coat of arms of Leith on the inspection door showed an early bright yellow layer and layers of dark varnish. This would suggest that the arms were painted either fully painted in their proper colours at least in part at an early date, or some moulding were picked up in gold. The early green paints were coated with varnish.

## Historic Lighting Inventory

### Leith Conservation Area- historic lighting, location and details of original lamp standards 2010.

An inventory of historic street lighting will be used to record where original fittings are located. This inventory will be used to inform where features would need to be protected with new development changes. The inventory will also assist in informing repairs and management of street lighting.

The street lighting team have information and details in relation to some of the historic street lighting and ornamental lighting throughout Edinburgh. Edinburgh World Heritage is preparing an inventory for the World Heritage Site. In Leith an inventory prepared by a local resident has been collated by Historic Scotland. Details of the Leith inventory are illustrated below.

Street Lighting columns were an integral part of Leith's townscape image. Ornate street lighting columns were specially designed for Leith, many with a coat of arms. The tram columns also extended down to Leith and were a dominant feature in the main streets. Key buildings were also designed with integral and specific light fittings.



There are a number of streets in the heart of Leith where original street lighting remains. Many of these have been recorded around The Shore, and streets leading from and around Great Junction Street



The lighting columns on the Shore were conserved and restored in the 1990's (under the Townscape Heritage Initiative)



Many of these lights are in a poor condition.



The following map shows the location of this original lighting.

