



## Belfast City Council

<b>Report to:</b>	Strategic Policy & Resources Committee
<b>Subject:</b>	<b>'ILLUMINATE' Project completion and governance arrangements</b>
<b>Date:</b>	18 <sup>th</sup> February 2013
<b>Reporting Officer:</b>	Gerry Millar, Director of Property & Projects
<b>Contact Officer:</b>	George Wright, Head of Facilities Management (Ext. 5206/6232)

1.	Relevant Background Information												
1.1	At its meeting of 25 <sup>th</sup> April 2012 the Committee approved the invitation of tenders for the implementation of the 'ILLUMINATE' project. This project seeks to facilitate the introduction of low-energy LED lighting in order to sustainably reduce energy consumption and CO <sub>2</sub> emissions.												
1.2	The project, which is part-funded by EC grant in partnership with six other Cities and will replace the existing City Hall façade lighting on the front, east and west facades as well as the main dome and turrets <sup>1</sup> etc. The project is well-advanced, and it is anticipated that the installation will be complete, tested and ready for first use by April 2013.												
1.3	In terms of the overall estimated savings in energy and replacement lamp costs the situation is as follows:  Estimated annual reduction in electricity usage and costs:-  <table border="1" data-bbox="261 1525 1007 1711"> <thead> <tr> <th></th> <th>Existing Floodlighting</th> <th>New LED Lighting</th> </tr> </thead> <tbody> <tr> <td>Electricity Consumption (KwH)</td> <td>139,339</td> <td>63,044</td> </tr> <tr> <td>Annual Cost of Electricity</td> <td>£16,720</td> <td>£7,565</td> </tr> <tr> <td>Annual Electricity Saving</td> <td></td> <td>£9,155</td> </tr> </tbody> </table>		Existing Floodlighting	New LED Lighting	Electricity Consumption (KwH)	139,339	63,044	Annual Cost of Electricity	£16,720	£7,565	Annual Electricity Saving		£9,155
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1.4	In addition, the LED fittings provide a very significantly longer life-span than the standard floodlights, requiring replacement every 12-15 years as opposed to every 3 years on average. This produces a further estimated re-lamping saving of <b>£4,500</b> per annum.												
1.5	In terms of the potential for reductions in CO <sub>2</sub> emissions the new system will represent an estimated reduction of <b>41 tonnes</b> per annum, or just under 25% of the council's total annual carbon-reduction target (and a further <b>£500</b> per annum saving in related CRC payments).												

<sup>1</sup> Main dome & turrets lit 360°

1.6	Overall, the new system will therefore reduce total City Hall energy costs by approximately <b>£14,000</b> per annum and also significantly reduce CO <sub>2</sub> emissions.
1.7	However, in addition to the financial and environmental benefits to be gained by the new LED technology, the system has a range of additional benefits. Specifically, it is possible to precisely control the brightness and colour of each of the 433 lamps independently, and consequently a wide variety of effects can be obtained ranging from very subtle light, shade and colour effects emphasizing the building's architectural features (see Appendix 1a) to a full colour 'wash' of the building for special events and charity functions etc (see Appendix 1b). It should be noted that the same system of lighting has recently been installed on the Empire State building in New York city to considerable public acclaim, and has become a recognised tourist attraction.
1.8	These features, if properly and imaginatively used, clearly have the potential to enhance the appearance and public perception of the City Hall amongst tourists, visitors and residents, and may attract significant media interest. The suppliers are therefore providing specialist assistance in terms of lighting design, to ensure that the system complements the building appropriately. Some modest additional expenditure may be necessary to cover this.
1.9	It is important that the Committee sets clear parameters around the circumstances in which the enhanced lighting features will be used, and the extent to which charities, event organisers and other organizations will have access to them.
1.10	Members will be aware that, even at the present time when we still operate the traditional floodlighting system, a number of applications are received each year from organizations seeking to have the City Hall lit in their chosen colour(s). Once the new facilities are available this is likely to increase significantly, and there is an obvious concern that over-use could adversely affect the image and reputation of the building.
1.11	The City Hall has an iconic status both in terms of its architectural splendour and its civic importance. It has been the natural focal and rallying point for many of the historic and political events which have shaped Belfast and Northern Ireland, from the signing of the Ulster Covenant in 1912 to more recent rallies by peace and trade union movements and welcoming back our Olympian sports stars.
1.12	However, the City Hall is also the seat of local democracy and is both the council's civic and administrative headquarters and a historic, listed building. It is therefore essential that we create a lighting implementation which will utilise the full capabilities of the enhanced lighting infrastructure to best effect, but will do so in a way which is in keeping with the purpose, history and use of the City Hall building.
1.13	<p>The following management mechanism is therefore proposed:-</p> <ul style="list-style-type: none"> <li>a) only the charities nominated by the Lord Mayor, Deputy Lord Mayor and High Sheriff may avail of the features provided by the new lighting system (these charities change as the incumbents change and so over time there should be an opportunity for all charities to benefit);</li> <li>b) only events organised in the City Hall and/or grounds by the council itself (either directly or in partnership with others) will have access to the lighting system;</li> <li>c) a schedule of additional days of more general public interest should also be agreed by the Committee and the building washed<sup>2</sup> in the appropriate colour(s) – see 4.2 below;</li> <li>d) the Director of Property &amp; Projects may, in exceptional circumstances, seek the</li> </ul>

<sup>2</sup> colour-wash requests will be allowed for a maximum of one day only for all organizations;

1.14	<p>approval of a specific request by the Committee even where the above criteria are not satisfied; <i>and</i></p> <p>e) where time does not allow the prior permission of the Committee to be sought the Director of Property &amp; Projects may approve access to the facilities in appropriate circumstances, and will subsequently report the matter to the Committee for note.</p>
1.15	<p>Members should note that there will be periods of time during which some or all of the existing façade lighting will be turned off over the coming weeks, in order to facilitate the installation and connection of the new wiring and fittings etc. This will be kept to a minimum, but is to some extent inevitable and unavoidable. It is anticipated that the system will be installed and fully operational by 1<sup>st</sup> April 2013.</p>
1.16	<p>It is hoped to be able to provide a demonstration of the system’s capabilities for members immediately prior to the full Council meeting scheduled for 3<sup>rd</sup> April 2013. This will be confirmed and invitations issued nearer to the time.</p>
1.17	<p>A further benefit of this project has been the exposure of the Property Maintenance Electrical Team to world class designers and manufacturers such as ARUP and Philips who act as advisers on the project for the EU.</p>
1.18	<p>It is also proposed that the ILLUMINATE project group meeting be hosted by Belfast on the 17<sup>th</sup> &amp; 18<sup>th</sup> April 2013. This will be the 5<sup>th</sup> co-ordination meeting held since the commencement of the project in January 2012. The meeting will be attended by representatives from the 7 pilot projects which, in addition to the City Hall, include Genoa Porto Antico, Genoa Aquarium, Rotterdam Zoo, Lithuania Sea Museum, the Hellenic Centre for Marine Research, Crete and the Experimentarium Museum, Copenhagen.</p>
1.19	<p>The BCC project team would be keen to offer the City Hall as the venue for the meeting, particularly as it coincides with the go-live date of the City Hall project.</p>
1.20	<p>A total of approx. 20 people will be involved, and it is proposed that the Committee agree to provide small-scale hospitality for this group in the form of an evening meal, and also to permit the use of the Reception Room (and possibly a Committee Room) on the specified days for the group’s meeting.</p>
1.21	<p>In addition it is proposed that a dissemination event takes place whereby the project will be presented to an audience of local councils, energy managers, architects, consulting engineers, etc to highlight the new technology and promote the general benefits and energy saving associated with LED lighting. This event will take place on the afternoon of the 17<sup>th</sup> April 2013, after the ILLUMINATE project meeting outlined above.</p>
	<p>It should be noted that the Illuminate project has attracted considerable attention within the architectural world with the Belfast City Hall highlighted in the Journal of the Royal Institute of British Architects as detailed in Appendix 2.</p>

<b>2.</b>	<b>Key Issues</b>
2.1	<p>The key issues may be summarised as follows:-</p> <ul style="list-style-type: none"> <li>• on foot of the Committee’s original decision of April 2012 the implementation of the new LED lighting system is now imminent;</li> <li>• the system will generate annual energy cost savings of approx £14,000 and bring about a significant reduction in CO<sub>2</sub> emissions;</li> </ul>

	<ul style="list-style-type: none"> <li>the new system has almost unlimited potential in terms of the use of light, shade and colour being applied to the various parts of the City Hall building;</li> <li>continual use of the new facilities could potentially detract from the image of the building and the reputation of the council; and</li> <li>appropriate criteria governing the use of the new facilities are therefore required, including clarity around which charities, groups and events will be facilitated by the council.</li> </ul>
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<b>3.</b>	<b>Resource Implications</b>
3.1	Overall, the ILLUMINATE scheme is projected to cost £335,000. Of this, £200,000 is being provided by the EC by way of grant, and of the remaining £135,000 a provision of £90,000 had already been made in the planned maintenance programme to replace the existing floodlighting.
3.2	Consequently, this very significant upgrade is being achieved at an additional cost to the council of just <b>£45,000</b> , and brings a range of benefits including an annual energy saving of approx. £14,000 and a tangible reduction in CO <sub>2</sub> emissions.

<b>4.</b>	<b>Equality &amp; Good Relations implications</b>						
4.1	<p>The recent EQIA agreed by Council on Belfast City Hall - <i>“Promoting a good and harmonious environment”</i> - summarises our aim as:</p> <p><i>‘to manage Belfast City Hall and its grounds in order to help promote a good and harmonious environment for those who visit and work in the building, while reflecting both the diverse identities of its users and the several functions served by the City Hall, and acknowledging its prominent role in the civic life and history of Belfast’.</i></p>						
4.2	<p>The Good Relations Manager has been consulted on the proposals set out above, and as a result it is proposed that, in addition to the charity and other events covered above, the facilities could be used to mark a range of days of wider cultural or social significance to various groups within the city, most notably the following:</p> <table border="0"> <tr> <td>St. Patrick’s Day (green)</td> <td>Chinese New Year (red &amp; yellow)</td> </tr> <tr> <td>Orangefest (orange)</td> <td>Polish independence day (red &amp; white)</td> </tr> <tr> <td>St. Valentine’s Day (red)</td> <td>Gay Pride (rainbow)</td> </tr> </table>	St. Patrick’s Day (green)	Chinese New Year (red & yellow)	Orangefest (orange)	Polish independence day (red & white)	St. Valentine’s Day (red)	Gay Pride (rainbow)
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4.3	There are, of course, a considerable number of internationally-recognized days (such as the 115 specific days recognized by the UN, including Holocaust Day, Suicide Prevention Day, World Aids day, Autism and Diabetes etc) however in many cases these carry political connotations or are not associated with a specific colour etc., and it is therefore proposed that these days not be marked except where specifically approved by the Committee under 1.13(c) or (d) above.						
4.4	<b>NB:</b> it should be noted that the new facilities cannot project images or logos etc onto the building; instead the building can be ‘washed’ in broad colour combinations using static LED fittings. It is therefore only appropriate for use in marking days or events which are associated with specific colour(s).						

<b>5.</b>	<b>Recommendations</b>
5.1	<p>It is recommended that the Committee:-</p> <ul style="list-style-type: none"> <li>a) notes the imminent installation of the new LED infrastructure, hardware and software;</li> <li>b) approves the proposed management arrangements set out above in relation to charity and special event usage etc;</li> <li>c) agrees to create and keep under review an approved list of additional days which the council may wish to mark;</li> <li>d) approves the hosting of the ILLUMINATE meeting on 17<sup>th</sup>/18<sup>th</sup> April 2013 and the associated provision of small-scale hospitality;</li> <li>e) agrees to review the management and control arrangements after 12 months in order to permit any necessary changes to be made; <i>and</i></li> <li>f) agrees to a demonstration for all members prior to the April 2013 council meeting.</li> </ul>

<b>6.</b>	<b>Decision Tracking</b>
6.1	<p>The City Hall ILLUMINATE project is scheduled to conclude during the first week of April 2013, and the facilities will be available from that time. There will inevitably be a short period during which expertise in the optimal use and deployment of the system must be developed by staff, but subject to this the facilities will be available as outlined above.</p>

<b>Key to Abbreviations</b>
<p>LED – Light-emitting Diode  UN – United Nations</p>

<b>Documents Attached</b>
<p>Appendix 1(a) – Illustrations of normal usage  Appendix 1(b) – Illustrations of special events usage</p>

**APPENDIX 1(a) – Routine uses of the ILLUMINATE facilities**

**APPENDIX 1(b) – illustration of capabilities of the ILLUMINATE system**

