WEST DUNBARTONSHIRE COUNCIL

Report by the Executive Director of Infrastructure and Regeneration

Infrastructure, Regeneration and Economic Development Committee: 18 June 2014

Subject: Street Lighting Energy Efficiency Scheme

1. Purpose

1.1 The purpose of this report is to update the Committee on the development and progress of the street lighting energy efficiency scheme since the outline business case was presented to the Housing, Environment and Economic Development Committee in November 2012.

2. Recommendations

2.1 It is recommended that the Committee:

(i) notes the content of the report;
(ii) notes the acceleration of the scheme from 2015/16- 2016/17 to 2014/15 – 2015/16;
(iii) approves the procurement of all goods, services and works required to deliver the street lighting energy efficiency scheme and delegates authority to the Executive Director of Infrastructure and Regeneration to award all contracts in relation to the project; and
(iv) agrees that an update be provided to the Infrastructure, Regeneration and Economic Development Committee as part of the reporting on capital Programme monitoring framework.

3. Background

3.1 The report presented to the Housing, Environment and Economic Development Committee in August 2013 detailed the need to maintain a reliable and efficient street lighting infrastructure and updated the Members on progress in developing the outline business case for the street lighting energy efficiency scheme.

3.2 A Members' seminar was also given on the 2 April 2014 and the presentation detailing the benefits and issues likely to arise through the promotion of the street lighting energy efficiency scheme was well received.

3.3 As a consequence of the seminar a further briefing update was presented to the Strategic Change Board on the 29 April 2014 where a decision was taken to present a report to the Infrastructure, Regeneration and Economic Development Committee in June 2014 to seek approval to proceed with this scheme at the earliest opportunity to enable the Council to take advantage of the significant revenue savings that will be achieved through a saving in both electrical power usage and reduced maintenance costs.

4. Main Issues

4.1 Capital funding has been allocated in the Council's long term capital funding plan for years 2015/16 and 2016/17 to the value of £6.5m for the street lighting energy efficiency scheme. This will now require to be accelerated to facilitate the progress of the necessary works with £1.8m being allocated in 2014/15 and the remainder of the funding amounting to £4.7m being allocated in 2015/16. The table below details how the £6.5m will be spent

	Number	**Unit Cost**	**Total Value**
Retro fitting lanterns	16000	£250	£4,000,000
Renewal of corroded columns and associated wiring	800	£2000	£1,600,000
Columns replacement to ensure compliance	700	£1000	£700,000
Design costs		Sum	£200,000
Total Cost			**£6,500,000**

4.2 Appendix 1, Comparison of energy usage, details the proposed energy consumption return for street lighting for 2014/15 which amounts to 7,460,111 Kilowatt hours (Kwhrs). At current rates for energy supply (procured through a national framework agreement) this amounts to an anticipated annual cost of £726,000. The introduction of energy efficient street lighting utilising LED lanterns with the benefit of trimming will reduce our annual energy consumption to 2,586,870 Kwhrs. Based on current prices this should reduce the energy bill to £260,000, a 65% saving, £466,000 per year. It is also almost certainly the case that energy costs will continue to increase and if this is the case this will allow additional costs to be significantly avoided.

4.3 Carbon tax is now being introduced this financial year in respect to the energy consumption utilised for street lighting. To date this has not applied. It is assumed at present that the levy will be £15.60 per tonnes and the energy efficient street lighting scheme will reduce this additional financial burden on the Council from an anticipated £56,000 to £19,000 an overall saving of £37,000.

4.4 Our current street lighting maintenance and installation service is externally provided through a term service contract. This was awarded to Lightways (Contractors) Ltd in November 2013 for a period of 1 year with the option to extend on an annual basis for upwards of an additional 3 years. This contract will require to be terminated at the end of the first year period and a new contract tendered for the cyclic maintenance of our street lighting infrastructure including for the installation some 16,000 LED lanterns over a 12 month period. The term service contract would be for 4 years.

4.5 Overall the savings to be achieved pre finance through the introduction of an energy efficiency scheme for street lighting can be summarised as detailed:

Spend Type	Pre Energy Efficiency	Post Energy Efficiency
Energy Costs	£726,000	£260,000
Carbon Reduction Commitment	£56,000	£19,000
Maintenance costs	£466,000	£205,000
Annual Total	**£1,248,000**	**£484,000**
Annual Savings		**£764,000**

4.6 The procurement of the LED lanterns will be through the Scotland Excel street lighting material framework contract which has recently been tendered and is currently being assessed. The anticipated commencement date for this new framework contract will be July 2014.

4.7 The street lighting energy efficiency scheme will utilise existing infrastructure with most new lanterns being a retro fit on existing columns. Our infrastructure has now been 100% electrically tested and at present some 50% of the 8,000 columns requiring structural testing has been completed. The remaining 4,000 columns will be structurally tested by the end of November 2014. The testing results have been positive, our electrical installations proving to be in good condition and a more positive response in regards to the structural condition of our columns than was initially anticipated. It is assumed on the basis of existing results and through the introduction of trial installations that upwards of 800 new columns will be required to be procured and installed as part of the street lighting energy efficiency scheme.

4.8 The proposed programme for the street lighting energy efficiency scheme is detailed in Appendix 2. It is planned that the supply and installation of the LED street lanterns and new columns will be completed by February 2016.

5. People Implications

5.1 Additional support will be required to undertake the design of areas where the existing street lighting is not of sufficient quality to be retro fitted with the new LED lanterns. This will either be achieved through the utilisation of the existing Scotland Excel framework contract for the provision of professional services, through joint support with adjoining Councils if resources permit or the procurement of short term agency staff support.

6. Financial Implications

6.1 Capital funding for the scheme had previously been agreed and funding to the overall value of £6.5m was committed across two financial years, namely 2015/16 and 2016/17 in the Council's long term capital programme. The requirement for additional people support will be funded fully through the capital allocation of funds.

6.2 A saving of around £764,000 per year is anticipated through this investment, as detailed in the table at 4.5 above (once all planned improvements are implemented).

6.3 As stated above the capital plan agreed in February 2014 includes a total of £6.5m of funding to implement these works. The capital plan also anticipates that the revenue savings achieved will support prudential borrowing of £10m. The level of saving identified above will support this level of prudential borrowing.

7. Risk Analysis

7.1 Risks previously identified in the outline business case have been mitigated through the ongoing condition survey of the infrastructure. It is also now clearly established that all major electrical manufacturers and suppliers are switching their focus to the use of LED lanterns. Unit costs have stabilised and the Scotland Excel framework has been developed in the knowledge that most Scottish Councils will be migrating to the use of LED technology. A robust specification ensuring quality and durability of the available Led lanterns has been jointly developed.

7.2 A variety of LED lanterns will be utilised throughout West Dunbartonshire to ensure no overall dependency on one supplier. This will mitigate the risk to both supplies and also potential component failure in future years.

7.3 The success of the accelerated programme is very dependent on being able to procure a new term service contract within the next 6 months. The existing service contract has proven to be robust and has demonstrated good value. It is the intention to utilise this contract document with minimum change to develop the Invitation to tender for the new contract for the additional requirement to install approximately 16,000 lanterns and 800 new street lighting columns over a 12 month period. Early engagement with our Procurement Section will be critical in achieving this tight deadline. Other Councils have expressed an interest in collaborative working in regards to the procurement of street lighting term maintenance contracts and whilst we will be supportive to working collaboratively it cannot however be to the detriment of achieving our own aspiration of accelerating this programme of energy efficiency savings.

8. Equalities Impact Assessment (EIA)

8.1 No significant issues were identified in a screening for potential equality impact. The introduction of white light will improve the night time environment and will benefit all road users

9. Consultation

9.1 All residents on the streets affected by the trial installation of LED lighting within the Western Isles Housing Estate were consulted and 34 of the 54 property owners responded.

66% of the respondents confirmed that the LED lighting was better or no worse than the old SOX lighting. 60% responded in respect to noticing an improvement or no worsening to the lighting during the period of dimming (10.00pm to 06.00am)

In respect to personal and home security there was less support with slightly less than half of the respondents feeling less secure. This is mainly as a result of new lanterns being designed to focus the light output onto the road and not providing backspill into the gardens and driveways of the adjoining residential properties.

There was a broad level of support to the introduction of LED lighting as a good idea in reducing costs and carbon dioxide emissions.
Similarly the promoting of dimming street lighting was broadly supported. The full outcome of the consultation is attached as Appendix 2 to this report.

9.2 As a result of this consultation a number of LED lanterns have been trialled on various roads throughout West Dunbartonshire and manufacturers are now adjusting the Led arrays to provide additional back spill. It will be our intention to consider this issue when we develop future schemes.

9.3 Resulting from the consultation undertaken to date a list of frequently asked questions and answers has been developed and this will be provided to our residents in advance of works. A detailed web page will also be developed and maintained to keep our residents informed of the scheme and programming of works.

10. Strategic Assessment

10.1 The road infrastructure is fundamental in promoting social wellbeing for all in terms of aiding employment, accessing health care, business growth and tourism within West Dunbartonshire. The introduction of an energy efficient street lighting infrastructure supports the Council's strategic priority to improve local housing and environmentally sustainable infrastructure and will assist in improving the wellbeing of communities and protect the welfare of vulnerable people.

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Date: 23 May 2014

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Appendices:	Appendix 1 - Comparison of energy usage Appendix 2 - Programme Appendix 3 - Consultation results Appendix 4 - Frequently asked questions
Background Papers:	Lighting Energy Efficiency Outline Business case November 2012 Update Report August 2013
Wards Affected:	All