

**STREET LIGHTING CAPITAL IMPROVEMENTS PROGRAMME 2022/23
LED PROJECT AND REPLACEMENT COLUMNS PROGRAMME 2022/23**

1.0 EXECUTIVE SUMMARY

- 1.1 Argyll and Bute Council are responsible for the maintenance of over 14,500 street lights and associated lighting columns, control pillars and lit road signs. A large quantity of the inventory of streetlights is still powered from the “5th core” electrical supply system, dating from 1930s. This is a hidden problem which manifests itself in frequent power failures which are costly to rectify.
- 1.2 There is also a parallel issue, where the age of street lighting columns is unknown. The newest columns are now approaching 25 years, since the previous upgrading programme in 1990’s, with many others estimated as between 50 – 80 years. This is well outside the Industry recognised life expectancy of 25 years for columns and wiring.
- 1.3 As a direct result of this, over recent years additional costs have been incurred through the Street Lighting Revenue budget, to replace failed power supplies and deal with actual or potential column failures due to corrosion.
- 1.4 The £3.9M LED Replacement Luminaires project commenced in Helensburgh and Lomond in 2015. Sections of work were completed in the period to 2018 bringing approximately 12,580 new LED Luminaires onto the system.
- 1.5 The disruption due to Coronavirus has delayed the continuation of the project until now. At the time of writing, the final assessment and award of a tender is underway with an expected start onsite in the remaining area of Oban, Lorn and the Isles in August 2022. Thereafter a “mop-up” process will replace any columns classed unsuitable for continued use and catch any luminaires missed in the original works.
- 1.6 The remaining works packages for LED fit out and column replacement works are estimated at £485,000 and is fully funded within the existing LED Project budget.

RECOMMENDATIONS:

It is recommended that the Environment, Development and Infrastructure Committee:-

- i. Endorses the Street Lighting Capital Improvements programme 2022/23; and
- ii. Endorses the LED and Replacement Column programme 2022/23.

STREET LIGHTING CAPITAL IMPROVEMENTS PROGRAMME 2022/23**LED PROJECT AND REPLACEMENT COLUMNS PROGRAMME 2022/23**

2.0 INTRODUCTION

- 2.1 This report provides details of the proposed Street Lighting reconstruction programme for 2022/23. The programme is based on an allocation of £740,000, comprising of £440,000 of Capital allocation from this and the previous financial year and an additional £300,000, awarded through the budget process, to deal with defective columns and cabling.
- 2.2 This report also provides details of the proposed LED Replacement luminaires project, to completion in OLI and follow-on process of replacement of defective columns and “catch-up” luminaire fittings in all areas. This is valued at £485,000 and funded through the £3.9M LED project budget.

3.0 RECOMMENDATIONS

- 3.1 It is recommended that the Environment, Development and Infrastructure Committee:-
- i. Endorses the Street Lighting Capital Improvements programme for 2022/23; and
 - ii. Endorses the LED and Replacement Column programme for 2022/23.

4.0 DETAIL**4.1 Street Lighting Capital Improvements programme 2022/23**

- 4.1.1 The Street Lighting inventory of 14,500 lighting columns is located generally, one third in Helensburgh and Lomond, a third in Bute and Cowal and the remaining third distributed throughout Kintyre, Mid-Argyll, Lorn and the outer islands centers of population.
- 4.1.2 Faulty cables and corroded columns are an issue throughout the network but a large number of recurring faults remain outstanding in the eastern districts where the bulk of the inventory is situated. Schemes have been identified and prioritised in these areas, where lights remain in fault condition or the risk of recurring failures is likely. This is the first batch of schemes identified to rectify the previous backlog in inventory improvements.
- 4.1.3 The plan is to design new lighting systems as part of each scheme, fully compliant with current regulations and include independently controlled cabling systems through new control pillars, known as Highway Distribution Units

(HDUs). This will provide one new power supply to each HDU and give full control of the cable network to each lighting column, through ducting which will allow future cable replacement without the requirement to re-excavate tracks between columns. This will eliminate the current “5th core” issues and also “wired armoured” cables, which were previously buried directly in the ground without ducts and require full re-excavation to replace any defective sections.

- 4.1.4 The programme for delivery will be through the mixed economy model, partly for smaller schemes, delivered through the in-house Street Lighting Team, which consists of three electricians and one apprentice, working with local contractors from the framework contract, to provide the tracking, cabling and column placement element of the works. Larger schemes will be let to experienced Street Lighting Contractors through a tendering process.
- 4.1.5 Appendix 1 details the specific schemes and estimated values for the Street Lighting Capital Replacement Schemes programme 2022/23. At the time of writing, works are scheduled to commence in August 2022 and continue through to March 2023.
- 4.1.6 An element of parallel working to improve footways affected by lighting tracking works has been allowed for in the programme. This will generate minor savings in the lighting works estimates, where final full width footway re-surfacing is funded through the parallel Footways Capital Improvements programme. This will allow two improvements in one, in certain locations and provide additional benefit to communities.

4.2 LED Luminaires and Replacement Columns programme 2022/23

- 4.2.1 Capital funding in recent years, pre-Covid, focused on the LED luminaire replacement project. This reduced the overall power consumption of the system by approximately 45%. In some cases columns deemed unsuitable for new luminaires were by-passed in the project and are part of further “column upgrade catch-up” works, in parallel with this programme of full system upgrades.
- 4.2.2 The design element of the LED project will be delivered by WSP Ltd, in parallel with the Street Lighting Capital replacement schemes design work. The new lighting for each street requires a design assessment. This will comply with current lighting standards and be based on the existing location and height of the lighting columns, to determine the specification of LED luminaire required. This will provide a new fully compliant LED lighting system in each location.
- 4.2.3 The tender assessment and award process is underway. A start to the fitting out of the LED programme in Oban and Lorn is anticipated in August.
- 4.2.4 The follow-on works packages for column replacement and “catch-up” LED fitting will follow-on from the completion of the OLI original LED programme. This will be delivered by a combination of in-house Street Lighting / Framework contractors toward completion of the LED project by 31st March 2023.

5.0 CONCLUSION

- 5.1 This report provides details of the proposed Street Lighting Improvement programme for 2022/23.
- 5.2 This report provides details of the parallel LED Luminaires and Replacement Column programme 2022/23.

6.0 IMPLICATIONS

- 6.1 Policy - works assessed and carried out under the current Roads and Lighting Asset Management Plan.
- 6.2 Financial – Programme based on capital allocation for year 2022/23. The increase in LED luminaires will further reduce the overall power consumption requirement for the street lighting asset.
- 6.3 Legal – None.
- 6.4 HR - Works delivered by a combination of in-house operations teams with sub-contractors and external contractors.
- 6.5 Fairer Scotland Duty
 - 6.5.1 Equalities - protected characteristics – None Known.
 - 6.5.2 Socio-economic Duty – None Known.
 - 6.5.3 Islands – None Known.
- 6.6 Climate Change – All Luminaires–low energy LED, plus recyclable equipment.
- 6.7. Risk - Completed works will reduce requirement for reactive repair of lighting faults and improve the overall condition of the Street Lighting asset.
- 6.8 Customer Service - overall improvement in Street Lighting service.

Kirsty Flanagan, Executive Director with responsibility for Roads and Infrastructure

Jim Smith, Head of Roads and Infrastructure

Policy Lead for Roads and Transport, Councillor Andrew Kain

AUGUST 2022

For further information contact:

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APPENDICES

Appendix 1 – Street Lighting - Capital Reconstruction Programme 2022/23

Appendix 2 – LED project - Programme to completion 2022/23

APPENDIX 1 - STREET LIGHTING - CAPITAL RECONSTRUCTION PROGRAMME 2022/23

Street Lighting Capital Program 2022/23			v2 - 11/05/2022	
			v3 06/07/2022 (Est red)	
		Funding through Capital and other allocation		
<i>Note</i>		£440,000	Capital Allocation (inc £190,000 carried over from 2021-22)	
<i>HDU = Highway Distribution Unit</i>		£300,000	Additional allocation for Defective Columns and Cables.	
<i>Power connection and control box</i>		£740,000	CAPITAL BUDGET 2022-23	
<u>DUCTING , CABLE AND COLUMN UPGRADE AND REPLACEMENT PROGRAMME</u>				
Area	Scheme Name	Estimated Value	Proposed Scheme Details	Contractor Delivery Model
Works programmed after Design process completed - to appointed Small Works Framework Contractor				
BC	Dunoon - Argyll Street Car Park / Pier Esplanade	£1,500	12No. 8M Column Brackets Single Head, 12No. 8m Column Brackets Double Head, Install 2No. 4m Columns and 56No. New LED Luminaires	In House
HL	Rosedale Gardens	£26,500	Column (7No.) and HDU Replacement / cabling and ducting	In House / Small Works Framework
HL	Eastwood Lane From the A814	£32,200	Column (9No.) and Cable Replacement / Cabling and ducting	In House / Small Works Framework
HL	Kathleen Park (From Rhu Road Higher)	£43,200	Column (12No.) and HDU / Cabling Replacement	In House / Small Works Framework
BC	Ladside Road and Ladside Place Rothesay	£66,000	Column (18No.) and HDU / Cabling Replacement	In House / Small Works Framework
BC	St Brides Road / Blain Terrace Ballochgoy Rothesay	£42,000	Column (12No.) and Cable Replacement	In House / Small Works Framework
Works let after Design ,Tendering and Procurement process completed - to appointed Contractor				
HL	Kilmahew Drive & Kilmahew Grove Cardross	£72,000	Column (20No.) and Cable Replacement	Contractor
HL	St Modens Way	£54,200	Column (15No.) and HDU Replacement	Contractor
BC	A815 Innellan Shore Road	£204,600	Column (60No.) and HDU (6No.) / Cabling Replacement	Contractor
Lorn	OBAN - Nant Drive and Spur roads (Phase 1 of £238K project estimate) (£114K c/o)	£124,700	Column (71No) 8 HDU and cable replacement (PH 1 2022)	Contractor
Mull	Tobermory - Back Brae	£73,200	Column (20no.) 2 x HDU and Cabling Replacement	Contractor
		£740,100	Estimated Value of Works	

APPENDIX 2 – LED PROJECT - PROGRAMME TO COMPLETION 2022/23

Funded through remaining LED Replacement Project Budget				
<u>OTHER INSTALLATION WORKS - LED PROJECT</u>				
Works programmed after Design process completed - to appointed Small Works Framework Contractor				
Kin	Sound of Kintyre	£55,000	95 nr LED REPLACEMENT	In house
Var	Cat 4 Columns - LED mop up	£180,000	200 nr Column replacement & LED	In house / framework
Works let after Design ,Tendering and Procurement process completed - to appointed Contractor				
Lorn	Oban and Lorn upgrade	£150,000	1100nr LED REPLACEMENT	Contractor
Var	Sweep Through - LED Catch	£100,000	600nr tbc LED REPLACEMENT	Contractor
		£485,000	Estimated Value of Works	