FBC – Capital Bid 2020/21

Prepared by/Bid Originator – **P D Downs**

Scheme Title: Ashton gardens lighting Improvements and additions

Description of Scheme:

The project involves improvements to the existing lighting to Ashton Gardens.

This issues with the site are:-

Lighting & electrical distribution overview

Park Lighting

- 21No. 5-meter lighting columns with circular heads which have been converted from 70w SON lamps to LED (3000K),
- 1 No. column mounted flood light to the "MUGA" games area (this has replaced the now obsolete solar lighting to this area)
- 10No. bollards most of which have been removed and the circuits made safe due to vandalism.
- 5No (70w metal halide) in-ground uplighters to the war memorial
- 2No. (70w metal halide) in-ground uplighters to St George's Rd gate house.
- 10No. (LED) in-ground uplighters to the boulevard from the Clifton Rd North gate to the war memorial

Electrical Distribution for lighting to the park

The 4No. columns in the proximity of the gardener's compound gate and lakeside are supplied from the distribution equipment in the pumping station, and each column has individual fused cut-out and post top photo cell control.

The remaining lighting is supplied either directly from distribution equipment in the café or indirectly from the café via a above ground link box in the middle of the park. This lighting is controlled by a photocell and contactor located at the café, with override and isolation switch in the electric room (NOTE override and isolation switch is duplicated in No. 5 St Georges Rd)

Faults Identified on the lighting columns

The lighting columns are all functioning but there is damage identified to the internal cabling, this is probably due to mechanical strain, metal fatigue or abrasion, these need to be replaced with suitable flexible cable, (not solid conductors, twin and earth)
There is also a problem with the hinged columns with cables becoming trapped and crushed in the hinged joint, because of the inappropriate cable installed.


Damage to cable inside the column including evidence of previous repairs

There are also problems with the fuse cutouts to each column, some have water, insect ingress and others have metal clad switch fuses that are not appropriate for the environment



Columns around the café have inappropriate metal clad switch fuses installed

Note - All 21No. columns were working during a night time inspection 0n Friday 6th November 2020

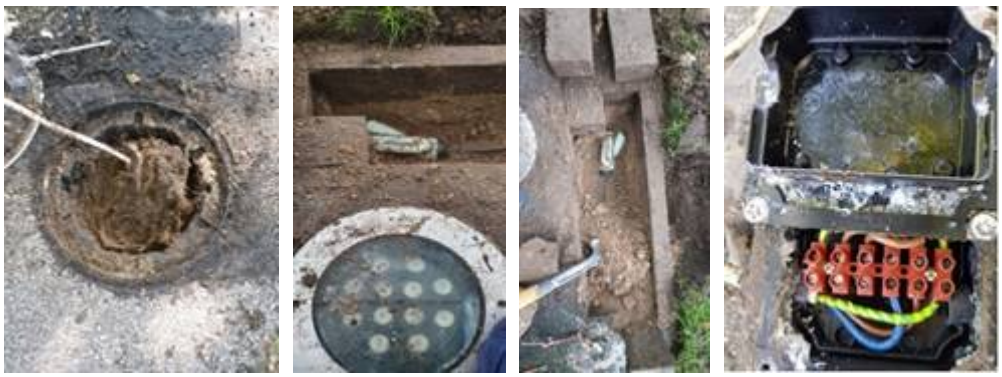
Faults Identified on the in-ground up lights

Most of the in-ground uplights have failed, the 7No. metal halide lamp versions have low insulation resistance (IR) they are supplied by final circuits with RCBO protection, and will typically operate for a few days before tripping out, this is due to water ingress, dampness to the wiring connections at the luminaries and internal component's,


Distribution equipment and water ingress to luminaries

The 10No. LED in-ground uplighters to the main boulevard have also have low insulation resistance on the circuit, preventing them from being operated, this appears to be again from water ingress to the luminaries, these are sealed units, as all 10No. are on the same circuit with underground resin filled tee joints to each luminaire, it is not possible to readily identify if one or if all ten luminaries are responsible for the fault, it will require excavation and isolation of every unit.
It appears that the luminaries are located in areas that don't have good drainage and are underwater in puddles when it rains, sometimes for prolonged periods (the IP rating is not suitable for under water use)

The underground SWA cabling and resin filled joints to the luminaries do appear to be installed to a good standard & relatively recently (2011/12 restoration works)



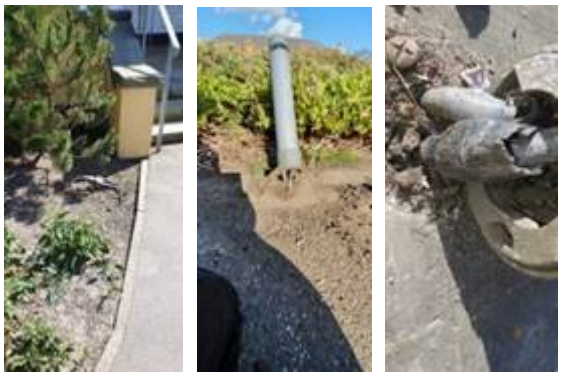
LED inground up-lighting to the "boulevard" showing debris washed into the luminaire housing, excavation of SWA cable and joint, water ingress within the luminaire wiring.

Note – 1 of 17No. inground up-lights were working during a night time inspection 0n Friday 6th November 2020

<u>Faults Identified on the Bollard lights</u>

These lights are located around the café, we estimate that there were originally 10No. going around the café /public WC, however most have been removed previously, with only a few remaining in the café "alfresco" outside area.

As with the inground lighting these are from the 2011 restoration works and supplied by underground SWA cables which appear to be in good order, however most of the bollards have suffered from vandalism, and those that have not been removed are currently working but all badly damaged.



The bollards are either missing or damaged

Conclusion and recommendation's

The existing lighting to the Gardens, will require replacement of the water damaged and vandalized luminaries, the distribution cables, circuit protection and lighting controls appear to be in good order and operational.

Capital cost plan:

Cost Heading	Description	Total £
Installation of appropriate internal wiring and cut-outs to the lighting columns	Decrease the element of failure	6,000
Excavation of the in-ground up lights, isolation, IR testing and renewal if faulty	Excavation of the in-ground up lights, isolation, IR testing and renewal if faulty	8,000
Renewal of vandalised bollards with a more robust vandal resistant bollard	Renewal of vandalised bollards with a more robust vandal resistant bollard or uplighter units	3,000
Consideration of lighting to rose garden	Install new lighting to rose garden	4,500
Consideration of lighting to the footpath (St Georges Sq. side)	Install new lighting to the footpath (St Georges Sq. side)	3,000
Contingencies		500
Total Scheme Cost:		**£25,000**

Outputs (i.e. details of what the investment will specifically deliver):

- To improve the lighting to Ashton gardens
- To meet statutory electrical health and safety and safeguarding requirements

Outcomes (i.e. details of the broader benefits achieved by the investment, for example community or environmental benefit, health and safety compliance, or statutory obligations):

- Safer environment for patrons visiting the gardens at night, or simply walking through the gardens.
- Reduce the risk of foot falls and to brighten up the ambience of the gardens, and hopefully reduce anti-social behaviour.
- Wider enjoyment of the Gardens in the evenings.

Contribution to corporate objectives (i.e. how does the project achieve or help deliver priorities within the corporate plan):

- Value for money
- Continuously review services and assets to improve efficiency and effectiveness

Budget Resource Requirements
Breakdown of initial capital costs and future revenue implications

Estimated Total Capital costs of bid (£000's): £ 25,000

Annual additional Revenue costs arising from the bid (£000's): £ NIL
OR
Future Annual Revenue Savings achievable as a result of the bid: (£000's): £

Please provide any further details of revenue savings below:

Value and phasing of bid:

2020/21	**2021/22**	**2021/22**	**2022/23**	Additional capital investment required (i.e. the value of the bid)
£000	**£25000**	£000	£000	

Existing resources in the Capital Programme relating to this scheme:

2020/21	**2021/22**	**2022/23**	**2023/24**	Existing capital resources in the approved Capital Programme
£000	£000	£000	£000	

Estimated timescales for the bid:

Start Date Jan 2021	Completion Date September 2021

Project Risks (outline any risks to delivery of the project and how these will be mitigated)

Risk	**Impact**	**Mitigating Action**

Inclement weather and heavy ground frustrates contract Foot falls affect and subsequent claims	Increase cost and disturbance Increased costs	Excavation work planned for spring months Initial relamping / rewiring works to be planned first, to light up existing dark areas.

Endorsement of Bid for Further Consideration		
	Service Director	**Management Team**
Comments		
Name:		
Date:		