

Agenda Item	<b>11</b>
Report No	<b>CCC/08/22</b>

## THE HIGHLAND COUNCIL

**Committee:** Climate Change Committee

**Date:** 3 November 2022

**Report Title:** Salix Recycling Fund

**Report By:** Executive Chief Officer – Performance and Governance

### 1. Purpose/Executive Summary

- 1.1 This report provides a summary of Salix Recycling Fund and an update on the progress being made.

### 2. Recommendations

- 2.1 Members are asked to note the contents of this report.

### 3. Implications

- 3.1 Resource: The works form part of the Salix RF; all resources are fully costed to the wider fund. There is a project team in place and ongoing management of this resource will continue through the Head of Property as Sponsor.
- 3.2 Legal: There are no legal implications arising from this paper.
- 3.3 Community (Equality, Poverty, Rural and Island): Installations are taking place pan-Highland, in high electricity consuming corporate buildings such as schools and leisure facilities, meaning remote buildings will still benefit from lighting upgrades. These buildings will see a reduction in electricity consumed from the grid and improved lighting environment for its users. Furthermore, we are utilising local contractors to deliver the work which will help support the Highland economy, particularly in remote areas of the region.
- 3.4 Climate Change / Carbon Clever: During a financially challenging period, the Salix RF offers a huge opportunity for the organisation to proactively reduce carbon emissions without negatively impacting a reduced capital budget. This means that the financial savings will be reinvested in further energy efficiency projects (resulting in a greater reduction in carbon).
- 3.5 Risk: Due to Health & Safety concerns regarding Covid19, the most immediate risk had been in relation to contractors accessing sites. To combat this the project team

implemented strict control measures, such as more robust working practices and preventing work across multiple sites simultaneously. This standard of care and diligence will continue to be adopted across all the planned RF works.

Gaelic: There are no Gaelic implications arising from this paper.

## 4. Background

### 4.1 Climate

The Scottish Government has pledged to end Scotland's contribution to climate change no later than 2045. All public bodies have a duty to support and work towards this target under the Climate Change (Scotland) Act 2009, as amended by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019. At a meeting of The Highland Council on 9th May 2019, following a motion brought by the Leader of the Council, Cllr Margaret Davidson, Members agreed that the Council declare a climate and ecological emergency, whilst recommitting to achieving a carbon neutral Highland by 2025

As a result of the Scottish Government's own declaration of a climate emergency and to ensure public sector compliance with revised national net zero targets, the Climate Change (Duties of Public Bodies: Reporting Requirements) (Scotland) Amendment Order 2020 ("the Order") came into force in November 2020, and a letter dated 4<sup>th</sup> February 2021 from the Cabinet Secretary for Environment, Climate Change and Land Reform, Roseanna Cunningham was issued to all Council leaders and Chief Executives setting out the new duties for local authorities. This letter sets out that the Council will be required to provide the following in annual reports from reporting year 2021/22 onwards, including:

- a target date for achieving zero direct emissions of greenhouse gases, or such other targets that demonstrate how the body is contributing to Scotland achieving its emissions reduction targets;
- any targets for reducing indirect emissions of greenhouse gases;
- how the Council aligns its spending plans and use of resources to contribute to reducing emissions and delivering its emissions reduction targets;

To support national and regional ambition in respect of climate change and to proactively demonstrate compliance with the new reporting requirements, the Council must continue to invest in the decarbonisation of its operations and service delivery.

### 4.2 Salix and the Recycling Fund

4.2.1 Salix Finance Ltd. are a non-departmental public body, owned by government. Salix was established by UK Government and began working in partnership with Scottish Government in 2006 to provide interest-free loans to the public sector for energy efficiency projects. To date, Salix has worked with the public sector in Scotland to invest over £67 million in energy efficiency projects, saving an estimated £183 million over the lifetime of the projects.

4.2.2 In 2019, based on a business case developed by the Transformation Service, Highland Council, secured a £3.5m interest free loan from Salix, match funded against Council investments in solar and hydro; **this is the largest award made in Scotland and the largest made to a local authority in the UK.**

- 4.2.3 The £7m Recycling Fund (RF) aims to increase long-term investment in energy-efficient technologies across the public sector by enabling clients to reinvest savings from previous projects to finance further energy reduction schemes. The loan fund is ring-fenced for investment in projects that will reduce the Council's energy spend and carbon emissions.

Any work progressed through the Salix Fund **must** realise a carbon and financial saving for THC (The Highland Council) (project compliance criteria of up to a 12-year payback at a cost of £305 per tonne of carbon dioxide saved).

From 2023 the Salix fund will no longer fund projects involving fossil fuel use will no longer be permitted.

## 5. Progress to Date

- 5.1 Through the RF the Council has undertaken a huge amount of work which will benefit the organisation in both the short and long term, through initial improvements and the recycling of savings. Some of the works funded through the RF are -

- 5.2 **LED Phase 1:** >£2.3m has been invested in improving the lighting condition of 77 buildings throughout the estate. Replacing older bulbs with new energy efficient bulbs is expected to save almost 1.8 million kWh annually and result in estimated annual carbon savings of over 500,000 kgCO<sub>2e</sub>.

- 5.3 **LED Phase 2:** >£1.9m has been invested in improving the lighting condition of buildings throughout the estate. Replacing older bulbs with new energy efficient bulbs is expected to save almost 1.2 million kWh annually and result in estimated annual carbon savings of over 283,000 kgCO<sub>2e</sub>

- 5.4 **Solar PV programme:** ~£2m of solar PV has been deployed across 30 a mixture of schools, leisure facilities and offices, displacing a reliance on grid supplied electricity and the associated increasing costs. The PV installations have a life expectancy of over 25 years and are expected to generate over 1.3million kWh annually, resulting in yearly carbon savings of ~300,000 kgCO<sub>2e</sub>.

This provides reassurance in the process, modelling, and performance of the assets, although given the unpredictability of the Highland weather, there is likely to be annual fluctuations that alter the total generation figures.

However, it should be noted that the actual benefit realised for the organisation may be slightly impacted by COVID19 and significant changes to building occupancy levels and general building usage and behaviours.

- 5.5 **Boiler replacements:** Raigmore Primary School and St. Joseph's Primary School have both benefitted from the replacement of outdated and inefficient oil boilers. This was a capital led project with a financial contribution from the RF.
- 5.6 **River Ness Hydro:** £2.55m installation of a 92kW Archimedes screw, hydroelectric power turbine in the River Ness, making use of existing infrastructure from a historical hydroelectric system at the site. The project is self-financing; energy generated is "sold" to Inverness Leisure Centre displacing a reliance on grid supplied electricity and protecting the organisation from increasing energy prices. The system, which has a life expectancy of over 60 years, is expected to generate ~550,000 kWh of

renewable electricity annually (approximately 50% of the leisure centres total consumption), reducing carbon emissions by ~140,000 kgCO<sub>2e</sub> annually. System commissioned and working.

- 5.7 **HLH Sites:** Working across 21 sites the RF has invested in several energy saving measures including LED replacement and pool covers. This has resulted in estimated savings of 445,391kWh at an estimated cost of £734,000. Annual savings are £66,000 with estimated CO<sub>2e</sub> saving of 127,000 kgCO<sub>2e</sub> annually.
- 5.8 **Street Lighting:** In FY 21/22 the RF worked across 19 wards with a spend of £514,000 on 1,490 fittings. Estimated savings of 531,689kWh, resulting in estimated annual energy savings of >£85,000 an estimated annual CO<sub>2e</sub> saving of 122,000kgCO<sub>2e</sub>.

To date the fund has worked across 21 wards with a spend of >£3M on ~14,000 fittings. Estimated savings of 531,689kWh, resulting in estimated annual energy savings of >£500k an estimated annual CO<sub>2e</sub> saving of 715,000kgCO<sub>2e</sub>.

- 5.9 The key headlines and benefits of the **original £7m investment** to date -
- Estimated annual energy savings in excess of 4.4m kWh;
  - Estimated annual carbon savings in excess of 1,200 tCO<sub>2e</sub>;
  - Estimated annual financial savings in excess of £0.5m (which will continuously be reinvested in other energy efficiency initiatives);
  - A match funding contribution of £3.5m from Salix at 0% interest;
  - Lifetime savings of over £13.5m;
  - Ongoing access to technical support and project analysis from Salix;
  - Further strengthening the Councils successful partnership with Salix. The Highland Council is a leading Salix client, operating the largest value active Recycling Fund and highlighting exemplar implementation of projects estate-wide to support holistic decarbonisation.

## 6. Financials and Delivery

- 6.1 Given the success of the existing £7m RF, the declaration of a Climate & Ecological Emergency and the available estate-wide energy efficiency opportunities - many of which are detailed in this paper - the Council agreed further £3.5m investment as part of the Phase 2 Health and Prosperity Fund. Salix have recently changed their match funding contributions and as of 21/22 they now operate on a 75/25 funding basis, therefore this £3.5m contribution would activate an investment of £10.5m from Salix taking the total RF value to £21m.
- 6.2 The immediate focus of new investment is on completing the proposed LED Phase 2 works (estimated to cost ~£2.6m as outlined in Appendix 1); this is seen as a direct continuation of the Phase 1 programme and would look to build on the current momentum - utilising the same project team, contractors, and approach - ensuring consistency and the continuation of high standards. The £2.6m investment is comprised of lighting upgrades across 10 lots comprised of 51 sites including schools, leisure facilities and public conveniences.
- 6.3 Whilst there is a pledge of funds from Salix, significant work must be undertaken to develop compliant projects that demonstrate a clear ability to commit this spend - the

Fund Manager, in conjunction with officers from the Property Service and Climate Change & Energy Team, through the Energy & Renewables Board, will work to identify and develop additional project proposals on an ongoing basis. Appendix 1 highlights the opportunities available – the RF can be used to fund or enhance this and by securing the requested additional investment, it provides the financial certainty and flexibility to develop and implement a 2–3-year programme of projects and initiatives amounting to the unallocated funds which will be further enhanced by the annual recycling of savings.

## **7. Benefits**

- 7.1.1 Significant benefits can be realised, directly and indirectly, through the increased investment and ongoing delivery of a forward thinking and ambitious Salix programme.
- 7.1.2 The RF is closely monitored both internally and through Salix - this helps ensure benefits are realistic and deliverable. Measurable benefits include a direct and reportable carbon reduction and related energy spend reduction. Soft benefits will vary based on the technology and the type of efficiency work undertaken although examples of previously derived benefits include improved comfort levels through the redesign of light fittings and the replacement of older bulbs.

## **7.2 Carbon reduction**

- 7.2.1 It is estimated that the LED Phase 2 work will save 332,000 kgCO<sub>2</sub>e annually. The recycling nature of the fund means it is never static and work is continuously ongoing to identify projects and initiatives that will realise both financial and carbon savings; further analysis on opportunities needs to continue to determine the exact total annual carbon savings that could be derived from the RF 'top up.' Projects and initiatives progressed must adhere to strict criteria determined by Salix and Scottish Government.
- 7.2.2 This work and the related reduction in carbon is vitally important on a local and national level. Furthermore, the approach to carbon savings underpins the wider strategic work being undertaken by the Climate Change & Energy Team - the RF, and the additional investment, will continue to act as a successful example of securing external funding, which will be a key element of the team's vision and refreshed focus.

## **7.3 Financial Savings and Reinvestment**

- 7.3.1 It is estimated, using robust modelling and industry standards, that the LED Phase 2 work will save ~£300k annually. It is reasonable to estimate that investing the requested remaining £4.5m of unallocated funds would see annual savings exceed £0.6m in total – this is subject to further analysis and project development work which will take place in parallel to delivery of the LED Phase 2 works.
- 7.3.2 A portion of the savings realised will continue to be reinvested or 'recycled' through the fund as per our partnership agreement with Salix. The total annual recycling amount will depend on the type of projects taken forward, the total cost and the level of success; this will again be an ongoing process involving the Fund Manager, Finance and Salix. As only a portion of the savings realised will be reinvested into the RF, any surplus could be used to build up Council reserves ensuring some of the investments technically repay themselves (albeit over the life of the asset).

## **7.4 Economic**

- 7.4.1 Further investment in the fund will undoubtedly have a positive economic impact, thus directly supporting the Council's COVID-19 economic recovery strategy. For example, the LED Phase 1 programme utilises only Highland based contractors – that is over £2m of investment that has positively and directly impacted local businesses.
- 7.4.2 The LED Phase 2 programme, will employ the same approach, ensuring only Highland based contractors benefit from the additional investment – in accordance to procurement regulations.
- 7.4.3 Although technologies, and the expertise and skills required to deliver them, will vary the project team will, where possible, continue to utilise local contractors to ensure ongoing economic support for local contractors and businesses.

## **7.5 Partnership Working**

- 7.5.1 This investment will not only reinforce the Council's status as one of the most ambitious climate conscious local authorities in Scotland but will also further demonstrate its ongoing commitment to the RF and prosperous working partnership with Salix.
- 7.5.2 Attracting external investment is, and will continue to be, vitally important in delivering against climate targets and helping ensure long term sustainability for the organisation and the region. Reinvesting in the fund, reemphasises the organisations willingness and ability to work with likeminded partners; this also continues to serve as a successful example for future energy and climate related funding bids

## **7.6 Lessons Learned**

- 7.6.1 Significant lessons have been learned through the work to date (spend and ongoing delivery of ~£7m worth of work). Adopting a structured data driven approach has proven invaluable and allowed the project team to make quick and effective decisions, resulting in minimal overspend and strong energy savings.
- 7.6.2 For instance, based on tender submissions (both successful and unsuccessful) and final project costs, the anticipated installation costs for solar PV and LED can be accurately modelled and tailored depending on a number of relevant factors; contractor, building location, type of roof, efficiency, or brand of fittings – this database will prove invaluable for informing future proposals.
- 7.6.3 Additionally, the project team also has a clearer understanding of the local market and availability of materials and labour – this will help ensure realistic programmes are agreed with minimal disruptions to service delivery.

## **8. Next Steps**

- 8.1 A lighting design tender exercise is already underway for several of the LED packaged lots. Additionally, tender documentation for the remaining lots is collated and ready to be shared with contractors once approval has been granted; this will minimise delays and ensure fully costed designs and work schedules are returned in due course, giving a much stronger chance of being on-site and undertaking works during the summer period, avoiding out of hours working and the associated cost implications.

8.2 Concurrently, work will be undertaken to further explore projects and initiatives that could be progressed as a priority and attributed to the unallocated match funding contribution from Salix. Given the recycling nature of the fund, this is an ongoing piece of work and will therefore continue to be managed by the Fund Manager and governed by the Energy & Renewables Board.

Designation: Executive Chief Officer Performance and Governance

Author: Stuart Miller – Salix Fund Manager (CCET (Climate Change & Energy Team))

Date: 25 October 2022

# Appendix 1: LED Phase 2 Business Case

## 1. The case for change

Climate change is now recognised as one of the most significant threats facing the planet. The Council has now declared a climate and ecological emergency, and specifically includes climate change within its corporate risk register as there is recognition that the changing climate will present the Council with significant long-term challenges. This includes continued service delivery to those Highland communities who are particularly vulnerable to potential impacts of changing and extreme weather patterns. It is therefore vital that the Council works towards mitigating its own climate change impact wherever possible and to do what it can to help avoid the worst climate outcomes.

The use of energy across the Council's estate accounts for a huge proportion of the Council's total carbon footprint (30,308tCO<sub>2</sub>e from a corporate total of 40,145tCO<sub>2</sub>e in 2019/20), and therefore, presents the best opportunity for the organisation to meaningfully contribute to national emissions reduction targets.

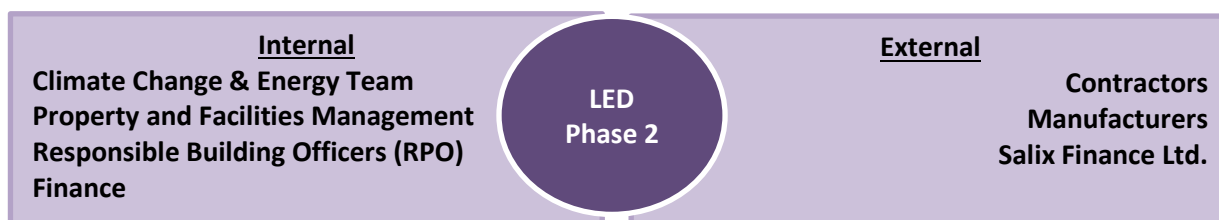
## 2. Brief summary of the vision

This business case lays out the justification for the Council to undertake an additional phase of LED lighting upgrades across the estate; proposed upgrades include schools, leisure facilities and sports pitches, depots, public conveniences, flood lighting and harbour offices / facilities. It is envisaged this would be a direct continuation of the Phase 1 works (~£2.3m) that has been funded directly through the Salix RF. As with Phase 1, the work will focus on replacing older, poorer performing lights across the estate. By replacing these lights, the organisation will realise carbon and financial savings, an improved lighting environment for building occupants and a reduced maintenance burden. This is an established technology which will realise strong savings for the organisations; this is also a relatively minor intervention and has limited risk and exposure to unforeseen or escalating costs.

Sites have already been identified and undergone initial surveys. As with Phase 1 these sites have been packaged into geographically based lots; it is envisaged this will again help realise economies of scale and act as an attractive work package for local contractors.

It is anticipated that the funding request would be comprised of Council Reserves (earmarked for investment as part of a wider Phase 2 investment strategy). This amount would be matched by Salix Finance Ltd - a £3.5m investment from THC would access a £10.5m investment from Salix - and their portion of the funding would continue to be interest free. Alternatively, in the event this is not possible this capital could be drawn down from Public Works Loan Board (PWLB) on a self-financing basis (as previous investment was).

## 3. Who needs to be involved?



## 4. Breakdown of potential delivery options

*Summarise the different delivery options available. Can this be delivered internally? Can the development be managed and run by a partner? Present the reader with all the options.*



It is suggested that the project team will continue to adopt a blended delivery model, comprised of the following options –

- Utilising the existing framework (used for Phase 1) will ensure the project team is clear on roles and expectations. Furthermore, this framework utilises trusted Highland-based contractors who clearly understand the organisations expectations in terms of price, quality, and enhanced working practise. It is proposed that contractors listed on the framework will carry out the majority of the internal lighting upgrades.
- Continue to use the Street Lighting Team where capacity allows with a particular focus on external light fittings (including depots, public conveniences, and harbour facilities). This is a cost-effective model and allows remote or less favourable sites to be progressed. Successfully completed work to date has included Rose Street Car Park, Inverness HQ, and Inverness Leisure (external flood lighting).

## 5. Benefits realisation: Financial, social & environmental

Benefit type	Benefit	Measure
Financial	Reduced energy spend Reinvested savings	Meter readings and bills* Salix online portal (SERS) and continued recycling
Social	Reduced energy consumption Better understanding of individuals roles in mitigating waste	Reduced consumption over a comparative period Feedback from stakeholders Uptake and active engagement/users
Environmental	Reduced energy consumption Reduced carbon emissions Reduced energy wastage	Meter readings and bills*

\*as well as the addition of any additional remote monitoring tools like Building Energy Management Systems (BEMS).

Phase 1 has been extremely successful; initially there were challenges and tender return costs were deemed excessive. The project team worked to revise the scope of works and lot geographically dispersed sites to realise economies of scale. This approach will be replicated across phase 2.

Savings realised will be taken from the relevant energy budget and used to pay off the capital borrowing and reinvest in future energy efficiency projects directly through the fund.

## 6. SWOT analysis of the opportunity

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Reduction in emissions and spend</li> <li>• High level of control</li> <li>• Using only Highland based contractors</li> <li>• Ease of implementation</li> <li>• Strong savings</li> <li>• Match-funding from Salix at 0% interest</li> <li>• Improved lighting environment and comfort levels</li> </ul>	<ul style="list-style-type: none"> <li>• Likely to be competing priorities for Council reserves investment</li> <li>• Repayments to PWLB incur interest which is subject to change but is typically around ~2%</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Additional inclusion of controls and sensors to reduce wastage</li> <li>• Savings will be reinvested in green projects further realising savings</li> </ul>	<ul style="list-style-type: none"> <li>• Potential limited contractor availability due to downsizing and economic impact of COVID19</li> <li>• Ensuring ongoing high standards of hygiene in relation to site access for contractors</li> </ul>

## 7. What level of control do we have?

*Is it within our own gift to deliver the opportunity, are we reliant on a 3<sup>rd</sup> party to provide an asset etc., is the opportunity only feasible by working in partnership with others?*

The Council has **full control** – sites being progressed are owned by the Council (albeit some are operated by key partners including HLH). Sponsorship, at both a project and board level, from the Head of Property & Facilities Management will continue to ensure that there is cohesion between the project delivery team and wider estate strategic decisions; future rationalisation or asset transfer plans will inform site progression. Delivery of the project will continue to sit within the Property Service and utilise expertise of SME's including maintenance to ensure continuity in the standards being employed on site.

## 8. Risk management

*A summary of the key, emerging risks (an event that could occur in the future) and issues (something we know about that needs to be managed) relating to the progression of this opportunity.*

There is very little risk in progressing this proposal due to the established partnership with Salix and the excellent record of accomplishment of delivery across LED Phase 1. The main risks, which are deemed unlikely and manageable, are as follows -

<b>Risk</b>	<b>Mitigation</b>
<ul style="list-style-type: none"><li>• Estimated / financial savings are less than anticipated</li></ul>	<ul style="list-style-type: none"><li>• Estimated savings have been approved by Salix and cross referenced against industry standards</li><li>• Estimated savings have been informed by LED Phase 1 KPI's</li></ul>
<ul style="list-style-type: none"><li>• Project costs are higher than expected (this could be because of COVID19, Brexit or encountering unexpected issues such as asbestos).</li></ul>	<ul style="list-style-type: none"><li>• There is contingency in the property budget for issues such as asbestos</li><li>• Enhanced COVID19 working practices are enforced at all sites - due to the nature of the works robust cleaning has always been administered to ensure rooms are clean and ready for use</li><li>• Framework adopts a 2-stage process ensuring that after the design stage works can be re-tendered to ensure sites meet strict carbon and financial criteria.</li></ul>

## 9. Is there potential for the proposal to be enhanced through additional opportunities?

*Think about whether the proposal could be complimented with additional work to enhance any benefit realised. Examples could be solar with the addition of battery, or a heat network replacement with the addition of BMS (Building Management Systems) and insulation.*

There is the potential to supplement the lighting work with the addition of controls or sensors to ensure lighting wastage is minimised. This results in increased project costs and erodes savings (and therefore the amount of money reinvested in further energy works).

## 10. Will this opportunity require additional works to be carried out to be effective?

*Think about whether the proposal requires supporting infrastructure or improvements. Examples could be Air Source Heat Pumps potentially requiring larger radiators, lighting requiring re-wiring.*

Further rollout of Building Energy Management System (BEMS) across the non-domestic estate, whilst not essential to this work, will improve the levels of monitoring (and potentially control).

A number of sites (including depots, football pitches and harbour facilities) are being surveyed on an ongoing basis when THC resource is in the area; this is to minimise cost and avoid unnecessary travel during a period of restrictions on travel. As the survey data has yet to be modelled and verified, we have estimated the cost for this work at ~£0.25m (this will be referred to as Lot 6). This would take the total funding request amount to £2.6m. In the event the Lot 6 costs exceed the earmarked £0.25m then the difference will be allocated from the Salix contribution.

The proposed Salix match contribution of £2.6m is currently unallocated. Work will continue to determine projects and proposals that can be expedited thanks to the fund (ensuring they are compliant with strict financial and carbon criteria). Ongoing management of the fund will continue to be the responsibility of the Fund Manager who will work with Salix, the Head of Property & Facilities Management, and the Climate Change & Energy Team Manager to determine the best opportunities.

### 11. Carbon reduction

*Detail the projected kWh and carbon reduction anticipated through this proposal.*

The following is based on robust modelling (informed by Phase 1) and has also been verified by Salix and their technical team; any assumptions made align with industry standards.

Lot	Annual Electrical Consumption (kWh)	Existing Energy Usage (kwh)	Proposed Energy (kwh)	Energy Saving (kwh)	Total number of proposed Fittings	Tons of CO2 saved annually
1	957,798	294,113	68,429	225,684	1,994	53
2	1,167,417	263,023	54,948	209,075	1,866	49
3	573,686	222,383	58,588	163,795	1,295	31
4	1,604,607	534,262	81,992	452,270	3,634	105
5	1,825,933	468,006	132,505	335,501	3,164	78
PC 1	22,838	13,680	2,717	10,963.05	51	3
PC2	34,939	12,848	2,899	9,950	54	2
PC3	17,496	9,264	1,887	7,377	25	2
PC4	86,274	16,951	3,797	13,155	69	3
PC5	25,436	31,854	5,681	26,173	105	6
					<b>Total</b>	<b>332</b>

In addition to this, a number of sites (including depots, sports pitches, and harbour facilities) are being surveyed. Currently, as the survey data has yet to be modelled and verified, we cannot estimate the anticipated financial or carbon savings that would be derived from any lighting upgrades in these sites.