

Torbay Council used Salix interest-free funding of £514,854 to upgrade their street lighting to LED. The Council has saved £104,348 and 338 tonnes of carbon each year. This is how they did it.



Project overview

Torbay Council has had to look at all services and where savings can be made, due to funding pressures. The council had already completed a number of energy efficiency projects through their Salix recycling fund and wanted to find further ways to reduce their energy usage. Around 19% of the Council's electricity costs were attributed to street lighting, so it was felt significant energy savings could be made in this area.

The quick payback associated with switching to white light off-sets the longer payback from the LED lighting resulting in the project payback of only 4.9 years.



Technical overview:

961 old luminaries that were running at 172 W to 61 W LED

Upgraded lanterns by re-profiling electronic ballasts & converting to 90 W white light equivalent

Operational hours have been reduced by 15 mins per day due to new LED

New equipment installed will be updated on a weekly basis on the asset management computer system

The Council's Business Case

When developing the business case, it was recognised that the greatest savings could be obtained on main roads where the higher wattage luminaries existed. The majority of these roads were lit with 172 W magnetic and electronic gear, high pressure sodium lanterns.

The successful bidder was required to provide lighting designs based on traffic flow data and road layout. Diming regimes were also introduced based on this data which gave further savings.

A luminaire specification was included in the tender, which included ease of maintenance, installation and ability to upgrade as LED technology improves over time. Only two types of different optics and wattages were required to provide the required lighting levels across the various road categories.

Salix indicators

Total loan value

£514,854

Annual £ savings

£104,348

Annual savings tonnes of CO₂*

338

Lifetime £ savings

£1,684,136

Project payback

4.9 years

*Calculated using emissions factors published by government for carbon footprinting.

The New Lighting Installed

The existing lanterns were removed, excess bracket length cut back and new LED luminaries installed in accordance with the road type and lighting design requirements for each road within the project. Any lanterns that could be reused were taken to the contractor's store.

Working with Salix

Why Salix?

Torbay Council has worked with Salix since 2008, utilising Salix funding through both the recycling fund and loans programme. The Council developed an internal business case which was then used to apply for a Salix loan. Salix funding has provided a cost effective means of securing finance. The funding has helped to deliver a financially strong business case, quantifiable cost savings and reductions in carbon over the lifetime of the project.

The Salix Solution

Torbay Council combined a £386,504 Salix loan with £128,350 from their existing Salix recycling fund to deliver this project. 961 luminaries were replaced with LED, with a further 1,091 upgraded by re-profiling electronic ballasts and converting to white light.

Torbay Council used a drone to provide an aerial view which allowed them to compare the quality of lighting between the existing high pressure sodium lighting and the new LED scheme. The Council has received positive feedback by members of the public and Torbay Council councillors.

How Salix Worked

The flexible nature of Salix Finance allowed the project to be adjusted after contracts were awarded and a greater number of lanterns to be installed.

Torbay Council is now looking at extending the project into residential areas, which will concentrate on replacing conventional 70W high pressure sodium lanterns with LED. It is hoped that by using dimming profiles the scheme can reduce the need for part-night lighting.

Access Salix loans for your organisation, by logging onto:
salixfinance.co.uk/loans/street-lighting

Available as a downloadable PDF at:
salixfinance.co.uk/knowledge-share/case-studies



“Not only does Salix provide a cost effective solution to acquire funding but it also helps deliver a robust solution in reducing energy costs and carbon emissions”

Dave Simmons, Street Lighting & Systems Engineer, Torbay Council

