# **RENEWABLE HEAT**Greenspace Scotland





# Locogen undertook option appraisals and outline feasibility studies covering renewable heat and power for five large open public spaces in Falkirk & North Lanarkshire between October - December 2019.

As part of their ParkPower Programme, Greenspace Scotland commissioned Locogen to explore renewable energy options for five large publicly-owned greenspaces on behalf of Falkirk Council and North Lanarkshire Council. The councils were keen to maximise the potential of their land assets through renewable energy schemes without impacting negatively on their value for amenity and biodiversity services.

Phase 1 delivered an options appraisal highlighting all potential renewable energy options available on the sites. After client consultation, Phase 2 undertook a techno-economic feasibility of optimal options including recommendations for a robust low carbon heat and energy plan. This focused not only on maximising benefits to services within the greenspace but also how the asset could be used to support surrounding building assets.

Locogen used GIS technology to map all potential loads within approx. 500m of greenspace ownership boundaries. Thermal and electrical consumption data were collated from the councils. Energy loads were mapped in GIS so as to identify clusters of buildings with high heat consumption. Loads were categorised in terms of public or non-public ownership as well as proximity and size.

Locogen then identified suitable greenspace areas which could supply energy resource and evaluated technology options. All potential load, resource and storage options were mapped and ranked considering environmental, technical and economic opportunities and risks. These were then reviewed with clients to provide a series of recommended options for each greenspace.

Locogen's renewable heat practice comprises a multi-disciplinary team of consultants with extensive expertise across technologies. These technologies include district heating networks, heat pumps and biomass systems.

Our service portfolio is comprehensive, encompassing every stage of the renewable heat project:

 Options appraisal; Feasibility; Design; Technical review; Owner's engineer; Project management; Installation; Commissioning; Asset management

Such is the expertise of our renewable heat practice that, in addition to these activities, our team are often called upon to provide remediation and expert witness services. This involves us in reviewing and assessing some of the most high-profile renewable energy installations in the country and bringing them back to proper working to order to deliver the benefits intended.

Our team also provides due diligence services on renewable heat projects to financial institutions offering non-recourse debt to projects and private equity investors.

John Maslen, ParkPower Programme Manager for Greenspace Scotland, shared his gratitude by saying:

"Locogen exceeded our expectations in terms of the level of detail and range of options they considered. All project stakeholders were impressed with the quality of outputs and their flexible approach to project management."

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## WHY

### LOCOGEN?

Locogen is an internationally recognised and award-winning expert in facilitating the development, construction and operation of renewable energy systems for our partners and clients. Our vision is to see the world powered by 100% distributed renewable and low carbon energy; where everyone has access to affordable, sustainable energy and clean air. We work to realise that vision by providing investment-grade technical and commercial expertise and advisory services to support the development, design, build and operation of renewable energy and low carbon projects in the UK and internationally.

#### SERVICE AREAS

We operate across all project stages, from site finding, feasibility and options appraisal, all the way through to construction, asset management and decommissioning. These services are delivered via our development, operational services, consultancy and energy services divisions.

#### DEVELOPMENT

Locogen has been developing renewable energy projects since 2009. We have successfully developed utility and commercial-scale wind and solar farms, along with community hydro projects. We often develop projects in partnership with other organisations, such as private equity investors, landowners, international developers and community groups. We are actively seeking new projects to invest in and we bring considerable experience and expertise to ensure success. We also offer a zero-risk option for landowners, where we lease the site and take full responsibility for every aspect of the development. If you're simply looking for finance, we can help identify the best-fit deal or look at investing in your project ourselves.



#### **OPERATIONAL SERVICES**

Our operational services team delivers asset management, operation and maintenance services across a range of renewable technologies. Asset management is key to ensuring the proper operation of your renewable energy asset, maximising revenue streams and boosting return on investment. Securing the right asset performs to your expectations over the course of its lifetime. Locogen has comprehensive asset management packages for wind, solar and hydro projects. Services include performance analysis, maintenance co-ordination, operational administration, regulatory compliance and financial services. We tailor these packages to meet precise needs of individual clients. Our asset management team has an excellent record in minimising downtime, responding quickly to technical issues to maximise generation - and revenues. Our Power Purchase Agreement (PPA) service is free to all asset management clients and secures the best deals available.

#### **ENERGY SERVICES**

Our energy services team complements our renewable energy consultancy and development divisions, offering contracting services over a wide range of technologies, including wind, solar, renewable heat and hydro projects. Our team includes experienced consultants, designers, field engineers, electricians and project managers. The renewable energy services team can also act as principal or main contractor, taking full control and responsibility for construction of your renewable energy project.

The team has worked extensively across sectors such as newbuild and social housing, public sector, commercial and community groups. Our experience and expertise ensure these projects are delivered safely, on schedule and to budget.

#### CONSULTANCY

Our consultancy team provides professional services at every stage in the life of a renewable energy project. At the very earliest stage, we conduct feasibility studies to advise on the viability of the project and perform formal due diligence services to ensure lenders or investors are appraised of all project risks. Our design team will take the project through from survey to complete project design and our consenting services will make sure all proper consents are obtained to allow the project to proceed. We offer expertise in mature technologies, such as wind, solar and renewable heat, and also advise on emerging sectors such as hydrogen, net-zero strategies, energy storage and local energy markets.

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