South Seeds:
A Community Energy Business Model Prospectus

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February 2022

This report was authored by the University of Strathclyde, on behalf of South Seeds. It was funded through the EPSRC's Impact Acceleration Account funded project:

'Community energy at a crossroads: Co-developing a path forward for South Seeds and the UK community energy sector'

Please cite as: Carus, C., Hannon, M. (2022) *South Seeds: A Community Energy Business Model Prospectus*. University of Strathclyde https://doi.org/10.17868/strath.00082367

Contents

1. Executive Summary 1
2. Introduction 3
3. South Seeds 4
   3.1. Organisational Structure 4
   3.2. Missions Statement 6
   3.3. Impact 8
   3.4. Revenue 8
   3.5. Costs 10
   3.6. South Seeds' business model today 11
4. New Energy Business Models 13
   4.1. Emerging Community Energy Business Models 13
   4.2. Policy context 14
   4.3. Characterising South Seeds' Area 16
5. Business Model Innovation 27
   5.1. Ideation and Shortlisting Process 27
   5.2. Shortlisting Decision 27
   5.3. Feasibility Assessments 28
6. Discussion and Conclusions 45

Appendices 49

Appendix 1: Constitutional Purposes 49
Appendix 2: Survey on Scope and Purpose of Community Energy Business Modelling – Results 50
Appendix 3: Analysis of Scottish Index of Multiple Deprivation 57
Appendix 4: Other Local Social Enterprises, Community Groups and Charities 58
Appendix 5: Long list of community energy ideas 59
Appendix 6: Long list screening criteria 61
Appendix 7: Customer Value Propositions and Business Model Canvases for Shortlisted Ideas 62
Appendix 8: Estimate of core costs 70
Appendix 9: Considerations relating to trading 71
Appendix 10: Financial Assumptions for Retrofit Advice Portfolio 74
Appendix 11: Carbon Literacy Project Accreditations 75

1. Executive Summary

South Seeds is a community-led, sustainability social enterprise with charity status. It has operated in the South of Glasgow for the past ten years and has had great success engaging with the local community to deliver a range of projects designed to build a sense of community, promote sustainability and tackle poverty.

After a decade of helping local people to lead more sustainable lives, South Seeds is now exploring how its business model may need to evolve into the future; in light of a fast changing market and policy landscape. The organisation is also heavily reliant on grant funding, with almost all (91%) of South Seeds' revenue over the past six financial years from restricted grants. This raises questions about how it can become more financially independent and by extension, resilient to changing funding regimes.

The purpose of this report is to explore new business model options for South Seeds that simultaneously deliver on the organisation's goals of sustainability and alleviating poverty, whilst also reducing its reliance on grant funding. The aim is to generate revenue that can at the very least cover the costs of its services but ideally to generate a surplus that can be used to cross-subsidise other non-revenue generating activities for fuel poor customers. Importantly, the report was authored independently by University of Strathclyde staff, on behalf, and with the support, of South Seeds. As such, the report's contents do not necessarily represent South Seeds' preferred business strategy. Instead, it offers a range of energy business activities the charity may choose to adopt as part of its future business model.

The project was funded by the University of Strathclyde's Impact Acceleration Account and aimed to generate impact from the outcomes of two research council funded projects: 1) the UK Energy Research Centre's Financing Community Energy project; and 2) the EnergyREV consortium for smart, local energy systems.

The report is structured in three parts. First, the project team reviewed South Seeds as an organisation including its finances, purpose and priorities, as well as reviewing the context in which it operates. Second, based on a review of the UK-wide community energy sector, a long list of 26 community energy business ideas was created. These ideas were assessed for their fit with South Seeds priorities, competencies and resources. They were also assessed for the difficulty of implementation and the likely financial feasibility. In the third stage, with guidance from the charity's trustees, a short list of four business activities was identified, which were explored as part of a more in-depth feasibility study. These were:

1. An energy retrofit extension to the existing **tool library**;
2. A **retrofit handyperson** to carry out energy efficiency works;
3. A portfolio of professional energy **retrofit advice**; and
4. Provision of **carbon literacy** training.

The long-list of 26 potential business models spanned traditional and emergent community energy activities, including advice and support for domestic building low energy retrofit, electric vehicle charging, smart demand side response and community investment in wind farms. The shortlisting process with the trustees revealed a preference amongst trustees for incremental, rather than radical business model innovation. This meant the shortlist tended to focus on business activities that offered a natural progression to existing activities, rather than a step-change into new territory.

The share of organisational core costs to be covered by the business model on its notional 'profit and loss statement' also formed a key determinant of viability. For this study, the authors imposed a threshold for a "fair share" of core costs, which had to be covered by any new business activity, at £27,000 or 25% of total core costs. At this level, the **retrofit advice** service does not break even until there are three fully utilised full time advisers. The **retrofit handyperson** faces the same structural cost issue.

South East London Community Energy (SELCE), operating in a market far larger than South Glasgow, has found it difficult to attract a viable level of demand for its **retrofit advice** service. The exception is

thermographic surveys franchised from Bristol's CHEESE Project via First Thermal Ltd, which is a proven success model than could be implemented relatively easily by South Seeds.

The most promising route towards strengthening the organisations finances is to expand South Seeds' **tool library** to support home energy retrofit. The customer experience could be improved by adding premium and specialist tools including retrofit tools like insulation saws as well as extending opening hours and providing home delivery. Additional tool library officer capacity would be repaid by an increased membership and borrowing fees for premium tools targeted at "able to pay" customers.

Carbon literacy training could generate a surplus but there is major uncertainty over the size of the market of paying customers for such training, whether these be citizens or company employees. A pilot course could be used to identify demand and viable pricing, and benchmark this against competing offers.

Increasing revenue from any of these shortlisted business activities should not incur payment of business rates, assuming they were to take place in the current premises at 514 Victoria Road. A change in the primary use of the premises from the current Class 2 ('financial and professional services') to Class 1 ('shop') is considered permitted development and would not require a planning application. Provided that the new business model delivers, or complements the delivery of the charity's primary purpose, profits will be exempt from corporation tax but further advice should be sought.

Finally, the majority of the start-up costs for these incremental "follow on" business model options could potentially be covered by modest amounts of reserves. If this were not possible, there could be scope for start-up costs to be covered by "one-off" flexible or targeted grant support, community shares or crowd-funding.

2. Introduction

South Seeds is a community environmental charity in central South Glasgow that recently celebrated its tenth anniversary. Its mission is to '*enable Southsiders to lead more sustainable lives*'. While it has enjoyed success in engaging the community in the broad spectrum of urban sustainability issues and in supporting the fuel poor, it remains vulnerable to changes to the public grant-funding regime. This report examines potential avenues through which South Seeds could establish a resilient, sustainable economic basis through which to achieve it aims specifically in the field of community energy. As per Hannon et al.[1], we define community energy here as:

> *Any project relating to the generation, supply and management of energy, which is wholly or partly-owned, delivered & managed by a community, and whose mission is to deliver environmental, social & economic value for a local area.*

Whilst there are various questions in relation to what constitutes "community"[2] and whether a community energy project ought to create value for a specific place or not[3], in general it represents a very different approach to satisfying our energy needs, which broadly places the needs of communities first.

Community energy is increasingly recognised as an important driver of the decarbonisation transition as it can redirect investment away from fossil fuels, build public support for low-carbon solutions and help to educate citizens about sustainable development. In addition, community energy can also deliver strong benefits for the communities involved. In particular, it can reduce fuel poverty, preserve and grow wealth within a geography and be a focal point for community building.

To date, most community energy projects have involved low-carbon electricity generation, normally wind, solar PV or hydro[4]. However, as government subsidies for generation have reduced in the UK, a broad spectrum of alternative models has started to evolve[5]. In this context, this report explores some of the emerging community energy business models and how these might apply to the case of South Seeds to provide additional benefit to its local community.

This document is structured as follows. Section 3 reviews South Seeds as an organisation, considering its history, strengths, successes and current day business model. Section 4 sets out the strategic context within which this business strategy is located in terms of emerging community energy business models, policy and socioeconomic aspects of the community within which South Seeds operates. Section 5 then reports on the process through which the South Seeds board considered internal and external views to develop a short list of potential community energy business models. Furthermore, it reports on the feasibility of the short listed options and identifies key steps necessary to realise these options. Findings are discussed and conclusions set out in section 6.

[1] https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4109070
[2] G. Walker, The role for "community" in carbon governance, Wiley Interdiscip. Rev. Clim. Chang. (2011). https://doi.org/10.1002/wcc.137
[3] Community Energy: A Practical Guide to Reclaiming Power, FoEE/ RESCOOP/ Energy Cities (2020)
[4] https://www.nature.com/articles/s41560-019-0546-4
[5] https://ukerc.ac.uk/news/financing-community-energy-in-brave-new-world/

3. South Seeds

South Seeds is a Scottish Charitable Incorporated Organisation (SCIO) founded in 2011. SCIO is a form of legal entity specific to Scotland. The entity was created for social enterprises that wish to be regulated by the charities regulator, OSCR, as opposed to the FCA (for Community Benefit Societies) or Community Interest Company regulator.

South Seeds was established ten years ago with a focus on reducing carbon and increasing energy efficiency. However, there was a low uptake of support for energy efficiency but a significant demand for help with energy bills. Since then South Seeds has expanded its operations beyond providing energy bills support to include, amongst other activities, a tool library, an eco-croft and bespoke energy efficiency advice.

This section looks internally at South Seeds: its structure, purpose, history, funding, impact and strengths. Its current operation is then summarised in the form of a business model using the Business Model Canvas[6].

3.1. Organisational Structure

South Seeds is governed by a board of seven trustees elected by the members. The trustees bring a wealth of experience from their professional lives in energy and sustainability policy, industry and academia, as well as the realm of community development. The board is advised by the employees and the broader governance structure is outlined in Figure 1.

There are currently five salaried employees comprising a general manager, an office manager, tool library officer and two energy officers. South Seeds also employs a number of sessional workers to run projects or activities which are seasonal. In previous years, there have been as many as eight salaried employees plus sessional workers.

South Seeds has multi-skilled energy officers who work to support both energy efficiency interventions and dealing with energy bills. People skills have been important as well as technical skills. Indeed the primary recruitment criteria is people skills, for example experience working in a café or similar people-facing context, and energy knowledge has been developed in-post.

South Seeds' membership numbered 22 as of August 2021. Each year the members meet at the AGM and elect the trustees.

[6] https://www.strategyzer.com/canvas/business-model-canvas

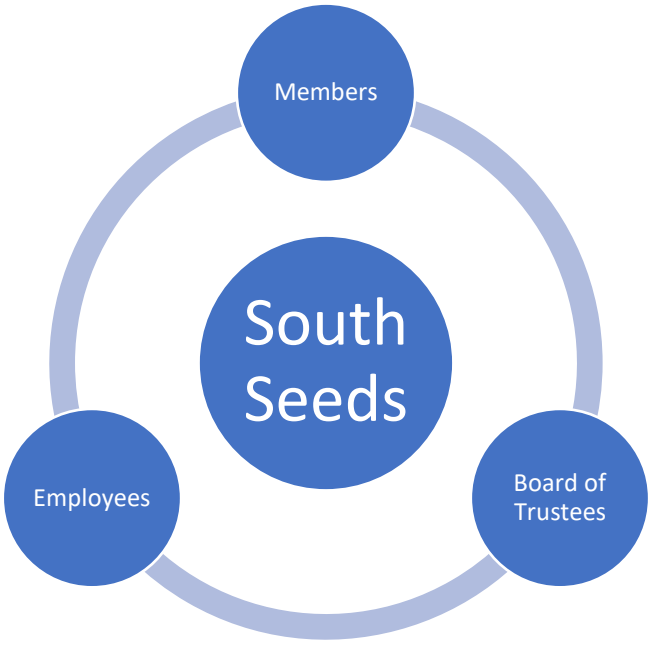

Figure 1: Representation of South Seeds' governance structure (Source: author)

3.2. Missions Statement

South Seeds has nine purposes set out in its Constitution (see Figure 2 and Appendix 1). However, it was stated during the strategy review that the constitutional purposes do not entirely reflect the priorities of the organisation today. The constitutional purposes were picked from a predefined list when applying for charitable status in 2011 and haven't been reviewed since.

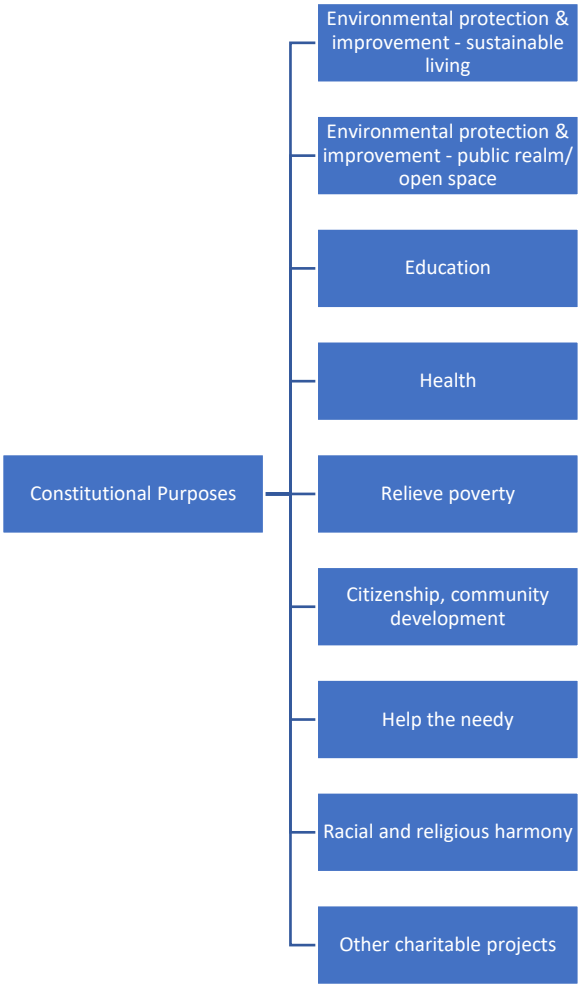

Figure 2: South Seeds' Constitutional Purposes (Source: South Seeds)

So what is South Seeds' real purpose? In the words of its manager General Manager, '*South Seeds is about the future. It's about making the Southside a better place to live*'. In 2020, South Seeds adopted the below tagline, which is printed on the side of its office (Figure 3):

Figure 3: Design for shop front sign showing the South Seeds Mission Statement (Source: South Seeds)

To clarify the ethos and priorities of the organisation in order that they may influence this energy business strategy, trustees and employees were surveyed by questionnaire in October 2021. Three trustees and four employees responded to questions around organisational priorities and the nature of appropriate users/customers of any future Community Energy business. The full results of the summary are to be found in Appendix 2.

The survey respondents indicated that, with regard to providing energy services, relieving poverty has the greatest priority for the organisation with an average score of 2.4 (with 1 being the greatest priority, 8 being least). Advancing environmental protection (2.9) and public realm improvements (3.7) were the second and third priorities. Significant variation in the survey responses is evident in Figure 4 which shows the highest and lowest ratings given to each constitutional purpose.

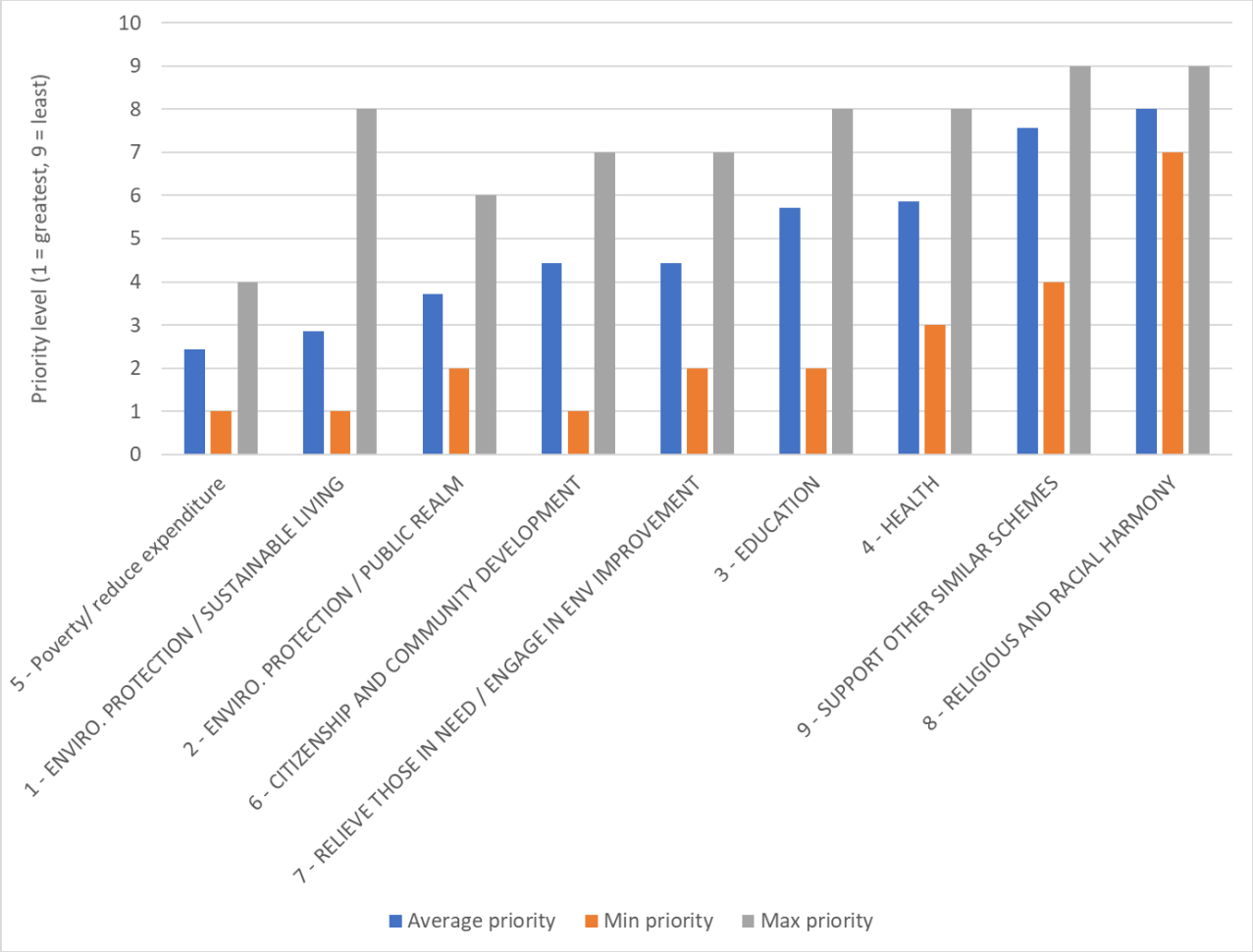

Figure 4:"Which of the constitutional purposes is most important to identifying what energy product or service South Seeds should provide?" 1 = highest priority; 8 = lowest. (Source: author)

3.3. Impact

South Seeds does not keep a structured track of its impact beyond the commentary in its AGM and annual accounts and in reporting to funders associated with individual grants. However, a ten year retrospective view of South Seeds achievements identifies the following highlights[7]:

1. **Advice and advocacy:** Estimated 13,000 visitors to shop on Victoria Road for advice and information since opening April 2011.
2. **Tool library:** has made over 1,000 lends from a selection of 500 tools delivering 1 tonne of carbon savings and £10,000 in purchase cost avoidance.
3. **Energy efficiency:** Helping people make their homes more energy efficient. Advice on clothes pulleys, draught-proofing, chimney balloons. Handyman service 2015-2018.
4. **Growing:** Created 5 community gardens, although 2 have now been cleared for building. 500 people have adopted a growing bed at the Croft.
5. **Decarbonisation of heat:** Produced a strategy for decarbonising heat.
6. **Policy engagement:** Giving evidence to Citizens' and Climate Assemblies.
7. **Education:** Published newspapers with 10,000 cumulative readers.
8. **Community integration:** Helping migrants deal with energy system.

3.4. Revenue

This section summarises the sources of South Seeds' funding, the issue targeted by the funded projects, and how funding has changed over time. Revenue categories in the accounts have been structured similarly since 14/15, allowing easy aggregation. Figure 5 shows how over the past six year, Scottish Government funding has been the main source of income, providing £896k (63%) out of £1.4M over the period. More broadly, restricted grants made up 91% of South Seeds' income.

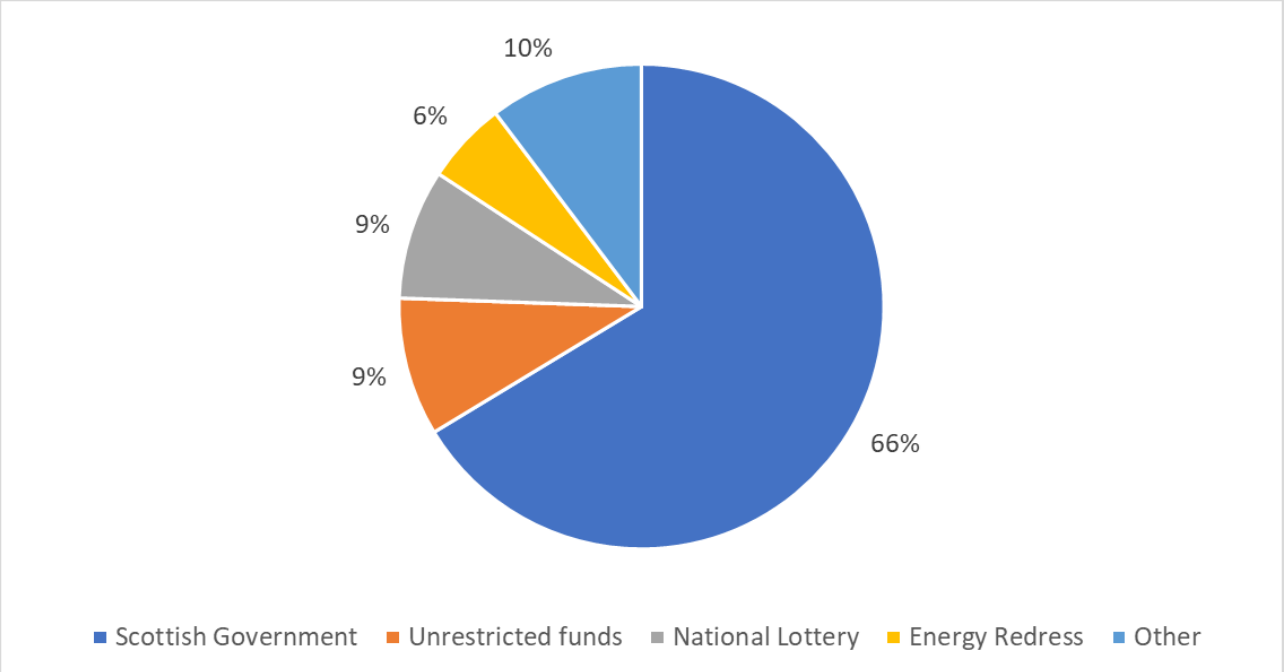

Figure 5: Breakdown of funding sources 14/15 to 19/20 by source.

[7] https://southseeds.org/south-seeds-is-10-years-old/

For this report, income in the accounts was roughly categorised according to the issue for which it was granted to address. Between 14/15 and 20/21, domestic energy has been the greatest spending category at £579,000 out of £1,101,000. Circular economy activities relating to waste and the tool library are the second largest area of expenditure at £183,000. Funding for general costs and growing projects were the third and fourth income categories (Figure 6).

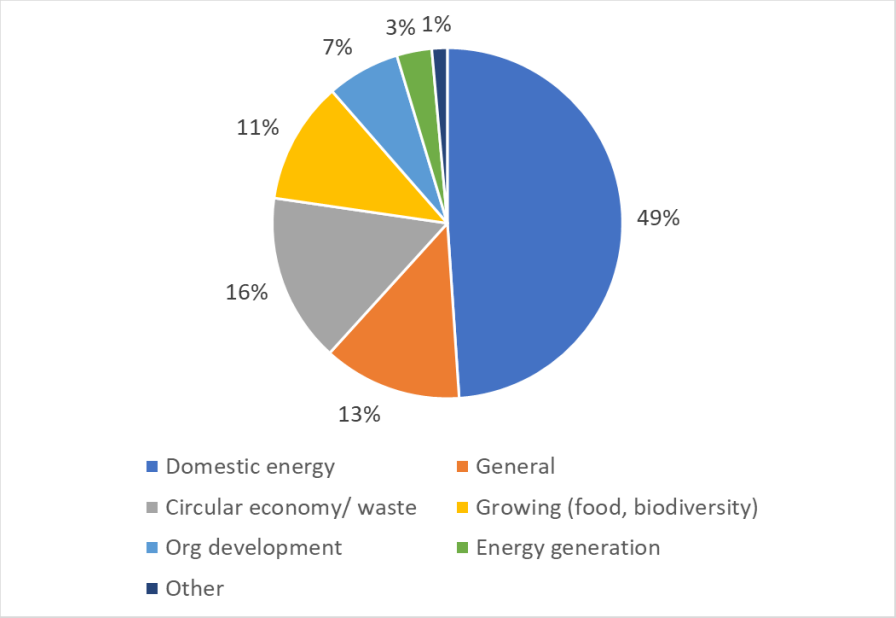

Figure 6: Breakdown of income 14/15 to 20/21 by the main issue addressed by the project.

Figure 7 shows how funding from each source has changed over time based on the year in which it was received. The chart shows that Scottish Government funding for South Seeds dropped substantially in 19/20, attributed to the closure of the Climate Challenge Fund.

In 20/21, funding levels rebounded somewhat, thanks in large part to the success of the Energy Redress bid. However, £58k of the £85k rebound was related to the COVID-19 support, including £14k of furlough funds.

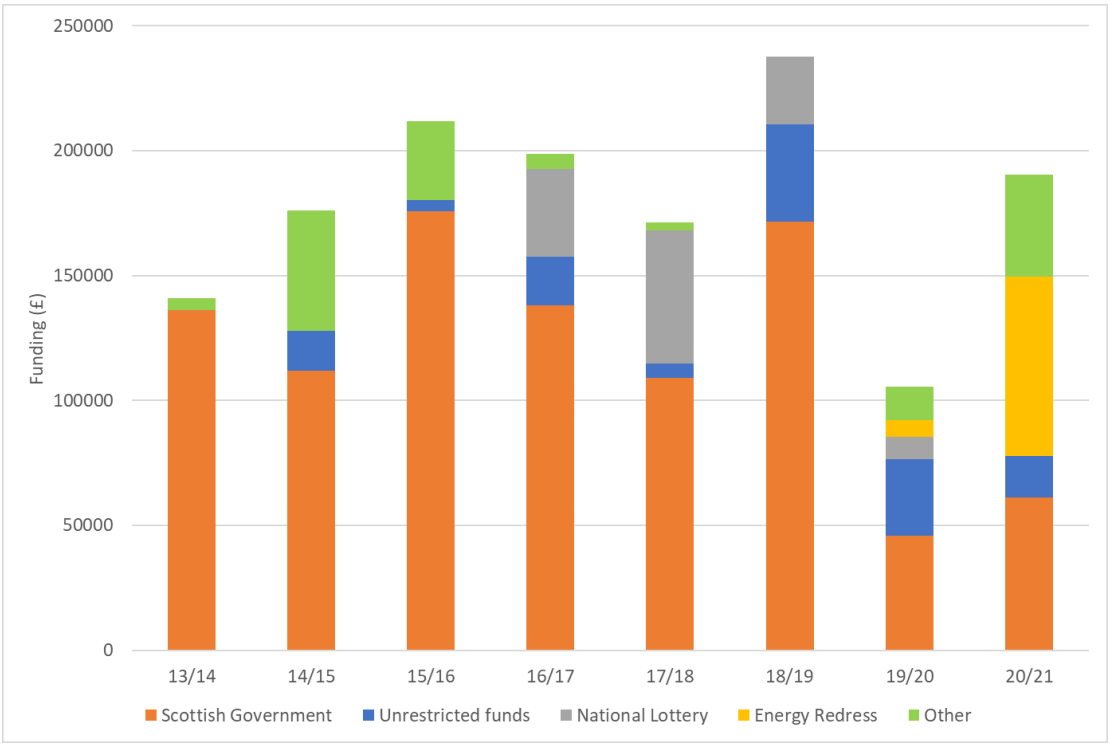

Figure 7: Changes in funding by source, by year.

Figure 8 shows that the number of grants reported in the accounts has increased substantially since the closure of the Climate Challenge Fund. Whilst a more diverse grant funding regime has helped to improve the organisation's financial resilience, the downside is that applying for and managing a larger number of grants is likely to have had a negative impact on available organisational capacity to develop and deliver projects. This chimes with comments in the survey, namely that fund raising is 'exhausting' and that a stable income would be safer for the organisation.

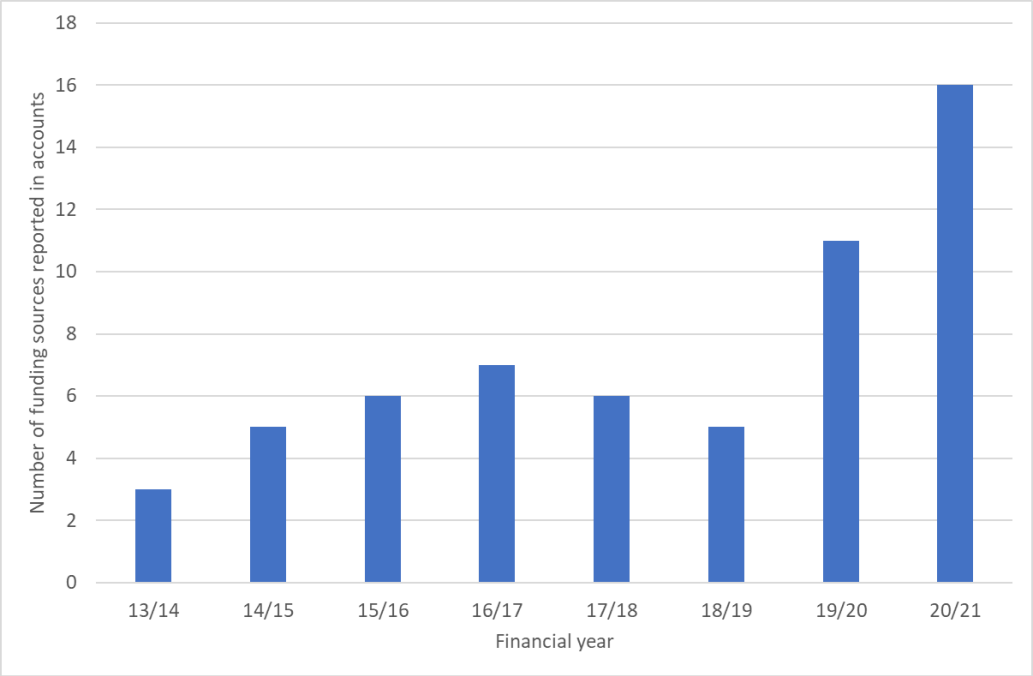

Figure 8: Number of funding sources reported in the accounts

It can be seen that South Seeds activities, which are mostly related to domestic energy, are almost entirely funded by restricted grants. Recently, funding is being achieved by attracting a larger number of smaller grants including COVID support.

3.5. Costs

Cost reporting in the accounts has been categorised in a standardised structure since 17/18, allowing easy aggregation. Figure 9 shows that of the £653k costs in this period, the majority (56%) were staff costs. Office, rent and running costs were the second most important category at 17%.

Costs explicitly linked to project delivery were clearly in the minority. It was not possible to separate project delivery staffing costs from the fixed staffing costs such as office manager and bookkeeper etc. However, attracting funding to cover fixed costs – referred to as 'core costs' in the organisation – is a key focus of the general manager[8].

[8] Personal communication with General Manager.

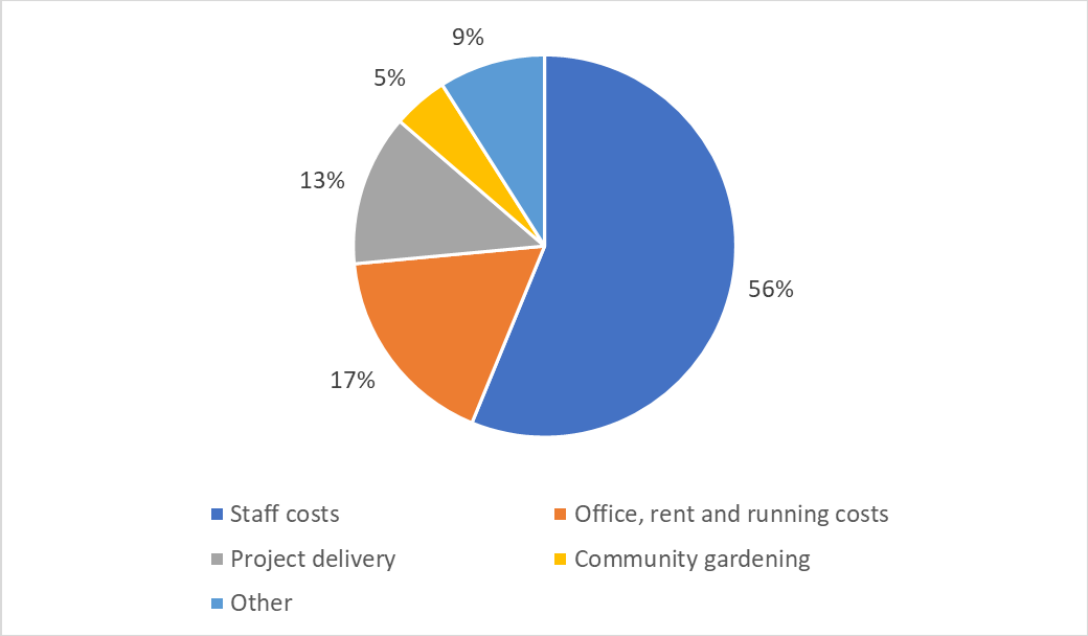

Figure 9: Breakdown of costs by accounting category for the financial years 17/18 to 20/21.

3.6. South Seeds' business model today

The Business Model Canvas[9] is used in Table 1 to summarise South Seeds' business model today.

[9] https://www.strategyzer.com/canvas/business-model-canvas

Table 1: South Seeds current business model described using the Business Model Canvas.

<table>
<tr><th>Key Partners</th><th>Key Activities</th><th>Value Propositions</th><th>Customer Relationships</th><th>Customer Segments</th></tr>
<tr>
<td rowspan="3">Scottish Government – seeking channels for policy delivery, or for environments in which to trial and learn.
Volunteers – motivated to act on sustainability in their local area.
Local casual, skilled labour for small projects
Local authority.</td>
<td>Advice, advocacy
Project/service delivery
Volunteer engagement
Employee management, HR</td>
<td rowspan="3">South Seeds helps government and NGOs deliver on energy, environmental and social policy goals.
South Seeds provides ground level insights to government and NGOs
South Seeds helps government test ideas.
South Seeds provides a route to supporting fuel poor and community development or environmental projects for other funders, e.g. Energy Redress, National Lottery.</td>
<td>Two sided model
1. Primarily engage with paying customers through grant applications and monitoring.
2a. Engage with energy service users through word-of-mouth, prominent shop front.
2b. Engage with residents on other projects through shared goals for local environment.</td>
<td rowspan="3">Paying customers
Government
Other charities
NGOs
Local citizens:
People struggling to pay energy bills or stay warm due to financial, language/cultural, or health-related barriers.
Individuals motivated by environment concerns, saving money, or comfort (e.g. insulation, food growing, active travel and waste avoidance projects).</td>
</tr>
<tr><th>Key Resources</th><th>Channels</th></tr>
<tr>
<td>Recognised brand.
Knowledge of local area, people, buildings etc.
Customer engagement skills.
Prominent/accessible shop front.
Tool library.
Experience dealing with fuel poverty.
Access to Croft and Old Changing Rooms.</td>
<td>Grant application processes.
Attending and participating in relevant conferences.
Social media connection with volunteers and environmentally-motivated citizen.
Engage with fuel poor through word of mouth and prominent shop front.
AGM.</td>
</tr>
<tr><th colspan="3">Cost Structure</th><th colspan="2">Revenue Streams</th></tr>
<tr>
<td colspan="3">Key costs are staff and premises.</td>
<td colspan="2">Almost entirely funded through project-specific and time-limited grants.
Historically grants have been few in number but large and paid for over several years (especially Climate Challenge Fund). More recently, grants have been obtained in smaller amounts from an increasing number of sources.</td>
</tr>
</table>

4. New Energy Business Models

Looking across the UK's community energy sector, the main activity over the last 10 to 15 years has been generation projects[10]. For example, 110MW of operational community-owned renewables capacity was identified in 2021, of which 100MW is wind projects[11]. Opportunities for urban groups like South Seeds to operate energy projects have been largely limited to solar PV installations on community buildings. However, since the closure of the Feed-in Tariff scheme in 2019, community generation projects of all kinds have become significantly less viable. In 2020, only three new solar and one wind community energy projects were installed, totalling just 181 kW. Consequently, adopting the popular community renewable power generation models of the late 2000s and early 2010s does not offer the same promise for South Seeds today, given neither its urban location, nor the current subsidy landscape.

In this context, the following section summarises the range of community energy models emerging across the sector, then briefly lists the most relevant policy developments and, last, describes the local area and community in which South Seeds operates.

4.1. Emerging Community Energy Business Models

A review of the UK Community Energy landscape was conducted through a review of academic literature, grey literature and through meetings with community energy groups, intermediaries and associated technology providers. Figure 10 shows the range of models now emerging. The inset boxes give example projects, industry partners and intermediaries and potential competition for South Seeds if it were to enter these areas. Community Energy models are grouped into five broad areas:

- Generation including local energy clubs;
- Grid services including smart demand side response and storage;
- Energy services including pay-as-you save;
- Demand reduction including retrofit advice;
- And advice and advocacy, such as south seeds' own service.

The overlaps between the bubbles in the diagram indicate how individual energy projects can span multiple categories. For example, demand reduction retrofit advice can overlap with advocacy for the fuel poor as well as linking with energy service models such as pay as you save, which in turn can interact with grid services such as demand side response control of heat pumps.

Community energy is at the heart of considerable innovation, focusing on smart and decentralised energy management. It is evident that there is considerable latitude for South Seeds to either follow competitors in adopting tried-and-tested market offerings or to pioneer new approaches.

[10] https://www.nature.com/articles/s41560-019-0546-4
[11] Community Energy England State of the Sector 2021.
https://communityenergyengland.org/files/document/523/1624438045_UKSOTSReport.pdf

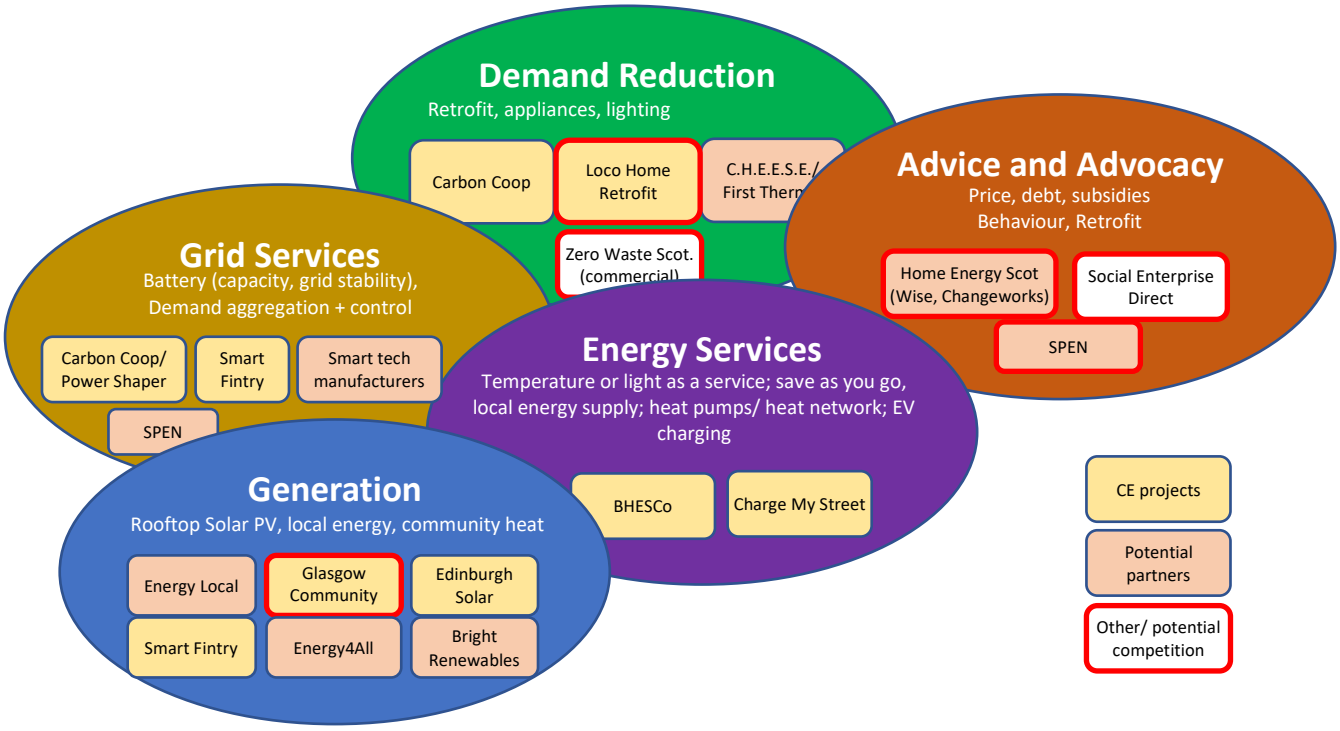

Figure 10: The overlapping nature of emerging community energy models. (Source: Chris Carus)

4.2. Policy context

This section briefly lists the key government policies relevant to South Seeds and Community Energy. Broadly, we find a policy landscape that offers some – albeit limited – support for domestic energy retrofit and fuel poverty alleviation. Whilst Scottish Government has in place some targeted support for community energy projects, this is almost entirely absent at the level of UK Government (Table 2).

Table 2: Summary of relevant policy targets and documents.

Policy Priority	Scottish Targets	Policies
Carbon reduction targets	• Scotland target of 75% reduction in all greenhouse gases (GHG) vs 1990 baseline by 2030. Net zero GHG emissions by 2045[12]. • Glasgow City target of net zero carbon dioxide emissions by 2030 and net zero GHG by 2045[13].	• N/A
Fuel Poverty and domestic energy efficiency	• Scottish Government statutory targets for no more than 5% of households should be in fuel poverty and no more than 1% of households should be in extreme fuel poverty by 2040[14]	• Home Energy Efficiency Programme for Scotland (HEEPS): Area Based Schemes (ABS)[15]

[12] https://www.gov.scot/policies/climate-change/reducing-emissions/
[13] Glasgow's Climate Plan https://www.glasgow.gov.uk/CHttpHandler.ashx?id=50623&p=0
[14] https://www.gov.scot/policies/home-energy-and-fuel-poverty/fuel-poverty/
[15] https://www.gov.scot/policies/home-energy-and-fuel-poverty/energy-saving-home-improvements/

	• Proposal that most buildings reaching EPC B and C by 2030 (CCC), with earlier 'backstop' dates for the private rented sector (2028)	• Energy Efficiency Standard for Social Housing (EESSH)[16] • Minimum energy efficiency in private rented properties will be progressively tightened[17]. • Minimum Energy Efficiency Standards (MEES) for owner occupied properties currently in policy for the 2030s but may be advanced to mid-2020s. • Home Energy Scotland interest-free loans and cashback. • Energy Company Obligation[18] • Warm Homes Discount Scheme[19] • Warmer Homes Scotland grants[20]
Clean heat	• Fossil fuel boilers will be phased out from 2025 in off-grid buildings and from 2030 for on-grid buildings. (CCC) • Decarbonising 1 million homes and the equivalent of 50,000 nondomestic buildings by 2032 by switching them to low- or zero-emissions heating. (CCC) • 2030: at least 22% of non-electrical heat in buildings will be directly supplied by zero-carbon sources. (CCC) • Zero emissions heat installations will scale to provide at least 124,000 systems between 2021-2026, peaking at 200,000 per year in the late 2020s. Primarily heat networks and heat pumps. • Public sector buildings achieve zero-emissions heating by 2038.	• Home Energy Scotland interest-free loans and cashback. • Scottish Heat Networks Act requires all public sector building owners to assess whether they are suitable for connection to a heat network and requires local authorities to decide whether to designate certain areas as 'heat network zones'. (CCC) • End of public subsidies for oil and LPG boilers, which came into effect in September 2021. (CCC)
Decentralised renewables		• Home Energy Scotland interest-free loans and cashback.
Transport	• UK target to phase-out of internal combustion engines in 2030s[21] • Scottish government target of 20% reduction in car kilometres by 2030 compared with 2019[22].	• Interest-free loans for EVs • EV charge point grants

[16] https://www.gov.scot/policies/home-energy-and-fuel-poverty/energy-efficiency-in-social-housing/
[17] https://www.gov.scot/publications/heat-buildings-strategy-achieving-net-zero-emissions-scotlands-buildings/
[18] https://www.ofgem.gov.uk/environmental-and-social-schemes/energy-company-obligation-eco
[19] https://www.gov.uk/the-warm-home-discount-scheme
[20] https://www.homeenergyscotland.org/find-funding-grants-and-loans/warmer-homes-scotland/
[21] https://www.gov.uk/government/news/government-takes-historic-step-towards-net-zero-with-end-of-sale-of-new-petrol-and-diesel-cars-by-2030
[22] https://www.transport.gov.scot/publication/a-route-map-to-achieve-a-20-per-cent-reduction-in-car-kilometres-by-2030/

4.3. Characterising South Seeds' Area

This section characterises the South Seeds area in terms of demographics, socioeconomics, energy and transport. This information is presented as the context into which a new business strategy should fit.

Since its foundation in 2011, South Seeds has been primarily identified with the central Southside neighbourhoods of Govanhill, Queens Park, Crosshill and Strathbungo. In recent years, South Seeds' reach has extended to take in East Pollokshields, Mount Florida, Battlefield and occasionally Shawlands (Figure 11). This section characterises this area in socioeconomic and physical terms. It goes on to describe energy and carbon emissions in the area.

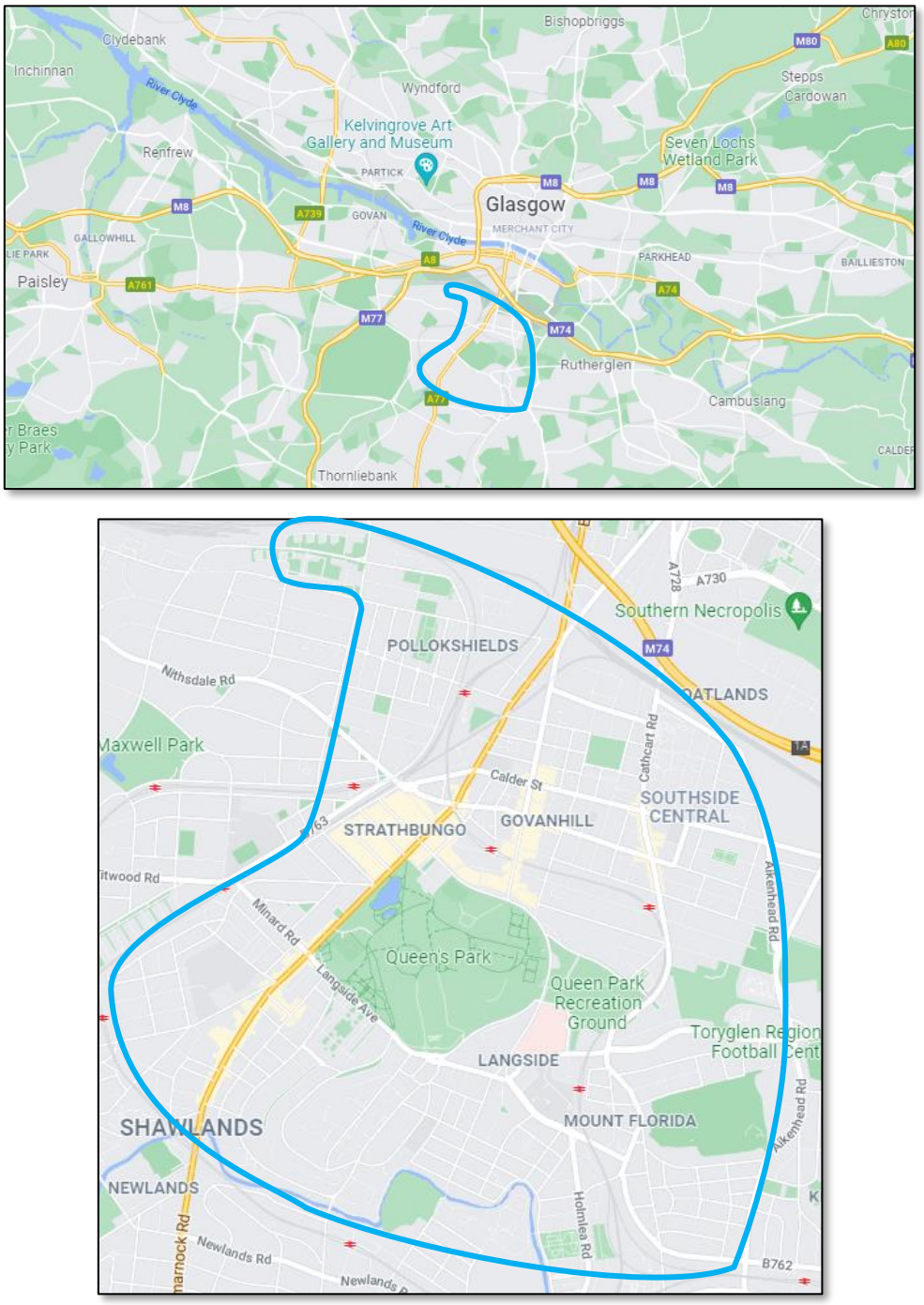

Figure 11: Maps showing location of South Seeds area in central South Glasgow, UK (Source: Google Maps)

4.3.1. Demographic Analysis

According to the population estimates by datazone[23] in the Scottish Index of Multiple Deprivation, the population in the South Seeds area was around 50,000 in 2020, of which the working age population is 36,000[24].

The 2011 Census shows that the South Seeds area was more diverse than most areas of Scotland, with 25% of the Southside Central ward being non-white, compared with 4% across Scotland as a whole[25,26]. For the other wards that the South Seeds area straddles, these numbers are 9% for Langside and 30% for Pollokshields.

The South Seeds area is socio-economically diverse and includes both highly deprived and affluent areas, as measured by the Scottish Index of Multiple Deprivation. The SIMD is a multi-factor assessment of every Lower Level Super Output Area (LLSOA) in Scotland. LLSOAs are referred to as 'datazones' here. There are 58 datazones in the South Seeds area. The index is designed to take account of six data 'domains', with each domain given a different weighting in the overall index (Figure 12). The most heavily weighted domains are income and employment levels. Each domain is itself the product of several socioeconomic variables.

Domain	Percentage of overall SIMD 2020
Income	28%
Employment	28%
Health	14%
Education, skills and training	14%
Geographic access to services	9%
Crime	5%
Housing	2%

Figure 12: Socioeconomic factors, called 'domains' and their contribution to the Scottish Index for Multiple Deprivation.

Source: (Scottish Government)

Comparison of the 2020 SIMD with that of 2016 shows an overall reduction in deprivation in the South Seeds area (Figure 13). Two datazones moved to a more deprived ranking, while eleven datazones moved to less deprived rankings.

[23] Scottish Index of Multiple Deprivation. Available at: https://simd.scot/
[24] ibid
[25] Glasgow City Council ward factsheets https://www.glasgow.gov.uk/index.aspx?articleid=18820
[26] Scotland's Census: https://www.scotlandscensus.gov.uk/census-results/at-a-glance/ethnicity/

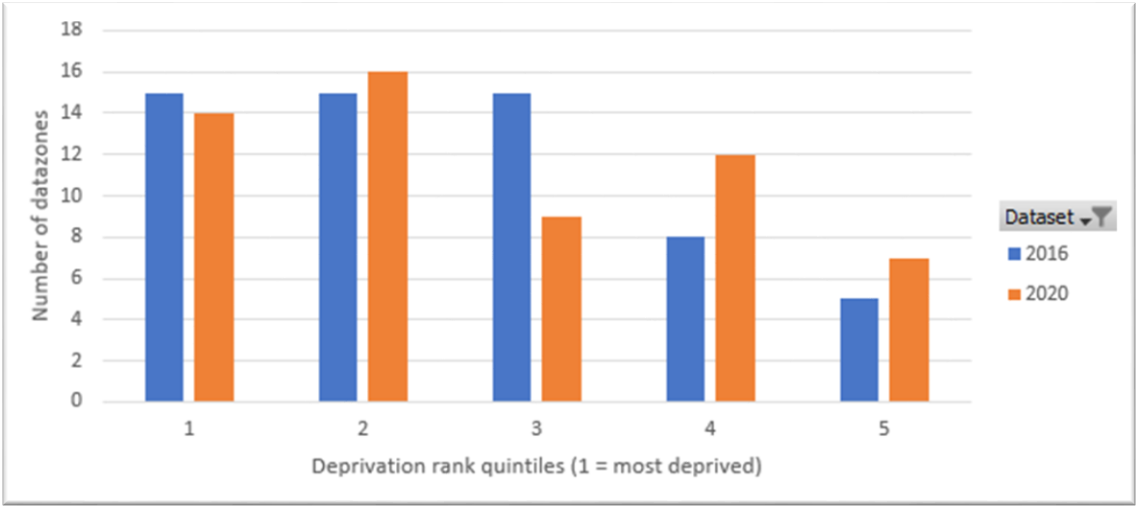

Figure 13: Changes in number of datazones in the South Seeds per quintile of ranking SIMD ranking, 2020 vs 2016. Eleven datazones have moved to less deprived rankings, and two have moved to more deprived rankings (Source: Scottish Government)

Analysis of the 2020 rankings for the South Seeds datazones (see detail in Appendix 3) suggest that residents in the South Seeds datazones:

- Reflect a fairly representative sample of Scotland as a whole with respect to employment, health and education.
- Tend to have lower incomes and more problems with crime.
- Have very much lower housing standards than most of the rest of Scotland. This domain was not updated between 2016 and 2020.
- Have significantly better access to amenities as measured by driving and walking times. This is one of the most densely populated areas in Scotland with 50,000 people in area that can be walked in 20 minutes.

The key drivers in the housing rank are a high number of residents estimated to be in overcrowded homes and 5% of residents without central heating, based on the 2011 Census. It is expected that overcrowding may reduce as the proportion of homes under Housing Association control increases in the enforcement zone as rules on occupancy rates apply in the social rent sector. Homes without central heating are those that had no gas or oil boiler or storage heater at the time of the 2011 Census.

4.3.2. Housing

The South Seeds area is dominated by pre-1919 solid stone-walled housing, especially the traditional Glasgow tenement as well as sandstone terraced or semi-detached houses. Other common building archetypes include 1920s/30s 'short tenements', post war low-rise flats, solid walled 'four in a block' cottage flats, 'mini multis' and a growing numbers of more modern flats (1990s to present day) (Figure 14).

Figure 14: Common housing archetypes in the South Seeds area

Govanhill has long been associated with poor housing standards, especially in relation to private landlords and inadequate factoring. Since 2015, Scottish Government and Glasgow City Council funding has been awarded to local Housing Associations to acquire, improve and let some of the worst properties[27]. In 2015, Glasgow City Council was awarded Enhanced Enforcement powers in relation to private landlords in a specific area that was extended in 2017 (Figure 15).

[27] Govanhill Housing Association http://www.govanhillha.org/about-us/south-west-govanhill/

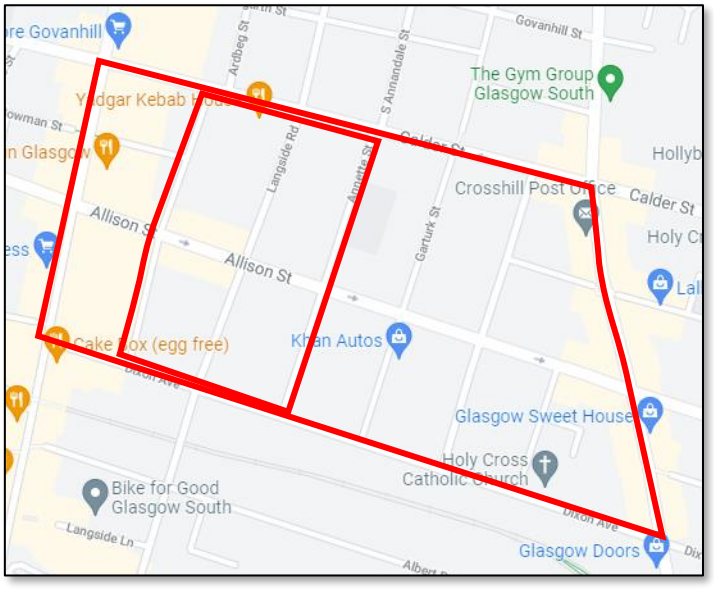

Figure 15: The original and extended landlord enhanced enforcement areas in Govanhill (Source: Google Maps)

According to the Scottish Government's Heat Map[28], the 2011 Census found that 61% of properties in Govanhill East were socially rented (Figure 16).

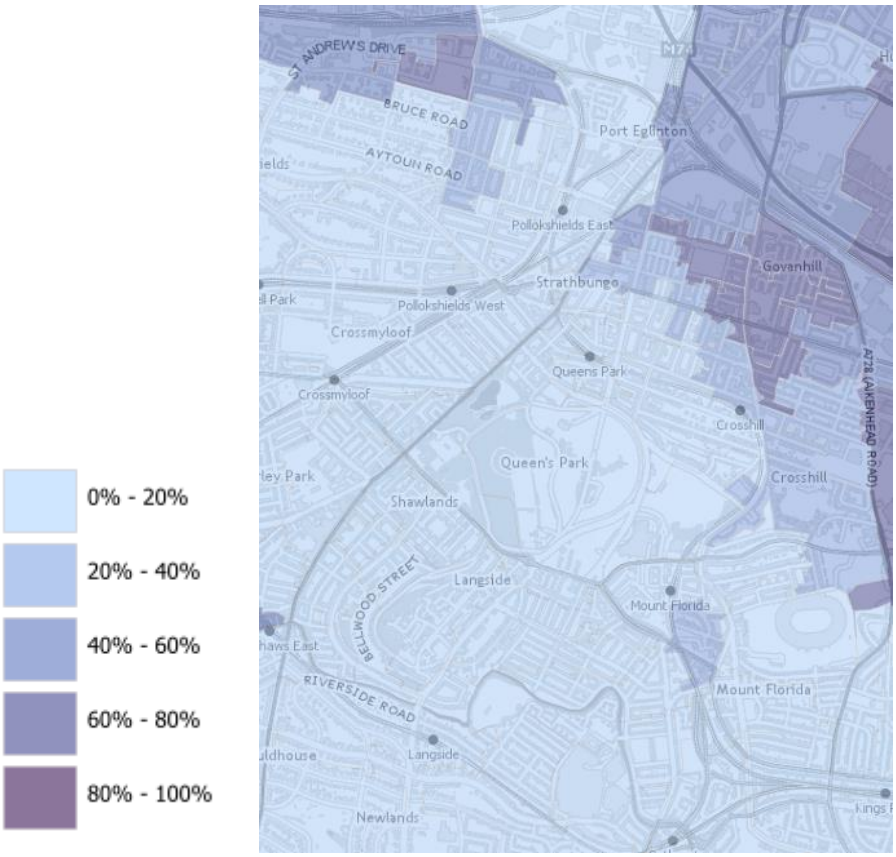

Figure 16: Mapping of social renting (%) by datazone, 2011 (Source: Scottish Government)

Zoopla[29] reports property prices in postcodes G42 8xx rising 9% in the 12 months to October 2021, and 24% in the past five years. These numbers are in line with Scottish averages of 10% and 26% respectively.

[28] Scotland Heat Map Interactive. https://heatmap.data.gov.scot/custom/heatmap/
[29] https://www.zoopla.co.uk/house-prices/browse/scotland/?q=scotland

4.3.3. Transport

As stated in Section 2.4, South Seeds' area ranks as one of the best areas in Scotland for access to amenities. The number of vehicles licensed at addresses in the G41 and G42 postcode districts has increased by 7% in the 10 years to Q2 2021. This increase is significantly below the increase of 17% in vehicle licensing across all G postcodes covering Greater Glasgow[30]. In recent years, ultra-low emission vehicles (ULEV) ownership has increased rapidly in postcodes G41 and G42 with 251 ULEVs licensed at addresses in these postcodes in Q2 2021 (Figure 17).

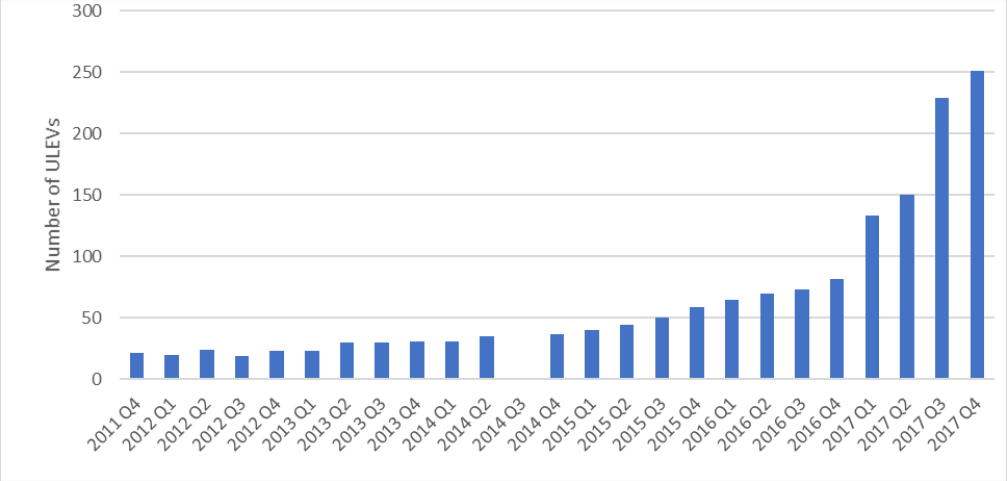

Figure 17: Ultra low emission vehicles licensed in G41 and G42 post districts. (Source: UK Gov)

As most homes do not have off-street parking, on-street charging is important to the electrification of the local vehicle fleet. Figure 18 shows just 11 chargers for 50,000 people[31], three of which were had been reported out of service on the day the data was accessed.

[30] https://www.gov.uk/government/statistical-data-sets/all-vehicles-veh01

[31] Screenshot taken 17th February 2022 from https://www.zap-map.com/live/.

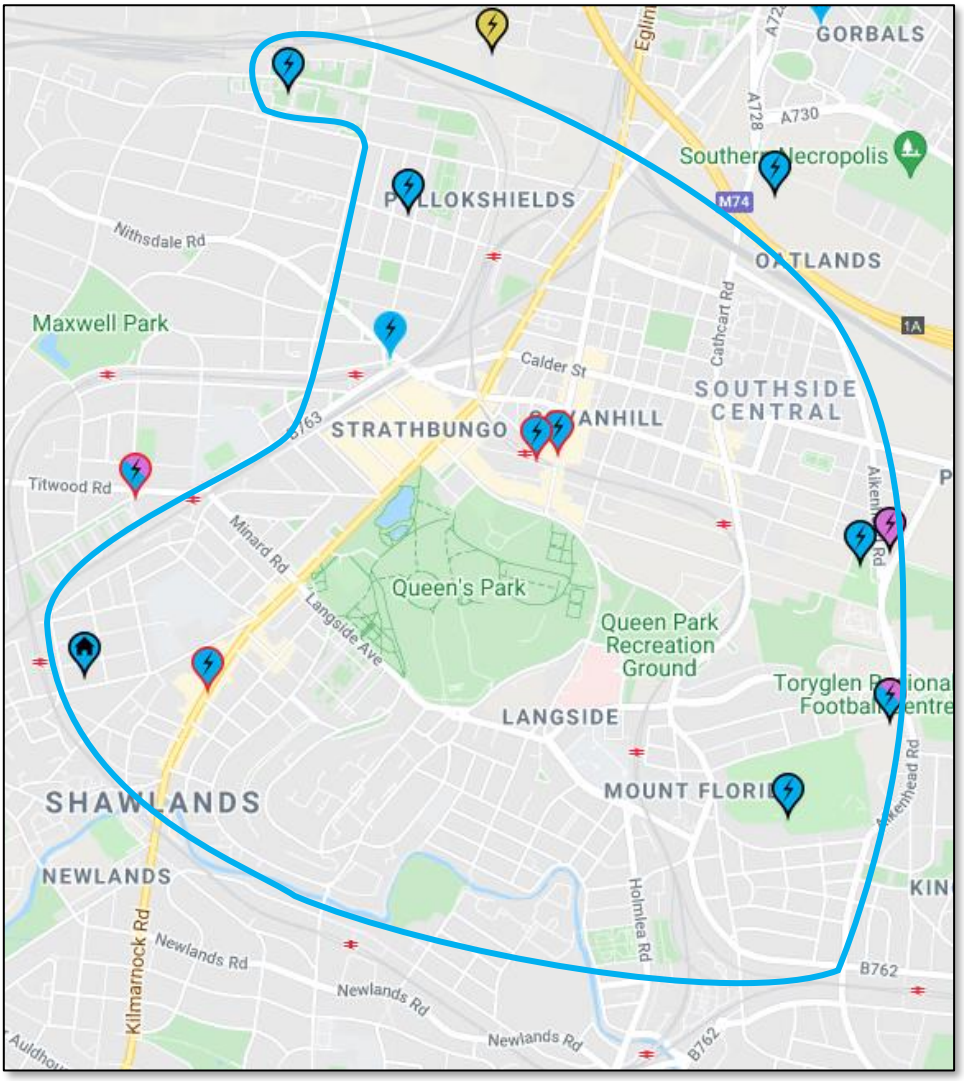

Figure 18: Map of publicly-accessible EV chargers in South Seeds area. Red borders indicate the charger is out of service. (Source: adapted from ZapMap)

Cycle infrastructure has improved over the past ten years with segregated cycle lanes in both directions and a protected junction on Victoria Road (Figure 19). An automated cycle counter on Victoria Road near the junction with Calder Street has recorded an average of 753 southbound cycles passing per day in the 8 months since it was installed (June 2021 to February 2022)(Figure 20).

Figure 19: Segregated cycle lanes and protected junction at Victoria Road and Calder Street.

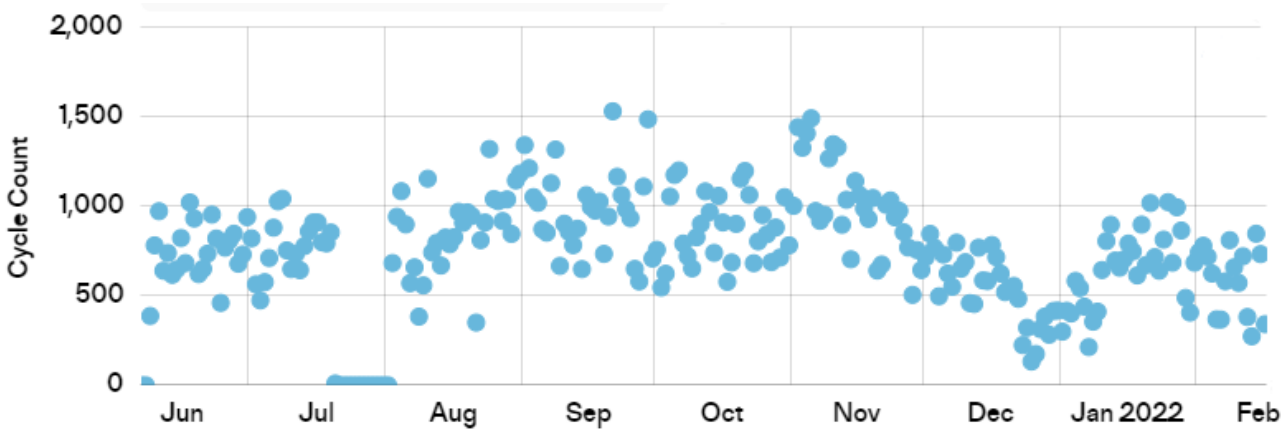

Figure 20: Automated count of southbound cycles on Victoria Road near junction with Calder Street.

4.3.4. Commercial and Industrial

The main commercial district in the South Seeds area is Pollokshaws Road where there are cafes, trendy eateries and other independent shops, as well as national chains. Shawlands was identified as one of the best places to live in the UK in 2017[32]. Shawlands has benefited from a Business Investment District, which has attracted significant government funding for street scene improvements including a new civic plaza.

Another important commercial area is Victoria Road, which has undergone rapid gentrification. Queens Park and Govanhill was recognised as one of the 'coolest neighbourhoods' in the UK in 2020[33]. Independent cafes, gourmet takeaways, grocers, repair shops and bookshops are flourishing. The South City Way cycle infrastructure has made Victoria Road more accessible for active travellers.

There is little industrial activity in the South Seeds area, although there are a few light industrial units on the fringes of the area. Grocery wholesalers, vehicle repairs, warehousing and light manufacturing units are found in North East Pollokshields and in Polmadie.

[32] https://www.glasgowlive.co.uk/news/glasgow-news/heres-shawlands-one-best-places-12759601
[33] https://www.glasgowlive.co.uk/news/glasgow-news/queens-park-govanhill-coolest-neighbourhood-18369543

4.3.5. Other Social Enterprises and Community Organisations

South Seeds is one of many social enterprises and community groups in South Glasgow, many of them also concerned with sustainability and fuel poverty. An inexhaustive list is given in Appendix 4. These organisations have deep specialisations in particular issues. For example, Bike for Good supports travel by bicycle; Locavore promotes locally-sourced low impact food, Remade promotes a circular economy for consumer goods; Loco Home Retrofit supports deep domestic energy retrofit. In this context, South Seeds can choose to take a complementary approach that is broad and supportive of other more specialist organisations and/or tackle an unaddressed issue in depth.

4.3.6. Energy Use and Carbon Emissions in the South Seeds Area

This section characterises energy use and carbon emissions in the South Seeds area. The South Seeds community is in the Glasgow City local authority area where CO_2 emissions have reduced by 41% since 2006[34], due mostly (52% of the reduction) to the increased use of renewables in the generation of electricity nationally.

The downward trend in electricity consumption in South Seeds datazones has followed the same trend as the whole of Glasgow. Households in the South Seeds datazones use around 13% less electricity than Glasgow as a whole [35], perhaps due to a lower proportion of houses using electricity for heating (Figure 21).

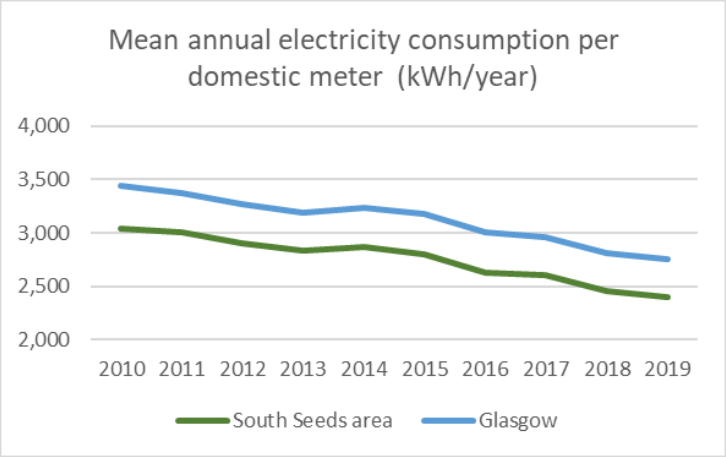

Figure 21: Mean annual electricity consumption per domestic meter in the South Seeds area (Source: UK Gov)

Mean gas consumption per meter has been consistently 1% below the Glasgow average. However the clear downward trend from 2010 stops abruptly in 2014 and this is most likely linked to the significant reduction of the ECO insulation programme at that time[36] (Figure 22).

[34] UK Local Authority CO2 emissions 2005-2019, ONS UK Gov, 2020 .
[35] https://www.gov.uk/government/statistics/lower-and-middle-super-output-areas-electricity-consumption
[36] https://www.theccc.org.uk/publication/2021-progress-report-to-parliament/

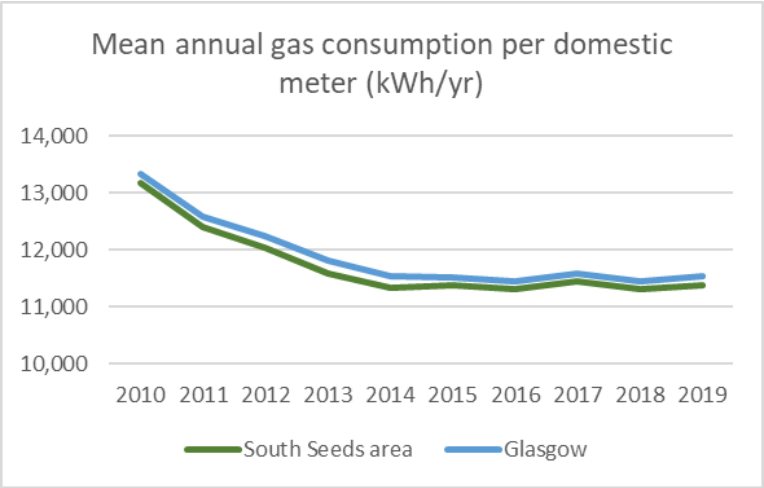

Figure 22: Mean annual gas consumption per domestic meter in the South Seeds area (Source: UK Gov)

According to government statistics for 2017, 15% of meters in the South Seeds area were prepayment and in the core area that proportion increased to 21%, in line with the 20% proportion for the whole of Glasgow[37].

[37] https://www.gov.uk/government/statistics/electric-prepayment-meter-statistics

4.3.7. Energy potential of the area

An unusually deep level of information relating to renewables potential is available for the South Seeds area. This is thanks to four expert reports that were commissioned by South Seeds.

The Energy Snapshot (2013)[38] categorised the housing stock and characterised it with regard to thermal efficiency. It found that much of the housing stock was built pre-1919 or in the early 20th century is thermally inefficient due to solid walls, large windows and suspended timber floors.

In 2015, the Renewables Snapshot[39] considered the potential for installing renewable energy capacity in the area. It noted that the urban topography is not suitable for wind turbines and without a river there is no hydropower potential. Maps were produced showing the potential suitability for each building in the core South Seeds area for solar PV, air source heat pumps, solar thermal, ground source heat pumps or biomass. The report also considered the potential for a district heat network powered by burning biomass, or from a mine water-source heat pump, or from the burning of waste and methane from waste at the Glasgow Recycling and Renewable Energy Centre (GRREC) at Polmadie. Supplying heat to a district heating system is a requirement of GRRECs SEPA operating licence.

A report by the British Geological Survey (2015)[40] estimated that 1.76 MW of thermal power could be extracted from mine water under the South Seeds area, however there is a large margin of error around this estimate.

The Renewable Heat Study (2016)[41] found that in the study area of East Pollokshields, Govanhill, Crosshill, Queens Park and Strathbungo, the annual heating energy demand is 980,475 MWh. In Pollokshields, 95% of heat demand is for domestic properties, and this proportion is 85% in Govanhill. The study identified four flatted areas of highly concentrated heat demand – areas with high housing density and/or low thermal efficiency. The study then modelled the economics of using either a gas Combined Heat and Power (CHP) plant or the nearby Glasgow Recycling and Renewable Energy Centre (GRREC) to supply heat networks for three of the areas at a price discounted by 20% vs gas to incentivise connections. Gas CHP was found not to be viable. A district heat network supplied by the GRREC was found to be economically viable depending on levels of grant funding and the required level of return to the network operator.

[38] South Seeds Energy Snapshot Report
[39] South Seeds Renewables Snapshot Report
[40] BGS report on geothermal potential for South Seeds
[41] South Seeds Renewable Heat-Study

5. Business Model Innovation

Section 5.1 summarises the process through which ideas for a business model were generated and filtered to a short list of four. The shortlisting decision and the rationale are then given in Section 5.2. Then, potential business models for these four ideas are presented in Section 5.3.

5.1. Ideation and Shortlisting Process

This business strategy review was structured in three main phases, as shown in Table 3.

Table 3: Phased structure of the business strategy review process.

Phase	Time period	Main activity
Learning	September – October 2021	Learning about South Seeds, the local area and getting up to speed on Community Energy models
Longlisting	November – December 2021	Identifying a long list of 26 community energy business ideas. Trustees reduced the list to seven in December
Feasibility assessment	January – February 2022	Elaborating the shortlisted seven ideas to further explore their feasibility.

The learning phase was an opportunity for the associate to get up to speed on community energy business models. This was achieved through a review of relevant literature as well as attending some conferences and meeting with relevant technology providers and comparable community energy organisations. During the learning phase, the team also met staff and spent time in the shop to observe activity and receive some client enquiries to the energy advice service. The survey of trustees and employees, carried out in this period, also helped set the direction of the project in line with the purposes of the organisation.

The longlisting process created many ideas that could address South Seeds priorities in poverty alleviation and environmental protection while also leveraging existing resources and, importantly, having some potential to generate revenue to at least cover its own costs if not generate a surplus.

After the shortlisting decision by trustees in December 2021, described in Section 5.2, the feasibility phase expanded narrative and financial descriptions of the shortlisted items.

5.2. Shortlisting Decision

The 26 ideas on the long list are outlined in Appendix 5 and each of the business ideas were scored against the criteria presented in Appendix 6. The leading nine ideas were recommended to be taken forward for more detailed feasibility assessment. Of these six ideas survived in the shortlist, some as a portfolio, and a new idea – carbon literacy was added to the list. The primary interests of the trustees were to find an activity that was relatively easy to implement, highly likely to generate income and for which South Seeds could readily anticipate being competitive with existing operators. The short list of ideas is given in Table 4.

Table 4: Business ideas shortlisted in December 2021 by the Board of Trustees for feasibility assessment.

Paid-for retrofit tool library
Retrofit handyperson
Portfolio of retrofit advice and support services • Paid energy saving advice • Thermographic assessments • EPCs/ Retrofit assessments • Retrofit referrals – to funded services (e.g. ECO) and to paid services
Providing carbon literacy training

5.3. Feasibility Assessments

The following sections elaborate the shortlisted items by first providing background and a narrative description of the proposal as well as a rough financial assessment. The customer value propositions and business models are provided in Appendix 7.

5.3.1. Allocation of a Share of Core Costs

Core costs are estimated at £108k based on the last five years accounts and assumptions on the ongoing salary levels for the general manager and officer manager. The details of this estimate are provided in Appendix 8.

Large companies have accounting methodologies for allocating costs to different parts of the business. These may be based on share of floor space occupied, share of head count or share of revenue. For the sake of this exercise, simplified assumptions were made. 25% of core costs, £27k, were allocated to each of the tool library and a potential new community energy business model (Table 5).

Table 5: Allocation of core costs to organisation activities

	Allocation	**£**
Total core costs	100%	108,000
Tool library	25%	27,000
New service	25%	27,000

5.3.2. Planning Consent, Business Rates and Tax

South Seeds is located at 514 Victoria Road, which is currently treated as Class 2 ('financial and professional services') in the Planning System. Conversion to Class 1 ('shop') is a permitted development not requiring a planning application.

Increasing revenue from trading activities, including the Tool Library, will not change the non-domestic business rates, which are currently discounted to zero. Non-domestic business rates valuation is based on floor area.

Profit on trading carried out by the charity may be liable to corporation tax if is not seen by HMRC to be delivering, or complementing the delivery of, the primary purpose of the charity[42]. The feasibility scenarios were created on the assumption that they would be tax-exempt. However, further advice should be sought on this topic.

Like other organisations, charities must register for VAT if VAT-taxable income exceeds £85,000 in a 12 month period[43]. See Appendix 9 for more information on the above.

5.3.3. Retrofit Tool Library

At present, the tool library is a net drain on resources. Being exempt from supporting a share of core costs, it is bringing in less revenue than its costs including a fair share of the lease and other overheads. An adjusted business model could see the tool library cover its share of core costs, as well as potentially generate a surplus to fund other South Seeds services. This could be achieved by:

1. Increasing the volume of borrowers and loans;
2. Higher charges for access to the library's services; or
3. Providing additional services, such as consumables sales and training courses.

Increased charges are, arguably, justified now without any change to the service based on comparison with other 'libraries of things' across the UK. However, additional justification would be provided by adding premium tools. For this community energy strategy, the option of providing specialist items, in particular tools and consumables to support domestic energy efficiency retrofit activity, is considered in a proposed business model scenario. In line with South Seeds focus on alleviating poverty, access to the tool library can remain on an 'able to pay' basis and either free or heavily subsidised for those who are 'unable to pay'.

Table 6 compares Southside Tool Library's charges with other 'libraries of things' across the UK. Most tool libraries provide a concessionary or 'able to pay' basis for access. However, Southside overall has the lowest charge – only suggesting a donation of £20. The next lowest fee is Glasgow TL where higher £25 'pay it forward' and a suggested concessions of £12, as well as standard membership at £20 is made clear in the membership process (Figure 23). Glasgow TL points new members towards higher standard fees, a 'pay it forward' rate and a non-zero concessionary rate. Free membership remains possible.

[42] https://www.oscr.org.uk/guidance-and-forms/charities-and-trading-guide/1-types-of-charity-trading/
[43] https://www.gov.uk/vat-charities/registration

Table 6: Comparison of membership and loan fees for various UK libraries of things.

Library	Annual membership	Loans
Southside Tool Library[44]	• Suggested donation of £20	• Free
Glasgow Tool Library[45]	• Standard £20 • 'Pay it forward' £25 • Concession: pay what you can, suggested £12.	• Free
Stirling Tool Library[46]	• Suggested £30/pay as you feel.	• Free
Edinburgh Tool Library[47]	• Standard £30 (renewal £20) • Concession £10 • 'Pay it forward' donation option	• Free
Share Bristol[48]	• Supporter £80 • Standard £50 • Concession £20	• Free
Hull Library of Things[49]	• Standard £80 • Pay as you go (PAYG) £1	• Standard: free • PAYG: e.g. power drill £2.50 for 7 days
London Library of Things[50]	• Free	• Power drill £8/day or £32/week

[44] https://southsidetoollibrary.myturn.com/library/
[45] https://glasgowtoollibrary.com/
[46] https://transitionstirling.myturn.com/library/
[47] https://edinburghtoollibrary.org.uk/
[48] https://www.sharebristol.org.uk/
[49] https://libraryofstuff.co.uk/index.php
[50] https://www.libraryofthings.co.uk/

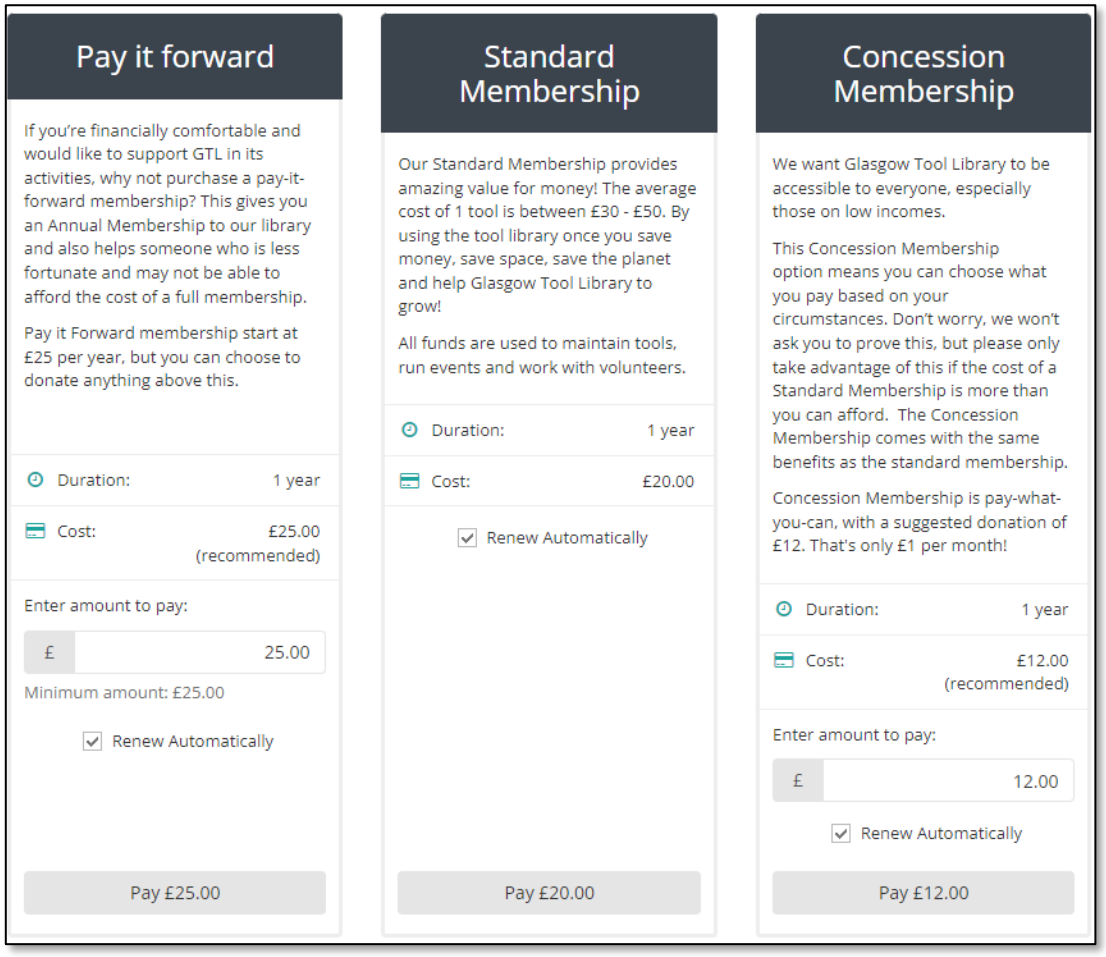

Figure 23: Glasgow Tool Library sign up page and membership fees (Source: Glasgow Tool Library)

London and Hull Libraries of Things (LoTs) were the only ones to charge fees, although their fees are considerably less than conventional commercial tool hire. London - the only LoT not constituted as a not-for-profit - charges £8/day for a cordless drill. Hull charges even less at £2.50 per week for a cordless drill. Conventional commercial tool hire has much higher prices. HSS Tool Hire, for example, charges £22.56 per day[51] for a comparable tool.

The practicable options for increasing revenue are listed below:

- **More members and more loans.** Southside Tool Library typically lends 10 items for each day it is open (i.e. 1000 lends over 50 weeks, opening 2 days a week). Growth levers:
  - Better service: opening hours, additional locations and public lockers (see London Library of Things), delivery (as Edinburgh).
  - Better tools: trade standard tools, specialist tools or toolkits such as those to support retrofit.
  - Additional categories of things to borrow: musical instruments, camping equipment etc..
  - More promotion: Recommend a friend, promotion on social media, press, etc.
  - Improved availability: through shorter loan periods and increased and/or more strictly enforced late fees (currently £1 per day). Also through having more volunteers or staff to ensure the library is fully available. For example the e-bikes are not currently lent due to lack of capacity.
- **Additional paid services,** for example:
  - Tool sharpening, as Edinburgh tool library.

[51] https://www.hss.com/hire/c/breaking-and-drilling/general-drills

    - Paid make and repair training courses, as Stirling.
- **Sell consumables**
    - Generic examples include PPE, rubble sacks, etc.
    - Retrofit specific examples include air tightness tapes, membranes etc.
- **Higher charges**: increase and strictly enforce late fees (currently £1 per day) and cleaning fees.

One scenario is outlined in the following pages. The key differences are summarised in Table 7.

Table 7: Key proposed changes to new tool library model.

Current	**Proposed**
Does not generate sufficient revenue to cover its costs including a fair share of core costs	Covers its own costs by targeting a small surplus. Any surplus is used to fund South Seeds support for fuel poor
Suggested £20 donation for membership, weakly enforced	Firmer line on increased £30 membership fee with £50 'supporter option' but remains 'pay as you can'
Late fees weakly enforced	Strict enforcement, regardless of means
One range of items	Loan fees for premium range
No consumables	Sell PPE and retrofit consumables
Ad hoc marketing	Strong, staffed, year-round marketing strategy

An important challenge is how to encourage 'able to pay' customers to pay for a subscription, while retaining a 'pay what you can' approach for those who have less disposable income. Glasgow tool library 'nudges' new members towards higher rates, including for concessionary membership. Another method may be to require new and renewing members to complete or read a small form about the Library's costs, the value they are getting, and their own circumstances. They then make an informed decision about their ability to pay. Ultimately, it's a balance between the potential pitfalls of trust versus the costs of bureaucracy (Table 8).

Table 8: Description of business model for Retrofit Tool Library

<table>
<tr><td>Narrative description</td><td>Membership and loans from the tool library in general, and the premium library in particular, are increased via an improved service, including increased opening hours, browsing space, instant loans, option for home delivery (e.g. via Zedify) etc. To compensate for this additional cost, membership and loan fees are strictly enforced. However, we ensure that those that are unable to pay, pay less or nothing for hire. To protect an individual's dignity there is no direct means test their ability to pay. Rather, discreet methods would be explored, such as asking new members to read or complete a form, which is not retained, that asks them to consider their means and the charity's needs.

The core idea is that premium tools and tool kits incur additional charges to members. In addition, there are options to sell consumables and training courses.

Subscription models:
• Option A (preferred): single membership scheme plus hire fees for premium tools
• Option B: premium membership gives access to different tools
• Option C: mix above A and B as Hull Library of Things.

Borrowing:
• Premium tools - weekly fee to borrow.
o Specialist retrofit tools such as insulation saws and thermal cameras.
o New and professional standard tools. E.g. new DeWalt drills.
o Tool kits: drawn mostly from the existing library perhaps with signposting to some instructions. For example, for insulating suspended timber floors from above: lump hammer, levers, nail punch, wood moisture gauge, craft knife, staple gun, insulation saw, hand plane, power driver, electric drill.
• Standard tools – free to borrow.

Consumables available for sale:
• Hard-to-obtain: Air tightness tapes, refurbishment eaves vent trays, lime putty.
• General: PPE, rubble sacks, draught-proofing materials.</td></tr>
<tr><td>Revenue</td><td>
<table>
<tr><td>Membership fees
2000 members (up from 350) @ average fee of £30, blending £30 standard, pay as you like concessions and £50 'supporter fees'</td><td>£60,000</td></tr>
<tr><td>Loans
5000 item-loans, up from 1000 today, of which 4000 free and 1000 paid @ £20/ week (or variations with kits)</td><td>£20,000</td></tr>
<tr><td>Consumables
40% on delivered cost of £12k wholesale cost of consumables</td><td>£4,800</td></tr>
<tr><td>Training courses, repair services</td><td>not included</td></tr>
<tr><td>Late fees</td><td>£2,000</td></tr>
<tr><td>TOTAL</td><td>£86,800</td></tr>
</table>
</td></tr>
<tr><td>Annual operating costs (ex VAT)</td><td>A full time member of staff organises an increased number of volunteers handling loans, inspection and repairs. The FTE is also responsible for marketing the library.

<table>
<tr><td>Share of core costs</td><td>£27,000</td></tr>
<tr><td>1 FTE salary</td><td>£35,000</td></tr>
<tr><td>Employer NIC</td><td>£2,700</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td></td><td>
<table>
<tr><td>Pension @ 8%</td><td>£2,800</td></tr>
<tr><td>Testing, repair, refurb</td><td>£5,000</td></tr>
<tr><td>Depreciation of premium tools</td><td>£5,000</td></tr>
<tr><td>Volunteer rewards (night out)</td><td>£500</td></tr>
<tr><td>Public liability insurance</td><td>£500</td></tr>
<tr><td>Payment and accounting services</td><td>£500</td></tr>
<tr><td>Transport to/from off-site storage</td><td>£0</td></tr>
<tr><td>Total</td><td>£79,000</td></tr>
</table>
</td></tr>
<tr><td>Operating profit</td><td>£7,800</td></tr>
<tr><td>Start-up costs</td><td>
<table>
<tr><td>Premium tools, renewed every 3 years, for example:</td><td></td></tr>
<tr><td>2 x power insulation saw @ £900 each</td><td>£1,800</td></tr>
<tr><td>10 to 16 x new trade hand power tools @ £250-500 each</td><td>£5,000</td></tr>
<tr><td>2 x compound mitre saws @£600 each</td><td>£1,200</td></tr>
<tr><td>Cash flow for consumables: (tapes, putty, PPE…)</td><td>£3,000</td></tr>
<tr><td>Investment in shop to allow browsing and instant hire</td><td>£5,000</td></tr>
<tr><td>Investment in marketing assets</td><td>£2,000</td></tr>
<tr><td>Investment in tool library officer hours (up to 6 months @0.5 FTE)</td><td>£7,500</td></tr>
<tr><td>Total</td><td>£25,500</td></tr>
</table>

It may be possible to obtain some tools and materials through corporate sponsorship arrangements. For example, Wickes has a community-giving programme.
Investment in increased tool library officer hours would be required before the strategy would pay a return in increased fees.
</td></tr>
<tr><td>Next steps</td><td>

Decide what items to stock: retrofit, camping, parties etc.
Detailed pricing, cost and revenue estimates
Finance plan: borrowing, or using reserves to fund year 1 investment in FTE and tools?
Staffing plan including holiday and sickness cover.
Hire full time tool library manager
Purchase tools
Implement marketing strategy
Shop changes to allow browsing and instant hires
Quarterly review of sales and operations
Increase tool library manager salary in line with performance.

</td></tr>
<tr><td>Legal</td><td>Insurance risks. Health & safety risks with heavy, sharp, energised equipment.</td></tr>
<tr><td>Pros</td><td>Two-tier membership can be avoided.</td></tr>
<tr><td>Cons</td><td>Investment required to achieve aggressive growth assumption.</td></tr>
</table>

Key conclusion: There is significant potential to develop the economic viability of the tool library in its current form. Furthermore, providing additional value through premium and specialist tools would justify premium payments. Specialist retrofit tools would both exploit and support the development of retrofit for energy efficiency and decarbonisation.

Recommendation: Invest in additional tool library manager capacity - up to 1 full time head - to expand tool library marketing, availability, specialist tools and general service offer.

5.3.4. Retrofit Handyperson

South Seeds previously operated a handyperson service as part of its Climate Challenge Fund (CCF) programme. Four handypersons were provided sessional work. They would install energy efficiency measures, including draught-proofing and clothes drying pulleys. A key enabler for the programme was an office-based coordinator/administrator funded by CCF and who had experience of providing office support to a tradesperson.

When CCF funding came to an end in 2019, there was no longer a funded administrator so the service started to run down. Over time, the handypersons moved away or found other work and the lockdown in 2020 finally put an end to the programme. Of the four handypersons previously supplied with work by South Seeds only one continues to operate as a handyperson. Now with a strong network of repeat customers, they no longer require sales through South Seeds.

This proposal considers whether it would be possible to operate a service that could, over time, be directed towards more substantial energy efficiency works such as loft and floor insulation. It also considers the scenario of employing the handyperson in order to have greater control on the scope of the offering, quality and reputational risks. The alternative would be to return to providing sales leads to independent handypersons in return for a referral fee (Table 9).

Table 9: Description of business model for Retrofit Handyperson

Narrative description	South Seeds employs one or more skilled general tradespersons or highly experienced DIYers as 'retrofit handypersons'. The handyperson offers a service primarily targeted at resolving energy efficiency problems: • clearing lofts prior to insulation, • carrying out basic energy efficiency improvements including air tightness measures such as door brushes. The service develops as the individuals and South Seeds gain experience and invest in training and accreditations: • loft insulation, • air tightness testing and draught proofing, • under floor insulation. The service is superior to alternatives because of excellent customer service, higher performance installations (e.g. airtight downlighter seals in loft insulation) and agility to cover a variety of jobs. South Seeds did not rule-out doing other handyperson work such as putting up shelves or assembling flat pack furniture but contact with households is primarily seen as an opportunity to sell energy efficiency. Initially, the tradesperson would manage their own time and marketing with limited *ad hoc* support from the energy officers or manager. With increasing volume of sales, office support for customer service, work scheduling and payment handling may be necessary.
Revenue	A competent, established handyperson carrying out mid-level domestic improvements (e.g. replacement wooden flooring or bathroom improvements) can charge £225/ day (approximately £30/ hour). More basic work is paid less, accordingly. Assuming 1 FTE, working 45.6 weeks (32 days holiday), and achieving 90% utilisation (10% quoting, lack of sales, training, team meetings), @ £30/hr = **total turnover £46,170.**

<table>
<tr><td></td><td>VAT would be due on top (i.e. customer pays £36/hr) after South Seeds total VAT-taxable turnover exceeds the VAT threshold of £85k over 12 months.</td></tr>
<tr><td>Annual operating costs (ex VAT)</td><td>
<table>
<tr><td>Share of core costs</td><td>£27,000</td></tr>
<tr><td>1 FTE handyman salary</td><td>£30,000</td></tr>
<tr><td>Employer NIC</td><td>£2,700</td></tr>
<tr><td>Pension @ 8%</td><td>£2,400</td></tr>
<tr><td>Uniform, PPE</td><td>£200</td></tr>
<tr><td>Public liability insurance</td><td>£200</td></tr>
<tr><td>Renewal of tools (20% depreciation)</td><td>£400</td></tr>
<tr><td>Van lease, fuel, insurance</td><td>£5,500</td></tr>
<tr><td>Total</td><td>£68,400</td></tr>
</table>

Materials costs are billed to the customers. Potentially a mark-up could be applied to materials costs but for simplification it is assumed that revenue comes only from labour.</td></tr>
<tr><td>Operating profit</td><td>Loss of £22,230
Sensitivities: higher price could be merited; 90% utilisation may be too optimistic.</td></tr>
<tr><td>Start-up costs</td><td>
<table>
<tr><td>Tools
(some specialist / infrequent use items can be borrowed from tool library)</td><td>£2,000</td></tr>
<tr><td>Marketing assets</td><td>£1,000</td></tr>
<tr><td>3 months’ salary, NIC, pension buffer</td><td>£9,000</td></tr>
<tr><td>Total</td><td>£12,000</td></tr>
</table>
</td></tr>
<tr><td>Legal</td><td>Householders can claim limited government funding (e.g. £400 cashback) and 0% loans through Home Energy Scotland if they use PAS2030 accredited installers for, e.g., loft, floor, wall insulation. Accreditation incurs training and licence fees.

Government funding may in future require coordination to PAS2035 standard, which gets massively more complex with, for example, requirements for ventilation to be installed with insulation.</td></tr>
<tr><td>Next steps</td><td>• Develop pricing: hourly rate and estimate of time required for particular jobs.
• Design customer experience.
• Recruit handyperson
• Year 1: launch and establish basic service
• Year 2: gain accreditation for loft and/or underfloor insulation, enabling government funding.
• Year 3: expand capacity and introduce internal wall insulation. Integrate with other service providers.</td></tr>
<tr><td>Pros</td><td>The service addresses need – such as loft clearance - that is not met by other providers in Glasgow.
Access to tool library reduces capital costs.</td></tr>
<tr><td>Cons</td><td>Risk of customer claims for damage to property or against bad advice. Public liability insurance therefore required. If advising on measures to be taken then professional indemnity insurance should be held.

Would a competent, self-managed person choose to be employed when they could be their own boss as a sole trader?</td></tr>
</table>

	VAT registration would put South Seeds at a 20% pricing disadvantage vs sole traders. However, VAT on business costs, such as the purchase of equipment and consumables, could be recovered.

Key conclusion: A service based on employing a single handyperson would likely make a loss due to the higher overheads – including a share of South Seeds core costs – as compared with a sole trader. This competitive disadvantage would be exacerbated when the threshold for VAT registration is reached.

The economics would improve substantially if several handypersons were employed, diluting the fixed overheads. Economics would improve further in the proposed later stages of development when services include high performance insulation installations. However, the effort required to pass these hurdles would not be justified.

Recommendation: Reject the retrofit handyman idea.

5.3.5. Retrofit Advice Portfolio

The shortlisted idea was a basket of retrofit advice services. For the feasibility assessment it was envisaged that a single full time employee would seek to be fully occupied by working flexibly across the services. This proposal is modelled largely on the able-to-pay retrofit advice services provided by South East London Community Energy under the 'Future Fit Homes' brand.

However, a SELCE board review in February 2022 found that several of the services have proven to be unviable, due mainly to lack of customer demand. Furthermore, the review found that insufficient retrofit contractor supply chain capacity meant that customers were not able to proceed with works, creating negative feedback[52]. As far as the able to pay sector is concerned, SELCE is likely to continue to provide thermographic surveys, which have been easy to sell at £299 per survey. Other services are likely to remain on hold until the sector has developed further.

Homes must be deeply retrofitted within the next few years to support decarbonisation on timelines consistent with the Paris Agreement[53]. Keeping this in mind, community intermediaries are likely to be necessary to develop both the market and the supply chain[54]. Therefore there may well be a place for South Seeds to provide paid retrofit services in future.

The overall proposal is given below (Table 10). However, given the lessons learnt by SELCE, the service may develop as follows

- Stage 1 – Thermographic surveys and potentially EPCs if the employee is already trained
- Stage 2 – When retrofit market picks up, perhaps driven by government legislation, upskill or hire a retrofit coordinator to provide a 'paid advice' portfolio.

Table 10: Description of business model for Retrofit Advice Portfolio

Narrative description	Modelled on South East London Community Energy's 'Future Fit Homes' programme, South Seeds offers a basket of services in the area of retrofit advice for the 'able to pay'. One or more highly trained and experienced retrofit advisers is employed by South Seeds. These

[52] Personal communication, Nadia Smith, Future Fit Homes Project Manager, South East London Community Energy
[53] Anderson et al, 'A factor of two: how the mitigation plans of 'climate progressive' nations fall far short of Paris-compliant pathways' https://www.tandfonline.com/doi/full/10.1080/14693062.2020.1728209
[54] Gillich *et al*, 'Designing an 'optimal' domestic retrofit programme', 2017. https://doi.org/10.1080/09613218.2017.1368235

advisers flow between the various offerings depending on demand. The offering can evolve over time.

The advisers have a high level of skill appropriate to the risks and opportunities in local buildings (mainly pre-1919 solid wall buildings) and have a good working knowledge of heat loss and retrofit approaches. The following qualifications would cover this:

- AECB Carbonlite Retrofit graduate, or, Energy Efficiency Measures for Older and Traditional Buildings (Level 3 / NVQ)
- Accredited Domestic Energy Assessor / Retrofit Assessor
- Optional advanced qualifications: Retrofit Coordinator or Certified Passivhaus Consultant

The basket of services listed below is based on the activities of other community groups. It can develop over time.

- **Thermographic surveys carried out in winter** under negative pressure to identify air ingress and cold spots.
    - This service has been proven in Bristol and London to provide strong impetus for immediate action that reduces heat loss by up to 30%. 87% of customers took action to address findings within 1 year[55].
    - The simplest route to implementation is to franchise the 'Energy Tracers' model created by Bristol's Cold Homes Energy Efficiency Survey Experts (CHEESE) in which training, equipment, booking system and other resources are provided. Franchises will be granted via First Thermal Ltd CIC.
    - The work is seasonal, requiring outdoor temperatures below around 10C, and could also be carried out by session workers. The assumptions below are based on 157 surveys be carried out in the winter months: 150 at £200, and 7 (5%) without charge. Each survey lasts 2 to 3 hours. SELCE (London) charges from £299 per survey and CHEESE from £175.

- **Professional energy saving advice**
    - Targeting £40/ hour.
    - The advice would be to a professional standard and significantly superior to free alternatives While Home Energy Scotland advisers have basic training in energy awareness and perhaps Domestic Energy Assessment, the proposal here is for the adviser to have a much higher level of training (see above).
    - Service includes home visits and video calls.
    - Can address specific questions or help households develop plans to move to low carbon heating based on comprehensive property reviews of heat loss and opportunities for insulation, airtightness, ventilation.
    - Can also address lesser energy demands such as hot water, appliances and lighting.

- **Energy Performance Certificates**
    - Requires an accredited Domestic Energy Assessor.
    - Could start by providing leads to independent DEAs for a small fee.
    - Customers are likely to be requiring an EPC to qualify for government funding, especially via Home Energy Scotland.

[55] Personal communication, Michael Andrews, CEO First Thermal Ltd. CEO The CHEESE Project CIC.

- **Retrofit Assessments**
    - Retrofit assessments – which use an extended EPC process to gather data for retrofit designers – are likely to be needed in future for 'able to pay' support programmes in Scotland.

- **Recruitment and referral to funded retrofit programmes**, in particular ECO4.
    - Requires familiarity with funded programmes, eligibility of candidates, eligible works.
    - South Seeds assesses the property, prepares a retrofit improvement plan, assesses the eligibility of the household and recruits the household to implementing the plan.
    - ECO4, starting in 2022, is a more challenging proposition for households and lead generators because of the new 'whole building' and 'fabric-first' approach, which requires more extensive works, compared with ECO3.

- **Referral to paid retrofit services**, such as retrofit coordinators.
    - Pre-assessment of property and preliminary agreement of household to an outline 'deep retrofit' package. Deep retrofit is broadly packages costing more than £10,000.
    - As there is almost no 'able to pay' owner-occupier retrofit supply chain to speak of in Glasgow, this would be highly developmental. In London, SELCE provides leads to RetrofitWorks.

The strategy for maximising staff utilisation is to have a sufficiently highly trained and flexible employee(s) that can flow between different services. The employee(s) must also take care of all marketing and administration. Over time additional employees could be hired as the business is grown, eventually justifying the hiring of a sales administrator.

An example approximate annual time distribution across the services for one employee

	Number	**Time per each (hours)**	**Hours/ annum**	**Hours/ week**	**% of time**
Thermographic assessment PAID (seasonal Nov-Mar)	150	3	450	10.0	41%
Thermographic assessment FREE (seasonal Nov-Mar)	7	3	21	0.5	2%
Hourly advice	350 hrs	1	350	7.8	32%
Energy Performance Certificate - private	100	2	200	4.4	18%
Paid retrofit referral (make a whole house plan and confirm household on board for £10k+ plan).	5	8	40	0.9	4%
ECO referral / Retrofit assessment for funded programmes.	5	8	40	0.9	4%
TOTAL			**1101**	**24.5**	**100%**

This earning time is 65% of a full time person's annual schedule of 1700 hours, excluding holidays.

Revenue

	EA (ex VAT)	EA (inc VAT	Number	Revenue
Thermographic assessment PAID (seasonal Nov-Mar)	£200	£240	150	£30,000
Thermographic assessment FREE (seasonal Nov-Mar)	£ -	£ -	7	£ -
Hourly advice	£50	£ 60	350	£17,500
Energy Performance Certificate - private	£85	£102	100	£8,500
Paid retrofit referral (make a whole house plan and confirm household on board for £10k+ plan).	£400	£480	5	£2,000
ECO referral / Retrofit assessment for funded programmes.	£400	£480	5	£2,000
Total revenue				**£60,000**

These prices work out an average rate of £57/hour on paid work.

Annual operating costs (ex VAT)

Thermographic	Equipment hire: total cost for 1 kit for 1 season	£2,700
	Energy Tracer booking software - free	-
	Management fee per survey @ 15%	£4,500
EPC	Lodging fee per EPC @ £14 each	£1,400
Direct	Employee salary	£35,000
	Employer NIC	£2,700
	Pension @ 8%	£2,800
Overheads	Share of core costs	£27,000
	Annual renewal of IT equipment and survey tools £4,000 @ 20% / year	£800
	Insurance PPI and PLI	£500
	Total costs	**£77,400**

Operating profit

Operating loss of £17,400

The service is loss-making due to overheads, i.e. covering a share of core costs. The service breaks-even when there are three assessors operating as described as above. As with the Retrofit Handyperson, the economies of scale are important to the model's financially viability. Full revenue and cost calculations are included in Appendix 10.

Start-up costs

Franchise fee to First Thermal Ltd	£5,000
Laptop and survey equipment.	£2,000
Marketing materials	£2,000
Three months employee salary as buffer	£10,000
Total	**£19,000**

Optional training costs: Domestic Energy Assessor £500; AECB Carbonlite Retrofit £500, Level 3 Energy Efficiency in Older Buildings £900.

Next steps	As the service is loss-making, an alternative route would be to start with thermographic surveys and build up the service over time. Ramp up • Hire part time seasonal worker to organise seasonal thermographic assessments using Energy Tracer franchise for winter 2022/23. • Negotiate lead generation fees with domestic energy assessors • Investigate/ negotiate ECO lead generation requirements and fees with an energy supplier. • (Later – when market is further developed). Train up employee/ hire skilled and experienced retrofit adviser for advice service and referrals.
Legal	Significant professional and public liability risk if poor advice is given. Insurance must be maintained.
Pros	Growing sector
Cons	Reputational risks. Risk to customer's properties if bad advice is given, or if good advice is acted upon incorrectly. Underdeveloped retrofit supply chain. Customers will find it difficult to find contractors to implement works which could lead to a negative feedback loop.

Key conclusion:

The service is loss making, mainly due to the assumed 25% of core costs to be covered by the service. Furthermore, and taking heed of the experience of SELCE which operates in London – a larger market with, arguably, a more developed supply chain – it is likely that South Seeds would struggle to find enough customers for economic service delivery. The service would break even and cover 25% of core if three full time employed assessors were fully occupied.

However, SELCE (London) and CHEESE (Bristol) have found ready markets for thermographic surveys. This part of the service could be developed and operated with a seasonal employee who would train and coordinate sessional surveyors. Permanent staff time would be required to administrate the franchise year-round.

Recommendation: Further explore the franchise option for CHEESE thermographic surveying service via First Thermal Ltd. Leave other components of the offering on hold until the market has developed further.

5.3.6. Carbon Literacy Training

The board agreed to consider the idea of providing classroom carbon literacy training as a way of leveraging South Seed's knowledge and brand as well as its resources such as the Old Changing Rooms. The Carbon Literacy Project defines carbon literacy as follows:

> *'an awareness of the carbon costs and impacts of everyday activities and the ability and motivation to reduce emissions, on an individual, community and organisational basis.'* [56]

The Carbon Literacy Project is the leading authority on carbon literacy in the UK. It maintains a best practice definition and accreditation standard called the Carbon Literacy Standard. The Project is operated on a non-profit basis by the Carbon Literacy Trust which is a Charitable Incorporated Organisation based in Manchester.

Keep Scotland Beautiful has been delivering training since 2016 as the Carbon Literacy Project's official partner in Scotland[57]. They have several training offers:

- Introduction for individuals. Online e-learning. 1 hour. £40 + VAT
- Monthly course for individuals. Online. 4 x 1 hour classes + 4 hours self-lead learning. £115 + VAT
- Bespoke courses for organisations. Price on enquiry.

Besides defining the standard, The Carbon Literacy Project provides a suite of assets for delivering a generic course. These materials are typically adapted to the context and audience in the organisations receiving training. South Seeds could, for example, create a course adapted to the needs of a major local employer such as Barclays Bank. Alternatively, South Seeds could provide a course for individuals with a focus on low carbon solutions for households in the Southside.

South Seeds could choose not to use the Carbon Literacy Project standard and independently create its own training course in carbon literacy. However an independent approach may not be accepted by potential customers, especially organisations, while a well-known accredited scheme is already in place. The form of Zero Waste Scotland's 'Green Champions' training in resource efficiency[58] may provide a model for a new carbon literacy course.

South Seeds could choose to provide the training in person, rather than virtually. Training could be delivered using either the shop, the renovated Old Changing Rooms or by hiring space locally. This would be a key differentiator versus Keep Scotland Beautiful's online offering for individuals and could support the development of a local action network. Providing the course in person would provide an opportunity for individuals to meet other like-minded people. Employers may find that in-person training at the Croft provides their employees with the wellbeing benefits of being outside.

Regardless of whether South Seeds provides carbon literacy training to employees or to individuals the main competition would be Keep Scotland Beautiful. However, the market for carbon literacy training is currently small. Keep Scotland Beautiful started giving training in 2016[59] and up to September 2021 it had trained 2622 individuals[60]. KSB trainees in 2021 included 100 Home Energy Scotland advisers[61] and some COP26

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[56] https://carbonliteracy.com/
[57] https://www.keepscotlandbeautiful.org/carbonliteracy
[58] Green Champions Training, Zero Waste Scotland https://greenchampions.zerowastescotland.org.uk/
[59] https://www.keepscotlandbeautiful.org/climate-change/climate-change/climate-emergency-training/
[60] https://www.glasgowchamberofcommerce.com/climatechamber/sustainability-stories/2021/september/17/keep-scotland-beautiful/
[61] https://www.scottishhousingnews.com/articles/keep-scotland-beautiful-supports-home-energy-scotland-to-become-certified-as-carbon-literate

volunteers[62]. However carbon literacy training is expected to grow. It is mentioned in the Scottish Government's draft strategy for public engagement on climate change[63]. A key growth area is in school education and Keep Scotland Beautiful is supporting the Scottish Government's Climate Ready Classrooms initiative (Table 11).

Table 11: Description of business model for Carbon Literacy Training

<table>
<tr><td>Narrative description</td><td>South Seeds markets and hosts a carbon literacy training programme accredited by the Carbon Literacy Project (CLP).

The course is a series four two-hour night classes. The eight hours comprise four hours of teaching and four hours of supported self-lead learning and action planning, thus meeting the minimum requirement for Carbon Literacy Project accreditation.

To deliver an accredited course, the trainer must be accredited.</td></tr>
<tr><td>Revenue</td><td>Pricing is at parity with the Keep Scotland Beautiful online course for individuals at £115 (£138 including VAT).

30 night class courses = 3 nights per week for 40 weeks per year

Assuming 20 students per course = 600 students per year

600 students x £115 = £69,000</td></tr>
<tr><td>Annual operating costs (ex VAT)</td><td><table>
<tr><td>Share of core costs</td><td>27,000</td></tr>
<tr><td>Sessional payments to trainer
30 courses x 8 hours x £60 per hour of class time</td><td>14,400</td></tr>
<tr><td>Venue hire @ £60/ night = 30 x 4 x £60</td><td>7,200</td></tr>
<tr><td>Printing course, marketing materials</td><td>500</td></tr>
<tr><td>Total</td><td>£49,100</td></tr>
</table></td></tr>
<tr><td>Operating profit</td><td>£19,900</td></tr>
<tr><td>Start-up costs</td><td><table>
<tr><td>Train the trainer</td><td>£138</td></tr>
<tr><td>Trainer accreditation (Facilitator £75, or trainer £150, or consultant £600, three-yearly renewal £200)</td><td>£75</td></tr>
<tr><td>Trainer's time to develop course and gain accreditation
20 days @ £40/ hour</td><td>£3,000</td></tr>
<tr><td>Course 'criteria checking' accreditation</td><td>£200</td></tr>
<tr><td>Computer, projector</td><td>£1,000</td></tr>
<tr><td>Marketing assets</td><td>£2,000</td></tr>
<tr><td>Total</td><td>£6,413</td></tr>
</table></td></tr>
<tr><td>Next steps</td><td>Over 3 to 6 months:
Identify a trainer
Trainer applies to become a Facilitator, if not already holding that status</td></tr>
</table>

[62] https://www.glasgowworld.com/news/cop26-volunteers-to-get-climate-literate-in-time-for-global-summit-in-glasgow-3382706

[63] https://www.gov.scot/publications/net-zero-nation-public-engagement-strategy-climate-change/documents/

	• Trainer designs course in conjunction with CLP; gains 'criteria approval' • Identify venue • Market course and recruit students • Run the course Optionally, • Provide the additional service of supporting organisations to gain Accredited Carbon Literate Organisation status • Seek to be a service provider for Climate Ready Classrooms for local schools.
Legal	N/A
Pros	Leverage local trusted reputation. Provides a use for the Old Changing Rooms.
Cons	Market is not yet well developed. Difficult to compete with Keep Scotland Beautiful. Potentially difficult to invest in establishing a course: identify trainer, gain accreditation.

Key conclusion: Providing carbon literacy training could be a financially attractive for South Seeds, and it would provide a use for the Old Changing Rooms. Although government strategy may drive market growth, the market is currently very small and there is an established and dominant competitor.

Recommendation: monitor market development or consider running a pilot to identify demand.

6. Discussion and Conclusions

This business strategy review sought to identify a community energy business model that would address South Seeds' priorities for alleviating poverty and promoting environmental protection. Besides covering its own costs, this new business model would ideally generate a surplus that can be used to undertake future business model experimentation, as well as to subsidise services for the 'unable to pay'.

The trustees were open-minded about which aspect of energy to address and how. They were clear of their preference for ideas that are likely to deliver surplus to the organisation while being relatively easy to implement. Ideas that leverage South Seeds resources including its brand and tool library were seen as being more likely to succeed. The ideation and shortlisting process identified four ideas and the feasibility of these ideas was explored in Section 5.3.

Table 12 summarises the key findings from the feasibility assessments. Of the shortlisted four business activities, just one – retrofit tool library – is clearly worth pursuing today. Price rises for the existing library's use are justified, whilst the lending of premium and specialist retrofit tools would justify additional loan fees. Service improvements including easier access and home delivery could increase the number of members and loans. Retrofit tool library is the easiest of the four ideas to pursue as the key infrastructure is already in place and progress can be made incrementally after first investing in increased tool library officer capacity.

At present, it is not economic to employ a full time retrofit adviser due to the cost of overheads and also because of significant doubts about the size of the market. However, thermographic surveys are certainly worth considering, as the model is provided 'off the shelf' by CHEESE/ First Thermal Ltd. A seasonal employee would manage session workers to market and carry out the surveys. The challenge is that permanent member of staff would need to manage the franchise and a seasonal employee. In time, the retrofit advice service could expand into other areas, such as ECO and retrofit referrals, retrofit assessments etc.

Carbon literacy would be financially attractive but there is already a dominant service provider – Keep Scotland Beautiful – and there is no evidence to suggest the market is yet large enough to support another provider. South Seeds could choose to develop its own unaccredited course focussing on sustainable and low carbon lifestyle options in the Southside. South Seeds could choose to carry out a pilot to gauge demand and the price students would be willing to pay.

Building up a retrofit service with an employed handyperson would allow South Seeds to influence the depth, quality and scope of works. This control is important in relation to invasive measures that have the potential to harm the health of buildings and their occupants but which are also key to decarbonising the local housing stock. The employed retrofit handyperson scenario would likely be loss making with fewer than three fully-utilised full time handypersons. This is due to fixed overheads, especially a share of core costs, emphasising the importance of the economies of scale. Furthermore, VAT registration would put the service at a price disadvantage of at least 20% compared with sole traders.

A variation on the shortlisted ideas that was not explored in depth is to support DIYers to retrofit their homes to a high standard of quality and performance rather than providing a handyperson service. Training classes could be offered by the tool library, thereby equipping enthusiastic DIYers with both skills and the tools for retrofit.

Table 12: Summary of feasibility assessment conclusions.

	Retrofit tool library	Retrofit handyperson	Retrofit advice portfolio	Carbon literacy training
Recommendation	Pursue	Reject	Pursue thermographic surveys. Monitor market for other items.	Monitor market development or carry out a pilot course.
Rationale	Incremental improvements are highly likely to increase revenue.	Loss making unless operated on a large scale because a share of core costs and likelihood of VAT registration makes it uncompetitive vs sole traders.	Thermographic surveys are proven to be popular. But mainstream owner occupier market doesn't yet exist for professional advice. Also retrofit supply chain is insufficiently well developed.	The market is likely insufficiently well-developed to support another entrant in addition to the established service from Keep Scotland Beautiful.
Ease of start up	Easy	Difficult	Difficult	Medium
Start-up costs	£25,500	£12,000	£19,000	£6,413
Modelled surplus	£7,800	-£22,300	-£17,400	£19,900
Key financial sensitivities		Market size and VAT registration would put SS at a disadvantage.	Market size	Market size
Key start up challenges	Increase tool manager hours before additional revenue arrives	Project start up capacity. Ongoing administrator	Project capacity and skills Other than for thermographic surveys, the market and supply chain are under-developed For thermographic, permanent staff to manage franchise and a seasonal employee	Market is likely under developed Finding a trainer and funding to develop a course
Key risk	Size of market paying for premium tools	Risk of claims of bad advice and damage to property	Risk of claims of bad advice and damage to property	Difficult to compete with Keep Scotland Beautiful

This review did not include any new primary research, beyond informal discussions with ten stakeholder organisations, from across the private, public and third sector. Consequently, assumptions have had to be made, especially in relation to potential market demand. The business models could be addressed on any geographic level – for example the entirety of Greater Glasgow. However greater economies of scale will accrue if there a strong market within a limited geography, such as South Glasgow. Any future primary research may specifically assess the demand and price sensitivity of the markets for carbon literacy training and retrofit advice.

A key determinant of economic viability was whether and how much of the core costs of the organisation should be borne on the notional 'profit and loss statement' of each service, both new and existing. For the purposes of this review, it was assumed that a sustainable ongoing core would cost £108k annually (see Appendix 8), and that a new service would bear a quarter of this cost, or £27k.

The decision to allocate a quarter of core costs to the new service was relatively arbitrary. Further enquiry of this question would consider the breadth and depth of activities that South Seeds wishes to pursue into the future. The economic sustainability of South Seeds' activities depends on donors, grant sources and individuals perceiving sufficient value for money. Ultimately, the value delivered depends on the depth of South Seeds' expertise and its ability to exploit that expertise on an economic scale. Trustees may wish to consider reporting the 'profit and loss' for each activity area starting now, regardless of new business model innovation.

It was found that the tool library could provide an additional source of income for South Seeds, with very little change to its current offering. Simply bringing pricing in line with other libraries of things would increase income. Value to the borrower could be increased by replicating enhancements made by other libraries including increased opening hours, home delivery, repair services, paid workshops and so on. Such improvements would be relatively easy to implement in an incremental fashion and would be almost certain to increase income. The pandemic has, understandably, been a huge distraction and disruption for the organisation. However, the gap between Southside Tool Library and its peers begs the question as to whether there is presently sufficient organisational focus for the Library to realise its potential.

Another key determinant of economic viability relates to VAT. When annual VAT-relevant income exceeds £85,000 a business must register to pay, and therefore collect, VAT[64]. This is particularly important for the handyperson service. Many sole traders will limit their activity to keep their annual revenue below £85,000. South Seeds has apparently not yet breached the VAT threshold. However, a handyperson service as part of South Seeds – alongside the tool library and other VAT-relevant income-generating activity – would soon be obliged to charge VAT and operate at a 20% competitive disadvantage vs sole traders.

The above considerations of breadth versus depth in relation to core cost allocations, organisational focus and VAT registration, pose the question of whether a new service should be spun off from South Seeds as a separate entity with its own governance. South Seeds could remain the owner/ investor and the destination for any surplus and could share resources including the shop, but the organisation would have narrow focus on the financial success of its service.

As described in Section 5.3, financial investment would be necessary to launch any of the business models, as well as staff time. For the tool library, early investment in expanded officer hours, marketing assets and premium tools would require a cash injection of around £25,500. For the thermographic surveys operated by a seasonal employee and sessional workers would be a relatively simple stepping stone towards deeper retrofit advice. The initial investment required for the franchise fee, hiring the seasonal employee and renting the equipment would come to around £13,500. For a pilot carbon literacy course, the cost is estimated at around £6,000. In total, expanding South Seeds activities into these three areas would incur an upfront cost of £45,000. Given the charity's need to retain a certain level of reserves, it could not rely on reserves alone for this investment. It would therefore likely need to source a combination of grants, donations and crowd-funding and community shares[65] to finance this diversification.

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[64] https://www.gov.uk/vat-registration-thresholds

[65] 'Business models and financial characteristics of community energy in the UK', Braunholtz-Speight et al, 2020, Nature Energy. https://doi.org/10.1038/s41560-019-0546-4

Locally-marketed community share offers have had success in South Seeds' area. For example, Locavore grocer, Govanhill Baths and Glasgow Community Energy have all successfully closed their own self-marketed shared offers in the last few years. This suggests that South Seeds may enjoy similar success with its own share offer, although the interest would need to be paid on shares, in turn reducing the level of surplus. Considering the relatively small sums required, a simpler alternative to a share offer would be a crowdfunder in which supporters buy the service in advance as a 'perk' for donating[66]. For example, the supporter would effectively be paying in advance for a thermographic survey or a place on a carbon literacy course. They would get their money back if the crowdfunder falls short of the target required for the project to go ahead.

In the immediate term, South Seeds would usefully focus on improving the tool library offering, by including the provision of specialist retrofit tools and funding this through fees from local "able to pay" customers.

[66] https://www.crowdfunder.co.uk/guides/creating/giving-rewards

Appendices

Appendix 1: Constitutional Purposes

South Seeds purposes are as follows (source: annual report and accounts).

- To advance environmental protection and improvement in the south of Glasgow through establishing, coordinating, supporting and/or managing schemes and projects which are directed towards supporting environmentally sustainable living and/or regeneration and reducing any negative impacts on the environment;
- To advance environmental protection and improvement through establishing, coordinating, supporting and/or managing schemes and projects which are directed towards improvements to public realm or other open space for the benefit of the general public and in particular those resident in the areas in which the organisation operates;
- To advance education, particularly in relation to sustainable low carbon lifestyles, gardening, food production, healthy eating, food preparation, composting, craft skills and matters relating to the environment and sustainability;
- To advance health through encouraging people to become involved in exercise by participating in environmental improvement projects, gardening and similar activities and by promoting healthy eating, healthy food production and healthy lifestyles;
- To relieve poverty among the residents of the areas in which the organisation operates by promoting environmentally, economically and socially sustainable practices which assist people of limited means to reduce expenditure on energy, food and other necessities.
- To advance citizenship and community development (including the promotion of volunteering and the promotion of the voluntary sector) by involving people who might otherwise be socially excluded in environmental improvement projects, gardening, and other appropriate activities;
- To relieve those in need by reason of age, ill-health, disability, financial hardship or other disadvantage, and in particular by encouraging them to engage in environmental improvement projects, gardening, and other appropriate activities;
- To promote religious and racial harmony and to promote equality and diversity among people resident in the areas in which the organisation operates; and
- To promote, establish, operate and/or support other similar schemes and projects which further charitable purposes.

Appendix 2: Survey on Scope and Purpose of Community Energy Business Modelling – Results

Trustees and employees were surveyed on their views of South Seeds purpose, identity and ethos between 18th and 31st October 2021. The purpose of the survey was to make it possible to filter the long list of Community Energy models and present the ideas that are most relevant to South Seeds. There were seven responses, three from trustees and four from employees.

Summary

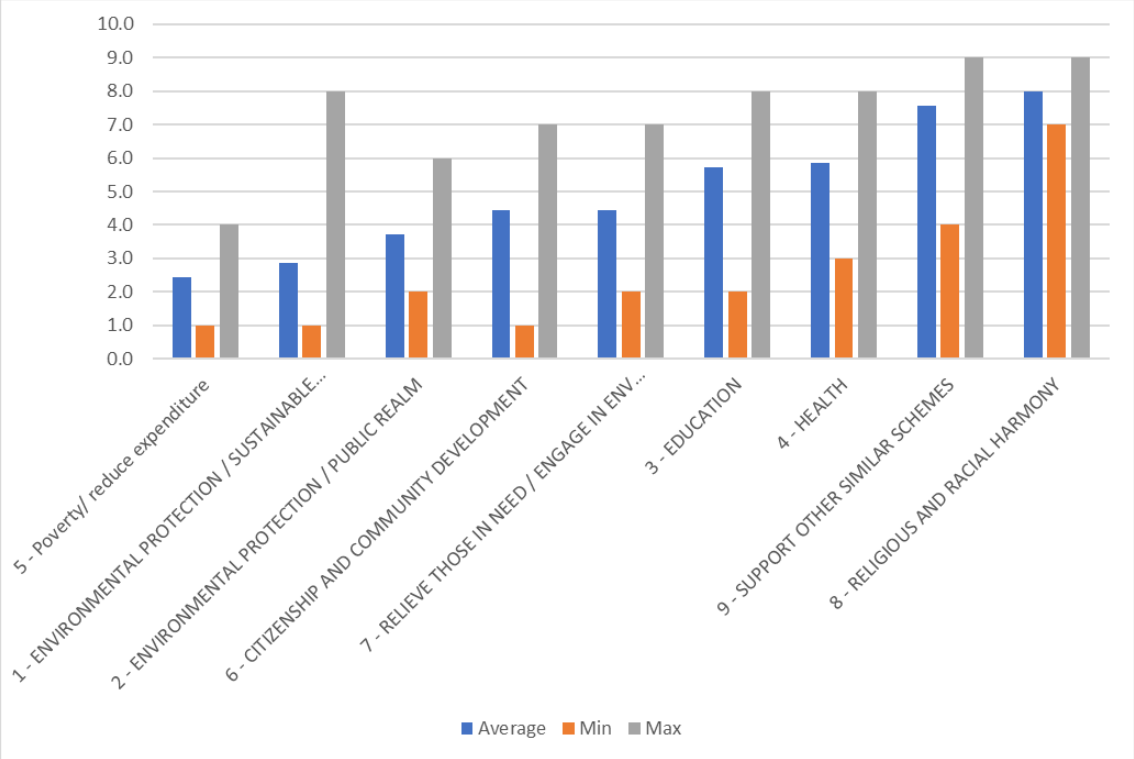
A summary of the findings can be found below, with each theme unpacked in more details after.

- **Purpose:**
  - 'Relieving poverty … by reducing expenditure on energy etc' had the highest overall ranking, with all respondents placing it in ranks 1 to 4.
  - 'Advancing environmental protection … [through]… environmentally sustainable living' was the second most important ranking, although one employee ranked it 8 out of 9.
  - Public realm improvements was the third most highly ranked.
  - There was considerable variation in rankings for most other constitutional purposes, especially amongst employees. Employees tended slightly to prioritise poverty alleviation compared with trustees who tended towards environmental purposes.
  - 'Promoting religious and racial harmony' consistently ranked low for all respondents.
- **Revenue:**
  - Respondents see no inconsistency in South Seeds raising revenue, although there is some hesitancy about raising surplus income.
  - Employees see benefits in a stable revenue-generating business model because, as one commented, fund raising is 'exhausting' and another remarked that a stable income would be safer for the organisation.
- **Service users:**
  - Respondents generally see no bar to any kind of service user being considered in business models.
- **Customers:**
  - Respondents generally see no bar to any kind of customer being considered in business models.
- **Area/market:**
  - Respondents mostly indicated that it would not be appropriate for South Seeds to extending services and operations beyond the existing area in central Southside.
  - However views were mixed, especially among the trustees. One trustee thought all geographies up to Scotland-wide were in scope, while another thought that current resource constraints (staffing, funding) would make it impossible to extend beyond the current area.
- **Other comments:**
  - There is interest in:
    - addressing home energy efficiency
    - exploring ways for solar panels to be used to pay for factoring on tenements
    - Working with energy providers
    - Book lending library
  - There was a comment that energy generation is no longer viable since the closure of the Feed In Tariff.

Purpose

Question: "Setting aside for a moment what any surplus revenue may be used for, which of the constitutional purposes is most important to identifying what energy product or service South Seeds should provide?"

Top rank (1) = most influential in identifying the product or service that South Seeds will provide.



Verbatim comments

- "Not sure the constitution is the place to go for the mission statement"

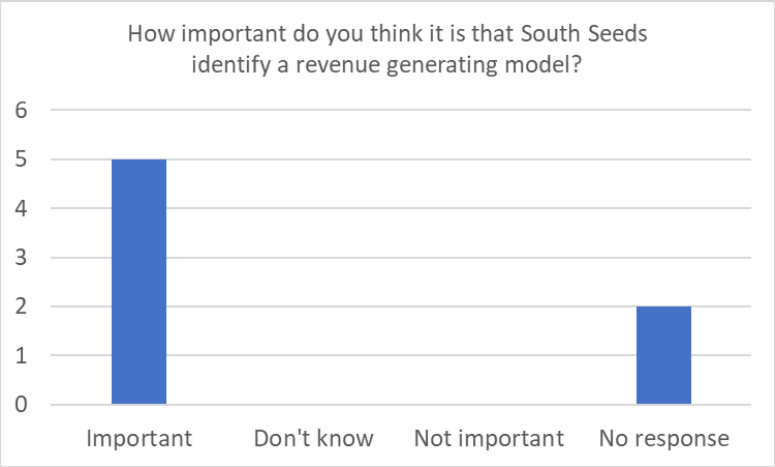
Analysis

'Relieving poverty … by reducing expenditure on energy etc' had the highest overall ranking with all respondents placing in ranks 1 to 4. 'Advancing environmental protection … [through]… environmentally sustainable living' was the second most important ranking, although one employee ranked it 8 out of 9. Public realm improvements was the third most highly ranked.

There was considerable variation in rankings for most other constitutional purposes, especially amongst employees. Employees tended to prioritise poverty alleviation, while trustees tended towards environmental purposes. 'Promoting religious and racial harmony' consistently ranked low for all respondents.

Value of Revenue

Question: **"**How important do you think it is that South Seeds identify a revenue generating model?"



Question: "Any comments on the project goal of creating a robust revenue-generating model that may over time generate funds for social and environmental benefit?"

Verbatim respondent comments

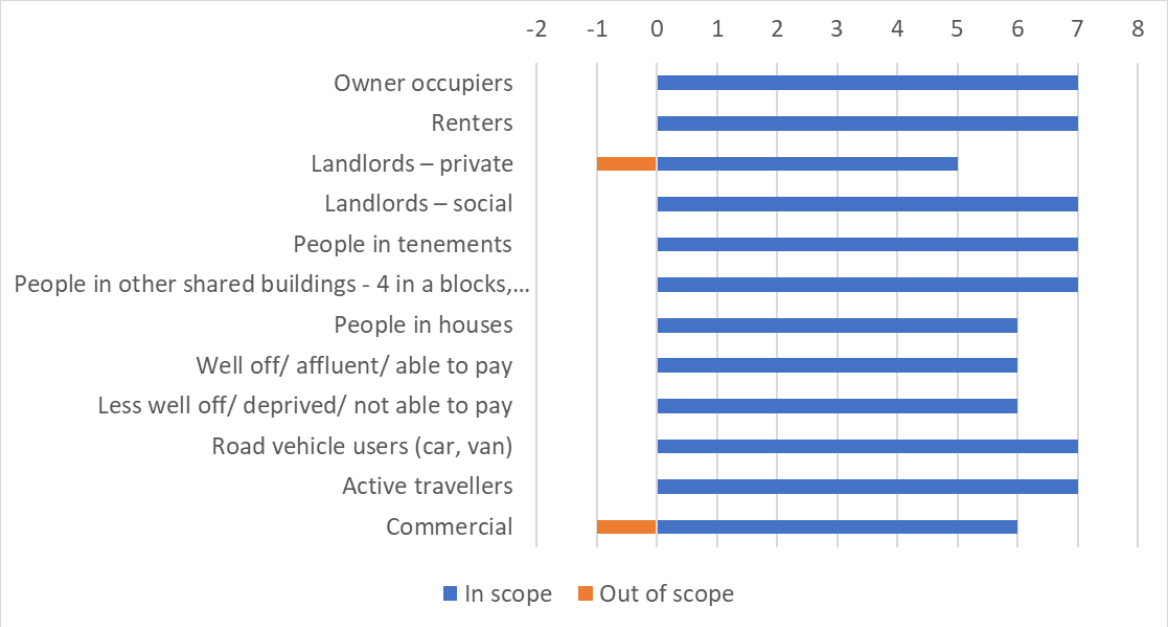
- Trustees
  - "It is important to look for opportunities and take them forward if appropriate, but South Seeds aim is not to generate income, it is a bonus for our organisation sustainability if we do"
  - "there are many different ways of potentially generating revenue. Those that South Seeds take forward need to support the overarching sustainability objectives of South Seeds, but do not necessarily need to come from energy related projects. For example, subletting the changing rooms."
- Employees
  - "Fund raising is exhausting"
  - "Reliance on funding is not normally safe but perhaps the project of climate change ensures more likely future funding than most so although a robust model of income generation is important perhaps not vital in the short term."

Analysis

- Respondents see no inconsistency in South Seeds raising revenue, although there is some hesitancy about raising surplus income.
- Employees see benefits in a stable revenue-generating business model because fund raising is 'exhausting' and a stable income would be safer for the organisation.

Service Users

Question: "Does your understanding of South Seeds identity, purpose and ethos place any limits on who the target users of a community energy service should be?"



Verbatim respondent comments

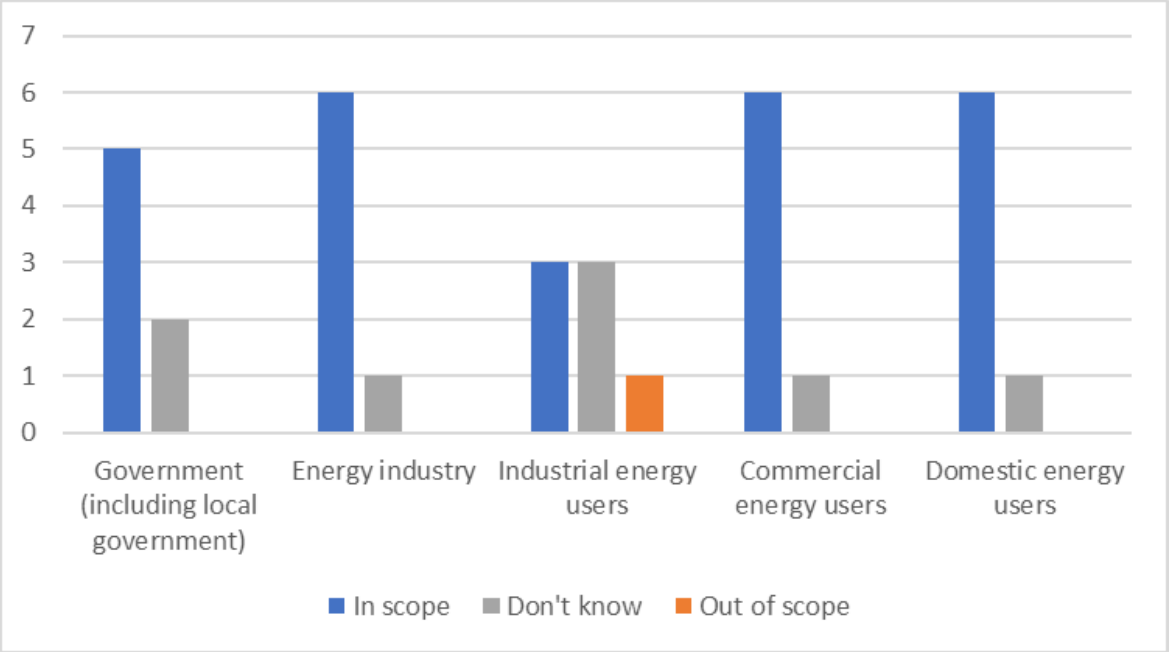
- Trustees
  - "I think at this stage everyone should be in scope and then during more detailed research, information should be drawn out as to where a project would be most likely to success"
  - "The target service users are determined by the needs of the community. Well off/ affluent/ able to pay are equally open to be supported by South Seeds to improve the sustainability of the south side, however the needs of the less well off would be prioritised and those that can pay, should pay for support"
- Employees
  - "South Seeds works with everyone"
  - "Just to understand the mix of users old, young, English speakers, non English speakers poor and richer and appeal to all"

Analysis

- Respondents generally see no bar to any kind of service user being identified in business models.

Customers

Question: "Does your understanding of South Seeds identity, purpose and ethos place any limits on who its CUSTOMERS should be?"



Verbatim respondent comments

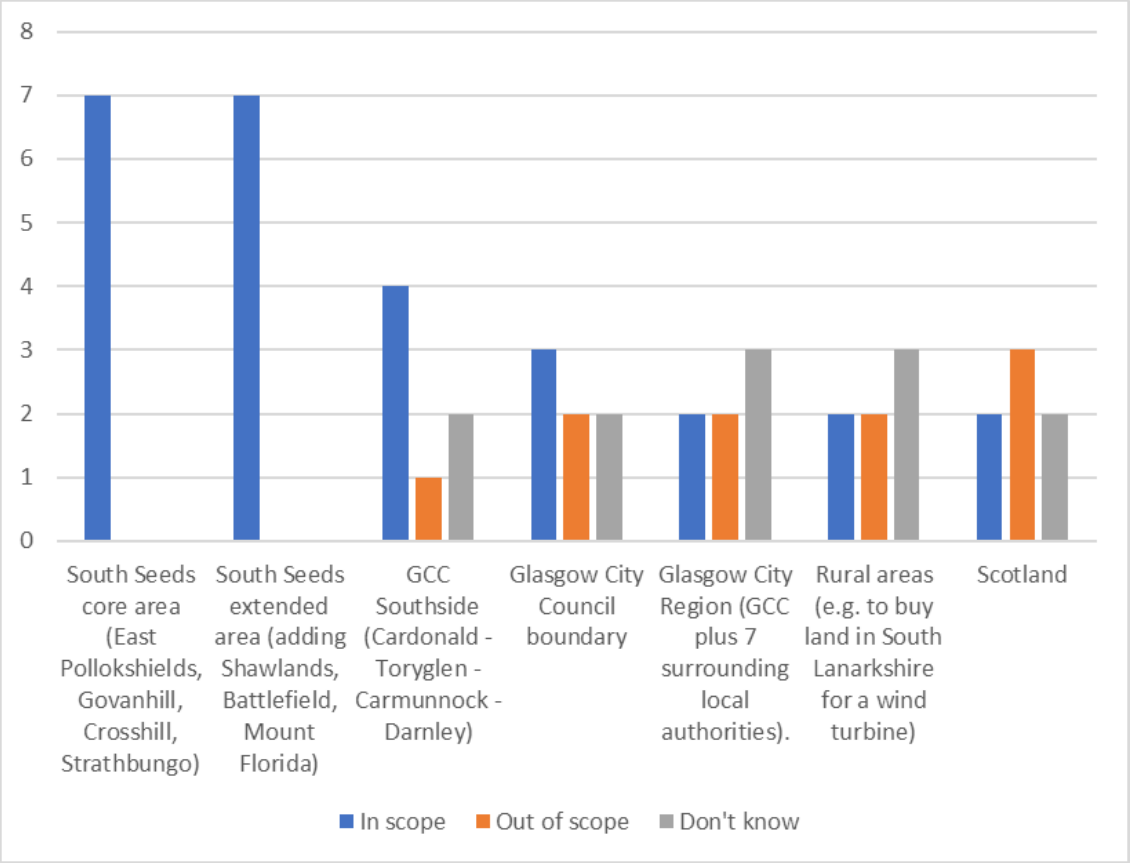
- Trustees
  - "I'm sceptical on how much influence we might have on industrial organisations"
  - "To me this is largely dependant on the service being provided, so hard to say"
  - "Industrial users are only out of scope because I am not sure if there are any industrial users in the south side"
- Employees
  - "South Seeds is able to take money from all sectors/users/customers"

Analysis

- Respondents see no bar to any kind of customer being identified in business models.

Area/Market

Question: "Does your understanding of South Seeds identity, purpose and ethos place any limit on the geographic area in which the business may operate or seek to serve?"



Verbatim respondent comments

- Trustees
  - "I suggest constraints, (staff, funding, etc) limit our reach, however our experience and knowledge sharing with other organisations could be incredibly helpful"
  - "Again this depends on if it's a service we are delivering or a place we are using to generate energy. To me it's 2 different spheres of influence."
  - "All areas are in scope, however as pointed out in the Rural areas example, certain areas are only in scope because of what might happen in that area. For example, South Seeds has the ability to act as a mentor for other communities, which could be anywhere across the UK"
- Employees
  - "Keeping the service local means the service users can be understood and catered for. Perhaps try to encourage replication in other areas"

Analysis

- Respondents mostly indicated that it would not be appropriate for South Seeds to extending services and operations beyond the existing area in central Southside.
- Views were mixed among the trustees. One trustee thought all geographies were in scope, while another thought that current constraints would make it impossible to extend beyond the current area.

Other input

Verbatim comments

- Trustees
    - “Project concepts that support improvements to the energy efficiency of homes in the south side should be supported. My feeling is that energy generation is a ship that has sailed now the FiT has gone. Our relationships with the energy providers has always felt under utilised and their may be opportunities to work with them to improve people's lives.”
- Employee
    - “A lending library of energy related literature, e.g. geography books, politics or energy etc. with space to browse and meet like-minded people Small joining fee. More nature walks and the like for small”
    - “Why can't solar panels pay for factoring in tenement blocks?”

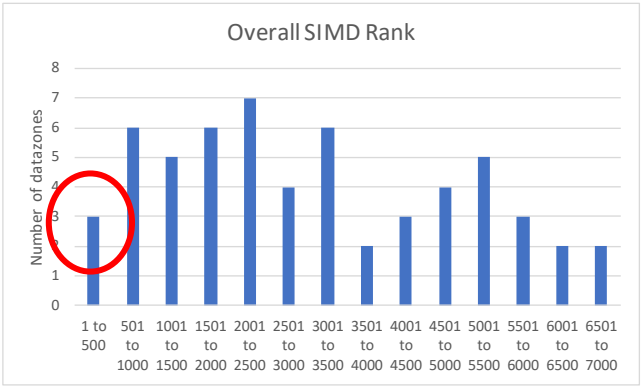
Summary

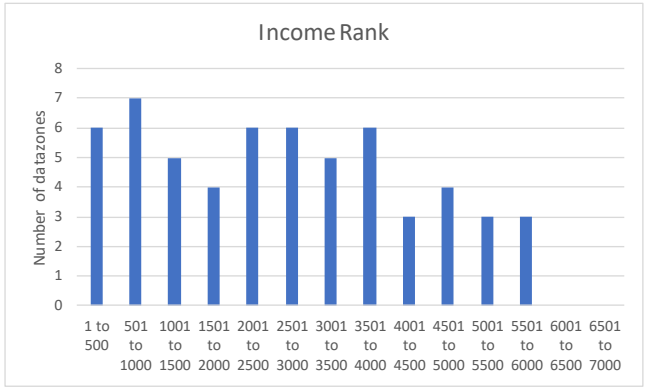
- There is interest in
    - addressing home energy efficiency
    - exploring ways for solar panels to be used to pay for factoring on tenement blocks
    - Working with energy providers
    - Book lending library
- There is a feeling that energy generation is no longer viable since the closure of the Feed In Tariff.

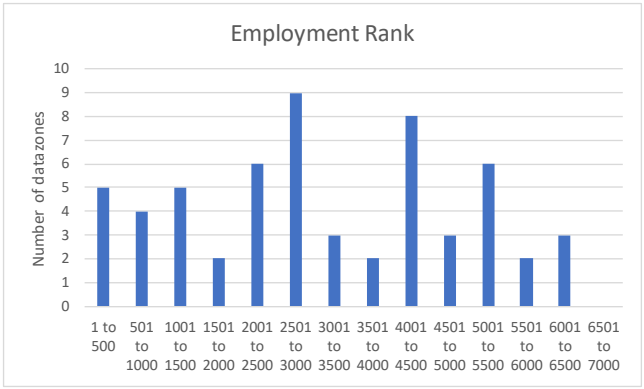
Appendix 3: Analysis of Scottish Index of Multiple Deprivation

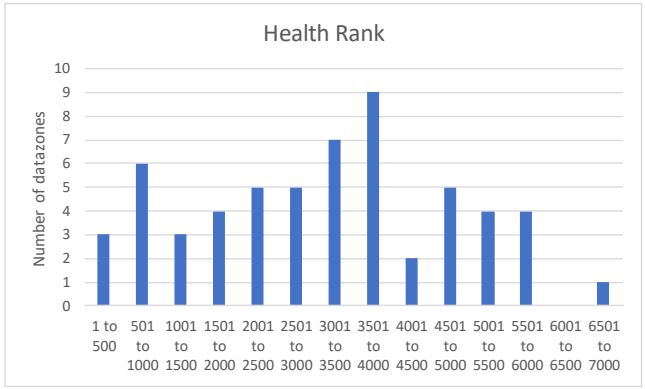
The histograms below show how South Seeds datazones are placed in the national rankings for each data domain. For example, 3 of the 58 datazones are among the 500 most deprived zones in Scotland (circled).

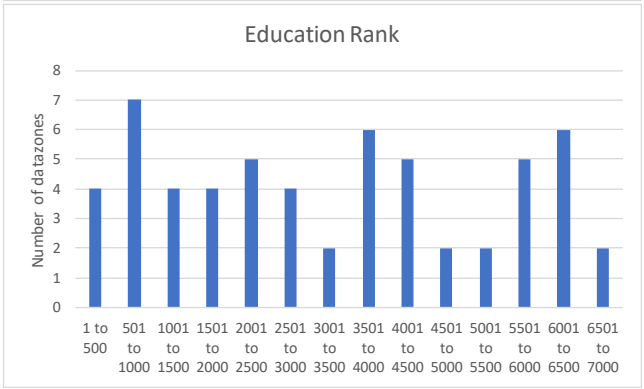
South Seeds datazones are spread across the Index. However South Seeds datazones tend towards having lower incomes and more problems with crime than the overall distribution of Scottish datazones. Housing standards are very much lower than most of the rest of Scotland, with 34 of 58 South Seeds datazones being among the 500 most deprived datazones in Scotland in this respect. Residents have significantly better access to amenities as measured by driving and walking times.

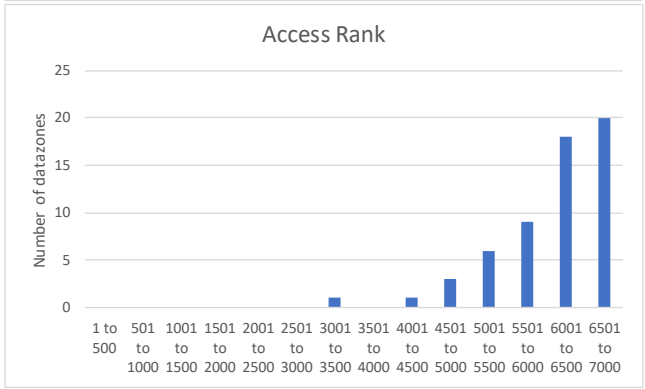


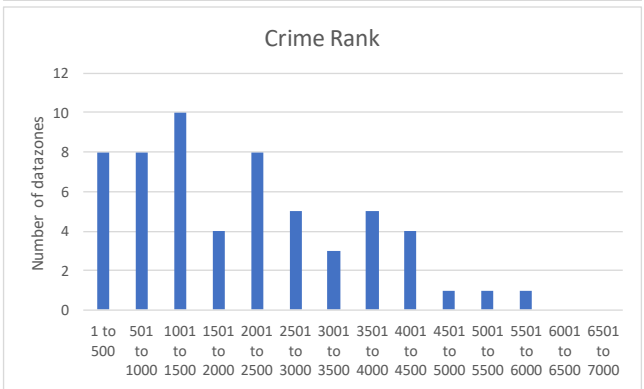


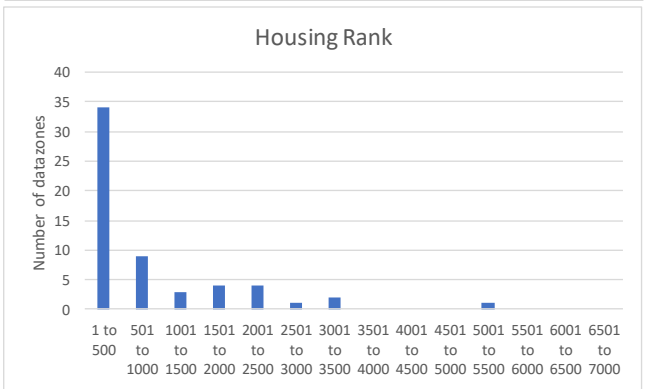












Appendix 4: Other Local Social Enterprises, Community Groups and Charities

Other Social Enterprises

- Govanhill Baths Community Benefit Society (sport, community development)
- Locavore CIC (sustainable food)
- Merry Go Round (circular economy)
- Milk (women's rights and empowerment)
- Loco Home Retrofit CIC (retrofit)
- Glad Café CIC (café and events venue)
- Kindr Handl (circular economy)
- Bike for Good (active travel)
- Remade (circular economy)
- Greater Govanhill CIC (magazine)
- Queens Park Arena Ltd (arts, events)
- Govanhill Community Development Trust (property)
- The Common Guild (arts)
- Jangling Space (arts)

Community Groups and Local Charities

- Community Councils:
    - Govanhill & Crosshill;
    - Mount Florida;
    - Langside, Battlefield and Camphill;
    - Shawlands and Strathbungo;
    - Pollokshields;
- Strathbungo Society (heritage, community development and sustainability)
- Friends of Queens Park (local environment)
- Pollokshields Trust (community development)
- Mount Florida Community Trust (sport, community development)
- South Glasgow Heritage and Environmental Trust (heritage)
- Big Noise Govanhill (music, community development)
- Glasgow City Heritage Trust (heritage)
- Pollokshields Heritage (heritage)
- Langside Community Heritage (heritage)
- The Well (community development)
- Govanhill Community Action (community development)
- Various residents associations (building maintenance and improvement, community development)
- Congregations, places of worship (religion, community development)

Appendix 5: Long list of community energy ideas

Theme	Idea	Description
Retrofit	ECO referral	Home energy assessment in partnership with an energy supplier. Apply for ECO funding. If measures are taken up, energy supplier pays a fee which covers part of the cost of the assessment.
	EPC / RAs	Generate EPCs or even retrofit assessments as prerequisite for funded retrofit plans.
	Energy saving advice	Light touch/ over the phone advice on main options and costs.
	Thermographic/ airtightness assessments	Visual energy assessments using blower door and thermal imaging camera.
	Handyman	'Light retrofit' installation. Draught proofing, handy man service, clearing lofts, loft insulation.
	Independent heat engineering advisor.	Independent advice to households on maximising efficiency of gas boilers (controls and radiators), getting house heat pump ready and overseeing installers.
	PAS2035 Retrofit Coordinator, Designer	Whole house deep retrofit advice and/or project coordination to high performance, high quality standard (PAS2035)
	PAS2030 Retrofit installer	Deep retrofit installation - underfloor insulation, wall insulation, etc.
	Tenement factor.	Maintenance and energy efficiency. Novel, socially and environmentally responsible approach to factoring that, in addition to maintenance, also manages retrofit and renewables; facilitates owners associations.
Retrofit support	Retrofit training venue	Demonstration rig for insulating in Old Changing Rooms. Course run by South Seeds via contractor.
	Retrofit tool library	Retrofit tool library - specialist equipment, e.g. insulation saws.
	Surplus / second hand materials shop	Collect and resell leftover insulation, recovered timber etc...
Mobility	EV chargers	Install and operate on-street EV chargers and/or e-bike chargers. SS run community share offer, IDs sites, arrange for installation and operation by 3rd party.
	Community car club	Peer-to-peer car sharing club. SS promotes and recruits participants. Technology (telematics, billing) provided by 3rd party.
Heat pump data	Heat pump performance database	National database of actual private heat pump performance as incentive for good design and service by installers. Develop software and recruit households nationally.

Theme	Idea	Description
Grid services	Storage heater aggregation and optimisation.	Remote control of private storage heaters for 1) maximum comfort (charge as late as possible and during day), 2) minimum cost, and 3) minimum pressure on grid. Time of use tariffs and/or flexibility payments from DNO. SS recruits customers, sets up commercial vehicle, establishes billing via back office partner (maybe Octopus?), partners with equipment supplier-installer (e.g. Connected Response).
	Virtual Power Plant	Flexible load aggregation / smart demand response. All large loads - storage heaters, heat pumps, immersions, EVs participate in a local time of use energy tariff and respond to price signal. SS recruits customers, sets up commercial vehicle, establishes billing via back office partner (maybe Octopus?), partners with equipment supplier-installer (e.g. Connected Response).
Supply	Community solar PV	Place solar PV on large community buildings. Sell excess to grid under PPA. Maximise own consumption for viable economics (batteries, heat, …). Consider local energy clubs. SS IDs sites, raises finance, manages project via Energy4All or similar.
	Wind farm investment	Buy a stake in a wind farm with low cost finance from supporters to generate surplus revenue. E.g. borrow from supporters at 3% and lend to developer at 5%. SS raises finance and manages investment.
	Tenement solar	Develop a model for shared buildings to benefit from solar PV on the roof. SS develops technical and regulatory solution, recruits closes, puts contracts and finance in place and arrange installation.
	Large scale battery	Large scale battery for capacity or frequency support. SS IDs site, raises finance, sells capacity to DNO and manages project potentially via intermediary like Energy4All.
	Local energy tariff	Local energy tariff. SS recruits local generators and a backoffice operator (e.g. Co-op/ Octopus energy).
Energy services	Lighting as a service (also commercial)	Be responsible for maintaining the light bulbs in a large commercial property
	Appliances as a service	Finance, supply, install, service, repair and power appliances (washing machine, dishwasher). E.g. responsible for x% service level of washing machines which are rented for less than normal cost of ownership.
	Temperature as a service	Retrofit planning, insulation, heating system design, installation and maintenance, plus energy supply all in one monthly bill
	Heating appliance as a service.	Boilers, heat pumps. Design, selection, installation, optimisation, finance. Get to brag about the performance of installations.

Appendix 6: Long list screening criteria

The table below shows the criteria used to score each of the long listed ideas.

Criteria		Details	Scoring		
			3	2	1
Internal Fit	**Strong fit with South Seeds' top 2 priorities for energy**	1) relieve poverty (by promoting sustainable practices) 2) advance environmental protection.	Directly addresses both priorities.	Generates some revenue to indirectly fund poverty relief activity.	Weak/ no fit
	Uses existings competencies	Resident engagement, know the area, energy awareness, understanding of fuel poverty and bill problems, multicultural awareness, energy company relationships, government policy understanding, renewables expertise.	Natural progression from existing work	Requires new skills and knowledge	Major divergence from existing organisational knowledge
	Leverages brand	Recognisably 'of the Southside', plus two further brand equities: 1. Eco, green 2. Altruistically helps those struggling to pay bills.	Makes commercial advantage of both sides of brand	Makes commercial advantage of one side of brand	Weak/ no fit
	Leverages physical assets	Tool library, shopfront, Changing Rooms	Uses existing assets, even if additional resources are required.	-	No potential to use assets
External rationale	**Technical readiness**	Is the technology already available?	Plug and play	Further development required	Technology not ready
	Policy readiness	Is the necessary regulatory environment already in place?	Supportive policy environment	No blocks but no help	Regulatory blocks
	Exposure to risk	Regulatory, insurance or financial risks	Very low risk	Medium risk	Risk of substantial claims against South Seeds
	How easy to set up (or copy)?	How much unpaid work is needed to until project is self-funding?	Little effort to start up	Up to 1 year run-in.	Substantial unpaid work over 1 or more years
Financial	**Financial feasibility**	Can the project be financed and self-funding based on reasonable assumptions and within constraints (especially patch)?	80%+ chance of being self-funding with some reserve margin within 3 years. Likely possible to attract finance.	50% chance of being self-funding OR need larger patch	Low prospect of economic viability.
	Likelihood of generating surplus revenue (after capital repaid)		Likely to generate surplus to fund other activity	Not sure	Unlikely to generate surplus

Appendix 7: Customer Value Propositions and Business Model Canvases for Shortlisted Ideas

Retrofit Handyperson: Customer Value Proposition

How well does the proposed service fit with our understanding of the potential customer? Here the customer is owner occupiers.

<table>
<tr><th colspan="2">Service</th><th colspan="2">Customer Profile</th></tr>
<tr><td rowspan="2">Products and Services

Efficiency enablers: clear loft/ clutter, install loft platforms

Energy Efficiency: loft insulation, draught-proofing, under floor insulation.

General jobs: flat pack furniture, put up shelves, clothes pulleys, laminate floor.</td><td>Gain Creators

Flexible service: addressing energy efficiency but not limited to this.
One visit for diverse tasks.
High quality work.
Excellent customer service. Clear explanation at handover.
Payment options (card, BACs, …)</td><td>Gains

Lower bills.
More comfortable house.
Greater amenity, more space and storage. Less cluttered home.
Lower environmental impact/ less eco guilt.
Help those less fortunate than me by providing revenue to a local charity.</td><td rowspan="2">Customer Jobs

I’m worried about paying my bills.
I need to furnish my property.
I want to create more space.
I want to feel like, and be seen to be, doing my bit to reduce climate change.
I want to contribute to local good causes.</td></tr>
<tr><td>Pain Relievers

Skilled person(s) familiar with local housing archetypes.
Easy to get a quote and schedule the work.
Identifiable track record associated with a local trusted brand.
Superior standard installation, e.g. fire-proof and airtight hoods over downlighters under loft insulation.
Any ‘profit’ goes to a good cause.
There is a shop where I can go if I have a complaint.
Quality control: e.g. photo evidence checklist.</td><td>Pains

Lack of time, physical ability, skills or equipment to do it myself.
I don’t know who I can trust to do this work for me with respect to both quality, fair price, and security concerns with strange people in my house.
I want to be able to follow up a complaint if there is a problem.</td></tr>
</table>

Retrofit Handyperson: Business Model Canvas

<table>
<tr><th>Key Partners</th><th>Key Activities</th><th>Value Propositions</th><th>Customer Relationships</th><th>Customer Segments</th></tr>
<tr><td rowspan="3">South Seeds tool library</td><td>Acquiring householder customers, work scheduling, payments handling.
Sourcing materials.
Health & safety compliance, risk assessments, work methods.
Clearing lofts; carrying materials; installing insulation.
Waste disposal (needs SEPA registration?)
Quality assurance and control processes.</td><td rowspan="3">Trusted, competent local tradesperson installing energy efficiency measures to a superior standard as well as supporting general amenity improvements.

Quality assured via Trustmark accreditations for recognised retrofit measures such as loft or floor insulation.

Supporting a local good cause</td><td>Direct relationships with householders. Could be one-off or there may be return visits.</td><td rowspan="3">Time poor with middle income.

Elderly and others with reduced capacity to do things themselves.

Private tenants and landlords.</td></tr>
<tr><td>Key Resources</td><td>Channels</td></tr>
<tr><td>Competent, experienced handyperson or general tradesperson.
Or trainee and link with training provider.</td><td>Word of mouth recommendations.
High street shop and recognised brand.
South Seeds social media
Promotions to support referrals
Promote via local press (e.g. Greater Govanhill)
Target house movers</td></tr>
<tr><td colspan="3">Cost Structure</td><td colspan="2">Revenue Streams</td></tr>
<tr><td colspan="3">Wages are main cost. Also vehicle, fuel, tools.
Materials chargeable to customer.</td><td colspan="2">Direct payments from households.
Later, accreditation would allow part payment by voucher from Home Energy Scotland.</td></tr>
</table>

Retrofit Tool Library: Customer Value Proposition

How well does the proposed service fit with our understanding of the potential customer? Here the customer is householders, especially those with less space or lower disposable income, or high environmental motivation. Millenials and Gen Y, in particular, are predisposed towards subscriptions and rental in order to avoid owning and storing 'stuff'[67].

<table>
<tr><th colspan="2">Service</th><th></th><th colspan="2">Customer Profile</th></tr>
<tr><td rowspan="2">Products
'Library of things' available to borrow at short notice or instantly.
Common and 'hard to obtain' consumables for sale including PPE and retrofit consumables such as airtightness tapes.
Bundles of items for particular jobs, e.g. underfloor insulation.
Optionally:
Providing in-person or written advice.
Training courses, supported DIY workshops.</td><td>Gain creators
Save money as fees are significantly lower than owning.
Wide variety means the optimum tool can be used. Safer, saves time and achieves better quality finish.
Storage space released.
Gain access to unfamiliar retrofit tools and consumables that cannot currently be found in shops in Glasgow.
Safer due to availability of PPE.
Enables home improvements that otherwise wouldn't have been considered/attempted.</td><td rowspan="2"></td><td>Gains
Easy access
Having exactly the tool or item needed.
Advice on which tool and how to use.
Saving time and effort by having the most appropriate tool, especially a power tool.
Tools are safe and in good condition.
Improve home value
Make additional improvements I hadn't thought of.</td><td rowspan="2">Jobs
Household maintenance tasks: build/repair furniture, etc..
Home aesthetic improvements: painting, wallpapering, laying flooring, etc.
Energy efficiency improvements: insulating loft, floor, etc..
Hobbies, e.g. building a kayak.
Seasonal/ infrequent activities: camping, big parties.
Reduce carbon and resource footprints.</td></tr>
<tr><td>Pain relievers
'Pay what you can' option for those with smaller disposable incomes.
Advice on tools avoids risk of making a mistake or getting stuck. In person advice, how to guides, training workshops.
No need to insure, maintain tools.
Don't need to collect at awkward times.
Don't need to plan and book ahead, nor order online.
Don't need a car for heavy items. Home delivery of tools is possible.</td><td>Pains
Lack of budget to buy tools.
Space lost to store rarely used items
Poor results through not having the optimum tool for the job.
Time spent trying to recover cost of rarely used items through re-sale (Gumtree, ebay).
Insuring items.
Don't know how to do the job.
Lack skills, time, budget to maintain tools. Tools broken.
Carbon guilt of consumption</td></tr>
</table>

[67] https://www.marketingweek.com/millennials-look-for-experiences-over-possessions/

Retrofit Tool Library: Business Model Canvas

<table>
<tr><th>Key Partners</th><th>Key Activities</th><th>Value Propositions</th><th>Customer Relationships</th><th>Customer Segments</th></tr>
<tr>
<td rowspan="2">Volunteers
Repair service provider
Equipment and consumables suppliers
Card payment service provider.</td>
<td>Maintain accurate inventory
Set pricing per item.
Take reservations and prepare loans.
Take payments. Check membership.
Test, inspect, maintain.
Enforce late fees.
Promote, market, recruit.</td>
<td rowspan="2">Borrowing tools for an annual membership fee.
Rental of infrequent use items such as camping equipment, PA equipment.
Home delivery can be arranged.
Sale of DIY consumables such as PPE.
Sale of hard to obtain retrofit consumables includes tapes, putty.</td>
<td>Membership</td>
<td rowspan="2">Millennials not into owning things.
Low income home improvers
Eco-motivated home improvers
High performance retrofit DIYers
Infrequent events: camping, big parties.</td>
</tr>
<tr>
<td>Key Resources
Existing tool library.
Specialist tools.</td>
<td>Channels
Shop front
Social media
Mailing list</td>
</tr>
<tr><th colspan="3">Cost Structure</th><th colspan="2">Revenue Streams</th></tr>
<tr><td colspan="3">Main operating costs are staff, premises, repairs.
Main capital costs are purchase and renewal of loan items.</td><td colspan="2">Membership fees. £30 standard, £50 supporter and ‘pay as you can’
Late fees. £1 per item per day.
Sale of consumables at, for example, 40% mark up.
Donations</td></tr>
</table>

Retrofit advice portfolio: Customer Value Proposition

Service			**Customer Profile**	
Products Thermographic surveys Advanced independent retrofit advice Energy Performance Certificate Referral to funded scheme Referral to paid retrofit	**Gain creators** Make resident aware of options they may not previously have encountered, e.g. shared heat pumps, or specialist insulation. Make resident aware of funding for which they may be eligible. Provide before/after EPCs to support applications for Home Energy Scotland funding. Access funded programmes to cut my energy bills. Get signposted to appropriate installers.		**Gains** Getting bespoke advice for my property. Being able to see the issues in my property. Get the improvements funded or at reduced prices.	**Jobs** Cut my energy bills Cut my carbon footprint Make my property more comfortable and healthier. Comply with minimum energy efficiency standards (from 2025?)
	Pain relievers Independent advice from local, trusted provider. Thermographic imaging allows me to see exactly where heat is being lost.		**Pains** Energy efficiency is complicated. Don't know where to start. Improvements can be expensive – I want to know where I will get best return on investment. Advice from suppliers and installers is, or could be, biased.	

Retrofit advice: Business Model Canvas

<table>
<tr><th>Key Partners</th><th>Key Activities</th><th>Value Propositions</th><th>Customer Relationships</th><th>Customer Segments</th></tr>
<tr><td rowspan="3">First Thermal Ltd (CHEESE thermographic surveys)

ECO energy supplier, e.g. Scottish Power

EPC accreditation body (e.g. Elmhurst)

Retrofit designers/ coordinators</td><td>Set up thermal imaging franchise.
Training and CPD of employee(s)
Recruiting customers,
Booking appointments, collecting payments
Negotiating referral fees with energy suppliers.</td><td rowspan="3">Independent advice based on thermal imaging survey
Independent advice (ad hoc)
Energy Performance Certificates</td><td>Householders: direct, bespoke

Energy supplier: through a referral framework

Retrofit coordinator/ designer</td><td rowspan="3">Able to pay motivated by comfort, carbon or bills

Unable to pay seeking help with comfort or bills.</td></tr>
<tr><td>Key Resources</td><td>Channels</td></tr>
<tr><td>Highly trained, experienced retrofit adviser.
Laptop, tablet, basic survey equipment
Accreditations: domestic energy assessor</td><td>Social media
Word of mouth
EPC on Trustmark website</td></tr>
<tr><td colspan="3">Cost Structure</td><td colspan="2">Revenue Streams</td></tr>
<tr><td colspan="3">The main costs are salary, franchise fees, share of South Seeds manager and share of South Seeds premises.</td><td colspan="2">Householder payments
Referral fees from energy suppliers
Referral fees from retrofit coordinators</td></tr>
</table>

Carbon Literacy Training: Customer Value Proposition

How well does the proposed service fit with our understanding of the potential customer? Here the customer is owner occupier.

<table>
<tr><th colspan="2">Service</th><td></td><th colspan="2">Customer Profile</th></tr>
<tr><td rowspan="2">Products

A course split between classroom learning and self-led application. Learning how to evaluate carbon emissions and make plans to reduce them.</td><td>Gain creators
Course is accredited and widely recognised and valued.</td><td rowspan="2"></td><td>Gains
Cut out personal research and guide me to immediate impactful action.</td><td rowspan="2">Jobs

Companies:
Raise environmental credentials in line with corporate strategy for customer engagement, marketing strategy or company values.

Individuals:
Reduce environmental impact
Assuage environmental guilt.
Support my local economy
Find like-minded people locally.

Government
Increase public consent for climate change mitigation policies</td></tr>
<tr><td>Pain relievers

Companies:
outsource the capability rather than develop in-house

Individuals:
Customised to be relevant to my daily life in my local area.</td><td>Pains

Companies:
Addressing complex topic with little pre-existing in-house expertise

Individuals
Advice is too generic and difficult to apply in my local area.</td></tr>
</table>

Carbon Literacy Training: Business Model Canvas

<table>
<tr><th>Key Partners</th><th>Key Activities</th><th>Value Propositions</th><th>Customer Relationships</th><th>Customer Segments</th></tr>
<tr><td rowspan="3">Trainers; either Carbon Literacy Trust accredited or other experts

For Southside course: local authority, local businesses

Training venue</td><td>Identify the target audience
Develop a course to suit the target audience
Develop the course
Marketing
Arrange logistics including venue
Collect course fees.
Deliver the course
Gather feedback and iteratively improve

Adjust the course for different or bespoke audiences</td><td rowspan="3"><u>Companies:</u>
Learn how to evaluate and improve the greenhouse gas emissions or general sustainability of your company activities

<u>Individuals</u>
Learn how to evaluate and improve the greenhouse gas emissions or general sustainability of your personal lifestyle
Learn how to support local businesses in implementing changes.</td><td>Selling direct to customer</td><td rowspan="3">Companies seeking Carbon Literate Organisation status, or other recognition for their sustainability efforts

OR
Individuals motivated by environmental concern

AND POTENTIALLY
Government seeking to promote citizen engagement on carbon literacy</td></tr>
<tr><td>Key Resources</td><td>Channels</td></tr>
<tr><td></td><td>Local commercial networks, especially Chamber of Commerce

Social media

Local social networks, word of mouth</td></tr>
<tr><th colspan="3">Cost Structure</th><th colspan="2">Revenue Streams</th></tr>
<tr><td colspan="3">Trainer to develop and deliver training

Venue hire

Marketing expense</td><td colspan="2">Companies paying for their employees to attend.

Individuals paying to attend out of their own interest.

Government may later fund this course for individuals to attend.</td></tr>
</table>

Appendix 8: Estimate of core costs

Sustainable annual core costs are estimated at £107k.

	£	
Office, rent and running costs	**27000**	**Average of last 5 years**
Staff and volunteer training	**2200**	**Average of last 5 years**
Governance costs	**1700**	**Average of last 5 years**
Manager salary	40000	Compare with government and for-profit private sector jobs with similar responsibilities.
Employer NIC	4156	
Pension @ 8%	3200	
Office admin @ 2 days / week	10000	FTE £25k
Employer NIC	2086	
Pension @ 8%	800	
Bookkeeper @ 1 day/ week	19200	@400/ day, 48 weeks
Employers NI allowance	-3000	
Staff costs subtotal	**76442**	
TOTAL CORE COSTS	**£107342**	

Core costs are assumed to be allocated across the organisation's activities as follows:

Activity	**Allocations**	**£ allocated**
Energy advice and advocacy	50%	53671
Tool library	25%	26836
New energy-related service	25%	26836
TOTAL	**100%**	**107342**

Appendix 9: Considerations relating to trading

Planning Permission

As part of planning legislation in Scotland, non-domestic premises are categorised into use classes. Currently South Seeds' base at 514 Victoria Road is classified as use class 2 ('financial, professional and other services'). The use as a tool library and for a small sales turnover, such as from selling LED bulbs, is considered secondary.

Conversion from Class 2 to Class 1 is considered permitted development, meaning no planning application is necessary[68, 69]. If South Seeds wanted to have written confirmation from the planning department then an application needs to be made for Certificate of Proposed Lawful Use or Development, however this written confirmation is not a legal requirement.

Table 13: summary of relevant planning use classes and permitted development rights.. Source: https://www.savills.co.uk/resources-and-tools/guide-to-use-classes-order-in-scotland.aspx

USE CLASS	DESCRIPTION	PERMITTED CHANGE
Class 1 - Shops	Use for all or any of the following purposes: (a) as a shop, (b) for undertakers (c) as a post office, (d) for the sale of tickets or as a travel agency, (e) for the sale of sandwiches or other cold food, (f) for hairdressing, (g) for the direction of funerals, (h) as a repair shop (i) for dry cleaning and launderettes	No permitted change
Class 2 – Financial and professional services	Use for the provision of: (a) as a bank, (b) for building societies, (c) for estate agencies, (d) for employment agencies, (e) professional and financial services (other than health or medical services), (f) for betting offices	Permitted change to Class 1
Class 3 – Food and Drink	Use for the following: (a) as a restaurant, (b) as a cafes, (c) as an establishment where food and drink is consumed on the premises	Permitted change to Class 1 and 2
… and other classes up to Class 11		

Non-domestic rates

Non-domestic rates are determined as a percentage ('poundage') of the rateable value of business premises. The premises use class used in the planning system is not a determinant of the valuation and all premises considered by the Scottish Assessors to be 'shops' are treated in the same way[70]. The valuation is based on two factors:

- the square metres of floor area in each zone A – D which related to proximity to the shop frontage, and,
- evidence of local shop rents.

The most recent valuation for 514 Victoria Road, carried out in 2017, gives a rateable value for the property of £9,900 (Figure 24).

[68] https://www.savills.co.uk/resources-and-tools/guide-to-use-classes-order-in-scotland.aspx
[69] https://www.gov.scot/publications/planning-circular-2-2015-consolidated-circular-non-domestic-permitted-development-rights-updated-2021/pages/2/
[70] https://www.saa.gov.uk/wp-content/uploads/2017/04/Shops_R2017_CPC01.pdf

Valuation Sheet 2017 Revaluation

Ref No.:	N198600514	**Final Value:**	£9,916
Description:	SHOP	**NAV:**	£9,900
Property Address:	514 VICTORIA ROAD, GLASGOW, G42 8BG	**RV:**	£9,900
Primary Practice Note:	Shops	**Effective Date:**	01/04/2017

Buildings Value

Practice Note: Shops

Floor	Description	Zone	Area (m²)	Rate (£/m²)	Value
---		A	50.85	£140.00	£7,119
---		A1	1.89	£126.00	£238
---		B	22.77	£70.00	£1,594
---		B1	20.18	£63.00	£1,271
TOTAL			95.69		£10,223

Adjustments

Practice Note: Shops

Description	Value
Size Adjustment	-£307

Figure 24: Valuation for 514 Victoria Road based on floor area per zone, with zones dependent on proximity to shop frontage (Source: SAA)

The Small Business Bonus Scheme applies 100% rates relief to properties with rateable values of up to £15,000[71]. Therefore, no rates are due on 514 Victoria Road (Figure 25).

[71] https://www.mygov.scot/non-domestic-rates-relief/small-business-bonus-scheme

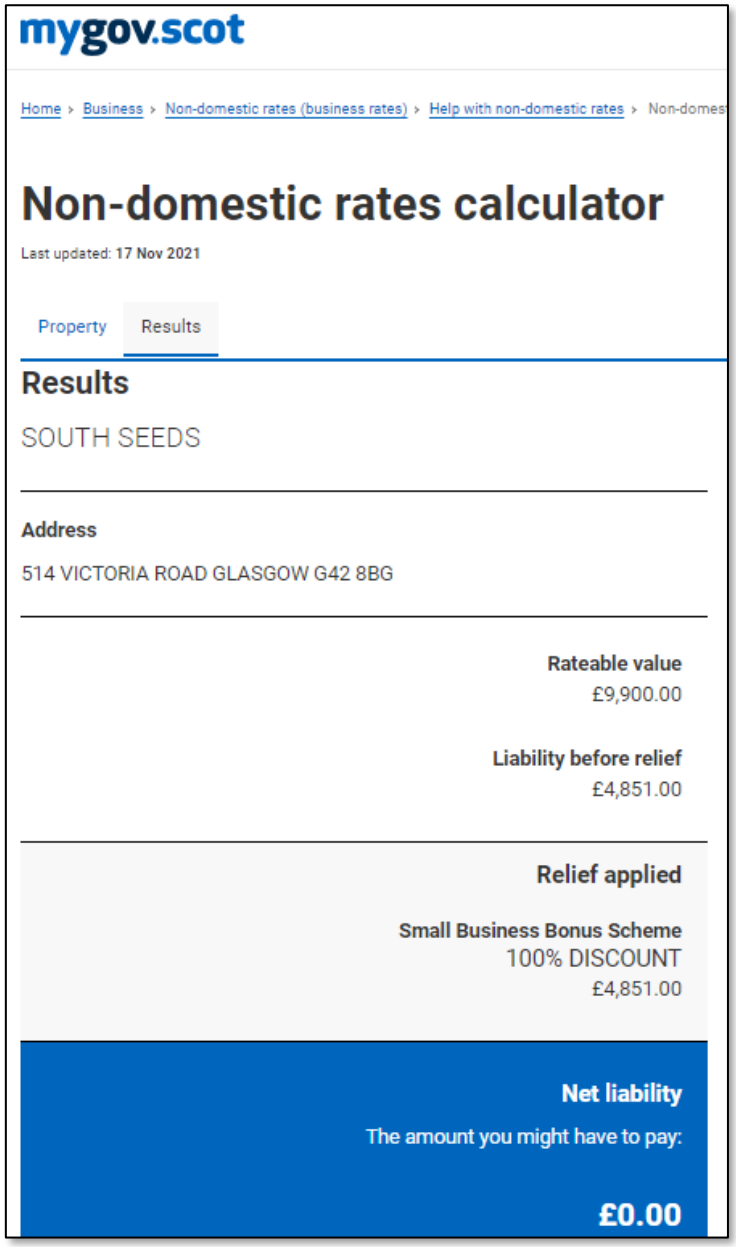


Figure 25: Non domestic business rates calculator. (Source: MyGov)

Tax

Profit on trading carried out by the charity may be liable to corporation tax if is not seen by HMRC to be delivering, or complementing the delivery of, the primary purpose of the charity[72]. The feasibility scenarios were created on the assumption that they would be tax-exempt. However, further advice should be sought on this topic. Like other organisations, charities must register for VAT if VAT-taxable income exceeds £85,000 in a 12 month period[73].

Conclusions

Neither a change of use class under the planning system nor an increase in sales turnover would affect the rateable value or business rates for 514 Victoria Road.

[72] https://www.oscr.org.uk/guidance-and-forms/charities-and-trading-guide/1-types-of-charity-trading/
[73] https://www.gov.uk/vat-charities/registration

Appendix 10: Financial Assumptions for Retrofit Advice Portfolio

			TOTAL	Thermo-graphic	Hourly advice	EPC	Paid retrofit referral	ECO referral, assessment
Revenue		Number paid		150	350	100	5	5
		Number free of charge		7				
		Price each		£200	50	85	400	400
		Total revenue	**£60,000**	**£30,000**	**£17,500**	**£8,500**	**£2,000**	**£2,000**
Costs	**Energy Tracer**	Franchise fee of ~£5000 assumed to be once off		£-				
		Equipment hire: number of kits		1				
		Equipment hire: price per day		£20				
		Equipment hire: period (days)		135				
		Equipment hire: total cost	£2,700	£2,700				
		Energy Tracer booking software - free	£-	£-				
		Management fee per survey @ 15%	£4,500	£4,500				
	EPC	Lodging fee per EPC @ £14 each	£1,400			£1,400		
	(share of time)			*45%*	*33%*	*14%*	*4%*	*4%*
	Indirect	Share of core costs	£27,000	£12,100	£8,991	£3,853	£1,028	£1,028
	Direct	Share of FTE - salary	£35,000	£15,685	£11,656	£4,995	£1,332	£1,332
		Employer NIC	£2,700	£1,210	£899	£385	£103	£103
		Pension @ 8%	£2,800	£1,255	£932	£400	£107	£107
	Overheads	Annual renewal of IT equipment and survey tools £4,000 @ 20% / year	£800	£359	£266	£114	£30	£30
		Insurance PPI and PLI	£500	£224	£167	£71	£19	£19
		Total costs	**£77,400**	**£38,032**	**£22,912**	**£11,219**	**£2,618**	**£2,618**
		per sale		£242	£65	£112	£524	£524
Gross profit			**-£17,400**	-£8,032	-£5,412	-£2,719	-£618	-£618

Appendix 11: Carbon Literacy Project Accreditations

The Carbon Literacy Project defines carbon literacy as follows:

> *'an awareness of the carbon costs and impacts of everyday activities and the ability and motivation to reduce emissions, on an individual, community and organisational basis.'*

The Carbon Literacy Project[74] is the leading authority on carbon literacy in the UK. It maintains a best practice definition called the Carbon Literacy Standard. The Project is operated on a non-profit basis by the Carbon Literacy Trust which is a Charitable Incorporated Organisation based in Manchester.

Figure 26 describes the various accreditations that are awarded by the Carbon Literacy Project. The minimum training requirement for INDIVIDUALS is one day's training which should include some action planning on reducing carbon emissions. ORGANISATIONS including companies and local authorities, can demonstrate increasing levels of carbon literacy within their organisation through certification as Carbon Literate Organisations (CLO) on a four point scale (Bronze, Silver, Gold, Platinum). Organisations wishing to provide certified training to its own people, or as a service to other organisations can choose to use the Project's existing materials or create new material to be certified by the Project.

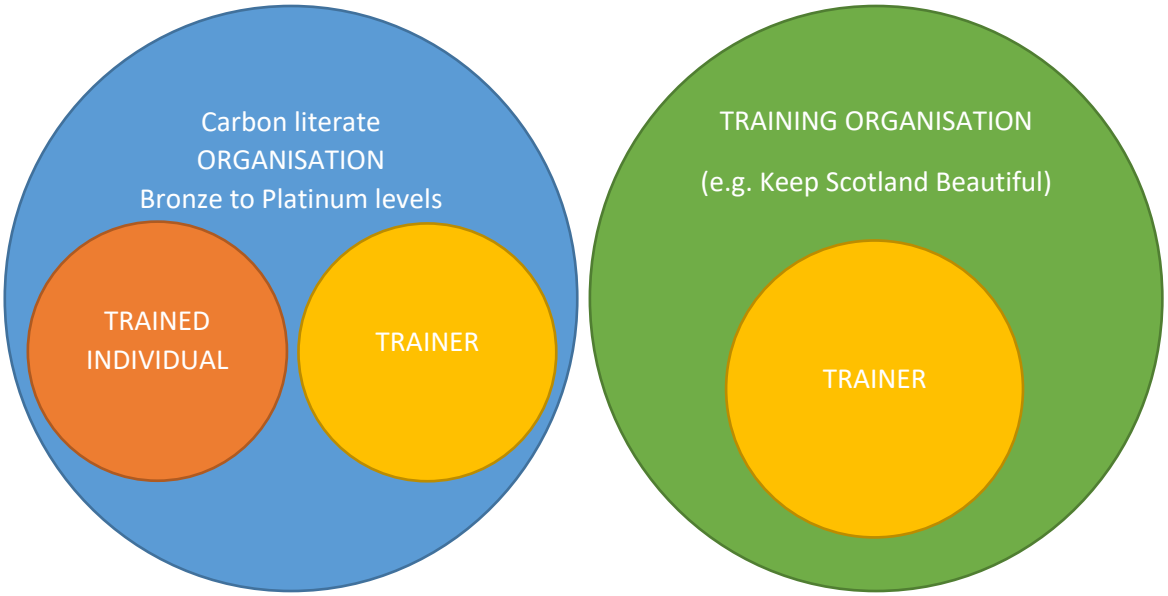


Figure 26: Diagram of various accreditations provided by the Carbon Literacy Project. South Seeds may seek to become a training organisation, alongside Keep Scotland Beautiful.

Carbon literacy TRAINERS are certified to one of three levels reflecting the depth of their knowledge and experience. Trainers may be part of the organisation being trained, or part of a training organisation. Independent TRAINING ORGANISATIONS may also be accredited to provide carbon literacy training. Training organisation accreditation is not necessary to deliver accredited training and accreditations are only considered by invitation by CLP.

[74] https://carbonliteracy.com/