

South West Net Zero Hub: Able to Pay Retrofit Loan Fund



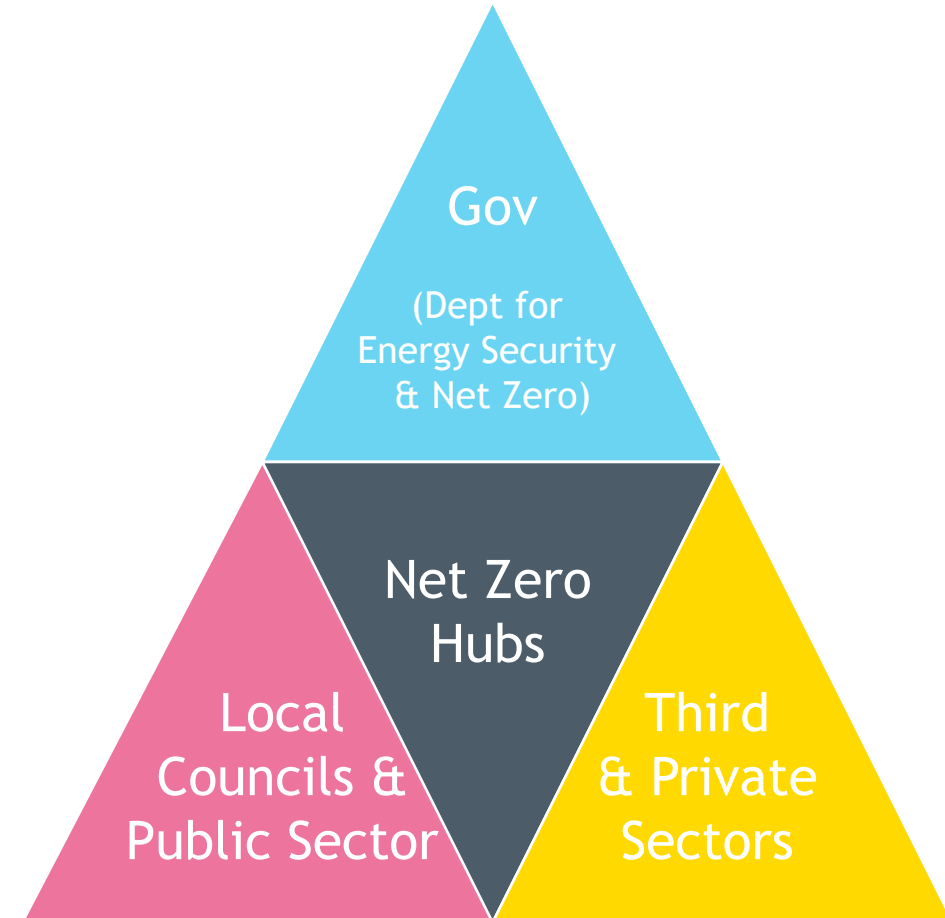
David Lewis - Head of Project Delivery
Team

Agenda

- Introduction
- The South West Net Zero Hub
- Able to Pay Retrofit: A South West Journey
 - ✓ Archetypes
 - ✓ Skills and Supply Chain
 - ✓ Retrofit Finance
- Able to Pay Retrofit Finance Project
 - Stage One
 - Stage Two
 - Primary Risks
 - Next Steps

South West net Zero Hub

The South West Net Zero Hub provides impartial advice, technical support and funding to public and not-for-profit organisations, to develop projects that accelerate emission reductions and enable the transition to a more sustainable future.



South West net Zero Hub

Government Net Zero Strategy established 5 regional hubs with core objectives:

- 1. Attract commercial investment** and help LAs and other local public sector bodies to develop investment models which accelerate progress to net zero
- 2. Continue to increase the number, quality, and scale of local Net Zero projects** being delivered across the region in line with national targets and strategies, including supporting the early-stage development and delivery of projects.
- 3. Collaborate** with the Department of Energy Security & Net Zero to develop & support Net Zero elements to wider programmes & initiatives including Levelling Up
- 4. Support a national knowledge transfer programme** to improve information sharing, training & evaluation
- 5. Raise local awareness** of opportunities & benefits of local Net Zero investment

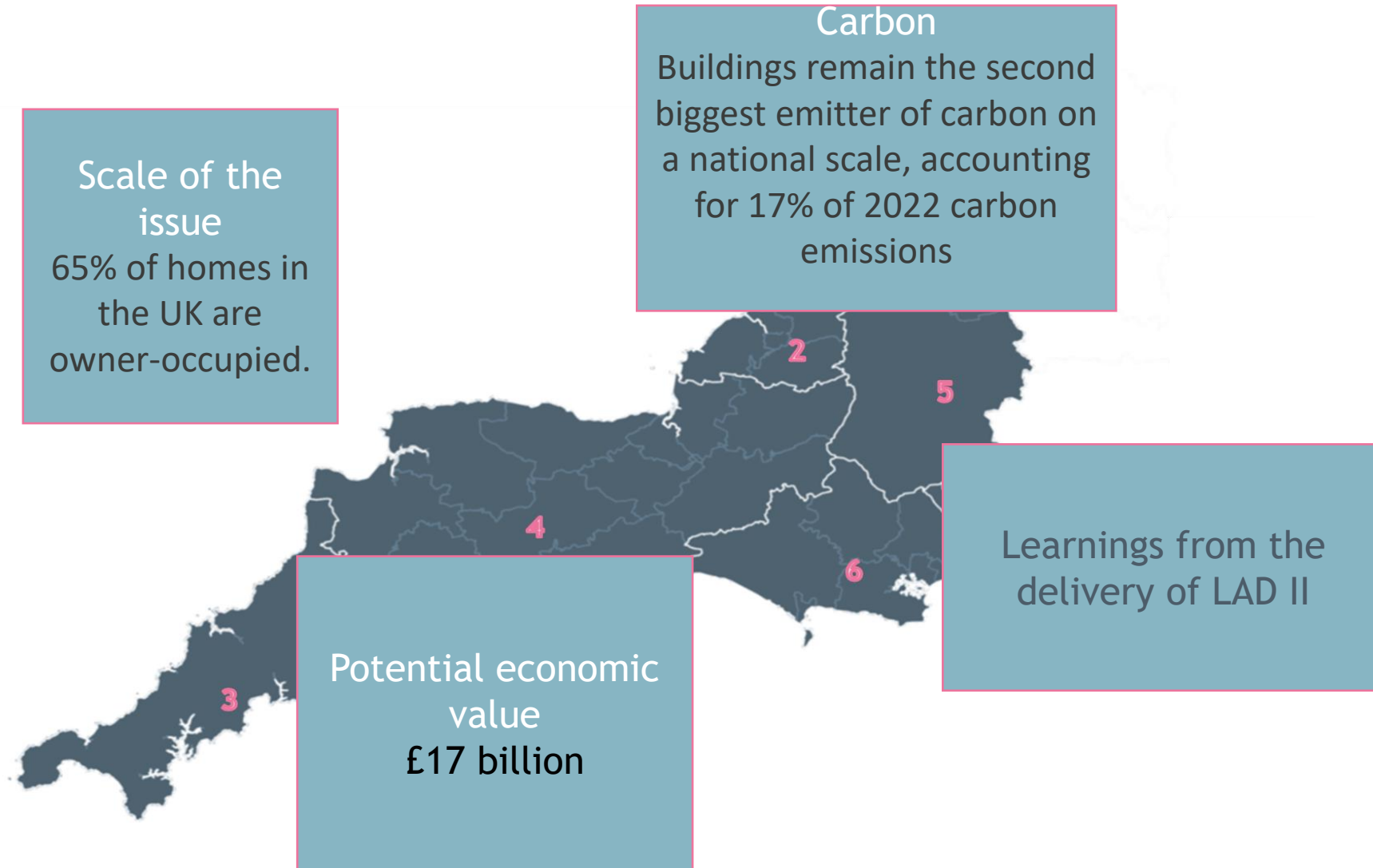
Able to Pay retrofit: A South West Journey

Scale of the issue
65% of homes in the UK are owner-occupied.

Carbon
Buildings remain the second biggest emitter of carbon on a national scale, accounting for 17% of 2022 carbon emissions

Potential economic value
£17 billion

Learnings from the delivery of LAD II




Able to Pay retrofit: A South West Journey




Devon Archetypes Project

93.7% of the homes in the rural areas of Devon that have EPCs are covered by the twelve Home Types, totalling about 104,000 properties.



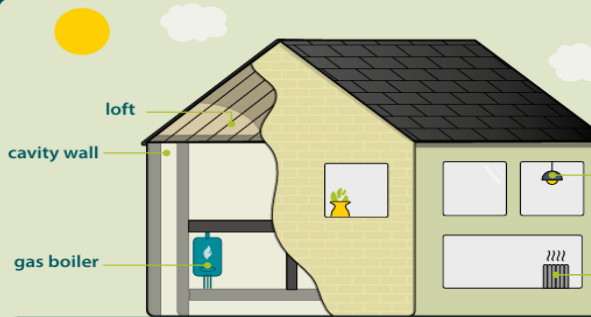
Example home improvement plans




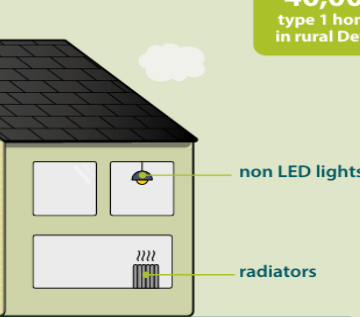
TYPE:
1

Your home is best described as:

- mid-century construction of brick or stone with a cavity
- detached or semi detached
- on mains gas



loft
cavity wall
gas boiler



non LED lights
radiators

Over
40,000
type 1 homes
in rural Devon


Type 1 house (before improvements)

Your home is likely to have:	<ul style="list-style-type: none"> A gas boiler and standard sized radiators Some loft insulation 	<p>carbon emissions kg CO₂ per year</p> <p>3,638</p>	<p>bill costs £ per year</p> <p>£835</p>
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Home Type 1 Your house or bungalow made of brick or stone with a cavity and gas central heating

37% of homes in Devon could broadly fit this description. Energy bills might be in the region of £840 per year and carbon emissions from heating and electricity might be around 3,640 kg/year.

Flip over to see what a typical set of improvements to this type of home might be, and how they might help lower emissions and energy bills.



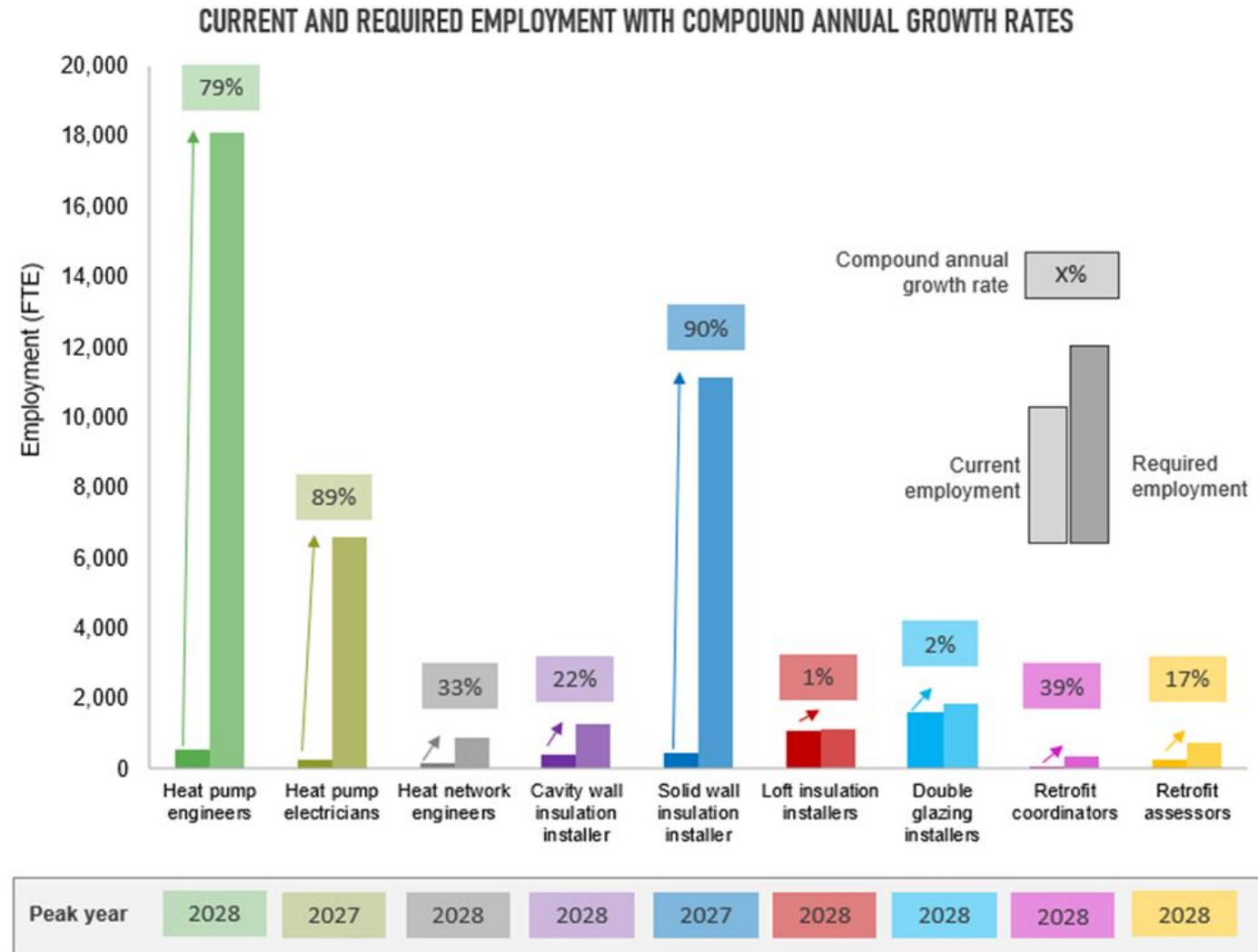
Skills and Supply Chain Development

To reach net zero by 2030 the South West must train:

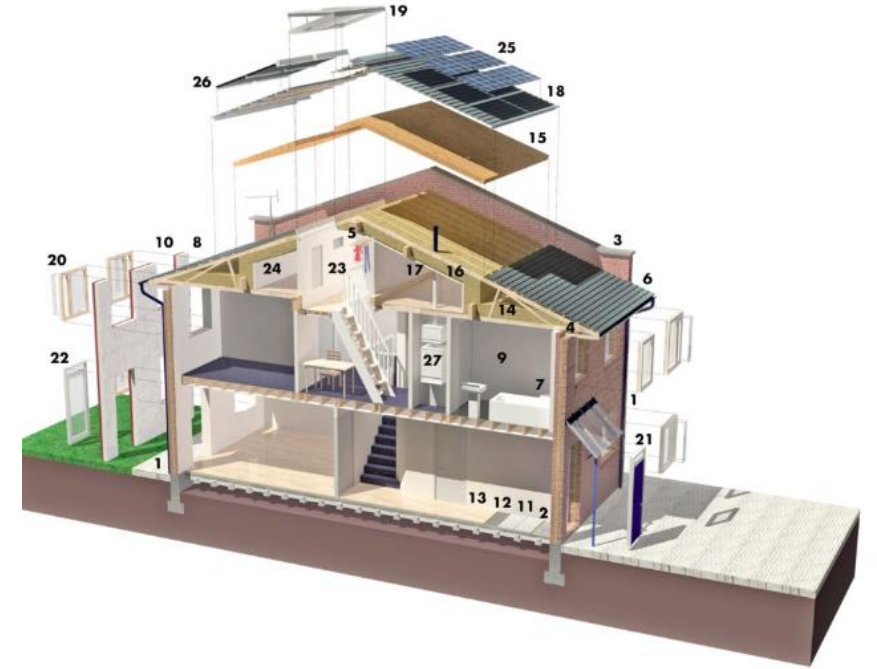
- Over 10,000 extra solid wall insulation installers by 2028
- Over 17,500 extra heat pump engineers by 2027

To reach net zero by 2050 the South West must train:

- Over 3,300 extra solid wall insulation installers by 2036
- Over 8,700 extra heat pump engineers by 2040



Able To Pay Finance - Stage One



Able To Pay Finance - Stage One

- The proposed Fund would cover the geographic area of **21 Councils in the SW of England - Supporting Lendology**
- Be £100m;
- Be financed through a combination of public and private capital;
- Operate on a loan fund basis for 10 years lending plus 5 years run off;
- Secure that lending through a title restriction placed on the property in question; and
- Offer a low or even nil interest rate solution to the ATP market.
- Static 10 year fund NOT revolving

Findings

- VIA Analytics Limited leads a team including Daedalus Environmental Limited and Amberley Advisory
- **Loans are typically secured** in some way, rarely interest free
- In practice, it appears that loans will typically be in the **£10k - £15k range, repaid over 10-15 years** to maximise affordability (and assumed at an interest rate of c 4%)
- **£100m represents a small proportion of the identified opportunity** - should be considered a pilot project but given the scale of overall opportunity (and assuming access to good market intelligence) there should be scope to focus attention on relatively 'easy wins'
- That subsidy requirement is estimated in the region of **£45m over 10 years**
- The positive impact of carbon savings on society - estimated to be in the region of **450,000tCO2 over 10 years.**
- Direct energy cost savings to households - a total saving in household energy bills of **around £70.0m (undiscounted) is estimated over 10 years.**
- **The GVA of estimated employment impacts** - associated with the jobs that would be created and / or sustained in the installation of retrofit measures financed by the Loan Fund. - *£31Million*
- **Initial cost benefit analysis suggests a (strong) cost benefit cost ratio ('BCR') of 2.4:1 associated with a public sector investment on that scale**

Able To Pay Finance - Stage Two

Project Assumptions

- Fund size: £100million+
- Geographical area: **SWNZH SW region** - as a minimum the contractually committed LA partners to the Lendology programme would also be considered.
- **Blended fund Public/Private**
- **Revolving** not static fund - First 10 years revolving - yr. 11 year 20 is run off period investor distribution yr. 11 onwards.
- The modelling and business case based only on **homeowners**
- The study would model **3 scenarios BAU/Grant/blended fund**
- The **fully functional model is capable of modelling all variables** i.e £100 million and £15million varying % of public and private funding
- We recognised that **we could not cover all scenarios with the budget available** for example in-depth demand modelling
- **Increased and wider engagement** - UKIB, GFI, DESNEZ West of England Combined Authority
- **Special note should be made of the current Retrofit Accelerator Programme in the West of England Combined Authority**, although other programmes may also exist in the region.
- **Green Book compliant:** The establishment of this proposed fund would require significant support from local and national government. To that end all the following sections and related outputs and overall business case of this report should be based on Green Book terms and methodologies.

Expected Project outcomes

- **The overall viability and validity of the fund as a possible financial solution to stimulate and support households** who wish to retrofit their homes as an alternative to current market options, i.e., mortgage providers.
- **Full unencumbered (no hidden code etc)** access to all developed financial model (s) with accessible interface to be delivered in Excel format.
- **To provide full Green Book business case** and full financial modelling of the proposed fund and associated parameters of lending etc.
- ***To detail sufficient evidence to allow engagement with local and national government and private sector to establish such a fund either at regional or national scale.***

Procurement

Gemserv/Thermaly/Amberside/Lux Nova/ Brown Jacobson

- **Gemserv** - overall project lead
- **Thermaly** - Investment Advisors
- **Amberside** - Project Lead on Financial Modelling/Market Analysis
- **Lux Nova** - Legal Project Lead/ Energy Efficiency and Clean Energy Programme Design Specialist
- **Brown Jacobson** - FSMA and Consumer Credit/ Financial Services and Regulatory
- Direct project support from The West of England Combined Authority

The West of England Combined Authority (CA)

- Direct support and engagement with CA
- Shared project team
- Future application of report findings and model with Retrofit West Initiative regarding finance project elements in 24/25
- Separate legal report for CA (not publicly available)

Green Book Business Case

- Strategic
- Economic
- Commercial
- Financial
- Management

Strategic Business Case

- **Strategic -**

- Strategic overview of the SW Region,
- Govt Policy and Programmes,
- incentives and barriers to uptake of retrofit,
- establishing strategic objectives and outcomes for the overall study,
- retrofit challenges in the South West,
- available current funding programmes for retrofit support,
- Defining the target audience for the fund,
- Permitted technologies,
- Minimum loan levels and affordability,
- Strategic outputs of fund mobilisation (economic and social)

- **Economic**

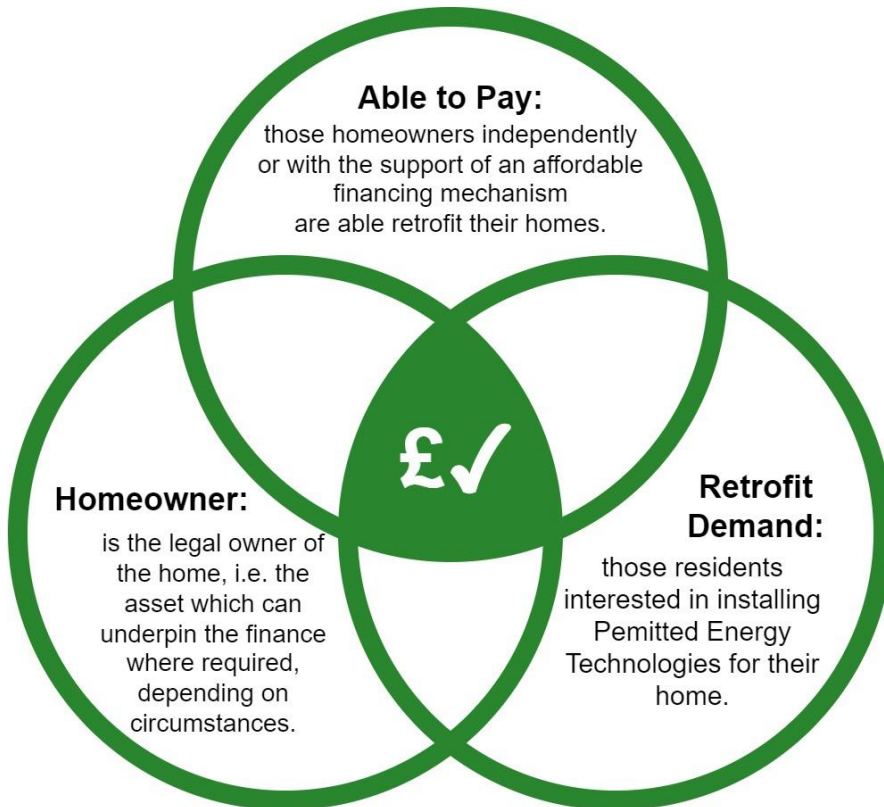
- **Commercial**

- **Financial**

- **Management**

Strategic

This pilot is an able to pay focused exercise designed in principle to support that portion of the population who contribute the most to residential emissions. It is not fuel poverty, or near fuel poverty, focused.



AFFORDABILITY:

- Top 3 income deciles
- Household income > £42k
- Underpinned by high level affordability analysis - i.e. repayments are affordable 10 year term for average loan size

TENURE:

- Owner occupiers only for the purposes of the pilot

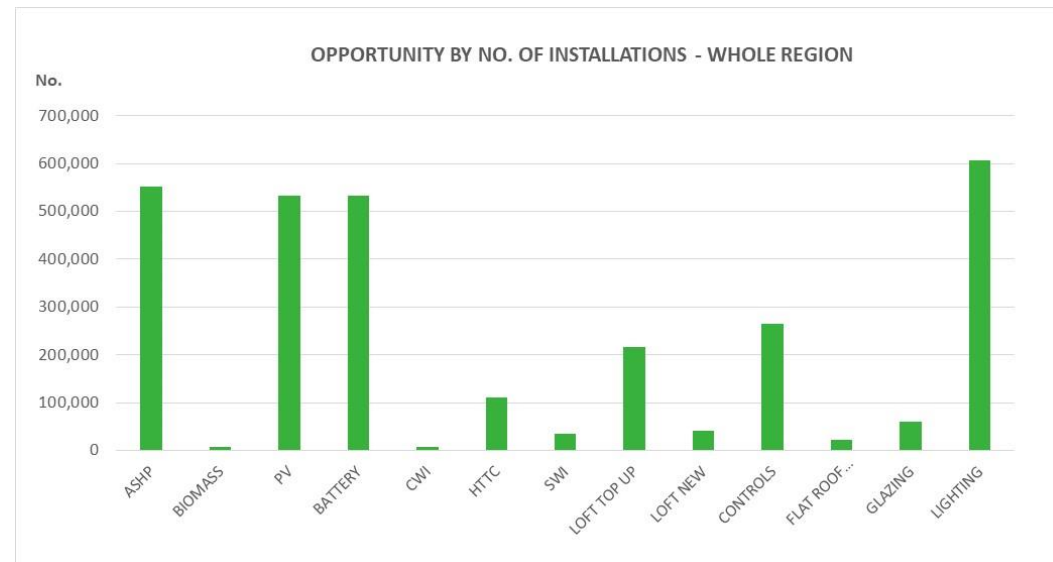
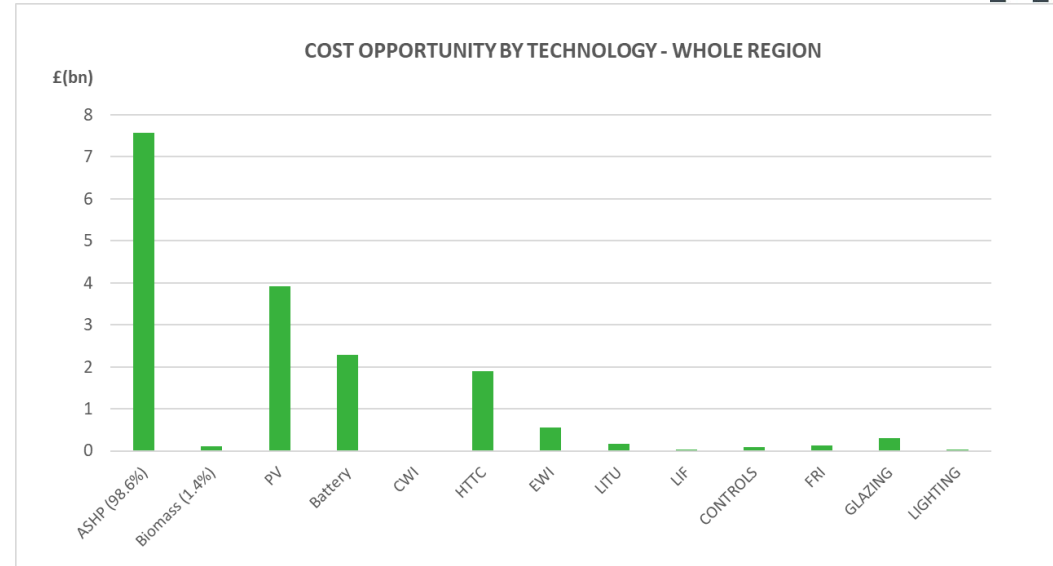
MEASURES:

- Where required a title restriction can be imposed but no second charges on property
- Must include at least one Primary Measure with any number of Secondary measures then permitted. Cost of repairs needed to facilitate measures can also be included in loan amount.
- PAS2030/2035 driven for complex combinations of measures, with RC required, but with flexibility for simpler measures (e.g. PV and battery). All renewables must be MCS certified
- Minimum value of measures £7.5k, loan will sit alongside Boiler Upgrade Scheme to cover residual balance where required

Strategic

The total opportunity for investment in retrofit across the **37 authority areas** is **estimated to be around £17.1bn**. There is clearly ample scope for an Able to Pay Loan Fund within the target region. A fund value of £100m will be a first step in supporting the residential sector to become net zero.

A significant proportion of the fund could be spent in the transition to clean heat - for which we have currently assumed heat pumps will make up most of that transition. The decarbonisation of heat - which should be undertaken with sensible energy efficiency measures - therefore offers the largest opportunity for the fund

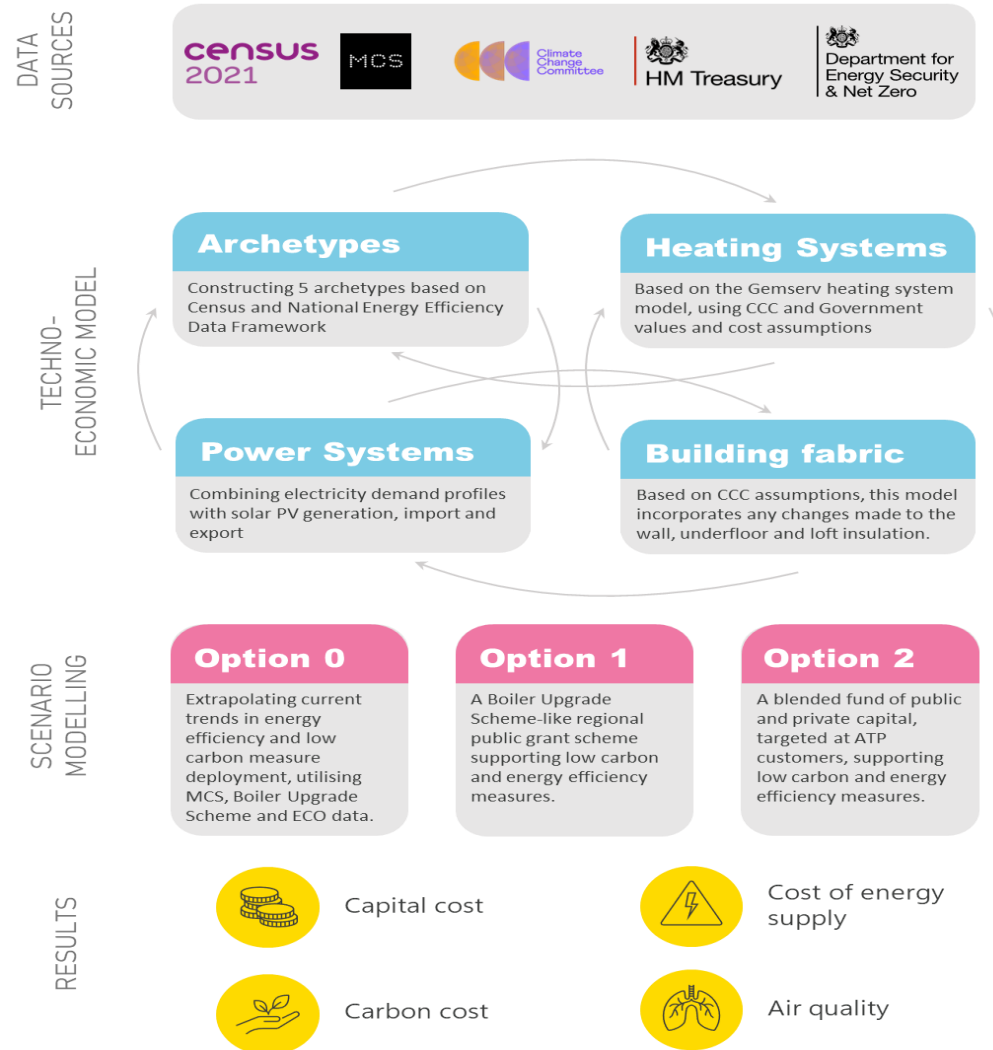


Economic Business Case

- Strategic
- **Economic**
 - ❑ Investigates the economic rationale for Government intervention in encouraging finance solutions and domestic retrofit and compares investment scenarios compared to a Business-as-Usual scenario. This section will also evaluate
 - ❑ 3 x scenarios BAU, Grant funding and blended finance
 - ❑ Quantifying carbon savings, SNPV
 - ❑ Scheme design and management options. Fund structure analysis based on strategic objectives
- Commercial
- Financial
- Management

Economic

Figure 1 - The structure of the economic model used to assess the impact of Option 1 and Option 2



Economic

Social costs and benefits of the two interventions relative to no government intervention (Business As Usual Scenario).

Social Net Present value compared to the Business As Usual Scenario

MILLION £, 2022	OPTION 1	OPTION 2
	PUBLIC GRANT	BLENDED FUND
Capital Costs	-68.1	-139.2
Avoided Cost of Energy Supply	162.4	260.80
Value of GHG Emission Savings	40.2	79.8
Value of Air Quality Improvements	6.7	10.6
Total SNPV	142.2	212.0

SCENARIO	OPTION 1 - PUBLIC GRANT	OPTION 2 - BLENDED FUND
cumulative ghg emission savings	184,906 tonnes of CO ₂ e	376,509 tonnes of CO ₂ e

		OPTION 1	OPTION 2
GHG savings over 20 years (tonnes of CO ₂ e)		184,906	376,509
Using Green Book values	Discounted value of GHG savings (using a rate of 3.5%)	£40.2 million	£79.8 million
	Discounted value of GHG (using a rate of 3.5%)	£14.5 million	£29.7 million
Using ETS price projections	Undiscounted value of GHG savings	£21.1 million	£45.2 million

Commercial Business Case

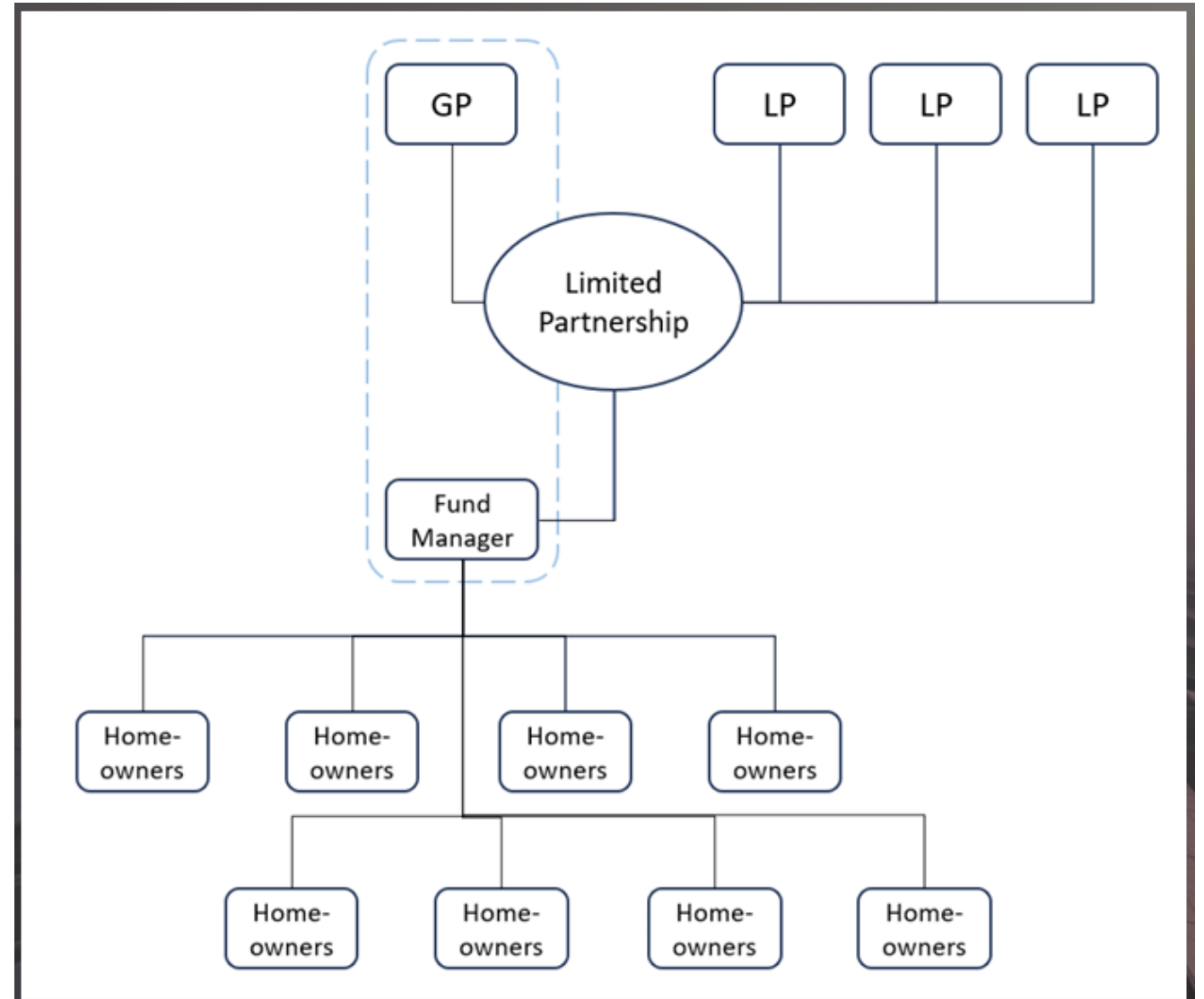
- Strategic
- Economic
- **Commercial**
 - Commercial viability of the fund
 - Legal Structure
 - Fund management
 - Private sector investment
 - FSA & Consumer Credit Act
 - Procurement Fund Management/Consumer Credit
- Financial
- Management

Commercial

Limited partnership structure

		Company Limited By Shares	Company Limited By Guarantees	Limited Partnership
Alignment With Private Investor Interests	Setup And Operating Costs	●	●	●
	Profitability	●	●	●
	Tax efficiency	●	●	●
	Governance structure	●	●	●
	Predictability	●	●	●
	Overall alignment	●	●	●
Financial Interest And Competition		●	●	●

- High suitability
- Moderate suitability
- No suitability



Financial Business Case

- Strategic
- Economic
- Commercial
- **Financial**
 - ❑ Segregated but linked inputs and workings schedules feeding into financial outputs;
 - ❑ **Core financial outputs (profit and loss and cash flow projections)** automated and generated on an annual and detailed monthly basis, together with underlying funding schedules illustrating investor cash flow profiles;
 - ❑ **Financial outputs generated in respect of both the ATP Fund** and the Fund Manager, given the proposed Limited Partnership structure;
 - ❑ **Modelling over a timeframe of up to 25 years**, allowing for both an active lending period and a loan book run off period;
 - ❑ Explicit integration of the strategic case and market review findings, in the form of a direct read across to the retrofit measures;
 - ❑ **Flexibility around funding structure** - in particular, enabling the **model to illustrate revolving fund principles** and alternative scenarios in relation to the cash flow waterfall, or hierarchy where investor funds are drawn down and subsequently the returns generated back into the Fund are distributed to investors;
 - ❑ Enabling sensitivity analysis to be carried out on a number of key input assumptions (for instance, loan default rates or pricing of loans to borrowers); and
 - ❑ **Transparent build offering unencumbered access to financial model workings, with no hidden code or macros.**
- Management

Financial +++++



Able to Pay Retrofit Fund business case - financial case modelling architecture



- fully linked & automated
- transparent
- assumptions segregated from workings segregated from reports

Link market assumptions into **economic case / economic modelling** *on basis of common inputs sheet, with economic model illustrating (amongst others) cumulative forecast energy and carbon savings

DASHBOARD INTERFACE & KEY SENSITIVITIES



INPUTS / ASSUMPTIONS

General

- Reporting timeframes *25 years
- Inflation *include functionality to apply one of up to 3 different inflation profiles to income / cost lines, from a drop down menu

Market

- Typical / average package of measures (or # packages)
- Typical / average cost of package(s) of measures
- Volume / uptake of package(s) of measures
- *Functionality to split loan book into 2 tiers of different creditworthiness, initially based on % split of assumed uptake

Lending

- Average size of loan
- Term
- Pricing / % cost of finance charged to borrower
- Application success rates
- Early repayment rates
- Default rate *with functionality to apply differential % default rates to different tiers of loan based on creditworthiness rating

Fund management

- Fund manager cost base (including variability over time)
- Fund management fees

Financing

- Scale of fund
- Balance of public / private sector investment
- Capital draw down / repayment assumptions *to include variable draw down vs committed capital funds, and revolving fund functionality
- Private sector capital (IRR%) return requirements

Workings worksheet(s) in Excel

REPORTS

- Monthly P&L forecast over agreed timeframe
- Summarising up to annual P&L
- 2 x reports - Fund P&L, Fund Manager P&L
- Capture full loan run off timeframe

HIGH LEVEL VISUAL DASHBOARD INTERFACE

- KPIs (Fund profit, FM profit, private capital IRR, public sector NPV subsidy requirement, *Fund cash flow based on headline working capital assumptions)
- Linked sensitivity levers (private capital %IRR requirement, loan term, loan pricing, lending volume / uptake)

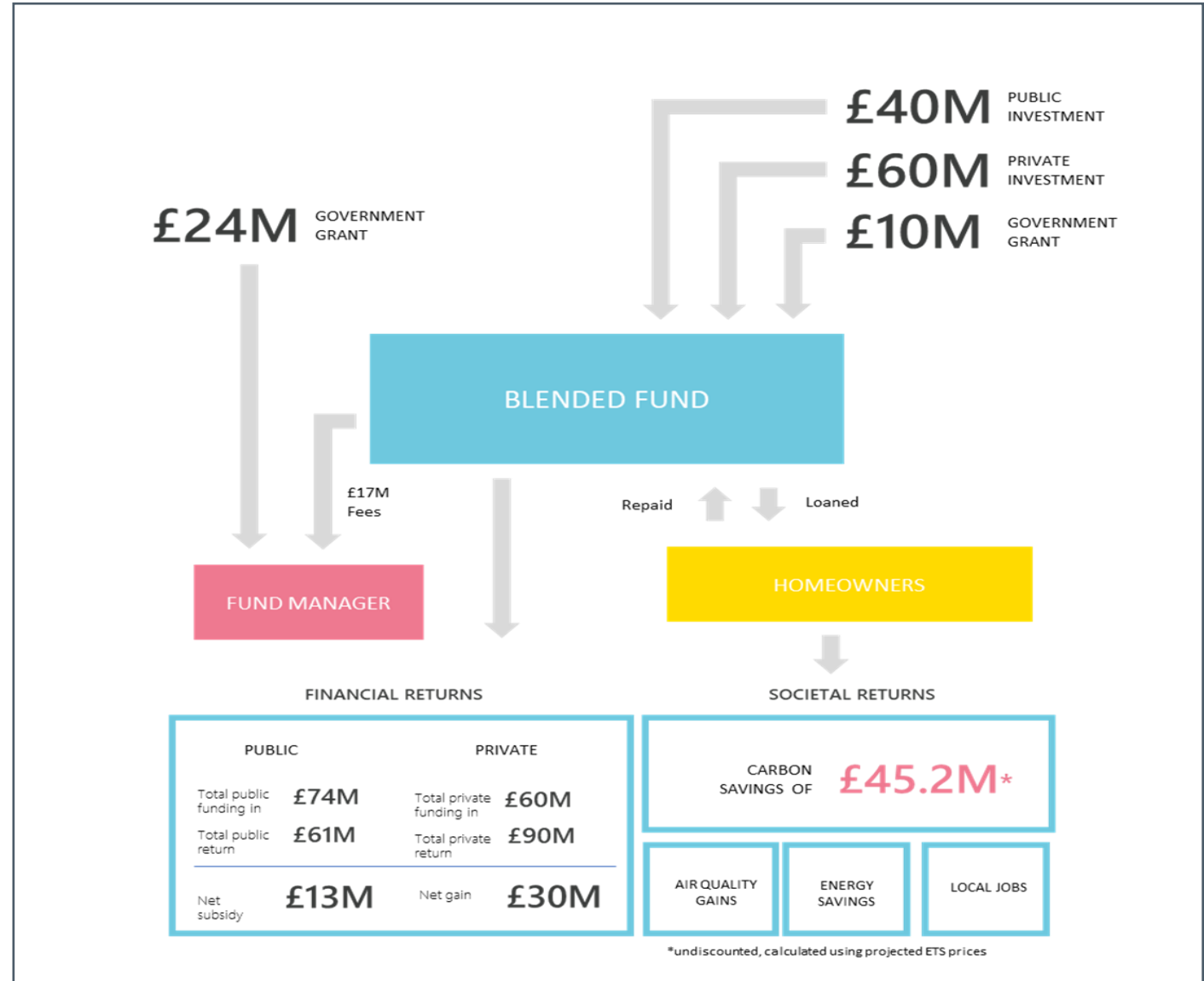
Green Book Business Case

- Strategic
- Economic
- Commercial
- Financial
- **Management**
 - ❑ The Management Case assesses whether a proposal can be successfully delivered by the organisation and its partners. It sets-out the arrangements for delivery, monitoring and evaluation of the scheme, specifically elements such as: **project planning, governance structure, risk management, communications and stakeholder management, benefits realisation and assurance**

Headlines

- ~3%IRR for the public sector,
- ~8%IRR for the private sector,
- ~6% interest on the loan.
- ~£13 Million Net subsidy is **UNDISCOUNTED**

NOT all of the investment is required at fund setup, given the 20-year life-cycle of the fund. This net public sector subsidy, through enabling wider investment, is calculated to save 376,000 tonnes of CO₂e savings over the lifetime of the fund, as well as other non-monetised benefits.



Identified Primary Risks

This business case presents several areas of risk to the establishment of a loan fund and discusses mitigation in detail. While intricacies are discussed later on, these risks can be broadly assigned to the following categories:

- **Consumer interest:** no loan fund can be established without suitable consumer interest and appetite resulting in uptake.
- **Attracting suitable public sector investment and attracting suitable private sector investment:**
 - The financial viability of the loan fund requires both investment and grant funding to function as intended.
 - This blended fund delivers greater scale and achieves benefits that would otherwise be out of reach from the public sector funds alone. The overall benefits assessed in the economic case cannot be achieved or demonstrated without attracting suitable levels of funding from both sectors.
- **Appointment of suitable organisations to operate the Scheme:** overall scheme management will likely comprise a party with a full suite of fund management permissions (Fund Manager), and a party with consumer credit permissions (Consumer Credit Lender). Effective procurement and management of these roles will be key for the continued success of the loan fund.
- **Supply chain capability and installation quality:** while this fund is intended to bolster the supply chain, the overall capacity within the region remains a risk to successful operation of the fund (especially earlier on in its life cycle).

Next steps

- **Engagement with potential investors from both the Public and Private Sector continues.**
 - including source of funding and intentions for repayment
 - attractiveness for investors, including whether the fund will be circular, the exact repayment requirements for each limited partner and shaping the overall downstream nature of the fund.
 - development of the management arrangements for this fund
- **SWNZH undertakes consumer engagement within the target region, establishing interest for the loan fund and undertaking significant advocacy/promotion work to drive interest**
 - Fund is reliant upon consumer uptake to demonstrate the financial viability of the fund.
 - <https://www.gov.uk/government/publications/green-home-finance-expert-analysis-from-a-behavioural-perspective>
 - possibilities for early repayment and other fund mechanics
- **SWNZH must continue its work improving regional skills and supply chain availability as set out in previous reports, to support and realise this opportunity.**

And Finally

- SWNZH Webinar 30th April 2024
- Publishing March 2024
- Emails:
 - ✓ David.Lewis@WestOfEngland-CA.gov.uk
 - ✓ justin.olosunde@westofengland-ca.gov.uk
- <https://www.swnetzerohub.org.uk/knowledge/information-guides-and-toolkits/>
- <https://www.lendology.org.uk/>
- [Retrofit projects across the West of England - West of England Combined Authority \(westofengland-ca.gov.uk\)](https://www.westofengland-ca.gov.uk/retrofit-projects)