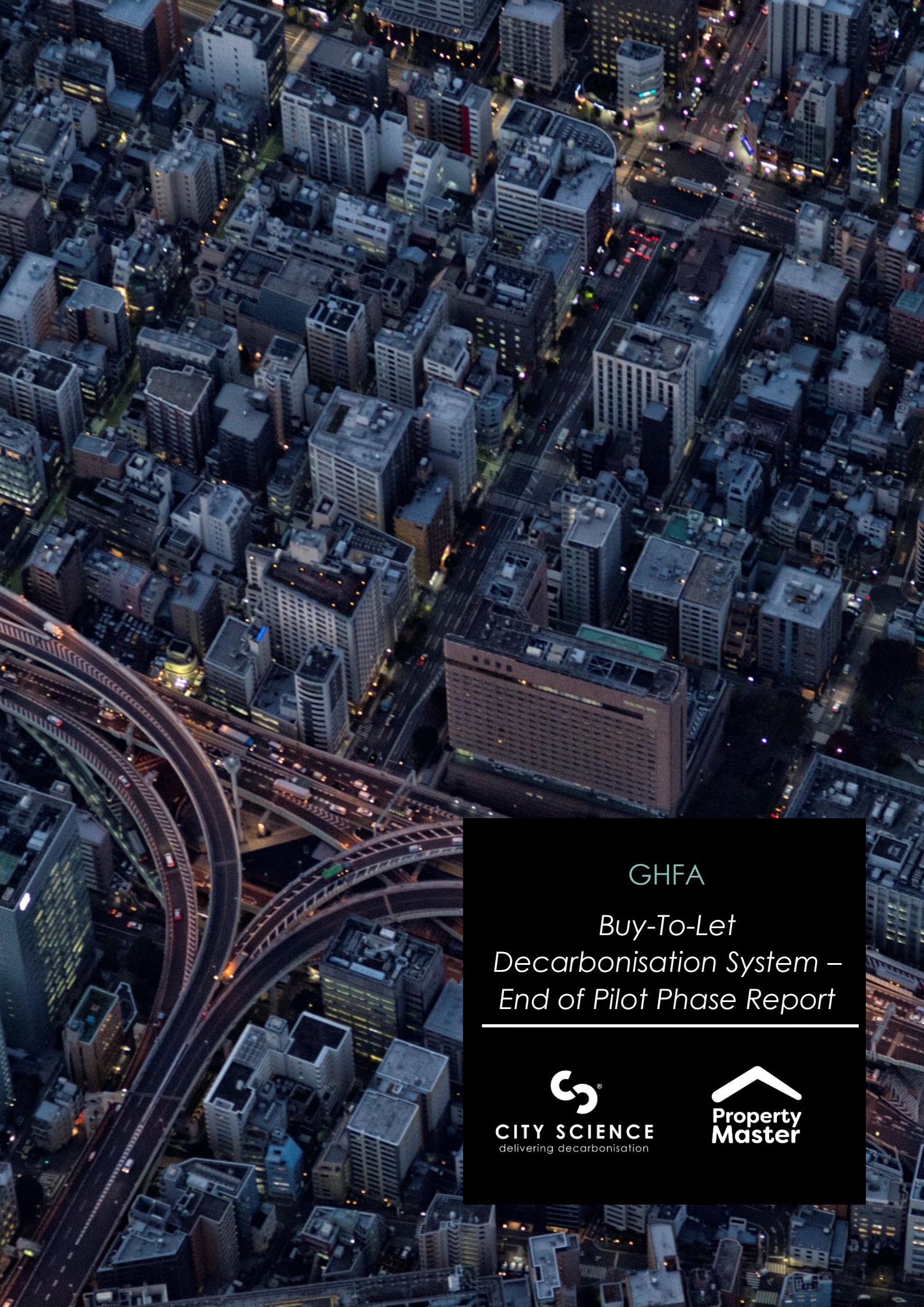

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Buy-To-Let Decarbonisation System – End of Pilot Phase Report

CITY SCIENCE
delivering decarbonisation

Property Master

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Contents

1 Executive Summary

1.1 Introduction

The pilot focused on developing a one-stop-shop digital platform called eco-Landlord, designed to help UK landlords retrofit their properties by providing seamless access to property intelligence, retrofit recommendations, financing, and accredited installers. The core aim of the project was to simplify and accelerate the adoption of energy-efficient upgrades in the private rental sector (PRS), supporting landlords in meeting minimum Energy Performance Certificate (EPC) standards (as determined by developing government policy) while ensuring retrofit projects were both financially viable and operationally straightforward. By integrating green finance solutions, such as mortgages and grants, with a trusted installer network, the initiative sought to address key barriers preventing landlords from making energy efficiency improvements. These key barriers include the high upfront costs, complex grant eligibility criteria, limited access to financing, and a lack of technical knowledge.

What sets this solution apart from other solutions in the marketplace is its holistic approach to retrofitting, and its specific focus on the private rental sector. Unlike traditional financing options that focus solely on funding, our platform integrates finance, technical support, and access to installers into a single digital service. Additionally, the pilot explored the potential for white-labelled (a re-brandable product sold without supplier branding) and co-branded versions of the platform for lenders, allowing financial institutions to offer customised retrofit solutions directly to their landlord clients. This embedded finance model creates a smoother customer journey, ensuring landlords can both access funding and find reputable contractors without navigating multiple disjointed services.

This innovation has the potential to accelerate the adoption of low carbon measures, demonstrating how digital integration can overcome existing market barriers. By aligning green finance with practical retrofit solutions, the platform serves as a potential scalable blueprint for future initiatives, encouraging greater lender participation and unlocking more capital for energy-efficient home upgrades. Furthermore, the data insights generated through landlord engagement can help inform policy, improve financial product design, and drive investment decisions, accelerating the UK's transition to net-zero housing.

1.2 Key Dates

In the delivery of the pilot, the following key milestones were achieved:

Milestone	Date
Project Commencement	02/01/2024
Minimum Viable Product Completed	28/06/2024
Soft Launch for Pilot Testing	01/07/2024
Full Launch for Pilot Testing	30/10/2024
Project Closure	28/02/2025

1.3 Grant Amount

The project has received grant funding of £1.5m from the Department for Energy Security and Net Zero's Green Home Finance Accelerator (part of the Department's £1bn Net Zero Innovation Portfolio) for the delivery of the Pilot Phase. In addition to this, the consortium has contributed match funding of £0.4m, with total project delivery costs totalling £1.9m.

1.4 Geographical Scope

Our initial objective was to provide a comprehensive solution for landlords across the entire UK. However, a key challenge arose due to the lack of a unified EPC data API. An API (Application Programming Interface) allows software to communicate and share data in a seamless and rapid way. Unlike a single-source database, EPC data is fragmented across multiple platforms, requiring separate API integrations for England & Wales, Scotland, and Northern Ireland. Given the technical complexity and time constraints of the project, developing multiple integrations was not a viable option. As a result, we focused on England and Wales, leveraging the Open Data Communities EPC API provided by the Department for Levelling Up, Housing & Communities.

To expand coverage, we prototyped an alternative approach, maintaining our own copy of the downloadable EPC dataset for England, Wales, and Scotland. However, the sheer scale of the dataset and the need for frequent data updates (to account for changes made to the central EPC database) quickly became apparent. Managing this effectively would have required developing large-scale data handling infrastructure, which fell outside the scope of this project.

Additionally, attempts to access EPC data for Northern Ireland proved unsuccessful. Despite referrals from the England & Wales EPC Enquiry Team to Northern Ireland's Department of Finance, we were unable to obtain access. This data fragmentation and lack of uniform access across the UK presents a significant barrier to delivering scalable, nationwide digital solutions. The inability to easily access key energy performance data not only increases costs but also limits the efficiency of services designed to support landlords in improving their properties. Moving forward, greater data transparency and standardisation will be critical to enabling UK-wide green finance and retrofit initiatives.

1.5 Pilot Objectives

The primary objective of the pilot was to create and test a market ready digital platform that helps UK landlords finance and implement retrofits to improve their properties' energy efficiency and EPC ratings. The platform was designed to streamline access to property intelligence, retrofit advice, financing, and accredited installers, removing barriers that often prevent landlords from investing in energy efficiency upgrades. Our target consumer segments included:

- Private landlords (both small-scale and portfolio owners) looking for financially viable ways to improve their properties and/or meet necessary standards to comply with regulations.
- Mortgage brokers, who could leverage the platform to extend the services they can provide to their existing client base.
- Installers who can benefit from the platforms ability to generate qualified leads.
- Lenders, who could integrate the platform, or components of the platform into their lending platforms.

The pilot specifically addressed two key gaps in the green finance sector:

1. Lack of integrated finance and retrofit solutions – Many landlords struggle to navigate the complex process of funding and executing energy efficiency improvements. By combining retrofit advice, finance, and installers in one platform, the solution removes key friction points.
2. Lack of products and services tailored for the Private Rental Sector – A number of one-stop-shops have been developed for the home owner-occupier, but none exist with a specific focus on the private rental sector. Additionally, established financing product (e.g., grants and additional mortgage advances) have failed to cater for this sector. Our solution satisfies this market demand.

The most successful aspects of the pilot were:

- Engagement from larger portfolio landlords and brokers, who quickly saw the financial and regulatory benefits of using the platform.
- Positive reception from some of the leading buy-to-let lenders, who showed interest in the platform for assisting the decarbonisation of their existing loan book (i.e., through providing their clients with reliable retrofit advice and access to installers).
- Simplified finance-access process, which helped landlords better understand available funding options and how they align with retrofit costs and benefits.

These successes highlight the importance of integration, clarity, and lender participation in driving adoption of green finance solutions. Moving forward, refining the installer network and expanding financial product offerings will be key to scaling the impact of the platform. These factors are critical as a well-integrated network, clear processes, and active lender engagement ensure accessibility, trust, and ease of adoption for a wider range of users.

1.6 Barriers Addressed

eco-Landlord aimed to address several key barriers that prevent landlords from retrofitting their properties, including difficulty accessing finance, a lack of trusted installers, and regulatory uncertainty. Many landlords struggle to understand and secure funding for energy efficiency improvements, while others face challenges in finding accredited installers to carry out the work. Additionally, uncertainty around future EPC regulations makes some landlords hesitant to invest in retrofits. The eco-Landlord platform was designed to simplify this process by integrating retrofit advice, green finance options, and vetted installers into a single digital solution.

While significant progress was made during the pilot, some barriers remain only partially resolved. For example, installer availability and engagement proved to be a greater challenge than anticipated, with regional shortages and inconsistent capacity limiting the speed at which retrofits could be implemented. Additionally, data access issues, particularly in Scotland and Northern Ireland, restricted the platform's ability to provide full UK-wide coverage.

Several adjustments were made during the pilot to overcome these barriers more effectively. Recognising the challenges in engaging installers, we refined the onboarding process, offering 1:1 onboarding support to hand-hold installers through the process. This change in approach resulted in the successful onboarding of installers which may not have been possible otherwise. Whilst it is too soon to confirm, our expectation is this approach will only be needed in the short term to create a critical mass of installers. Once this is achieved, the value proposition for installers will be easier to demonstrate (through case studies of how others have benefited), resulting in installers being more willing to invest time and effort into engaging with the system.

Similarly, in response to landlord concerns about regulatory uncertainty, we produced and delivered educational content (including attendance at industry events) to build their understanding and confidence. We received positive feedback from landlords who felt they were better informed of the challenges and potential solutions available to them.

1.7 Consumer Impact

eco-Landlord has streamlined the financing and retrofitting process for landlords. Previously, landlords had to navigate multiple disjointed services to obtain retrofit advice, secure financing and find accredited retrofit installers, leading to delays and confusion. By providing a clear, step-by-step process, the platform has reduced friction, helping landlords to understand the suitable low carbon measures, understand available funding, compare options, and connect with trusted installers more efficiently.

To accommodate different types of landlords, the platform was designed to be flexible, with it being equally relevant for single property owners, small and large portfolio owners. Portfolio landlords benefited from rapid population of their property portfolio, utilising integrated data links with Land

Registry and Companies House. Mortgage brokers were also integrated into the system, expanding access to a broader landlord base by allowing brokers to offer retrofit advice as part of their services.

Recognising that some landlords, particularly those with lower-value properties or in rural areas, face additional barriers to retrofitting, the pilot included measures to increase accessibility. This included simplifying language and processes to ensure ease of use, as well as exploring alternative financing models that could better serve landlords with limited upfront capital (such as grant funding). Additionally, engagement efforts targeted smaller landlords who may not have been actively seeking retrofit solutions but could benefit from clearer guidance. While further refinements are needed, these efforts have laid the foundation for broader adoption across diverse landlord demographics.

1.8 Outcomes and Learnings

Overall, the pilot validated the platform's core concept while identifying areas for refinement, particularly in installer engagement, data integration, and targeted financial offerings. These insights will inform the platforms continued development, ensuring a more scalable and effective solution for landlords, brokers, and lenders alike.

The pilot provided valuable insights into the challenges and opportunities within the green finance and retrofit market. The top three learnings in were:

1. Due to a lack of regulatory and/or financial incentives, landlords are not sufficiently motivated to take action to improve the energy efficiency of their properties (see 15.3.2 for more details).
2. There is a shortage of installers in the UK and established installers are prioritising the larger grant funded programmes (e.g. Social Housing Decarbonisation Fund) where the cost of customer acquisition is low, and profit margins are higher and more predictable (see section 9 for more details).
3. The lack of availability and accessibility of key data within government agencies/bodies, as well as the inconsistency across devolved nations, is acting as a barrier to the development and deployment of digital solutions (see section 4 for more details).

1.9 Unexpected Results

The pilot revealed some unexpected results, both positive and negative. Positively, engagement from mortgage brokers and letting agents was higher than initially anticipated. This outcome reinforced the importance of lender and professional partnerships and highlighted an opportunity to expand financial product offerings to better serve this segment. The historic hesitancy from lenders likely stems from concerns about investment risk, uncertainty of returns on retrofits, regulatory complexities and uncertainties, and the challenge of aligning landlord and tenant incentives. Additionally, limited market data on retrofit performance and demand may make lenders cautious about developing new financial products.

On the negative side, installer recruitment proved more difficult than expected. Many installers were either fully booked, hesitant to commit to new lead generation models, or lacked the necessary capacity to engage with a new digital service offering. This created a bottleneck in service delivery, slowing down the matchmaking process between landlords and contractors. Additionally, challenges in accessing EPC data in devolved nations made it difficult to provide seamless national coverage, limiting the platform's reach in Scotland and Northern Ireland. While full UK-wide integration was not feasible within the pilot timeframe, initial discussions and knowledge sharing with government departments and regulatory bodies have helped identify potential long-term solutions for improving access to EPC data.

1.10 Readiness for Commercial Deployment

While the pilot demonstrated strong interest and validated the core value proposition of the platform, some barriers remain before full-scale commercial deployment can be achieved. Key challenges include installer availability and long-term clarity on government policy and regulation. The shortage of accredited retrofit installers remains a bottleneck, meaning that scaling nationally will require strong industry partnerships and workforce development initiatives. Additionally, the lack of long-term certainty over government policy and regulation is resulting in many landlords taking a 'wait-and-see' approach, rather than taking the necessary action needed to contribute the UK's net zero objectives.

To successfully scale, several key factors must be addressed:

- Expanded lender participation – Increasing the number of financial institutions offering green finance products will be crucial to driving wider adoption.
- Stronger installer networks – Partnerships with trade bodies, accreditation schemes, and training programs will help grow the installer supply chain.
- Regulatory clarity and incentives – Government policies, such as clearer EPC upgrade mandates and financial incentives for landlords, would create stronger market demand.
- Data standardisation – Improved access to EPC and property data across all UK regions would enhance the platform's ability to provide seamless nationwide service.

This pilot has highlighted several opportunities for further innovation in the green finance space. One potential area is the development of new financing models that blend grants, private capital, and landlord contributions to make retrofitting more accessible. Our solution partially delivers this through presenting grant finance alongside debt finance, as well as taking account of any landlord contributions. However, there is an opportunity for our or other solutions to take this further by incorporating additional retrofit financing options, which could include:

- The sale of Retrofit Credits (a form of carbon and social value credit, such as that developed by HACT for the social housing sector).
- Capital from impact investors that seek either carbon reduction, or other societal benefits. Investors could include local authorities, charities, or philanthropic investors.
- Tenant contributions where they may benefit from energy cost savings.

Additionally, insights from the pilot could drive smarter, data-driven underwriting models, allowing lenders to assess energy efficiency improvements as a factor in mortgage risk and property valuation.

The pilot has also underscored the need for tech-driven solutions to automate and simplify the retrofit process, such as AI-powered tools to recommend cost-effective energy efficiency measures. By addressing these barriers and leveraging the lessons learned, eco-Landlord is now in a strong position for commercial deployment. Regulatory uncertainty for landlords continues to have a negative impact on immediate demand for the service, but this is anticipated to be a short-term barrier.

2 Pilot Project summary

2.1 Product and Service Overview

Like all property owners, buy-to-let landlords have a need to decarbonise the properties they own through a combination of energy efficiency measures and transitioning heating systems to low/zero emissions technologies.

Those that own their own home can access grant funding and specialist finance products (such as green mortgage advances), whilst social housing providers can also access significant grant funding (such as the Social Housing Decarbonisation Fund). However, this leaves the private rental sector, which represents 20% of households, with limited support in improving the energy efficiency of their properties.

Our service offering – eco-Landlord - addresses this support gap by providing buy-to-let landlords with a single point of contact to fulfil their retrofit needs. Via a web-based software tool, our solution allows users to quickly populate their property portfolio and associated finance, utilising open data sources such as Land Registry, Companies House, and the EPC database. Once populated, users can choose their desired outcome (e.g. an EPC rating, or emissions level), as well as any budgetary constraints. The solution then provides them with a tailored package of costed retrofit measures, specific to their property and desired outcome. Uniquely, our solution matches the cost of these measures to the most appropriate financing solution from a broad spectrum of leading buy-to-let mortgage providers.

Our solution does not stop there - it then connects landlords to accredited installers operating in their area to carry out the retrofit works. Where the landlord's target outcome is a higher EPC rating, the solution will also incorporate a re-assessment of the property. Throughout this process, the progress through the retrofit journey is tracked within the platform, with users being able to see a snapshot of the energy efficiency (EPC rating and energy demand per m2) of their portfolio at any point in time. Tracking is achieved through individual user logins, with input data being stored and the user journey being captured through the completion of key user journey milestones. Key milestones include:

- building an initial retrofit plan
- identifying relevant grants
- securing a new EPC (if needed)
- requesting installer quotes
- requesting finance quotes
- receiving installer and finance quotes
- completion of the retrofit; and,
- completion of post-retrofit EPC

Our solution caters for a full scope of retrofit measures, including building fabric (e.g. internal/external wall insulation), low carbon heating (e.g. heat pumps), and on-site energy generation (e.g. solar PV).

This service is provided in return for small value, but high-volume fees to the borrower, the lender, and the installers.

2.2 Changes Since Discovery Phase

The final design of the solution has taken an iterative approach, informed by regular feedback from target users. However, the overall structure and functionality of the solutions has remained the same since the Discovery Phase. The Discovery Phase was a precursor to this Pilot Phase, where the feasibility of the solution was established, and initial solution designs were tested with key stakeholders.

One area that has altered slightly, is the enhanced integration of installers into the solution. During the Discovery Phase, we identified several alternative methods of integrating installers into the user journey: from simply sign-posting users to a list of installers, to fully integrating installers into the solution as an in-built marketplace. At the end of the Discovery Phase, the preferred approach was a hybrid of these, with our solution providing a direct link to installers, but the installer-to-customer interaction occurring outside of the solution. This hybrid approach was preferred as it enabled the delivery of a full customer journey but kept the scope of what needed to be developed to a manageable level – reducing the risk of an incomplete solution being piloted. During the Pilot Phase, the importance of maintaining and managing the full customer journey within the solution became increasingly apparent. One reason for this is the importance of installers as a means of generating revenue to our solution. By having greater integration, and therefore visibility of the transactions occurring between installers and customers, the opportunity to generate lead generation revenue is significantly increased. As such, our final solution has included a fully integrated installer portal where they can interact with customers directly via our platform. This enables us to track the volume and monetary value of work delivered through the platform and calculate the associated lead generation fees as a result.

2.3 Target Users

20.3% of properties in England and Wales are privately rented, which equates to 5 million homes. The private rented sector is the fastest growing housing sector in the country and has doubled in size in the past ten years. Growth continues and, in some markets, such as London, it is estimated that as much as 40% of the city's households could be renting by 2030[1].

Over the past 10 years there has been a significant shift in the number of landlords and the proportion of properties that they own. Many of those with one or two properties have chosen to sell. While there has been a corresponding growth in the number of landlords with a portfolio of properties, which increases the complexity of finance solutions, but also presents an opportunity for new and innovative products.

Our analysis of 4.8m EPC records for residential rental properties shows that 48% are at a C or better with about 40% showing as a D and 10% as an E. 2% are F and G combined.

According to analysis conducted by Habito[2], the average cost of upgrading a house from an EPC-D to C rating is £6,400. This suggests the cost of retrofitting all privately rented homes in England and Wales to an EPC-C is £17 billion.

As a conservative estimate, the cost of property analysis, retrofit planning and finance arrangement is likely to be in the region of 6% of the total retrofit cost - a potential market of £1 billion in England and Wales alone.

2.4 Regulatory Considerations

The primary regulatory considerations are in relation to the provision of finance brokering services, which can be a Financial Conduct Authority (FCA) regulated activity. Other than identifying potential grant funding, the primary finance products offered are buy-to-let mortgage products. Most buy-to-let mortgages are unregulated and therefore do not fall under the scope of the FCA. Some landlords, for example those that have inherited property or have previously lived in a property that they are now renting, fall under a regulated approach as a Consumer Buy-to-Let (CBTL). The consortium

[1] Future of London, Engaging London's Private Rented Sector, https://www.futureoflondon.org.uk/knowledge/completed-projects/prs/#:~:text=London's%20PRS%20doubled%20in%20just,is%20part%20of%20its%20potential.
[2] Habito, Don't Underestimate the Power of Your EPC, https://www.habito.com/hub/article/dont-underestimate-the-power-of-your-epc

delivering the pilot included Property Master who has the permissions and expertise to provide advice in line with FCA requirements when this is needed.

Most lenders expect a broker to be FCA regulated whether the loan being provided is regulated or not. Furthermore, as a regulated entity, Property Master is required to abide by the new Consumer Duty regulations. The key elements of this regulation include:

- A Duty to Act in the Customer's Best Interest: This requires firms to consider customers' best interests and prioritise them in their decision-making processes.
- A Duty to Exercise Care, Skill, and Diligence: Firms are expected to exercise care, skill, and diligence in their interactions with customers, ensuring that the products and services offered are suitable for the customer's needs.
- A Duty to Provide Information that is Clear, Fair, and Not Misleading: Firms need to communicate with customers in a way that is clear, fair, and not misleading, ensuring that customers have the information they need to make informed decisions.
- A Duty to Communicate in a Manner that is Clear, Fair, and Not Misleading: This aspect is focused on how information is presented to customers, ensuring that it is communicated in a way that is clear, fair, and not misleading.

As such, our solution conforms to these regulations in the way it interacts and communicates with users.

3 Pilot Timeline

The Pilot Phase was delivered over a 15-month period between December 2023 and February 2025. The project largely followed a waterfall delivery approach, with the technical development being delivered over monthly sprints, as illustrated in Figure 1.

Stage	Activities	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25
	Inception Meeting															
	Internal Project Meetings															
Project Management & Reporting	Monthly MO Meetings															
	Interim Report															
	Final Report															
	Design Refinements															
	Progress Milestone - Design Report															
	Build Onboarding															
	Progress Milestone - Onboarding Feature															
	Build Black Box EPC Assessment MVP															
	Onboarding Feature - EPC Assessment															
	Retrofit planner MVP															
	Progress Milestone - Retrofit planner															
	Basic Grant Search															
	Progress Milestone - Grant Search															
	Further Advance Sourcing Enhancement															
Technical Development	Basic Finance Advice and Sourcing Integration															
	Progress Milestone - Financing															
	EPC Assessor Request Integration															
	Installer Search Integration															
	Progress Milestone - Launch with MVP															
	Advanced Finance Advice Enhancement															
	Progress Milestone - Finance Advice															
	Enhanced Grant Eligibility Feature															
	Progress Milestone - Grant Eligibility															
	RdSAP Validation Model															
	Progress Milestone - RdSAP Model Report															
	Iterative improvements and Live Environment Support															
	Progress Milestones - Release Updates Reports															
	Customer Journey Mapping															
Customer Journey Validation	Customer Journey Testing															
	Customer Journey Report															
	Pilot Customer Recruitment Startegy															
	Pilot Customer Recruitment															
Pilot Testing	Pilot Solution Deployment															
	Pilot Customer Feedback Collection															
	Pilot Results Report															
	Refined Value Proposition Development															
Commercialisation	Customer Price Modelling & Validation															
	Route-to-Market Plan															
	Commercialisation Report															

Figure 1: Project Gantt

Each of the deliverables and milestones were achieved in line with the original plan. We undertook the project with a robust delivery approach, drawing on the best components of PRINCE2 project management techniques, while also combining this with best-practice learnings to create efficiencies and manage technical components of delivery. Our project management and reporting system was robust, flexible and responsive to changes in project scope, emerging opportunities, technical challenges and learnings from our continual improvement process. Within the project we utilised a design thinking approach - a problem-solving approach that focuses on understanding the needs of users and designing solutions that meet those needs. Design thinking was particularly well-suited to these design tasks because it focuses on understanding user needs and designing solutions that meet those needs.

4 Integration and Utilisation of Technology

4.1 Technology Utilised

We have developed a new enterprise grade, cloud hosted IT solution with dedicated portals for landlords, mortgage brokers (Figure 3) and installers (Figure 2). This is accompanied by a corporate website (Figure 4), social media accounts and an integrated customised Customer Relationship Management (CRM) solution.

Each of the portals has been designed around bespoke user journeys that reflect the outcome goals for each user base.

We have built a novel AI model along with data cleansing routines for the published EPC data.

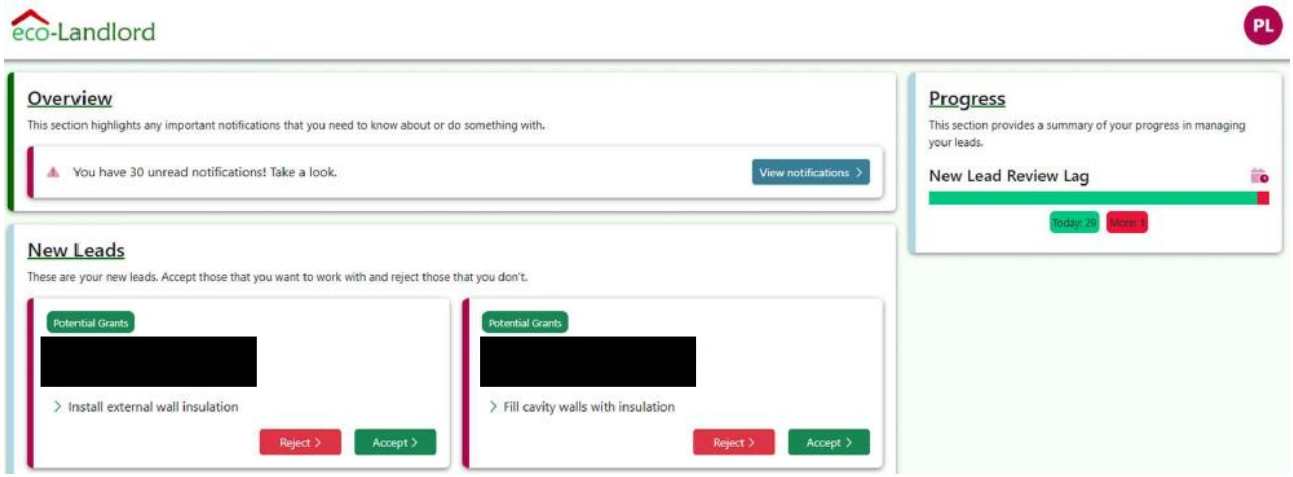

Figure 2: Redacted Screenshot of Installer Portal

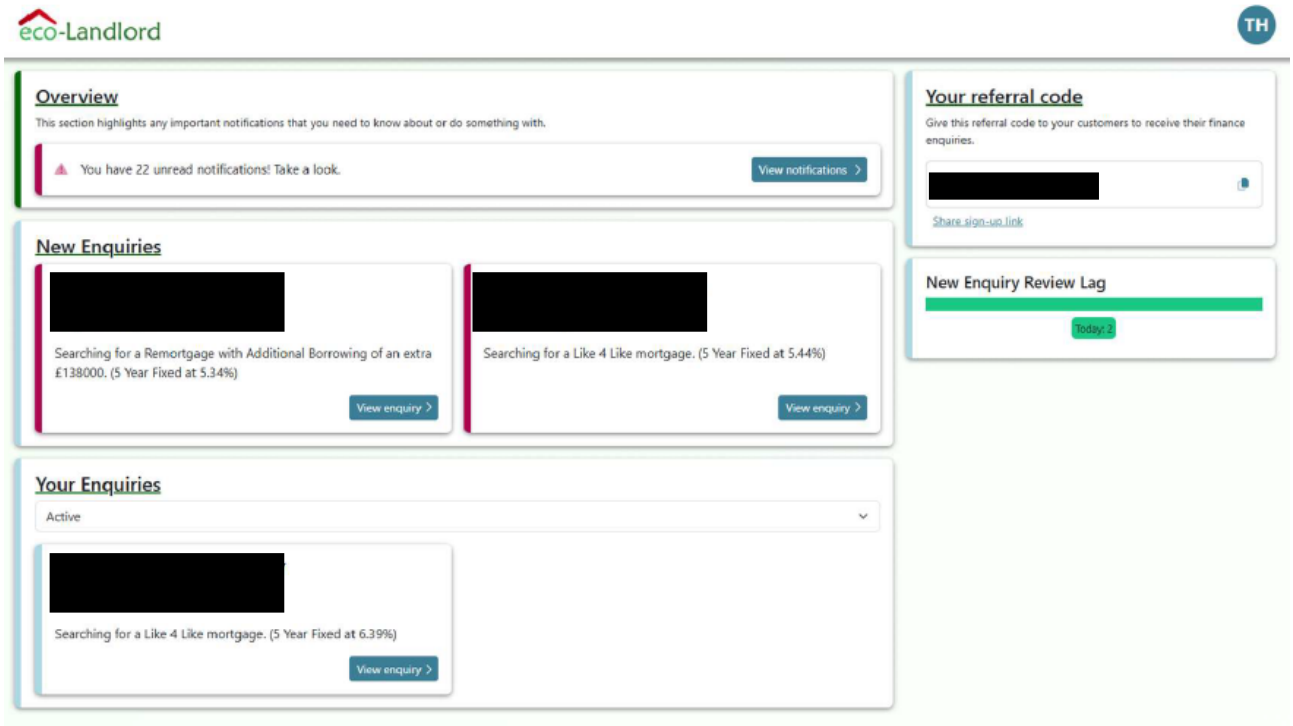

Figure 3: Redacted Screenshot of Broker Portal

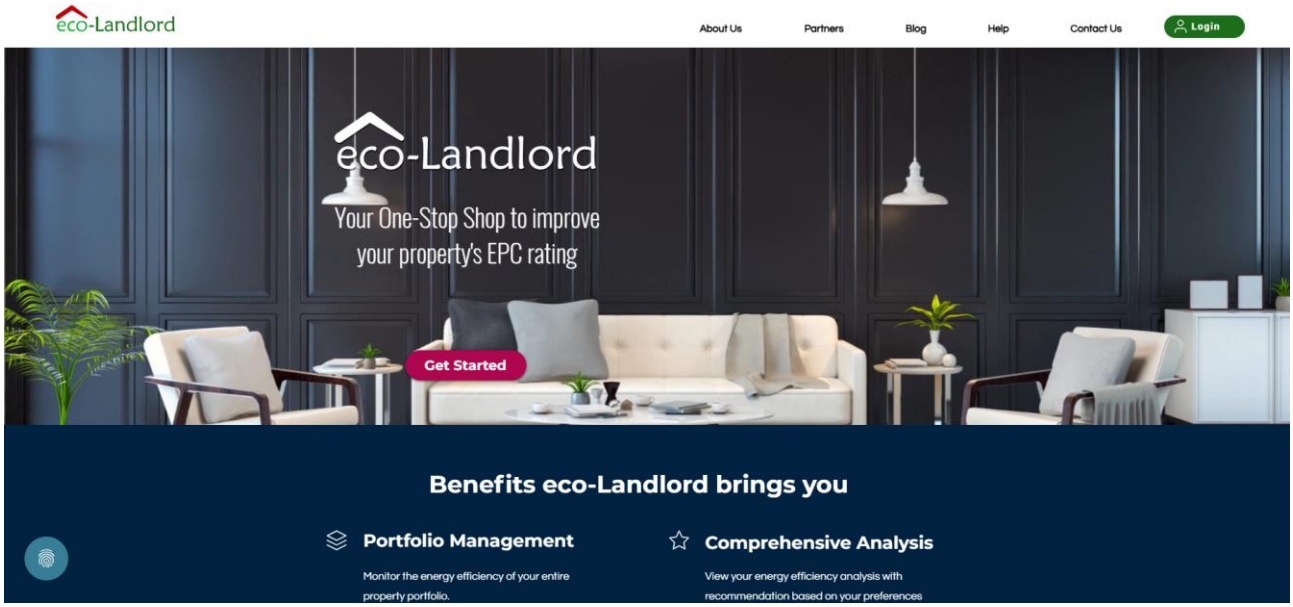

Figure 4: Screenshot of Website Landing Page

4.2 Technology Performance

Our infrastructure monitoring capabilities have shown that we have had a system uptime of over 99.9%. A small number (<10 cases) of errors have been observed due to defects in the system. We have resolved the majority within 24 hours and the remainder with three days. The root cause for these errors has mostly traced back to invalid/unexpected data that has been sourced from the EPC Register or our address lookup service.

We have monitored usability using screen recording and heatmap technologies. These have highlighted parts of the user interface (and general user experience) that users have had not understood (e.g., clicking on areas or buttons that aren't active). These observations have been feedback into our software development pipeline.

We have received feedback and questions from some landlords. These have helped us identify some edge cases in the EPC data. We are also using this feedback to prioritise the creation of training materials in the form of video shorts (e.g. onboarding and creating an account; requesting a new EPC; manually looking up an EPC).

4.3 Technology Challenges

The consistency and accuracy of the EPC data was found to be significantly poorer than we expected – even taking into account initial investigations during the Discovery Phase. Example of these issues include:

- The description fields (e.g., floor, walls, heating) contain dual language entries for some Welsh properties. Often, with the accents incorrectly encoded.
- There are places where the unique address identifiers are missing or are for the building and not the individual flats.

We encountered a wider issue with address lookup services that use the Postcode Address File (PAF) for buildings that have been converted to flats. This is a very common occurrence in the Private Rental Sector (PRS) compared to the owner-occupied market. There seems to be no requirement for the PAF data to be updated when the properties are converted. These issues with carrying out assisted address lookups has led to additional development effort to handle manual fallbacks for the system's users that have added unhelpful complexity to the users.

As a consortium with a highly experienced and skilled software engineering teams, we have demonstrated that it is possible to deliver technology solutions in a timely manner to solve (or at least compliment) real world services that have been traditionally fulfilled with mostly analogue/manual people-based solutions.

A significant driver for landlords to carryout green retrofit activities is the access to grants. There is a clear shortfall in the end-to-end process of handling grants. The following perspectives highlight some of the challenges:

- Landlords: understanding which grants are available (including whether their tenants are eligible)
- Landlords: understanding which installers can apply for which grants and to identify those installers
- Installers: simplifying how installers can apply (and even automate the process for them)
- Grant Holders: help local authorities (that have a decentralised responsibility) to be able to manage grants in an automated and efficient manner.
- Energy Suppliers: There are many energy suppliers that are marketing retrofit activities with government grants underlying their offers. These energy suppliers are effectively acting as installers but there is no central data source that details each supplier and their offering.

In summary, there is a clear demand for an open access (in terms of integration access), common IT solution for managing green property grants to reduce siloed and duplicate grant management activities be each of the local authorities.

Under the new Warm Homes: Local Grant, which is available from April 2025, landlords will be able to apply for support to upgrade properties occupied by eligible low-income households. Under this scheme, the first home upgraded by a landlord is fully funded by the grant, with additional homes requiring a 50% cost contribution from the landlord. This scheme is being delivered by 73 projects involving 270 Local Authorities across England (covering 97% of eligible local authority areas).

Local Authorities will be supported by a delivery partner procured by DESNZ, who will check via a centrally managed database whether landlords with regional or national portfolios have already had a home fully funded under this scheme via a different Local Authority project. This will help to ensure against gaming and fraud by landlords.

5 Integration of Design or Process Innovations

5.1 Design Methods

The initial system design for eco-Landlord was based on more than 8 years of experience in delivering digital buy-to-let brokerage service, www.property-master.com. As a result, the consortium (see 6.1) held a significant wealth of experience of how our landlord community interacts with digital systems and received a lot of user feedback including some elements that have to date, not had the opportunity to implemented within the pre-existing Property Master offering.

The consortium combined this experience with a number of creative concepts to generate a digitally joined up system to give the users rich capabilities without the need for onerous data entry that would have otherwise been needed for their property portfolio.

Our on-going monitoring using screen recording and heatmapping of real users has enabled us to identify and plan future iterations of the system.

5.2 Personalised Features

We have built a number of novel capabilities within the product to aid ease of use and to provide deeper insights that aren't easily accessible from our sources. Some examples of these capabilities include:

- Using Companies House and Land Registry data to enable automated onboarding of our landlords' portfolios.
- Using AI models to provide a simple feature that allows a landlord to understand the potential change to their EPC by any combination of retrofit activity. This allows us to provide a feature that is richer and has more depth than is available from the simple, static recommendations that are provided as part of the EPC assessment.
- We have leveraged our existing capabilities (from Property Master) to provide indicative property finance figures and guidance to landlords, based on the funding needed for their retrofit.
- The building of additional dedicated portals for installers and brokers has allowed us to deliver a truly digital one-stop-shop capability. Each is tailored to provide a streamlined and modern user experience to foster wide update and retention of with these business partners.

5.3 Operational Processes

From an operational perspective, our eco-Landlord service has been setup as a new business unit. Therefore, we have taken on new staff and developed new operational processes specifically for this purpose. With the tight project timescales, proactive management and review activities have enabled us to onboard personnel and focus their activities to achieve the most valuable outcomes first.

5.4 Responding to User Needs

Our initial system design from the Discovery Phase was to focus primarily on an IT solution for the landlords, but as we explored the wider business processes that involve installers and brokers, it quickly became apparent that it was vital to build out portals for these roles. Our initial project plan was developed based on a series of iterative improvements after we had released our initial minimum viable product (MVP) version of the landlord portal. These iterations were planned to be primarily for reacting to feedback from Landlords. Instead, we have prioritised the development of the installer and broker portals. This has enabled us to have an improved level of engagement with the installers and brokers by having a demonstrable capability for them to manage the work flowing from the landlords and integrated communication channel within the eco-Landlord ecosystem. This change in prioritisation was instigated by the recognition that one of the key motivators for landlords to engage with the system is to first have a robust network of installers to ensure they can achieve a full customer journey. Driving landlord engagement to the service, only for them to find that there are no installers operating in their area would have created a poor customer experience and damage the

reputation of the solution. Equally, the broker portal was identified as a key channel to drive landlord engagement which was not fully appreciated prior to the Pilot Phase.

5.5 Factors Contributing to Success

Within the relatively short timescales of the Pilot Phase (15 months) to accomplish the delivery and testing of a digital one-stop-shop, it was vital to focus on the functionality required to deliver a 'minimum viable product' (MVP), using a specialist development team comprised of experienced professionals. Alongside, a product owner/business analyst role who has sufficient knowledge of the private rental sector and green finance products to focus development of the initial feature set.

5.6 Project Limitations

Even with our early engagement with installers and brokers, we have found that these partnerships take significant effort with long lead times to finalise contractual agreements and operational processes – with each organisation having different approaches and priorities. With significantly greater funding or longer project timescales, we would have devoted more resources to engage with these third parties.

Similarly, with a larger project we would like to have enhanced engagement with our landlords during the system design stage, including the presentation of multiple options (as mock ups) and the early prototypes to receive greater feedback. Due to the project constraints, we have been limited to building a single user experience based on existing knowledge and best industry best practices, followed by iterative enhancements based on user feedback.

Despite this, we believe we have developed a solution that has strong market fit and closely aligns with the needs of or target users.

6 Pilot Partnership Learnings

6.1 Delivery Partner Roles

Through the Discovery and Pilot phases, this project delivered a new opportunity for City Science, Property Master, and PM Data Services to collaborate for the first time as a consortium. Through the delivery of the Discovery Phase, this relationship was strengthened, building a strong foundation for further collaboration during the Pilot Phase.

The key roles and responsibilities of each of the delivery partners has been outlined below:

Delivery Partner	Key areas of experience and expertise	Key roles and responsibilities during the Pilot Phase
Property Master	• Operates as a mortgage broker, specialising in the PRS • Have delivered digital services to existing client base • Has extensive experience of the PRS • Has a broad network of contacts across key stakeholder groups (landlords, brokers, lenders, regulators) • A founder run business, with a track record of launching new businesses	• Overseeing the design and build of the digital solution • Engagement with key stakeholders (landlords, brokers, lenders) • Recruitment of pilot users • Onboarding of installers into the solution • Monitoring pilot results and gathering pilot feedback
PM Data Services	• Operates as the digital and data service provider to Property Master • Has extensive experience of developing digital solutions for the PRS	• Building and testing the digital solution
City Science	• Have project managed a number of R&D based projects • Have extensive domestic property energy performance modelling experience • Have experience of working with retrofit installers • Extensive experience of advising the public sector on sector wide decarbonisation challenges • Over 10 years of experience in developing software to tackle decarbonisation challenges	• Project management • Developing building energy performance modelling capability • Assisting in engagement with installers • Assisting in the design of the digital solution and customer journey

6.2 Benefits of the Partnership

Through this partnership working, the three organisations were able to combine expertise, resources, and perspectives, leading to greater innovation. By pooling knowledge from different industries and fields, the partners were able to develop a new product more efficiently.

The development of new products and services is expensive and can be financially risky, especially for smaller business. By working together, the organisations were able to share the financial burden, reducing individual costs. Additionally, risks associated with research and development such as

project failure or unforeseen technical challenges, are mitigated when multiple stakeholders contribute resources and expertise. This makes large-scale innovation projects more feasible.

Collaboration also led to faster development, with partners being able to divide tasks based on their strengths. By leveraging each partner's specialised skills and infrastructure, the project could progress more efficiently, reducing the time required to bring innovations to market.

Through working together, the partners also created the opportunity to expand their market reach by gaining access to each other's networks and customers.

With the finance sector being heavily regulated, this creates a potential barrier to new market entrants. Through bringing together Property Master, an FCA regulated business, PM Data Services, and City Science, these partners were able to operate in a sector which they would not have otherwise been able to operate.

6.3 Lessons Learnt

Key lessons learned on partnership working were:

- Clear Communication and Aligned Goals. One of the most important lessons in collaboration was the need for clear communication and alignment on objectives. The partners established a shared vision for the product and service to ensure that all stakeholders were working towards the same goals. Misalignment in expectations, priorities, or timelines can lead to inefficiencies, misunderstandings, and project delays. Regular meetings, progress updates, and well-defined responsibilities helped maintain focus and clarity – ensuring the project was delivered on time and deliverables were of a high standard.
- Leveraging Strengths and Expertise. The project partners made the most of each partner's unique strengths. Each organisation contributed based on their core competencies, whether that was technical expertise, market knowledge, customer insights, or distribution networks. By clearly defining roles based on strengths, partners were able to maximise efficiency and innovation while avoiding duplication of effort.
- Effective Project Management and Agility. Developing a new product or service often involves unforeseen challenges, requiring teams to be flexible and adaptable. Using agile project management methods - such as iterative development, prototyping, and continuous feedback - allowed the partners to refine their approach as the project progressed. Having a structured timeline, clear milestones, and contingency plans helped keep the project on track.
- Trust and Strong Relationships. Trust is essential in any collaboration. The partners remained transparent about their capabilities, limitations, and expectations. A lack of trust can lead to hesitation in sharing valuable information or resources, ultimately hindering innovation. The partners built strong working relationships through open communication and a collaborative mindset.
- Intellectual Property Ownership. The importance of clear legal agreements, especially regarding intellectual property, revenue sharing, and confidentiality should not be overlooked. Disagreements over ownership of ideas or profits can create conflict if not addressed early and can absorb avoidable time, energy and focus. The partnership was governed by a well-structured collaboration and data sharing agreement that outlined IP rights, responsibilities, and dispute resolution mechanisms.

7 Governance Frameworks

7.1 Internal Governance Structure

The consortium was made up of three small businesses:

- City Science
- Property Master
- PM Data Services

Senior representatives from each of these organisations provided strategic oversight and governance to the project, representing the Project Board:

- Angus Stewart – CEO and Founder of Property Master
- Paul Lunt – CTO of PM Data Services
- Simon Drake – Director of City Science.

Having senior representation within this Project Board enabled rapid decision making to aid in the delivery of the project within the planned time scales. This Board met fortnightly to track project performance and manage risks. Working below the Project Board were four dedicated teams, each reporting up to the Project Board:

- Customer Requirements Team: The Customer Requirements team undertook research with the buy-to-let market users/investors to develop a clear understanding of their needs and "pain points". This team also engaged with brokers and lenders, tested solution designs with users, and led the commercialisation stage of the Pilot.
- Software Development Team: The Software Development team designed the systems to provide intelligent advice to buy-to-let investors, combining energy efficiency analysis with the specific borrowing position of both the portfolio and individual properties. They have also designed the system workflows and user interfaces to maximise simplicity for users, while retaining the robustness of the calculations, and creating visuals for user testing.
- Energy Modelling Team: The Energy Modelling team took the lead in deploying technical infrastructure and developing a Black Box Retrofit Model. They were also responsible for the development and releasing the Home Energy Model-based Validation Model.
- Project Support Team: The Project Support team were responsible for supporting engagement activities, e.g. including development of surveys and events. They also supported the delivery of project outputs including development of project reports and dissemination materials.

As a consortium made up of small businesses, we have been able to capitalise on the ability to be agile when it comes to being able to quickly make decisions and approve project outputs. We quickly implemented weekly whole-team meetings to review overall progress and discuss priorities. These meetings retained a high level of momentum from week to week. The prioritisation activities within these meetings minimised issues from interdependencies between team members. We encouraged individuals to have a stream of tasks that they could work on so that if any one task became an impediment, they could make progress with another until it became unblocked.

A significant effort within the project was the software development tasks. A small team size with strict review and sign-off checkpoints enabled the team to rapidly produce new functionality during the incremental development of eco-Landlord, while keeping to high quality standards but not getting distracted with overbearing project management activities.

7.2 Approval Processes

Effective approval processes ensured that software met quality, security, and compliance requirements before release. These processes typically involved multiple stages, stakeholders, and checkpoints to validate different aspects of the project.

The process began with planning and requirement approval, where the product owner reviewed the project scope, functional requirements, and strategic objectives. During the Discovery Phase solution specifications and initial designs were created and assessed. These were reviewed on commencement of the Pilot Phase and approved.

During the development stage, code review and approval played a crucial role in maintaining quality. Developers conducted reviews to ensure the code adhered to best practices, was maintainable, and met security standards. A checklist guided the review process, ensuring that clean code, adherence to style guides, security considerations, and performance optimisations were all met before approval was granted.

After development, the software underwent testing and quality assurance (QA) approval. QA engineers verified functionality, security, and performance through test plans and automated test reports. Approval was granted only when all unit, integration, system, and security testing had been successfully completed, ensuring a stable and secure product.

Once testing was completed, the software moved to deployment and release approval. Release managers ensured that the deployment process was stable and low-risk. Documents such as release notes, deployment checklists, and pipeline reports were reviewed. Pre-production tests, rollback strategies, and final senior approvals determined whether the release could proceed.

Finally, the post-deployment review assessed user feedback, bug reports, and performance metrics. Developers reviewed incident reports and customer feedback to ensure that the software met user expectations.

Throughout the approval process, several key considerations influenced decisions. Automation played a significant role, particularly in pipelines, where automated testing streamlined approvals. Compliance with industry regulations such as General Data Protection Regulation (GDPR) was also essential. Effective stakeholder communication and structured change management processes helped address modifications and ensure smooth progress.

7.3 Managing Risks

The Project Board managed and monitored risks throughout the Pilot Phase by establishing a structured risk management framework. This framework ensured that potential issues were identified early, assessed for impact and likelihood, and mitigated effectively to prevent disruptions.

As part of the Pilot Phase application process the Board undertook a risk identification process. A risk register was created to document identified risks, their potential impact, and proposed mitigation strategies. This register was then reviewed and confirmed upon commencement of the Pilot Phase.

To mitigate risks, the Project Board approved and oversaw risk response strategies. For critical risks, a member of the Board was allocated responsibility for overseeing the delivery of necessary mitigations.

Throughout the Pilot Phase, the board monitored risks continuously. During fortnightly steering meetings, the agenda included risk updates, where new threats were assessed, and existing risks were re-evaluated. If a previously low-risk issue escalated, the Board adjusted mitigation plans accordingly.

7.4 Lessons Learnt

From the successful delivery of the Pilot Phase, the key governance related factors which contributed to success were:

- Clearly defined roles and responsibilities - Establishing clear accountability and delineating specific duties ensured that all stakeholders understood their contributions, reducing confusion and streamlining workflows.

- Senior representation to ensure rapid decision-making - Involvement of senior leaders enabled swift resolution of challenges, facilitated strategic alignment, and provided the authority needed to drive progress efficiently.
- Effective risk management tools, including easy to understand and use risk register - Implementing a well-structured risk register helped track potential issues, making it easier to identify, assess, and mitigate risks proactively.
- Embedding the consideration of risk in regular meetings - Making risk assessment a routine part of discussions ensured ongoing vigilance, allowing teams to address emerging risks promptly and integrate risk management into everyday decision-making.

8 Advice and Guidance utilised throughout the Pilot Phase

8.1 Advice Overview

The design of the Landlord portal was such that its first task was to inform the users about the current state of their properties and highlight where improvements should be considered. Secondly, we built a bespoke recommendation engine to provide targeted advice on what impact the property improvements could have on energy efficiency and emission reductions. From this educational and advice phase, the tool guides the landlord to contact a qualified broker for financial assistance and provides the capability to engage with installers for quotes and initiate retrofit activities.

We have built a truly one-stop-shop that will guide landlords from having little awareness of the energy efficiency of their properties through to completing any remedial activities that are identified.

8.2 Effectiveness of Advice

Ongoing feedback has helped us to assess both the successes and shortfalls within the system. We identified approaches to improve these shortfalls including:

- Redesigning features within the portal (from adding simple guidance text to altering the user experience flows). This reduces the risk of the solution disengaging users who had less technical understanding of retrofit measures and their potential impact.
- Developing video shorts that can be provided as a standalone support library on our website or embedding it within the portal to introduce the user to each feature on its first use. Again, this increases the chance of users remaining engaged with the solution and not dropping out of the user journey.

The depth of detail within the advice we have developed for the pilot has been kept to a high level to reduce the barriers to users engaging with the solution. Outside of our pilot solution, we see that there is a clear need for unbiased informational articles that explain the pros and cons and wider considerations that a landlord should consider when looking at each retrofit activity. As for the pilot, we have taken the decision not to build this detailed knowledge base because we see that there is already a wealth of information from existing government and public websites. We see the benefit of this advice being curated and hosted by an un-biased provider (such as the government) to increase trust; however, there is an argument that by requiring users to move between multiple sources, the user journey is not seamless and may result in some users dropping off. A potential solution to this could be the incorporation of accredited or approved advice within commercial solutions (e.g. the government authorising the use of their logo against pre-approved guidance).

Our initial finance guidance capability has been focused on existing secured financing (i.e., buy-to-let mortgages) that the landlords already use to finance their property purchases. This route is often the cheapest form of finance due to the lower interest rates when compared to unsecured lending. Through our discussions with installers, they can offer 0% finance deals through 3rd party brokers but the installation costs are simply inflated to cover the cost of the finance and include significant commissions.

We have integrated a bespoke buy-to-let mortgage calculator (based on the sourcing capabilities licensed from Property Master) into the finance features to give an immediate indication of how much could be borrowed and the cost of borrowing. The user journey flows from this calculator to an enquiry to our panel of mortgage brokers. Due to the regulated nature of finance in the UK, it is vital that any advice is given from an FCA registered broker who can consider what is best for the landlord based on a more detailed review than is possible within our portal.

We have identified shortcomings with the use of secured further advance products by landlords to take a small (up to £30,000) additional borrowing on their mortgages. Due to the mechanism of procuration fees that are used to pay a broker for their services (often around 0.5%-1% or loan

amount) and the small additional sums borrowed, it will often cost a broker more time and effort to process these further advances than they receive in payment for their service. This negative revenue makes many brokers unwilling to take on such business. Some mortgage lenders offer direct application by the landlords for these further advances, but it is by no means widespread.

Through our on-going relationships with lenders, we have discussed how an option to allow an automated decision-in-principal process for these green further advances could be developed. These conversations are on-going, but without the emphasis that regulatory compliance regarding the "green-ness" of their loan book could weigh, then there is no real driver for this concept to progress.

We have reached out to a series of financial organisations that offer lending via other models, such as point-of-sale finance and carbon credit generation. We have not identified feasible ways in which we can integrate these other offerings, but we hope this will change as their products evolve.

Our research that was conducted as part of the Discovery Phase, highlighted that many landlords would hope or expect to be able to cover retrofit cost from a combination of savings and grants. Therefore, the volume needed for bespoke finance is yet to be proven. It may be that as landlords see the actual costs of retrofit, then they may recognise that savings and grants will not be sufficient.

8.3 Customer Concerns & Misconceptions

One of the recurring themes from our interactions with landlords, is that they want to know what grants are available. There seems to be an expectation that if the regulatory pressures are to be applied to enforce minimum energy efficient standards to the private rental sector, then there must be more widely available and larger grants to cover the costs.

Current impressions from landlords on the state of available grants, is such that they are often unfair as they target properties that have tenants that have low incomes or are vulnerable. This means that potentially two identical properties on a street, but with different tenants could qualify for grants or not.

We have seen landlords repeatedly ask about how they are able to apply for these grants, highlighting a significant gap in awareness and clarity within the process. Many landlords are unaware that, in most cases, it is the installers who are primarily responsible for managing the grant application on their behalf. This lack of understanding creates confusion and inefficiencies, as landlords may spend time attempting to apply for grants themselves or searching for information that is not readily available or applicable to them. This leads to further friction when landlords struggle to identify which installers are qualified and authorised to handle specific grant applications. Without a transparent and standardised way to verify installer eligibility for different grants, landlords may face delays, missed opportunities, or even experience misinformation, ultimately hindering the uptake of retrofitting initiatives. Improved communication, clearer guidance, and a more accessible directory of grant-eligible installers could help address this challenge.

We have seen this situation come into focus recently, where local authorities are managing grants but are stipulating that their preferred supplier is the only installer that can get the grant. In the social housing sector where the grants completely cover the retrofit activities, then this is not an issue. But in the 'able-to-pay' market, landlords expect to be able to obtain multiple quotes for their retrofit and have the grant to be available to any qualified installer. There are concerns that the decentralised management of grants for the 'able-to-pay' sector will become uncompetitive and costs to landlords will be inflated.

9 Installer Integration

9.1 Level of Integration

eco-Landlord includes the functionality for installers to be fully integrated into its end-to-end customer journey. Our primary goal with installers was to provide them with this capability through a dedicated portal. This portal can receive leads and interact with landlords via a single integrated eco-Landlord platform.

The are two main motivations for integrating installers:

1. Without integration, it is not possible to deliver an end-to-end user experience for landlords. We believe the ability to oversee and control the customer experience throughout the process is critical to the delivery of a valuable service.
2. Through integrating installers, we can build a commercial model which utilises income from installers in return for introducing them to customers.

9.2 Key Challenges

We focused on engaging with national installers to give us the quickest possible geographical and capability coverage. We have not excluded smaller installers, but we have found it harder to engage with them as they often don't have the staffing capability to manage a third-party relationship. The optimum method for engaging with these smaller businesses is yet to be determined and is an area which will need to be considered further as part of a fall scale deployment.

With at least one large national installer that already has mature digital lead generation capabilities, we have found that they are not willing to adapt their processes or integrate with a third party (such as eco-Landlord). This is especially difficult as we are a new business without a track record of volume that would guarantee that any integration expenditure would be recouped by additional business.

Engaging individual installers has been a challenge. For the installers that we have been able to discuss eco-Landlord with at a management level, they have shown interest to proceed with further contractual discussions. These contractual arrangements have been slow, and organisations have taken extended timescales to achieve sign-off.

Through discussion with relevant industry associations, we have had some initial success engaging with heating system manufactures. We have identified that heating system manufacturers have significant installer bases that are approved to install their equipment. Therefore, we are in late-stage discussions to trial a scheme where we can encourage installers to work with us and receive manufacturer discounts when installing equipment through our manufacturer partner. We believe this is approach will provide us access to a wider installer base with a lower operation overhead for on-boarding. From a landlord's perspective, they would see no difference in their user journey, but would potentially benefit from lower installations costs.

With the recent increased availability in grants for social housing, there are many installers that are solely focused on servicing this market – as their costs are entirely covered by local government grants and they focus on the mechanics of completing the material upgrades to the property and not the wider sales and marketing aspects. Discussions with a number of these businesses has demonstrated their lack of interest in engaging with the 'able-to-pay' market.

9.3 Introducing Installers to Customers

As part of the end-to-end user journey, eco-Landlord provides landlords with the ability to request quotes from installers directly from the online platform. This functionality comes after the point where the solution provides recommendations on potential retrofit solutions – giving them the ability to get a more accurate cost information for the specific measures. Once the landlord selects the option to request quotes, eco-Landlord will automatically notify installers that operate in the locality of the property that there is a live opportunity. Utilising their dedicated installer portal, they will then

be able to engage with the landlord, providing a quote directly through eco-Landlord. It is then up to the landlord as to whether the quote is accepted or not (which is also managed within the platform). This allows us to track installations delivered through eco-Landlord.

9.4 Responsiveness of Installers

Responsiveness to landlord inquiries was a key concern when designing the installer portal and installer-landlord interaction.

To reduce this risk, we included two features:

- Present a KPI metric on the installer's dashboard that shows the time between receiving an inquiry and a response being made.
- Including real-time notifications to the installer and landlord when an inquiry/response is received – these notifications are presented as both in-app popups and by email.

We have also built internal reports to monitor these response rates across our installers, so that we can work to resolve any cases where installers are not being sufficiently responsive.

We have had insufficient volumes to-date to provide any meaningful insights, but it is vital for us to proactively manage the service level of our installer base.

9.5 Lessons Learnt

Some of the key lessons learnt are:

- Difficulty in Standardising Workflows - Installers often have different work processes, pricing structures, and digital systems, making standardisation a challenge. Creating a consistent service offering within a one-stop-shop requires clear guidelines, standardised procedures, and shared best practices to align installers with the broader business model.
- Importance of Trust and Relationship Building - Many installers are small, independent businesses that rely on word-of-mouth and existing relationships. They may be hesitant to join a centralised platform unless they see clear benefits. Building trust through transparent communication, fair pricing, and long-term partnerships is essential for securing their participation.
- Need for Clear Value Proposition - To encourage engagement, the one-stop-shop must clearly communicate why installers should participate. Many installers, particularly those large installers working in the social housing sector, already have steady work and may not immediately see the benefits of joining. Highlighting advantages such as increased job opportunities and diversifying their customer base to reduce commercial risks is key in communicating this proposition.
- Digital Adoption Challenges - Some installers, especially smaller businesses, are not accustomed to using digital platforms for managing projects. A one-stop-shop that relies on technology, such as eco-Landlord, must ensure that its platform is user-friendly, provides training, and offers customer support to help installers transition smoothly. Providing mobile-friendly interfaces can also improve adoption.
- Regional Supply Chain Constraints - Availability of skilled installers can vary by region, leading to gaps in coverage for retrofit services. Engaging local installers and developing regional partnerships can help address this challenge. Additionally, offering incentives for installers to operate in underserved areas can improve overall service availability.
- Need for Long-Term Engagement Strategies - Simply onboarding installers is not enough—continuous engagement is key to maintaining participation. Regular communication, training opportunities, and performance-based incentives can help build a loyal and active installer network within the one-stop-shop model.

10 Verification Processes and Quality Assurance in the Delivery of the Service

10.1 Installation Verification Process

Our service offering does not directly verify or assess the quality of the installation process, and we are not warranting the work of the installers. The installers are responding to a sales lead generated from our system and payments for installation is made directly between the landlord and installer.

We believe that existing accreditation organisations (and the grant application processes) provide a sufficient mechanism to validate that an installer can complete the works and provide necessary complaints procedures.

As part of our on-boarding process, we are validating that the installer is registered with the relevant industrial bodies (e.g., Gas Safe Register, NICEIC, MCS, etc.) and checking for a TrustMark registration. We restrict an installer's account until we have completed these checks, and they have completed our commercial supplier contract.

10.2 Challenges Faced

We are using a manual process as this allows us to vet installers and gather an understanding of the nuances of these processes. We will ideally automate this process in the future, but it will require access to APIs from the various accreditation bodies for this to be possible. We have not thoroughly investigated the integration options, but we anticipate gaps. We need to understand if any access charges for the APIs are cost-effective based on our usage levels. Therefore, our initial manual process was a good pragmatic solution for the pilot.

10.3 Verification Best Practice

Various parties in the financial journey require validation that the retrofit works have been delivered and to the correct industrial standard needed. These are both for the grant application processes and for mortgage lenders that are offering favourable rates when funding green home improvements.

There is already a competitive market in delivering property logbook services, as can be seen from the Residential Logbook Association (RLBA). A post-pilot feature that we are considering is integration with one or more of these services. We will need to understand the demand from our landlords, installers and lenders and what value this integration would give (without just adding further complexity to the user experience).

10.4 The Role of New Technology

Property logbooks are one area in which new technology could play a key role. Digital records containing key information about a property, such as ownership history, legal documents, maintenance records, and energy performance data is an area that has been discussed within the industry for some time. In the UK, the introduction of new technology could significantly enhance the adoption and functionality of property logbooks by improving accessibility, security, automation, and compliance. Some areas where new technology could take an active role include:

- Blockchain for Secure and Tamper-Proof Records. Blockchain is a secure, decentralised system for recording and verifying data across multiple computers and is being used in areas like supply chain tracking, digital identity, and healthcare records to ensure transparency and tamper-proof information. This technology could provide a secure, decentralised way to store property logbooks. Each entry could be timestamped and verified to prevent fraud and ensure data integrity. Blockchain could also enable smart contracts, allowing automatic updates to the logbook when legal transactions occur, such as mortgage approvals or property sales.

- **AI and Automation for Data Collection and Management.** AI and automation are becoming increasingly relevant in the property and retrofit industry, offering powerful tools to enhance data collection, management, and decision-making. AI-driven solutions can streamline the process of gathering, verifying, and updating property data by extracting key information from legal documents, survey reports, and planning applications, automatically populating digital property logbooks. Additionally, AI-powered chatbots or virtual assistants could provide landlords and homeowners with personalised guidance on maintenance schedules, energy efficiency improvements, and compliance requirements. By integrating AI into grant and finance application processes, the industry could reduce administrative burdens, improve accuracy, and enhance accessibility. As AI continues to evolve, collaboration between financial institutions, technology providers, and policymakers will be essential to unlocking its full potential in supporting property retrofitting and sustainable development.
- **Integration with Government and Industry Databases.** To ensure accuracy and ease of use, property logbooks could be integrated with government and industry databases such as:
    - HM Land Registry for ownership records
    - Local Authority Planning Portals for permits and approvals
    - EPC Register for energy efficiency ratings
    - Surveyor Reports for property condition history

11 Market Testing, Deployment and Distribution

11.1 Marketing Strategy

During the Pilot Phase we utilised many different sales strategies and tools throughout the customer journey i.e. using prospecting tools to attract landlords to the website and to encourage registration, a CRM system to build and maintain customer relationships during the end-to-end process whilst utilising the database to target segmented audiences along the way. eco-Landlord used sales intelligence, acceleration, monitoring analytics and productivity throughout the whole duration of the customer journey from the initial awareness of the website, to maintaining engagement and interaction with the users throughout.

We initially targeted four different customer types: landlords, brokers, lenders, and installers. The sales and marketing approach for each differed and their specific customer journey reflected their different needs.

The primary function of the eco-Landlord service is to identify a property's EPC rating, advise what can be done to improve this rating, provide quotations for the works to do so, and to then offer options to fund the project - be that grants, a remortgage or a further advance.

We utilised several different sales strategies and tools depending on the customer type and their position in their customer journey. This was supported by a CRM system which tracked all interactions and communications.

We utilised Property Master's contacts database to promote eco-Landlord and used sales intelligence, acceleration, monitoring analytics and productivity throughout the customer journey.

11.1.1 Landlords

Following the dedicated website being launched we targeted and attracted landlords through a number of different approaches to test the costs and effectiveness of each strategy. These included using Google/Bing, direct email, social media, exhibition at events attended by landlords, and landlord networking events. Some of these activities commenced pre-launch to gain pre-registrations. These initial activities encouraged landlords to register for an account on the eco-Landlord website. The sales and marketing strategies during this process were not only to educate the landlord, but also encourage them to take the next step in using the full service once fully launched.

11.1.2 Brokers

Over 80% of buy-to-let mortgages are arranged through mortgage brokers, and landlords - especially those with a portfolio – tend to build strong, long-term relationships with their brokers. To drive the maximum opportunity to improve the housing stock, referrals to the eco-Landlord service through the landlord's mortgage broker are a key sales channel.

Safeguards have been designed into the eco-Landlord system to earmark a referred landlord to the broker that referred them, as the broker will not want to refer a landlord if they think there is a risk that their relationship will be lost. This is achieved by providing each broker with a unique reference number. This reference number can then be provided to landlords to enter into the system when they first engage. Brokers will not want to pay for this service so any referrals in will need to be "free" and we used the pilot to confirm added value services which can be provided to brokers for a fee.

Engagement with brokers was more of a business-to-business (B2B) activity and utilised trade press to educate brokers about the service, and mortgage clubs to introduce the service to their members.

We leveraged in-person networking events, industry exhibitions, and online platforms to generate leads and build a broker client database. In addition, the marketing team created targeted campaigns and promotions online to attract brokers to the eco-Landlord platform. Additionally, we utilised

prospecting tools such as LinkedIn Sales Agency to identify potential brokers within the target audience, such as brokers in need of expanding their business.

We made contact with leads through email, phone calls, and in-person meetings to introduce eco-Landlord's services and establish rapport. Furthermore, we educated brokers about the benefits of joining eco-Landlord and how it meets their needs. The most successful way of achieving this was through the Association of Mortgage Intermediaries, where we were given the opportunity to speak at association events. This has shown to be an effective mechanism for both educating and achieving general engagement with many brokers at one time. One-to-one engagement was also utilised and found to be effective, but due to the large number of small brokers, this method was found to be more time consuming. It also lacked the brand association and credibility afforded by partnership with industry associations. Additionally, we provided personalised recommendations and solutions tailored to each broker agency when necessary.

We guided brokers through the onboarding process and facilitated a smooth transition to using eco-Landlord's services. Moreover, addressing any objections or concerns raised by brokers and providing reassurance and solutions as needed. The onboarding process covered (1) Understanding eco-Landlord's mission and values, (2) Service knowledge (3) Landlord relationship management (4) Technology training.

11.1.3 Installers

Engagement with this user group sought to attract installers to join the eco-Landlord installer network, expand market exposure, and increase revenue through installer commissions. We sought to establish a mutually beneficial partnership by offering access to quality leads and financial support for landlords to pay for the property enhancements.

We generated installer leads through the following methods:

- Networking Events: Attended industry exhibitions, seminars, and networking events to connect with potential installers. Showcased eco-Landlord's benefits and the opportunities for installers to grow their business.
- Online Platforms: Utilised online platforms, including social media and industry forums, to generate leads and engage with installers. Shared success stories and testimonials to demonstrate the value of joining eco-Landlord.
- Identified suitable installers through existing schemes that validated the quality of an installer such as Trustmark.
- Personalised Outreach: Initiated contact with leads through personalised emails and phone calls. Highlighting the advantages of partnering with eco-Landlord, such as access to high-quality leads and financial support.
- Demonstrations: Offered demonstrations of the eco-Landlord platform to showcase its features and benefits for installers. Addressed any concerns or questions raised during these sessions to build trust and confidence.

11.1.4 Lenders

While for mortgage purposes all lenders that have a relationship with a broker are available for the provision of finance already, there were two reasons to encourage lenders to work closely with eco-Landlord.

Firstly, they all have a customer base of landlord mortgage holders who may need to improve the EPC of their property. A lender could therefore introduce eco-Landlord to their landlord customers.

Secondly, there may be instances when a further advance to an existing mortgage is a more suitable and cost-effective solution for funding than a full remortgage. There is an opportunity to design and implement a low cost automated further advance solution which can be made available to lenders.

We engaged with this potential user base through:

- Networking and Events: Attended industry conferences, seminars, and networking events to connect with potential lenders. Showcased eco-Landlord's unique value proposition and the benefits of partnering with us. This approach enabled us to reach a large number of lenders in one go, whilst also adding credibility to the solution through acting as a thought leader during panel discussions.
- Used existing relationships that Property Master has with lenders to identify the correct individuals to engage for the eco-Landlord service. Utilising existing contacts and relationships was particularly effective, as trusted relationships can take time to establish.
- Personalised Outreach: Initiated contact with leads through personalised emails and phone calls. Highlighted how eco-Landlord can streamline the financing process for lenders, reducing risk and enhancing decision-making. Whilst worthwhile, this approach was found to be time consuming and not as productive as other approaches. It was also noted that outreach through social media platforms such as LinkedIn is becoming increasingly challenging as they have become very saturated with businesses trying to sell products and services. This seems to be leading to users not being willing to engage with outreach activity.
- Demonstrations: Offered demonstrations of the eco-Landlord platform to showcase its features and benefits for lenders. Addressed any concerns or questions raised during these sessions to build trust and confidence.

11.2 Market Limitations

Our initial goal was to offer our solution to landlords with properties throughout the UK. Unfortunately, EPC data for the UK is not available via a single API. The development of multiple API integrations (i.e., England & Wales; Northern Ireland; Scotland) that would be required to gain full coverage, was not practical within the project timeline. Therefore, we focused on England and Wales via the Open Data Communities EPC API provided by the Department of Levelling Up, Housing & Communities (https://epc.opendatacommunities.org/docs/api/domestic).

We prototyped solutions that involved maintaining our own copy of the downloadable EPC dataset for England, Wales & Scotland – but we quickly recognised that the effort required to handle the size of this dataset and making regular necessary updates would entail the development of systems that were outside the scope of this project.

Enquiries to gain access to the dataset for Northern Ireland were unsuccessful even after referral to the Northern Ireland's Department of Finance by England & Wales EPC Enquiry Team. This siloing of data and lack of uniform access to key energy performance data adds significant hurdles and costs in the ability to deliver a service across the whole of the UK.

11.3 Lessons Learnt

Developing eco-Landlord to help landlords retrofit their properties, including access to retrofit finance, has provided valuable insights into engaging with, onboarding, and selling to different stakeholders. Each user group (landlords, mortgage brokers, installers, and lenders) has unique needs and challenges, requiring tailored approaches. Below are some of the key lessons learnt:

Engaging with Landlords

- Clear Value Proposition: Landlords need a compelling reason to engage. Messaging that highlighted energy savings (although not always relevant), increased property value, compliance with future regulations, and tenant demand for energy-efficient homes was seen to be most effective. Landlords did not respond as highly to messaging focusing on emission reductions or sustainability.
- Simplified Process: Many landlords fear the complexity of retrofitting. eco-Landlord's step-by-step guided approach, with rapid onboarding of their portfolio reduced friction.

- Trust and Credibility: Many landlords are hesitant to engage with unknown platforms. Partnering with trusted partners, such as their existing broker, aided this trust and credibility building.

Engaging with Brokers

- Removing a Pain-point: Many brokers have very limited knowledge of the regulatory and practical complexities of retrofitting properties in the buy-to-let sector, and many have little desire to upskill in this area. Given the already complex nature of mortgage advisory services, brokers are often focused on securing financing solutions rather than navigating additional layers of property regulations, energy efficiency requirements, or grant applications. Furthermore, since retrofitting is not a direct revenue stream for brokers, there is little incentive for them to invest time and effort in upskilling in this area. Instead, they prioritise transactional efficiency and rely on trusted third parties to handle specialised aspects of property improvements. This is why positioning eco-Landlord as a solution that removes this burden from brokers has been particularly effective, allowing them to continue providing mortgage advice without the added complexity of retrofit-related guidance.
- Seamless Integration: Brokers prefer platforms that integrate with their existing CRM and sourcing tools rather than standalone systems. API integration is key.
- Lead Retention: Brokers are more likely to engage if they see a clear way for them to retain the brokerage fees of the landlord.

Engaging with Installers

- Pre-Qualified Leads: Installers expressed a desire for leads to be vetted and serious, so that the system can deliver genuine value to them – rather than increasing their administrative time through producing quotes for low quality leads.
- Easy-to-Use Platform: eco-Landlord's simple, user-friendly interface ensures accessibility and received positive feedback from installers. Many installers operate in the field and prefer quick, straightforward lead management.
- Transparent Costs & Terms: Installers need clear and simple pricing models for leads. They did not respond well to more complex tiered or contingent fee structures.

12 Customer Sales – Success Metrics

Due to the uncertainty and delay in government policy in relation to EPC requirements of privately rented properties, we have seen fewer landlords engaging with the system as originally hoped. In addition to the impact of the regulatory environment, we also recognise that this level of engagement is not unexpected for a new service operating under a new brand. Equally, the maturity of our broad array of engagement channels are still infantile. As we grow our brand and gain success with our partner organisation, we expect that a critical mass will be achievable through the channels that we have identified and tested.

For the landlords that have engaged with our service, we have seen that the majority have quickly progressed through the initial EPC review stages and have engaged with building their retrofit plans. This validates the effectiveness of the platform to be easy to use and rapidly onboard landlord portfolios.

The primary revenue generation channel for the solution is commission received from installers that are introduced to customers via the platform. Engaging with and onboarding installers has been challenging, but we have had strong success in mobilising a sufficient number of installers to enable national coverage. Despite this, we recognise that continued onboarding of installers will be needed to service the potential demand from landlords if policy drivers are introduced.

In respect of landlord engagement, the consensus that we are hearing from our landlords is very much of a 'wait and see' approach (regarding government policy). Therefore, for many landlords we have seen engagement with our system to understand what their retrofit options are (including the financial aspects), but they are not progressing further as there is currently a lack of incentive for them to do so.

Some of the hurdles that we have seen inhibit landlords from progressing with their retrofit include:

- Increased financial pressures on landlords due to changes to taxation and licensing.
- Proposed changes to the EPC assessment process over the next few years. They have concerns that the new Home Energy Model may impact any improvement to their ratings that they invest in over the short term. The proposed changes to the EPC assessment process are currently under consultation and further clarity is expected following the consultation process.
- Pending confirmation of Government consultation outcomes and exemption rules for the proposed minimum EPC regulations. For landlords with EPC ratings of E (or better), it is vital for them to understand their return on a potential significant investment versus the sale of the property. Further clarity is expected following the consultation process.
- There is a degree of expectation that more favourable grants or loans may become available to encourage retrofit uptake. The UK Government has committed investment via grants or loans to further encourage retrofit uptake.

All of these drivers are leading to landlords to 'wait and see' as their properties are most often an investment vehicle and less driven by an environmental mindset.

13 Customer and Behavioural Insights

13.1 Research Undertaken with Consumers and Users of the Service

To ensure our offering met the needs of landlords, mortgage brokers, lenders, and retrofit installers, we have conducted a combination of quantitative and qualitative research throughout the development process. This research has been instrumental in shaping the platform, refining user experience, and identifying key barriers to adoption.

Our research focused on gathering insights to understand user behaviours, preferences, and the overall demand for the service. We conducted surveys and 1:1 interviews with landlords, brokers, and installers to assess their awareness of retrofit requirements/regulations, willingness to invest in energy efficiency upgrades, and key decision-making factors. This engagement provided insights into the most common challenges faced by landlords, such as upfront cost concerns and difficulties in finding reliable installers.

We have tracked user interactions during the Pilot Phase, measuring metrics such as drop-off rates, time spent on the platform, and engagement with various features. This data has allowed us to refine our service offerings, ensuring that the platform remains user-friendly and provides clear value to all users. Some of the enhancements that were made in response to these user observations included:

- Improved User Journey and Navigation – Analysis of drop-off rates revealed areas where users struggled to progress through key steps. We redesigned elements of the user interface to streamline navigation, added tooltips for complex terms, and introduced progress indicators to enhance clarity and engagement.
- Seamless Communication Tools – Feedback indicated that landlords and installers often faced delays due to inefficient communication. We introduced an in-platform messaging system with document-sharing capabilities, enabling faster, more transparent discussions between landlords, brokers, and installers.
- Mobile-Friendly Enhancements – With increasing demand for mobile access, we optimised the platform for smartphones and tablets, ensuring users could engage with services easily on the go.

We also conducted user testing sessions with our digital platform, allowing participants to navigate the system and provide real-time feedback on usability, functionality, and areas for improvement. This iterative approach ensured that our user interface and user experience designs were optimised for clarity and ease of use.

We also undertook engagement with lenders and industry experts allowing us to validate our business model, ensuring that the platform aligns with broader market trends and financial sector expectations. By incorporating this feedback, we were able to refine our value proposition and partnership approach, making our service more attractive to potential collaborators.

13.2 Meeting Customer Needs and Expectations

During the Pilot Phase, eco-Landlord performed well in addressing key customer needs and expectations, particularly in providing a streamlined solution for landlords looking to navigate the complexities of property retrofitting. The platform successfully brought together essential elements (portfolio insights, property assessments, financing options, and access to accredited installers) which were previously fragmented and difficult for landlords to manage independently. Feedback from users indicated that the service was particularly valued for its clarity, ease of use, and the integrated financing and installer components.

However, while the service met many expectations, some challenges and areas for improvement emerged. One key issue was the installer network, where availability and engagement levels varied regionally. This variation can be attributed to several factors, including differences in the concentration of qualified retrofit installers, regional demand for energy efficiency upgrades, and the

extent of local authority or government incentives supporting retrofitting efforts. In some areas, a higher number of active installers meant quicker response times and greater engagement, whereas in regions with fewer accredited professionals, we faced delays and limited options. Additionally, variations in market awareness and installer business models played a role. Installers in regions with strong demand may have been more proactive in engaging with the platform, while those in lower-demand areas may have been less incentivised to participate. Addressing these regional disparities will require targeted installer recruitment, increased awareness campaigns, and potential collaborations with local authorities to ensure a more consistent level of service across all areas.

Additionally, some landlords required more guidance on the financial implications of not retrofitting (particularly if this would result in penalties/fines under new regulation). This highlighted a need for more educational resources within the platform to support informed decision-making. However, this is not possible until government regulations have been updated (at the date of writing this is currently under public consultation).

Among the market segments we targeted, medium and large portfolio landlords showed the most immediate interest and engagement with the platform. Larger landlords were more commercially motivated, recognising the long-term financial and regulatory benefits of upgrading multiple properties to higher EPC standards.

Mortgage brokers also emerged as a highly engaged segment, as they saw the platform as an opportunity to add value to their clients by bundling retrofit recommendations with mortgage products. Their existing relationships with landlords made them a key channel for driving adoption, reinforcing our view that broker partnerships will be an essential part of scaling the service.

In contrast, smaller, individual landlords were generally more hesitant. Many were still uncertain about future government regulations, which made them reluctant to commit to retrofitting. Concerns over upfront costs and disruption to tenants were more pronounced in this segment, suggesting a need for stronger financial incentives or policy clarity to drive adoption among smaller landlords.

Overall, the pilot demonstrated that while the platform effectively met the needs of engaged, financially prepared landlords, more work is needed to build confidence and reduce barriers for smaller landlords who are less familiar with the retrofit process. By refining our education and installer engagement, we can further improve adoption rates and enhance the platform's value across all landlord segments.

13.3 Encouraging the Installation of Low Carbon Measures

Due to the majority of landlords taking a 'wait-and-see' approach whilst government regulation is finalised, we did not have the opportunity to take landlords through the entire user journey. We had very strong engagement in the early parts of the customer journey, with landlords importing their portfolio, gaining insights into the energy efficiency of their properties, building retrofit packages, and obtaining finance and installation quotes. However, feedback suggests many users utilised this functionality to understand the potential future investment requirement whilst government policy is established. Without clarity in government policy and regulation, landlords are reluctant to take tangible steps to improve the energy efficiency of their properties.

Despite this, we have gained positive feedback from landlords that have reported an increased understanding of how low carbon measures could impact their properties and tenants, with the increased confidence and awareness of these measures increasing the probability of them being adopted in the future.

13.4 Customer Understanding of the Value Proposition

Overall, customers demonstrated a strong interest in eco-Landlord, particularly appreciating its ability to simplify the complex process of retrofitting rental properties, including the sourcing of appropriate finance. However, the depth of understanding around the full value proposition varied among different user groups. Larger portfolio landlords and mortgage brokers grasped the benefits quickly, recognising the time-saving and financial advantages of having a single platform to access property intelligence, retrofit plans, financing, and installers. In contrast, smaller non-professional landlords were more hesitant, requiring additional education on how retrofitting could increase property value, lower tenant energy costs, and improve compliance with future regulations. Whilst this suggests a need to cater for two different user personas, we believe eco-Landlord has been effectively developed to achieve this. One method for achieving this is the use of 'tool tips' within the system to enable users who have lesser knowledge or understanding to obtain more information and support, whilst not overwhelming more knowledgeable users with unnecessary information.

One of the most significant drivers of customer engagement was the platform's ability to rapidly populate their property portfolio. Landlords, particularly those with multiple properties, found value in the integration of mortgage and grant finance options, which reduced the friction typically associated with funding retrofit projects. Mortgage brokers were also highly engaged, as the platform offered them a new way to provide value to their clients, by linking financing with low carbon property improvements.

Specific features and benefits stood out as particularly valuable to users:

- Centralised Retrofit Journey – Customers appreciated that the platform acted as a one-stop solution, reducing the time and effort needed to navigate different financing, installer, and compliance requirements. The convenience of having everything in one place was a major selling point.
- Access to Installers – Landlords valued the ability to connect with accredited retrofit professionals, as many had previously struggled to find reliable installers on their own. The platform's vetting process reassured them of quality workmanship and compliance with regulations.
- Funding Insights and Support – The ability to explore mortgage products and grant options within the platform was a major advantage, particularly for landlords who had previously been unaware of available funding options.

Beyond platform features, several external and psychological factors played a role in customers' decision-making:

- Regulatory Uncertainty – Landlords who anticipated stricter EPC regulations in the near future were more inclined to engage with the service, as they wanted to future-proof their properties. Those who believed policy enforcement would be weak or delayed were less motivated to act.
- Cost vs. Return on Investment Perception – Landlords who clearly understood the financial benefits of retrofitting (such as increased property value and long-term savings) were more likely to commit. However, those with short-term financial concerns needed more reassurance about affordable financing options.
- Tenant Demand – Some landlords who had tenants requesting lower energy bills or improved property conditions were more motivated to engage with the service.

13.5 Lessons Learnt from Customer Pain Points

The pain points experienced by customers during the Pilot Phase have provided valuable insights into the challenges of accessing and financing retrofits. Understanding these barriers to engagement has allowed us to refine both our service design and the wider approach to green finance products, ensuring they better align with the needs of landlords, mortgage brokers, and retrofit installers.

One of the most significant pain points was the complexity of navigating retrofit financing. Many landlords struggled to understand what financial products were available, how they differed, and which options best suited their properties and investment goals. Some were unaware of green mortgage products, while others found mortgage and grant eligibility criteria restrictive or unclear. This highlights a need for simplified, transparent financial education and clearer guidance on financing pathways.

Regulatory uncertainty was also a major barrier. Many landlords are delaying action due to pending confirmation of future government policies on EPC ratings, anticipating potential changes that might alter financial viability. This uncertainty made many reluctant to invest in retrofits now, preferring to wait for clearer guidance. The lesson here is that green finance products need to be aligned with evolving regulations (e.g., green mortgage or grant eligibility criteria aligned with the regulatory requirements for EPC ratings).

14 Integration of government grants

We have built the capability within our solution to hold key grant information, including eligibility criteria (Figure 5 and Figure 6). This data is then presented to the landlord via a simple assessment. The result is that we can display which grants are potentially available to that property (or its occupants).

This design has avoided the need to signpost landlords out to other websites and keeps them within a single user journey.

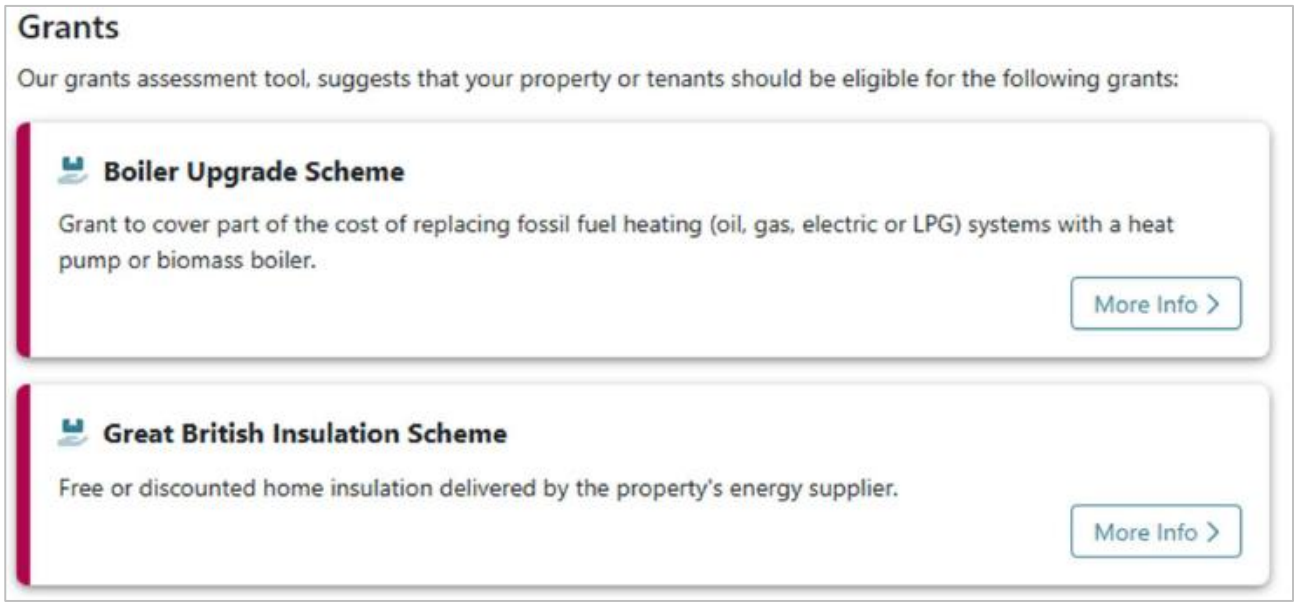

Figure 5: Screenshot of grant eligibility function

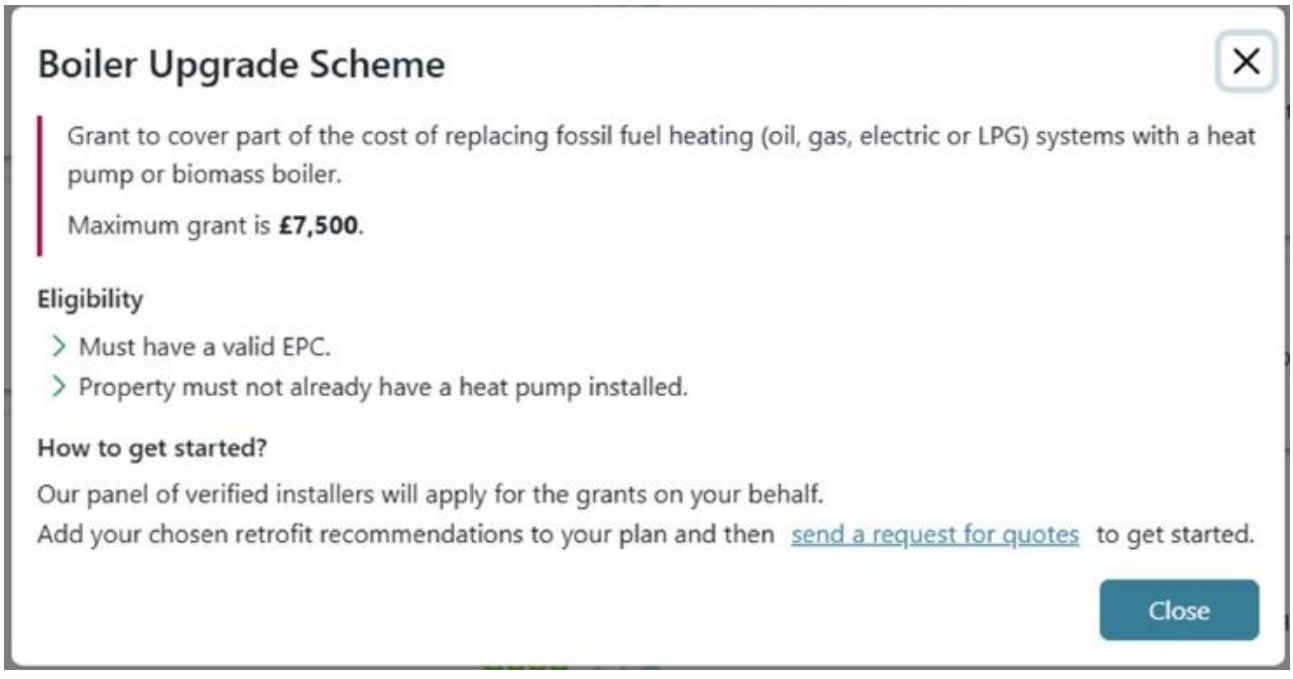

Figure 6: Screenshot of grant information pop-out.

Delivering a digital solution that combines energy performance data, property data, financing and grants required us to curate this data into a set of fully related datasets.

The availability of grant information is challenging for two main reasons:

1. Grant funding can come from central government and local authorities, making the provision of a single digital solution that covers the UK complex and costly to maintain a bespoke dataset.

2. Even when eligibility criteria are kept simple, there seems to be special cases and exceptions that evolve over time. Certain grants are automatically available in specific low-income postcode areas, while in others, they may be subject to additional criteria. Each Local Authority is also responsible for distributing grants within their jurisdiction, which can lead to localised disparities and potentially hinder grant availability.

To improve this, ideally, we would want to see a digital pre-approval process for grants. This service would:

- Offer a free API integration with a simple mechanism to register for its use
- Enable uploading of any documents needed for proof of eligibility
- Automated updates where pre-approval has a delayed human sign-off stage
- Followed by a final digital grant pay-out submission process, that allows the implementation of services that remove the burden of manual paperwork that often leads to smaller installers refused to engage with offering grants to their clients.

Finally, unexpected hurdles have impacted our grant eligibility assessment functionality. One of the eligibility criteria is based on council tax band. Although there is a centrally hosted service to allow a human user to look up their property's council tax band[3], it has been designed to inhibit automated computer lookups, and no dedicated data link is available. This seemingly trivial issue prevents us from offering the most simple and accessible user experience to our landlords.

The digital services available from GOV.UK have greatly improved over recent years for human users. However, the service offered to the wider digital community who look to join-up fragmented data sources into improved value-added services could still be significantly improved.

[3] https://www.gov.uk/council-tax-bands

15 Commercial Viability

15.1 Immediate Commercial Opportunity

Throughout the Pilot Phase, we have considered potential revenue streams that we could leverage, along with how they may impact landlord (and other partner) engagement.

Our experience with the landlord community has demonstrated that they are highly price sensitive and often unwilling to pay a service/subscription charge when they can access the similar services elsewhere (even if they are disjointed and may take more time to engage with).

Therefore, our primary plan has been to offer a 'free at point of use' service to the landlords and instead generate revenue from other avenues further down the journey.

The potential revenue that we can receive from installers as part of their referred revenue stream has been modelled to show the most sustainable option. During the initial rollout, it is therefore vital that we can finance the service until installations have been completed. This does however present a commercial and cash flow risk during the first year of at-scale operation.

We have explored options to provide value added (or premium) features within the service. These include:

- the ability for landlords to book a new EPC assessment
- offering brokers with a set of advanced buy-to-let mortgage sourcing tools

We have considered a "freemium" offering to landlords where we could charge a subscription for access to more valuable features. However, we have decided not to implement this model initially as we do not want to limit the potential for landlords to complete their retrofit journeys, which is when we receive commissions from installers.

15.2 Unique Value Proposition

There is nothing else in the market that is dedicated to the unique needs of landlords and attempts to bring it together in one place. Some of the unique on-boarding capabilities, grants assessment and buy-to-let specific financing are our biggest advantage in terms of technical capability. Our experience in the buy-to-let space and our relationships with lenders and significant broker associations provides us this a unique opportunity to gain market share in this sector.

15.3 Barriers to Achieving Scale

15.3.1 Availability of Installers

As discussed previously, the onboarding of sufficient installers is a key concern as they are our primary revenue source to achieve long term sustainability. Even if landlords are willing to retrofit their properties and have secured financing, a shortage of installers creates a bottleneck in project execution. Without enough accredited professionals to carry out energy efficiency improvements, projects are delayed or abandoned, reducing the effectiveness and sustainability of the eco-Landlord offering.

With few installers available, there is a risk that unqualified or inexperienced contractors may enter the market, leading to poor-quality work. This may result in customer dissatisfaction, reputational damage if not managed carefully, making it harder to scale successfully.

Retrofit installer shortages are more severe in rural and less populated areas, leading to regional disparities in service availability. Therefore, eco-Landlord may struggle to scale nationwide if it cannot provide coverage across all locations, reducing the inclusivity and impact of the platform. Despite this, properties owned by landlords tend to be in more urban, populated areas, which will enable us to service most of the sector.

15.3.2 Government Policy

The need for consistent government policy in the buy-to-let sector is currently preventing many landlords from retrofitting their properties to achieve higher EPC ratings. Without strong regulations, financial incentives, and long-term certainty, landlords have little motivation or support to invest in energy efficiency improvements. This delay in retrofitting slows progress towards the UK's net-zero targets and leaves many tenants living in inefficient, high-cost homes.

One of the biggest barriers is policy uncertainty and reversals. The UK government previously proposed requiring all new rental agreements to meet EPC C by 2025 and all existing rentals by 2028. However, delays and policy reversals have left landlords uncertain about whether they need to act at all. Without firm deadlines or enforcement mechanisms, many landlords are choosing to wait and see, rather than investing in energy efficiency upgrades that may not become mandatory. The public consultation (Improving the Energy Performance of Privately Rented Homes) released in February 2025 does provide some needed clarity on these regulations.

Another major issue is the lack of financial incentives for landlords. Unlike homeowners, landlords do not benefit directly from lower energy bills, making the return on investment for retrofits less attractive. While some government grants and schemes exist, they are often complex, inconsistent, or exclude landlords entirely. Without tax incentives, green loans, or subsidies specifically designed for the private rental sector, the high upfront costs of retrofits remain a deterrent for many property owners.

The absence of green finance requirements in the mortgage market is also slowing down progress. Many lenders continue to provide buy-to-let mortgages without considering EPC ratings, meaning landlords face no financial pressure to improve the efficiency of their properties. If mortgage providers were incentivised or mandated to offer better rates for energy-efficient homes or refuse loans for poorly performing properties, landlords would have a stronger reason to invest in retrofits. However, without government intervention, the financial sector has made limited progress in pushing for greener rental homes.

Regional disparities also pose challenges. Many older buy-to-let properties, particularly in northern cities and rural areas (where property prices can also be lower), require significant upgrades such as solid wall insulation or low-carbon heating, which can be expensive and complex to install. A one-size-fits-all policy does not account for these variations, and without targeted funding or location-specific support, landlords in these areas are likely to struggle with retrofitting.

Finally, the lack of a long-term strategy for the private rental sector in the UK's net-zero plans is a fundamental issue. While social housing and homeowners have received more attention in government policies, the private rental sector remains largely overlooked. Without a comprehensive roadmap, landlords lack the confidence to invest in retrofits, fearing further policy shifts that could increase their costs or change compliance requirements. The absence of strong penalties for inefficient properties or meaningful incentives for early adopters means that many landlords see no reason to act now.

15.3.3 Cost of Customer Acquisition

As a digital-first service, we benefit from relatively low overhead costs, allowing us to scale efficiently as market demand increases in the coming years. However, acquiring customers in a new and evolving market presents unique challenges, particularly when traditional digital advertising strategies may not yield the expected return on investment.

Customer acquisition is a critical factor in bringing any new service to market, and our early experiences suggest that digital advertising alone may not be the most effective route - whether due to market readiness, targeting inefficiencies, or broader landlord engagement challenges. While digital channels remain valuable for brand awareness, the cost-per-acquisition appears high at this

stage. Instead, we believe that leveraging our broker partnerships presents a more cost-effective and scalable strategy to reach a wider landlord audience with minimal operational expenditure. Brokers already have trusted relationships with landlords, and by integrating our offering into their existing services, we can position ourselves within an established network, reducing direct acquisition costs.

Additionally, we see significant revenue potential through partnerships with mortgage lenders. Our ability to deliver bespoke white-labelled or co-branded versions of the eco-Landlord portal represents an opportunity to embed our solution within lenders' ecosystems, driving adoption at scale. Early discussions have generated strong interest, but we recognise that securing these partnerships will require time, effort, and sustained engagement to align with lenders' strategic priorities.

In the long term, we aim to refine our multi-channel acquisition strategy, combining strategic partnerships, industry collaborations, and targeted outreach to ensure cost-efficient growth. As the regulatory landscape evolves and market awareness increases, our ability to scale will be strengthened by these foundational efforts.

15.4 Impact of the Green Home Finance Accelerator Programme

The Green Home Finance Accelerator (GHFA) programme has been instrumental in accelerating the development and commercial viability of eco-Landlord offering. By providing funding and strategic support, GHFA has enabled us to refine our business model, develop our digital platform, and pilot the solution with key stakeholders in the buy-to-let, retrofit and finance sectors. This backing has allowed us to focus on both the technical development of our solution and the market validation needed to ensure long-term success.

One of the key impacts of GHFA funding has been the ability to de-risk early-stage development. Without this support, the high upfront costs of creating a comprehensive digital solution - including technology development, user research, and pilot testing - could have slowed our progress significantly. GHFA funding has allowed us to build a robust solution, test our assumptions with real users, and iterate based on feedback, ensuring that our platform is fit for purpose before full-scale commercial launch.

The funding has also played a crucial role in facilitating partnerships with lenders, brokers, and installers. By demonstrating financial backing from GHFA, we have been able to enhance our credibility within the industry, making it easier to engage potential partners and secure discussions with key players. This has helped us lay the groundwork for future revenue streams.

Furthermore, GHFA support has enabled us to refine our customer acquisition strategy. Early testing has shown that direct-to-landlord digital marketing may not be the most effective route, so we have pivoted towards broker-led and lender-integrated models, which offer greater scalability with lower acquisition costs. The GHFA funding has allowed us to experiment with different engagement strategies to find the most commercially viable approach.

16 Final reflections

16.1 Key Insights

This report highlights many key learnings and insights, however, the top three insights can be summarised as:

1. Due to a lack of regulatory and/or financial incentives, landlords are not sufficiently motivated to take action to improve the energy efficiency of their properties (see 15.3.2 for more details)
2. There is a shortage of installers in the UK and established installers are prioritising the larger grant funded programmes (e.g. SHDF) where the cost of customer acquisition is low, and profit margins are higher and more predictable (see section 9 for more details).
3. The lack of availability and accessibility of key data within government agencies/bodies, as well as the inconsistency across devolved nations, is acting as a barrier to the development and deployment of digital solutions (see section 4 for more details).

16.2 Learning from Hindsight

In hindsight, the challenges associated with recruiting and onboarding installers were significantly greater than we had initially anticipated. Despite recognising the importance of a strong installer network from the outset, the complexity of engaging this group - due to factors such as industry-wide shortages and installer hesitancy to operate in the able-to-pay market - proved to be a much larger barrier than expected.

A key issue was that many qualified installers are already in high demand, leading to reluctance in committing to new projects or platforms that require them to change their workflow or invest additional time in onboarding. Building trust within the installer community took longer than expected. Many installers were initially sceptical of a new digital platform, viewing it as an additional administrative burden rather than a tool to generate new business. Overcoming this required extensive outreach, relationship-building, and demonstrating clear value propositions to installers, which in turn delayed progress in fully integrating them into our solution.

If we were to repeat this project, we would have commenced installer recruitment much earlier in the process and allocated greater resources to managing the engagement, training, and onboarding process.

16.3 Next Steps

With the successful completion of our Pilot Phase, we are now focused on scaling our eco-Landlord offering to ensure widespread adoption among landlords, mortgage brokers, lenders, and installers. The next steps involve refining our platform, expanding our partnerships, enhancing customer acquisition, and securing long-term financial sustainability. This will include:

1. Expanding Partnerships with Lenders and Brokers

A key strategy for growth is deepening our collaboration with mortgage lenders and brokers, who act as a gateway to a large landlord audience. Our next steps include:

- Finalising white-labelled/co-branded platform agreements with mortgage lenders to integrate our solution into their customer offerings.
- Scaling our broker engagement strategy, ensuring brokers understand the benefits of the platform and are incentivised to refer landlords.
- Developing a standardised process for lender integration, making it seamless for financial institutions to embed our services into their existing mortgage products.

2. Strengthening the Installer Network

To ensure retrofits can be delivered at scale, we need a robust network of accredited installers. The next phase will involve:

- Continuing targeted recruitment campaigns to onboard more installers, particularly in high-demand regions.
- Refining our installer engagement strategy, offering training, support, and incentives to encourage participation.
- Streamlining the lead allocation system, ensuring that installers receive high-quality project leads efficiently.

3. Scaling Customer Acquisition and Marketing

Now that the platform is ready for wider adoption, we focus on customer acquisition through multiple channels:

- Leveraging lender and broker networks to reach landlords at key decision-making points.
- Implementing digital marketing campaigns, including search engine optimization (SEO), paid ads, and content marketing, to drive direct engagement.
- Building credibility through case studies and success stories, demonstrating the impact of retrofits and the ease of using our platform.

As we move forward, the ultimate goal is to create a sustainable and scalable solution that benefits all stakeholders—landlords, brokers, lenders, and installers—by making property retrofitting more accessible, efficient, and financially viable. By expanding our partnerships, strengthening our installer network, and refining our customer acquisition strategies, we aim to address regional challenges, streamline processes, and ensure that eco-Landlord becomes a trusted platform for driving energy-efficient upgrades across the UK. With a focus on continuous improvement and responsiveness to user needs, we are confident that our next phase of growth will drive significant impact in the market, fostering greater adoption of green finance solutions and contributing to the wider goal of building a more sustainable housing sector.