

THE GREEN SCREEN

Identifying Urban Land for Development
through the Lens of Climate and
Biodiversity Interventions

Build Better, Use Less [White Paper 4]
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The Green Screen:

Introduction

Sustainability and decarbonisation of the built environment has become a critical consideration in the construction and design industry as the sector grapples with its significant contribution to the climate and biodiversity crisis.

As a forward-thinking and responsible real estate development company, Grenadier Estates recognises the urgent need for a paradigm shift in the way we develop. Our experiences tell us that we need to screen land to acquire for development differently: **The Green Screen** is our answer.

This abridged white paper discusses how we use publicly available EPC and habitat data sets to identify where we should acquire land to make the most impactful intervention. By shifting the way, we screen and identify land for development we can create more positive outcomes for areas with poor EPC ratings and nature deserts, identifying commercial opportunities in the process. If we collaborate and share better ways of doing business, we can all achieve **Sustainability by Design**.

Acknowledgements:

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SCOPE

This paper is not designed to be holistic or solve all the problems, it is designed to be a tool for action, to inspire further conversation and collaboration. It will be naïve to some and antagonistic to others. It reflects our experience, not advice. It is not a critique of the suppliers and professionals we have used.

We are happy for others to use and share this document and the ideas within it provided they acknowledge Grenadier Estates.

Current Context

Traditional housing developers typically acquire land based on a combination of market demand, financial feasibility, and regulatory frameworks. The process often begins with identifying areas designated for development in local urban plans, which serve as a guide for potential building sites. Developers then assess the market demand, considering factors like proximity to urban centres, transportation links, and local amenities, which influence the potential saleability and profitability of the development.

Financial considerations play a significant role in land acquisition. Developers seek sites where the cost of acquisition and development aligns with their expected returns, factoring in the expenses of construction, infrastructure development, and compliance with regulatory standards. In many cases, developers engage in competitive bidding for desirable land parcels, especially in areas with high housing demand.

Environmental assessments may be conducted, but, [Biodiversity Net Gain](#) calculations aside, these are typically focused on ensuring that the development does not breach local environmental regulations, rather than proactively seeking to improve environmental conditions.

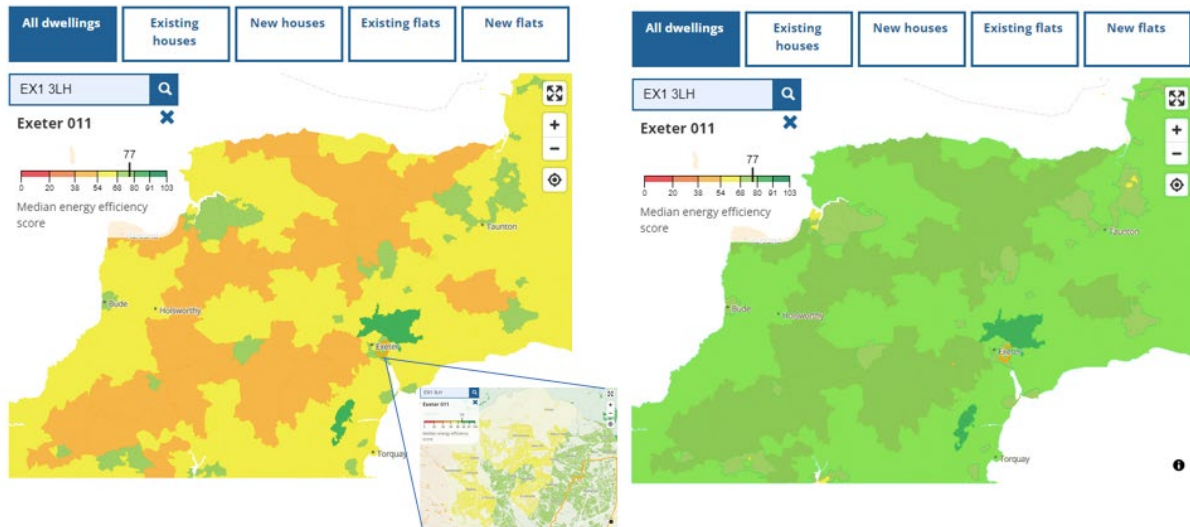
In summary, the current approach to land acquisition for housing development is predominantly driven by economic and regulatory considerations, with a primary focus on the viability and profitability of the project, while compliance with environmental standards is more of a requisite hurdle than a central objective of the development. We believe if you flip the starting point, you can achieve impact and profitability.

Grenadier's Green Screen

"The Green Screen" approach proposes using habitat deserts and areas of poor EPC ratings as primary criteria for identifying land for development. This method flips traditional land acquisition on its head, prioritising sites where development can make the most significant environmental impact.

Visual tools are crucial in understanding and communicating the environmental impact of development. This approach utilises data from Natural England

Habitat Data and the ONS's dwelling energy performance data. Maps illustrating habitat deserts and building energy efficiency provide a clear picture of potential development impacts.



This approach seeks to balance the urgent need for housing with environmental sustainability. By focusing development in areas with poor energy efficiency and low biodiversity, we can transform these "orange" zones into "green" ones, contributing positively to both the housing crisis and environmental goals. Ultimately this will add value to communities, to properties in them and the reputation of developers.

Using GIS data allows us to visualise and demonstrate the sustainability of development projects at scale as a collective development community.

Implementing Our Solution

The best solutions require collaboration, and we have learned that working with other developers is an important principle that allows change to happen at scale. To make this a reality we believe 2 tools need to be developed:

- 1) An open-source GIS tool that allows developers to assess the potential positive impact of their projects on biodiversity and energy efficiency. This approach encourages targeted interventions in development, aligning with the UK Climate Change Committee's recommendation of EPC C as a median pathway for a Net Zero transition.

- 2) A platform that enables collaboration among developers in urban areas to enhance nature connectivity. By working together, developers can coordinate their plans to create a network of habitats and corridors that allow for wildlife movement and natural growth, even in densely built areas.

The Positive Impacts of Green Screening

1. **Environmental Sustainability:** By prioritising land in habitat deserts and with low energy efficiency, this approach directly contributes to improving biodiversity and energy efficiency, aligning with global environmental goals.
2. **Commercial Opportunity:** It is easier to achieve biodiversity net gain in habitat deserts, which in turn could save the cost of buying Net Gain Units and potentially create a surplus for re-sale.
3. **Community Benefits:** Developments that focus on sustainability offer long-term benefits to residents, including lower energy costs and enhanced local ecosystems. This will provide a legacy of value for the community and house builder.
4. **Data-Driven Decision Making:** Utilising comprehensive datasets allows for more informed and impactful development decisions before land is acquired or a bidding process is undertaken.
5. **Innovation in Land Acquisition:** Flipping traditional land acquisition methods to focus on environmental impact represents an innovative step towards sustainable development. This will inspire others to think differently and use commercial tools to further this approach.
6. **Open Collaboration:** The proposal for an open-source GIS tool fosters collaboration among developers, environmentalists, and policymakers, encouraging a collective effort towards sustainable development.

Expanding the GIS Layers for a Comprehensive Environmental Assessment

In addition to habitat and energy efficiency data, incorporating additional Geographic Information System (GIS) layers can further refine and enhance the effectiveness of "The Green Screen" approach. These layers could include:

1. **Water Risk Assessment:** Integrating data on flood risks, water scarcity, and water quality can help identify areas where development could either mitigate or exacerbate water-related issues.
2. **Heat Susceptibility:** As climate change leads to increased temperatures, identifying areas particularly susceptible to heatwaves can guide the development of cooler, greener, and more resilient urban spaces.
3. **Air Quality Indices:** Including data on local air pollution levels can ensure developments contribute positively to the air quality, or at least do not exacerbate existing conditions.
4. **Soil Quality and Stability:** Assessing the soil's ability to support development without causing environmental degradation is crucial, particularly in areas prone to erosion or land degradation.
5. **Ecological Connectivity:** Adding layers that map ecological networks can aid in planning developments that enhance or, at the very least, do not disrupt wildlife corridors and biodiversity hotspots.

Conclusion

In conclusion, Grenadier Estates believes through collaboration and looking at land acquisition from a different perspective, developers can transform urban landscapes into interconnected networks of nature, enhancing biodiversity, improving the quality of life for residents, and contributing to the resilience of urban ecosystems against the backdrop of climate change and environmental degradation. That can be our legacy as an industry, and this is **Sustainability by Design**.