

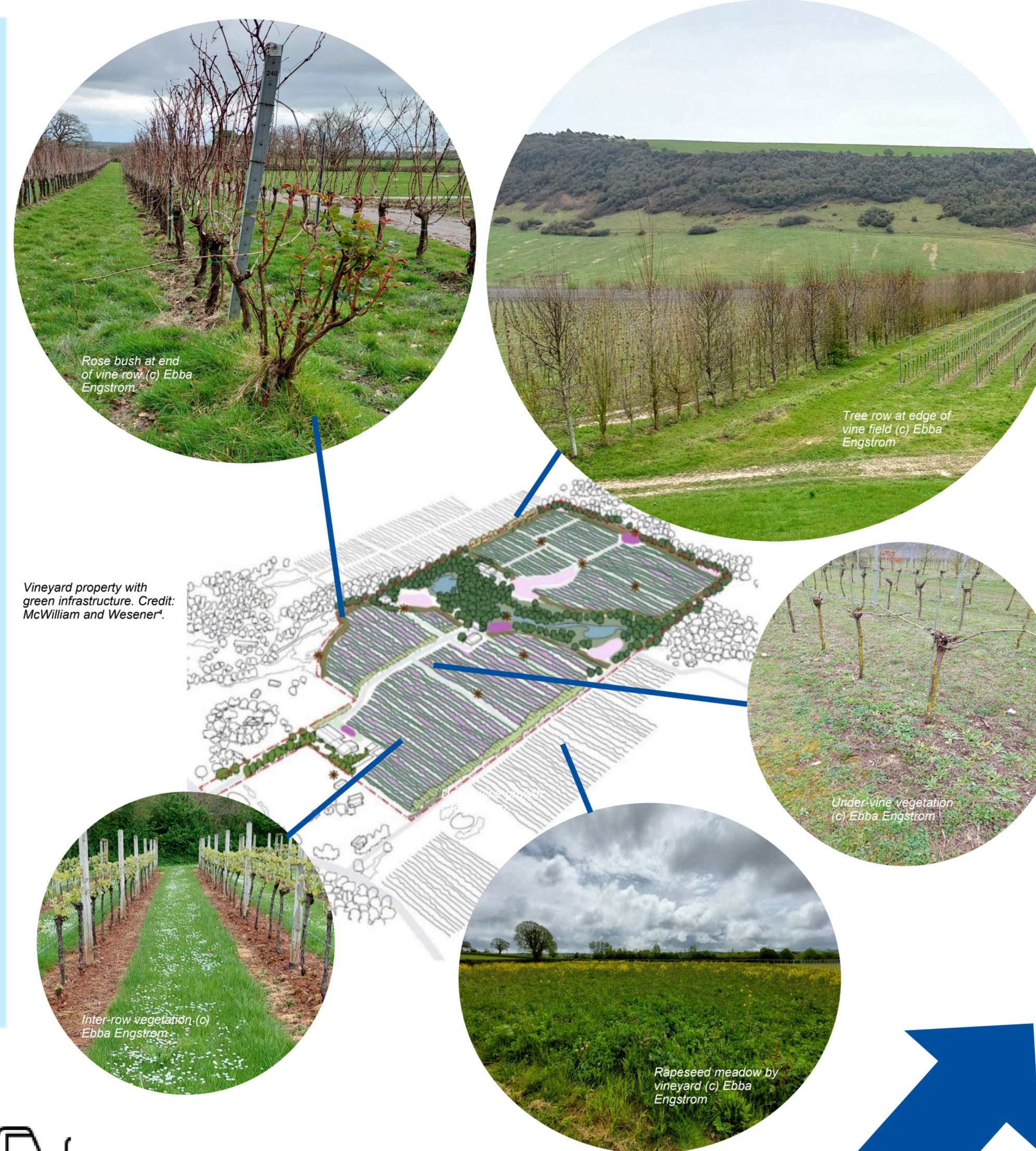
## 1. Background

### The UK context

- As of 2019, the wine and viticultural industry was the fastest growing agricultural sector in the UK<sup>1</sup>.
- There is a need to ensure sustainability in viticulture in the UK as viticultural systems are traditionally intensively managed<sup>2</sup>.
- At the same time, the UK government is aiming to promote the development and expansion of natural and semi-natural environments in rural settings<sup>3</sup>.

### Green infrastructure in viticulture

- Green (or ecological) infrastructure<sup>4</sup> offers solutions for both a more sustainable viticultural sector and the development of semi-natural and natural environments in the UK.
- In the viticultural context McWilliam and Wesener<sup>4</sup> define green infrastructure as, “**multi-spatial scaled networks of natural, semi-natural or human-constructed/planted areas of non-vine vegetation, water elements, and other structures (e.g., nesting boxes), that provide key ecosystem services to winegrowers, communities, and markets.**”
- The concept encompasses structures such as **cover crops, hedgerows, woodlands, and ponds**<sup>4</sup>.
- Green infrastructural components have been described to provide **sustainability benefits** including in the form of pollination and biological control<sup>5</sup>, improved soil structure<sup>4</sup>, and erosion control<sup>4</sup>.



## 2. Problem Statement

In viticultural research there is still a need to explore:

- What green infrastructure is implemented in the UK and why.**
- To expand on the **multi-dimensional sustainability<sup>6</sup> impacts of the management methods and operations** that are used in vineyards intentionally or as a consequence of the **green infrastructure.**
- To explore the **experience of these methods and operations** in an environment with green infrastructure.

Management, operations, and experiences

Sustainability impacts

## 3. Aims, Objectives, and Research stages

### Aim I

To understand what green infrastructure is implemented in UK vineyards and how these are managed

### Objective I

Collection of empirical evidence from different UK vineyards of the **types of green infrastructure implemented and managed** – and benefits and challenges associated with these

### Systematic Map

### Research Stage I

**Walking interviews** in UK vineyards

### Aim II

To understand the environmental and economic impacts from vineyard management activities and operations associated with green infrastructure in the UK

### Objective II

Assessment of **economic and environmental impact** from the change or potential change in management activities and operations associated with the integration or development of green infrastructure in UK vineyards

### Research Stage II

**Case study approach** – with life cycle assessment (LCA) and economic analysis (**cost**)

### Aim III

To understand vineyard workers' experiences of green infrastructure in the UK

### Objective III

Study of how **vineyard workers' tasks and work environments** are affected by green infrastructure in UK vineyards under varying management contexts

### Research Stage III

**Exploratory mixed-methods approach** using interviews and a survey

## 4. Project Implications

This project will be relevant for:

- industry actors**, by providing further understanding of opportunities and impacts
- policy-makers**, by providing indications of where financial and political support is needed
- academically**, expanding on viticultural research

