Rural Landscapes: Transformation and Governance

UNIVERSITY OF COPENHAGEN

Lucy Dunshea
ID: fzg264

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WHY UNDERSTAND LANDSCAPES?

Landscapes are a fundamental part of Earth, serving as records of the interaction between the natural and cultural phenomena that shape our world. As the pressures of industrial growth, urbanisation, and climate change continue to intensify, the importance of protecting landscapes has never been greater. However, with global tensions deepening between the sustainability agenda and the open market agenda (Primdahl & Swaffield, 2010) there is an inherent dilemma in identifying which landscapes require protection and how to balance their ecological, cultural, and social functions.

The concept of landscape has varying meanings within literature. Jones and Stenseke (2011) discuss just three conceptualisations of landscape as polity, scenery, and morphology, emphasizing the breadth of thought that has emerged surrounding landscapes. Acknowledging this wide range is important, however in practice, a definition of landscape that promotes landscape protection, management, and planning while also managing conflicts between stakeholders is most relevant for management professionals to understand.

"an area, perceived by people, whose character is the result of the action and interaction of natural and/or human factors."

- Council of Europe

The European Landscape Convention (ELC) defines landscape as "an area, perceived by people, whose character is the result of the action and interaction of natural and/or human factors" (Council of Europe, 2000). The ELC recognizes that 'landscape' encapsulates not just exceptional, scenic environments, but also ordinary and everyday settings, whether they be rural or urban. While the broad nature of this definition must be acknowledged, a clear theme is that the value of landscape is seen from the perspective of humans. This is especially relevant in current times, as it is human activity – either directly or indirectly – that has the most impact on landscapes.

Deliverable One:

Understanding Landscapes

Word Count: 1553

LANDSCAPE CHARACTER ASSESSMENT

The methods which have emerged to evaluate and understand landscapes have been plentiful, adapting as the needs of both humans and the environment evolve. However, one method dominates the landscape characterization process. Landscape Character Assessment (or LCA hereafter) is a well-established approach used extensively in land use planning, particularly in the UK and Scotland (Swanwick, 2002). The process, visualized in figure 1.2, is broken into three stages – defining the scope, mapping, and making judgements. By separating characterization from judgment, LCA identifies what makes landscapes different rather than ranking them as better or worse. It is intended to manage the conflicts which can emerge when making decisions based on landscapes, due to the differing policy agendas which often materialise at the local landscape level (figure 1.1).

LCA identifies features that produce an area's 'sense of place' – a human-place connection formed with specific environments, based on its unique features (Edwards, 2019). As 'sense of place' is an abstract concept, the LCA method allows the use of both objectivity and subjectivity. LCA's advantages also include scalability and adaptability to varying resources while adhering to a consistent framework.

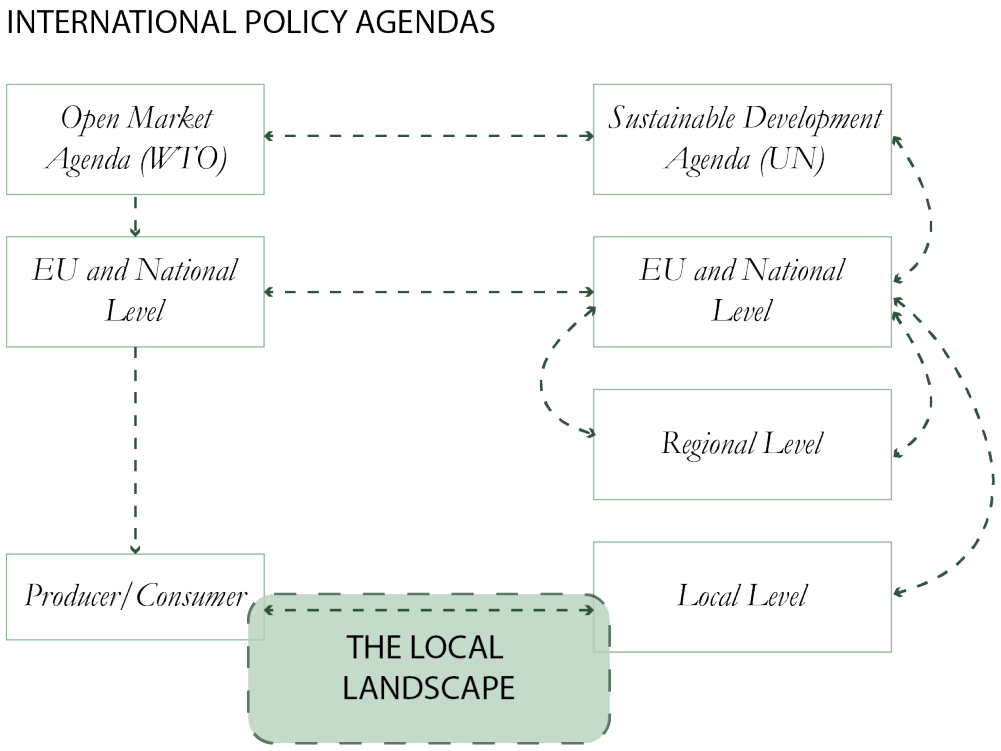


Figure 1.1 International Policy Agendas which impact decision-making at the local agricultural landscape

THE LCA METHOD

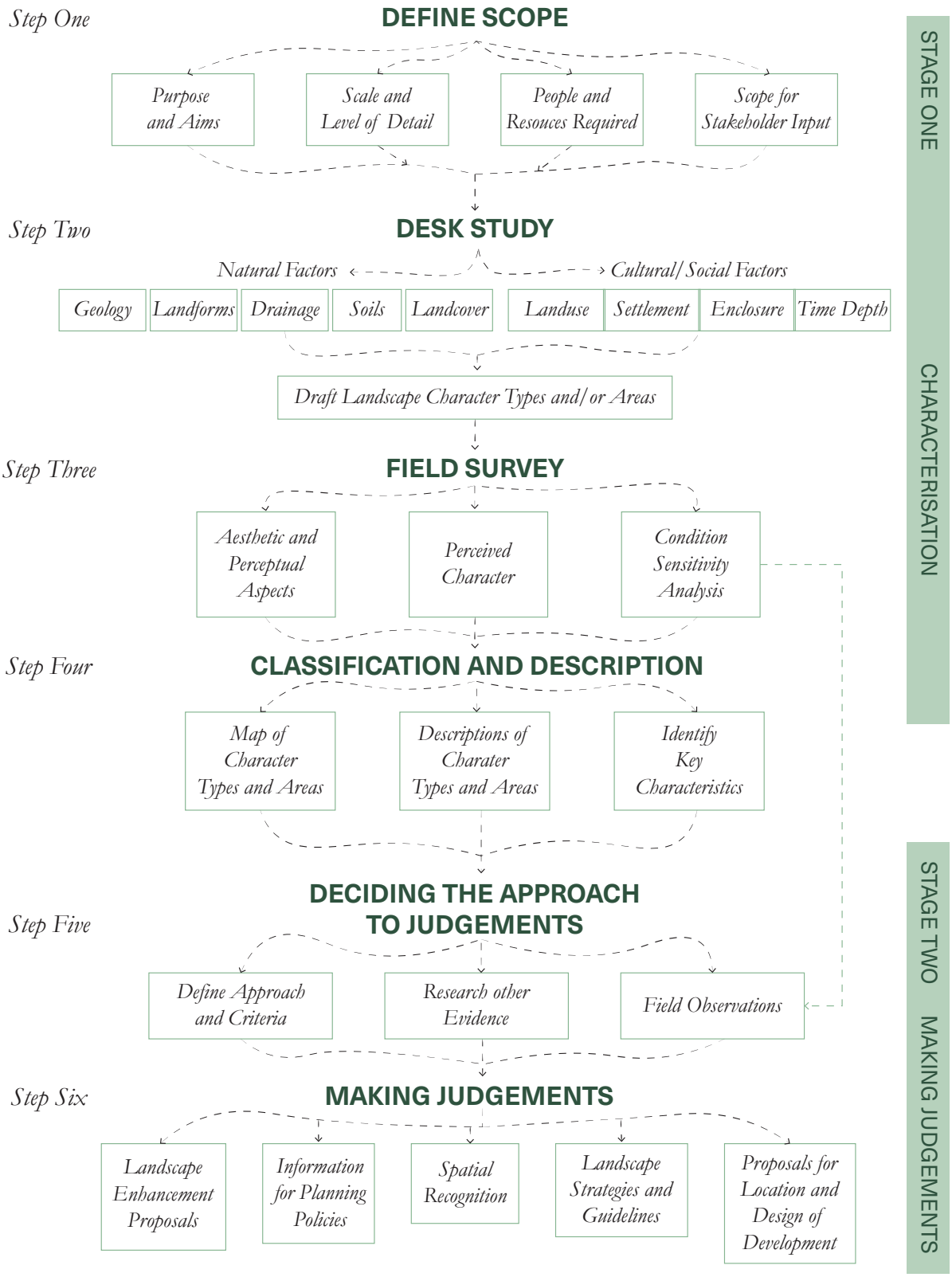


Figure 1.2 The Landscape Character Assessment method

CONTINGENT VALUATION

The effectiveness of contingent valuation (CV) is discussed by Clark et al (2000). CV is a stated preference approach emerging from economics in which respondents are asked directly about their willingness to pay (or willingness to accept compensation) for a hypothetical change in public goods (Clark et al, 2000, figure 1.3). In the case of landscape valuation, the natural environment is this public good. Landscape assessments that use CV as an approach typically create and conduct a survey which is directed towards the residents of a landscape.

In theory, the data from a CV assessment is representative of the value of the landscape. The reduction of value into monetary terms is seen as helpful through an economist's lens, as it means less time and resources are spent in the process (Clark et al, 2000). The dollar amount is also viewed as easily communicable to the general population, because of its presence in most aspects of modern life.

CV's simplicity is its limitation as a sole method for evaluating landscapes. Reducing landscape values to monetary terms can risk ignoring cultural, emotional, and ecological values, especially when the figures are used by groups or individuals with no connection to the landscape. Clark et al. (2000) note that CV often treats respondents as consumers rather than individuals with diverse connections to the landscape. This reductionist approach risks oversimplifying complex interactions and undermines the method's validity as a valuation tool.

The framing of the survey can further manipulate its results. A property developer may frame the survey through recreational or economic prospects, whereas an environmental NGO may provide the respondent with information on ecological services or threats to the area. It is likely that these different framings would result in the respondent presenting a different figure as their final answer.

Despite these challenges, CV can act as a starting point for discussions about the value of landscapes, encouraging stakeholders to articulate their preferences

WTP*

***Willingness To Pay.** *The maximum amount of income an individual or household is prepared to give up to obtain more of another good (by keeping utility constant).*

WTA*

***Willingness To Accept.** *the minimum monetary amount that a person is willing to accept to sell a good or service, or to bear a negative externality, such as pollution.*

Figure 1.3 The definitions of a Willingess to Pay vs a Willingness to Accept

and priorities. For example, in the Clark et al. study, the process of economic valuation fostered community cohesion by bringing residents together to discuss their perspectives. Although this can be considered a benefit, this should be done so with caution, as it is likely that this was the result of general engagement, not necessarily because of using the specific approach of CV.

The concept of landscape interfaces, as defined by Palang and Fry (2003), provides a framework for understanding the interactions and conflicts that arise when assessing landscapes. CV aligns with several key interfaces, such as expert/layperson, culture/culture, and past/future, as defined in table 1.1.

EXPERT/LAY PERSON: CV bridges the gap between experts and the public by engaging both groups in valuing landscapes. However, experts may equate the value of a landscape to the value of the sum of its components, while laypersons are more likely to consider the value of landscapes holistically.

CULTURE/CULTURE: Different cultures assign varying meanings and values to landscapes. For example, indigenous communities might value landscapes for their spiritual significance, while urban populations might focus on recreational opportunities.

PAST/FUTURE: CV highlights the tension between past and future uses of landscapes. For instance, nostalgia for traditional land use practices may conflict with forward-looking projects like afforestation, emphasizing the need for sustainable planning.

Economic valuation can supplement LCA at multiple stages, adding depth and perspective to the analysis. During desktop work, existing economic data provides baselines for monetary values. Fieldwork surveys gather public WTP data, and if stakeholder engagement is a part of the LCA, repeated surveys can track shifts in public perception as knowledge deepens. In the evaluation stage, CV quantifies trade-offs among ecological, cultural, and economic factors.

Table 1.1 The 'Landscape Interaces' as described by Palang and Fry (2003)

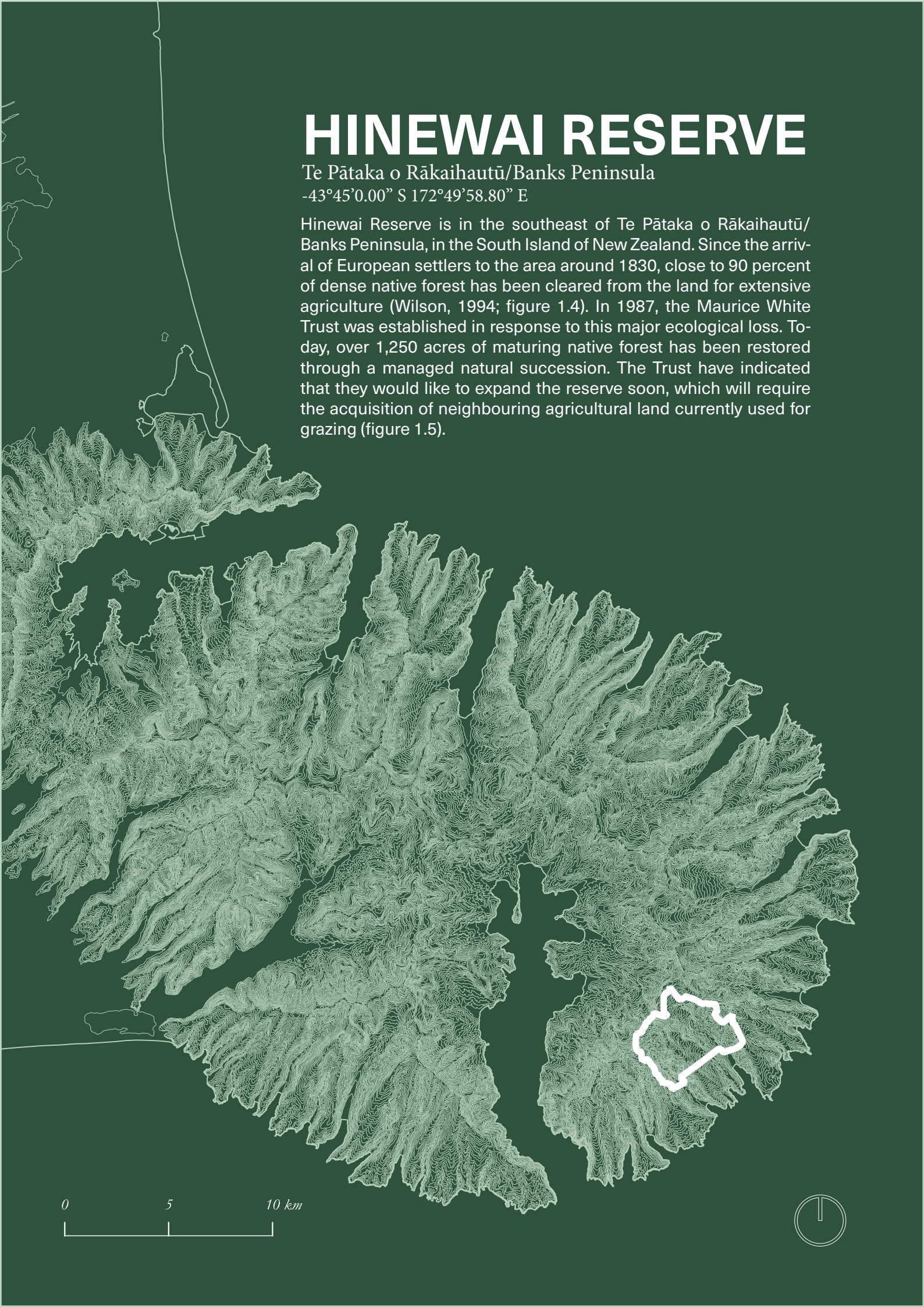
INTERFACE	DESCRIPTION
Culture/Culture	Explores diverse cultural perceptions of landscapes shaped by distinct cultural and political histories, highlighting potential conflicts and historical evolution.
Humanities/ Natural Sciences	Bridges material and non-material aspects of landscapes, integrating scientific and humanistic knowledge to understand landscape character values.
Past/Future	Examines present-day landscapes to understand historical remnants and predict future changes.
Time/Space	Views time and space in landscapes as interconnected, focusing on constant flux and the ability to steer changes contextually.
Expert/Lay Person	Balances local subjective and objective scientific knowledge in landscape planning through participatory research.
Preservation/Use	Debates preserving historical landscapes versus allowing natural evolution, prioritizing spiritual, cultural, and associative values.

HINEWAI RESERVE

Te Pātaka o Rākaihautū/Banks Peninsula

-43°45’0.00” S 172°49’58.80” E

Hinewai Reserve is in the southeast of Te Pātaka o Rākaihautū/ Banks Peninsula, in the South Island of New Zealand. Since the arrival of European settlers to the area around 1830, close to 90 percent of dense native forest has been cleared from the land for extensive agriculture (Wilson, 1994; figure 1.4). In 1987, the Maurice White Trust was established in response to this major ecological loss. Today, over 1,250 acres of maturing native forest has been restored through a managed natural succession. The Trust have indicated that they would like to expand the reserve soon, which will require the acquisition of neighbouring agricultural land currently used for grazing (figure 1.5).



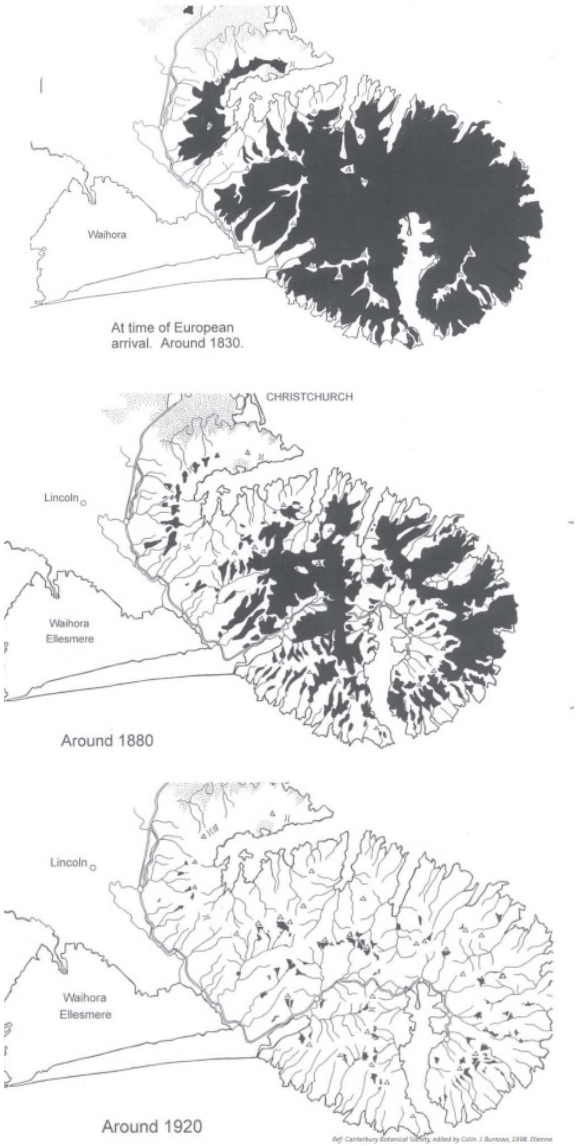


Figure 1.4 A representation of the deforestation of Banks Peninsula between 1800 and 1920. Source: Boffa Miskell

APPLICATION OF LCA AT HINEWAI

Following the framework of the LCA approach will allow for a systemic evaluation of the physical and perceptual characteristics of the landscape, ensuring that the process of afforestation is aligned with the peninsulas unique landscape features. Mapping and documenting attributes like topography, vegetation, and land use means that the LCA process will identify areas of ecological, cultural, and aesthetic significance.

To undertake a well-rounded impact assessment of expanding Hinewai Reserve, other methods could be used to supplement the overarching LCA process. This would ensure that the assessment considers the ecological, social, and economic impacts of the project over a reasonable time scale. Using both quantitative and qualitative assessment approaches would be the most effective way to achieve this goal. It is also valuable to consider which methods would provide the most valuable information, due to the limited resources often associated with environmental restoration projects.

An Ecosystems services assessment will help to identify any systems that could be disturbed or enhanced by the project. This would be helpful for informing the projects contributions to emissions reductions goals as a large carbon sequestration asset. A landscape preferences assessment would inform the aesthetic values that are associated with the landscape. The methods for undertaking a landscape preferences assessment are broad, so involving stakeholders early on to identify which areas are of most value in the landscape to them will help to reduce the resources spent on this assessment.

Top Artisitc interpretation of Akaroa Harbour by John Barr Clark Hoyte, 1875

Middle Green gecko species endemic to New Zealand are protected in Hinewai Reserve

Bottom Hikers utlilising walking tracks maintained throughout the area

Images: Maurice White Native Forest Trust

Figure 1.5 Protected land next to active farmland at Hinewai Reserve in 2007. Image: Boffa Miskell

STAKEHOLDER ENGAGEMENT

Stakeholder engagement is critical for ensuring the success and sustainability of the afforestation project. Engaging early and often allows for potential conflicts to be managed and can help to encourage more local involvement in environmental protection and restoration. A stakeholder matrix (figure 1.7) can be used to conceptualize how different groups are connected to the project, which helps to identify how to approach the engagement process. Dividing the stakeholders into communities of place and communities of interest also gives a more thorough understanding of how stakeholders can be involved in the impact assessment.

Engagement with the groups identified in figure 1.6 will ensure that the project takes a wide range of perspectives into account. Locals ensure that the project remains culturally and socially relevant, while NGOs and educational institutions bring expertise and long-term commitment. Recreational users and tourists contribute to economic sustainability, highlighting the Reserve's value as a natural and cultural asset. As the project will directly impact the adjacent grazing land, engagement with agricultural co-ops and local farmers is critical. Understanding their needs allows for the reduction of conflict and better outcomes for all parties.

In Aotearoa New Zealand, the interests of Iwi (indigenous tribes) are of vital importance in the engagement process given their deep cultural and historical connection to the land. Early engagement through hui (meetings) and collaboration on project design ensures that Te Ao Māori (the Māori worldview) is respected (Lister et al., 2022). Practices such as integrating mātauranga Māori (traditional knowledge) into forest management techniques foster cultural relevance and biodiversity.

Stakeholder engagement is a powerful way to ensure that this knowledge is clearly articulated in the value of a landscape, an important step towards fostering positive outcomes for landscapes and their communities.

Figure 1.6 Various stakeholder groups near Hinewai.

Ōnuku marae, a part of Ngai Tahu Iwi, has mana whenua status (authority/responsibility) over the land, making them an important stakeholder.

The French-inspired township of Akaroa, which has significant cultural heritage value. is the closest significant settlement to Hinewai Reserve.

Farming is an established activity on Banks Peninsula, starting around 1830. With much of the land still being used for grazing, farmers have a significant stake in the afforestation proposal.

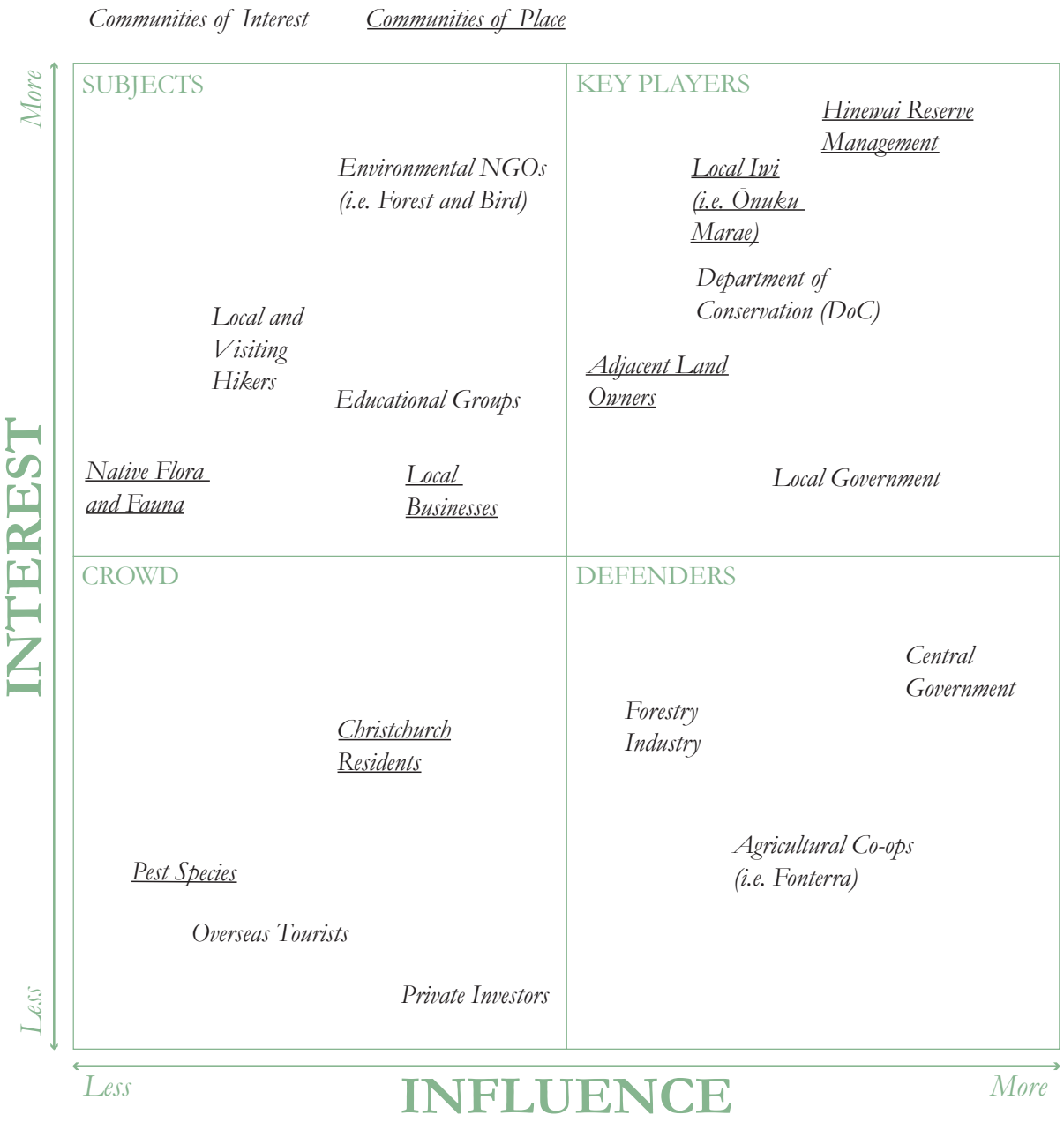


Figure 1.7 Interest-Influence matrix showing the stakeholders who are likely to have an interest in the decision on the expansion of Hinewai Reserve

Understanding landscapes is essential for informed decision-making. LCA's systematic approach identifies and values diverse landscape attributes, while supplementary methods like CV enrich the assessment by quantifying trade-offs and engaging stakeholders. Case studies like Hinewai Reserve underscore the importance of combining qualitative and quantitative approaches to ensure ecological, cultural, and economic sustainability. When undertaking an assessment of a landscape, some of the most valuable information on the area can come from the locals who interact with it each day. Including stakeholder engagement is a powerful way to ensure that this knowledge is clearly articulated in the value of a landscape, an important step towards fostering positive outcomes for landscapes and their communities.

Deliverable Two:

Understanding Farmers Landscape Management Practices

Word Count: 1396

LANDSCAPE MANAGEMENT PRACTICES

As key decision makers on the management of rural land, farmers play a substantial role in maintaining and improving the quality and health of landscapes to help advance the green transition. With more than 40 percent of Europe's land area covered by agricultural uses (Eurostat, 2021), it is vital that agri-environmental (AE) policies recognise the complexities of a farmers' relationship with environmental management. The Common Agricultural Policy (CAP) is the guiding policy framework designed by the EU to promote environmentally friendly farming practices as well as support the income of farmers.

Understanding the way policies developed under the CAP take effect at the farm-level requires an awareness of how farmers interact with their landscapes. This essay draws on studies by Wheeler et al. (2018) and Primdahl et al. (2013), exploring the tensions between environmental concerns and the productivist mindset, the factors influencing farmers' decisions, and how agri-environmental policies could be redesigned to better align with the complexities of these realities.

"THE GOOD GUYS ARE DOING IT ANYWAY"

As a response to the increasing market and societal pressure facing farmers to improve their environmental performance, Wheeler et al (2018) conducted surveys on farm across the UK, investigating farmers existing environmental concerns and their landscape management practices. The study identified that farmers' views and actions concerning the management of their land align with five goals that pertain to upholding their status as a "good" farmer, as illustrated in figure 2.1. These goals are representative of how societal and individual ideas have influenced farming practice. They also demonstrate how the idea of the "good" farmer has developed as the role and perception of farming in the wider world changes, especially in response to the growing sustainability agenda (Primdahl & Swaffield, 2010).

ENVIRONMENTAL CONCERNS

As the connection between agricultural activities and environmental degradation is increasingly studied (Canter, 2018), farmers have come under pressure to improve their environmental practices. Wheeler et al (2018) state that many farmers are acutely aware of the environmental quality of their land, and the impacts that agricultural practice can have on it. Through long-term consistent engagement with their properties, farmers develop a strong attachment to the landscape and biodiversity which characterises their farms (Fish et al., 2003). This connection means that farmers often set out with good intentions to appropriately manage the environmental impacts of their agricultural practice.

However, it is the tension between these environmental concerns and a deeply ingrained attitude towards production that has created an array of challenges towards environmental management at the farm level. It is impossible to ignore that agricultural production is a fundamental necessity for life, which in turn means that some changes to the environment are inevitable (Ritchie et al.,

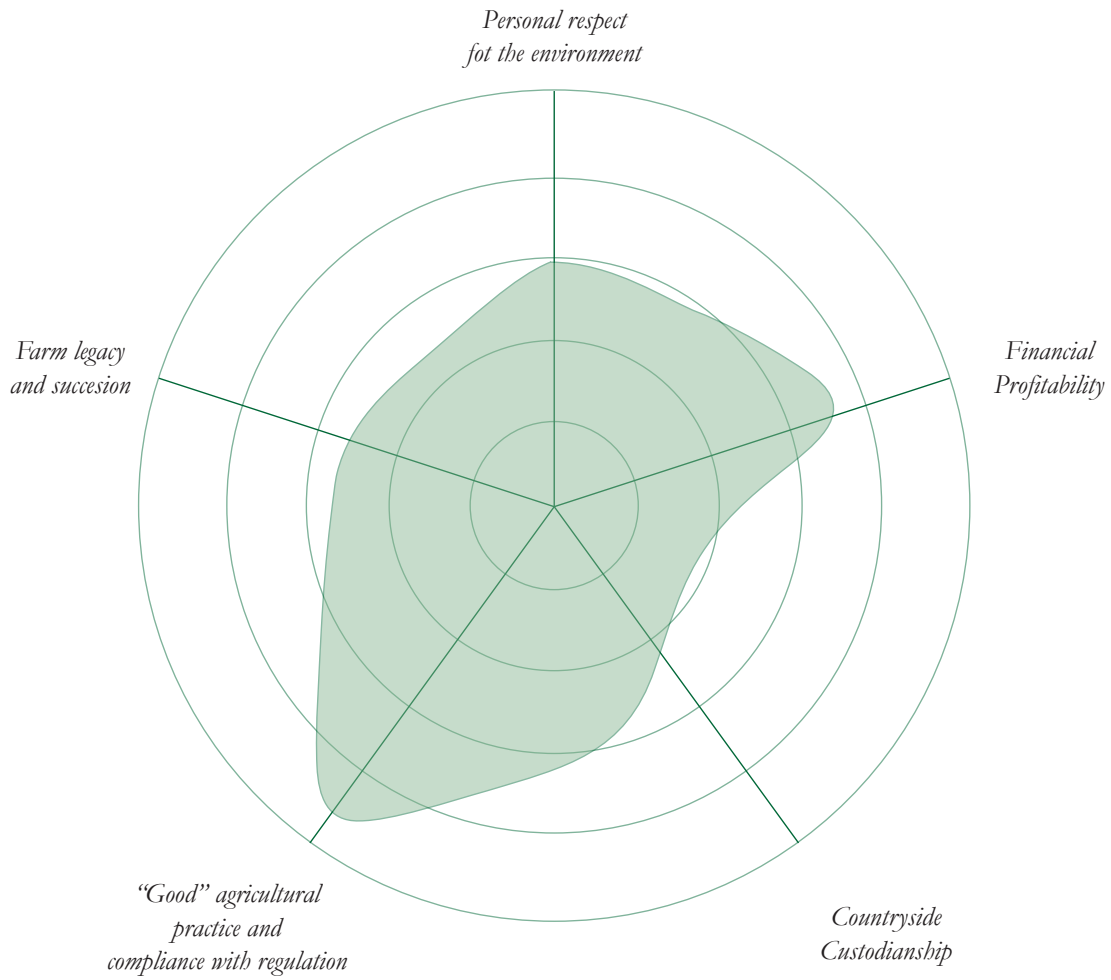


Figure 2.1 A representation of the factors which influence a farmers decisions conerning the management of their environment. The radar chart demonstrates a hypothetical weighting that a farmer may give to different values.

2022). Agricultural production is historically the most direct method for farmers to turn a profit from their land, meaning environmental concerns often become a secondary issue.

Farmers also frame their environmental concerns through a comparative lens. In the Wheeler et al. (2018) study, farmers identified as "good" by emphasizing the "bad" actions they avoided. One respondent remarked, "I think we're doing as best we can... As a farmer, you see all sorts of people farming, doing things which I wouldn't do." This framing positions them as responsible stewards without necessarily engaging in transformative practices. It suggests that social norms, rather than intrinsic environmental motivation, may be shaping agricultural practices.

LANDSCAPE PRACTICES

Farmers' actions are influenced not only by environmental concerns but also by financial pressures, care for the countryside, and farm succession (figure 2.1). Wheeler et al. found that many farmers view themselves as "custodians of the countryside" with a desire to maintain rural aesthetics and cultural heritage. This is a source of tension for environmental quality, as the cultural heritage being preserved is the product of intensive anthropogenic and agricultural activities, which have not prioritised ecological functions of the land. The study reveals that it can be difficult to reverse this perception, as it has been built over generations and established by strong rural traditions.

Financial considerations also frequently dominate on-farm decision-making. Farm profitability and sustainability of the business often take precedence over ecological goals. For example, practices damaging to the environment may persist due to immediate financial needs or ingrained cultural values. Farm succession further reinforces this focus, as farmers prioritize the long-term viability of their business over broader environmental concerns.

AGRI-ENVIRONMENTAL POLICIES

Agri-environmental schemes (AES) provide the farmer with a means to obtain financial benefits from their environmentally sustainable actions. According to the five factors influencing farmers identified by Wheeler et al. (2018), this should reduce the tensions experienced by the farmer while the make decisions. However, the study finds that participation in the current AE schemes might have a smaller impact on the environment than expected. Farmers noted that AE schemes were more of a 'tick-box' exercise, stating that they were already practicing many of the activities in the scheme before entering.

The existing environmental concerns of farmers suggests that the ecological health of their land is more likely to be improved by offering incentives for good behaviour instead of punishment for bad behaviour. Since farmers do have an intrinsic desire to improve the environmental quality of their land, a change in the current behaviour of farmers is not reliant on a change in attitude, but rather a shift in the sustainability solutions that are presented to the farmers (Wheeler et al., 2018). It is clear that agri-environmental policies should suggest solutions that consider the financial and agricultural viability for the farmer to increase their uptake.

DIFFERENT ROLES, DIFFERENT POLICY APPROACHES

Figure 2.2 The three different roles of the farmer, according to Primdahl et al (2010)

Similarly to Wheeler, Primdahl et al. (2010) view the farmer as the key agent concerning landscape management decisions and practice. However, this is done from a slightly different perspective, which views farmers actions through the lens of the roles they take, as producers, as owners, and as citizens (figure 2.2). Primdahl et al claim that these roles help to define the relationship between farming and landscape in a way that is beneficial for setting AE policies and maintaining their uptake.

ENVIRONMENTAL CONCERNS

Environmental concerns among farmers have traditionally been shaped by their role as citizens, reflecting their desire to conform with societal opinions and act accordingly to their individual values. However, as climate change increasingly affects the viability of agricultural land (Canter, 2018), farmers are also challenged in their roles as producers and owners. Financial sustainability, long-term land productivity, and environmental stewardship are now connected priorities which shape how farmers think about their environment.

Primdahl et al. (2010) note that environmental pressures can vary depending on the role a farmer prioritises. As producers, farmers may view environmental degradation as a byproduct of achieving necessary yields, whereas, as owners, they may feel a personal responsibility for preserving their land's ecological health. These overlapping concerns underline the need for policies that address both short-term production needs and long-term environmental outcomes.

LANDSCAPE PRACTICES

Unlike the Wheeler study, which focuses on environmental concerns in traditional agricultural practices, Primdahl et al. (2010) focus on the diversification of land uses becoming more common. They claim there is an increasing importance placed on the aesthetic and tourism values of farms in Denmark, with hobby farms and short-term stays becoming more popular. Farmers who engage with these alternative land uses often enhance the cultural and ecological value of their landscapes, which in turn meet the demands for both recreation and environmental improvement.

However, balancing these practices with production needs remains challenging. Primdahl et al. (2010) argue that the transition to more diverse land use often depends on how farmers perceive their roles. For example, as citizens, farmers may prioritize public benefits like biodiversity or scenic beauty, while as producers, their primary concern may still be economic profitability.

AGRI-ENVIRONMENTAL POLICIES

Primdahl et al. critique existing AE schemes for failing to fully recognise farmers roles outside of being the producer. Many policies are narrowly focused on production, neglecting the motivations and capacities of farmers as owners and citizens. Additionally, current policies often lack clear evaluation metrics and long-term visions, leaving farmers without a structured framework and clear instructions on how to sustainably manage their landscape.

Instead, they recommend that policies should be directed towards land use, environmental conservation and habitat protection. They should be constructed with clear incentive for the three roles of the farmer, and the policies should deliver benefits for the farmer as well as the environment. Primdahl et al. (2010) also discuss the need for integrated policies that match sustainable practices with financial incentives and emphasise that long-term goals are more effective than short-term compliance.

Deliverable Three:

Cultural Heritage: Governance and Landscape Implications

Word Count: 2500

IDENTIFYING CULTURAL HERITAGE

A landscape is constructed from layers of history, some celebrated for centuries and others lost to time. These landscapes have shaped human cultures and economies, which in turn have shaped the landscape. This relationship constitutes cultural heritage, which UNESCO has sought to protect globally since the World Heritage Convention of 1972. Cultural heritage includes physical structures like artefacts, monuments, buildings, sites, and museums, as well as intangible elements like ways of life and memories (Rössler, 2006). Heritage is thus linked to physical elements that tell valuable stories.

Managing cultural heritage becomes challenging when it extends beyond a single artefact to encompass wider areas. UNESCO defines these features as 'cultural landscapes', which include designed landscapes, organically developed landscapes, and associative landscapes symbolic of a religion or culture (Brumann & Gfeller, 2022). These landscapes present unique management challenges due to their complexity and subjective interpretations of heritage. Representation becomes an issue when determining whose culture is being preserved or excluded.

This essay explores these challenges by examining the Cultural Heritage in Planning (CHIP) method for identifying and evaluating cultural landscapes. Case studies from The Rocks in Sydney and the Southwest Coast in England analyse heritage governance approaches, challenges in integrating heritage in planning, and strategies for addressing these issues. The aim is to explore how the management process can become more holistic and culturally informed to respond to the pressures of development, climate change, and sustainability.

THE CHIP METHOD

The attrition of cultural heritage from unprecedented post-war anthropogenic growth means the traditional focus on singular elements is insufficient to protect cultural heritage (Ministry of Environment and Energy, 2001). The CHIP method is one approach to determine the extent of a cultural environment within a landscape (figure 3.1). CHIP reduces challenges in investigating cultural heritage by dividing the work into two key stages (Ministry of Environment and Energy, 2001).

The description stage (Figure 3.1) surveys the landscape to determine its management. Information on epochs, historical themes, and landscape types informs the selection of surveying themes. Epochs refer to specific periods altering the landscape, historical themes describe economic and functional structures influencing community development, and landscape types present opportunities and challenges for resource use. Once themes are defined, preliminary areas for further investigation are identified.

The evaluation stage (figure 3.1) focuses on delimiting areas qualifying as cultural environments. Key heritage elements are studied, and boundaries for their management are established. Epochs, historical themes, and landscape types often overlap to create heterogeneous landscapes, making boundaries difficult to define. Priorities for boundary establishment emphasise historically neglected epochs or themes to ensure balanced representation. A key requirement of the CHIP method is to develop an action plan for the environment, including protection strategies or integra-

tion into strategic planning.

CHALLENGES OF THE CHIP METHOD

Despite being a comprehensive method for identifying cultural heritage, the CHIP method has challenges, mostly arising from conflicting interests around cultural environments and limited resources to manage these conflicts. Local communities may prioritise different aspects of cultural heritage compared to national or international bodies. Areas of national or regional significance recognised by the planning process are typically given priority, which can sometimes overshadow local heritage values (Ministry of Environment and Energy, 2001).
The execution of the CHIP method and cultural heritage management must also recognise development pressures which are present in rapidly growing regions. It is not feasible to preserve all cultural environments completely, which often leads to prioritising the most culturally rich areas. This raises concerns about equity when ensuring that historically marginalised cultures are given authentic representation.

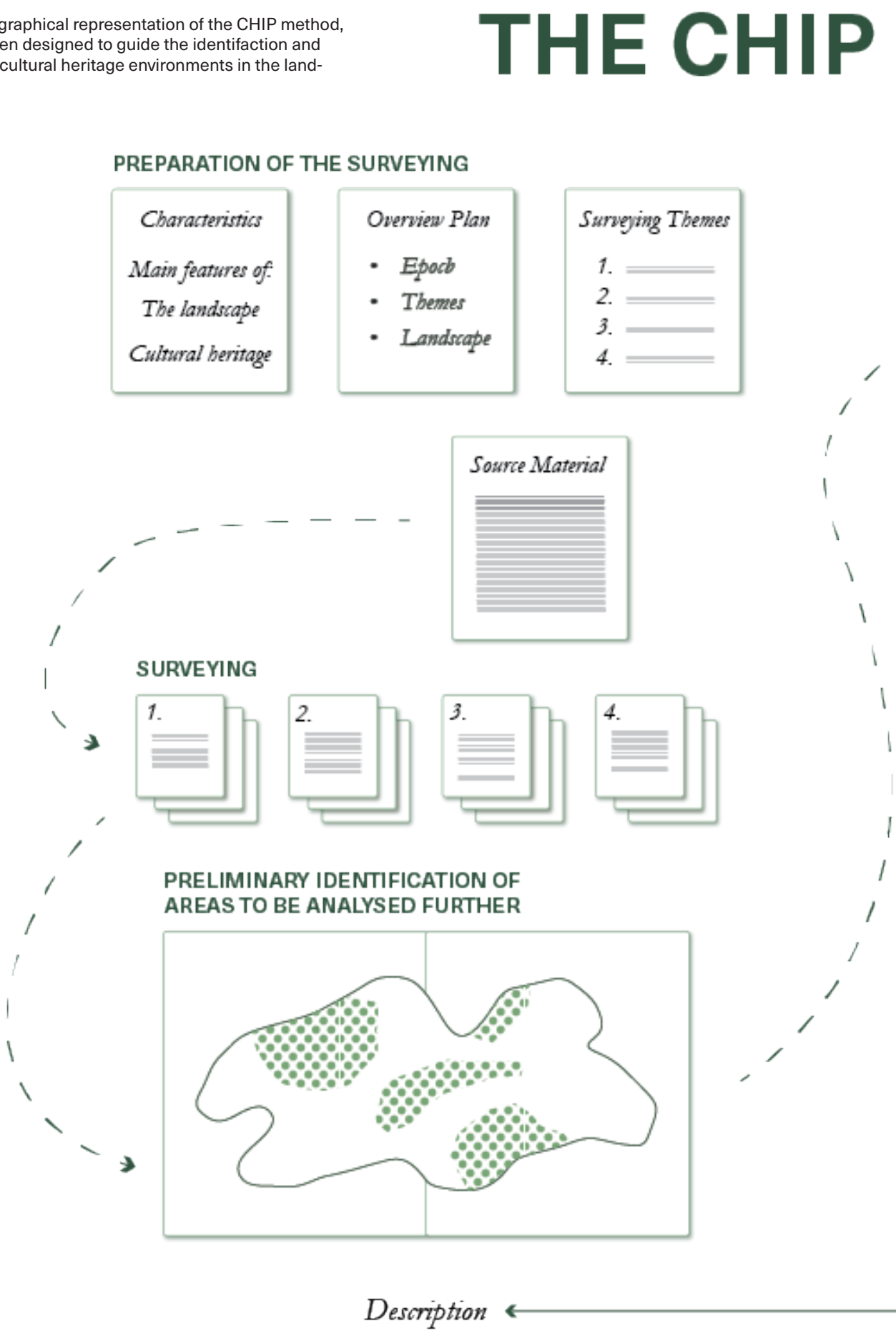
RELEVANCE OF LCA

The CHIP method can be complemented by an LCA (figure 1.2) which provides a broader framework for understanding the characteristics of the landscape. The structure of LCA, which involves a desk study, field surveys, classification, and description of landscape features is like the CHIP method. Combining the two methods can provide context for how cultural heritage fits into the wider landscape, ensuring that heritage conservation is integrated with broader planning objectives. LCA's emphasis on stakeholder engagement also strengthens the CHIP method, which does not explicitly require community involvement.

ROLE OF STAKEHOLDERS IN CHIP

Engaging with stakeholders during the execution of the CHIP method is critical to the successful identification of representative cultural environments. Including communities of place that have a unique and deep relationship with the cultural heritage elements of an environment can introduce new ways of seeing an environment which may otherwise be overlooked. Promoting an understanding of a common cultural heritage at all levels from local to international can help to develop individual and community responsibilities for protecting it (Ministry of Environment and Energy, 2001). Involving stakeholders in the CHIP process makes the identification and management of cultural heritage a collaborative effort which is representative of many ideas and cultures, improving the long-term sustainability of cultural environments.

Figure 3.1 A graphical representation of the CHIP method, which has been designed to guide the identifaction and evaluation of cultural heritage environments in the landscape.



METHOD

ANALYSIS OF THE PRELIMINARY IDENTIFIED AREAS (FIELD WORK)

Main Historical Features

State of Conservation

DELIMITATION OF CULTURAL ENVIRONMENTS

Delimitation Criteria

Historical Resource Unit
Topography

Delimitation

Option 1

Option 2

SETTING PRIORITIES AMONG AND IDENTIFYING CULTURAL ENVIRONMENTS

Criteria for Setting Priorities

Unique
Representative

Valuable Cultural Environments

Instruments

- *Objectives*
- *Vulnerability*
- *Need for Action*

INSTRUMENTS

Evaluation

GOVERNING CULTURAL HERITAGE

Deciding a governance approach adds another layer of complexity to the cultural heritage discourse. Effective governance of cultural heritage requires a nuanced, place-based approach that integrates many histories of culture to achieve the best outcome in a specific location. Two locations with unique cultural heritage features have been selected to compare governance approaches, the potentials and challenges of incorporating heritage into planning, and how these challenges can be addressed.

THE ROCKS, SYDNEY

The Rocks is a heritage area in Sydney Harbour, Australia. Close to landmarks such as the Sydney Harbour Bridge and the Opera House, it is marketed and recognised as the site of many of Australia's 'firsts', primarily linked to the beginnings of Eurocentric colonisation of the country in the late 18th century. It is characterised by narrow streets and preserved colonial-era buildings and structures, which today are used as an entertainment and tourist attraction, accommodating 14.4m visitors in 2023 (Placemaking NSW, 2024)

Before the arrival of Europeans, this part of Sydney Harbour was home to the Gadigal people of the Eora nation, who cared for and lived in harmony with the land for centuries (Lydon, 2000). Despite this rich Indigenous history, the version of heritage highlighted in the development of The Rocks is heavily curated, offering conventional, 'Disneyfied', experiences of history centred on consumption. This selective portrayal has neglected the presence and significance of Aboriginal culture during periods of rapid urban development, leading Waitt (2000) to question The Rocks' authenticity as a cultural heritage site.

Figure 3.2 Aerial image of The Rocks, demonstrating its seperation from the CBD

SOUTHWEST COAST, ENGLAND

The Southwest peninsula of England (figure 3.2) is home to some of the country's most cherished cultural heritage values, emerging from centuries of natural processes and cultural maritime activity. The peninsula is home to the South West Coast Path, which is a 1014 km long walking trail traversing the coast from Minehead in Somerset to Poole Harbour on the southern coast (figure 4.5) (South West Coast Path Association, 2025).

Historically, the coastal economy was driven by activities such as fishing, shipbuilding, farming and defence, all of which tied the way of life in these towns to the water. Today, tourism has become the main driver of the economy, with both domestic and international visitors being a common sight during the summer months.

Figure 3.3 Port Isaac Cove, a coastal town located along the South West Coast Path route.

Figure 3.4 Map of The Rocks, Sydney. The cultural heritage elements of The Rocks are mainly situated around the waterfront, seperated from the CBD by the motoway.

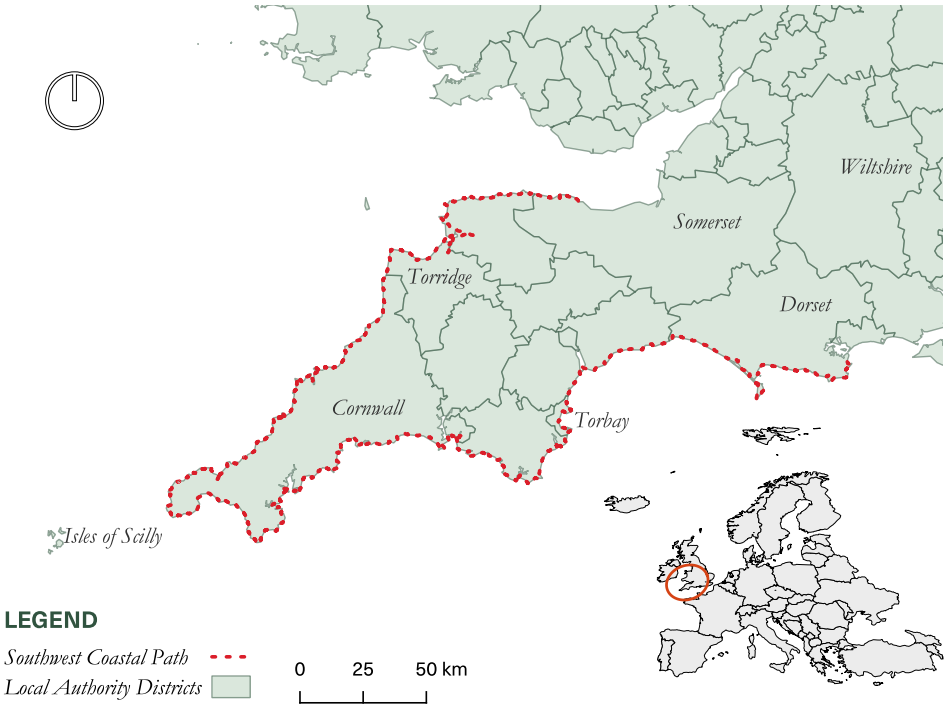


Figure 3.5 Map of the Southwest peninsula of England, including the 1014km-long South West Coast Path

The region has a rich cultural heritage which is reflected in both its significant landmarks and vernacular architecture. However, its coastal landscape is highly exposed to natural processes expected to intensify as the climate changes. Destruction from storms and flooding is becoming a common occurrence, which raises questions around the sustainability of the tourism economy and the preservation of cultural heritage. Howard and Pinder (2003) discuss the successes and failures of cultural heritage sustainability in the Southwest peninsula.

GOVERNANCE POTENTIALS

SENSE OF PLACE

Perhaps the most significant benefit of utilising heritage in the governance of landscape is its ability to create an enhanced sense of place for both locals and visitors. Sense of place refers to the emotional and cultural identity that is tied to a specific area (Tan et al., 2018). Establishing a sense of place can strengthen local identity, attracting tourists and improving the area's economy.

Educating residents and tourists on an area's cultural history can establish a strong sense of place. Sharing stories that reflect cultural heritage by highlighting architecture, ways of life, and unique landscapes can help people to understand and appreciate their surroundings (Howard & Pinder, 2003). In South West England, a trend of restoring and preserving vernacular architecture representative of the area's maritime history exemplifies this practice (Howard & Pinder, 2003). However, constructing a sense of place is highly subjective, as it depends on which stories are drawn from the cultural environment. When establishing sense of place narratives, efforts must be made to balance the priorities and perspectives of all people and cultures that associate with the area.

ECONOMIC DEVELOPMENT

Cultural heritage offers significant opportunities for economic development, especially through tourism. Waitt (2000) recognises the fundamental shift to contemporary preferences for quality, special interest markets, and experiential, rather than passive, activities. Tourism has become an extremely popular and marketable prospect for regions with a rich cultural heritage.

The Rocks is a prime example of the use of heritage for economic development, producing a share of $3.8billion in value added to the NSW economy in 2023 (Placemaking NSW, 2024). The area capitalises on the rich heritage by telling the story of Australia's colonial history while providing ample entertainment, hospitality, and accommodation for its visitors. The economic opportunities of heritage are similarly strong on the Southwest peninsula, with many of the coastal towns along the South West Coast Path leveraging heritage to attract tourist spending (Howard & Pinder, 2003).

Cultural heritage can also help fuel creative industries and higher-value goods and services that are deeply connected to the area's history. However, care must be taken to ensure that the use of cultural heritage for economic development does not become exploitative, as this risks having a detrimental effect on the condition of cultural heritage elements.

SUSTAINABILITY

To ensure longevity, cultural heritage preservation must be a sustainable practice environmentally, economically, and socially. Sustainability in cultural heritage governance involves reducing environmental impacts, fostering economic viability, managing representation (Howard & Pinder, 2003). One example of a sustainable preservation practice is adaptive reuse. Cultural environments

often face development pressures, and adaptive reuse provides a solution by repurposing heritage buildings for modern needs rather than constructing something new.

On the Southwest peninsula, admiration for cultural heritage has led to the adaptive reuse of both landmark and vernacular architecture from both public and private initiatives. Historic buildings have been repurposed into hotels, cafes, and residential accommodations (Howard & Pinder, 2003), which both preserve cultural heritage and reduce the environmental impact of the tourism industry. The Rocks has also seen instances of adaptive reuse; however, sustainability has not been a direct focus of the area's development strategy (Waitt, 2000), highlighting the need to be more purposeful about the integration of sustainable practices in cultural heritage governance.

GOVERNANCE CHALLENGES

AUTHENTICITY

Authenticity plays a critical role in how cultural heritage is preserved and experienced. The ability to preserve heritage in a way that accurately represents its past depends on an understanding of the original functional, structural, and conceptual dimensions of a cultural environment (Table 3.1). Highlighting authenticity in different ways is a challenging and subjective task, but one that is important as it shapes the way stories of cultural heritage develop.

Deciding to highlight certain aspects of cultural heritage often leads to the exclusion of other important narratives of place. At The Rocks, cultural heritage has been used to tell the story of Australia's colonial "firsts." The decision on what is preserved at The Rocks is also heavily influenced by a focus on consumption in the cultural heritage strategy (figure 3.6). Waitt (2000) suggests that the perceived authenticity of a cultural environment is reduced by this focus, as visitors can typically pick up on the commodification of history.

Waitt (2000) also notes that major elements of Sydney's history are left out of the Rocks' heritage strategy. At the time of the study, the rich aboriginal history of the area and the unsightly elements of early colonial life are overshadowed in the commercialisation of the heritage narrative, diminishing the multifaceted history of the area to a singular, less authentic story.

Howard and Pinder (2003) argue that heritage represents "the things which

Table 3.1 Types of authenticity to consider when preserving cultural heritage

TYPE	DESCRIPTION
Functional Authenticity	Preserving or adapting a heritage site to maintain its original use or align with its historical purpose.
Structural Authenticity	Maintaining the physical integrity of a site, including its original materials and construction methods.
Conceptual Authenticity	Preserving the intangible meanings, traditions, and cultural significance of a heritage site.

Figure 3.6 Motivations behind the individual cultural heritage strategies at The Rocks and the Southwest Coast, and the common outcomes of a governance strategy which focuses too heavily on consumption or protection.

people wish to save from oblivion." This view demonstrates that the preservation of cultural heritage is often shaped by societal interests and the priorities of those with influence on institutions. They detail that in the Southwest peninsula, the interests in preservation are often driven by academics or more affluent, middle-aged tourists. This has resulted in a gentrified community with high property prices and exclusive developments, driving out the original working-class population with the most authentic ties to the physical heritage elements in the area.

SUSTAINABILITY

Achieving authentic representation of cultural heritage is only influential in the long term if it is done sustainably. Howard and Pinder (2003) made detailed observations about the sustainability of heritage preservation in the Southwest peninsula of England. As established earlier, over-exploitation of cultural heritage for development purposes can be detrimental to the economic sustainability of a cultural environment. In the Southwest peninsula, the extreme seasonality of visiting has resulted in an oversupply of hotels during winter, which offer low-paid, seasonal work, typically taken by migrant workers resulting in external leakage of capital from the community (Howard and Pinder, 2003).

Achieving environmental sustainability in the Southwest peninsula is restricted by multiple factors, from the lack of sustainable transport to the region to challenges in managing coastal erosion. With most of its heritage tied to the coast, the most pressing environmental sustainability challenge is an increase in extreme weather from climate change. More frequent storms mean the cost of preserving cultural heritage continues to rise, raising questions on if the preservation of certain heritage buildings can continue. Howard and Pinder (2003) discuss an alternative solution of 'managed ruination', where structures are left exposed to natural processes. This approach accepts that not all heritage can be saved, prioritising resources for sites that can be preserved sustainably.

OVERCOMING CHALLENGES

Successful governance requires an approach which acknowledges both the potential and challenges of preserving cultural heritage. A governance strategy which is sustainable in the long term is crafted in a holistic way, viewing cultural heritage as environments rather than singular artefacts. Finding a common story by involving as many different stakeholders as possible in the process means resources for preservation can be allocated with more care for previously neglected parts of history and with less conflict between vested parties.

Building a shared vision from these viewpoints creates clarity in the governance process, ensuring a more representative strategy for heritage preservation. This

shared vision can be constructed from multiple, intertwining stories of heritage, creating more opportunities for locals or visitors to identify the heritage elements which represent an expression of their own knowledge and traditions (Dourou & Toce, 2021). Using rich visual qualities within the cultural environment to communicate the vision anchors it to physical reality.

Finally, including a cultural heritage strategy as an integral part of local and regional planning strengthens the long-term sustainability of heritage preservation as a community goal. Making sure that this plan is developed with the continuous involvement of stakeholders and aligning it with national and international priorities for cultural heritage preservation can further improve its outcomes.

Deliverable Four:

Location of Solar Panels in the Landscape

Word Count: 758

LOCATING SOLAR PANELS

Solar energy is recognised as a key part of the green transition. Under Danish law, between 30,000 and 40,000 hectares of land is to be allocated for the installation of solar panels (Pinson et al., 2017). Identifying areas where solar panels can be placed can be a complex task with many challenges to consider.

Viborg municipality in Jutland is required to install a share of Denmark's required solar panels. Its landscape has been formed out of glacial processes resulting in a relatively flat topography disturbed by a series of shallow river valleys. Much of this land currently used for farming, and as a core part of Viborg's economy and cultural heritage, maintaining sufficient agricultural activity and land is a priority for the municipality.

The natural and landscape interest is of upmost importance when installing solar panels, as these areas must remain protected and undisturbed by new development. The enhancement of these areas is also a goal, so it was considered whether solar panel installations could act as a tool for ecosystem restoration by ending the use of nitrate fertilisers on active agricultural land or re-establishing lowland soils into wetlands.

The proximity of solar panels to cultural features and houses is also a key factor, as conflict in solar panel placement decisions often arises from residents who may live close to proposed locations. Several historic churches are dispersed throughout the landscape which must be protected. There is a notable presence of contiguous landscapes that incorporate both cultural and natural values in Viborg, which can provide unique nature experiences and therefore should be disturbed as little as possible.

A series of other factors including geological interests, public access to nature, and existing infrastructure were also considered, however it is possible to develop these areas while ensuring adequate provisions are offered in exchange. Two potential locations for a 100ha installation of solar panels have been identified, considering the existing landscape values (figure 4.1).

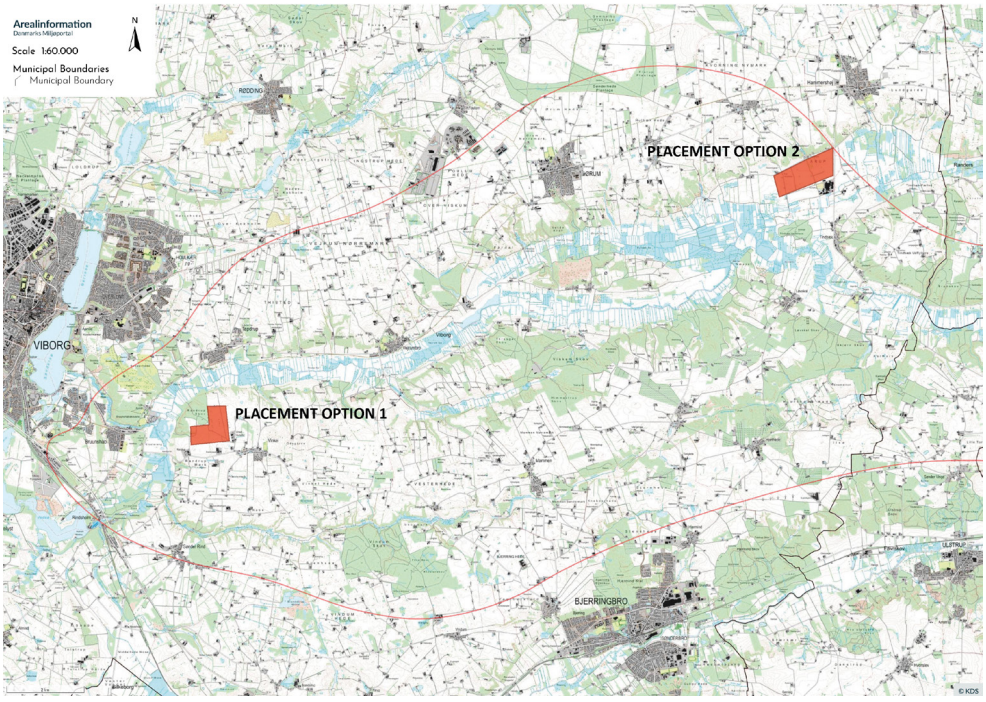


Figure 4.1 Placement options for the 100ha solar installation in Viborg municipality.

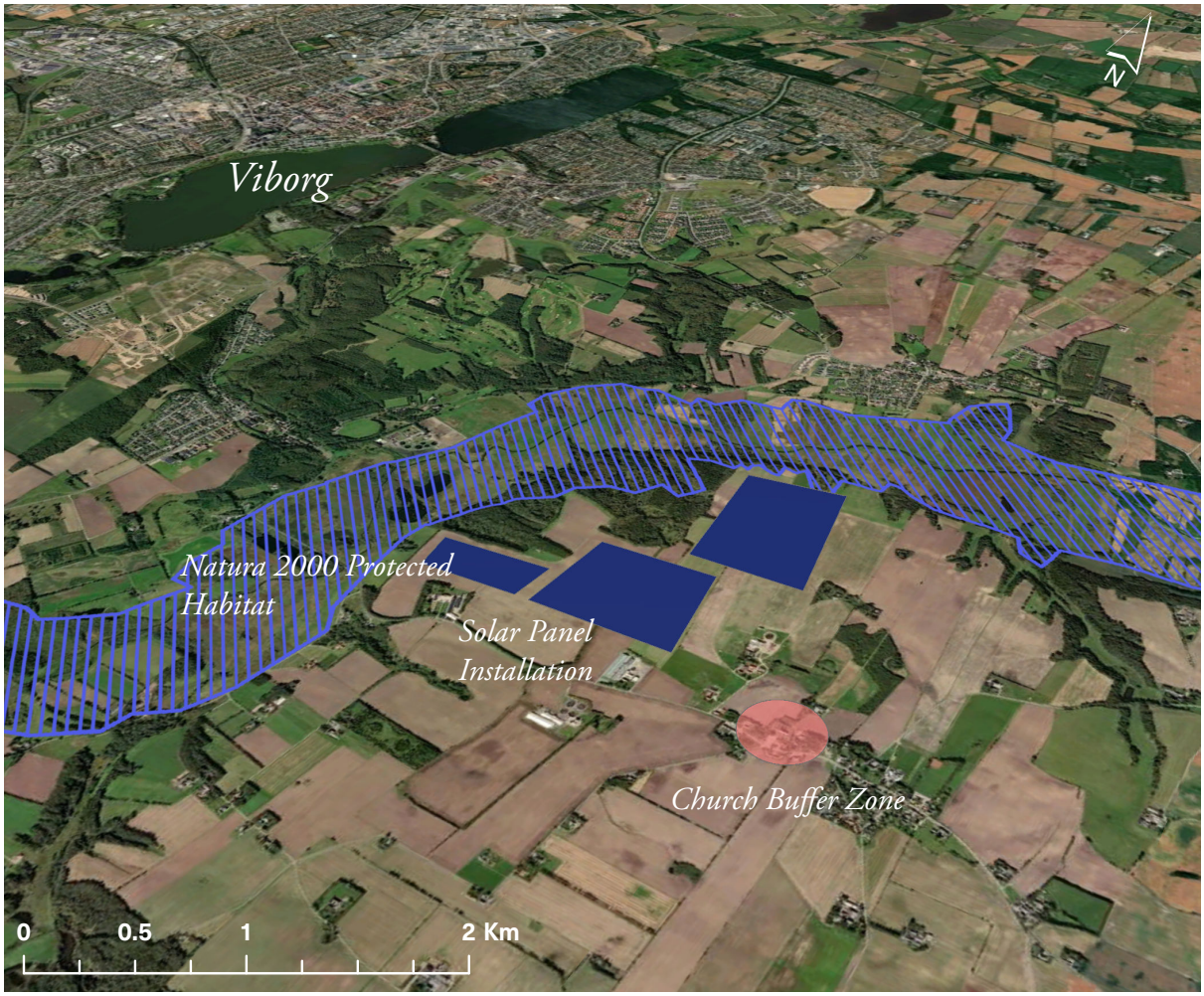


Figure 4.2 Solar panel installation in relation to cultural features and Natura 2000 habitits in Viborg.

SITE ONE

Site one (figure 4.2) was selected as the priority location for the solar panel installation. The area was identified with the main goal of reducing impacts on natural values and minimising agricultural productivity loss. It was decided that loss of some lower quality agricultural land would be acceptable, as the chosen area is positioned on coarse and fine loam sand soils over lower quality than other parts of Viborg municipality. A solar installation at this site would not interfere with any natural conservation areas or areas worthy of conservation, making it a suitable location from an environmental standpoint.

Its proximity to the city of Viborg can be considered both a positive and negative, as it could reduce infrastructure costs but may also be perceived as 'too close to home' for some residents. However, the presence of Randerup Skov is likely to partly obscure the view of the solar panels, providing some visual screening and reducing the aesthetic impact for residents. The site also avoided directly intruding on cultural features such as churches and larger townships, but some provisions should be made in the design to ensure that residents of Vinkel (figure 4.1) could access Randerup Skov. Some issues may arise with the presence of a few houses in the area, but clustering the installation could increase the space between them.

Figure 4.3 Solar panel installation near Randers tile factory, positioned alongside an existing ecological corridor.

SITE TWO

Site two (figure 4.3) was selected as an alternative location, on the basis that the solar panels should not cover any valuable agricultural land identified by the municipality. It however should be noted that the soil in this area is highly productive clay soil. The site is adjacent to an operational tile manufacturer, surrounded by mostly industrial or agricultural land uses. Solar panels in these surroundings would have less impact on the scenic value of the area, as industrial landscapes are generally more accepting of such installations compared to residential or natural areas.
The installation could also expand the width of the existing ecological corridor to the north, allowing the corridor to support greater biodiversity and serve as a dual-purpose area for renewable energy production and ecological enhancement. Its position on a hill side with a southwest aspect makes it an both an efficient location for energy generation and raised from river valley flooding but also means it may disturb the continuous viewshed of forest from the opposite side of the valley. Although the site avoids protected nature and cultural landmarks, a few houses are located within the area. Design adjustments can ensure these homes maintain the appropriate buffer zone. There is also an opportunity to develop recreational opportunities such as walking or cycling paths in the area.

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