Introduction

In July 2019 Terranomics Limited were commissioned by Tree Investment Limited, with co-funding support from the Tevi programme, to support the development of an environmental growth hub concept for Cornwall and the South West region.

This document summarises some of the research conducted and the concept developed from August to October 2019. A full findings report is available on request. This contains a review of market needs and solutions, existing market activities and service providers, a brief survey of stakeholder views and initial considerations of financial aspects and the future work steps necessary to realise the concept.
The Environmental Growth Hub
Supporting investment in trees and public goods across the South West

THE NEED

The next decade is forecast to be a period of substantial growth in investments related to trees for climate change mitigation, habitat creation, wildlife protection and a range of environmental services\(^1\). This growth is being driven largely by changes in farming, the climate emergency, changes to the planning regime through the DEFRA\(^2\) Net Gain requirement and several public and private sector commitments to multi-million-tree planting schemes. Examples are listed in Box 1.

This will create market opportunities for commercial and community ventures which can support the scale up of tree related services and promotion of best practice in land management for ecosystem services and public goods.

The tree nursery and arboriculture sectors are absolutely vital in delivering change. The UK garden nursery market (trees, shrubs and plants) is worth around £5.7 billion a year, and arboriculture (excluding forestry harvesting) generated £709 million in 2017 (£192m in South West England)\(^3\).

Although well-established, these sectors will need to evolve. The nursery sector is heavily dependent on unpredictable grant funding, making long term growth planning difficult. Profit margins are tight and in recent years several companies have closed. Biosecurity threats will reduce the sourcing of stock from overseas. Climate change and biodiversity loss will require more locally adapted native and non-native stock.

Tree planting will also need to be planned and executed with more care. Where tree planting has occurred in recent years there are numerous examples of poor survival and establishment rates, with trees often failing to reach their full potential due to a lack of planning, poor design and sub-standard execution. The adoption of a strategic and proactive approach to arboriculture, focused on tree benefit delivery rather than tree risk management would change this.

BOX 1: Key programmes creating demand for tree related services in 2020-2030

National programmes
- DEFRA’s Net Gain Biodiversity Metric V2.0
- DEFRA Environmental Land Management Scheme (ELMS)
- National Farmers Union (NFU) Achieving Net Zero
- Water UK tree planting working group
- Woodland Carbon Fund (and corporate offset requirements)
- Woodland Trust 64m trees pledge by 2025
- Urban Tree Challenge Fund
- UK government (e.g. Rural Development Programme for England) 10 million trees by 2022 commitment

Local programmes
- Forest for Cornwall
- Cornwall Climate Change Action Plan
- Draft Cornwall Council’s Farms Strategy 2019 – 2039

In the South West these issues are more pronounced. Although nationwide there has been dramatic growth in forest carbon projects, initiatives such as the Tree Health Centre in Yorkshire and Trees for Life in Scotland, and a range of sizeable nurseries, the same cannot be said for Cornwall and neighbouring counties. With the Cornwall County Council’s 2019 commitments to a Forest for Cornwall, and the county’s track record of leadership on marine issues and innovative environmental research, the time is ripe for bold initiatives which use new ways to deliver tree-related services in the region.

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1. Including flood protection, pollination, food and wellbeing  
2. Department for Environment, Food and Rural Affairs  
3. Oxford Economics, 2018
THE PROPOSED SOLUTION

By learning from highly relevant examples of commercial and community projects (tree nurseries, educational centres, technical consultancies, farm demonstration units), we believe there is a clear opportunity to promote interest in regional environmental enhancements using trees and best practice arboriculture. There is also an exciting opportunity to innovate to overcome structural challenges in the nursery market through a blend of financial instruments and long-term risk sharing partnerships.

The concept is to create a vibrant ‘home grown’ set of resources supplying services sustainably over the long term for environmental growth in Cornwall, supported by Cornwall based enterprises. The concept will involve two parallel initiatives:

- **An Environmental Growth Hub** (‘the Hub’) – located within a key Cornwall landholding with partner sites through the county. See diagrams 1 and 2 below.

- **An Environmental Growth Network** – of community and commercial groups in the South West delivering projects throughout the region with the support of the Hub. This could take an informal format or be a structured programme which the Hub actively nurtures and services. Network members would comprise a diverse range of community groups, research institutes, charities, entrepreneurs and individuals. The Hub would support the Network through physical resources, meeting spaces, education and a range of demand-led not for profit / commercial enterprises. See below.

DIAGRAM 1
Options for Hub structure and hosting

The Environmental Growth Hub at the **centre of a managed regional Environmental Growth Network** (comprising a diverse range of community groups, research institutes, charities, entrepreneurs) **OR**

The Environmental Growth Hub giving **ad hoc support to an informal network** of individuals and organisations with an interest in environmental land enhancements

- **Hub purchases or leases a site and builds its own physical infrastructure** **OR**
- **Hub is housed within partner institution grounds/facilities**

The Hub structure

The Hub siting/hosting
The Hub will focus on delivering four areas of activity:

### A long-term (innovative, evolving) demonstration centre

Utilising trees and shrubs as tools to mitigate and adapt to climate change, increase biodiversity, address physical and mental health issues, increasing land values and returns.

Data provision and tree related technology - accurate costings of environmental schemes and benefits of ecosystem services. Geospatial data on viable planting sites. Commercial evidence to support the investments needed to make greenfield developments sustainable. The demonstrations will occur through sub-division of areas of the site into individual test-plots for integrated ecosystem service-related projects. These plots will be managed with/ by a range of partner organisations and cost-benefit analysis/research will be undertaken on each and data shared widely. Support services will be provided for parties interested in replicating models within their sites (links with Hub service 3 - Consultancy services)

### Nursery services

A sustainable supply of locally grown, high quality, low carbon, bio-secure trees and shrubs. Specialising in robust tree and shrub species and size specifications suited to the harsh and unpredictable maritime climate of Cornwall.

Growing will occur through a cost effective and sustainable mix of models already working successfully in other parts of the UK such as:
- Contract growing with farmers
- Partnerships with private estates and environmental initiatives
- A blend of commercial and community/ not for profit elements (e.g. supporting the development of local community nurseries within Cornwall)

Nursery products and services will be supplied with a broader ‘project inputs package’ covering all supplies needed for specific natural capital investment projects and employing different ‘template models’ supplying and installing tree establishment schemes with quantified delivery parameters e.g. net gain / biodiversity units.

### Consultancy

Bespoke tree planting, design and management solutions applicable for all site contexts, carbon management and habitat and biodiversity creation/mitigation/expansion strategies. Priority projects will include:
- Community and household projects
- Enhancement of landholdings (e.g. farms, orchards, estates)
- Property development and planning support

### Educational facilities

From year two this will focus on promoting and quantifying the benefits of trees, the ecosystem services they provide and merits of planned, proactive and strategic management. The Hub will supply skills and materials for tree and environmental investments across the UK and in support of Cornwall’s Environmental Growth Strategy and Climate Action Plan. Seminars, support and training to business, conservation groups, local authorities, landowners and environmentally conscious individuals, along with training/apprenticeship programmes will be provided. The Hub will also showcase state of the art tree related technology (e.g. drones and satellite data for monitoring tree health, carbon sequestration and tree planting site suitability).

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4. The planned plantings within the site will demonstrate a variety of innovative examples of potential green business opportunities that would achieve goals of Cornwall’s Climate Change Action Plan and Environmental Growth Strategy. Plot design themes could include:
- Sustainable economies - recycling and reducing waste, pollution reduction, localised carbon cycling and decarbonisation
- Forests as natural capital banks and ecosystem service providers - planting for pollinators and biodiversity; planting for climate regulation; planting for water management; planting for food, fuel and fibre (e.g. agroforestry, silvopasture, permaculture, fuel, timber)
- Forests in context - urban forests; trees and farmland; trees in gardens and scenic landscapes

5. Companion plant species, fencing and pest control, monitoring systems, tools and testing apparatus
Diagram 2
Outline operating model for The Hub

Funding sources
- Grant funding and philanthropic donations
- Debt and equity injected on commercial basis

‘The Hub’ legal entities
- The Hub (not for profit/charity)
- The Hub Limited

Activities
- Research centre (Cornwall site)
- Demonstration centre
- Education facilities
- Consultancy for community & household projects
- Nursery and off-site commercial consultancy services
- Nursery business
- Consultancy for enhancement of landholdings
- Property development and planning support

Customers
- Farmers, unions and suppliers
- Commercial landowners (foresters, public houses and gardens)
- Environmental, conservation, tree planting organisations
- Developers, architects, planners
- Students/apprentices, colleges
- Nursery customers (wholesale buyers, householders, professional gardeners, allotment holders)
- Training and event attendees
- Community groups (parish, ward, village)
- Town and city council staff
- Forest products sector (forest products users, waste managers)

Delivery partners
- Partner institutions with aligned thematic interests
- Technical specialists
- Contract growers and partner nurseries

FLOW OF FUNDS
PARTNERSHIP MODEL

A consortium of partner institutions will guide and help deliver the Hub’s development. Operational activities will be managed by an experienced team of professionals from within relevant industries including nursery management, arboricultural support services, public outreach, finance and research.

Through late 2019 and early 2020, institutional partnerships will be explored with the aim of bringing together progressive and successful sustainable land use enterprises within Cornwall and neighbouring counties from business, academia and charity. In addition, a co-investment model will be developed to support effective long-term partnerships to deliver regional tree planting and land use commitments using local resources.

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