

Presenting to  
Just Transition Team, Midlands Regional Transition Team,  
MRTT Working Group  
29 June 2022

Category 4 - Renewable Energies  
Code: MRTT 160 - Real Leaf Farm Project



**RealLeafFarm**



Rialtas na hÉireann  
Government of Ireland

*Supported by the **Just Transition Fund**  
& the **Carbon Tax Fund***

# Real Leaf Farm

## Executive Summary

**01.** Leading the development of sustainable hydroponic farming in Ireland. It is a pioneering and disruptive business model which will be one of Ireland's first 100% Hydroponic farm, growing delicious, **sustainable leafy green** produce, **365 days** a year. Smart farming for a sustainable planet.

**02.** Through its unique Agri-tech solution, RLF has total control over variables like climate and light, while uses **significantly less land and less water**. By combining technology with optimal agriculture methods, RLF is making **fresh, nutrient-rich food accessible locally** throughout the year, **minimising wastage and excess transport**.

**03.** This is a unique opportunity to be **first to market**, in a growing market, through import substitution and the

“Smart farming for a sustainable planet”

“The plan is to build a farm in Ballycon, Co. Offaly with an ability to provide a local supply of leafy greens which is currently imported”

development of a more efficient and sustainable model of farming.

**04.** The plan is to build a farm in **Ballycon, Co. Offaly** with an ability to provide a local supply which is currently imported.

**05.** The company has a **highly experienced board and leadership team** with expertise in areas of plant and crop science, food, engineering, project management, technology & finance. They have a proven track record in driving and scaling businesses.

**06.** The first site is in Co. Offaly, in partnership with (leased from) **Bord na Móna**. RLF is repurposing underutilised site and building a new, state of the art, glasshouse thereby **reusing** the existing workshop yard and **bringing jobs back** into the peatlands community.

**07.** RLF is working with the **JTF Department of Environment, Climate and Communications, Midlands Regional Transition Team** and **MRTT Working Group** as RLF presents an ideal opportunity to support just transition in the Midlands creating jobs, opportunity and helping the Midlands move to a **low carbon society**.

**08.** RLF engagement with foodservice companies and retailers shows there is strong demand for **local, safe and reliable produce** available all year round.

**09.** The days of bringing fresh produce long distances into Ireland, the UK and the EU are changing and predicted to change even further and faster. The current pandemic, Brexit issues, coupled with extreme climate events, have highlighted the critical need to have access to fresh, tasty, locally produced food that is available **365 days** a year.



## Our Mission

Is to grow **fresh, nutritious** and **sustainable** leafy greens for the local market using natural growing techniques that have **low environmental** impact through the **elimination** of **pesticides** thus making Real Leaf Farm a provider of clean food products.



## Our Vision

Lead the development of the next wave of sustainable farming in Ireland and the UK.

Bring locally grown nutritious and sustainable food to the Irish and UK Market.

Promote environmentally responsible farms & farming using compatible new technologies.

Grow top quality produce, with a taste, texture & freshness unique to the growing process.

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RealLeafFarm

# The Why - The World needs sustainable food security



## Population Growth

**Global population is increasing exponentially, which needs to be feed.**

- UN has stated the world needs 50% more food by 2050
- Irish population to increase by 50% by 2050
- UK population to increase by 11 million by 2050
- Food waste is estimated at \$2.6 trillion (FAO)



## Climate Change

**Agricultural land is shrinking globally due to climate change & urbanisation, food security will continue to be a major issue.**

- Climate change happening faster & affecting every region (IPCC)
- Climate related risk to food security, food capacity and water supply
- Increasing demands on freshwater - to increase by 40% by 2030 with a \$200 billion impact (Barclay)



## External Factors

**Traditional Farming under pressure**

- Lack of skilled labour available for traditional soil-grown crop production.
- Some conventional farming use pesticides and herbicides which can enter the food chain.
- Extreme weather events and other events (Covid 19) are making food production more unpredictable and unstable.

# The Solution - Sustainably grown produce using less water, fertiliser and soil



## Sustainability

**A model for the future of scalable, sustainable farming, committed to growing locally so that fresh produce can be delivered from harvest to the plate in minimal time and distance.**

- Growing the food closer to the markets
- Dramatically reducing environmental impact
- Improving shelf life
- Reducing food and labour waste.



## Agri-Tech

**Cutting edge hydroponics to produce crops in a fully controlled environment monitored 365 days a year.**

- The utilisation of IOT sensors and AI for effective planting, watering and harvesting
- Controlled environment = predictable year round optimised growth.
- Air/water/power/heat/CO2 management to reduce waste and recirculate inputs
- Co-location partnerships for heat supply



## Eco-Friendly

**Using far less energy, land and water than conventional farming. Monitoring of nutrients to deliver consistent flavour and nutrient beneficial plants.**

- Using 90% less water
- Zero chemical pesticides
- Low Carbon Production
- Rich in Iron, Vitamin C & Dietary Fibre.

# Our Product

Our Irish Leafy Green Mix bags will include servings of any of the following leaves:

- Batavia Red / Green
- Butter Type Crunch Red / Green
- Frisse Incised Leaf Red / Green
- Oak Red
- Gem Red



Our curated varieties are selected to provide consumers a sensory experience of **colour, flavour, aroma** and **texture** in each serving

# Our USP

- **Pesticide** free, **Sustainable** Leafy Greens
- Available all year round - 365 days
- Consistent, quality product
- No Chlorine
- Great shelf life
- Significant reduction in **food waste**
- All Irish **locally** grown
- Strong sustainability credentials - less water, land and chemical pesticide free
- **Low Carbon** Farming



# Progress To Date



- ▶ Successful large-scale **trials** of proof of concept & shelf life completed
- ▶ **Teams assembled** - Operational & Build Teams

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- ▶ Key strategic partnership - **Bord na Mona** - Infrastructure & Enabling Partner
- ▶ **Planning Permission** - Granted & about to commence construction

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- ▶ Funding - Seed Capital **€1.5 m** invested to date
- ▶ Detailed **Design** completed including design to BRC standards

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- ▶ Government Funding - Just Transition Grants of **€1m** and Dept of Agriculture, Food & Marine Grants secured
- ▶ **Customers** - significant interest with LOIs from foodservice/retail & manufacturing

# We are Seeking to Deliver



- ▶ Deliver a Sustainable Low Carbon Green Business in the Midlands
- ▶ Key strategic partnerships in place for energy provision

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- ▶ 1st Irish Farm on stream and producing end Q2 2023 in Ballycon, Co. Offaly
- ▶ Build a skilled team of over 20 people over time with significant indirect jobs

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- ▶ Grow a range of sustainable leafy greens 365 days a year
- ▶ Develop the team by providing training in Hydroponics & other essential training

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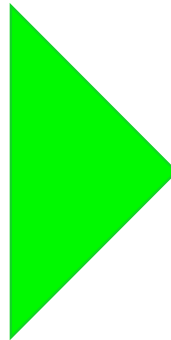
- ▶ Minimise the use of fossil fuels thereby enabling low carbon farming
- ▶ Increase community capacity through jobs, upskilling and revenue generation



# Mapping to Sustainable Development Goals

## Real Leaf Farm SDGs

### SDGs



Reduce leafy food waste and improve food security



Provide healthier food choices



Source 100% green energy for heating glasshouses



Employ up to 20 skilled people in Ballycon



Recyclable packaging and process that reduces waste



Low carbon farming with low carbon emissions



No soil, No peat - 16X yield that of field grown crops

# Potential **Impacts**



## **Social**

Job Potential 20+ jobs for Offaly, Ireland (160 jobs LT)

Up-skill former BNM employees

Re-energise impacted communities

Repurpose former disused sites

Developing a purpose & pride for a Region



## **Economic**

Scaleable, Profitable & Achievable business

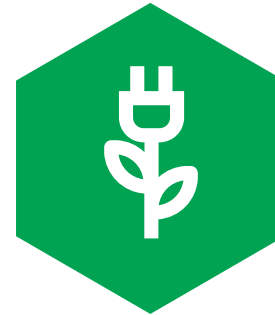
Premium Product

Growing Market / Enabling new markets

Displacing imports

Innovative Smart Agri

Experienced Team



## **Energy**

Growing food closer to markets - reduces Fossil Fuels

Longer shelf life - reduces waste

Powered by 100% green energy - solar / wind energy.  
Next sites: co-location to utilise waste heat

LT: Recycling & re-use of aquaculture waste as nutrients & other anaerobic digestion



## **Environmental**

Using less Energy, Land and Water

Eliminating Chemical Pesticides

Clean, natural food

Leave no residue behind

Reducing Food miles - reducing carbon footprint

Reuse of brownfield sites - creating low carbon farming

# RLF Milestones



- ▶ **Stage 1** ▶ Pre-construction and Site Works Preparation - appointment of contractors, demolition, levelling, backfill & drainage

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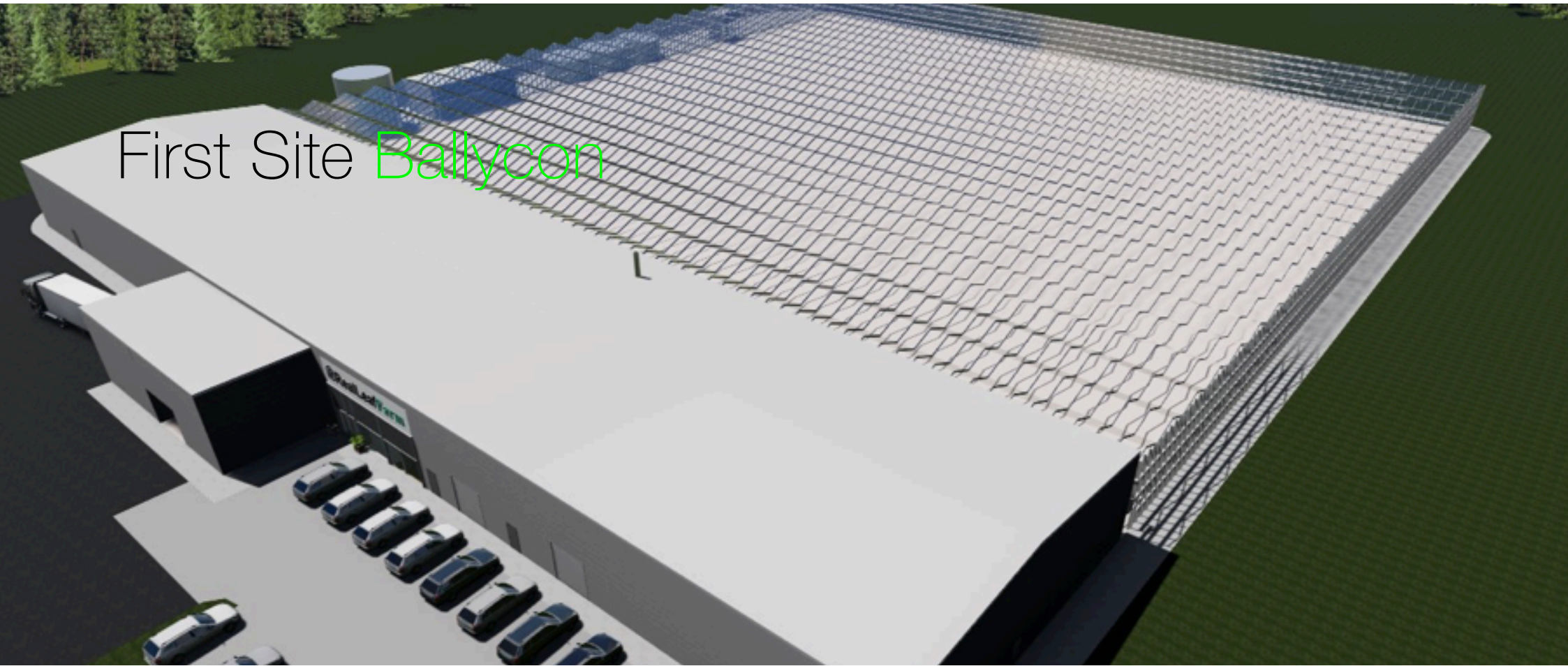
- ▶ **Stage 2** ▶ CSA design and fabrication, cold room construction, installation of mechanical, plant & machinery, site works

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- ▶ **Stage 3** ▶ Hook-up to mechanical plan, ductwork, installation of electrical equipment, cabling, secondary containment, terminations

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- ▶ **Stage 4** ▶ Commissioning & testing work, commence production



# First Site Ballycon

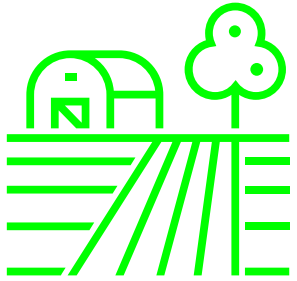
450+  
Tonnes

90%  
less water

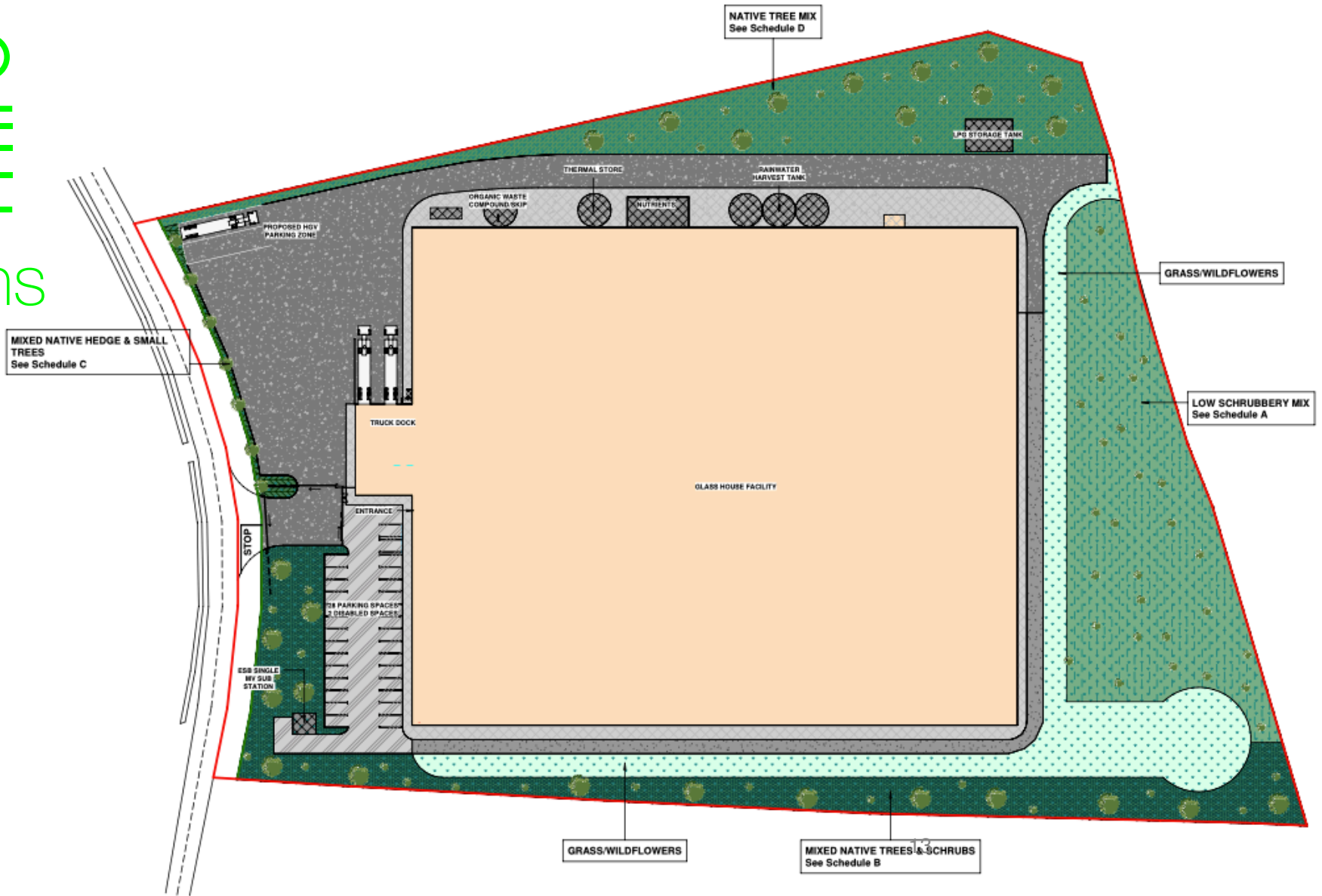
10,500sqm  
growing area

Circa 20  
full-time  
employees

First  
Planting  
Q2 2023



# Site Plans



# Example of Recirculating Deep Water Culture Farm





**RealLeafFarm**

Thank You

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