

# Novar Wind Farm Update

Thursday 16<sup>th</sup> January 2020  
Averon Leisure Centre

# Meeting Introduction

Camilla Barlocco, Brand & Stakeholder Manager  
Ventient Energy

# PROGRAMME

## 1. VENTIENT OVERVIEW

Tony Crombie, Regional Asset Management

## 2. WIND FARMS IN SCOTLAND

Tony Crombie, Regional Asset Management

## 3. NOVAR WIND FARM

Jon Priddy, Novar Asset Manager

## 4. LIFE EXTENSION APPLICATION

Joanna Thornton, Project Manager

## 5. QUESTIONS AND ANSWERS

# Ventient Energy Company Overview

Tony Crombie, Regional Asset Management  
Ventient Energy

# VENTIENT ENERGY

## PORTFOLIO KEY STATISTICS



Our innovative approach has seen us quickly become one of Europe's top independent producers of renewable energy with the highest level of GRESB rating.



**103**

Operational  
onshore wind farms



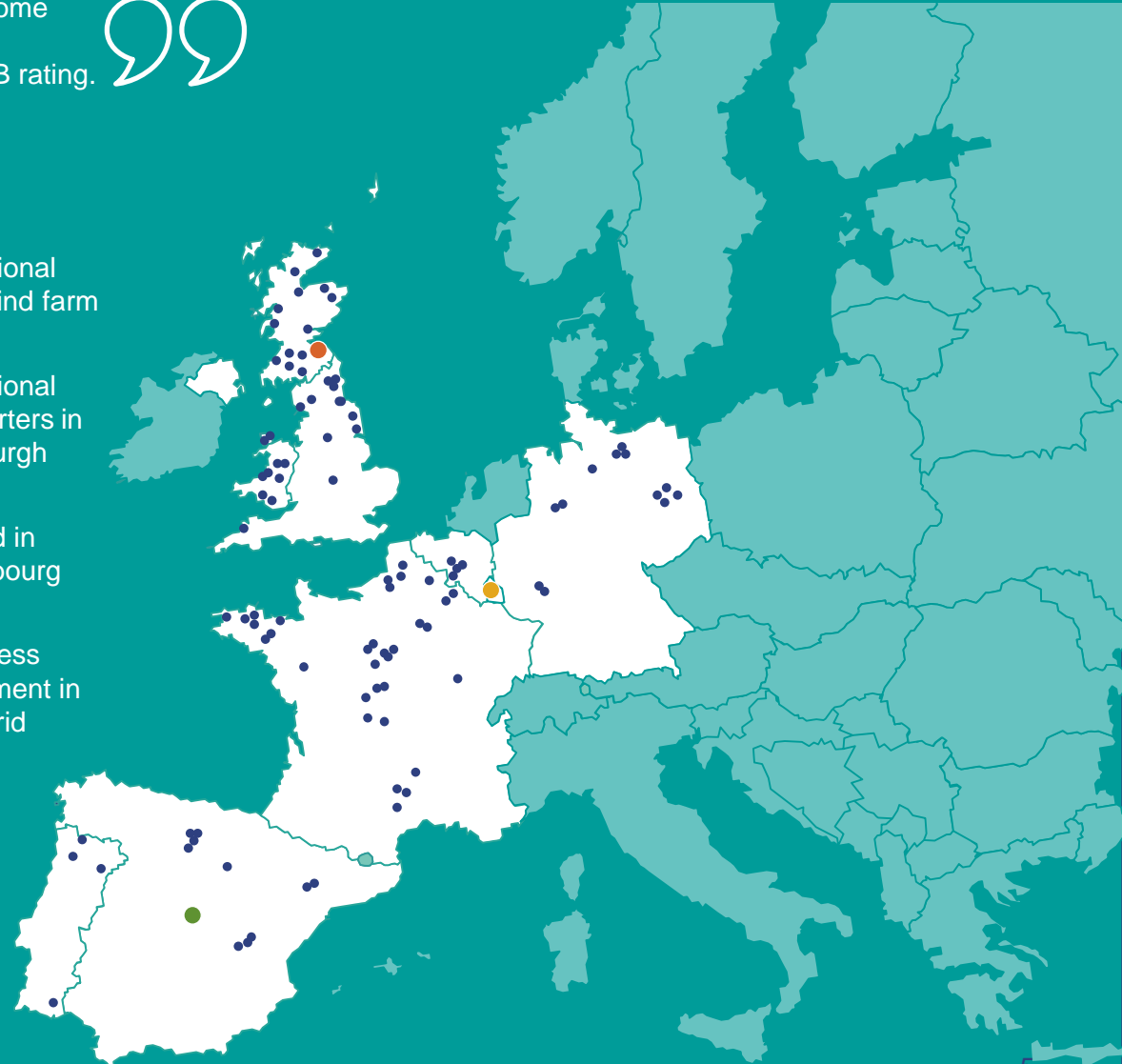
**1.9<sub>GW</sub>**

Installed  
capacity

**2<sup>nd</sup>  
largest**

European onshore  
windfarm group  
non utility  
owned

- Operational onshore wind farm
- Operational Headquarters in Edinburgh
- Board in Luxembourg
- Business Development in Madrid



**£1.5M**

community  
funding  
in the UK  
each year



G R E S B



Out of 33

Global / Renewable Power:  
Wind Power Generation:  
On-Shore Wind Power  
Generation



H&S Awards

NOVAR WIND FARM UPDATE

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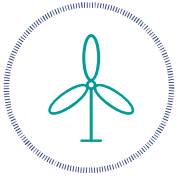
# VENTIENT ENERGY

## UK PORTFOLIO



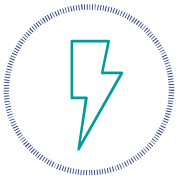
WIND FARMS

34



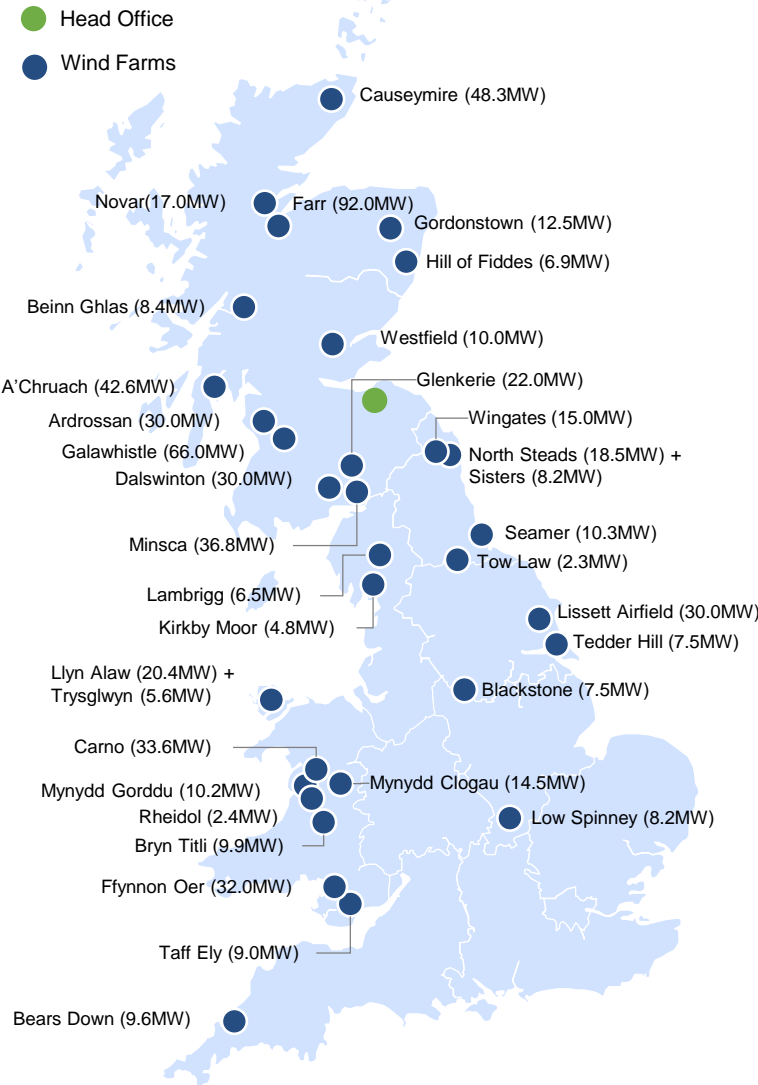
TURBINES

509



INSTALLED CAPACITY OF PROJECT

690MW




# Wind farms in Scotland

Tony Crombie, Regional Asset Manager  
Ventient Energy

# VENTIENT ENERGY SCOTLAND




- Head Office
- Wind Farms




WIND FARMS

12



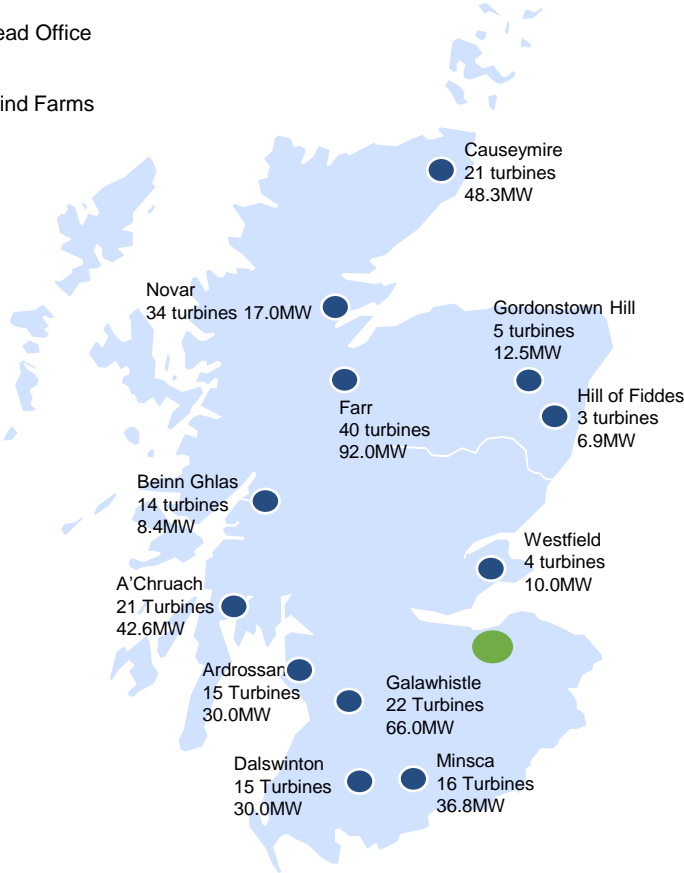
TURBINES

210



INSTALLED CAPACITY OF PROJECT

390MW

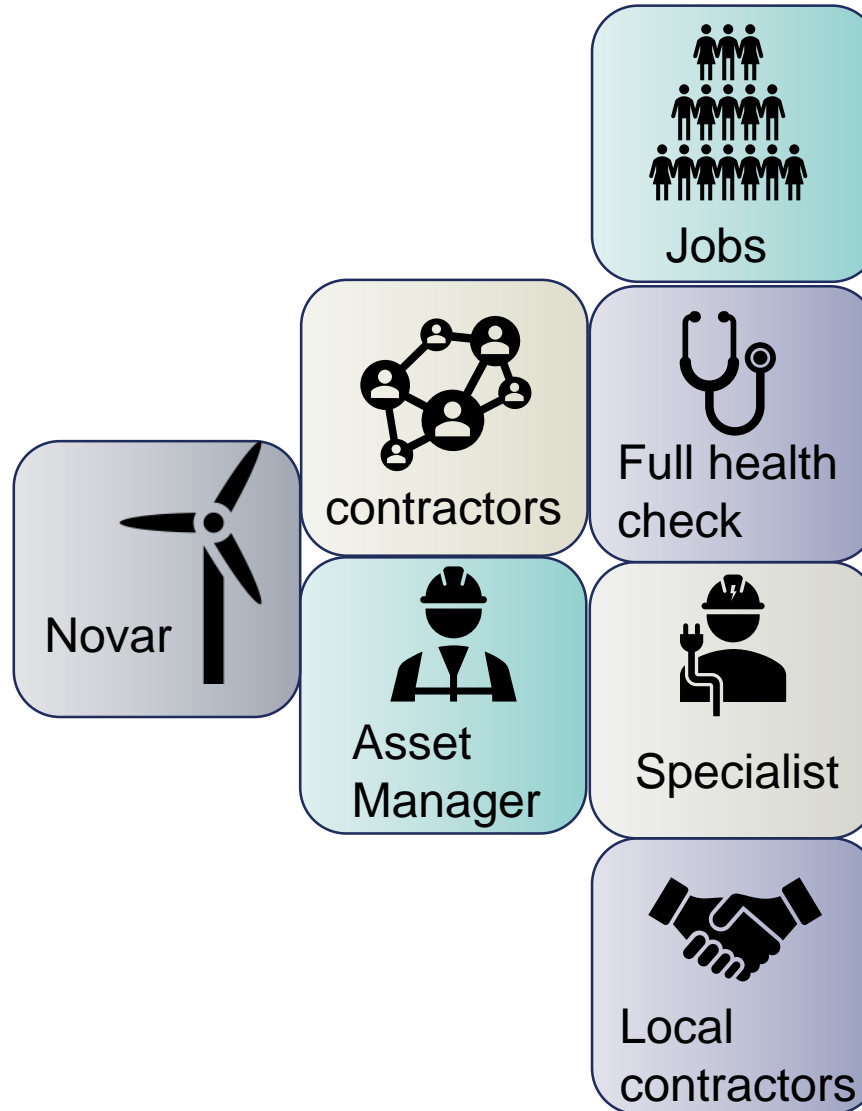




# VENTIENT ENERGY – SCOTLAND



- Our Scottish wind farms create jobs for 40 people permanently employed. 5 of them are dedicated to Novar.
- 1 dedicated Ventient Asset Manager per wind farm.
- 2 full health check of each asset per year
- Specialist engineers employed to complete any additional work beyond the scope of on site engineers.
- Approximately 6 Local contractors employed to serve the wind farms in other ways:
  - ✓ Haulage
  - ✓ Cranes
  - ✓ Certification/Testing
  - ✓ Civil work



# Operating Novar Wind Farm

Jon Priddy, Asset Manager  
Ventient Energy

# PERFORMANCE AND SITE IMPROVEMENT



## The site performance:

**Since we took ownership of Novar in 2017, the wind farm has generated 85.8 GWh of energy**

**Novar generates enough clean electricity to supply around 10,304 homes\* every year**

## The site improvements:

- Emergency facilities improved
- Control building upgrade internally
- Site tracks improved
- Remote Met Station installed for accurate data
- Can Am off road vehicle to assist during the winter months
- Close interaction with Novar Estate to minimise impact during stalking season

\*Based on an average energy yield and assumed annual household usage of 4,115 kWh per year<sup>^</sup> = 10,304 homes.  
Typical domestic consumption values from OFGEM

# OPERATING NOVAR WIND FARM

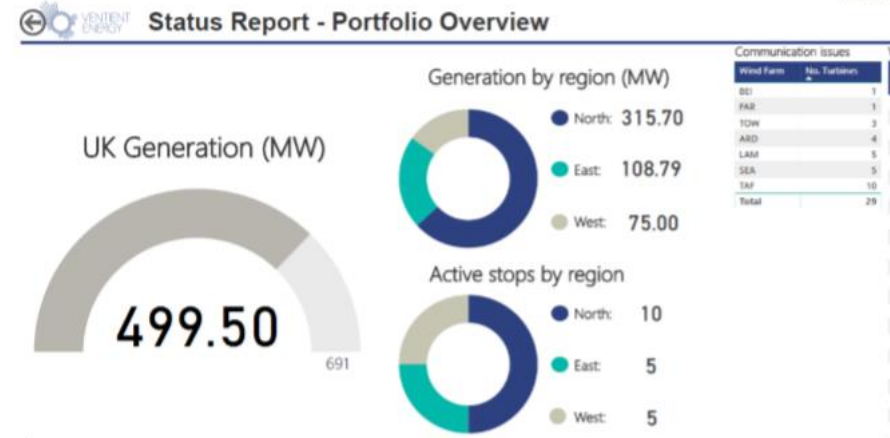


- Farming without the sowing and cultivation but still fraught with the uncertainties that come from the weather
- Predictions, targets and budgets
- Planned Preventative Maintenance agreed
- Dynamic multi tasking process with the weather adding uncertainty at random
- Maximising generation when its windy, maximising maintenance and repairs when its not and keeping people safe



# A DAY IN THE LIFE

- MANAGEMENT OF TECHNICAL, FINANCIAL AND SAFETY PERFORMANCE
- STAKEHOLDER MANAGEMENT, LANDOWNER, ESTATE ACTIVITIES, CONTRACTORS
- WORKS PLANNING
- HEALTH AND SAFETY MANAGEMENT
- MONITORING STATUS REPORTS
- MONITORING TRENDS
- REVIEWING WEATHER AND PRODUCTION FORECASTS
- INFORMED DECISION MAKING

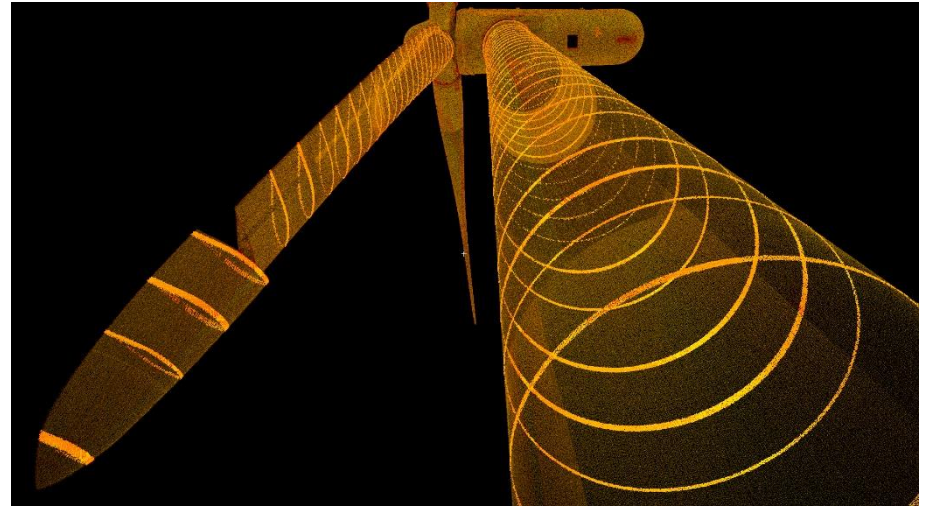




# GOING FORWARDS – WHERE DO WE GO FROM HERE



- 2019 – A YEAR OF REVIEW AND ANALYSIS
- FULL STRUCTURAL ANALYSIS UNDERTAKEN - TOP TO BOTTOM
- BLADE SURVEYS COMPLETED – LATEST DRONE TECHNOLOGY
- DRIVE TRAIN ANALYSIS FROM HUB TO GENERATOR
- TURBINE WALK DOWNS
- SCOPE OF WORKS DETERMINED
- WORK STARTED ON MAJOR COMPONENTS AND DRIVE TRAIN
- SCHEDULED COMPLETION Q2-3 2020
- SERVICING AND ANNUAL INSPECTIONS ETC AS USUAL





# NOVAR WIND FARM: LOCAL BENEFITS



- Local business premises in Invergordon used to support the wind farm with storage and off site maintenance facility
- Local contactors used for craneage, civils works, snow clearing etc carried out at site
- Local site team comprising 4 technicians
- Community Fund supporting several projects:
  - Home Start East Highland
  - West End Community Hall
  - Assistance with electricity bills for the over 70s
  - Ardross Primary School for extracurricular activities
  - Ardross Christmas Treats fund

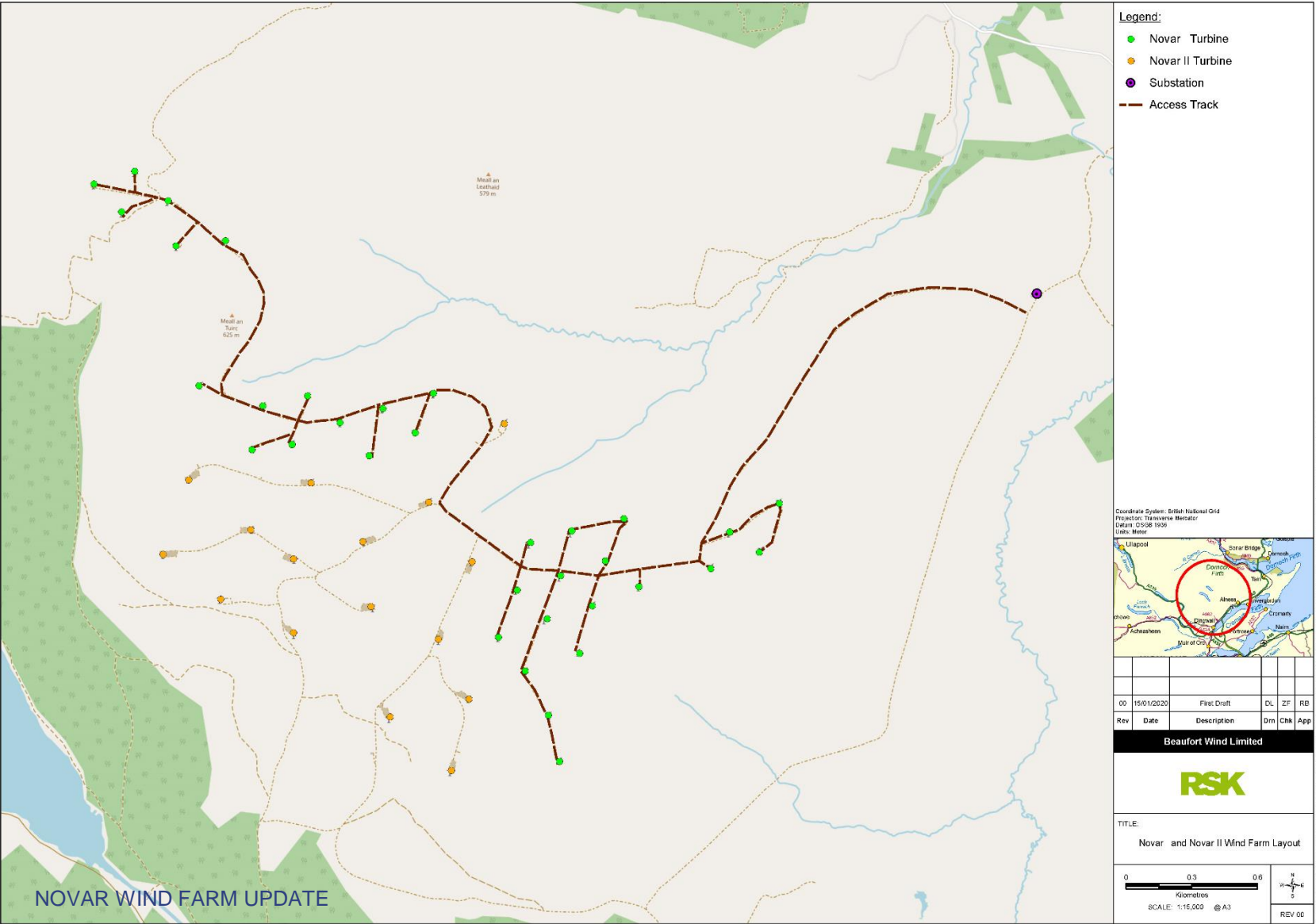
# The Life Extension Application

Joanna Thornton, Project Manager

# NOVAR WIND FARM AND NOVAR 2 LAYOUT



-The life extension application relates to Novar Wind Farm only. Novar 2 is owned by Innogy Renewables UK-



# LIFE EXTENSION APPLICATION



## WHAT'S THE APPLICATION

- Existing planning consent expires in August 2021
- Detailed technical assessments confirmed ability to operate for extended period
- Application to extend operational life for a further 10 years
- Environmental consultants RSK appointed to help prepare the application

## WHAT DOES IT MEAN FOR THE COMMUNITIES

- No new infrastructure
- Traffic to and from the site will continue to be low intensity
- Opportunity to help support continuation of clean energy generation
- Increase in the community fund to £3,000 / installed MW per annum from August 2021

# Questions & Answers



# THANK YOU

Ventient Application Team

Should you have more questions, please email us at  
[WindFarms@ventientenergy.com](mailto:WindFarms@ventientenergy.com)

[www.ventientenergy.com](http://www.ventientenergy.com)