Lundy Renewable Energy Project

Derek Green, Lundy Company


Haverfordwest
Milford Haven
Johnston
Pembroke Dock
Pembroke
Tenby
Pendine
Carmarthen Bay
Kidwelly
Ammanford
Brynamman
Llanelli
Burry Port
Swansea
Neath
Port Talbot
Maesteg
Pontardawe
Ystalyfera
Merthyr Tydfil
Aberdare
Treorchy
Pontypridd
Pencoed
Pyle
Bridgend
Porthcawl
Cowbridge
Llantwit Major
Barry
Port-Eynon
Gower
Worms Head/ Penrhyn-Gwyr
St Govan's Head
Swansea Bay
Ebbw Vale
Pontypool
Cwmbran
Caerphilly
CARDIFF
Newport
Monmouth
Abergavenny
Cinderford
Raglan
Usk
Chepstow
Lydney
Thornbury
Dursley
Nailsworth
Stroud
Tetbury
Malmesbury
Yate
Avonmouth
Portishead
Clevedon
Nailsea
Bristol
Chippenham
Corsham
Keynsham
Bath
Banwell
Weston-super-Mare
Blagdon
Cheddar
Radstock
Bradford-on-Avon
Trowbridge
Burnham-on-Sea
Mendip Hills
Frome
Westbury
Bridgwater Bay
BRISTOL CHANNEL
Skomer Island


IIEM
25
Isle of Man

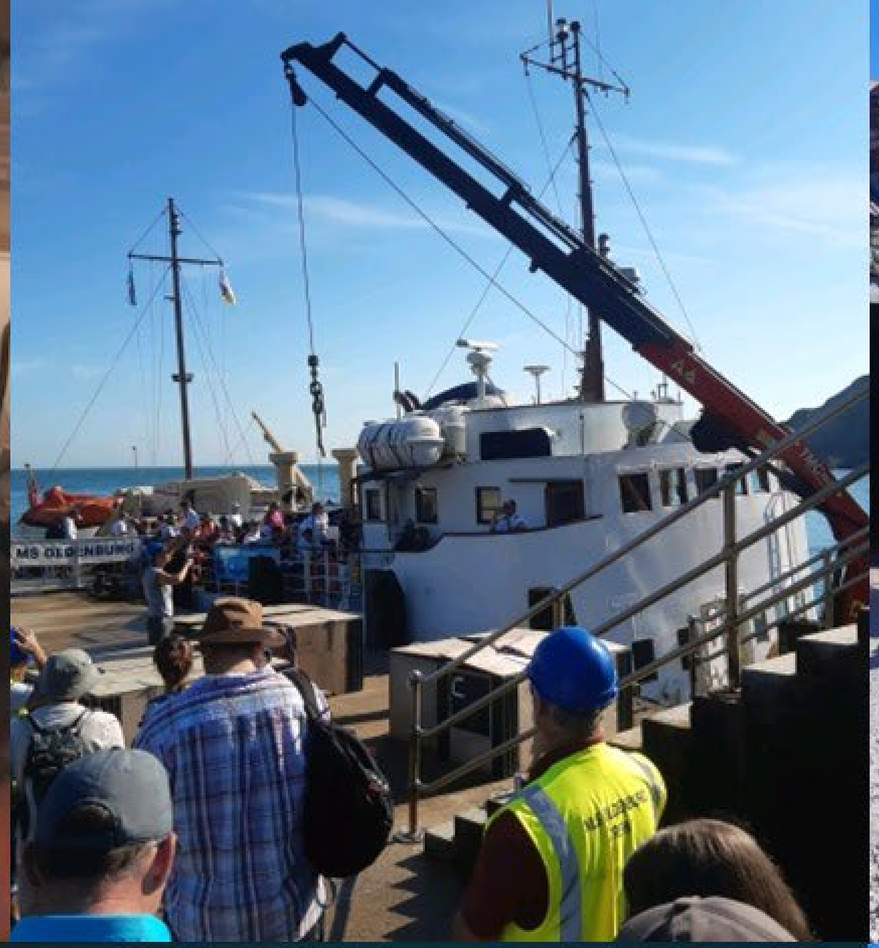

Lundy
Ilfracombe
Lynton
Minehead
North Devon
Barnstaple Bay or Bideford Bay
Braunton
Barnstaple
Porlock
EXMOOR
Williton
Bridgwater
Quantock Hills
Northam
Hartland Point
Hartland
Bideford
Dulverton
South Molton
Taunton
Wellington
Great Torrington
Chulmleigh
Tiverton
Blackdown Hills
Cullompton
Bude
Stratton
Holsworthy
Hatherleigh
Crediton
Honiton
Cornwall
Boscastle
Tintagel
Launceston
Halwill Junction
Okehampton
DEVON
Exeter
Ottery St Mary
Sidmouth
East Devon
Port Isaac
Camelford
Tamar Valley
Moretonhampstead
Exmouth
Trevose Head
Padstow
Bodmin Moor
DARTMOOR
Bovey Tracey
Dawlish
Tavistock
Teignmouth
Babbacombe Bay
Wadebridge
Callington
Yelverton
Newton Abbot
Bodmin
Buckfastleigh
Torquay
Newquay
Liskeard
Bugle
Lostwithiel
Saltash
Plymouth
Ivybridge
Totnes
Paignton
Perranporth
St Austell
Looe
Fowey
Torpoint
Berry Head
Brixham
St Agnes Head
St Agnes
Truro
Polperro
Whitsand Bay
Rame Head
Yealmpton
Halwell
Bigbury
Dartmouth
Redruth
Probus
Mevagissey
Kingsbridge
St Ives
Camborne
Penryn
Hayle
Cornwall
Dodman Point
Bigbury Bay
Start Bay
Salcombe
Start Point
South Devon
Prawle Point
St Mawes
Helston
Falmouth
Falmouth Bay
Porthleven
Mount's Bay


15 miles
MS Oldenburg
Ilfracombe
Lundy
MS Oldenburg
Anderton House
Barnstaple
Helicopter
Hartland Point
Bideford
Clovelly
Peppercombe
The Library
Coombe
South Street

M.S. Oldenburg – Lundy's passenger and supply ship

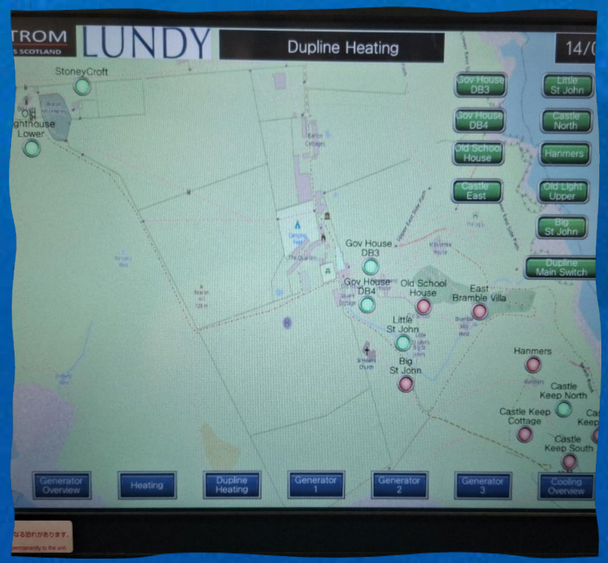
Lundy: Designations & Wildlife

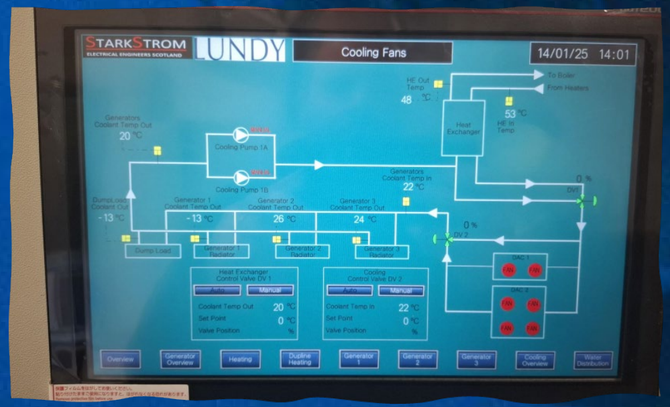
- SSSi
- MPA: (MCZ, SAC & NTZ)
- 44 Scheduled Monuments
- Heritage Coast
- UNESCO Biosphere
- Dark Sky Discovery Site
- 40,000 nesting seabirds
- 200 Atlantic Grey Seals
- 285 Soay Sheep
- 180 Sika Deer
- 22 Feral Goats
- Endemic Lundy Cabbage



Lundy’s reliance on diesel fuel

Approximately 160,000 litres per year transported to the Island via the MS Oldenburg





Efficiency improvements before renewables

- Modern controls
- Improved Monitoring / visibility
- Ensuring system is fit for the future
- Programmable Logic Controls (PLC) (brain!) / HMI Screens

Renewables Project - Indicative Programme

Phase 1 (November 2024 – December 2025) (already funded)

- Efficiency works
- Control upgrades (efficiencies)
- Heating upgrades / pilots (Storage heaters & ASHP)
- Monitoring (remote access / enhanced visibility)
- Pre consultation & planning application on new energy system for Lundy

Phase 2 (November 2025 – October 2026)

- Tender new energy system works (December 2025)
- Approval of funding and new energy system (Mar 2026)
- Commencement of energy system installation (April 2026)
- Commissioning of new energy system (October 2026)

Lundy Island Feasibility Options

1 Diesel Replacement

- **Description:** Like for like replacement of existing generator including new island controller.
- **Requirement:** In part: Essential
- **Continued Cost of Diesel:** £172,107

2 Solar PV/ Battery

- **Description:** Installation of a ground mounted solar PV array and battery store to provide 1 day's storage.
- **Requirement:** Option
- **Continued Cost of Diesel:** £91,853

3 Wind/ Battery

- **Description:** Installation of a single wind turbine with a hub height of 22m and battery store to provide 1 day's storage.
- **Requirement:** Option
- **Continued Cost of Diesel:** £76,688

4 Solar & Wind / Battery

- **Description:** Installation of both renewables listed in option 2 and 3 with a battery store to provide 1 day's storage.
- **Requirement:** Option
- **Continued Cost of Diesel:** £25,604

5 Solar & Wind / No Battery

- **Description:** Installation of both renewables listed in option 2 and 3 but without the additional battery storage.
- **Requirement:** Not ideal
- **Continued Cost of Diesel:** £121,940

Phase 2 – renewables / microgrid

Ambition to reduce diesel use by 85% or more

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Lundy’s previous aerogenerator

Similar machine (height / power / rotor) to the one considered for Lundy (tiltable)

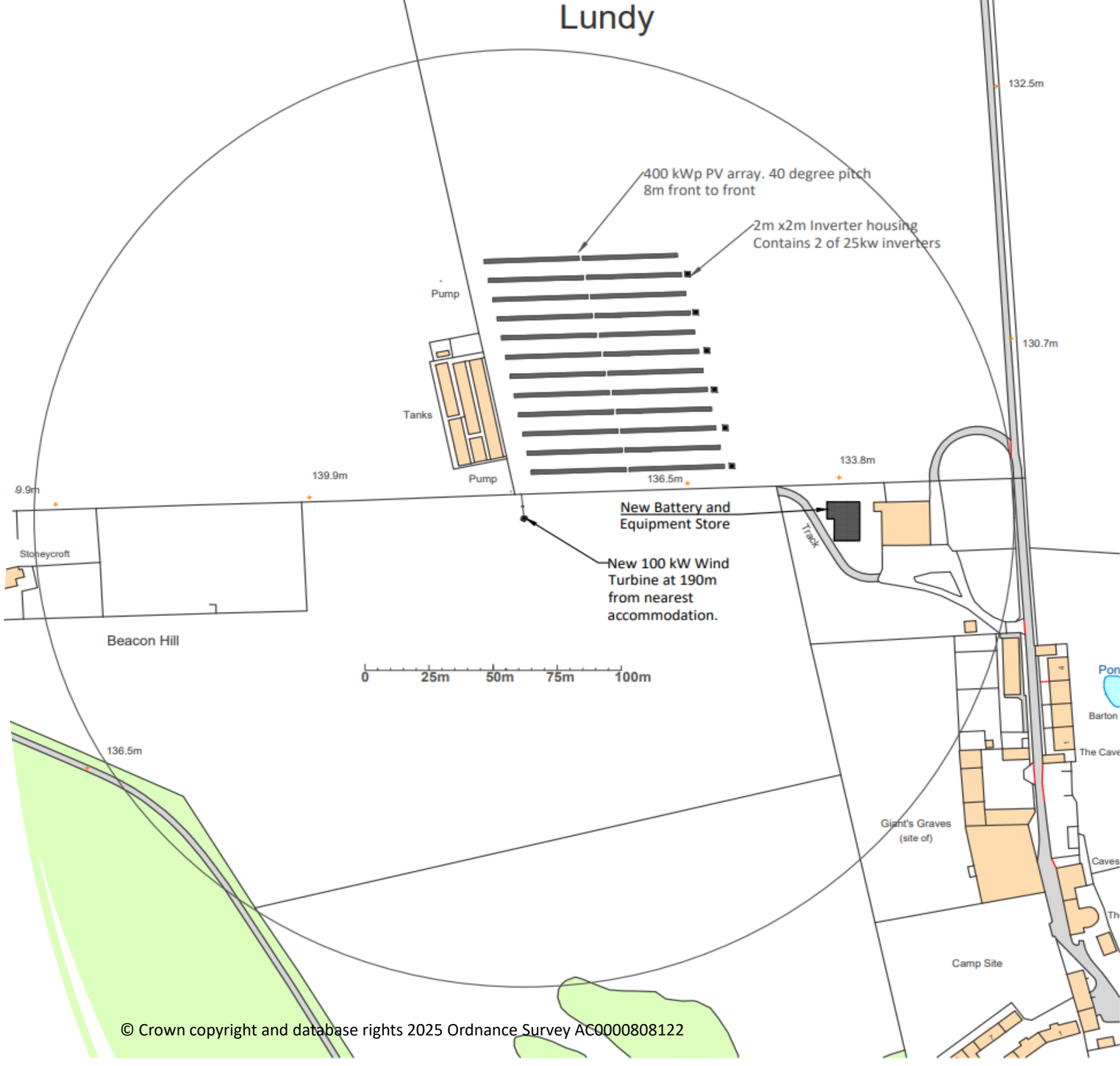
Indicative renewable energy specifications

- **Wind** – 100 kW (21M hub height 20.7M rotor diameter)

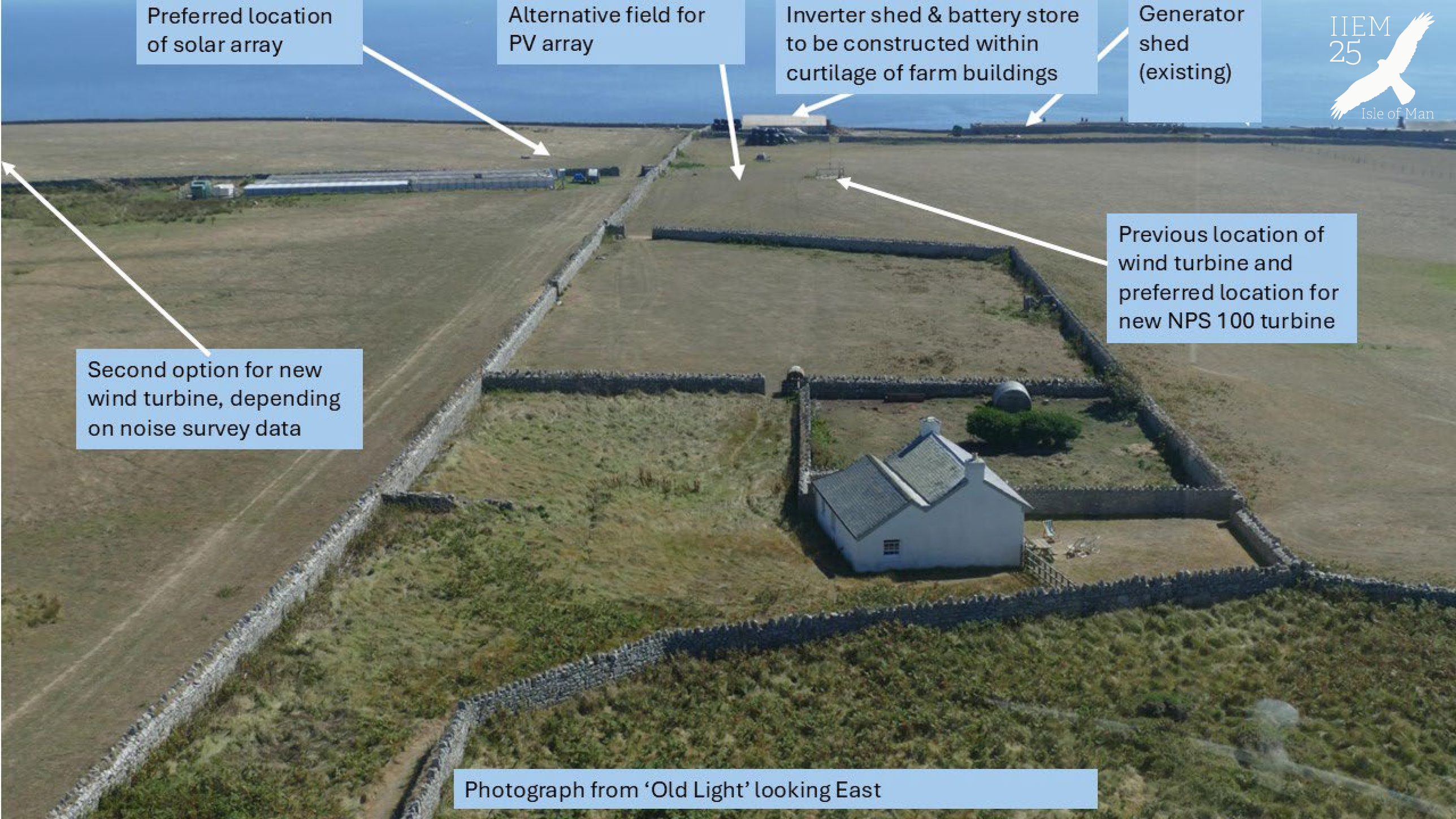
- **Solar** – 400 kWp - Approximately 2.5 M in height / 8 M spacing. 75 x 90 M (similar area 100 x 64M senior football pitch)

- **Battery store** – 1 MWh (within container or purpose-built unit) - lithium iron phosphate

- **Thermal accumulators** (buffer vessels)



Proposed new wind turbine - visualisation


Preferred location of solar array
Alternative field for PV array
Inverter shed & battery store to be constructed within curtilage of farm buildings
Generator shed (existing)
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Isle of Man
Previous location of wind turbine and preferred location for new NPS 100 turbine
Second option for new wind turbine, depending on noise survey data
Photograph from ‘Old Light’ looking East

Surveys & Consultations - 2025

Lots of surveys and conversations to date.

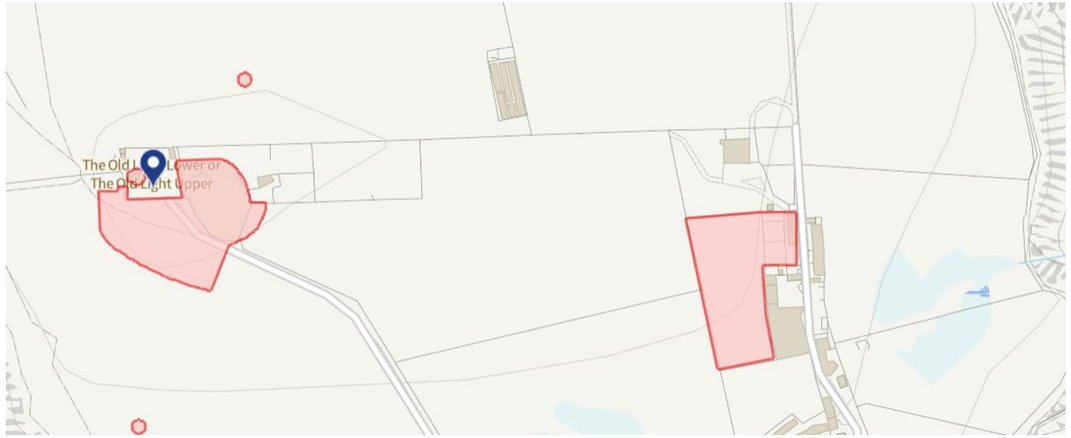
Outline (technical) design for planning (screening)
Archaeology / HIA
Noise assessment
Landscape & Visual Impact Assessment (LVIA)
Glint and glare
Telecoms

Ecology (bats / flora)

National Air Traffic Controls (NATS)

Ornithology surveys (VP / nocturnal)
Transport & access
Biodiversity Net Gain (BNG) assessment
Design and access statement
Review of external documents
Community consultation
Stewardship / SFI impacts on farm operations

We love our Manx Shearwaters too !



Please get in touch and let us know your thoughts

Thank you!

Website - https://www.landmarktrust.org.uk/lundyisland/discovering-lundy/renewable-energy-project/

Email - REP@Lundyisland.co.uk

*Survey results and visual representations will be added to the website once they are available.

The Landmark Trust