## QFF LANDHOLDER RENEWABLES TOOL KIT



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- Development of large-scale wind developments within Australia follows a similar process to other countries, but timescales will vary between state.
- Some activities do not follow the linear sequence shown above and can occur across multiple phases.
- ACCIONA Energia works across the entire development chain, which reflects on the way we do business.

# PROSPECTING AND INVESTIGATION







- Am I interested in hosting wind turbines?
  - Is it compatible with my farming operations?
  - How many turbines & what is the additional income?
  - Is the additional income valuable to diversify income streams from farming
- Who is the developer?
  - What is their capability and financial capacity to develop a project?
  - > What is their business and financing model?
  - Have they developed projects before and do they have operational projects in Australia and elsewhere?
  - Can I visit their operating project in Australia?
  - How do they engage and contribute to the local community?

- Suitable wind speeds over large enough area
- Proximity to transmission grid and available grid capacity
- Any ecology issues such as protected plants or animals
- Land ownership (freehold or leasehold)
- Is the terrain difficult and will this cause issues with construction
- Contact landowner to determine if the landowner is interested in hosting?



← → C ♠ https://www.nationalmap.gov.au/renewables/





- Licence Agreement conditions
  - ➢ Biosecurity

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- Property access requirements eg, notification prior to entry
- Low impact on farming practices
- How likely is it that the project may be sold and you may be dealing with new people?

- Licence Agreement
  - $\geq$  2 3 year agreement with option to extend
  - Exclusive
  - Compensation payment
- Site wind monitoring conducted on some properties – SODAR, LIDAR
  - minimum 12 months
  - trailer mounted measurement device
- Conduct ecology review and site ecology surveys
- Grid connection checks
- Check for other wind turbine location constraints
- Preliminary wind turbine layout
- Sell project depends on business model

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## DEVELOPMENT AND PLANNING







- Agreement for Lease
  - Lease payments per MW of installed capacity
  - Compensation during construction period
  - Biosecurity
  - Notification prior to entry
- Low impact on farming
- Some vegetation clearing may be required for installing met masts
- Areas of land restricted from renewable energy infrastructure
- Long term goals for property
- Length of time between signing Agreement for Lease and commencement of construction
- Community will be informed of the project and engagement activities will commence eg, information sessions

- Agreement for Lease
  - 5 year agreement with option to extend
  - Payments for construction phase and operations phase
  - Exclusive
- Easement Agreements for power lines with some owners
- On the ground ecology surveys
- Additional wind monitoring on selected properties using meteorological (met) masts
- Planning applications with state and commonwealth governments
- Community engagement





# ENGINEERING AND PROCUREMENT







- Some vegetation clearing may be required for geotechnical studies
- Agreements for substation land and construction areas with some landowners
- Easements for power lines with some landowners
- How likely is it that the project may be sold and you may be dealing with new people?
- Disruptions during construction period

- Electrical and civil design
- Geotechnical investigations
- Identify areas for substations, temporary construction areas
- Grid connection application with Powerlink
- Early procurement activities identifying suppliers
- Arrange financing not all developers need to do this
- Final investment decision

# CONSTRUCTION AND OPERATIONS







- Notice of construction commencement
- May be required to sign documents for project approvals
- Handover from development to construction
- Liaise with project manager and project community relations coordinator
- Heavy construction equipment on site
- Construction of wind turbine pads and foundations
- Access roads suitable for heavy vehicles
- Underground cables and over head power lines
- Impact on fences, farm tracks, gates

- Work with landowners to minimise impact on farming operations
- May have to temorarily fence of construction areas
- Finalise remaining approvals and consents
- Community engagement activities
- Identify areas for substations, temporary construction areas
- Grid connection application with Powerlink
- Early procurement activities identifying local suppliers where available

# 15 CONSTRUCTION PHASE- SITE CLEARING & ROADS







## CONSTRUCTION PHASE- WIND TURBINE FOUNDATIONS

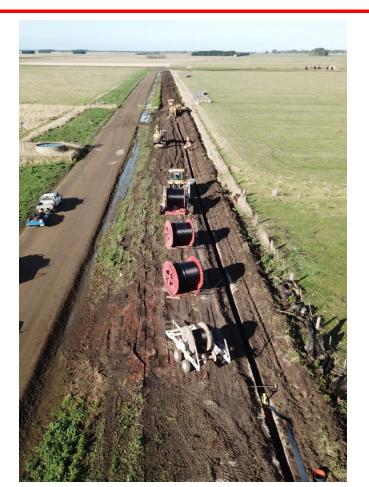






## CONSTRUCTION PHASE- CABLE TRENCHING







## CONSTRUCTION PHASE- WIND TURBINE CONSTRUCTION

















- Sign site leases
- Site manager takes over landowner relations from construction
- Light vehicles for maintenence
- Operations employees or contracted
- Ongoing community investment by the Developer?
- End of Lease
  - Extend or end project?
  - Removal of turbines and above ground equipment
  - Make good site

- Rehabilitation of construction areas
- Site leases finalised
- Site manager and operations staff live locally
- Periodic wind turbine maintenance
- End of lease
  - Extend and repower or end project?
  - Removal of turbines and above ground equipment
  - Make good site



# Questions?