

GEOLOGICAL SOCIETY

**PEAT RISK MANAGEMENT
DESIGN, CONSTRUCTION &
AFTERCARE OF WIND FARMS**

11 March 2008



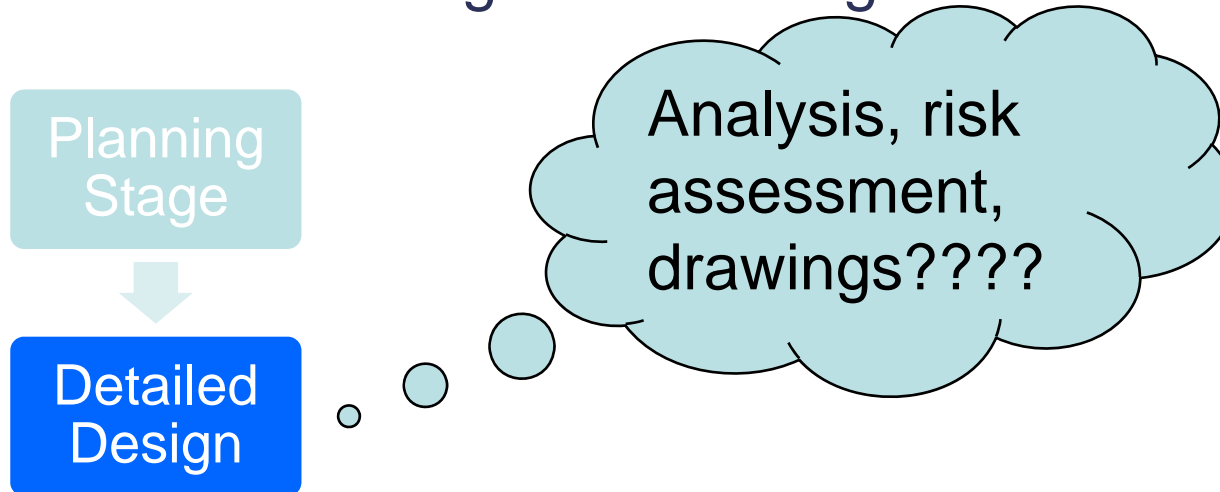
DONALDSON ASSOCIATES
CONSULTING ENGINEERS

Peat Risk Management – Stages

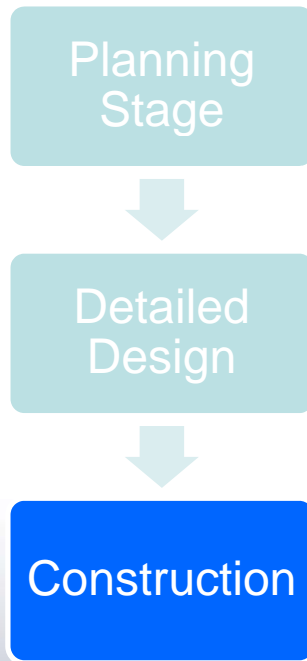
Planning
Stage



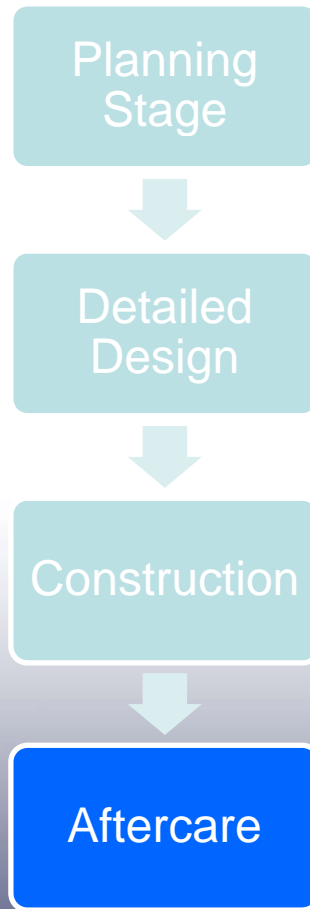
Peat Risk Management – Stages



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Peat Risk Management – Stages



Project Influences on Peat Stability

- Excavations



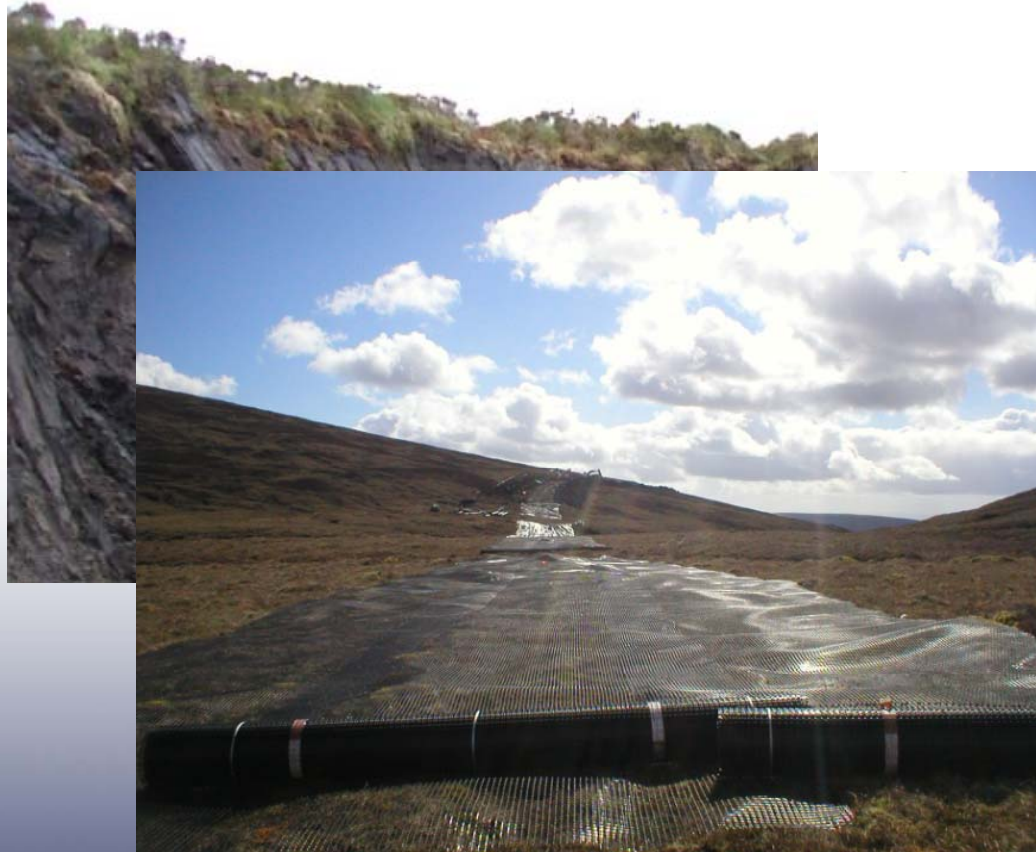
Project Influences on Peat Stability

- Excavations
 - Foundations
 - Hardstandings
 - Borrow Pits
 - Lagoons
 - Drainage
 - Cable Trenches



Project Influences on Peat Stability

- Excavations
 - Foundations
 - Hardstandings
 - Borrow Pits
 - Lagoons
 - Drainage
 - Cable Trenches
- Loading

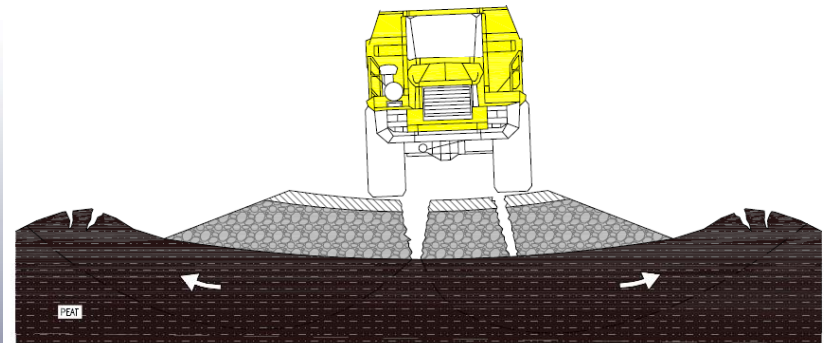
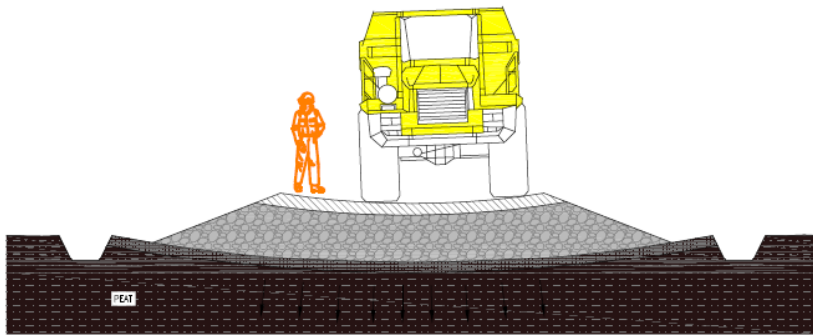
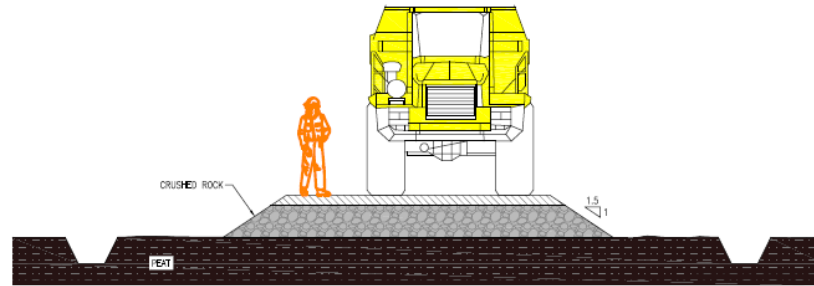


Project Influences on Peat Stability

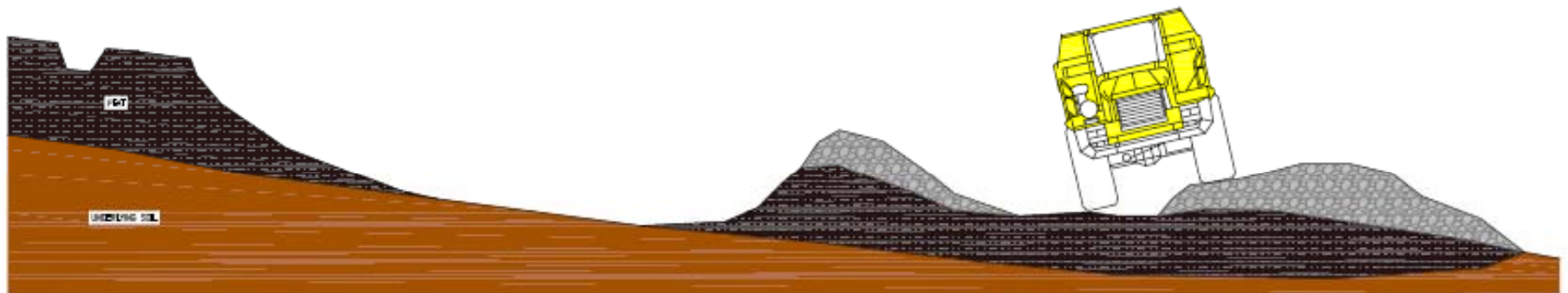
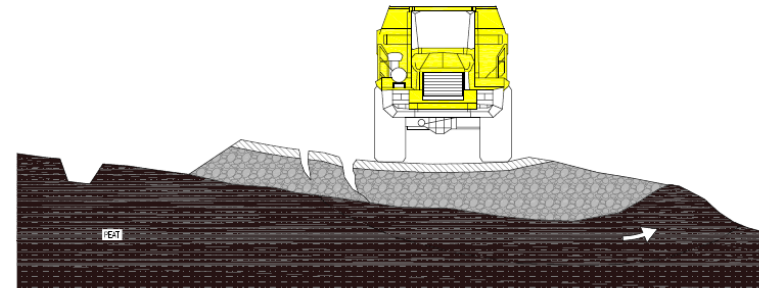
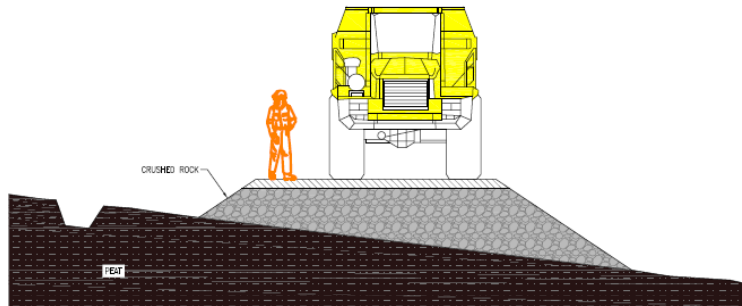
- Excavations
 - Foundations
 - Hardstandings
 - Borrow Pits
 - Lagoons
 - Drainage
 - Cable Trenches
- Loading
 - Roads
 - Stockpiles
 - Plant Movements



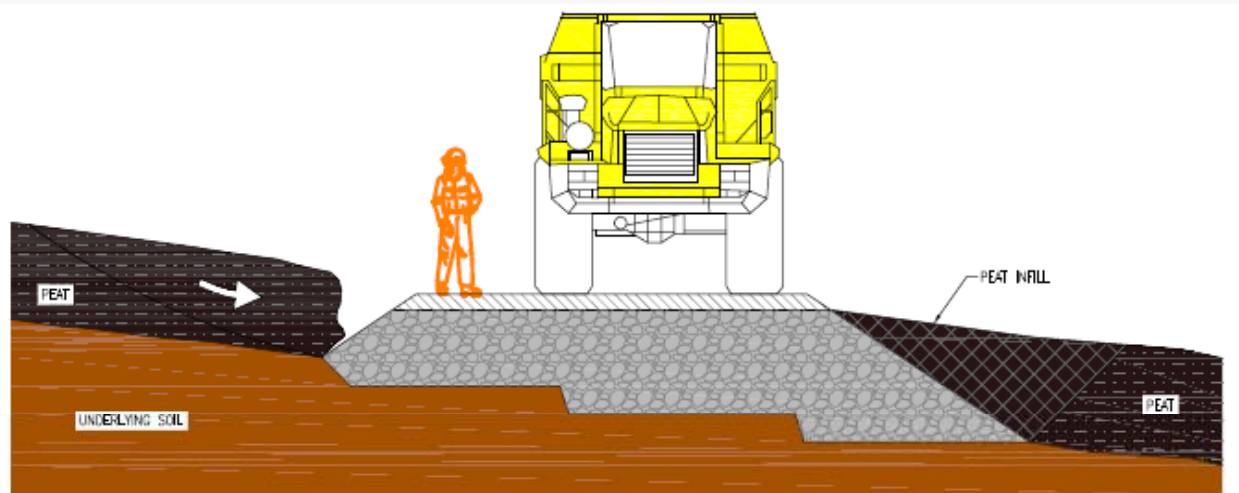
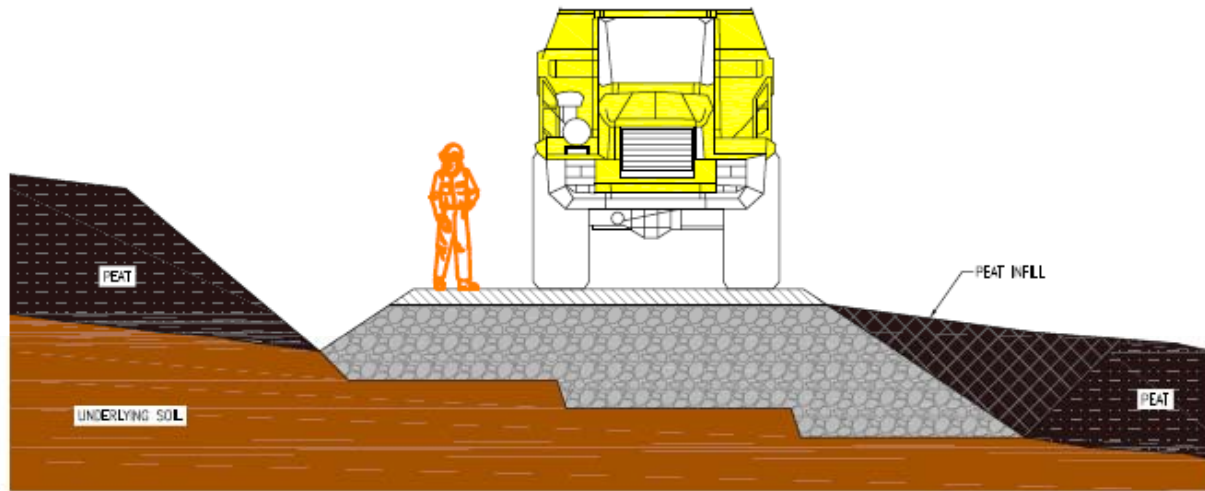
Design Considerations – Loading



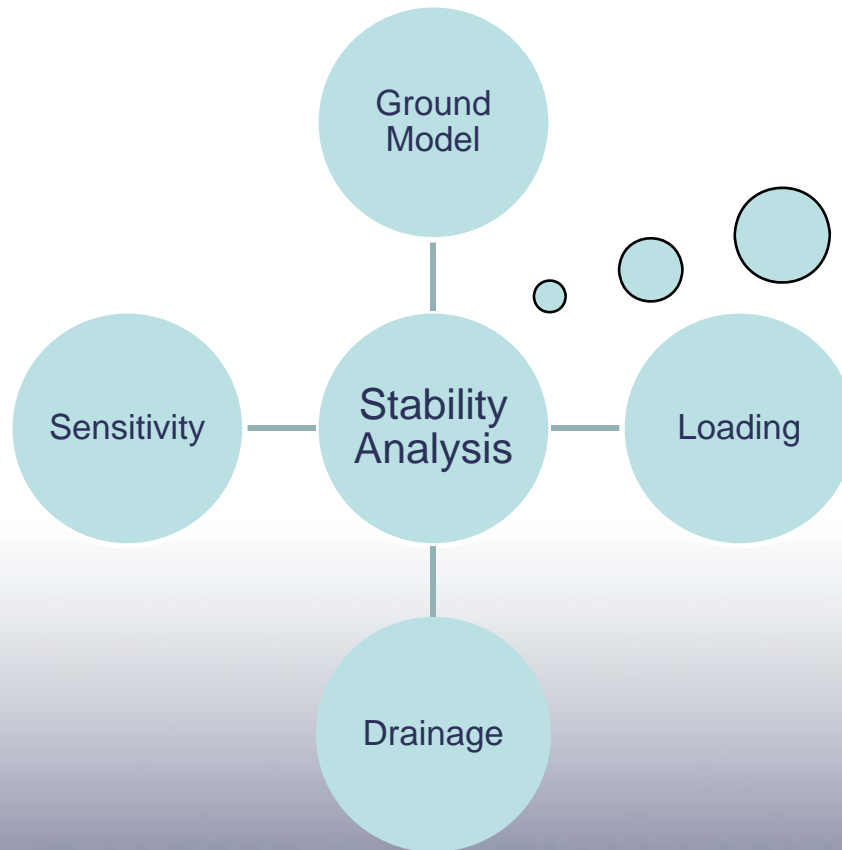
Design Considerations – Loading



Design Considerations – Excavation



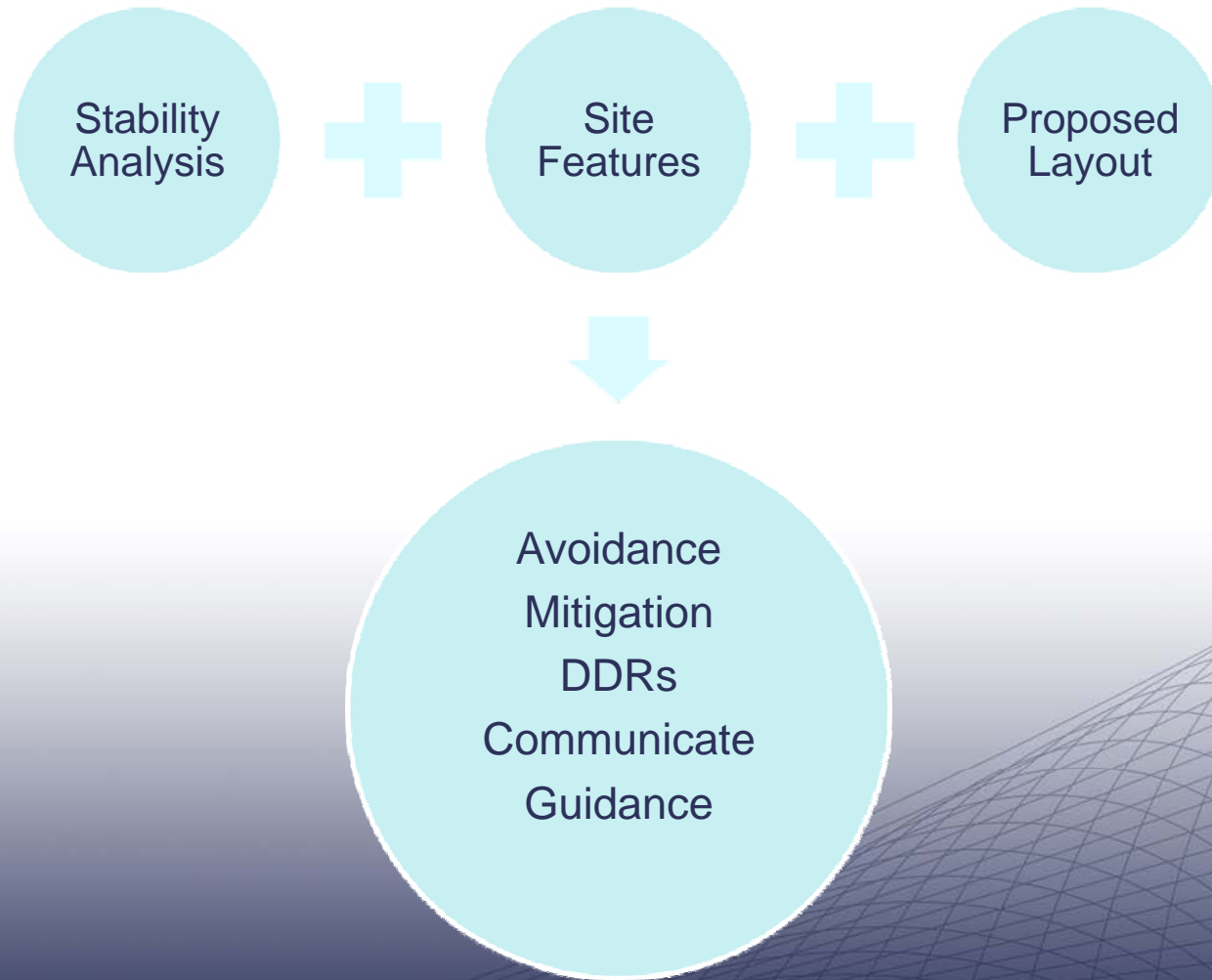
Design - Stability Analysis



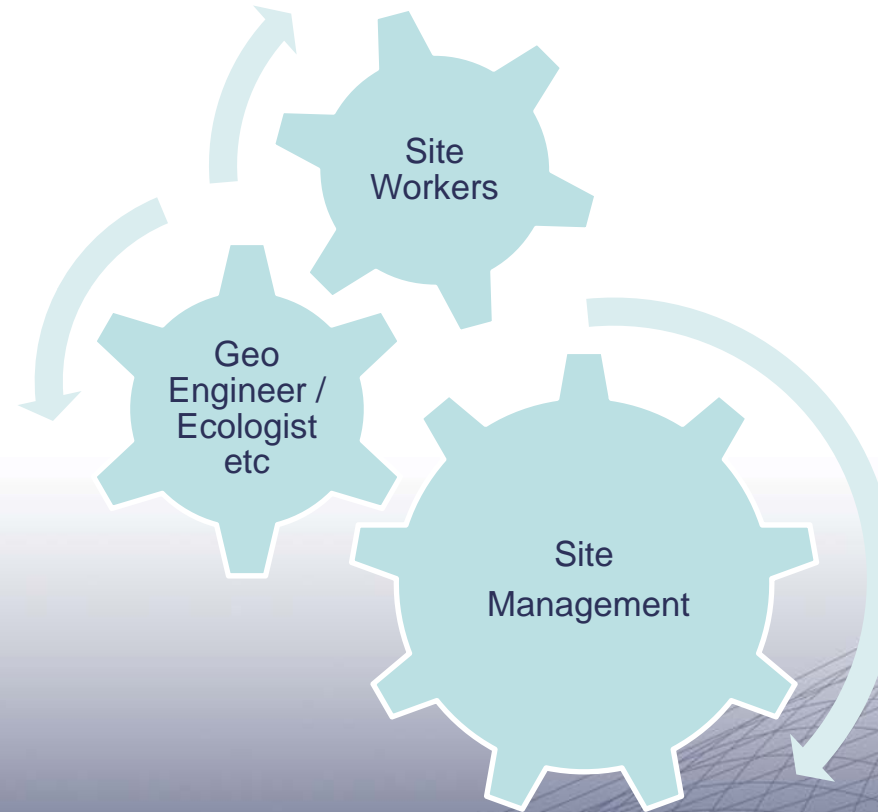
**How do you
use this
information?**



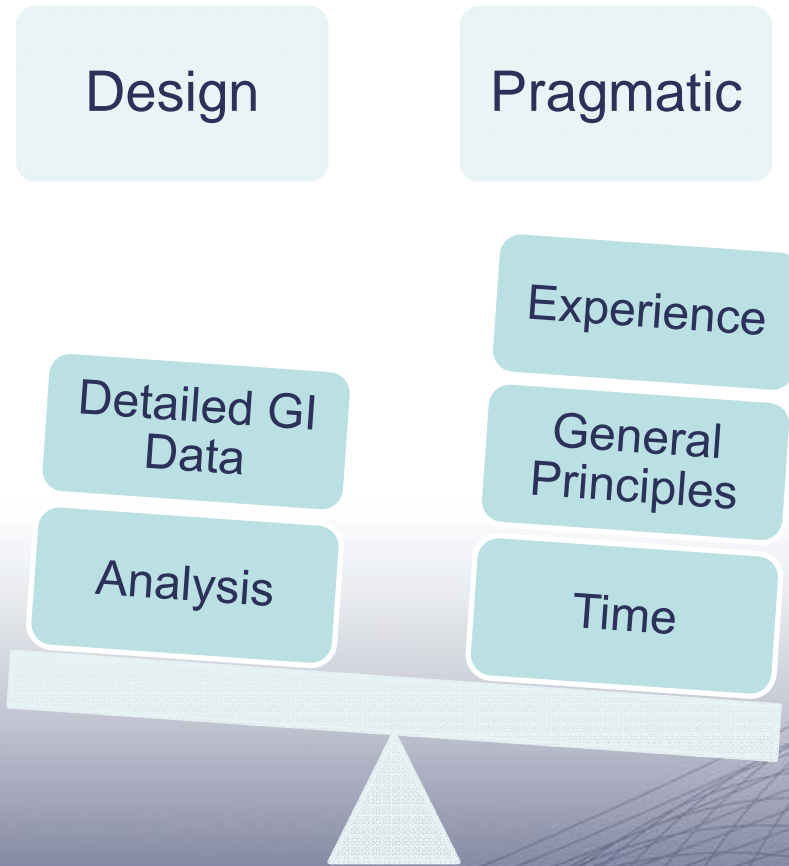
Design – Process



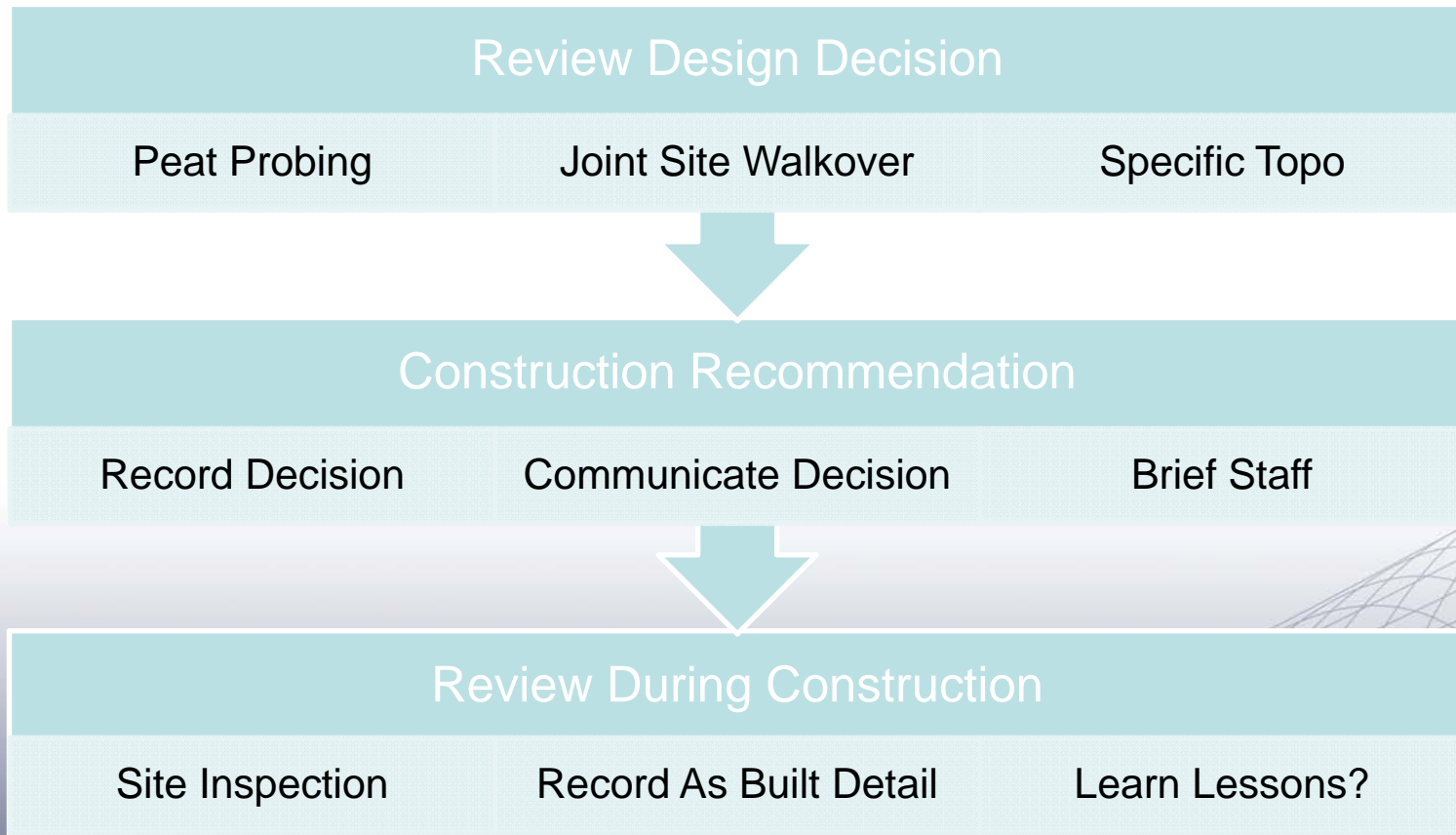
Construction – Integrated Team is Essential



Construction – Which Approach?



Construction – Decision Process



Aftercare

- Communicate Existing instability
- Record peat depth

- Present areas of higher risk
- Regular reviews to assess change
- Seasonal in first year of operation
- Communication to other site users

