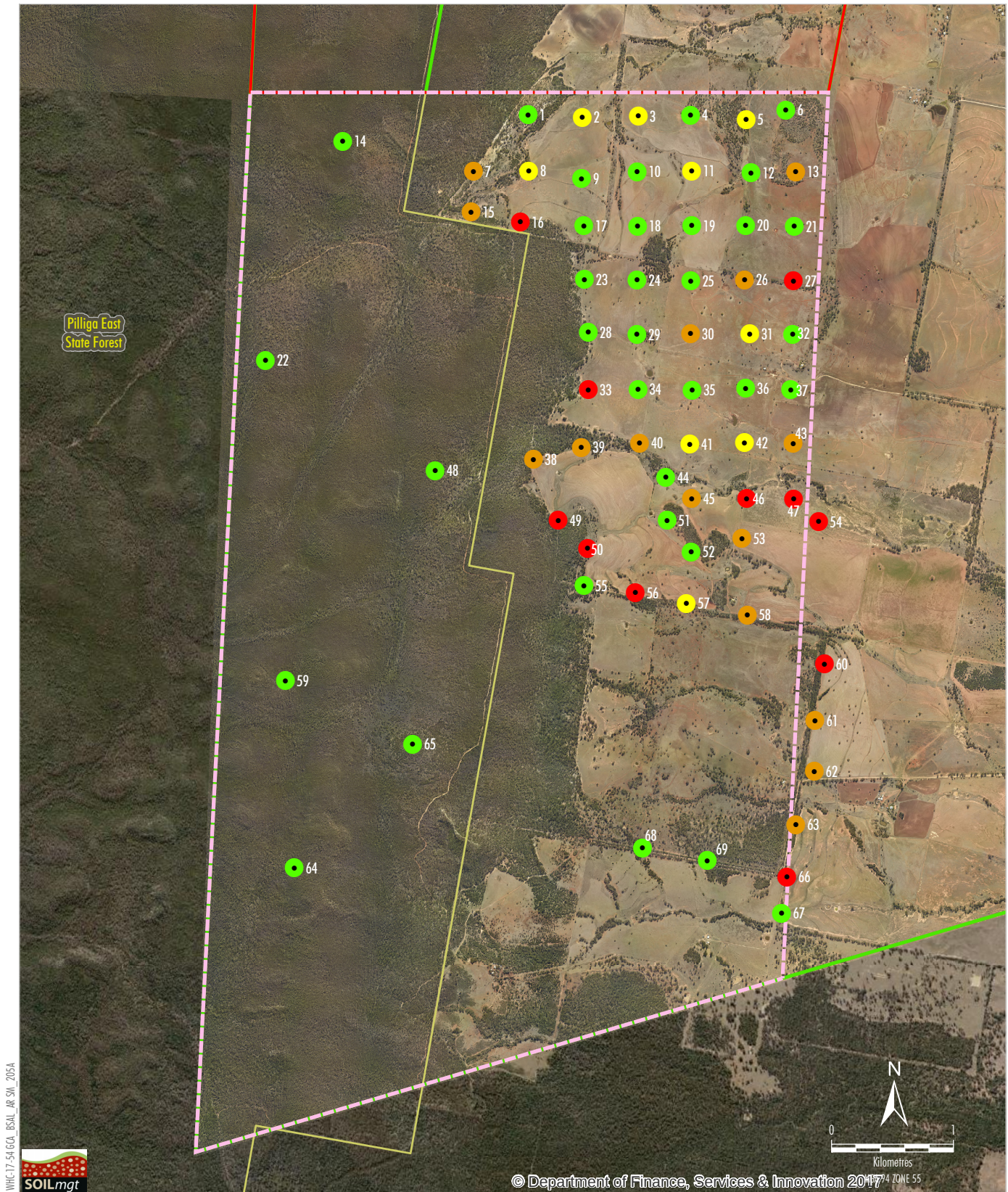
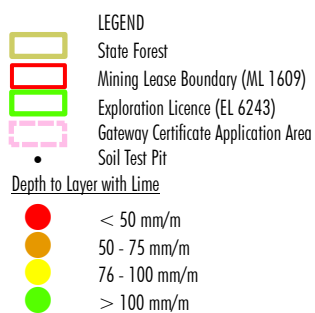
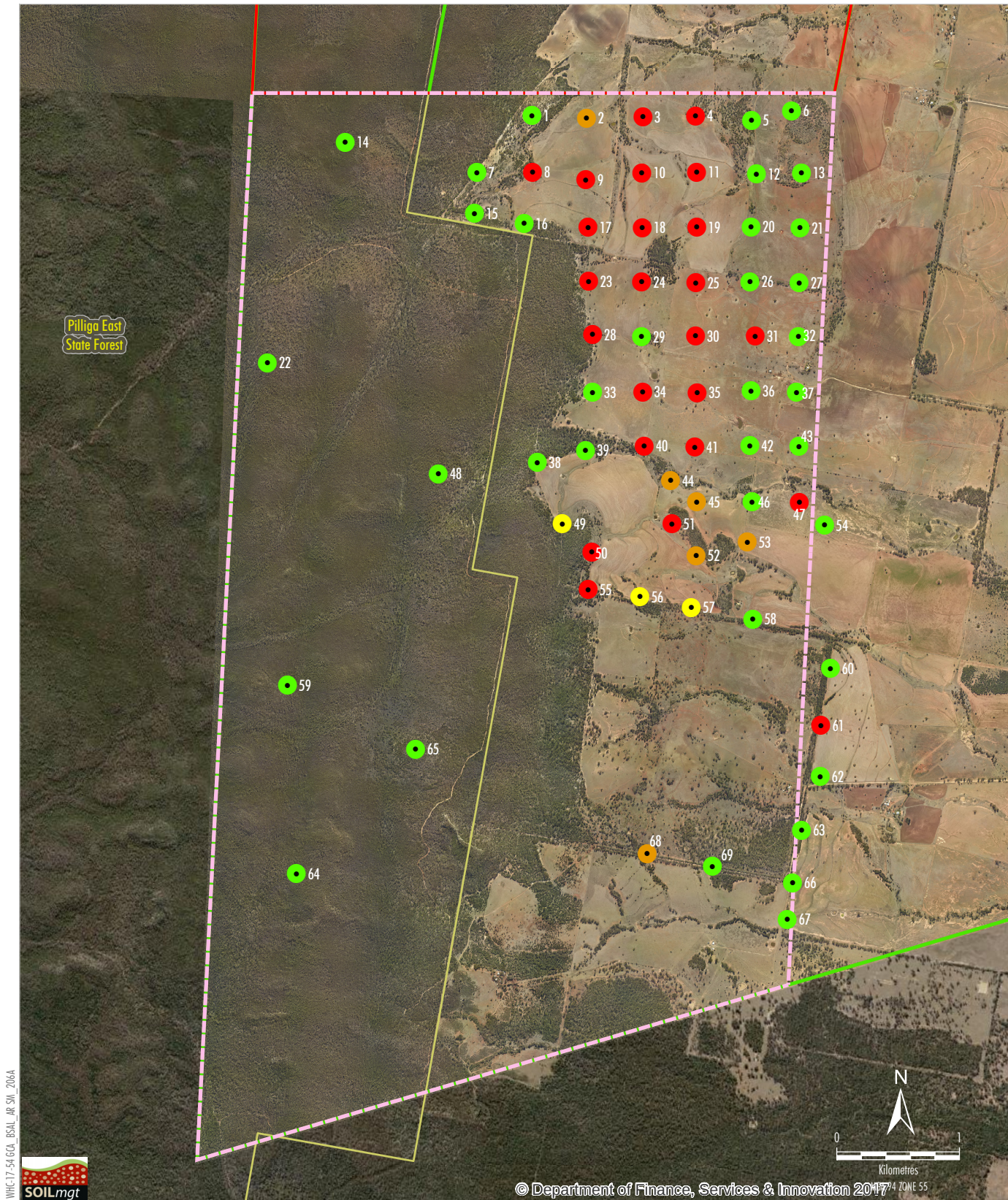




Source: Orthophotos - Whitehaven Coal (July 2017); R.W. Corkery & Co Pty Ltd (2009),  
NSW Trade & Investment (2015); NCOPL (2017); McKenzie Soil Management (2017)

- LEGEND**
- State Forest
  - Mining Lease Boundary (ML 1609)
  - Exploration Licence (EL 6243)
  - Gateway Certificate Application Area
  - Soil Test Pit
- Depth to Mottled Layer**
- < 50 cm
  - 50 - 75 cm
  - 76 - 100 cm
  - > 100 cm

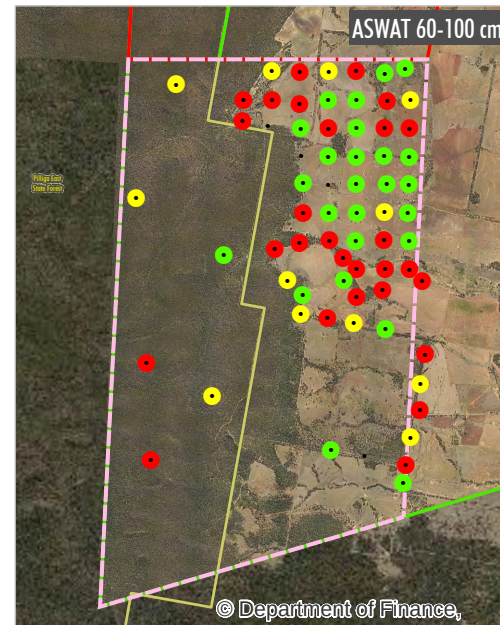
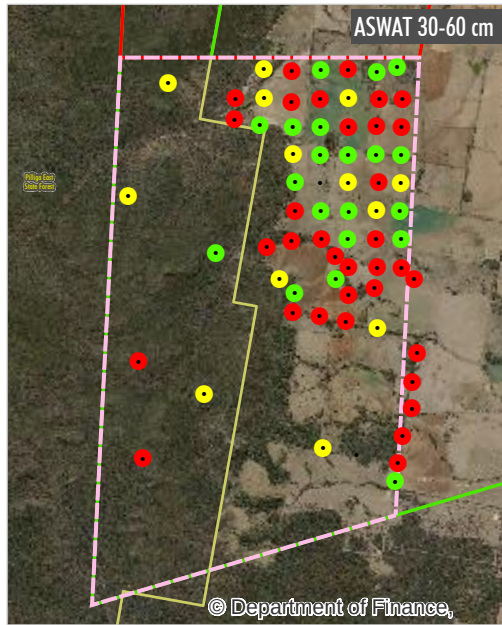
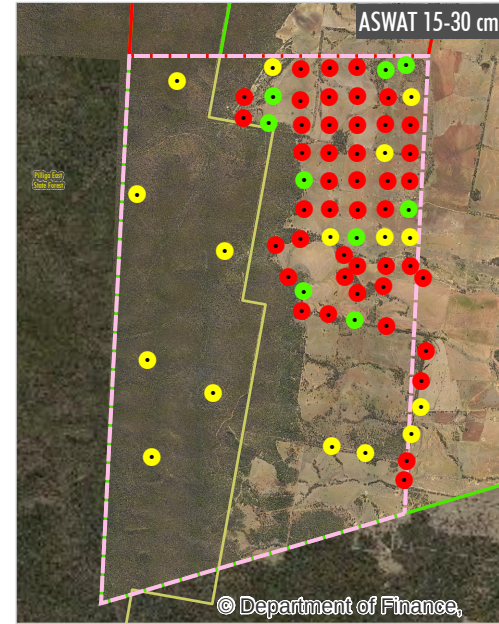
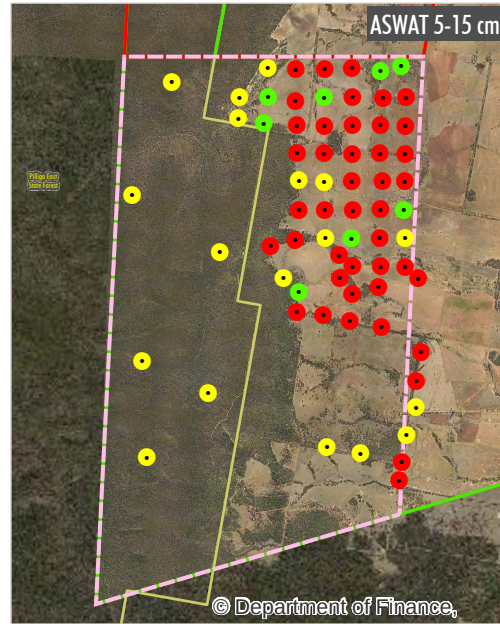
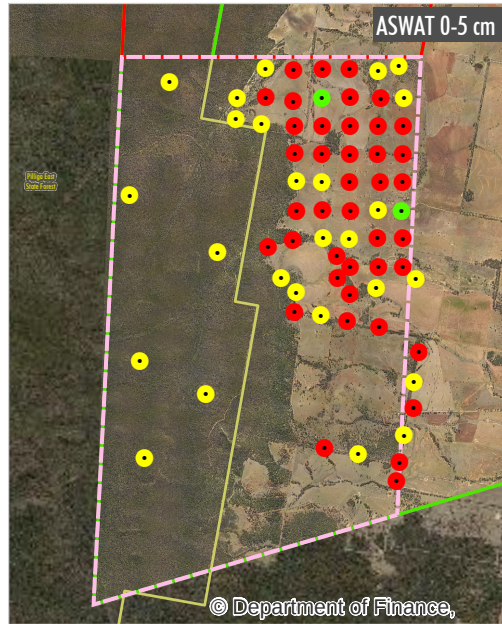
  
**NARRABRI STAGE 3 PROJECT**  
 Depth to Mottled Layer



WHITEHAVEN COAL

NARRABRI STAGE 3 PROJECT

Depth to Layer with Lime

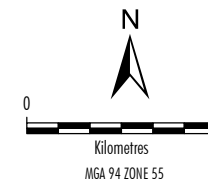


- LEGEND**
- State Forest
  - Mining Lease Boundary (ML 1609)
  - Exploration Licence (EL 6243)
  - Gateway Certificate Application Area
  - Soil Test Pit

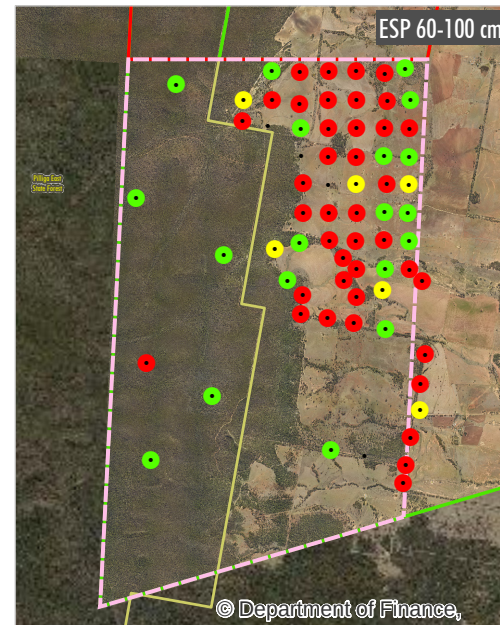
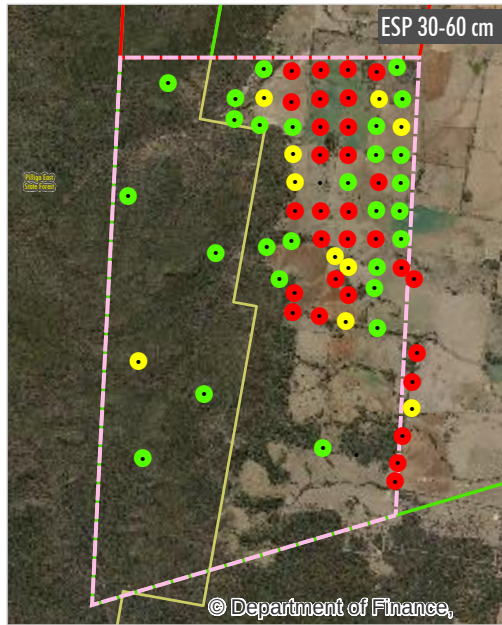
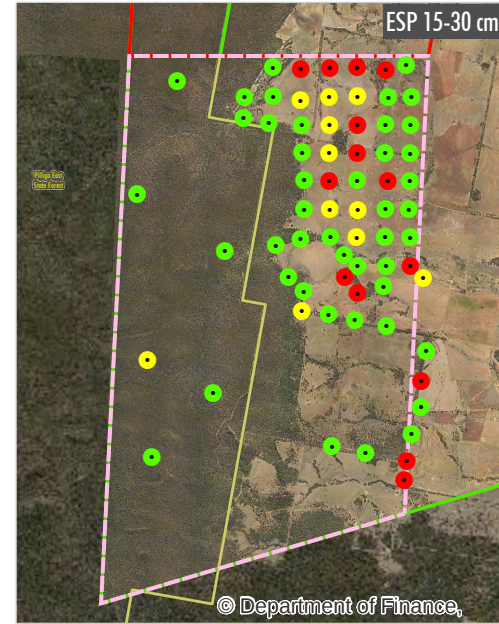
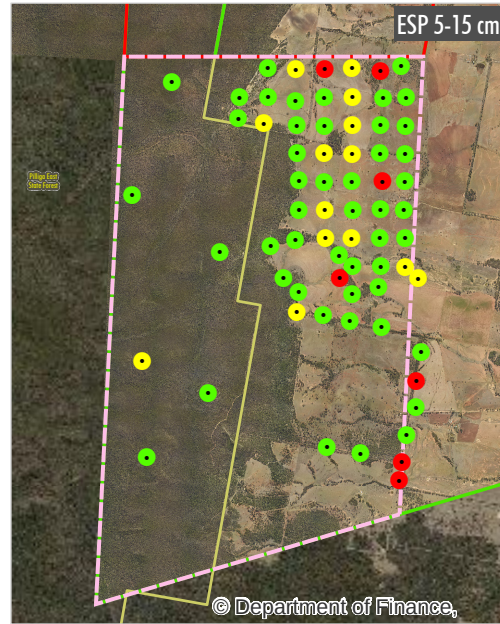
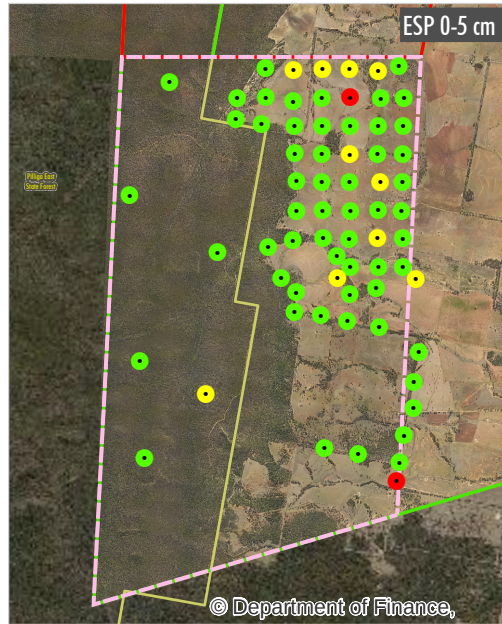
**Dispersion (ASWAT)**

- > 6
- 2 - 6
- < 2

Source: Orthophotos - Whitehaven Coal (July 2017);  
R.W. Corkery & Co Pty Ltd (2009);  
NSW Trade & Investment (2015); NCOPL (2017);  
McKenzie Soil Management (2017)



**WHITEHAVEN COAL**  
**NARRABRI STAGE 3 PROJECT**  
**Dispersion (ASWAT Score)**

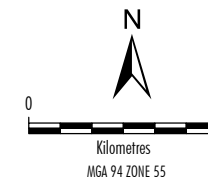


- LEGEND**
- State Forest
  - Mining Lease Boundary (ML 1609)
  - Exploration Licence (EL 6243)
  - Gateway Certificate Application Area
  - Soil Test Pit

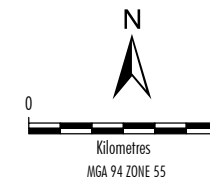
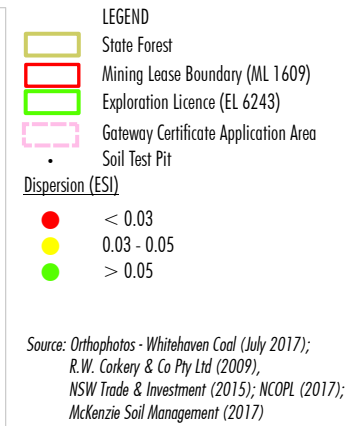
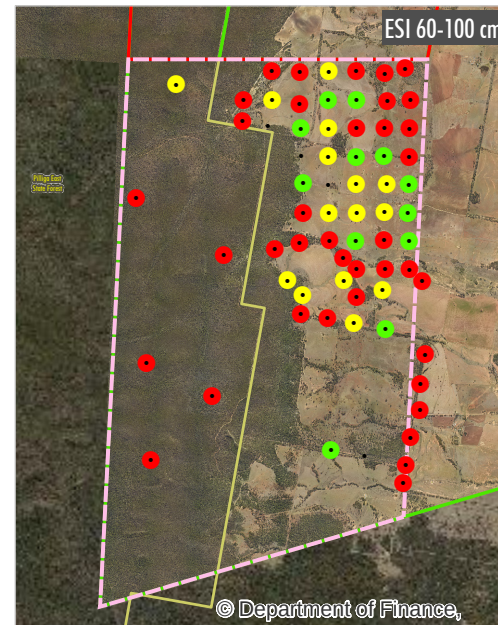
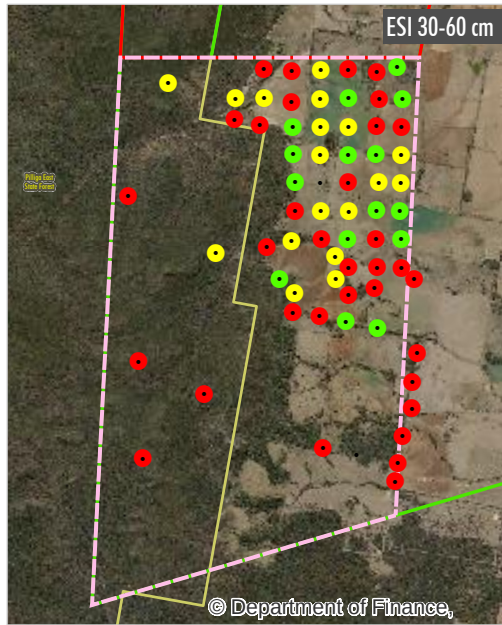
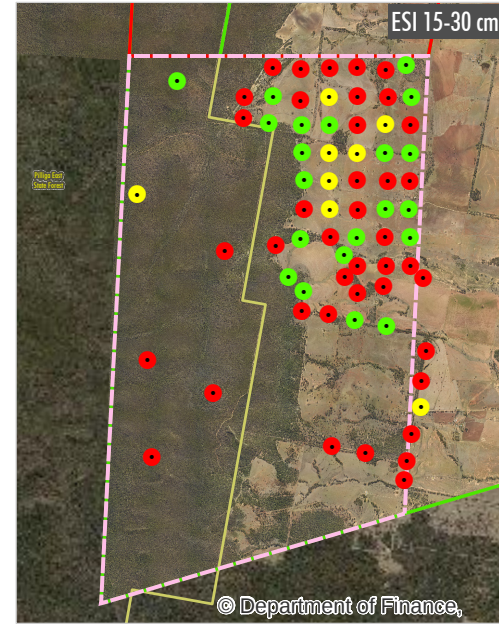
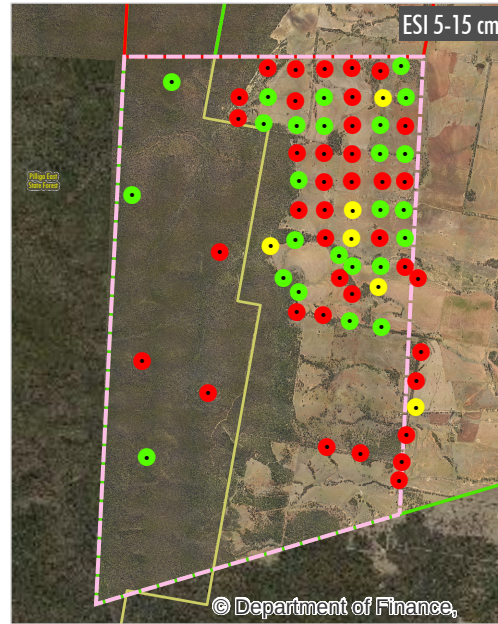
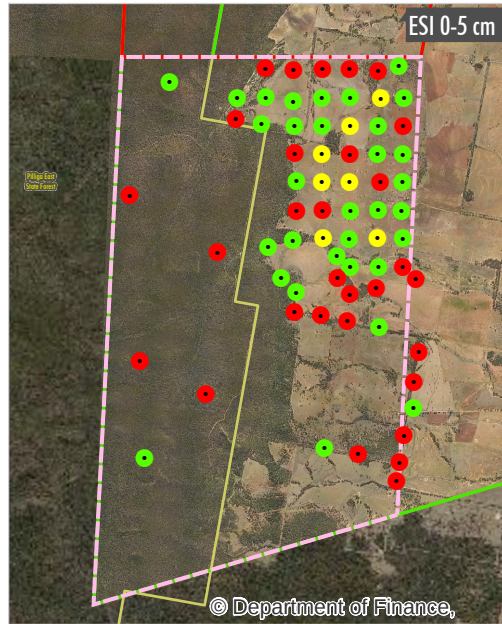
**Dispersion (ESP)**

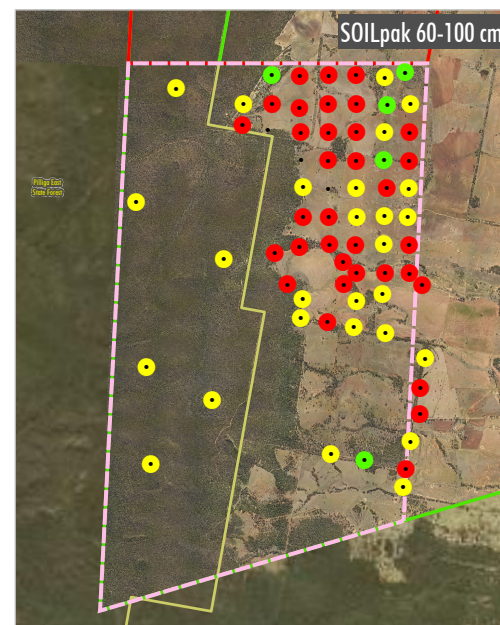
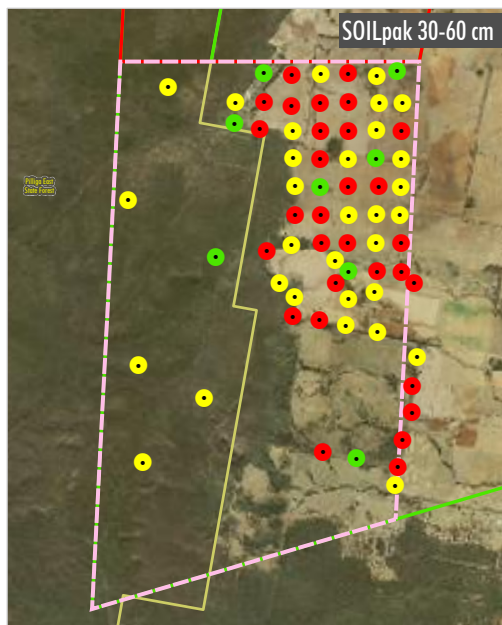
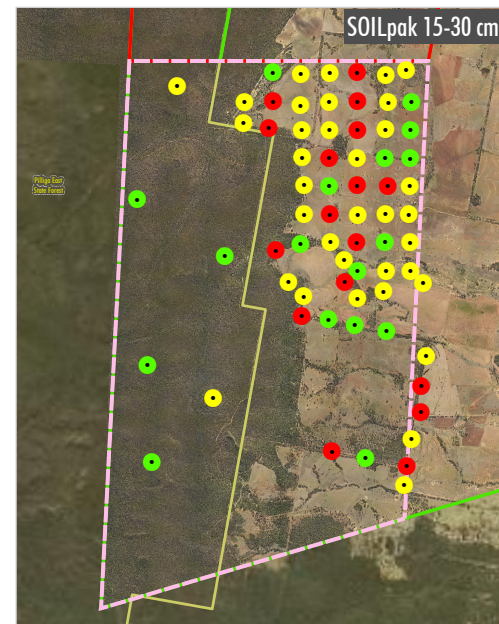
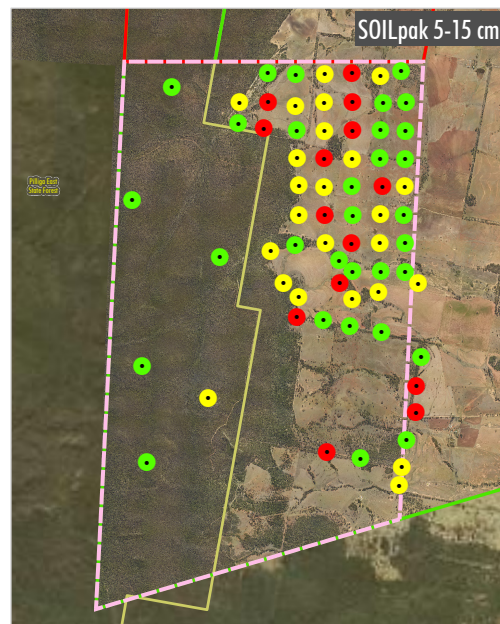
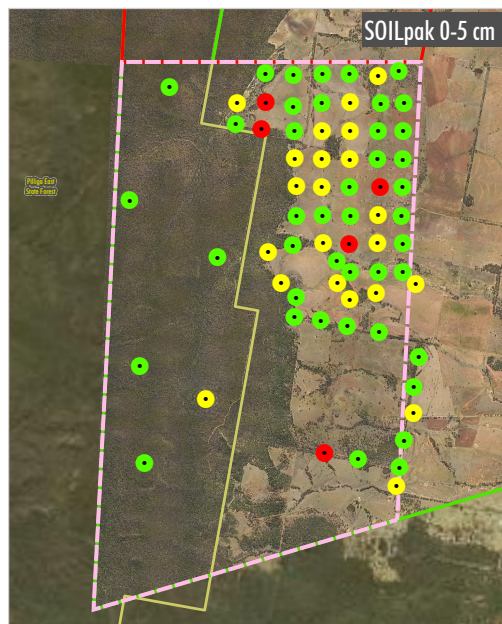
- > 6
- 3 - 6
- < 3

Source: Orthophotos - Whitehaven Coal (July 2017);  
 R.W. Corkery & Co Pty Ltd (2009),  
 NSW Trade & Investment (2015); NCOPL (2017);  
 McKenzie Soil Management (2017)



**WHITEHAVEN COAL**  
 NARRABRI STAGE 3 PROJECT  
 Dispersion (ESP Value)



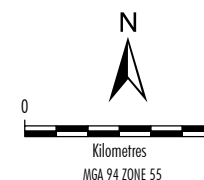


- LEGEND**
- State Forest
  - Mining Lease Boundary (ML 1609)
  - Exploration Licence (EL 6243)
  - Gateway Certificate Application Area
  - Soil Test Pit

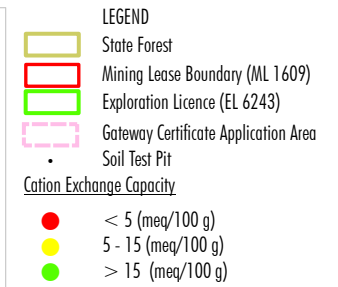
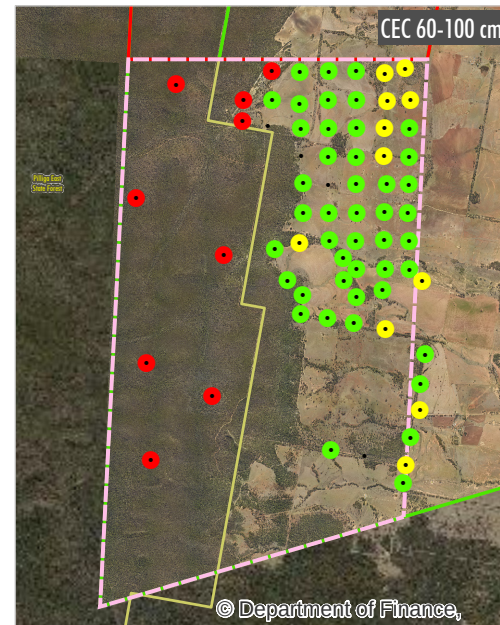
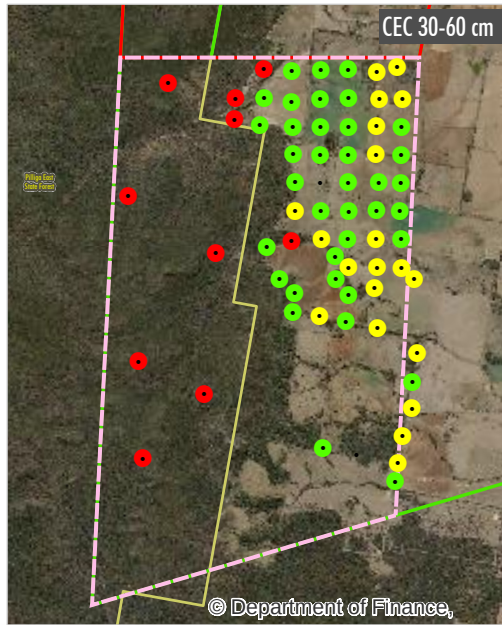
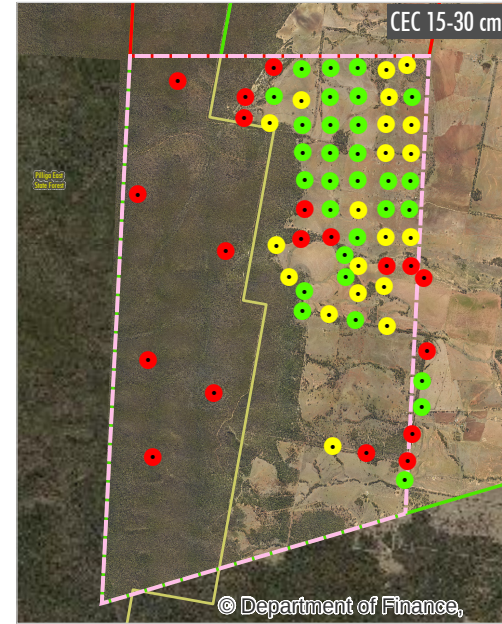
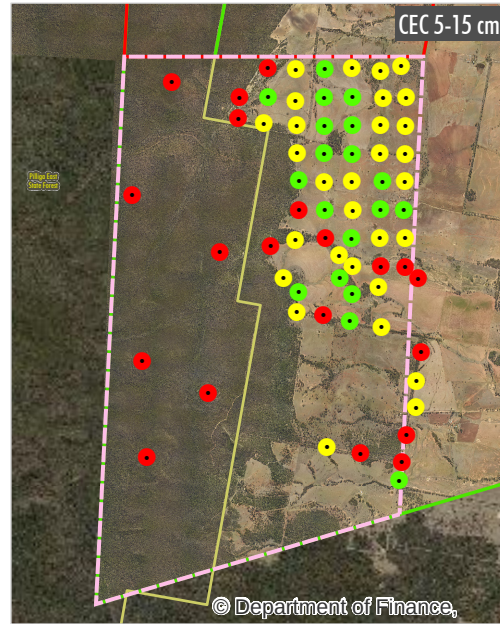
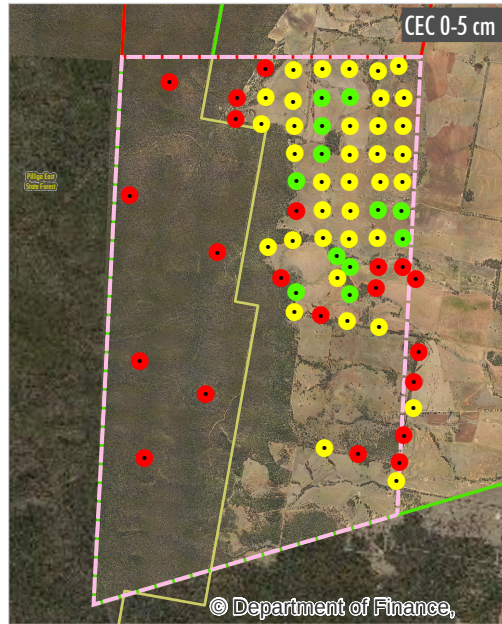
**Compaction Severity**

- < 1.0
- 1.0 - 1.5
- > 1.5

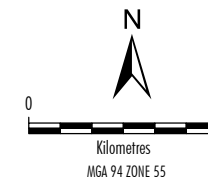
Source: Orthophotos - Whitehaven Coal (July 2017);  
R.W. Corkery & Co Pty Ltd (2009);  
NSW Trade & Investment (2015); NCOPL (2017);  
McKenzie Soil Management (2017)



  
**NARRABRI STAGE 3 PROJECT**  
Compaction Severity (SOILpak Score)



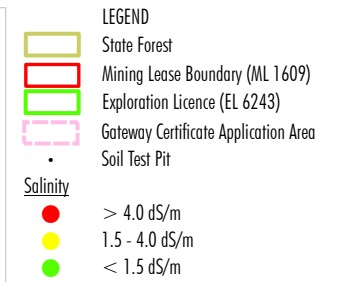
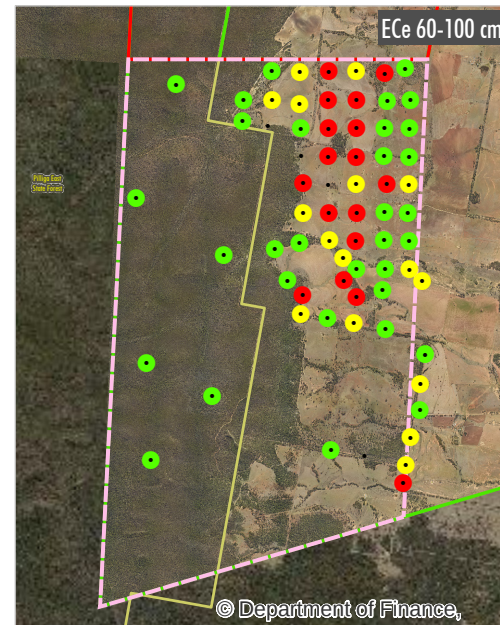
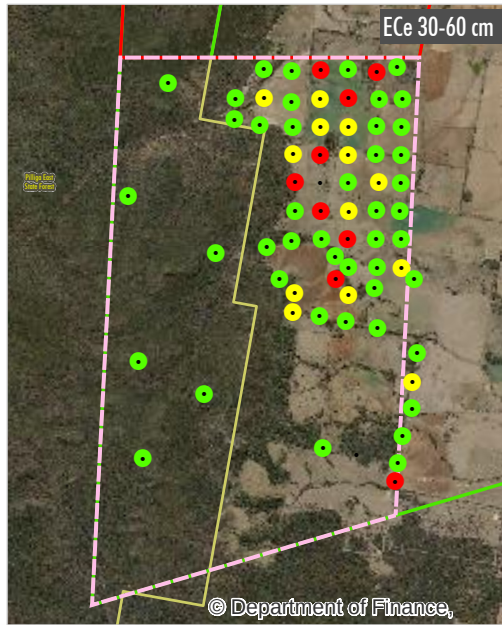
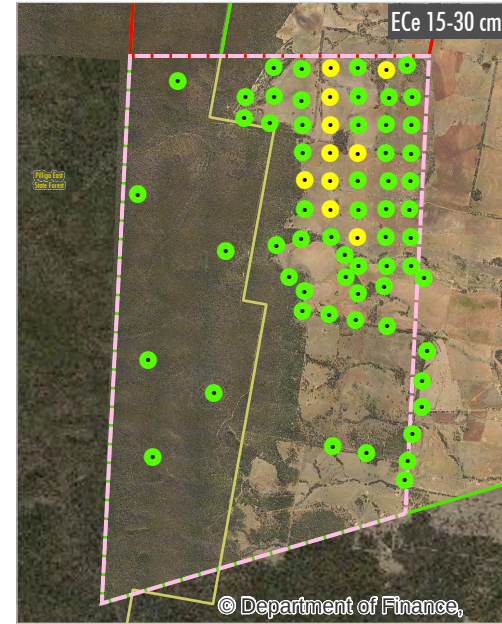
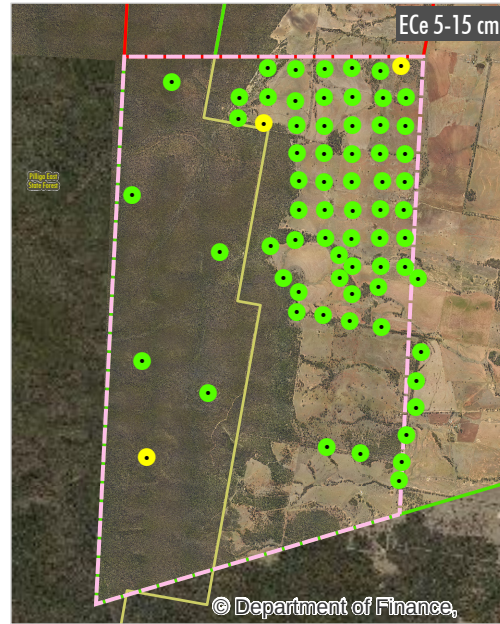
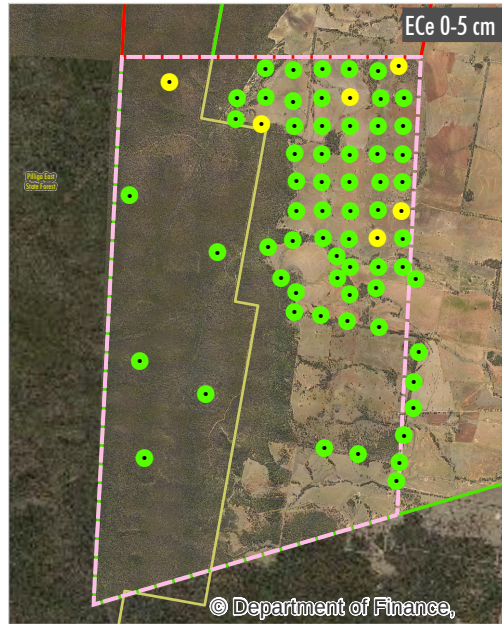
Source: Orthophotos - Whitehaven Coal (July 2017);  
R.W. Corkery & Co Pty Ltd (2009);  
NSW Trade & Investment (2015); NCOPL (2017);  
McKenzie Soil Management (2017)



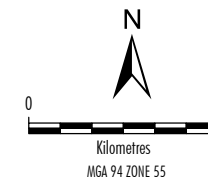
WHITEHAVEN COAL

NARRABRI STAGE 3 PROJECT

Cation Exchange Capacity



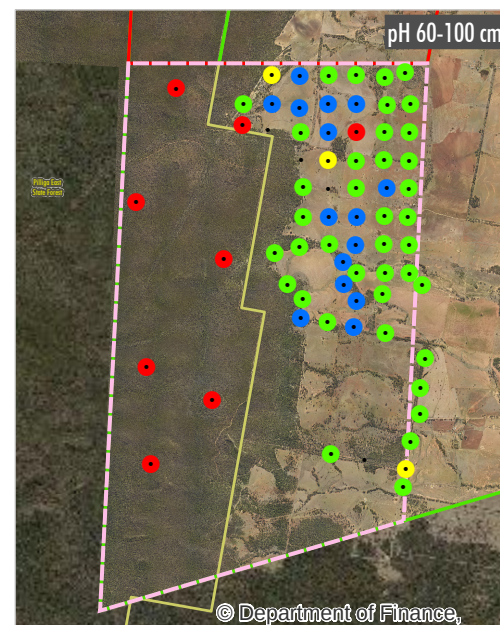
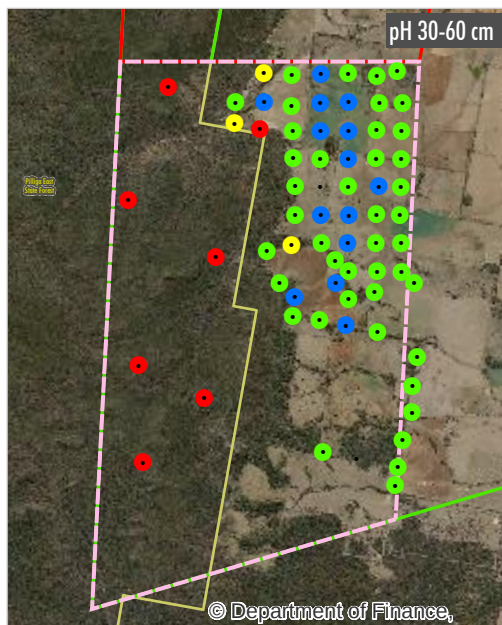
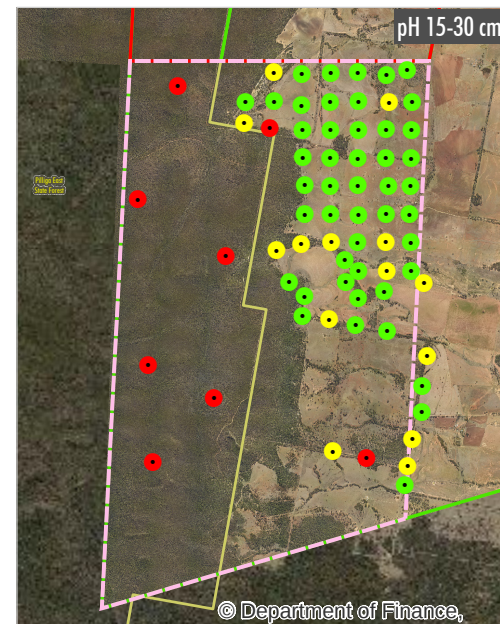
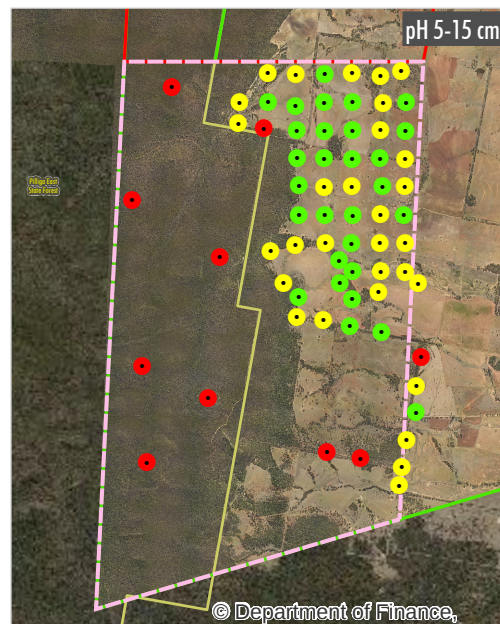
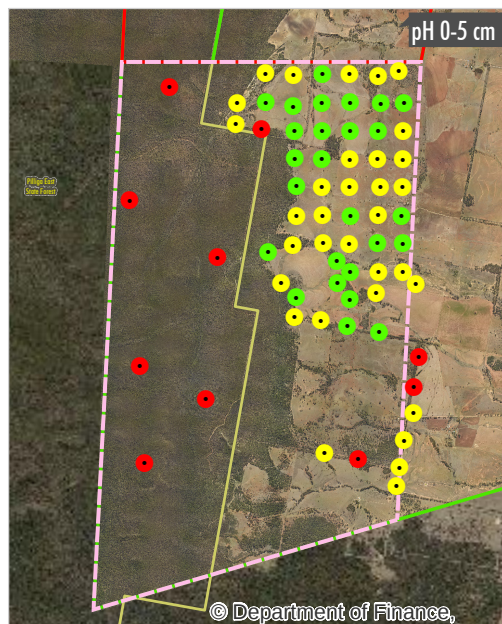
Source: Orthophotos - Whitehaven Coal (July 2017);  
R.W. Corkery & Co Pty Ltd (2009);  
NSW Trade & Investment (2015); NCOPL (2017);  
McKenzie Soil Management (2017)



WHITEHAVEN COAL

NARRABRI STAGE 3 PROJECT

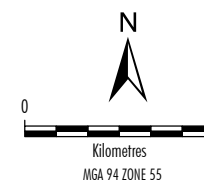
Salinity (Electrical Conductivity – ECe)



- LEGEND**
- State Forest
  - Mining Lease Boundary (ML 1609)
  - Exploration Licence (EL 6243)
  - Gateway Certificate Application Area
  - Soil Test Pit

- pH**
- < 4.5
  - 4.5 - 5.5
  - 5.6 - 8.1
  - > 8.1

Source: Orthophotos - Whitehaven Coal (July 2017);  
R.W. Corkery & Co Pty Ltd (2009);  
NSW Trade & Investment (2015); NCOPL (2017);  
McKenzie Soil Management (2017)



  
**NARRABRI STAGE 3 PROJECT**  
**pH (CaCl<sub>2</sub>)**

