

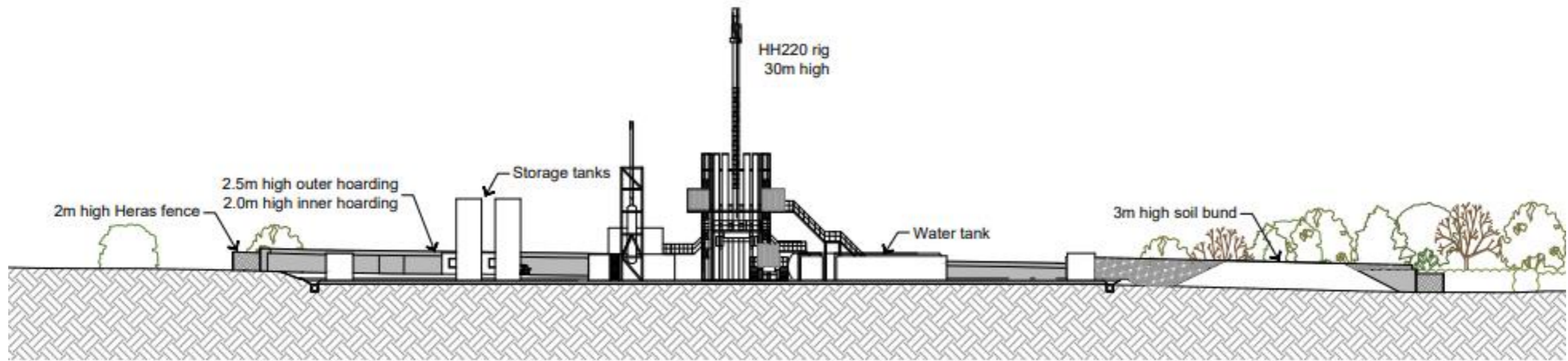
Tinker Lane Community Liaison Group

18.10.18

Drilling – what to expect

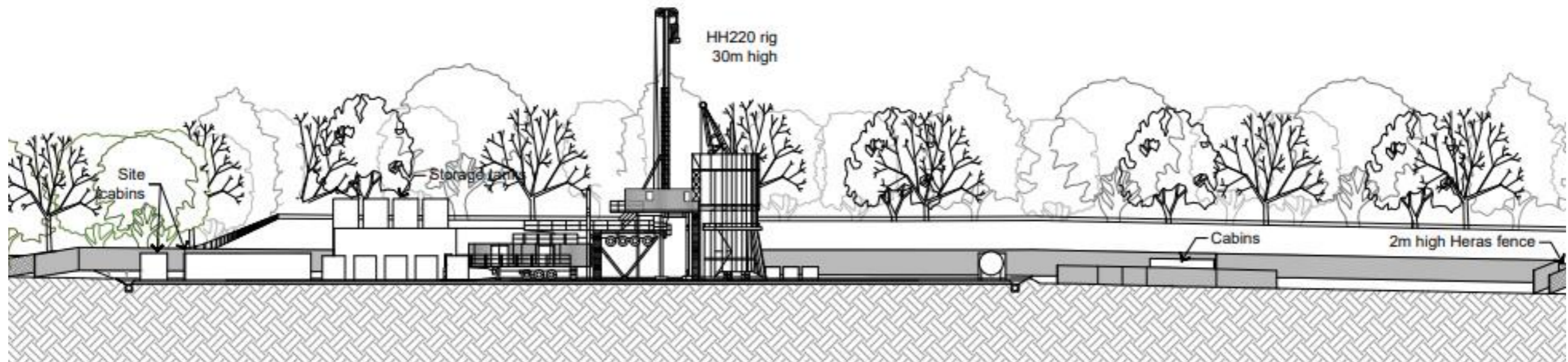
Image of operational HH220 rig





Drilling Section facing North-West - HH220 Rig

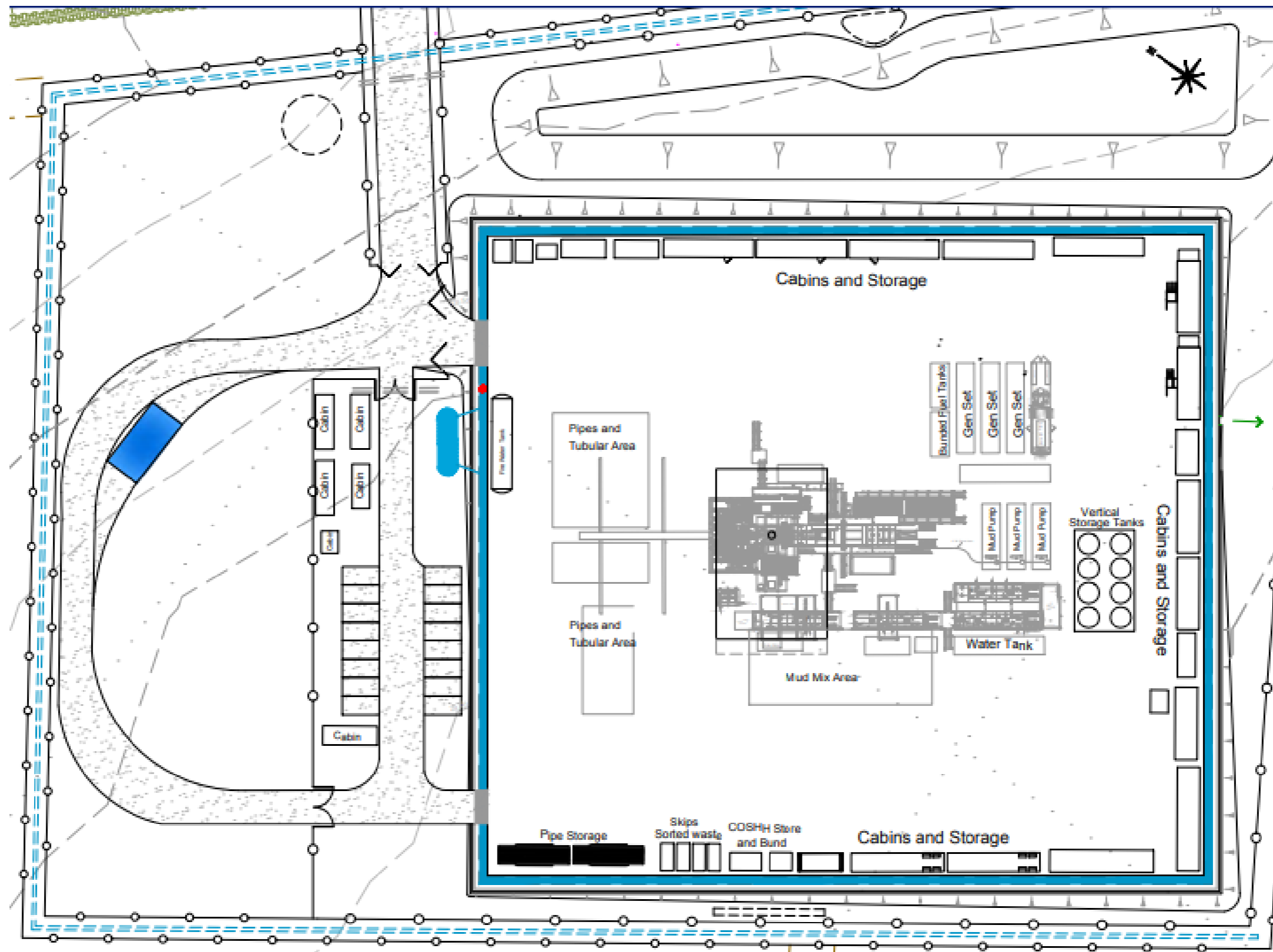
0 5m 10m
Scale: 1:500



Drilling Section facing South-West - HH220 Rig

0 5m 10m
Scale: 1:500

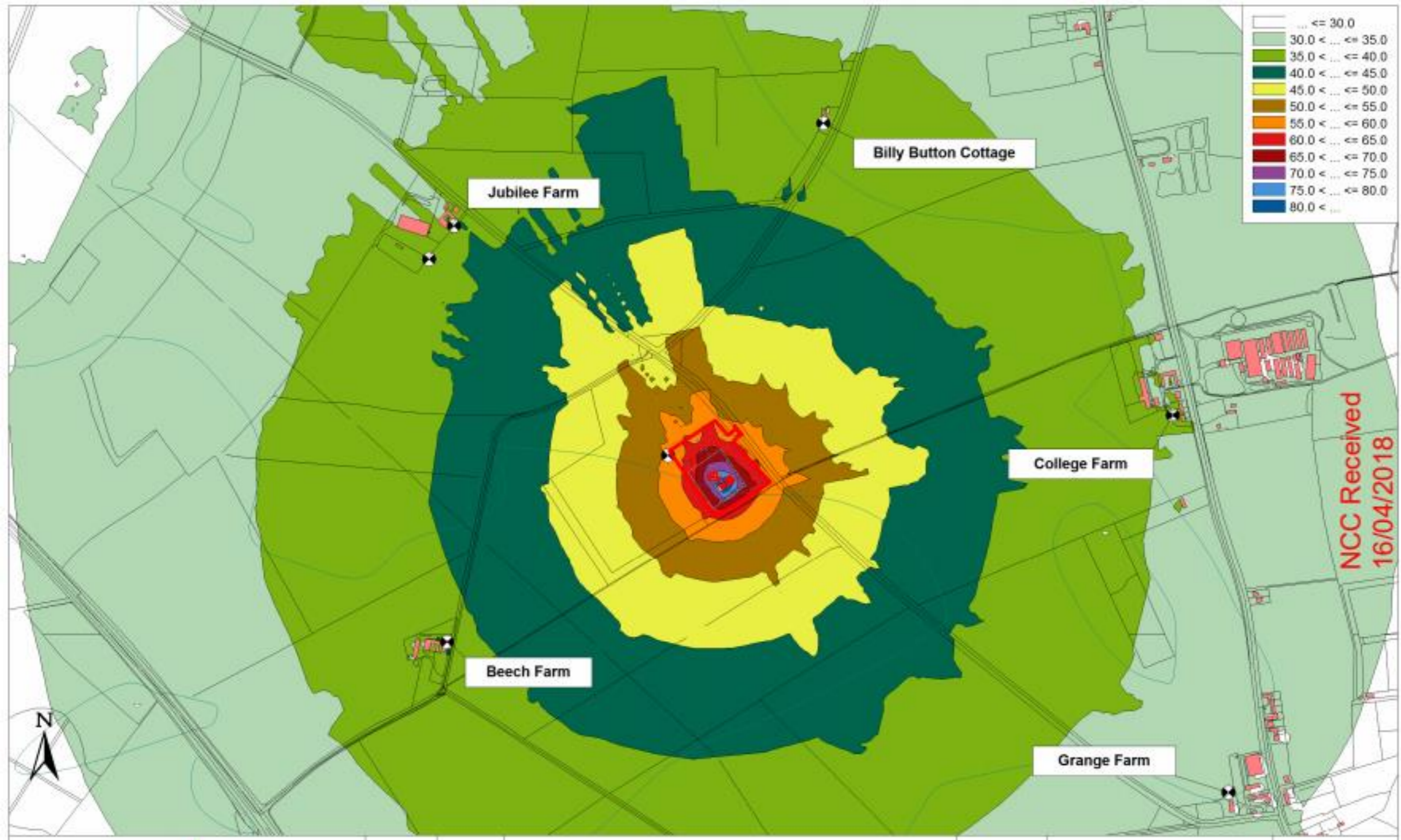
Site layout for HH220 Rig



Drilling Layout - HH220 Rig

0 5m 10m
Scale: 1:500

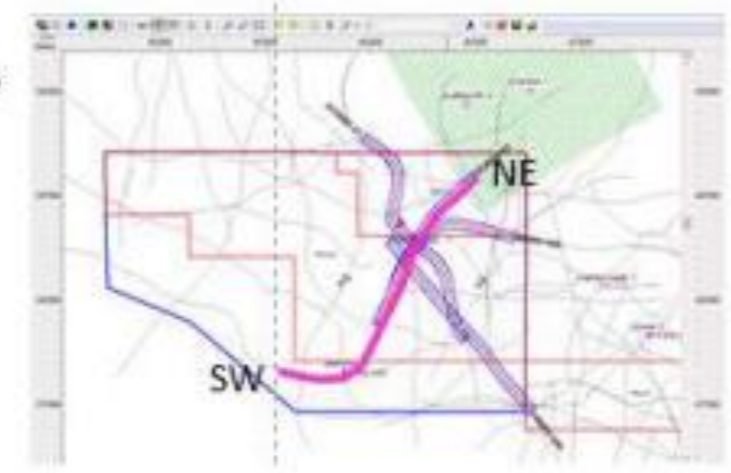
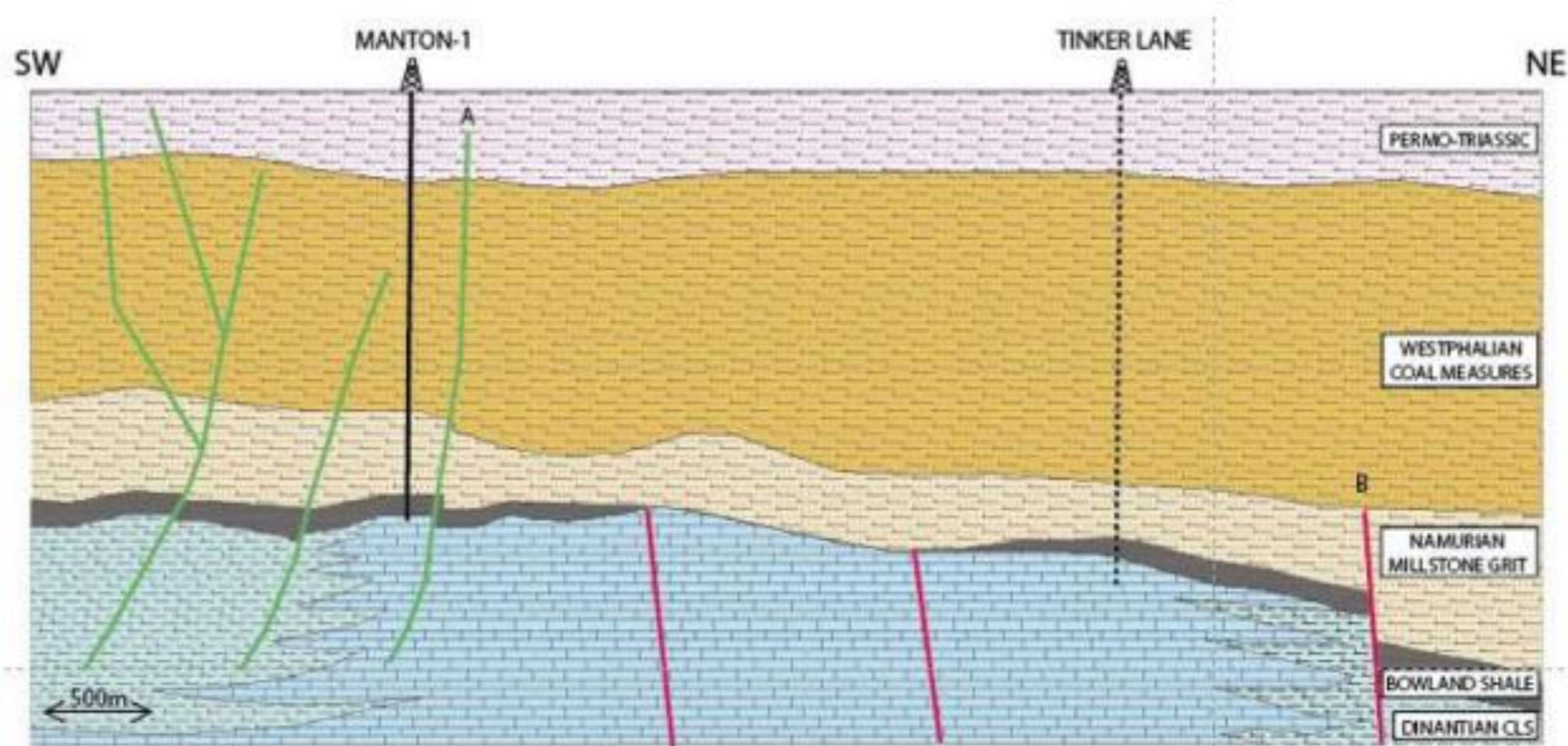
Site noise model for HH220 Rig



Forecasted average HGV movements

| Phase | Average Hourly HGV Movements (Assuming the maximum daily number permitted by Condition 13 and an Even Profile) |
|-------------------------------|--|
| Construction | 6.7 HGV movements per hour (3.9 HGV movements per hour over a 7 day period during term time) |
| Drilling | 6.7 HGV movements per hour during drill rig transportation (3.9 HGV movements per hour over a 7 day period during term during drill rig transportation) 1.3 HGV movements per hour during drilling |
| Evaluation | 0 Movements |
| Decommissioning & Restoration | 6.7 HGV movements per hour (3.9 HGV movements per hour over a 7 day period during term time) |

2D schematic cross-section (SW-NE orientation)



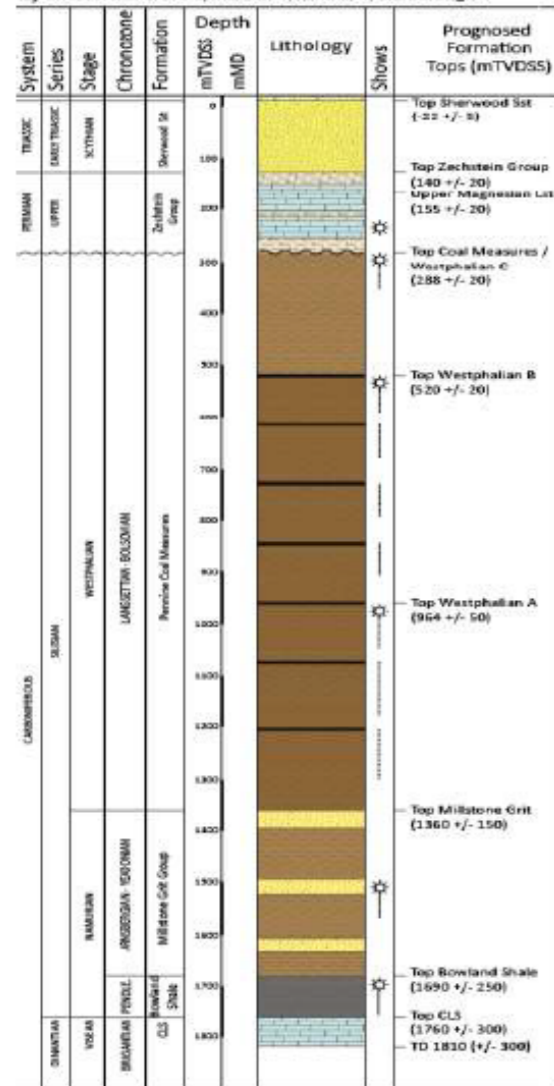
Tinker Lane – 01: Well diagrams

Stratigraphic Column Prognosis and Casing Depths

Well Design Schematic

Well Abandonment Schematic

Tinker Lane-1 Prognosed Stratigraphic Column.
Key Offset Wells: Grove-3, Manton-1, Ranskill-1, Claborough-1



| PEDL 200 TL-1 Proposed Well Schematic | | | | | | |
|--|---|----------------|-----------------------------|-----------|-------|----------------|
| Surface Co-Ordinates : TBC (OS Grid) | | | Rev. 4 Date : April 2016 | | | |
| Formation Tops | Casing and Hole | Well Schematic | Feature | MD BGL | TVDS | Comments |
| Quaternary | 20" | | Ground level | 0m | 0m | |
| Sherwood Sandstone | 17-1/2" Hole | | 20" Stove Pipe | 60m | 30m | 20" conductor |
| Zechstein | 13-3/8" Casing | | 13-3/8" shoe | 180m | 150m | Top Brotherton |
| Pennine Upper Coal Measures | 12-1/4" Hole | | TOC | 430m | 400m | |
| Pennine Middle Coal Measures | 9-5/8" Casing | | 9-5/8" shoe | 650m | 620m | |
| Pennine Middle Coal Measures | 5 1/2" Final decision Upon findings | | | | | |
| Namurian | | 8-1/2" Hole | | | | |
| Section - Shale | 8-1/2" Hole | | 5-1/2" Shoe | 1830m | 1800m | |
| | | | 8-1/2" Hole | 1840m | 1810m | Well TD |

| Proposed Well Schematic | | | | | | |
|---|--------------------|----------------|---|-----------|-------|---------------------------------|
| Surface Co-Ordinates : TBC (OS Grid) | | | Rev. 3 | | | |
| Formation Tops | Casing and Hole | Well Schematic | Feature | MD BGL | TVDS | Comments |
| Quaternary | 20" | | Ground level | 0m | 0m | |
| 5m TVD BGL Sherwood Sandstone | 17-1/2" Hole | | 20" Stove Pipe | 60m | 30m | Remove casings 20" conductor |
| Zechstein | 13-3/8" Casing | | 13-3/8" shoe | 180m | 150m | Top Brotherton |
| Pennine Upper Coal Measures | 12-1/4" Hole | | Bridge Plug Cut & Pull 5-1/2" | 200m | 170m | |
| Pennine Upper Coal Measures | 530m TVDBGL | | TOC | 530m | 500m | |
| Pennine Middle Coal Measures | | 9-5/8" Casing | 9-5/8" shoe | 650m | 620m | |
| Pennine Middle Coal Measures | 8-1/2" Hole | | Bridge Plug | 680m | 650m | |
| Namurian | | | TOC | TBC | TBC | |
| Section - Shale | 8-1/2" Hole | | Bridge Plug | TBC | TBC | |
| | | | Squeeze cement Perforations 5-1/2" Shoe | TBC | TBC | Well TD |
| | | | 8-1/2" Hole | 1830m | 1800m | Well TD |
| | | | | 1840m | 1810m | Well TD |