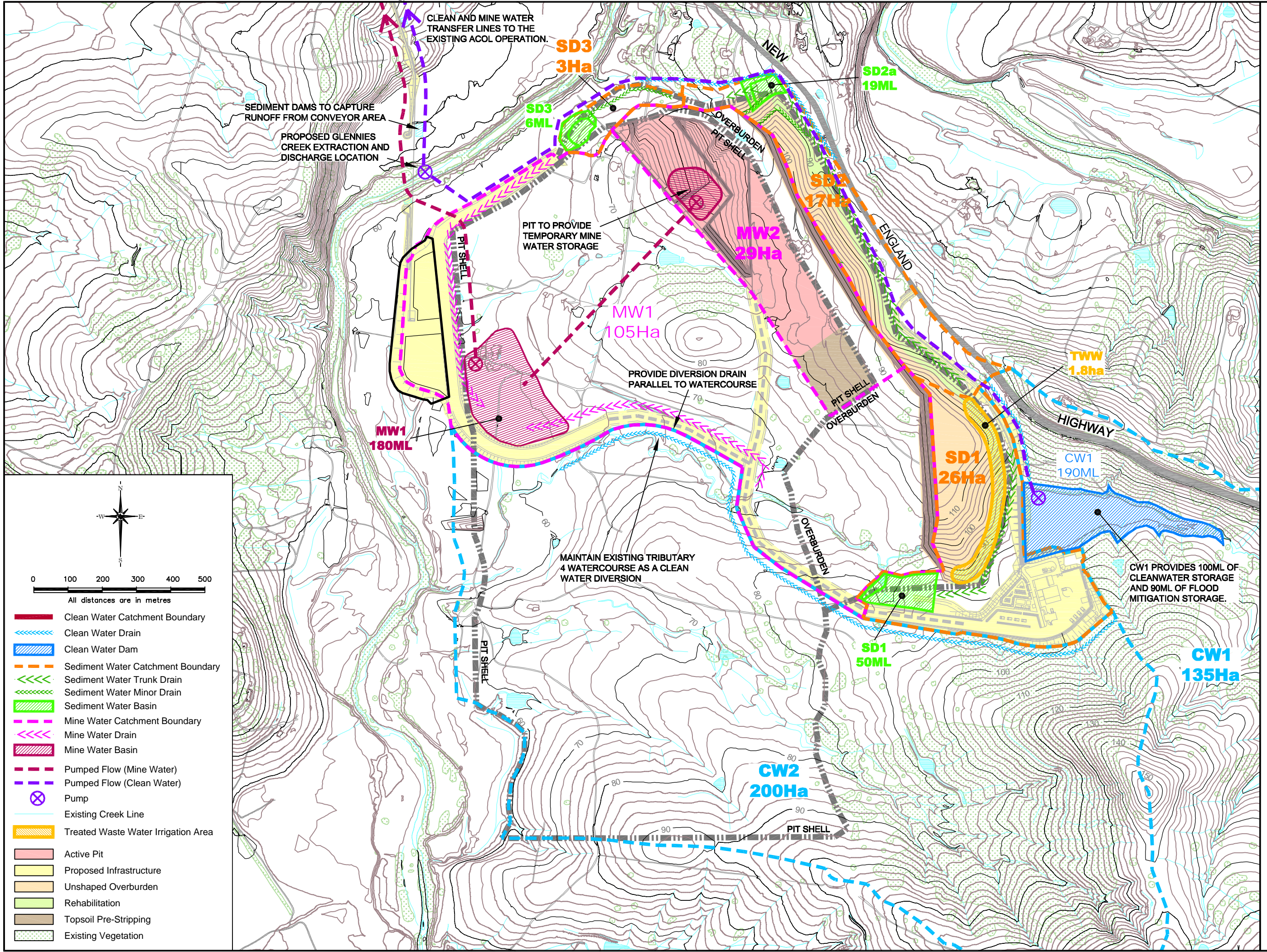
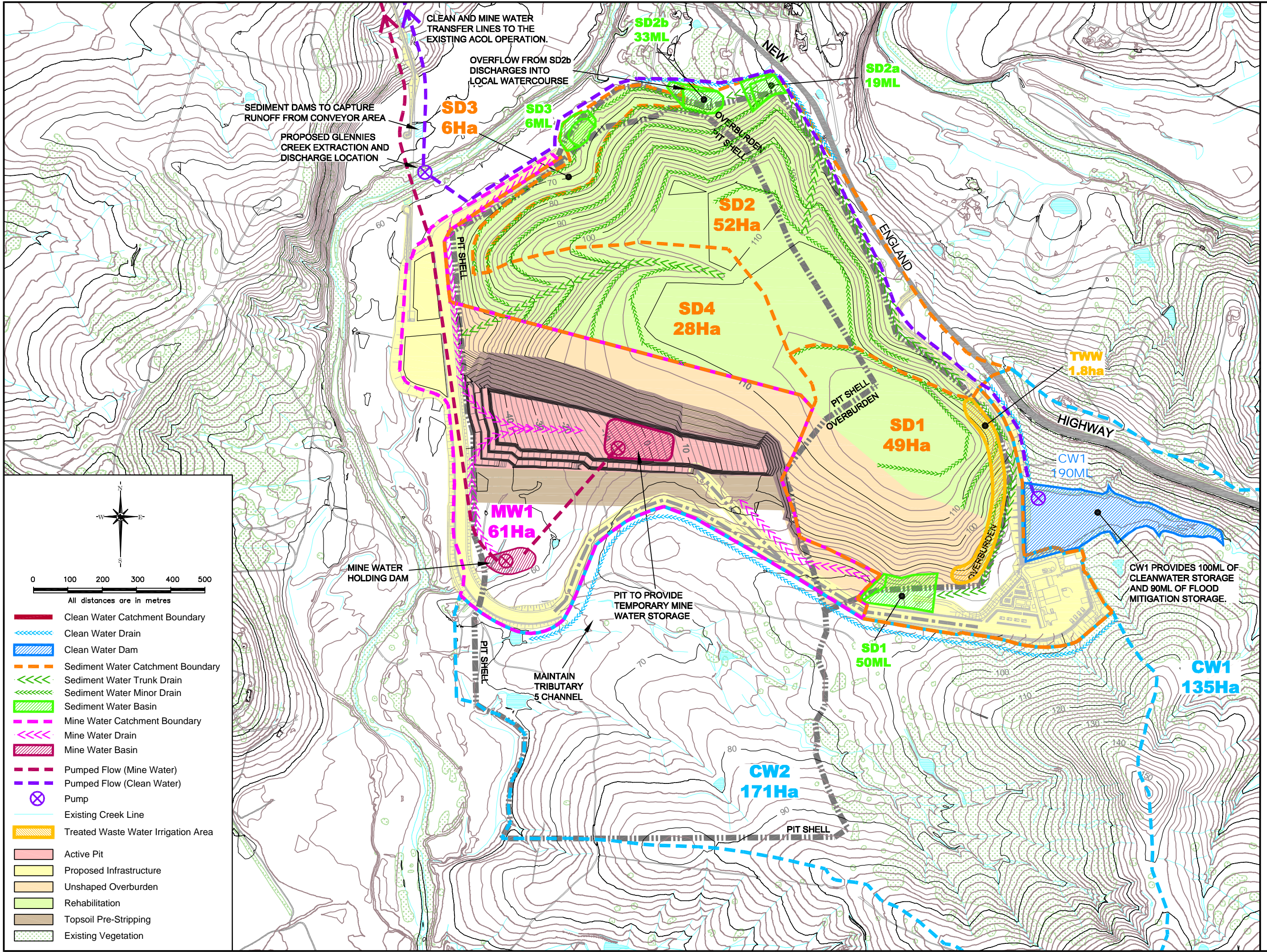


— Clean Water
— Mine Water

NOTE:
REFER TO FIGURE 16 FOR SUBCATCHMENT EXTENTS AND
LOCATION OF FEATURES SHOWN IN THIS SCHEMATIC.



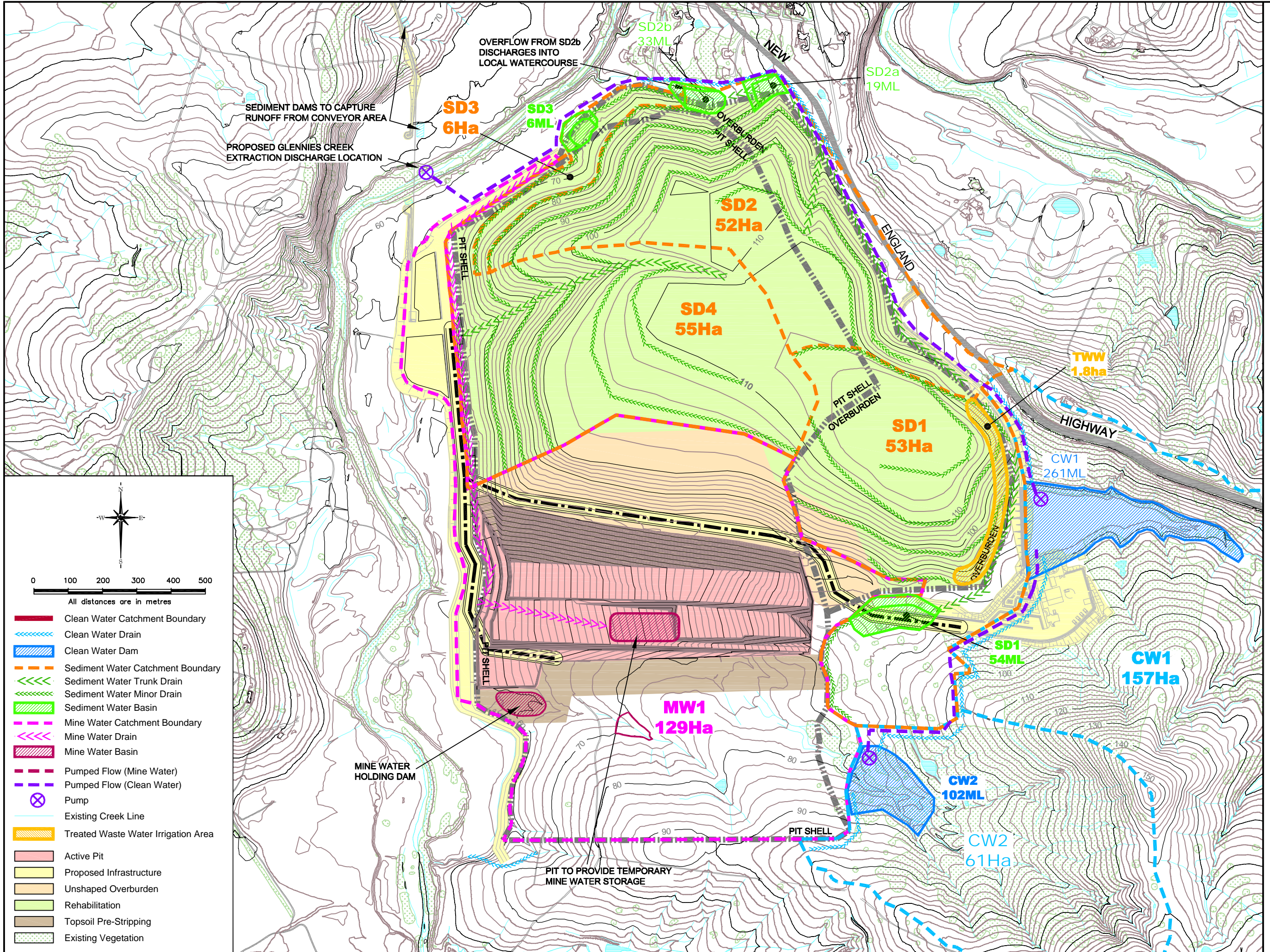
South East Open Cut Project
 Conceptual water management plan for Year 1 of the SEOC



South East Open Cut Project

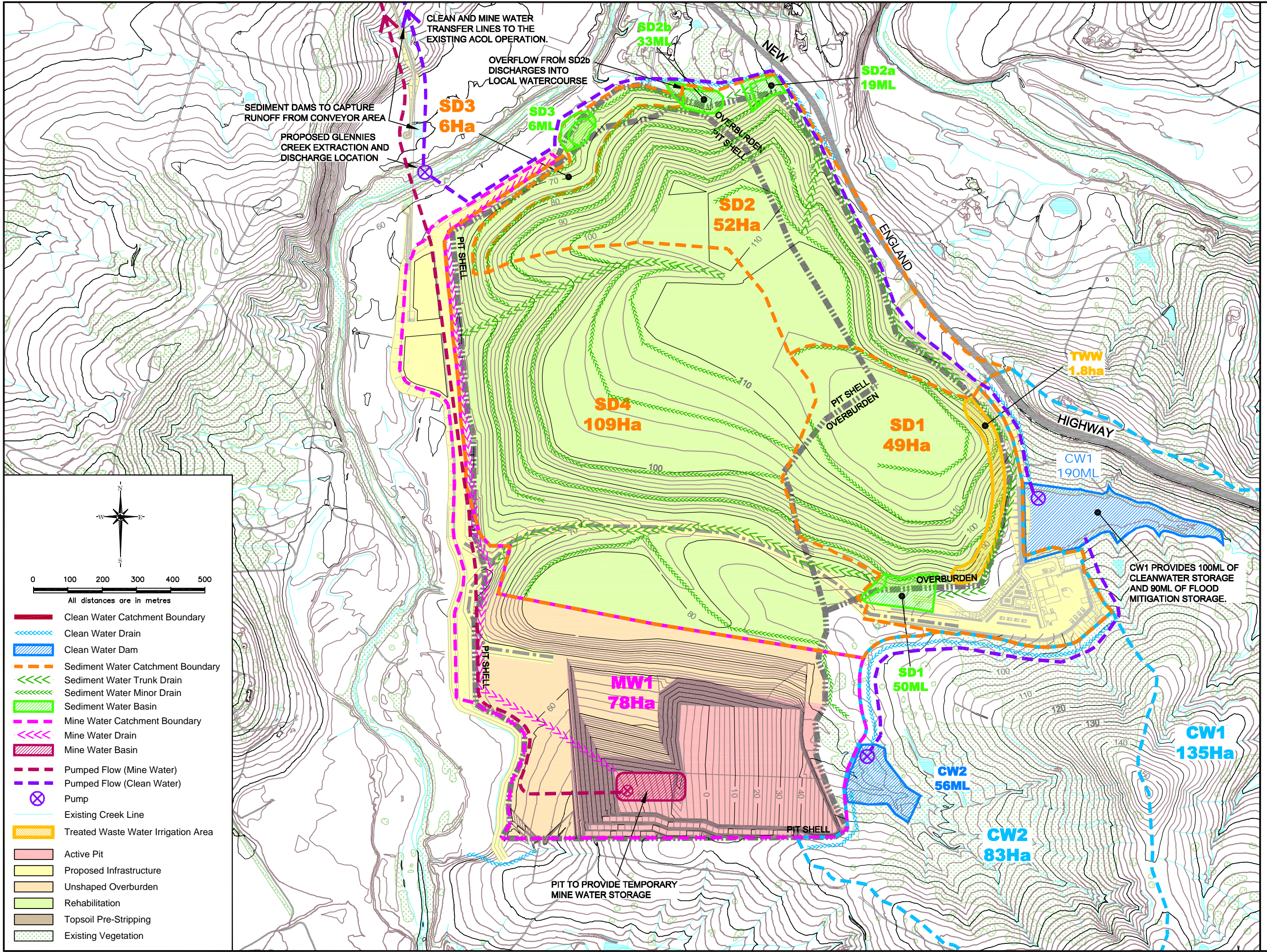
Conceptual water management plan for Year 3 of the SEOC

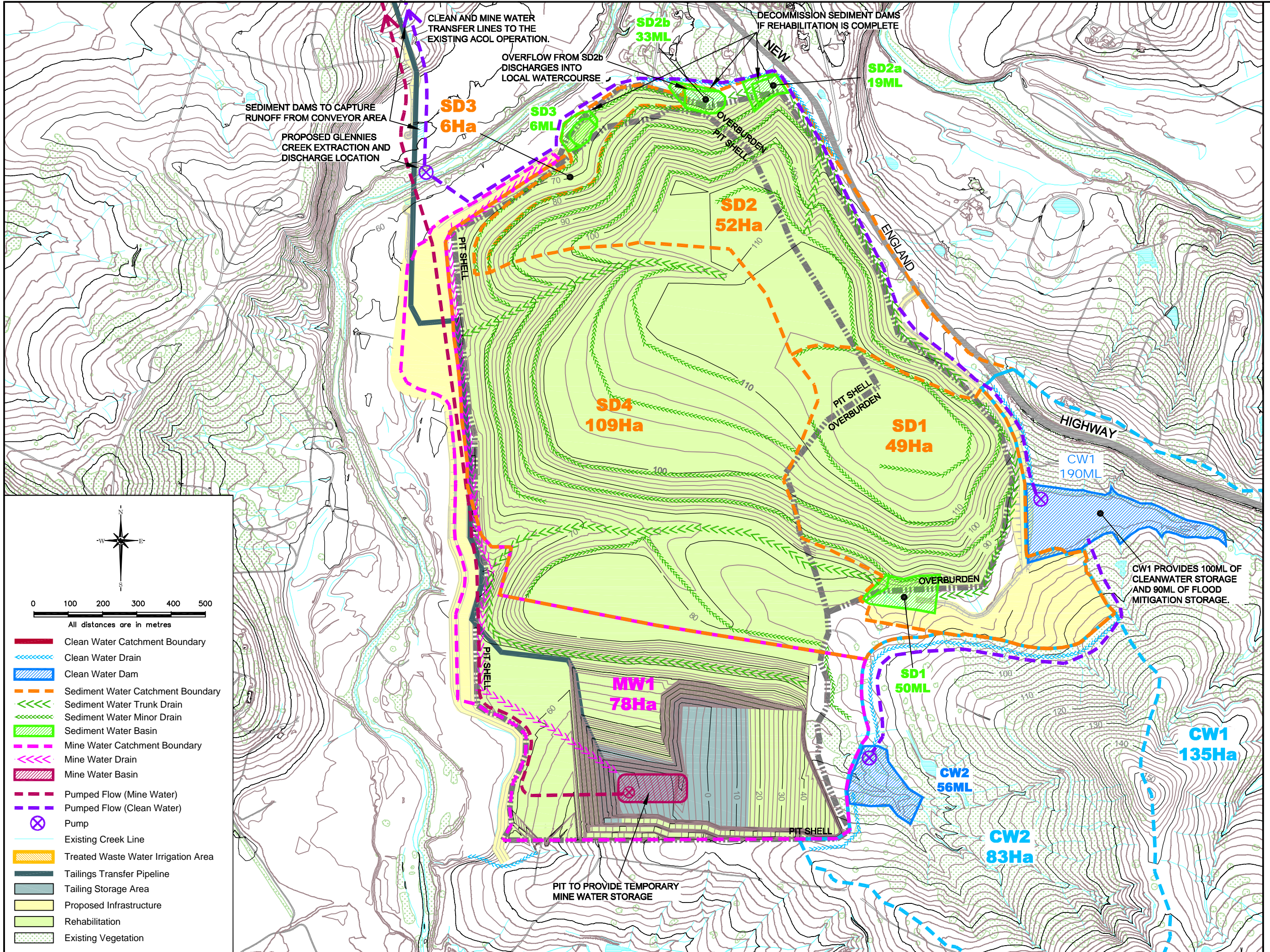
Worley Parsons



0 100 200 300 400 500
All distances are in metres

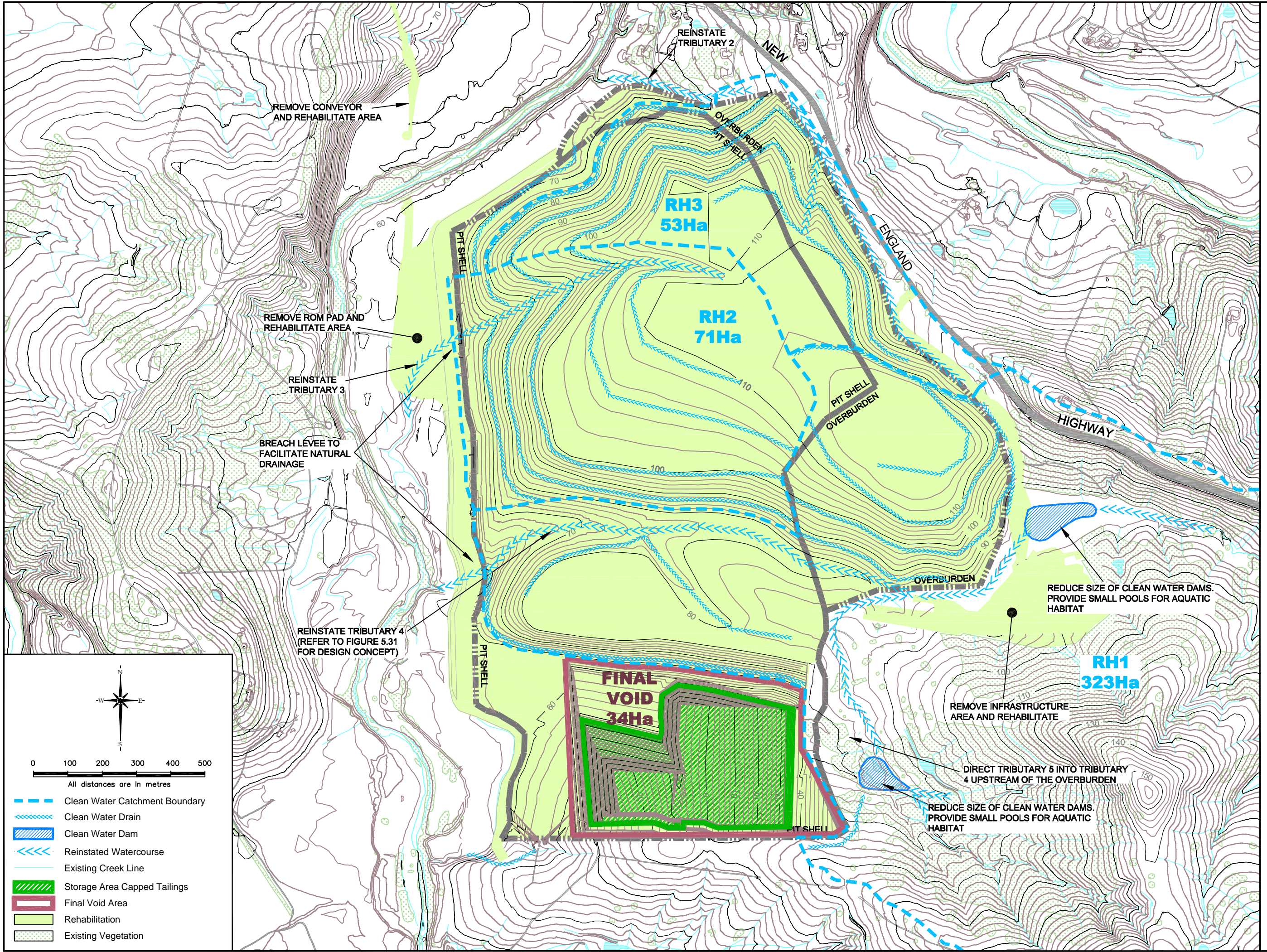
- Clean Water Catchment Boundary
- Clean Water Drain
- Clean Water Dam
- Sediment Water Catchment Boundary
- Sediment Water Trunk Drain
- Sediment Water Minor Drain
- Sediment Water Basin
- Mine Water Catchment Boundary
- Mine Water Drain
- Mine Water Basin
- Pumped Flow (Mine Water)
- Pumped Flow (Clean Water)
- Pump
- Existing Creek Line
- Treated Waste Water Irrigation Area
- Active Pit
- Proposed Infrastructure
- Unshaped Overburden
- Rehabilitation
- Topsoil Pre-Stripping
- Existing Vegetation

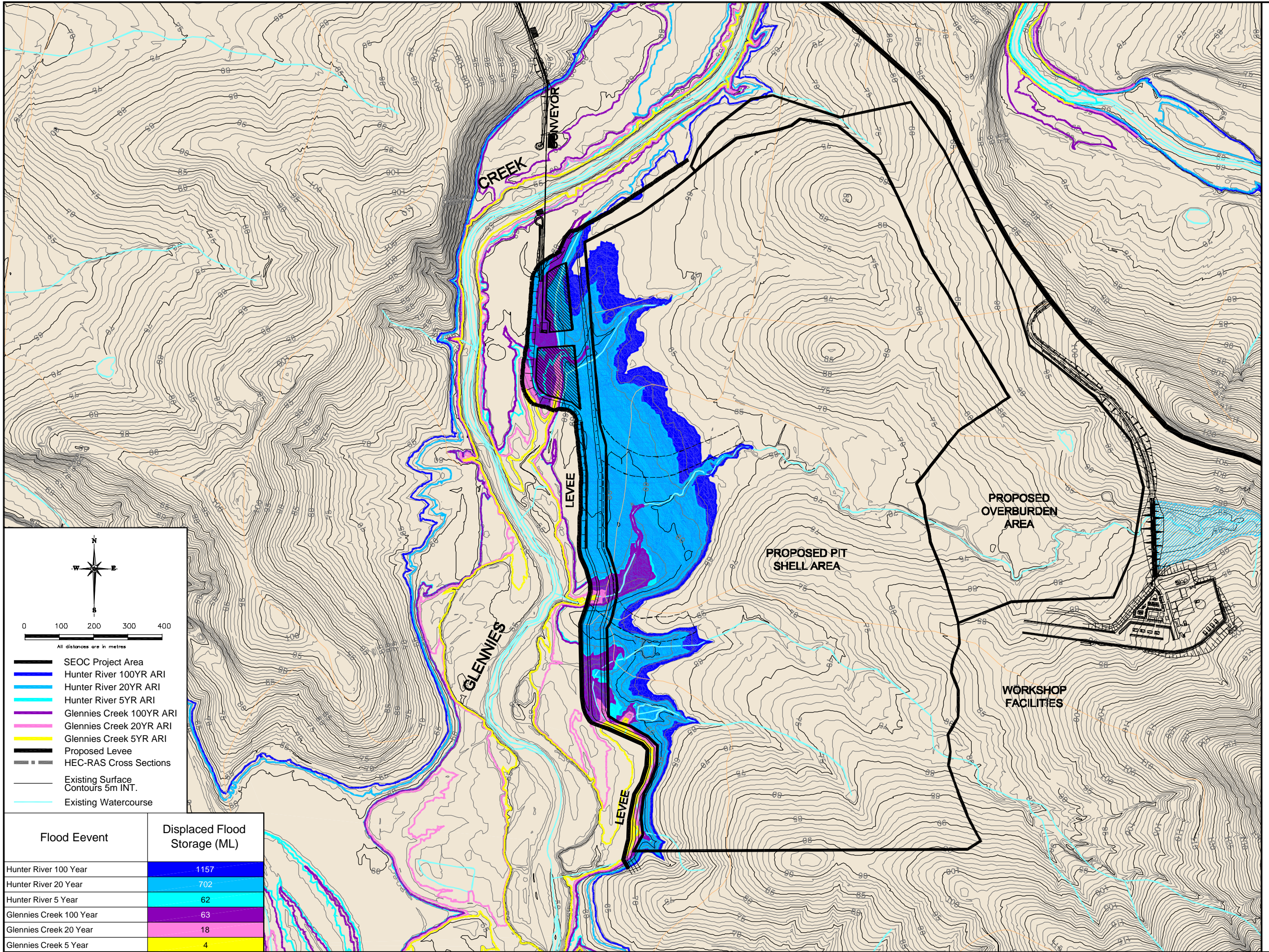




0 100 200 300 400 500
All distances are in metres

- Clean Water Catchment Boundary
- Clean Water Drain
- Clean Water Dam
- Sediment Water Catchment Boundary
- Sediment Water Trunk Drain
- Sediment Water Minor Drain
- Sediment Water Basin
- Mine Water Catchment Boundary
- Mine Water Drain
- Mine Water Basin
- - - Pumped Flow (Mine Water)
- - - Pumped Flow (Clean Water)
- ⊗ Pump
- Existing Creek Line
- Treated Waste Water Irrigation Area
- Tailings Transfer Pipeline
- Tailing Storage Area
- Proposed Infrastructure
- Rehabilitation
- Existing Vegetation

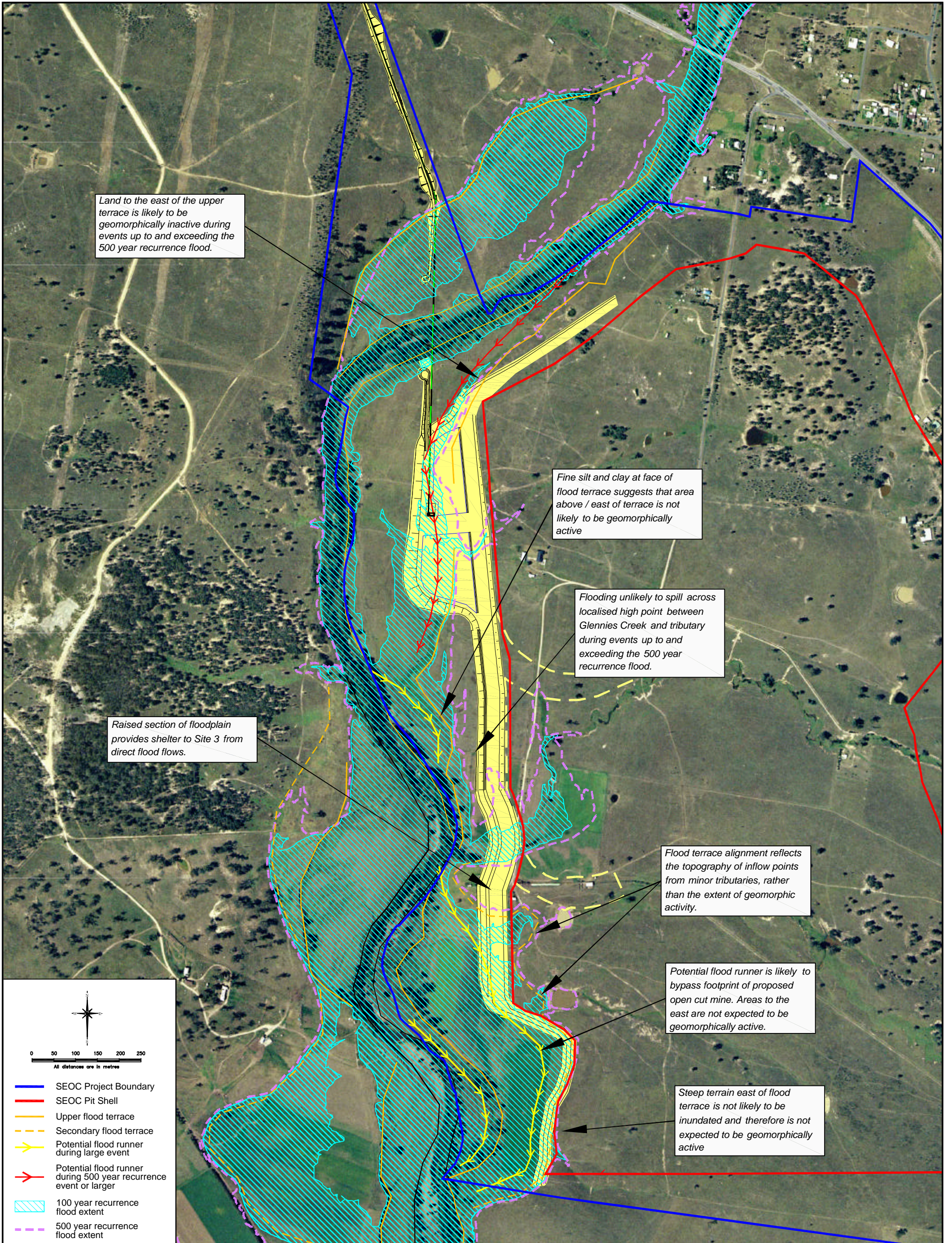




0 100 200 300 400
All distances are in metres

- SEOC Project Area
- Hunter River 100YR ARI
- Hunter River 20YR ARI
- Hunter River 5YR ARI
- Glennies Creek 100YR ARI
- Glennies Creek 20YR ARI
- Glennies Creek 5YR ARI
- Proposed Levee
- HEC-RAS Cross Sections
- Existing Surface Contours 5m INT.
- Existing Watercourse

| Flood Event | Displaced Flood Storage (ML) |
|-------------------------|------------------------------|
| Hunter River 100 Year | 1157 |
| Hunter River 20 Year | 702 |
| Hunter River 5 Year | 62 |
| Glennies Creek 100 Year | 63 |
| Glennies Creek 20 Year | 18 |
| Glennies Creek 5 Year | 4 |



Land to the east of the upper terrace is likely to be geomorphically inactive during events up to and exceeding the 500 year recurrence flood.

Fine silt and clay at face of flood terrace suggests that area above / east of terrace is not likely to be geomorphically active

Flooding unlikely to spill across localised high point between Glennies Creek and tributary during events up to and exceeding the 500 year recurrence flood.

Raised section of floodplain provides shelter to Site 3 from direct flood flows.

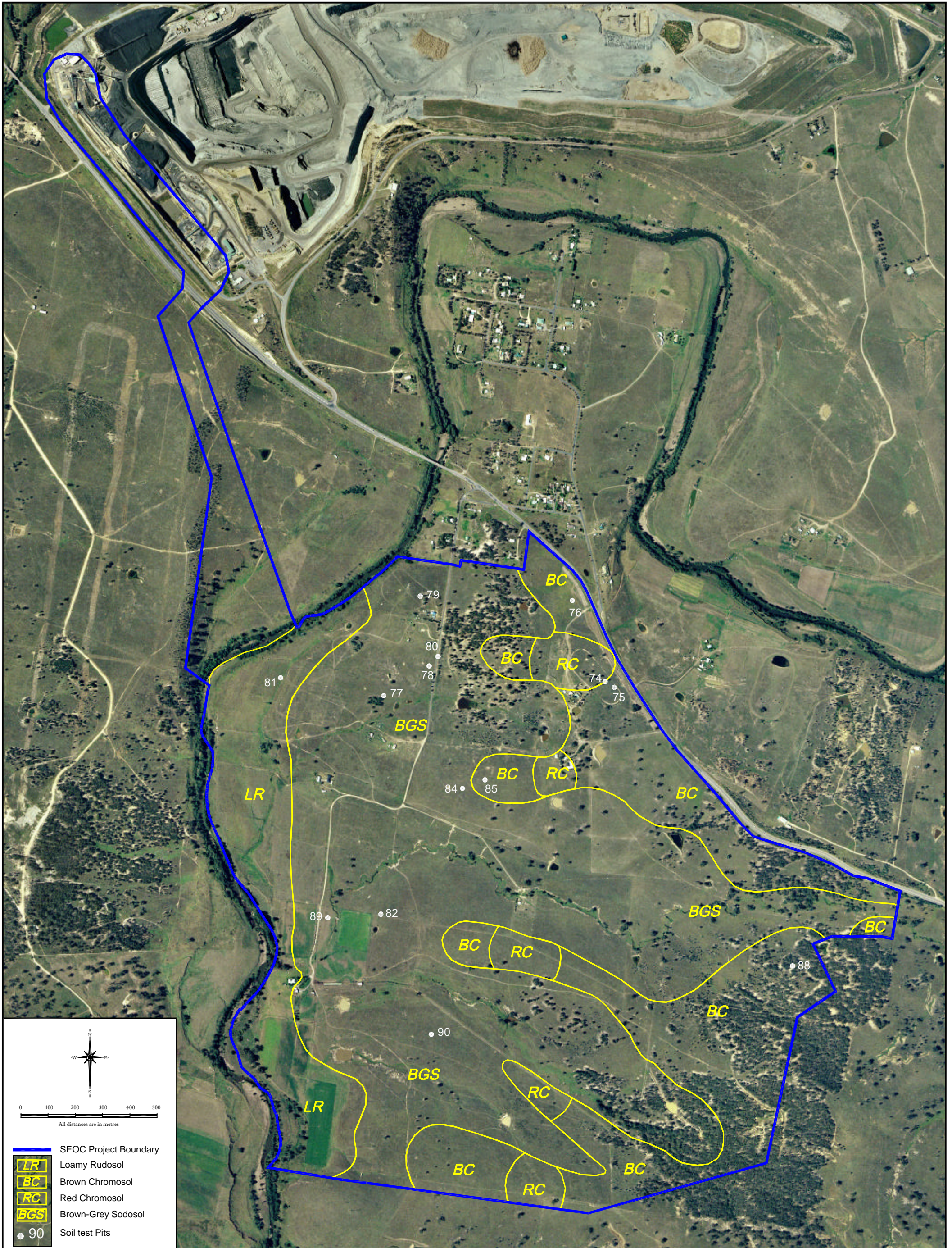
Flood terrace alignment reflects the topography of inflow points from minor tributaries, rather than the extent of geomorphic activity.

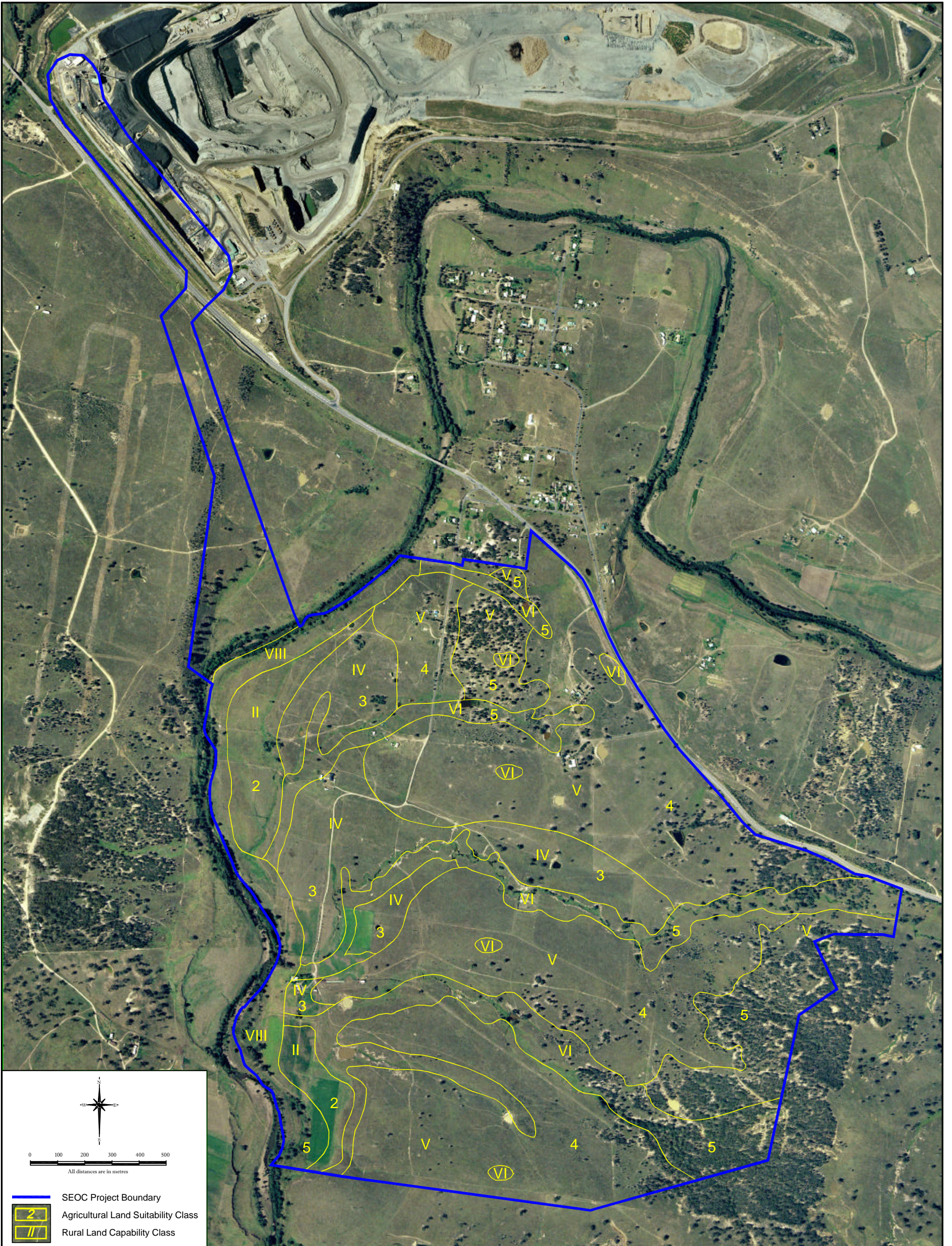
Potential flood runner is likely to bypass footprint of proposed open cut mine. Areas to the east are not expected to be geomorphically active.

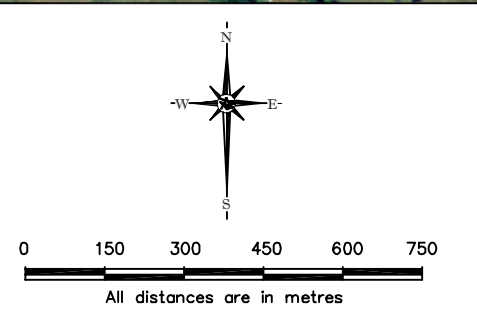
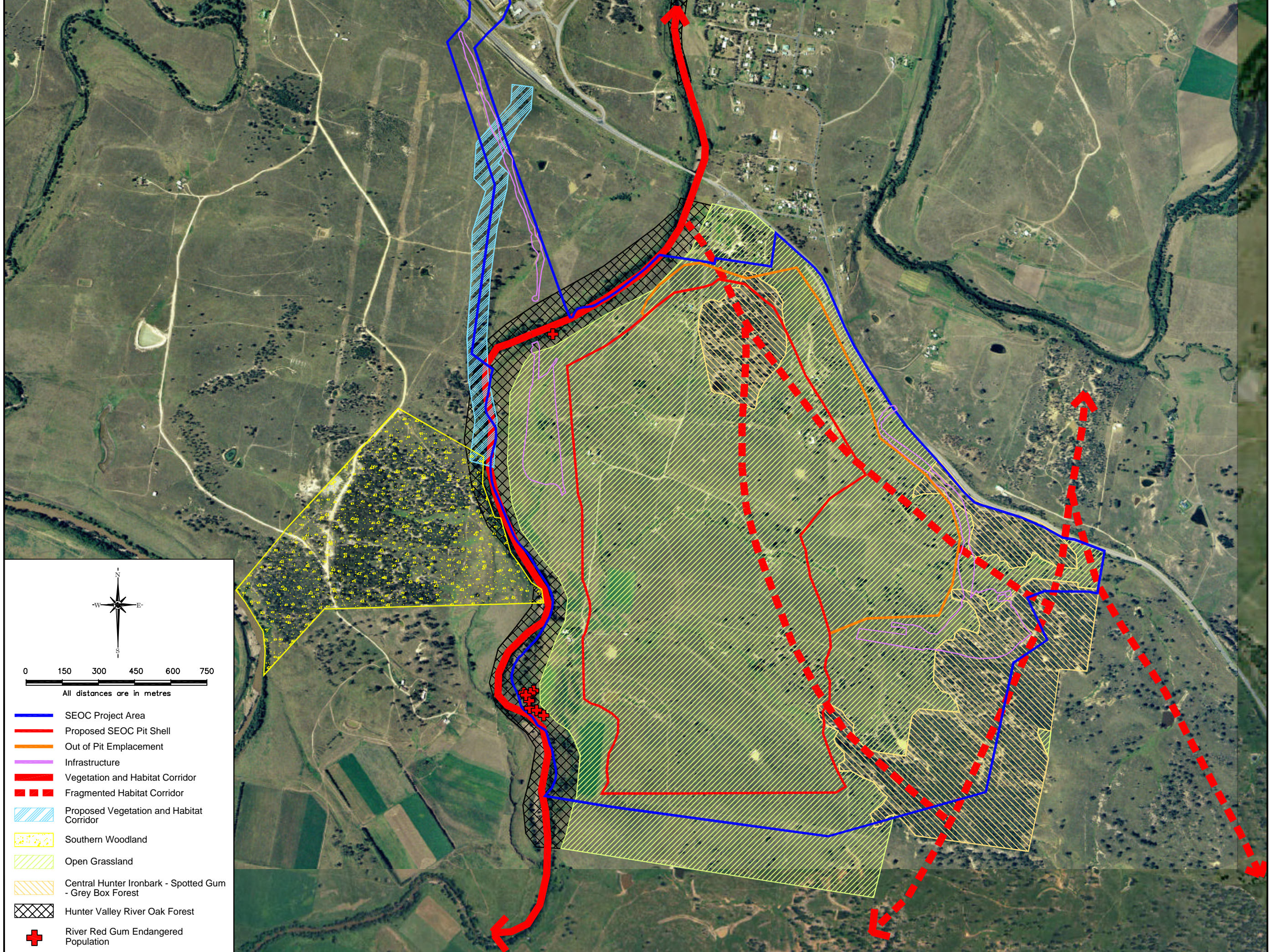
Steep terrain east of flood terrace is not likely to be inundated and therefore is not expected to be geomorphically active

0 50 100 150 200 250
All distances are in metres

- SEOC Project Boundary
- SEOC Pit Shell
- Upper flood terrace
- - - Secondary flood terrace
- Potential flood runner during large event
- Potential flood runner during 500 year recurrence event or larger
- ▨ 100 year recurrence flood extent
- - - 500 year recurrence flood extent





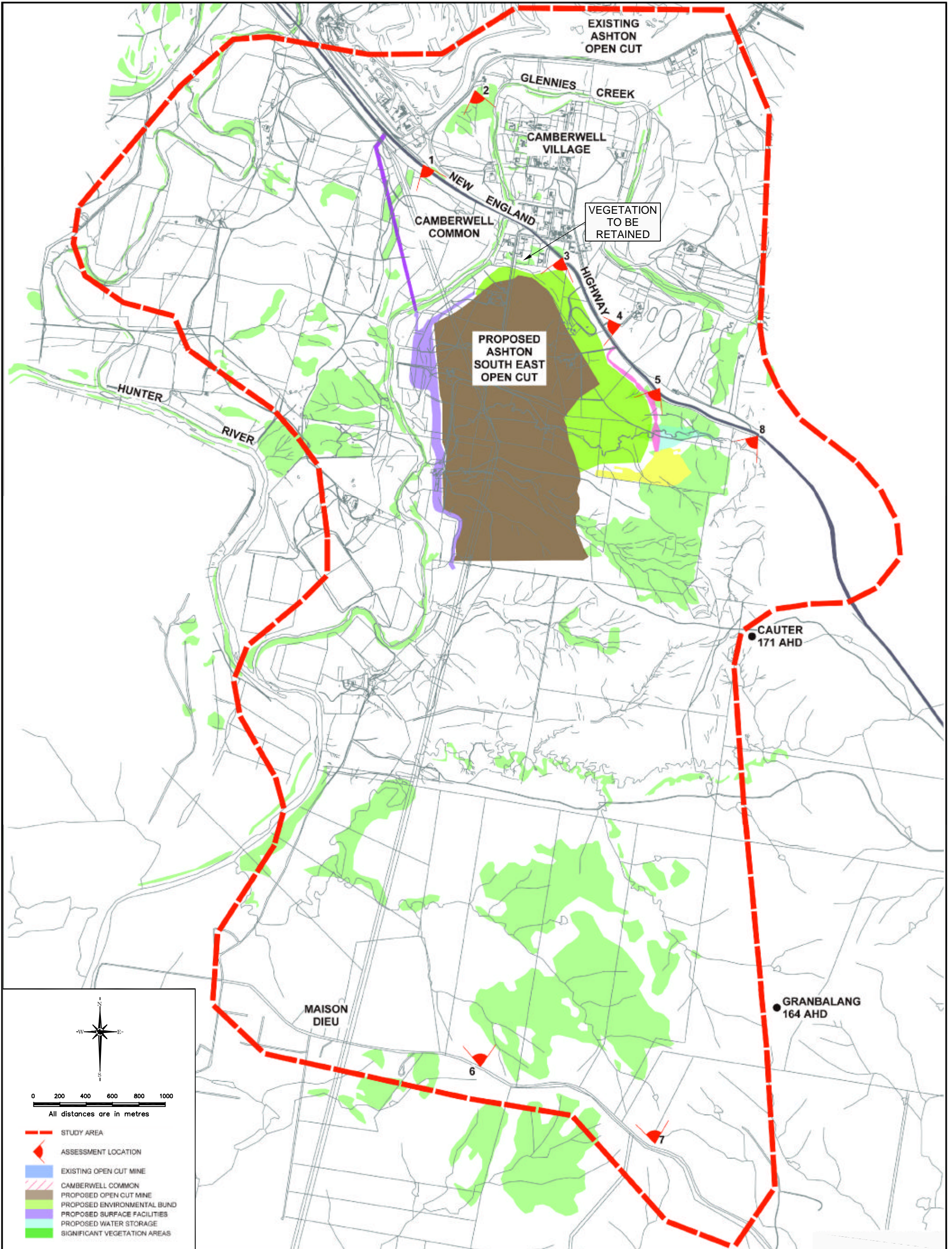


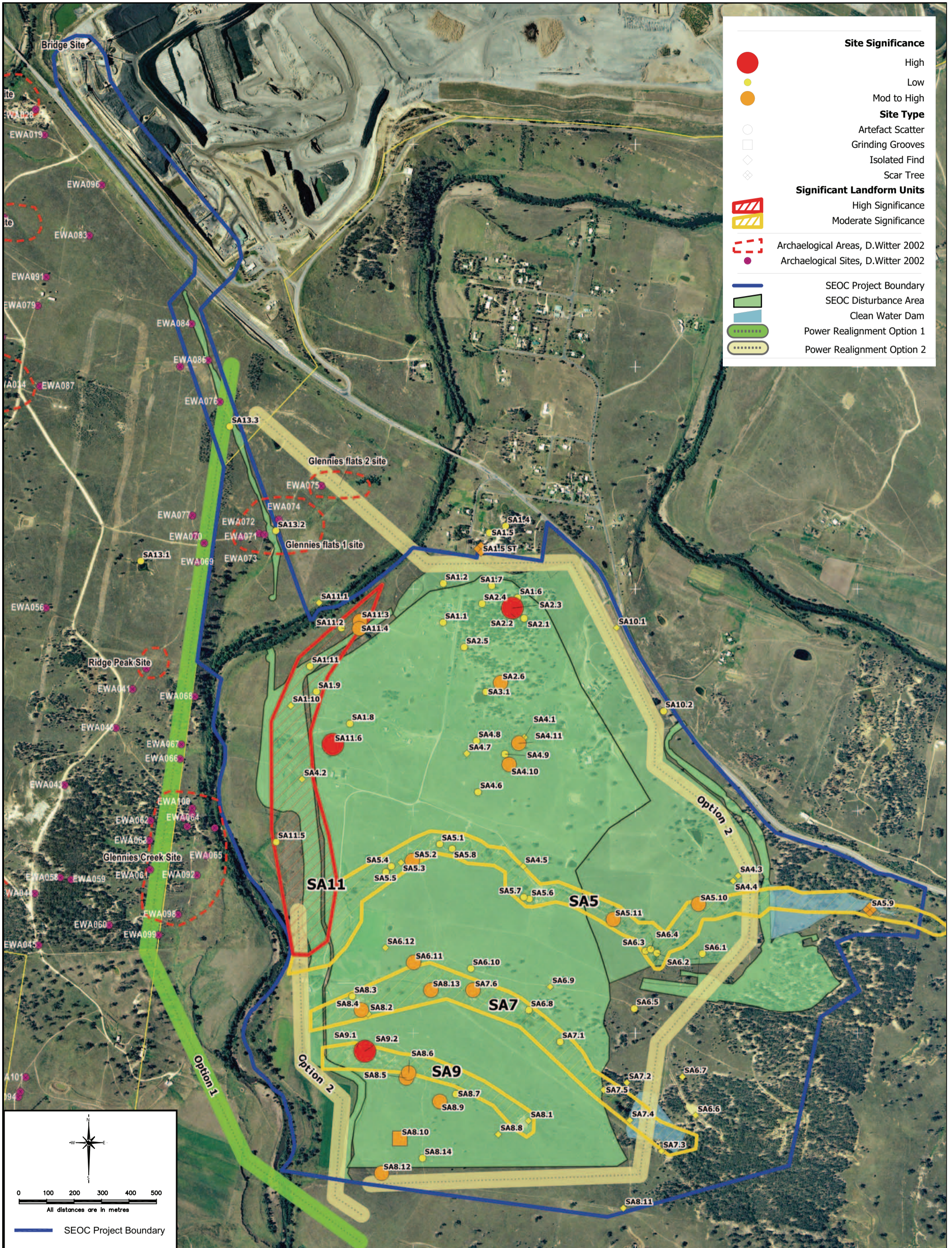
- SEOC Project Area
- Proposed SEOC Pit Shell
- Out of Pit Emplacement
- Infrastructure
- Vegetation and Habitat Corridor
- - - Fragmented Habitat Corridor
- Proposed Vegetation and Habitat Corridor
- Southern Woodland
- Open Grassland
- Central Hunter Ironbark - Spotted Gum - Grey Box Forest
- Hunter Valley River Oak Forest
- + River Red Gum Endangered Population

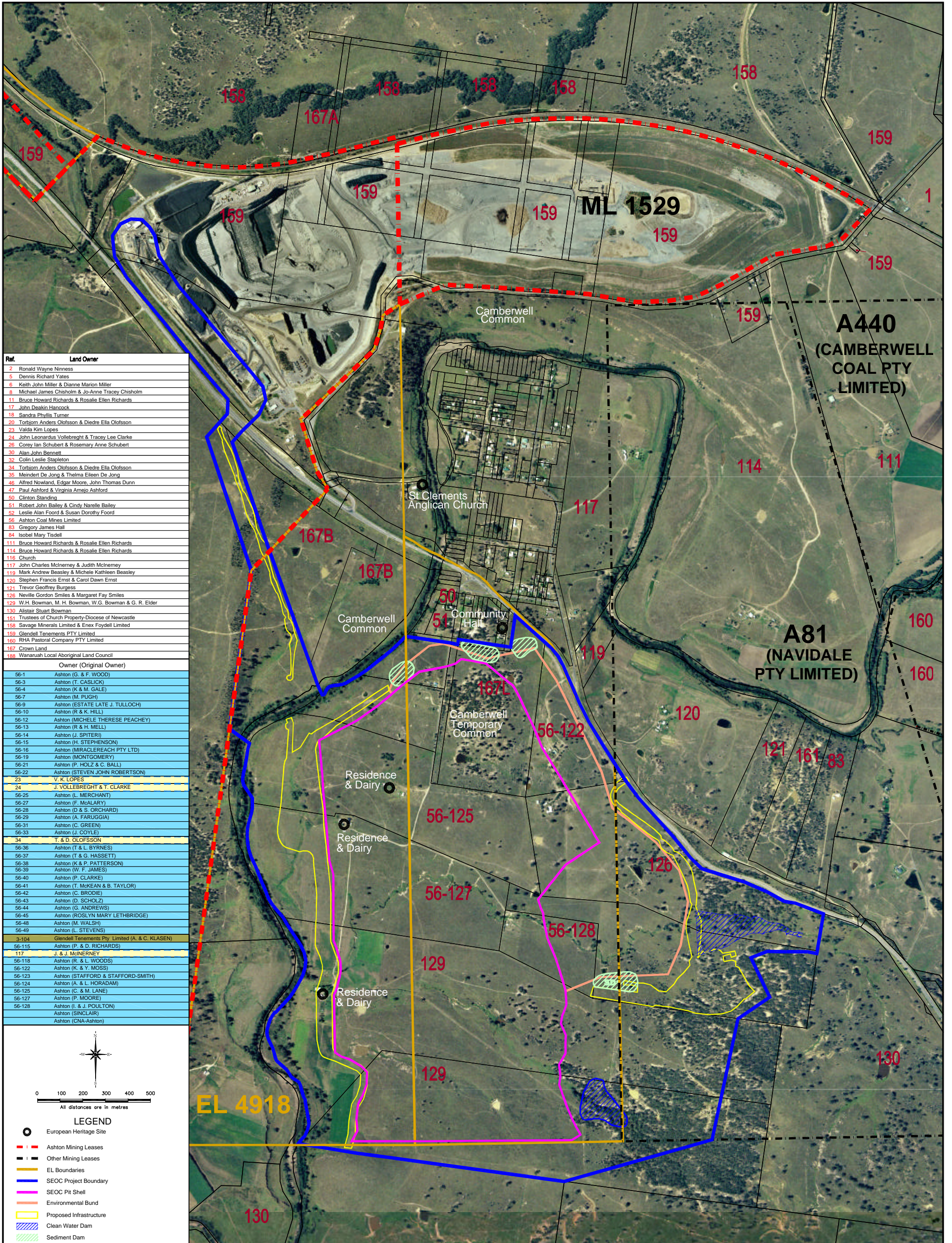


0 100 200 300 400 500
All distances are in metres

SEOC Project Area
 Vegetation Survey Quadrants
 Spotlighting Transect
 Hair Tube Transects
 Fauna Trap Lines
 Grey Crowned Babbler
 Grey Crowned Babbler Nest
 Speckled Warbler
 Hollow-Bearing Trees
 River Red Gum Endangered Population







| Ref. | Land Owner |
|------|--|
| 2 | Ronald Wayne Ninness |
| 5 | Dennis Richard Yates |
| 6 | Keith John Miller & Dianne Marion Miller |
| 8 | Michael James Chisholm & Jo-Anne Tracey Chisholm |
| 11 | Bruce Howard Richards & Rosalie Ellen Richards |
| 17 | John Deakin Hancock |
| 18 | Sandra Phyllis Turner |
| 20 | Torbjorn Anders Olofsson & Diedre Ella Olofsson |
| 23 | Valda Kim Lopes |
| 24 | John Leonardus Vollebreght & Tracey Lee Clarke |
| 26 | Corey Ian Schubert & Rosemary Anne Schubert |
| 30 | Alan John Bennett |
| 32 | Colin Leslie Stapleton |
| 34 | Torbjorn Anders Olofsson & Diedre Ella Olofsson |
| 35 | Meindert De Jong & Thelma Eileen De Jong |
| 46 | Alfred Nowland, Edgar Moore, John Thomas Dunn |
| 47 | Paul Ashford & Virginia Arnejo Ashford |
| 50 | Clinton Standing |
| 51 | Robert John Bailey & Cindy Narelle Bailey |
| 52 | Leslie Alan Foord & Susan Dorothy Foord |
| 56 | Ashton Coal Mines Limited |
| 83 | Gregory James Hall |
| 84 | Isobel Mary Tisdell |
| 111 | Bruce Howard Richards & Rosalie Ellen Richards |
| 114 | Bruce Howard Richards & Rosalie Ellen Richards |
| 116 | Church |
| 117 | John Charles McInerney & Judith McInerney |
| 119 | Mark Andrew Beasley & Michele Kathleen Beasley |
| 120 | Stephen Francis Ernst & Carol Dawn Ernst |
| 121 | Trevor Geoffrey Burgess |
| 126 | Neville Gordon Smiles & Margaret Fay Smiles |
| 129 | W.H. Bowman, M. H. Bowman, W.G. Bowman & G. R. Elder |
| 130 | Alistair Stuart Bowman |
| 151 | Trustees of Church Property-Diocese of Newcastle |
| 158 | Savage Minerals Limited & Enxex Foydell Limited |
| 159 | Glendell Tenements PTY Limited |
| 160 | RHA Pastoral Company PTY Limited |
| 167 | Crown Land |
| 188 | Wanaruah Local Aboriginal Land Council |

| Ref. | Owner (Original Owner) |
|---------------------|--|
| 56-1 | Ashton (G. & F. WOOD) |
| 56-3 | Ashton (T. CASLICK) |
| 56-4 | Ashton (K. & M. GALE) |
| 56-7 | Ashton (M. PUGH) |
| 56-9 | Ashton (ESTATE LATE J. TULLOCH) |
| 56-10 | Ashton (R. & K. HILL) |
| 56-12 | Ashton (MICHELE THERESE PEACHEY) |
| 56-13 | Ashton (R. & H. MELL) |
| 56-14 | Ashton (J. SPITERI) |
| 56-15 | Ashton (H. STEPHENSON) |
| 56-16 | Ashton (MIRACLERACH PTY LTD) |
| 56-19 | Ashton (MONTGOMERY) |
| 56-21 | Ashton (P. HOLZ & C. BALL) |
| 56-22 | Ashton (STEVEN JOHN ROBERTSON) |
| 23 | V. K. LOPES |
| 24 | J. VOLLEBREGHT & T. CLARKE |
| 56-25 | Ashton (L. MERCHANT) |
| 56-27 | Ashton (F. McALARY) |
| 56-28 | Ashton (D. & S. ORCHARD) |
| 56-29 | Ashton (A. FARUGGIA) |
| 56-31 | Ashton (C. GREEN) |
| 56-33 | Ashton (J. COYLE) |
| 34 | T. & D. OLOFSSON |
| 56-36 | Ashton (T. & L. BYRNES) |
| 56-37 | Ashton (T. & G. HASSETT) |
| 56-38 | Ashton (K. & P. PATTERSON) |
| 56-39 | Ashton (W. F. JAMES) |
| 56-40 | Ashton (P. CLARKE) |
| 56-41 | Ashton (T. McKEAN & B. TAYLOR) |
| 56-42 | Ashton (C. BRODIE) |
| 56-43 | Ashton (D. SCHOLZ) |
| 56-44 | Ashton (G. ANDREWS) |
| 56-45 | Ashton (ROSLYN MARY LETHBRIDGE) |
| 56-48 | Ashton (M. WALSH) |
| 56-49 | Ashton (L. STEVENS) |
| 3-104 | Glendell Tenements Pty. Limited (A. & C. KLASEN) |
| 56-115 | Ashton (P. & D. RICHARDS) |
| 117 | J. & J. McINERNEY |
| 56-118 | Ashton (R. & L. WOODS) |
| 56-122 | Ashton (K. & Y. MOSS) |
| 56-123 | Ashton (STAFFORD & STAFFORD-SMITH) |
| 56-124 | Ashton (A. & L. HORADAM) |
| 56-125 | Ashton (C. & M. LANE) |
| 56-127 | Ashton (P. MOORE) |
| 56-128 | Ashton (I. & J. POULTON) |
| Ashton (SINCLAIR) | |
| Ashton (CNA-Ashton) | |

0 100 200 300 400 500
All distances are in metres

LEGEND

- European Heritage Site
- Ashton Mining Leases
- Other Mining Leases
- EL Boundaries
- SEOC Project Boundary
- SEOC Pit Shell
- Environmental Bund
- Proposed Infrastructure
- Clean Water Dam
- Sediment Dam