

# PRIMARY GOLD



## Rustler's Roost & Quest 29 Open-Cut Mine Redevelopment

Erosion and Sediment Control Plan  
Volume 3: Appendix A.3 to Appendix C.2  
September 2021

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Photograph Cover Sheet: Rustler's Roost Pit looking north July 2021. Photograph: K Evans 2021

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# ACRONYMS & ABBREVIATIONS

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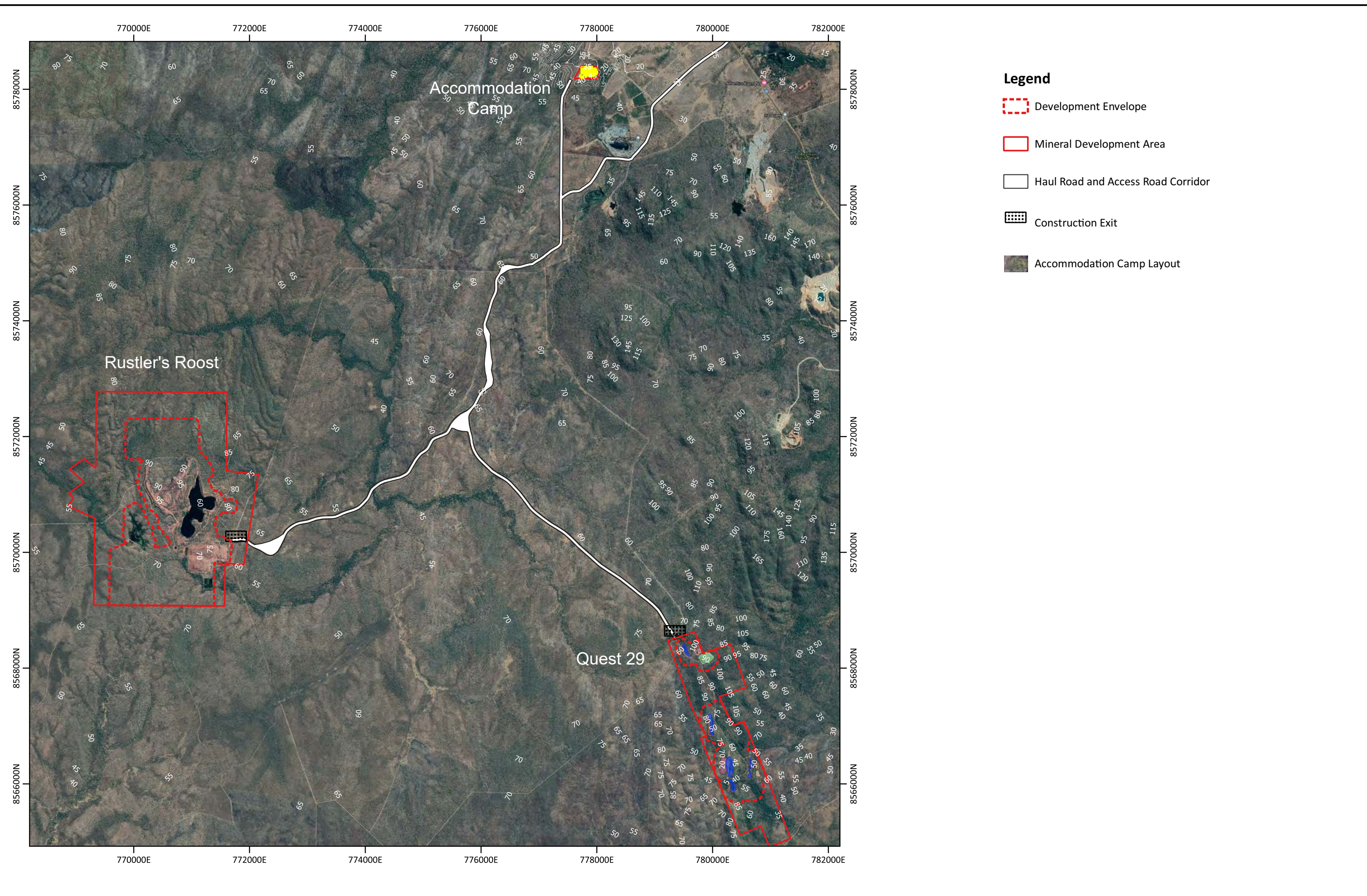
<b>BOM</b>	Bureau of Meteorology
<b>CPEng</b>	Chartered Professional Engineer
<b>CPESC</b>	Certified Professional in Erosion and Sediment Control
<b>EMSP</b>	Environmental Management System and Plans
<b>ESCP</b>	Erosion and Sediment Control Plan
<b>IECA</b>	International Erosion Control Association
<b>LOM</b>	Life of Mine
<b>ML</b>	Mineral Lease
<b>MMP</b>	Mining Management Plan
<b>NT</b>	Northern Territory
<b>RR</b>	Rustler's Roost
<b>TSF</b>	Tailing Storage Facility
<b>WMP</b>	Water Management Plan
<b>WRD</b>	Waste rock dump

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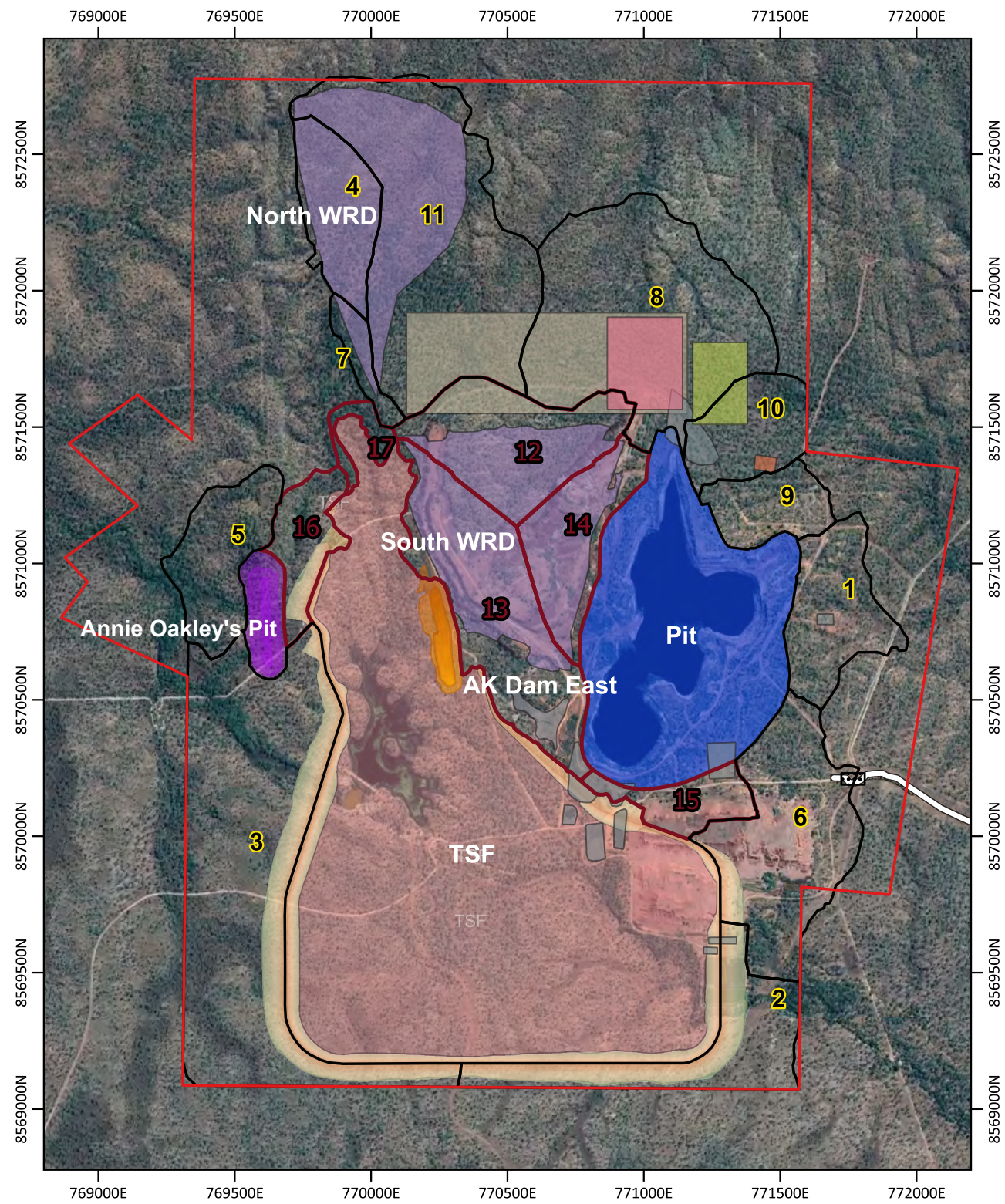
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## Appendix A.3 Topography - Q29 & Accommodation Camp

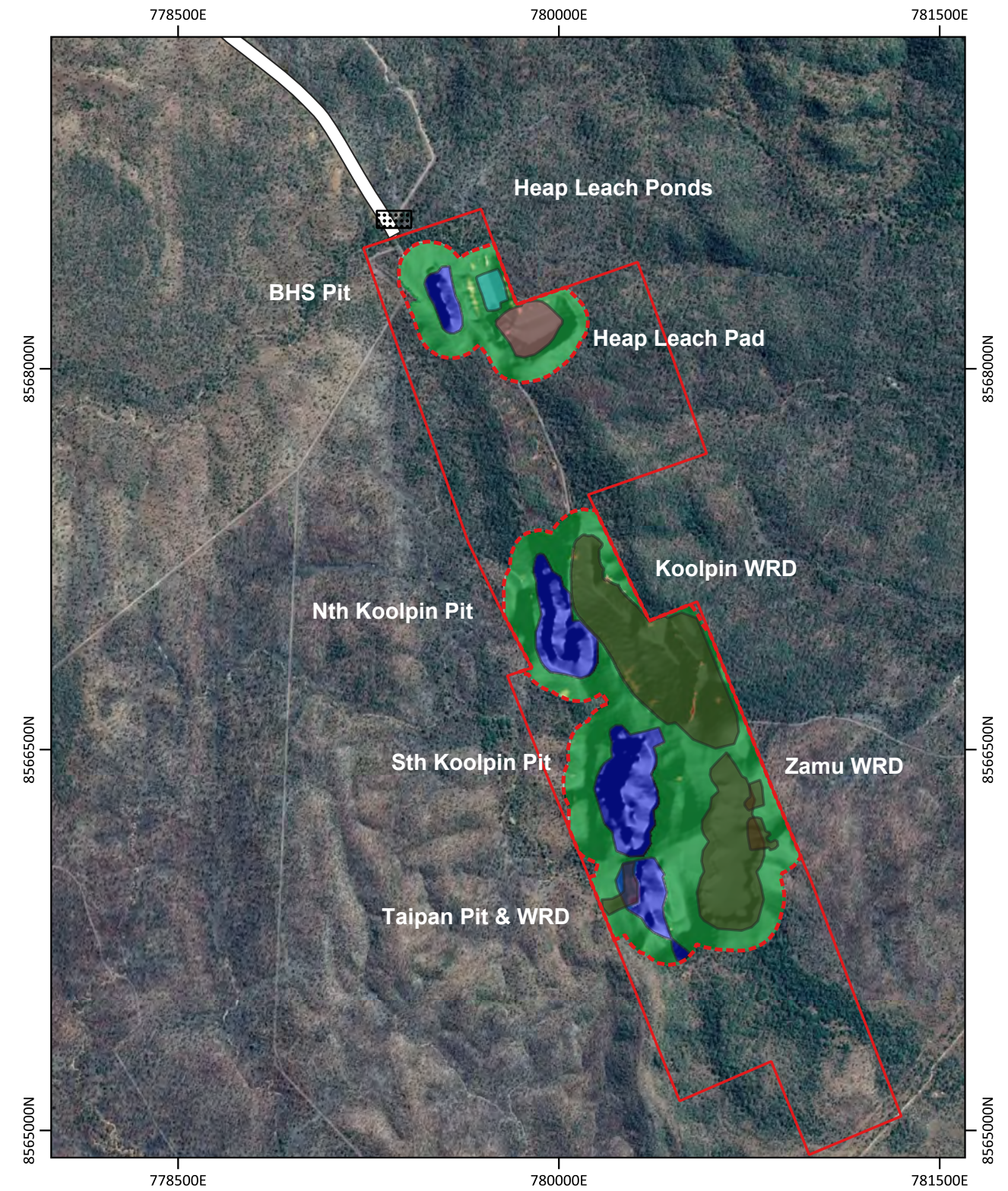


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## **Appendix B.1 Infrastructure Layout post-mining at RR and Q29**



Above. Topographic contours at Rustler's Roost at closure with the TSF and WRDs. This layout was used for soil loss calculations and erosion hazard assessment.



Above. Catchment distribution at the Q29 Project Area for the post-mining condition. This layout was used for soil loss calculations and erosion hazard assessment.

**Legend**

- Internal Catchments
- External Catchments
- ML disturbed area
- Proposed Infrastructure
- WRD
- Annie Oakley's Pit AK
- Dam East
- Pit 1 final
- Laydown Area
- Haul\_Road
- ROM
- Proposed Additions
- Administration Office
- GRES Plant Area
- Magazine
- Proposed Tailing Storage Facility
- TSF Bund Option 2
- 45
- 71
- 97

*Tim Elder*

Tim Elder #4399



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## **Appendix C.1 RRPA Maximum operational soil and rehabilitated soil loss**

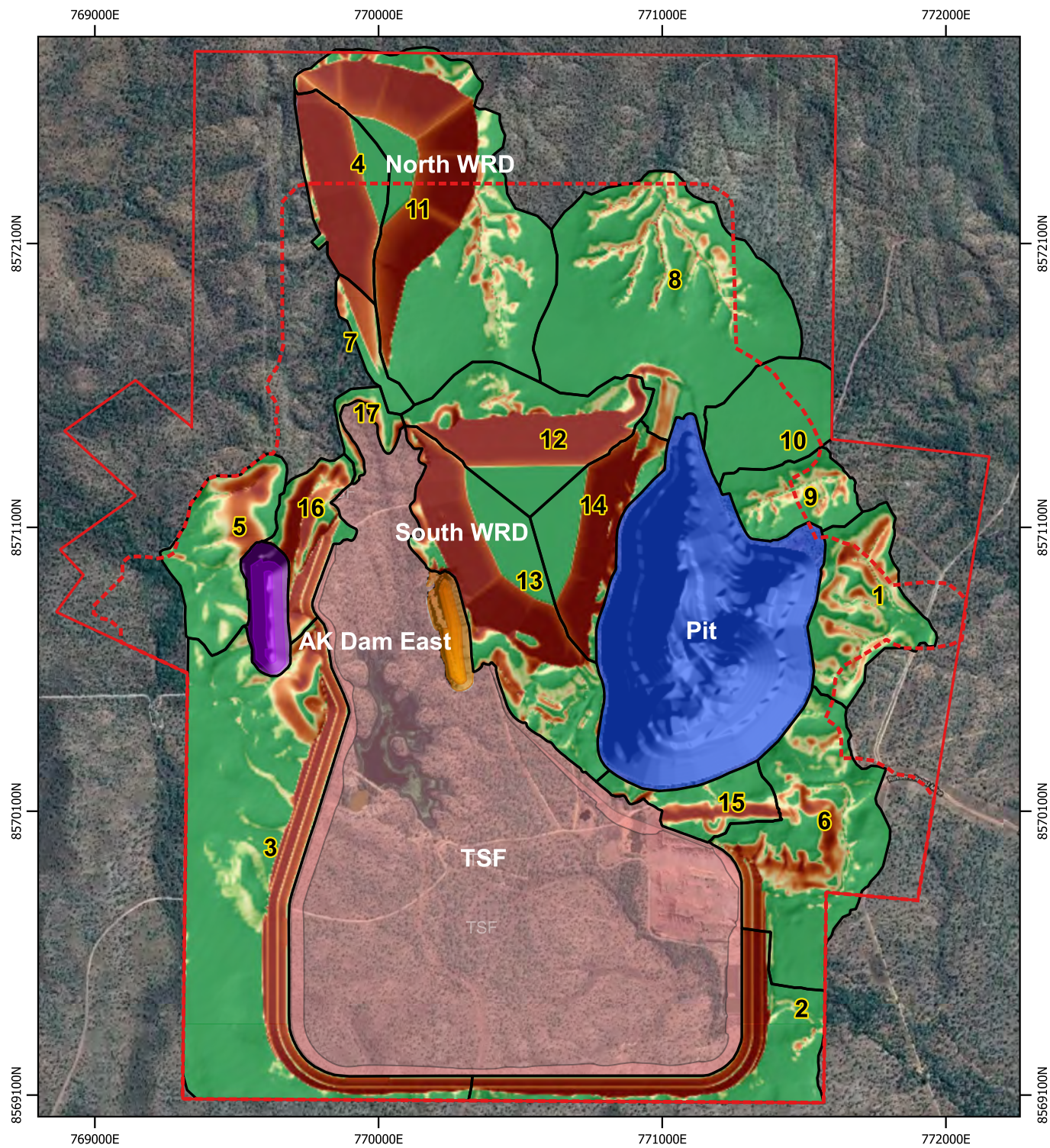


Figure Above: Erosion distribution on the RRPA for the maximum operation disturbance.

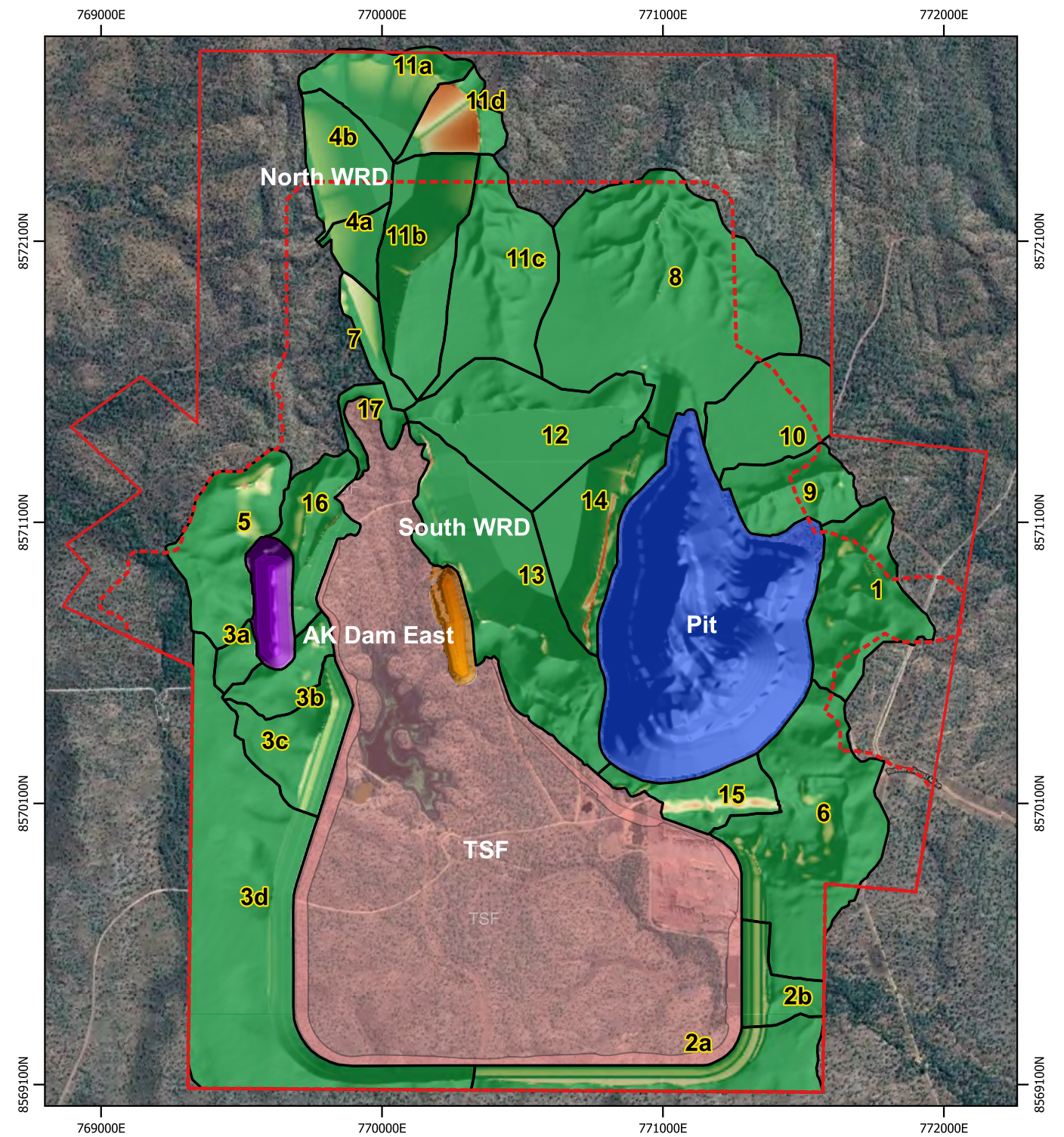
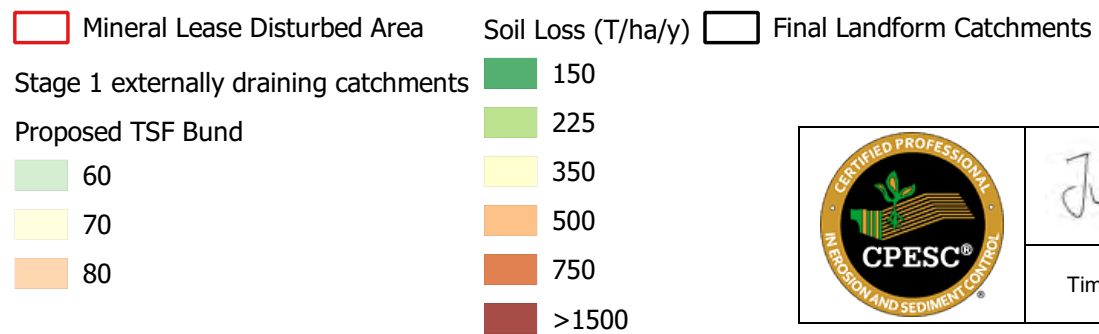


Figure Above: Erosion distribution on the RRPA after site rehabilitation.

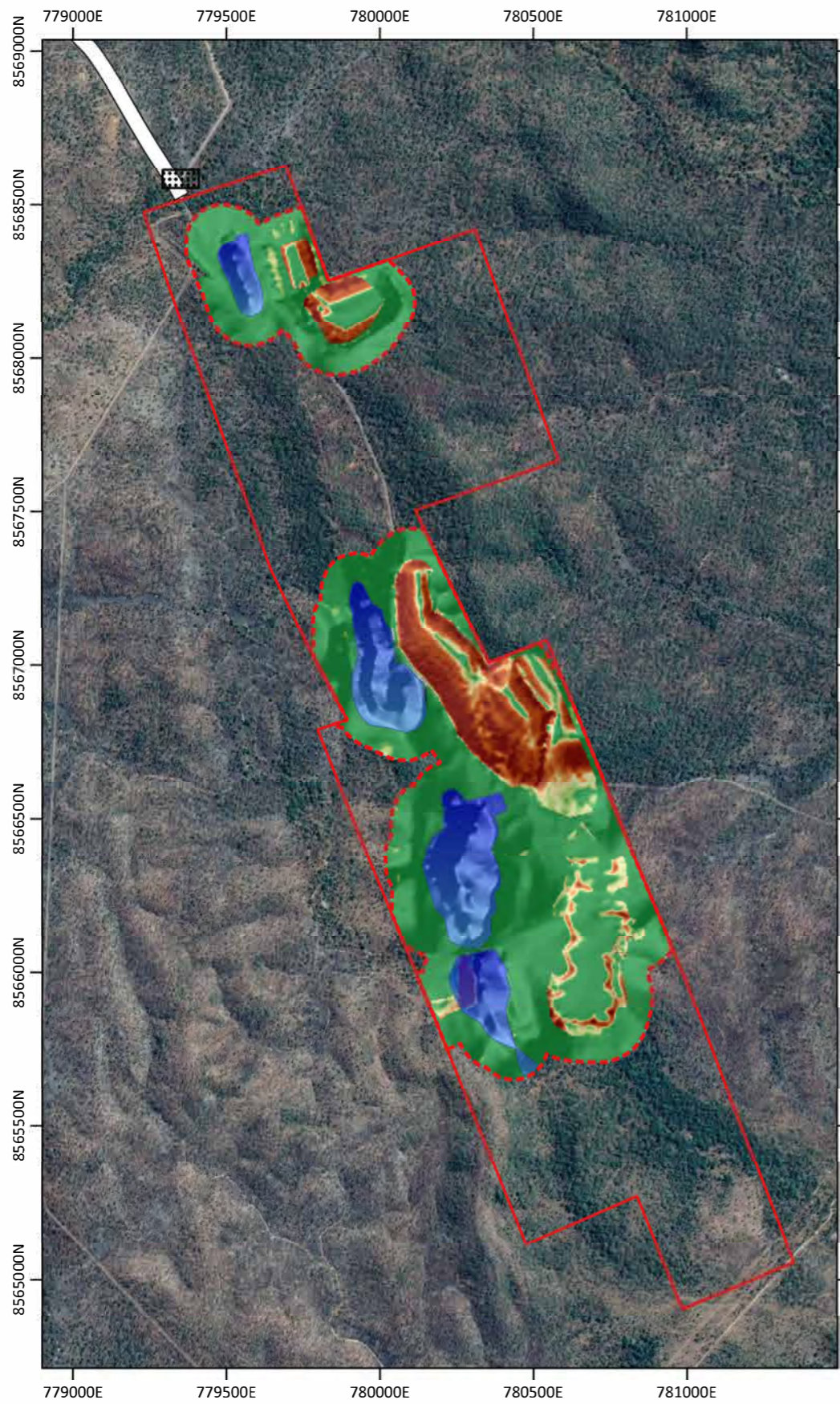


**NOTES**

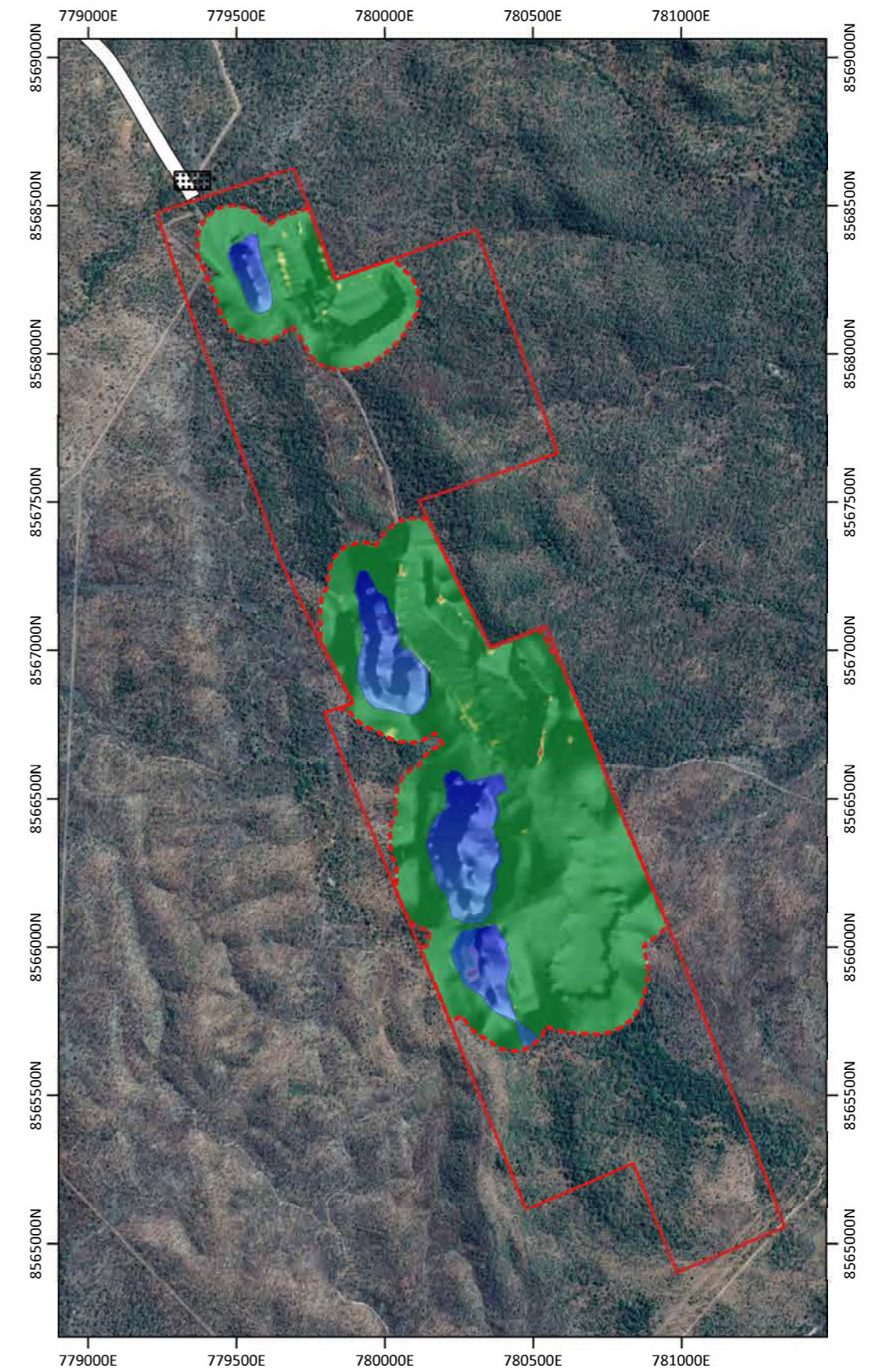
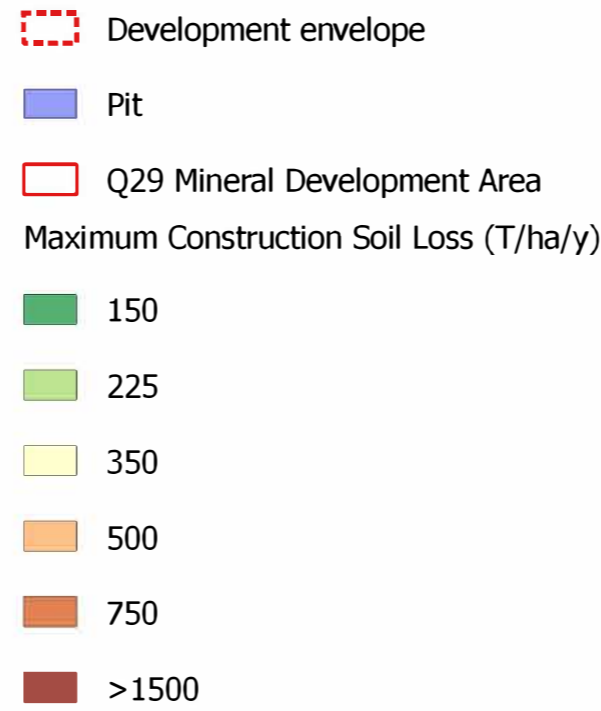
1. Local R and K values were determined using the methods described by Evans et al (2004).
2. Sediment basins are required for all catchments during the maximum disturbance.
3. A spatially variable LS factor was used and derived using the SAGA LS Factor tool and applying the Desment & Govers (1996) method.
4. C= 1 and P=1.3 are recommended by IECA for construction sites.
5. Soil loss was derived using raster calculations in QGIS.
6. Soil loss is the average value for a catchment derived in QGIS.
7. For the post rehabilitation condition, C-factor and P-factor were adjusted to reflect the rehabilitation techniques applied.

	Appendix C.1	Project Rustler's Roost Erosion & Sediment Control Plan	Title RR Maximum operational soil and rehabilitated soil loss.	Designed	Drawn	Checked	Sheet size
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## **Appendix C.2 Q29 Maximum operational and rehabilitated soil loss**



Above. Distributed maximum operational soil loss based on distributed LS-factors.



Above. Post-rehabilitation soil loss applying RUSLE parameter values for the rehabilitated condition.